

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM025533
2. Name of Operator BOPCO LP		6. If Indian, Allottee or Tribe Name
3a. Address P O BOX 2760 MIDLAND, TX 79702		7. If Unit or CA/Agreement, Name and/or No. 891000303X
3b. Phone No. (include area code) Ph: 432-221-7341		8. Well Name and No. POKER LAKE UNIT CVX JV BS.035H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 19 T24S R31E NENW 190FNL 2332FWL 32.209422 N Lat, 103.817658 W Lon		9. API Well No. 30-015-42427-00-X1
		10. Field and Pool, or Exploratory UNDESIGNATED WC-0156-06 324819C BS
		11. County or Parish, and State EDDY COUNTY, NM C 9925

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

BOPCO L. P. respectfully requests to amend to the targeted production zone for the PLU CVX JV BS #035H. The original producing targeted zone was in the Bone Spring 2 A Sand. The amend target is in the Bone Spring 2 B Sand. The original APD surface and bottom hole locations did not change. A long string of 5-1/2" casing with a DV tool placed at 5,800' will be set through the 8-3/4" hole to total depth. I have attached a letter detailing the changes in the target and cement volumes. A revised directional plan is also attached.

Please see attached supporting documents

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 24 2014

Accepted for record
NMOC D 109
9-25-14**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct.		RECEIVED	
Electronic Submission #265600 verified by the BLM Well Information System		For BOPCO LP, sent to the Carlsbad	
Committed to AFMSS for processing by JENNIFER MASON on 09/24/2014 (14JAM0406SE)			
Name (Printed/Typed)	DON WOOD	Title	DRILLING ENGINEER
Signature	(Electronic Submission)	Date	09/24/2014
APPROVED			
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved By		Title	
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.		BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE	

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

TO: Whitney McKee
 FROM: Donald H. Wood
 DATE: September 23, 2014
 SUBJECT: Sundry Notice for the PLU CVX JV BS #035H Target and Producing Formation Change

BOPCO L. P. requests to amend to the targeted production zone for the PLU CVX JV BS #035H. The original producing targeted zone was in the Bone Spring 2 A Sand. The amend target is in the Bone Spring 2 B Sand. A long string of 5-1/2" casing with a DV tool placed at 5,800' will be set through the 8-3/4" hole to total depth. The APD casing size and cement volumes changes are detailed in the table below.

Approved 8-Point Casing Program:

Casing Description	Interval (MD)	Hole Size	Purpose	Material Status
7", 26.0 ppf, HCP-110 BT&C	0-10,435'	8-3/4"	Production	New
4-1/2", 11.6 ppf, HCP-110 BTC	10,385-17,350'	6-1/8"	Completion System	New

Amended 8-Point Casing Program:

Casing Description	Interval (MD)	Hole Size	Purpose	Material Status
5-1/2", 17.0#, HCP-110 BTC	0-17,324	8-3/4"	Production	New

The adjusted cement types and volumes are as follows:

Approved 8-Point Cement Program:

Interval (MD)	Amount (sx)	Fill Ht. (ft)	Type	Water (gal/sx)	Density (ppg)	Vol. (cu. ft.)
PRODUCTION						
Stage 1:						
Lead: 5,000-9,652'	400	4,652	Tuned Light + 0.125 pps Poly-E-Flake	14.87	11.0	2.64
Tail: 9,952-10-,435'	70	783	Class "H" + 0.5% Halad-344 + 0.25% CFR-3 + 0.5% Econolite	11.41	12.00	2.03
DV Tool @ 5,000'						
Stage 2:						
Lead: 3,790-5,000'	110	1,210	Tuned Light + 0.125 pps Poly-E-Flake	11.70	11.0	2.35

Amended 8-Point Cement Program:

Interval (MD)	Amount (sx)	Fill Ht. (ft)	Type	Water (gal/sx)	Density (ppg)	Vol. (cu. ft.)
PRODUCTION						
Stage 1:						
Lead: 5,800-9,514	695	3,714'	VERSACEM SYSTEM+8% bentonite, 0.5# D-AIR 5000, 0.7% HR-601, 0.125 lbm Poly-E-Flake	13.29	11.9	2.30
Tail: 9,514-17,324'	2090	7,797	VERSACEM SYSTEM+0.5% LAP-1, 0.3% CFR-3, 0.10% FWCA, 0.125# Poly-E-Flake, 0.5# D-AIR 5000, 0.2% HR-601	5.59	14.5	1.23
DV Tool @ 5,800'						
Stage 2:						
Lead: 3,790-5,500'	315	1,710	VERSACEM SYSTEM+8% bentonite, 0.125# Poly-E-Flake, 0.5# D-AIR 5000	13.05	11.9	2.27
Tail: 5,500-5,800	100	300	HALCEM SYSTEM + 0.1% BWOC HR-800	6.34	14.8	1.33

The revised directional plan is attached.



BOPCO, LP

Location: Eddy County, NM

Sht: PLU CVX JV BS #035H (Lathaw 18)

Field: Eddy County, NM (NAD 27 / Grid)

Well: SL 100 FNL, 2332 FNL

Facility: PLU CVX JV BS (35H) 35H Sec. 19.245-31E

Wellbore: PLU CVX JV BS #035H Planned

Plot reference wellbore is Rev C.D

True vertical depths are referenced to Lathaw 18 (RKB)

Grid System: NAD27 / TM New Mexico SP, Eastern Zone (D001), US feet

Measured depths are referenced to Lathaw 18 (RKB)

North Reference: Grid north

Lathaw 18 (RKB) to Mean Sea Level: 3527 feet

Scale: True distance

Mean Sea Level to Mud Line (At Sht): PLU CVX JV BS #035H (Lathaw 18) -3458 feet

Depths are in feet

Coordinates are in feet referenced to Sht

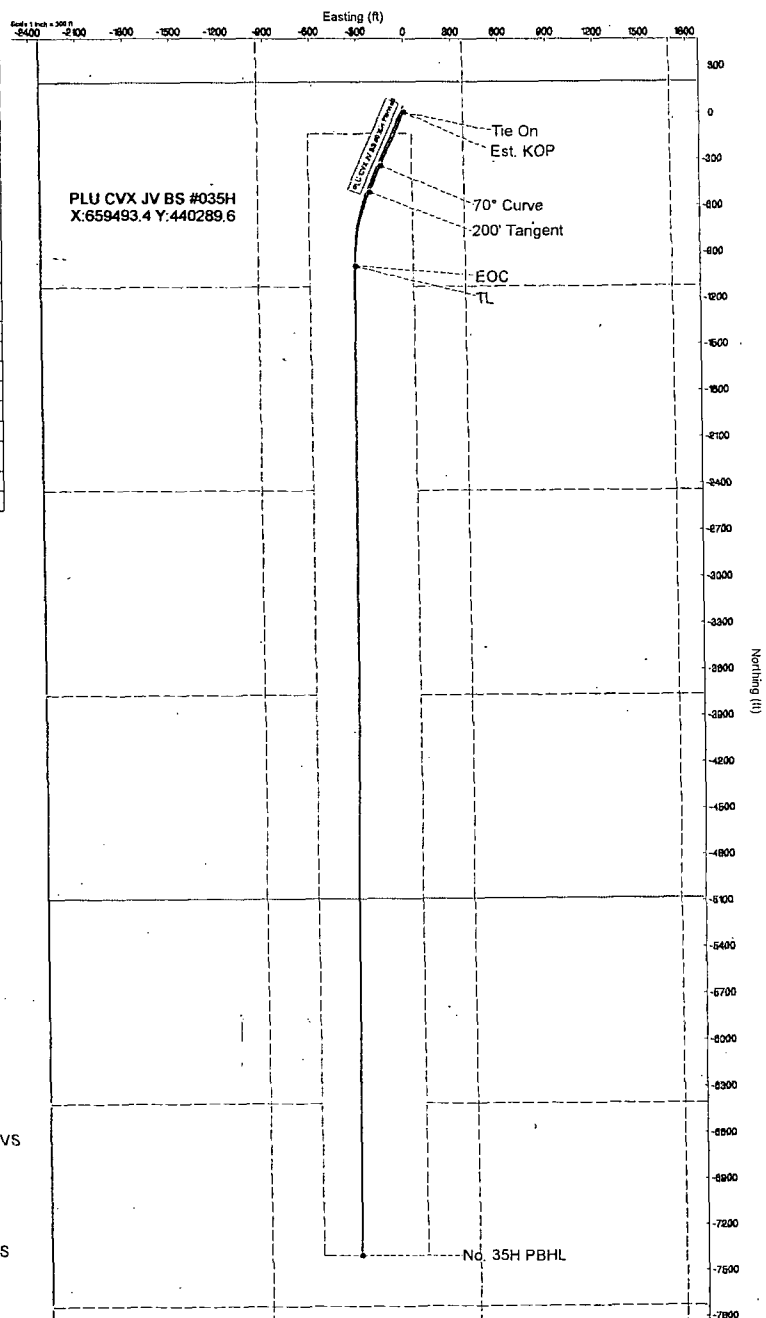
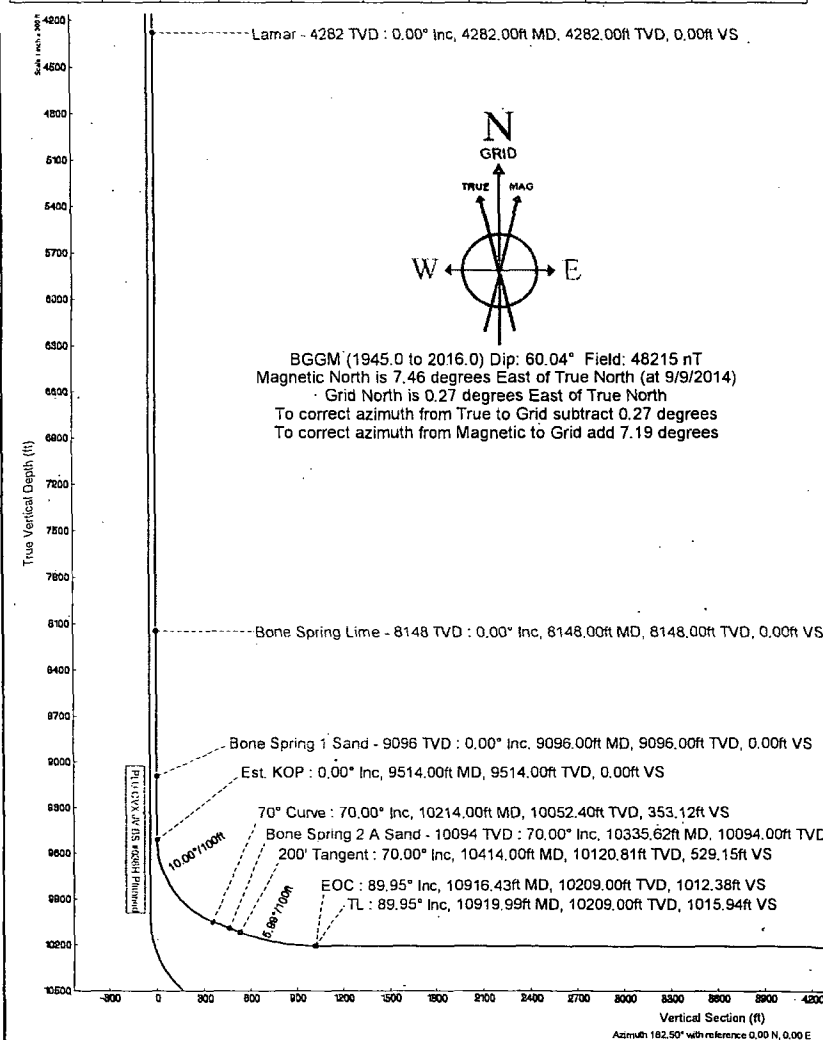
Created by: Summary on 8/18/2014

Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS ("/100ft)	VS (ft)
Tie On	29.00	0.000	203.000	29.00	0.00	0.00	0.00	0.00
Est. KOP	9514.00	0.000	203.000	9514.00	0.00	0.00	0.00	0.00
70° Curve	10214.00	70.000	203.000	10052.40	-347.03	-147.30	10.00	353.12
200' Tangent	10414.00	70.000	203.000	10120.81	-520.02	-220.74	0.00	529.15
EOC	10916.43	89.946	180.000	10209.00	-999.60	-315.15	5.99	1012.38
TL	10919.99	89.946	180.071	10209.00	-1003.16	-315.16	2.00	1015.94
No. 35H PBHL	17324.30	89.946	180.071	10215.00	-7407.47	-323.12	0.00	7414.51

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
No. 35H PBHL	17324.30	10215.00	-7407.47	-323.12	659170.30	432862.60	32°11'20.633"N	103°49'07.739"W





Planned Wellpath Report

Rev-C.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS #035H (Latshaw 18)
Area	Eddy County, NM	Well	SL 190 FNL, 2332 FWL
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS #035H Planned
Facility	PLU CVX JV BS (35H, 36H) Sec. 19-24S-31E		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.0
North Reference	Grid	User	Burnranj
Scale	0.999938	Report Generated	9/18/2014 at 4:50:24 PM
Convergence at slot	0.27° East	Database/Source file	WA_MIDLAND/C:\Users\burnranj\AppData\Roaming\Well Explorer\temp\BOPCO, LP PLU CVX JV BS #035H (Latshaw 18) (Rev-C.0).xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	659493.40	440289.60	32°12'33.917"N	103°49'03.566"W
Facility Reference Pt			659493.40	440289.60	32°12'33.917"N	103°49'03.566"W
Field Reference Pt			510280.10	534700.83	32°28'12.000"N	104°18'00.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Latshaw 18 (RKB) to Facility Vertical Datum	29.00ft
Horizontal Reference Pt	Slot	Latshaw 18 (RKB) to Mean Sea Level	3527.00ft
Vertical Reference Pt	Latshaw 18 (RKB)	Latshaw 18 (RKB) to Mud Line at Slot (PLU CVX JV BS #035H (Latshaw 18))	29.00ft
MD Reference Pt	Latshaw 18 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	182.50°



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Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS #035H Planned
Facility	PLU CVX JV BS {35H, 36H} Sec. 19-24S-31E		

WELLPATH DATA (94 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	203.000	0.00	0.00	0.00	0.00	0.00	
29.00	0.000	203.000	29.00	0.00	0.00	0.00	0.00	Tie On
540.00†	0.000	203.000	540.00	0.00	0.00	0.00	0.00	Rustler - 540 TVD
920.00†	0.000	203.000	920.00	0.00	0.00	0.00	0.00	Salado - 920 TVD
4060.00†	0.000	203.000	4060.00	0.00	0.00	0.00	0.00	Base/Salt - 4060 TVD
4282.00†	0.000	203.000	4282.00	0.00	0.00	0.00	0.00	Lamar - 4282 TVD
8148.00†	0.000	203.000	8148.00	0.00	0.00	0.00	0.00	Bone Spring Lime - 8148 TVD
9096.00†	0.000	203.000	9096.00	0.00	0.00	0.00	0.00	Bone Spring 1 Sand - 9096 TVD
9500.00†	0.000	203.000	9500.00	0.00	0.00	0.00	0.00	
9514.00	0.000	203.000	9514.00	0.00	0.00	0.00	0.00	Est. KOP
9600.00†	8.600	203.000	9599.68	6.03	-5.93	-2.52	10.00	
9700.00†	18.600	203.000	9696.75	28.03	-27.55	-11.69	10.00	
9800.00†	28.600	203.000	9788.27	65.48	-64.35	-27.32	10.00	
9900.00†	38.600	203.000	9871.46	117.25	-115.23	-48.91	10.00	
10000.00†	48.600	203.000	9943.78	181.76	-178.63	-75.82	10.00	
10100.00†	58.600	203.000	10003.05	257.06	-252.62	-107.23	10.00	
10200.00†	68.600	203.000	10047.46	340.85	-334.97	-142.19	10.00	
10214.00	70.000	203.000	10052.40	353.12	-347.03	-147.30	10.00	70° Curve
10300.00†	70.000	203.000	10081.82	428.81	-421.41	-178.88	0.00	
10335.62†	70.000	203.000	10094.00	460.16	-452.22	-191.96	0.00	Bone Spring 2 A Sand - 10094 TVD
10400.00†	70.000	203.000	10116.02	516.83	-507.91	-215.60	0.00	
10414.00	70.000	203.000	10120.81	529.15	-520.02	-220.74	0.00	200' Tangent
10500.00†	73.273	198.811	10147.91	606.57	-596.25	-249.82	5.99	
10600.00†	77.179	194.117	10173.42	700.37	-688.94	-277.18	5.99	
10700.00†	81.167	189.569	10192.21	797.24	-785.03	-297.30	5.99	
10800.00†	85.207	185.118	10204.08	896.14	-883.47	-309.97	5.99	
10900.00†	89.277	180.720	10208.89	995.97	-983.18	-315.05	5.99	
10916.43	89.946	180.000	10209.00	1012.38	-999.60	-315.15	5.99	EOC
10919.99	89.946	180.071	10209.00	1015.94	-1003.16	-315.16	2.00	TL
11000.00†	89.946	180.071	10209.08	1095.88	-1083.17	-315.25	0.00	
11100.00†	89.946	180.071	10209.17	1195.79	-1183.17	-315.38	0.00	
11200.00†	89.946	180.071	10209.27	1295.70	-1283.17	-315.50	0.00	
11300.00†	89.946	180.071	10209.36	1395.62	-1383.17	-315.63	0.00	
11400.00†	89.946	180.071	10209.45	1495.53	-1483.17	-315.75	0.00	
11500.00†	89.946	180.071	10209.55	1595.44	-1583.17	-315.88	0.00	
11600.00†	89.946	180.071	10209.64	1695.35	-1683.17	-316.00	0.00	
11700.00†	89.946	180.071	10209.73	1795.26	-1783.17	-316.13	0.00	
11800.00†	89.946	180.071	10209.83	1895.17	-1883.17	-316.25	0.00	

11900.00†	89.946	180.071	10209.92	1995.08	-1983.17	-316.37	0.00
12000.00†	89.946	180.071	10210.01	2094.99	-2083.17	-316.50	0.00
12100.00†	89.946	180.071	10210.11	2194.90	-2183.17	-316.62	0.00
12200.00†	89.946	180.071	10210.20	2294.81	-2283.17	-316.75	0.00
12300.00†	89.946	180.071	10210.30	2394.72	-2383.17	-316.87	0.00
12400.00†	89.946	180.071	10210.39	2494.63	-2483.17	-317.00	0.00
12500.00†	89.946	180.071	10210.48	2594.54	-2583.17	-317.12	0.00



Planned Wellpath Report

Rev-C.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS #035H (Latshaw 18)
Area	Eddy County, NM	Well	SL 190 FNL, 2332 FWL
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS #035H Planned
Facility	PLU CVX JV BS {35H, 36H} Sec. 19-24S-31E		

WELLPATH DATA (94 stations) = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
12600.00†	89.946	180.071	10210.58	2694.45	-2683.17	-317.24	0.00	
12700.00†	89.946	180.071	10210.67	2794.36	-2783.17	-317.37	0.00	
12800.00†	89.946	180.071	10210.76	2894.27	-2883.17	-317.49	0.00	
12900.00†	89.946	180.071	10210.86	2994.18	-2983.17	-317.62	0.00	
13000.00†	89.946	180.071	10210.95	3094.09	-3083.17	-317.74	0.00	
13100.00†	89.946	180.071	10211.04	3194.00	-3183.17	-317.87	0.00	
13200.00†	89.946	180.071	10211.14	3293.91	-3283.17	-317.99	0.00	
13300.00†	89.946	180.071	10211.23	3393.82	-3383.17	-318.12	0.00	
13400.00†	89.946	180.071	10211.33	3493.73	-3483.17	-318.24	0.00	
13500.00†	89.946	180.071	10211.42	3593.64	-3583.17	-318.36	0.00	
13600.00†	89.946	180.071	10211.51	3693.55	-3683.17	-318.49	0.00	
13700.00†	89.946	180.071	10211.61	3793.46	-3783.17	-318.61	0.00	
13800.00†	89.946	180.071	10211.70	3893.37	-3883.17	-318.74	0.00	
13900.00†	89.946	180.071	10211.79	3993.28	-3983.17	-318.86	0.00	
14000.00†	89.946	180.071	10211.89	4093.19	-4083.17	-318.99	0.00	
14100.00†	89.946	180.071	10211.98	4193.10	-4183.17	-319.11	0.00	
14200.00†	89.946	180.071	10212.07	4293.01	-4283.17	-319.23	0.00	
14300.00†	89.946	180.071	10212.17	4392.92	-4383.17	-319.36	0.00	
14400.00†	89.946	180.071	10212.26	4492.83	-4483.17	-319.48	0.00	
14500.00†	89.946	180.071	10212.36	4592.74	-4583.17	-319.61	0.00	
14600.00†	89.946	180.071	10212.45	4692.66	-4683.17	-319.73	0.00	
14700.00†	89.946	180.071	10212.54	4792.57	-4783.17	-319.86	0.00	
14800.00†	89.946	180.071	10212.64	4892.48	-4883.17	-319.98	0.00	
14900.00†	89.946	180.071	10212.73	4992.39	-4983.17	-320.10	0.00	
15000.00†	89.946	180.071	10212.82	5092.30	-5083.17	-320.23	0.00	
15100.00†	89.946	180.071	10212.92	5192.21	-5183.17	-320.35	0.00	
15200.00†	89.946	180.071	10213.01	5292.12	-5283.17	-320.48	0.00	
15300.00†	89.946	180.071	10213.10	5392.03	-5383.17	-320.60	0.00	
15400.00†	89.946	180.071	10213.20	5491.94	-5483.17	-320.73	0.00	
15500.00†	89.946	180.071	10213.29	5591.85	-5583.17	-320.85	0.00	
15600.00†	89.946	180.071	10213.39	5691.76	-5683.17	-320.98	0.00	
15700.00†	89.946	180.071	10213.48	5791.67	-5783.17	-321.10	0.00	
15800.00†	89.946	180.071	10213.57	5891.58	-5883.17	-321.22	0.00	
15900.00†	89.946	180.071	10213.67	5991.49	-5983.17	-321.35	0.00	
16000.00†	89.946	180.071	10213.76	6091.40	-6083.17	-321.47	0.00	
16100.00†	89.946	180.071	10213.85	6191.31	-6183.17	-321.60	0.00	
16200.00†	89.946	180.071	10213.95	6291.22	-6283.17	-321.72	0.00	
16300.00†	89.946	180.071	10214.04	6391.13	-6383.17	-321.85	0.00	

16400.00†	89.946	180.071	10214.13	6491.04	-6483.17	-321.97	0.00
16500.00†	89.946	180.071	10214.23	6590.95	-6583.17	-322.09	0.00
16600.00†	89.946	180.071	10214.32	6690.86	-6683.17	-322.22	0.00
16700.00†	89.946	180.071	10214.42	6790.77	-6783.17	-322.34	0.00
16800.00†	89.946	180.071	10214.51	6890.68	-6883.17	-322.47	0.00
16900.00†	89.946	180.071	10214.60	6990.59	-6983.17	-322.59	0.00
17000.00†	89.946	180.071	10214.70	7090.50	-7083.17	-322.72	0.00



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS #035H (Latshaw 18)
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Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS #035H Planned
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WELLPATH DATA (94 stations) = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
17100.00	89.946	180.071	10214.79	7190.41	-7183.17	-322.84	0.00	
17200.00	89.946	180.071	10214.88	7290.32	-7283.17	-322.97	0.00	
17300.00	89.946	180.071	10214.98	7390.23	-7383.17	-323.09	0.00	
17324.30	89.946	180.071	10215.00	7414.51	-7407.47	-323.12	0.00	No. 35H PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No. 35H PBHL	17324.30	10215.00	-7407.47	-323.12	659170.30	432882.60	32°14'20.633"N	103°49'07.739"W	point

SURVEY PROGRAM = Ref Wellbore: PLU CVX JV BS #035H Planned; Ref Wellpath: Rev-C.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	607.00	Generic gyro - northseeking (Standard)		PLU CVX JV BS #035H Planned
607.00	16901.92	NaviTrak (Standard)		PLU CVX JV BS #035H Planned

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMNM-0506A
WELL NAME & NO.:	Poker Lake Unit CVX JV BS 35H
SURFACE HOLE FOOTAGE:	0190' FNL & 2332' FWL
BOTTOM HOLE FOOTAGE:	2310' FNL & 1980' FWL Sec. 30, T. 24 S., R 31 E.
LOCATION:	Section 19, T. 24 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico
API:	30-015-42427

The original COAs still stand with the following drilling modifications:

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Operator has stated that Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. Operator has also stated that if H2S is encountered in quantities greater than 10 PPM the well shall be shut in and H2S equipment shall be installed and flare line must be extended pursuant to Onshore Oil and Gas Order #6. Report measured values and formation to the BLM. After detection, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Rustler, Red Beds, and Delaware.

1. The 13-3/8 inch surface casing shall be set at approximately 900 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Centralizers required through the curve and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Operator has proposed DV tool at depth of 5800'; but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**
 - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
 - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
 - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
 - d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
 - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer.**

- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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