



TGT - LAB
REGISTROS GEOLOGICOS

FINAL WELL REPORT

WELL: LO6-29D

AUGUST-SEPTEMBER 2013

SAVIA PERU S.A.

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INTRODUCTION

TGT – LAB S.A.C. started Mud Logging Operations on the Well LO6-29D on August 23rd, 2013 at 450 feet depth, and finished on September 21th, at the depth of 8691.0 feet TD(RT), with 7" Casing cementation; Casing Shoe at 8690 feet.

Origin:	
Surface Northing	9'508,656.13 m.
Surface Easting	459,052.36 m.
Main objective:	Mogollon Formation
Objective Northing	9'507,161.47 m
Objective Easting	458,537.36 m
Kelly Bushing	50 ft.
Water depth	-335 ft.
Total Depth	8691 ft.
Reference	DATUM-WGS -84 UTM

It is proposed to drill a development well LO6-29D to produce oil of Mogollon and Rio Bravo reservoir in Lobitos oil field.

The well LO6-29D will be drilled from platform Lobitos 6 and will reach a final depth of 6062.91 feet (TVD).

The geological control for Mogollon and Rio Bravo reservoirs is based on stratigraphic and structural data from neighbors wells drilled in field.

This report includes the geological, rig activity from the Mud Logging Unit of the Well LO6-29D from 450 feet measured depth (Rotary Table) from August 23rd, 2013; to the Final Total Depth at 8691 feet that was reached on September 21th, 2013.

To drill this Well, the company SAVIA PERÚ, used a "BASIC ON LINE UNIT" of Mud Logging, with the capture of On-Line Data using equipment belonging to T.G.T. LAB S.A.C.

This Unit was endowed with the following equipment:

Hook height measurement:

Draw work sensor

Drilling parameters:

Stand pipe pressure

Weight on bit

Depth (Measure Depth and True Vertical Depth)

MMRPM (Down Hole Motor RPM)

ROP (Rate of Penetration)

Mud system:

Pit Suction level # 1 (Sonic sensor)

Pit Pre-suction level # 2 (Sonic sensor)

Pit Desander level # 3 (Sonic sensor)

Pit Desilter level # 4 (Sonic sensor)

Mud pumps:

Pump # 1 (Triplex)

Pump # 2 (Triplex)

Pump # 3 (Triplex)

Gas chain specification:

Gas trap pneumatic shaker box

Gas Chromatograph FID SRI 8610C gas cycle 40"

Data acquisition system:

1 computer DRILL VIEW ADQ for Real time acquisition.

1 computer Windows 2003 Server for data bases.

1 computer Windows XP, for Geology Data control.

1 computer Windows XP, for Chromatograph control.

1 computer Windows XP, for Repetition screen on CoMan office.

- The monitoring Unit is composed of a cabin equipped by T.G.T. LAB.
- The system is designed for the acquisition and storage of Geologic Information and the continuous monitoring of the perforation process.
- The analysis of the gathered information is a tool of great help for the personnel in charge of the taking of immediate decisions or of the optimization of the different variables.
- The continuous monitoring of the process allows detecting complications and mishaps in advance, as well as it helps in the prevention of situations of risk for the personnel and drilling teams.

The geologic interpretation was carried out as a continuous analysis of the drilling cuttings with the purpose of defining parameters such the content of Hydrocarbons and Lithology. For the definition of an area of interest, a good indicator is the concentration of gassy hydrocarbons extracted directly from the perforation mud. The Gas Chromatography provides a qualitative and quantitative analysis of the gas content in the sample co relatable to the composition of the hydrocarbons present.

By means of the use of different sensors installed in strategic points of the Rig, it becomes possible the record and calculate of a wide range of parameters like:

Measured Depth, Lag Depth, Bit Depth.

Rate of Penetration

Hook Load

Weight on Bit

Bit Position

RPM on Down Hole Motor

Total Bit Hours on Bottom

SPM and Total SPM

Pit Volume Totalizer

Flow in GPM

Pump Pressure

Chromatographic Analysis

In addition to the parameters measured in the different points of the drilling, inside the geology cabin and thanks to the accessories of geologic support, it was also possible to carry out the analysis of such auxiliary parameters as: complete Lithological and Show descriptions, Fluorescence Data and Drilling Operations which are included accordingly.

The On-line applications allowed in different occasions to "review" and "replay" drilling events in diverse graphic and numeric formats during the monitoring of the perforation activities. With the help of a second computer the data in On-line form it was transfered toward the database Off-Line Computer where the information was processed to allow the elaboration of different graphic registrations such as: Formation Evaluation Log.

The information obtained from the different equipment and the analysis of samples each 30 feet from 450 to 4500 feet; and each 10 feet from 4500 feet to 8691 feet; in two (2) Graphic Logs: The Formation Evaluation Log at scale 1:500 (Measured Depth and True Vertical Depth.)

In this one the penetration rate each $\frac{1}{2}$ feet is included, the lithology in percentage and interpreted form, lithological description, oil and gas shows present with its corresponding evaluation; utilized bits, mud information, drilling parameters, casing, as well as those activities that were considered of interest.

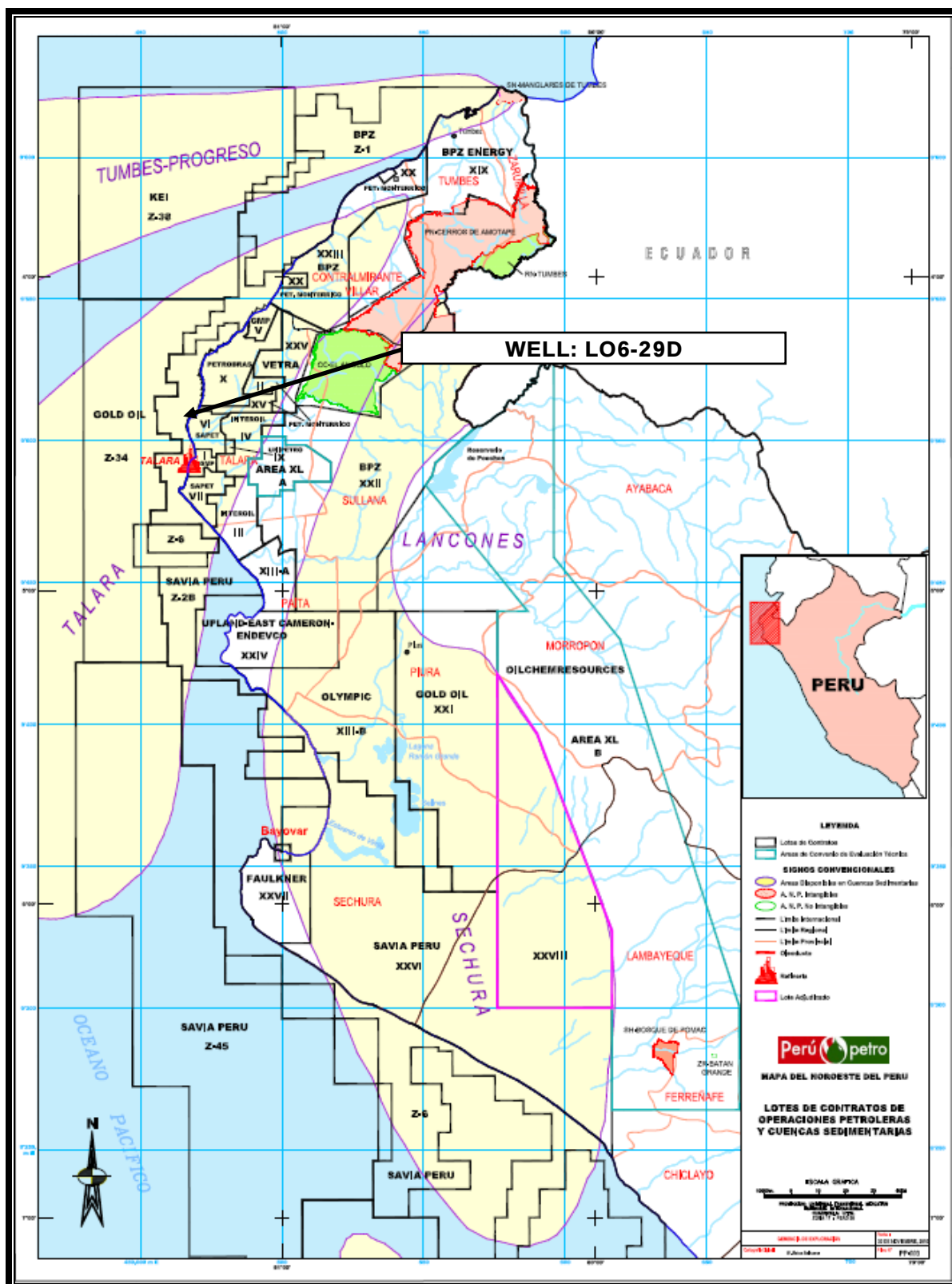


GEOLOGICAL REPORT



WELL AND RIG DATA

Company:	SAVIA PERU	
Well Name:	LO6-29D	
Well Type:	DEVELOPMENT	
Field:	LOBITOS OFFSHORE	
Basin:	TALARA	
State:	PIURA	
Country:	PERU	
Coordinates (WGS-84 UTM):	North	East
Origin:		
Main Objective: (MOGOLLON FM)	9'507,161.47 m	458,537.36 m
Rotary table:	50 ft.	
Water Depth:	-335 ft.	
Spud Date:	AUGUST 21 st 2013	
End Date:	SEPTEMBER 16 th 2013	
Total Depth:	8691.0 ft. MD (RT); 6062.91 ft. TVD (RT)	
Drilling Contractor / Rig:	PEPESA / P-40	
Drilling Fluids:	HALLIBURTON	
Logging Contractor:	WEATHERFORD	
Mud logging / Unit:	TGT LAB SAC	
Well site Geologist:	A. ORTEGA	
TGT-LAB Geologist:	G. CARDOZA / E. SANTISTEBAN / M. ORTEGA / H. MONASTERIO.	





FORMATION TOPS



WELL LO6-29D

Elevación RKB: 50 ft

SEA DEPTH: 335 ft

ROTARY TABLE: 50 ft.	PREDICTED TOPS			LITHOLOGIC TOPS BY SAMPLES			TOPS BY ELECTRICAL LOGS		
FORMATION/ZONE	MD (ft)	DEPTH	DEPTH	MD (ft)	DEPTH	DEPTH	MD (ft)	DEPTH	DEPTH
	RT (ft)	TVD (ft)	SSTVD (ft)	RT (ft)	TVD (ft)	SSTVD (ft)	RT (ft)	TVD (ft)	SSTVD (ft)
Talara sandstone	-	-	-	-	-	-	-	-	-
Lobitos	-	-	-	770.0	767.87	-717.87	770.0	767.87	-717.87
Terebratula	-	-	-	2234.0	1844.52	-1794.52	2234.0	1844.52	-1794.52
Chacra	2061.0	1750.0	-1700.0	2667.0	2052.23	-2002.23	2667.0	2052.23	-2002.23
Rio Bravo	5079.0	3200.0	-3150.0	5549.0	3494.38	-3444.38	5554.0	3497.63	-3447.63
Palegreda	7266.0	4750.0	-4700.0	6885.0	4456.58	-4406.58	6890.0	4460.48	-4410.48
Mogollon	7800.0	5220.0	-5170.0	7254.0	4765.21	-4715.21	7267.0	4776.35	-4726.35
Final T.D.	9155.0	6377.0	-6327.0	8691.0	6062.91	6012.91	8691.0	6062.91	-6012.91



AGE			FORMATION/MEMBER	THICKNESS (ft)	LITHOLOGY	DESCRIPTION		
CENOZOIC	TERTIARY	Eocene	TALARA SANDSTONE	767.9		SANDSTONE: med dk gry, loc med gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, scs arg mtrx, calc cmt, mod consol-mod fri, loc ti, w/dk & gnsh mnrls incl, p vis por. N.O.S. SAND: wh, v-f, tr m qtz gr, hyal, trnsi, sbang-sbrnd, wl srt. CLAYSTONE: olv blk, med dk gry, loc olv gry, ea, blkly-sbbily, occ amor, mod frm, micmic, miccarb, sli calc. SAND: wh, 70% m, 20% f, 10% crs qtz gr, hyal, trnsi, sbang-ang, loc sbrnd, p srt. CLAYSTONE: olv blk, occ olv gry, ea, blkly, frm, v sli micmic, sli miccarb, sli calc-v sli calc.		
			LOBITOS	1077.1		CLAYSTONE: olv blk, loc olv gry, occ med dk gry, ea, blkly-sbbily, loc srtab, frm-mod frm, sli stly i/p, micmic, sli miccarb, sli calc. CLAYSTONE: olv blk, loc olv gry, ea, blkly-sbbily, loc sply, mod frm-mod sft, micmic, miccarb, sli calc. SANDSTONE: med gry, loc med dk gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, scs arg mtrx, calc cmt, mod consol-mod fri, occ ti, drty, miccarb, w/dk & gnsh mnrls incl, p vis por. N.O.S. SAND: wh, 80% v-f, 20% m qtz gr, hyal, trnsi, sbang-sbrnd, wl srt. DOLOMITE: dk yelsh brn, pl yelsh brn, ea, sbbily, mod hd-hd, mass, w/dk lit mnrls incl. CLAYSTONE: olv blk, loc med gry, occ olv gry, ea, sbbily-blky, mod frm-mod sft, micmic, miccarb, sli calc.		
			TELEBRATULA	207.7		SAND: wh, 70% v-f, 30% m qtz gr, hyal, trnsi, sbang-sbrnd, wl srt. SANDSTONE: med gry, loc med lt gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, arg mtrx, calc cmt, mod fri, w/dk mnrls incl, p vis por. N.O.S. CLAYSTONE: olv blk, loc med gry, occ olv gry, ea, sbbily-blky, loc srtab, mod frm-frm, loc mod sft, micmic, miccarb, sli calc. SAND: wh, 60% v-f, 40% m qtz gr, hyal, trnsi, sbang-sbrnd, wl srt. SANDSTONE: med gry, loc med lt gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, arg mtrx, calc cmt, mod fri-fri, w/dk mnrls incl, p vis por. N.O.S.		
			CHACRA	1442.2		CLAYSTONE: olv blk, loc med dk gry, occ olv gry, ea, sbbily-blky, loc srtab, mod frm-frm, loc mod sft, loc stly i/p, micmic, miccarb, sli calc. CLAYSTONE: olv blk, loc med dk gry, occ olv gry, ea, blkly-sbbily, loc srtab-sblam, mod frm-frm, loc mod sft, loc stly i/p, micmic, miccarb, sli calc. CLAYSTONE: med dk gry, olv blk, loc olv gry, ea, sbbily-blky, loc srtab, occ sblam, mod frm-frm, stly i/p, occ w/coal incl, micmic, miccarb, n calc. CLAYSTONE: med dk gry, loc olv gry, dk gry, ea, blkly-sbbily, loc srtab, occ sblam, mod frm-frm, occ mod sft, stly, micmic, miccarb, n calc-v sli calc. CLAYSTONE: olv gry, loc med dk gry, occ dk gry, ea, blkly, loc sbblocky, loc srtab-sblam, frm-mod frm, stly, micmic, miccarb, occ w/coal vns incl, v sli calc-sli calc. SANDSTONE: med gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, arg mtrx, calc cmt, mod consol-mod fri, drty, w/glau & dk mnrls incl, p vis por. N.O.S. SAND: wh, v-f qtz gr, hyal, trnsi, sbang-sbrnd, wl srt. CLAYSTONE: med dk gry, loc olv gry, med gry, ea, blkly-sbbily, loc srtab, mod frm-frm, stly, micmic, miccarb, n calc-sli calc.		
			RIO BRAVO	962.2		SANDSTONE: med lt gry, lt gry, occ v lt gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, arg mtrx, calc cmt, mod fri-mod consol, w/dk mnrls incl, p vis por. SAND: wh, 60% m, 40% v-f, qtz gr, hyal, trnsi, sbrnd-sbang, loc ang, p srt. Fluorescence: NVOS, 3-25% pin point pl yelsh nat fluor, slw, wk, fnt, even, yelsh wh cut fluor, mky wh res ring under U. V. It, n res ring at nat lt. POS. SANDSTONE: med lt gry, loc lt gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, arg mtrx, calc cmt, mod fri-fri, w/shell frag & dk mnrls incl, p vis por. SAND: wh, 50% f, 40% m, 10% crs, qtz gr, hyal, trnsi, sbang-sbrnd, p srt. Fluorescence: NVOS, Tr-20% pin point pl yelsh nat fluor, slw, wk, fnt, even, yelsh wh cut fluor, mky wh res ring under U. V. It, n res ring at nat lt. POS. SANDSTONE: lt gry, v lt gry, occ med lt gry, olv gry, v-f qtz gr, hyal, trnsi, sbang-sbrnd, wl srt, arg mtrx i/p, abnt calc cmt, mod consol-mod fri, w/dk mnrls incl, p vis por. SAND: wh, 60% v-f, 40% m qtz gr, hyal, trnsi, sbang-sbrnd, fr srt. Fluorescence: NVOS, Tr-20% pin point pl yelsh nat fluor, slw, wk, fnt, even, yelsh wh cut fluor, mky wh res ring under U. V.		
			PALEGREDA	308.63		CLAYSTONE: dk gry, med dk gry, occ grysh blk, olv gry, ea, blkly-sbbily, loc srtab-sblam, frm-mod frm, loc stly, micmic, miccarb, n calc. SILTSTONE: med gry, loc med dk gry, ea, blkly-sbbily, frm-mod frm, micmic, miccarb, grad v sst, sli calc. CLAYSTONE: med dk gry, loc dk gry, occ olv gry, ea, blkly-sbbily, loc srtab-sblam, mod frm-frm, loc stly, loc w/veins coal incl, micmic, miccarb, n calc.		
			MOGOLLON	1297.7		SANDSTONE: lt gry, v lt gry, occ med lt gry, olv gry, v-f qtz gr, hyal, trnsi, sbang-sbrnd, wl srt, arg mtrx i/p, abnt calc cmt, mod consol-mod fri, w/dk mnrls incl, p vis por. SAND: wh, 60% v-f, 40% m qtz gr, hyal, trnsi, sbang-sbrnd, fr srt. Fluorescence: NVOS, 10-15% pin point pl yelsh nat fluor, slw, wk, fnt, even, yelsh wh cut fluor, mky wh res ring under U. V. It, n res ring at nat lt. POS. SAND: wh, 60% f, 40% m, tr crs, qtz gr, hyal, trnsi, sbang-sbrnd, fr srt. SANDSTONE: lt gry, med lt gry, occ v lt gry, olv gry, v-f qtz gr, hyal, trnsi, sbang-sbrnd, wl srt, arg mtrx, calc cmt, fri-mod fri, loc mod consol, w/dk mnrls incl, p vis por. Fluorescence: NVOS, 10-15% pin point pl yelsh nat fluor, slw, wk, fnt, even, yelsh wh cut fluor, mky wh res ring under U. V. It, n res ring at nat lt. POS. CLAYSTONE: med dk gry, loc med gry, occ dk gry, ea, blkly-sbbily, loc srtab-sblam, mod frm-frm, stly i/p, micmic, miccarb, n calc. SAND: wh, 50% f, 40% m, 10% crs qtz gr, hyal, trnsi, sbang-sbrnd, p srt. SANDSTONE: lt gry, v lt gry, loc med lt gry, v-f qtz gr, hyal, sbang-sbrnd, wl srt, arg mtrx, calc cmt, fri-mod fri, w/veins coal & dk mnrls incl, p vis por. Fluorescence: NVOS, Tr-25% pin point pl yelsh nat fluor, slw, wk, fnt, even, yelsh wh cut fluor, mky wh res ring under U. V. It, n res ring at nat lt. POS.		
			TOTAL DEPTH: 8691.0 ft. MD (RT), 6062.91 ft. TVD (RT)					

STRATIGRAPHIC SEQUENCE

WELL: LO6-29D

The Stratigraphy Column expected in this well was the same according to correlations with the original prognosis, consists of the following Formations and Members: Talara Sandstone, Lobitos, Terebratula, Chacra, Rio Bravo, Palegreda, Mogollon of Tertiary age.

TGT LAB started logging into Talara Formation at 450 feet to the total depth on Mogollon at 8691 feet MD.

CENOZOIC

TERTIARY

TALARA FORMATION

TALARA SANDSTONE MEMBER

Interval: 0 to 770 feet

The lithology at the upper section was conformed predominantly by Sand, Sandstone and Claystone.

Sand: white, very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.

Sandstone: medium dark gray, locally medium gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.

Claystone: olive black, medium dark gray, locally olive gray, earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.

In the lower section the lithology was conformed mainly by Sand, Sandstone intercalated with Claystone.

Sand: white, 70% medium, 20% fine, 10% coarse quartz grain, hyaline, translucent, subangular to angular, locally subrounded, fair sorted.

Sandstone: medium dark gray, locally medium gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, consolidated, very tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.

Claystone: olive black, medium dark gray, locally olive gray, earthy, blocky to subblocky, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.

Accessories: calcite, pyrite.

LOBITOS MEMBER

Interval: 770 to 2234 feet

The lithology in this member was conformed mainly by Claystone with small intercalations Sandstone, Sand and Dolomite.

At the upper section:

Claystone: olive black, occasionally olive gray, earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous.

Sandstone: medium dark gray, locally medium gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.

At the middle section:

Claystone: olive black, locally olive gray, occasionally medium dark gray, earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous.

Sandstone: medium dark gray, medium gray, very fine to fine quartz grain, hyaline, subangular, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, micromicaceous, microcarbonaceous, with dark minerals inclusion, poor visual porosity. No Oil Show.

At the lower section:

Claystone: olive black, occasionally olive gray, earthy, subblocky, locally subplaty, very occasionally tabular, moderately firm to moderately soft, micromicaceous, microcarbonaceous, very slightly calcareous.

Sand: white, 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.

Claystone: olive black, locally olive gray, medium dark gray, earthy, blocky to subblocky, locally subplaty, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.

Dolomite: dark yellowish brown, pale yellowish brown, earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion.

Accessories: calcite, coal, pyrite, microfossils, bentonite.

TEREBRATULA MEMBER

Interval: 2234 to 2667 feet

The lithology at the upper section was conformed predominantly by Sand, Claystone with intercalations of Sandstone and Dolomite.

Sand: white, 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.

Claystone: olive black, locally medium gray, occasionally olive gray, earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.

Sandstone: medium gray, locally medium light gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusion, poor visual porosity. No Oil Show.

Dolomite: dark yellowish brown, earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion.

In the lower section the lithology was conformed mainly by Claystone, Sand and small lents Sandstone.

Sand: white, 60% very fine to fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.

Claystone: olive black, locally medium gray, occasionally olive gray, earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous.

Sandstone: medium gray, locally medium light gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show.

Accessories: calcite, pyrite, coal.

CHACRA FORMATION

Interval: 2667 to 5549 feet

The lithology in this formation was conformed mainly by Claystone with some intercalations Siltstone, Sandstone and small lens of Sand and Dolomite.

At the upper section:

Claystone: olive black, locally medium dark gray, occasionally olive gray, earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous.

Sandstone: medium light gray, very fine quartz grain, hyaline, subrounded, fair to well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show.

At the middle section:

Claystone: medium dark gray, locally olive black, occasionally medium gray, earthy, blocky to subblocky, occasionally subtabular to sublaminar, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous.

Sandstone: medium light gray, very fine to fine quartz grain, hyaline, subrounded, well sorted, calcareous matrix, calcareous cement, moderately friable to moderately hard, with dark minerals inclusion, poor visual porosity. No Oil Show.

At the lower section:

Claystone: medium dark gray, locally olive gray, medium gray, earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.

Siltstone: medium dark gray, locally medium gray, earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

Sandstone: medium gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.

Sand: white, very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted.

Dolomite: dark yellowish brown, locally olive gray, earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion.

Accessories: calcite, coal, glauconite, pyrite, microfossils, calcareous fragments.

RIO BRAVO FORMATION

Interval: 5549 to 6885 feet

The lithology in this formation was conformed predominantly by Sand, Sandstone with some intercalations of Claystone and Siltstone.

At the upper section the lithology was conformed mainly by Sand, Sandstone intercalated with Claystone and Siltstone.

Sand: white, 60% medium, 40% fine quartz grain, hyaline, translucent, subrounded to subangular, local angular, poor sorted.

Sandstone: medium light gray, light gray, occasionally very light gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity.

Fluorescence: NVOS, 3-50% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. F-POS.

Claystone: medium dark gray, occasionally olive black, earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.

Siltstone: medium dark gray, locally medium gray, earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

In the middle section the lithology was conformed mainly by Sandstone, Sand intercalated with Claystone and Siltstone.

Sandstone: very light gray, light gray, locally medium light gray, very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show.

Fluorescence: NVOS, Tr-20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.

Sand: white, 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.

Claystone: dark gray, locally grayish black, occasionally medium dark gray, earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.

Siltstone: medium dark gray, medium gray, earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

In the lower section the lithology was conformed mainly by Claystone and Sandstone intercalated with Sand and Siltstone.

Claystone: medium dark gray, olive gray, locally medium gray, occasionally dark gray, grayish black, earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.

Sandstone: light gray, very light gray, occasionally medium light gray, olive gray, very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, abundant calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity.

Fluorescence: NVOS, Tr-20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.

Sand: white, very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.

Siltstone: medium dark gray, medium gray, earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

Accessories: calcite, pyrite, calcareous fragments, slickenside, shell fragments, dolomite, glauconite, bentonite, coal.

PALEGREDA FORMATION

Interval: 6885 to 7254 feet

The lithology in this formation was conformed mainly by Claystone with small lens of Siltstone and Sandstone.

At the upper section:

Claystone: dark gray, medium dark gray, occasionally grayish black, olive gray, earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.

Siltstone: medium gray, locally medium dark gray, earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

Sandstone: medium light gray, medium gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show.

At the lower section:

Claystone: medium dark gray, locally dark gray, occasionally olive gray, earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally silty, locally with veins coal inclusions, micromicaceous, microcarbonaceous, non calcareous.

Siltstone: medium gray, locally medium dark gray, earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

Sandstone: light gray, locally medium light gray, very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.

Accessories: calcite, coal, glauconite, pyrite, dolomite, microfossils, shell fragments, slickenside.

MOGOLLON FORMATION

Interval: 7254 to 8691 feet

The lithology in this formation was conformed predominantly by Sand, Sandstone and Claystone with some intercalations of Siltstone.

At the upper section the lithology was conformed mainly by Sand, Sandstone intercalated with Claystone and Siltstone.

Sand: white, 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.

Sandstone: light gray, medium light gray, occasionally very light gray, olive gray, very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity.

Fluorescence: NVOS, trazas-15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.

Claystone: medium dark gray, dark gray, locally grayish black, earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.

Siltstone: medium gray, locally medium dark gray, occasionally medium light gray, earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

In the middle section the lithology was conformed mainly by Claystone, Sand, Sandstone intercalated with Siltstone.

Claystone: medium dark gray, locally medium gray, occasionally dark gray, earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.

Sand: white, 40% coarse to very coarse, 40% medium, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.

Sandstone: light gray, medium light gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with shell fragments and dark minerals inclusions, poor visual porosity.

Fluorescence: NVOS, traces-20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.

Siltstone: medium gray, medium dark gray, earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

In the lower section the lithology was conformed mainly by Sand, Claystone and Sandstone intercalated with Siltstone.

Sand: white, 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.

Claystone: medium dark gray, dark gray, occasionally olive gray, grayish black, earthy, blocky to subblocky, subtabular in part, occasionally sublaminar, firm to moderately firm, silty in part, micromicaceous, very microcarbonaceous, non calcareous.

Sandstone: light gray, very light gray, locally medium light gray, very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, with veins coal and dark minerals inclusions, poor visual porosity.

Fluorescence: NVOS, traces-25% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.

Siltstone: medium dark gray, medium gray, earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.

Accessories: calcite, pyrite, slickenside, shell fragments, dolomite, coal.

LITHOLOGICAL DESCRIPTION

WELL: LO6-29D

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
Started logging & Monitoring Data from 445 feet on August 23 th , 2013 In Talara Sandstone Mbr. (Talara Fm.)			
445 – 470	50	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	
	30	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	20	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite. NOTE: SAMPLE CONTAMINATED WITH 10% CEMENT.	
470 – 500	40	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	
	30	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	30	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite.	
500 – 530	40	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	
	40	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	20	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite.	
530 – 560	40	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30	sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	
	30	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite.	
560 – 590	60	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	
	30	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite.	
590 – 620	50	SAND: white (N9), 40% fine, 40% medium, 20% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	40	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	10	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite.	
620 – 650	50	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	30	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	20	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally amorphous, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite.	
650 – 680	60 20 20	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite.	
680 – 710	50 30 20	CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium light gray (N6), very fine to fine quartz grain, hyaline, angular, angular to subangular, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable, locally tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. SAND: white (N9), 60% very fine, 20% fine, 10% medium quartz grain, hyaline, translucent, subangular to angular, poor sorted. Accessories: calcite, pyrite.	
710 – 740	80 10 10	SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, consolidated, very tight, locally microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), coarse quartz grain, hyaline, translucent, subangular, well sorted. Accessories: calcite.	
740 – 770	60 30 10	SAND: white (N9), 70% medium, 20% fine, 10% coarse quartz grain, hyaline, translucent, subangular to angular, locally subrounded, poor sorted. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, consolidate in part, very tight in part, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. CLAYSTONE: olive black (5Y 2/1), medium dark gray (N4), locally olive gray (5Y 4/1), earthy, blocky to subblocky, moderately firm, micromicaceous, microcarbonaceous, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite.	
LOBITOS Mbr. (TALARA FM.) TOP. AT 770.00 ft. MD (RT); 767.87 ft. TVD (RT)			
770 – 793	90 10 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky, firm, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SAND: white (N9), 80% very fine, 20% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite.	
793 – 830	100 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite.	
830 – 860	100 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite.	
860 – 890	100 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, pyrite, microfossils.	
890 – 920	100	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite, dolomite, microfossils.	
920 – 950	100	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, very slightly micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. Accessories: calcite, dolomite, coal, microfossils.	
950 – 980	100	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. Accessories: calcite, dolomite, pyrite, microfossils.	
980 – 1010	100 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, pyrite, microfossils.	
1010 – 1040	100 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils.	
1040 – 1070	100 Tr	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous to very slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, coal, microfossils.	
1070 – 1100	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils.	
1100 – 1130	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils.	
1130 – 1160	90 10	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, slightly silty in part, micromicaceous, slightly microcarbonaceous, slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils, coal.	
1160 – 1190	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils, pyrite.	
1190 – 1220	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium dark gray (N4), locally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils, pyrite.	
1220 – 1250	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, dolomite, microfossils, pyrite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
1250 – 1280	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, dolomite, microfossils.	
1280 – 1310	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, dolomite, microfossils.	
1310 – 1340	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, dolomite, microfossils.	
1340 – 1370	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, dolomite.	
1370 – 1400	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. SANDSTONE: medium dark gray (N4), medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, consolidated, micromicaceous, microcarbonaceous, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite.	
1400 – 1430	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, dolomite, gypsum.	
1430 – 1460	100	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: dolomite, calcite.	
1460 – 1490	90 10	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. SANDSTONE: medium dark gray (N4), medium gray (N5), very fine to fine quartz grain, hyaline, subangular, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, micromicaceous, microcarbonaceous, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite.	
1490 – 1520	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. SANDSTONE: medium dark gray (N4), medium gray (N5), very fine	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		to fine quartz grain, hyaline, subangular, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, micromicaceous, microcarbonaceous, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite.	
1520 – 1550	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: dolomite.	
1550 – 1580	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. SANDSTONE: medium dark gray (N4), medium gray (N5), very fine to fine quartz grain, hyaline, subangular, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, micromicaceous, microcarbonaceous, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite.	
1580 – 1610	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: dolomite, calcite.	
1610 – 1640	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally splintery, firm to moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: dolomite, microfossils.	
1640 – 1670	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally splintery, firm to moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite.	
1670 – 1700	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally splintery, firm to moderately firm, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, massive, with dark lithic minerals inclusion. Accessories: calcite.	
1700 – 1730	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally splintery, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, massive, with dark lithic minerals inclusion. Accessories: calcite, microfossils.	
1730 – 1760	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subplaty, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, hard in part, massive, with dark lithic minerals inclusion. Accessories: calcite.	
1760 – 1790	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	Tr	DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, hard in part, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite.	
1790 – 1820	50	SANDSTONE: medium gray (N5), locally medium dark gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, occasionally tight, dirty, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	30	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	20	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	Tr	DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, hard in part, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite, coal.	
1820 – 1850	50	SANDSTONE: medium gray (N5), locally medium dark gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, occasionally tight, dirty, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show.	
	40	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	10	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	Tr	DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, hard in part, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite, bentonite.	
1850 – 1880	100	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), locally medium dark gray (N5),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, occasionally tight, dirty, microcarbonaceous, with dark and greenish minerals inclusion, poor visual porosity. No Oil Show. DOLOMITE: pale yellowish brown (10YR 6/2), earthy, subblocky, locally splintery, moderately hard to moderately soft, hard in part, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite.	
1880 – 1910	80 20	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to firm, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite.	
1910 – 1940	90 10	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to firm, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite.	
1940 – 1970	90 10	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to firm, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite.	
1970 – 1995	90 10	CLAYSTONE: olive black (5Y 2/1), locally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subplaty, moderately firm to firm, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite, pyrite.	
1995 – 2030	100	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, subblocky, locally subplaty, very occasionally tabular, moderately firm to moderately soft, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, coal, dolomite. NOTE: SAMPLE CONTAMINATED WITH CEMENT.	
2030 – 2060	100	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subplaty, very occasionally	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	subtabular, moderately firm to moderately soft, micromicaceous, microcarbonaceous, very slightly calcareous to non calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite. NOTE: SAMPLE CONTAMINATED WITH CHEMICAL PRODUCTS.	
2060 – 2090	90 10	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally tabular, occasionally sublaminae, moderately firm to moderately soft, micromicaceous, microcarbonaceous, very slightly calcareous to non calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite.	
2090 – 2120	90 10	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, occasionally tabular, occasionally sublaminae, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite.	
2120 – 2150	90 10	CLAYSTONE: olive black (5Y 2/1), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, very occasionally tabular, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), pale yellowish brown (10YR 6/2), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: calcite.	
2150 – 2180	90 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite.	
2180 – 2210	90 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite, coal.	
TEREBRATULA Mbr. (TALARA FM.) TOP. AT 2234.00 ft. MD (RT); 1844.52 ft. TVD (RT)			
2210 – 2240	60	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20 10 10	occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusion, poor visual porosity. No Oil Show. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite, coal.	
2240 – 2270	50 30 10 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusion, poor visual porosity. No Oil Show. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite, coal.	
2270 – 2300	70 10 10 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusion, poor visual porosity. No Oil Show. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite, coal.	
2300 – 2330	90 10 Tr Tr	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, coal.	
2330 – 2360	80	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, moderately firm to moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	20	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	Tr	DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion.	
	Tr	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, coal.	
2360 – 2390	70	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm, locally moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	30	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	Tr	DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion.	
	Tr	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, coal, pyrite.	
2390 – 2420	70	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm, locally moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	20	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show.	
	Tr	DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: calcite, coal, pyrite, microfossils.	
2420 – 2450	90	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, micromicaceous, microcarbonaceous, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, irregular fracture, with dark lithic minerals inclusion. Accessories: calcite, coal, pyrite.	
2450 – 2480	80 10 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, dolomite, coal, pyrite, microfossils.	
2480 – 2510	70 20 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, coal, pyrite.	
2510 – 2540	70 20 10	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 60% very fine to fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, coal, pyrite.	
2540 – 2570	70 20	CLAYSTONE: olive black (5Y 2/1), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SAND: white (N9), 60% very fine to fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, coal, pyrite.	
2570 – 2600	40	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous.	
	40	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	20	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, pyrite.	
2600 – 2630	70	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous.	
	20	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, dolomite, pyrite.	
2630 – 2660	80	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous.	
	20	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, dolomite, pyrite.	
CHACRA FM. TOP. AT 2667.00 ft. MD (RT); 2052.23 ft. TVD (RT)			
2660 – 2690	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), locally medium light gray (N6),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils.	
2690 – 2720	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils.	
2720 – 2750	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, microfossils.	
2750 – 2780	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: abundant glauconite, calcite, dolomite, microfossils.	
2780 – 2810	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: abundant glauconite, calcite, dolomite, microfossils.	
2810 – 2840	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: abundant microfossils, glauconite, calcite, dolomite.	
2840 – 2870	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: microfossils, glauconite, calcite, dolomite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
2870 – 2900	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: microfossils, glauconite, calcite, dolomite, pyrite.	
2900 – 2930	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, microfossils, glauconite, coal, dolomite, pyrite.	
2930 – 2960	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, locally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, microfossils, glauconite, coal, dolomite, pyrite.	
2960 – 2990	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, moderately soft, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, coal, dolomite, pyrite.	
2990 – 3020	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, moderately soft, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, coal, pyrite.	
3020 – 3050	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky, locally subblocky, very occasionally subtabular, moderately firm, locally moderately soft, silty in part, micromicaceous, microcarbonaceous, slightly calcareous to very slightly calcareous. Accessories: calcite, coal, microfossils, pyrite.	
3050 – 3080	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky, locally subblocky, moderately firm, occasionally silty in part, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: dolomite, calcite, coal, microfossils.	
3080 – 3110	100 Tr	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky, locally subblocky, locally subtabular, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous. SANDSTONE: medium light gray (N6), very fine quartz grain, hyaline, subrounded, fair to well sorted, argillaceous matrix, locally calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, coal, pyrite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
3110 – 3140	90	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky, locally subblocky, locally subtabular, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), very fine quartz grain, hyaline, subrounded, fair to well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, coal, pyrite.	
3140 – 3170	90	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm, occasionally silty, occasionally with glauconite inclusions, micromicaceous, microcarbonaceous, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), very fine quartz grain, hyaline, subrounded, fair to well sorted, calcareous matrix, calcareous cement, moderately friable to moderately consolidate, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, coal, pyrite.	
3170 – 3200	90	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm, occasionally silty, occasionally with glauconite inclusions, micromicaceous, microcarbonaceous, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), very fine quartz grain, hyaline, subrounded, fair to well sorted, calcareous matrix, calcareous cement, moderately friable to moderately consolidate, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, coal, pyrite.	
3200 – 3230	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, very occasionally subtabular, moderately firm, occasionally silty, occasionally with glauconite inclusions, micromicaceous, microcarbonaceous, slightly calcareous.	
	Tr	SANDSTONE: medium light gray (N6), very fine quartz grain, hyaline, subrounded, fair to well sorted, calcareous matrix, calcareous cement, moderately friable to moderately consolidate, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, coal.	
3230 – 3260	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, subblocky, moderately firm to firm, silty in part, occasionally with glauconite inclusions, micromicaceous, microcarbonaceous, slightly calcareous.	
		Accessories: dolomite, glauconite, calcite, pyrite, coal.	
3260 – 3290	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky, locally subblocky, moderately firm, locally moderately soft, silty in part, occasionally with coal inclusions, micromicaceous, microcarbonaceous, very slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: dolomite, calcite, pyrite.	
3290 – 3320	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, moderately firm, locally moderately soft, very occasionally silty, occasionally with coal inclusions, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: dolomite, calcite, coal.	
3320 – 3350	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, subblocky, locally blocky, moderately firm to firm, occasionally silty, occasionally with coal inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, coal, dolomite.	
3350 – 3380	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, subblocky to blocky, moderately firm to firm, occasionally silty, occasionally with coal inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, coal, dolomite.	
3380 – 3410	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, subblocky to blocky, occasionally subtabular, moderately firm to firm, silty in part, occasionally with coal inclusions, micromicaceous, microcarbonaceous, very slightly calcareous to slightly calcareous. Accessories: calcite, coal, dolomite.	
3410 – 3440	100	CLAYSTONE: olive black (5Y 2/1), occasionally medium gray (N5), locally medium dark gray (N4), earthy, subblocky to blocky, occasionally subtabular, moderately firm to firm, silty in part, occasionally with coal inclusions, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, coal, dolomite.	
3440 – 3470	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, silty in part, occasionally with coal inclusions, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, coal, dolomite, microfossils.	
3470 – 3500	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, silty in part, occasionally with coal inclusions, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, coal, dolomite, pyrite, microfossils.	
3500 – 3530	100	CLAYSTONE: olive black (5Y 2/1), locally medium dark gray (N4), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, very slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite, coal, dolomite, pyrite, microfossils.	
3530 – 3560	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite.	
3560 – 3590	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite.	
3590 – 3620	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite, pyrite.	
3620 – 3650	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite.	
3650 – 3680	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite, microfossils, pyrite.	
3680 – 3710	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), occasionally medium gray (N5), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite, microfossils, pyrite.	
3710 – 3740	100	CLAYSTONE: medium dark gray (N4), locally olive black (5Y 2/1), earthy, subblocky to blocky, firm, occasionally silty, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, coal, dolomite.	
3740 – 3770	100 Tr	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally sublaminae, moderately firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), very fine to fine quartz grain, hyaline, subrounded, well sorted, calcareous matrix, calcareous cement, moderately friable to moderately hard, with dark minerals	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		inclusion, poor visual porosity. No Oil Show. Accessories: calcite, coal, dolomite, pyrite.	
3770 – 3800	90 10	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky, occasionally sublaminal, moderately firm, silty in part, occasionally with coal inclusion, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), very fine to fine quartz grain, hyaline, subrounded, well sorted, calcareous matrix, calcareous cement, moderately friable to moderately hard, with dark minerals inclusion, poor visual porosity. No Oil Show. Accessories: calcite, dolomite, pyrite.	
3800 – 3830	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm, silty in part, with coal inclusion in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, coal.	
3830 – 3860	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky to blocky, locally subtabular, occasionally sublaminal, moderately firm to firm, silty in part, with coal inclusion in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite.	
3860 – 3890	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky to blocky, locally sublaminal, occasionally subtabular, moderately firm to firm, silty in part, with coal inclusion in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, microfossils.	
3890 – 3920	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky to blocky, locally sublaminal, occasionally subtabular, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, pyrite.	
3920 – 3950	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky, locally sublaminal, occasionally subtabular, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, coal, pyrite.	
3950 – 3980	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, coal, pyrite.	
3980 – 4010	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky to blocky, locally sublaminal, firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, pyrite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
4010 – 4040	100	CLAYSTONE: medium dark gray (N4), olive black (5Y 2/1), locally olive gray (5Y 4/1), earthy, subblocky to blocky, locally sublaminal, very occasionally subtabular, firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: dolomite, calcite, coal.	
4040 – 4070	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, subblocky to blocky, locally sublaminal, firm to moderately consolidate, very occasionally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, dolomite, coal.	
4070 – 4100	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, subblocky to blocky, locally sublaminal, firm to moderately consolidate, silty in part, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite.	
4100 – 4130	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky, occasionally subtabular, firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, coal.	
4130 – 4160	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky, occasionally subtabular, firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, coal.	
4160 – 4190	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, coal.	
4190 – 4220	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular to sublaminal, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, pyrite.	
4220 – 4250	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, pyrite, microfossils.	
4250 – 4280	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, pyrite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
4280 – 4310	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, pyrite, coal.	
4310 – 4340	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, pyrite, microfossils, coal.	
4340 – 4370	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, pyrite, coal.	
4370 – 4400	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, pyrite, coal, microfossils.	
4400 – 4430	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, pyrite, coal, microfossils.	
4430 – 4460	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, pyrite, microfossils, coal.	
4460 – 4490	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, pyrite, microfossils.	
4490 – 4500	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, glauconite, microfossils.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
4500 – 4510	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, occasionally subtabular to sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, pyrite, microfossils, glauconite.	
4510 – 4520	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, microfossils.	
4520 – 4530	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, microfossils.	
4530 – 4540	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, microfossils.	
4540 – 4550	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils.	
4550 – 4560	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils, glauconite.	
4560 – 4570	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils, glauconite.	
4570 – 4580	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils, glauconite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
4580 – 4590	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils, glauconite.	
4590 – 4600	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: abundant glauconite, calcite, dolomite, microfossils.	
4600 – 4610	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: abundant glauconite, calcite, dolomite, microfossils.	
4610 – 4620	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: abundant glauconite, calcite, dolomite, microfossils.	
4620 – 4630	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: abundant glauconite, calcite, dolomite, microfossils.	
4630 – 4640	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: glauconite, calcite, dolomite, pyrite, microfossils.	
4640 – 4650	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: glauconite, calcite, dolomite, pyrite, microfossils.	
4650 – 4660	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: glauconite, calcite, dolomite, microfossils.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
4660 – 4670	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: glauconite, calcite, dolomite, microfossils.	
4670 – 4680	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: glauconite, calcite, dolomite, microfossils.	
4680 – 4690	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: glauconite, calcite, dolomite, microfossils.	
4690 – 4700	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils.	
4700 – 4710	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: calcite, dolomite, microfossils.	
4710 – 4720	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm, silty, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, dolomite, microfossils.	
4720 – 4730	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, silty, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: calcite, dolomite, glauconite, microfossils.	
4730 – 4740	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, subblocky, locally subtabular to sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, slightly calcareous. Accessories: microfossils, glauconite, calcite, dolomite.	
4740 – 4750	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, subblocky to blocky, locally sublaminae, occasionally subtabular to tabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		glauconite inclusions, slightly calcareous. Accessories: glauconite, calcite, dolomite, microfossils.	
4750 – 4760	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, subblocky to blocky, occasionally sublaminal, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, slightly calcareous. Accessories: glauconite, calcite, dolomite, microfossils.	
4760 – 4770	90 10	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally sublaminal, occasionally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, very slightly calcareous. SILTSTONE: medium gray (N5), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, glauconite.	
4770 – 4780	100 Tr	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally sublaminal to subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, very slightly calcareous. SILTSTONE: medium gray (N5), locally olive gray (5Y 4/1), earthy, blocky to subblocky, firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: glauconite, pyrite, microfossils.	
4780 – 4790	100 Tr	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally sublaminal to subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, very slightly calcareous. SILTSTONE: medium gray (N5), locally olive gray (5Y 4/1), earthy, blocky, firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: calcite, glauconite, pyrite.	
4790 – 4800	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally sublaminal to subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, with glauconite inclusions, very slightly calcareous. Accessories: glauconite, pyrite, calcite.	
4800 – 4810	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky, locally subblocky, occasionally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, very slightly calcareous. Accessories: calcite, glauconite, pyrite, dolomite.	
4810 – 4820	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, occasionally	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, very slightly calcareous. Accessories: dolomite, glauconite, pyrite.	
4820 – 4830	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, occasionally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, very slightly calcareous. Accessories: calcite, glauconite, pyrite.	
4830 – 4840	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to non calcareous. Accessories: calcite, dolomite, pyrite.	
4840 – 4850	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to non calcareous. Accessories: calcite, dolomite, pyrite.	
4850 – 4860	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky, locally subblocky, locally subtabular to sublaminar, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to slightly calcareous. Accessories: calcite, dolomite.	
4860 – 4870	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally sublaminar, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to slightly calcareous. Accessories: calcite, dolomite, glauconite.	
4870 – 4880	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, blocky to subblocky, locally sublaminar, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to slightly calcareous. Accessories: calcite, dolomite, glauconite.	
4880 – 4890	100	CLAYSTONE: olive gray (5Y 4/1), locally medium dark gray (N4), occasionally dark gray (N3), earthy, subblocky to blocky, locally sublaminar, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to slightly calcareous. Accessories: dolomite, calcite, coal, pyrite.	
4890 – 4900	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, subblocky to blocky, locally sublaminar, firm to moderately firm, silty, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous to slightly calcareous. Accessories: calcite, dolomite, coal, microfossils.	
4900 – 4910	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, subblocky to blocky, locally sublaminal, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous to slightly calcareous. Accessories: calcite, dolomite, coal.	
4910 – 4920	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, subblocky to blocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: calcite, dolomite.	
4920 – 4930	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, subblocky to blocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: dolomite, calcite.	
4930 – 4940	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, subblocky to blocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous to non calcareous. Accessories: dolomite, calcite.	
4940 – 4950	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, subblocky to blocky, locally sublaminal, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous to non calcareous. Accessories: dolomite, calcite, pyrite.	
4950 – 4960	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous. Accessories: dolomite, calcite, pyrite.	
4960 – 4970	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, very slightly calcareous to slightly calcareous. Accessories: dolomite, calcite.	
4970 – 4980	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, very slightly calcareous. Accessories: dolomite, calcite.	
4980 – 4990	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with vein coal inclusions, very slightly calcareous. NOTE: SAMPLE CONTAMINATED WITH 100% CEMENT.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
4990 – 5000	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with vein coal inclusions, very slightly calcareous. NOTE: SAMPLE CONTAMINATED WITH 90% CEMENT.	
5000 – 5010	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with vein coal inclusions, very slightly calcareous. Accessories: calcite, pyrite. NOTE: SAMPLE CONTAMINATED WITH 10% CEMENT.	
5010 – 5020	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with vein coal inclusions, very slightly calcareous. Accessories: calcite, pyrite. NOTE: SAMPLE CONTAMINATED WITH TRACES CEMENT.	
5020 – 5030	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally with vein coal inclusions, very slightly calcareous. Accessories: calcite, pyrite, coal.	
5030 – 5040	90	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
5040 – 5050	90	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
5050 – 5060	80	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	20	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, coal, glauconite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
5060 – 5070	70	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	20	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	Tr	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: abundant glauconite, calcite, coal.	
5070 – 5080	90	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: abundant glauconite, calcite, coal.	
5080 – 5090	80	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	DOLOMITE: dark yellowish brown (10YR 4/2), locally olive gray (5Y 4/1), earthy, subblocky, moderately hard to hard, massive, with dark lithic minerals inclusion. Accessories: glauconite, calcite, pyrite.	
5090 – 5100	70	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: glauconite, calcite, pyrite, dolomite.	
5100 – 5110	60	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	40	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: glauconite, calcite, dolomite.	
5110 – 5120	60	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), occasionally medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: glauconite, calcite, pyrite, dolomite.	
5120 – 5130	60	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: glauconite, calcite, pyrite, dolomite.	
5130 – 5140	30	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30	firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: glauconite, calcite, pyrite, dolomite.	
5140 – 5150	60	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: glauconite, calcite, pyrite, dolomite.	
5150 – 5160	50	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: glauconite, calcite, pyrite, dolomite.	
5160 – 5170	60	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: glauconite, calcite, pyrite, dolomite.	
5170 – 5180	60	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: glauconite, calcite, pyrite, dolomite.	
5180 – 5190	60	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, dirty, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: glauconite, calcite, pyrite.	
5190 – 5200	70	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30 Tr	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: glauconite, calcite, pyrite.	
5200 – 5210	80 20 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, glauconite, dolomite, pyrite.	
5210 – 5220	80 20 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium gray (N5), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, dolomite.	
5220 – 5230	90 10	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite.	
5230 – 5240	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, glauconite, dolomite.	
5240 – 5250	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite.	
5250 – 5260	90 10	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: abundant dolomite, calcite, pyrite.	
5260 – 5270	90 10	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite.	
5270 – 5280	80 10 10	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with glauconite and dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, pyrite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
5280 – 5290	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite.	
5290 – 5300	100	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	Tr	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite.	
5300 – 5310	80	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite.	
5310 – 5320	80	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite.	
5320 – 5330	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
5330 – 5340	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, pyrite, coal.	
5340 – 5350	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: abundant dolomite, calcite, coal.	
5350 – 5360	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: abundant dolomite, calcite, calcareous fragments, coal.	
5360 – 5370	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: abundant dolomite, calcite, calcareous fragments, coal.	
5370 – 5380	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: abundant dolomite, calcite, calcareous fragments, coal.	
5380 – 5390	100 Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: abundant dolomite, calcite, calcareous fragments, coal.	
5390 – 5400	100 Tr Tr	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. DOLOMITE: dark yellowish brown (10YR 4/2), earthy, subblocky, moderately hard, massive, with dark lithic minerals inclusion. Accessories: abundant dolomite, calcite, calcareous fragments, microfossils.	
5400 – 5410	60 30 10	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, calcareous fragments.	
5410 – 5420	70 20	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, calcareous fragments.	
5420 – 5430	80	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, calcareous fragments.	
5430 – 5440	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite.	
5440 – 5450	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		visual porosity. No Oil Show. Accessories: dolomite, calcite.	
5450 – 5460	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite, calcareous fragments.	
5460 – 5470	90	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	
5470 – 5480	80	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	
5480 – 5490	70	CLAYSTONE: medium dark gray (N4), locally olive gray (5Y 4/1), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, occasionally moderately soft, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	30	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
5490 – 5500	100 Tr	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite, calcareous fragments.	
5500 – 5510	100 Tr	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	
5510 – 5520	70 30	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium gray (N5), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, calcareous fragments.	
5520 – 5530	100 Tr	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. Accessories: calcite, calcareous fragments, pyrite.	
5530 – 5540	100 Tr	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	
RIO BRAVO FM. TOP. AT 5549.00 ft. MD (RT); 3494.38 ft. TVD (RT)			
5540 – 5550	100	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: dolomite, calcite.	
5550 – 5560	40 40 20	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SAND: white (N9), 60% medium, 40% very fine to fine quartz grain, hyaline, translucent, subrounded to subangular, local angular, fair sorted. SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: calcite, calcareous fragments.	5
5560 – 5570	50 30 20	SAND: white (N9), 60% medium, 40% very fine to fine quartz grain, hyaline, translucent, subrounded to subangular, local angular, fair sorted. SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: calcite, calcareous fragments.	5
5570 – 5580	50	SAND: white (N9), 60% medium, 40% very fine to fine quartz grain, hyaline, translucent, subrounded to subangular, local angular, fair	10

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30	sorted. SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	20	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: calcite, calcareous fragments.	
5580 – 5590	40	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	15
	40	SAND: white (N9), 50% medium, 40% fine, 10% coarse quartz grain, hyaline, translucent, subrounded to subangular, local angular, poor sorted.	
	20	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: calcite, calcareous fragments, pyrite.	
5590 – 5600	40	SAND: white (N9), 60% medium, 40% fine quartz grain, hyaline, translucent, subrounded to subangular, local angular, fair sorted.	
	30	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 25% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. F-POS.	25
	30	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		calcareous. Accessories: calcite, calcareous fragments, pyrite.	
5600 – 5610	70	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	5
	20	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity.	
	10	Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcareous fragments, calcite.	
5610 – 5620	90	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	
5620 – 5630	90	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcareous fragments, dolomite, calcite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
5630 – 5640	70	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	30	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite.	
5640 – 5650	80	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite.	
5650 – 5660	100	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	Tr	SILTSTONE: medium dark gray (N4), locally medium gray (N5), earthy, blocky to subblocky, locally amorphous, moderately firm, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: dolomite, calcite.	
5660 – 5670	100	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
		Accessories: dolomite, calcite, pyrite.	
5670 – 5680	80	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: dolomite, calcite.	
5680 – 5690	60	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	40	moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: dolomite, calcite, pyrite, coal.	
5690 – 5700	60	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. Accessories: calcite, pyrite, coal.	
5700 – 5710	50	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	10
	40	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, poor sorted.	
	10	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: calcite, pyrite, shell fragments.	
5710 – 5720	50	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	5
	30	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted.	
	20	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		microcarbonaceous, non calcareous to slightly calcareous. Accessories: calcite, pyrite.	
5720 – 5730	70 20 10	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. Accessories: calcite, pyrite.	TR
5730 – 5740	60 40 Tr	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, well sorted. Accessories: calcite, pyrite.	
5740 – 5750	80 20	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
5750 – 5760	70 30	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite, pyrite.	
5760 – 5770	90 10	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
5770 – 5780	70 20 10	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, well sorted. Accessories: abundant pyrite, calcite.	
5780 – 5790	40 40 20	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 50% fine, 50% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, poor sorted. Accessories: pyrite, calcite, coal, shell fragments.	
5790 – 5800	60 20	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	20

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subrounded to subangular, poor sorted. Accessories: pyrite, calcite, coal, shell fragments.	
5800 – 5810	70	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 30% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	30
	20	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	10	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. Accessories: pyrite, calcite, coal, shell fragments.	
5810 – 5820	70	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	30	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. Accessories: pyrite, calcite, coal.	
5820 – 5830	80	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
5830 – 5840	50	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	15
	30	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. Accessories: pyrite, calcite, coal.	
5840 – 5850	50 30 20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 30% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal.	30
5850 – 5860	50 40 10	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 50% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. F-POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments.	50
5860 – 5870	60 30	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 50% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual	50

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	ring at natural light. F-POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
5870 – 5880	50	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subrounded to subangular, fair sorted.	40
	30	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 40% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. F-POS.	
	20	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
5880 – 5890	40	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 30% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. F-POS.	30
	40	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal, shell fragments.	
5890 – 5900	80	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity.	
	Tr	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal, shell fragments.	
5900 – 5910	80	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20 Tr	subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal.	
5910 – 5920	60 30 10	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SAND: white (N9), 50% fine, 50% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite, coal, shell fragments.	10
5920 – 5930	50 30 20	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal.	15
2930 – 5940	70 20	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut	20

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally subplaty, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal.	
5940 – 5950	40 30 30	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, shell fragments, coal.	10
5950 – 5960	40 30 30	CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite, coal.	TR
5960 – 5970	50 30	SAND: white (N9), 50% fine, 50% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual	5

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	ring at natural light. POS. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal.	
5970 – 5980	60 30 10	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 50% fine, 50% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous to slightly calcareous. Accessories: pyrite, calcite, coal.	10
5980 – 5990	50 30 20	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 40% fine, 40% medium, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	20
5990 – 6000	40 40	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), locally dark gray (N3),	15

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	
6000 – 6010	70	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	10
	20	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, coal.	
6010 – 6020	90	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	10
	10	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	Tr	CLAYSTONE: dark gray (N3), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6020 – 6030	60	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	10
	30	SANDSTONE: medium light gray (N6), locally light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	CLAYSTONE: dark gray (N3), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6030 – 6040	60	SAND: white (N9), 50% medium, 30% fine, 20% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	15
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	20	CLAYSTONE: dark gray (N3), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6040 – 6050	40	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	10
	40	CLAYSTONE: dark gray (N3), locally medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), 50% medium, 30% fine, 20% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite.	
6050 – 6060	40	SAND: white (N9), 50% medium, 40% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	TR
	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	30	CLAYSTONE: dark gray (N3), locally medium dark gray (N4),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6060 – 6070	60 20 20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite, shell fragments.	TR
6070 – 6080	40 40 20	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, shell fragments.	15
6080 – 6090	50 30	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	5

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
6090 – 6100	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	5
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	20	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, shell fragments.	
6100 – 6110	40	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	TR
	40	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite.	
6110 – 6120	50	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	TR
	40	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
6120 – 6130	40	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show.	
	40	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	20	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6130 – 6140	40	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: pyrite, calcite.	
6140 – 6150	50	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show.	
	40	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: pyrite, calcite.	
6150 – 6160	50	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	40	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite.	
6160 – 6170	60 30 10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: pyrite, calcite.	
6170 – 6180	70 20 10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal.	
6180 – 6190	60 20 20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal.	
6190 – 6200	70 20 10	SANDSTONE: light gray (N7), very light gray (N8), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite, coal.	
6200 – 6210	80 20 Tr	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6210 – 6220	40 30 30	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 50% medium, 30% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
6220 – 6230	40 40 20	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 40% medium, 30% fine, 30% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	
6230 – 6240	50	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	5

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30	SAND: white (N9), 50% medium, 30% coarse to very coarse, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	20	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, coal.	
6240 – 6250	40	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	5
	40	SAND: white (N9), 50% medium, 30% coarse to very coarse, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	20	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, slickenside.	
6250 – 6260	50	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	TR
	30	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), 50% medium, 30% coarse to very coarse, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	
6260 – 6270	50	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut	TR

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30 20	fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 50% medium, 30% coarse to very coarse, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, coal.	
6270 – 6280	50 40 10	SANDSTONE: very light gray (N8), light gray (N7), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 50% medium, 30% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, shell fragments, slickenside, coal.	
6280 – 6290	40 40 20	SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 40% medium, 30% fine, 30% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, shell fragments, slickenside, coal.	
6290 – 6300	50 40 10	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 40% medium, 30% fine, 30% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
6300 – 6310	40	SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SAND: white (N9), 60% medium, 30% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal, shell fragments.	
6310 – 6320	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 30% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	
6320 – 6330	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 30% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	
6330 – 6340	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 30% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, coal.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
6340 – 6350	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), locally medium light gray (N6), occasionally very light gray (N8), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
6350 – 6360	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
6360 – 6370	90	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
6370 – 6380	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite.	
6380 – 6390	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite.	
6390 – 6400	80	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
6400 – 6410	40	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	40	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
6410 – 6420	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
6420 – 6430	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
6430 – 6440	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
6440 – 6450	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite, pyrite.	
6450 – 6460	60 20 20	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
6460 – 6470	60 30 10	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
6470 – 6480	50 20 20 10	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: calcite, pyrite, shell fragments.	
6480 – 6490	50	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: calcite, pyrite, shell fragments, slickenside.	
6490 – 6500	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, pyrite, coal.	
6500 – 6510	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, coal, slickenside.	
6510 – 6520	50	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20 10	microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 70% medium, 30% fine quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, pyrite, coal.	
6520 – 6530	60 20 10 10	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 60% medium, 40% fine quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, pyrite, coal.	
6530 – 6540	80 10 10 Tr	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 60% medium, 40% fine quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, pyrite, coal.	
6540 – 6550	80 10	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal, dolomite.	
6550 – 6560	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), 60% medium, 40% fine quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SANDSTONE: medium light gray (N6), light gray (N7), occasionally olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal, dolomite.	
6560 – 6570	60	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), light gray (N7), occasionally olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 30% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, poor sorted. Accessories: calcite, pyrite, coal, dolomite.	
6570 – 6580	80	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: medium light gray (N6), light gray (N7), occasionally olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10 Tr	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, poor sorted. Accessories: calcite, pyrite, coal, dolomite.	
6580 – 6590	70 20 10 Tr	CLAYSTONE: dark gray (N3), locally grayish black (N2), occasionally medium dark gray (N4), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 60% medium, 40% fine quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, fair sorted. Accessories: calcite, pyrite, coal, dolomite.	
6590 – 6600	80 10 10	CLAYSTONE: dark gray (N3), locally grayish black (N2), olive black (5Y 4/1), occasionally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite.	
6600 – 6610	60 20	CLAYSTONE: dark gray (N3), locally grayish black (N2), olive black (5Y 4/1), occasionally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10 10	moderately friable to moderately consolidated, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 60% medium, 40% fine quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, fair sorted. Accessories: calcite, pyrite, dolomite.	
6610 – 6620	70 20 10 Tr	CLAYSTONE: dark gray (N3), locally grayish black (N2), olive black (5Y 4/1), occasionally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 80% fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite.	
6620 – 6630	80 10 10 Tr	CLAYSTONE: dark gray (N3), locally grayish black (N2), olive black (5Y 4/1), occasionally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 80% fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite.	
6630 – 6640	70	CLAYSTONE: dark gray (N3), locally grayish black (N2), olive black (5Y 4/1), occasionally olive gray (5Y 4/1), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), 90% fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite.	
6640 – 6650	70	CLAYSTONE: dark gray (N3), locally olive black (5Y 4/1), olive gray (5Y 4/1), occasionally grayish black (N2), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), locally light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, dolomite.	
6650 – 6660	50	CLAYSTONE: dark gray (N3), locally olive black (5Y 4/1), olive gray (5Y 4/1), occasionally grayish black (N2), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	TR
	30	SANDSTONE: medium light gray (N6), locally light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), 90% fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite, pyrite, dolomite.	
6660 – 6670	60 20 20 Tr	CLAYSTONE: dark gray (N3), locally olive black (5Y 4/1), olive gray (5Y 4/1), occasionally grayish black (N2), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 90% fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite.	TR
6670 – 6680	30 30 30 10	CLAYSTONE: dark gray (N3), locally olive black (5Y 4/1), olive gray (5Y 4/1), occasionally grayish black (N2), medium dark gray (N4), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: medium light gray (N6), locally light gray (N7), occasionally medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 80% fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	10
6680 – 6690	50	SANDSTONE: light gray (N7), medium light gray (N6), locally olive gray (5Y 4/1), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity.	10

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30 10 10	Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 80% fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
6690 – 6700	70 20 10 Tr	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), locally olive gray (5Y 4/1), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite.	TR
6700 – 6710	80 10 10 Tr	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally olive gray (5Y 4/1), very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No oil Show. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), very fine to fine, traces medium, quartz grain,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite, microfossils.	
6710 – 6720	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, non calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally olive gray (5Y 4/1), very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, glauconite, dolomite, microfossils.	
6720 – 6730	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, glauconite, dolomite, microfossils.	
6730 – 6740	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	Tr	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, glauconite, microfossils.	
6740 – 6750	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, pyrite, glauconite, microfossils, bentonite.	
6750 – 6760	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, with glauconite inclusions, non calcareous. Accessories: calcite, pyrite, glauconite, microfossils, bentonite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
6760 – 6770	100 Tr	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, with glauconite inclusions, non calcareous. SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, scarce calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, glauconite, microfossils, bentonite.	
6770 – 6780	100	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, with glauconite inclusions, non calcareous. Accessories: calcite, pyrite, microfossils, bentonite.	
6780 – 6790	90 10	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, with glauconite inclusions, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, microfossils, glauconite.	
6790 – 6800	90 10	CLAYSTONE: olive gray (5Y 4/1), medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, with glauconite inclusions, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, microfossils, glauconite.	
6800 – 6810	90 10 Tr	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, glauconite, microfossils, dolomite.	
6810 – 6820	80	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: glauconite, calcite, pyrite, microfossils, dolomite.	
6820 – 6830	70	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions non calcareous.	5
	20	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated, locally moderately friable, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: glauconite, calcite, pyrite, microfossils.	
6830 – 6840	30	CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions non calcareous.	10
	30	SANDSTONE: medium light gray (N6), light gray (N7), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated, locally moderately friable, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20 20	fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: glauconite, calcite, pyrite, microfossils, slickenside.	
6840 – 6850	40 40 10 10	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, abundant calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: glauconite, calcite, pyrite, slickenside.	10
6850 – 6860	50 30 10 10	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, abundant calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 60% very fine to fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. CLAYSTONE: medium dark gray (N4), olive gray (5Y 4/1), locally dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, occasionally with glauconite inclusions non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy,	20

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: glauconite, calcite, pyrite, slickenside.	
6860 – 6870	50	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, abundant calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	20
	30	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SAND: white (N9), 60% very fine to fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: calcite, pyrite, slickenside.	
6870 – 6880	60	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, abundant calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	20
	20	SAND: white (N9), 60% very fine to fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, fair sorted.	
	10	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, very slightly calcareous. Accessories: calcite, pyrite, glauconite.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
PALEGREDA FM. TOP. AT 6885.00 ft. MD (RT); 4456.58 ft. TVD (RT)			
6880 – 6890	50	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, abundant calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	20
	30	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
6890 – 6900	60	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm, locally moderately firm, occasionally silty, micromicaceous, microcarbonaceous, non calcareous.	5
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	SAND: white (N9), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
6900 – 6910	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, occasionally subtabular, firm to moderately firm, locally micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous. Accessories: calcite, pyrite, coal, microfossils.	
6910 – 6920	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, occasionally subtabular, firm to moderately firm, locally micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: coal, glauconite, dolomite, microfossils, pyrite.	
6920 – 6930	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, occasionally subtabular, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: coal, dolomite, microfossils, pyrite.	
6930 – 6940	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: coal, dolomite, pyrite.	
6940 – 6950	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: coal, dolomite, pyrite.	
6950 – 6960	100 Tr	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: coal, dolomite, pyrite.	
6960 – 6970	100 Tr	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
6970 – 6980	100 Tr	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
6980 – 6990	100 Tr	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
6990 – 7000	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
7000 – 7010	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
7010 – 7020	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins and glauconite inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
7020 – 7030	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins and glauconite inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: medium light gray (N6), medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, dolomite.	
7030 – 7040	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins and glauconite inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	SANDSTONE: medium light gray (N6), medium gray (N5), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, dolomite.	
7040 – 7050	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins and glauconite inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal.	
7050 – 7060	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins and glauconite inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal.	
7060 – 7070	100	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	Tr	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7070 – 7080	100	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	Tr	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal, slickenside.	
7080 – 7090	90	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally silty, locally	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7090 – 7100	90	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal, glauconite.	
7100 – 7110	90	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal, glauconite.	
7110 – 7120	90	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal, glauconite.	
7120 – 7130	80	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7130 – 7140	90	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	subtabular to sublaminar, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7140 – 7150	90 10	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7150 – 7160	100 Tr	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7160 – 7170	100 Tr	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite, coal.	
7170 – 7180	100 Tr	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal.	
7180 – 7190	100 Tr	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal.	
7190 – 7200	100 Tr	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally silty, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal.	
7200 – 7210	100 Tr	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal, pyrite, slickenside.	
7210 – 7220	80 20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, coal, pyrite.	
7220 – 7230	50 50	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, dolomite.	
7230 – 7240	50 30	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. CLAYSTONE: medium dark gray (N4), locally medium gray (N5),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SANDSTONE: light gray (N7), locally medium light gray (N6), very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7240 – 7250	60	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	30	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SANDSTONE: light gray (N7), locally medium light gray (N6), very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal, shell fragments.	
MOGOLLON FM. TOP. AT 7254.00 ft. MD (RT); 4765.21 ft. TVD (RT)			
7250 – 7260	60	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	20	SANDSTONE: light gray (N7), locally medium light gray (N6), very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal, shell fragments.	
7260 – 7270	30	SANDSTONE: light gray (N7), locally medium light gray (N6), very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point gold yellow to yellowish natural fluorescence. slow, weak, pale, even, pale yellowish white cut	5

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30 20 20	fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
7270 – 7280	40 20 20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), locally medium light gray (N6), very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point gold yellow to yellowish natural fluorescence, slow, weak, pale, even, pale yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: abundant pyrite, calcite, coal.	TR
7280 – 7290	70 20 10	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), locally medium light gray (N6), very fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: abundant pyrite, calcite, coal.	
7290 - 7300	50	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	TR
	20	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point gold yellow to yellowish natural fluorescence, slow, weak, pale, even, pale yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: abundant pyrite, calcite, coal.	
7300 – 7310	90	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7310 – 7320	60	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	20	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), locally medium light gray (N6), very	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7320 – 7330	70	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SAND: white (N9), 70% very fine to fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
7330 – 7340	40	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	30	SAND: white (N9), 70% very fine to fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
7340 – 7350	80	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminae, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous.	
	10	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite.	
7350 – 7360	90 10	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, dolomite.	
7360 – 7370	80 20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, dolomite.	
7370 – 7380	90 10 Tr	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, dolomite.	
7380 – 7390	60 20 20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminar, moderately firm to firm, locally moderately soft, silty in part, locally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous to very slightly calcareous. SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, dolomite.	
7390 – 7400	70	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, locally moderately soft, silty in part, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite.	
7400 – 7410	80	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, locally moderately soft, locally silty, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7410 – 7420	50	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, locally moderately soft, locally silty, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	30	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite, coal.	
7420 – 7430	90	SAND: white (N9), 80%very fine to fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, locally moderately soft, locally silty, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	Tr	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite.	
7430 – 7440	70	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally grayish black (N2), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, firm to moderately firm, locally moderately soft, locally silty, occasionally with coal veins inclusions, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), 80%very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7440 – 7450	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, occasionally micropyrritic, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7450 – 7460	80	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20 Tr	sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, occasionally micropyrritic, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, locally dirty, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7460 – 7470	50 30 10 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, occasionally micropyrritic, non calcareous. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, shell fragments.	
7470 – 7480	60 20 10 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 50% medium, 40% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, shell fragments.	
7480 – 7490	70 20	SAND: white (N9), 60% medium, 30% fine, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted,	TR

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10 Tr	scarse argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point gold yellow to yellowish natural fluorescence, slow, weak, pale, even, pale yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: shell fragments, pyrite.	
7490 – 7500	40 20 20	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarse argillaceous matrix, calcareous cement, moderately consolidated to moderately friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point gold yellow to yellowish natural fluorescence, slow, weak, pale, even, pale yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 60% medium, 30% coarse, 10% fine quartz grain, hyaline, translucent, subangular to subrounded, minor angular, poor sorted. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: shell fragments, pyrite.	5
7500 – 7510	50 20 20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, poor sorted. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: shell fragments, pyrite.	
7510 – 7520	40	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, poor sorted.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive black (5Y 2/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: shell fragments, pyrite, coal.	
7520 – 7530	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive black (5Y 2/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: shell fragments, pyrite, coal.	
7530 – 7540	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive black (5Y 2/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, coal, calcite.	
7540 – 7550	60 20 10 10	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally olive black (5Y 2/1), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm, moderately firm in part, locally silty, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: abundant pyrite, coal, calcite.	
7550 – 7560	90 10	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, coal.	TR
7560 – 7570	50 20 20 10	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium gray (N5), medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm, moderately firm in part, locally silty, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		microcarbonaceous, non calcareous. Accessories: shell fragments, pyrite, coal, calcite.	
7570 – 7580	60	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminar, firm, moderately firm in part, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: shell fragments, pyrite, coal, calcite.	
7580 – 7590	60	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	10
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), occasionally olive black (5Y 2/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminar, firm, moderately firm in part, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: shell fragments, pyrite, coal, calcite.	
7590 – 7600	90	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	10
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: shell fragments, pyrite, coal, calcite.	
7600 – 7610	80 20	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: shell fragments, pyrite, coal, calcite.	15
7610 – 7620	70 20 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous. Accessories: pyrite, calcite.	
7620 – 7630	60 20 10 10	SAND: white (N9), 80% fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), olive gray (5Y 2/1), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous. CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite.	
7630 – 7640	90 10	SAND: white (N9), 50% medium, 30% coarse, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, minor angular, poor sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 5% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, shell fragments, calcite.	5
7640 – 7650	80 20	SAND: white (N9), 50% medium, 30% coarse, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, minor angular, poor sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, shell fragments, calcite.	TR
7650 – 7660	30 30 20 20	SAND: white (N9), 60% fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous. Accessories: shell fragments, pyrite, calcite.	TR
7660 – 7670	30	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30 20 20	black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SILTSTONE: medium dark gray (N4), medium gray (N5), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous to non calcareous. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: shell fragments, pyrite, calcite.	
7670 – 7680	60 20 10 10	SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix in part, calcareous cement, moderately friable to moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), occasionally medium light gray (N6), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: shell fragments, pyrite, calcite.	
7680 – 7690	80 10 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite.	
7690 – 7700	80	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, locally silty, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7700 – 7710	30	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: pyrite, calcite.	
7710 – 7720	50	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	30	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7720 – 7730	50	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, shell fragments.	
7730 – 7740	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
7740 – 7750	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7750 – 7760	90	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7760 – 7770	50	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous.	
	30	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), 60% medium, 20% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, slickenside.	
7770 – 7780	40	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	30	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous.	
	10	SAND: white (N9), 60% medium, 20% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal.	
7780 – 7790	50	SANDSTONE: medium light gray (N6), light gray (N7), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	SAND: white (N9), 60% medium, 30% fine, 10% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	microcarbonaceous, grading to very fine sandstone, slightly calcareous. CLAYSTONE: dark gray (N3), medium dark gray (N4), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous. Accessories: pyrite, calcite.	
7790 – 7800	40	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	TR
	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous. Accessories: pyrite, calcite.	
7800 – 7810	60	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
7810 – 7820	70	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10 10 10	micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 50% fine, 50% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
7820 – 7830	60 20 10 10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, occasionally with coal veins inclusions, non calcareous. SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite.	
7830 – 7840	80 10 10	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite.	
7840 – 7850	70	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7850 – 7860	60	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7860 – 7870	60	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7870 – 7880	60	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
7880 – 7890	60	SAND: white (N9), 40% fine, 40% medium, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite.	
7890 – 7900	50	SAND: white (N9), 40% coarse to very coarse, 40% medium, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite.	
7900 – 7910	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), 40% coarse to very coarse, 40% medium, 20% fine quartz grain, hyaline, translucent, subangular to subrounded, poor sorted.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), very fine to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7910 – 7920	40	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	30	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 30% fine, 10% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite, slickenside.	
7920 – 7930	40	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	40	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), 60% medium, 30% fine, 10% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite.	
7930 – 7940	80	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
7940 – 7950	60	CLAYSTONE: dark gray (N3), medium dark gray (N4), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. Accessories: pyrite, calcite.	
7950 – 7960	50	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
7960 – 7970	70	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite.	
7970 – 7980	40	CLAYSTONE: medium dark gray (N4), occasionally dark gray (N3), medium gray (N5), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), 60% medium, 40% fine, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite, coal, shell fragments, slickenside.	
7980 – 7990	70	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
7990 – 8000	80	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
8000 – 8010	50	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, silty in part,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30	micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
8010 – 8020	60	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), 90% fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
8020 – 8030	40	SANDSTONE: light gray (N7), medium light gray (N6), locally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	SAND: white (N9), 90% fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
8030 – 8040	70	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), medium light gray (N6), locally very light gray (N8), occasionally olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
8040 – 8050	90	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), occasionally olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
8050 – 8060	80	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally olive gray (5Y 4/1), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, coal.	
8060 – 8070	80	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite.	
8070 – 8080	30	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
8080 – 8090	50	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: pyrite, calcite.	
8090 – 8100	70	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	Tr	argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SAND: white (N9), 70% fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: abundant pyrite, calcite, dolomite.	
8100 – 8110	40 30 20 10	SAND: white (N9), 50% medium, 30% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, shell fragments, slickenside.	TR
8110 – 8120	80 10 10 Tr	SAND: white (N9), 60% medium, 20% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	20

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: pyrite, calcite.	
8120 – 8130	40 30 20 10	SAND: white (N9), 60% medium, 20% fine, 20% coarse to very coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite, shell fragments.	TR
8130 – 8140	80 10 10 Tr	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 60% fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite, shell fragments.	TR
8140 – 8150	60	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminal, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	20	calcareous. SAND: white (N9), 60% fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally micropirytic, with shell fragments and coal veins inclusions, poor visual porosity. No Oil Show. Accessories: pyrite, calcite, shell fragments, coal, slickenside.	
8150 – 8160	50	SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally micropirytic, with shell fragments and coal veins inclusions, poor visual porosity. No Oil Show.	
	20	SAND: white (N9), 60% fine, 40% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	20	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminar, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, shell fragments, slickenside, coal.	
8160 – 8170	80	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminar, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine, traces medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally micropirytic, with shell fragments and coal veins inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal, slickenside.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
8170 – 8180	70	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally micropirytic, with shell fragments and coal veins inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal, slickenside.	
8180 – 8190	80	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), olive gray (5Y 4/1), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, scarce calcareous cement, moderately friable to friable, occasionally micropirytic, with shell fragments and coal veins inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
8190 – 8200	80	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, scarce calcareous cement, moderately friable to friable, occasionally micropirytic, with shell fragments and coal veins inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
8200 – 8210	40	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline,	10

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	30 20 10	subangular to subrounded, well sorted, argillaceous matrix, abundant calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropirytic, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 10% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, fair sorted. CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular, occasionally sublaminar, moderately firm to firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments, occasionally glauconite.	
8210 – 8220	80 20	SAND: white (N9), 80% fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, abundant calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropirytic, with shell fragments and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: pyrite, calcite, coal, shell fragments.	15
8220 – 8230	40 30 20	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropirytic, with shell fragments, coal veins and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SILTSTONE: medium gray (N5), occasionally medium dark gray (N4),	TR

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 90% very fine to fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: abundant pyrite, calcite, coal, shell fragments.	
8230 – 8240	40	SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrictic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), occasionally medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: abundant pyrite, calcite, coal, shell fragments.	
8240 – 8250	40	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrictic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	40	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	20	SILTSTONE: medium gray (N5), occasionally medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	CLAYSTONE: medium dark gray (N4), locally medium gray (N5), occasionally dark gray (N3), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
8250 – 8260	60	SANDSTONE: very light gray (N8), light gray (N7), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrictic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	30	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SILTSTONE: medium gray (N5), occasionally medium dark gray (N4),	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
8260 – 8270	50	SANDSTONE: very light gray (N8), light gray (N7), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	40	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
8270 – 8280	60	SANDSTONE: very light gray (N8), light gray (N7), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SILTSTONE: medium gray (N5), medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: abundant pyrite, calcite, coal, shell fragments.	
8280 – 8290	40	SANDSTONE: very light gray (N8), light gray (N7), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, locally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	40	CLAYSTONE: medium dark gray (N4), medium gray (N5), occasionally dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		calcareous. Accessories: pyrite, calcite, coal, shell fragments.	
8290 – 8300	80	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally medium gray (N5), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: very light gray (N8), light gray (N7), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, locally micropyrictic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium gray (N5), locally medium dark gray (N4), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
8300 – 8310	80	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	20	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrictic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, moderately firm to firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: pyrite, calcite, coal.	
8310 – 8320	60	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	TR
	30	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine, occasionally medium quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to moderately consolidated, occasionally micropyrictic, with coal veins and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	CLAYSTONE: medium dark gray (N4), locally dark gray (N3), occasionally medium gray (N5), grayish black (N2), earthy, blocky to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. Accessories: pyrite, calcite, coal.	
8320 – 8330	60	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, very microcarbonaceous, occasionally micropyrritic with coal veins inclusions, non calcareous.	
	30	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine, occasionally medium quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: pyrite, calcite, coal.	
8330 – 8340	70	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, very microcarbonaceous, occasionally micropyrritic with coal veins inclusions, non calcareous.	
	20	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: pyrite, calcite, coal, slickenside, dolomite.	
8340 – 8350	80	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, very microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	consolidated, occasionally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
8350 – 8360	80	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, scarce argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropyrritic, with coal veins and dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
8360 – 8370	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally olive gray (5Y 4/1), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
8370 – 8380	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
8380 – 8390	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), very fine to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, dolomite.	
8390 – 8400	50 40 10 Tr	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
8400 – 8410	60 20 10 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. Accessories: calcite, pyrite.	TR
8410 – 8420	80 20 Tr Tr	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, subtabular in part, occasionally sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. SANDSTONE: light gray (N7), medium light gray (N6), very fine to	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, dolomite.	
8420 – 8430	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, dolomite.	
8430 – 8440	60	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SAND: white (N9), 70% very fine to fine, 30% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	Tr	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
8440 – 8450	50	SAND: white (N9), 80% very fine to fine, 20% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted.	15
	30	SANDSTONE: light gray (N7), medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS.	
	10	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
8450 – 8460	50 50 Tr Tr	SAND: white (N9), 60% fine, 40% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, with veins coal and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 20% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	20
8460 – 8470	80 20 Tr Tr	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, with veins coal and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 25% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	25
8470 – 8480	70 20	SAND: white (N9), 50% fine, 40% medium, 10% coarse quartz grain, hyaline, translucent, subangular to subrounded, poor sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement,	25

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10 Tr	friable to moderately friable, with veins coal and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 25% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, pyrite, coal.	
8480 – 8490	50 30 10 10	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, with veins coal and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, 15% pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. Accessories: calcite, pyrite, coal.	15
8490 – 8500	40 30 20	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminal, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), very light gray (N8), locally medium light gray (N6), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, friable to moderately friable, with veins coal and dark minerals inclusions, poor visual porosity. Fluorescence: NVOS, traces pin point pale yellowish natural fluorescence, slow, weak, faint, even, yellowish white cut fluorescence, milky white residual ring under U. V. light, non residual ring at natural light. POS. SAND: white (N9), 70% fine, 30% medium, traces coarse quartz	TR

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	grain, hyaline, translucent, subangular to subrounded, fair sorted. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, coal.	
8500 – 8510	80	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SAND: white (N9), 70% fine, 30% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted. Accessories: calcite, pyrite, dolomite.	
8510 – 8520	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite, dolomite.	
8520 – 8530	90	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminar, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	Tr	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: abundant dolomite, calcite, pyrite.	
8530 – 8540	40	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	20	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
		Accessories: dolomite, calcite, pyrite.	
8540 – 8550	30	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	30	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	30	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
		Accessories: calcite, pyrite.	
8550 – 8560	60	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous.	
	20	SAND: white (N9), 80% fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, fair sorted.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
		Accessories: calcite, pyrite.	
8560 – 8570	90 10 Tr	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, with dark minerals inclusions, poor visual porosity. No Oil Show. Accessories: calcite, pyrite.	
8570 – 8580	100 Tr	CLAYSTONE: medium dark gray (N4), dark gray (N3), grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
8580 – 8590	80 10 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), locally grayish black (N2), earthy, blocky to subblocky, locally subtabular to sublaminae, firm to moderately firm, silty in part, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), 90% very fine to fine, 10% medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite.	
8590 – 8600	40 30 20	SAND: white (N9), 80% very fine to fine, 20% medium, traces coarse quartz grain, hyaline, translucent, subangular to subrounded, locally angular, well sorted. SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
8600 – 8610	60	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally micropyrritic, non calcareous.	
	20	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, occasionally micropyrritic, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, well sorted. Accessories: calcite, pyrite, slickenside.	
8610 – 8620	40	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, occasionally micropyrritic, non calcareous.	
	40	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, occasionally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, occasionally micropyrritic, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, occasionally angular, well sorted. Accessories: calcite, pyrite, slickenside.	
8620 – 8630	40	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous.	
	40	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10 10	translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: slickenside, calcite, pyrite.	
8630 – 8640	50 30 10 10	SANDSTONE: light gray (N7), very light gray (N8), occasionally medium light gray (N6), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, silty, micromicaceous, microcarbonaceous, non calcareous. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: slickenside, calcite, pyrite.	
8640 – 8650	80 10 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite.	
8650 – 8660	80 10	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous. SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent,	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, with dark minerals inclusions, poor visual porosity. No Oil Show. SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, dolomite, pyrite.	
8660 – 8670	70	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite.	
8670 – 8680	70	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	20	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show.	
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous. Accessories: calcite, pyrite, dolomite.	
8680 – 8691	70	CLAYSTONE: medium dark gray (N4), dark gray (N3), occasionally grayish black (N2), earthy, blocky to subblocky, locally subtabular, occasionally sublaminae, firm to moderately firm, locally silty, micromicaceous, microcarbonaceous, non calcareous.	
	10	SANDSTONE: light gray (N7), medium light gray (N6), occasionally very light gray (N8), very fine to fine quartz grain, hyaline, translucent, subangular to subrounded, well sorted, argillaceous matrix, calcareous cement, moderately friable to friable, locally moderately consolidated, occasionally micropyrritic, with dark minerals inclusions, poor visual porosity. No Oil Show.	

INTERVAL (Feet)	%	DESCRIPTION	FLUOR. (%)
	10	SILTSTONE: medium dark gray (N4), medium gray (N5), earthy, blocky to subblocky, firm to moderately firm, micromicaceous, microcarbonaceous, grading to very fine sandstone, slightly calcareous.	
	10	SAND: white (N9), very fine to fine, traces medium quartz grain, hyaline, translucent, subangular to subrounded, well sorted. Accessories: calcite, pyrite, dolomite, coal.	
FINAL TOTAL DEPTH 8691.0 ft. MD(RT); 6062.91 ft. TVD(RT)			

WELL: LO6-29D

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
TALARA SANDSTONE Mbr.							
450	135	0.0	0	0	0	0	0
451	85	0.0	0	0	0	0	0
452	77	0.0	0	0	0	0	0
453	10	0.0	0	0	0	0	0
454	10	0.0	0	0	0	0	0
455	18	0.1	7	0	0	0	0
456	19	0.1	8	0	0	0	0
457	17	0.1	7	0	0	0	0
458	25	0.1	10	0	0	0	0
459	29	0.1	13	0	0	0	0
460	25	0.2	16	1	0	0	0
461	31	0.2	17	0	0	0	0
462	27	0.2	21	0	0	0	0
463	27	0.2	23	0	0	0	0
464	36	0.2	24	0	0	0	0
465	34	0.2	24	0	0	0	0
466	33	0.3	25	0	0	0	0
467	37	0.3	26	0	0	0	0
468	34	0.3	29	0	0	0	0
469	30	0.4	44	0	0	0	0
470	17	0.5	53	0	0	0	0
471	27	0.6	61	0	0	0	0
472	51	0.7	68	0	0	0	0
473	55	0.7	69	1	0	0	0
474	37	0.7	69	1	0	0	0
475	33	0.6	62	1	0	0	0
476	30	0.5	49	1	0	0	0
477	25	0.6	62	1	0	0	0
478	24	0.6	61	0	0	0	0
479	21	0.5	53	0	0	0	0
480	28	0.5	49	1	0	0	0
481	26	0.5	47	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
482	28	0.5	47	0	0	0	0
483	47	0.5	47	0	0	0	0
484	49	0.5	46	0	0	0	0
485	32	0.5	49	0	0	0	0
486	30	0.5	54	0	0	0	0
487	25	0.6	62	0	0	0	0
488	32	0.7	72	0	0	0	0
489	31	0.7	71	0	0	0	0
490	21	0.7	65	0	0	0	0
491	35	0.6	61	0	0	0	0
492	41	0.6	57	0	0	0	0
493	41	0.6	59	0	0	0	0
494	40	0.7	65	0	0	0	0
495	41	0.8	81	0	0	0	0
496	42	1.1	104	0	0	0	0
497	44	1.1	109	0	0	0	0
498	33	1.1	112	1	0	0	0
499	24	1.3	134	0	0	0	0
500	39	1.3	131	0	0	0	0
501	36	1.2	119	1	1	0	0
502	32	1.0	103	0	0	0	0
503	42	1.0	96	0	0	0	0
504	43	0.9	90	0	0	0	0
505	18	0.8	81	0	0	0	0
506	37	0.8	81	0	0	0	0
507	40	0.8	83	0	0	0	0
508	37	1.1	108	0	0	0	0
509	32	1.2	118	0	0	0	0
510	37	0.6	64	1	0	0	0
511	1	0.6	57	0	0	0	0
512	77	0.7	71	0	0	0	0
513	64	0.9	85	0	0	0	0
514	30	0.9	85	1	1	0	0
515	68	0.8	79	1	1	0	0
516	72	0.9	91	1	1	0	0
517	72	1.0	103	1	1	0	0
518	72	1.2	114	1	1	0	0
519	37	1.7	165	0	0	0	0
520	32	1.9	188	1	1	0	0
521	37	1.9	188	1	1	0	0
522	30	1.3	132	1	1	0	0
523	34	1.0	102	1	1	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
524	35	0.5	45	0	0	0	0
525	34	0.2	15	0	0	0	0
526	32	0.1	9	0	0	0	0
527	38	0.1	10	0	0	0	0
528	30	0.3	28	0	0	0	0
529	30	0.3	29	0	0	0	0
530	36	0.4	40	0	0	0	0
531	36	1.2	118	1	0	0	0
532	39	1.7	169	1	0	0	0
533	21	1.7	169	0	0	0	0
534	21	1.7	169	0	0	0	0
535	21	1.7	169	1	0	0	0
536	44	1.7	166	1	0	0	0
537	47	2.0	200	1	1	0	0
538	35	2.4	240	1	1	0	0
539	39	2.5	247	2	1	0	0
540	39	2.5	247	2	1	0	0
541	39	1.8	171	1	1	0	0
542	25	2.4	231	1	1	0	0
543	40	0.3	33	0	0	0	0
544	56	0.4	38	0	0	0	0
545	45	0.4	43	0	0	0	0
546	41	0.6	58	1	0	0	0
547	43	0.6	62	0	0	0	0
548	35	0.8	76	0	0	0	0
549	38	2.1	205	1	1	0	0
550	15	1.8	180	1	1	0	0
551	11	2.0	197	1	1	0	0
552	33	2.0	197	1	1	0	0
553	29	1.7	161	2	1	0	0
554	25	1.4	133	2	1	0	0
555	29	1.0	96	1	1	0	0
556	25	1.0	96	1	1	0	0
557	35	1.0	97	1	1	0	0
558	29	1.0	101	1	0	0	0
559	31	1.3	129	1	1	0	0
560	31	1.6	160	1	0	0	0
561	54	1.9	183	1	0	0	0
562	61	1.9	183	1	0	0	0
563	50	2.1	209	1	1	0	0
564	59	3.4	336	3	1	0	0
565	31	4.5	437	4	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
566	47	4.5	437	4	2	0	0
567	58	4.1	397	4	2	0	0
568	55	3.7	360	4	2	0	0
569	49	4.7	457	5	2	0	0
570	52	5.6	540	6	2	0	0
571	60	6.3	611	7	3	0	0
572	55	6.3	611	7	3	0	0
573	55	5.9	575	5	2	0	0
574	61	4.9	479	5	2	0	0
575	56	4.9	479	5	2	0	0
576	88	5.5	528	6	3	0	0
577	76	5.8	565	6	3	0	0
578	55	5.8	565	6	3	0	0
579	90	5.8	565	6	3	0	0
580	70	5.6	549	5	2	0	0
581	89	5.0	488	3	2	0	0
582	64	5.0	488	3	2	0	0
583	96	4.8	470	3	2	0	0
584	85	4.8	470	3	2	0	0
585	73	4.7	459	3	2	0	0
586	63	4.5	438	2	2	0	0
587	76	4.5	440	2	2	0	0
588	87	5.7	564	3	2	0	0
589	43	5.7	564	3	2	0	0
590	67	6.9	674	3	2	0	0
591	76	7.7	751	4	3	0	0
592	85	7.7	751	4	3	0	0
593	108	8.2	807	4	3	0	0
594	90	8.2	807	4	3	0	0
595	90	8.2	807	4	3	0	0
596	72	7.8	764	3	3	0	0
597	82	6.8	669	2	2	0	0
598	91	6.8	669	2	2	0	0
599	90	5.8	577	2	2	0	0
600	76	5.2	509	2	1	0	0
601	107	5.2	509	2	1	0	0
602	70	4.7	469	1	1	0	0
603	53	4.6	457	1	1	0	0
604	89	4.6	457	1	1	0	0
605	83	4.6	457	1	1	0	0
606	96	4.6	456	1	1	0	0
607	39	4.3	431	1	1	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
608	28	2.7	262	1	1	0	0
609	30	2.8	271	2	2	0	0
610	36	2.8	271	2	2	0	0
611	33	2.6	255	2	1	0	0
612	40	3.1	299	2	1	0	0
613	52	3.1	299	2	1	0	0
614	59	2.6	255	2	1	0	0
615	39	7.6	745	4	3	0	0
616	29	7.6	745	4	3	0	0
617	6	8.8	861	5	3	0	0
618	6	10.0	977	5	3	0	0
619	8	1.2	114	1	1	0	0
620	23	1.3	123	1	1	0	0
621	24	1.2	117	1	1	0	0
622	30	1.4	135	1	1	0	0
623	42	2.0	195	1	1	0	0
624	15	2.4	240	1	1	0	0
625	24	2.2	216	1	1	0	0
626	28	2.8	274	1	1	0	0
627	23	6.3	621	3	2	0	0
628	23	6.7	659	3	2	0	0
629	23	5.8	567	3	2	0	0
630	25	3.4	336	1	1	0	0
631	23	2.8	278	1	1	0	0
632	31	2.4	239	1	1	0	0
633	36	2.2	220	1	1	0	0
634	33	2.1	212	0	1	0	0
635	34	2.1	213	1	1	0	0
636	45	2.1	213	1	0	0	0
637	40	2.1	208	0	1	0	0
638	40	2.1	210	0	0	0	0
639	41	2.0	204	0	0	0	0
640	24	1.9	191	0	0	0	0
641	45	1.8	183	0	0	0	0
642	38	1.9	194	0	0	0	0
643	32	2.1	214	0	0	0	0
644	23	3.1	306	0	0	0	0
645	35	3.3	331	1	1	0	0
646	29	4.0	395	1	1	0	0
647	36	4.2	414	1	1	0	0
648	26	3.8	378	1	1	0	0
649	25	3.6	361	1	1	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
650	35	3.6	356	1	1	0	0
651	34	3.6	363	1	1	0	0
652	31	3.6	363	1	1	0	0
653	36	3.6	359	0	0	0	0
654	36	3.7	365	0	0	0	0
655	29	6.0	589	2	2	0	0
656	28	7.2	717	2	2	0	0
657	42	7.2	716	2	2	0	0
658	30	5.9	581	1	1	0	0
659	28	5.4	540	1	1	0	0
660	26	4.7	464	1	1	0	0
661	24	3.9	393	1	1	0	0
662	27	3.9	393	1	1	0	0
663	24	3.8	379	1	1	0	0
664	26	3.5	347	1	1	0	0
665	27	3.3	333	1	0	0	0
666	28	2.9	293	0	0	0	0
667	15	3.1	310	0	0	0	0
668	11	3.1	310	0	0	0	0
669	24	3.0	297	0	0	0	0
670	25	2.4	242	1	0	0	0
671	25	1.9	187	0	0	0	0
672	24	2.0	199	0	0	0	0
673	22	2.1	210	0	0	0	0
674	28	2.3	227	0	0	0	0
675	28	2.4	235	0	0	0	0
676	26	2.4	241	0	0	0	0
677	22	2.7	265	1	0	0	0
678	6	2.4	244	0	0	0	0
679	18	1.7	166	0	0	0	0
680	31	1.4	143	0	0	0	0
681	30	1.2	118	0	0	0	0
682	31	1.1	105	0	0	0	0
683	30	1.7	165	0	0	0	0
684	32	2.0	200	0	0	0	0
685	21	2.0	200	0	0	0	0
686	23	2.1	206	0	0	0	0
687	3	2.1	206	0	0	0	0
688	33	1.8	175	0	0	0	0
689	17	1.8	180	0	0	0	0
690	18	1.8	176	0	0	0	0
691	22	2.0	197	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
692	23	2.2	215	0	0	0	0
693	23	2.4	242	0	0	0	0
694	37	3.2	315	0	0	0	0
695	26	4.0	398	1	1	0	0
696	33	4.2	413	1	1	0	0
697	27	4.1	410	1	1	0	0
698	28	4.1	410	1	1	0	0
699	21	0.3	27	0	0	0	0
700	25	0.5	45	0	0	0	0
701	29	0.7	67	0	0	0	0
702	21	0.6	64	0	0	0	0
703	20	0.9	86	1	0	0	0
704	22	1.2	118	0	0	0	0
705	25	1.5	153	1	0	0	0
706	18	1.9	183	1	1	0	0
707	15	2.0	197	1	0	0	0
708	22	2.1	210	1	0	0	0
709	24	2.1	213	1	0	0	0
710	29	2.2	215	1	1	0	0
711	42	1.9	190	1	0	0	0
712	22	1.7	170	0	0	0	0
713	19	1.6	164	0	0	0	0
714	20	1.8	176	0	0	0	0
715	24	2.0	193	1	1	0	0
716	28	1.9	194	0	0	0	0
717	30	1.9	192	0	0	0	0
718	20	2.0	200	0	0	0	0
719	4	2.0	200	0	0	0	0
720	5	2.4	240	1	1	0	0
721	11	1.3	127	0	1	0	0
722	17	1.0	100	0	0	0	0
723	18	0.9	92	1	0	0	0
724	21	1.0	98	0	0	0	0
725	15	1.1	107	0	0	0	0
726	17	1.3	128	0	0	0	0
727	24	1.7	169	0	0	0	0
728	23	1.9	186	0	0	0	0
729	20	1.8	178	0	0	0	0
730	3	1.0	100	0	0	0	0
731	6	0.6	57	0	0	0	0
732	15	0.5	45	0	0	0	0
733	15	0.5	50	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
734	17	0.8	80	0	0	0	0
735	16	1.2	116	0	0	0	0
736	15	1.3	129	0	0	0	0
737	12	1.3	126	0	0	0	0
738	16	1.1	105	0	0	0	0
739	20	1.0	101	0	0	0	0
740	20	1.0	103	0	0	0	0
741	15	1.3	125	0	0	0	0
742	20	1.3	132	0	0	0	0
743	20	1.3	134	0	0	0	0
744	20	1.3	133	0	0	0	0
745	18	1.3	133	0	0	0	0
746	25	1.3	133	0	0	0	0
747	25	1.3	127	0	0	0	0
748	21	1.3	128	0	0	0	0
749	24	1.3	133	0	0	0	0
750	28	1.7	166	0	0	0	0
751	30	1.8	180	0	0	0	0
752	24	1.8	183	0	0	0	0
753	28	1.8	182	0	0	0	0
754	22	2.0	202	0	0	0	0
755	28	2.0	196	0	0	0	0
756	24	1.8	180	0	0	0	0
757	21	1.7	169	0	0	0	0
758	23	1.6	162	0	0	0	0
759	26	1.5	154	0	0	0	0
760	84	1.9	188	0	0	0	0
761	88	1.7	174	0	0	0	0
762	84	1.7	174	0	0	0	0
763	93	1.6	156	0	0	0	0
764	69	1.4	142	0	0	0	0
765	67	1.4	142	0	0	0	0
766	82	1.4	144	0	0	0	0
767	85	1.4	144	0	0	0	0
768	77	1.5	147	0	0	0	0
769	66	1.4	143	0	0	0	0
LOBITOS Mbr.							
770	57	1.3	134	0	0	0	0
771	44	1.3	130	0	0	0	0
772	40	1.6	162	0	0	0	0
773	37	2.2	219	0	0	0	0
774	45	2.8	278	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
775	47	3.7	367	0	0	0	0
776	41	4.2	419	0	0	0	0
777	42	4.5	448	0	0	0	0
778	94	4.5	448	0	0	0	0
779	90	4.6	455	0	0	0	0
780	56	4.4	440	0	0	0	0
781	63	3.8	378	0	0	0	0
782	47	3.0	295	0	0	0	0
783	50	3.0	295	0	0	0	0
784	52	2.4	238	0	0	0	0
785	47	2.2	223	0	0	0	0
786	40	2.1	213	0	0	0	0
787	36	2.0	203	0	0	0	0
788	52	2.1	212	0	0	0	0
789	37	2.7	271	0	0	0	0
790	52	2.9	291	0	0	0	0
791	41	1.0	103	0	0	0	0
792	48	1.0	103	0	0	0	0
793	50	0.6	60	0	0	0	0
794	57	0.6	55	0	0	0	0
795	57	0.5	50	0	0	0	0
796	94	0.5	50	0	0	0	0
797	82	0.5	45	0	0	0	0
798	90	0.5	45	0	0	0	0
799	61	0.4	44	0	0	0	0
800	43	0.4	42	0	0	0	0
801	114	0.4	42	0	0	0	0
802	90	0.4	42	0	0	0	0
803	89	0.4	42	0	0	0	0
804	90	0.4	42	0	0	0	0
805	85	0.4	42	0	0	0	0
806	84	0.4	41	0	0	0	0
807	90	0.4	41	0	0	0	0
808	84	0.4	44	0	0	0	0
809	69	0.7	67	0	0	0	0
810	70	0.7	71	0	0	0	0
811	73	1.1	113	0	0	0	0
812	77	1.1	113	0	0	0	0
813	86	1.2	122	0	0	0	0
814	69	1.3	134	0	0	0	0
815	78	1.5	146	0	0	0	0
816	73	1.5	146	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
817	82	1.6	163	0	0	0	0
818	70	1.8	184	0	0	0	0
819	66	1.8	184	0	0	0	0
820	65	2.2	215	0	0	0	0
821	68	1.7	170	0	0	0	0
822	100	2.0	204	0	0	0	0
823	91	2.0	204	0	0	0	0
824	100	2.5	245	0	0	0	0
825	85	2.5	245	0	0	0	0
826	72	2.9	293	0	0	0	0
827	80	2.8	275	0	0	0	0
828	77	2.8	275	0	0	0	0
829	79	2.6	263	0	0	0	0
830	84	2.3	227	0	0	0	0
831	84	2.3	227	0	0	0	0
832	91	1.9	193	0	0	0	0
833	79	1.6	158	0	0	0	0
834	82	1.6	158	0	0	0	0
835	87	1.3	128	0	0	0	0
836	91	1.0	104	0	0	0	0
837	85	1.0	104	0	0	0	0
838	81	0.9	93	0	0	0	0
839	85	0.9	93	0	0	0	0
840	92	0.9	92	0	0	0	0
841	83	1.0	97	0	0	0	0
842	87	1.0	97	0	0	0	0
843	102	1.1	110	0	0	0	0
844	91	1.1	110	0	0	0	0
845	78	1.1	110	0	0	0	0
846	78	1.1	110	0	0	0	0
847	80	1.3	130	0	0	0	0
848	121	1.6	160	0	0	0	0
849	73	1.6	160	0	0	0	0
850	75	2.1	205	0	0	0	0
851	102	2.1	205	0	0	0	0
852	110	2.8	281	0	0	0	0
853	115	2.8	281	0	0	0	0
854	72	3.8	377	0	0	0	0
855	127	3.6	359	0	0	0	0
856	96	3.6	359	0	0	0	0
857	127	3.6	362	0	0	0	0
858	110	3.6	362	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
859	123	3.6	362	0	0	0	0
860	97	3.6	362	0	0	0	0
861	92	3.5	352	0	0	0	0
862	70	3.5	352	0	0	0	0
863	87	3.3	334	0	0	0	0
864	115	3.0	301	0	0	0	0
865	88	3.0	301	0	0	0	0
866	92	2.7	271	0	0	0	0
867	112	2.4	238	0	0	0	0
868	118	2.4	238	0	0	0	0
869	112	2.2	224	0	0	0	0
870	114	2.2	224	0	0	0	0
871	124	2.2	224	0	0	0	0
872	123	2.4	242	0	0	0	0
873	122	2.4	242	0	0	0	0
874	106	3.1	313	0	0	0	0
875	130	3.1	313	0	0	0	0
876	125	4.4	438	0	0	0	0
877	99	4.4	438	0	0	0	0
878	99	5.0	503	0	0	0	0
879	105	5.0	503	0	0	0	0
880	89	6.0	595	0	0	0	0
881	89	7.0	696	0	0	0	0
882	72	7.0	696	0	0	0	0
883	105	7.0	696	0	0	0	0
884	101	6.9	694	0	0	0	0
885	123	6.9	694	0	0	0	0
886	105	6.3	631	0	0	0	0
887	101	6.4	635	0	0	0	0
888	110	0.6	56	0	0	0	0
889	130	0.9	86	0	0	0	0
890	91	1.1	105	0	0	0	0
891	89	1.1	114	0	0	0	0
892	83	1.1	114	0	0	0	0
893	91	1.1	114	0	0	0	0
894	89	1.1	111	0	0	0	0
895	85	1.1	105	0	0	0	0
896	91	1.1	105	0	0	0	0
897	90	0.9	93	0	0	0	0
898	132	0.9	93	0	0	0	0
899	140	1.1	106	0	0	0	0
900	125	2.0	201	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
901	89	2.2	220	0	0	0	0
902	94	2.5	251	0	0	0	0
903	77	4.5	445	0	0	0	0
904	94	4.5	445	0	0	0	0
905	98	6.1	615	0	0	0	0
906	76	6.1	615	0	0	0	0
907	100	6.2	616	0	0	0	0
908	132	6.2	616	0	0	0	0
909	96	6.3	634	0	0	0	0
910	134	6.9	690	0	0	0	0
911	91	6.9	690	0	0	0	0
912	85	7.9	791	0	0	0	0
913	85	15.0	1498	0	0	0	0
914	87	6.7	674	0	0	0	0
915	84	6.4	638	0	0	0	0
916	129	6.4	638	0	0	0	0
917	130	6.4	638	0	0	0	0
918	118	6.5	647	0	0	0	0
919	110	6.6	655	0	0	0	0
920	92	6.6	655	0	0	0	0
921	103	6.9	689	0	0	0	0
922	100	6.9	689	0	0	0	0
923	115	7.4	744	0	0	0	0
924	106	8.0	799	0	0	0	0
925	110	9.5	945	0	0	0	0
926	104	9.5	945	0	0	0	0
927	123	10.0	996	0	0	0	0
928	125	10.0	996	0	0	0	0
929	117	10.0	996	0	0	0	0
930	111	9.6	955	0	0	0	0
931	114	9.2	914	0	0	0	0
932	96	7.8	782	0	0	0	0
933	94	7.8	782	0	0	0	0
934	116	6.5	645	0	0	0	0
935	122	6.5	645	0	0	0	0
936	94	5.5	551	0	0	0	0
937	96	5.5	551	0	0	0	0
938	114	5.2	516	0	0	0	0
939	104	5.2	516	0	0	0	0
940	135	5.1	514	0	0	0	0
941	109	5.5	545	0	0	0	0
942	107	5.5	545	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
943	103	6.0	601	0	0	0	0
944	121	6.0	601	0	0	0	0
945	118	7.1	711	0	0	0	0
946	114	7.3	726	0	0	0	0
947	100	7.3	726	0	0	0	0
948	142	7.9	785	0	0	0	0
949	126	7.9	785	0	0	0	0
950	131	8.4	838	0	0	0	0
951	143	8.4	838	0	0	0	0
952	137	8.4	838	0	0	0	0
953	106	9.0	898	0	0	0	0
954	88	9.0	898	0	0	0	0
955	95	10.6	1062	0	0	0	0
956	110	10.6	1062	0	0	0	0
957	134	13.8	1384	0	0	0	0
958	132	13.8	1384	0	0	0	0
959	156	13.8	1384	0	0	0	0
960	131	16.8	1674	0	0	0	0
961	88	19.3	1924	1	0	0	0
962	73	19.3	1924	1	0	0	0
963	87	21.0	2101	1	0	0	0
964	96	21.0	2101	1	0	0	0
965	96	21.1	2108	1	0	0	0
966	110	21.1	2108	1	0	0	0
967	148	21.1	2108	1	0	0	0
968	105	19.2	1923	1	0	0	0
969	103	19.2	1923	1	0	0	0
970	105	16.4	1637	0	0	0	0
971	121	16.4	1637	0	0	0	0
972	126	13.5	1350	0	0	0	0
973	108	11.3	1127	0	0	0	0
974	92	11.3	1127	0	0	0	0
975	66	10.2	1022	0	0	0	0
976	76	10.2	1022	0	0	0	0
977	74	9.8	979	0	0	0	0
978	108	9.5	947	0	0	0	0
979	91	1.4	141	0	0	0	0
980	90	1.2	117	0	0	0	0
981	77	1.1	111	0	0	0	0
982	78	1.1	111	0	0	0	0
983	50	0.9	93	0	0	0	0
984	64	0.8	81	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
985	89	0.7	68	0	0	0	0
986	67	0.7	69	0	0	0	0
987	63	0.9	88	0	0	0	0
988	55	1.2	121	0	0	0	0
989	58	2.3	228	0	0	0	0
990	61	2.9	286	0	0	0	0
991	61	4.9	488	0	0	0	0
992	52	5.4	544	0	0	0	0
993	53	6.7	670	0	0	0	0
994	55	6.0	605	0	0	0	0
995	48	5.5	547	0	0	0	0
996	48	5.3	531	0	0	0	0
997	48	5.2	516	0	0	0	0
998	48	5.0	500	0	0	0	0
999	46	4.2	420	0	0	0	0
1000	44	4.3	433	0	0	0	0
1001	52	4.3	433	0	0	0	0
1002	64	5.1	511	0	0	0	0
1003	42	6.3	633	0	0	0	0
1004	54	6.3	633	0	0	0	0
1005	51	7.3	731	0	0	0	0
1006	50	7.3	731	0	0	0	0
1007	50	7.3	731	0	0	0	0
1008	50	5.7	571	0	0	0	0
1009	47	4.6	455	0	0	0	0
1010	53	7.8	779	0	0	0	0
1011	53	7.8	779	0	0	0	0
1012	31	8.1	808	0	0	0	0
1013	63	8.1	814	0	0	0	0
1014	64	8.1	814	0	0	0	0
1015	90	8.1	814	0	0	0	0
1016	87	7.5	751	0	0	0	0
1017	57	6.6	661	0	0	0	0
1018	88	5.7	566	0	0	0	0
1019	85	5.7	566	0	0	0	0
1020	90	9.5	952	0	0	0	0
1021	95	7.2	714	0	0	0	0
1022	95	4.8	476	0	0	0	0
1023	72	4.7	467	0	0	0	0
1024	101	4.8	481	0	0	0	0
1025	95	4.8	481	0	0	0	0
1026	103	5.0	503	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1027	88	5.3	534	0	0	0	0
1028	75	5.3	534	0	0	0	0
1029	96	5.3	534	0	0	0	0
1030	129	5.3	534	0	0	0	0
1031	94	5.1	513	1	0	0	0
1032	99	4.0	398	1	0	0	0
1033	101	4.0	398	1	0	0	0
1034	90	4.0	398	0	0	0	0
1035	100	4.1	409	0	0	0	0
1036	98	4.4	444	0	0	0	0
1037	98	4.9	490	0	0	0	0
1038	108	5.4	537	0	0	0	0
1039	99	6.2	616	0	0	0	0
1040	104	6.2	616	0	0	0	0
1041	103	6.2	616	0	0	0	0
1042	112	6.9	694	0	0	0	0
1043	111	11.1	1111	0	0	0	0
1044	89	12.5	1251	0	0	0	0
1045	102	12.5	1251	0	0	0	0
1046	135	14.1	1411	0	0	0	0
1047	149	14.1	1411	0	0	0	0
1048	145	15.8	1584	0	0	0	0
1049	150	15.8	1584	0	0	0	0
1050	148	15.8	1584	0	0	0	0
1051	147	17.3	1726	0	0	0	0
1052	130	17.3	1726	0	0	0	0
1053	154	17.3	1726	0	0	0	0
1054	153	17.3	1726	0	0	0	0
1055	156	17.3	1726	0	0	0	0
1056	153	18.1	1812	0	0	0	0
1057	147	18.1	1812	0	0	0	0
1058	148	18.1	1812	0	0	0	0
1059	152	18.1	1812	0	0	0	0
1060	164	18.1	1812	0	0	0	0
1061	170	18.1	1812	0	0	0	0
1062	145	18.1	1812	0	0	0	0
1063	135	17.8	1775	0	0	0	0
1064	161	17.8	1775	0	0	0	0
1065	141	17.8	1775	0	0	0	0
1066	147	17.8	1775	0	0	0	0
1067	131	16.2	1622	0	0	0	0
1068	95	16.2	1622	0	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1069	136	14.2	1420	0	0	0	0
1070	80	14.2	1420	2	0	0	0
1071	119	11.6	1155	2	0	0	0
1072	141	12.4	1239	1	0	0	0
1073	126	12.4	1239	1	0	0	0
1074	140	12.4	1239	1	0	0	0
1075	127	57.1	5711	1	0	0	0
1076	112	46.4	4633	1	0	0	0
1077	100	35.6	3556	1	0	0	0
1078	77	24.8	2478	1	0	0	0
1079	89	5.3	527	0	0	0	0
1080	90	5.3	527	0	0	0	0
1081	98	4.7	475	0	0	0	0
1082	116	4.7	475	0	0	0	0
1083	117	4.5	449	0	0	0	0
1084	113	4.2	424	0	0	0	0
1085	108	4.2	424	0	0	0	0
1086	122	3.9	390	0	0	0	0
1087	138	3.9	390	0	0	0	0
1088	131	3.9	391	0	1	0	0
1089	172	3.9	391	0	1	0	0
1090	170	3.9	391	0	1	0	0
1091	188	4.1	412	0	1	0	0
1092	200	4.1	412	0	0	0	0
1093	180	4.1	412	0	0	0	0
1094	131	4.5	446	0	0	0	0
1095	157	4.5	446	0	0	0	0
1096	131	4.5	446	0	0	0	0
1097	174	5.1	507	0	0	0	0
1098	156	5.1	507	0	0	0	0
1099	164	5.1	507	0	0	0	0
1100	130	5.7	570	0	0	0	0
1101	169	5.7	570	0	0	0	0
1102	168	6.5	647	0	0	0	0
1103	142	6.5	647	0	0	0	0
1104	95	6.5	647	0	0	0	0
1105	149	7.7	766	0	0	0	0
1106	122	7.7	766	0	0	0	0
1107	148	8.0	798	2	0	0	0
1108	165	8.0	798	2	0	0	0
1109	156	8.0	798	2	0	0	0
1110	129	10.2	1013	2	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1111	151	10.2	1013	2	0	0	0
1112	134	10.2	1013	2	0	0	0
1113	173	13.6	1362	2	0	0	0
1114	155	13.6	1362	1	0	0	0
1115	166	13.6	1362	1	0	0	0
1116	190	13.6	1362	1	0	0	0
1117	186	18.2	1816	1	0	0	0
1118	162	18.2	1816	0	0	0	0
1119	168	18.2	1816	0	0	0	0
1120	137	21.3	2132	1	0	0	0
1121	140	25.1	2512	1	0	0	0
1122	82	26.7	2664	1	0	0	0
1123	60	28.2	2817	1	0	0	0
1124	102	28.2	2817	1	0	0	0
1125	123	31.1	3104	1	0	0	0
1126	100	31.1	3104	1	0	0	0
1127	105	33.5	3345	1	0	0	0
1128	66	35.2	3520	1	0	0	0
1129	60	37.2	3718	1	0	0	0
1130	65	38.9	3890	1	0	0	0
1131	68	38.9	3890	1	0	0	0
1132	66	40.5	4051	1	0	0	0
1133	76	41.4	4141	1	0	0	0
1134	75	41.4	4141	1	0	0	0
1135	86	51.7	5168	7	0	0	0
1136	90	46.3	4621	7	0	0	0
1137	102	47.4	4725	7	0	0	0
1138	166	47.4	4725	7	0	0	0
1139	157	51.7	5165	7	0	0	0
1140	111	51.7	5165	5	0	0	0
1141	181	51.7	5165	2	0	0	0
1142	171	51.7	5165	2	0	0	0
1143	180	52.5	5242	2	0	0	0
1144	151	52.5	5242	2	0	0	0
1145	136	53.5	5353	2	0	0	0
1146	120	53.5	5353	1	0	0	0
1147	115	54.3	5431	1	0	0	0
1148	123	54.3	5431	1	0	0	0
1149	122	54.3	5431	1	0	0	0
1150	145	53.7	5371	1	0	0	0
1151	134	53.7	5371	1	0	0	0
1152	130	53.7	5371	1	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1153	125	50.4	5039	1	0	0	0
1154	104	50.4	5039	1	0	0	0
1155	164	45.1	4504	1	0	0	0
1156	168	45.1	4504	1	0	0	0
1157	168	45.1	4504	1	0	0	0
1158	160	45.1	4504	1	0	0	0
1159	150	39.6	3954	1	0	0	0
1160	148	39.6	3954	1	0	0	0
1161	136	37.1	3709	1	0	0	0
1162	137	39.7	3969	1	0	0	0
1163	152	39.7	3969	1	0	0	0
1164	149	40.9	4085	1	0	0	0
1165	184	40.9	4085	1	0	0	0
1166	214	40.9	4085	1	0	0	0
1167	200	40.9	4085	1	0	0	0
1168	158	37.3	3732	1	0	0	0
1169	99	67.8	6780	4	0	0	0
1170	80	28.2	2819	1	0	0	0
1171	75	28.2	2819	1	0	0	0
1172	152	26.8	2677	1	0	0	0
1173	187	26.8	2677	1	0	0	0
1174	109	26.8	2677	1	0	0	0
1175	111	25.2	2518	1	0	0	0
1176	116	25.2	2518	1	0	0	0
1177	150	22.8	2278	1	0	0	0
1178	95	22.8	2278	4	0	0	0
1179	95	17.6	1750	4	0	0	0
1180	121	17.6	1750	4	0	0	0
1181	107	17.0	1698	2	0	0	0
1182	95	17.0	1698	2	0	0	0
1183	96	16.0	1602	2	0	0	0
1184	106	15.1	1507	2	0	0	0
1185	97	15.1	1507	0	0	0	0
1186	83	15.0	1502	0	0	0	0
1187	102	16.1	1608	0	0	0	0
1188	87	16.1	1608	0	0	0	0
1189	89	19.5	1949	1	0	0	0
1190	105	19.5	1949	1	0	0	0
1191	88	25.7	2568	1	0	0	0
1192	112	31.0	3095	1	0	0	0
1193	106	31.0	3095	1	0	0	0
1194	95	31.0	3095	1	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1195	117	36.0	3596	1	0	0	0
1196	101	41.9	4191	1	0	0	0
1197	128	41.9	4191	1	0	0	0
1198	100	41.9	4191	1	0	0	0
1199	92	49.0	4895	1	0	0	0
1200	100	55.7	5572	1	0	0	0
1201	107	55.7	5572	1	0	0	0
1202	86	60.9	6084	1	0	0	0
1203	83	66.1	6612	1	0	0	0
1204	83	66.1	6612	1	0	0	0
1205	88	73.9	7383	2	0	0	0
1206	80	81.0	8095	2	0	0	0
1207	71	81.0	8095	2	0	0	0
1208	79	86.1	8603	2	0	0	0
1209	85	86.1	8603	2	0	0	0
1210	109	88.5	8851	2	0	0	0
1211	122	88.5	8851	2	0	0	0
1212	142	88.5	8851	2	0	0	0
1213	160	88.5	8851	2	0	0	0
1214	155	89.1	8911	2	0	0	0
1215	150	89.1	8911	2	0	0	0
1216	123	89.1	8911	2	0	0	0
1217	74	86.2	8611	2	0	0	0
1218	65	54.4	5436	1	0	0	0
1219	58	54.4	5436	1	0	0	0
1220	75	46.8	4677	7	0	0	0
1221	88	45.7	4560	7	0	0	0
1222	98	62.3	6218	5	0	0	0
1223	93	75.5	7549	5	0	0	0
1224	78	75.5	7549	1	0	0	0
1225	79	82.1	8207	1	0	0	0
1226	71	88.4	8836	2	0	0	0
1227	78	88.4	8836	2	0	0	0
1228	86	94.9	9486	2	0	0	0
1229	76	94.9	9486	2	0	0	0
1230	88	107.7	10771	2	0	0	0
1231	86	99.5	9948	2	0	0	0
1232	90	96.9	9685	2	0	0	0
1233	87	96.9	9685	2	0	0	0
1234	110	94.3	9427	2	0	0	0
1235	130	94.3	9427	2	0	0	0
1236	112	91.3	9123	2	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1237	124	91.3	9123	2	0	0	0
1238	123	92.4	9238	2	0	0	0
1239	130	92.4	9238	2	0	0	0
1240	122	92.4	9238	2	0	0	0
1241	117	92.1	9210	1	0	0	0
1242	117	92.1	9210	1	0	0	0
1243	117	86.3	8626	2	0	0	0
1244	86	71.9	7169	11	0	0	0
1245	94	71.9	7169	11	0	0	0
1246	91	65.0	6484	11	0	0	0
1247	122	65.0	6484	11	0	0	0
1248	135	65.0	6484	11	0	0	0
1249	117	63.3	6320	5	0	0	0
1250	121	62.2	6218	3	0	0	0
1251	71	61.2	6116	1	0	0	0
1252	94	55.0	5494	1	0	0	0
1253	54	55.0	5494	1	0	0	0
1254	88	53.1	5310	1	0	0	0
1255	143	51.3	5126	1	0	0	0
1256	101	48.7	4865	1	0	0	0
1257	117	48.7	4865	1	0	0	0
1258	140	47.6	4763	1	0	0	0
1259	107	46.6	4660	1	0	0	0
1260	117	47.0	4703	1	0	0	0
1261	86	46.2	4622	1	0	0	0
1262	80	46.2	4622	1	0	0	0
1263	90	47.6	4758	1	0	0	0
1264	99	47.6	4758	1	0	0	0
1265	56	30.0	3000	1	0	0	0
1266	107	20.0	2000	0	0	0	0
1267	82	19.5	1950	0	0	0	0
1268	127	15.0	1500	0	0	0	0
1269	97	11.9	1192	0	0	0	0
1270	115	11.0	1099	0	0	0	0
1271	110	11.0	1099	0	0	0	0
1272	110	10.4	1036	0	0	0	0
1273	115	9.7	972	0	0	0	0
1274	98	13.3	1327	2	1	0	0
1275	88	13.3	1327	2	1	0	0
1276	93	15.5	1537	3	2	0	0
1277	91	18.0	1790	3	2	0	0
1278	85	18.0	1790	3	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1279	88	22.1	2204	3	2	0	0
1280	103	24.8	2469	4	3	0	0
1281	68	24.8	2469	4	3	0	0
1282	62	24.8	2469	4	3	0	0
1283	82	26.3	2611	5	3	0	0
1284	99	26.3	2611	5	3	0	0
1285	100	26.7	2653	4	3	0	0
1286	95	4.1	402	2	1	0	0
1287	88	27.0	2684	4	3	0	0
1288	83	27.0	2684	4	3	0	0
1289	99	27.1	2691	4	3	0	0
1290	94	27.1	2691	4	3	0	0
1291	111	29.8	2958	5	4	0	0
1292	93	29.8	2958	5	4	0	0
1293	80	29.8	2958	6	5	0	0
1294	82	30.1	2984	6	5	0	0
1295	101	30.1	2984	7	5	0	0
1296	73	32.2	3196	7	6	0	0
1297	71	34.3	3396	8	6	0	0
1298	75	35.5	3518	8	6	0	0
1299	85	35.5	3518	8	6	0	0
1300	76	36.5	3615	8	6	0	0
1301	67	36.5	3615	8	6	0	0
1302	69	32.7	3257	4	2	0	0
1303	79	38.0	3771	8	7	0	0
1304	80	38.0	3771	8	7	0	0
1305	85	45.0	4467	8	7	0	0
1306	74	53.2	5281	10	9	0	0
1307	75	53.3	5281	11	9	0	0
1308	69	58.8	5838	11	9	0	0
1309	68	62.6	6214	12	10	0	0
1310	74	65.7	6521	12	10	0	0
1311	68	66.6	6603	14	11	0	0
1312	74	66.6	6603	14	11	0	0
1313	79	66.9	6635	15	11	0	0
1314	88	66.9	6635	15	11	0	0
1315	81	66.8	6625	14	12	0	0
1316	81	66.9	6626	15	12	0	0
1317	69	65.6	6500	14	12	0	0
1318	81	65.6	6500	14	12	0	0
1319	76	63.5	6295	14	12	0	0
1320	78	62.5	6188	15	12	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1321	80	62.5	6188	14	12	0	0
1322	70	61.4	6078	15	12	0	0
1323	91	60.3	5968	15	12	0	0
1324	78	59.4	5875	16	12	0	0
1325	79	62.2	6153	15	13	0	0
1326	62	62.2	6153	15	13	0	0
1327	107	63.3	6269	14	13	0	0
1328	80	63.3	6269	14	13	0	0
1329	139	65.8	6516	14	13	0	0
1330	148	65.8	6516	15	13	0	0
1331	150	65.8	6516	15	13	0	0
1332	142	69.3	6860	16	14	0	0
1333	142	69.3	6860	16	14	0	0
1334	133	77.0	7628	17	15	0	0
1335	130	77.0	7628	17	15	0	0
1336	142	77.0	7628	18	15	0	0
1337	139	84.1	8329	19	17	0	0
1338	130	84.4	8361	20	17	0	0
1339	137	79.7	7885	19	17	0	0
1340	130	79.6	7885	18	17	0	0
1341	158	79.6	7885	18	17	0	0
1342	149	72.6	7185	17	16	0	0
1343	160	72.6	7185	18	16	0	0
1344	153	72.6	7185	19	16	0	0
1345	168	65.3	6457	17	15	0	0
1346	150	65.3	6457	17	15	0	0
1347	144	58.7	5809	15	13	0	0
1348	142	53.1	5281	8	6	0	0
1349	121	53.1	5281	8	6	0	0
1350	122	56.3	5602	9	6	0	0
1351	135	56.3	5602	9	6	0	0
1352	147	64.9	6431	10	14	0	0
1353	85	64.9	6431	10	14	0	0
1354	138	64.9	6431	10	14	0	0
1355	137	44.7	4425	8	10	0	0
1356	163	44.8	4425	13	10	0	0
1357	151	41.9	4138	12	10	0	0
1358	152	41.9	4138	12	10	0	0
1359	140	47.6	4705	13	11	0	0
1360	142	47.6	4705	12	11	0	0
1361	130	47.6	4705	13	11	0	0
1362	149	1.5	142	3	1	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1363	56	2.6	252	2	1	0	0
1364	65	4.2	405	4	2	0	0
1365	76	7.4	721	5	3	0	0
1366	61	7.4	721	5	3	0	0
1367	34	34.6	3419	10	9	0	0
1368	26	43.8	4332	12	11	0	0
1369	36	45.4	4486	13	11	0	0
1370	37	40.7	4050	7	4	0	0
1371	34	35.8	3558	7	4	0	0
1372	36	14.5	1424	6	5	0	0
1373	43	8.2	804	5	4	0	0
1374	64	4.9	472	5	3	0	0
1375	45	7.7	746	6	4	0	0
1376	54	17.2	1688	7	6	0	0
1377	47	55.9	5528	14	13	0	0
1378	34	55.9	5528	14	13	0	0
1379	43	54.9	5427	14	13	0	0
1380	46	39.5	3899	15	11	0	0
1381	51	40.3	3971	15	11	0	0
1382	56	40.3	3971	15	11	0	0
1383	55	39.7	3916	15	11	0	0
1384	34	42.1	4150	15	11	0	0
1385	53	44.0	4338	15	12	0	0
1386	55	46.8	4615	16	12	0	0
1387	43	43.8	4336	15	5	0	0
1388	44	46.4	4580	17	12	0	0
1389	38	47.6	4693	18	13	0	0
1390	59	47.6	4693	18	13	0	0
1391	53	48.7	4803	18	13	0	0
1392	46	48.7	4803	17	13	0	0
1393	55	48.3	4765	17	13	0	0
1394	52	43.8	4317	16	12	0	0
1395	50	30.0	2951	14	10	0	0
1396	57	19.1	1871	10	8	0	0
1397	43	12.7	1244	8	5	0	0
1398	33	9.2	894	6	4	0	0
1399	44	6.0	578	5	4	0	0
1400	36	5.2	505	4	3	0	0
1401	51	4.8	461	4	3	0	0
1402	38	4.5	434	4	3	0	0
1403	47	4.2	402	4	2	0	0
1404	46	4.0	386	4	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1405	30	3.3	323	3	1	0	0
1406	35	3.6	348	3	2	0	0
1407	39	3.6	348	3	2	0	0
1408	40	3.4	330	3	2	0	0
1409	72	2.1	205	2	2	0	0
1410	93	2.0	188	2	2	0	0
1411	91	2.0	188	2	2	0	0
1412	108	1.7	166	2	2	0	0
1413	134	1.7	166	2	2	0	0
1414	155	1.7	166	2	2	0	0
1415	160	1.6	149	2	1	0	0
1416	132	1.6	149	2	1	0	0
1417	86	1.4	137	2	1	0	0
1418	70	1.3	127	2	1	0	0
1419	66	1.2	119	1	1	0	0
1420	81	1.2	114	2	1	0	0
1421	73	1.2	114	2	1	0	0
1422	99	1.1	108	1	1	0	0
1423	98	1.1	108	1	1	0	0
1424	97	1.1	106	1	1	0	0
1425	97	1.2	110	1	1	0	0
1426	96	1.3	122	1	1	0	0
1427	95	1.5	147	1	1	0	0
1428	95	2.3	223	2	2	0	0
1429	75	2.5	247	2	2	0	0
1430	39	2.5	247	2	2	0	0
1431	43	2.2	216	2	1	0	0
1432	34	2.5	244	2	1	0	0
1433	81	2.5	244	2	1	0	0
1434	133	2.5	244	2	1	0	0
1435	176	2.3	228	2	1	0	0
1436	193	2.3	228	2	1	0	0
1437	187	2.3	228	2	1	0	0
1438	171	2.2	216	2	1	0	0
1439	149	2.1	205	2	1	0	0
1440	115	2.4	232	2	2	0	0
1441	140	2.4	232	2	2	0	0
1442	167	3.1	300	3	2	0	0
1443	142	3.1	300	3	2	0	0
1444	146	3.8	366	3	2	0	0
1445	148	7.7	754	4	4	0	0
1446	139	6.9	680	4	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1447	44	5.9	579	4	3	0	0
1448	48	4.9	479	3	3	0	0
1449	48	3.9	378	3	2	0	0
1450	48	2.9	278	2	2	0	0
1451	37	2.9	278	2	2	0	0
1452	54	3.2	312	3	3	0	0
1453	63	3.2	312	3	3	0	0
1454	57	3.4	328	2	1	0	0
1455	68	3.4	328	2	1	0	0
1456	56	4.0	394	3	2	0	0
1457	57	5.2	508	4	3	0	0
1458	60	6.6	646	4	3	0	0
1459	57	8.3	811	4	4	0	0
1460	55	10.3	1008	5	4	0	0
1461	60	13.3	1309	5	4	0	0
1462	50	21.9	2160	7	5	0	0
1463	22	26.0	2577	7	6	0	0
1464	36	28.6	2829	6	6	0	0
1465	51	32.8	3255	7	6	0	0
1466	72	37.8	3751	7	7	0	0
1467	32	43.2	4289	8	8	0	0
1468	60	47.3	4699	8	8	0	0
1469	60	47.3	4699	8	8	0	0
1470	66	46.3	4595	8	8	0	0
1471	66	37.7	3734	7	7	0	0
1472	60	33.8	3348	7	6	0	0
1473	80	29.9	2962	7	6	0	0
1474	71	0.1	0	6	1	0	0
1475	52	17.0	1683	6	3	0	0
1476	66	17.0	1683	6	4	0	0
1477	78	15.3	1514	6	4	0	0
1478	72	12.9	1269	5	3	0	0
1479	68	12.2	1202	5	3	0	0
1480	87	12.2	1202	5	3	0	0
1481	74	11.6	1148	4	3	0	0
1482	68	11.9	1178	4	3	0	0
1483	80	12.2	1202	5	3	0	0
1484	72	12.2	1202	5	3	0	0
1485	79	12.2	1202	5	3	0	0
1486	73	11.9	1174	3	3	0	0
1487	88	11.9	1172	4	3	0	0
1488	101	12.2	1203	5	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1489	76	12.2	1203	5	3	0	0
1490	72	11.3	1115	5	3	0	0
1491	81	11.3	1115	5	3	0	0
1492	72	10.5	1037	5	3	0	0
1493	155	9.7	958	5	3	0	0
1494	138	9.7	955	5	3	0	0
1495	137	9.7	955	5	3	0	0
1496	153	9.7	955	5	3	0	0
1497	156	9.7	950	5	3	0	0
1498	153	9.7	950	5	3	0	0
1499	153	9.7	950	5	3	0	0
1500	153	9.6	944	5	3	0	0
1501	153	9.6	944	5	3	0	0
1502	162	8.7	858	3	1	0	0
1503	144	8.7	858	3	1	0	0
1504	142	9.5	932	5	1	0	0
1505	151	9.5	932	5	1	0	0
1506	126	9.5	932	5	1	0	0
1507	143	11.7	1148	7	4	0	0
1508	121	12.0	1174	7	4	0	0
1509	75	12.0	1174	7	4	0	0
1510	92	12.0	1174	7	5	0	0
1511	28	10.5	1028	7	4	0	0
1512	30	10.4	1012	7	4	0	0
1513	118	10.4	1012	7	4	0	0
1514	119	10.4	1019	7	4	0	0
1515	132	10.4	1019	6	4	0	0
1516	126	10.5	1026	6	4	0	0
1517	149	10.5	1026	6	4	0	0
1518	153	10.5	1026	6	4	0	0
1519	119	10.5	1026	6	4	0	0
1520	140	10.3	1012	6	4	0	0
1521	126	10.3	1012	6	4	0	0
1522	82	10.1	987	6	4	0	0
1523	113	10.1	987	6	4	0	0
1524	141	9.8	954	6	4	0	0
1525	167	9.8	954	6	4	0	0
1526	189	9.8	954	6	4	0	0
1527	200	9.8	954	6	4	0	0
1528	163	9.1	891	6	4	0	0
1529	166	9.1	891	6	4	0	0
1530	120	8.4	818	6	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1531	92	7.7	751	5	3	0	0
1532	74	7.7	751	5	3	0	0
1533	105	7.4	719	5	3	0	0
1534	110	7.0	687	5	3	0	0
1535	110	6.1	599	5	3	0	0
1536	126	5.9	575	4	3	0	0
1537	127	5.7	551	4	3	0	0
1538	138	4.8	469	4	1	0	0
1539	165	7.7	750	5	3	0	0
1540	197	10.3	1009	6	4	0	0
1541	146	12.9	1267	7	5	0	0
1542	50	4.6	448	4	3	0	0
1543	49	4.5	435	3	3	0	0
1544	50	4.3	422	3	2	0	0
1545	50	4.2	409	3	2	0	0
1546	50	4.1	397	3	2	0	0
1547	71	3.6	347	3	2	0	0
1548	92	2.7	263	2	2	0	0
1549	37	2.4	228	2	2	0	0
1550	64	2.1	204	2	2	0	0
1551	54	2.0	194	2	1	0	0
1552	57	2.0	194	2	1	0	0
1553	76	2.2	215	2	2	0	0
1554	73	2.7	261	2	2	0	0
1555	69	3.9	385	3	2	0	0
1556	67	3.9	385	3	2	0	0
1557	84	3.9	385	3	2	0	0
1558	43	10.0	983	5	3	0	0
1559	40	10.0	983	5	3	0	0
1560	50	12.4	1215	7	4	0	0
1561	49	14.2	1400	7	5	0	0
1562	58	16.2	1593	8	5	0	0
1563	71	17.8	1746	8	6	0	0
1564	57	19.3	1895	9	6	0	0
1565	44	20.9	2061	9	6	0	0
1566	60	22.2	2184	10	6	0	0
1567	75	22.2	2184	10	6	0	0
1568	69	22.9	2255	10	6	0	0
1569	69	23.5	2318	10	6	0	0
1570	64	23.8	2341	11	6	0	0
1571	62	23.8	2341	11	7	0	0
1572	77	23.5	2315	11	7	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1573	74	23.3	2292	11	6	0	0
1574	78	23.3	2292	11	6	0	0
1575	75	22.3	2194	11	6	0	0
1576	67	22.1	2175	11	6	0	0
1577	61	22.1	2175	11	6	0	0
1578	71	21.7	2132	11	6	0	0
1579	68	23.8	2336	14	7	0	0
1580	3	24.2	2380	14	7	0	0
1581	111	24.7	2424	14	7	0	0
1582	101	25.7	2526	15	7	0	0
1583	112	25.7	2526	15	7	0	0
1584	126	25.7	2526	15	7	0	0
1585	127	27.4	2688	16	7	0	0
1586	119	27.4	2688	16	7	0	0
1587	122	29.1	2857	17	7	0	0
1588	115	29.2	2866	18	8	0	0
1589	124	29.2	2866	18	8	0	0
1590	91	29.2	2866	18	8	0	0
1591	106	28.4	2787	18	8	0	0
1592	107	27.6	2708	17	8	0	0
1593	128	24.6	2410	17	8	0	0
1594	105	24.6	2410	17	8	0	0
1595	125	21.6	2109	16	7	0	0
1596	115	21.6	2109	16	7	0	0
1597	139	21.6	2109	16	7	0	0
1598	127	20.3	1984	15	7	0	0
1599	117	19.0	1858	14	7	0	0
1600	125	17.5	1707	14	7	0	0
1601	145	17.5	1707	14	7	0	0
1602	136	17.5	1707	14	7	0	0
1603	122	17.2	1678	13	6	0	0
1604	139	17.2	1678	13	6	0	0
1605	133	17.0	1663	13	6	0	0
1606	148	17.0	1663	13	6	0	0
1607	120	16.6	1622	12	6	0	0
1608	115	16.6	1622	12	6	0	0
1609	102	16.3	1597	12	5	0	0
1610	112	16.5	1616	12	5	0	0
1611	91	16.5	1616	11	5	0	0
1612	93	16.5	1616	12	5	0	0
1613	97	16.4	1604	12	5	0	0
1614	73	15.2	1493	10	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1615	81	16.6	1634	11	2	0	0
1616	101	16.6	1634	11	2	0	0
1617	122	20.7	2042	12	4	0	0
1618	103	20.7	2042	12	4	0	0
1619	116	20.7	2042	12	4	0	0
1620	128	24.4	2397	15	6	0	0
1621	162	24.4	2397	15	6	0	0
1622	133	26.0	2558	15	6	0	0
1623	128	26.0	2558	15	6	0	0
1624	137	26.8	2638	16	6	0	0
1625	111	26.8	2638	16	6	0	0
1626	121	27.7	2728	17	6	0	0
1627	138	27.7	2728	17	6	0	0
1628	114	27.3	2689	16	6	0	0
1629	118	26.3	2590	16	6	0	0
1630	108	26.3	2590	16	6	0	0
1631	96	25.3	2490	16	5	0	0
1632	105	25.3	2490	16	5	0	0
1633	88	25.0	2452	16	5	0	0
1634	99	25.9	2541	17	6	0	0
1635	97	25.9	2541	17	6	0	0
1636	104	26.6	2618	17	6	0	0
1637	97	26.6	2618	17	6	0	0
1638	97	22.3	2188	13	7	0	0
1639	97	21.9	2156	12	7	0	0
1640	97	21.6	2124	12	7	0	0
1641	92	21.3	2092	11	7	0	0
1642	97	12.5	1222	8	5	0	0
1643	96	3.7	351	5	3	0	0
1644	97	3.2	307	4	3	0	0
1645	92	2.8	262	4	3	0	0
1646	97	2.3	217	3	3	0	0
1647	100	2.1	203	3	2	0	0
1648	43	2.6	253	3	2	0	0
1649	49	3.1	303	4	2	0	0
1650	49	3.7	359	4	2	0	0
1651	62	4.6	450	5	2	0	0
1652	54	5.9	576	6	2	0	0
1653	47	7.2	706	7	2	0	0
1654	60	8.6	835	7	3	0	0
1655	51	9.6	943	8	3	0	0
1656	55	10.7	1048	8	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1657	51	11.1	1090	9	3	0	0
1658	68	11.4	1120	9	3	0	0
1659	40	11.4	1120	9	3	0	0
1660	63	11.7	1148	9	3	0	0
1661	85	11.8	1161	9	3	0	0
1662	73	11.9	1163	9	3	0	0
1663	61	11.9	1163	9	3	0	0
1664	45	12.0	1180	9	3	0	0
1665	42	12.0	1180	9	3	0	0
1666	64	11.7	1145	9	3	0	0
1667	48	11.7	1145	9	3	0	0
1668	53	10.2	1002	7	3	0	0
1669	67	9.7	955	7	2	0	0
1670	54	9.7	955	7	2	0	0
1671	59	8.8	862	7	2	0	0
1672	54	8.8	862	7	2	0	0
1673	54	8.8	862	7	2	0	0
1674	54	8.8	862	7	2	0	0
1675	54	8.8	862	7	2	0	0
1676	28	8.5	831	7	2	0	0
1677	54	8.1	793	7	2	0	0
1678	51	8.0	782	6	2	0	0
1679	52	7.9	770	7	2	0	0
1680	56	8.0	783	7	2	0	0
1681	50	9.4	923	8	2	0	0
1682	52	8.1	791	8	2	0	0
1683	44	8.1	791	8	2	0	0
1684	91	8.1	791	8	2	0	0
1685	117	8.4	819	9	2	0	0
1686	149	8.4	819	9	2	0	0
1687	133	8.4	819	9	2	0	0
1688	146	8.4	818	9	2	0	0
1689	131	8.4	818	9	3	0	0
1690	136	8.1	789	9	3	0	0
1691	128	8.1	789	9	3	0	0
1692	119	7.6	735	8	2	0	0
1693	116	7.6	735	8	2	0	0
1694	153	7.6	735	8	2	0	0
1695	94	7.0	679	8	2	0	0
1696	105	7.0	679	8	3	0	0
1697	138	6.5	626	8	3	0	0
1698	112	6.5	626	8	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1699	122	6.3	606	8	2	0	0
1700	134	6.0	585	8	2	0	0
1701	123	6.0	585	8	2	0	0
1702	152	5.5	536	7	2	0	0
1703	155	5.5	536	7	4	0	0
1704	135	5.3	506	7	4	0	0
1705	95	5.3	506	7	4	0	0
1706	129	5.2	501	7	2	0	0
1707	121	5.2	501	7	2	0	0
1708	132	5.4	520	7	2	0	0
1709	134	5.6	542	7	2	0	0
1710	128	5.8	563	7	2	0	0
1711	107	5.8	563	7	2	0	0
1712	98	6.4	618	7	2	0	0
1713	96	6.4	618	7	2	0	0
1714	98	7.1	691	8	2	0	0
1715	100	7.7	749	8	2	0	0
1716	70	7.7	749	8	2	0	0
1717	83	8.3	805	8	3	0	0
1718	110	8.3	805	8	3	0	0
1719	133	8.8	855	9	3	0	0
1720	114	8.8	855	9	3	0	0
1721	141	8.8	855	9	3	0	0
1722	123	8.7	845	9	3	0	0
1723	103	8.7	845	9	3	0	0
1724	83	8.4	820	9	3	0	0
1725	94	8.4	820	9	3	0	0
1726	118	8.9	871	9	3	0	0
1727	119	9.4	912	9	3	0	0
1728	70	9.6	935	10	3	0	0
1729	81	9.6	935	10	3	0	0
1730	91	9.6	935	10	3	0	0
1731	58	9.8	948	10	3	0	0
1732	44	9.9	964	11	4	0	0
1733	62	11.0	1070	13	5	0	0
1734	122	11.0	1070	13	5	0	0
1735	105	9.5	915	12	4	0	0
1736	120	9.5	915	12	4	0	0
1737	151	8.4	809	11	4	0	0
1738	107	8.4	809	11	4	0	0
1739	86	8.3	801	11	4	0	0
1740	59	8.3	801	11	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1741	63	4.6	437	7	3	0	0
1742	36	4.8	464	5	3	0	0
1743	7	4.8	464	5	3	0	0
1744	14	4.8	462	5	3	0	0
1745	29	4.8	467	5	3	0	0
1746	59	4.9	474	6	3	0	0
1747	60	5.2	506	5	3	0	0
1748	48	6.9	675	6	3	0	0
1749	49	6.9	675	6	3	0	0
1750	61	12.6	1245	6	3	0	0
1751	60	21.5	2132	5	3	0	0
1752	52	32.8	3265	5	3	0	0
1753	77	40.6	4038	6	4	0	0
1754	72	40.6	4038	6	4	0	0
1755	64	43.5	4333	6	4	0	0
1756	71	43.6	4334	6	4	0	0
1757	50	40.2	3996	6	4	0	0
1758	47	34.4	3424	6	4	0	0
1759	60	29.4	2918	6	4	0	0
1760	56	29.4	2918	6	4	0	0
1761	72	24.7	2453	7	4	0	0
1762	46	18.4	1819	7	4	0	0
1763	28	16.6	1634	8	3	0	0
1764	59	15.6	1540	8	3	0	0
1765	73	15.2	1498	8	4	0	0
1766	80	15.2	1498	8	4	0	0
1767	80	14.7	1448	8	4	0	0
1768	35	14.3	1401	8	4	0	0
1769	48	13.8	1354	8	4	0	0
1770	47	14.1	1387	8	4	0	0
1771	53	14.5	1426	9	4	0	0
1772	64	15.6	1528	9	4	0	0
1773	57	16.8	1648	10	4	0	0
1774	61	16.8	1648	10	4	0	0
1775	47	17.8	1749	11	5	0	0
1776	85	16.6	1632	11	5	0	0
1777	75	16.6	1632	11	5	0	0
1778	75	16.5	1620	11	5	0	0
1779	111	17.3	1695	12	6	0	0
1780	90	17.3	1695	12	6	0	0
1781	115	17.3	1695	12	6	0	0
1782	132	18.5	1812	12	6	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1783	132	18.5	1812	12	6	0	0
1784	114	19.0	1864	13	6	0	0
1785	136	19.0	1864	13	6	0	0
1786	130	19.0	1864	13	6	0	0
1787	90	18.2	1786	13	6	0	0
1788	68	18.2	1786	13	6	0	0
1789	65	14.2	1386	11	5	0	0
1790	9	9.2	897	7	4	0	0
1791	14	7.4	724	6	3	0	0
1792	22	6.2	601	5	3	0	0
1793	25	6.0	584	5	3	0	0
1794	58	6.0	590	4	3	0	0
1795	56	6.0	590	4	3	0	0
1796	133	6.0	583	4	2	0	0
1797	144	6.1	603	4	2	0	0
1798	127	6.1	603	4	2	0	0
1799	103	6.1	603	4	2	0	0
1800	109	7.1	698	4	2	0	0
1801	95	7.6	751	4	2	0	0
1802	120	8.2	805	4	3	0	0
1803	126	8.2	805	4	3	0	0
1804	140	9.2	905	4	3	0	0
1805	126	9.2	905	4	3	0	0
1806	132	9.2	905	4	3	0	0
1807	126	10.2	1002	5	3	0	0
1808	106	10.2	1002	5	2	0	0
1809	91	12.3	1215	5	3	0	0
1810	136	12.3	1215	5	3	0	0
1811	125	19.3	1909	5	3	0	0
1812	67	42.9	4267	8	4	0	0
1813	40	220.8	22015	24	9	0	0
1814	31	336.0	33490	38	13	0	0
1815	43	422.9	42139	51	16	1	0
1816	59	463.5	46187	59	18	1	0
1817	85	463.5	46187	59	18	1	0
1818	132	453.8	45215	56	18	1	0
1819	153	453.8	45215	56	18	1	0
1820	151	453.8	45215	56	18	1	0
1821	157	407.7	40629	49	16	1	0
1822	161	407.7	40629	49	16	1	0
1823	152	380.8	37947	44	14	1	0
1824	122	380.8	37947	44	14	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1825	126	380.8	37947	44	14	1	0
1826	115	354.1	35291	40	13	1	0
1827	111	296.7	29567	34	11	1	0
1828	107	239.2	23843	27	9	1	0
1829	131	224.2	22337	25	9	1	0
1830	88	206.7	20594	24	9	1	0
1831	128	206.7	20594	24	9	1	0
1832	128	164.6	16393	19	7	1	0
1833	117	164.6	16393	19	7	1	0
1834	135	117.8	11724	17	8	1	0
1835	1	31.4	3102	8	5	1	0
1836	55	27.2	2687	8	4	1	0
1837	50	24.2	2392	7	4	1	0
1838	49	21.3	2104	7	4	1	0
1839	37	18.6	1837	6	4	1	0
1840	65	16.8	1648	6	3	1	0
1841	75	15.2	1493	6	3	1	0
1842	47	13.9	1365	6	3	1	0
1843	18	12.8	1257	6	3	1	0
1844	37	14.2	1389	6	4	1	0
1845	69	14.8	1453	6	4	1	0
1846	54	15.4	1504	7	4	1	0
1847	67	15.9	1552	7	4	1	0
1848	57	15.9	1552	7	3	1	0
1849	71	16.1	1579	8	4	1	0
1850	72	16.1	1579	8	4	1	0
1851	51	15.5	1520	8	4	1	0
1852	38	14.7	1434	8	4	1	0
1853	74	13.3	1298	8	4	1	0
1854	61	13.0	1265	8	4	1	0
1855	60	11.8	1156	7	3	1	0
1856	58	11.1	1077	7	3	1	0
1857	93	11.1	1077	7	3	1	0
1858	69	10.6	1027	7	3	1	0
1859	57	9.7	946	7	3	1	0
1860	63	8.9	863	6	3	0	0
1861	77	8.9	863	6	3	1	0
1862	54	8.1	790	6	3	1	0
1863	70	7.8	759	6	3	0	0
1864	80	7.4	720	6	3	1	0
1865	54	7.4	720	6	3	1	0
1866	79	7.9	764	6	3	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1867	40	9.4	910	7	3	1	0
1868	88	11.1	1076	7	3	1	0
1869	56	13.0	1271	8	3	1	0
1870	71	13.0	1271	8	3	1	0
1871	71	15.0	1465	9	4	1	0
1872	62	15.3	1493	9	4	1	0
1873	78	15.6	1522	10	4	1	0
1874	114	7.1	687	6	3	1	0
1875	144	7.1	687	6	3	1	0
1876	154	7.1	687	6	3	1	0
1877	106	6.5	621	6	3	1	0
1878	156	6.5	621	6	3	1	0
1879	145	5.7	547	5	3	1	0
1880	145	5.7	547	5	3	1	0
1881	137	5.7	547	5	3	1	0
1882	123	5.2	502	5	2	1	0
1883	127	5.2	502	5	2	1	0
1884	148	5.2	502	5	2	1	0
1885	134	4.7	453	5	2	1	0
1886	160	4.7	453	5	2	1	0
1887	134	4.4	417	5	2	1	0
1888	112	4.4	417	5	2	1	0
1889	153	4.4	417	5	2	1	0
1890	162	4.1	393	4	2	0	0
1891	142	4.1	393	4	2	1	0
1892	109	4.1	391	4	2	1	0
1893	73	4.7	455	4	2	1	0
1894	135	4.7	455	4	2	1	0
1895	108	5.6	543	5	2	1	0
1896	139	5.6	543	5	2	1	0
1897	124	6.7	650	6	3	1	0
1898	136	6.7	650	6	3	0	0
1899	112	8.4	819	6	3	1	0
1900	114	8.4	819	6	3	1	0
1901	123	11.0	1070	6	3	1	0
1902	110	12.0	1172	6	3	1	0
1903	74	12.0	1172	6	3	1	0
1904	110	12.3	1204	6	3	1	0
1905	47	12.3	1204	7	3	1	0
1906	109	12.1	1176	7	3	1	0
1907	79	12.1	1176	7	3	1	0
1908	105	11.2	1093	7	3	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1909	128	11.2	1093	7	3	1	0
1910	120	10.3	1002	7	3	1	0
1911	90	10.3	1002	7	3	1	0
1912	74	10.0	970	6	3	1	0
1913	93	10.0	970	6	3	1	0
1914	106	9.3	903	6	3	1	0
1915	98	9.3	903	6	3	1	0
1916	112	8.7	848	6	3	1	0
1917	130	8.2	793	6	3	1	0
1918	110	6.9	666	6	3	1	0
1919	73	6.9	666	6	3	1	0
1920	64	6.7	643	5	3	1	0
1921	105	6.4	620	5	3	1	0
1922	117	6.0	575	5	2	1	0
1923	109	6.8	655	6	2	1	0
1924	106	7.2	692	6	3	1	0
1925	113	7.2	692	6	3	1	0
1926	113	7.3	710	6	3	1	0
1927	48	15.7	1535	10	4	1	0
1928	63	24.1	2360	14	6	1	0
1929	55	7.4	717	7	3	1	0
1930	47	5.5	526	6	2	1	0
1931	75	4.7	452	5	2	0	0
1932	47	4.1	396	4	2	0	0
1933	68	4.1	396	4	2	1	0
1934	88	3.8	365	4	2	1	0
1935	93	3.7	352	4	2	1	0
1936	94	3.9	376	4	2	1	0
1937	33	3.9	376	4	2	0	0
1938	74	4.2	403	4	2	1	0
1939	74	4.5	430	5	2	1	0
1940	30	5.3	512	6	2	1	0
1941	58	5.3	512	6	2	0	0
1942	82	6.0	582	6	2	0	0
1943	75	7.7	741	7	3	1	0
1944	31	7.7	741	7	3	1	0
1945	60	7.7	741	7	3	1	0
1946	88	7.2	694	7	3	1	0
1947	75	7.2	692	7	3	0	0
1948	66	7.3	710	7	3	1	0
1949	61	7.9	763	7	3	1	0
1950	62	7.9	763	7	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1951	82	8.0	776	7	3	1	0
1952	78	8.0	776	7	2	1	0
1953	94	8.0	775	7	2	0	0
1954	49	7.8	756	7	3	0	0
1955	66	7.8	756	7	3	1	0
1956	94	7.7	745	7	2	1	0
1957	68	7.6	733	7	2	0	0
1958	58	7.8	752	7	2	0	0
1959	68	7.9	768	7	3	0	0
1960	58	7.9	768	7	3	0	0
1961	67	7.6	742	7	2	0	0
1962	52	7.3	708	7	2	0	0
1963	49	7.8	751	7	2	1	0
1964	39	11.1	1086	9	3	1	0
1965	25	11.4	1109	9	3	1	0
1966	25	11.6	1133	10	3	1	0
1967	24	11.2	1087	9	3	1	0
1968	17	8.7	840	8	3	1	0
1969	25	8.1	781	8	3	1	0
1970	27	8.0	775	8	3	1	0
1971	18	6.8	656	7	2	0	0
1972	43	11.3	1094	9	3	1	0
1973	18	11.3	1094	10	3	1	0
1974	31	12.7	1230	11	4	1	0
1975	19	12.5	1216	11	4	1	1
1976	19	10.3	998	10	3	1	0
1977	23	9.4	912	9	3	0	0
1978	77	9.6	931	9	3	0	0
1979	127	9.6	931	9	3	0	0
1980	145	9.6	931	9	3	0	0
1981	143	9.6	931	9	3	0	0
1982	161	9.6	929	9	3	0	0
1983	175	9.6	929	9	3	0	0
1984	200	9.6	929	9	3	0	0
1985	154	9.0	876	9	3	0	0
1986	154	9.0	876	9	3	0	0
1987	125	8.9	858	9	3	1	0
1988	111	8.9	858	9	3	1	0
1989	109	8.9	858	9	3	1	0
1990	123	9.3	899	9	3	0	0
1991	117	10.3	992	10	3	1	0
1992	22	10.3	992	10	3	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
1993	95	10.9	1058	10	3	1	0
1994	86	10.9	1058	10	3	1	0
1995	83	11.7	1136	10	4	1	0
1996	49	11.7	1136	9	4	0	0
1997	19	2.2	205	6	0	0	0
1998	37	2.2	207	6	0	0	0
1999	30	2.2	204	4	1	0	0
2000	35	2.2	205	5	0	0	0
2001	35	2.1	200	5	0	0	0
2002	48	2.2	205	6	0	0	0
2003	52	2.2	202	7	0	0	0
2004	54	2.1	199	5	0	0	0
2005	59	2.1	197	5	1	0	0
2006	64	2.2	197	7	2	0	0
2007	62	2.1	193	8	1	0	0
2008	63	2.1	195	5	2	1	0
2009	53	2.2	193	5	2	1	1
2010	49	2.1	192	7	0	0	0
2011	53	2.1	196	5	2	0	0
2012	52	1.9	186	4	0	0	0
2013	49	2.0	185	5	0	0	0
2014	39	2.0	190	7	0	0	0
2015	78	2.1	200	7	0	0	0
2016	74	2.1	200	7	0	0	0
2017	63	2.2	205	6	0	0	0
2018	71	2.2	209	6	0	0	0
2019	68	2.3	206	7	2	0	0
2020	69	2.2	200	8	0	0	0
2021	68	2.1	197	7	0	0	0
2022	69	2.1	200	6	0	0	0
2023	63	2.3	205	8	2	0	0
2024	47	2.1	200	6	0	0	0
2025	31	2.2	197	10	0	0	0
2026	44	2.0	190	5	0	0	0
2027	45	1.2	111	4	0	0	0
2028	55	1.8	164	5	2	0	0
2029	51	1.8	164	5	2	0	0
2030	51	1.8	164	5	2	0	0
2031	37	2.9	279	5	0	0	0
2032	31	3.2	301	9	2	0	0
2033	38	3.5	323	9	0	0	0
2034	42	7.9	767	12	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2035	43	11.1	1067	15	1	1	0
2036	50	10.7	1051	12	0	0	0
2037	49	9.2	883	14	3	0	0
2038	40	6.2	602	10	0	0	0
2039	33	5.4	519	8	2	0	0
2040	47	4.9	467	10	1	0	0
2041	52	3.8	367	6	0	0	0
2042	48	3.8	367	6	0	0	0
2043	50	2.7	263	4	0	0	0
2044	50	2.5	235	6	0	0	0
2045	41	2.6	221	6	2	0	0
2046	22	2.6	222	5	3	2	1
2047	39	2.4	226	5	0	0	0
2048	40	2.4	228	6	2	0	0
2049	53	2.5	235	6	1	1	0
2050	38	2.4	233	6	0	0	0
2051	42	2.6	236	9	2	0	0
2052	49	2.4	226	6	0	0	0
2053	37	2.7	228	7	2	0	0
2054	44	2.8	252	4	1	0	0
2055	45	3.4	324	7	1	0	0
2056	38	3.6	346	9	0	0	0
2057	40	3.6	346	9	0	0	0
2058	48	3.1	287	8	2	0	0
2059	41	2.8	260	8	1	0	0
2060	35	2.5	241	7	0	0	0
2061	35	2.5	229	8	2	1	0
2062	51	2.2	214	3	1	0	0
2063	44	2.3	214	3	1	0	0
2064	41	2.2	205	6	0	0	0
2065	41	2.2	207	6	0	0	0
2066	39	2.1	204	4	1	0	0
2067	51	2.1	205	5	0	0	0
2068	34	2.1	200	5	0	0	0
2069	42	2.2	205	6	0	0	0
2070	46	2.1	202	7	0	0	0
2071	64	2.1	199	5	0	0	0
2072	71	2.1	197	5	1	0	0
2073	64	2.2	197	7	2	0	0
2074	51	2.1	193	8	1	0	0
2075	50	2.2	195	5	2	1	0
2076	30	2.2	193	5	2	1	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2077	48	2.0	192	7	0	0	0
2078	35	2.1	196	5	2	0	0
2079	48	1.9	186	4	0	0	0
2080	30	1.9	185	0	0	0	0
2081	48	2.0	190	7	0	0	0
2082	36	2.1	200	7	0	0	0
2083	45	2.1	200	7	0	0	0
2084	38	2.2	205	6	0	0	0
2085	45	2.2	209	6	0	0	0
2086	45	2.2	206	7	2	0	0
2087	47	2.1	200	8	0	0	0
2088	76	2.1	197	7	0	0	0
2089	68	2.1	200	6	0	0	0
2090	66	2.2	205	8	2	0	0
2091	80	2.1	200	6	0	0	0
2092	50	2.2	197	10	0	0	0
2093	31	2.0	190	5	0	0	0
2094	69	1.9	184	4	0	0	0
2095	55	1.9	180	4	0	0	0
2096	49	2.0	188	5	0	0	0
2097	78	2.0	188	5	0	0	0
2098	48	2.2	208	8	0	0	0
2099	47	2.2	210	6	0	0	0
2100	54	2.6	248	6	0	0	0
2101	41	3.0	294	4	0	0	0
2102	33	2.8	266	6	0	0	0
2103	29	2.8	262	8	3	0	0
2104	48	2.7	256	7	1	0	0
2105	36	1.9	183	4	0	0	0
2106	45	1.9	183	4	0	0	0
2107	59	4.1	389	11	0	0	0
2108	65	4.1	389	11	0	0	0
2109	69	3.8	340	13	2	2	0
2110	83	3.1	296	9	0	0	0
2111	99	3.1	296	9	0	0	0
2112	91	2.7	248	11	2	0	0
2113	111	2.7	248	11	2	0	0
2114	102	2.2	208	8	0	0	0
2115	110	1.9	180	5	0	0	0
2116	108	1.9	180	5	0	0	0
2117	115	1.9	180	5	0	0	0
2118	109	1.7	160	5	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2119	120	1.7	160	5	0	0	0
2120	107	1.6	150	5	0	0	0
2121	107	1.4	136	3	0	0	0
2122	86	1.3	125	5	0	0	0
2123	95	1.4	125	5	0	0	0
2124	86	1.6	129	4	2	2	0
2125	81	1.6	129	4	2	2	0
2126	93	1.3	122	6	0	0	0
2127	88	1.3	122	6	0	0	0
2128	93	1.1	106	4	0	0	0
2129	82	1.4	120	4	2	2	0
2130	78	1.4	126	5	0	0	0
2131	122	1.4	126	5	0	0	0
2132	119	1.5	139	4	2	0	0
2133	142	1.5	139	4	2	0	0
2134	122	1.6	155	5	0	0	0
2135	128	1.6	155	5	0	0	0
2136	111	1.6	155	5	0	0	0
2137	123	2.0	179	7	2	0	0
2138	112	2.0	179	7	2	0	0
2139	122	2.4	210	7	2	2	0
2140	125	2.8	253	8	3	2	0
2141	104	2.8	253	8	3	2	0
2142	112	3.4	312	8	2	0	0
2143	112	3.4	312	8	2	0	0
2144	124	3.4	312	8	2	0	0
2145	130	3.9	374	10	0	0	0
2146	98	4.5	428	11	0	0	0
2147	120	4.5	428	11	0	0	0
2148	114	4.6	431	11	2	0	0
2149	103	4.5	431	8	2	0	0
2150	121	4.5	431	8	2	0	0
2151	119	4.3	421	7	0	0	0
2152	104	4.2	410	7	0	0	0
2153	100	4.4	410	10	1	1	0
2154	113	4.5	410	12	2	1	0
2155	119	4.5	407	12	2	1	0
2156	129	4.5	408	12	2	1	0
2157	133	4.3	408	10	0	0	0
2158	120	4.5	434	10	0	0	0
2159	133	4.5	434	10	0	0	0
2160	134	4.5	434	10	0	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2161	114	5.0	458	14	3	1	0
2162	129	5.0	458	14	3	1	0
2163	103	5.0	458	14	3	1	0
2164	110	4.8	455	12	2	0	0
2165	120	4.8	455	12	2	0	0
2166	114	4.8	455	12	2	0	0
2167	124	5.0	466	12	2	0	0
2168	116	5.6	502	15	3	2	0
2169	111	5.5	502	15	3	2	0
2170	112	5.5	502	15	3	2	0
2171	124	6.1	561	15	3	2	0
2172	106	5.9	561	14	0	0	0
2173	107	6.7	606	16	4	2	0
2174	111	7.0	634	16	4	2	1
2175	79	7.3	663	17	4	2	2
2176	57	7.1	663	12	2	2	2
2177	93	7.5	699	15	3	2	2
2178	86	8.0	766	15	3	1	0
2179	105	7.9	766	13	2	0	0
2180	105	8.0	768	14	4	0	0
2181	55	8.0	768	14	4	0	0
2182	83	7.9	755	16	3	0	0
2183	119	7.8	742	18	3	0	0
2184	103	7.5	712	18	3	0	0
2185	94	7.8	712	20	4	0	0
2186	122	7.6	697	20	4	0	0
2187	128	7.6	697	20	4	0	0
2188	109	7.2	683	15	3	0	0
2189	121	7.2	683	16	3	0	0
2190	91	6.8	643	16	4	0	0
2191	80	6.8	643	15	4	0	0
2192	90	6.9	633	17	4	1	0
2193	86	6.1	560	16	4	1	0
2194	98	5.3	488	15	3	1	0
2195	87	4.8	453	12	3	0	0
2196	95	4.8	454	12	3	0	0
2197	77	4.8	454	10	1	0	0
2198	92	6.5	601	13	3	2	0
2199	106	6.5	601	13	3	2	0
2200	101	8.7	828	16	3	0	0
2201	85	18.4	1736	36	7	2	2
2202	85	2.8	256	9	3	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2203	141	2.4	215	7	2	2	0
2204	196	2.4	215	7	2	2	0
2205	163	2.4	215	7	2	2	0
2206	164	2.1	195	6	1	1	0
2207	158	1.8	175	5	0	0	0
2208	165	1.6	147	5	0	0	0
2209	160	1.6	147	5	0	0	0
2210	179	1.6	147	5	0	0	0
2211	168	1.5	145	5	0	0	0
2212	192	1.5	145	5	0	0	0
2213	171	1.4	129	4	0	0	0
2214	149	1.4	129	4	0	0	0
2215	219	1.4	129	4	0	0	0
2216	202	1.1	107	2	0	0	0
2217	178	1.1	107	2	0	0	0
2218	187	1.1	107	2	2	0	0
2219	143	1.0	92	2	2	0	0
2220	120	1.0	92	2	2	0	0
2221	142	0.8	82	0	0	0	0
2222	153	0.8	82	0	0	0	0
2223	164	1.1	102	4	2	0	0
2224	175	1.1	102	4	2	0	0
2225	173	1.1	102	4	2	0	0
2226	203	1.5	135	4	2	0	0
2227	243	1.5	135	4	2	0	0
2228	204	1.5	135	4	1	0	0
2229	182	1.8	166	6	1	0	0
2230	154	1.8	166	6	0	0	0
2231	174	1.8	166	6	0	0	0
2232	155	1.8	166	6	0	0	0
2233	173	2.1	191	8	2	0	0
TEREBRATULA Mbr.							
2234	151	2.1	191	8	2	0	0
2235	186	4.3	405	11	3	0	0
2236	168	4.3	405	11	3	0	0
2237	167	4.3	405	11	3	0	0
2238	191	12.3	1189	18	3	0	0
2239	195	12.3	1189	18	3	0	0
2240	205	12.3	1189	18	3	0	0
2241	258	12.3	1189	18	3	0	0
2242	219	14.8	1433	21	4	0	0
2243	242	17.3	1677	25	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2244	203	17.3	1677	25	4	0	0
2245	213	17.3	1677	25	4	0	0
2246	180	19.1	1859	25	4	0	0
2247	184	19.1	1859	25	4	0	0
2248	179	19.1	1859	25	4	0	0
2249	183	24.2	2333	30	5	3	2
2250	188	24.2	2333	30	5	3	2
2251	185	24.2	2333	30	5	3	2
2252	198	24.2	2333	30	5	3	2
2253	187	46.9	4563	52	7	2	0
2254	199	46.9	4563	52	7	2	0
2255	198	46.9	4563	52	7	2	0
2256	212	67.6	6588	72	8	2	0
2257	200	67.6	6588	72	8	2	0
2258	205	67.6	6588	72	8	2	0
2259	221	101.2	9894	88	11	4	2
2260	174	101.2	9894	88	11	4	2
2261	239	101.2	9894	88	11	4	2
2262	251	111.1	10870	99	12	4	2
2263	282	120.9	11845	111	13	4	2
2264	225	120.9	11845	111	13	3	1
2265	250	120.9	11845	111	13	1	0
2266	247	120.9	11845	111	13	1	1
2267	230	120.9	11845	111	13	1	2
2268	248	118.6	11600	109	13	1	2
2269	219	116.2	11354	108	12	1	2
2270	237	116.2	11354	108	12	1	2
2271	225	116.2	11354	108	12	1	2
2272	238	99.2	9706	95	10	0	0
2273	261	99.2	9706	95	10	0	0
2274	272	99.2	9706	95	10	0	0
2275	205	99.2	9706	96	11	0	0
2276	217	93.2	9109	96	11	0	0
2277	237	87.2	8512	96	11	0	0
2278	216	87.2	8512	96	11	0	1
2279	253	87.2	8512	96	11	0	2
2280	267	80.3	7836	88	11	0	2
2281	235	80.3	7836	88	11	0	2
2282	218	80.3	7836	88	11	0	2
2283	137	74.4	7251	79	9	0	0
2284	187	74.4	7251	79	9	0	0
2285	183	74.9	7289	81	11	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2286	169	75.4	7327	82	12	2	0
2287	219	75.4	7327	82	12	2	0
2288	210	75.4	7327	83	12	2	0
2289	219	75.4	7327	85	12	2	0
2290	187	75.3	7313	85	11	2	0
2291	186	75.3	7313	85	11	3	0
2292	188	75.3	7313	85	12	4	0
2293	197	71.4	6920	81	12	4	0
2294	196	2.4	205	5	2	0	0
2295	182	2.7	236	9	4	2	0
2296	28	1.3	103	5	1	0	0
2297	41	1.2	99	5	1	0	0
2298	48	1.3	103	4	0	0	0
2299	46	1.5	112	4	3	1	0
2300	54	1.5	114	4	2	2	0
2301	54	1.5	114	4	2	2	0
2302	52	1.2	99	3	0	0	0
2303	51	1.1	84	4	2	0	0
2304	56	1.1	72	4	2	0	0
2305	52	0.9	70	3	1	0	0
2306	52	0.9	69	2	1	0	0
2307	50	1.0	75	4	0	0	0
2308	57	1.0	75	4	0	0	0
2309	65	1.0	73	4	0	0	0
2310	48	0.9	70	4	0	0	0
2311	49	1.6	133	5	0	0	0
2312	59	2.1	166	7	3	2	0
2313	64	2.1	166	7	3	2	0
2314	54	2.0	166	9	2	0	0
2315	66	2.2	174	9	3	1	0
2316	77	2.6	210	10	3	2	0
2317	41	2.6	214	9	3	2	0
2318	120	2.6	218	9	3	1	0
2319	176	2.6	218	9	3	1	0
2320	176	2.7	227	9	3	1	0
2321	163	2.7	227	9	3	0	0
2322	183	2.7	227	9	3	0	0
2323	166	2.9	239	10	3	2	0
2324	151	2.9	239	10	3	2	0
2325	162	2.9	239	10	3	2	0
2326	226	3.1	259	10	3	2	0
2327	191	3.0	259	8	2	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2328	190	3.0	259	7	1	1	0
2329	215	3.0	259	7	1	1	0
2330	179	3.3	280	11	3	1	0
2331	194	3.3	280	11	3	0	0
2332	162	3.3	280	11	3	0	0
2333	158	3.6	309	11	4	0	0
2334	155	3.6	309	11	4	0	0
2335	199	3.6	309	11	4	0	0
2336	229	4.2	359	14	4	0	0
2337	165	4.1	359	14	4	0	0
2338	192	4.1	359	14	4	0	0
2339	155	4.1	360	14	4	0	0
2340	147	4.1	360	14	4	0	0
2341	145	4.1	360	14	4	0	0
2342	205	4.1	360	14	4	0	0
2343	196	3.5	303	12	3	0	0
2344	189	3.5	303	12	3	0	0
2345	211	3.6	303	12	4	0	0
2346	196	2.9	244	9	4	0	0
2347	170	3.1	244	10	4	3	0
2348	88	2.9	230	10	4	3	0
2349	65	2.7	215	10	3	3	0
2350	65	2.5	200	10	3	3	0
2351	116	2.1	171	7	2	0	0
2352	106	2.1	171	8	3	0	0
2353	105	2.0	160	8	3	0	0
2354	142	2.0	160	8	3	0	0
2355	199	2.2	173	9	3	0	0
2356	205	2.2	173	9	3	0	0
2357	184	2.2	173	9	3	0	0
2358	184	2.4	192	9	4	0	0
2359	126	2.3	192	6	4	0	0
2360	135	2.6	219	7	4	0	0
2361	139	2.5	219	7	2	0	0
2362	132	2.5	219	7	2	0	0
2363	161	3.1	269	8	2	0	0
2364	157	3.1	269	8	2	0	0
2365	171	3.7	327	10	3	0	0
2366	176	3.7	327	10	3	0	0
2367	194	3.7	327	10	3	0	0
2368	165	4.1	360	11	4	0	0
2369	164	4.1	360	11	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2370	198	4.1	360	11	4	0	0
2371	200	4.1	360	11	4	0	0
2372	189	4.3	382	11	3	1	0
2373	236	4.6	403	11	3	2	0
2374	211	4.6	403	11	3	2	0
2375	236	4.6	403	11	3	2	0
2376	213	4.8	420	15	4	0	0
2377	185	4.8	420	15	4	0	0
2378	240	4.8	420	15	4	0	0
2379	230	4.8	423	15	3	0	0
2380	244	4.8	426	15	3	0	0
2381	200	4.8	426	15	3	0	0
2382	196	4.9	428	16	4	0	0
2383	237	4.9	431	16	5	0	0
2384	189	4.9	431	16	5	0	0
2385	220	5.0	439	16	5	0	0
2386	190	5.1	448	16	5	0	0
2387	215	5.1	448	15	5	0	0
2388	200	5.1	448	15	5	0	0
2389	240	5.8	525	16	5	0	0
2390	206	6.6	602	17	5	0	0
2391	168	8.6	782	20	5	2	0
2392	180	5.0	449	13	3	1	0
2393	267	1.5	116	6	1	0	0
2394	224	1.7	139	6	1	0	0
2395	195	1.7	139	5	0	0	0
2396	197	1.7	139	5	0	0	0
2397	252	1.7	139	5	0	0	0
2398	193	1.8	151	7	0	0	0
2399	197	1.8	151	7	0	0	0
2400	193	1.8	151	7	0	0	0
2401	230	1.0	78	4	0	0	0
2402	191	1.0	78	4	0	0	0
2403	210	1.0	78	4	0	0	0
2404	191	1.1	78	6	0	0	0
2405	227	1.0	75	6	0	0	0
2406	205	1.0	75	6	0	0	0
2407	244	1.0	75	6	0	0	0
2408	222	1.1	75	6	2	0	0
2409	185	1.0	66	4	2	0	0
2410	188	1.0	66	4	2	0	0
2411	197	1.0	66	4	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2412	202	0.9	64	4	1	0	0
2413	172	0.8	61	3	0	0	0
2414	240	0.8	61	3	0	0	0
2415	191	0.8	60	2	0	0	0
2416	229	0.8	60	2	0	0	0
2417	219	0.8	60	2	0	0	0
2418	225	1.0	69	3	2	0	0
2419	160	1.0	69	3	2	0	0
2420	168	1.6	126	4	2	0	0
2421	188	1.5	126	4	0	0	0
2422	171	1.5	126	4	0	0	0
2423	172	1.7	138	6	2	0	0
2424	157	1.7	138	6	2	0	0
2425	193	1.7	138	6	2	0	0
2426	179	1.9	153	6	2	0	0
2427	176	1.9	153	6	2	0	0
2428	145	1.9	153	6	2	0	0
2429	155	1.9	156	6	2	0	0
2430	154	1.9	156	5	1	0	0
2431	158	1.9	156	5	1	0	0
2432	179	2.0	162	6	1	1	0
2433	172	2.0	162	6	1	1	0
2434	179	2.0	162	6	1	1	0
2435	156	2.3	184	7	3	3	0
2436	176	2.3	184	7	3	3	0
2437	174	2.3	184	7	3	3	0
2438	230	2.4	191	8	4	2	0
2439	165	2.4	191	8	4	2	0
2440	201	2.4	191	8	4	2	0
2441	192	2.4	191	8	4	2	0
2442	190	2.5	199	8	4	2	0
2443	219	2.4	199	8	2	0	0
2444	231	2.7	219	10	3	1	0
2445	192	3.0	239	12	4	2	0
2446	234	3.0	239	12	4	2	0
2447	193	3.0	239	12	4	2	0
2448	172	4.4	368	15	4	2	0
2449	191	4.3	368	15	4	1	0
2450	236	4.3	368	15	4	0	0
2451	203	5.4	474	16	5	1	0
2452	226	6.6	581	17	6	2	0
2453	160	4.3	378	14	5	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2454	149	4.3	378	14	5	0	0
2455	163	14.8	1340	36	13	4	0
2456	150	3.6	314	10	2	1	0
2457	164	3.6	314	10	2	1	0
2458	169	4.0	350	11	4	0	0
2459	93	4.2	362	14	5	0	0
2460	93	4.2	362	14	5	0	0
2461	99	4.2	362	14	5	0	0
2462	227	4.3	358	14	6	2	0
2463	180	4.3	358	14	6	2	0
2464	184	4.3	358	14	6	2	0
2465	190	4.3	358	14	6	2	0
2466	165	4.0	349	13	3	0	0
2467	194	4.0	349	13	3	0	0
2468	202	4.5	385	15	4	1	0
2469	200	4.9	422	16	4	2	0
2470	195	4.9	422	16	4	2	0
2471	194	5.0	422	17	5	2	0
2472	194	1.8	133	8	3	1	0
2473	180	1.8	133	8	3	1	0
2474	179	1.4	114	4	2	0	0
2475	229	1.4	114	4	2	0	0
2476	194	1.5	114	6	2	0	0
2477	200	1.5	114	7	3	0	0
2478	173	1.5	109	7	3	0	0
2479	148	1.5	109	7	3	0	0
2480	152	1.5	121	4	2	0	0
2481	182	1.5	121	4	2	0	0
2482	209	1.5	121	4	2	0	0
2483	265	2.6	216	8	2	0	0
2484	212	4.6	220	8	2	1	0
2485	100	0.9	44	4	3	2	0
2486	111	0.9	44	4	3	2	0
2487	96	0.9	52	4	5	2	0
2488	137	0.9	52	4	5	2	0
2489	148	0.9	62	4	2	3	0
2490	185	0.9	62	4	2	3	0
2491	171	1.1	62	4	4	3	3
2492	196	1.1	62	4	4	3	3
2493	166	1.1	62	4	4	3	3
2494	183	0.8	60	5	4	0	0
2495	185	0.8	60	5	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2496	176	0.8	60	5	4	0	0
2497	159	1.1	65	5	5	0	0
2498	185	1.1	65	5	5	0	0
2499	171	1.1	65	5	5	0	0
2500	220	1.1	71	6	5	1	0
2501	173	1.0	71	6	4	1	0
2502	155	1.1	71	6	4	3	0
2503	181	1.1	71	6	4	5	0
2504	199	1.1	67	4	3	5	0
2505	196	1.1	67	4	3	5	0
2506	190	1.1	67	4	3	5	0
2507	192	1.1	67	6	4	4	0
2508	210	1.1	67	6	4	4	0
2509	199	1.3	67	6	5	4	3
2510	225	1.3	65	6	5	2	3
2511	181	1.3	64	6	5	0	3
2512	240	1.3	65	6	5	0	3
2513	209	1.3	66	6	5	0	3
2514	163	0.9	66	5	5	0	0
2515	192	0.9	66	5	5	0	0
2516	147	1.1	64	5	4	3	0
2517	178	1.1	64	5	4	3	0
2518	186	1.1	64	5	5	3	2
2519	148	1.0	63	5	5	1	2
2520	190	1.1	64	6	5	2	2
2521	181	1.2	66	6	5	3	2
2522	175	1.2	66	6	4	3	2
2523	174	1.2	66	6	4	3	2
2524	174	1.4	67	6	4	3	2
2525	202	1.4	67	6	4	2	2
2526	168	1.4	67	6	4	2	2
2527	179	1.4	83	7	4	5	2
2528	172	1.4	83	7	4	5	0
2529	199	1.4	83	7	4	5	0
2530	184	1.5	97	8	4	5	0
2531	208	1.5	97	8	4	4	0
2532	217	1.5	97	8	4	4	0
2533	197	1.6	105	8	4	4	0
2534	218	1.6	112	8	5	4	0
2535	206	1.6	112	7	5	3	0
2536	191	1.6	112	7	5	3	0
2537	186	1.8	121	7	4	4	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2538	196	1.9	130	7	4	4	0
2539	209	1.9	130	7	4	4	0
2540	230	1.9	131	7	4	4	0
2541	188	1.9	132	7	4	4	0
2542	174	1.8	132	6	4	3	0
2543	142	1.9	139	7	4	4	0
2544	81	1.9	144	7	4	4	0
2545	86	1.9	144	7	4	4	0
2546	200	1.9	144	7	4	4	0
2547	220	2.1	169	6	6	1	0
2548	206	2.1	169	6	6	1	0
2549	133	2.5	191	9	6	2	1
2550	137	2.9	212	11	6	3	2
2551	133	2.9	212	11	6	3	2
2552	126	3.2	232	12	6	5	0
2553	129	13.4	1014	44	31	17	1
2554	157	23.7	1796	75	55	29	2
2555	140	23.7	1796	75	55	29	2
2556	211	59.3	4310	207	161	80	12
2557	258	94.9	6823	339	267	132	22
2558	197	96.2	6830	350	273	136	29
2559	234	97.5	6836	360	279	140	35
2560	150	93.2	6513	347	267	135	35
2561	146	89.0	6190	334	254	129	35
2562	136	89.0	6190	334	254	129	35
2563	157	77.3	5384	291	221	112	28
2564	166	77.3	5384	291	221	112	28
2565	180	77.3	5384	291	221	112	28
2566	187	65.3	4506	248	187	99	23
2567	64	51.6	3692	172	139	84	23
2568	107	47.4	3384	155	128	79	22
2569	94	43.2	3076	138	117	74	22
2570	153	42.4	3075	134	113	67	18
2571	116	42.4	3075	134	113	67	18
2572	181	42.4	3075	134	113	67	19
2573	200	42.1	3059	132	111	66	19
2574	213	41.7	3043	130	109	64	19
2575	190	41.7	3043	130	109	64	19
2576	198	40.1	2888	128	106	63	16
2577	204	38.4	2734	127	103	61	14
2578	177	38.4	2734	127	103	61	14
2579	160	39.9	2889	127	102	60	15

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2580	128	41.4	3045	128	101	60	16
2581	157	42.8	3200	128	100	59	17
2582	73	2.1	108	11	8	7	2
2583	135	2.3	118	11	8	7	1
2584	132	2.4	129	11	9	8	0
2585	136	2.4	129	11	9	8	0
2586	132	2.8	136	13	10	8	2
2587	133	2.8	136	13	10	8	2
2588	153	3.0	142	13	11	8	2
2589	176	3.0	142	13	11	8	2
2590	195	3.0	142	13	11	8	2
2591	199	3.0	142	13	11	8	2
2592	201	3.0	143	13	11	9	2
2593	192	3.0	143	13	11	9	2
2594	165	3.0	143	13	11	9	2
2595	192	3.1	143	14	11	9	5
2596	138	3.1	139	14	11	8	5
2597	182	3.1	139	14	11	8	5
2598	214	2.7	130	14	10	9	3
2599	169	2.7	130	14	10	9	3
2600	160	2.7	130	14	10	9	3
2601	171	2.7	130	14	10	9	7
2602	200	2.7	119	14	8	8	7
2603	207	2.7	119	14	8	8	7
2604	212	2.7	119	14	8	9	7
2605	170	2.2	114	11	8	9	0
2606	143	2.2	114	11	8	9	0
2607	126	2.0	103	8	6	5	0
2608	183	2.0	103	8	6	5	0
2609	163	2.0	103	8	6	5	0
2610	164	2.0	95	9	6	7	3
2611	191	2.0	95	9	6	7	3
2612	186	2.0	95	9	6	7	3
2613	194	1.7	90	11	8	6	0
2614	164	1.7	90	11	8	6	0
2615	163	1.8	90	11	8	7	2
2616	108	1.8	87	9	6	7	2
2617	159	1.8	87	9	6	7	2
2618	87	2.6	186	8	6	6	5
2619	134	3.7	245	13	8	6	4
2620	148	3.7	245	13	8	6	4
2621	191	3.7	270	13	8	6	4

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2622	186	3.7	270	13	8	4	3
2623	168	3.7	270	13	8	4	3
2624	157	4.0	282	15	8	7	4
2625	134	4.0	282	15	8	7	4
2626	161	4.4	302	16	9	8	4
2627	132	4.4	302	16	9	8	2
2628	150	4.4	302	16	9	8	2
2629	154	4.4	314	17	10	8	2
2630	154	4.3	314	17	10	7	0
2631	171	4.6	337	20	11	7	0
2632	159	4.6	337	20	11	6	0
2633	137	4.6	337	20	11	5	0
2634	175	5.9	436	20	11	7	3
2635	137	5.9	436	19	11	7	3
2636	128	7.8	632	24	13	7	3
2637	165	7.8	632	24	13	5	2
2638	164	7.8	632	24	13	5	2
2639	133	9.1	735	25	14	8	0
2640	138	9.1	735	25	14	8	0
2641	137	9.8	814	26	14	9	7
2642	130	8.0	672	21	9	6	0
2643	102	8.0	672	21	9	6	0
2644	85	10.0	843	28	12	8	2
2645	77	11.7	977	30	16	8	2
2646	94	11.7	977	33	17	9	0
2647	86	11.6	972	33	17	9	0
2648	54	11.5	966	33	17	9	0
2649	66	10.6	876	32	16	9	0
2650	80	9.3	766	29	14	7	0
2651	72	8.1	634	25	13	7	3
2652	80	8.1	634	25	13	7	4
2653	78	6.2	498	17	9	6	4
2654	82	5.0	391	16	10	5	2
2655	85	5.0	391	16	10	6	3
2656	99	4.0	303	13	7	7	3
2657	83	3.6	269	11	6	7	4
2658	121	3.3	235	9	5	7	5
2659	129	1.9	144	8	5	2	0
2660	158	1.9	153	8	4	1	2
2661	194	1.9	164	8	5	1	0
2662	135	1.9	164	8	5	1	0
2663	152	1.9	164	7	5	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2664	124	1.9	164	9	5	0	0
2665	195	1.9	163	9	4	0	0
2666	196	1.9	163	9	4	0	0
CHACRA Fm.							
2667	158	1.9	163	9	4	0	0
2668	158	5.9	514	15	7	5	3
2669	157	5.9	514	14	6	5	2
2670	146	5.6	476	13	6	5	0
2671	146	5.6	476	13	6	5	0
2672	123	5.0	436	13	7	5	2
2673	146	3.6	318	11	6	4	1
2674	124	2.3	200	8	6	2	0
2675	160	2.3	200	8	6	0	0
2676	187	2.8	240	10	5	2	0
2677	171	2.8	240	10	5	2	0
2678	160	3.0	240	14	7	2	2
2679	137	3.0	237	14	7	2	2
2680	119	3.0	237	14	7	2	2
2681	128	3.0	237	14	7	2	3
2682	126	2.9	224	13	6	0	3
2683	141	2.9	224	13	6	0	3
2684	143	2.5	199	12	6	2	0
2685	143	2.5	199	12	6	3	0
2686	134	2.3	178	9	4	3	0
2687	131	2.3	178	9	4	3	0
2688	138	2.3	178	9	4	3	2
2689	155	1.9	148	7	4	2	2
2690	152	1.9	148	7	4	2	2
2691	161	2.0	148	9	5	3	2
2692	161	2.0	140	9	5	3	0
2693	148	2.0	140	9	5	3	0
2694	129	1.5	131	6	3	0	0
2695	163	1.5	131	6	3	0	0
2696	166	1.5	131	6	3	0	0
2697	158	1.6	120	7	2	2	2
2698	195	1.6	120	7	2	2	2
2699	175	1.6	120	7	2	2	2
2700	149	1.6	121	7	3	3	0
2701	126	1.6	121	7	3	3	0
2702	149	1.8	134	8	4	3	0
2703	127	1.8	134	8	4	1	0
2704	141	1.8	134	8	4	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2705	146	1.9	151	9	4	2	0
2706	132	1.9	151	9	4	2	0
2707	128	1.7	153	7	3	0	0
2708	128	1.7	153	7	3	0	0
2709	155	2.2	171	7	4	3	3
2710	129	2.2	181	7	4	3	3
2711	147	2.2	190	7	4	4	3
2712	110	2.2	190	7	2	4	0
2713	140	2.2	190	7	2	4	0
2714	175	2.7	211	8	3	1	4
2715	143	2.7	211	8	3	1	4
2716	128	3.1	246	12	5	3	0
2717	117	3.1	246	12	5	3	0
2718	126	3.1	246	12	5	3	0
2719	141	3.3	274	11	4	3	2
2720	130	3.3	274	11	4	3	2
2721	143	3.4	292	12	4	2	0
2722	146	3.4	292	12	4	2	0
2723	132	3.4	312	12	4	2	0
2724	138	3.4	312	12	3	0	0
2725	138	3.4	312	12	3	0	0
2726	167	3.6	325	12	4	0	0
2727	176	3.6	325	12	4	0	0
2728	188	3.6	325	12	4	0	0
2729	165	3.8	344	13	5	0	0
2730	206	3.8	344	13	5	0	0
2731	179	3.9	354	13	5	0	0
2732	184	4.0	363	13	5	0	0
2733	189	4.0	363	11	4	0	0
2734	171	4.1	378	12	4	0	0
2735	162	4.3	392	14	4	0	0
2736	134	4.6	408	14	4	0	1
2737	147	5.0	423	14	5	0	3
2738	133	5.0	423	14	5	0	3
2739	138	5.2	470	15	5	2	3
2740	155	5.2	470	15	5	2	0
2741	138	5.2	470	15	5	2	0
2742	152	6.3	559	21	7	0	2
2743	183	6.3	559	21	7	0	2
2744	142	7.2	632	21	7	2	2
2745	147	7.2	632	19	7	2	2
2746	167	7.2	632	19	7	2	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2747	133	6.9	622	18	7	2	0
2748	146	6.9	622	18	7	2	0
2749	190	6.9	622	18	7	2	0
2750	189	6.6	594	17	6	0	0
2751	187	6.6	594	17	6	1	0
2752	165	6.6	594	17	6	3	0
2753	145	6.2	559	15	5	3	0
2754	184	6.2	559	15	5	3	0
2755	179	6.2	559	16	7	3	3
2756	177	6.1	553	16	7	2	3
2757	139	6.1	546	16	7	2	3
2758	147	5.6	520	16	5	0	0
2759	197	5.6	520	16	5	0	0
2760	192	5.6	520	16	5	0	0
2761	147	5.6	520	17	6	0	0
2762	185	5.5	509	17	6	0	0
2763	132	5.7	509	17	6	2	2
2764	137	5.7	509	17	5	2	2
2765	132	5.7	509	17	5	2	2
2766	191	6.0	512	19	5	2	0
2767	150	6.5	515	19	7	2	1
2768	130	1.0	80	4	2	0	0
2769	147	1.3	103	4	1	1	2
2770	156	1.3	103	4	1	1	2
2771	121	1.3	103	4	1	1	2
2772	139	1.4	110	4	2	1	2
2773	193	1.4	110	4	2	1	2
2774	174	1.4	110	4	2	1	2
2775	171	1.3	108	3	3	3	0
2776	175	1.3	108	3	3	3	0
2777	154	1.3	108	6	3	0	0
2778	145	1.3	108	6	3	0	0
2779	168	1.4	108	6	3	0	0
2780	182	1.4	108	6	3	0	0
2781	159	1.5	99	6	2	1	2
2782	143	1.5	99	6	2	1	2
2783	148	0.2	8	2	2	0	0
2784	137	0.2	8	2	2	0	0
2785	157	1.3	85	4	3	2	2
2786	140	1.3	85	4	3	2	2
2787	157	1.3	85	4	3	2	2
2788	155	1.2	90	4	3	0	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2789	88	1.3	90	4	3	0	1
2790	142	2.2	179	7	2	2	0
2791	115	2.2	179	7	2	2	0
2792	127	2.4	199	8	3	2	0
2793	120	2.4	199	8	3	2	0
2794	109	2.8	227	8	4	2	2
2795	153	2.8	227	8	4	2	2
2796	148	3.1	250	11	4	3	2
2797	86	3.1	250	11	4	3	2
2798	138	3.4	292	13	5	0	0
2799	121	3.4	292	13	5	0	0
2800	132	3.7	306	13	5	2	2
2801	143	3.7	306	13	5	2	2
2802	155	3.7	306	13	5	2	2
2803	116	3.4	303	13	4	0	0
2804	116	3.4	303	13	4	0	0
2805	116	3.4	303	13	4	0	0
2806	105	3.4	303	13	4	0	0
2807	116	3.4	304	13	6	0	0
2808	107	3.4	304	13	6	0	0
2809	130	3.4	297	11	4	1	2
2810	127	3.4	297	11	4	1	2
2811	138	3.4	292	9	4	3	2
2812	121	3.5	292	9	4	3	2
2813	130	3.6	302	10	5	2	2
2814	87	3.4	300	10	5	2	1
2815	99	3.4	305	9	4	1	0
2816	93	3.4	307	10	3	1	1
2817	121	3.5	307	10	3	1	1
2818	88	4.2	359	14	7	1	2
2819	106	4.3	359	14	7	1	2
2820	106	4.4	359	14	7	1	2
2821	116	6.2	497	20	10	5	1
2822	129	8.0	646	26	13	7	2
2823	75	8.0	646	26	13	7	2
2824	135	9.1	754	28	16	8	0
2825	127	9.1	754	28	16	8	0
2826	154	10.3	845	34	20	10	0
2827	171	10.3	845	34	20	10	0
2828	173	10.4	845	34	20	10	0
2829	125	11.2	897	36	23	12	2
2830	96	11.2	897	36	23	12	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2831	124	10.6	852	37	20	11	3
2832	104	9.7	783	34	19	10	2
2833	108	8.7	714	31	19	9	1
2834	121	8.7	714	31	19	9	3
2835	115	8.0	625	30	17	8	3
2836	119	8.0	625	30	17	8	3
2837	133	6.7	550	24	14	5	0
2838	122	6.7	550	24	14	5	4
2839	99	5.9	459	22	11	5	4
2840	124	4.9	382	19	11	4	2
2841	64	4.9	382	19	11	5	4
2842	95	4.1	321	13	7	5	4
2843	117	4.1	321	13	7	5	4
2844	142	3.8	307	12	6	4	2
2845	150	3.6	292	11	5	4	1
2846	124	3.6	292	12	6	4	1
2847	152	3.2	268	12	6	0	0
2848	147	3.2	268	12	6	0	0
2849	130	3.1	254	10	5	2	1
2850	130	3.1	241	9	4	3	1
2851	110	3.1	241	9	4	3	1
2852	126	3.1	241	12	6	3	1
2853	165	2.6	227	12	6	0	0
2854	145	2.8	227	12	6	4	4
2855	130	2.9	237	12	6	3	3
2856	139	3.1	246	12	7	3	2
2857	136	3.1	246	12	7	3	2
2858	160	3.1	246	12	7	3	2
2859	143	3.0	243	9	4	3	0
2860	118	4.7	396	15	6	5	2
2861	155	4.2	363	14	6	0	2
2862	141	4.3	370	14	6	3	2
2863	117	17.1	1537	35	17	9	2
2864	87	29.9	2705	56	28	15	2
2865	47	29.9	2705	56	28	15	2
2866	111	31.4	2846	57	29	15	2
2867	137	31.4	2846	57	29	15	2
2868	150	31.4	2846	57	29	15	2
2869	146	30.3	2723	61	30	15	2
2870	168	30.3	2723	61	30	15	2
2871	150	30.3	2723	61	30	15	2
2872	130	22.6	1995	55	26	12	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2873	151	22.6	1995	55	26	12	0
2874	164	22.6	1995	55	26	12	0
2875	140	15.5	1340	40	19	8	4
2876	160	15.5	1340	40	19	8	4
2877	153	10.9	943	31	16	7	0
2878	145	10.9	943	31	16	7	0
2879	136	8.4	715	26	12	7	2
2880	119	8.4	715	26	12	7	2
2881	123	8.4	715	26	12	7	2
2882	133	6.5	541	21	11	6	0
2883	100	6.5	541	21	11	6	2
2884	105	5.6	449	20	10	5	2
2885	156	5.6	449	20	10	5	2
2886	141	5.5	456	18	9	4	0
2887	165	5.5	456	18	9	4	0
2888	174	6.0	502	20	9	4	0
2889	175	6.5	548	21	9	4	0
2890	166	6.5	548	21	9	4	0
2891	170	6.9	596	23	10	5	0
2892	105	6.9	596	23	10	5	0
2893	88	8.1	705	25	11	4	0
2894	113	8.1	705	25	11	4	0
2895	106	8.3	710	26	11	5	0
2896	117	8.3	710	26	11	5	0
2897	160	8.3	710	26	11	5	0
2898	162	8.6	759	25	11	4	0
2899	144	8.6	759	25	11	4	0
2900	133	9.4	812	27	11	6	2
2901	157	9.4	812	27	11	6	2
2902	132	9.4	812	27	11	6	2
2903	205	9.6	838	23	10	8	2
2904	119	9.6	838	23	10	8	2
2905	135	9.7	868	25	10	8	2
2906	158	9.7	868	25	10	4	2
2907	187	9.7	868	25	10	4	2
2908	182	9.5	842	23	9	6	2
2909	129	9.5	842	23	9	6	2
2910	120	8.1	714	21	10	5	0
2911	118	8.1	714	21	10	5	0
2912	141	6.4	567	20	8	1	2
2913	136	6.4	567	20	8	1	2
2914	135	6.4	567	20	8	2	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2915	126	5.2	459	15	7	2	0
2916	142	5.2	459	15	7	2	0
2917	105	4.5	390	16	5	2	0
2918	120	4.5	390	16	5	3	2
2919	114	4.4	374	12	5	3	2
2920	143	4.4	374	12	5	3	2
2921	160	4.5	385	14	5	2	0
2922	148	4.5	385	14	5	2	0
2923	116	4.5	385	14	5	3	0
2924	149	4.3	375	12	5	3	0
2925	138	4.4	378	16	5	3	0
2926	155	4.4	378	16	5	2	0
2927	128	4.4	378	16	6	2	0
2928	103	4.4	378	16	7	2	0
2929	125	4.5	401	15	7	2	0
2930	83	4.5	401	15	6	2	0
2931	102	5.1	442	15	7	3	0
2932	107	6.8	589	20	9	4	0
2933	94	6.8	589	20	9	4	0
2934	119	9.0	791	19	9	5	3
2935	103	9.0	791	19	9	5	3
2936	91	8.8	780	21	9	5	2
2937	104	8.8	780	21	9	5	2
2938	123	7.4	658	19	9	3	0
2939	97	7.4	658	19	9	3	0
2940	103	6.1	529	16	7	5	0
2941	120	6.1	529	16	7	5	0
2942	76	5.3	443	14	6	5	0
2943	114	5.3	443	16	7	5	0
2944	104	4.6	391	16	7	4	0
2945	120	4.6	391	16	7	4	1
2946	125	4.2	358	13	5	1	1
2947	110	4.2	358	13	5	1	1
2948	114	3.9	325	13	6	4	0
2949	113	3.9	325	16	6	4	0
2950	139	3.9	325	16	5	2	0
2951	131	3.9	325	16	5	2	0
2952	116	3.9	325	16	5	2	0
2953	136	3.4	308	10	4	0	0
2954	219	3.4	308	11	5	0	0
2955	141	2.5	219	8	4	0	0
2956	130	1.7	130	6	3	1	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2957	79	0.8	41	3	2	2	1
2958	140	1.8	143	6	2	2	0
2959	154	2.0	152	8	4	1	1
2960	126	2.0	152	8	4	1	1
2961	153	1.6	139	6	3	0	0
2962	139	1.6	139	6	3	0	0
2963	127	1.7	139	6	3	0	0
2964	127	1.8	146	5	2	2	2
2965	125	1.8	146	5	2	2	2
2966	124	1.8	150	8	2	2	0
2967	108	1.8	151	5	3	0	0
2968	116	1.8	151	5	3	0	0
2969	101	1.8	151	5	3	0	0
2970	111	1.7	151	6	2	1	0
2971	129	1.7	151	6	2	1	0
2972	122	1.7	155	5	3	0	0
2973	125	1.8	155	5	3	0	0
2974	143	1.8	158	5	2	0	0
2975	133	1.8	158	5	2	0	0
2976	107	1.9	168	6	4	0	0
2977	118	1.9	168	6	4	0	0
2978	125	2.3	178	6	3	2	2
2979	125	2.3	178	6	3	2	2
2980	131	2.3	178	6	3	2	2
2981	128	2.3	187	7	4	2	2
2982	105	2.4	187	7	4	2	2
2983	132	2.3	189	9	4	2	0
2984	137	2.3	189	9	4	2	0
2985	95	2.2	190	10	3	0	0
2986	95	2.2	190	10	3	0	0
2987	84	2.2	190	10	3	0	0
2988	116	2.6	212	8	4	3	2
2989	110	2.8	212	8	4	3	2
2990	114	2.9	222	9	4	2	2
2991	131	2.9	222	9	4	2	2
2992	116	2.7	235	9	6	0	0
2993	122	2.7	235	9	6	0	0
2994	106	2.8	244	8	4	1	0
2995	100	2.9	244	8	4	1	0
2996	126	2.7	230	8	4	1	0
2997	134	2.7	230	8	4	1	0
2998	120	2.6	223	8	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
2999	112	2.6	223	8	4	0	0
3000	116	2.3	204	8	4	0	0
3001	119	2.3	204	8	4	0	0
3002	116	2.4	197	9	4	2	0
3003	102	2.4	197	9	4	2	0
3004	108	2.2	188	10	3	2	0
3005	94	2.2	188	10	3	2	0
3006	129	2.2	184	7	2	3	2
3007	113	2.2	184	7	2	3	2
3008	101	2.0	179	7	2	2	0
3009	123	2.0	179	7	2	2	0
3010	132	2.1	171	6	3	2	1
3011	123	2.1	171	6	3	2	1
3012	118	2.1	171	6	3	2	1
3013	115	1.9	173	7	3	0	0
3014	117	1.9	173	7	3	0	0
3015	138	2.0	171	7	2	1	1
3016	104	2.0	171	7	2	1	1
3017	104	2.0	171	7	2	1	1
3018	104	2.0	171	7	2	1	1
3019	104	2.0	171	7	2	1	1
3020	83	2.1	173	9	4	2	0
3021	111	2.1	173	9	3	2	0
3022	109	1.9	167	9	4	0	0
3023	85	2.0	168	9	4	0	0
3024	97	2.1	169	8	3	1	0
3025	66	2.2	170	8	3	2	0
3026	94	2.3	180	9	4	2	0
3027	59	2.1	180	9	4	0	0
3028	97	2.3	185	9	4	2	0
3029	97	2.3	185	9	3	2	0
3030	127	2.4	190	9	4	2	0
3031	115	2.4	197	10	4	2	0
3032	130	2.5	204	11	4	2	0
3033	139	2.4	204	11	3	1	0
3034	177	2.4	204	11	3	1	0
3035	135	2.6	207	11	4	1	0
3036	174	2.6	207	10	4	1	0
3037	172	2.6	207	10	4	1	0
3038	165	2.5	212	9	5	1	0
3039	160	2.5	212	9	5	1	0
3040	142	2.7	219	9	5	3	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3041	140	2.5	219	6	3	3	1
3042	170	2.5	219	7	3	3	1
3043	122	2.4	214	7	2	3	0
3044	137	2.6	214	7	2	3	1
3045	193	2.7	214	7	3	3	2
3046	132	2.6	210	7	3	2	2
3047	143	2.6	206	7	3	2	2
3048	103	2.4	204	7	3	1	1
3049	112	2.2	202	7	3	0	0
3050	112	2.4	199	8	4	1	0
3051	112	2.5	195	9	4	2	0
3052	88	2.5	219	7	3	3	1
3053	38	2.6	207	10	4	1	0
3054	42	0.7	56	4	2	0	0
3055	169	0.6	58	2	1	0	0
3056	168	0.6	60	0	0	0	0
3057	149	0.7	60	2	2	0	0
3058	145	0.6	54	2	2	0	0
3059	156	0.6	54	2	2	0	0
3060	184	0.7	56	2	2	0	0
3061	184	0.7	57	3	2	0	0
3062	195	0.7	57	3	2	0	0
3063	155	0.8	60	4	2	0	0
3064	128	0.8	60	4	2	0	0
3065	196	0.8	60	4	1	0	0
3066	151	0.9	60	4	2	1	0
3067	175	0.8	60	3	2	1	0
3068	144	0.8	60	3	2	1	0
3069	152	0.8	61	3	2	1	0
3070	148	0.8	61	3	2	1	0
3071	151	0.9	62	3	2	1	1
3072	173	1.0	62	3	3	2	1
3073	161	1.0	62	3	3	2	1
3074	134	1.0	62	3	3	2	1
3075	152	0.8	63	4	2	0	0
3076	146	0.8	63	4	2	0	0
3077	138	0.7	64	5	0	0	0
3078	142	0.7	64	5	0	0	0
3079	148	0.7	64	5	0	0	0
3080	154	0.7	64	5	0	0	0
3081	121	0.7	64	2	0	0	0
3082	128	0.8	63	4	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3083	132	0.8	63	4	2	0	0
3084	141	0.7	64	3	0	0	0
3085	138	0.7	64	3	0	0	0
3086	124	0.9	68	3	1	2	1
3087	126	0.9	68	3	1	2	1
3088	148	1.0	68	3	1	2	1
3089	132	1.0	78	3	2	1	0
3090	150	1.0	78	3	2	1	0
3091	126	1.2	111	4	2	0	0
3092	115	1.3	111	4	2	0	0
3093	92	1.8	161	5	1	1	0
3094	135	1.8	161	5	1	1	0
3095	153	2.5	217	8	4	1	0
3096	151	2.5	217	8	4	1	0
3097	145	2.6	217	8	4	1	0
3098	120	4.2	363	11	5	2	0
3099	120	4.1	363	11	5	2	0
3100	120	4.1	363	11	5	2	0
3101	28	5.0	438	16	6	1	0
3102	57	5.5	492	17	7	1	0
3103	65	6.2	529	16	8	4	2
3104	26	6.4	550	20	9	3	2
3105	57	6.3	552	18	8	4	0
3106	78	6.2	547	16	8	4	0
3107	80	6.1	533	15	8	5	0
3108	64	6.1	533	15	8	5	0
3109	59	5.3	472	15	6	1	0
3110	73	5.3	472	15	6	1	0
3111	79	5.1	434	16	7	5	0
3112	73	4.5	389	15	7	3	1
3113	72	4.7	389	15	7	3	1
3114	71	4.2	336	12	6	4	2
3115	83	4.2	336	12	6	4	2
3116	83	4.2	336	12	6	4	2
3117	83	4.2	336	12	6	4	2
3118	54	3.5	308	13	6	0	0
3119	64	3.2	280	12	6	0	0
3120	107	3.3	280	12	6	0	0
3121	113	3.2	265	10	4	3	0
3122	112	3.2	265	10	4	3	0
3123	97	3.1	257	11	5	4	0
3124	88	3.1	257	11	5	4	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3125	105	3.4	262	12	6	3	0
3126	111	3.3	262	9	4	3	0
3127	113	3.3	262	9	4	3	0
3128	120	3.5	268	11	4	3	2
3129	127	3.2	268	11	4	2	2
3130	132	3.3	272	11	5	2	2
3131	105	3.2	272	11	5	2	1
3132	162	3.2	272	11	5	2	1
3133	141	3.6	283	12	6	4	0
3134	136	3.6	283	12	6	4	0
3135	151	3.7	293	12	6	4	0
3136	154	3.6	293	12	6	3	0
3137	174	3.4	293	11	6	2	0
3138	121	3.6	318	10	4	3	1
3139	107	3.5	318	10	4	2	0
3140	91	4.1	344	12	6	4	2
3141	139	4.1	344	12	6	4	2
3142	91	4.1	344	12	6	4	2
3143	164	4.3	356	12	5	2	2
3144	132	4.3	356	12	5	2	2
3145	99	4.4	356	13	6	4	2
3146	140	4.0	340	13	6	4	0
3147	136	4.4	371	15	7	4	0
3148	152	4.3	371	15	7	3	0
3149	116	4.8	425	15	7	3	0
3150	153	4.8	425	15	7	2	0
3151	116	1.8	125	8	5	3	2
3152	100	2.1	125	8	6	4	3
3153	93	0.5	34	3	1	1	0
3154	77	0.5	39	3	1	1	0
3155	131	0.5	39	3	2	0	0
3156	101	0.7	50	5	2	1	0
3157	85	0.8	63	3	2	1	0
3158	103	0.9	72	3	2	0	0
3159	85	0.9	72	3	2	0	0
3160	116	1.3	95	4	3	3	1
3161	144	1.3	95	4	3	3	1
3162	80	1.4	108	3	3	1	0
3163	102	1.7	128	5	3	2	1
3164	76	2.7	198	10	4	3	3
3165	50	1.3	114	4	2	1	0
3166	79	1.3	114	3	2	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3167	124	1.3	114	3	2	1	0
3168	113	1.3	114	3	2	1	0
3169	98	1.4	117	6	3	0	0
3170	115	1.4	117	6	3	0	0
3171	97	1.4	117	6	3	0	0
3172	89	1.5	118	6	3	2	0
3173	102	1.5	118	6	3	2	0
3174	108	1.5	118	6	3	2	0
3175	112	1.3	107	4	2	0	0
3176	142	1.3	107	4	2	0	0
3177	140	1.3	107	4	2	0	0
3178	112	1.3	109	4	2	1	1
3179	105	1.1	108	4	0	0	0
3180	90	1.1	108	4	0	0	0
3181	113	1.4	114	4	2	2	1
3182	117	1.7	146	6	3	2	1
3183	87	1.7	146	6	3	2	0
3184	135	2.2	175	6	5	0	0
3185	100	2.2	192	8	3	2	0
3186	114	2.5	222	10	5	2	0
3187	106	2.9	259	10	5	2	0
3188	93	3.6	294	11	4	2	2
3189	120	3.6	305	11	5	2	2
3190	106	3.6	305	12	5	2	1
3191	156	3.6	304	8	5	2	2
3192	140	3.6	304	8	5	2	2
3193	107	3.7	320	9	5	2	0
3194	118	3.7	320	9	5	2	0
3195	86	4.1	355	12	6	2	1
3196	134	4.1	355	12	6	2	1
3197	133	4.6	402	12	7	3	2
3198	103	5.5	466	15	8	3	3
3199	90	5.5	466	15	8	3	0
3200	105	6.3	538	18	9	5	2
3201	114	6.3	538	18	9	5	2
3202	101	5.0	405	16	10	3	2
3203	107	5.0	405	16	10	3	2
3204	121	3.8	307	12	7	4	2
3205	116	4.0	312	15	8	5	2
3206	110	4.0	312	15	8	5	0
3207	92	4.1	333	16	8	5	2
3208	89	4.1	333	16	8	3	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3209	102	4.2	352	16	8	4	0
3210	104	4.2	352	16	8	4	0
3211	130	4.8	372	16	9	4	1
3212	90	4.8	372	16	9	5	1
3213	112	4.8	372	16	10	5	1
3214	92	4.6	372	16	10	5	1
3215	98	4.3	357	14	9	4	0
3216	130	4.3	357	14	9	4	0
3217	131	3.3	259	11	7	4	0
3218	149	3.3	259	11	7	4	0
3219	140	7.2	579	22	10	7	3
3220	100	7.2	579	22	10	5	3
3221	105	7.4	619	23	11	5	3
3222	107	7.4	619	23	11	5	3
3223	153	7.4	619	23	11	5	2
3224	135	7.8	676	24	11	6	2
3225	147	7.8	676	24	11	6	0
3226	171	8.9	741	25	12	7	2
3227	147	8.9	741	25	12	7	2
3228	148	8.9	741	25	12	7	2
3229	152	8.9	741	25	12	7	2
3230	137	9.7	839	28	15	8	0
3231	164	9.7	839	28	15	8	0
3232	143	11.1	956	31	16	9	0
3233	125	11.1	956	31	16	9	0
3234	128	11.3	956	31	16	9	0
3235	152	11.5	956	31	16	9	0
3236	159	14.7	1248	40	22	12	0
3237	156	14.6	1248	40	22	12	0
3238	171	14.6	1248	40	22	12	0
3239	121	14.1	1215	40	20	10	0
3240	133	14.9	1307	32	18	11	0
3241	126	14.9	1307	32	18	11	0
3242	118	14.9	1307	32	18	11	0
3243	111	15.7	1363	32	17	13	2
3244	139	9.7	827	30	15	8	0
3245	132	8.8	725	26	12	7	2
3246	100	2.1	164	7	5	1	0
3247	123	2.0	150	9	5	2	0
3248	58	1.9	137	7	4	4	0
3249	109	1.9	137	7	4	4	0
3250	101	1.8	123	6	3	3	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3251	120	1.5	118	4	4	0	0
3252	103	1.5	118	4	4	0	0
3253	106	1.4	109	6	3	3	0
3254	83	1.4	102	4	3	3	0
3255	76	1.4	102	4	3	3	0
3256	81	1.4	104	5	4	3	0
3257	90	1.4	104	5	4	3	0
3258	77	1.2	90	5	3	2	1
3259	73	1.2	88	7	3	2	0
3260	71	1.1	84	4	3	2	1
3261	67	1.3	84	4	3	2	1
3262	71	1.3	73	3	3	3	3
3263	72	1.2	71	4	2	2	2
3264	81	1.0	75	4	2	1	0
3265	84	1.1	74	5	2	2	2
3266	82	1.2	74	5	2	2	2
3267	89	1.2	74	5	2	2	2
3268	91	1.1	73	4	3	0	0
3269	93	1.2	90	6	5	0	0
3270	93	1.4	100	6	3	0	0
3271	75	1.5	108	5	3	2	1
3272	72	1.6	108	5	3	2	1
3273	72	1.4	112	5	3	1	0
3274	70	1.6	119	6	3	2	0
3275	68	1.4	117	5	1	0	0
3276	81	1.4	115	5	1	1	0
3277	57	1.4	116	6	2	0	0
3278	42	1.5	104	5	2	2	0
3279	48	1.5	104	5	2	2	0
3280	62	1.2	105	6	2	0	0
3281	69	1.3	107	6	4	0	0
3282	71	1.3	107	6	4	0	0
3283	91	1.2	101	4	2	1	0
3284	81	1.1	100	4	2	0	0
3285	78	1.2	100	4	2	0	0
3286	87	1.2	98	3	3	1	0
3287	86	1.3	106	4	3	1	0
3288	80	1.4	109	5	2	2	2
3289	118	1.4	109	5	2	2	2
3290	126	1.5	109	5	2	2	2
3291	105	1.4	113	4	2	1	1
3292	109	1.4	113	4	2	1	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3293	114	1.6	140	7	2	0	0
3294	96	1.9	154	7	3	2	2
3295	98	1.9	154	7	3	2	2
3296	102	2.1	176	7	3	3	0
3297	112	2.1	176	7	3	3	0
3298	126	2.1	172	7	3	2	2
3299	112	2.1	172	7	3	2	2
3300	123	2.2	178	7	4	3	1
3301	90	2.2	185	6	4	3	0
3302	123	2.4	202	8	4	3	0
3303	117	2.3	202	8	2	2	0
3304	136	2.9	221	9	5	3	2
3305	118	3.2	244	12	5	3	2
3306	122	3.0	244	12	5	3	0
3307	129	3.0	244	12	5	3	0
3308	126	3.1	261	11	5	4	0
3309	116	3.1	261	11	5	4	0
3310	98	3.4	280	13	6	3	0
3311	106	3.4	280	13	6	3	0
3312	113	3.6	293	13	5	4	2
3313	114	3.6	293	13	5	4	2
3314	115	3.7	293	13	5	4	2
3315	121	3.8	299	14	6	4	2
3316	138	3.8	299	14	6	4	2
3317	133	3.7	308	12	5	4	0
3318	159	3.8	308	12	5	4	0
3319	150	3.9	308	14	7	3	0
3320	114	3.9	308	14	7	3	0
3321	132	3.9	308	14	7	3	0
3322	148	3.7	303	14	7	2	0
3323	160	3.6	296	13	7	4	0
3324	168	3.5	296	13	7	4	0
3325	133	3.8	296	13	7	4	0
3326	138	3.8	294	10	6	3	3
3327	110	3.8	294	10	6	3	3
3328	123	3.5	282	13	6	2	1
3329	135	3.5	282	13	6	2	1
3330	132	3.5	282	12	4	2	2
3331	103	3.5	282	12	4	2	2
3332	110	3.3	274	10	5	3	2
3333	98	3.3	274	10	5	3	2
3334	93	3.2	286	10	6	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3335	95	3.5	317	9	5	2	0
3336	83	3.5	317	9	5	2	0
3337	101	1.0	74	5	0	0	0
3338	54	6.2	528	19	10	3	2
3339	78	5.4	438	18	10	4	2
3340	110	5.4	438	18	10	4	2
3341	120	4.0	323	14	7	4	2
3342	128	4.0	323	14	7	4	2
3343	148	3.2	252	12	6	4	2
3344	170	3.2	252	12	6	4	2
3345	163	3.2	252	12	6	4	2
3346	149	2.7	220	10	5	2	2
3347	143	2.7	220	10	5	2	2
3348	119	2.8	220	10	5	2	2
3349	133	3.3	258	13	6	2	2
3350	139	3.4	258	13	6	2	2
3351	125	3.7	281	14	7	4	2
3352	127	3.8	281	14	7	4	2
3353	69	4.1	316	13	7	5	2
3354	46	4.6	382	14	8	3	2
3355	45	5.3	432	15	8	5	2
3356	101	5.3	432	15	8	5	2
3357	112	4.9	420	13	6	5	0
3358	122	4.9	420	13	6	5	0
3359	104	5.0	420	13	6	5	0
3360	120	4.6	385	13	6	4	2
3361	136	4.7	385	13	6	4	2
3362	140	4.2	341	14	8	5	0
3363	122	4.2	341	14	8	5	0
3364	122	4.3	354	16	6	4	0
3365	129	4.3	354	16	6	4	0
3366	97	4.6	374	14	7	5	0
3367	125	4.6	374	14	7	5	0
3368	130	4.9	407	16	8	3	2
3369	122	4.9	407	16	8	3	2
3370	125	5.3	451	17	7	5	0
3371	103	5.3	451	17	7	5	0
3372	104	5.5	457	17	8	4	2
3373	84	5.5	457	17	8	4	2
3374	130	5.8	481	18	7	4	0
3375	105	5.8	481	18	7	4	0
3376	132	5.8	493	18	7	4	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3377	131	5.8	493	18	7	4	2
3378	140	5.5	472	16	7	3	2
3379	122	5.5	472	16	7	3	2
3380	114	5.1	422	17	5	4	3
3381	122	5.1	422	17	5	4	3
3382	109	5.1	422	17	5	4	3
3383	124	4.6	383	16	7	3	2
3384	120	4.2	368	15	5	2	0
3385	140	4.2	368	15	5	2	0
3386	158	4.2	368	15	5	2	0
3387	150	4.2	368	15	5	2	0
3388	150	4.2	377	14	5	0	0
3389	127	4.5	403	11	6	1	1
3390	124	4.5	403	11	6	1	1
3391	124	4.7	408	12	6	2	1
3392	130	4.7	413	12	6	3	0
3393	122	4.7	415	13	6	3	1
3394	179	4.7	416	13	7	3	1
3395	173	4.8	416	13	7	3	1
3396	205	4.8	416	13	7	3	1
3397	180	4.8	413	14	7	3	1
3398	147	4.8	409	15	6	4	0
3399	150	4.8	410	14	7	4	0
3400	167	4.7	410	12	7	4	0
3401	168	4.8	410	12	7	4	0
3402	156	4.8	403	14	6	3	2
3403	139	4.8	403	14	6	3	2
3404	152	4.9	403	14	6	3	2
3405	104	4.8	394	14	7	4	1
3406	87	4.6	378	16	5	2	2
3407	106	4.6	378	16	5	2	2
3408	115	4.6	390	14	6	4	0
3409	123	4.6	400	15	6	4	2
3410	129	4.6	400	15	6	3	2
3411	131	4.6	400	15	6	3	2
3412	123	4.6	400	15	6	3	2
3413	168	4.8	412	20	8	2	0
3414	144	4.9	412	20	8	2	2
3415	125	4.9	419	15	6	2	0
3416	151	4.9	419	15	6	2	0
3417	138	5.2	458	19	7	3	0
3418	168	5.2	458	19	7	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3419	148	5.7	499	19	7	5	0
3420	142	5.7	499	15	7	5	0
3421	139	5.7	499	15	7	5	0
3422	142	6.2	524	18	9	3	1
3423	144	6.6	549	20	10	2	2
3424	148	6.6	549	20	10	2	2
3425	114	7.0	590	23	10	6	2
3426	112	7.0	597	23	10	6	0
3427	118	7.1	603	23	10	5	0
3428	108	7.1	610	24	10	5	0
3429	127	7.2	616	24	10	4	0
3430	92	7.1	603	23	10	5	0
3431	117	6.2	528	19	10	3	2
3432	110	0.8	60	6	2	0	0
3433	92	0.8	60	6	2	0	0
3434	78	0.9	60	6	2	0	0
3435	84	0.7	54	3	2	1	0
3436	112	0.7	54	3	2	1	0
3437	122	0.6	50	3	0	0	0
3438	138	0.6	50	3	0	0	0
3439	118	0.6	51	2	3	0	0
3440	114	0.8	51	2	3	0	0
3441	127	0.7	47	4	2	0	0
3442	115	0.3	30	2	0	0	0
3443	118	0.2	18	0	0	0	0
3444	106	0.2	18	0	0	0	0
3445	115	0.1	12	0	0	0	0
3446	77	0.1	10	0	0	0	0
3447	80	0.2	14	2	0	0	0
3448	84	0.2	19	0	0	0	0
3449	80	0.2	19	0	0	0	0
3450	109	0.3	20	2	2	0	0
3451	108	0.3	20	2	2	0	0
3452	117	0.3	28	2	0	0	0
3453	92	0.4	40	0	0	0	0
3454	73	0.4	40	0	0	0	0
3455	105	0.4	40	0	0	0	0
3456	111	0.6	49	2	1	0	0
3457	125	0.7	58	3	2	0	0
3458	127	0.7	58	3	2	0	0
3459	155	0.7	58	3	2	0	0
3460	146	1.0	70	3	1	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3461	112	1.3	81	6	3	1	2
3462	90	1.3	81	6	3	1	2
3463	107	1.1	89	4	1	2	0
3464	122	1.1	89	4	1	2	0
3465	144	1.0	70	5	2	1	0
3466	149	1.0	70	5	2	1	0
3467	158	1.0	70	5	2	1	0
3468	155	1.0	70	5	2	1	0
3469	158	0.9	74	4	1	1	0
3470	164	1.2	101	5	2	0	0
3471	143	1.2	101	5	2	0	0
3472	142	1.4	101	5	2	0	0
3473	163	1.7	125	5	2	1	0
3474	204	1.7	125	5	2	1	0
3475	179	1.7	125	5	2	1	0
3476	158	1.7	125	5	2	1	0
3477	164	1.8	155	7	4	1	0
3478	136	1.9	155	7	4	1	0
3479	142	2.1	177	8	4	1	0
3480	140	2.1	177	8	4	1	0
3481	108	2.5	189	9	5	1	0
3482	120	2.6	208	8	4	1	0
3483	185	2.4	191	10	5	0	0
3484	156	2.3	191	10	5	0	0
3485	200	2.4	191	10	5	0	0
3486	190	2.5	191	10	5	0	0
3487	206	2.4	182	10	3	2	0
3488	206	2.4	182	10	3	2	0
3489	258	2.4	182	10	3	2	0
3490	200	2.1	170	9	4	1	0
3491	233	2.0	170	9	4	1	0
3492	223	2.0	170	9	4	1	0
3493	179	2.0	159	9	3	2	0
3494	149	2.0	159	9	3	2	0
3495	148	2.0	159	9	3	2	0
3496	137	2.0	156	6	3	3	0
3497	155	2.0	156	6	3	3	0
3498	171	2.0	155	8	3	2	0
3499	174	2.0	153	9	2	2	0
3500	212	2.0	153	9	2	2	0
3501	209	2.0	150	8	3	2	1
3502	192	1.8	146	6	3	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3503	247	1.8	146	6	3	2	1
3504	278	1.8	146	6	3	2	1
3505	252	1.8	147	7	3	1	1
3506	287	1.7	147	7	4	0	0
3507	265	1.9	158	8	4	2	0
3508	284	1.9	158	8	4	2	0
3509	181	2.1	174	10	4	2	0
3510	211	2.1	174	10	4	2	0
3511	248	2.1	180	8	4	0	0
3512	224	2.1	180	8	4	0	0
3513	248	2.1	180	8	4	0	0
3514	199	2.1	180	8	4	0	0
3515	168	2.1	181	8	4	2	0
3516	163	2.1	181	8	4	2	0
3517	151	2.3	182	8	4	2	1
3518	180	2.5	184	8	5	2	3
3519	206	2.1	160	8	4	2	0
3520	225	2.0	160	8	3	2	0
3521	165	2.0	160	8	3	2	0
3522	147	2.1	160	8	3	2	0
3523	162	2.1	160	7	4	3	1
3524	169	2.0	160	7	4	2	1
3525	140	2.2	173	7	5	1	0
3526	159	2.0	170	7	5	1	0
3527	120	0.8	71	3	0	0	0
3528	90	4.1	342	14	6	3	3
3529	63	3.2	265	11	5	3	3
3530	47	2.1	177	10	4	2	0
3531	54	1.8	142	7	3	1	1
3532	50	1.1	92	4	1	1	0
3533	64	1.0	83	4	3	0	0
3534	55	0.9	79	6	3	2	0
3535	24	1.0	71	4	2	2	0
3536	47	1.0	66	3	2	2	0
3537	53	1.0	83	5	3	0	0
3538	43	1.3	92	6	3	1	2
3539	51	1.3	107	6	3	1	2
3540	54	1.4	107	6	3	3	2
3541	32	1.4	107	5	3	3	2
3542	41	1.2	109	4	3	1	0
3543	75	1.4	119	5	3	0	0
3544	51	2.2	183	9	4	2	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3545	16	2.2	183	9	4	2	0
3546	51	2.4	188	10	4	2	1
3547	40	2.4	209	12	4	2	1
3548	61	2.4	209	11	3	1	1
3549	148	2.3	209	10	3	0	0
3550	178	2.4	207	9	3	2	0
3551	164	2.4	209	9	3	2	1
3552	180	2.5	211	9	3	2	2
3553	180	2.5	211	9	3	2	2
3554	185	2.5	211	9	3	1	2
3555	182	2.5	211	9	3	2	2
3556	212	2.6	211	9	3	3	2
3557	188	2.6	208	9	3	3	0
3558	181	2.7	218	9	4	3	2
3559	174	2.9	228	10	4	3	5
3560	152	2.9	228	10	4	3	5
3561	171	2.9	228	10	4	3	5
3562	176	2.9	230	10	4	3	5
3563	158	2.9	232	10	4	3	5
3564	195	2.7	232	9	4	3	0
3565	171	2.8	233	10	5	2	0
3566	214	2.8	234	11	5	1	0
3567	184	2.8	234	11	5	2	0
3568	161	2.8	234	11	5	2	0
3569	189	2.7	222	10	3	2	0
3570	154	2.7	222	10	3	2	0
3571	138	2.8	227	10	4	3	2
3572	137	2.8	227	9	4	3	2
3573	156	2.8	233	11	4	3	2
3574	138	2.8	233	11	4	3	0
3575	137	2.9	241	11	4	3	1
3576	147	3.1	249	11	5	3	1
3577	156	3.1	249	11	5	2	1
3578	143	3.7	321	14	5	2	1
3579	131	3.7	321	14	5	2	1
3580	158	3.7	321	14	5	2	1
3581	127	4.9	432	16	6	3	0
3582	149	4.9	432	16	6	3	0
3583	154	6.8	580	21	8	5	0
3584	157	6.8	580	21	8	5	0
3585	142	7.2	630	23	8	5	1
3586	150	7.7	680	25	8	5	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3587	157	7.7	680	25	8	2	2
3588	156	7.7	680	25	9	3	4
3589	141	7.7	673	24	9	3	4
3590	117	7.7	666	23	9	3	4
3591	138	7.1	630	22	8	3	0
3592	131	7.1	630	22	8	3	0
3593	158	7.1	630	22	9	4	0
3594	150	7.1	614	22	9	4	0
3595	162	7.4	642	22	9	5	2
3596	149	7.4	642	22	8	5	2
3597	138	7.4	642	22	8	5	2
3598	131	7.4	668	22	8	5	2
3599	118	7.4	668	22	8	2	0
3600	136	7.7	682	22	9	3	0
3601	153	7.6	682	21	9	3	0
3602	137	7.6	682	21	9	3	0
3603	143	7.8	703	20	9	3	0
3604	170	8.0	723	20	9	4	0
3605	162	8.0	723	20	9	4	0
3606	171	8.1	734	20	8	4	0
3607	182	8.2	745	19	8	3	0
3608	174	8.5	745	23	9	6	0
3609	194	9.8	860	26	10	6	1
3610	186	11.0	975	29	11	6	1
3611	178	12.3	1090	32	13	6	2
3612	170	13.6	1205	35	14	6	2
3613	161	14.9	1320	38	15	6	3
3614	149	2.9	241	11	4	3	1
3615	154	2.9	249	11	4	3	1
3616	141	2.9	249	11	4	2	1
3617	143	3.7	321	14	5	2	1
3618	149	3.7	321	14	5	2	1
3619	176	3.7	321	14	5	2	1
3620	162	4.9	432	16	6	3	0
3621	147	3.7	321	14	5	2	1
3622	136	3.7	321	14	5	2	1
3623	120	3.7	321	14	5	2	1
3624	135	4.9	432	16	6	5	2
3625	120	2.7	207	11	5	3	0
3626	145	2.7	207	11	5	3	0
3627	151	2.7	207	11	5	3	0
3628	148	2.5	197	11	6	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3629	150	2.5	197	11	6	3	0
3630	125	2.5	197	11	6	3	0
3631	136	2.5	190	9	5	2	0
3632	145	2.5	190	12	5	2	0
3633	143	2.4	183	12	5	2	0
3634	116	2.4	183	12	5	3	0
3635	122	2.2	175	10	5	3	0
3636	128	2.2	175	10	5	3	0
3637	138	2.2	175	10	5	3	2
3638	180	2.2	172	9	5	2	2
3639	155	2.1	169	9	4	0	2
3640	135	2.0	159	8	4	3	2
3641	111	2.0	159	8	4	3	2
3642	100	2.1	164	10	5	2	0
3643	103	2.1	164	10	5	2	0
3644	102	2.2	173	8	4	3	3
3645	112	2.5	182	9	4	4	5
3646	100	2.5	182	9	5	4	5
3647	71	2.4	172	9	5	3	2
3648	115	2.4	172	9	5	3	2
3649	138	1.9	156	7	5	2	0
3650	118	1.9	156	7	5	2	0
3651	138	1.9	156	7	5	5	0
3652	107	1.9	148	7	3	5	0
3653	107	1.9	148	7	5	5	0
3654	124	1.7	141	7	5	3	0
3655	107	1.7	138	6	3	2	0
3656	120	1.7	138	6	3	2	0
3657	115	1.9	149	8	5	2	0
3658	127	1.9	149	8	5	1	0
3659	106	2.0	155	8	5	2	0
3660	117	2.0	155	8	5	2	0
3661	131	3.6	310	14	5	2	0
3662	122	3.6	310	14	5	1	0
3663	117	4.0	344	15	6	3	3
3664	110	4.2	362	15	5	3	0
3665	129	4.4	394	14	6	2	0
3666	143	4.4	394	14	6	2	0
3667	142	4.8	421	16	6	3	0
3668	145	5.0	442	16	6	3	1
3669	160	5.2	464	16	6	3	2
3670	127	6.2	525	19	7	3	5

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3671	142	6.5	593	20	7	3	5
3672	133	7.4	648	20	8	4	1
3673	123	7.4	648	20	8	4	1
3674	116	7.8	682	24	8	3	0
3675	120	7.8	699	24	8	3	2
3676	121	7.9	690	22	9	4	1
3677	121	7.9	695	24	9	4	2
3678	123	8.0	704	24	9	4	2
3679	126	8.0	713	24	9	4	2
3680	116	8.4	739	25	9	4	3
3681	122	8.4	741	25	9	3	3
3682	139	8.3	741	24	9	5	4
3683	121	8.3	714	24	9	5	4
3684	130	7.3	637	22	8	3	2
3685	125	6.3	559	20	8	2	0
3686	122	4.4	395	17	7	2	0
3687	112	4.9	418	15	7	2	2
3688	113	5.1	464	15	6	3	2
3689	76	5.5	492	17	6	4	0
3690	103	5.5	492	17	6	4	0
3691	117	6.3	543	19	8	2	0
3692	91	6.3	543	19	8	2	0
3693	94	6.9	599	22	8	2	0
3694	99	7.3	655	22	8	2	0
3695	98	7.3	655	21	8	2	0
3696	91	7.3	655	21	8	2	0
3697	102	7.5	666	24	10	3	0
3698	113	7.5	666	24	10	3	0
3699	109	6.7	601	22	8	2	0
3700	113	6.7	601	22	9	4	0
3701	129	6.5	568	21	9	4	0
3702	117	9.1	813	27	10	4	0
3703	139	9.1	813	27	10	4	0
3704	18	9.1	813	27	10	4	0
3705	28	8.7	761	26	10	4	2
3706	168	8.7	761	26	10	4	2
3707	135	9.2	814	27	11	4	2
3708	130	9.8	866	28	11	4	2
3709	135	9.8	866	28	11	4	0
3710	125	9.8	866	28	11	4	0
3711	121	11.7	1031	33	12	8	0
3712	133	11.7	1031	33	12	8	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3713	105	11.7	1031	33	12	8	0
3714	93	11.7	1031	33	12	8	0
3715	116	14.5	1298	41	14	6	0
3716	124	14.5	1298	41	14	6	0
3717	107	19.3	1744	49	18	6	0
3718	87	24.0	2189	58	22	7	0
3719	102	39.3	3594	91	35	14	0
3720	106	35.5	3160	92	40	18	3
3721	29	4.8	398	17	8	3	2
3722	111	4.8	398	17	8	3	3
3723	74	3.9	320	15	7	3	2
3724	80	2.9	241	13	5	3	0
3725	56	2.7	213	9	4	2	2
3726	81	2.7	213	9	4	2	2
3727	80	2.4	200	10	4	1	2
3728	65	2.3	187	11	4	1	1
3729	74	2.2	183	11	3	1	1
3730	85	2.2	183	11	4	1	1
3731	83	2.0	172	9	4	0	0
3732	81	2.3	181	10	6	2	0
3733	85	2.5	207	10	6	2	0
3734	75	2.8	234	12	5	2	0
3735	81	2.8	234	12	5	2	0
3736	84	3.2	275	11	6	2	0
3737	70	3.5	301	13	6	3	0
3738	71	3.5	301	13	6	3	0
3739	78	3.8	305	13	6	3	1
3740	79	4.1	360	17	7	4	1
3741	85	4.5	389	17	7	3	0
3742	71	4.5	389	16	6	3	0
3743	75	5.0	416	17	8	4	1
3744	74	5.0	436	17	8	4	1
3745	70	5.3	443	18	8	4	1
3746	52	5.3	452	18	8	4	2
3747	67	5.3	466	20	6	2	2
3748	64	5.3	466	20	5	2	0
3749	86	5.3	469	20	7	3	0
3750	84	5.4	484	19	7	3	0
3751	78	5.4	484	18	6	2	0
3752	81	6.0	508	19	8	4	2
3753	85	6.0	508	19	8	4	2
3754	95	5.8	506	18	7	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3755	85	5.8	483	18	7	5	1
3756	122	5.8	483	18	7	5	1
3757	102	5.3	465	16	6	3	2
3758	130	5.3	465	16	6	3	2
3759	162	5.3	465	16	6	3	2
3760	108	4.9	444	16	6	0	0
3761	119	4.9	444	16	6	2	0
3762	102	4.9	426	16	5	2	0
3763	99	4.5	381	17	6	2	0
3764	74	4.5	381	17	6	2	0
3765	52	3.9	340	14	5	3	2
3766	78	3.6	308	14	5	3	2
3767	73	3.3	278	14	5	2	0
3768	85	3.0	256	11	5	2	0
3769	47	3.0	256	12	5	2	0
3770	82	2.7	240	11	4	1	0
3771	79	2.7	240	11	4	1	0
3772	94	2.7	240	11	4	2	0
3773	107	2.7	240	11	4	2	0
3774	106	2.7	239	11	4	2	0
3775	102	2.7	237	11	4	2	0
3776	106	2.7	236	11	4	2	0
3777	109	2.9	242	11	4	2	0
3778	109	3.0	248	11	4	2	0
3779	103	3.1	257	10	4	2	0
3780	99	3.4	286	12	5	2	2
3781	94	3.4	286	12	5	1	2
3782	96	3.9	322	13	6	2	2
3783	86	3.9	322	13	6	2	0
3784	91	4.3	368	13	6	3	2
3785	116	5.1	429	19	8	4	2
3786	87	5.4	466	19	8	4	2
3787	85	5.7	502	19	8	5	2
3788	80	6.6	580	19	8	6	0
3789	77	6.6	580	19	8	6	0
3790	81	7.6	653	24	10	6	0
3791	94	8.9	749	26	12	6	2
3792	97	8.9	749	26	12	6	2
3793	75	11.1	969	31	15	6	2
3794	59	11.1	969	31	15	6	0
3795	74	11.5	1018	31	15	6	2
3796	70	12.1	1049	32	14	7	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3797	84	12.1	1049	32	15	7	3
3798	75	11.5	1003	30	15	6	3
3799	63	11.0	972	30	14	8	0
3800	63	10.7	925	28	12	8	3
3801	74	7.5	624	24	10	6	2
3802	89	6.7	568	22	9	6	0
3803	82	6.3	523	20	9	4	3
3804	88	6.0	496	20	9	4	3
3805	83	6.1	496	20	9	4	3
3806	61	5.5	460	18	8	4	2
3807	60	5.2	427	17	8	4	0
3808	59	4.9	400	16	8	4	0
3809	60	5.1	380	17	8	5	3
3810	73	5.0	389	19	11	5	1
3811	80	4.0	335	17	8	3	0
3812	83	4.1	335	17	8	3	0
3813	90	4.0	310	16	8	6	0
3814	76	3.3	259	14	6	5	0
3815	74	2.9	232	13	6	3	0
3816	90	3.1	232	13	6	3	0
3817	81	3.1	226	13	8	2	2
3818	89	2.8	222	13	7	2	0
3819	81	2.8	222	13	7	2	0
3820	79	2.7	208	11	6	2	0
3821	92	2.6	198	9	5	2	0
3822	78	2.6	198	9	5	2	0
3823	83	2.4	182	10	6	1	0
3824	77	2.4	176	9	5	2	2
3825	91	2.4	176	9	5	2	2
3826	62	2.2	177	9	5	2	0
3827	61	2.1	169	8	6	2	0
3828	86	2.1	170	8	4	3	0
3829	79	2.2	173	11	6	3	0
3830	61	2.4	173	11	6	3	0
3831	68	2.3	182	11	4	0	0
3832	87	2.4	195	9	3	2	1
3833	75	2.5	209	12	4	2	0
3834	83	2.6	209	12	4	2	0
3835	73	2.9	228	10	5	3	0
3836	78	2.8	234	8	5	4	0
3837	85	2.8	234	8	5	4	0
3838	76	3.1	263	11	3	3	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3839	91	2.9	261	10	4	1	0
3840	82	3.0	261	10	4	1	0
3841	82	3.3	266	10	4	2	0
3842	67	3.3	260	13	5	2	0
3843	75	3.0	262	14	3	1	0
3844	69	3.1	262	14	3	1	0
3845	79	3.0	258	11	4	2	0
3846	71	3.1	256	12	6	0	0
3847	65	3.1	247	12	4	2	1
3848	62	2.8	232	11	5	3	0
3849	64	2.8	232	11	5	3	0
3850	46	2.7	227	9	4	2	0
3851	87	2.7	227	9	4	2	0
3852	99	2.9	237	13	4	2	0
3853	90	2.8	237	10	4	1	0
3854	76	2.8	237	10	4	1	0
3855	76	3.0	255	12	5	0	0
3856	73	3.3	274	12	5	2	2
3857	70	3.5	287	14	6	2	0
3858	72	3.5	284	14	6	2	0
3859	94	3.5	284	14	6	2	0
3860	106	3.4	283	12	4	2	0
3861	92	3.4	283	12	4	2	0
3862	82	3.4	280	11	4	2	0
3863	74	3.4	279	13	6	1	0
3864	68	3.4	279	13	6	1	0
3865	75	3.4	283	12	5	3	0
3866	79	3.3	278	13	5	0	0
3867	96	3.3	278	13	5	0	0
3868	81	3.4	286	13	5	1	0
3869	88	3.5	287	13	6	3	0
3870	94	3.5	287	13	6	3	0
3871	80	3.3	275	13	5	0	0
3872	69	3.3	274	12	4	2	0
3873	85	3.3	274	12	4	2	0
3874	75	3.2	277	12	5	0	0
3875	54	3.4	280	12	4	1	1
3876	71	3.5	276	11	6	2	1
3877	73	3.2	283	12	4	2	0
3878	69	3.3	280	12	4	2	2
3879	59	3.3	275	12	5	3	0
3880	77	3.3	275	12	5	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3881	76	3.4	275	13	5	3	0
3882	77	3.3	277	13	6	2	0
3883	91	3.3	277	13	6	2	0
3884	93	3.3	281	13	3	0	0
3885	66	3.3	284	11	4	0	0
3886	63	3.5	298	13	4	2	0
3887	75	3.5	298	13	4	2	0
3888	79	3.6	307	13	4	2	0
3889	66	3.5	307	13	4	2	0
3890	63	3.5	302	12	4	3	0
3891	79	3.5	302	12	6	2	0
3892	86	3.4	290	12	4	2	0
3893	75	3.4	290	12	4	2	0
3894	80	3.3	285	12	4	1	0
3895	91	3.3	285	12	4	1	0
3896	91	3.3	279	11	4	0	0
3897	94	3.2	267	12	4	2	0
3898	97	3.3	267	12	4	2	0
3899	114	3.3	267	12	5	2	0
3900	105	3.1	268	11	4	2	0
3901	85	3.1	268	11	5	2	0
3902	77	7.8	642	28	12	6	0
3903	26	5.3	433	19	10	6	0
3904	58	4.2	327	17	7	4	3
3905	87	4.2	327	17	7	4	3
3906	87	3.2	260	15	6	1	1
3907	87	3.0	245	12	6	3	0
3908	90	3.1	245	12	6	3	0
3909	88	2.8	228	10	6	0	0
3910	84	2.4	205	10	4	1	0
3911	65	2.4	205	10	4	1	0
3912	71	2.2	179	8	4	1	0
3913	69	2.2	176	9	5	2	0
3914	47	1.9	165	7	3	0	0
3915	47	2.0	161	8	3	0	0
3916	33	1.9	148	7	4	0	1
3917	39	1.9	145	8	3	1	0
3918	42	1.9	156	6	4	1	0
3919	37	3.0	235	12	6	2	2
3920	43	2.8	232	12	4	2	1
3921	29	2.9	247	11	5	1	0
3922	35	2.9	244	10	5	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3923	42	2.7	234	9	3	2	0
3924	59	2.6	227	8	3	0	0
3925	51	2.6	228	9	3	0	0
3926	54	2.7	228	9	3	0	0
3927	57	2.7	229	10	3	0	0
3928	60	2.8	230	10	3	0	0
3929	56	3.4	289	12	6	0	0
3930	50	3.7	310	12	5	2	1
3931	62	3.4	289	11	3	3	1
3932	57	2.9	251	13	4	0	0
3933	59	2.5	224	9	3	0	0
3934	59	2.3	207	10	4	0	0
3935	57	2.3	197	10	4	0	0
3936	40	2.2	185	9	3	0	0
3937	51	2.2	185	9	3	0	0
3938	63	2.8	216	11	5	2	2
3939	59	2.8	236	12	5	2	2
3940	57	2.7	238	12	5	2	0
3941	59	2.9	244	11	4	0	2
3942	54	2.7	241	12	4	0	0
3943	39	3.0	256	14	4	0	0
3944	57	3.0	256	14	4	0	0
3945	70	2.8	249	11	3	0	0
3946	74	2.9	252	11	3	0	0
3947	80	3.0	258	12	4	0	0
3948	62	3.0	258	12	4	0	0
3949	53	2.9	254	12	4	0	0
3950	69	2.9	254	13	5	0	0
3951	64	2.9	248	13	5	0	0
3952	56	2.8	245	11	4	0	0
3953	50	2.8	240	12	4	0	0
3954	57	2.4	206	12	3	0	0
3955	56	1.7	140	7	3	2	0
3956	64	1.2	104	6	3	0	0
3957	66	1.3	116	6	3	0	0
3958	67	1.5	128	6	2	0	0
3959	64	1.6	140	6	2	0	0
3960	48	1.6	140	6	2	0	0
3961	50	1.5	139	6	2	0	0
3962	57	2.2	192	10	3	2	3
3963	3	2.2	192	10	3	0	0
3964	108	2.6	212	11	3	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
3965	113	2.6	212	11	3	1	0
3966	113	2.8	227	11	4	1	2
3967	103	2.8	238	11	4	1	2
3968	99	2.9	250	11	4	1	2
3969	93	3.3	272	13	4	2	2
3970	91	3.3	272	13	4	2	2
3971	93	3.5	302	13	5	2	2
3972	96	3.9	339	15	6	2	0
3973	65	3.9	339	15	6	0	0
3974	89	4.4	365	17	6	2	2
3975	88	4.4	365	16	6	2	2
3976	75	4.2	358	16	6	2	2
3977	102	4.0	351	16	5	1	1
3978	88	2.7	229	11	4	0	1
3979	82	2.7	229	11	4	2	2
3980	90	2.7	204	10	4	2	2
3981	103	2.2	187	10	4	1	0
3982	108	2.2	187	10	5	3	0
3983	104	2.2	175	9	5	3	0
3984	108	2.2	180	9	4	1	1
3985	115	2.2	185	10	3	0	2
3986	103	2.4	199	10	2	1	2
3987	104	2.5	208	11	3	1	1
3988	85	2.7	216	11	4	2	0
3989	102	2.7	220	11	4	2	0
3990	117	2.7	223	11	3	2	0
3991	109	2.6	223	11	3	0	0
3992	126	2.7	223	11	4	2	0
3993	67	2.6	222	11	4	2	0
3994	85	2.1	173	10	4	1	0
3995	83	2.2	173	10	4	2	0
3996	57	2.4	185	8	3	2	2
3997	91	2.4	185	8	3	2	2
3998	96	1.7	145	7	3	0	0
3999	93	2.6	179	12	4	3	3
4000	80	1.8	150	8	3	1	0
4001	51	1.7	142	7	3	1	0
4002	60	1.7	142	8	3	1	0
4003	89	1.7	129	8	3	1	0
4004	80	1.2	107	6	2	0	0
4005	86	1.2	107	6	2	0	0
4006	81	1.4	107	6	3	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4007	85	1.3	98	6	3	2	0
4008	75	1.1	98	6	2	0	0
4009	85	1.1	93	5	2	0	0
4010	57	1.1	86	4	2	0	0
4011	63	1.3	94	6	2	1	0
4012	49	1.1	94	6	2	0	0
4013	54	1.1	96	6	2	0	0
4014	55	1.1	97	6	2	0	0
4015	57	1.1	98	6	2	0	0
4016	66	1.1	98	6	2	0	0
4017	66	1.2	104	4	2	0	0
4018	62	1.3	113	5	2	0	0
4019	62	1.6	121	6	2	2	0
4020	53	1.4	125	6	2	0	0
4021	59	1.5	130	7	3	0	0
4022	59	1.6	141	7	2	0	0
4023	62	1.7	152	8	2	0	0
4024	35	1.9	152	8	2	1	0
4025	31	2.1	167	8	3	1	0
4026	44	2.0	172	8	3	1	0
4027	37	2.0	176	8	3	1	0
4028	49	2.1	178	8	4	1	0
4029	67	2.1	185	8	4	1	0
4030	51	2.2	188	8	3	0	0
4031	47	2.2	184	10	3	0	0
4032	45	2.2	183	10	4	0	0
4033	43	2.2	181	9	4	0	0
4034	35	2.0	176	9	2	0	0
4035	35	2.0	176	9	2	0	0
4036	35	2.0	174	9	3	0	0
4037	38	1.9	168	8	2	0	0
4038	44	1.9	168	8	2	0	0
4039	40	2.0	162	8	3	2	0
4040	66	2.1	162	8	3	2	0
4041	72	2.0	162	8	2	0	0
4042	90	1.9	161	7	2	2	0
4043	69	1.9	168	8	2	0	0
4044	67	1.8	162	8	2	0	0
4045	59	1.7	151	7	2	0	0
4046	53	1.7	151	7	2	0	0
4047	59	1.9	153	9	4	0	0
4048	51	1.8	147	7	3	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4049	50	1.8	147	7	2	1	0
4050	54	1.8	143	7	3	1	0
4051	48	1.8	149	7	2	0	0
4052	49	1.6	145	8	2	0	0
4053	51	1.9	151	8	3	0	0
4054	45	1.9	154	6	2	2	1
4055	45	2.0	162	8	4	1	0
4056	78	2.0	162	8	4	1	0
4057	87	1.9	160	9	3	1	0
4058	89	1.8	154	6	2	2	1
4059	61	1.9	162	8	4	1	0
4060	56	1.8	158	8	3	0	0
4061	61	1.8	158	8	3	0	0
4062	62	1.8	158	9	3	0	0
4063	77	1.8	152	9	4	2	0
4064	45	1.7	139	9	4	2	0
4065	67	1.5	136	6	3	0	0
4066	64	1.7	140	6	2	3	0
4067	57	1.7	146	9	3	0	0
4068	63	1.9	146	9	3	0	0
4069	64	1.9	148	7	2	2	0
4070	86	1.7	151	7	3	0	0
4071	93	1.9	158	10	4	0	0
4072	66	2.1	171	12	4	1	0
4073	74	2.1	171	12	4	1	0
4074	57	2.2	181	10	4	2	0
4075	79	2.2	179	9	4	0	0
4076	95	2.2	181	9	4	0	0
4077	118	2.2	181	9	4	0	0
4078	95	2.0	176	8	4	0	0
4079	77	2.0	153	10	4	2	1
4080	81	1.3	109	6	3	0	0
4081	81	1.3	109	6	3	0	0
4082	70	1.0	90	5	1	0	0
4083	56	1.7	125	5	4	0	0
4084	54	2.1	151	8	4	0	2
4085	64	2.3	180	9	4	3	2
4086	72	2.3	180	9	4	3	2
4087	68	2.4	207	10	3	0	0
4088	83	2.6	225	10	4	1	0
4089	64	2.9	259	11	4	0	0
4090	74	3.5	290	13	5	2	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4091	66	3.9	340	12	5	0	0
4092	72	4.1	338	14	6	3	0
4093	76	3.9	333	12	6	3	0
4094	67	3.9	333	12	6	3	0
4095	50	1.1	92	4	2	0	0
4096	93	1.0	90	5	1	0	0
4097	90	1.2	104	5	2	1	0
4098	111	1.2	104	5	2	1	0
4099	95	1.4	116	7	3	0	0
4100	105	1.4	116	7	3	0	0
4101	122	1.4	117	6	3	2	0
4102	123	1.5	117	6	3	2	0
4103	104	1.6	122	6	2	2	2
4104	149	1.6	122	6	2	2	2
4105	118	1.7	139	8	3	3	0
4106	124	1.8	139	8	3	3	0
4107	115	2.1	166	8	4	3	0
4108	123	2.1	166	8	4	3	0
4109	152	2.1	166	8	4	3	0
4110	161	2.2	181	11	4	2	0
4111	136	2.2	181	11	4	2	0
4112	122	1.7	141	6	3	1	0
4113	106	1.7	141	6	3	1	0
4114	107	1.4	120	6	3	0	0
4115	67	1.4	126	7	2	0	0
4116	54	1.5	125	7	4	0	0
4117	87	1.5	125	7	4	0	0
4118	112	1.6	133	7	4	0	0
4119	93	1.7	146	7	4	0	0
4120	97	1.7	146	7	4	0	0
4121	113	1.7	146	7	4	0	0
4122	106	1.9	152	10	3	2	0
4123	135	1.9	152	10	3	2	0
4124	108	1.9	156	8	4	2	0
4125	133	2.0	169	8	4	1	0
4126	54	4.1	369	13	5	1	0
4127	132	4.2	369	13	5	1	0
4128	139	4.4	374	13	6	2	2
4129	119	4.5	374	13	6	2	2
4130	99	4.3	371	14	6	2	0
4131	125	4.4	371	14	6	2	0
4132	123	4.4	374	15	6	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4133	111	4.4	374	15	6	2	0
4134	109	4.4	378	15	7	4	0
4135	102	4.6	378	15	7	4	0
4136	121	4.6	391	16	6	1	0
4137	130	4.6	391	16	6	1	0
4138	147	5.0	415	16	6	3	1
4139	135	5.0	415	16	6	3	1
4140	109	4.9	433	16	7	2	0
4141	134	4.9	433	16	7	2	0
4142	133	4.9	420	16	6	3	0
4143	109	4.9	420	16	6	3	0
4144	119	4.9	420	16	7	3	0
4145	116	4.5	390	16	7	2	0
4146	118	4.5	390	16	7	2	0
4147	123	4.2	360	16	7	2	0
4148	119	4.2	360	16	7	2	0
4149	131	3.7	326	12	6	0	0
4150	131	3.7	326	14	6	2	0
4151	130	3.5	301	14	4	2	0
4152	133	3.5	301	14	6	2	1
4153	144	3.3	282	11	6	2	1
4154	131	3.3	282	11	6	2	1
4155	136	3.1	276	11	3	1	0
4156	135	3.1	276	11	3	1	0
4157	118	3.3	283	10	5	2	0
4158	126	3.9	326	12	6	3	0
4159	103	3.9	326	12	6	3	0
4160	77	4.4	397	16	6	3	0
4161	92	4.4	397	16	5	0	0
4162	92	5.6	488	17	7	4	0
4163	101	6.9	618	20	7	4	0
4164	86	6.9	618	20	7	4	0
4165	70	8.6	765	23	8	4	2
4166	106	9.7	861	24	9	6	2
4167	126	9.7	861	24	9	6	0
4168	125	10.6	946	27	11	6	2
4169	98	10.6	948	27	11	7	2
4170	147	10.7	950	27	11	7	2
4171	132	10.7	950	27	11	7	0
4172	128	10.7	950	27	11	7	0
4173	142	10.2	917	24	11	5	0
4174	121	10.2	917	25	11	5	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4175	83	9.7	873	25	10	6	2
4176	98	9.4	822	25	10	6	2
4177	119	8.9	784	25	9	3	0
4178	112	8.9	784	25	10	5	0
4179	114	8.8	770	25	10	5	0
4180	127	8.8	770	25	10	5	0
4181	130	13.3	1182	32	14	7	3
4182	122	13.3	1182	32	14	6	3
4183	114	13.3	1182	33	14	8	3
4184	125	13.1	1168	33	14	8	0
4185	80	13.1	1168	33	14	8	0
4186	134	9.2	812	25	11	6	0
4187	133	9.2	812	25	11	6	0
4188	134	10.4	914	28	12	5	2
4189	121	11.3	994	30	13	6	2
4190	105	12.1	1073	31	14	7	2
4191	64	34.2	3101	80	33	14	1
4192	87	28.1	2538	68	28	12	1
4193	79	22.1	1976	57	23	10	2
4194	89	22.1	1976	57	23	10	2
4195	102	16.9	1495	41	19	9	0
4196	91	16.9	1495	41	19	9	2
4197	85	13.4	1167	36	16	8	2
4198	84	11.7	1023	33	14	8	0
4199	86	11.7	1023	33	14	8	0
4200	95	11.0	973	31	14	6	0
4201	85	10.4	902	29	13	5	1
4202	99	10.4	916	29	13	5	1
4203	88	10.4	916	28	11	4	0
4204	126	12.5	1109	28	13	6	2
4205	82	13.0	1166	30	13	6	3
4206	80	13.0	1166	30	12	5	3
4207	77	12.5	1145	30	11	5	0
4208	71	12.1	1090	28	11	5	0
4209	63	12.1	1090	28	11	5	0
4210	71	11.1	1002	28	11	5	2
4211	57	10.1	907	23	9	5	2
4212	73	9.4	849	23	9	6	0
4213	58	8.8	800	22	9	6	2
4214	57	8.7	773	21	9	4	2
4215	76	6.0	533	17	6	2	2
4216	92	8.9	805	22	9	5	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4217	58	9.4	849	23	10	5	0
4218	48	9.4	849	23	10	3	0
4219	67	7.0	615	23	9	5	0
4220	56	6.9	583	21	8	5	2
4221	71	6.4	555	20	8	5	2
4222	66	6.4	555	21	8	5	0
4223	69	6.4	548	21	10	5	0
4224	67	6.3	541	20	10	4	0
4225	60	6.2	524	20	8	4	0
4226	59	6.3	528	20	8	7	2
4227	43	6.3	530	20	8	4	2
4228	57	6.2	530	21	9	5	0
4229	44	6.2	527	21	9	5	2
4230	71	6.0	512	20	8	4	2
4231	67	6.1	513	22	8	6	2
4232	62	6.1	530	22	8	6	2
4233	68	6.4	545	20	8	6	2
4234	84	6.4	548	20	7	6	2
4235	56	6.3	548	22	8	4	0
4236	59	6.3	546	22	8	5	0
4237	60	6.2	540	21	8	5	0
4238	57	6.1	521	20	8	7	0
4239	72	6.1	521	20	8	7	0
4240	81	5.8	493	19	7	5	0
4241	52	5.7	482	21	7	4	0
4242	80	5.7	482	21	7	4	0
4243	92	6.0	517	21	8	4	0
4244	82	6.3	531	21	9	4	3
4245	83	6.3	547	21	9	4	3
4246	68	6.6	577	21	9	4	0
4247	40	7.0	603	22	9	4	0
4248	72	7.0	603	22	9	4	0
4249	65	7.0	624	23	9	4	0
4250	71	7.3	636	23	9	5	0
4251	80	7.3	636	23	9	5	0
4252	91	7.3	638	23	10	5	0
4253	92	7.5	649	22	10	4	1
4254	81	7.5	653	22	10	6	1
4255	66	7.6	667	23	10	6	0
4256	70	8.1	715	24	10	5	3
4257	57	10.0	886	29	12	5	3
4258	46	10.0	886	29	12	5	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4259	75	18.1	1622	45	17	10	2
4260	61	20.7	1862	47	20	9	3
4261	49	39.0	3566	80	34	14	3
4262	61	39.0	3566	80	34	14	4
4263	78	39.0	3566	80	34	14	5
4264	102	31.9	2877	67	29	14	5
4265	107	31.9	2877	67	29	14	5
4266	110	22.1	1988	51	22	11	2
4267	100	22.1	1988	51	22	11	2
4268	116	11.6	1031	33	13	7	0
4269	110	12.3	1086	33	14	8	1
4270	109	12.3	1086	32	14	8	1
4271	101	45.1	4122	93	37	16	3
4272	118	45.1	4122	93	37	16	3
4273	91	59.1	5382	122	47	22	5
4274	97	68.6	6251	145	55	25	7
4275	96	72.8	6636	145	58	27	9
4276	91	72.8	6636	145	58	27	9
4277	70	74.8	6812	153	59	30	7
4278	90	75.3	6877	156	59	30	7
4279	89	75.3	6877	156	59	26	7
4280	65	75.3	6877	156	59	26	7
4281	87	34.2	3108	72	29	15	2
4282	72	26.1	2363	56	21	11	3
4283	68	19.8	1786	46	17	10	0
4284	56	20.2	1786	46	17	10	0
4285	50	1.7	125	7	4	1	0
4286	42	1.2	81	4	2	2	0
4287	28	1.3	93	5	3	2	2
4288	44	1.6	125	7	3	1	0
4289	38	1.5	122	6	2	0	0
4290	46	1.8	147	7	3	1	0
4291	51	2.6	202	10	4	2	0
4292	47	2.9	228	10	3	2	0
4293	59	3.8	307	12	4	4	1
4294	28	3.7	320	11	5	0	0
4295	46	4.0	339	12	5	4	0
4296	30	4.8	394	16	6	3	1
4297	30	5.8	477	17	7	4	2
4298	31	2.9	225	10	5	3	0
4299	20	3.0	241	11	5	1	0
4300	50	3.6	297	12	5	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4301	54	4.3	336	14	5	3	6
4302	53	3.7	322	11	5	3	0
4303	127	4.3	373	14	5	2	2
4304	113	4.3	373	14	5	2	2
4305	110	4.3	373	14	5	2	2
4306	96	4.4	384	14	4	1	0
4307	100	4.3	382	14	5	2	0
4308	105	4.3	382	14	5	2	0
4309	80	4.4	382	14	5	2	0
4310	78	4.5	381	13	5	4	0
4311	86	4.5	381	13	5	4	0
4312	74	4.5	381	13	5	4	0
4313	55	4.8	416	15	5	3	1
4314	64	4.8	416	15	5	3	1
4315	54	5.2	433	16	5	2	1
4316	45	7.5	661	21	8	2	0
4317	42	8.6	757	24	10	4	0
4318	68	9.2	802	25	10	6	2
4319	50	9.1	806	27	10	2	0
4320	62	8.9	786	23	9	3	0
4321	57	8.8	777	22	9	5	0
4322	46	8.7	776	23	8	3	0
4323	43	7.9	695	21	8	5	0
4324	51	7.6	670	20	8	4	0
4325	62	7.0	611	20	7	5	0
4326	57	6.5	560	18	8	3	2
4327	58	6.0	521	18	8	3	0
4328	76	5.7	487	17	7	3	1
4329	63	5.4	456	14	7	2	2
4330	78	5.0	435	16	6	3	2
4331	76	5.0	435	16	6	3	2
4332	77	4.6	406	14	6	1	1
4333	100	4.5	388	13	7	3	2
4334	113	4.6	388	13	7	3	2
4335	73	4.3	372	14	6	1	2
4336	77	4.0	351	14	5	1	1
4337	100	3.9	339	14	6	2	0
4338	80	3.9	339	14	6	2	0
4339	82	3.8	326	12	4	1	2
4340	68	3.6	311	15	5	2	0
4341	75	3.6	311	15	5	2	0
4342	88	3.4	302	12	4	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4343	86	3.4	291	10	4	3	0
4344	95	3.4	290	11	4	3	1
4345	99	3.4	290	11	4	3	1
4346	86	3.6	290	11	5	3	1
4347	97	3.6	290	11	5	3	1
4348	67	3.3	290	12	4	1	0
4349	73	3.5	300	13	5	1	1
4350	73	3.8	324	13	4	3	0
4351	90	4.3	366	14	5	2	0
4352	91	4.3	366	14	5	2	0
4353	33	4.9	403	16	6	4	0
4354	108	4.9	410	15	5	2	0
4355	66	4.7	413	14	5	1	0
4356	75	4.9	424	16	6	3	0
4357	61	5.6	486	18	6	4	0
4358	55	7.4	658	20	8	4	0
4359	45	7.5	658	20	8	4	0
4360	110	9.7	855	25	10	4	0
4361	83	11.7	1036	26	10	7	2
4362	71	11.5	1048	27	9	5	2
4363	89	11.4	1035	27	10	5	0
4364	72	11.5	1035	27	10	5	0
4365	119	13.7	1233	33	12	5	1
4366	84	14.9	1346	34	12	6	0
4367	86	13.9	1251	31	12	6	2
4368	57	12.7	1161	30	11	3	0
4369	77	10.1	924	25	9	4	0
4370	86	10.3	924	25	9	4	0
4371	68	8.7	777	23	8	4	0
4372	82	7.0	618	20	7	4	0
4373	78	6.7	592	18	7	3	0
4374	61	5.6	496	15	7	1	0
4375	111	3.6	317	11	5	2	0
4376	77	3.7	317	11	5	2	0
4377	80	3.5	299	12	4	2	0
4378	75	3.8	307	11	5	2	2
4379	60	3.6	317	11	5	2	0
4380	77	3.6	317	11	5	2	0
4381	106	3.4	299	12	4	2	0
4382	83	16.1	1440	41	17	8	2
4383	75	3.2	273	11	4	3	2
4384	70	2.9	248	12	5	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4385	52	2.9	248	12	5	2	0
4386	71	4.1	339	16	8	3	0
4387	77	4.2	339	16	8	6	2
4388	67	4.2	328	15	8	6	2
4389	59	3.4	273	13	7	6	1
4390	47	5.5	461	19	9	2	0
4391	73	5.5	461	19	9	2	0
4392	53	9.8	839	29	14	6	0
4393	73	10.8	946	31	14	8	0
4394	60	11.7	1026	31	13	8	0
4395	68	11.7	1026	30	13	6	0
4396	62	12.2	1069	32	13	7	1
4397	64	13.4	1207	34	13	7	1
4398	66	14.1	1270	35	14	7	0
4399	73	14.1	1270	35	14	7	3
4400	60	14.1	1262	34	14	6	3
4401	59	13.4	1208	34	13	5	1
4402	70	12.8	1150	32	12	5	0
4403	63	13.2	1175	34	13	6	2
4404	84	14.2	1297	34	13	6	2
4405	46	16.9	1535	39	16	8	2
4406	54	17.4	1576	41	16	8	0
4407	64	18.2	1645	40	16	7	2
4408	72	18.6	1680	43	17	9	2
4409	40	18.2	1642	42	17	8	2
4410	93	17.7	1603	42	17	8	2
4411	100	17.3	1565	41	16	8	2
4412	99	16.9	1527	40	16	8	2
4413	106	17.1	1548	40	16	8	2
4414	115	17.3	1569	40	16	8	2
4415	91	17.3	1569	40	15	7	1
4416	111	15.7	1423	38	14	9	0
4417	123	15.7	1423	38	14	9	2
4418	129	14.0	1252	35	13	6	2
4419	122	14.0	1252	35	13	6	2
4420	117	12.6	1111	33	12	6	2
4421	120	12.6	1111	33	12	6	2
4422	107	12.6	1111	33	12	6	2
4423	110	12.2	1083	32	12	5	1
4424	132	11.9	1056	31	12	5	1
4425	132	11.5	1028	31	11	5	0
4426	132	11.2	1001	30	11	5	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4427	125	10.9	986	30	10	5	0
4428	119	12.1	1097	32	11	5	0
4429	111	12.1	1097	32	11	2	0
4430	129	12.1	1097	32	11	2	0
4431	118	15.0	1348	37	13	6	1
4432	130	15.0	1348	37	13	6	1
4433	125	18.7	1697	45	15	7	2
4434	115	18.7	1697	45	15	7	2
4435	118	19.6	1773	47	16	10	2
4436	136	20.9	1884	47	19	10	2
4437	80	20.9	1884	46	19	10	2
4438	97	24.6	2221	56	23	10	3
4439	125	24.6	2221	56	23	10	3
4440	120	24.6	2221	56	23	10	3
4441	137	29.9	2684	66	28	13	3
4442	156	29.9	2684	66	28	13	3
4443	166	36.2	3275	78	33	17	3
4444	136	36.2	3275	78	33	17	3
4445	133	44.6	4015	100	42	21	3
4446	112	44.6	4015	100	42	21	2
4447	96	51.1	4648	113	47	21	1
4448	88	55.0	4995	119	48	22	2
4449	137	59.2	5380	125	48	23	5
4450	106	59.2	5380	125	48	23	5
4451	121	58.0	5289	119	45	22	3
4452	100	58.0	5289	119	45	22	3
4453	138	54.5	4988	111	41	17	5
4454	108	54.5	4988	111	41	17	5
4455	100	54.5	4988	111	41	17	5
4456	95	50.5	4658	96	37	17	7
4457	67	44.0	4079	84	30	12	4
4458	86	38.1	3517	73	26	11	2
4459	94	34.7	3217	68	24	11	0
4460	104	34.7	3217	68	24	11	2
4461	110	34.4	3174	66	23	11	2
4462	82	31.4	2904	62	22	9	0
4463	115	31.4	2904	62	22	9	0
4464	112	27.8	2562	57	20	9	0
4465	80	27.8	2562	57	20	9	3
4466	95	25.6	2341	57	19	9	2
4467	83	25.6	2341	57	19	9	2
4468	80	17.7	1614	44	15	7	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4469	96	17.7	1614	44	15	7	0
4470	75	12.4	1120	32	12	5	0
4471	73	11.6	1033	31	12	6	0
4472	112	12.0	1065	32	11	6	2
4473	86	12.2	1085	33	11	6	2
4474	73	12.2	1085	33	11	6	2
4475	57	30.1	2691	72	32	17	7
4476	1	21.8	1930	54	21	14	5
4477	7	20.1	1767	48	19	12	4
4478	35	17.8	1585	44	17	12	5
4479	34	15.2	1331	39	17	10	3
4480	37	14.4	1240	38	16	9	3
4481	44	13.5	1186	36	16	10	1
4482	31	12.5	1087	34	15	9	3
4483	39	9.0	759	27	11	7	3
4484	34	7.7	664	25	10	7	2
4485	43	6.7	591	23	9	5	0
4486	35	6.7	591	23	9	4	2
4487	44	6.7	587	22	8	4	2
4488	44	6.9	601	22	8	5	1
4489	35	7.3	653	25	9	5	1
4490	26	8.0	696	23	9	5	3
4491	38	8.0	687	25	9	5	3
4492	43	10.6	937	30	10	5	1
4493	40	21.6	1972	49	18	8	2
4494	35	37.3	3422	86	26	10	5
4495	6	38.3	3527	87	26	12	5
4496	111	38.3	3527	87	25	12	0
4497	111	38.3	3527	87	25	12	0
4498	114	38.2	3532	88	27	9	0
4499	121	38.7	3552	89	27	9	2
4500	115	38.7	3552	89	26	9	2
4501	119	39.0	3568	89	27	11	3
4502	99	39.4	3584	88	27	12	4
4503	105	39.4	3584	88	27	12	4
4504	136	39.9	3678	93	29	12	4
4505	110	41.4	3837	96	30	11	0
4506	120	41.4	3837	96	30	11	0
4507	120	41.6	3837	97	30	11	0
4508	97	41.6	3837	97	30	11	1
4509	109	41.6	3836	97	30	11	2
4510	115	36.1	3317	85	26	9	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4511	113	36.1	3317	85	26	9	2
4512	101	27.3	2488	66	22	7	1
4513	97	22.8	2080	55	20	7	0
4514	96	22.8	2080	55	20	7	0
4515	115	22.8	2080	57	21	7	0
4516	129	22.1	2003	57	21	6	0
4517	142	22.1	2003	57	21	8	0
4518	120	20.2	1814	54	20	8	0
4519	105	20.2	1814	54	20	8	3
4520	127	18.6	1665	52	18	6	3
4521	89	18.6	1665	52	18	6	3
4522	80	18.4	1648	52	18	6	1
4523	150	24.0	2178	57	21	7	1
4524	107	24.0	2178	57	21	7	1
4525	126	35.3	3233	87	29	8	2
4526	140	35.3	3233	87	29	8	2
4527	132	48.9	4485	113	36	12	1
4528	126	48.9	4485	113	36	12	1
4529	113	53.8	4953	125	39	12	2
4530	125	58.7	5420	138	42	12	2
4531	80	73.2	6769	177	50	14	5
4532	93	73.2	6769	177	48	13	5
4533	124	69.8	6430	169	45	13	2
4534	129	69.8	6430	169	45	13	2
4535	139	69.8	6430	169	45	13	2
4536	136	58.6	5440	133	38	9	2
4537	137	52.8	4897	120	35	9	1
4538	121	47.0	4354	106	31	8	0
4539	105	47.0	4354	106	31	8	3
4540	114	38.7	3580	90	26	7	3
4541	129	38.7	3580	90	26	7	3
4542	113	32.4	2993	77	22	6	3
4543	117	32.4	2993	77	22	6	3
4544	117	22.5	2076	57	15	4	3
4545	98	19.2	1751	51	14	4	3
4546	94	38.5	3574	90	22	6	3
4547	104	63.6	5923	149	34	7	3
4548	124	88.6	8223	220	50	10	3
4549	89	106.1	9810	281	63	11	0
4550	72	116.6	10721	321	76	16	5
4551	81	118.4	10866	329	80	17	5
4552	96	120.2	11011	336	85	18	4

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4553	122	120.2	11011	336	85	18	4
4554	110	119.7	10951	338	87	19	2
4555	94	119.7	10951	338	87	20	3
4556	123	113.9	10402	320	82	20	3
4557	110	107.1	9783	298	77	19	6
4558	86	107.1	9783	298	77	19	6
4559	100	107.1	9783	298	77	19	6
4560	110	99.1	9072	272	70	16	4
4561	71	89.4	8244	225	59	15	3
4562	83	89.4	8244	225	59	15	3
4563	40	85.8	7935	214	53	14	0
4564	83	80.0	7424	197	48	11	0
4565	73	60.2	5586	149	35	8	0
4566	125	60.2	5586	149	35	8	2
4567	137	46.6	4293	116	29	8	2
4568	80	168.5	15315	570	121	20	8
4569	1	83.5	7601	246	69	15	2
4570	107	68.1	6185	192	55	14	2
4571	84	57.0	5182	161	47	10	1
4572	119	57.0	5182	161	47	10	3
4573	103	53.9	4893	150	46	10	3
4574	104	55.7	5076	154	46	10	3
4575	108	55.7	5076	154	45	10	3
4576	99	58.9	5383	153	46	11	0
4577	111	58.9	5383	153	46	11	0
4578	103	62.0	5660	162	48	12	1
4579	111	66.4	6078	176	50	12	4
4580	100	66.4	6078	176	50	12	4
4581	102	70.7	6482	189	52	12	4
4582	91	71.1	6530	189	52	12	1
4583	92	71.1	6530	184	50	12	1
4584	69	71.1	6530	184	50	12	1
4585	104	70.0	6417	178	50	12	1
4586	82	70.1	6444	179	48	11	1
4587	96	71.8	6608	182	49	12	3
4588	93	71.8	6608	182	49	12	3
4589	93	72.9	6714	184	49	12	3
4590	107	77.1	7114	194	53	12	2
4591	104	77.1	7114	194	53	12	2
4592	94	83.6	7701	212	56	15	2
4593	106	90.1	8288	231	60	17	2
4594	98	90.1	8288	231	60	17	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4595	75	90.1	8288	231	60	17	2
4596	92	83.0	7663	206	54	15	2
4597	75	74.4	6868	182	48	13	2
4598	98	74.4	6868	182	48	13	2
4599	114	69.1	6406	165	43	12	2
4600	109	69.1	6406	165	43	12	2
4601	88	68.5	6349	167	41	11	1
4602	98	68.5	6349	167	41	9	1
4603	92	69.4	6464	167	41	12	1
4604	93	69.4	6464	158	40	12	1
4605	83	72.0	6707	166	41	12	1
4606	114	72.5	6751	169	41	12	1
4607	85	72.5	6751	169	41	12	1
4608	117	72.5	6751	169	41	12	2
4609	74	68.5	6347	169	41	9	2
4610	116	68.5	6347	169	41	9	2
4611	91	62.6	5818	145	38	8	1
4612	85	58.3	5427	133	34	8	1
4613	102	58.3	5427	133	34	8	1
4614	98	55.0	5108	126	33	6	5
4615	91	53.1	4948	123	32	7	1
4616	97	53.1	4948	123	32	7	1
4617	108	53.1	4948	123	32	7	2
4618	116	51.7	4809	119	31	7	2
4619	129	51.7	4809	119	31	7	2
4620	112	47.7	4427	109	29	6	2
4621	102	47.7	4427	109	29	6	2
4622	101	42.3	3942	98	26	5	1
4623	95	41.4	3849	96	27	6	0
4624	68	41.1	3812	96	27	7	1
4625	91	40.8	3774	97	27	8	3
4626	89	40.7	3765	97	27	8	3
4627	105	40.6	3755	97	27	7	3
4628	106	40.6	3755	97	27	7	2
4629	113	40.6	3755	97	27	7	2
4630	107	38.7	3578	95	27	6	1
4631	96	34.9	3214	87	23	6	3
4632	77	34.9	3214	87	23	6	3
4633	83	49.5	4589	117	31	8	1
4634	79	70.7	6550	171	46	11	2
4635	70	97.7	8942	267	69	15	2
4636	78	130.2	11770	392	111	28	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4637	74	159.5	14169	527	163	45	8
4638	100	159.5	14169	527	163	45	8
4639	98	178.4	15654	620	204	59	8
4640	114	199.3	17271	726	249	75	17
4641	102	217.3	18662	813	293	92	23
4642	98	199.9	17240	723	263	87	19
4643	134	193.1	16717	685	247	81	18
4644	108	192.4	16700	674	241	80	17
4645	44	182.2	15852	625	219	74	19
4646	66	158.9	13987	490	179	64	15
4647	146	158.9	13987	490	179	64	15
4648	119	137.6	12183	404	144	54	16
4649	99	137.6	12183	404	144	54	16
4650	109	137.6	12183	404	144	54	16
4651	66	122.6	10946	337	121	45	12
4652	89	107.5	9710	270	97	36	8
4653	86	92.9	8426	224	82	31	5
4654	90	71.4	6422	174	63	23	9
4655	92	71.4	6422	174	63	23	9
4656	116	58.9	5337	142	51	20	7
4657	88	58.9	5337	142	51	20	7
4658	102	51.2	4656	123	43	17	1
4659	96	47.8	4377	114	39	14	3
4660	96	202.0	17905	646	216	70	16
4661	81	61.8	5562	161	60	22	8
4662	95	47.4	4260	125	47	19	3
4663	8	24.3	2123	64	26	11	5
4664	41	56.2	5044	136	53	22	5
4665	24	56.2	5041	135	54	23	6
4666	37	56.2	5041	135	54	22	8
4667	35	57.3	5166	140	52	22	8
4668	41	60.6	5454	151	56	22	6
4669	32	42.2	3794	105	40	16	6
4670	6	26.3	2337	70	25	11	3
4671	30	19.8	1769	56	22	9	3
4672	36	14.8	1292	44	17	7	3
4673	25	12.8	1122	40	15	6	4
4674	18	11.4	1005	37	14	8	4
4675	13	10.9	943	37	14	6	1
4676	10	27.9	2496	74	28	9	3
4677	35	34.6	3121	93	34	13	3
4678	18	30.5	2753	78	31	12	4

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4679	18	21.3	1879	60	23	10	3
4680	80	21.3	1879	60	22	9	3
4681	79	21.9	1954	60	23	10	4
4682	81	21.9	1954	57	23	10	4
4683	68	20.6	1828	57	22	10	3
4684	74	18.6	1636	51	20	10	2
4685	67	18.0	1591	48	19	8	1
4686	94	18.0	1591	48	19	8	1
4687	81	17.2	1532	47	18	9	2
4688	82	15.7	1389	45	18	7	2
4689	74	14.4	1272	42	17	7	0
4690	78	14.4	1272	42	17	7	0
4691	85	14.1	1243	42	17	6	1
4692	81	17.0	1501	47	19	6	2
4693	77	25.1	2268	67	26	9	2
4694	65	33.9	3061	87	35	12	2
4695	69	40.2	3639	106	41	12	2
4696	56	44.2	3979	116	44	16	5
4697	62	44.2	3979	116	44	16	5
4698	61	46.4	4212	114	46	16	1
4699	82	46.7	4228	114	45	15	3
4700	57	45.8	4158	111	43	14	2
4701	50	45.9	4146	116	43	15	2
4702	58	46.0	4169	111	43	15	2
4703	64	46.4	4224	112	43	16	2
4704	62	46.9	4272	113	42	16	2
4705	64	46.9	4272	113	42	15	1
4706	67	47.1	4299	114	42	15	0
4707	58	47.7	4328	113	42	14	2
4708	72	47.9	4373	114	42	15	2
4709	54	47.5	4319	113	41	14	3
4710	45	44.1	4023	104	39	13	5
4711	64	40.6	3683	98	36	11	5
4712	65	37.4	3402	91	34	10	2
4713	53	34.1	3114	83	31	10	1
4714	51	34.5	3126	85	31	11	3
4715	29	31.4	2845	77	30	10	1
4716	77	31.4	2845	77	30	10	3
4717	75	31.3	2839	78	29	9	3
4718	62	29.9	2718	78	29	9	2
4719	73	26.9	2436	72	26	8	2
4720	101	23.7	2125	64	24	8	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4721	89	23.7	2125	64	24	8	2
4722	100	26.0	2357	68	26	8	2
4723	109	26.0	2357	68	26	8	1
4724	84	28.9	2612	75	28	8	3
4725	107	28.9	2612	75	28	8	3
4726	107	32.7	2969	84	30	9	3
4727	121	36.4	3326	92	33	9	2
4728	94	46.7	4252	117	41	11	3
4729	90	56.4	5130	143	50	14	3
4730	101	56.4	5130	143	50	14	2
4731	111	65.4	5973	170	57	17	2
4732	91	65.4	5973	170	57	17	2
4733	91	72.7	6623	180	63	21	4
4734	113	76.8	6988	194	69	23	4
4735	61	78.3	7090	202	70	23	3
4736	64	81.6	7399	214	74	26	3
4737	104	81.6	7399	214	74	26	3
4738	117	81.6	7399	214	74	26	3
4739	121	82.2	7461	205	75	27	3
4740	127	82.2	7461	205	75	27	3
4741	133	82.2	7461	205	75	28	6
4742	149	81.3	7350	203	73	28	6
4743	112	81.3	7350	203	74	28	6
4744	146	77.1	7003	190	74	22	2
4745	98	77.1	7003	195	74	22	2
4746	135	74.0	6724	195	67	22	4
4747	95	76.7	6961	201	69	22	4
4748	134	78.8	7153	205	70	22	4
4749	87	81.0	7345	210	71	22	4
4750	113	81.0	7345	210	71	22	4
4751	104	83.9	7639	223	74	24	4
4752	130	85.8	7800	229	74	21	4
4753	126	87.3	7967	231	76	21	4
4754	131	89.7	8175	240	77	21	2
4755	120	89.7	8175	240	77	21	3
4756	125	85.1	7764	228	74	20	4
4757	100	60.9	5463	176	63	18	0
4758	86	54.4	4877	150	57	17	2
4759	60	48.7	4351	132	51	16	4
4760	83	42.6	3799	119	45	14	3
4761	83	33.5	2999	95	37	12	2
4762	93	33.6	2999	95	37	12	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4763	80	29.9	2666	82	33	12	1
4764	76	25.6	2275	72	30	12	1
4765	88	25.6	2275	72	30	12	1
4766	91	22.4	1970	68	27	9	2
4767	91	22.4	1970	68	27	9	2
4768	85	21.3	1881	66	26	8	2
4769	85	22.0	1950	67	26	9	1
4770	88	22.1	1950	67	26	9	1
4771	83	23.2	2050	68	27	10	1
4772	87	23.2	2050	68	27	10	1
4773	83	24.7	2186	72	28	10	1
4774	50	25.8	2284	74	30	10	2
4775	85	28.6	2561	81	31	11	0
4776	80	28.7	2561	81	31	11	0
4777	84	31.0	2769	86	32	11	2
4778	84	31.7	2836	86	33	11	2
4779	84	31.8	2836	86	33	11	2
4780	86	30.9	2749	84	30	11	3
4781	94	31.2	2791	86	31	11	2
4782	71	33.0	2980	85	32	10	3
4783	55	33.2	2980	85	32	10	4
4784	50	39.7	3584	99	34	12	5
4785	42	43.7	3982	100	35	13	3
4786	53	50.3	4616	119	38	12	2
4787	62	51.8	4757	123	38	12	2
4788	53	53.9	4968	128	38	12	2
4789	60	53.8	4968	128	38	12	0
4790	62	57.1	5259	136	41	14	2
4791	73	59.6	5485	141	41	14	2
4792	55	60.9	5605	146	42	14	2
4793	50	61.0	5605	146	43	14	3
4794	56	60.7	5576	143	43	14	3
4795	44	38.5	3534	94	29	9	1
4796	54	25.5	2310	67	22	5	1
4797	54	15.5	1382	45	15	5	0
4798	76	15.5	1382	45	15	5	0
4799	68	16.5	1486	46	15	5	1
4800	68	25.4	2318	64	21	7	1
4801	67	25.4	2318	64	21	7	1
4802	75	33.3	3027	84	27	11	1
4803	64	33.2	3027	84	27	11	0
4804	55	33.3	3027	84	27	11	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4805	75	24.8	2243	64	23	9	1
4806	65	30.8	2799	79	26	9	1
4807	63	30.8	2799	79	26	9	1
4808	58	21.7	1944	59	20	8	1
4809	70	13.4	1185	41	14	6	1
4810	78	13.9	1240	41	14	4	1
4811	91	19.3	1730	53	18	7	1
4812	88	19.3	1730	53	18	7	0
4813	89	28.7	2595	75	26	8	2
4814	98	28.7	2595	75	26	8	2
4815	98	37.4	3400	94	34	10	2
4816	100	43.5	3940	111	39	12	3
4817	93	45.9	4161	117	40	13	3
4818	57	45.7	4161	117	40	13	2
4819	72	48.3	4391	126	43	14	2
4820	62	56.6	5134	151	50	15	1
4821	54	58.4	5306	156	52	16	1
4822	57	55.0	5000	139	49	16	3
4823	64	52.6	4783	132	46	15	2
4824	50	52.2	4732	138	46	15	1
4825	75	52.2	4732	138	46	15	1
4826	63	53.0	4798	141	48	14	2
4827	75	39.6	3586	101	36	12	0
4828	72	27.4	2468	74	26	8	0
4829	76	15.2	1350	46	17	5	0
4830	78	3.6	290	14	6	3	2
4831	73	2.3	190	11	4	1	1
4832	77	2.4	190	11	4	1	1
4833	74	1.7	139	7	3	0	0
4834	83	1.5	129	7	3	0	0
4835	72	1.1	88	6	3	1	1
4836	86	1.3	88	6	3	1	1
4837	92	1.6	115	6	3	1	0
4838	114	13.2	1158	41	14	3	1
4839	54	29.0	2612	76	26	10	0
4840	41	56.5	5163	144	46	15	2
4841	45	64.1	5855	165	54	16	2
4842	73	67.5	6155	176	60	19	1
4843	62	70.1	6379	183	61	19	1
4844	59	66.9	6073	176	59	19	2
4845	54	49.4	4492	120	44	17	2
4846	62	51.6	4701	129	46	17	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4847	54	53.3	4846	135	47	16	2
4848	66	52.4	4750	136	48	18	2
4849	47	50.8	4622	124	46	18	2
4850	48	65.8	5914	185	73	24	4
4851	46	7.1	614	27	11	6	0
4852	46	5.8	473	26	9	5	0
4853	39	6.3	534	22	9	5	2
4854	47	6.3	534	22	9	3	0
4855	17	9.1	788	32	13	5	0
4856	30	11.0	978	36	13	5	1
4857	11	13.9	1217	45	17	7	2
4858	21	13.9	1217	45	17	8	2
4859	20	12.7	1108	43	16	8	1
4860	17	11.7	1015	38	14	6	2
4861	41	24.3	2164	69	25	10	2
4862	78	28.1	2545	75	28	10	0
4863	105	33.4	3017	90	33	9	2
4864	68	33.4	3017	90	33	9	2
4865	76	39.7	3606	102	37	12	2
4866	84	48.2	4389	126	45	14	0
4867	83	48.2	4389	126	45	14	0
4868	76	55.1	5006	147	52	15	2
4869	64	58.5	5314	157	56	15	2
4870	56	58.5	5314	157	56	16	0
4871	48	53.8	4856	147	53	15	2
4872	53	48.0	4355	124	48	13	0
4873	53	42.0	3785	111	43	13	2
4874	73	42.0	3785	111	43	14	2
4875	52	36.4	3249	96	38	14	1
4876	59	32.4	2898	91	34	12	2
4877	39	30.0	2699	79	31	11	0
4878	51	31.1	2795	78	32	11	2
4879	49	37.9	3452	88	32	12	2
4880	53	43.6	3969	101	39	14	2
4881	54	52.1	4703	125	50	20	2
4882	57	59.7	5331	150	67	25	2
4883	57	65.1	5732	170	77	32	6
4884	65	65.8	5752	178	83	34	7
4885	51	65.8	5752	179	83	34	7
4886	46	66.5	5820	181	82	35	6
4887	40	65.7	5772	178	76	32	5
4888	46	66.8	5884	183	76	32	7

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4889	60	67.1	5962	183	74	32	7
4890	77	67.1	5989	170	70	31	7
4891	79	66.8	5989	167	68	27	5
4892	85	66.0	5919	170	64	27	3
4893	65	65.6	5895	169	62	24	4
4894	72	65.6	5895	169	62	24	4
4895	61	64.3	5828	161	61	21	5
4896	51	59.3	5347	145	54	21	5
4897	51	28.6	2562	75	29	13	1
4898	76	28.6	2562	75	29	13	2
4899	52	17.9	1576	49	20	8	2
4900	57	10.8	918	35	15	6	2
4901	72	7.2	620	25	11	5	0
4902	56	16.6	1479	46	17	7	1
4903	59	35.7	3220	90	35	14	3
4904	63	35.7	3220	90	35	14	3
4905	52	35.4	3198	90	34	12	3
4906	41	32.3	2900	85	32	13	3
4907	48	31.6	2862	85	33	13	3
4908	40	31.6	2862	81	33	12	1
4909	37	30.7	2759	79	30	12	3
4910	35	23.4	2081	66	25	9	3
4911	35	23.1	2074	65	25	9	2
4912	38	12.8	1119	41	15	6	2
4913	44	9.3	802	31	12	5	1
4914	32	4.6	391	19	7	4	2
4915	34	15.1	1348	43	16	5	0
4916	30	24.2	2191	61	22	9	2
4917	43	29.7	2690	72	26	11	2
4918	41	32.3	2936	78	27	13	1
4919	42	23.6	2118	57	22	10	1
4920	32	14.0	1249	41	16	6	1
4921	44	16.2	1458	45	16	7	0
4922	51	28.0	2542	70	26	10	1
4923	58	33.6	3057	82	29	10	1
4924	42	39.5	3596	94	33	12	3
4925	46	41.9	3826	101	36	12	3
4926	53	41.9	3826	101	36	14	2
4927	59	41.3	3749	99	35	14	2
4928	63	36.5	3302	91	33	13	2
4929	68	34.9	3146	87	31	13	2
4930	68	33.2	2990	83	30	13	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4931	68	31.6	2834	79	29	13	1
4932	66	33.0	2965	86	31	12	1
4933	74	35.4	3194	87	35	16	1
4934	70	35.4	3194	87	35	16	3
4935	73	29.5	2650	74	28	12	3
4936	88	23.2	2055	62	25	11	3
4937	87	23.2	2055	62	25	11	3
4938	57	16.0	1419	46	17	8	1
4939	55	15.1	1317	43	17	8	2
4940	55	15.6	1376	45	17	9	2
4941	60	15.6	1376	45	17	9	1
4942	69	14.0	1237	43	15	7	1
4943	80	33.3	3023	84	29	10	1
4944	68	33.3	3023	84	29	10	1
4945	36	74.5	6831	204	74	27	7
4946	60	43.1	3858	116	46	16	2
4947	82	39.6	3550	108	42	15	2
4948	72	28.5	2520	81	31	12	2
4949	90	19.4	1693	58	24	12	2
4950	69	15.3	1318	51	20	8	0
4951	66	15.3	1318	51	20	8	0
4952	66	15.9	1394	49	20	8	2
4953	84	15.9	1394	49	20	8	2
4954	76	15.9	1394	49	20	8	2
4955	68	15.9	1394	50	20	8	2
4956	80	15.9	1386	50	19	7	1
4957	82	15.9	1386	50	19	7	1
4958	64	11.5	991	38	15	6	0
4959	68	8.6	739	33	11	5	0
4960	80	6.9	578	26	10	5	0
4961	81	4.6	382	18	8	3	0
4962	76	3.9	326	16	7	2	1
4963	68	4.4	360	18	7	2	1
4964	75	4.4	360	18	7	2	0
4965	76	5.4	438	23	8	4	1
4966	55	5.4	438	23	8	4	1
4967	64	5.5	466	23	8	4	1
4968	69	6.1	504	24	11	4	1
4969	67	6.1	504	24	11	4	1
4970	66	8.6	727	31	12	5	1
4971	64	8.6	727	31	12	5	1
4972	91	14.6	1299	44	16	6	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
4973	69	20.7	1839	60	21	9	1
4974	75	25.5	2279	70	24	9	2
4975	70	25.5	2279	70	24	8	2
4976	98	35.9	3269	86	29	11	2
4977	49	35.9	3269	86	29	11	2
4978	97	47.6	4377	115	34	11	2
4979	61	59.7	5489	146	37	12	2
4980	62	75.6	6982	193	45	14	2
4981	57	84.3	7770	224	49	16	2
4982	28	4.7	220	21	17	14	1
4983	20	4.4	241	23	19	16	2
4984	38	4.4	241	23	19	16	2
4985	95	5.0	276	24	21	18	4
4986	80	5.2	276	24	21	18	4
4987	90	6.2	349	27	24	20	3
4988	59	7.8	433	32	27	23	8
4989	36	8.9	521	36	31	27	7
4990	42	10.2	521	36	31	27	7
4991	43	4.6	276	24	21	18	4
4992	20	4.6	276	24	21	18	4
4993	69	5.5	349	27	24	20	3
4994	68	6.8	433	32	27	23	8
4995	61	1.5	129	7	2	1	0
4996	61	1.5	129	7	2	1	0
4997	43	1.6	127	7	4	0	2
4998	43	1.5	122	7	4	1	0
4999	43	1.6	124	7	3	1	2
5000	34	2.4	212	10	5	0	0
5001	80	2.5	212	11	5	0	0
5002	99	2.3	203	9	3	2	0
5003	92	2.3	188	8	3	2	2
5004	104	1.8	154	6	3	1	0
5005	97	1.5	129	7	2	1	0
5006	97	1.5	129	7	2	1	0
5007	109	1.6	127	7	4	0	2
5008	97	1.5	122	7	4	1	0
5009	79	1.6	124	7	3	1	2
5010	80	2.4	212	10	5	0	0
5011	72	2.5	212	11	5	0	0
5012	90	2.3	203	7	3	2	0
5013	73	2.2	188	5	3	2	2
5014	72	1.8	154	8	3	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5015	73	1.8	154	8	3	1	0
5016	65	1.7	141	7	2	2	0
5017	53	1.6	131	7	3	1	0
5018	40	1.4	126	7	2	0	0
5019	34	1.7	126	7	2	0	0
5020	37	2.0	149	8	3	1	0
5021	54	2.0	158	7	2	2	0
5022	49	1.5	129	7	2	1	0
5023	42	1.5	129	7	2	1	0
5024	62	1.6	127	7	4	0	2
5025	62	1.6	122	7	4	1	0
5026	64	1.7	124	7	3	1	2
5027	70	2.5	212	13	5	0	0
5028	66	2.5	212	13	5	0	0
5029	58	2.4	203	10	3	2	0
5030	58	2.4	188	12	3	2	2
5031	55	1.9	154	8	3	1	0
5032	50	1.9	154	8	3	1	0
5033	46	1.7	141	7	2	2	0
5034	38	1.6	131	7	3	1	0
5035	34	1.4	126	7	2	0	0
5036	53	1.5	126	7	2	0	0
5037	42	1.8	149	8	3	1	0
5038	35	2.0	158	7	2	2	0
5039	18	3.3	266	14	5	1	2
5040	20	3.3	279	15	4	2	0
5041	25	3.6	290	15	4	1	1
5042	31	3.4	292	14	4	0	0
5043	45	3.5	296	14	5	2	2
5044	45	3.3	286	13	5	1	2
5045	25	3.2	268	13	4	1	2
5046	38	3.2	255	14	4	2	4
5047	36	3.2	255	14	4	2	4
5048	72	3.2	255	14	5	2	4
5049	65	2.9	248	12	5	1	0
5050	57	2.9	242	12	5	1	1
5051	44	2.7	224	12	5	1	0
5052	56	2.6	215	10	4	1	0
5053	60	2.6	215	11	4	1	1
5054	52	2.6	210	11	5	2	1
5055	51	2.7	208	11	5	2	1
5056	40	2.7	212	11	5	3	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5057	37	2.6	214	10	4	1	2
5058	25	2.5	211	10	3	3	0
5059	27	2.7	225	10	4	3	0
5060	34	2.8	228	11	5	2	0
5061	34	3.1	252	13	5	3	0
5062	48	3.4	292	13	5	3	0
5063	35	3.9	323	14	6	4	1
5064	41	4.6	386	19	8	4	1
5065	39	4.6	386	19	8	6	1
5066	37	3.9	319	15	6	4	2
5067	32	3.5	287	13	6	4	2
5068	30	3.1	259	11	5	3	0
5069	39	2.9	246	11	4	3	0
5070	38	2.9	237	11	5	4	2
5071	52	2.9	235	12	5	4	1
5072	43	2.9	235	12	5	2	1
5073	40	2.9	246	11	5	2	0
5074	55	2.9	246	10	5	2	0
5075	43	2.9	242	11	5	2	1
5076	55	3.0	246	11	5	3	1
5077	55	3.0	246	11	5	3	1
5078	42	3.1	252	13	4	3	3
5079	49	3.1	252	13	4	3	3
5080	54	3.1	265	11	4	3	0
5081	49	3.1	267	11	4	3	0
5082	41	3.1	267	11	4	1	1
5083	32	3.1	266	9	5	3	1
5084	34	3.2	274	12	4	2	1
5085	28	3.3	285	12	5	2	2
5086	30	3.5	303	14	5	2	1
5087	35	3.7	310	14	6	4	0
5088	35	4.0	330	15	6	3	0
5089	42	4.0	339	15	6	3	1
5090	27	3.9	338	15	5	3	1
5091	44	3.8	335	13	5	3	0
5092	38	3.8	330	13	5	3	1
5093	39	3.6	313	12	5	3	1
5094	36	3.5	302	12	5	3	1
5095	37	3.4	279	14	5	3	1
5096	38	3.4	270	14	5	2	1
5097	34	3.1	256	13	6	3	1
5098	41	2.9	239	11	5	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5099	52	2.9	234	11	5	4	1
5100	45	2.5	216	11	4	1	1
5101	46	2.7	209	9	5	2	2
5102	46	2.7	207	11	5	3	2
5103	42	2.6	207	11	5	3	2
5104	46	2.5	209	9	5	3	1
5105	50	2.5	211	10	4	2	1
5106	44	2.5	210	10	4	3	1
5107	45	2.5	210	8	4	3	0
5108	53	2.6	213	12	4	2	1
5109	51	2.7	215	12	4	3	2
5110	63	2.7	215	11	5	3	2
5111	57	2.6	209	11	5	2	1
5112	53	2.7	207	10	4	4	4
5113	55	2.7	214	10	5	4	4
5114	57	2.6	220	12	5	2	1
5115	52	2.6	220	12	4	1	0
5116	42	3.2	265	13	5	4	3
5117	50	2.1	178	9	4	1	0
5118	89	2.1	178	9	4	1	0
5119	52	2.8	235	12	5	2	2
5120	37	2.9	237	12	5	2	3
5121	48	2.9	237	11	5	2	3
5122	33	2.7	228	10	5	2	0
5123	29	2.4	214	10	5	1	1
5124	57	2.4	196	9	4	1	3
5125	61	2.4	183	8	4	1	3
5126	51	2.1	174	9	4	3	0
5127	66	2.2	172	10	5	2	1
5128	89	2.5	199	12	5	2	1
5129	85	2.5	199	12	5	2	1
5130	87	2.6	206	12	5	2	2
5131	69	2.6	206	11	5	2	2
5132	74	2.6	200	12	5	2	1
5133	64	2.6	200	12	5	1	1
5134	70	2.6	203	11	5	0	0
5135	65	2.6	203	11	6	4	0
5136	59	2.5	184	11	6	4	1
5137	51	2.4	180	10	6	3	2
5138	78	2.4	182	10	6	2	2
5139	54	2.6	214	11	5	3	1
5140	39	2.6	220	10	5	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5141	39	2.7	225	10	5	2	1
5142	43	2.7	227	10	4	2	0
5143	39	2.9	244	12	4	1	0
5144	48	3.0	253	12	4	1	1
5145	46	3.2	271	11	4	2	2
5146	43	3.8	325	14	5	4	1
5147	40	4.6	412	15	5	4	0
5148	60	6.0	547	16	6	3	0
5149	60	7.9	719	20	7	2	1
5150	55	12.1	1125	27	8	4	1
5151	32	12.1	1125	27	8	4	0
5152	40	9.9	927	21	7	2	1
5153	68	8.6	795	19	6	2	4
5154	71	8.1	734	19	5	2	4
5155	69	7.4	683	17	5	3	0
5156	45	6.8	626	15	5	2	0
5157	53	6.6	609	16	5	3	0
5158	59	6.6	602	19	5	2	0
5159	60	6.7	602	19	6	2	2
5160	53	6.5	581	19	6	2	2
5161	54	6.5	577	18	6	2	1
5162	45	6.4	574	18	7	2	1
5163	51	6.4	576	17	7	2	1
5164	43	6.4	576	17	6	4	2
5165	42	6.4	561	17	6	4	2
5166	47	6.3	573	17	5	3	2
5167	57	6.8	630	19	5	3	2
5168	72	7.9	728	19	7	2	0
5169	45	9.3	853	20	7	3	0
5170	47	10.4	953	22	8	4	1
5171	60	10.6	982	23	8	4	1
5172	55	10.6	982	23	8	4	1
5173	51	10.5	964	26	9	4	2
5174	57	9.9	890	26	8	3	0
5175	57	9.9	890	26	9	3	0
5176	60	9.3	841	26	9	4	0
5177	61	7.2	632	21	6	4	2
5178	60	6.0	529	17	6	3	2
5179	57	5.5	498	17	6	2	1
5180	55	5.3	470	16	6	2	1
5181	39	5.1	452	16	5	2	1
5182	57	5.1	449	16	5	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5183	61	5.1	452	16	6	2	2
5184	69	5.1	459	16	6	2	2
5185	53	5.3	476	18	6	3	0
5186	48	5.3	476	18	6	3	0
5187	46	5.4	475	18	6	4	1
5188	52	5.4	476	18	6	2	1
5189	133	5.4	476	17	6	2	0
5190	68	5.7	506	19	6	3	0
5191	84	5.9	518	19	6	3	1
5192	69	5.9	518	19	6	3	1
5193	93	6.1	525	19	6	5	2
5194	142	6.1	526	20	8	5	2
5195	45	6.2	544	20	8	3	2
5196	39	6.2	544	20	8	5	1
5197	51	6.1	541	18	7	5	1
5198	54	5.8	507	18	6	5	1
5199	20	5.5	482	18	7	2	3
5200	43	4.9	426	17	7	1	0
5201	54	4.9	426	17	7	3	2
5202	62	4.2	358	14	5	3	2
5203	63	4.2	358	14	5	3	2
5204	89	4.0	351	14	5	2	0
5205	91	5.7	507	16	6	5	2
5206	77	6.2	564	17	6	3	1
5207	65	6.8	610	18	8	3	0
5208	68	7.4	638	23	10	5	1
5209	83	7.4	638	23	10	5	1
5210	98	7.4	643	23	10	5	1
5211	88	7.4	643	22	9	4	0
5212	86	6.7	576	21	9	5	3
5213	145	4.8	424	16	5	2	3
5214	126	4.8	424	16	5	2	0
5215	107	6.3	565	20	6	2	0
5216	76	6.3	565	20	6	2	0
5217	130	7.3	654	22	7	4	0
5218	143	7.3	654	22	7	4	0
5219	78	7.8	688	22	8	4	3
5220	118	7.8	688	22	8	4	3
5221	76	7.8	687	19	8	4	2
5222	93	7.8	687	20	8	5	2
5223	73	7.5	652	20	7	5	3
5224	56	6.8	604	19	7	5	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5225	32	8.6	739	26	11	7	2
5226	24	8.7	739	30	14	7	2
5227	57	8.7	726	30	14	5	2
5228	43	9.2	768	32	16	7	0
5229	53	9.2	768	32	16	7	1
5230	87	8.9	747	32	15	7	1
5231	65	7.9	665	28	14	6	1
5232	81	7.1	597	25	12	5	1
5233	105	7.1	597	25	12	5	1
5234	74	6.7	566	25	11	5	0
5235	68	7.3	631	25	12	5	0
5236	86	10.6	898	32	16	8	2
5237	60	13.3	1139	38	20	10	2
5238	60	14.0	1214	40	20	10	2
5239	69	14.0	1214	40	18	10	2
5240	70	13.9	1210	39	17	10	2
5241	60	13.2	1166	34	16	9	1
5242	70	13.2	1166	34	16	9	2
5243	69	12.0	1054	33	15	8	0
5244	79	12.0	1054	33	15	8	2
5245	50	10.3	908	28	12	8	2
5246	42	8.6	725	24	11	8	2
5247	55	6.9	593	24	10	6	2
5248	52	6.1	512	19	9	4	2
5249	59	5.9	515	22	9	4	0
5250	39	7.6	645	24	10	7	1
5251	74	9.4	802	30	13	7	2
5252	74	10.6	919	31	14	7	2
5253	64	11.1	976	31	14	5	2
5254	82	11.1	976	31	14	3	0
5255	79	11.7	1024	32	15	8	0
5256	90	11.8	1024	32	15	8	0
5257	70	12.0	1041	33	14	8	1
5258	85	11.6	1022	33	14	8	1
5259	71	11.7	1022	33	14	8	1
5260	61	11.5	1003	30	13	8	2
5261	59	11.0	963	27	12	8	0
5262	51	11.1	963	27	12	8	0
5263	42	10.8	928	34	14	5	1
5264	45	10.4	895	31	14	6	0
5265	33	11.4	954	35	16	8	2
5266	65	20.5	1753	62	30	16	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5267	80	30.0	2577	86	45	22	3
5268	66	31.8	2697	89	46	26	6
5269	66	31.8	2697	89	46	26	6
5270	65	30.1	2588	82	44	24	1
5271	73	27.2	2326	72	39	21	5
5272	50	24.4	2113	67	35	17	3
5273	55	22.0	1898	56	29	16	6
5274	60	14.5	1278	38	18	10	1
5275	67	13.2	1144	35	17	9	2
5276	81	13.2	1144	35	17	9	2
5277	74	11.9	1026	33	15	10	1
5278	69	11.0	923	31	13	10	2
5279	42	9.8	836	26	12	7	1
5280	41	9.0	772	26	11	6	1
5281	59	9.0	772	26	11	6	1
5282	86	9.0	766	32	12	6	0
5283	74	9.0	767	29	13	6	0
5284	48	9.6	812	32	12	8	1
5285	73	10.4	896	32	14	7	1
5286	73	11.0	949	32	14	10	0
5287	81	11.4	998	32	12	8	2
5288	83	11.4	998	32	12	8	2
5289	81	11.3	1011	32	13	6	0
5290	71	11.6	1024	32	13	5	0
5291	80	12.0	1028	33	14	9	6
5292	63	12.0	1028	33	14	9	6
5293	67	11.7	1031	30	12	7	2
5294	76	11.5	1020	30	12	8	0
5295	68	11.4	1011	30	12	7	1
5296	83	11.6	1017	30	12	8	1
5297	59	11.7	1028	29	12	6	3
5298	76	12.1	1036	32	14	8	3
5299	51	13.3	1142	42	18	9	0
5300	45	13.7	1186	42	18	9	0
5301	67	14.7	1266	43	19	10	2
5302	70	14.2	1224	39	16	9	2
5303	29	5.8	471	18	9	4	1
5304	72	6.8	538	28	12	9	0
5305	49	6.8	538	28	12	9	0
5306	28	6.4	518	26	10	7	0
5307	92	6.4	518	26	10	7	0
5308	42	13.7	453	23	10	4	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5309	110	300.4	21480	1408	883	491	97
5310	105	301.0	21480	1408	883	491	97
5311	59	305.8	21697	1390	907	527	120
5312	131	305.8	21697	1390	907	527	120
5313	121	286.2	20168	1283	844	513	127
5314	166	285.7	20168	1283	844	513	127
5315	139	285.7	20168	1283	844	513	127
5316	136	248.0	17680	1069	706	444	119
5317	101	248.0	17680	1069	706	444	119
5318	98	161.5	11946	603	389	261	90
5319	124	161.5	11946	603	389	261	90
5320	144	127.8	9754	453	289	176	61
5321	104	127.8	9754	453	289	176	61
5322	100	127.8	9754	453	289	176	61
5323	63	127.8	9754	453	289	176	61
5324	62	127.8	9754	453	289	176	61
5325	89	127.8	9754	453	289	176	61
5326	98	127.8	9754	453	289	176	61
5327	120	63.6	4954	224	124	70	28
5328	111	51.7	4082	168	97	57	21
5329	123	51.7	4082	168	97	57	21
5330	114	42.9	3382	138	77	47	20
5331	86	42.9	3382	138	77	47	20
5332	87	36.9	2918	118	65	40	17
5333	88	57.2	4553	185	103	60	23
5334	67	58.4	4553	185	103	60	23
5335	81	89.5	7145	290	164	93	32
5336	84	93.2	7420	309	169	98	35
5337	79	93.2	7420	309	169	98	35
5338	83	29.4	2288	88	44	35	26
5339	98	29.4	2288	88	44	35	26
5340	91	21.8	1751	67	31	20	15
5341	114	20.0	1642	56	27	18	8
5342	71	18.4	1540	54	24	18	9
5343	89	18.4	1540	54	24	18	9
5344	89	17.8	1471	50	21	17	9
5345	96	17.6	1457	53	23	14	8
5346	65	17.4	1455	57	23	14	3
5347	88	17.5	1455	57	23	14	3
5348	59	16.8	1408	56	20	11	4
5349	46	15.4	1325	52	17	9	2
5350	84	15.3	1330	47	15	9	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5351	61	15.3	1310	47	14	8	4
5352	62	15.3	1310	47	14	8	4
5353	58	14.7	1274	45	14	6	4
5354	94	14.1	1241	41	12	7	2
5355	81	14.0	1214	42	13	8	2
5356	70	14.0	1214	42	13	8	2
5357	100	13.5	1177	40	12	6	2
5358	83	13.0	1151	39	11	7	2
5359	113	13.1	1157	39	11	7	3
5360	111	13.2	1164	40	12	6	2
5361	87	13.5	1190	41	13	6	2
5362	78	13.6	1190	41	13	6	3
5363	89	14.0	1219	39	13	9	3
5364	77	31.1	2645	89	41	23	11
5365	18	23.0	1909	64	32	20	10
5366	3	24.7	2033	79	39	23	12
5367	11	20.4	1585	73	37	22	11
5368	12	17.3	1338	66	33	20	10
5369	7	12.0	888	43	23	18	11
5370	7	11.3	830	43	23	18	11
5371	5	10.7	771	43	23	17	11
5372	3	10.1	713	43	22	17	11
5373	16	9.6	644	37	21	18	11
5374	16	9.8	730	37	21	18	9
5375	22	11.9	877	41	24	19	11
5376	25	11.9	876	41	25	19	11
5377	13	8.5	590	35	21	15	6
5378	13	8.1	531	30	21	14	6
5379	28	7.2	501	28	17	14	8
5380	27	6.4	454	22	14	14	8
5381	26	6.6	479	25	14	13	8
5382	33	7.2	513	31	16	13	6
5383	19	7.9	560	31	18	13	5
5384	14	9.1	684	36	19	14	6
5385	22	9.1	714	36	18	13	6
5386	50	9.6	742	35	26	12	6
5387	33	9.7	756	35	16	12	8
5388	22	11.7	965	42	17	14	21
5389	3	11.6	965	39	17	10	6
5390	134	12.0	974	40	18	10	7
5391	88	12.7	1026	42	18	12	7
5392	85	13.1	1072	42	19	12	8

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5393	70	13.4	1124	41	19	11	8
5394	84	13.4	1124	40	19	11	2
5395	88	13.7	1158	43	19	11	4
5396	104	13.7	1160	43	18	11	6
5397	105	13.7	1160	41	18	11	6
5398	117	13.7	1160	41	18	11	6
5399	108	20.8	1780	66	28	15	7
5400	45	10.4	851	37	17	9	4
5401	63	20.1	1690	64	29	14	4
5402	60	20.1	1690	64	29	14	3
5403	68	93.7	8021	277	126	58	21
5404	59	54.2	4644	146	68	37	17
5405	11	45.3	3873	120	57	34	14
5406	69	32.1	2708	88	43	26	11
5407	84	36.0	2983	112	52	27	11
5408	55	198.9	16046	907	408	135	26
5409	60	494.2	36531	2854	1488	501	77
5410	70	494.2	36531	2854	1488	501	77
5411	84	786.5	54632	4872	2741	1086	142
5412	67	1090.9	71687	6888	4004	1937	277
5413	68	1090.9	71687	6888	4004	2017	339
5414	65	1088.4	70906	6795	3949	2017	339
5415	70	933.8	61631	5787	3281	1688	313
5416	45	804.2	53677	4974	2780	1409	270
5417	75	716.6	48477	4171	2457	1234	241
5418	51	616.8	42232	3574	2064	1027	204
5419	58	504.9	35169	2867	1627	802	168
5420	47	401.1	28735	2095	1224	592	135
5421	47	325.1	24372	1609	898	428	107
5422	49	294.7	22152	1475	759	338	90
5423	39	204.6	15750	972	476	195	55
5424	37	204.6	15750	972	476	195	55
5425	52	137.4	10859	583	276	122	43
5426	57	113.3	9120	430	212	98	32
5427	46	94.1	7668	337	165	78	27
5428	43	80.3	6598	271	131	65	27
5429	52	60.0	5000	190	88	45	22
5430	48	60.0	5000	190	88	45	22
5431	46	46.6	3910	132	62	36	19
5432	50	42.8	3631	119	56	33	16
5433	38	38.2	3295	97	46	28	14
5434	38	36.6	3150	91	43	27	15

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5435	42	34.6	2986	86	39	26	15
5436	45	33.4	2827	91	42	23	13
5437	54	33.4	2827	92	42	23	13
5438	54	31.3	2625	89	40	24	12
5439	56	31.3	2625	89	40	25	12
5440	63	30.3	2528	89	42	25	10
5441	75	29.2	2424	89	42	25	13
5442	42	28.6	2352	83	49	33	14
5443	105	27.5	2176	81	49	35	15
5444	108	27.3	2147	77	49	35	15
5445	106	27.3	2147	77	49	36	18
5446	114	27.2	2122	77	49	36	18
5447	86	27.2	2116	75	50	38	17
5448	118	27.2	2116	75	50	38	17
5449	85	26.8	2082	74	49	40	15
5450	92	26.3	2039	73	49	40	15
5451	100	26.3	2039	73	49	43	17
5452	83	26.0	1998	67	49	43	17
5453	83	26.8	1990	85	58	42	15
5454	76	27.2	2008	90	60	43	16
5455	45	27.3	2021	87	58	43	17
5456	60	27.3	2021	87	58	41	17
5457	75	27.3	2021	87	58	41	17
5458	69	26.3	1972	86	57	40	18
5459	49	25.9	1912	81	55	40	18
5460	59	48.8	4005	140	74	45	20
5461	19	276.4	21554	1411	612	221	61
5462	2	24.5	1879	81	44	33	19
5463	7	24.7	1880	82	45	32	19
5464	4	25.8	1978	88	46	33	18
5465	3	21.1	1613	68	38	30	18
5466	12	27.8	2165	94	45	30	18
5467	12	24.7	1926	85	41	29	19
5468	9	20.9	1611	66	34	28	16
5469	9	19.3	1483	66	34	27	15
5470	3	14.8	1116	52	26	22	15
5471	7	14.2	1072	44	25	19	15
5472	115	14.2	1072	44	25	20	15
5473	101	12.8	968	41	23	20	6
5474	133	12.8	968	41	23	20	6
5475	142	12.0	875	39	21	18	14
5476	166	12.0	875	39	21	18	14

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5477	166	9.9	705	33	19	17	12
5478	135	9.9	705	33	19	17	12
5479	154	9.4	665	37	20	15	7
5480	121	9.4	665	37	20	15	7
5481	144	9.4	665	37	20	15	8
5482	143	9.1	640	37	18	15	8
5483	136	9.1	640	37	18	15	11
5484	119	8.9	615	36	18	14	11
5485	99	8.9	615	36	18	14	11
5486	114	8.2	596	34	18	13	9
5487	75	8.3	584	32	16	15	9
5488	94	8.3	584	32	16	15	6
5489	117	8.6	624	33	17	15	9
5490	133	8.6	624	33	17	11	9
5491	74	9.1	675	35	17	15	3
5492	61	12.0	964	41	20	15	9
5493	10	5.3	424	19	9	6	2
5494	145	7.0	557	26	12	9	3
5495	92	7.0	557	26	12	9	3
5496	97	8.7	688	31	13	9	7
5497	81	9.5	761	35	16	11	7
5498	87	9.5	761	35	16	11	3
5499	104	9.8	798	35	16	11	3
5500	91	9.8	798	35	16	11	1
5501	98	9.9	813	33	16	10	4
5502	84	9.9	813	33	16	10	4
5503	112	9.2	750	32	16	10	3
5504	75	9.6	787	33	15	11	3
5505	94	12.6	1028	42	18	13	3
5506	85	12.6	1028	42	18	13	3
5507	108	13.6	1124	45	21	13	5
5508	98	16.6	1376	52	25	16	5
5509	118	19.6	1627	59	28	18	5
5510	56	47.8	4068	132	62	33	11
5511	48	55.7	4748	154	71	38	17
5512	57	55.7	4748	154	71	38	17
5513	68	48.5	4127	131	62	37	17
5514	40	204.6	16127	934	438	173	44
5515	28	204.6	16127	938	438	176	54
5516	25	202.8	15897	938	433	176	54
5517	52	172.3	13594	761	348	149	50
5518	70	143.2	11483	576	272	123	44

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5519	51	122.6	9829	474	226	106	40
5520	48	102.4	8251	381	182	90	35
5521	62	67.8	5493	219	112	64	26
5522	47	67.8	5493	219	112	64	26
5523	93	54.6	4427	171	89	53	24
5524	83	44.2	3590	137	71	43	19
5525	93	44.2	3590	137	71	43	19
5526	70	35.9	2915	109	56	36	14
5527	57	29.3	2418	86	46	33	12
5528	47	24.8	2007	71	38	28	12
5529	51	21.0	1699	62	32	24	10
5530	60	16.0	1277	45	25	19	10
5531	67	16.0	1277	45	25	19	10
5532	68	14.1	1143	44	22	18	7
5533	50	13.3	1035	47	22	18	7
5534	50	11.7	894	42	22	15	7
5535	48	10.4	799	39	19	13	8
5536	57	10.2	778	39	19	12	8
5537	58	9.3	742	37	19	13	3
5538	32	9.3	711	34	17	13	3
5539	30	9.2	690	32	17	13	8
5540	44	9.2	697	30	17	13	8
5541	41	9.1	690	31	16	13	6
5542	38	9.1	676	33	17	13	6
5543	49	8.7	657	34	19	14	4
5544	57	8.7	640	35	19	15	3
5545	59	8.6	638	36	20	13	4
5546	45	8.9	638	37	21	13	7
5547	66	8.6	622	34	20	14	4
5548	69	8.7	622	34	20	16	5
RIO BRAVO Fm.							
5549	71	8.7	611	33	20	16	5
5550	3	7.3	537	28	17	15	5
5551	83	7.9	558	28	17	15	8
5552	65	7.9	558	27	17	15	8
5553	94	7.9	566	27	17	16	8
5554	105	7.6	566	27	16	16	3
5555	63	7.6	566	29	17	16	3
5556	81	8.0	579	31	18	16	5
5557	67	8.0	579	32	18	13	5
5558	92	7.9	578	32	18	13	2
5559	89	7.9	578	32	18	14	7

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5560	96	8.4	587	32	18	14	7
5561	56	8.4	611	32	18	14	11
5562	102	8.3	630	31	17	14	11
5563	69	8.3	630	31	16	14	2
5564	125	9.0	708	32	17	14	4
5565	80	9.0	708	32	17	12	4
5566	114	10.3	821	34	18	13	4
5567	98	11.6	934	37	18	15	4
5568	115	16.5	1366	44	22	15	5
5569	114	16.5	1366	44	22	15	5
5570	118	23.6	2044	60	27	17	5
5571	143	23.6	2044	60	27	17	5
5572	125	52.8	4606	136	59	33	9
5573	170	52.8	4606	136	59	33	13
5574	133	48.4	4213	114	54	32	13
5575	82	48.4	4213	114	54	32	13
5576	77	40.0	3472	95	46	28	10
5577	107	40.0	3472	95	46	28	12
5578	149	32.6	2784	84	40	24	12
5579	191	18.9	1564	56	25	16	6
5580	147	17.0	1405	53	24	15	4
5581	132	17.0	1405	53	24	15	8
5582	137	15.6	1299	49	22	14	8
5583	123	15.6	1299	49	22	15	8
5584	130	15.3	1280	44	21	15	2
5585	91	46.3	4179	105	39	20	9
5586	47	30.7	2729	73	29	15	3
5587	91	40.4	3636	89	37	18	2
5588	115	40.4	3636	89	37	18	2
5589	113	48.1	4324	106	44	22	4
5590	94	49.7	4487	110	44	24	5
5591	71	49.7	4487	110	43	24	8
5592	53	47.1	4237	104	41	22	8
5593	67	44.6	4020	101	42	22	8
5594	75	42.6	3772	101	42	22	8
5595	71	42.6	3772	101	42	22	8
5596	63	38.1	3357	100	41	21	5
5597	66	33.3	2914	90	36	21	5
5598	86	31.4	2716	88	36	20	8
5599	88	31.4	2716	88	37	20	8
5600	55	30.2	2608	82	37	21	8
5601	51	27.5	2342	75	35	21	8

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5602	51	37.5	3202	108	48	26	8
5603	63	54.3	4631	159	69	34	12
5604	48	54.6	4642	162	71	38	14
5605	66	79.1	6765	240	106	51	14
5606	51	154.9	12800	588	260	106	32
5607	48	176.2	14364	707	309	132	45
5608	56	156.5	12812	603	264	121	45
5609	26	120.1	10013	396	182	92	36
5610	30	95.4	8037	286	134	71	30
5611	25	78.8	6682	244	109	54	17
5612	33	60.7	5156	180	78	42	15
5613	51	52.3	4481	142	66	35	12
5614	40	39.4	3397	102	47	27	10
5615	52	33.9	2936	89	41	24	11
5616	53	29.7	2544	73	35	21	11
5617	41	25.8	2226	66	31	20	8
5618	60	22.9	1952	57	27	18	8
5619	46	20.4	1731	53	24	17	9
5620	32	16.6	1371	40	21	17	9
5621	41	15.0	1234	41	20	17	8
5622	59	13.9	1121	44	20	15	8
5623	45	12.7	1026	44	20	15	6
5624	48	12.2	959	41	20	15	8
5625	40	11.1	849	38	20	14	8
5626	31	10.4	807	37	19	14	6
5627	42	10.2	777	37	19	16	6
5628	57	10.3	797	36	19	16	6
5629	30	11.2	848	38	20	17	8
5630	37	11.2	848	36	21	17	8
5631	44	11.0	844	36	21	18	10
5632	59	11.1	843	36	21	18	10
5633	56	11.1	841	35	21	20	9
5634	51	10.8	818	32	21	17	6
5635	75	10.8	818	38	23	18	6
5636	53	10.9	808	41	24	18	6
5637	66	11.3	821	41	24	18	7
5638	62	11.3	821	40	24	18	7
5639	38	10.6	793	39	23	18	7
5640	39	10.1	772	39	23	17	5
5641	47	10.0	752	39	22	17	6
5642	47	10.0	729	34	22	17	8
5643	31	9.1	683	32	19	17	6

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5644	42	9.0	660	31	18	17	6
5645	60	8.9	646	29	17	16	6
5646	42	8.6	639	29	17	15	7
5647	69	8.3	628	26	16	13	4
5648	83	8.3	636	26	16	14	4
5649	78	8.7	653	31	18	14	7
5650	44	9.0	687	32	18	14	7
5651	43	9.6	741	34	17	13	5
5652	35	9.7	753	34	17	14	5
5653	52	9.7	753	32	17	14	5
5654	42	9.5	745	33	16	14	7
5655	31	9.0	710	33	16	13	5
5656	56	9.0	701	32	15	13	4
5657	39	9.1	690	30	15	14	5
5658	41	8.6	678	29	14	14	3
5659	82	8.8	682	29	15	14	3
5660	97	8.9	691	28	15	13	6
5661	82	8.9	691	28	15	13	6
5662	83	8.8	689	28	15	13	5
5663	50	8.5	677	27	15	13	5
5664	37	8.4	657	30	16	12	5
5665	56	8.4	633	30	16	12	5
5666	53	7.9	596	29	15	13	5
5667	41	7.9	587	29	15	13	5
5668	49	7.6	587	28	14	13	5
5669	36	7.5	567	25	13	13	6
5670	39	7.5	556	26	13	13	6
5671	46	7.5	550	26	13	13	5
5672	88	7.2	550	22	12	10	5
5673	83	7.4	552	23	13	12	5
5674	72	7.5	558	23	13	12	7
5675	86	7.5	584	23	12	12	7
5676	79	7.8	608	22	12	13	4
5677	47	8.4	651	26	14	14	8
5678	52	8.8	679	32	15	14	8
5679	48	15.7	1290	53	23	15	10
5680	1	11.0	910	35	16	12	3
5681	75	14.7	1236	43	20	15	3
5682	54	17.4	1456	50	23	15	6
5683	73	17.4	1456	50	23	14	6
5684	111	16.9	1382	58	25	13	8
5685	69	16.9	1382	58	25	13	10

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5686	88	14.9	1205	52	23	14	10
5687	67	15.1	1231	52	22	15	8
5688	63	15.1	1231	52	22	15	8
5689	76	14.4	1153	49	22	14	3
5690	53	12.1	983	43	19	11	0
5691	88	24.9	2063	80	35	20	9
5692	68	24.9	2063	80	35	20	9
5693	71	39.7	3361	120	51	27	11
5694	65	40.7	3482	115	51	28	7
5695	54	77.1	6612	235	101	45	14
5696	75	182.8	15007	749	324	126	35
5697	69	231.2	18587	1035	450	179	51
5698	61	231.2	18587	1035	450	179	51
5699	77	231.2	18587	1035	450	179	55
5700	75	54.3	4505	171	77	44	20
5701	23	22.1	1782	66	32	21	13
5702	7	18.8	1553	55	26	15	8
5703	12	17.7	1475	55	23	15	10
5704	11	8.3	620	35	22	17	9
5705	4	7.8	527	35	22	17	10
5706	10	6.0	409	25	18	15	5
5707	20	6.3	427	24	16	15	8
5708	27	5.9	380	24	15	11	6
5709	80	6.0	382	26	15	12	8
5710	102	6.0	382	26	15	12	8
5711	145	6.0	397	26	15	12	8
5712	115	6.0	420	26	15	13	6
5713	122	5.8	420	25	15	13	3
5714	103	5.8	420	25	15	13	3
5715	93	6.7	450	26	14	13	5
5716	95	6.8	486	28	16	13	7
5717	112	6.8	486	28	16	11	7
5718	101	6.8	486	28	16	11	7
5719	130	7.4	518	28	16	13	7
5720	118	7.4	537	28	16	13	4
5721	92	7.4	537	28	16	11	4
5722	97	7.4	537	28	16	11	4
5723	91	7.7	558	29	16	13	6
5724	80	7.7	564	29	16	13	6
5725	101	7.5	564	28	16	13	5
5726	95	8.2	610	30	17	14	7
5727	72	9.0	656	31	17	15	8

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5728	35	9.0	656	29	17	13	8
5729	52	9.8	749	32	17	13	10
5730	77	10.9	834	34	18	15	10
5731	48	11.0	836	38	21	15	10
5732	54	11.0	836	38	21	15	8
5733	69	10.0	751	36	19	13	8
5734	49	9.1	684	34	18	13	11
5735	54	8.9	657	33	18	13	11
5736	83	8.9	689	34	17	11	3
5737	86	9.9	762	34	18	13	4
5738	49	11.0	867	37	18	13	8
5739	48	11.0	877	37	18	15	7
5740	59	11.0	882	35	16	15	7
5741	56	11.0	882	33	16	13	6
5742	67	10.8	871	33	16	12	6
5743	35	10.5	847	32	15	13	6
5744	42	10.0	804	27	13	12	6
5745	39	9.5	774	28	13	12	6
5746	34	9.3	741	31	15	13	6
5747	38	9.1	690	31	15	13	8
5748	45	8.5	654	29	15	13	2
5749	82	8.2	627	29	13	11	3
5750	83	8.2	627	29	14	11	5
5751	78	8.1	618	28	14	11	7
5752	57	8.1	615	28	13	11	7
5753	74	8.6	655	28	13	13	7
5754	98	9.2	706	29	13	15	7
5755	133	9.2	706	29	13	15	7
5756	121	9.2	706	29	13	15	7
5757	154	9.4	739	30	13	15	8
5758	165	9.4	739	30	13	12	8
5759	104	9.6	761	30	13	12	8
5760	52	9.6	776	28	13	12	6
5761	63	10.0	797	29	13	12	7
5762	78	10.1	800	29	14	12	7
5763	53	10.1	803	29	14	13	5
5764	48	10.2	808	29	14	13	7
5765	78	10.2	809	28	14	13	7
5766	59	10.4	824	31	14	13	9
5767	71	10.4	824	31	14	13	9
5768	74	10.9	857	39	18	14	9
5769	118	11.3	884	41	18	14	9

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5770	79	11.8	913	41	19	14	9
5771	51	20.7	1689	63	27	16	13
5772	60	23.0	1912	67	28	20	13
5773	101	8.6	659	29	14	13	4
5774	68	8.6	659	29	14	15	4
5775	170	7.7	595	26	13	15	2
5776	168	7.7	595	26	13	15	2
5777	162	8.2	612	27	14	15	5
5778	91	19.5	1581	52	27	22	12
5779	72	19.5	1581	52	27	22	12
5780	86	37.3	3111	101	48	30	16
5781	92	40.7	3365	129	59	31	16
5782	93	40.7	3365	129	59	31	14
5783	89	35.3	2880	114	49	30	15
5784	73	35.3	2880	114	49	30	15
5785	77	32.0	2604	102	46	28	15
5786	106	28.8	2327	90	44	25	14
5787	82	26.3	2100	84	40	24	14
5788	92	23.8	1874	77	37	23	14
5789	93	56.4	4679	180	84	44	12
5790	52	119.5	9494	497	239	105	30
5791	54	182.6	14309	815	394	167	47
5792	56	245.7	19124	1132	549	229	65
5793	59	245.7	19124	1132	549	229	65
5794	74	245.7	19124	1132	549	229	69
5795	96	233.6	18256	1053	504	217	69
5796	91	199.8	15758	857	405	185	65
5797	87	199.8	15758	857	405	185	65
5798	91	183.0	14488	765	360	170	61
5799	93	166.2	13218	673	316	155	58
5800	102	138.3	11095	531	253	128	47
5801	63	113.6	9205	386	196	107	43
5802	73	90.4	7358	288	150	86	36
5803	55	90.4	7358	288	150	86	36
5804	70	69.9	5686	209	110	70	31
5805	85	54.5	4432	154	82	59	26
5806	80	43.4	3530	112	64	46	26
5807	83	43.4	3530	112	64	46	26
5808	83	35.7	2824	111	60	40	21
5809	53	29.2	2285	98	51	32	13
5810	57	23.8	1851	82	42	29	14
5811	59	20.0	1540	67	34	23	14

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5812	52	17.0	1307	56	29	20	12
5813	57	15.0	1149	53	26	19	7
5814	61	14.5	1136	45	24	18	6
5815	68	15.6	1266	48	23	18	5
5816	73	17.1	1370	48	23	18	10
5817	72	17.1	1408	51	23	18	10
5818	70	17.6	1449	51	23	17	12
5819	52	17.6	1458	47	22	17	12
5820	61	17.6	1458	47	22	17	8
5821	57	16.3	1348	41	20	16	5
5822	37	14.9	1246	36	17	16	10
5823	59	13.7	1134	39	18	16	6
5824	62	12.7	1040	39	18	15	5
5825	74	12.7	1040	39	18	15	5
5826	60	12.1	963	39	17	15	9
5827	53	11.5	909	36	17	15	9
5828	60	9.9	758	32	16	15	9
5829	65	10.1	755	35	18	16	9
5830	58	10.3	764	35	19	16	9
5831	68	10.3	764	32	19	14	9
5832	102	10.6	774	35	19	17	9
5833	114	10.6	775	35	19	18	9
5834	91	10.5	775	34	19	18	6
5835	92	10.5	775	34	20	20	8
5836	93	10.5	773	34	20	20	8
5837	87	10.5	773	34	20	20	8
5838	104	10.6	783	32	20	20	6
5839	99	10.9	783	32	20	21	10
5840	78	10.9	783	32	20	21	10
5841	87	11.1	791	34	20	21	13
5842	89	11.1	791	34	20	21	13
5843	77	11.2	799	33	21	20	11
5844	91	11.2	799	33	21	20	11
5845	102	11.3	827	37	22	21	11
5846	63	12.1	889	43	25	21	6
5847	45	12.4	901	43	26	21	7
5848	45	12.7	913	44	26	21	7
5849	85	12.7	913	44	26	21	7
5850	102	12.7	924	45	26	22	10
5851	102	12.6	924	45	24	22	10
5852	83	12.6	924	45	24	22	10
5853	131	12.6	914	43	25	21	11

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5854	117	12.6	914	43	25	21	11
5855	136	12.7	914	43	25	22	13
5856	140	36.1	2745	154	83	42	17
5857	97	31.0	2307	136	72	40	16
5858	122	31.0	2307	136	72	40	16
5859	123	30.0	2250	127	71	39	15
5860	133	30.0	2250	127	71	39	15
5861	143	30.1	2250	127	71	40	16
5862	135	30.1	2241	127	70	40	16
5863	150	32.3	2428	139	75	41	16
5864	144	32.3	2428	139	75	41	15
5865	96	39.7	3016	163	86	48	21
5866	80	39.7	3016	163	86	48	21
5867	93	27.5	1958	134	76	42	17
5868	80	51.9	3639	260	153	82	30
5869	60	46.4	3184	228	137	80	28
5870	51	46.4	3184	228	137	80	33
5871	95	43.3	2977	199	124	79	33
5872	135	43.3	2977	203	127	79	33
5873	133	40.9	2726	203	127	75	28
5874	92	40.9	2726	203	127	75	28
5875	118	39.4	2629	202	122	70	27
5876	86	38.0	2531	200	117	64	25
5877	116	36.4	2440	184	105	64	23
5878	107	32.5	2208	152	90	55	23
5879	101	32.5	2208	152	90	55	23
5880	62	26.7	1805	125	73	49	19
5881	75	36.1	2689	147	78	47	19
5882	75	36.1	2689	147	78	47	19
5883	122	36.1	2689	147	78	47	19
5884	126	41.1	3143	151	83	51	16
5885	88	49.5	3871	176	93	54	21
5886	101	49.5	3871	176	93	54	21
5887	81	210.3	16229	933	475	210	72
5888	64	52.6	3903	220	131	72	25
5889	19	8.1	427	33	26	26	14
5890	47	6.7	381	33	25	23	6
5891	88	6.6	332	32	24	22	10
5892	59	6.6	332	32	24	22	10
5893	104	5.8	267	27	22	22	10
5894	98	5.0	203	22	19	21	10
5895	88	4.7	192	20	18	20	10

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5896	112	5.3	245	23	20	20	10
5897	115	5.4	246	23	20	20	11
5898	115	5.6	247	23	20	21	13
5899	83	6.7	318	26	23	24	15
5900	82	7.2	372	28	25	26	15
5901	80	7.7	426	31	26	28	15
5902	86	8.4	459	31	26	27	12
5903	73	8.9	489	32	26	27	16
5904	97	9.3	516	32	25	27	20
5905	93	9.1	534	32	25	28	12
5906	63	9.3	538	32	25	28	18
5907	90	9.3	538	30	24	27	18
5908	103	9.0	537	29	24	25	14
5909	91	9.5	551	36	26	26	14
5910	90	9.6	554	39	27	27	13
5911	90	9.6	554	39	27	27	13
5912	93	9.4	545	36	25	25	14
5913	82	9.4	545	36	25	25	14
5914	122	8.9	532	35	23	24	14
5915	68	8.8	519	34	23	23	12
5916	47	5.9	340	22	16	15	11
5917	59	5.3	295	20	14	14	10
5918	91	5.3	323	20	14	15	9
5919	99	5.4	350	20	14	15	8
5920	124	5.4	350	20	14	15	4
5921	133	5.6	358	22	14	15	6
5922	88	5.5	358	22	14	13	4
5923	97	5.8	377	23	15	15	5
5924	103	5.8	377	23	15	15	5
5925	158	5.7	380	25	15	12	3
5926	125	5.5	372	24	13	12	7
5927	127	5.8	372	24	13	14	8
5928	128	5.8	363	23	13	14	8
5929	110	5.6	362	22	13	12	6
5930	99	5.3	345	22	12	12	8
5931	159	5.3	338	19	12	12	8
5932	104	5.6	371	21	13	12	8
5933	80	6.1	423	26	14	12	7
5934	53	8.4	589	36	21	14	6
5935	40	8.4	589	36	21	14	6
5936	84	9.2	645	40	23	16	6
5937	69	10.1	716	43	24	18	5

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5938	78	13.8	1032	56	32	22	5
5939	59	22.4	1721	82	45	29	10
5940	55	45.6	3633	160	85	46	18
5941	44	76.5	6091	281	144	73	26
5942	31	76.5	6091	281	144	73	28
5943	45	69.8	5510	259	129	70	28
5944	50	9.3	633	45	26	21	9
5945	15	10.8	700	52	30	22	11
5946	8	10.8	700	52	30	22	12
5947	7	7.0	437	31	18	16	13
5948	5	6.2	397	23	14	14	7
5949	10	6.6	423	25	15	16	8
5950	37	8.3	521	29	19	20	14
5951	4	8.0	479	28	20	20	15
5952	98	8.3	486	31	20	20	15
5953	63	8.3	486	31	20	20	15
5954	88	8.3	504	32	20	20	15
5955	110	8.3	517	33	20	20	13
5956	105	8.4	530	33	21	20	11
5957	82	11.9	814	43	25	22	13
5958	86	11.9	814	43	25	22	13
5959	80	23.8	1824	76	41	30	16
5960	80	35.7	2835	108	57	37	20
5961	68	58.0	4693	175	86	57	30
5962	81	17.0	1260	52	31	28	16
5963	89	17.0	1260	52	31	28	19
5964	107	13.1	933	39	24	22	19
5965	87	9.2	551	34	19	19	23
5966	65	9.2	551	33	18	18	23
5967	88	5.6	350	23	13	17	5
5968	129	5.6	350	23	13	17	7
5969	85	4.4	254	16	11	12	7
5970	67	3.9	244	16	11	12	4
5971	69	4.0	244	16	11	14	4
5972	118	4.0	240	16	11	14	4
5973	116	4.0	236	15	10	14	3
5974	103	3.9	228	14	11	11	9
5975	79	3.9	225	12	11	11	9
5976	84	3.9	225	14	11	12	9
5977	103	3.7	222	14	9	12	3
5978	84	3.5	217	13	9	10	3
5979	81	3.6	218	15	10	11	5

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
5980	102	3.6	218	15	10	11	5
5981	94	3.6	220	16	11	11	5
5982	119	4.0	221	17	11	11	10
5983	84	4.0	221	17	9	9	10
5984	97	4.0	221	17	11	10	10
5985	111	3.7	218	17	11	10	3
5986	129	3.9	219	15	12	11	7
5987	114	3.9	219	15	12	11	7
5988	109	3.8	217	16	11	11	4
5989	133	3.9	227	16	12	11	5
5990	86	3.9	227	16	12	11	5
5991	69	4.1	241	16	12	11	5
5992	70	5.1	341	18	11	11	7
5993	30	38.1	2985	153	76	38	17
5994	35	27.0	2060	106	54	28	16
5995	33	21.4	1681	78	42	23	16
5996	25	16.6	1317	53	28	18	11
5997	8	13.8	1116	46	21	16	11
5998	21	16.0	1171	51	30	20	17
5999	5	17.9	1332	55	33	20	21
6000	60	19.1	1467	59	35	20	21
6001	70	20.2	1532	63	38	20	17
6002	70	20.2	1532	63	38	20	17
6003	86	20.5	1564	59	37	20	20
6004	81	21.4	1653	61	39	21	20
6005	124	21.4	1653	61	39	21	20
6006	123	24.2	1798	86	50	31	20
6007	86	24.2	1798	86	50	31	17
6008	91	26.3	1954	95	52	33	20
6009	92	28.1	2099	102	55	33	20
6010	86	28.1	2099	102	55	32	19
6011	92	30.5	2331	106	58	34	19
6012	94	31.6	2404	108	58	34	20
6013	81	31.6	2404	108	58	34	20
6014	87	31.6	2404	109	58	34	24
6015	99	36.3	2871	129	63	32	24
6016	94	36.3	2871	129	63	30	22
6017	108	37.9	3088	129	63	30	22
6018	77	37.9	3088	128	63	29	17
6019	67	37.2	3039	124	60	28	10
6020	98	37.2	3039	124	60	28	15
6021	58	36.5	2996	122	58	25	16

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6022	67	36.2	2971	119	55	25	16
6023	64	34.8	2901	108	54	23	16
6024	64	34.7	2877	106	52	23	16
6025	70	34.6	2877	111	53	23	16
6026	60	34.6	2838	111	53	23	16
6027	84	33.9	2799	104	51	21	15
6028	54	34.2	2799	119	56	28	15
6029	67	34.2	2767	119	56	28	13
6030	57	33.7	2748	119	55	27	14
6031	89	33.7	2734	119	55	27	14
6032	73	33.2	2699	118	54	27	12
6033	57	33.2	2699	118	54	27	13
6034	90	32.8	2662	110	53	26	13
6035	79	32.3	2631	110	52	25	12
6036	73	32.6	2656	110	52	25	15
6037	56	33.0	2695	111	52	25	15
6038	77	33.0	2695	111	51	25	16
6039	53	33.0	2717	106	52	23	12
6040	88	33.4	2756	107	52	23	14
6041	78	33.4	2756	107	51	22	14
6042	96	33.4	2756	107	51	22	15
6043	85	33.0	2719	106	49	22	15
6044	102	31.6	2609	101	47	22	13
6045	110	31.6	2609	101	47	22	14
6046	103	29.5	2449	88	44	18	14
6047	87	29.5	2449	88	44	19	14
6048	65	27.2	2240	81	40	19	13
6049	68	25.3	2071	75	38	19	12
6050	90	25.3	2071	81	40	23	12
6051	65	23.3	1847	78	40	23	10
6052	41	28.5	2319	89	44	22	14
6053	45	41.2	3400	135	63	28	16
6054	50	43.3	3559	143	68	30	17
6055	45	43.3	3559	143	68	30	18
6056	40	39.7	3245	126	62	28	20
6057	39	36.8	3001	113	56	26	20
6058	70	236.0	18250	1195	600	216	42
6059	85	166.8	13188	760	374	134	27
6060	106	166.8	13188	760	374	134	33
6061	95	137.9	11159	552	282	94	33
6062	92	116.5	9450	438	233	82	30
6063	88	116.5	9450	438	233	82	30

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6064	94	97.4	7935	347	187	69	27
6065	82	82.3	6670	292	159	64	21
6066	84	82.3	6670	292	159	64	21
6067	106	70.4	5662	261	137	60	14
6068	216	70.4	5662	261	137	60	15
6069	156	64.6	5187	238	126	56	15
6070	220	58.8	4712	215	115	52	15
6071	181	58.8	4712	215	115	52	15
6072	132	31.9	2521	119	65	31	8
6073	95	27.2	2123	104	55	28	9
6074	88	25.5	1975	98	52	27	9
6075	163	23.8	1828	91	50	26	9
6076	152	20.1	1534	79	44	23	6
6077	163	17.2	1293	69	37	20	5
6078	129	17.0	1275	69	37	19	4
6079	117	18.2	1362	69	38	20	10
6080	143	18.2	1362	66	38	20	10
6081	104	16.1	1248	54	31	14	11
6082	108	14.0	1066	48	29	13	11
6083	155	11.9	886	42	27	13	7
6084	95	11.9	886	43	30	18	9
6085	112	8.7	529	43	30	18	7
6086	130	8.3	464	42	32	20	8
6087	139	8.3	464	42	32	22	8
6088	159	8.0	413	40	34	23	8
6089	177	9.2	473	47	42	27	8
6090	111	9.3	473	47	42	27	8
6091	85	12.7	681	61	55	34	12
6092	96	13.7	748	65	57	37	10
6093	87	13.9	748	64	58	38	13
6094	111	13.9	748	64	58	38	13
6095	124	12.0	618	57	50	34	15
6096	131	10.0	514	49	43	29	11
6097	144	9.2	474	46	42	29	7
6098	97	8.9	448	40	38	24	12
6099	62	8.8	422	42	38	25	13
6100	90	8.7	385	40	38	25	16
6101	115	6.9	241	39	37	30	10
6102	87	7.1	241	40	37	30	10
6103	77	7.0	226	40	36	29	12
6104	25	7.1	209	39	38	32	11
6105	51	7.2	198	41	38	33	14

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6106	32	7.3	193	42	39	35	13
6107	33	7.1	189	43	38	35	13
6108	48	6.5	176	38	33	26	17
6109	37	6.4	173	37	32	27	17
6110	57	6.2	161	36	30	25	16
6111	79	6.6	176	39	32	29	16
6112	63	6.7	201	38	33	32	11
6113	44	3.4	120	19	12	14	8
6114	55	3.2	112	20	12	11	7
6115	41	3.0	114	19	11	11	4
6116	44	2.9	111	25	12	11	2
6117	51	2.9	109	24	11	11	5
6118	44	3.0	113	24	11	12	4
6119	48	2.4	96	16	9	9	4
6120	52	1.4	40	11	5	6	2
6121	58	1.5	44	11	6	5	2
6122	89	1.5	46	12	6	5	1
6123	88	1.5	46	13	6	5	1
6124	99	1.6	49	15	4	7	2
6125	47	1.9	53	17	6	7	6
6126	67	1.8	55	14	6	6	4
6127	48	2.4	73	20	9	10	4
6128	44	3.0	92	25	10	12	6
6129	39	2.7	88	22	9	11	7
6130	50	3.8	131	30	12	16	7
6131	52	5.1	179	35	17	20	10
6132	32	6.3	222	45	19	23	15
6133	33	6.1	222	46	18	19	15
6134	40	6.5	234	49	19	20	17
6135	40	6.9	245	50	19	21	20
6136	39	6.9	245	51	19	21	20
6137	48	7.5	255	52	24	29	20
6138	51	8.3	282	55	26	35	17
6139	57	9.6	400	60	28	35	15
6140	94	10.2	446	65	28	35	15
6141	132	10.2	446	66	28	35	15
6142	91	9.9	461	50	27	35	16
6143	82	9.6	441	52	26	35	14
6144	98	9.1	412	45	26	34	15
6145	80	9.2	412	40	26	34	15
6146	98	8.5	369	35	24	33	14
6147	118	8.6	369	36	24	33	14

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6148	125	8.0	327	38	22	32	14
6149	73	7.8	313	32	24	31	16
6150	66	7.8	313	32	24	31	16
6151	83	8.5	384	35	26	31	13
6152	84	9.1	461	32	26	32	12
6153	77	9.2	461	32	26	32	12
6154	78	10.9	573	37	28	33	14
6155	53	23.6	1650	61	41	34	24
6156	67	35.7	2725	90	55	40	28
6157	85	35.7	2725	90	55	40	30
6158	59	28.1	2042	78	48	39	28
6159	43	22.9	1584	72	44	40	21
6160	61	18.4	1218	62	36	36	19
6161	61	14.2	904	51	32	34	14
6162	106	14.3	904	51	32	34	14
6163	99	9.8	523	38	24	29	15
6164	96	9.9	523	38	24	29	15
6165	90	8.5	433	30	23	28	11
6166	77	8.5	433	30	23	28	11
6167	99	8.1	414	28	22	27	11
6168	90	8.0	414	28	22	27	11
6169	71	6.8	353	23	18	23	8
6170	71	6.9	353	23	18	23	8
6171	90	6.7	341	23	16	23	10
6172	59	6.4	335	22	16	21	8
6173	69	6.2	338	21	14	18	10
6174	87	5.5	295	18	12	17	8
6175	44	5.2	278	18	11	16	8
6176	68	5.1	267	13	10	13	12
6177	82	4.6	256	11	10	15	6
6178	82	4.8	256	11	10	15	6
6179	70	5.1	251	10	11	14	14
6180	88	5.2	256	12	10	18	12
6181	82	5.2	256	12	10	18	12
6182	76	5.5	278	15	12	17	12
6183	99	5.9	313	16	12	18	12
6184	108	5.9	313	16	12	18	12
6185	89	6.4	353	20	12	19	11
6186	100	6.4	353	20	12	19	11
6187	72	6.8	384	18	14	20	10
6188	87	7.2	413	23	15	21	10
6189	81	7.3	442	23	14	22	8

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6190	82	7.5	442	23	14	22	8
6191	69	7.8	462	23	15	21	10
6192	79	7.8	473	24	15	20	10
6193	68	7.9	473	24	15	20	10
6194	80	8.1	490	25	15	20	10
6195	81	8.4	510	24	16	20	11
6196	85	8.4	510	24	16	20	11
6197	86	8.4	504	28	16	22	10
6198	109	8.0	483	24	16	22	10
6199	113	8.0	483	24	16	22	10
6200	114	7.4	451	17	12	15	15
6201	121	7.3	451	17	12	10	15
6202	90	7.0	412	17	13	10	16
6203	58	6.2	385	14	12	10	10
6204	66	6.3	385	14	12	10	10
6205	92	6.3	361	16	12	8	15
6206	120	6.3	361	16	12	8	15
6207	134	6.2	366	18	13	8	10
6208	89	6.3	366	18	13	10	10
6209	89	6.3	366	18	13	10	10
6210	77	6.2	354	19	14	10	9
6211	178	6.2	354	19	14	10	9
6212	123	6.2	342	18	13	12	11
6213	129	6.2	342	18	13	12	11
6214	113	5.8	326	18	13	10	9
6215	159	5.7	320	17	12	10	9
6216	86	5.7	320	17	12	11	9
6217	125	5.8	315	19	13	11	10
6218	96	5.7	316	18	13	12	11
6219	105	5.7	316	18	13	12	11
6220	160	5.4	310	16	12	10	9
6221	87	5.6	310	16	12	10	9
6222	59	4.9	277	13	11	10	9
6223	69	5.0	277	13	11	10	9
6224	93	4.9	277	11	11	9	7
6225	82	4.8	285	11	10	9	7
6226	97	4.8	285	11	10	8	7
6227	118	5.0	309	12	10	8	6
6228	85	5.9	327	17	11	18	11
6229	96	6.2	343	19	11	18	11
6230	103	6.2	343	19	11	17	9
6231	88	6.2	351	20	11	17	9

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6232	94	6.1	351	20	11	17	9
6233	94	6.0	352	20	11	17	8
6234	91	8.4	635	30	11	16	10
6235	80	9.6	740	31	13	10	10
6236	79	10.2	776	34	13	10	7
6237	60	10.2	776	34	12	10	7
6238	80	10.2	776	34	12	10	7
6239	96	9.7	753	34	12	10	4
6240	72	9.2	696	32	12	9	5
6241	69	9.2	696	32	12	10	6
6242	59	8.4	619	30	12	10	8
6243	84	7.5	557	24	10	10	10
6244	98	6.9	529	21	10	5	10
6245	97	7.2	529	21	13	5	4
6246	100	7.7	582	22	10	6	5
6247	93	7.7	582	22	10	6	4
6248	92	7.6	582	22	10	6	3
6249	92	7.7	582	22	10	6	4
6250	133	8.0	594	23	11	6	4
6251	118	7.8	582	23	11	6	3
6252	105	7.8	570	24	12	6	4
6253	117	8.3	570	24	17	13	7
6254	78	12.3	891	40	17	13	8
6255	71	33.1	2717	101	39	21	17
6256	89	33.1	2717	101	39	21	18
6257	56	11.4	952	36	13	10	14
6258	3	3.4	204	14	7	7	2
6259	13	3.1	168	13	7	6	3
6260	28	3.3	199	17	8	7	3
6261	6	3.2	203	15	7	5	3
6262	10	3.2	201	15	8	6	3
6263	7	2.2	120	12	7	5	2
6264	8	2.0	112	10	6	5	3
6265	10	1.8	98	8	4	4	2
6266	8	2.3	128	11	6	5	3
6267	10	2.3	128	11	5	4	3
6268	15	2.0	113	10	5	4	2
6269	13	2.0	134	9	4	3	2
6270	8	2.3	134	10	5	4	2
6271	5	1.2	64	7	3	3	1
6272	49	1.1	59	6	3	3	1
6273	71	1.2	59	6	4	3	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6274	90	1.2	59	6	4	3	1
6275	91	1.2	57	6	3	3	1
6276	94	1.2	57	6	3	3	1
6277	106	1.4	67	6	3	3	2
6278	91	1.4	67	5	3	2	2
6279	101	1.4	81	7	3	2	2
6280	85	1.4	81	7	3	1	1
6281	88	1.5	91	7	3	1	1
6282	48	1.5	94	7	4	1	1
6283	67	1.5	97	7	4	1	1
6284	76	1.8	103	8	4	2	2
6285	113	1.8	103	8	3	2	2
6286	76	1.8	103	9	4	3	2
6287	88	1.8	103	9	4	3	2
6288	141	1.8	108	9	4	3	3
6289	129	1.7	108	9	4	2	3
6290	118	1.7	108	9	4	2	3
6291	126	1.9	118	8	4	2	1
6292	119	1.9	118	8	4	2	1
6293	141	1.9	128	8	3	2	1
6294	132	1.9	128	8	3	2	1
6295	138	2.1	137	8	4	2	1
6296	119	2.1	137	8	4	2	0
6297	125	2.1	151	9	4	2	0
6298	108	2.1	155	9	3	3	0
6299	61	2.4	165	10	3	3	1
6300	73	2.4	165	10	3	3	1
6301	66	2.8	222	10	4	3	2
6302	28	3.4	278	11	4	3	2
6303	41	3.7	341	11	4	1	1
6304	71	3.7	341	11	4	0	0
6305	123	4.4	395	12	4	0	0
6306	92	4.7	424	14	4	1	1
6307	52	4.7	424	14	3	1	1
6308	60	5.0	438	16	4	1	1
6309	123	5.0	438	16	4	1	1
6310	115	5.1	438	18	4	3	2
6311	112	5.1	439	20	4	3	2
6312	93	5.1	439	20	4	2	1
6313	180	5.1	433	19	4	2	0
6314	146	5.1	433	19	4	2	0
6315	142	5.1	428	19	4	1	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6316	142	5.1	428	19	4	1	1
6317	135	5.1	428	19	4	3	1
6318	94	4.9	410	18	5	3	2
6319	102	4.5	385	16	5	2	2
6320	116	4.6	402	15	5	1	1
6321	138	5.0	413	17	4	2	1
6322	146	5.4	461	21	4	2	1
6323	139	5.7	491	21	5	3	1
6324	144	5.7	491	21	5	3	1
6325	105	4.6	392	19	5	1	0
6326	116	4.6	392	19	5	1	0
6327	126	4.6	392	19	5	1	0
6328	90	2.0	177	10	2	0	0
6329	60	1.7	147	8	2	0	0
6330	67	1.4	117	6	2	0	0
6331	32	1.0	87	5	1	0	0
6332	29	72.9	6466	214	73	14	5
6333	35	72.9	6466	214	73	14	5
6334	41	66.8	5886	199	69	13	7
6335	35	54.8	4826	161	58	13	5
6336	40	42.6	3727	127	45	10	4
6337	89	42.6	3727	127	45	10	4
6338	68	16.8	1432	57	22	5	3
6339	74	18.7	1602	59	22	5	3
6340	72	18.7	1602	59	22	5	3
6341	51	17.7	1594	44	20	2	1
6342	54	16.3	1460	41	17	1	1
6343	74	13.6	1219	34	14	1	1
6344	74	13.6	1219	34	14	3	1
6345	70	9.3	785	30	11	3	0
6346	60	9.3	785	30	11	3	0
6347	77	7.7	675	28	9	3	0
6348	78	7.1	614	26	8	3	0
6349	78	6.5	565	23	6	2	1
6350	85	6.2	529	23	6	2	2
6351	39	6.0	509	23	6	2	1
6352	60	5.9	504	21	7	1	2
6353	67	5.8	501	20	6	1	1
6354	42	5.7	490	20	5	1	1
6355	87	5.7	486	19	6	2	1
6356	65	5.7	508	20	6	2	1
6357	61	5.9	512	20	5	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6358	62	5.9	512	20	5	2	1
6359	56	5.8	513	18	4	2	1
6360	73	5.9	528	16	4	1	0
6361	66	5.9	528	16	4	1	0
6362	78	5.9	543	16	4	1	0
6363	82	6.1	557	17	4	1	0
6364	81	6.1	557	17	4	1	0
6365	87	6.1	551	19	4	1	0
6366	70	6.1	551	20	5	1	0
6367	52	5.9	536	20	5	1	1
6368	54	5.8	509	20	5	2	1
6369	52	5.5	459	20	6	2	1
6370	33	5.4	455	18	6	2	1
6371	84	5.2	442	19	5	3	0
6372	96	5.2	442	19	6	3	2
6373	93	5.2	435	19	8	3	2
6374	92	5.2	440	20	8	3	0
6375	68	5.2	440	20	8	2	0
6376	54	5.0	435	16	7	0	0
6377	53	5.1	440	16	7	1	1
6378	53	5.0	440	16	6	1	0
6379	82	5.0	440	16	8	1	1
6380	89	5.0	435	16	8	1	1
6381	55	5.1	421	19	7	3	1
6382	38	4.9	389	19	7	3	1
6383	26	4.8	401	18	7	3	1
6384	29	4.8	424	18	7	3	0
6385	29	5.1	442	17	7	2	1
6386	99	5.1	444	17	7	2	1
6387	109	5.1	444	16	5	2	1
6388	108	5.3	444	17	7	2	1
6389	85	5.3	441	17	7	2	1
6390	76	4.5	391	17	4	2	0
6391	93	4.5	391	17	4	2	0
6392	74	4.2	353	15	4	1	1
6393	66	3.8	332	14	3	1	1
6394	85	3.3	302	10	4	1	0
6395	66	3.2	282	10	4	1	0
6396	67	3.3	277	11	3	1	0
6397	84	3.3	277	11	3	1	0
6398	52	3.6	303	13	3	1	1
6399	35	3.5	307	13	4	1	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6400	60	3.5	308	14	4	1	0
6401	55	4.1	357	14	4	2	1
6402	32	4.4	396	16	3	1	1
6403	49	5.0	436	17	3	1	1
6404	57	6.1	531	20	6	2	1
6405	40	6.1	531	20	6	1	1
6406	141	6.1	558	20	6	1	1
6407	139	6.0	558	17	4	0	0
6408	120	6.1	563	17	5	0	0
6409	155	8.1	714	26	6	2	2
6410	105	8.1	714	26	6	2	2
6411	77	7.4	660	24	6	2	0
6412	84	6.5	569	23	6	2	0
6413	120	6.5	569	23	6	2	1
6414	125	5.8	503	20	5	2	1
6415	113	5.4	466	19	6	1	1
6416	134	5.4	466	19	6	2	1
6417	92	5.2	442	18	5	2	0
6418	70	4.1	353	17	5	1	0
6419	102	4.1	353	17	5	1	0
6420	86	4.2	359	17	5	2	1
6421	123	4.3	365	17	5	2	1
6422	94	4.3	365	17	5	2	1
6423	114	6.6	587	24	6	2	1
6424	1	5.2	455	18	5	1	1
6425	62	5.1	449	20	6	0	0
6426	57	8.4	722	29	9	2	1
6427	68	8.4	722	29	9	2	1
6428	88	8.4	722	29	9	2	1
6429	166	12.1	1048	41	14	3	1
6430	196	15.9	1374	52	18	4	1
6431	152	17.1	1497	56	19	4	2
6432	135	17.1	1497	56	19	4	2
6433	95	17.1	1497	56	19	4	2
6434	88	15.9	1392	53	17	4	1
6435	204	14.7	1288	50	16	4	1
6436	108	13.4	1161	47	16	4	2
6437	162	12.2	1035	44	15	3	2
6438	137	12.2	1035	44	15	3	2
6439	115	9.4	790	34	13	3	1
6440	108	9.4	790	34	13	3	1
6441	96	7.1	589	27	8	3	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6442	86	5.3	450	23	8	2	0
6443	72	5.3	450	23	8	2	0
6444	64	4.3	355	21	6	2	0
6445	106	3.9	324	18	5	2	0
6446	121	3.9	324	18	5	2	0
6447	125	4.2	352	17	5	2	1
6448	120	5.3	446	19	6	2	1
6449	70	6.5	567	24	6	2	0
6450	88	6.8	610	24	6	2	1
6451	72	7.1	646	22	6	1	1
6452	92	7.1	646	22	5	1	0
6453	109	7.1	646	22	5	1	0
6454	117	7.5	683	22	6	0	0
6455	119	7.9	707	23	7	0	1
6456	120	7.9	707	23	7	0	1
6457	109	8.1	731	26	7	1	1
6458	124	8.1	731	26	5	1	0
6459	107	8.1	731	27	6	1	0
6460	121	8.1	731	28	6	1	0
6461	148	8.1	728	28	6	1	1
6462	85	8.0	714	27	6	1	1
6463	51	8.0	704	27	6	1	0
6464	134	8.0	709	27	6	1	0
6465	101	8.1	728	28	6	2	0
6466	74	8.3	750	29	6	2	0
6467	65	8.4	752	29	7	1	1
6468	62	8.4	752	29	7	1	1
6469	41	8.1	743	29	7	0	0
6470	124	8.4	747	29	6	2	0
6471	61	8.5	759	31	6	2	0
6472	91	8.5	759	31	6	1	0
6473	61	8.1	743	23	6	0	0
6474	57	8.1	743	22	6	1	0
6475	37	8.7	789	26	7	1	0
6476	29	9.4	841	30	7	2	1
6477	49	9.8	883	32	8	2	1
6478	144	10.2	924	34	8	2	1
6479	127	12.0	1066	37	10	2	1
6480	50	12.0	1066	37	10	1	1
6481	84	12.9	1168	39	10	2	2
6482	75	12.9	1168	39	10	2	2
6483	135	12.7	1157	39	10	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6484	117	12.7	1157	39	10	2	0
6485	131	13.3	1190	41	11	2	1
6486	127	13.3	1190	41	11	2	1
6487	133	15.7	1425	46	13	2	1
6488	122	15.7	1425	46	13	2	1
6489	134	18.8	1717	54	15	2	1
6490	98	18.8	1717	54	15	2	1
6491	138	20.4	1857	57	15	3	1
6492	148	20.4	1857	57	14	3	0
6493	142	20.4	1857	57	14	3	0
6494	82	20.4	1857	57	15	3	1
6495	133	19.6	1784	55	15	3	1
6496	124	17.2	1557	49	14	2	0
6497	115	17.2	1557	49	14	2	0
6498	135	17.2	1557	49	14	2	0
6499	147	14.7	1331	44	13	2	0
6500	91	12.8	1160	40	12	3	0
6501	88	12.8	1160	40	12	3	0
6502	88	12.0	1082	33	10	1	0
6503	108	12.2	1116	33	10	1	0
6504	83	14.1	1312	36	9	1	0
6505	87	16.0	1470	45	13	2	0
6506	57	16.4	1496	48	13	2	0
6507	66	16.3	1496	49	12	2	1
6508	70	16.1	1475	49	12	2	1
6509	71	16.7	1534	49	11	3	1
6510	68	15.0	1392	41	8	1	0
6511	47	14.4	1327	40	8	2	0
6512	71	13.7	1255	38	8	2	0
6513	66	12.9	1180	36	8	1	1
6514	70	10.9	979	33	8	1	1
6515	93	9.7	876	30	7	1	1
6516	83	8.1	713	32	9	2	0
6517	47	9.7	857	35	11	2	0
6518	62	10.3	902	38	11	3	1
6519	81	17.9	1594	57	19	3	1
6520	72	17.9	1594	57	19	3	1
6521	86	35.5	3177	102	36	7	2
6522	102	41.2	3684	120	42	8	2
6523	81	36.0	3230	107	37	8	2
6524	33	28.5	2542	85	29	6	3
6525	21	21.8	1904	69	23	4	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6526	101	21.8	1904	69	23	4	3
6527	109	21.8	1904	69	23	4	3
6528	107	15.7	1379	54	18	4	2
6529	109	10.9	983	35	13	0	0
6530	63	10.9	983	35	13	2	0
6531	112	8.5	740	27	11	2	0
6532	116	8.5	740	27	11	2	0
6533	102	7.2	619	24	9	0	0
6534	131	7.2	619	24	9	1	1
6535	140	7.4	641	27	9	2	1
6536	100	7.4	641	27	8	2	0
6537	64	8.4	745	30	8	2	0
6538	62	8.4	745	30	8	2	0
6539	98	9.5	829	33	9	2	0
6540	77	9.5	833	34	9	2	0
6541	126	9.6	837	34	10	2	0
6542	78	9.6	837	34	10	2	1
6543	77	8.7	764	30	7	2	1
6544	92	6.7	585	24	6	2	0
6545	59	4.7	426	19	5	1	1
6546	51	3.8	321	15	4	1	1
6547	51	3.0	253	13	4	1	1
6548	51	3.1	252	15	4	1	1
6549	58	3.9	336	17	4	1	0
6550	61	3.9	336	17	4	1	0
6551	59	4.5	392	14	4	1	1
6552	95	5.2	473	17	4	1	1
6553	61	5.2	473	17	4	1	0
6554	55	5.7	520	19	5	0	0
6555	110	5.9	533	19	5	0	0
6556	96	6.1	546	20	5	0	0
6557	108	6.1	546	20	4	0	0
6558	100	6.5	584	23	5	1	0
6559	97	6.9	623	24	5	1	1
6560	78	7.3	657	25	6	1	1
6561	42	9.8	896	29	7	2	1
6562	35	16.6	1535	41	8	2	1
6563	25	24.0	2264	50	10	1	0
6564	43	28.3	2678	59	12	2	1
6565	111	30.7	2908	62	13	2	1
6566	89	30.7	2908	62	13	2	1
6567	86	31.8	2996	66	14	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6568	94	31.8	2996	66	14	2	2
6569	48	30.5	2863	64	14	2	2
6570	107	27.2	2589	48	11	0	0
6571	87	27.2	2589	48	11	0	0
6572	125	23.9	2275	45	11	1	0
6573	37	23.6	2229	42	11	1	0
6574	86	23.6	2229	41	11	0	0
6575	75	24.1	2256	53	12	2	0
6576	50	24.1	2256	53	12	2	0
6577	60	22.8	2140	50	12	2	0
6578	112	22.8	2140	50	13	2	1
6579	55	20.9	1954	47	13	2	1
6580	115	18.8	1746	42	12	2	0
6581	54	16.7	1551	40	10	2	1
6582	81	15.0	1385	40	10	2	1
6583	64	15.0	1385	40	10	2	1
6584	69	13.9	1274	38	10	2	1
6585	100	12.7	1164	36	9	2	1
6586	48	12.9	1178	35	10	2	1
6587	53	14.4	1330	38	10	2	0
6588	52	19.2	1773	52	12	2	0
6589	48	23.2	2144	60	14	2	0
6590	63	23.0	2143	57	14	2	0
6591	114	22.9	2141	53	13	1	0
6592	67	21.0	1957	50	12	1	0
6593	90	21.0	1957	50	12	1	0
6594	72	18.9	1754	45	12	1	0
6595	123	16.7	1561	41	11	1	0
6596	100	16.7	1561	41	11	2	1
6597	96	14.0	1286	40	9	2	0
6598	73	13.1	1208	39	9	2	0
6599	58	12.1	1108	36	9	2	0
6600	48	11.3	1025	34	9	2	0
6601	85	10.4	938	32	8	2	0
6602	98	10.5	938	32	8	2	0
6603	117	8.8	796	24	6	0	0
6604	113	8.8	796	24	6	0	0
6605	74	9.8	901	27	7	0	0
6606	47	5.3	463	20	4	1	1
6607	43	8.9	775	31	8	1	0
6608	55	12.6	1140	38	8	1	0
6609	42	12.7	1140	38	8	1	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6610	41	56.1	5217	130	35	5	0
6611	48	62.9	5850	148	39	4	0
6612	37	93.1	8672	229	56	7	1
6613	51	117.9	10906	317	75	9	1
6614	51	142.7	13140	404	94	11	1
6615	80	151.0	13886	441	99	12	3
6616	57	213.7	19677	645	127	13	4
6617	57	213.8	19677	645	127	13	4
6618	141	225.9	20806	688	134	14	2
6619	141	225.9	20806	688	134	14	2
6620	100	195.1	18061	553	108	12	1
6621	103	195.0	18061	553	108	12	1
6622	131	195.0	18061	553	108	12	1
6623	111	164.2	15321	428	84	10	1
6624	142	164.4	15321	428	84	10	1
6625	133	174.9	16452	399	87	3	0
6626	64	203.1	18873	555	115	4	1
6627	122	200.3	18873	555	11	4	1
6628	99	26.5	2507	46	11	1	1
6629	73	23.5	2216	41	11	1	0
6630	25	20.8	1944	40	10	1	1
6631	35	17.0	1576	39	10	2	0
6632	57	15.5	1424	38	10	2	1
6633	45	11.7	1069	31	8	3	0
6634	30	10.4	938	29	9	2	0
6635	32	9.6	852	30	10	2	1
6636	32	9.6	845	29	10	2	1
6637	32	9.5	838	29	10	2	1
6638	31	9.4	817	29	11	3	0
6639	36	11.8	1049	36	13	3	0
6640	40	17.6	1624	42	15	4	1
6641	38	23.4	2146	52	19	3	1
6642	38	26.5	2422	65	22	7	0
6643	35	26.5	2422	66	22	7	2
6644	26	26.4	2403	66	27	8	2
6645	39	25.7	2337	66	27	8	1
6646	20	21.9	1989	58	21	6	1
6647	34	19.7	1784	53	19	5	1
6648	35	19.1	1725	53	17	5	1
6649	32	18.3	1651	51	17	4	0
6650	28	17.5	1632	37	14	2	0
6651	43	17.5	1632	42	14	3	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6652	38	17.3	1594	44	14	3	1
6653	36	17.1	1562	44	15	4	0
6654	66	17.1	1562	44	15	4	0
6655	91	16.6	1523	43	14	4	0
6656	112	16.6	1523	43	14	4	0
6657	63	15.5	1415	41	13	2	0
6658	56	15.3	1398	41	11	3	0
6659	63	15.4	1410	41	12	3	0
6660	38	15.7	1431	41	12	3	0
6661	54	15.7	1412	41	12	3	0
6662	71	14.6	1341	39	11	3	0
6663	53	13.9	1272	38	11	3	0
6664	54	14.3	1329	38	10	0	0
6665	83	15.8	1486	38	10	1	0
6666	59	18.0	1676	39	12	3	0
6667	81	18.0	1676	39	12	3	0
6668	79	22.1	2062	52	15	3	0
6669	92	26.8	2485	66	17	4	1
6670	68	27.5	2545	69	18	4	1
6671	61	27.5	2545	69	18	4	1
6672	104	25.0	2298	64	18	3	2
6673	150	25.0	2298	64	18	4	2
6674	76	21.3	1944	59	17	4	1
6675	64	18.5	1681	52	14	4	1
6676	74	17.7	1620	48	14	3	1
6677	74	18.7	1732	48	14	4	1
6678	76	19.6	1805	52	14	4	1
6679	49	19.8	1815	52	14	4	1
6680	45	20.4	1865	49	14	4	2
6681	53	22.8	2121	50	14	3	0
6682	98	22.8	2121	50	14	3	0
6683	99	28.3	2651	61	16	3	0
6684	85	35.5	3359	65	18	3	1
6685	55	45.6	4322	83	21	3	1
6686	36	53.0	4984	107	27	4	2
6687	40	59.7	5597	131	33	7	2
6688	50	63.9	5950	144	36	7	1
6689	68	66.3	6189	153	39	8	1
6690	58	67.6	6290	159	39	8	1
6691	57	67.6	6290	159	39	9	1
6692	65	65.4	6089	156	39	9	1
6693	71	60.1	5592	145	38	7	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6694	66	54.3	5020	131	36	7	2
6695	62	51.1	4735	122	34	7	2
6696	48	48.5	4492	116	30	7	0
6697	57	43.6	4044	105	28	7	1
6698	69	31.8	2989	64	19	2	0
6699	83	28.2	2641	58	19	2	0
6700	70	25.3	2370	55	17	4	1
6701	40	15.0	1350	42	13	4	1
6702	29	13.9	1246	41	13	4	0
6703	44	13.5	1203	42	13	4	0
6704	70	12.2	1084	36	12	4	0
6705	59	8.3	730	29	9	3	0
6706	53	9.0	792	28	10	3	0
6707	48	10.7	831	31	10	3	0
6708	46	11.1	831	48	15	3	0
6709	49	34.3	3237	64	19	2	0
6710	52	22.0	2059	47	13	2	0
6711	51	35.0	3195	77	24	3	2
6712	44	108.5	10040	270	70	12	2
6713	42	103.1	9547	255	66	13	1
6714	46	105.9	9840	260	64	13	2
6715	34	115.5	10805	272	65	13	2
6716	46	99.3	9335	217	49	10	1
6717	46	79.7	7478	168	42	9	1
6718	47	63.2	5897	133	37	9	1
6719	2	18.1	1648	47	17	5	1
6720	30	39.3	3573	105	36	8	1
6721	33	62.2	5635	170	58	14	1
6722	32	667.3	58822	3073	653	70	5
6723	18	861.7	74497	4327	1063	120	9
6724	41	828.2	71760	4101	997	116	9
6725	25	536.9	47658	2330	481	61	6
6726	32	245.9	22879	652	143	11	2
6727	50	182.1	17057	425	99	9	2
6728	48	134.5	12626	297	73	11	2
6729	56	100.2	9366	223	55	11	1
6730	61	73.5	6851	169	42	9	1
6731	60	53.7	5000	122	33	9	0
6732	55	39.4	3647	94	26	6	0
6733	56	29.4	2702	75	22	6	1
6734	58	22.7	2044	60	19	6	0
6735	73	17.7	1594	53	17	5	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6736	55	14.8	1306	46	17	4	0
6737	63	13.0	1137	42	17	6	2
6738	60	12.0	1044	42	15	5	2
6739	48	12.0	1044	42	16	5	2
6740	59	11.3	1005	34	14	2	0
6741	57	11.6	1021	36	16	3	1
6742	62	11.7	1035	36	16	3	0
6743	69	12.2	1054	37	16	3	0
6744	68	12.6	1077	44	17	5	0
6745	67	12.6	1077	44	17	5	0
6746	67	12.6	1077	44	17	5	0
6747	96	12.5	1081	45	17	5	0
6748	108	12.5	1081	45	17	5	0
6749	70	12.3	1073	45	16	5	0
6750	53	12.2	1046	43	17	6	1
6751	55	11.6	1004	41	16	6	1
6752	33	11.2	962	38	14	5	1
6753	27	10.4	886	37	14	5	1
6754	35	9.6	828	36	14	4	1
6755	33	10.8	954	38	16	5	1
6756	35	13.0	1156	38	18	4	0
6757	44	18.9	1692	54	25	4	0
6758	30	22.2	1936	73	30	8	1
6759	45	22.2	1936	73	31	9	2
6760	14	18.7	1586	65	29	9	2
6761	34	17.3	1479	63	28	9	1
6762	36	13.8	1155	53	25	8	2
6763	32	12.7	1049	48	22	7	2
6764	36	12.2	1008	47	22	7	2
6765	36	11.7	966	47	22	6	1
6766	38	8.5	722	30	17	3	0
6767	42	7.8	673	28	15	3	0
6768	40	7.8	638	33	16	5	0
6769	39	7.5	615	30	15	5	2
6770	50	7.4	615	32	14	5	0
6771	37	7.6	625	32	15	5	2
6772	42	8.1	656	32	15	5	2
6773	43	8.1	656	32	14	5	1
6774	43	8.3	670	33	14	6	1
6775	52	8.3	670	33	15	5	1
6776	40	7.8	649	33	15	5	0
6777	44	7.8	635	31	14	4	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6778	44	7.8	644	29	12	4	0
6779	48	7.7	660	26	11	2	1
6780	50	7.7	665	26	11	2	0
6781	55	7.8	675	26	11	2	0
6782	64	7.9	688	28	12	2	0
6783	58	8.1	688	28	12	2	0
6784	60	8.4	692	33	12	5	2
6785	57	8.1	674	32	12	3	1
6786	82	8.1	685	30	12	4	0
6787	60	8.6	719	33	13	4	0
6788	63	8.6	719	33	13	4	0
6789	79	8.9	767	29	14	2	0
6790	70	8.6	736	28	13	2	0
6791	62	8.4	727	26	12	2	1
6792	69	8.4	727	26	12	2	1
6793	67	8.7	743	30	13	3	0
6794	69	9.1	757	32	14	6	1
6795	69	8.8	724	32	14	5	2
6796	66	8.8	724	32	14	5	2
6797	59	8.3	680	30	12	5	1
6798	64	9.8	842	34	13	5	0
6799	76	9.8	842	34	13	5	0
6800	54	9.7	846	34	13	4	0
6801	55	4.6	373	18	7	3	1
6802	55	4.7	373	18	7	3	1
6803	37	12.9	1135	40	14	5	0
6804	56	13.9	1221	43	16	5	1
6805	63	14.0	1221	43	16	5	1
6806	68	22.5	2026	62	20	6	1
6807	57	32.3	3004	64	23	2	1
6808	78	35.1	3277	66	23	3	0
6809	60	48.9	4589	88	28	3	0
6810	46	82.6	7738	170	46	8	0
6811	58	90.4	8439	202	50	10	2
6812	43	76.8	7165	171	42	10	0
6813	45	44.2	4102	98	27	7	1
6814	35	33.9	3140	78	22	6	1
6815	40	22.6	2057	56	18	6	0
6816	40	20.9	1871	54	18	6	2
6817	31	19.7	1762	51	17	7	1
6818	40	16.8	1487	46	15	5	2
6819	42	15.6	1383	43	14	5	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6820	50	13.4	1215	34	12	2	0
6821	51	12.8	1154	33	12	3	1
6822	41	12.3	1101	34	12	2	0
6823	72	12.0	1060	33	13	2	1
6824	66	11.8	1022	38	11	5	2
6825	17	11.1	971	35	12	4	0
6826	64	10.8	941	35	11	5	0
6827	35	10.6	925	37	12	4	0
6828	32	10.2	891	33	10	4	0
6829	35	10.1	874	33	11	4	0
6830	16	13.9	1240	42	13	5	0
6831	42	22.2	2049	50	15	2	0
6832	43	35.7	3331	76	21	3	1
6833	72	47.9	4488	101	27	4	1
6834	94	56.2	5255	126	32	5	0
6835	94	56.2	5255	126	32	5	0
6836	96	57.9	5390	137	34	8	1
6837	52	54.6	5082	131	31	9	0
6838	46	51.8	4815	124	30	8	1
6839	55	48.5	4528	111	28	6	0
6840	56	43.5	4032	100	25	7	1
6841	68	38.0	3505	89	24	7	0
6842	127	38.0	3505	89	24	7	0
6843	109	34.5	3188	84	23	6	1
6844	119	34.6	3188	84	23	6	1
6845	127	33.5	3099	83	20	6	0
6846	109	33.5	3099	83	20	6	0
6847	83	34.2	3149	82	22	7	2
6848	71	35.4	3276	84	23	6	0
6849	107	35.4	3276	84	23	6	0
6850	107	40.4	3735	98	25	7	1
6851	100	40.4	3735	98	25	7	1
6852	56	51.9	4809	128	34	8	0
6853	110	70.6	6521	184	47	10	3
6854	114	70.8	6521	184	47	10	3
6855	116	87.3	8126	210	57	6	0
6856	170	87.3	8126	210	57	6	0
6857	119	87.4	8126	210	57	6	0
6858	107	94.6	8777	233	63	7	1
6859	121	93.8	8719	231	63	7	1
6860	224	93.1	8661	229	62	8	2
6861	161	93.1	8661	229	62	8	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6862	126	93.4	8661	229	62	8	2
6863	132	88.6	8226	214	58	7	1
6864	125	88.6	8226	214	58	7	1
6865	75	83.9	7763	209	57	8	1
6866	132	82.4	7588	214	55	11	0
6867	101	82.4	7588	214	55	11	0
6868	80	90.2	8301	243	61	12	1
6869	108	108.1	9907	312	78	14	1
6870	46	124.6	11340	384	94	17	2
6871	52	139.1	12607	457	110	19	2
6872	72	154.1	13945	533	127	22	3
6873	91	154.6	13945	533	127	22	3
6874	68	166.3	14934	600	143	23	4
6875	63	180.1	16111	677	159	26	5
6876	128	202.2	17956	814	190	30	4
6877	108	225.3	19880	961	228	34	4
6878	99	225.5	19880	961	228	34	4
6879	96	244.4	21439	1097	258	37	3
6880	98	240.7	21483	961	243	33	3
6881	83	201.6	17959	802	187	29	2
6882	74	181.0	16221	680	161	25	2
6883	93	160.6	14459	571	137	23	2
6884	93	160.6	14459	571	137	23	2
PALEGREDA Fm.							
6885	130	157.3	14161	556	134	23	2
6886	65	156.5	14108	551	131	21	3
6887	49	133.2	12075	443	107	18	1
6888	79	133.2	12075	443	107	18	1
6889	63	118.8	10805	374	93	16	3
6890	63	118.8	10805	374	93	16	3
6891	99	113.8	10377	353	87	15	2
6892	98	90.4	8280	263	68	13	2
6893	81	90.7	8280	263	68	13	3
6894	40	44.9	4024	133	43	11	2
6895	40	44.8	4024	133	43	11	1
6896	33	52.2	4703	155	51	12	2
6897	34	56.1	5040	164	53	12	2
6898	38	67.6	6105	195	60	14	3
6899	37	78.7	7132	226	69	16	4
6900	36	75.2	6805	214	66	16	4
6901	38	54.9	4921	158	55	14	3
6902	38	37.5	3314	114	43	13	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6903	25	31.6	2806	94	44	8	2
6904	21	29.1	2539	90	44	12	2
6905	34	24.7	2090	89	41	12	3
6906	9	16.8	1382	64	30	10	2
6907	33	14.3	1197	58	27	9	1
6908	30	12.8	1052	53	24	8	2
6909	35	12.5	1006	50	24	8	2
6910	35	10.7	912	39	21	4	0
6911	43	10.4	885	41	20	4	0
6912	35	10.4	878	42	21	6	0
6913	51	10.4	860	44	21	6	1
6914	51	10.1	815	44	21	7	1
6915	40	9.5	775	43	20	7	1
6916	55	9.1	729	42	20	6	0
6917	60	9.1	729	42	20	6	1
6918	54	9.0	722	41	19	7	1
6919	49	9.1	722	41	20	7	1
6920	53	9.1	722	39	20	6	1
6921	44	9.4	768	42	19	6	2
6922	31	10.1	818	42	19	6	1
6923	36	10.8	922	42	19	5	1
6924	53	11.5	998	40	18	4	1
6925	53	12.3	1074	38	18	3	0
6926	36	13.5	1193	40	19	4	0
6927	55	15.5	1334	49	22	7	0
6928	31	15.6	1352	51	22	7	2
6929	37	15.5	1331	50	21	7	2
6930	29	13.5	1163	45	19	7	1
6931	30	12.1	1032	43	18	7	0
6932	36	15.4	1344	47	19	7	1
6933	26	16.3	1465	47	19	7	1
6934	14	15.5	1387	41	17	3	2
6935	30	14.3	1279	42	17	5	2
6936	39	13.0	1128	43	16	6	2
6937	37	12.3	1066	40	16	7	2
6938	32	10.4	894	35	14	6	0
6939	33	9.3	789	33	13	6	0
6940	47	8.5	733	31	13	6	1
6941	34	7.3	604	28	12	5	1
6942	42	6.7	557	26	12	5	0
6943	38	6.3	504	23	10	5	0
6944	40	5.8	486	22	10	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6945	30	5.4	459	19	9	2	1
6946	34	5.2	433	20	9	3	1
6947	36	5.7	478	23	9	3	1
6948	32	7.7	655	27	11	6	0
6949	30	8.6	744	30	12	6	0
6950	44	9.8	844	32	13	5	1
6951	43	10.2	878	34	13	6	2
6952	41	10.7	909	36	14	6	2
6953	54	10.6	906	37	15	6	1
6954	40	10.6	906	37	15	6	1
6955	59	10.5	883	38	14	6	1
6956	44	10.6	896	38	15	5	1
6957	44	10.6	896	37	15	6	0
6958	39	10.2	877	36	13	5	1
6959	36	10.0	869	30	13	3	0
6960	59	9.9	860	30	13	3	0
6961	59	9.7	851	29	13	3	0
6962	59	9.6	842	29	13	3	0
6963	59	9.5	833	29	13	3	0
6964	59	9.4	824	28	13	3	0
6965	38	9.2	800	32	13	6	1
6966	44	8.6	712	32	13	5	2
6967	41	8.5	736	33	12	6	0
6968	44	9.0	753	33	13	6	1
6969	39	9.3	784	34	13	6	1
6970	34	9.5	805	34	13	6	0
6971	35	9.9	832	36	14	6	2
6972	11	9.6	807	34	13	6	1
6973	37	9.0	774	28	13	3	1
6974	55	8.2	709	25	11	3	0
6975	58	5.9	501	19	9	2	0
6976	62	4.1	335	15	8	2	0
6977	58	3.0	226	12	5	2	0
6978	48	3.0	235	12	5	3	0
6979	62	4.0	325	16	8	3	1
6980	52	5.3	406	22	10	4	2
6981	49	5.4	442	22	10	5	2
6982	61	5.8	469	23	10	5	1
6983	59	6.0	495	23	10	5	1
6984	48	15.7	1367	53	19	7	2
6985	4	15.7	1367	53	19	7	2
6986	29	20.7	1866	56	18	6	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
6987	39	23.8	2151	62	19	6	2
6988	28	17.1	1532	49	16	5	1
6989	46	16.1	1442	45	14	6	1
6990	44	14.6	1302	44	14	6	0
6991	75	11.4	1021	30	11	3	0
6992	69	14.0	1264	42	12	5	2
6993	52	15.2	1322	50	18	6	2
6994	54	17.2	1496	55	21	7	2
6995	47	31.4	2793	96	36	10	2
6996	61	45.3	4016	134	51	14	3
6997	54	46.0	4068	134	51	14	3
6998	23	43.0	3871	123	40	12	3
6999	33	43.0	3871	123	40	11	2
7000	38	39.8	3593	114	37	10	2
7001	34	24.7	2191	73	25	8	2
7002	24	15.4	1364	43	17	4	2
7003	31	12.7	1100	40	14	6	1
7004	29	13.0	1135	40	15	6	2
7005	30	13.0	1135	40	15	6	2
7006	10	8.3	698	32	11	5	1
7007	46	6.7	568	26	10	4	2
7008	33	6.6	537	24	9	4	2
7009	40	6.2	515	24	9	4	1
7010	42	5.6	477	19	8	2	1
7011	47	5.6	468	18	8	2	1
7012	49	5.5	460	19	9	3	1
7013	46	5.5	459	21	9	4	0
7014	48	5.5	455	22	9	4	0
7015	53	5.5	455	22	9	4	1
7016	33	5.0	418	21	8	4	1
7017	35	5.5	464	24	8	4	1
7018	34	6.3	533	26	9	4	1
7019	18	7.1	602	27	11	4	1
7020	26	8.9	787	31	11	4	2
7021	13	9.1	798	29	11	3	1
7022	26	8.6	744	31	12	5	1
7023	6	7.0	578	28	11	5	0
7024	25	6.0	492	24	9	4	1
7025	23	5.3	428	21	9	4	1
7026	22	5.4	444	21	9	3	0
7027	23	5.4	441	22	8	3	1
7028	27	4.8	386	22	8	4	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7029	17	4.6	375	20	7	4	1
7030	22	4.6	373	20	6	4	1
7031	28	4.5	371	21	8	4	1
7032	13	4.0	325	18	7	4	1
7033	23	4.4	331	18	6	3	1
7034	25	4.1	340	16	5	1	1
7035	26	3.9	332	17	6	2	1
7036	22	4.0	323	17	6	3	0
7037	32	4.3	349	19	7	4	1
7038	22	4.1	314	18	7	4	0
7039	35	4.0	312	18	6	3	1
7040	16	3.8	316	18	6	3	1
7041	11	3.5	277	16	6	3	1
7042	19	3.2	261	15	5	3	1
7043	22	3.7	298	17	6	3	1
7044	1	2.0	143	11	4	2	1
7045	24	2.0	145	9	4	3	0
7046	18	1.9	144	10	3	3	1
7047	39	1.8	133	10	3	1	1
7048	28	1.8	129	9	3	1	1
7049	49	1.4	119	6	3	1	0
7050	38	1.4	117	7	3	1	0
7051	29	1.7	129	8	3	1	0
7052	46	1.7	142	9	3	1	0
7053	41	2.3	187	11	4	2	0
7054	27	3.0	244	14	6	3	1
7055	18	3.9	328	17	6	3	0
7056	5	5.0	421	21	7	2	1
7057	24	5.0	416	21	7	2	0
7058	10	3.2	261	15	4	2	0
7059	18	3.4	283	15	5	2	1
7060	16	3.4	283	15	5	2	0
7061	12	2.9	240	13	4	2	0
7062	18	3.0	252	13	4	2	1
7063	14	2.9	244	13	4	1	0
7064	25	2.7	238	9	4	1	1
7065	19	2.9	252	11	4	1	2
7066	20	3.1	258	13	4	1	0
7067	24	3.1	258	14	4	1	1
7068	36	3.1	256	14	4	2	1
7069	29	2.9	242	14	4	2	0
7070	30	2.9	237	14	4	2	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7071	19	2.6	206	11	4	2	2
7072	24	2.6	202	12	4	2	2
7073	17	2.8	243	12	3	1	1
7074	19	3.2	264	12	5	1	2
7075	15	3.4	277	15	5	2	2
7076	39	3.5	296	18	5	2	0
7077	21	3.8	321	18	5	2	1
7078	26	3.9	332	18	6	2	1
7079	22	3.7	313	17	5	2	1
7080	37	3.7	310	17	5	2	1
7081	35	3.7	310	17	5	2	1
7082	33	3.7	312	17	4	2	1
7083	34	3.6	316	14	3	1	1
7084	26	3.6	316	15	5	1	1
7085	19	5.8	497	23	8	3	2
7086	24	8.0	679	31	12	4	2
7087	21	9.0	762	35	12	4	2
7088	24	20.0	1767	63	23	7	2
7089	25	19.2	1697	61	22	5	2
7090	20	18.0	1634	46	18	3	1
7091	22	6.1	544	21	7	2	0
7092	17	5.6	492	21	6	2	1
7093	22	5.6	477	21	6	2	0
7094	19	4.8	425	21	4	1	1
7095	20	4.2	375	17	4	1	0
7096	25	3.9	350	14	4	1	0
7097	20	3.9	332	17	4	2	2
7098	21	3.9	325	17	4	2	2
7099	22	3.8	320	16	4	2	2
7100	22	3.7	315	16	4	1	1
7101	18	3.8	327	15	5	2	0
7102	22	4.1	348	16	5	2	1
7103	20	4.4	383	16	5	2	1
7104	17	4.4	383	17	6	2	0
7105	17	4.1	347	18	5	2	0
7106	14	4.0	327	18	5	1	0
7107	18	3.6	320	14	4	1	0
7108	13	3.5	310	13	4	1	1
7109	34	3.8	320	17	4	1	1
7110	19	3.6	312	15	5	1	1
7111	18	3.6	299	15	4	2	1
7112	8	3.9	331	16	5	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7113	16	2.9	253	13	3	1	1
7114	10	2.6	218	11	3	1	0
7115	20	2.4	204	10	3	0	0
7116	32	1.5	125	7	1	1	0
7117	27	3.8	204	10	3	0	0
7118	20	8.8	366	65	54	18	2
7119	19	12.3	557	70	83	30	3
7120	18	23.5	794	150	132	43	5
7121	15	32.3	764	280	200	179	16
7122	40	30.6	595	380	258	121	11
7123	30	29.6	595	384	258	121	11
7124	34	28.5	600	350	248	108	11
7125	42	29.4	689	320	266	109	11
7126	45	29.4	689	319	266	109	11
7127	48	29.5	728	310	264	104	10
7128	60	30.7	755	320	258	125	13
7129	66	30.5	755	310	258	125	13
7130	75	30.3	761	324	252	121	12
7131	82	30.3	755	340	246	121	12
7132	67	29.8	748	342	242	118	12
7133	68	29.8	748	345	237	117	12
7134	71	30.1	783	350	234	116	12
7135	41	29.6	785	355	226	114	12
7136	30	28.2	786	340	206	105	12
7137	19	16.2	446	180	118	57	7
7138	23	16.9	495	190	120	54	7
7139	73	18.0	578	200	122	55	7
7140	62	19.6	641	220	124	69	8
7141	51	19.4	695	250	116	39	8
7142	48	15.7	840	95	44	34	7
7143	47	15.6	829	91	42	32	7
7144	88	16.0	829	94	42	30	7
7145	67	19.4	1198	93	37	26	8
7146	29	18.5	1139	89	34	25	7
7147	31	19.0	1058	81	65	32	8
7148	44	17.6	860	89	66	40	10
7149	42	17.7	796	88	67	48	10
7150	42	16.9	724	85	65	44	11
7151	32	16.8	660	91	64	47	12
7152	61	16.3	599	95	63	48	11
7153	59	16.2	559	99	65	50	13
7154	53	15.6	530	95	66	45	13

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7155	47	13.2	400	89	51	34	12
7156	30	12.4	435	56	42	26	12
7157	30	12.4	457	55	35	21	12
7158	32	12.2	463	53	31	19	11
7159	19	13.8	483	65	51	39	12
7160	49	13.0	504	54	41	26	12
7161	25	12.8	504	53	41	22	12
7162	43	12.8	501	60	45	24	12
7163	29	11.5	484	52	29	19	10
7164	13	12.0	558	43	32	15	10
7165	18	11.9	603	43	20	18	10
7166	63	11.7	599	42	18	18	10
7167	23	11.6	592	43	28	17	9
7168	49	11.4	577	42	29	18	8
7169	53	11.2	555	41	26	16	8
7170	68	10.7	533	38	27	16	5
7171	61	10.3	505	41	24	15	8
7172	48	9.9	476	35	22	13	8
7173	32	9.9	435	39	28	15	9
7174	28	10.4	429	38	29	18	8
7175	39	10.8	412	40	29	23	12
7176	39	10.7	442	37	31	15	9
7177	38	10.7	459	40	24	14	9
7178	47	10.5	455	38	21	13	9
7179	44	10.4	457	36	22	13	8
7180	45	10.6	473	37	25	14	9
7181	46	10.5	481	32	20	15	8
7182	44	10.8	493	34	22	15	8
7183	50	16.0	1002	46	25	16	9
7184	13	19.7	1343	61	19	11	9
7185	4	16.5	956	46	21	14	8
7186	14	14.1	704	39	22	14	9
7187	15	11.1	496	33	25	16	9
7188	5	9.0	439	28	13	11	7
7189	18	9.0	447	29	13	11	7
7190	14	10.0	543	34	12	9	7
7191	15	10.2	547	34	12	9	7
7192	28	10.2	547	34	12	9	7
7193	33	9.6	548	34	12	8	5
7194	28	9.7	545	34	11	8	6
7195	26	9.6	542	34	10	7	6
7196	25	11.2	720	36	9	5	6

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7197	23	11.9	776	36	10	6	5
7198	23	11.5	700	35	10	6	5
7199	30	10.7	626	35	10	6	6
7200	20	9.5	527	31	9	6	5
7201	28	10.1	578	31	8	6	5
7202	22	10.3	607	33	7	5	5
7203	25	10.3	616	31	6	4	5
7204	32	10.3	616	29	6	4	4
7205	35	10.9	667	32	11	11	4
7206	21	11.3	698	34	11	6	5
7207	21	11.5	713	34	11	6	5
7208	33	11.5	715	37	11	7	6
7209	33	11.4	696	37	11	7	5
7210	37	11.4	696	34	10	6	5
7211	26	11.3	676	34	14	9	5
7212	28	11.0	647	30	18	8	4
7213	23	10.2	602	32	15	7	3
7214	18	10.1	597	35	16	8	4
7215	24	10.1	597	35	11	8	4
7216	35	10.1	596	36	11	7	4
7217	44	10.3	631	36	11	7	4
7218	34	10.3	641	34	10	6	4
7219	39	10.3	641	34	9	5	3
7220	39	10.3	646	34	9	4	3
7221	32	10.3	647	33	9	6	4
7222	48	10.5	647	35	10	8	4
7223	62	10.0	622	34	10	7	4
7224	40	8.9	540	32	9	7	3
7225	44	9.3	549	33	9	7	3
7226	42	9.4	577	33	9	7	4
7227	28	9.6	600	34	9	7	3
7228	38	10.0	668	34	8	6	3
7229	33	10.3	694	33	7	3	3
7230	41	10.8	732	33	7	4	3
7231	34	11.1	749	35	8	4	3
7232	39	11.1	757	35	8	5	3
7233	39	11.0	751	36	7	5	3
7234	41	9.9	660	31	7	5	3
7235	25	7.9	530	27	6	4	3
7236	44	7.4	505	26	5	3	3
7237	35	15.6	1247	49	8	5	4
7238	37	16.7	1337	51	8	3	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7239	51	17.2	1402	50	7	3	3
7240	42	18.1	1466	52	7	3	3
7241	60	18.7	1528	54	7	3	3
7242	69	19.3	1546	61	11	6	3
7243	41	19.0	1515	61	11	6	4
7244	30	17.9	1408	58	11	6	4
7245	31	16.6	1277	53	11	6	4
7246	46	14.9	1120	50	10	6	4
7247	63	14.1	1043	48	10	6	4
7248	39	12.8	932	44	9	6	4
7249	60	11.5	815	41	8	5	4
7250	34	9.4	648	34	6	4	3
7251	40	8.6	573	29	6	4	3
7252	39	8.0	521	28	5	3	3
7253	76	7.6	508	27	5	2	3
MOGOLLON Fm.							
7254	53	9.7	687	35	7	5	3
7255	49	14.2	1091	47	8	5	3
7256	28	14.2	1091	47	8	5	3
7257	66	18.1	1469	55	10	5	4
7258	52	18.1	1469	55	10	5	4
7259	67	19.5	1606	59	10	5	4
7260	72	21.1	1750	62	10	5	3
7261	60	22.3	1848	71	11	5	3
7262	41	21.4	1778	64	10	5	3
7263	71	20.6	1714	64	10	4	3
7264	48	15.7	1277	45	7	3	3
7265	43	16.1	1334	48	7	3	3
7266	67	16.8	1388	48	7	3	2
7267	41	16.8	1388	47	7	3	2
7268	76	16.3	1350	46	7	3	3
7269	51	15.6	1257	46	7	3	3
7270	78	15.6	1257	46	7	3	3
7271	41	14.0	1121	42	7	3	3
7272	59	15.0	1213	45	7	3	3
7273	60	25.1	2141	74	10	4	3
7274	42	14.2	1209	45	6	0	0
7275	43	14.5	1193	45	9	4	2
7276	53	16.7	1398	56	10	4	3
7277	43	19.3	1613	63	11	4	3
7278	43	19.1	1595	63	11	4	3
7279	23	18.3	1529	60	11	4	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7280	23	17.6	1462	57	10	4	2
7281	23	15.0	1226	47	8	3	2
7282	30	7.0	524	30	4	0	0
7283	38	6.7	499	28	6	3	2
7284	28	6.5	468	28	5	3	2
7285	30	6.3	464	28	6	3	0
7286	26	6.4	472	28	6	3	0
7287	32	6.6	478	28	6	3	2
7288	49	6.5	471	28	6	3	2
7289	38	6.5	466	28	5	3	2
7290	34	6.4	466	26	5	2	0
7291	30	6.3	467	27	4	2	0
7292	42	6.4	473	27	4	2	0
7293	62	7.1	509	27	6	3	0
7294	50	7.2	543	31	6	3	0
7295	37	7.9	594	32	6	2	2
7296	33	8.1	617	32	5	2	2
7297	17	8.0	631	33	5	2	2
7298	28	9.9	808	37	5	2	0
7299	24	14.4	1239	45	5	0	0
7300	23	18.6	1659	52	6	0	0
7301	39	21.1	1871	61	9	3	2
7302	33	22.2	1971	65	9	2	2
7303	24	23.1	2041	65	9	2	2
7304	50	22.8	2035	64	10	2	0
7305	33	22.5	2008	64	10	2	0
7306	33	22.2	1982	64	9	2	0
7307	33	22.0	1956	64	9	2	0
7308	57	20.8	1854	61	9	2	0
7309	37	19.4	1726	58	9	2	0
7310	45	18.4	1623	55	8	2	0
7311	23	15.5	1352	50	6	0	0
7312	22	12.9	1166	45	7	2	3
7313	27	12.8	1072	46	7	2	3
7314	42	12.9	1071	46	7	2	0
7315	35	9.9	804	39	7	2	0
7316	26	8.5	691	34	6	2	0
7317	36	8.4	673	33	6	2	0
7318	41	7.8	631	31	6	0	0
7319	37	7.8	619	31	5	0	0
7320	44	7.6	602	30	5	0	0
7321	29	7.8	595	31	8	3	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7322	47	7.8	604	34	8	3	2
7323	28	7.8	604	34	7	2	0
7324	43	7.3	576	31	6	2	0
7325	48	7.3	567	30	6	2	0
7326	47	7.3	567	30	6	2	0
7327	48	8.0	626	33	6	2	3
7328	40	8.0	627	33	6	0	2
7329	25	7.6	612	31	6	0	0
7330	39	7.6	607	31	5	0	0
7331	40	7.5	592	28	5	0	2
7332	44	7.3	568	28	6	2	2
7333	50	7.2	551	27	6	0	2
7334	51	7.0	541	26	5	0	0
7335	43	6.7	527	26	5	2	0
7336	25	6.7	522	29	5	0	0
7337	33	6.5	509	26	5	0	0
7338	31	6.5	510	26	5	0	0
7339	43	6.4	510	26	5	0	0
7340	44	6.6	507	27	3	0	0
7341	37	6.3	501	23	3	0	0
7342	38	5.9	459	24	5	2	0
7343	34	5.9	451	23	5	2	0
7344	33	5.4	413	22	4	0	0
7345	34	5.2	406	23	4	2	2
7346	31	5.8	450	27	5	2	2
7347	31	6.0	460	27	5	0	0
7348	37	6.0	460	23	5	0	0
7349	40	6.0	474	26	5	0	0
7350	32	6.2	495	26	4	0	0
7351	48	6.3	499	25	4	0	0
7352	60	6.6	499	30	7	3	0
7353	25	6.4	487	31	7	2	0
7354	34	4.4	347	21	3	0	0
7355	43	3.8	338	20	4	0	0
7356	55	3.7	327	20	4	0	0
7357	41	3.7	324	20	4	0	0
7358	31	4.2	324	19	3	0	0
7359	21	3.9	306	19	3	0	0
7360	18	3.9	298	19	4	0	0
7361	39	4.0	308	19	4	0	0
7362	44	4.9	432	24	4	0	0
7363	36	6.1	488	25	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7364	29	6.5	536	28	5	0	0
7365	20	6.0	480	25	5	0	0
7366	23	5.2	414	23	5	0	0
7367	25	5.0	406	22	4	0	0
7368	24	4.8	374	21	5	0	0
7369	1	5.4	439	24	4	0	0
7370	42	5.6	444	24	3	0	0
7371	37	5.6	445	22	3	0	0
7372	50	6.1	498	25	3	0	0
7373	48	7.4	608	30	4	0	0
7374	51	9.5	787	38	7	2	0
7375	24	9.8	828	38	7	2	0
7376	9	5.3	432	22	4	0	0
7377	29	7.1	579	29	6	3	0
7378	32	8.2	655	33	6	3	2
7379	28	8.0	655	34	6	2	0
7380	29	7.6	611	32	5	2	0
7381	26	6.3	518	30	5	0	0
7382	33	6.0	480	26	4	0	0
7383	31	4.6	407	24	4	0	0
7384	31	4.5	397	24	4	0	0
7385	31	4.4	388	24	4	0	0
7386	31	4.3	378	24	4	0	0
7387	25	4.3	338	19	3	0	0
7388	18	5.1	407	22	4	0	0
7389	21	5.1	436	24	4	0	0
7390	34	4.9	442	23	4	0	0
7391	27	5.6	445	23	4	0	0
7392	22	5.9	473	25	4	0	0
7393	32	6.0	490	25	3	0	0
7394	33	6.3	507	25	3	0	0
7395	44	6.3	507	26	4	0	0
7396	37	5.9	494	27	4	0	0
7397	26	5.8	459	27	4	0	0
7398	19	5.4	425	23	4	0	0
7399	22	5.9	468	26	4	0	0
7400	18	6.0	500	26	4	0	0
7401	41	6.5	543	25	3	0	3
7402	67	6.5	554	28	5	0	3
7403	64	6.5	554	28	5	0	0
7404	70	6.5	552	27	5	0	0
7405	40	6.4	530	28	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7406	42	5.8	520	28	4	0	0
7407	32	6.0	536	28	4	0	0
7408	32	6.0	540	29	4	0	0
7409	62	6.3	540	29	4	0	0
7410	85	6.3	531	28	4	0	0
7411	33	6.0	505	25	4	0	0
7412	26	5.0	449	24	5	2	0
7413	24	4.9	374	22	5	2	0
7414	29	4.4	367	22	4	0	0
7415	61	4.8	380	23	4	0	0
7416	62	4.9	393	23	4	0	0
7417	62	5.0	406	24	4	0	0
7418	38	5.0	431	25	5	0	0
7419	53	5.1	450	25	5	0	0
7420	48	5.2	465	24	4	0	0
7421	41	6.2	508	27	4	0	0
7422	31	6.2	536	27	4	0	0
7423	50	6.3	575	27	4	0	0
7424	51	7.0	638	30	4	0	0
7425	57	7.3	643	29	4	0	0
7426	55	7.4	643	29	3	0	0
7427	64	7.4	635	29	3	0	0
7428	23	7.0	592	27	3	0	0
7429	63	6.3	573	26	4	0	0
7430	49	6.1	538	25	4	0	0
7431	43	6.1	504	26	4	0	0
7432	38	6.1	504	26	4	0	0
7433	64	6.1	504	22	4	0	0
7434	51	5.5	500	22	3	0	0
7435	48	5.5	503	22	4	0	0
7436	63	5.5	499	22	4	0	0
7437	45	5.4	499	20	4	0	0
7438	56	5.5	503	20	3	0	0
7439	51	6.0	508	22	3	0	0
7440	43	6.0	535	22	5	0	0
7441	41	6.0	547	23	5	0	0
7442	38	6.0	547	23	4	0	0
7443	39	6.4	566	22	4	0	0
7444	35	6.8	578	24	4	0	0
7445	46	6.8	580	27	4	0	0
7446	44	6.7	571	27	4	0	0
7447	53	6.9	582	26	5	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7448	50	6.9	582	26	5	0	0
7449	57	6.7	580	27	5	0	0
7450	25	6.8	599	28	4	0	0
7451	46	7.4	665	28	4	0	0
7452	34	7.9	689	27	3	0	0
7453	46	7.9	714	29	5	0	0
7454	38	9.1	785	35	6	0	0
7455	32	9.3	807	38	6	0	0
7456	26	8.9	807	38	6	0	0
7457	30	9.1	795	36	6	0	0
7458	46	9.1	782	34	5	0	0
7459	32	9.1	782	34	5	0	0
7460	51	8.8	773	35	5	0	0
7461	37	9.1	780	36	6	0	0
7462	60	9.2	792	36	6	0	0
7463	37	9.0	794	37	6	0	0
7464	37	8.8	796	38	7	0	0
7465	19	7.5	637	31	6	0	0
7466	16	7.8	700	34	6	0	0
7467	38	18.0	1594	62	13	0	0
7468	34	23.4	2093	76	17	0	0
7469	32	23.4	2119	79	18	0	0
7470	28	22.0	1965	75	15	0	0
7471	36	18.3	1628	60	12	0	0
7472	55	16.2	1445	54	9	0	0
7473	54	12.9	1132	45	7	0	0
7474	47	12.9	1132	45	7	0	0
7475	46	10.2	875	39	9	0	0
7476	30	8.7	773	38	7	0	0
7477	31	7.9	655	35	7	0	0
7478	19	7.7	626	34	8	0	0
7479	37	7.9	661	34	8	0	0
7480	42	8.2	694	31	6	0	0
7481	44	8.4	711	33	6	0	0
7482	62	8.4	715	32	5	0	0
7483	30	8.2	705	30	5	0	0
7484	61	7.5	686	30	5	0	0
7485	72	7.9	668	29	5	0	0
7486	67	8.2	694	34	6	0	0
7487	63	8.2	694	34	6	0	0
7488	70	8.4	719	35	6	0	0
7489	28	8.4	720	35	7	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7490	32	7.5	658	28	5	0	0
7491	38	14.1	1304	38	5	0	0
7492	31	21.2	1961	55	7	0	0
7493	47	123.1	11101	466	79	4	0
7494	32	169.9	15197	708	124	7	0
7495	32	160.9	14386	660	115	7	0
7496	27	91.6	8331	317	53	4	0
7497	42	74.7	6817	245	39	3	0
7498	33	40.1	3671	124	18	0	0
7499	24	21.2	1919	70	15	2	0
7500	31	16.2	1460	55	13	2	0
7501	49	13.0	1168	49	11	2	0
7502	41	33.7	3071	98	23	3	3
7503	20	23.1	2096	69	13	1	0
7504	20	35.8	3290	98	19	2	0
7505	37	4.8	377	24	8	2	0
7506	51	4.8	372	25	8	0	0
7507	56	4.9	372	25	8	0	0
7508	62	5.1	398	28	8	0	0
7509	37	5.7	467	26	7	0	0
7510	39	6.1	496	28	8	0	0
7511	36	7.9	650	36	10	0	0
7512	45	7.9	650	36	10	0	0
7513	19	7.7	621	37	12	3	0
7514	32	7.2	573	34	11	3	0
7515	58	6.7	542	32	10	2	0
7516	25	7.2	598	36	10	0	0
7517	51	7.9	657	34	10	2	0
7518	48	8.0	665	35	10	0	0
7519	61	7.8	641	35	10	0	0
7520	48	7.4	614	33	9	0	0
7521	70	7.9	684	29	7	0	0
7522	57	7.9	684	29	7	0	0
7523	61	9.3	797	33	8	2	0
7524	46	10.9	941	37	9	3	0
7525	46	12.4	1106	35	10	2	0
7526	57	12.6	1119	38	10	2	0
7527	43	12.8	1132	39	10	2	0
7528	37	13.0	1130	40	10	3	2
7529	22	11.7	1037	38	10	2	0
7530	57	11.7	1026	40	10	3	0
7531	56	11.5	1016	36	10	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7532	53	11.3	998	36	9	2	0
7533	49	11.2	988	38	9	0	0
7534	50	11.4	1013	37	9	2	0
7535	42	12.1	1079	40	8	0	0
7536	45	12.7	1180	39	8	0	0
7537	68	13.7	1235	39	8	0	0
7538	49	14.3	1270	44	9	2	0
7539	77	14.2	1279	43	9	2	0
7540	58	13.9	1237	42	9	2	0
7541	50	13.9	1237	42	9	2	0
7542	26	12.9	1152	41	8	2	0
7543	40	12.4	1078	40	8	2	4
7544	19	10.1	886	34	7	3	0
7545	26	10.9	976	40	9	4	0
7546	87	10.6	961	35	8	3	0
7547	82	10.6	955	38	9	3	0
7548	78	10.9	962	38	9	4	0
7549	80	11.1	969	39	9	3	0
7550	90	11.2	969	39	9	3	0
7551	95	11.7	1018	39	8	4	0
7552	88	11.8	1018	39	11	5	0
7553	108	12.6	1108	43	14	4	0
7554	85	13.3	1160	44	11	5	0
7555	50	14.7	1287	48	14	4	0
7556	63	21.3	1617	52	18	8	0
7557	41	280.6	24094	1483	312	30	4
7558	41	280.4	24094	1483	312	30	4
7559	41	280.3	24094	1483	312	30	4
7560	28	207.1	18112	993	186	20	3
7561	25	153.0	13705	616	107	10	3
7562	48	133.6	11843	531	126	19	4
7563	42	116.5	10376	447	99	16	3
7564	61	99.9	8924	369	84	13	3
7565	39	73.4	6577	252	60	10	4
7566	37	56.1	5031	188	45	8	3
7567	31	48.2	4303	161	40	7	3
7568	53	40.9	3678	140	34	6	2
7569	50	35.2	3137	119	28	5	3
7570	47	30.7	2710	105	25	8	2
7571	81	26.7	2364	88	21	9	3
7572	50	21.8	1906	75	17	8	4
7573	31	18.9	1505	60	13	8	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7574	27	16.9	1300	65	12	7	2
7575	48	14.2	1237	54	13	4	0
7576	81	13.9	1215	54	13	3	0
7577	92	13.6	1212	51	12	3	0
7578	77	14.2	1252	52	11	3	0
7579	58	14.3	1286	52	11	4	0
7580	21	13.1	1153	44	10	3	0
7581	26	10.9	958	40	8	2	0
7582	66	10.9	958	40	8	2	0
7583	66	10.9	958	40	8	2	0
7584	66	10.9	958	40	8	2	0
7585	47	13.7	1247	46	9	2	0
7586	93	13.7	1247	46	9	2	0
7587	106	21.5	1960	66	13	2	0
7588	101	29.0	2646	86	16	2	0
7589	45	32.1	2949	97	22	4	0
7590	21	32.1	2932	97	22	5	0
7591	30	27.4	2474	91	21	4	0
7592	60	24.8	2239	86	20	4	0
7593	73	22.9	2061	81	20	4	0
7594	41	35.5	3155	123	31	7	0
7595	42	65.9	5883	234	56	9	3
7596	32	147.8	13033	620	142	19	4
7597	51	147.8	13033	620	142	19	4
7598	13	118.6	10519	479	102	13	3
7599	47	103.4	9194	403	87	12	2
7600	38	102.1	9164	379	75	9	0
7601	45	130.9	11601	537	110	13	3
7602	56	156.6	13739	670	162	25	3
7603	68	162.7	14249	708	170	25	5
7604	63	156.7	13738	680	157	23	4
7605	37	146.7	12891	615	147	22	4
7606	54	140.2	12355	578	136	21	4
7607	72	166.3	14564	733	169	24	4
7608	38	183.7	16025	853	188	25	5
7609	58	190.4	16588	896	196	26	5
7610	49	188.1	16379	893	189	25	4
7611	21	167.2	14724	737	151	18	3
7612	33	150.2	13284	640	127	16	4
7613	52	132.3	11770	545	102	15	4
7614	54	112.4	10005	437	99	15	3
7615	36	139.7	12361	577	130	19	3

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7616	36	139.7	12361	577	130	19	0
7617	50	187.2	16350	869	194	25	4
7618	41	211.2	18322	1026	230	28	4
7619	47	213.7	18517	1041	234	29	4
7620	39	213.7	18517	1041	234	29	4
7621	49	197.4	17180	936	209	25	4
7622	35	150.0	13211	652	139	19	4
7623	39	131.4	11630	549	114	15	4
7624	54	114.6	10257	438	94	13	0
7625	67	98.5	8826	364	77	11	3
7626	68	98.5	8826	364	77	11	3
7627	96	82.7	7437	296	60	9	0
7628	45	69.2	6244	242	51	7	0
7629	85	57.9	5232	199	40	6	0
7630	126	57.9	5232	199	40	6	0
7631	97	57.9	5232	199	40	7	2
7632	102	48.7	4374	161	38	7	2
7633	23	34.9	3109	122	30	6	0
7634	58	30.0	2659	107	27	6	0
7635	19	24.1	2093	92	26	6	0
7636	27	24.1	2093	87	26	6	3
7637	29	23.3	2021	85	23	5	3
7638	125	22.2	1923	81	23	5	0
7639	121	22.2	1923	81	23	5	2
7640	126	21.3	1835	80	22	5	2
7641	57	20.3	1780	72	21	4	0
7642	133	20.3	1780	72	21	4	0
7643	153	20.3	1780	72	21	4	0
7644	100	20.2	1765	72	20	4	0
7645	103	22.0	1923	78	20	4	0
7646	109	22.0	1923	78	20	4	0
7647	96	29.3	2574	105	27	5	0
7648	88	90.5	8016	342	83	14	3
7649	36	133.4	11728	562	131	19	3
7650	20	144.7	12679	625	147	21	4
7651	76	122.9	10878	500	117	17	4
7652	26	120.8	10693	492	106	13	3
7653	33	112.3	9992	434	104	17	4
7654	17	126.2	11121	502	128	21	4
7655	69	180.8	15729	813	199	29	4
7656	0	29.8	2641	105	32	8	0
7657	59	28.5	2506	101	30	7	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7658	31	28.0	2464	104	28	7	0
7659	55	27.8	2464	104	28	6	0
7660	66	27.8	2458	97	28	6	2
7661	43	26.7	2351	93	25	5	2
7662	44	24.9	2216	91	23	4	0
7663	57	26.8	2379	92	24	5	0
7664	63	27.6	2460	97	29	7	0
7665	45	27.7	2398	101	32	8	3
7666	31	25.6	2182	97	32	8	3
7667	28	22.9	1939	90	31	8	0
7668	40	21.7	1815	88	30	9	2
7669	16	17.5	1456	73	27	6	0
7670	20	17.5	1456	73	27	6	0
7671	51	16.2	1325	71	24	6	0
7672	37	13.7	1126	61	21	5	0
7673	42	13.8	1135	59	22	6	0
7674	69	13.8	1135	59	22	6	0
7675	52	16.8	1366	69	29	9	3
7676	35	17.3	1413	69	29	9	2
7677	53	17.5	1432	68	28	9	2
7678	62	17.5	1432	68	28	8	2
7679	52	17.5	1432	68	28	8	2
7680	39	16.8	1380	67	27	8	0
7681	36	15.8	1281	64	25	8	0
7682	30	15.1	1223	56	23	8	3
7683	34	14.4	1166	54	22	7	3
7684	28	12.2	979	48	17	6	2
7685	33	10.7	869	42	19	7	0
7686	29	11.6	958	46	19	7	0
7687	41	17.6	1513	63	20	7	0
7688	37	21.6	1872	73	23	7	2
7689	33	21.6	1872	73	23	7	2
7690	43	21.2	1871	72	22	7	0
7691	38	20.5	1796	65	19	6	0
7692	48	19.6	1727	61	18	6	0
7693	33	17.7	1546	58	16	5	0
7694	33	16.8	1465	57	15	4	0
7695	50	15.9	1400	53	16	5	2
7696	40	14.2	1227	52	14	5	0
7697	43	14.2	1227	52	15	5	0
7698	66	12.5	1061	46	13	5	0
7699	30	10.8	917	42	13	5	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7700	38	10.4	875	42	12	4	0
7701	77	10.4	875	42	12	4	0
7702	70	10.1	850	39	12	4	0
7703	61	10.0	842	39	12	4	0
7704	66	10.0	842	39	12	4	0
7705	50	9.9	852	39	11	5	0
7706	96	10.2	862	38	11	5	0
7707	78	10.2	862	38	12	5	0
7708	63	10.1	859	38	12	4	0
7709	104	10.2	856	39	11	3	0
7710	66	10.2	856	38	10	3	0
7711	54	10.2	863	38	10	3	0
7712	79	10.0	863	35	9	3	2
7713	79	9.9	861	35	9	2	2
7714	87	10.3	865	35	11	4	0
7715	85	10.3	879	39	11	4	0
7716	40	10.4	891	39	11	5	0
7717	44	10.3	883	35	10	5	0
7718	31	9.7	856	34	10	4	0
7719	27	9.4	797	33	10	4	0
7720	35	9.2	807	31	9	3	0
7721	26	11.2	992	34	8	3	0
7722	24	11.7	1058	34	7	2	0
7723	27	12.4	1101	37	9	3	0
7724	74	13.1	1162	38	9	3	0
7725	49	13.7	1214	40	9	3	0
7726	25	14.0	1252	42	9	4	0
7727	85	14.1	1265	42	9	4	0
7728	56	14.1	1265	42	9	3	0
7729	85	13.8	1222	42	8	3	0
7730	71	13.8	1222	42	8	3	0
7731	34	11.8	1056	36	7	3	0
7732	29	10.7	973	35	7	2	0
7733	33	10.2	918	31	6	2	0
7734	100	9.8	872	31	6	3	0
7735	54	9.4	833	30	6	3	0
7736	49	9.1	802	30	6	2	0
7737	54	8.4	739	28	6	3	0
7738	39	8.2	707	29	7	3	0
7739	44	8.0	684	29	7	3	0
7740	39	7.5	640	29	6	3	0
7741	45	7.7	655	28	7	4	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7742	41	7.9	676	27	7	4	0
7743	15	7.2	633	24	5	2	0
7744	75	7.6	661	26	5	2	0
7745	66	7.9	720	26	5	2	0
7746	40	8.1	721	25	4	2	0
7747	45	10.5	930	33	6	3	0
7748	32	10.5	930	35	7	3	0
7749	39	10.3	912	35	5	3	0
7750	45	10.6	947	34	6	3	2
7751	47	5.3	464	21	4	2	0
7752	50	5.2	453	21	4	0	0
7753	64	5.5	475	22	5	2	0
7754	25	8.3	724	32	7	2	0
7755	16	8.5	761	32	7	2	0
7756	26	9.3	817	34	7	2	0
7757	30	9.9	886	36	7	2	0
7758	25	10.2	910	40	9	3	0
7759	22	10.1	910	40	9	3	0
7760	11	7.7	669	32	7	2	0
7761	22	7.3	645	28	6	2	0
7762	17	7.6	700	28	5	2	0
7763	20	8.8	773	34	7	3	0
7764	22	8.7	773	35	7	3	0
7765	27	8.7	756	32	6	2	0
7766	53	8.7	751	32	6	2	0
7767	33	8.5	749	33	6	2	0
7768	56	8.2	717	32	5	2	0
7769	69	8.2	717	32	5	2	0
7770	51	7.5	666	26	6	2	0
7771	58	7.3	638	26	5	2	0
7772	34	7.0	629	27	5	0	0
7773	50	7.8	688	27	5	2	0
7774	28	7.9	688	30	5	2	0
7775	20	7.8	666	30	5	2	0
7776	21	7.4	631	27	4	3	0
7777	27	7.3	625	27	4	3	0
7778	54	7.2	618	26	5	2	0
7779	48	7.2	620	28	5	2	0
7780	41	7.8	673	28	6	2	0
7781	49	8.1	717	27	5	2	0
7782	30	8.8	793	28	5	0	0
7783	50	8.7	793	28	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7784	59	9.3	852	28	5	0	0
7785	57	10.1	916	28	5	2	0
7786	57	12.0	1074	35	6	2	0
7787	29	12.9	1147	38	8	3	0
7788	52	12.8	1147	38	8	3	0
7789	46	12.3	1106	36	7	3	0
7790	52	12.3	1106	36	7	3	0
7791	46	11.0	975	36	6	3	0
7792	64	10.1	897	32	6	3	0
7793	80	9.2	839	30	6	2	0
7794	65	9.4	839	30	6	2	0
7795	56	9.1	806	30	6	2	0
7796	39	9.7	869	30	6	2	0
7797	44	10.0	890	28	5	2	0
7798	51	10.1	893	27	5	2	0
7799	44	9.8	893	27	4	0	0
7800	49	9.7	878	24	4	0	0
7801	37	9.9	912	26	5	2	0
7802	28	13.1	1201	32	6	3	0
7803	41	14.9	1370	36	6	3	0
7804	41	16.0	1476	38	8	3	0
7805	31	17.8	1643	44	8	2	0
7806	26	19.5	1812	48	9	2	0
7807	36	25.5	2363	65	11	2	0
7808	32	39.0	3630	97	17	3	0
7809	45	51.1	4742	136	23	4	0
7810	47	56.4	5168	160	34	6	0
7811	20	53.9	4929	154	34	6	0
7812	54	48.8	4469	141	30	5	0
7813	55	43.3	3968	125	26	5	0
7814	31	16.6	1489	55	11	3	0
7815	10	13.1	1165	44	8	2	0
7816	16	11.0	986	36	7	0	0
7817	39	10.2	927	36	6	2	0
7818	45	9.5	872	32	6	2	0
7819	42	7.8	721	28	5	0	0
7820	55	7.4	677	28	5	0	0
7821	58	4.5	414	16	4	0	0
7822	61	4.4	393	18	4	0	0
7823	57	4.2	378	18	4	0	0
7824	53	4.1	367	16	4	0	0
7825	75	4.2	372	18	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7826	62	4.6	392	18	4	2	0
7827	49	5.1	441	17	3	2	0
7828	41	4.9	454	17	3	0	0
7829	42	5.1	470	17	4	0	0
7830	59	5.1	470	17	4	0	0
7831	46	5.1	469	19	4	0	0
7832	46	5.2	464	19	4	0	0
7833	33	5.0	461	19	3	0	0
7834	41	4.9	454	17	3	0	0
7835	40	5.0	462	16	3	0	0
7836	45	5.7	529	18	3	0	0
7837	38	6.4	570	20	4	0	0
7838	41	11.5	1045	35	6	0	0
7839	43	9.8	876	34	8	0	0
7840	41	9.1	820	32	8	0	0
7841	32	5.2	470	17	4	0	0
7842	41	5.1	469	19	4	0	0
7843	38	5.1	464	19	4	0	0
7844	42	5.4	461	19	3	0	0
7845	47	14.3	1283	47	11	2	0
7846	53	14.2	1265	46	13	2	0
7847	34	13.5	1193	44	12	2	0
7848	44	12.8	1128	41	11	3	0
7849	51	12.1	1077	42	11	2	0
7850	18	10.0	896	36	9	2	0
7851	19	8.7	778	31	7	0	0
7852	65	8.2	733	31	7	0	0
7853	53	8.0	701	28	6	0	0
7854	36	7.3	659	27	5	0	0
7855	33	7.6	681	28	6	0	0
7856	51	10.4	941	36	9	2	0
7857	34	9.2	814	35	9	2	0
7858	21	7.2	631	26	6	2	0
7859	30	6.7	611	24	5	0	0
7860	38	6.6	611	23	5	0	0
7861	24	5.4	496	17	4	0	0
7862	21	4.7	431	16	2	0	0
7863	18	4.8	439	16	3	0	0
7864	28	4.8	442	16	3	0	0
7865	39	4.8	440	16	3	0	0
7866	48	4.8	440	16	3	0	0
7867	45	4.7	435	16	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7868	52	4.7	432	15	3	0	0
7869	55	4.7	432	15	2	0	0
7870	34	4.6	424	16	2	0	0
7871	22	3.9	367	12	2	0	0
7872	40	3.8	351	13	2	0	0
7873	37	3.7	339	13	3	0	0
7874	32	3.4	314	13	3	0	0
7875	39	3.3	299	12	3	0	0
7876	36	3.0	276	11	2	0	0
7877	46	2.9	265	11	2	0	0
7878	50	3.1	285	11	3	0	0
7879	26	3.5	324	13	3	0	0
7880	47	4.0	370	16	3	0	0
7881	30	4.3	390	16	3	0	0
7882	15	3.7	340	13	2	0	0
7883	52	3.9	368	11	2	0	0
7884	60	4.3	396	16	2	0	0
7885	57	4.5	417	16	3	0	0
7886	45	4.9	455	16	2	0	0
7887	55	5.2	481	17	3	0	0
7888	60	5.3	497	17	3	0	0
7889	84	5.4	500	17	3	0	0
7890	60	5.4	500	17	2	0	0
7891	47	5.2	484	17	3	0	0
7892	35	5.1	476	15	3	0	0
7893	48	5.1	476	15	3	0	0
7894	54	4.9	463	14	2	0	0
7895	38	4.8	456	14	2	0	0
7896	58	4.6	432	16	3	0	0
7897	17	4.5	418	16	3	0	0
7898	38	4.4	410	15	2	0	0
7899	40	4.4	403	15	3	0	0
7900	28	4.0	372	14	2	0	0
7901	33	4.5	423	14	2	0	0
7902	19	5.1	482	13	3	0	0
7903	20	5.9	561	14	2	0	0
7904	29	6.3	594	15	2	0	0
7905	42	6.6	628	16	3	0	0
7906	67	7.1	666	19	3	0	0
7907	33	7.2	677	19	3	0	0
7908	34	7.0	661	19	3	0	0
7909	31	6.4	606	17	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7910	29	5.6	525	18	3	0	0
7911	16	5.1	479	15	2	0	0
7912	36	4.8	450	14	2	0	0
7913	38	4.5	418	14	2	0	0
7914	42	4.2	384	14	3	0	0
7915	53	4.0	371	15	3	0	0
7916	36	4.0	370	15	3	0	0
7917	42	4.0	367	14	3	0	0
7918	48	4.0	367	14	3	0	0
7919	31	4.1	377	15	3	0	0
7920	53	4.2	389	14	3	0	0
7921	73	4.7	434	17	3	0	0
7922	33	4.7	441	17	3	0	0
7923	32	4.7	441	15	3	0	0
7924	42	4.7	435	15	3	0	0
7925	44	4.6	430	15	2	0	0
7926	69	4.5	420	14	2	0	0
7927	49	4.3	398	14	2	0	0
7928	49	4.0	378	14	2	0	0
7929	53	3.5	333	13	2	0	0
7930	49	3.4	310	13	2	0	0
7931	42	3.5	322	12	2	0	0
7932	45	4.1	382	14	2	0	0
7933	35	4.7	435	15	2	0	0
7934	35	4.6	419	13	2	0	0
7935	35	4.5	419	13	2	0	0
7936	35	4.5	418	14	2	0	0
7937	47	4.2	393	14	2	0	0
7938	49	4.1	381	15	2	0	0
7939	13	3.8	352	14	2	0	0
7940	34	3.8	352	13	2	0	0
7941	49	3.7	346	13	2	0	0
7942	50	3.7	346	13	3	0	0
7943	28	3.6	329	14	3	0	0
7944	30	4.6	396	17	4	0	0
7945	23	5.2	473	19	4	0	0
7946	19	5.6	501	22	5	0	0
7947	15	4.4	395	19	4	0	0
7948	65	4.2	378	17	4	0	0
7949	23	3.7	325	15	3	0	0
7950	26	3.5	319	14	3	0	0
7951	26	3.6	333	13	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7952	17	3.7	343	14	2	0	0
7953	21	4.0	365	14	2	0	0
7954	23	4.3	396	15	3	0	0
7955	12	4.3	401	14	3	0	0
7956	23	4.2	391	14	3	0	0
7957	38	4.1	386	13	3	0	0
7958	52	3.9	366	12	2	0	0
7959	56	3.8	347	12	2	0	0
7960	51	3.5	327	11	2	0	0
7961	51	3.5	322	11	2	0	0
7962	52	3.7	336	13	3	0	0
7963	25	3.8	352	12	3	0	0
7964	23	3.9	360	13	3	0	0
7965	20	3.8	355	13	2	0	0
7966	24	3.8	355	13	2	0	0
7967	24	3.3	302	12	3	0	0
7968	19	3.5	327	13	3	0	0
7969	15	3.8	347	13	3	0	0
7970	44	4.0	368	13	3	0	0
7971	53	4.3	396	15	3	0	0
7972	62	4.5	421	15	3	0	0
7973	41	4.7	438	15	3	0	0
7974	42	4.7	438	15	2	0	0
7975	24	4.4	406	15	2	0	0
7976	21	3.9	362	14	2	0	0
7977	20	3.7	347	12	0	0	0
7978	24	3.6	336	13	2	0	0
7979	27	3.8	349	13	3	0	0
7980	27	3.9	363	14	3	0	0
7981	23	4.0	372	13	2	0	0
7982	15	4.7	438	15	3	0	0
7983	29	6.3	589	18	2	0	0
7984	21	6.6	627	18	2	0	0
7985	19	6.6	626	19	2	0	0
7986	13	5.6	516	17	2	0	0
7987	13	4.7	434	15	2	0	0
7988	30	4.0	377	13	2	0	0
7989	19	4.0	373	13	2	0	0
7990	17	4.2	395	13	2	0	0
7991	28	4.3	402	13	2	0	0
7992	18	4.1	390	13	3	0	0
7993	28	4.0	371	13	3	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
7994	22	3.9	360	13	3	0	0
7995	17	3.5	320	12	3	0	0
7996	30	3.3	298	11	3	0	0
7997	39	3.0	281	10	2	0	0
7998	36	3.2	296	14	2	0	0
7999	15	3.5	321	14	2	0	0
8000	36	3.7	339	14	3	0	0
8001	15	3.8	335	13	2	0	0
8002	20	3.5	326	13	2	0	0
8003	20	3.4	314	11	2	0	0
8004	28	3.1	291	11	2	0	0
8005	42	3.2	294	12	2	0	0
8006	27	3.5	317	13	2	0	0
8007	26	3.8	350	14	2	0	0
8008	32	4.4	411	15	3	0	0
8009	20	4.7	430	16	3	0	0
8010	22	4.7	431	16	3	0	0
8011	23	4.4	415	14	0	0	0
8012	43	4.2	394	13	2	0	0
8013	20	4.8	454	15	3	0	0
8014	39	2.8	258	9	3	0	0
8015	39	2.9	240	11	4	1	1
8016	39	2.9	221	13	5	2	2
8017	27	1.4	116	9	4	0	0
8018	34	1.4	108	9	2	0	0
8019	13	1.4	119	8	2	0	0
8020	24	1.6	127	11	3	0	0
8021	25	1.6	127	10	3	0	0
8022	25	1.6	127	9	3	0	0
8023	25	1.6	125	10	3	0	0
8024	26	1.7	126	10	4	0	0
8025	39	1.7	123	10	4	0	0
8026	33	1.6	129	10	3	0	0
8027	29	1.6	129	10	3	0	0
8028	27	1.4	121	8	2	0	0
8029	27	1.4	113	8	4	0	0
8030	23	1.1	90	6	3	0	0
8031	11	1.1	83	5	2	0	0
8032	24	1.2	95	6	3	0	0
8033	16	1.3	109	5	2	0	0
8034	22	1.5	120	7	3	0	0
8035	14	1.5	120	7	4	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8036	5	1.6	136	6	3	0	0
8037	22	1.9	154	8	2	0	0
8038	29	1.9	162	7	2	0	0
8039	26	2.2	187	7	2	0	0
8040	19	2.4	202	8	3	0	0
8041	21	2.6	222	9	2	0	0
8042	25	2.6	225	9	3	0	0
8043	20	2.5	219	10	3	0	0
8044	23	2.3	211	10	3	0	0
8045	20	2.0	186	8	2	0	0
8046	23	1.9	170	8	2	0	0
8047	29	1.8	167	7	2	0	0
8048	22	1.9	176	8	2	0	0
8049	22	2.2	203	9	2	0	0
8050	20	2.4	217	10	3	0	0
8051	16	2.4	222	10	2	0	0
8052	19	2.7	243	10	2	0	0
8053	16	2.6	238	9	2	2	0
8054	15	2.6	223	10	2	2	0
8055	16	2.6	237	11	2	0	0
8056	18	2.8	244	11	2	0	0
8057	13	2.7	239	10	2	0	0
8058	18	2.7	238	11	3	0	0
8059	11	2.9	268	11	3	0	0
8060	13	2.0	174	8	2	0	0
8061	13	1.1	80	5	2	0	0
8062	32	1.0	70	3	0	0	0
8063	28	1.0	76	3	2	0	0
8064	20	0.9	77	5	0	0	0
8065	19	0.8	78	3	0	0	0
8066	35	1.2	109	4	0	0	0
8067	18	1.3	109	6	2	0	0
8068	18	1.9	173	7	2	0	0
8069	28	2.1	200	7	2	0	0
8070	21	2.4	209	8	2	0	0
8071	29	2.4	209	10	2	0	0
8072	27	2.3	201	8	2	0	0
8073	28	2.1	194	8	2	0	0
8074	21	1.9	180	7	0	0	0
8075	20	2.1	180	8	2	0	0
8076	25	1.9	180	8	0	0	0
8077	22	1.9	174	8	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8078	28	1.8	162	7	2	0	0
8079	25	1.9	168	7	2	0	0
8080	18	2.1	194	8	2	0	0
8081	20	2.1	195	7	0	0	0
8082	18	2.1	190	9	0	0	0
8083	11	1.9	181	8	0	0	0
8084	14	2.2	189	8	0	0	0
8085	18	2.4	209	10	2	0	0
8086	18	2.4	209	10	2	0	0
8087	13	2.2	191	9	2	0	3
8088	22	2.2	191	9	2	0	0
8089	28	2.0	183	7	2	0	0
8090	28	2.1	186	9	0	0	0
8091	22	2.4	214	11	3	0	0
8092	20	2.4	224	11	2	0	0
8093	28	2.7	240	10	2	0	0
8094	17	2.8	249	12	2	0	0
8095	23	2.8	238	10	2	0	0
8096	22	2.7	232	11	0	0	0
8097	32	2.4	220	11	0	0	0
8098	32	2.5	223	9	2	0	0
8099	30	2.6	236	10	2	2	0
8100	21	2.6	236	10	2	2	0
8101	27	2.6	233	10	2	0	0
8102	27	1.9	174	9	2	0	0
8103	32	2.9	263	12	3	0	0
8104	29	2.9	263	13	3	0	0
8105	46	2.8	250	13	3	0	0
8106	64	2.6	233	11	3	0	0
8107	62	2.2	201	10	2	0	0
8108	81	2.1	189	9	0	0	0
8109	70	2.1	189	9	0	0	0
8110	42	1.7	162	7	2	0	0
8111	45	1.5	137	6	2	0	0
8112	54	1.1	102	6	2	0	0
8113	41	1.1	97	7	2	0	0
8114	39	0.9	79	7	0	0	0
8115	16	0.5	52	3	0	0	0
8116	16	1.1	101	5	0	0	0
8117	26	1.3	111	7	2	0	0
8118	26	1.5	127	8	3	0	0
8119	27	1.4	119	9	2	0	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8120	30	1.4	118	8	2	0	0
8121	27	2.0	176	9	2	0	0
8122	28	2.9	256	13	3	0	0
8123	20	3.5	309	16	4	2	0
8124	32	2.5	222	11	3	0	0
8125	25	1.5	126	8	3	0	0
8126	33	8.7	788	31	8	2	0
8127	14	8.7	788	31	8	2	0
8128	16	154.2	14260	479	85	11	9
8129	19	20.4	1853	56	14	3	0
8130	20	16.5	1476	50	11	3	0
8131	23	12.2	1113	37	10	3	0
8132	15	7.7	669	30	8	3	0
8133	24	5.9	522	24	6	0	0
8134	23	5.5	487	23	6	1	0
8135	23	5.1	451	21	6	2	0
8136	34	4.8	407	20	6	2	0
8137	47	4.2	367	20	6	2	0
8138	15	4.5	381	21	6	2	0
8139	15	4.7	395	23	6	2	0
8140	13	6.4	518	29	12	3	0
8141	15	14.5	1312	48	14	3	0
8142	9	13.4	1171	46	14	4	0
8143	33	9.6	853	33	10	3	0
8144	14	7.5	654	27	8	2	0
8145	17	4.2	385	18	3	0	0
8146	30	4.0	362	18	3	0	0
8147	50	3.9	344	15	3	0	0
8148	44	3.9	341	17	5	2	0
8149	27	3.9	333	17	5	2	0
8150	26	3.7	323	15	5	2	0
8151	19	3.7	315	15	5	2	0
8152	29	3.4	294	14	4	2	0
8153	31	3.2	286	14	4	0	0
8154	36	3.1	267	12	4	0	2
8155	34	2.9	260	11	4	0	2
8156	47	4.6	407	16	5	2	0
8157	28	8.3	754	23	6	2	0
8158	20	11.3	1044	30	7	2	0
8159	38	11.4	1044	29	8	2	0
8160	28	11.4	1027	30	8	2	0
8161	37	10.6	964	26	7	2	0
8162	30	8.8	797	24	6	3	0
8163	21	7.7	673	25	8	3	0
8164	30	7.0	593	24	7	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8165	26	7.2	616	22	9	3	0
8166	22	6.9	590	19	7	4	0
8167	28	6.4	548	20	8	4	0
8168	29	6.0	525	17	9	4	0
8169	27	6.3	522	21	5	3	0
8170	25	6.1	508	19	7	2	0
8171	17	5.9	487	19	9	4	0
8172	25	5.6	482	19	5	3	0
8173	26	5.6	483	18	6	3	0
8174	37	5.3	472	16	5	3	0
8175	25	5.2	460	17	5	3	0
8176	25	4.9	451	15	4	3	2
8177	30	4.6	406	16	5	3	2
8178	25	4.5	376	15	6	2	0
8179	41	4.4	372	16	6	2	0
8180	41	4.8	396	16	5	3	0
8181	28	4.8	406	16	4	3	0
8182	32	4.7	408	17	6	2	0
8183	28	4.7	407	16	6	2	0
8184	26	4.8	410	16	5	2	0
8185	26	4.8	414	17	5	2	0
8186	5	4.8	417	17	5	2	0
8187	44	5.2	443	20	6	3	0
8188	33	5.8	497	22	6	3	0
8189	27	6.1	515	19	6	3	0
8190	23	5.8	514	19	5	3	0
8191	32	5.9	515	19	6	3	0
8192	32	5.9	515	18	5	3	0
8193	31	5.7	515	20	5	2	0
8194	29	5.9	521	20	5	1	0
8195	32	6.1	545	18	5	2	0
8196	31	6.4	553	21	6	3	2
8197	22	6.0	538	20	5	2	0
8198	24	5.4	483	18	4	3	0
8199	8	4.7	409	17	4	2	2
8200	24	4.9	432	17	4	2	2
8201	33	2.6	232	9	3	2	0
8202	27	5.3	472	18	5	3	0
8203	22	6.4	575	21	6	2	0
8204	30	6.7	586	22	6	2	0
8205	38	6.8	603	24	6	2	0
8206	36	6.8	607	22	7	3	0
8207	44	7.1	636	23	7	3	0
8208	30	7.0	630	23	7	3	0
8209	29	6.4	565	21	6	3	0
8210	31	5.8	526	20	6	3	0
8211	45	5.5	485	19	6	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8212	37	5.0	442	19	5	2	0
8213	30	4.9	433	18	5	2	0
8214	27	4.6	401	17	5	2	0
8215	28	4.9	446	16	5	2	0
8216	21	8.5	781	26	7	2	0
8217	32	12.3	1121	37	9	3	0
8218	34	13.2	1209	38	10	3	0
8219	40	16.9	1544	45	13	2	0
8220	33	23.1	2124	63	17	4	0
8221	25	29.7	2754	74	18	5	0
8222	34	32.0	2982	79	19	5	0
8223	33	32.0	2982	74	20	5	0
8224	31	30.5	2806	71	18	5	0
8225	24	25.8	2398	64	16	4	0
8226	26	22.8	2124	52	14	3	0
8227	35	20.7	1906	47	11	3	0
8228	29	19.7	1825	48	13	4	0
8229	20	18.4	1697	45	13	4	0
8230	32	19.1	1762	50	12	3	0
8231	27	22.2	2051	55	14	3	0
8232	34	27.3	2517	65	15	3	0
8233	34	27.7	2576	66	16	4	0
8234	30	26.1	2425	63	16	4	0
8235	24	22.5	2087	53	13	4	0
8236	26	20.2	1869	53	12	4	0
8237	26	19.2	1767	50	12	4	0
8238	20	17.3	1581	43	11	4	0
8239	32	15.0	1373	41	10	3	0
8240	32	13.9	1273	40	9	3	0
8241	29	12.7	1181	35	9	3	0
8242	32	12.7	1159	35	8	3	0
8243	28	12.7	1179	34	8	3	0
8244	26	14.6	1327	38	10	3	0
8245	24	15.6	1430	41	11	4	0
8246	36	15.7	1451	41	11	4	0
8247	36	15.8	1472	41	10	4	0
8248	41	16.2	1488	40	10	4	0
8249	32	16.0	1480	40	11	4	0
8250	27	15.3	1398	38	10	3	0
8251	40	14.0	1283	36	9	3	0
8252	25	12.6	1142	33	10	4	0
8253	7	11.7	1076	32	9	4	0
8254	15	10.9	992	28	8	3	0
8255	31	10.7	974	27	8	3	0
8256	51	10.0	908	25	8	2	0
8257	45	9.6	871	25	7	2	0
8258	38	9.3	842	24	7	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8259	42	8.8	805	22	7	3	0
8260	42	8.9	815	20	7	2	0
8261	41	9.3	846	24	7	3	0
8262	40	9.4	847	24	7	3	0
8263	42	10.5	942	25	8	3	0
8264	54	11.0	1008	27	7	3	0
8265	27	11.0	1027	27	7	3	0
8266	53	11.0	1027	27	7	3	0
8267	39	9.8	898	23	6	2	0
8268	39	8.8	802	23	6	0	0
8269	59	8.1	736	21	6	2	0
8270	34	7.0	634	19	6	2	0
8271	15	5.8	522	17	6	2	0
8272	41	5.5	499	19	5	2	0
8273	40	5.9	533	21	5	2	0
8274	52	6.3	569	18	5	2	0
8275	39	6.6	586	18	5	2	0
8276	43	7.2	662	17	6	3	0
8277	41	7.6	706	19	6	3	0
8278	61	8.2	745	19	6	3	0
8279	53	8.7	810	20	6	2	0
8280	27	10.1	943	23	6	2	0
8281	36	11.0	1023	26	6	2	0
8282	36	11.6	1086	26	5	2	0
8283	42	12.2	1141	25	6	2	0
8284	43	12.4	1149	30	7	3	0
8285	41	12.4	1149	30	6	3	0
8286	38	11.9	1098	30	5	3	0
8287	50	11.8	1099	27	6	3	0
8288	51	11.8	1095	27	6	3	0
8289	48	11.7	1090	27	6	3	0
8290	36	11.6	1086	26	6	3	0
8291	43	11.2	1042	26	6	2	0
8292	40	10.3	963	25	5	2	0
8293	39	9.6	897	25	5	3	0
8294	37	9.4	865	25	5	2	0
8295	35	9.7	886	25	6	3	0
8296	16	8.6	798	22	5	2	0
8297	25	8.3	767	22	5	2	0
8298	20	8.6	778	24	6	3	0
8299	1	6.3	571	21	5	0	0
8300	18	6.4	578	21	5	2	0
8301	8	6.4	581	20	5	2	0
8302	24	6.7	606	22	5	2	0
8303	35	7.3	678	23	5	0	0
8304	91	8.0	714	25	7	2	0
8305	80	8.0	720	25	7	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8306	86	8.0	735	24	7	2	0
8307	45	8.2	747	24	7	2	0
8308	55	8.3	755	25	6	2	0
8309	50	8.3	755	25	6	2	0
8310	52	8.0	726	23	6	2	0
8311	54	8.0	714	23	6	2	0
8312	53	7.7	694	24	7	3	0
8313	58	7.7	691	24	8	3	0
8314	51	7.6	685	23	8	3	0
8315	45	7.2	653	22	6	1	0
8316	45	7.0	623	21	6	2	0
8317	35	6.4	583	21	6	2	0
8318	36	6.0	538	18	5	2	0
8319	46	5.8	517	16	5	2	0
8320	30	5.9	549	17	5	0	0
8321	26	6.5	595	19	5	2	0
8322	24	9.0	831	22	6	1	0
8323	24	27.1	2583	48	10	3	0
8324	15	72.5	6961	115	22	4	0
8325	11	86.1	8249	142	25	5	0
8326	11	99.6	9537	169	29	5	0
8327	18	108.0	10310	183	33	8	0
8328	12	108.0	10310	184	32	8	2
8329	9	101.2	9688	165	30	8	1
8330	10	81.1	7770	128	22	6	2
8331	10	54.9	5242	90	16	5	1
8332	1	28.6	2713	52	9	4	0
8333	19	26.6	2537	48	9	4	0
8334	15	22.5	2134	45	10	4	0
8335	17	21.6	2028	45	10	3	0
8336	16	16.2	1505	36	8	4	2
8337	27	16.1	1501	38	9	4	1
8338	16	15.4	1428	35	9	3	0
8339	20	15.4	1428	35	10	3	0
8340	19	15.0	1381	37	10	3	0
8341	22	15.9	1454	40	12	5	0
8342	17	18.4	1685	45	12	5	0
8343	16	18.6	1711	46	14	4	1
8344	18	18.6	1697	46	13	4	2
8345	22	17.3	1580	42	12	4	2
8346	26	18.0	1648	46	13	6	0
8347	25	17.2	1559	46	13	4	0
8348	20	17.1	1570	46	13	4	0
8349	21	17.5	1601	46	12	5	1
8350	19	16.1	1482	41	11	4	0
8351	13	16.0	1482	38	10	3	0
8352	16	14.6	1333	38	10	4	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8353	14	13.5	1233	34	8	4	0
8354	16	13.4	1233	32	9	3	0
8355	8	13.5	1241	32	8	3	2
8356	21	12.9	1190	33	9	4	1
8357	12	10.3	925	30	8	4	2
8358	18	10.1	919	28	8	4	1
8359	17	9.5	847	25	8	3	1
8360	11	9.0	805	28	8	4	2
8361	14	9.0	801	27	8	4	0
8362	17	9.6	863	27	8	4	0
8363	16	9.5	856	26	7	3	0
8364	16	9.0	808	27	8	4	0
8365	11	8.8	783	27	8	4	0
8366	11	8.6	759	26	8	3	0
8367	24	7.4	659	23	6	3	1
8368	20	7.4	657	22	6	3	1
8369	22	7.3	650	21	6	3	2
8370	17	7.1	640	22	5	2	0
8371	21	7.1	640	21	6	2	0
8372	16	6.9	614	23	6	3	1
8373	21	6.9	614	20	5	3	0
8374	26	6.4	575	18	6	2	2
8375	23	6.3	575	19	4	3	2
8376	14	6.3	575	18	4	2	0
8377	25	6.6	593	21	6	2	1
8378	22	7.0	619	22	7	3	0
8379	9	8.4	769	26	6	3	0
8380	8	8.4	759	23	6	2	2
8381	14	8.2	736	23	6	2	0
8382	17	8.2	734	22	6	3	0
8383	20	7.7	701	22	6	2	0
8384	19	7.3	668	23	5	2	2
8385	17	7.0	621	22	5	3	2
8386	7	5.6	506	18	5	2	0
8387	24	5.4	494	18	4	2	0
8388	16	5.3	485	17	4	2	2
8389	17	5.8	516	17	5	2	0
8390	10	5.7	509	19	5	3	1
8391	14	5.2	474	17	4	3	1
8392	16	4.5	402	14	3	1	0
8393	15	3.6	321	10	3	1	0
8394	21	3.5	292	12	4	2	0
8395	22	3.3	272	13	4	1	1
8396	30	8.5	767	19	5	2	1
8397	44	13.9	1323	21	3	0	4
8398	26	16.9	1609	26	4	1	0
8399	25	26.1	2488	41	7	2	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8400	17	28.8	2764	43	7	2	0
8401	21	26.1	2508	40	7	1	0
8402	15	21.5	2050	35	6	2	0
8403	17	22.6	2129	43	8	2	0
8404	16	20.2	1869	46	11	3	0
8405	19	15.1	1394	35	9	3	0
8406	14	10.5	963	25	6	3	0
8407	16	10.2	941	26	5	2	0
8408	15	14.0	1301	34	8	2	0
8409	15	13.8	1273	31	8	2	0
8410	19	12.5	1158	29	6	2	0
8411	17	11.3	1045	24	6	3	0
8412	21	10.4	954	24	5	2	0
8413	21	8.1	718	24	6	2	0
8414	3	8.0	702	25	6	3	0
8415	17	10.0	895	28	7	2	2
8416	9	9.4	843	30	8	2	0
8417	9	8.3	735	24	7	2	0
8418	10	7.0	626	22	5	0	0
8419	8	6.8	583	21	7	2	0
8420	12	5.7	495	18	4	2	0
8421	14	5.7	495	18	4	2	0
8422	14	5.7	495	18	4	2	0
8423	9	4.8	418	17	5	1	0
8424	15	4.3	374	15	4	2	0
8425	13	4.3	367	14	3	2	2
8426	14	4.1	350	14	3	2	1
8427	14	4.2	358	14	4	2	0
8428	16	3.9	312	14	4	2	0
8429	18	2.6	219	11	4	1	0
8430	16	3.0	269	13	4	2	0
8431	15	3.3	294	13	4	1	0
8432	15	6.5	567	22	7	3	0
8433	15	10.5	952	31	9	4	0
8434	13	10.0	922	28	8	3	2
8435	13	8.3	773	23	7	3	2
8436	13	6.6	592	21	6	2	2
8437	26	6.6	592	19	6	3	1
8438	33	6.3	556	19	6	2	0
8439	36	3.4	303	10	3	2	0
8440	30	3.3	291	10	4	2	0
8441	26	6.9	621	20	6	2	2
8442	1	6.4	591	17	5	2	0
8443	30	6.4	593	17	4	2	0
8444	56	7.1	663	18	4	1	0
8445	46	10.2	945	27	7	2	0
8446	24	14.8	1365	36	9	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8447	26	16.7	1556	40	10	3	0
8448	41	18.9	1768	43	10	3	0
8449	56	21.1	1966	48	10	3	0
8450	70	21.1	1966	48	10	3	0
8451	58	24.4	2299	50	11	3	2
8452	88	24.4	2299	50	11	3	0
8453	124	28.7	2710	56	12	3	0
8454	93	35.0	3298	68	15	4	1
8455	69	36.4	3440	71	15	4	1
8456	75	36.4	3440	71	15	4	0
8457	47	38.4	3650	69	16	4	0
8458	83	39.0	3693	71	16	4	0
8459	70	39.0	3693	71	15	4	0
8460	65	39.0	3693	71	15	4	0
8461	72	34.1	3233	66	16	5	0
8462	86	33.3	3128	68	16	5	0
8463	61	33.8	3187	72	16	5	0
8464	60	33.8	3187	72	17	4	1
8465	94	29.7	2783	64	15	4	1
8466	48	25.3	2367	55	14	4	0
8467	44	22.9	2138	51	11	4	0
8468	25	18.1	1701	41	10	3	2
8469	14	21.1	1996	41	10	4	0
8470	19	26.4	2472	55	12	4	1
8471	35	28.0	2635	60	14	4	0
8472	26	30.8	2895	65	14	5	0
8473	41	31.8	2994	65	14	4	0
8474	45	31.8	2994	67	14	4	0
8475	51	31.6	2981	61	14	5	0
8476	44	31.3	2964	64	14	4	0
8477	57	31.3	2964	64	13	4	0
8478	58	33.0	3131	62	13	3	0
8479	54	37.7	3549	70	16	4	0
8480	42	46.6	4395	95	19	5	0
8481	45	66.3	6238	144	29	7	2
8482	44	73.4	6929	154	32	8	2
8483	42	78.9	7430	168	35	8	1
8484	56	84.4	7948	187	36	9	0
8485	33	93.3	8805	200	40	10	0
8486	34	94.8	8933	207	40	9	0
8487	39	98.8	9330	213	40	9	0
8488	35	103.1	9743	222	41	9	0
8489	38	103.1	9743	222	41	8	0
8490	55	104.0	9859	234	47	11	2
8491	41	103.1	9672	234	47	11	1
8492	48	90.9	8560	194	39	10	1
8493	51	93.9	8863	200	42	10	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8494	44	61.5	5819	120	26	7	2
8495	1	14.6	1338	37	10	4	0
8496	30	11.2	1014	33	10	4	2
8497	17	31.0	2777	88	30	10	0
8498	15	38.4	3463	107	36	11	0
8499	16	32.9	2962	94	32	10	1
8500	15	7.1	610	24	9	4	0
8501	17	7.3	634	27	9	4	1
8502	14	6.4	536	23	10	5	1
8503	14	6.6	556	24	10	5	2
8504	15	7.1	606	25	10	5	2
8505	14	7.4	613	29	13	6	0
8506	15	7.4	613	29	14	7	2
8507	8	6.1	505	25	11	6	2
8508	22	6.3	534	21	10	5	0
8509	26	7.4	648	24	9	4	0
8510	17	7.7	660	23	9	5	0
8511	14	7.3	627	23	9	5	0
8512	13	5.4	454	19	9	5	1
8513	17	5.8	506	18	7	4	2
8514	12	5.8	495	21	8	4	0
8515	17	5.6	470	21	7	4	2
8516	15	5.6	470	20	7	4	2
8517	15	5.8	497	20	8	3	0
8518	13	6.0	523	21	7	4	0
8519	15	6.4	551	21	8	5	0
8520	13	5.2	440	19	7	4	2
8521	12	5.0	424	16	7	4	0
8522	15	5.2	428	18	8	5	0
8523	15	5.2	441	17	7	5	0
8524	16	6.2	540	20	6	4	2
8525	18	6.3	549	20	6	4	2
8526	18	6.4	558	20	7	4	2
8527	18	6.5	568	20	7	4	2
8528	16	4.6	389	15	5	3	2
8529	15	6.7	591	20	7	4	0
8530	21	6.7	591	20	7	4	0
8531	21	6.0	519	18	6	4	0
8532	17	6.7	595	18	6	4	1
8533	17	7.1	654	17	6	4	0
8534	25	7.8	721	21	7	3	0
8535	23	8.6	762	22	7	4	1
8536	29	8.6	776	22	7	4	2
8537	34	9.0	816	23	6	3	2
8538	36	9.6	875	26	6	3	2
8539	40	9.8	902	26	6	3	2
8540	38	9.4	858	25	7	3	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8541	26	9.3	843	24	7	3	0
8542	29	8.0	719	21	8	4	0
8543	25	7.1	638	19	6	4	0
8544	31	6.4	584	19	5	3	0
8545	35	7.9	719	18	6	3	0
8546	33	8.0	727	22	6	3	0
8547	33	8.8	793	21	5	2	0
8548	34	8.8	808	21	5	2	0
8549	44	9.6	873	24	5	2	2
8550	48	8.9	808	21	5	3	0
8551	32	8.3	756	21	5	3	0
8552	50	8.4	774	23	6	3	2
8553	47	8.4	774	23	6	3	0
8554	50	8.4	759	23	5	3	0
8555	33	7.6	701	22	5	2	0
8556	38	7.6	688	22	5	2	0
8557	41	7.0	638	21	5	3	0
8558	58	5.8	526	17	5	3	1
8559	31	6.1	548	17	5	3	1
8560	16	6.1	548	17	6	2	1
8561	19	5.8	528	20	6	3	0
8562	25	5.8	528	19	5	4	0
8563	29	6.3	551	18	6	4	2
8564	18	6.7	604	19	6	3	0
8565	21	6.2	564	19	5	3	0
8566	18	7.7	698	24	5	4	1
8567	15	7.9	713	24	5	3	1
8568	14	8.0	728	25	5	3	1
8569	12	8.2	743	25	5	2	0
8570	11	8.2	743	25	5	2	0
8571	28	8.2	743	25	5	2	0
8572	33	7.7	701	20	5	1	0
8573	21	7.4	676	19	5	1	1
8574	22	7.2	651	18	5	1	1
8575	22	6.9	626	17	4	1	1
8576	23	7.2	644	22	6	3	0
8577	18	7.5	671	23	6	3	0
8578	18	7.8	698	24	6	4	0
8579	18	8.1	724	25	7	4	0
8580	12	104.7	9552	284	87	21	0
8581	14	71.8	6549	195	60	15	0
8582	15	39.0	3546	107	32	9	0
8583	16	6.1	543	19	5	3	0
8584	17	8.1	724	25	6	4	0
8585	30	4.4	398	14	4	2	0
8586	25	5.1	459	17	4	2	1
8587	24	5.4	475	17	5	2	1

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8588	14	5.6	491	17	5	2	1
8589	13	6.3	557	19	5	3	2
8590	9	7.0	624	22	6	3	2
8591	12	5.5	450	21	8	2	0
8592	17	5.5	450	21	8	2	0
8593	21	8.8	769	25	8	4	0
8594	34	12.6	1143	28	8	3	0
8595	23	12.4	1116	30	10	4	0
8596	18	14.7	1346	34	8	4	0
8597	26	10.5	947	27	6	4	0
8598	15	7.9	703	20	6	2	0
8599	13	7.4	653	22	6	2	0
8600	13	7.2	638	21	5	2	0
8601	15	6.3	536	19	7	4	0
8602	11	6.8	581	23	8	3	0
8603	18	4.6	392	16	5	2	0
8604	12	5.7	498	17	6	3	0
8605	12	5.9	496	18	7	4	0
8606	12	6.3	550	21	6	3	0
8607	24	6.3	556	20	5	2	0
8608	6	6.7	576	19	7	3	0
8609	17	8.6	761	24	8	2	0
8610	10	6.5	568	21	7	2	0
8611	10	5.3	451	16	6	3	0
8612	8	6.8	584	21	6	4	2
8613	8	6.3	547	20	5	3	0
8614	9	6.5	554	19	5	3	0
8615	8	6.8	593	23	6	2	0
8616	11	4.9	424	15	4	2	0
8617	12	6.2	549	19	6	3	1
8618	9	6.7	610	20	6	4	2
8619	11	7.2	651	23	6	3	0
8620	12	6.4	554	19	5	2	0
8621	11	6.9	616	21	6	2	0
8622	12	7.4	655	22	7	3	0
8623	22	31.4	2946	63	14	5	0
8624	12	31.4	2946	63	14	5	0
8625	16	83.7	8027	138	24	6	0
8626	14	83.7	8027	138	24	7	0
8627	8	20.2	1891	42	8	3	2
8628	13	19.7	1848	41	9	3	0
8629	21	16.1	1487	37	10	4	1
8630	19	15.0	1401	34	8	3	1
8631	16	17.7	1648	39	9	4	2
8632	21	13.7	1260	33	7	3	0
8633	19	10.1	932	25	6	3	0
8634	34	10.1	932	25	6	3	2

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8635	24	10.3	965	24	6	3	1
8636	18	18.7	1753	37	7	4	0
8637	20	14.5	1339	36	10	4	0
8638	8	11.8	1054	36	9	5	1
8639	15	7.7	701	24	7	3	1
8640	13	7.1	626	23	5	3	0
8641	24	14.4	1314	38	8	3	2
8642	16	17.3	1604	40	10	4	0
8643	10	17.3	1604	41	9	4	0
8644	10	17.3	1604	42	9	3	0
8645	0	15.7	1454	37	9	3	0
8646	17	13.2	1223	36	8	4	2
8647	12	12.3	1104	32	8	3	2
8648	13	9.2	838	26	7	2	0
8649	13	9.2	838	26	6	2	0
8650	16	13.3	1225	29	7	3	0
8651	14	14.9	1358	39	9	3	0
8652	13	14.4	1325	37	9	3	0
8653	15	12.9	1180	34	8	3	0
8654	21	10.2	911	27	7	3	0
8655	20	8.9	818	23	6	2	0
8656	19	7.5	680	23	6	2	0
8657	1	7.5	675	23	6	2	0
8658	25	6.9	628	21	5	2	0
8659	19	6.9	615	20	5	2	0
8660	20	4.8	416	16	4	1	0
8661	31	4.6	395	15	4	1	0
8662	15	4.1	359	13	4	1	0
8663	23	4.1	361	12	3	1	0
8664	13	4.1	361	12	4	1	0
8665	12	4.3	365	14	5	2	0
8666	15	26.9	450	15	5	2	0
8667	14	6.9	615	22	6	2	0
8668	19	9.9	842	36	13	4	0
8669	8	13.1	1112	49	21	6	0
8670	9	31.8	2661	115	55	16	0
8671	9	50.6	4113	195	107	37	0
8672	11	104.8	8811	405	188	51	0
8673	14	104.9	8811	405	188	51	0
8674	13	34.5	2971	107	48	15	0
8675	16	24.2	2051	81	37	13	0
8676	11	18.3	1572	60	24	9	0
8677	18	6.9	520	30	18	8	0
8678	25	6.6	506	28	15	6	0
8679	18	15.6	1367	49	19	7	0
8680	19	15.2	1337	46	18	7	0
8681	25	17.1	1497	48	19	6	0

DEPTH ft.	R.O.P. ft/h.	T. GAS units	CHROMATOGRAPHY (ppm)				
			C1	C2	C3	C4	C5
8682	31	18.4	1618	50	21	7	0
8683	29	36.1	3101	109	60	24	0
8684	29	20.9	1709	70	42	20	1
8685	20	5.8	316	31	23	14	0
8686	18	11.0	773	48	30	16	0
8687	19	16.2	1229	65	37	18	0
8688	19	23.1	1911	76	40	21	0
8689	18	11.1	895	37	16	8	0
8690	15	8.2	665	32	12	7	0
8691	15	8.2	666	32	12	7	0



FLUORESCENCE DATA RECORD

WELL: LO6-29D



INTERVALS (Meters)	FORMATION	NATURAL FLUORESCENCE						COLOR	SPEED CUT				REACTION			INTENSITY CUT				FORM CUT			COLOR CUT	RESIDUAL RING	
		NIL	TRACES	POOR	FAIR	GOOD	%		CRUSH	SLOW	FAST	FLASH	FAINT	WEAK	STRONG	DULL	FAINT	PALE	BRIGHT	EVEN	BLOOMING	STREAMING		U.V.L.	NAT. L.
5550 - 5560	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5560 - 5570	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5570 - 5580	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5580 - 5590	RIO BRAVO						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5590 - 5600	RIO BRAVO						25	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5600 - 5610	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5700 - 5710	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5710 - 5720	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5720 - 5730	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5790 - 5800	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5800 - 5810	RIO BRAVO						30	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5830 - 5840	RIO BRAVO						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5840 - 5850	RIO BRAVO						30	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5850 - 5860	RIO BRAVO						50	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5860 - 5870	RIO BRAVO						50	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5870 - 5880	RIO BRAVO						40	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5880 - 5890	RIO BRAVO						30	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5910 - 5920	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5920 - 5930	RIO BRAVO						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5930 - 5940	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL



FLUORESCENCE DATA RECORD

WELL: LO6-29D



INTERVALS (Meters)	FORMATION	NATURAL FLUORESCENCE						COLOR	SPEED CUT				REACTION			INTENSITY CUT				FORM CUT			COLOR CUT	RESIDUAL RING	
		NIL	TRACES	POOR	FAIR	GOOD	%		CRUSH	SLOW	FAST	FLASH	FAINT	WEAK	STRONG	DULL	FAINT	PALE	BRIGHT	EVEN	BLOOMING	STREAMING		U.V.L.	NAT. L.
5940 - 5950	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5950 - 5960	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5960 - 5970	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5970 - 5980	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5980 - 5990	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
5990 - 6000	RIO BRAVO						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6000 - 6010	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6010 - 6020	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6020 - 6030	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6030 - 6040	RIO BRAVO						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6040 - 6050	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6050 - 6060	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6060 - 6070	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6070 - 6080	RIO BRAVO						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6080 - 6090	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6090 - 6100	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6100 - 6110	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6110 - 6120	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6230 - 6240	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6240 - 6250	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL



FLUORESCENCE DATA RECORD

WELL: LO6-29D



INTERVALS (Meters)	FORMATION	NATURAL FLUORESCENCE						COLOR	SPEED CUT				REACTION			INTENSITY CUT				FORM CUT			COLOR CUT	RESIDUAL RING	
		NIL	TRACES	POOR	FAIR	GOOD	%		CRUSH	SLOW	FAST	FLASH	FAINT	WEAK	STRONG	DULL	FAINT	PALE	BRIGHT	EVEN	BLOOMING	STREAMING		U.V.L.	NAT. L.
6250 - 6260	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6260 - 6270	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6650 - 6660	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6660 - 6670	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6670 - 6680	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6680 - 6690	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6690 - 6700	RIO BRAVO		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6820 - 6830	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6830 - 6840	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6840 - 6850	RIO BRAVO						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6850 - 6860	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6860 - 6870	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6870 - 6880	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6880 - 6890	RIO BRAVO						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
6890 - 6900	RIO BRAVO						5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7260 - 7270	MOGOLLON						5	GL YEL/YELSH		X				X				X		X			PL YELSH WH	MKY WH	NIL
7270 - 7280	MOGOLLON		X					GL YEL/YELSH		X				X				X		X			PL YELSH WH	MKY WH	NIL
7290 - 7300	MOGOLLON		X					GL YEL/YELSH		X				X				X		X			PL YELSH WH	MKY WH	NIL
7480 - 7490	MOGOLLON		X					GL YEL/YELSH		X				X				X		X			PL YELSH WH	MKY WH	NIL
7490 - 7500	MOGOLLON						5	GL YEL/YELSH		X				X				X		X			PL YELSH WH	MKY WH	NIL



FLUORESCENCE DATA RECORD

WELL: LO6-29D

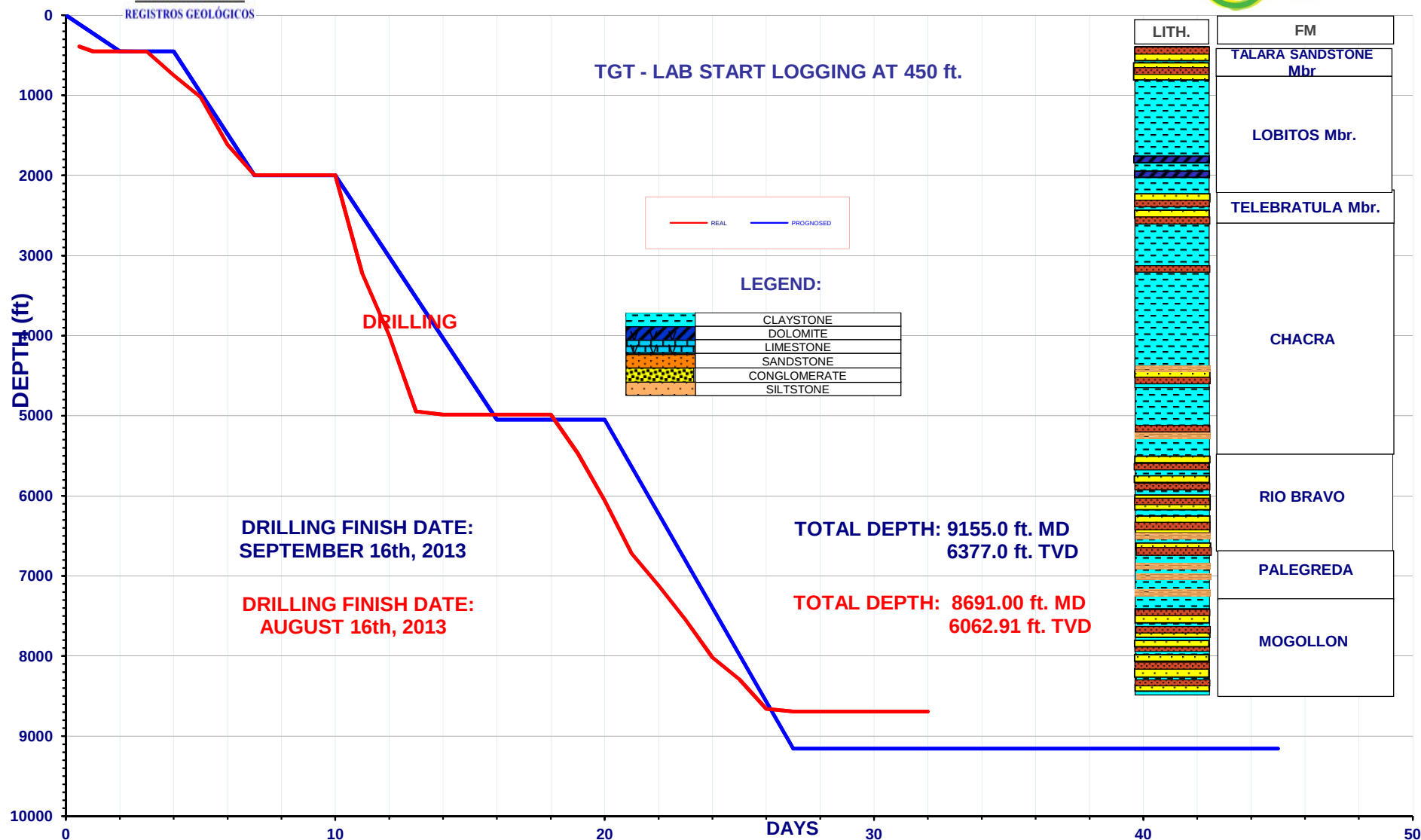


INTERVALS (Meters)	FORMATION	NATURAL FLUORESCENCE						COLOR	SPEED CUT				REACTION			INTENSITY CUT				FORM CUT			COLOR CUT	RESIDUAL RING	
		NIL	TRACES	POOR	FAIR	GOOD	%		CRUSH	SLOW	FAST	FLASH	FAINT	WEAK	STRONG	DULL	FAINT	PALE	BRIGHT	EVEN	BLOOMING	STREAMING		U.V.L.	NAT. L.
7550 - 7560	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7580 - 7590	MOGOLLON						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7590 - 7600	MOGOLLON						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7600 - 7610	MOGOLLON						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7630 - 7640	MOGOLLON		X				5	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7640 - 7650	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7650 - 7660	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
7790 - 7800	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8100 - 8110	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8110 - 8120	MOGOLLON						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8120 - 8130	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8130 - 8140	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8200 - 8210	MOGOLLON						10	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8210 - 8220	MOGOLLON						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8220 - 8230	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8310 - 8320	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8400 - 8410	MOGOLLON		X					PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8440 - 8450	MOGOLLON						15	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8450 - 8460	MOGOLLON						20	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL
8460 - 8470	MOGOLLON						25	PL YELSH		X				X			X			X			YELSH WH	MKY WH	NIL

[illegible]



DRILLING PROGRESS CURVE WELL : LO6-29D





BIT RECORD



WELL: LO6-29D

* STARTED MUD LOGGING @ 450 ft.

BIT	SIZE	MAKE	TYPE	SERIAL	DEPTH		HOLE	ROP Effective	HOURS	HOURS	JETS	GPM/PSI	WOB/RPM Klbs / rpm	IADC
	IN				IN	OUT	Made	M/HR	Total	Drilling				
2R	17	SMITH	TCD-XT1RC	1188714	450	793	343	33.1	37.4	10.4	3X16;1X20	720/1200	10-15/70	-
3R	17	NOV	24XH	E159172	793	1995	1202	78.4	60.1	15.3	3X15;2X16	850/1700	10-15/120	0-1-WT-A-X-I-NO-TD
4	12 1/4	NOV	SKH419S-A1A	E182076	1995	4984	2989	85.3	95.4	35.0	6X14	780/2800	6-8/60	0-2-WT-A-X-I-CT-TD
5	8 1/2	SMITH	MSI519HUPX	JE9372	4984	6056	1072	51.0	52.5	21.0	7X13	535/2300	15/60	0-1-BT-G-X-1-CT-BHA
5R	8 1/2	SMITH	MSI519HUPX	JE9372	6056	7120	1064	47.9	46.6	22.2	7X13	550/2690	25/60	0-1-BT-G-X-1-CT-BHA
6	8 1/2	NOV	REH519M-A10	224891	7120	8691	1571	27.8	109.5	56.5	4X12;3X13;1X11	550/2700	25/60	1-0-CT-S-X-1-NO-TD

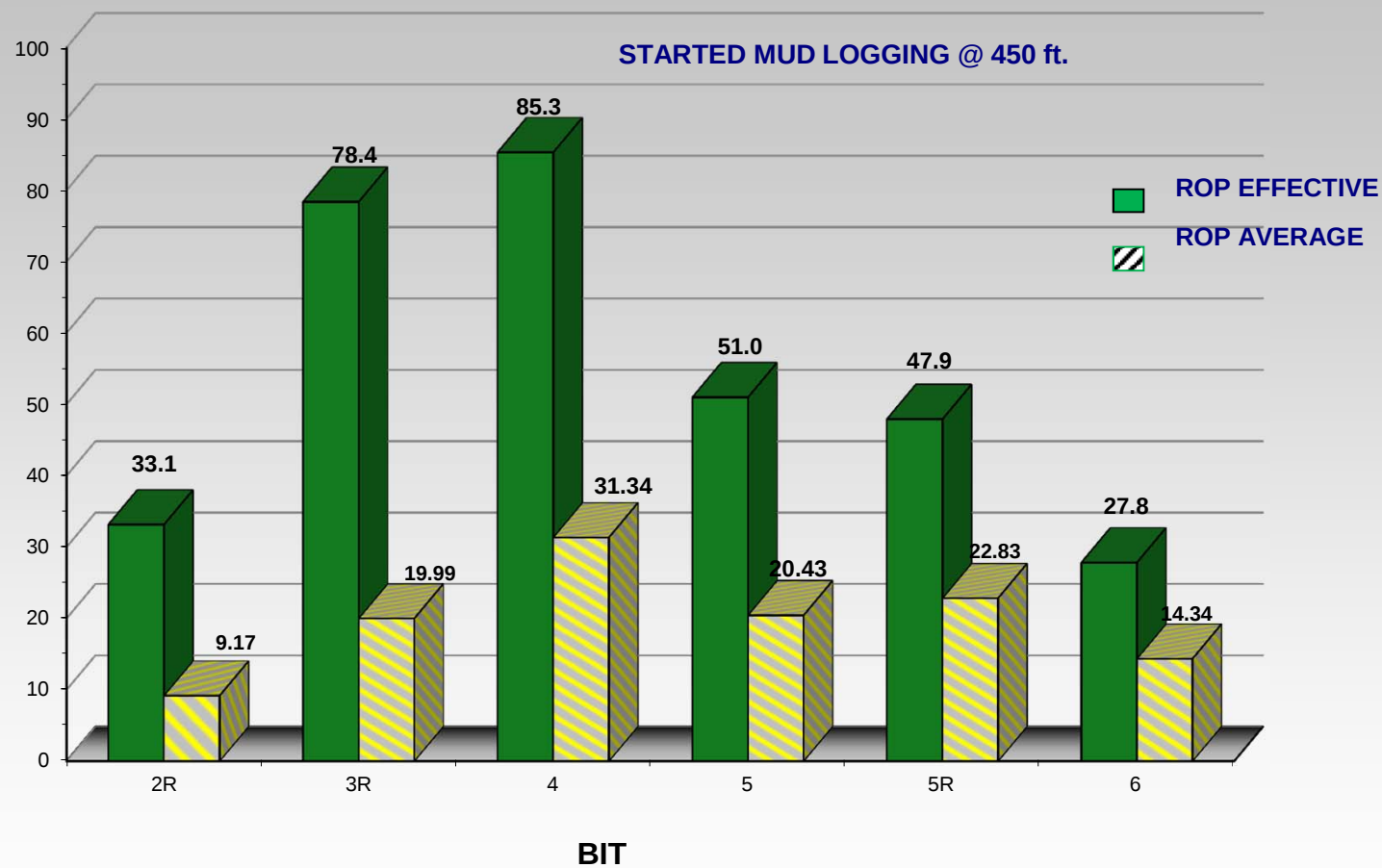
FORMATIONS:	MD (ft)	TVD (ft)
TALARA SANDSTONE	0	0.0
LOBITOS	770	767.9
TEREBRATULA	2234	1844.5
CHACRA	2667	2052.2
RIO BRAVO	5549	3494.4
PALEGREDA	6885	4456.6
MOGOLLON	7254	4765.2
TD	8691	6062.9

WELL : LO6-29D

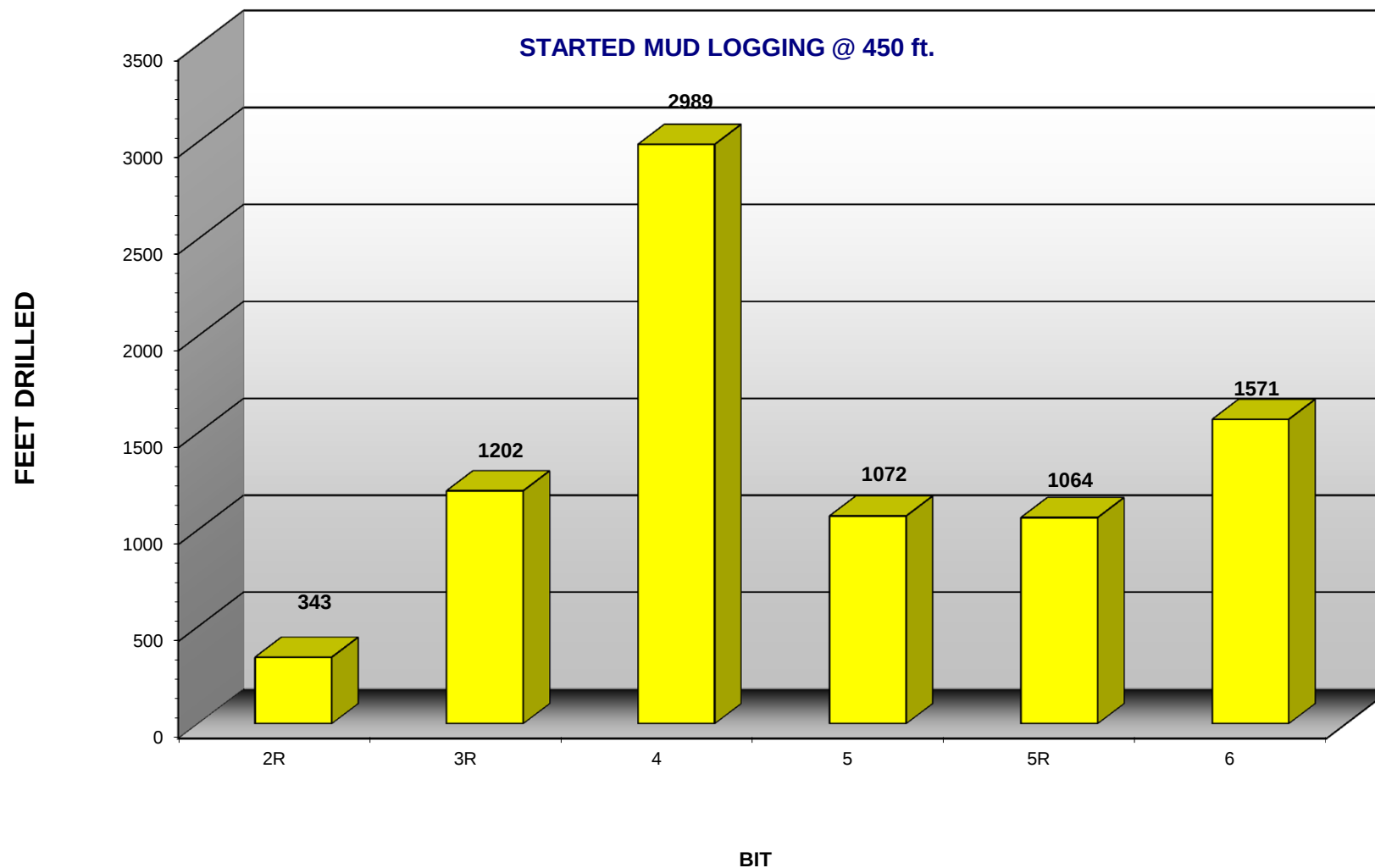
EFFECTIVE AND AVERAGE RATE OF

PENETRATION BY BIT (ft/hr)

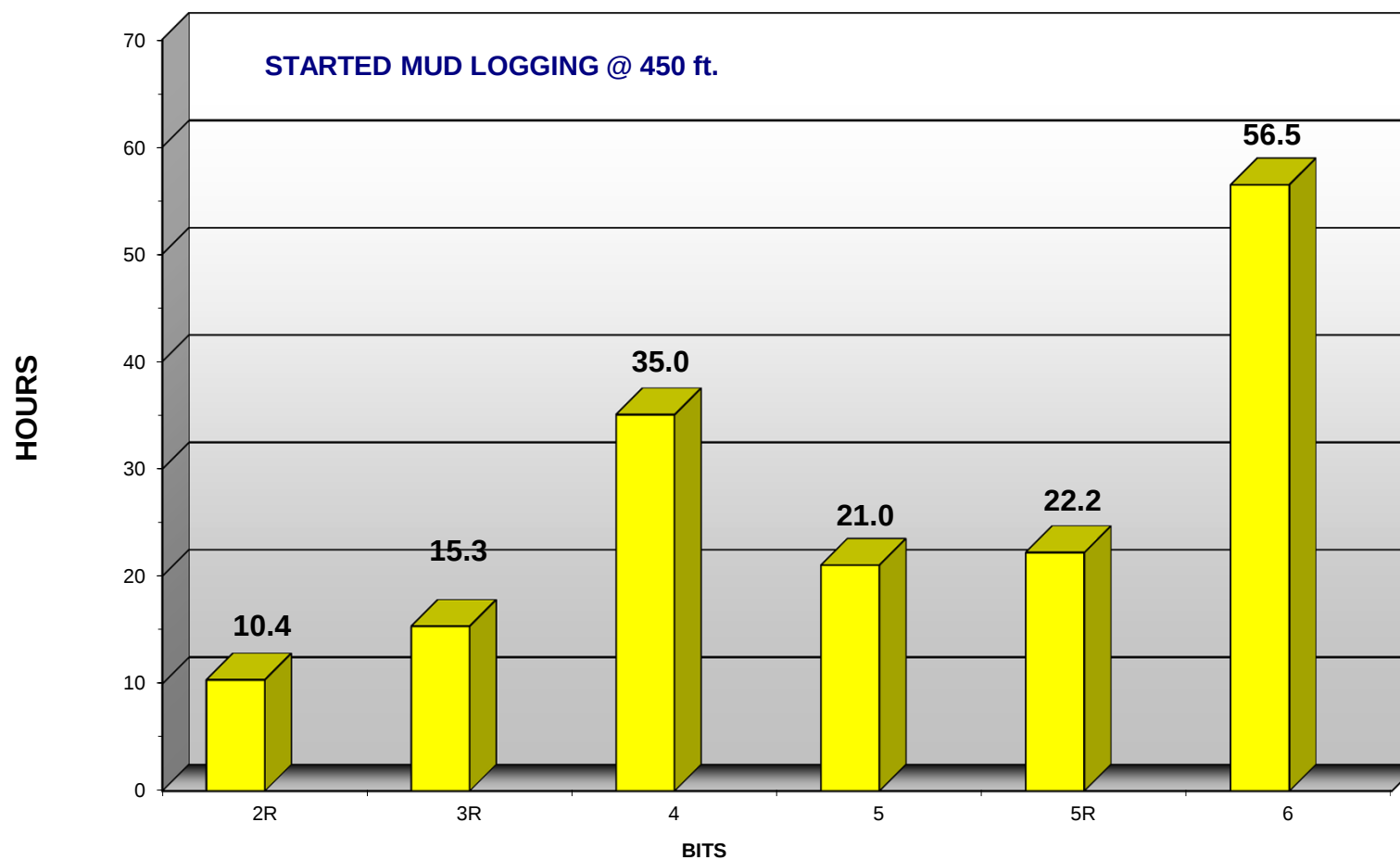
ROP (FEET/HOUR)



WELL : LO6-29D
FEET DRILLING BY BIT



WELL : LO6-29D
EFFECTIVE DRILLING HOURS



DAILY OPERATIONS REPORTS

WELL: LO6-29D

August 23rd, 2013

00:00 – 00:30 Halliburton crew M/U cement lines and cement head from Medomack barge, platform and rig floor.

00:30 – 01:00 Perform safety meeting with Hall, Pepesa and Savia crew. Hall M/U cement head and lines.

01:00 – 02:30 Perform cement lines test: with 1200 psi by 10 min, ok. Start 18" conductor cement job with close diverter: pump 20 bbls water, 3 bpm, 100 psi. 34 bbls Halcem I cement 15.6 ppg, 3.1 bpm, 210 - 240 psi. Open diverter to continue pump 16 bbls 15.6 ppg Halcem I, 3.1 bpm, 240 psi. POOH 5" DP cement from 438 to 90 ft. Circulate to clean pipe by 5 min, 200 gpm, 0 psi. Observed loss circulation after pump. Close diverter and DS valves and displace with 10 bbls with 2 bpm, don't pressurize, review and don't find fluid level on first level.

02:30 – 03:00 RIH 5" DP cement to 439 ft, install cement head and lines to perform cement job again.

03:00 – 04:00 Pump 30 bbls Halcem I cement 15.6 ppg, 3.1 bpm, 210 - 240 psi. Observant return by DS lateral valve and close BOP diverts and laterals valves. Continue pumping up to complete 54 bbls Halcem I cement 1.

04:00 – 04:30 POOH from 439 ft to 90 ft. Circulate to clean pipe by 15 min, 90 gpm, 35 psi. Close diverter and DS valves and displace with 9 bbls with 1 bpm, 35 psi, Close cement head and wait of cement.

04:30 – 11:00 WOC. L/D Halliburton cement lines, cement 5" DP & sent to barge. M/U 3 stand 5" HWDP, 8 stand 5" DP on rig set back.

11:00 – 13:30 L/D Halliburton cement head and L/D a stand 5" cement DP. P/U 6 stand 5" DP take serial and measure.

13:30 – 14:30 Condition rig floor and platform, prepare tools, x/o's to BHA. Perform safety and operation meeting with all crew.

14:30 – 17:00 M/U & RIH 17" directional BHA: 17" rr-triconic bit, Model XT1RC, n/s 11887149, Nozzles 4x16 PDM Phoenix (BH 1.5^a, 0.11 rev/gal & 16 3/4" sleeve STB), 9 5/8" x/o, 8" UBHO, 8" Flex Monel, 8" NM Monel. Check mud motor bend housing orientation, ok, RIH BHA directional to 94 ft. POOH to rig set back.

17:00 – 19:30 M/U & RIH directional BHA with 17" tricone bit, model T11, s/n 140911, jets 4x15, 7 3/4" Bit sub, 3 jt 7 3/4" DC, 6 jt 6 1/2" DC and 6" HWDP take tag hard cement to 440 ft.

19:30 – 20:30 Drill out cement from 440 ft to 450 ft and Rotary drill from 450 ft to 455 ft, with 400 gpm 300 psi, 5 -10 klbs wob, 60 rpm.

20:30 – 21:00 Circulate a bottom up w/ 400 gpm, 350 psi and Eng. mud logger confirm 100% formation, displace sea water by 9.0 ppg Clayseal drilling fluid.

21:00 – 00:00 Rig repairs: TD hydraulic hoses leak hyd fluids, mechanics changes 2 hyd hoses of top drive.

August 24th, 2013

00:00 – 02:30 Continue change 2 hydraulic hoses of top drive.

02:30 – 03:30 POOH and L/D 17" BHA from 455 ft to surface.

03:30 – 06:00 M/U 17" & RIH 17" directional BHA. triconic bit, Model XT1RC, n/s 11887149,

	Nozzles 4x16 PDM Phoenix (BH 1.5 ^a , 0.11 rev/gal & 16 3/4" sleeve stb), 8" UBHO, 8" Flex Monel, 8" NM Monel. Check bend house.
	Continue RIH BHA directional w/ 2 jt 8" DC, 9 5/8" hyd jar, 1jt 8"jt DC, x/o, 1jt 6 1/2" DC, x/o, 5" HWDP to 450 ft.
06:00 – 06:30	Circulate to brake gels with 400 gpm, 600 psi.
06:30 – 07:30	Pepesa M/U slick line unit. Take gyro survey at 399 ft, incl 1.45 deg, azm 295.43 deg. TFG: 135.19 deg.
07:30 – 14:30	Acum slide directional drill f/450 ft to 643 ft, 193 ft, 700 gpm, 900 / 1000 psi, 10/20 klb wob, ROP avg 27.6 ft/hr.
14:30 – 15:30	Acum rotary directional drill f/643 ft to 698 ft, 700 gpm, 1000 psi, 10/15klb wob, 60 rpm, 2.0 klb-ft tq, ROP avg 58 ft/hr.
15:30 – 18:30	Acum reaming, surveys & connections. Last survey at 553 ft, incl 3.06 deg, azm 145.32 deg, GTF 144.13 deg.
18:30 – 19:30	Circulate and reciprocate with 800 gpm, 1400 psi and pump 20 bbls HVP and displace with circulation a bottom up.
19:30 – 20:30	M/U slick line and take gyro surveys at 647 ft, incl 7.25 deg, azm 149.98 deg, GTF 84.14R. DD eng orienting to 90R, take gyro survey at 647 ft, incl 7.15 deg, azm 149.98 deg, GTF 113.45R.
20:30 – 00:00	Directional drill sliding from 647' to 749' mud motor 800 gpm, pres 1400 psi, 15-20 klb wob.

August 25th, 2013

00:00 – 00:30	Directional slid drill f/749 ft to 762 ft, 13 ft, 800 gpm, 1400 psi, 15 klb wob, ROP avg 21 ft/hr.
00:30 – 01:30	Directional rotary drill f/762 ft to 793 ft, 800 gpm, 1400 psi, 15/20klb wob, 60 rpm, 2/4 klb-ft tq, ROP avg 47.7 ft/hr.
01:30 – 02:30	M/U slick line and take gyro surveys at 743 ft, incl 10.29 deg, azm 170.2 deg, GTF 113.45R. Phoenix well planning engineer confirm well without jamming.
02:30 – 03:30	Circulate and reciprocate with 800 gpm, 1400 psi. Pump 20 bbl HVP and displace with circulation a bottom up.
03:30 – 05:00	POOH directional BHA with 17" tricone bit from 793' to surface.
05:00 – 09:30	M/U & RIH directional tools: 17" PDC bit model TFH519S-A1-Z, n/s E159172, Nozzles 3x15 + 2x16, PDM Phoenix (BH 1.5 ^a , 0.11 rev/gal & 16 3/4" sleeve STB), x/o, 8" UBHO, 8" Flex monel, 8" NM monel, 2 jt 8" DC, 9 5/8" hyd jar, 1jt 8"jt DC, x/o, 1jt 6 1/2" DC, x/o, 6jt 5" HWDP, RIH to 420 ft.
09:30 – 10:00	Rig services, Pepesa personnel condition hydraulic hoses from power unit to top drive.
10:00 – 11:30	Rig repairs: TD technician install cover and supports of hydraulic hoses from hose neck to TD washpipe
11:30 – 12:30	Reaming and washdown with 17" PDC bit from 420 ft to 792 ft, with 600 gpm, 760 psi.
12:30 – 13:00	Phoenix eng take survey at 737 ft, 10.3 inc, 170.9 azm, DD eng oriented mud motor tool face to 90 degree right.
13:00 – 14:00	Directional drill slid f/ 793 ft to 858 ft, 65 ft, 800 gpm, 1600 psi, 10/15 klb wob, ROP avg 76.4 ft/hr.
14:00 – 14:30	Directional drill rotary f/858 ft to 888 ft, 800 gpm, 1650 psi, 10/15klb wob, 60 rpm, 2/4 klb-ft tq, ROP avg 85.7 ft/hr.
14:30 – 15:00	Phoenix eng take survey at 833 ft, 12.2 inc, 186 azm, DD eng oriented mud motor tool face to 90 degree right.
15:00 – 16:00	Directional drill slid f/ 888 ft to 953 ft, 30 ft, 800 gpm, 1650 psi, 5/2 klb wob, ROP avg 112.6 ft/hr.

16:00 – 16:30	Directional drill rotary f/953 ft to 983 ft, 800 gpm, 1680 psi, 10/15klb wob, 60 rpm, 2/4 klb-ft tq, ROP avg 90 ft/hr.
16:30 – 17:00	Phoenix eng take survey at 929 ft, 16.1 inc, 188.23 azm, DD eng oriented mud motor tool face to 90 degree right.
17:00 – 17:30	Directional drill slid f/ 983 ft to 1015 ft, 32 ft, 800 gpm, 1650 psi, 5/6 klb wob, ROP avg 54.8 ft/hr.
17:30 – 18:00	Directional drill rotary f/1015 ft to 1024 ft, 800 gpm, 1630 psi, 10/15klb wob, 60 rpm, 2/4 klb-ft tq, ROP avg 60 ft/hr.
18:00 – 19:00	Circulate and reciprocate with 800 gpm, 1600 psi. Pump 20 bbl HVP and displace with circulation a bottom up.
19:00 – 20:00	POOH directional BHA with 17" PDC bit due rough seas current from 1024 ft to 412 ft.
20:00 – 21:00	Pepesa and Tramarsa crew perform maneuver to disconnect electrical cables, mud hoses, mud injection lines and rock wash hoses to separate Perla barge to platform due rough seas.
21:00 – 00:00	Waiting for better weather.

August 26th, 2013

00:00 – 07:00	Waiting for better weather. Tramarsa crew prepare winches to approach barge to platform.
07:00 – 09:00	Tramarsa crew perform maneuver to approach Perla barge to platform.
09:00 – 11:00	Pepesa and Tramarsa crew to connect electrical cables, mud hoses, mud injection lines and rock wash hoses to Perla barge to platform.
11:00 – 11:30	Perform operative mud pump test, Circulate to brake gels by 10 min.
11:30 – 12:00	RIH directional BHA with 17" PDC bit from 420 ft to 960 ft, last stand washdown to bottom hole. Circulate a bottom up with 700 gpm, 1600 psi.
12:00 – 12:30	Directional slid drill f/1024 ft to 1047 ft, 23 ft, 800 gpm, 1700 psi, 10 klb wob, ROP avg 92 ft/hr.
12:30 – 13:00	Directional rotary drill f/1047 ft to 1076 ft, 29 ft, 800 gpm, 1700 psi, 8/12 klb wob, 60 rpm, 2/4 klb-ft tq, ROP avg 108,7 ft/hr.
13:00 – 13:30	Circulating, reaming, surveys & connections. Last survey at 1202 ft, inc 19 deg, azm 198.3 deg.
13:30 – 14:00	Directional slid drill f/1076 ft to 1136 ft, 60 ft, 800 gpm, 1750 psi, 8/12 klb wob, ROP avg 102.8 ft/hr.
14:00 – 14:30	Directional rotary drill f/1136 ft to 1169 ft, 33 ft, 800 gpm, 1800 psi, 10/15 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg 123.7 ft/hr.
14:30 – 15:00	Circulating, reaming, surveys & connections. Last survey at 1116 ft, inc 23.6 deg, azm 194.8 deg.
15:00 – 15:30	Directional slid drill f/1169 ft to 1233 ft, 64 ft, 800 gpm, 1750 psi, 8/12 klb wob, ROP avg 98.5 ft/hr.
15:30 – 16:00	Directional rotary drill f/1233 ft to 1265 ft, 32 ft, 800 gpm, 1820 psi, 10/12 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg 96 ft/hr.
16:00 – 16:30	Circulating, reaming, surveys & connections. Last survey at 1211 ft, inc 28.7 deg, azm 194.6 deg.
16:30 – 17:30	Directional slid drill f/1265 ft to 1329 ft, 64 ft, 800 gpm, 1750 psi, 8/12 klb wob, ROP avg ft/hr.
17:30 – 18:00	Directional rotary drill f/1329 ft to 1359 ft, 30 ft, 800 gpm, 1820 psi, 10/12 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg ft/hr.
18:00 – 18:30	Circulating, reaming, surveys & connections. Last survey at 1306 ft, inc 33.9 deg, azm 196.1 deg.
18:30 – 19:30	Directional slid drill f/1359 ft to 1421 ft, 62 ft, 800 gpm, 1850 psi, 8/12 klb wob, ROP avg 47 ft/hr.

19:30 – 20:00	Circulating and pump 20 bbl HVP displace to bottom up.
20:00 – 20:30	Directional rotary drill f/1421 ft to 1454 ft, 33 ft, 800 gpm, 1900 psi, 10/12 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg 40.4 ft/hr.
20:30 – 21:00	Circulating, reaming, surveys & connections. Last survey at 1403 ft, inc 38.2 deg, azm 199.1 deg.
21:00 – 22:00	Directional slid drill f/1455 ft to 1502 ft, 48 ft, 800 gpm, 1950 psi, 8/12 klb wob, ROP avg 65.4 ft/hr.
22:00 – 22:30	Directional rotary drill f/1502 ft to 1548 ft, 45 ft, 800 gpm, 1820 psi, 10/12 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg 87 ft/hr.
22:30 – 23:00	Circulating, reaming, surveys & connections. Last survey at 1496 ft, inc 43.2 deg, azm 198.9 deg.
23:00 – 23:30	Directional slid drill f/1548 ft to 1588 ft, 40 ft, 800 gpm, 1750 psi, 8/12 klb wob, ROP avg 61.5 ft/hr.
23:30 – 00:00	Directional rotary drill f/1588 ft to 1620 ft, 32 ft, 800 gpm, 1820 psi, 10/12 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg 140 ft/hr.

August 27th, 2013

00:00 – 00:30	Directional rotary drill f/1620 ft to 1643 ft, 45 ft, 800 gpm, 1820 psi, 10/12 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg ft/hr.
00:30 – 01:30	Circulate and reaming with 800 gpm, 2000 psi and pump 20 bbl HVP and displace with circulation a bottom up.
01:30 – 03:00	Perform short trip from 1643 ft to 990 ft and RIH directional BHA from 990 ft to 1643 ft.
03:00 – 03:30	Circulate with 800 gpm, 2000 psi a bottom up to continue directional drilling.
03:30 – 07:00	Directional drilling: slid drill f/1643 ft to 1821 ft, 178 ft, 800 gpm, 2000 psi, 8/12 klb wob, ROP avg 51.3 ft/hr.
07:00 – 09:00	Directional rotary drill f/1821 ft to 1995 ft (13 3/8" csg point), 174 ft, 800 gpm, 2050 psi, 8/15 klb wob, 60 rpm, 3/5 klb-ft tq, ROP avg 84.9 ft/hr.
09:00 – 12:30	Accum: circulating, reaming, surveys & connections. Last survey at 1941 ft, inc 57.8 deg, azm 199.2 deg. Projection at bottom hole at 1995 ft, inc 60.5 deg, azm 199.2 deg.
12:30 – 14:30	Circulate & reciprocate with 850 gpm, 2200 psi and pump 30 bbl HVP continue to displace with circulation up to clean shakers.
14:30 – 21:30	POOH 17" Directional BHA from 1995 ft to surface with normal drag. L/D 17" BHA directional: 8" Flex monel, 8" NM monel, 8" UBHO, PDM Phoenix.
21:30 – 00:00	M/U and RIH 17" wiper trip BHA from surface to 1189.

August 28th, 2013

00:00 – 01:30	Continue RIH 17" wiper trip BHA from 1189 ft to 1995 ft. Washdown last to two stands with 600 gpm, 1800 psi.
01:30 – 02:00	Circulating with 800 gpm, 2000 psi. Clean possum belly, full of claystone. Halliburton condition mud.
02:00 – 04:00	Continue circulate and pump 20 bbl HVP and continue circulation up to clean shakers.
04:00 – 08:00	POOH 17" BHA and 17" tricone bit from 1995 ft to surface. L/D 17" BHA wiper trip: 15jt 5" HWDP, 6jt 6 1/2" DC, 1jt 9 5/8" Hyd Jar, 3jt 8" DC, Bit Sub, 17" tricone bit.
08:00 – 10:30	Condition rig floor and L/D Hawk Jawk, 5" hyd elevator and 5" links. Install ITS csg running tools: 18" links, csg spiders, fill up tool and single joint.
10:30 – 11:00	Perform safety and operative meeting w/ Pepesa, Halliburton, ITS, Tramarsa, TGT lab and Savia.

11:00 – 14:00	Install w/weld on 13 3/8" drillable guide shoe, 1 jt 13 3/8" csg, 13 3/8" drillable float collar, perform float valve test, ok. Continue run 11 jt 13 3/8" csg 54.5 #/ft, K-55, BTC, run csg to 410 ft.
14:00 – 14:30	Brake gels and circulate with 370 gpm 330 psi by 30 min.
14:30 – 20:00	Continue run 40 jt (51 jt total) 13 3/8" csg 54.5 #/ft, K-55, BTC, from 410 ft to 1994 ft. Install 14 ea x 17" bow spring centralizer as program. Run with circulation from 1600 ft, 1680 ft and 1840 ft.
20:00 – 20:30	Continue wash down last two 13 3/8" csg with 140 gpm, 320 psi from 1920 ft to 1994 ft.
20:30 – 22:30	Circulate and reciprocate csg with 170 gpm, 350 psi. While ITS personnel R/D running tools equipment from rig floor (power tong, csg spider, hyd hoses and power unit).
22:30 – 23:30	ITS and Pepesa crew L/D fill up tool and csg spider.
23:30 – 00:00	Halliburton personnel install cementing head (bottom & top plugs) and connect cmt lines from Medomack to Platform.

August 29th, 2013

00:00 – 00:30	Continue Halliburton personnel install cement lines from Medomack to Platform.
00:30 – 01:30	Continue circulate with 370 gpm and 350 psi.
01:30 – 02:00	Perform safety and operation meeting with Pepesa, Halliburton and Savia crew. Halliburton fill cmt lines with water fresh and perform test lines with 2100 psi, ok.
02:00 – 04:00	Start cmt job: pump 15 bbl of 8.4 ppg Mud Flush w/ 5 bpm, 270 psi. and 25 bbl of 11.0 ppg Tuned Spacer w/5 bpm, 320 psi. Drop bottom plug and Hall mix lead slurry Econocem 12.5 ppg. Pump 231 bbl of lead slurry 12.5 ppg (616 sxs Pacasmayo I cmt) with 5.0 bpm, 430/360 psi. Continue pump 92 bbl of tail slurry Halcem 15.2 ppg (424 sxs Pacasmayo I cmt) with 4.8 bpm, 430-480 psi. Release top plug & displacement with 303 bbl of mud 9.7 ppg, 7-2 bpm, 600/380 psi, top plug perform bump plug on landing valve with 2,0 bpm, 380 psi and pressure with 900 psi by 5 min, ok. Observed full return by shakers & return Mud Flush and Spacer contaminated & 23 bbl cement 12.3 - 12.5 ppg during displacement. Perform flow back test and return 1.5 bbl, ok. Casing shoe at 1994 ft, Float Valve at 1953 ft.
04:00 – 08:00	R/D cmt lines. Pepesa welder open window on 18" csg, maneuver to center 13 3/8" csg, cut and weld ring between 18" conductor and 13 3/8" csg. Open Cmt head and discharge and l/d cmt head.
08:00 – 11:00	Welder cut 13 3/8" csg and P/U. N/D bell nipple, 21 1/4" diverter, drilling spool, 21 1/4" flange with 18" extension.
11:00 – 11:30	Pepesa perform crew change, organize safety meeting with two crews.
11:30 – 13:00	Fepco technician bevel on 13 3/8" csg & condition to install 13 3/8" x 13 5/8" x 3M casing head type slick lock. Install 13 3/8" x 13 5/8" x 3M Fepco Casing Head type slick lock. Fepco technician appl nuts optimo torque. Perform slick lock test w/ 1200 psi by 5 min in two cycles, ok.
13:00 – 17:00	Install 13 3/8" x 11" x 3M extension, 13 3/8" x 5M drilling spool, secure bolts. N/U 13 5/8" x 5M BOP.
17:00 – 18:30	Install a 5" DP stand on TD to center BOP with rotary table, perform maneuver to center BOP and weld pads on second level.
18:30 – 21:00	Install hyd hoses from Koomey to BOP, choke and kill line. Pepesa change 7" to 5" pipe rams in 13 5/8" BOP. Prepare hydrostatic pump to perform 13 5/8" BOP test.
21:00 – 21:30	M/U and install plug tester with 5" DP.

21:30 – 00:00 Start 13 5/8" BOP test: Pressure test annular BOP with 300/1500 psi by 10 min, ok. .Pressure test pipe ram with 500 psi. don't pressurized, observed leak by BOP annular.
Pepesa open pipe ram to lubricate rams and M/U to continue BOP test.
Pressure test pipe rams with HCR valve with 500/3000 psi by 10 min, ok.

August 30th, 2013

00:00 – 03:30 Continue BOP test: Close blind rams and HCR valve to pressure test with 500/3000 psi by 10 min, ok. Pressure test blind rams and HCR valve to pressure test with 500/3000 psi by 10 min, ok.
P/T Blind rams w/ manifold medium valves w/ 500 & 3000 psi by 10 min, ok. P/T Blind rams w/ manifold internal valves w/ 500 & 3000 psi by 10 min, ok.
Test hydraulic auto chock & manual choke w/ blind rams w/ 500 & 3000 psi by 10 min, ok. BOP valve of TDS w/stand pipe, mud hoses to pumps & kill valve w/ 500 & 3000 psi by 10 min, ok.
Recovery plug tester and install wear bushing with running tool.

03:30 – 06:30 Pepesa prepare maneuver to level drilling rig with hydraulic cats. Install bell nipple in progress.

06:30 – 07:30 Install bell nipple and welder prepare flow line. While pick up 5" DP from Perla Barge to Platform. Take serial numbers and measure.

07:30 – 09:00 Install Hawk Jawk. M/U plug tester with running tools and install wear bushing. Perform safety and operation meeting with all crew.

09:00 – 12:30 P/U & M/U 22 stands 5" DP on rig floor.

12:30 – 18:00 M/U & RIH BHA directional: 12 1/4" PDC bit Type SKH419S-A1A, N/S E182076 (6x14 jets, IADC S123), 8" PDM mud motor (12" sleeve, 0.17 rev/gal, 1.5 deg BH), 8" Short DC, 12 1/8" string STB, 8" UBHO, 8" Spiral Monel MWD, 8" NMDC, x/o, 1x 6 1/2" DC 12 jt 5" HWDP 6 3/4" Hyd Jar, 8 jt 5" HWDP RIH to 763 ft.

18:00 – 18:30 Pepesa mechanics perform TD Rig Services.

18:30 – 19:00 Cut 120 ft. and slip 100 ft. 1 1/4" drilling line.

19:00 – 22:30 Continue RIH 12 1/4" BHA from 763 ft to 878 ft: M/U 4 jt 5" HWDP, BHA: 880.93 ft. Continue RIH with 5" DP M/U single by single to 1949 ft, last two 5" DP washdown. At 1949 ft tag top of cement (FC:195).

22:30 – 23:00 Drill out cement f/ 1949 ft. to 1984 ft: drill out top and bottom plug and float collar; with 450 gpm, 700 psi, 40 rpm, wob 4/5 klb, 4-5 klb-ft tq.

23:00 – 23:30 Circulate a bottom up with 450 gpm, 700 psi.

23:30 – 00:00 Perform CIT with 1000 psi by 10 min, ok.

August 31st, 2013

00:00 – 01:00 Drill out cement f/1984 ft to 1993 ft; with 450 gpm, 700 psi, 40 rpm, wob 4/5 klb, 4-5 klb-ft tq. Perform change mud system w/250 bbl, 450 gpm, 750 psi: displace mud contaminated by mud system Clayseal.

01:00 – 02:00 Continue drill out cement f/1993 ft to 2005 ft & drill new formation from 1995 ft to 2005 ft with 450 gpm, 700 psi, 40 rpm, wob 4/5 klb, 4-5 klb-ft tq. Circulate at 2005 ft, while geologist wait bottom sample.

02:00 – 02:30 Perform formation integrity test (FIT) with MW:9.8 ppg, EMW: 13.5 ppg. 331 psi ok at 1721 ft TVD.

02:30 – 04:30 Directional rotary drilling from 2005 ft to 2106 ft, with 650 gpm, 2090 psi, 5/10 klb wob, 5-10 klb-ft tq, 60 rpm, ROP avg 55 ft/hr.

04:30 – 05:30 Ream, connection and take survey at 2044 ft, 59.3 incl, 199.8 azimuth.

05:30 – 07:00 Directional rotary drilling from 2106 ft to 2297 ft, with 650 gpm, 2100 psi, 5/10

	klb wob, 5-10 klb-ft tq, 60 rpm, ROP avg 56 ft/hr. Last geologist sample at 2120 ft: 90% Claystone, 10% Dolomite.
07:00 – 08:30	Accum: circulating, reaming, surveys & connections. Last survey at 2235 ft, inc 59.2 deg, azm 200.0 deg.
08:30 – 09:00	Directional drilling: slid drill f/2297 ft to 2336 ft, 39 ft, 800 gpm, 2600 psi, 10/15 klb wob, ROP avg 83.6 ft/hr.
09:00 – 11:00	Directional rotary drilling from 2336 ft to 2643 ft, with 800 gpm, 2890 psi, 10/15 klb wob, 60 rpm, 7/8 klb-ft tq, ROP avg 154.8 ft/hr.
11:00 – 13:30	Accum: circulating, reaming, surveys & connections. Last survey at 2518 ft, inc 61.8 deg, azm 199.5 deg.
13:30 – 14:00	Directional drilling: slid drill f/2643 ft to 2661 ft, 18 ft, 800 gpm, 2650 psi, 10/15 klb wob, ROP avg 90 ft/hr.
14:00 – 19:30	Directional rotary drilling from 2661 ft to 3148 ft, with 800 gpm, 3000 psi, 10/15 klb wob, 60 rpm, 7/8 klb-ft tq, ROP avg 116 ft/hr.
19:30 – 22:30	Accum: circulating, reaming, surveys & connections. Last survey at 3086 ft, inc 61.1 deg, azm 197.4 deg.
22:30 – 23:00	Directional drilling: slid drill f/3148 ft to 3168 ft, 20 ft, 800 gpm, 2980 psi, 10/15 klb wob, ROP avg 120 ft/hr.
23:00 – 23:30	Directional rotary drilling from 3168 ft to 3225 ft, with 780 gpm, 3000 psi, 10/15 klb wob, 60 rpm, 7/8 klb-ft tq, ROP avg 105.8 ft/hr.
23:30 – 00:00	Reaming, surveys & connections. Last survey at 3180 ft, inc 62.1 deg, azm 198.4 deg.

September 01st, 2013

00:00 – 02:30	Directional rotary drilling from 3225 ft to 3432 ft, with 780 gpm, 3100 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 95.5 ft/hr.
02:30 – 03:30	Accum: circulating, reaming, surveys & connections. Last survey at 3369 ft, inc 61.8 deg, azm 198.8 deg.
03:30 – 05:30	Circulate and reciprocate with 800 gpm, 3050 psi and pump 20 bbl HVP and displace with circulation up to clean shakers.
05:30 – 07:30	Perform short wiper trip: POOH 12 1/4" BHA from 3432 ft to 2204 ft.
07:30 – 08:30	At 2204 ft circulate and reciprocate a bottom up with 700 gpm, 2300 psi, due a that drag up increase from 140 klb to 160 klb during wiper trip. Observed by shakers a lot of debris, circulate up to clean shakers. Pepesa personnel clean possum belly, shaker sun tank and mud lines.
08:30 – 09:00	Continue POOH from 2204 ft to 1990 ft with drag normal.
09:00 – 10:00	Perform TD rig services and Pepesa continue condition shakers and sand tank.
10:00 – 11:30	RIH 12 1/4" BHA from 1990 ft to 3432 ft, last stand washdown with 760 gpm and 2560 psi (mud pump # 1 & 3).
11:30 – 12:00	Brake gels and circulate with 760 gpm, and 2600 psi to displace trip gas (mud pump # 1 & 3).
12:00 – 13:00	Directional rotary drilling from 3432 ft to 3528 ft, with 800 gpm, 3100 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 94 ft/hr.
13:00 – 14:00	Reaming, surveys & connections. Last survey at 3464 ft, inc 62.0 deg, azm 198.8 deg.
14:00 – 14:30	Directional slid drill f/ 3526 ft to 3548 ft, 22 ft, 800 gpm, 3050 psi, 10/15 klb wob, ROP avg 45 ft/hr.
14:30 – 15:00	Directional rotary drilling from 3548 ft to 3623 ft, with 800 gpm, 3100 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 150 ft/hr.
15:00 – 15:30	Reaming two times prior to take survey and connection. Stop circulation due to leak of diesel cooling system of Genset #3.
15:30 – 16:30	Pepesa electronic perform test with Genset #4 without success. Genset #4

	inoperative. Circulate on bottom with 530 gpm, 1500 psi (Genset #1 y #2) while Pepesa electronic and mechanics change diesel cooling system and install on Genset #3. Perform Genset #3 tests, ok.
16:30 – 21:00	Directional rotary drilling from 3623 ft to 4000 ft, with 800/740 gpm, 3150/2700 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 84 ft/hr.
21:00 – 00:00	Accum: circulating, reaming, surveys & connections. Last survey at 3936 ft, inc 62.3 deg, azm 201.4 deg.

September 02nd, 2013

00:00 – 01:30	Circulate and reciprocate with 800 gpm, 3200 psi and pump 20 bbl and displace with circulation up to clean shakers.
01:30 – 03:00	Directional rotary drilling from 4000 ft to 4095 ft, with 800/740 gpm, 3150/2700 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 146.2 ft/hr. (Mud Pump #1 & #3).
03:00 – 04:00	Reaming, surveys & connections. Last survey at 4031 ft, inc 62.7 deg, azm 201.5 deg.
04:00 – 06:30	Directional rotary drilling from 4095 ft to 4284 ft, with 800/780 gpm, 3150/2850 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 84.5ft/hr (Mud pump #1 & #3).
06:30 – 08:00	Accum: Reaming, surveys & connections. Last survey at 4221 ft, inc 62.6 deg, azm 201.9 deg.
08:00 – 08:30	Directional slid drill f/ 4284 ft to 4304 ft, 20 ft, 800 gpm, 3280psi, 10/17 klb wob, ROP avg 41.4 ft/hr.
08:30 – 11:00	Directional rotary drilling from 4304 ft to 4472 ft, with 760 gpm, 3000/2850 psi, 10/16 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 73.6 ft/hr (Mud pump #1 & #3).
11:00 – 12:00	Accum: Reaming, surveys & connections. Last survey at 4411 ft, inc 61.7 deg, azm 200.8 deg.
12:00 – 13:00	Circulate and reciprocate with 760 gpm, 3000 psi and pump 30 bbl HVP and displace with circulation up to clean shakers. Mud pump #2 in repair, Pepesa crew change module #1.
13:00 – 15:30	Directional rotary drilling from 4472 ft to 4662 ft, with 760 gpm, 3050 psi, 10/16 klb wob, 60 rpm, 7/10 klb-ft tq, ROP avg 83.2 ft/hr (Mud pump #1 & #3). Mud pump #2 continuous repair.
15:30 – 16:30	Accum: Reaming, surveys & connections. Last survey at 4505 ft, inc 59.6 deg, azm 199.4 deg.
16:30 – 17:30	Directional slid drill f/ 4662 ft to 4682 ft, 20 ft, 750 gpm, 2900 psi, 14/17 klb wob, ROP avg 26 ft/hr.
17:30 – 20:00	Directional rotary drilling from 4682 ft to 4850 ft, with 760 gpm, 3000 psi, 10/16 klb wob, 60 rpm, 8/10 klb-ft tq, ROP avg 67 ft/hr (Mud pump #1 & #3). Mud pump #2 continuous repair.
20:00 – 21:30	Accum: Reaming, surveys & connections. Last survey at 4789 ft, inc 57.8 deg, azm 198.5 deg.
21:30 – 22:00	Directional slid drill f/ 4850 ft to 4865 ft, 15 ft, 760 gpm, 3100 psi, 15/20 klb wob, ROP avg 34 ft/hr.
22:00 – 23:30	Directional rotary drilling from 4865 ft to 4946 ft, with 785 gpm, 3300 psi, 13/16 klb wob, 60 rpm, 8/10 klb-ft tq, ROP avg 55 ft/hr (Mud pump #1 & #2). Mud pump #2 is operative.
23:30 – 00:00	Reaming & surveys. Last survey at 4883 ft, inc 56.7 deg, azm 199.2 deg. Last geologist sample at 4940 ft: 100% Claystone.

September 03rd, 2013

00:00 – 00:30	Continue circulate and reciprocate with 780 gpm, 3300 psi.
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00:30 – 01:30	Directional rotary drilling from 4946 ft to 4984 ft (9 5/8" csg point), with 785 gpm, 3340 psi, 14/16 klb wob, 60 rpm, 8/10 klb-ft tq, ROP avg 60 ft/hr. Mud pump #2 is operative.
01:30 – 04:00	Circulate and reciprocate with 800 gpm, 3320 psi and pump 30 bbl sweep pill and displace with circulation up to clean shakers.
04:00 – 07:00	POOH 12 1/4" BHA from 4984 ft to 4126 ft. The first 4 stand POOH with drag normal (D/U 165 klb) and continue POOH to 3535 ft with circulation and rotation.
07:00 – 08:00	Circulate and reciprocate with 800 gpm, 3320 psi up to clean shakers. Return abundant cuttings.
08:00 – 15:00	Continue POOH with backreaming from 3535 to 1994 ft. POOH from 1994 ft to surface without circulation & rotation. L/D directional BHA.
15:00 – 18:30	M/U & RIH 12 1/4" conventional BHA from surface to 1994 ft (13 3/8" casing shoe).
18:30 – 19:00	Circulate with 800 gpm - 1511 psi, observed cutting on shaker.
19:00 – 19:30	TIH conventional BHA from 1994 ft to 2308 ft without pump & rotation.
19:30 – 00:00	TIH washing down from 2308 ft to 3900 ft with 800 gpm - 2000 psi. observed cutting on shaker. Circulate at 3000 ft with 800 gpm.

September 04th, 2013

00:00 – 08:00	TIH washing down from 3900 ft to 4984 ft with 830 gpm - 2350 psi. observed cutting on shaker. Circulate at 4100 ft w/ 830 gpm.
08:00 – 10:00	Circulate and reciprocate with 840 gpm, 2350 psi and pump 40 bbl low rheology pill with 40 bbls high visc pill and displace with circulation up to clean shakers. MW: 10.9 ppg.
10:00 – 16:00	POOH from/ 4984 ft to 4714 ft. The first 3 stand POOH with drag normal & continue POOH to 1995 ft with circulation and rotation. Circulate at 3300 ft with 800 gpm.
16:00 – 16:30	Circulate at 1995 ft with 800 gpm - 1700 psi. Return abundant cuttings.
16:30 – 17:00	TIH conventional BHA from 1995 ft to 2326 ft without pump & rotation.
17:00 – 00:00	TIH washing down from 2326 ft to 4984 ft with 810 gpm - 2100 psi. String set at 2326', 2600', 2718', 2970', 3127', 3301', 3548', 3612'.

September 05th, 2013

00:00 – 02:00	Circulate, pump 30 bbls of disperse pill to shaker clean .Increase mud weight from/10.9 to 11.2 ppg.
02:00 – 05:30	POOH 12 1/4" conventional BHA from/ 4984 ft to 1995 ft without problem, just work string at 4495 ft and 4200 ft.
05:30 – 06:00	Circulate at 1995 ft (13 3/8" csg shoe) with 700 gpm - 1190 psi.
06:00 – 11:00	Continue POOH 12 1/4" w/ convent BHA from 1995 ft to surface. L/D BHA.
11:00 – 11:30	Retrieve wear bushing.
11:30 – 12:00	R/D mechanic tongs, hawk jaw, hyd elevator, short links.
12:00 – 13:00	R/U and M/U ITS tools, install fill up tool, power unit, hydraulic tongs, casing board and links (15 ft) to top drive.
13:00 – 13:30	Perform safety and operational meeting to run casing.
13:30 – 00:00	9 5/8" BTC drillable guide shoe, 2 joints 9 5/8" 43.5 ppf N-80 BTC casing, 9 5/8" drillable float valve and continue Run 9 5/8" casing (N-80, 43.5 lb/ft, BTC) to 3704 ft.

September 06th, 2013

00:00 – 04:00	Continue Run 9 5/8" casing (N-80, 43.5 lb/ft, BTC) f/ 3704' to 4982' ft. Total : 132
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	x 38' csg and 48 centralizer.
04:00 – 05:00	L/D ITS fill up tool, R/U and install 9 5/8" circulation head, and circulate bottoms up with 350 gpm. Continue to circulate, homogenize and condition mud.
05:00 – 07:00	Rig up bake cementing lines and prepare cement on HIPPO. Circulate hole with rig pumps.
07:00 – 08:00	Rig cementing head and perform safety meeting with all crews. And continue circulate hole with rig pumps.
08:00 – 12:00	Test cement lines with 2560 psi, Ok. Perform cement job: Pump 80 bbls of low rheology mud, 15 bbls of spacer 12 ppg, 10 bbls x 8.4 ppg mud clean, 10 bbls x 8.5 ppg of mud sweep. 15 bbls x 12 ppg spacer and drop bottom plug, pump 213 bbls extend Cement V 13.5 ppg x 6.6 bpm and 42 bbls cement tail slurry 15.6 ppg x 6 bpm. Drop top plug, displace with Mud 11.2 ppg- 369 bbls plug arrived with 505 psi & down to 480 psi. Stop displace. Back flow 4 bbls in two time. Return 4 bbls to well and close it with 480 psi.
12:00 – 12:30	WOC. Baker crew R/D cementing lines, moved material from platform to barge.
12:30 – 13:30	Perform maneuver, lift BOP Stack to install casing hanger 9 5/8".
13:30 – 19:00	WOC, while pick up 5" DP from Perla Barge to Platform. Take serial numbers and measure, install short links TD, and Hawk Jawk.
19:00 – 21:00	Open cement head discharge and R/D, Pepesa crew L/D flow line, kill line, HCR, P/U BOP 13 5/8" welder cut 9 5/8" Csg and L/D.
21:00 – 00:00	Fepco technician bevel on 9 5/8" csg & condition to install Csg spool 13 5/8" x 3M - 11 x 3M tighten bolts, Perform drilling spool test w/ 1500 psi by 10 min ok. (Section B).

September 07th, 2013

00:00 – 03:30	Install double flange drill extension 13 5/8"x3M - 11x3M. BOP stack and tighten bolts. Connect choke line and kill lines.
03:30 – 04:00	M/U and install plug tester with 5" DP.
04:00 – 05:00	Center BOP with rotary table, perform maneuver to center BOP and weld pads on second level.
05:00 – 10:00	Perform HCR & BOP operative test. Test Annular BOP with 300/1500 psi x 10 min, Ok, pipe rams, with 300/3000 psi x 10 min, Ok, HCR, Kill line valve, chock valve with 300/3000 psi, Ok. Test choke manifold valves, IBOP, stand pipe manifold, rotary hose with 300/3000 psi x 10 min, Ok. Test blinds rams with 300/3000 psi x 10 min, Ok.
10:00 – 11:00	Retrieve plug tester and install wear bushing.
11:00 – 13:30	Install bell nipple and flow line.
13:30 – 18:30	R/U directional tools, measure and take serial number. M/U & RIH dir. BHA w/ 8 1/2" PDC bit (MSi519HUPX, 7x13), 6 3/4" mud motor BH 1.5 (8 1/8 sleeve stb), 8 3/8" stabilizer, 6 3/4" UBHO, 2 monels, X/O, 1 DC 6 1/2", X/O, 2 HWDP 5", 01 Jar 6 3/4", 18 HWDP 5" to 760.62'.
18:30 – 00.00	TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in singles from 760.62' to 3000', drifting, take measurement and serial.

September 08th, 2013

00:00 – 03:00	Continue TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in singles from 3000' to 4516', drifting, take measurement and serial.
03:00 – 03:30	Cont. TIH from 4516 ft to 4887 ft in stand's. TOC : 4887 ft.
03:30 – 07:00	Drill out cement from 4887 ft to 4984 ft. Perform CIT with 1000 psi x 10 min - ok.
07:00 – 07:30	Drill 17 ft of new formation from 4984 ft to 5001 ft.

07:30 – 08:30 Circulate and displace contaminate mud for new mud, 10.8 ppg.
 08:30 – 09:00 Perform FIT. mud weight 10.8 ppg, pres 440 psi, EMW: 13.5 ppg. Ok.
 09:00 – 16:00 Directional rotary drilling from 5001 ft to 5366 ft, with 550 gpm, 2100/2200 psi, 10/15 klb wob, 60 rpm, 7/9 klb-ft tq, ROP avg 59.7 ft/hr (Mud pump #1 & #3).
 16:00 – 18:00 Accum: Reaming, surveys & connections. Last survey at 5346 ft, incl 55.3 deg, azm 197.5 deg.
 18:00 – 19:30 Directional slid drill f/5366 ft to 5388 ft, 22 ft, 550 gpm, 2200psi, 5/12 klb wob, ROP avg 15.2 ft/hr.
 19:30 – 22:00 Directional rotary drilling from 5388 ft to 5463 ft, with 550 gpm, 2100/2200 psi, 10/15 klb wob, 60 rpm, 10/12 klb-ft tq, ROP avg 71.5 ft/hr (Mud pump #1 & #3).
 22:00 – 23:00 Accum: Reaming, surveys & connections. Last survey at 5441 ft, incl 52.8 deg, azm 199.4 deg.
 23:00 – 00:00 Directional slid drill f/5463 ft to 5471 ft, 8 ft, 550 gpm, 2200psi, 5/12 klb wob, ROP avg 4.8 ft/hr.

September 09th, 2013

00:00 – 00:30 Continue Directional slid drill f/ 5471 ft to 5473 ft, 2 ft, 550 gpm, 2200psi, 5/12 klb wob, ROP avg 5.2 ft/hr.
 00:30 – 01:00 Reaming, surveys & connections. Last survey at 5441 ft, inc 52.8 deg, azm 199.4 deg.
 01:00 – 02:30 Directional rotary drilling from 5473 ft to 5585 ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 10/12 klb-ft tq, ROP avg 69.2 ft/hr (Mud pump #1 & #3).
 02:30 – 03:00 Reaming, & connections.
 03:00 – 06:00 Directional rotary drilling from 5585 ft to 5703 ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 10/12 klb-ft tq, ROP avg 40 ft/hr (Mud pump #1 & #3).
 06:00 – 07:00 Directional slid drill f/ 5703 ft to 5711 ft, 8 ft, 550 gpm, 2200psi, 5/12 klb wob.
 07:00 – 07:30 Directional rotary drilling from 5711 ft to 5771 ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 10/12 klb-ft tq, ROP avg 69.2 ft/hr (Mud pump #1 & #3).
 07:30 – 08:30 Reaming, & connections ,take survey and circulate.
 08:30 – 09:30 Directional rotary drilling from 5771 ft to 5868 ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 10/12 klb-ft tq (Mud pump #1 & #3).
 09:30 – 10:00 Reaming, & connections, take survey.
 10:00 – 11:30 Directional rotary drilling from 5868 ft to 5944ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 10/12 klb-ft tq (Mud pump #1 & #3).
 11:30 – 12:00 Rig service.
 12:00 – 13:00 Directional slid drill f/ 5944 ft to 5950 ft, 550 gpm, 2200psi, 5/12 klb wob.
 13:00 – 14:00 Directional rotary drilling from 5950 ft to 5995 ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 11/14 klb-ft tq (Mud pump #1 & #2).
 14:00 – 15:00 Directional slid drill f/ 5995 ft to 6000 ft, 550 gpm, 2200psi, 5/12 klb wob. It's difficult to slide, need more weight on BHA.
 15:00 – 15:30 Directional rotary drilling from 6000 ft to 6056 ft, with 550 gpm, 2300 psi, 10/15 klb wob, 60 rpm, 12/15 klb-ft tq (Mud pump #1 & #2). Last geology sample : 90% sand , 10% sandstone , trazas claystone.
 15:30 – 16:00 Circulate & pump vis pill of 40bbls - 120 seg. with 550 gpm - 2200 psi to shaker clean to POOH string to change BHA. PU:180 SO:80 HL:130 klbs. Survey point at 5912 ft , 48.3° incl - 199.20°azm
 16:00 – 21:00 POOH directional BHA w/ 8 1/2" PDC bit from 6056' to 760' with normal drag.
 21:00 – 23:00 POOH and L/D dir. BHA with 8 1/2" PDC bit. retrieve 8 1/8" sleeve of mud motor to used slick mud motor.
 23:00 – 00:00 M/U & RIH dir. BHA w/ 8 1/2" PDC bit (MSi519HUPX, 7x13) , 6 3/4" mud motor BH 1.5 (0.29 rev/ gal - slick) , 8 3/8" stabilizer, 6 3/4" UBHO, 2 monels, X/O, 3 DC 6 1/2", f/ surface to 190'.

September 10th, 2013

00:00 – 02:30 Continue X/O, 12 HWDP 5", 01 Jar 6 3/4", 18 HWDP 5" from 190' to 1126.15'.
 02:30 – 04:30 Continue TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in stand's f/ 1126.15' to 4982'.
 04:30 – 05:30 Cut 120 ft and slip 100 ft 1 1/4" drilling line.
 05:30 – 07:30 Continue TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in stand's f/ 4881' to 6056 ft.
 07:30 – 08:00 Circulate bottom up to shaker clean.
 08:00 – 11:30 Directional rotary drilling from 6056 ft to 6257 ft, with 560 gpm, 2400 psi, 10/15 klb wob, 60 rpm, 15/16 klb-ft tq, MD 162 RPM.
 11:30 – 13:30 Directional slide drill f/ 6257 ft to 6277 ft, 22 ft, 560 gpm, 2500psi, 3/4 klb wob, ROP avg 15.2 ft/hr.
 13:30 – 16:30 Accum: Reaming, surveys & connections. Last survey at 6277 ft, inc 44.1 deg, azm 201.2 deg.
 16:30 – 00:00 Directional rotary drilling from 6277 ft to 6720 ft, with 550 gpm, 2400 psi, 10/15 klb wob, 60 rpm, 15/16 klb-ft tq, MD 162 RPM.

September 11th, 2013

00:00 – 14:30 Directional rotary drilling from 6720 ft to 7120 ft, with 550 gpm, 2500 psi, 12/18 klb wob, 60 rpm, 20/25 klb-ft tq, MD 162 RPM. MW: 11.2ppg.
 Last geology sample at 7120 ft - 100 % claystone. Fm: Palegreda (top :6885 ft).
 Last survey point at 7033 ft - 33.6° incl - 196.6° azm.
 14:30 – 16:00 Circulate & pump high-vis pill to shaker clean to POOH 8.2" direct BHA to change PDC bit due low ROP.
 16:00 – 16:30 Repair Rig - Problem with grabber of top drive to disconnect Dp's. Repair & prepare to POOH string.
 16:30 – 21:00 POOH directional BHA w/ 8 1/2" PDC bit from 7120' to 1126' with normal drag.
 21:00 – 23:00 POOH and L/D dir. BHA with 8 1/2" PDC bit.
 23:00 – 00:00 M/U & RIH dir. BHA w/ 8 1/2" PDC bit (NOV - REH519M-A10) nozzles 4x12 3x13
 1x11 - M322, 6 3/4" mud motor BH 1.5 (8 1/8 sleeve stb), 8 3/8" stabilizer, 6 3/4" UBHO, 2 monels, X/O f/ surface to 100'.

September 12th, 2013

00:00 – 02:00 Continue RIH dir. BHA 3 DC 6 1/2" X/O, 12 HWDP 5", 1 Jar 6 3/4", 18 HWDP 5" from 100' to 1126.4'.
 02:00 – 06:30 Continue TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in stand's from/ 1126.4' to 7120 ft. without problems.
 06:30 – 07:00 Circulate 01 bottom up with 550 gpm - 2540 psi.
 07:00 – 12:00 Directional Drilling from 7120 ft to 7241 ft with 550 gpm, 2500 psi, 8/10klb wob, 60 rpm, 13/16 klb-ft tq, MD 162 RPM. MW: 11.3ppg
 12:00 – 12:30 Mechanic repair mud pump.
 12:30 – 22:00 Directional Drilling from 7241 ft to 7506 ft with 550 gpm, 2500 psi, 8-10 klb wob, 60 rpm, 13/16 klb-ft tq, MD 162 RPM. MW: 11.3ppg.
 22:00 – 22:30 Rig service.
 22:30 – 23:00 Circulated & pump high-vis pill to shaker clean.
 23:00 – 00:00 Directional Drilling from 7506 ft to 7544 ft with 550 gpm, 2500 psi, 8-10 klb wob, 60 rpm, 17/18 klb-ft tq, MD 162 RPM. MW: 11.3ppg.

September 13th, 2013

00:00 – 16:00 Direct Drilling from/ 7544' to 8016' w/ 560 gpm, 2600 psi, 8/10klb wob, 60 rpm, 19/23 klb-ft tq, MD 162 RPM. MW:11.3ppg.

16:00 – 18:00 Circulate & pump disperse pill and circulate to shaker clean with 550 gpm - 2600 psi. With Rotation & pump PU 185 klbs, SO: 120 klbs, HL: 152 klbs.

18:00 – 21:30 POOH directional BHA from 8016 ft to 6047 ft with rotation and circulation. Without rotation PU: 270 klbs, SO; 190 klbs, HL:147 klbs.

21:30 – 22:00 Circulate bottom up to shaker clean.

22:00 – 00:00 TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in stand's f/ 6047' to 7212 ft. with reducing torque (NRST-Spiro-Torque of North services).

September 14th, 2013

00:00 – 01:30 Continue TIH dir. BHA and 8 1/2" PDC bit w/ DP 5" in stand's f/ 7212' to 8016 ft. Installed reducing torque (NRST Spiro - torque : Northservices).

01:30 – 02:30 Circulated & pump high-vis pill to shaker clean.

02:30 – 05:00 Direct Drilling from/ 8016' to 8061' w/ 560 gpm, 2600 psi, 10/15 klb wob, 60 rpm, 18/19 klb-ft tq, MD 162 RPM. MW:11.3ppg.

05:00 – 07:00 Pepesa repair rig. Hose from top drive of robotics commands is leaking. Circulate with rotation and change oil hose.

07:00 – 10:30 Direct Drilling from/ 8061' to 8132' w/ 560 gpm, 2600 psi, 8/10 klb wob, 60 rpm, 18/19 klb-ft tq, MD 162 RPM. MW:11.4ppg.

10:30 – 11:30 Pressure drop slowly from 2600 psi to 2350 psi. Inspect surface lines and pumps one per one - ok. Determinate POOH to inspect string.

11:30 – 15:00 POOH string with rotation and circulation from 8132 ft to 6504 ft. Find wash out at 6504 ft. in Pepesa drill pipe.

15:00 – 15:30 Pepesa L/D drill pipe & replace it .Prepare to RIH to continue drilling. Circulate with 550 gpm - 2472 psi.

15:30 – 17:00 TIH with direct BHA from 6504 ft to 8132 ft without problems.

17:00 – 00:00 Direct Drilling from/ 8132' to 8290' w/ 560 gpm, 2600 psi, 8/10 klb wob, 60 rpm, 18/19 klb-ft tq, MD 162 RPM. MW:11.4ppg.

September 15th, 2013

00:00 – 12:00 Direct Drilling from/ 8290' to 8494' w/ 560 gpm, 2700 psi, 8/12 klb wob, 60 rpm, 18/19 klb-ft tq, MD 162 RPM. MW:11.4ppg.

12:00 – 13:00 Circulate with 550 gpm and pump visc with disperse pills to shacker clean. W/ rotation & pump (60 rpm- 550 gpm) : PU: 240 klbs and torque: 25700 lb-ft. SO: 110 klbs (torq: 15 klbs). HO: 155 klbs. Without rotation & pump (550 gpm): PU: 280/290 klbs.SO:110 klbs.

13:00 – 00:00 Direct Drilling from/ 8494' to 8660' w/ 560 gpm, 2700 psi, 8/12 klb wob, 60 rpm, torq: 19/20 klb-ft tq, MD 162 RPM. MW:11.4ppg.

September 16th, 2013

00:00 – 00:30 Direct Drilling from/ 8660' to 8666' w/ 560 gpm, 2775 psi, 8/12 klb wob, 60 rpm, torq: 19/20 klb-ft tq, MD 162 RPM. MW: 11.4ppg.

00:30 – 01:00 Pressure drop slowly from 2775 psi to 2010 psi. Inspect surface lines and pumps one per one - ok. Determinate POOH to inspect string.

01:00 – 03:00 POOH string with rotation and circulation from 8666 ft to 7125 ft. Find wash out

at 7125 ft in Pepesa drill pipe.

03:00 – 04:00 Pepesa LD drill pipe & replace it .Prepare to RIH to continue drilling. Circulated with 550 gpm - 2530 psi.

04:00 – 05:30 Without rotation & pump: PU: 270 klbs, SO: 110 klbs, HL: 155 klbs. RIH with 8.5" direct BHA from 7125 ft to 8666 ft without problem. Washing down last 3 stand's.

05:30 – 06:00 Circulate with 550 gpm - 2775 psi to shaker clean. Max gas: 2100 units. PU: 285 klbs, SO: 110 klbs, HO: 155 klbs, Torq down: 15 klbs, torq up with 60rpm: 25,6klbs.

06:00 – 08:30 Direct Drilling from/ 8666' to 8691' w/ 560 gpm, 2775 psi, 8/12 klb wob, 60 RPM, torq: 19/20 klb-ft tq, MD 162 RPM. MW: 11.4ppg. Final TD: 8691ft. Last geology sample at 8691 ft. 70% claystone, 10 % siltstone, 10% sandstone, 10% sand. Formation: Mogollon.

08:30 – 10:30 Survey Projection bit at 8691 ft, 21.37° incl: 188.23 ° azm. Circulated and pumps visc pill to shaker clean. Circulate and condition mud to RIH logging .MW:11.5 ppg.

10:30 – 14:00 POOH string with rotation and circulation from 8691 ft to 6700 ft.

14:00 – 16:00 POOH string only with circulation from 6700 ft to 5645 ft.

16:00 – 00:00 POOH without pump from 5645 ft to surface. LD directional BHA and bit.

September 17th, 2013

00:00 – 05:00 Weatherford rig up Compact Well Shuttle (well logging tool), BHA: 207.52 ft.

05:00 – 06:00 Safety meeting with all crew. Prepare to RIH WTF logging tool with Dp's in stand's.

06:00 – 18:30 M/U and TIH weatherford compact well shuttle tool with drill pipe to 8691 ft. Set at 6065 ft and pass with rotation & circulation.

18:30 – 19:00 POOH WTF compact well shuttle with Dp from 8691' to 8519'.

19:00 – 19:30 Drop shuttle messenger with 50 gpm – 566 psi and deployment logging tool with 800 psi - ok.

19:30 – 00:00 POOH WTF logging tool (gamma ray, density, resistivity, porosity, caliper), w/ Dp's from/ 8676' to 5121' w/controlled speed 30 ft/min max, & normal drag. PU 250 klbs, SO:100 klbs, HL: 150 klbs.

September 18th, 2013

00:00 – 01:00 Continue POOH logging w/WTF tool and Dp from 5121 ft to 4982' (9 5/8" csg shoe) with controled speed and normal drag.

01:00 – 04:00 Continue POOH WTF tool with Dp from 4982 ft to 200 with normal velocity.

04:00 – 07:30 Lay down Weatherford logging tool.

07:30 – 08:00 Rig service.

08:00 – 12:00 MU & RIH 8.5 conventional BHA (tricone bit, BS, 8 3/8"STB,3X6.5"DC,xo, 12x5"hwdp, Jar, 18x5"hwdp) from surface to 4823 ft.

12:00 – 13:00 Cut & slip 150 ft drilling line.

13:00 – 17:00 Continue RIH with conventional BH from 4823 ft to 8691 ft without pump & rot. Set at 5740 rotation & circulation to pass.

17:00 – 19:00 Circulated and pumps visc pill to shaker clean. Circulate and condition mud to RIH 7" csg with 600 gpm - 2500 psi.MW:11.5 ppg.

19:00 – 00:00 POOH 8.5" conventional BHA from 8691 ft to 6280 ft, with rotation & circulation (Lay down reducing torq - NRST Spiro Torq - Northservices).

September 19th, 2013

00:00 – 06:00 POOH 8.5" conventional BHA from 6280 ft to surface, (Lay down reducing torq- NRST Spiro Torque: 27 units).

06:00 – 07:00 Prepare rig floor to RIH 7" casing (Retrieve wear busing).

07:00 – 08:00 Rig up ITS casing running tools.

08:00 – 08:30 Safety meeting with all companies prior run 7" casing.

08:30 – 17:30 M/U & TIH 7" csg: 7" guide shoe - 2 joint 7" csg - 7" float collar and 7" csg 26.0 ppf N-80 BTC from surface to 4900 ft.

17:30 – 18:30 Rig up fill up tool and spider elevator, while circulate hole.

18:30 – 21:00 Cont. RIH 7" csg from 4900ft to 5650ft.

21:00 – 21:30 Circulate hole prior pass sand and sandstone formation at 5750ft.

21:30 – 00:00 Cont. RIH from 5650ft to 6500ft without restriction.

September 20th, 2013

00:00 – 03:00 Cont. M/U and TIH 7" casing from 6500ft to 7590ft.

03:00 – 06:00 At 7590' tight hole, work csg w/ 400 gpm max - 970psi & reduce 250 gpm to work string PU:300 klbs, SO:60klbs, HL:180klbs .Advance: 2 ft. down. Final depth 7592 ft, pipe free up with 250 klbs.

06:00 – 10:30 Cont. working 7" casing from 7592ft to 7616ft, pipe free up with 250Klbs.

10:30 – 11:00 Pooh 3 joints from 7616 ft to 7511 ft with circ. PU: 250klbs. RIH 7" csg to 7616 ft with circ. 300 gpm - 500 psi.

11:00 – 11:30 Circulate & pump 40 bbls disperse pill with lubrication.

11:30 – 12:00 RIH 7" csg with circ. 300 gpm - 550 psi from 7616 ft to 7768 ft. PU: 250klbs, SO: 65 klbs.

12:00 – 13:30 RIH 7" csg working with circ. from 7768 ft to 7842 ft.

13:30 – 17:00 RIH 7 csg just with circulation 300 gpm - 550 psi from 7842 ft to 8690 ft. Total centralizer used: 45 unit. Csg avg: 38 ft.

17:00 – 00:00 Wait on weather. Hippo boat try to approach to Perla barge but negative due bad sea condition. At the moment hippo wait better condition to perform cementing job.

Circulate on bottom at 8690 ft with 250 gpm - 400 psi.

September 21st, 2013

00:00 – 08:00 Hippo wait on weather to approach to Tender. Circulate at 8690ft w/250gpm-400psi lost mud 10bls-1hr, reduce to 200gpm-310psi. not lost.

08:00 – 09:30 Hippo approach to Perla tender, rig up BJ lines.

09:30 – 11:00 Rig down spider ton and fill up tool, install cement head and lines on platform.

11:00 – 13:00 Circulate hole with 250gpm-400psi, while cont. install BJ lines in Perla tender.

13:00 – 13:30 Safety meeting with all personnel prior cement 7" casing.

13:30 – 17:00 P/T BJ lines w/3300psi-10min Ok. Pump 10bls of mud 8.4ppg, 20bls Ultraflush 12.1ppg, 10bls mud 8.4ppg, 20bls Ultraflush 12.1ppg, 10 bls Sure bond 8.8ppg & 3 bls water all rate w/5bpm. Drop bottom plug.

Pump 118bls Lead 13.5ppg w/Fiber & 101bls Tail 15.2ppg w/5bpm. Displ w/331bls mud w/7-5-4-2bpm. Final Press=709psi, no lost circulation. Csg P/T w/1480psi-10`. Back flow 01 bls.

17:00 – 18:30 Rig down BJ cement lines and disconnect cement head.

18:30 – 20:00 Pick up BOP stack, install 7" casing hanger slip's, cut and laid down 7" casing joint.

20:00 – 20:30 Safety meeting with Pepesa crew prior law down.

20:30 – 00:00 Nipple down 13-5/8" BOP stack.

CONCLUSIONS AND RECOMMENDATIONS

- The **LO6-29D**, is an Development well, and was drilled in four phases for 7" Casing from 445 feet to 8690 feet.
- During 8.5" phase, it was used mud BARADRIL-N type with mud weight between 10.8 ppg and 11.4 ppg.
- The last survey took was at 8636.00 feet MD, 6011.73 feet TVD with 21.60° of inclination and 188.80 degrees azimuth.
- The reservoir Mogollon top structurally was found at 7254.00 ft MD (RT), 4765.21 ft. TVD (RT), at 454.79 ft. more upper structurally.
- During trip, as is usual in petroleum industry, in order to a best control is recommended used Trip Tank, checking displacement or filling hole.
- It is necessary send lubricated pill in the finished run casing for cleaning hole before of the cementing operation.
- Due to high ROP's reached with the PDC bit, was pumped heavy pills for clean hole.
- It is necessary to take care over all in sands in inclined wells due to the difficulty to maintain the pressure differential for controlling overpulls and then stuck pipes.