OCD Artesia

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

5. Lease Serial No.
NMLC068430 ~~NMLC-068905~~

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000303X

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
POKER LAKE UNIT CVX JV PC 19H

2. Name of Operator
BOPCO LP
Contact: WHITNEY MCKEE
E-Mail: wbmckee@basspet.com

9. API Well No.
30-015-42669-00-X1

3a. Address
P O BOX 2760
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-683-2277

10. Field and Pool, or Exploratory
~~UNDESIGNATED~~
Pierce Crossing; Bone Spring, East (96473)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 21 T24S R30E NWNE 25FNL 2410FEL
32.123702 N Lat, 103.530566 W Lon

11. County or Parish, and State
EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recomplete 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 recompletion 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 change the BHL and also the new TD, casing design and cement volume changes.
The original APD approved BHL was 2,310 FSL and 1,980? FEL in Sec 9, T24S-R30E the new BHL is 660? FSL and 1960? FEL in Sec 14, T24S-R30E.
Attached are the cement volumes, directional plan and the C-102.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

12/9/14
Accepted for record
NMOCD

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 18 2014

RECEIVED

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #283626 verified by the BLM Well Information System
For BOPCO LP, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER MASON on 12/11/2014 (15JAM0121SE)

Name *(Printed/Typed)* DON WOOD — Title DRILLING ENGINEER

Signature (Electronic Submission) — Date 12/01/2014

APPROVED
DEC 16 2014
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____ Date

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.

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1224 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1224 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
015-42669	~~97798~~ 96473	Pierce Crossing; ~~WILDCAT G-06524302GM;~~ BONE SPRING, East

Property Code	Property Name	Well Number
40065	POKER LAKE UNIT CVX JC PC	019H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3347

Surface Location

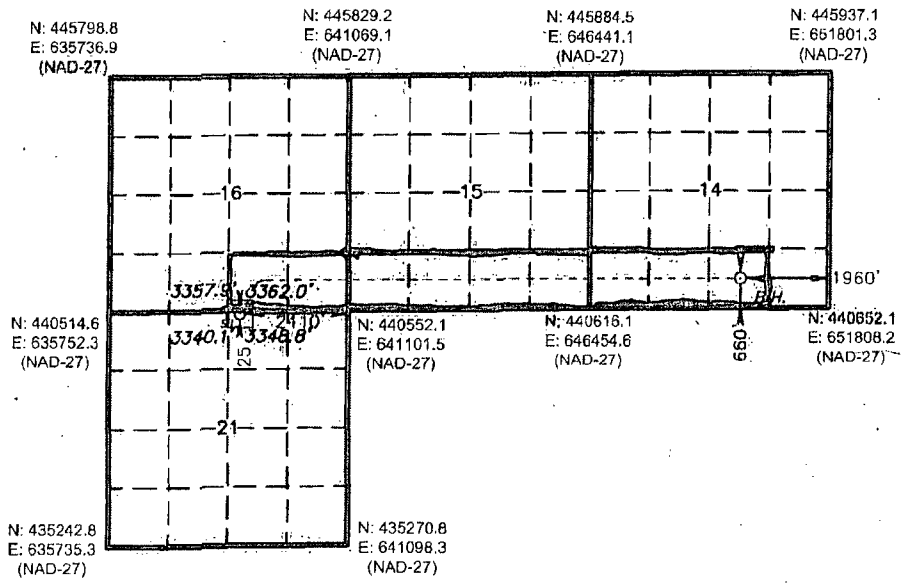
UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/NORTH LINE	FEET from the	East/EAST LINE	County
B	21	24 S	30 E		25	NORTH	2410	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/NORTH LINE	FEET from the	East/EAST LINE	County
O	14	24 S	30 E		660	SOUTH	1960	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
360			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



SURFACE LOCATION
Lat – N 32°12'37.02"
Long – W 103°53'05.66"
NMSPCE– N 440509.9
E 638692.3
(NAD-27)

PROPOSED BOTTOM HOLE LOCATION
Lat – N 32°12'44.39"
Long – W 103°50'55.71"
NMSPCE– N 441302.9
E 649853.9
(NAD-27)

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 12/1/14 Date

Whitney McKee
Printed Name

WMcKee@basspet.com
Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

FEBRUARY 10, 2014
Date Surveyed

Signature & Seal of Professional Surveyor

Certificate Number 7977

0' 2000' 4000' 6000' 8000'
SCALE: 1" = 4000'
WO Num.: 30044

BOPCO L.P. respectfully requests to change the BHL and also the new TD, casing design and cement volume changes.

The original APD approved BHL was 2,310 FSL and 1,980' FEL in Sec 9, T24S-R30E the new BHL is 660' FSL and 1960' FEL in Sec 14, T24S-R30E.

The following table details the approved APD casing design:

TYPE	INTERVAL MD	HOLE SIZE	PURPOSE	INSTALLATION TYPE
20"	0-120'	30"	Conductor	Contractor Discretion
13-3/8, 48.0 ppf, H-40 , 8rd STC	0-1,260'	17-1/2"	Surface	New
9-5/8", 40.0 ppf, J-55 LTC or 9-5/8" , 40.0 ppf, N-80 LTC	0-3,800'	12-1/4"	Intermediate	New
7", 26.0 ppf, HCP-110 LTC	0-9,915'	8-3/4"	Production	New
4-1/2" 11.6 ppf, HCP-8rd LTC	9,865-17,012'	6-1/8"	Completion System	New

This table details the requested changes in casing design:

TYPE	INTERVAL MD	HOLE SIZE	PURPOSE	INSTALLATION TYPE
20"	No changes	No changes	No changes	No changes
13-3/8, 54.5 ppf, J-55 , 8rd STC	0-958'	17-1/2"	Surface	New
9-5/8", 40.0 ppf, J-55 LTC	No change	No change	No change	No change
7", 26.0 ppf, HCP-110 LTC	0-9699'	8-3/4"	Production	New
4-1/2" 11.6 ppf, HCP-8rd LTC	9,649-20,553'	6-1/8"	Completion System	New

The 13-3/8" setting depth is being changed by our geologist who estimates the top of the Salado at 983 feet. The 7" casing is being set at the end of the 70 degree tangent in the curve at 9,699'. The lateral section is being lengthened to capture more reserves in the proration unit.

Original APD Cement Design

INTERVAL	SACKS	FT of FILL	TYPE	GAL/SX	PPG	FT3/SX
SURFACE:						
Lead: 0-960'	770	960	Class C + 2% CACL2 + 0.25 #/sk CFR-3 + 0.25 #/sk Cello Flake	8.69	13.5	1.75

			+ 3 #/sk LCM-1			
Tail: 960-1,260'	340	300	Class C + 2% CACL2 + 4% Bentonite + 0.25 #/sk Cello Flake + 3 #/sk LCM-1	6.35	14.8	1.35
INTERMEDIATE:						
Lead: 0-3375'	760	3375	EconoCEM HLC + 5% CACL2 + 5#/sk Gilsonite	9.32	12.9	1.85
Tail: 3375-3875	190	500	HALCEM C	6.34	14.80	1.33
PRODUCTION:						
Stage 1						
Lead: 5,000-9,141'	360	4141	Tuned Light + 0.125 #/sk Poly-E-Flake	14.87	11.0	2.64
Tail: 9,141'-9,915'	100	774	Class "H" +0.5% Halad-344 + 0.25% CFR-3 + 0.5% Econolite	11.41	12.0	2.03
DV Tool @5,000'						
Stage 2						
Lead: 3,375-5,000'	150	1625	Tuned Light + 0.125 #/sk Poly-E-Flake	11.70	11.0	2.35
COMPLETION SYSTEM						
Open hole packers			Un-cemented			

Revised Cement Design

INTERVAL	SACKS	FT of FILL	TYPE	GAL/SX	PPG	FT3/SX
SURFACE:						
Lead: 0-558'	445	300	ECONCEM + 5% Salt	10.76	12.7	1.96
Tail: 558-958'	335	658	HALCEM	6.34	14.8	1.33
INTERMEDIATE:						
Lead: 0-3,300'	830	3300	ECONCEM + 5% Salt + 0.15% HR-800	10.76	12.7	1.96
Tail: 3,300'-3,800'	240	500	HALCEM	6.34	14.8	1.33
PROODUCTION:						
Stage 1						
Lead: 5,800-8,799'	290	2,999'	Tuned Light + 0.125 pps Poly-E-Flake	15.32	10.8	2.78
Tail: 8,799-9,699'	116	900	VersaCem PBSH2+0.5% Halad-344 + 0.40% CFR-3 + 1#/sx Salt	8.84	13.0	1.67
Stage 2						
Lead: 3,300-5,800'	250	2,500	Tuned Light + 0.125 pps Poly-E-Flake	12.59	10.8	2.52
Completion System	1,135	11,054	VersaCem-H, 0.5% LAP-1, 0.3% CFR-3, 0.1% FWCA, 0.125	5.58	14.5	1.23

BOPCO, LP

Location:	Eddy County, NM	Slot:	No. 19H
Field:	Eddy County, NM (NAD 27 / Grid)	Well:	No. 19H
Facility:	PLU CVX JC PC (19H) Sec. 21, TSP 24S, Rnge 30E	Wellbore:	PLU CVX JC PC No. 19H PWB

BAKER HUGHES

Plot reference wellpath is PLU CVX JC PC No. 19H Rev A.0

True vertical depths are referenced to Latshaw 18 (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Latshaw 18 (KB)	North Reference: Grid north
Latshaw 18 (KB) to Mean Sea Level: 3376 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No. 19H): -3347 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: janotho on 11/25/2014

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	45.300	0.00	0.00	0.00	0.00	0.00
KOP	8799.25	0.000	45.300	8799.25	0.00	0.00	0.00	0.00
70° Curve	9499.25	70.000	45.300	9337.65	285.18	287.97	10.00	286.08
200' Tangent	9699.25	70.000	45.300	9406.06	357.37	401.55	0.00	426.71
EOC	10482.68	88.908	89.338	9556.01	575.55	1094.09	6.00	1129.30
No. 19H PBHL	20553.48	88.908	89.338	9748.00	793.06	11162.39	0.00	11190.53

Location Information

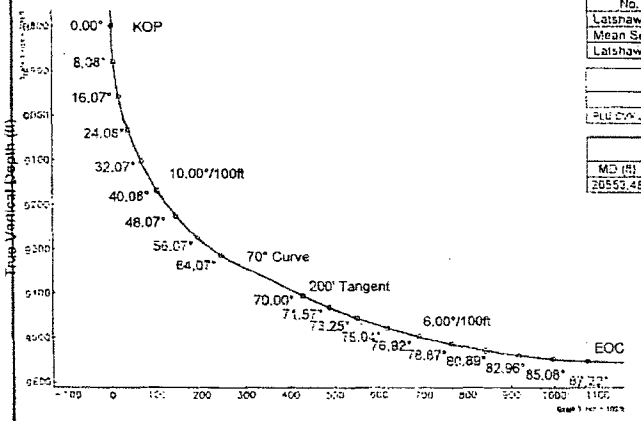
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
PLU CVX JC PC (19H) Sec. 21, TSP 24S, Rnge 30E			638692.300	440509.900	32°12'37.021"N	103°53'05.664"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
No. 19H	0.00	0.00	638692.300	440509.900	32°12'37.021"N	103°53'05.664"W
Latshaw 18 (KB) to Mud line (At Slot: No. 19H)					29ft	
Mean Sea Level to Mud line (At Slot: No. 19H)					-3347ft	
Latshaw 18 (KB) to Mean Sea Level					3376ft	

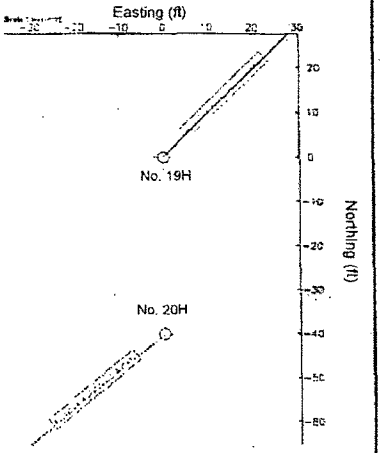
Targets

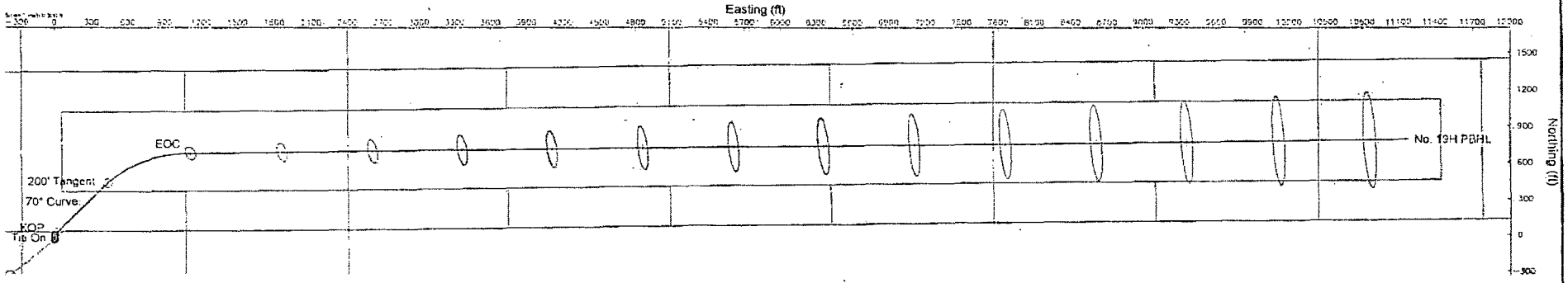
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
PLU CVX JC PC No. 19H PBHL Rev-1	20553.48	9748.00	793.06	11162.39	649853.90	441302.90	32°12'44.389"N	103°50'55.709"W

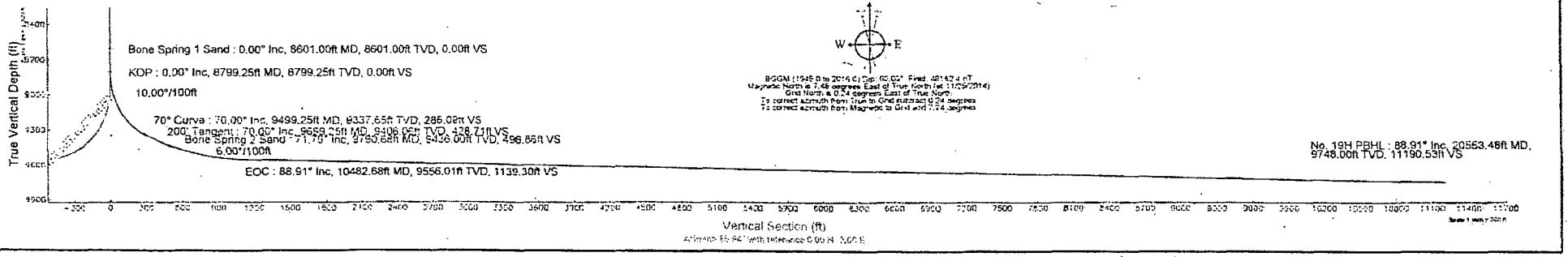
Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
20553.48	88.908	89.338	9748.00	793.06	11162.39	649853.90	441302.90	32°12'44.389"N	103°50'55.709"W









			lb/sk Poly-E-Flake, 0.5 lb/sk D-Air 5000, 0.1% HR-601			

Cement excesses will be as follows:

Surface-100% excess with cement circulated to surface.

1st Intermediate-80% excess above hole size with cement circulated to surface.

Production-30% excess from 9,699' to KOP at 8,799' and 80% excess over hole size from 8,799' to 9-5/8" shoe at 3,800'. Five hundred feet (500') of cement will be circulated up above the 9-5/8" shoe plus 10% excess.

Completion System-30% excess over hole size with 200' cement cap inside 7" above top of 4-1/2" liner.

cc: Charles Warne

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

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	Janotho
Scale	0.999931	Report Generated	11/25/2014 at 12:54:44 PM
Convergence at slot	0.24° East	Database/Source file	WA_Midland/PLU_CVX_JC_PC_No._19H_PWB.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	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W
Facility Reference Pt			638692.30	440509.90	32°12'37.021"N	103°53'05.664"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 (KB) to Facility Vertical Datum	29.00ft
Horizontal Reference Pt	Slot	Latshaw 18 (KB) to Mean Sea Level	3376.00ft
Vertical Reference Pt	Latshaw 18 (KB)	Latshaw 18 (KB) to Mud Line at Slot (No. 19H)	29.00ft
MD Reference Pt	Latshaw 18 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	85.94°

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	45.300	0.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Tie On
100.00†	0.000	45.300	100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
200.00†	0.000	45.300	200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
300.00†	0.000	45.300	300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
400.00†	0.000	45.300	400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
500.00†	0.000	45.300	500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
600.00†	0.000	45.300	600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
615.00†	0.000	45.300	615.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Rustler
700.00†	0.000	45.300	700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
800.00†	0.000	45.300	800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
900.00†	0.000	45.300	900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
990.00†	0.000	45.300	990.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Salado
1000.00†	0.000	45.300	1000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1100.00†	0.000	45.300	1100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1200.00†	0.000	45.300	1200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1300.00†	0.000	45.300	1300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1400.00†	0.000	45.300	1400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1500.00†	0.000	45.300	1500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1600.00†	0.000	45.300	1600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1700.00†	0.000	45.300	1700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1800.00†	0.000	45.300	1800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
1900.00†	0.000	45.300	1900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2000.00†	0.000	45.300	2000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2100.00†	0.000	45.300	2100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2200.00†	0.000	45.300	2200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2300.00†	0.000	45.300	2300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2400.00†	0.000	45.300	2400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2500.00†	0.000	45.300	2500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2600.00†	0.000	45.300	2600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2700.00†	0.000	45.300	2700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2800.00†	0.000	45.300	2800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
2900.00†	0.000	45.300	2900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3000.00†	0.000	45.300	3000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3100.00†	0.000	45.300	3100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3200.00†	0.000	45.300	3200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3300.00†	0.000	45.300	3300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3400.00†	0.000	45.300	3400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3500.00†	0.000	45.300	3500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3600.00†	0.000	45.300	3600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3631.00†	0.000	45.300	3631.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Base/Salt
3700.00†	0.000	45.300	3700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3800.00†	0.000	45.300	3800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
3845.00†	0.000	45.300	3845.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Lamar
3900.00†	0.000	45.300	3900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4000.00†	0.000	45.300	4000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4100.00†	0.000	45.300	4100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4200.00†	0.000	45.300	4200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4300.00†	0.000	45.300	4300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4400.00†	0.000	45.300	4400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4500.00†	0.000	45.300	4500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4600.00†	0.000	45.300	4600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4700.00†	0.000	45.300	4700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4800.00†	0.000	45.300	4800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
4900.00†	0.000	45.300	4900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5000.00†	0.000	45.300	5000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5100.00†	0.000	45.300	5100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5200.00†	0.000	45.300	5200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5300.00†	0.000	45.300	5300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5400.00†	0.000	45.300	5400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5500.00†	0.000	45.300	5500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5600.00†	0.000	45.300	5600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5700.00†	0.000	45.300	5700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5800.00†	0.000	45.300	5800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
5900.00†	0.000	45.300	5900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6000.00†	0.000	45.300	6000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6100.00†	0.000	45.300	6100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6200.00†	0.000	45.300	6200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6300.00†	0.000	45.300	6300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6400.00†	0.000	45.300	6400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6500.00†	0.000	45.300	6500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6600.00†	0.000	45.300	6600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6700.00†	0.000	45.300	6700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6800.00†	0.000	45.300	6800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
6900.00†	0.000	45.300	6900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7000.00†	0.000	45.300	7000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7100.00†	0.000	45.300	7100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7200.00†	0.000	45.300	7200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7300.00†	0.000	45.300	7300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7400.00†	0.000	45.300	7400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7500.00†	0.000	45.300	7500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7600.00†	0.000	45.300	7600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7682.00†	0.000	45.300	7682.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Bone Spring Lime
7700.00†	0.000	45.300	7700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7800.00†	0.000	45.300	7800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
7900.00†	0.000	45.300	7900.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8000.00†	0.000	45.300	8000.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8100.00†	0.000	45.300	8100.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8200.00†	0.000	45.300	8200.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8300.00†	0.000	45.300	8300.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8400.00†	0.000	45.300	8400.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8500.00†	0.000	45.300	8500.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8600.00†	0.000	45.300	8600.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8601.00†	0.000	45.300	8601.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	Bone Spring 1 Sand
8700.00†	0.000	45.300	8700.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	
8799.25	0.000	45.300	8799.25	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	0.00	KOP
8800.00†	0.075	45.300	8800.00	0.00	0.00	0.00	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W	10.00	
8900.00†	10.075	45.300	8899.48	6.70	6.21	6.28	638698.58	440516.11	32°12'37.082"N	103°53'05.591"W	10.00	
9000.00†	20.075	45.300	8995.92	26.42	24.49	24.74	638717.04	440534.38	32°12'37.262"N	103°53'05.375"W	10.00	
9100.00†	30.075	45.300	9086.38	58.54	54.26	54.83	638747.13	440564.15	32°12'37.555"N	103°53'05.023"W	10.00	
9200.00†	40.075	45.300	9168.11	102.09	94.63	95.62	638787.92	440604.52	32°12'37.953"N	103°53'04.547"W	10.00	
9300.00†	50.075	45.300	9238.64	155.75	144.37	145.89	638838.18	440654.26	32°12'38.443"N	103°53'03.959"W	10.00	
9400.00†	60.075	45.300	9295.82	217.89	201.96	204.09	638896.38	440711.85	32°12'39.011"N	103°53'03.279"W	10.00	
9499.25	70.000	45.300	9337.65	286.09	265.18	267.97	638960.25	440775.06	32°12'39.634"N	103°53'02.533"W	10.00	70° Curve
9500.00†	70.000	45.300	9337.91	286.62	265.67	268.47	638960.75	440775.55	32°12'39.639"N	103°53'02.527"W	0.00	
9600.00†	70.000	45.300	9372.11	357.93	331.77	335.26	639027.54	440841.65	32°12'40.290"N	103°53'01.746"W	0.00	
9699.25	70.000	45.300	9406.06	428.71	397.37	401.55	639093.83	440907.24	32°12'40.936"N	103°53'00.971"W	0.00	200' Tangent
9700.00†	70.014	45.345	9406.31	429.24	397.87	402.06	639094.33	440907.74	32°12'40.941"N	103°53'00.965"W	6.00	
9790.68†	71.792	50.787	9436.00	496.86	455.08	465.78	639158.05	440964.95	32°12'41.505"N	103°53'00.221"W	6.00	Bone Spring 2 Sand
9800.00†	71.984	51.340	9438.90	504.13	460.65	472.67	639164.94	440970.52	32°12'41.559"N	103°53'00.140"W	6.00	
9900.00†	74.134	57.196	9468.06	585.52	516.46	550.30	639242.56	441026.33	32°12'42.109"N	103°52'59.234"W	6.00	
10000.00†	76.438	62.925	9493.48	672.51	564.69	634.08	639326.34	441074.55	32°12'42.582"N	103°52'58.257"W	6.00	
10100.00†	78.870	68.540	9514.87	764.14	604.79	723.10	639415.35	441114.65	32°12'42.975"N	103°52'57.219"W	6.00	
10200.00†	81.404	74.061	9532.01	859.43	636.35	816.38	639508.62	441146.20	32°12'43.284"N	103°52'56.132"W	6.00	
10300.00†	84.016	79.507	9544.71	957.31	659.00	912.90	639605.14	441168.85	32°12'43.504"N	103°52'55.007"W	6.00	
10400.00†	86.681	84.901	9552.82	1056.73	672.51	1011.61	639703.84	441182.36	32°12'43.634"N	103°52'53.858"W	6.00	
10482.68	88.908	89.338	9556.01	1139.30	676.65	1094.09	639786.32	441186.51	32°12'43.671"N	103°52'52.897"W	6.00	EOC
10500.00†	88.908	89.338	9556.34	1156.59	676.85	1111.41	639803.64	441186.71	32°12'43.672"N	103°52'52.696"W	0.00	
10600.00†	88.908	89.338	9558.24	1256.39	678.01	1211.39	639903.60	441187.86	32°12'43.680"N	103°52'51.532"W	0.00	
10700.00†	88.908	89.338	9560.15	1356.20	679.17	1311.36	640003.57	441189.02	32°12'43.687"N	103°52'50.369"W	0.00	
10800.00†	88.908	89.338	9562.06	1456.00	680.32	1411.34	640103.54	441190.17	32°12'43.694"N	103°52'49.205"W	0.00	
10900.00†	88.908	89.338	9563.96	1555.81	681.48	1511.31	640203.51	441191.33	32°12'43.701"N	103°52'48.041"W	0.00	
11000.00†	88.908	89.338	9565.87	1655.62	682.63	1611.29	640303.48	441192.49	32°12'43.709"N	103°52'46.878"W	0.00	
11100.00†	88.908	89.338	9567.77	1755.42	683.79	1711.26	640403.44	441193.64	32°12'43.716"N	103°52'45.714"W	0.00	
11200.00†	88.908	89.338	9569.68	1855.23	684.95	1811.24	640503.41	441194.80	32°12'43.723"N	103°52'44.550"W	0.00	
11300.00†	88.908	89.338	9571.59	1955.03	686.10	1911.21	640603.38	441195.95	32°12'43.730"N	103°52'43.387"W	0.00	
11400.00†	88.908	89.338	9573.49	2054.84	687.26	2011.19	640703.35	441197.11	32°12'43.738"N	103°52'42.223"W	0.00	
11500.00†	88.908	89.338	9575.40	2154.64	688.41	2111.17	640803.32	441198.26	32°12'43.745"N	103°52'41.059"W	0.00	
11600.00†	88.908	89.338	9577.31	2254.45	689.57	2211.14	640903.28	441199.42	32°12'43.752"N	103°52'39.896"W	0.00	
11700.00†	88.908	89.338	9579.21	2354.26	690.72	2311.12	641003.25	441200.58	32°12'43.759"N	103°52'38.732"W	0.00	
11800.00†	88.908	89.338	9581.12	2454.06	691.88	2411.09	641103.22	441201.73	32°12'43.767"N	103°52'37.568"W	0.00	
11900.00†	88.908	89.338	9583.03	2553.87	693.04	2511.07	641203.19	441202.89	32°12'43.774"N	103°52'36.405"W	0.00	
12000.00†	88.908	89.338	9584.93	2653.67	694.19	2611.04	641303.16	441204.04	32°12'43.781"N	103°52'35.241"W	0.00	
12100.00†	88.908	89.338	9586.84	2753.48	695.35	2711.02	641403.12	441205.20	32°12'43.788"N	103°52'34.077"W	0.00	
12200.00†	88.908	89.338	9588.75	2853.28	696.50	2810.99	641503.09	441206.35	32°12'43.796"N	103°52'32.914"W	0.00	
12300.00†	88.908	89.338	9590.65	2953.09	697.66	2910.97	641603.06	441207.51	32°12'43.803"N	103°52'31.750"W	0.00	

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC (19H) Sec. 21, TSP 24S, Rnge 30E		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12400.00†	88.908	89.338	9592.56	3052.90	698.82	3010.94	641703.03	441208.67	32°12'43.810"N	103°52'30.587"W	0.00	
12500.00†	88.908	89.338	9594.47	3152.70	699.97	3110.92	641803.00	441209.82	32°12'43.817"N	103°52'29.423"W	0.00	
12600.00†	88.908	89.338	9596.37	3252.51	701.13	3210.89	641902.96	441210.98	32°12'43.825"N	103°52'28.259"W	0.00	
12700.00†	88.908	89.338	9598.28	3352.31	702.28	3310.87	642002.93	441212.13	32°12'43.832"N	103°52'27.096"W	0.00	
12800.00†	88.908	89.338	9600.18	3452.12	703.44	3410.84	642102.90	441213.29	32°12'43.839"N	103°52'25.932"W	0.00	
12900.00†	88.908	89.338	9602.09	3551.92	704.59	3510.82	642202.87	441214.44	32°12'43.846"N	103°52'24.768"W	0.00	
13000.00†	88.908	89.338	9604.00	3651.73	705.75	3610.79	642302.84	441215.60	32°12'43.853"N	103°52'23.605"W	0.00	
13100.00†	88.908	89.338	9605.90	3751.53	706.91	3710.77	642402.80	441216.76	32°12'43.861"N	103°52'22.441"W	0.00	
13200.00†	88.908	89.338	9607.81	3851.34	708.06	3810.74	642502.77	441217.91	32°12'43.868"N	103°52'21.277"W	0.00	
13300.00†	88.908	89.338	9609.72	3951.15	709.22	3910.72	642602.74	441219.07	32°12'43.875"N	103°52'20.114"W	0.00	
13400.00†	88.908	89.338	9611.62	4050.95	710.37	4010.69	642702.71	441220.22	32°12'43.882"N	103°52'18.950"W	0.00	
13500.00†	88.908	89.338	9613.53	4150.76	711.53	4110.67	642802.68	441221.38	32°12'43.889"N	103°52'17.786"W	0.00	
13600.00†	88.908	89.338	9615.44	4250.56	712.69	4210.64	642902.64	441222.53	32°12'43.897"N	103°52'16.623"W	0.00	
13700.00†	88.908	89.338	9617.34	4350.37	713.84	4310.62	643002.61	441223.69	32°12'43.904"N	103°52'15.459"W	0.00	
13800.00†	88.908	89.338	9619.25	4450.17	715.00	4410.59	643102.58	441224.85	32°12'43.911"N	103°52'14.295"W	0.00	
13900.00†	88.908	89.338	9621.16	4549.98	716.15	4510.57	643202.55	441226.00	32°12'43.918"N	103°52'13.132"W	0.00	
14000.00†	88.908	89.338	9623.06	4649.79	717.31	4610.54	643302.52	441227.16	32°12'43.925"N	103°52'11.968"W	0.00	
14100.00†	88.908	89.338	9624.97	4749.59	718.46	4710.52	643402.49	441228.31	32°12'43.932"N	103°52'10.805"W	0.00	
14200.00†	88.908	89.338	9626.87	4849.40	719.62	4810.49	643502.45	441229.47	32°12'43.940"N	103°52'09.641"W	0.00	
14300.00†	88.908	89.338	9628.78	4949.20	720.78	4910.47	643602.42	441230.63	32°12'43.947"N	103°52'08.477"W	0.00	
14400.00†	88.908	89.338	9630.69	5049.01	721.93	5010.44	643702.39	441231.78	32°12'43.954"N	103°52'07.314"W	0.00	
14500.00†	88.908	89.338	9632.59	5148.81	723.09	5110.42	643802.36	441232.94	32°12'43.961"N	103°52'06.150"W	0.00	
14600.00†	88.908	89.338	9634.50	5248.62	724.24	5210.39	643902.33	441234.09	32°12'43.968"N	103°52'04.986"W	0.00	
14700.00†	88.908	89.338	9636.41	5348.43	725.40	5310.37	644002.29	441235.25	32°12'43.975"N	103°52'03.823"W	0.00	
14800.00†	88.908	89.338	9638.31	5448.23	726.56	5410.35	644102.26	441236.40	32°12'43.983"N	103°52'02.659"W	0.00	
14900.00†	88.908	89.338	9640.22	5548.04	727.71	5510.32	644202.23	441237.56	32°12'43.990"N	103°52'01.495"W	0.00	
15000.00†	88.908	89.338	9642.13	5647.84	728.87	5610.30	644302.20	441238.72	32°12'43.997"N	103°52'00.332"W	0.00	
15100.00†	88.908	89.338	9644.03	5747.65	730.02	5710.27	644402.17	441239.87	32°12'44.004"N	103°51'59.168"W	0.00	
15200.00†	88.908	89.338	9645.94	5847.45	731.18	5810.25	644502.13	441241.03	32°12'44.011"N	103°51'58.004"W	0.00	
15300.00†	88.908	89.338	9647.85	5947.26	732.33	5910.22	644602.10	441242.18	32°12'44.018"N	103°51'56.841"W	0.00	
15400.00†	88.908	89.338	9649.75	6047.07	733.49	6010.20	644702.07	441243.34	32°12'44.025"N	103°51'55.677"W	0.00	
15500.00†	88.908	89.338	9651.66	6146.87	734.65	6110.17	644802.04	441244.49	32°12'44.033"N	103°51'54.513"W	0.00	
15600.00†	88.908	89.338	9653.56	6246.68	735.80	6210.15	644902.01	441245.65	32°12'44.040"N	103°51'53.350"W	0.00	
15700.00†	88.908	89.338	9655.47	6346.48	736.96	6310.12	645001.97	441246.81	32°12'44.047"N	103°51'52.186"W	0.00	
15800.00†	88.908	89.338	9657.38	6446.29	738.11	6410.10	645101.94	441247.96	32°12'44.054"N	103°51'51.023"W	0.00	
15900.00†	88.908	89.338	9659.28	6546.09	739.27	6510.07	645201.91	441249.12	32°12'44.061"N	103°51'49.859"W	0.00	
16000.00†	88.908	89.338	9661.19	6645.90	740.43	6610.05	645301.88	441250.27	32°12'44.068"N	103°51'48.695"W	0.00	
16100.00†	88.908	89.338	9663.10	6745.71	741.58	6710.02	645401.85	441251.43	32°12'44.075"N	103°51'47.532"W	0.00	
16200.00†	88.908	89.338	9665.00	6845.51	742.74	6810.00	645501.81	441252.58	32°12'44.082"N	103°51'46.368"W	0.00	
16300.00†	88.908	89.338	9666.91	6945.32	743.89	6909.97	645601.78	441253.74	32°12'44.089"N	103°51'45.204"W	0.00	
16400.00†	88.908	89.338	9668.82	7045.12	745.05	7009.95	645701.75	441254.90	32°12'44.097"N	103°51'44.041"W	0.00	
16500.00†	88.908	89.338	9670.72	7144.93	746.20	7109.92	645801.72	441256.05	32°12'44.104"N	103°51'42.877"W	0.00	
16600.00†	88.908	89.338	9672.63	7244.73	747.36	7209.90	645901.69	441257.21	32°12'44.111"N	103°51'41.713"W	0.00	
16700.00†	88.908	89.338	9674.54	7344.54	748.52	7309.87	646001.65	441258.36	32°12'44.118"N	103°51'40.550"W	0.00	
16800.00†	88.908	89.338	9676.44	7444.35	749.67	7409.85	646101.62	441259.52	32°12'44.125"N	103°51'39.386"W	0.00	

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

WELLPATH DATA (218 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16900.00†	88.908	89.338	9678.35	7544.15	750.83	7509.82	646201.59	441260.67	32°12'44.132"N	103°51'38.222"W	0.00	
17000.00†	88.908	89.338	9680.26	7643.96	751.98	7609.80	646301.56	441261.83	32°12'44.139"N	103°51'37.059"W	0.00	
17100.00†	88.908	89.338	9682.16	7743.76	753.14	7709.77	646401.53	441262.99	32°12'44.146"N	103°51'35.895"W	0.00	
17200.00†	88.908	89.338	9684.07	7843.57	754.30	7809.75	646501.50	441264.14	32°12'44.153"N	103°51'34.731"W	0.00	
17300.00†	88.908	89.338	9685.97	7943.37	755.45	7909.72	646601.46	441265.30	32°12'44.160"N	103°51'33.568"W	0.00	
17400.00†	88.908	89.338	9687.88	8043.18	756.61	8009.70	646701.43	441266.45	32°12'44.167"N	103°51'32.404"W	0.00	
17500.00†	88.908	89.338	9689.79	8142.99	757.76	8109.67	646801.40	441267.61	32°12'44.174"N	103°51'31.241"W	0.00	
17600.00†	88.908	89.338	9691.69	8242.79	758.92	8209.65	646901.37	441268.77	32°12'44.182"N	103°51'30.077"W	0.00	
17700.00†	88.908	89.338	9693.60	8342.60	760.07	8309.62	647001.34	441269.92	32°12'44.189"N	103°51'28.913"W	0.00	
17800.00†	88.908	89.338	9695.51	8442.40	761.23	8409.60	647101.30	441271.08	32°12'44.196"N	103°51'27.750"W	0.00	
17900.00†	88.908	89.338	9697.41	8542.21	762.39	8509.57	647201.27	441272.23	32°12'44.203"N	103°51'26.586"W	0.00	
18000.00†	88.908	89.338	9699.32	8642.01	763.54	8609.55	647301.24	441273.39	32°12'44.210"N	103°51'25.422"W	0.00	
18100.00†	88.908	89.338	9701.23	8741.82	764.70	8709.52	647401.21	441274.54	32°12'44.217"N	103°51'24.259"W	0.00	
18200.00†	88.908	89.338	9703.13	8841.62	765.85	8809.50	647501.18	441275.70	32°12'44.224"N	103°51'23.095"W	0.00	
18300.00†	88.908	89.338	9705.04	8941.43	767.01	8909.48	647601.14	441276.86	32°12'44.231"N	103°51'21.931"W	0.00	
18400.00†	88.908	89.338	9706.95	9041.24	768.17	9009.45	647701.11	441278.01	32°12'44.238"N	103°51'20.768"W	0.00	
18500.00†	88.908	89.338	9708.85	9141.04	769.32	9109.43	647801.08	441279.17	32°12'44.245"N	103°51'19.604"W	0.00	
18600.00†	88.908	89.338	9710.76	9240.85	770.48	9209.40	647901.05	441280.32	32°12'44.252"N	103°51'18.440"W	0.00	
18700.00†	88.908	89.338	9712.66	9340.65	771.63	9309.38	648001.02	441281.48	32°12'44.259"N	103°51'17.277"W	0.00	
18800.00†	88.908	89.338	9714.57	9440.46	772.79	9409.35	648100.98	441282.63	32°12'44.266"N	103°51'16.113"W	0.00	
18900.00†	88.908	89.338	9716.48	9540.26	773.94	9509.33	648200.95	441283.79	32°12'44.273"N	103°51'14.949"W	0.00	
19000.00†	88.908	89.338	9718.38	9640.07	775.10	9609.30	648300.92	441284.95	32°12'44.280"N	103°51'13.786"W	0.00	
19100.00†	88.908	89.338	9720.29	9739.88	776.26	9709.28	648400.89	441286.10	32°12'44.287"N	103°51'12.622"W	0.00	
19200.00†	88.908	89.338	9722.20	9839.68	777.41	9809.25	648500.86	441287.26	32°12'44.294"N	103°51'11.459"W	0.00	
19300.00†	88.908	89.338	9724.10	9939.49	778.57	9909.23	648600.82	441288.41	32°12'44.301"N	103°51'10.295"W	0.00	
19400.00†	88.908	89.338	9726.01	10039.29	779.72	10009.20	648700.79	441289.57	32°12'44.308"N	103°51'09.131"W	0.00	
19500.00†	88.908	89.338	9727.92	10139.10	780.88	10109.18	648800.76	441290.72	32°12'44.315"N	103°51'07.968"W	0.00	
19600.00†	88.908	89.338	9729.82	10238.90	782.04	10209.15	648900.73	441291.88	32°12'44.322"N	103°51'06.804"W	0.00	
19700.00†	88.908	89.338	9731.73	10338.71	783.19	10309.13	649000.70	441293.04	32°12'44.329"N	103°51'05.640"W	0.00	
19800.00†	88.908	89.338	9733.64	10438.52	784.35	10409.10	649100.66	441294.19	32°12'44.336"N	103°51'04.477"W	0.00	
19900.00†	88.908	89.338	9735.54	10538.32	785.50	10509.08	649200.63	441295.35	32°12'44.343"N	103°51'03.313"W	0.00	
20000.00†	88.908	89.338	9737.45	10638.13	786.66	10609.05	649300.60	441296.50	32°12'44.350"N	103°51'02.149"W	0.00	
20100.00†	88.908	89.338	9739.35	10737.93	787.81	10709.03	649400.57	441297.66	32°12'44.357"N	103°51'00.986"W	0.00	
20200.00†	88.908	89.338	9741.26	10837.74	788.97	10809.00	649500.54	441298.81	32°12'44.364"N	103°50'59.822"W	0.00	
20300.00†	88.908	89.338	9743.17	10937.54	790.13	10908.98	649600.50	441299.97	32°12'44.371"N	103°50'58.658"W	0.00	
20400.00†	88.908	89.338	9745.07	11037.35	791.28	11008.95	649700.47	441301.13	32°12'44.378"N	103°50'57.495"W	0.00	
20500.00†	88.908	89.338	9746.98	11137.16	792.44	11108.93	649800.44	441302.28	32°12'44.385"N	103°50'56.331"W	0.00	
20553.48	88.908	89.338	9748.00†	11190.53	793.06	11162.39	649853.90	441302.90	32°12'44.389"N	103°50'55.709"W	0.00	No. 19H PBHL

Planned Wellpath Report

PLU CVX JC PC No. 19H Rev A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

HOLE & CASING SECTIONS - Ref Wellbore: PLU CVX JC PC No. 19H PWB Ref Wellpath: PLU CVX JC PC No. 19H Rev A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	0.00	20553.48	20553.48	0.00	9748.00	0.00	0.00	793.06	11162.39

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) PLU CVX JC PC No. 19H PBHL Rev-1	20553.48	9748.00	793.06	11162.39	649853.90	441302.90	32°12'44.389"N	103°50'55.709"W	point

SURVEY PROGRAM - Ref Wellbore: PLU CVX JC PC No. 19H PWB Ref Wellpath: PLU CVX JC PC No. 19H Rev A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	500.00	Generic gyro - northseeking (Standard)		PLU CVX JC PC No. 19H PWB
500.00	20553.48	NaviTrak (Standard)		PLU CVX JC PC No. 19H PWB

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	**BOPCO, LP**	Slot	**No. 19H**
Area	**Eddy County, NM**	Well	**No. 19H**
Field	**Eddy County, NM (NAD 27 / Grid)**	Wellbore	**PLU CVX JC PC No. 19H PWB**
Facility	**PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E**		

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	**Janotho**
Scale	**0.999931**	Report Generated	**11/25/2014 at 12:56:50 PM**
Convergence at slot	**0.24° East**	Database/Source file	**WA_Midland/PLU_CVX_JC_PC_No._19H_PWB_CR.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**	638692.30	440509.90	32°12'37.021"N	103°53'05.664"W
Facility Reference Pt			**638692.30**	**440509.90**	32°12'37.021"N	103°53'05.664"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 (KB) to Facility Vertical Datum	**29.00ft**
Horizontal Reference Pt	**Slot**	Latshaw 18 (KB) to Mean Sea Level	**3376.00ft**
Vertical Reference Pt	**Latshaw 18 (KB)**	Latshaw 18 (KB) to Mud Line at Slot (No. 19H)	**29.00ft**
MD Reference Pt	**Latshaw 18 (KB)**		
Field Vertical Reference	**Mean Sea Level**		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS

Ellipse Confidence Limit	**3.00 Std Dev**	Ellipse Start MD	**29.00ft**	Surface Position Uncertainty	**included**
Declination	**7.48° East of TN**	Dip Angle	**60.03°**	Mag Field Strength	**48182 nT**
Slot Surface Uncertainty @1SD		Horizontal	**0.000ft**	Vertical	**0.000ft**
Facility Surface Uncertainty @1SD		Horizontal	**3.300ft**	Vertical	**1.000ft**

Positional Uncertainty values in the WELLPATH DATA table are the projection of the ellipsoid of uncertainty onto the vertical and horizontal planes.

ANTI-COLLISION RULE

Rule Name	**Baker Hughes Stop Drilling**	Rule Based On	**Ratio**
Plane of Rule	**Closest Approach**	Threshold Value	**1.00**
Subtract Casing & Hole Size	**yes**	Apply Cone of Safety	**no**

HOLE & CASING SECTIONS - Ref Wellbore: PLU CVX JC PC No. 19H PWB Ref Wellpath: PLU CVX JC PC No. 19H Rev A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	0.00	20553.48	20553.48	0.00	9748.00	0.00	0.00	793.06	11162.39

Clearance Report
PLU CVX JC PC No. 19H Rev A.0
Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

SURVEY PROGRAM - **Ref Wellbore: PLU CVX JC PC No. 19H PWB** **Ref Wellpath: PLU CVX JC PC No. 19H Rev A.0**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	500.00	Generic gyro - northseeking (Standard)		PLU CVX JC PC No. 19H PWB
500.00	20553.48	NaviTrak (Standard)		PLU CVX JC PC No. 19H PWB

CALCULATION RANGE & CUTOFF

From: **0.00ft MD**	To: **20553.48ft MD**	C-C Cutoff: **(none)**

OFFSET WELL CLEARANCE SUMMARY **(1 Offset Wellpath selected) Ratios are calculated in Closest Approach plane**

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR Separation Ratio			
					Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
PLU CVX JC PC {No 20H} Sec 21, TSP 24S, Rnge 30E	No. 20H	No. 20H	PLU CVX JC PC No. 20H PWB	PLU CVX JC PC No. 20H Rev A.0	0.00	40.00	8799.25	8803.44	0.63	13200.00	FAIL

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC (19H) Sec. 21, TSP 24S, Rnge 30E		

CLEARANCE DATA - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Facility: PLU CVX JC PC (No 20H) Sec 21, TSP 24S, Rnge 30E Slot: No. 20H Well: No. 20H Threshold Value=1.00

† = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
0.00	0.00	0.00	0.00	4.00	0.00	-40.00	0.00	180.00	40.00	0.73	NA	NA
100.00†	100.00	0.00	0.00	104.00	100.00	-40.00	0.00	180.00	40.00	20.53	1.98	PASS
200.00†	200.00	0.00	0.00	204.00	200.00	-40.00	0.00	180.00	40.00	20.55	1.98	PASS
300.00†	300.00	0.00	0.00	304.00	300.00	-40.00	0.00	180.00	40.00	20.59	1.98	PASS
400.00†	400.00	0.00	0.00	404.00	400.00	-40.00	0.00	180.00	40.00	20.66	1.97	PASS
500.00†	500.00	0.00	0.00	504.00	500.00	-40.00	0.00	180.00	40.00	20.74	1.96	PASS
600.00†	600.00	0.00	0.00	604.00	600.00	-40.00	0.00	180.00	40.00	20.79	1.96	PASS
700.00†	700.00	0.00	0.00	704.00	700.00	-40.00	0.00	180.00	40.00	20.82	1.95	PASS
800.00†	800.00	0.00	0.00	804.00	800.00	-40.00	0.00	180.00	40.00	20.87	1.95	PASS
900.00†	900.00	0.00	0.00	904.00	900.00	-40.00	0.00	180.00	40.00	20.95	1.94	PASS
1000.00†	1000.00	0.00	0.00	1004.00	1000.00	-40.00	0.00	180.00	40.00	21.05	1.93	PASS
1100.00†	1100.00	0.00	0.00	1104.00	1100.00	-40.00	0.00	180.00	40.00	21.18	1.92	PASS
1200.00†	1200.00	0.00	0.00	1204.00	1200.00	-40.00	0.00	180.00	40.00	21.33	1.91	PASS
1300.00†	1300.00	0.00	0.00	1304.00	1300.00	-40.00	0.00	180.00	40.00	21.51	1.89	PASS
1400.00†	1400.00	0.00	0.00	1404.00	1400.00	-40.00	0.00	180.00	40.00	21.70	1.87	PASS
1500.00†	1500.00	0.00	0.00	1504.00	1500.00	-40.00	0.00	180.00	40.00	21.93	1.85	PASS
1600.00†	1600.00	0.00	0.00	1604.00	1600.00	-40.00	0.00	180.00	40.00	22.17	1.83	PASS
1700.00†	1700.00	0.00	0.00	1704.00	1700.00	-40.00	0.00	180.00	40.00	22.43	1.81	PASS
1800.00†	1800.00	0.00	0.00	1804.00	1800.00	-40.00	0.00	180.00	40.00	22.72	1.79	PASS
1900.00†	1900.00	0.00	0.00	1904.00	1900.00	-40.00	0.00	180.00	40.00	23.02	1.76	PASS
2000.00†	2000.00	0.00	0.00	2004.00	2000.00	-40.00	0.00	180.00	40.00	23.34	1.74	PASS
2100.00†	2100.00	0.00	0.00	2104.00	2100.00	-40.00	0.00	180.00	40.00	23.68	1.71	PASS
2200.00†	2200.00	0.00	0.00	2204.00	2200.00	-40.00	0.00	180.00	40.00	24.04	1.68	PASS
2300.00†	2300.00	0.00	0.00	2304.00	2300.00	-40.00	0.00	180.00	40.00	24.41	1.66	PASS
2400.00†	2400.00	0.00	0.00	2404.00	2400.00	-40.00	0.00	180.00	40.00	24.80	1.63	PASS
2500.00†	2500.00	0.00	0.00	2504.00	2500.00	-40.00	0.00	180.00	40.00	25.21	1.60	PASS
2600.00†	2600.00	0.00	0.00	2604.00	2600.00	-40.00	0.00	180.00	40.00	25.63	1.58	PASS
2700.00†	2700.00	0.00	0.00	2704.00	2700.00	-40.00	0.00	180.00	40.00	26.06	1.55	PASS
2800.00†	2800.00	0.00	0.00	2804.00	2800.00	-40.00	0.00	180.00	40.00	26.50	1.52	PASS
2900.00†	2900.00	0.00	0.00	2904.00	2900.00	-40.00	0.00	180.00	40.00	26.96	1.50	PASS
3000.00†	3000.00	0.00	0.00	3004.00	3000.00	-40.00	0.00	180.00	40.00	27.43	1.47	PASS
3100.00†	3100.00	0.00	0.00	3104.00	3100.00	-40.00	0.00	180.00	40.00	27.91	1.44	PASS
3200.00†	3200.00	0.00	0.00	3204.00	3200.00	-40.00	0.00	180.00	40.00	28.40	1.42	PASS
3300.00†	3300.00	0.00	0.00	3304.00	3300.00	-40.00	0.00	180.00	40.00	28.90	1.39	PASS
3400.00†	3400.00	0.00	0.00	3404.00	3400.00	-40.00	0.00	180.00	40.00	29.41	1.37	PASS
3500.00†	3500.00	0.00	0.00	3504.00	3500.00	-40.00	0.00	180.00	40.00	29.93	1.35	PASS
3600.00†	3600.00	0.00	0.00	3604.00	3600.00	-40.00	0.00	180.00	40.00	30.45	1.32	PASS
3700.00†	3700.00	0.00	0.00	3704.00	3700.00	-40.00	0.00	180.00	40.00	30.99	1.30	PASS
3800.00†	3800.00	0.00	0.00	3804.00	3800.00	-40.00	0.00	180.00	40.00	31.53	1.28	PASS
3900.00†	3900.00	0.00	0.00	3904.00	3900.00	-40.00	0.00	180.00	40.00	32.08	1.25	PASS
4000.00†	4000.00	0.00	0.00	4004.00	4000.00	-40.00	0.00	180.00	40.00	32.63	1.23	PASS
4100.00†	4100.00	0.00	0.00	4104.00	4100.00	-40.00	0.00	180.00	40.00	33.19	1.21	PASS
4200.00†	4200.00	0.00	0.00	4204.00	4200.00	-40.00	0.00	180.00	40.00	33.76	1.19	PASS
4300.00†	4300.00	0.00	0.00	4304.00	4300.00	-40.00	0.00	180.00	40.00	34.34	1.17	PASS
4400.00†	4400.00	0.00	0.00	4404.00	4400.00	-40.00	0.00	180.00	40.00	34.92	1.15	PASS

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

CLEARANCE DATA - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Facility: PLU CVX JC PC {No 20H} Sec 21, TSP 24S, Rnge 30E Slot: No. 20H Well: No. 20H Threshold Value=1.00

† = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4500.00†	4500.00	0.00	0.00	4504.00	4500.00	-40.00	0.00	180.00	40.00	35.50	1.13	PASS
4600.00†	4600.00	0.00	0.00	4604.00	4600.00	-40.00	0.00	180.00	40.00	36.09	1.11	PASS
4700.00†	4700.00	0.00	0.00	4704.00	4700.00	-40.00	0.00	180.00	40.00	36.68	1.09	PASS
4800.00†	4800.00	0.00	0.00	4804.00	4800.00	-40.00	0.00	180.00	40.00	37.28	1.07	PASS
4900.00†	4900.00	0.00	0.00	4904.00	4900.00	-40.00	0.00	180.00	40.00	37.88	1.06	PASS
5000.00†	5000.00	0.00	0.00	5004.00	5000.00	-40.00	0.00	180.00	40.00	38.49	1.04	PASS
5100.00†	5100.00	0.00	0.00	5104.00	5100.00	-40.00	0.00	180.00	40.00	39.10	1.02	PASS
5200.00†	5200.00	0.00	0.00	5204.00	5200.00	-40.00	0.00	180.00	40.00	39.72	1.01	PASS
5300.00†	5300.00	0.00	0.00	5304.00	5300.00	-40.00	0.00	180.00	40.00	40.33	0.99	FAIL
5400.00†	5400.00	0.00	0.00	5404.00	5400.00	-40.00	0.00	180.00	40.00	40.96	0.98	FAIL
5500.00†	5500.00	0.00	0.00	5504.00	5500.00	-40.00	0.00	180.00	40.00	41.58	0.96	FAIL
5600.00†	5600.00	0.00	0.00	5604.00	5600.00	-40.00	0.00	180.00	40.00	42.21	0.95	FAIL
5700.00†	5700.00	0.00	0.00	5704.00	5700.00	-40.00	0.00	180.00	40.00	42.84	0.93	FAIL
5800.00†	5800.00	0.00	0.00	5804.00	5800.00	-40.00	0.00	180.00	40.00	43.47	0.92	FAIL
5900.00†	5900.00	0.00	0.00	5904.00	5900.00	-40.00	0.00	180.00	40.00	44.11	0.91	FAIL
6000.00†	6000.00	0.00	0.00	6004.00	6000.00	-40.00	0.00	180.00	40.00	44.75	0.89	FAIL
6100.00†	6100.00	0.00	0.00	6104.00	6100.00	-40.00	0.00	180.00	40.00	45.39	0.88	FAIL
6200.00†	6200.00	0.00	0.00	6204.00	6200.00	-40.00	0.00	180.00	40.00	46.03	0.87	FAIL
6300.00†	6300.00	0.00	0.00	6304.00	6300.00	-40.00	0.00	180.00	40.00	46.67	0.85	FAIL
6400.00†	6400.00	0.00	0.00	6404.00	6400.00	-40.00	0.00	180.00	40.00	47.32	0.84	FAIL
6500.00†	6500.00	0.00	0.00	6504.00	6500.00	-40.00	0.00	180.00	40.00	47.97	0.83	FAIL
6600.00†	6600.00	0.00	0.00	6604.00	6600.00	-40.00	0.00	180.00	40.00	48.62	0.82	FAIL
6700.00†	6700.00	0.00	0.00	6704.00	6700.00	-40.00	0.00	180.00	40.00	49.28	0.81	FAIL
6800.00†	6800.00	0.00	0.00	6804.00	6800.00	-40.00	0.00	180.00	40.00	49.93	0.80	FAIL
6900.00†	6900.00	0.00	0.00	6904.00	6900.00	-40.00	0.00	180.00	40.00	50.59	0.79	FAIL
7000.00†	7000.00	0.00	0.00	7004.00	7000.00	-40.00	0.00	180.00	40.00	51.25	0.78	FAIL
7100.00†	7100.00	0.00	0.00	7104.00	7100.00	-40.00	0.00	180.00	40.00	51.91	0.77	FAIL
7200.00†	7200.00	0.00	0.00	7204.00	7200.00	-40.00	0.00	180.00	40.00	52.57	0.76	FAIL
7300.00†	7300.00	0.00	0.00	7304.00	7300.00	-40.00	0.00	180.00	40.00	53.23	0.75	FAIL
7400.00†	7400.00	0.00	0.00	7404.00	7400.00	-40.00	0.00	180.00	40.00	53.90	0.74	FAIL
7500.00†	7500.00	0.00	0.00	7504.00	7500.00	-40.00	0.00	180.00	40.00	54.56	0.73	FAIL
7600.00†	7600.00	0.00	0.00	7604.00	7600.00	-40.00	0.00	180.00	40.00	55.23	0.72	FAIL
7700.00†	7700.00	0.00	0.00	7704.00	7700.00	-40.00	0.00	180.00	40.00	55.90	0.71	FAIL
7800.00†	7800.00	0.00	0.00	7804.00	7800.00	-40.00	0.00	180.00	40.00	56.57	0.70	FAIL
7900.00†	7900.00	0.00	0.00	7904.00	7900.00	-40.00	0.00	180.00	40.00	57.24	0.69	FAIL
8000.00†	8000.00	0.00	0.00	8004.00	8000.00	-40.00	0.00	180.00	40.00	57.91	0.69	FAIL
8100.00†	8100.00	0.00	0.00	8104.00	8100.00	-40.00	0.00	180.00	40.00	58.59	0.68	FAIL
8200.00†	8200.00	0.00	0.00	8204.00	8200.00	-40.00	0.00	180.00	40.00	59.26	0.67	FAIL
8300.00†	8300.00	0.00	0.00	8304.00	8300.00	-40.00	0.00	180.00	40.00	59.94	0.66	FAIL
8400.00†	8400.00	0.00	0.00	8404.00	8400.00	-40.00	0.00	180.00	40.00	60.61	0.66	FAIL
8500.00†	8500.00	0.00	0.00	8504.00	8500.00	-40.00	0.00	180.00	40.00	61.29	0.65	FAIL
8600.00†	8600.00	0.00	0.00	8604.00	8600.00	-40.00	0.00	180.00	40.00	61.97	0.64	FAIL
8700.00†	8700.00	0.00	0.00	8704.00	8700.00	-40.00	0.00	180.00	40.00	62.65	0.63	FAIL
8799.25	8799.25	0.00	0.00	8803.25	8799.25	-40.00	0.00	180.00	40.00	63.33	0.63	FAIL
8800.00†	8800.00	0.00	0.00	8804.00	8800.00	-40.00	0.00	180.00	40.00	63.33	0.63	FAIL

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

CLEARANCE DATA - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Facility: PLU CVX JC PC {No 20H} Sec 21, TSP 24S, Rnge 30E Slot: No. 20H Well: No. 20H Threshold Value=1.00

† = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8803.44†	8803.44	0.01	0.01	8807.44	8803.44	-40.00	0.00	180.02	40.01	63.36	0.63	FAIL
8900.00†	8899.48	6.21	6.28	8903.48	8899.48	-40.00	0.00	187.74	46.64	64.20	0.72	FAIL
9000.00†	8995.92	24.49	24.74	8995.61	8991.58	-40.91	-1.10	201.57	70.45	65.78	1.07	PASS
9100.00†	9086.38	54.26	54.83	9068.42	9063.68	-47.08	-8.62	212.05	121.70	67.03	1.82	PASS
9200.00†	9168.11	94.63	95.62	9120.20	9113.93	-54.98	-18.23	217.27	195.66	67.58	2.92	PASS
9300.00†	9238.64	144.37	145.89	9152.22	9144.36	-61.29	-25.92	219.88	284.08	67.91	4.22	PASS
9400.00†	9295.82	201.96	204.09	9168.13	9159.26	-64.83	-30.22	221.29	380.43	68.05	5.64	PASS
9499.25	9337.65	265.18	267.97	9171.67	9162.56	-65.65	-31.23	222.13	479.19	68.16	7.10	PASS
9500.00†	9337.91	265.67	268.47	9171.66	9162.55	-65.65	-31.22	222.13	479.94	68.16	7.11	PASS
9600.00†	9372.11	331.77	335.26	9170.30	9161.28	-65.33	-30.84	222.67	579.80	68.27	8.57	PASS
9699.25	9406.06	397.37	401.55	9169.17	9160.23	-65.07	-30.52	223.06	678.95	68.38	10.02	PASS
9700.00†	9406.31	397.87	402.06	9169.16	9160.22	-65.07	-30.51	223.06	679.69	68.39	10.04	PASS
9800.00†	9438.90	460.65	472.67	9167.41	9158.59	-64.66	-30.02	223.74	779.25	68.50	11.49	PASS
9900.00†	9468.06	516.46	550.30	9164.50	9155.87	-64.00	-29.21	224.95	877.63	68.63	12.91	PASS
10000.00†	9493.48	564.69	634.08	9160.67	9152.29	-63.14	-28.17	226.53	974.24	68.76	14.31	PASS
10100.00†	9514.87	604.79	723.10	9156.12	9148.02	-62.13	-26.94	228.36	1068.62	68.90	15.66	PASS
10200.00†	9532.01	636.35	816.38	9150.98	9143.19	-61.03	-25.60	230.37	1160.36	69.04	16.98	PASS
10300.00†	9544.71	659.00	912.90	9145.36	9137.89	-59.85	-24.16	232.51	1249.14	69.18	18.24	PASS
10400.00†	9552.82	672.51	1011.61	9139.36	9132.20	-58.63	-22.67	234.74	1334.62	69.33	19.44	PASS
10482.68†	9556.01	676.65	1094.09	9134.03	9127.24	-57.59	-21.42	236.65	1402.61	69.43	20.41	PASS
10500.00†	9556.34	676.85	1111.41	9133.02	9126.18	-57.38	-21.15	237.05	1416.63	69.44	20.61	PASS
10600.00†	9558.24	678.01	1211.39	9126.89	9120.33	-56.21	-19.73	239.19	1498.83	69.48	21.79	PASS
10700.00†	9560.15	679.17	1311.36	9121.19	9114.88	-55.16	-18.45	241.09	1583.00	69.52	23.00	PASS
10800.00†	9562.06	680.32	1411.34	9115.88	9109.78	-54.21	-17.30	242.79	1668.86	69.57	24.23	PASS
10900.00†	9563.96	681.48	1511.31	9110.92	9105.01	-53.35	-16.25	244.31	1756.15	69.63	25.48	PASS
11000.00†	9565.87	682.63	1611.29	9106.28	9100.54	-52.57	-15.30	245.68	1844.69	69.68	26.74	PASS
11100.00†	9567.77	683.79	1711.26	9101.93	9096.33	-51.86	-14.44	246.91	1934.30	69.74	28.02	PASS
11200.00†	9569.68	684.95	1811.24	9097.84	9092.38	-51.22	-13.65	248.03	2024.84	69.81	29.30	PASS
11300.00†	9571.59	686.10	1911.21	9094.00	9088.64	-50.62	-12.93	249.05	2116.20	69.90	30.58	PASS
11400.00†	9573.49	687.26	2011.19	9090.37	9085.12	-50.08	-12.26	249.98	2208.29	69.99	31.87	PASS
11500.00†	9575.40	688.41	2111.17	9086.94	9081.79	-49.57	-11.65	250.83	2301.01	70.08	33.17	PASS
11600.00†	9577.31	689.57	2211.14	9083.70	9078.63	-49.11	-11.09	251.61	2394.29	70.17	34.47	PASS
11700.00†	9579.21	690.72	2311.12	9080.63	9075.63	-48.68	-10.57	252.33	2488.08	70.26	35.77	PASS
11800.00†	9581.12	691.88	2411.09	9077.72	9072.79	-48.29	-10.08	253.00	2582.31	70.35	37.08	PASS
11900.00†	9583.03	693.04	2511.07	9074.96	9070.09	-47.92	-9.64	253.62	2676.95	70.44	38.39	PASS
12000.00†	9584.93	694.19	2611.04	9072.33	9067.52	-47.58	-9.22	254.19	2771.95	70.53	39.70	PASS
12100.00†	9586.84	695.35	2711.02	9069.83	9065.07	-47.26	-8.83	254.73	2867.28	70.62	41.01	PASS
12200.00†	9588.75	696.50	2810.99	9067.45	9062.73	-46.96	-8.47	255.23	2962.90	70.71	42.33	PASS
12300.00†	9590.65	697.66	2910.97	9065.17	9060.50	-46.68	-8.13	255.70	3058.80	70.81	43.64	PASS
12400.00†	9592.56	698.82	3010.94	9063.00	9058.37	-46.42	-7.81	256.13	3154.94	70.90	44.95	PASS
12500.00†	9594.47	699.97	3110.92	9060.92	9056.32	-46.18	-7.52	256.54	3251.30	71.00	46.25	PASS
12600.00†	9596.37	701.13	3210.89	9058.93	9054.37	-45.95	-7.24	256.93	3347.87	71.11	47.56	PASS
12700.00†	9598.28	702.28	3310.87	9057.03	9052.49	-45.73	-6.97	257.30	3444.63	71.22	48.85	PASS
12800.00†	9600.18	703.44	3410.84	9055.20	9050.69	-45.53	-6.73	257.64	3541.56	71.35	50.14	PASS
12900.00†	9602.09	704.59	3510.82	9053.45	9048.97	-45.34	-6.49	257.96	3638.66	71.49	51.41	PASS

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

CLEARANCE DATA - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Facility: PLU CVX JC PC {No 20H} Sec 21, TSP 24S, Rnge 30E Slot: No. 20H Well: No. 20H Threshold Value=1.00

† = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13000.00†	9604.00	705.75	3610.79	9051.77	9047.31	-45.16	-6.27	258.27	3735.90	71.66	52.66	PASS
13100.00†	9605.90	706.91	3710.77	9050.15	9045.72	-44.99	-6.07	258.56	3833.28	62.33	62.21	PASS
13200.00†	9607.81	708.06	3810.74	9048.60	9044.18	-44.82	-5.87	258.84	3930.78	70.62	56.23	PASS
13300.00†	9609.72	709.22	3910.72	9047.10	9042.70	-44.67	-5.68	259.10	4028.40	71.30	57.08	PASS
13400.00†	9611.62	710.37	4010.69	9045.65	9041.28	-44.53	-5.51	259.36	4126.14	71.54	58.26	PASS
13500.00†	9613.53	711.53	4110.67	9044.26	9039.91	-44.39	-5.34	259.59	4223.97	71.70	59.51	PASS
13600.00†	9615.44	712.69	4210.64	9042.92	9038.58	-44.26	-5.18	259.82	4321.91	71.84	60.77	PASS
13700.00†	9617.34	713.84	4310.62	9041.63	9037.30	-44.13	-5.03	260.04	4419.93	71.96	62.04	PASS
13800.00†	9619.25	715.00	4410.59	9040.38	9036.07	-44.01	-4.88	260.25	4518.03	72.08	63.31	PASS
13900.00†	9621.16	716.15	4510.57	9039.18	9034.87	-43.90	-4.75	260.45	4616.22	72.20	64.58	PASS
14000.00†	9623.06	717.31	4610.54	9038.01	9033.72	-43.79	-4.62	260.64	4714.48	72.32	65.85	PASS
14100.00†	9624.97	718.46	4710.52	9036.87	9032.60	-43.69	-4.49	260.82	4812.81	72.43	67.11	PASS
14200.00†	9626.87	719.62	4810.49	9035.79	9031.52	-43.59	-4.37	260.99	4911.20	72.54	68.38	PASS
14300.00†	9628.78	720.78	4910.47	9034.73	9030.47	-43.50	-4.26	261.16	5009.65	72.66	69.64	PASS
14400.00†	9630.69	721.93	5010.44	9033.70	9029.46	-43.41	-4.15	261.32	5108.17	72.78	70.89	PASS
14500.00†	9632.59	723.09	5110.42	9032.71	9028.47	-43.33	-4.04	261.48	5206.74	72.89	72.14	PASS
14600.00†	9634.50	724.24	5210.39	9031.74	9027.52	-43.24	-3.94	261.63	5305.36	73.01	73.39	PASS
14700.00†	9636.41	725.40	5310.37	9030.81	9026.59	-43.16	-3.85	261.77	5404.03	73.13	74.63	PASS
14800.00†	9638.31	726.56	5410.35	9029.90	9025.69	-43.09	-3.76	261.91	5502.74	73.25	75.87	PASS
14900.00†	9640.22	727.71	5510.32	9029.02	9024.82	-43.02	-3.67	262.04	5601.50	73.37	77.10	PASS
15000.00†	9642.13	728.87	5610.30	9028.16	9023.97	-42.95	-3.58	262.17	5700.30	73.49	78.33	PASS
15100.00†	9644.03	730.02	5710.27	9027.33	9023.14	-42.88	-3.50	262.30	5799.15	73.62	79.55	PASS
15200.00†	9645.94	731.18	5810.25	9026.52	9022.34	-42.82	-3.43	262.42	5898.03	73.74	80.77	PASS
15300.00†	9647.85	732.33	5910.22	9025.74	9021.56	-42.76	-3.35	262.53	5996.94	73.87	81.99	PASS
15400.00†	9649.75	733.49	6010.20	9024.97	9020.80	-42.70	-3.28	262.65	6095.89	73.99	83.19	PASS
15500.00†	9651.66	734.65	6110.17	9024.23	9020.06	-42.64	-3.21	262.75	6194.88	74.12	84.40	PASS
15600.00†	9653.56	735.80	6210.15	9023.50	9019.34	-42.58	-3.14	262.86	6293.89	74.25	85.59	PASS
15700.00†	9655.47	736.96	6310.12	9022.79	9018.64	-42.53	-3.08	262.96	6392.94	74.38	86.79	PASS
15800.00†	9657.38	738.11	6410.10	9022.10	9017.95	-42.48	-3.01	263.06	6492.01	74.52	87.97	PASS
15900.00†	9659.28	739.27	6510.07	9021.43	9017.29	-42.43	-2.95	263.16	6591.11	74.65	89.15	PASS
16000.00†	9661.19	740.43	6610.05	9020.78	9016.63	-42.38	-2.90	263.25	6690.24	74.79	90.33	PASS
16100.00†	9663.10	741.58	6710.02	9020.14	9016.00	-42.34	-2.84	263.34	6789.39	74.92	91.50	PASS
16200.00†	9665.00	742.74	6810.00	9019.52	9015.38	-42.29	-2.79	263.43	6888.56	75.06	92.66	PASS
16300.00†	9666.91	743.89	6909.97	9018.91	9014.78	-42.25	-2.73	263.51	6987.76	75.20	93.82	PASS
16400.00†	9668.82	745.05	7009.95	9018.32	9014.19	-42.21	-2.68	263.60	7086.98	75.34	94.97	PASS
16500.00†	9670.72	746.20	7109.92	9017.74	9013.61	-42.17	-2.63	263.68	7186.22	75.48	96.12	PASS
16600.00†	9672.63	747.36	7209.90	9017.17	9013.05	-42.13	-2.59	263.75	7285.48	75.63	97.26	PASS
16700.00†	9674.54	748.52	7309.87	9016.62	9012.50	-42.09	-2.54	263.83	7384.76	75.77	98.40	PASS
16800.00†	9676.44	749.67	7409.85	9016.08	9011.96	-42.05	-2.50	263.90	7484.06	75.92	99.53	PASS
16900.00†	9678.35	750.83	7509.82	9015.55	9011.44	-42.02	-2.45	263.98	7583.38	76.06	100.65	PASS
17000.00†	9680.26	751.98	7609.80	9015.03	9010.92	-41.98	-2.41	264.05	7682.72	76.21	101.77	PASS
17100.00†	9682.16	753.14	7709.77	9014.53	9010.42	-41.95	-2.37	264.11	7782.07	76.36	102.88	PASS
17200.00†	9684.07	754.30	7809.75	9014.03	9009.93	-41.92	-2.33	264.18	7881.44	76.51	103.99	PASS
17300.00†	9685.97	755.45	7909.72	9013.55	9009.45	-41.89	-2.29	264.25	7980.82	76.67	105.09	PASS
17400.00†	9687.88	756.61	8009.70	9013.08	9008.98	-41.86	-2.26	264.31	8080.22	76.82	106.18	PASS

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No. 19H
Area	Eddy County, NM	Well	No. 19H
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JC PC No. 19H PWB
Facility	PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E		

CLEARANCE DATA - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Facility: PLU CVX JC PC {No 20H} Sec 21, TSP 24S, Rnge 30E Slot: No. 20H Well: No. 20H Threshold Value=1.00

† = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17500.00†	9689.79	757.76	8109.67	9012.61	9008.52	-41.83	-2.22	264.37	8179.63	76.97	107.27	PASS
17600.00†	9691.69	758.92	8209.65	9012.16	9008.07	-41.80	-2.19	264.43	8279.05	77.13	108.35	PASS
17700.00†	9693.60	760.07	8309.62	9011.72	9007.63	-41.77	-2.15	264.49	8378.49	77.29	109.43	PASS
17800.00†	9695.51	761.23	8409.60	9011.28	9007.19	-41.74	-2.12	264.55	8477.95	77.45	110.50	PASS
17900.00†	9697.41	762.39	8509.57	9010.86	9006.77	-41.72	-2.09	264.60	8577.41	77.61	111.56	PASS
18000.00†	9699.32	763.54	8609.55	9010.44	9006.35	-41.69	-2.06	264.66	8676.89	77.77	112.62	PASS
18100.00†	9701.23	764.70	8709.52	9010.03	9005.95	-41.67	-2.03	264.71	8776.37	77.93	113.67	PASS
18200.00†	9703.13	765.85	8809.50	9009.63	9005.54	-41.64	-2.00	264.76	8875.87	78.09	114.72	PASS
18300.00†	9705.04	767.01	8909.48	9009.23	9005.15	-41.62	-1.97	264.82	8975.38	78.26	115.76	PASS
18400.00†	9706.95	768.17	9009.45	9008.85	9004.77	-41.60	-1.94	264.87	9074.91	78.42	116.79	PASS
18500.00†	9708.85	769.32	9109.43	9008.47	9004.39	-41.57	-1.91	264.91	9174.44	78.59	117.82	PASS
18600.00†	9710.76	770.48	9209.40	9008.10	9004.02	-41.55	-1.89	264.96	9273.98	78.76	118.84	PASS
18700.00†	9712.66	771.63	9309.38	9007.73	9003.66	-41.53	-1.86	265.01	9373.53	78.93	119.86	PASS
18800.00†	9714.57	772.79	9409.35	9007.38	9003.30	-41.51	-1.83	265.06	9473.09	79.10	120.87	PASS
18900.00†	9716.48	773.94	9509.33	9007.03	9002.95	-41.49	-1.81	265.10	9572.66	79.27	121.87	PASS
19000.00†	9718.38	775.10	9609.30	9006.68	9002.61	-41.47	-1.79	265.14	9672.23	79.44	122.87	PASS
19100.00†	9720.29	776.26	9709.28	9006.34	9002.27	-41.45	-1.76	265.19	9771.82	79.62	123.86	PASS
19200.00†	9722.20	777.41	9809.25	9006.01	9001.94	-41.43	-1.74	265.23	9871.41	79.79	124.85	PASS
19300.00†	9724.10	778.57	9909.23	9005.68	9001.62	-41.41	-1.72	265.27	9971.02	79.97	125.83	PASS
19400.00†	9726.01	779.72	10009.20	9005.36	9001.30	-41.40	-1.70	265.31	10070.63	80.14	126.80	PASS
19500.00†	9727.92	780.88	10109.18	9005.04	9000.98	-41.38	-1.67	265.35	10170.24	80.32	127.77	PASS
19600.00†	9729.82	782.04	10209.15	9004.74	9000.67	-41.36	-1.65	265.39	10269.87	80.50	128.73	PASS
19700.00†	9731.73	783.19	10309.13	9004.43	9000.37	-41.34	-1.63	265.43	10369.50	80.68	129.69	PASS
19800.00†	9733.64	784.35	10409.10	9004.13	9000.07	-41.33	-1.61	265.47	10469.14	80.86	130.64	PASS
19900.00†	9735.54	785.50	10509.08	9003.84	8999.78	-41.31	-1.59	265.50	10568.78	81.04	131.58	PASS
20000.00†	9737.45	786.66	10609.05	9003.55	8999.49	-41.30	-1.58	265.54	10668.44	81.23	132.52	PASS
20100.00†	9739.35	787.81	10709.03	9003.26	8999.20	-41.28	-1.56	265.57	10768.09	81.41	133.45	PASS
20200.00†	9741.26	788.97	10809.00	9002.98	8998.93	-41.27	-1.54	265.61	10867.76	81.60	134.38	PASS
20300.00†	9743.17	790.13	10908.98	9002.71	8998.65	-41.25	-1.52	265.64	10967.43	81.78	135.30	PASS
20400.00†	9745.07	791.28	11008.95	9002.44	8998.38	-41.24	-1.50	265.68	11067.10	81.97	136.22	PASS
20500.00†	9746.98	792.44	11108.93	9002.17	8998.12	-41.22	-1.49	265.71	11166.79	82.16	137.13	PASS
20553.48	9748.00	793.06	11162.39	9002.03	8997.98	-41.22	-1.48	265.73	11220.09	82.26	137.61	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Slot Surface Uncertainty @1SD	Horizontal	0.000ft	Vertical	0.000ft
Facility Surface Uncertainty @1SD	Horizontal	3.300ft	Vertical	1.000ft

HOLE & CASING SECTIONS - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	0.00	17435.22	17435.22	-4.00	NA	-24.39	0.00	NA	NA

Clearance Report

PLU CVX JC PC No. 19H Rev A.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, LP**	Slot	**No. 19H**
Area	**Eddy County, NM**	Well	**No. 19H**
Field	**Eddy County, NM (NAD 27 / Grid)**	Wellbore	**PLU CVX JC PC No. 19H PWB**
Facility	**PLU CVX JC PC {19H} Sec. 21, TSP 24S, Rnge 30E**		

SURVEY PROGRAM - Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	500.00	Generic gyro - northseeking (Standard)		PLU CVX JC PC No. 20H PWB
500.00	17440.61	NaviTrak (Standard)		PLU CVX JC PC No. 20H PWB

OFFSET WELLPATH MD REFERENCE -

Offset Wellbore: PLU CVX JC PC No. 20H PWB Offset Wellpath: PLU CVX JC PC No. 20H Rev A.0

MD Reference: **Latshaw 18 (KB)**	*Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)*
Ellipse Start MD	**29.00ft**

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMNM-002862
WELL NAME & NO.:	Poker Lake Unit CVX JV PC 19H
SURFACE HOLE FOOTAGE:	0025' FNL & 2410' FEL
BOTTOM HOLE FOOTAGE	2310' FSL & 1980' FEL Sec. 09, T. 24 S., R 30 E.
LOCATION:	Section 21, T. 24 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico
API:	30-015-42669

The original COAs still stand with the following drilling modification:

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 will 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. 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 Red Beds, Rustler, and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **958** 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, which shall be set at approximately **3800** feet (Lamar Limestone or basal anhydrite of the Castile formation), 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 **7** inch production casing is:

Operator has proposed DV tool at depth of 5000', 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. Cement as proposed on the **4-1/2"** casing. **Completion system being used.**

5. 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 9-5/8" and 7" casing integrity tests 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.

JAM 121614