

BELCO-Lima.

LO6-24

WELL FILE

LOBITOS OFFSHORE
LO6 - 24

TEMPERATURE GRADIENT
RUN # 1 84-08-18

TEMPERATURE GRADIENT
RUN # 2 84-08-18

BELCO PETROLEUM CORP. OF PERU
DPTO. TECNICO
25 SET. 1984
RECIBIDO

SUBSURFACE PRESSURE MEASUREMENTS

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1. BASIC DATA

COMPANY Belco Petroleum Corp. of Peru Inc. WELL NAME Lobitos Offshore
 ADDRESS Negritos LOCATION L06-24
 FIELD and POOL Lobitos STATUS OIL ☐ GAS ☐ OTHER SPECIFY
 TYPE OF TEST Temperature Gradient DATE OF TEST 84 08 18 TO ☐ ☐ ☐
 PRODUCING INTERVAL (CF) FT PERF ☐ OH ☐ PRODUCING THROUGH ☐ IN TUBING ☐ IN CASING ☐
 ELEVATION (CF) FT (KB) FT (KB) to CF FT MID-POINT OF PRODUCING (MPP) INTERVAL (CF) FT
 POOL DATUM FT (subsea) DATUM DEPTH OF WELL (FROM CF) FT
 ELEMENT SERIAL NO KT-8230 RANGE 60° - 160°F CLOCK RANGE 3 h S ☒ D ☐ I.H. # 12638
 CALIBRATION EQUATION DATE OF LAST CALIBRATION ☐ ☐ ☐

2. STATIC TEST

PRESSURE (GAUGE) TUBING PSI GAUGE ☐ DWG ☐ SHUT-IN DATE ☐ ☐ ☐ @ Not Perforated h
 CASING PSI GAUGE ☐ DWG ☐ DATE ON BOTTOM 84 08 18 @ 17:35 h
 RUN DEPTH (FROM CF) 4974' MD FT DATE OFF BOTTOM 84 08 18 @ 17:36 PSI
 B.H. TEMP °C SURFACE TEMP °F MPP PRESSURE (GAUGE) PSI
 R.D. PRESSURE (GAUGE) PSI GRADIENT PSI/FT DATUM PRESSURE (GAUGE) PSI

3. ACOUSTIC WELL SOUNDER TEST

DEPTH OF TUBING FT SHUT-IN DATE ☐ ☐ ☐ @ h
 AVERAGE TUBING JOINT LENGTH FT CURRENT WATER CUT %
 NO. OF JOINTS TO LIQUID CASING PRESSURE (GAUGE) PSI
 LENGTH OF GAS COLUMN FT GAS COLUMN PRESSURE (GAUGE) PSI
 LENGTH OF LIQUID COLUMN FT LIQUID COLUMN PRESSURE (GAUGE) PSI
 GAS GRAVITY GAS GRADIENT PSI/FT MPP PRESSURE (GAUGE) PSI
 OIL GRAVITY OIL GRADIENT PSI/FT DATUM DEPTH PRESSURE (GAUGE) PSI

4. BUILD UP OR DRAWDOWN TEST (Attach Forms 0-12A)

RESERVOIR/WELL PARAMETERS: POROSITY % WELL RADIUS FT THICKNESS FT WATER SATURATION %
 B.H. TEMP °F DATE AND DESCRIPTION OF LAST WELLBORE TREATMENT ☐ ☐ ☐
 CASING I.D. IN TUBING I.D. IN TUBING WEIGHT MASS LBS/FT
 COMPRESSIBILITY μZ
 OIL WELLS ONLY: GAS WELLS ONLY:
 OIL VISCOSITY CC GAS VISCOSITY μZ
 BUBBLE POINT PRESSURE (GAUGE) PSI Z at RESERVOIR CONDITIONS
 B₀ = VOL. AT RES. COND. RELATIVE DENSITY G
 VOL. AT ST. COND.
 WELL PRODUCING RATE DURING ☐ PRIOR TO ☐ TEST OIL BBL/D GAS MCF/D WATER BBL/D
 TEST OIL BBL/D GAS MCF WATER BBL/D
 TOTAL PRODUCTION DURING ☐ PRIOR TO ☐

5. CHART READINGS AND CALCULATIONS

DATE			DEPTH BELOW CF FT.	ACC. TIME h	TIME h	DEFLECTION IN	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	TEMPERAT. °F	GRADIENT PSI/FT
YR	MO	DAY								
84	08	18	Surface		16:29	0.2580			71.62	
			500		16:36	0.3760			76.26	
			1000		16:43	0.4820			80.32	
			1500		16:51	0.5900			84.60	
			2000		16:58	0.6610			87.68	
			2500		17:05	1.1200			111.04	
			3000		17:12	1.0990			110.00	
			3500		17:19	1.0770			108.91	
			4000		17:26	1.1260			111.34	
			4500		17:33	1.1710			113.57	

REMARKS Temperature survey # 1 Well with water.
 Float collar at 4982' Shoe at 5022'
 Cement job finished at 07:00 a.m. 84-08-18
 5.5.Casing.
 SURVEY COMPANY Go Well Services TEST BY G.Preciado COMPUTED BY CHECKED BY

Belco Petroleum Corp. of Peru Inc.

Lobitos Offshore L06-24

COMPANY Belco Petroleum Corp.of Peru Inc WELL NAME Lobitos Offshore

DATE OF TEST 840818 TO LOCATION L06-24
YR MO DAY YR MO DAY

LOCATION L06-24

CHART READINGS AND CALCULATIONS PAGE 2 of 2

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[illegible]

Surface

LOBITOS OFFSHORE

LO6-24

DEPTH VERSUS TEMPERATURE

TEMPERATURE GRADIENT

RUN # 1

84-08-18

250

500

750

1000

1250

1500

1750

2000

2250

2500

2750

3000

3250

3500

3750

4000

4250

4500

4750

5000

70

74

78

82

86

90

94

98

102

106

110

114

118

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K&E

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY Belco Petroleum Corp. of Peru Inc. WELL NAME Lobitos Offshore
 ADDRESS Negritos LOCATION LO6-24
 FIELD and POOL Lobitos STATUS: OIL ☐ GAS ☐ OTHER SPECIFY _____
 TYPE OF TEST Temperature Gradient DATE OF TEST 84 08 18 TO ☐ ☐ ☐
 PRODUCING INTERVAL (CF) _____ FT. PERF ☐ OH ☐ PRODUCING THROUGH _____ IN. TUBING ☐ IN. CASING ☐
 ELEVATION (CF) _____ FT. (KB) _____ FT. (KB) to CF _____ FT. MID-POINT OF PRODUCING (MPP) INTERVAL (CF) _____ FT.
 POOL DATUM _____ FT. (subsea) DATUM DEPTH OF WELL (FROM CF) _____ FT.
 ELEMENT SERIAL NO. KT-8230 RANGE 60° - 160°F CLOCK RANGE 3 h S ☒ D ☐ # 31882 I.H. # 12638
 CALIBRATION EQUATION _____ DATE OF LAST CALIBRATION ☐ ☐ ☐

2. STATIC TEST

PRESSURE (GAUGE): TUBING _____ PSI. GAUGE ☐ DWG ☐ SHUT-IN DATE ☐ ☐ ☐ @ Not Perforated h
 CASING _____ PSI. GAUGE ☐ DWG ☐ DATE ON BOTTOM 84 08 18 @ 19:07 h
 RUN DEPTH (FROM CF) 3000 'MD FT. DATE OFF BOTTOM 84 08 18 @ 19:12 PSI.
 B.H. TEMP. _____ °C SURFACE TEMP. _____ F MPP PRESSURE (GAUGE) _____ PSI.
 R.D. PRESSURE (GAUGE) _____ PSI GRADIENT _____ PSI/FT. DATUM PRESSURE (GAUGE) _____ PSI.

3. ACOUSTIC WELL SOUNDER TEST

DEPTH OF TUBING _____ FT. SHUT-IN DATE ☐ ☐ ☐ @ _____ h
 AVERAGE TUBING JOINT LENGTH _____ FT. CURRENT WATER CUT _____ %
 NO. OF JOINTS TO LIQUID _____ CASING PRESSURE (GAUGE) _____ PSI.
 LENGTH OF GAS COLUMN _____ FT. GAS COLUMN PRESSURE (GAUGE) _____ PSI.
 LENGTH OF LIQUID COLUMN _____ FT. LIQUID COLUMN PRESSURE (GAUGE) _____ PSI.
 GAS GRAVITY _____ GAS GRADIENT _____ PSI/FT. MPP PRESSURE (GAUGE) _____ PSI.
 OIL GRAVITY _____ OIL GRADIENT _____ PSI/FT. DATUM DEPTH PRESSURE (GAUGE) _____ PSI.

4. BUILD UP OR DRAWDOWN TEST (Attach Forms 0-12A)

RESERVOIR/WELL PARAMETERS: POROSITY _____ % WELL RADIUS _____ FT. THICKNESS _____ FT. WATER SATURATION _____ %
 B.H. TEMP. _____ °F DATE AND DESCRIPTION OF LAST WELLBORE TREATMENT ☐ ☐ ☐
 CASING I.D. _____ IN. TUBING I.D. _____ IN. TUBING WEIGHT MASS _____ LBS./FT.
 COMPRESSIBILITY _____ μ Z
 OIL WELLS ONLY: GAS WELLS ONLY:
 OIL VISCOSITY _____ CC GAS VISCOSITY _____ μ Z
 BUBBLE POINT PRESSURE (GAUGE) _____ PSI. Z at RESERVOIR CONDITIONS _____
 B₀ = VOL. AT RES. COND. _____ RELATIVE DENSITY G _____
 VOL. AT ST. COND. _____
 WELL PRODUCING RATE DURING ☐ PRIOR TO ☐ TEST OIL _____ BBL/D GAS _____ MCF/D WATER _____ BBL/D
 TOTAL PRODUCTION DURING ☐ PRIOR TO ☐ TEST OIL _____ BBL/D GAS _____ MCF WATER _____ BBL

5. CHART READINGS AND CALCULATIONS

DATE			DEPTH BELOW CF FT.	ACC. TIME h	TIME h	DEFLECTION IN	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	TEMPERAT. °F	GRADIENT PSI/FT.
YR	MO	DAY								
84	08	18	Surface		18:30	0.3270			74.35	
			500		18:37	0.4000			77.20	
			1000		18:44	0.5000			81.00	
			1500		18:51	0.6020			85.09	
			2000		18:58	0.6690			88.04	
			2500		19:05	1.1180			110.94	
84	08	18	3000		19:12	1.1220			111.14	

REMARKS: Temperature survey # 2 - Well with water.
 Float collar at 4982' Shoe at 5022'
 Cement job finished at 07:00 hrs. 84-08-18
 5.5" Casing.

SURVEY COMPANY Go Well Services TEST BY G. Preciado

COMPUTED BY _____ CHECKED BY _____

Belco Petroleum Corp. of Peru Inc.

Lobitos Offshore LO6-24

