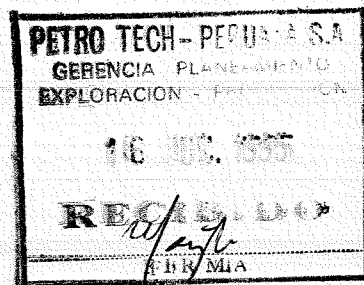


PETROTECH

PERUANA S.A.



ARCHIVO DEL PORD



PTP-IDPE - 508 -95

PTP-IPER - 074 - 95

TO : Assistant Operations Manager - Drilling

FROM : Assistant Operations Manager - Engineering

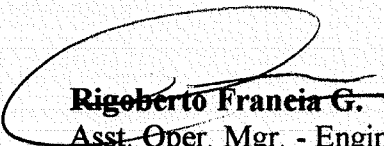
**SUBJECT : FEASIBILITY TO DRILL A NEW WELL IN LO16
PLATFORM FROM LO16-15 ABANDONED WELL**

DATE : June 12, 1995

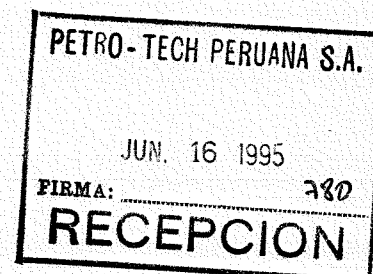
Well LO16-15 was drilled to 8148 ft with 9 5/8" casing set at 5128 ft and due to Mechanical and Hole Stabilization problems was abandoned with two cement plugs at 1000 ft and 5000 ft respectively.

Part of drilling string assy was left in the hole like a fish with top at 5710 ft. During drilling operation there was some problems going thru 9 5/8" guide shoe and casing between 1550 - 1820 ft and it's presume that this casing could be damage by Mechanical action while drilling.

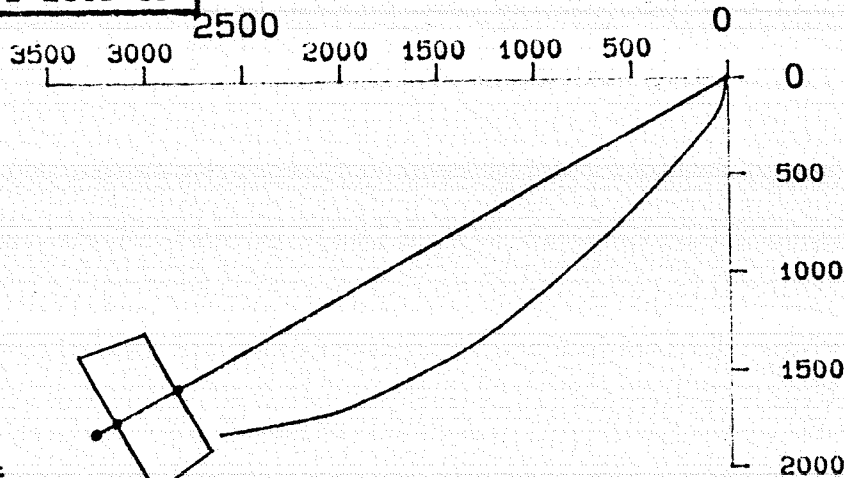
Previous well service need to be done before to take any decision to use this 9 5/8" casing for a new well. Attached program shows some background of the drilling period and some recommendations to be followed.


Rigoberto Francia G.
Asst. Oper. Mgr. - Engineering

cc: OPER. MGR.
EPPM



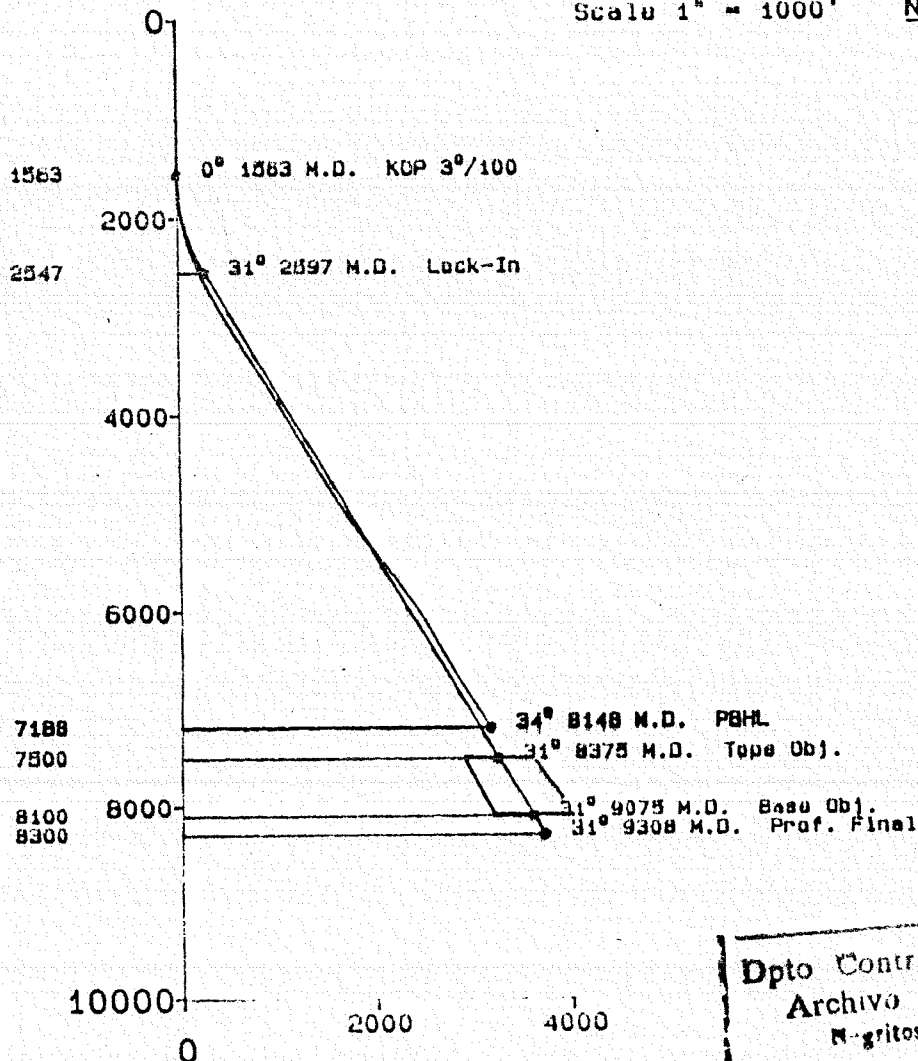
ANADRILL-SCHLUMBERGER
 PETROMAR RIG-8
 POZO: Z2A-21-797-D-L016-15



PLANE OF PROPOSAL
 S 61° 1' W

VERTICAL SECTION
 Scale 1" = 2000'

HORIZONTAL PLAN
 Scale 1" = 1000'



Dpto Control Geológico
 Archivo de pozos
 Magritos Perú

WELL : LO16-15

OPERATION SUMMARY

RIG # 8 (SERPETRO)

Spud drill : on Dec 12 - 91

Conductor 18" - 412' (no cement job)

Casing 13 3/8" - 820' (return cement)

Rig was stand by (6 days) for : kelly cock / swivel; mud pump and repair solid control equipment.

K.O.P. @ 1492 feet. Dynadrill 7 3/4" - BOS 2° (lead 27° interval drill: 247')

Drilled at 2108' wait 6 days for replacement: kelly and swivel
2308' stand by 3 days for strike
3931' stand by 2 days for strike
4320' wait repair kelly cock / swivel (6 days)

Drilled w/12 1/4" bit until 5170' (14 - Feb - 91)

Run 9 5/8" casing at 5128'

Slurry Used

1000 sx pozmix (13.5 ppg)

205 sx pozmix (14.1 ppg)

963 sx neto (15.6 ppg)

Not cement return to surface

Release rig for Overhaul : on Feb. 91.

Restart drill :on Set 20 - 92

Clean soft cement . drilled at: 6873'. POOH w/difficult - hole colapsed (reamer) - tension 250 Mlbs.

RIH reamer from: 6220'.

Run dyna drill : 6915' - 7003'. POOH f/DD didn't work.

RIH BHA ream from: 6924' and drill to 7449'. POOH (bit lost 26 tungsten carbide insert). RIH J.Basket.

DD was run 2 times it didn't work (high pressure). RIH BHA.

Drilled at 7484'. Made trip. Stuck pipe @ 7315. Working string w/jar (8 days). Run free point, make several back off (HLS). **Left in hole : 15.4' (fish).**

RIH w/ open ended to 7330' pumped 250 sx cmt.

Side track w/BHA @ 6896' (02.Nov.92). Drilled to 7180'. POOH.

Test BOP's - casing spool w/cup tester 1000 psi - ok. Rubber show crack.

RIH ream from 6150' to 7180' (10 days) w/ tension 275 Mlbs, changes BHA, mud condition (13.3 ppg) - caving presence.

Drilled slowly to 8110' w/short trip. POOH f/change bit - w/dificulty (pull 250 Mlbs).

Note: All Bit insert cracks
Stabilizers worm (1 1/2" - 1/4")
12 stand pipe with mark steel
Loss 4 rubber protector

RIH ream from 5656' to 8110' (8 days) w/high torque; pull bit (ball out), traveling block and mud pumps.were repaired.

Drilled to 8148', loss circulation (50 bbls). POOH f/bit. Working in 9 5/8" shoe STB/ Bit stuck at 1800'.

Run w/ casing roller. Work interval: 1550' - 1820' (12 hrs). POOH.

RIH ream from: 6497' to 6590' (2 hrs)
7594' to 8141' w/torque, pumping pipe lax, pull 275 Mlbs.
Stuck Pipe

Working string (19 days), run free point and make back off (mechanic-HLS) use severing tool. explosive No success.

Left in hole : 2,390.35' (fish)

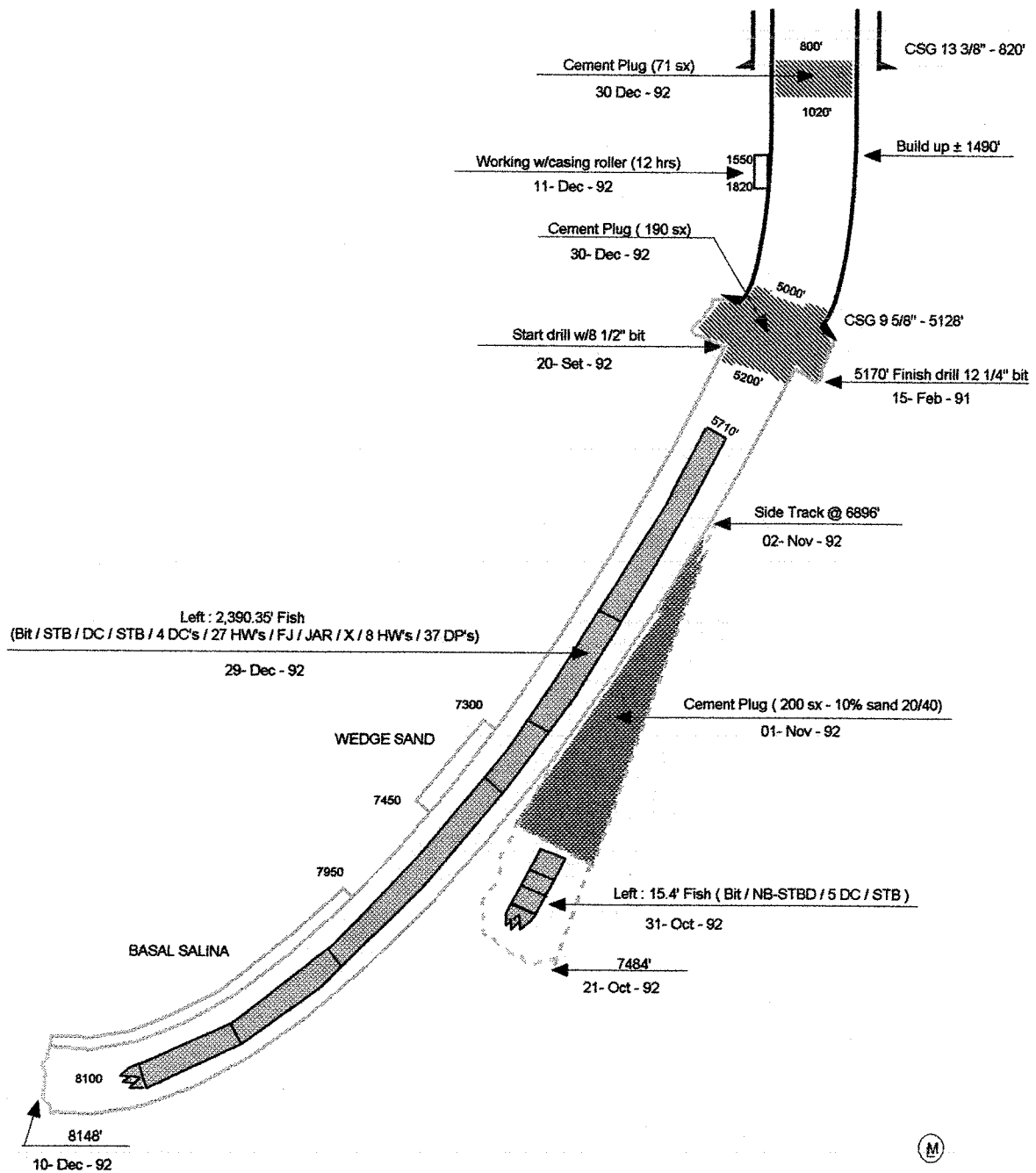
RIH w/open ended pumped 190 sx cement at 5200' and pull out string to 1020' pumped 71 sx cement.

Release rig : on Dec 30 - 92.

RR/lma

WELL LO16-15

SCHEME



**PROPOSED
SERVICES PROGRAM
WELL LO16-15A**

1. Move well service rig on well **LO16-15**
2. RIH bit (8 1/2") / DC's / Drill Pipe (3 1/2"). Clean out the first cement plug (top $\pm$ 1000').
3. Continue run in hole string until the top second cement plug ($\pm$ 5000'). POOH.
4. Run CIT-CBL logs, interval: 5000' - Surface. POOH tool.

Note: Apply pressure 1500 psi during logging.

- 1) If the casing hold the pressure. Go to step 5.
- 2) If the pressure drop.
 - a- Make four circulation shoots (According log results)
 - b- Open casing head valve
 - c- RIH with open ended.
 - d- Close control - BOP.
 - e- Make injectivity test and pump cement (squeeze job). POOH.
 - f- RIH. Clean out cement. POOH.
5. Run in hole assembly with K-Mill 9 5/8". Open section mill from: 4800' to 4900'. Circulated and POOH.
6. RIH with open ended at 4950'. Make cement plug job (according to annex-1)
7. Release well services rig.
8. Move drilling Rig.

RR/lma

Annex-1

SIDE TRACK PLUG

1. RIH open ended drill pipe (3 1/2", 13.3 #/ft) until 4950'.
2. Pump 8 bbls sea water.
3. Pump 13 bbls Slurry cement (15.6 ppg) - 60 sx.
4. Pump 1 bbl sea water.
5. Displacement with 34 bbls mud.
6. POOH 4 stand. Circulate by 15 minutes. POOH.
7. Wait on cement.

RR/lma

PETRO-TECH

PERUANA S.A.



PRELIMINARY

FAX COVER SHEET

EPPM-128-95

TO: Rigoberto Francia
Ass. Op. Manager - Engineering

FAX N°: (74) 38-2758
PHONE N°: (74) 38-2059
LOCATION: Negritos, Talara

FROM: Exploration-Production
Planning Manager

FAX N°: (1) 441-9423
PHONE N°: (1) 441-9423
LOCATION: Lima

DATE: June 6, 1995

SUBJECT: GEOLOGICAL RECOMMENDATION
FOR NEXT WELL Z-2B-21-022-D-LO16

PETRO - TECH PERUANA S.A.
Gerencia de Operaciones

- 6 JUN. 1995

N° OF PAGES INCLUDING COVER SHEET: 2

RECIBIDO

MESSAGE:

Following please find in advance the Data for the next location to be drilled from LO16 Platform. Formal Prognosis will be sent via courier.

Area:	Lobitos Offshore
Well Official Number:	Z-2B-21-022-D-LO16
Petro-Tech Number:	_____
Conductor:	_____
Well Type:	Development
Rig:	P-48
Main Objective:	Basal Salina
Secondary Objective:	-----
Surface Coordinates (UTM):	9'508,368.69 mN; 459,710.25 mE
Coordinates in the Objective (UTM):	9'505,800.00 mN; 458,480.00 mE
Direction:	S 65° W
Conductor Angle:	Vertical
KOP:	500 Ft.
Build Up:	3 Degrees/100 Ft.
Measured Depth at Objective:	8500 Ft.
Vertical Depth at Objective:	7050 Ft.
Horizontal Drift at Objective:	4500 Ft.
Maximum Vertical Angle:	38 Degrees
Total Depth (Estimated):	9800 Ft.
Total Vertical Depth:	7850 Ft.
Horizontal Drift to Total Depth:	5150 Ft.
Limits at Objective Top/Base (Diameter):	400/800 ft.

PETRO - TECH PERUANA S.A.
SUB GERENCIA DE INGENIERIA
RECIBIDO

- 7 JUN. 1995

Will be assigned by Operations

HORA: _____

FIRMA: _____

PETRO-TECH

PETRO-TECH
PERUANA S.A.



Schlumberger Anadrill

WELL LO16-15R

FIELD LOBITOS

NO PEPESA #48

Magnetic Declination
Method IGRF

Angle: °
Magnetic

True

Declination

Grid East

Scale Feet

Surface Location

U

10 Direction

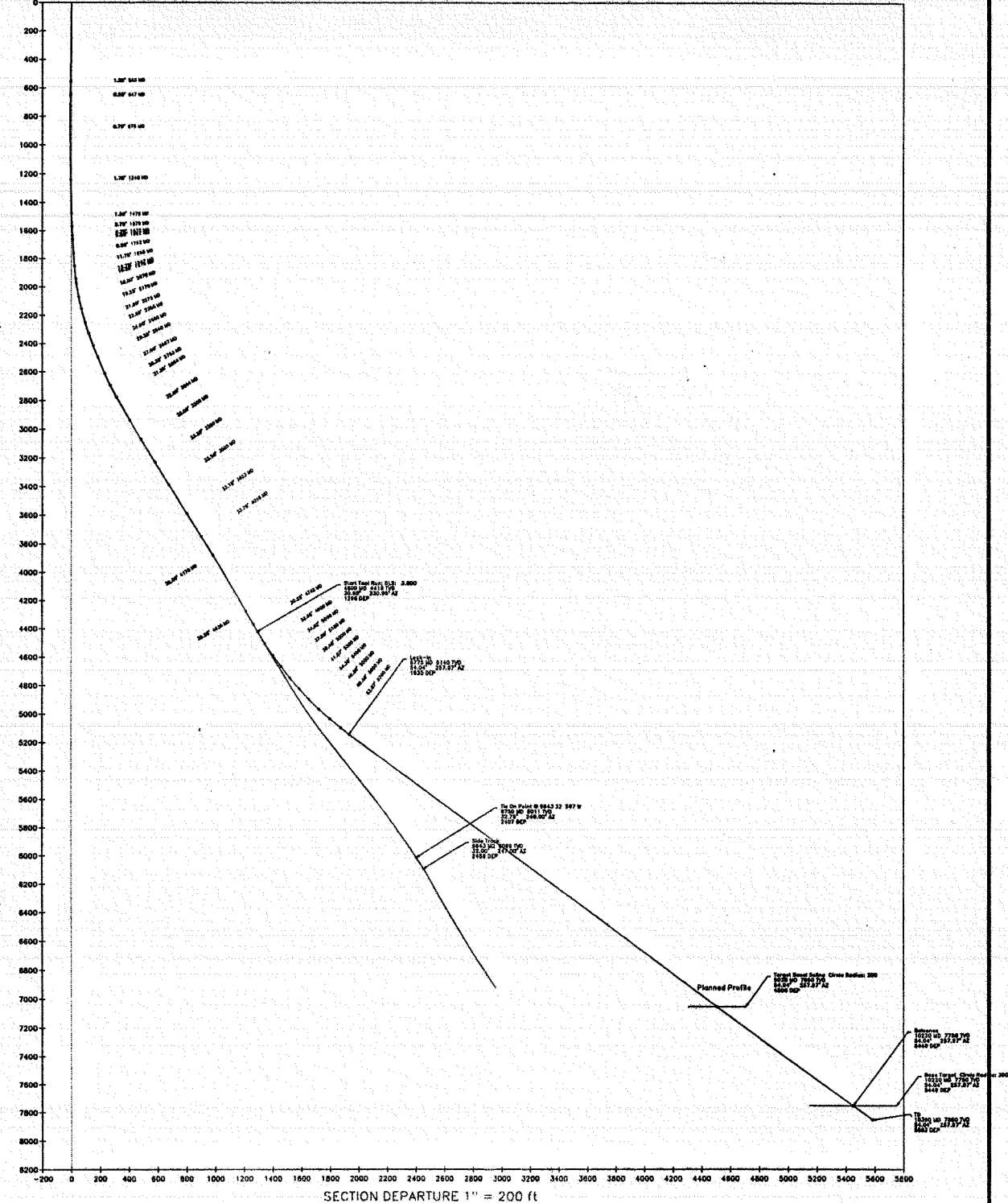
Drawn 12-Jun-95

Plot

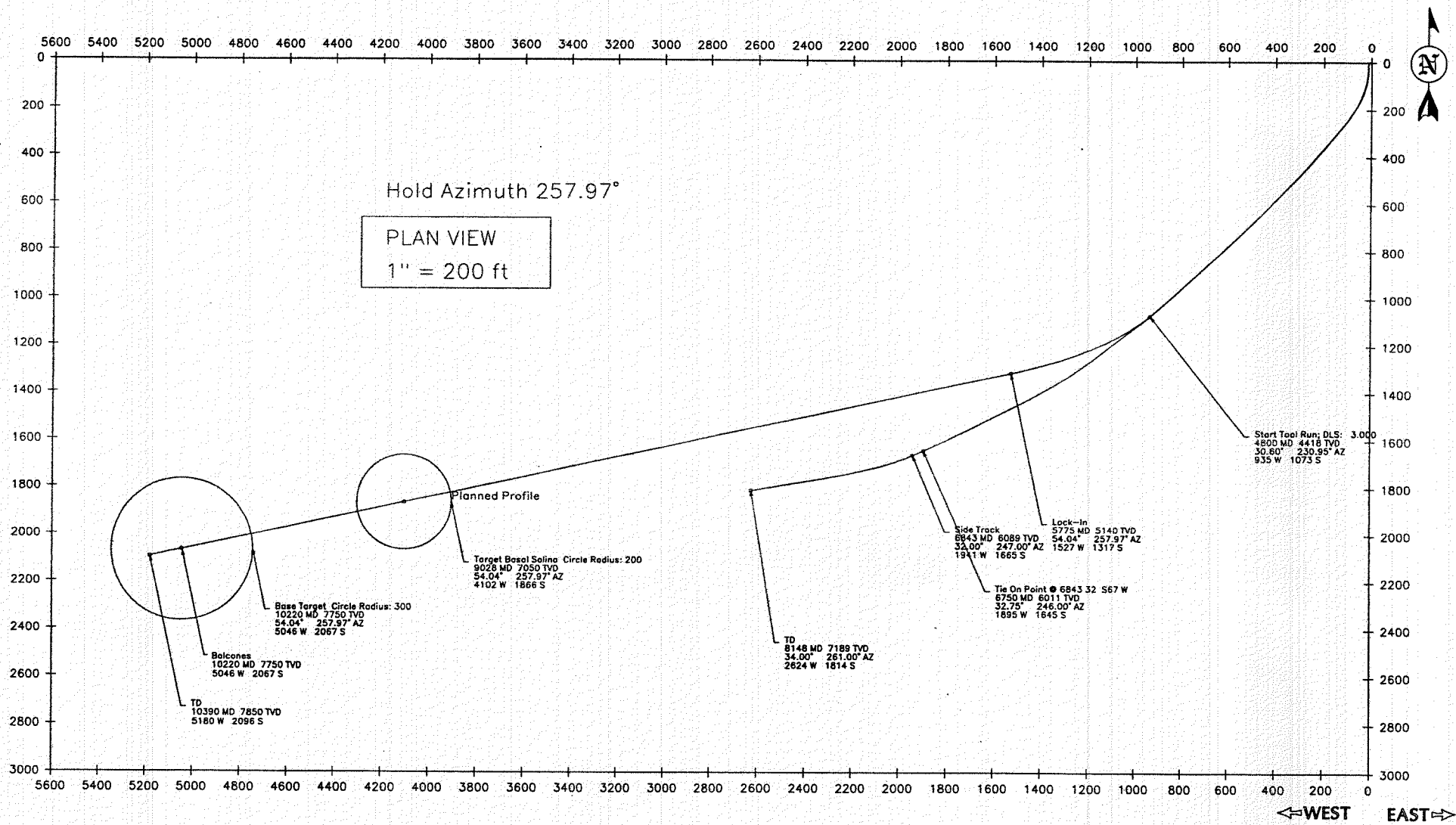
VERTICAL SECTION VIEW
SECTION AT 245.541° Az

Hold Angle 54.04°

1" TVD
200 ft

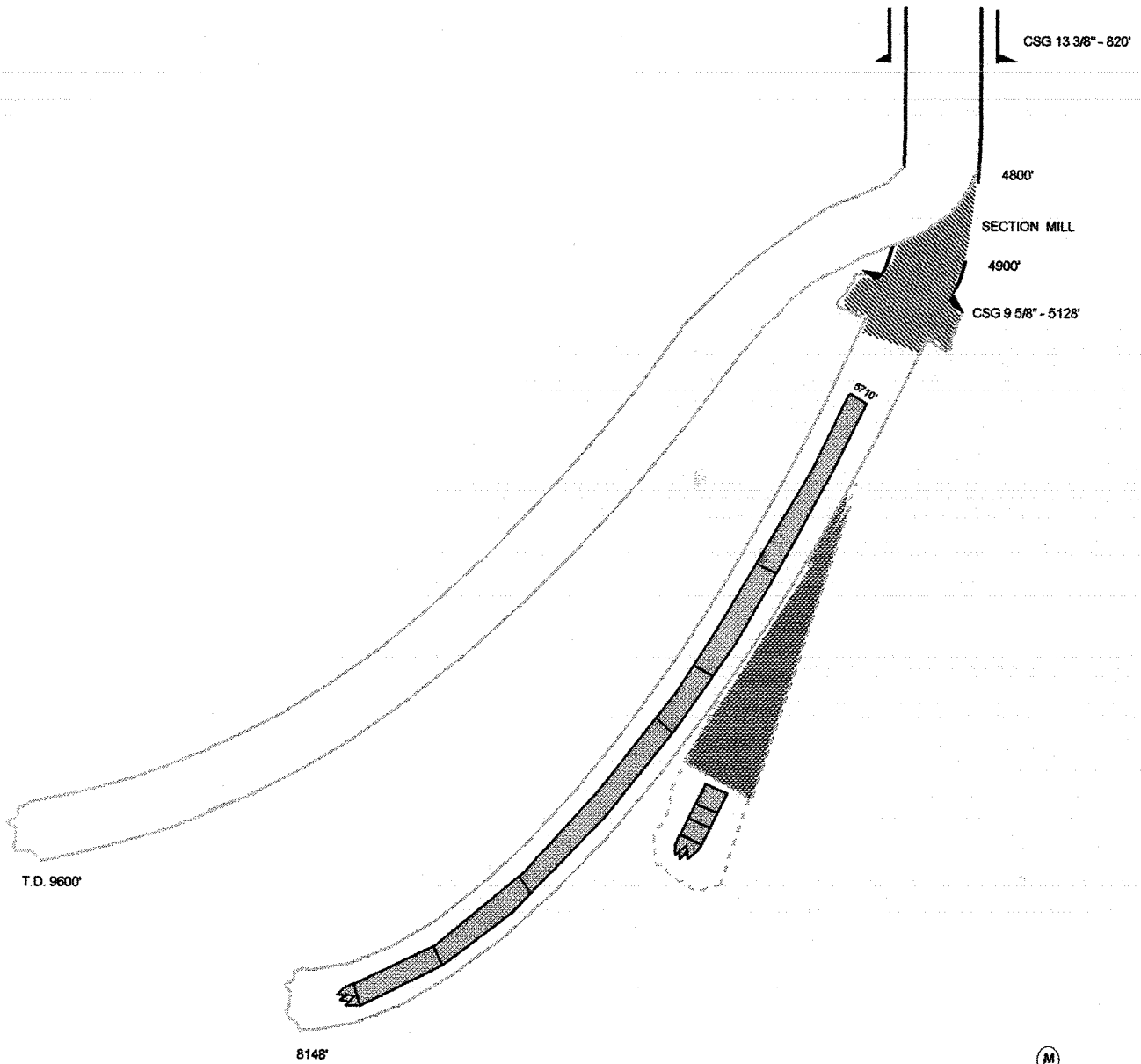


Drawn by: _____
Checked by: _____
Client OK: _____



PROPOSAL WELL LO16-15 (SIDE TRACK)

SCHEME



(M)