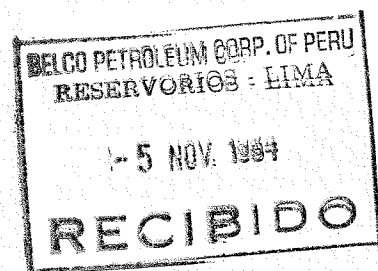


LOBITOS OFFSHORE
LO6-13X

B.H.P.FLOWING GRADIENT
84-10-28

STATIC GRADIENT
84-10-28

Lines
File



SUBSURFACE PRESSURE MEASUREMENTS

1. BASIC DATA

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COMPANY **Belco Petroleum Corp. of Peru Inc.** WELL NAME **Lobitos Offshore**
 ADDRESS **Negritos** LOCATION **L06-13X**
 FIELD and POOL **Lobitos** STATUS: OIL ☒ GAS ☐ OTHER SPECIFY _____
 TYPE OF TEST **B.H.P. Flowing Gradient** DATE OF TEST **84 10 28** TO **84 10 28**
 PRODUCING INTERVAL (CF) **3741 - 5203** FT. PERF. ☒ OH ☐ PRODUCING THROUGH: **2 7/8** 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) _____ FT. DATUM DEPTH OF WELL (FROM CF) _____ FT.
 ELEMENT SERIAL NO **22534N** RANGE **0 - 1000** PSI. CLOCK RANGE **3** h S ☒ D ☐ # **31881** I.H. # **14520**
 CALIBRATION EQUATION **PC = 508.02 D+ (-0.01)** DATE OF LAST CALIBRATION **84 04 06**

2. STATIC TEST

PRESSURE (GAUGE): TUBING **160** PSI. GAUGE ☒ DWG ☐ SHUT-IN DATE **84 10 28** @ **16:02** h
 CASING _____ PSI. GAUGE ☐ DWG ☐ DATE ON BOTTOM **84 10 28** @ **14:44** h
 RUN DEPTH (FROM CF) **(3687' MD)** FT. DATE OFF BOTTOM **84 10 28** @ **16:16** 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/D

5. CHART READINGS AND CALCULATIONS

DATE			DEPTH BELOW CF FT.	ACC. TIME h	TIME h	DEFLECTION IN	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	CORRECTED PRESSURE PSIG	GRADIENT PSI/FT.
YR	MO	DAY								
84	10	28	Surface		14:32	0.2710			138	
			Tool on bottom (3687') at		14:44		84-10-28			
			Opened gas lift gas valve at		14:52		84-10-28			
			Opened well to production at		14:53		84-10-28			
84	10	28	3687	13	14:44	0.4530			230	
84	10	28	3687	14	14:45	0.4550			231	

REMARKS **Vertical Well**
J.40 at 2745' BK1 at 3664' S.N. at 3697' PKR at 3701' F.Collar
Perf.: 3741' - 5203' MPP.: 4472'
 SURVEY COMPANY **Go Well Services** TEST BY **O.García** COMPUTED BY _____ CHECKED BY _____

Belco Petroleum Corp. of Peru Inc.

Lobitos Offshore L06-13X
WELL NAME & UNIQUE IDENTIFIER

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY Belco Petroleum Corp. of Peru WELL NAME Lobitos Offshore
 DATE OF TEST 84 10 28 TO LOCATION LO6-13X

CHART READINGS AND CALCULATIONS

PAGE 02 of 04

DATE			DEPTH BELOW CFFT.	ACC. TIME h	TIME h	DEFLECTION IN.	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	CORRECTED PRESSURE PSIG	GRADIENT PSI/FT
YR	MO	DAY								
84	10	28	3687	15	14:46	0.4575			233	
				16	14:47	0.4600			234	
				17	14:48	0.4625			235	
				18	14:49	0.4650			236	
				19	14:50	0.4675			238	
				20	14:51	0.4700			239	
				21	14:52	0.4725			240	
					14:53	0.3800			193	
					14:54	0.3350			170	
					14:55	0.3420			174	
84	10	28	3687		14:56	0.3740			190	
			Injection rate started at			14:56	84-10-28			
84	10	28	3687		14:57	0.5200			264	
84	10	28	3687		14:58	0.5620			286	
			Injection rate stopped at			14:58	84-10-28			
84	10	28	3687		14:59	0.5570			283	
					15:00	0.4755			242	
					15:01	0.3710			189	
					15:02	0.3275			166	
					15:03	0.3320			169	
					15:04	0.3400			173	
					15:05	0.3480			177	
					15:06	0.3540			180	
					15:07	0.3585			182	
					15:08	0.3620			184	
					15:09	0.3690			188	
					15:10	0.3780			192	
					15:11	0.3865			196	
					15:12	0.3910			199	
					15:13	0.3900			198	
					15:14	0.3850			196	
					15:15	0.3855			196	
84	10	28	3687		15:16	0.4150			211	
			Injection rate started at			15:16	84-10-28			
84	10	28	3687		15:17	0.5500			279	
84	10	28	3687		15:18	0.6060			308	
			Injection rate stopped at			15:18	84-10-28			
84	10	28	3687		15:19	0.6055			308	
					15:20	0.5535			281	
84	10	28	3687		15:21	0.4460			227	

WELL NAME Lobitos Offshore

LOCATION L06-13X

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[illegible]

SUBSURFACE PRESSURE MEASUREMENTS

PAGE 01 OF 01

1. BASIC DATA

COMPANY	Belco Petroleum Corp. of Peru Inc.	WELL NAME	Lobitos Offshore
ADDRESS	Negritos	LOCATION	L06-13X
FIELD and POOL	Lobitos	STATUS: OIL ☒ GAS ☐ OTHER SPECIFY	
TYPE OF TEST	Static Gradient	DATE OF TEST	84 10 28 TO 84 10 28
PRODUCING INTERVAL (CF)	3741 - 5203	PRODUCING THROUGH	2 7/8 IN. TUBING ☒ 4472 IN. CASING ☐
ELEVATION (CF)	FT. (KB)	FT. (KB) to CF	FT.
POOL DATUM	FT. (subsea)	DATUM DEPTH OF WELL (FROM CF)	FT.
ELEMENT SERIAL NO.	22534N	RANGE	0 - 1000 PSI
CLOCK RANGE	3	h	31881 I.H. #14520
CALIBRATION EQUATION	PC= 508.02 D + (-0.01)	DATE OF LAST CALIBRATION	84 04 06

2. STATIC TEST

PRESSURE (GAUGE): TUBING	160	PSI. GAUGE ☒ DWG ☐	SHUT-IN DATE	84 10 28 @ 16:02 = 0.7	h
CASING		PSI. GAUGE ☐ DWG ☐	DATE ON BOTTOM	84 10 28 @ 16:21	h
RUN DEPTH (FROM CF)	(3000' MD)	FT.	DATE OFF BOTTOM	84 10 28 @ 16:42	PSI.
B.H. TEMP		*C SURFACE TEMP	F	MPP PRESSURE (GAUGE)	157
R.D. PRESSURE (GAUGE)	237	PSI. GRADIENT	PSI/FT.	DATUM PRESSURE (GAUGE)	PSI.

3. ACOUSTIC WELL SOUNDER TEST

DEPTH OF TUBING	FT.	SHUT-IN DATE	84 10 28 @	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	pZ	GAS WELLS ONLY:					
OIL WELLS ONLY:		GAS VISCOSITY					
OIL VISCOSITY	CC	Z at RESERVOIR CONDITIONS					
BUBBLE POINT PRESSURE (GAUGE)	PSI.	RELATIVE DENSITY G					
B ₀ = VOL. AT RES. COND.		TEST OIL					
VOL. AT ST. COND.		BBL/D GAS					
WELL PRODUCING RATE DURING	PRIOR TO	MCF/D					
TOTAL PRODUCTION DURING	PRIOR TO	BBL/D					

5. CHART READINGS AND CALCULATIONS

DATE			DEPTH BELOW CF FT.	ACC. TIME h	TIME h	DEFLECTION IN	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	CORRECTED PRESSURE PSIG	GRADIENT PSI/FT.
YR	MO	DAY								
84	10	28	Surface		16:42	0.4672			237	0.0000
			500		16:41	0.4485			228	-0.0190
			1000		16:37	0.4210			214	-0.0279
			1500		16:33	0.4003			204	-0.0210
			2000		16:29	0.3810			194	-0.0196
			2500		16:25	0.3675			187	-0.0137
84	10	28	3000		16:21	0.3530			179	-0.0147

REMARKS MPP.: 4472 FT. 1472ft x -0.0147 psi/ft = -2163 psi = 157 psig.
 Stops for Static Gradient run upwards.
 Vertical Well
 Perf.: 3741 - 5203 MPP.: 4472 FT.
 SURVEY COMPANY Go Well Services TEST BY O. Garcia COMPUTED BY CHECKED BY

Belco Petroleum Corp. of Peru Inc.

Lobitos Offshore L06-13X

