

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<br><input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other |                                                       | 5. Lease Serial No.<br>NMNM05039                               |
| 2. Name of Operator<br>BOPCO LP                                                                                                  |                                                       | 6. If Indian, Allottee or Tribe Name                           |
| Contact: WHITNEY MCKEE<br>E-Mail: wbmckee@basspet.com                                                                            |                                                       | 7. If Unit or CA/Agreement, Name and/or No.<br>891000303X      |
| 3a. Address<br>MIDLAND, TX 79702                                                                                                 | 3b. Phone No. (include area code)<br>Ph: 432-683-2277 | 8. Well Name and No.<br>POKER LAKE UNIT 421H                   |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)<br>Sec 27 T25S R30E SESE 600FSL 950FEL                    |                                                       | 9. API Well No.<br>30-015-41033-00-X1                          |
|                                                                                                                                  |                                                       | 10. Field and Pool, or Exploratory<br>POKER LAKE SW (DELAWARE) |
|                                                                                                                                  |                                                       | 11. County or Parish, and State<br>EDDY COUNTY, NM             |

## 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<br>PD                |
|                                                      | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back        | <input type="checkbox"/> 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 update the directional well plan for the PLU #421H as well as change the casing set depth on our ?? production string. The new ?? casing point will be at approximately 7,850? MD/ 7,556? TVD. The grade will be upgraded to ??, 26 ppf, HCP-110, LTC casing. The safety factors for ??, 26 ppf, HCP-110 will be changed to; Tension S.F 4.69, Collapse S.F 2.23, and Burst S.F. 4.69. Please see the attached Weatherford directional plan for the directional well plan update.

BOPCO L.P. respectfully requests to change the cement on the ?? production casing as follows:

Stage 1: Lead ? Tuned Light + 0.125 lbm/sk Poly-E-Flake ? 250 sks -11 lbm/gal ? 2.64 ft3/sk yield ? 14.84 gal/sk water ratio.

Tail ? Versacem + 0.5% Halad(R) 344 + 0.4% CFR-3 + 1 lbm/sk salt ? 120 sks ? 13 lbm/gal ? 1.67

ft3/sk yield ? 8.88 gal/sk water.

Stage 2: Lead ? Tuned Light + 0.125 lbm/sk Poly-E-Flake ?150 sacks ? 11 lbm/gal ? 2.55 ft3/sk yield

Accepted for record  
NMOCD 105  
2-18-2014  
**RECEIVED**  
FEB 18 2014  
NMOCD ARTESIA

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

|                                                                                                                                                                                                       |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 14. I hereby certify that the foregoing is true and correct.                                                                                                                                          |                             |
| Electronic Submission #234430 verified by the BLM Well Information System<br>For BOPCO LP, sent to the Carlsbad<br>Committed to AFMSS for processing by CHRISTOPHER WALLS on 02/05/2014 (14CRW0174SE) |                             |
| Name (Printed/Typed) JEREMY BRADEN                                                                                                                                                                    | Title ENGINEERING ASSISTANT |
| Signature (Electronic Submission)                                                                                                                                                                     | Date 02/04/2014             |

## 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 or cause to be made any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. |              |            |

**APPROVED**

FEB 5 2014

/s/ Chris Walls

BUREAU OF LAND MANAGEMENT  
CARLSBAD FIELD OFFICE**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**Additional data for EC transaction #234430 that would not fit on the form**

**32. Additional remarks, continued**

-13.60 gal/sk water.

Tail ? Halcem C ? 100 sks ? 14.80 lbm/gal ? 1.33 ft<sup>3</sup>/sk yield ? 6.34 gal/sk water.

BOPCO, L.P. respectfully requests to change plans for BOP testing due to the utilization of the Cameron MBS wellhead. BOPCO L.P. respectfully requests to nipple up and test BOPE on surface casing to 3,000 psi high and 250 psi low which will cover testing requirements for the duration of the well. Please find attached the schematic of the wellhead. The field report from the Cameron representative and the BOP test information will be provided in a subsequent report at the end of the well.

Note: Dimensional information reflected on this drawing are estimated measurements only.

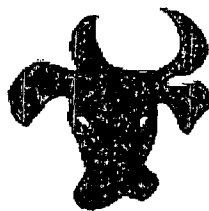
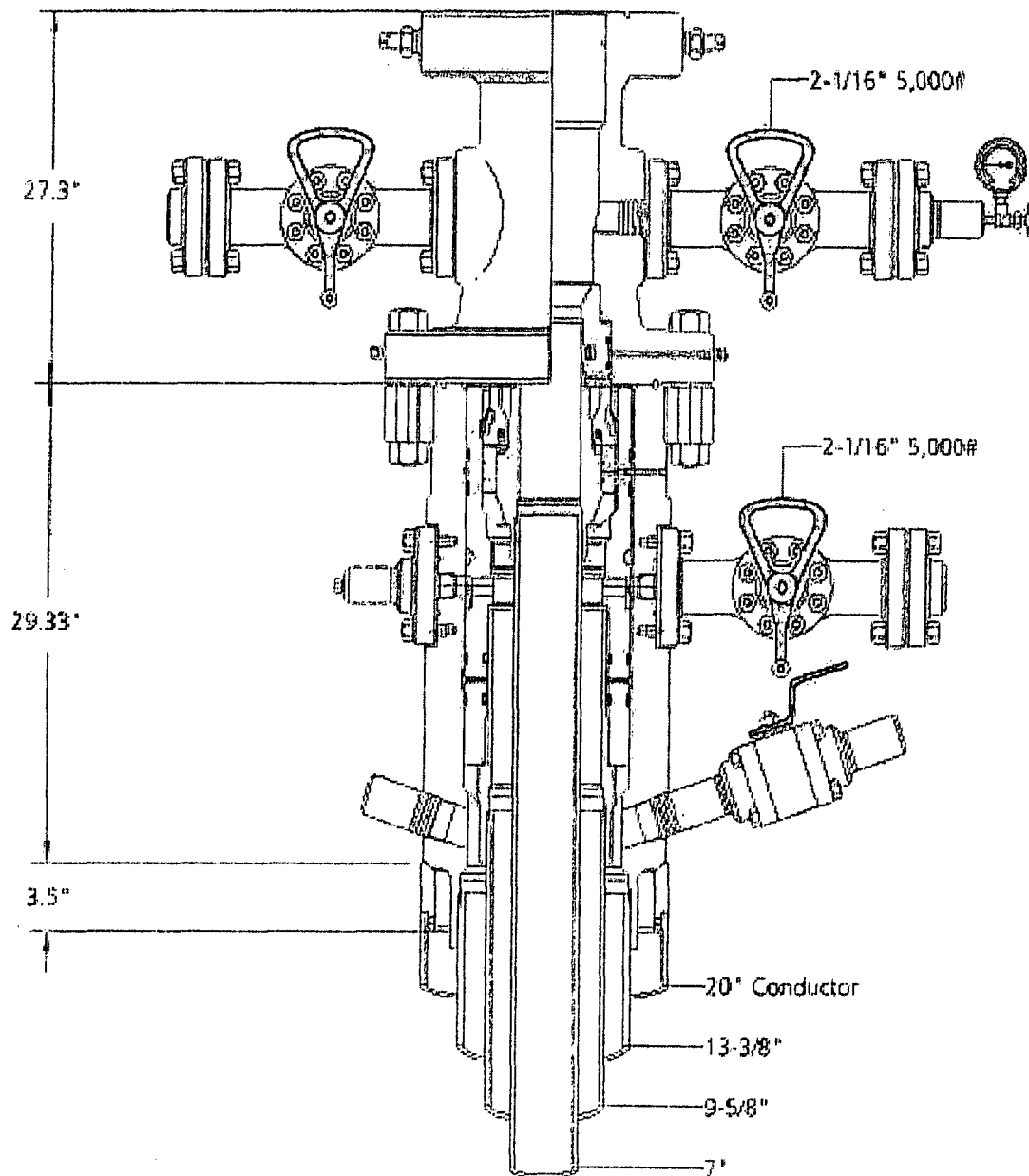


Diagram Z



BOPCO  
Project: South East New Mexico

 **CAMERON**

|          |         |            |
|----------|---------|------------|
| Jeanette | 7-22-13 | 21077904-A |
|----------|---------|------------|

**5D Plan Report**

**BOPCO, L.P.**

**Field Name:** *Eddy Co, NM Nad27 NMEZ*

**Site Name:** *Poker Lake Unit 421H*

**Well Name:** *PLU 421H*

**Plan:** *P4*

28 January 2014



**Weatherford®**

BOPCO, L.P.  
Poker Lake Unit 421H  
Eddy Co, NM



Plan Data for PLU 421H

Plan Point Information:

Dogleg Severity Unit: 1/100.00ft

| MD       | Inc   | Az    | TVD     | N/S    | E/W     | Northing  | Easting   | Vsec    | DLS    |
|----------|-------|-------|---------|--------|---------|-----------|-----------|---------|--------|
| (USft)   | (*)   | (*)   | (USft)  | (USft) | (USft)  | (USft)    | (USft)    | (USft)  | (DLSU) |
| 0.00     | 0.00  | 0.00  | 0.00    | 0.00   | 0.00    | 398738.60 | 645641.35 | 0.00    | 0.00   |
| 6950.28  | 0.00  | 0.00  | 6950.28 | 0.00   | 0.00    | 398738.60 | 645641.35 | 0.00    | 0.00   |
| 7650.28  | 70.00 | 89.14 | 7488.68 | 5.66   | 376.95  | 398744.26 | 646018.30 | 376.99  | 10.00  |
| 7850.28  | 70.00 | 89.14 | 7557.09 | 8.48   | 564.87  | 398747.08 | 646206.22 | 564.93  | 0.00   |
| 8032.43  | 88.22 | 89.14 | 7591.38 | 11.15  | 742.97  | 398749.75 | 646384.32 | 743.05  | 10.00  |
| 14201.10 | 88.22 | 89.14 | 7783.50 | 103.50 | 6907.95 | 398842.10 | 652549.30 | 6908.73 | 0.00   |

Plan Data for PLU 421H

Target Set Information:

Name: PLU 421H

Position offsets from Slot centre

| Name                | TVD      | Elevation | N/S     | E/W       | Northing  | Easting | Shape  | Comment |
|---------------------|----------|-----------|---------|-----------|-----------|---------|--------|---------|
| (USft)              | (USft)   | (USft)    | (USft)  | (USft)    | (USft)    | (USft)  |        |         |
| PBHL 7783.50        | -4491.50 | 103.50    | 6907.95 | 398842.10 | 652549.30 |         | Cuboid |         |
| HB1 For Dwg 7667.00 | -4375.00 | -0.00     | 0.00    | 398738.60 | 645641.35 |         | Cuboid |         |
| HB2 For Dwg 7842.00 | -4550.00 | 103.50    | 6907.95 | 398842.10 | 652549.30 |         | Cuboid |         |

Plan Data for PLU 421H

Slot: PLU 421H

Position:

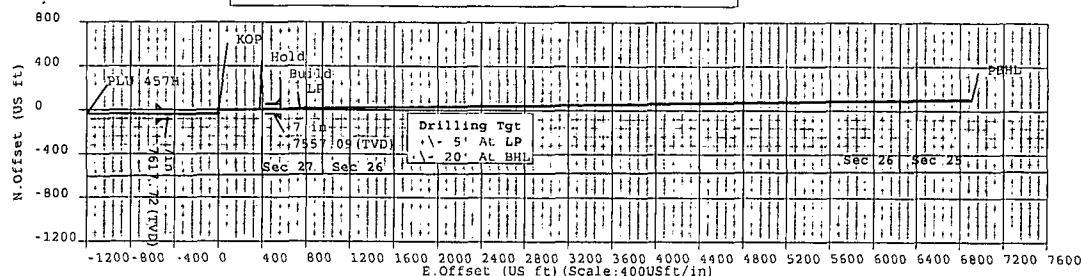
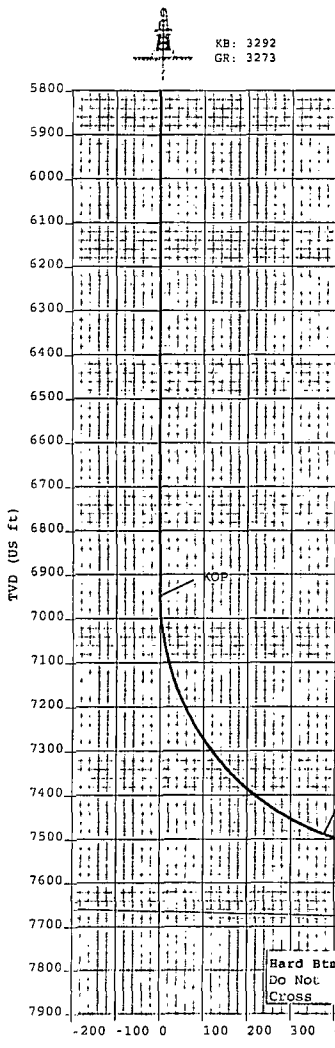
Offset is from Site centre

N/S: 0.00USft Northing: 398738.60USft Latitude: 32°5'43.4"

E/W: 0.00USft Easting: 645641.35USft Longitude: -103°51'46.9"

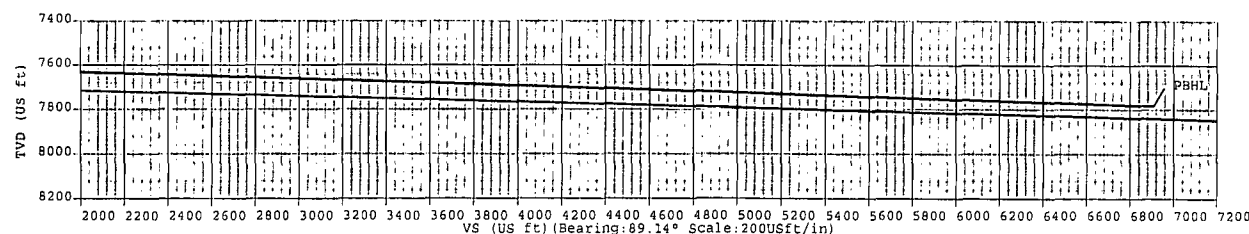
Elevation Above VRD: 3273.00USft

|          |       |
|----------|-------|
| PLU 421H | _____ |
| PLU 457H | _____ |



Hard Btm  
Do Not  
Cross

Drilling Tgt  
17 in. At LP  
20' At BHL



Sign Off: Russell Joyner

**PLU 421H**

**Field Name**  
Eddy Co. NM  
Nad27 NMEZ

**Map Units :** US ft  
**Company Name :** BOPCO, L.P.  
**Vertical Reference Datum (VRD) :** Mean Sea Level  
**Projected Coordinate System :** NAD27 / New Mexico East  
**Comment :**

**Site Name**  
Poker Lake Unit  
421H

**Units :** US ft      **North Reference :** Grid      **Convergence Angle :** 0.25  
**Position**  
**Northing :** 398738.60 US ft      **Latitude :** 32° 5' 43.35"  
**Easting :** 645641.35 US ft      **Longitude :** -103° 51' 46.91"  
**Elevation above Mean Sea Level:** 3273.00 US ft  
**Comment :**

**Slot Name**  
PLU 421H

**Position (Offsets relative to Site Centre)**  
**+N / -S :** 0.00 US ft      **Northing :** 398738.60 US ft      **Latitude :** 32° 5' 43.35"  
**+E / -W :** 0.00 US ft      **Easting :** 645641.35 US ft      **Longitude :** -103° 51' 46.91"  
**Elevation above Mean Sea Level :** 3273.00 US ft  
**Comment :**

**Well Name**  
PLU 421H

**Type :** Main well      **UWI :**      **Plan :** P4  
**Rig Height Well TVD Reference :** 19.00 US ft      **Comment :**  
**Relative to Mean Sea Level:** 3292.00 US ft  
**Closure Distance :** 6908.73 US ft      **Closure Azimuth :** 89.1416°  
**Vertical Section (Position of Origin Relative to Slot )**  
**+N / -S :** 0.00 US ft      **+E / -W :** 0.00 US ft      **Az :** 89.14°  
**Magnetic Parameters**  
**Model :** BGGM      **Field Strength :** 48233.7nT      **Dec :** 7.49°      **Dip :** 59.93°      **Date :** 15/Mar/2014

**Target Set**

**Name :** PLU 421H      **Number of Targets :** 3

**Comment :**

**Target Name:**  
PBHL

**Shape:**  
Cuboid

**Position (Relative to Slot centre)**  
**+N / -S :** 103.50 US ft      **Northing :** 398842.10 US ft      **Latitude :** 32° 5' 44.07"  
**+E / -W :** 6907.95 US ft      **Easting :** 652549.30 US ft      **Longitude :** -103° 50' 26.60"  
**TVD (Well TVD Reference) :** 7783.50 US ft  
**Orientation**      **Azimuth :** 0.00°      **Inclination :** 0.00°  
**Dimensions**      **Length :** 0.00 US ft      **Breadth :** 0.00 US ft      **Height :** 0.00 US ft

## 5D Plan Report

|                                    |                                           |                             |                            |
|------------------------------------|-------------------------------------------|-----------------------------|----------------------------|
| <b>Target Name:</b><br>HB1-For Dwg | <b>Position (Relative to Slot centre)</b> |                             |                            |
|                                    | +N / -S : 0.00US ft                       | Northing : 398738.60 US ft  | Latitude : 32°5'43.35"     |
|                                    | +E / -W : 0.00 US ft                      | Easting : 645641.35US ft    | Longitude : -103°51'46.91" |
| <b>Shape:</b><br>Cuboid            | TVD (Well TVD Reference) : 7667.00 US ft  |                             |                            |
|                                    | <b>Orientation</b> Azimuth : 89.14°       | <b>Inclination</b> : -1.45° |                            |
|                                    | <b>Dimensions</b> Length : 13818.00 US ft | <b>Breadth</b> : 0.00 US ft | <b>Height</b> : 1.00 US ft |
| <b>Target Name:</b><br>HB2-For dwg | <b>Position (Relative to Slot centre)</b> |                             |                            |
|                                    | +N / -S : 103.50US ft                     | Northing : 398842.10 US ft  | Latitude : 32°5'44.07"     |
|                                    | +E / -W : 6907.95 US ft                   | Easting : 652549.30US ft    | Longitude : -103°50'26.60" |
| <b>Shape:</b><br>Cuboid            | TVD (Well TVD Reference) : 7842.00 US ft  |                             |                            |
|                                    | <b>Orientation</b> Azimuth : 89.14°       | <b>Inclination</b> : -1.45° |                            |
|                                    | <b>Dimensions</b> Length : 13818.00 US ft | <b>Breadth</b> : 0.00 US ft | <b>Height</b> : 1.00 US ft |

| Casing Points (Relative to Slot centre, TVD relative to Well TVD Reference) |         |        |             |                  |                  |                  |                 |      |  |
|-----------------------------------------------------------------------------|---------|--------|-------------|------------------|------------------|------------------|-----------------|------|--|
| MD (US ft)                                                                  | Inc (°) | Az (°) | TVD (US ft) | N.Offset (US ft) | E.Offset (US ft) | Northing (US ft) | Easting (US ft) | Name |  |
| 7850.00                                                                     | 70.00   | 89.14  | 7556.99     | 8.48             | 564.61           | 398747.08        | 646205.96       | 7 in |  |

Well path created using minimum curvature

| Salient Points (Relative to Slot centre, TVD relative to Well TVD Reference) |         |        |             |                  |                  |                   |            |                      |                      |            |          |
|------------------------------------------------------------------------------|---------|--------|-------------|------------------|------------------|-------------------|------------|----------------------|----------------------|------------|----------|
| MD (US ft)                                                                   | Inc (°) | Az (°) | TVD (US ft) | N.Offset (US ft) | E.Offset (US ft) | DLS (%/100 US ft) | VS (US ft) | B.Rate (%/100 US ft) | T.Rate (%/100 US ft) | T.Face (°) | Comment  |
| 0.00                                                                         | 0.00    | 0.00   | 0.00        | 0.00             | 0.00             | 0.00              | 0.00       | 0.00                 | 0.00                 | 0.00       |          |
| 6950.28                                                                      | 0.00    | 0.00   | 6950.28     | 0.00             | 0.00             | 0.00              | 0.00       | 0.00                 | 0.00                 | 0.00       | KOP      |
| 7613.49                                                                      | 66.32   | 89.14  | 7475.00     | 5.15             | 342.81           | 10.00             | 342.85     | 10.00                | 0.00                 | 89.14      | LBC 8A : |
| 7650.28                                                                      | 70.00   | 89.14  | 7488.68     | 5.66             | 376.95           | 10.00             | 376.99     | 10.00                | 0.00                 | 0.00       | Hold     |
| 7850.00                                                                      | 70.00   | 89.14  | 7556.99     | 8.48             | 564.61           | 0.00              | 564.67     | 0.00                 | 0.00                 | 0.00       | 7 in     |
| 7850.28                                                                      | 70.00   | 89.14  | 7557.09     | 8.48             | 564.87           | 0.00              | 564.93     | 0.00                 | 0.00                 | 0.00       | Build    |
| 7865.17                                                                      | 71.49   | 89.14  | 7562.00     | 8.69             | 578.93           | 10.00             | 578.99     | 10.00                | 0.00                 | 0.01       | LBC Y :  |
| 8032.43                                                                      | 88.22   | 89.14  | 7591.36     | 11.15            | 742.97           | 10.00             | 743.05     | 10.00                | 0.00                 | 0.01       | LP       |
| 14201.10                                                                     | 88.22   | 89.14  | 7783.50     | 103.50           | 6907.95          | 0.00              | 6908.73    | 0.00                 | 0.00                 | 0.00       | PBHL     |

| Interpolated Points (Relative to Slot centre, TVD relative to Well TVD Reference) |         |        |             |                  |                  |            |                   |                  |                 |          |  |
|-----------------------------------------------------------------------------------|---------|--------|-------------|------------------|------------------|------------|-------------------|------------------|-----------------|----------|--|
| MD (US ft)                                                                        | Inc (°) | Az (°) | TVD (US ft) | N.Offset (US ft) | E.Offset (US ft) | VS (US ft) | DLS (%/100 US ft) | Northing (US ft) | Easting (US ft) | Comment  |  |
| 6900.00                                                                           | 0.00    | 0.00   | 6900.00     | 0.00             | 0.00             | 0.00       | 0.00              | 398738.60        | 645641.35       |          |  |
| 6950.28                                                                           | 0.00    | 0.00   | 6950.28     | 0.00             | 0.00             | 0.00       | 0.00              | 398738.60        | 645641.35       | KOP      |  |
| 7000.00                                                                           | 4.97    | 89.14  | 6999.94     | 0.03             | 2.16             | 2.16       | 10.00             | 398738.63        | 645643.51       |          |  |
| 7100.00                                                                           | 14.97   | 89.14  | 7098.30     | 0.29             | 19.45            | 19.45      | 10.00             | 398738.89        | 645660.80       |          |  |
| 7200.00                                                                           | 24.97   | 89.14  | 7192.17     | 0.80             | 53.56            | 53.56      | 10.00             | 398739.40        | 645694.91       |          |  |
| 7300.00                                                                           | 34.97   | 89.14  | 7278.69     | 1.55             | 103.45           | 103.46     | 10.00             | 398740.15        | 645744.80       |          |  |
| 7400.00                                                                           | 44.97   | 89.14  | 7355.22     | 2.52             | 167.60           | 167.62     | 10.00             | 398741.12        | 645808.95       |          |  |
| 7500.00                                                                           | 54.97   | 89.14  | 7419.46     | 3.66             | 244.06           | 244.09     | 10.00             | 398742.26        | 645885.41       |          |  |
| 7600.00                                                                           | 64.97   | 89.14  | 7469.44     | 4.96             | 330.52           | 330.56     | 10.00             | 398743.56        | 645971.87       |          |  |
| 7613.49                                                                           | 66.32   | 89.14  | 7475.00     | 5.15             | 342.81           | 342.85     | 10.00             | 398743.75        | 645984.16       | LBC 8A : |  |
| 7650.28                                                                           | 70.00   | 89.14  | 7488.68     | 5.66             | 376.95           | 376.99     | 10.00             | 398744.26        | 646018.30       | Hold     |  |
| 7700.00                                                                           | 70.00   | 89.14  | 7505.69     | 6.36             | 423.67           | 423.71     | 0.00              | 398744.96        | 646065.02       |          |  |
| 7800.00                                                                           | 70.00   | 89.14  | 7539.89     | 7.77             | 517.63           | 517.68     | 0.00              | 398746.37        | 646158.98       |          |  |
| 7850.00                                                                           | 70.00   | 89.14  | 7556.99     | 8.48             | 564.61           | 564.67     | 0.00              | 398747.08        | 646205.96       | 7 in     |  |
| 7850.28                                                                           | 70.00   | 89.14  | 7557.09     | 8.48             | 564.87           | 564.93     | 0.00              | 398747.08        | 646206.22       | Build    |  |
| 7865.17                                                                           | 71.49   | 89.14  | 7562.00     | 8.69             | 578.93           | 578.99     | 10.00             | 398747.29        | 646220.28       | LBC Y :  |  |

## 5D Plan Report

| Interpolated Points (Relative to Slot centre, TVD relative to Wall TVD Reference) |            |           |                |                      |                      |               |                      |                     |                    |         |
|-----------------------------------------------------------------------------------|------------|-----------|----------------|----------------------|----------------------|---------------|----------------------|---------------------|--------------------|---------|
| MD<br>(US ft)                                                                     | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N. Offset<br>(US ft) | E. Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(%/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment |
| 7900.00                                                                           | 74.97      | 89.14     | 7572.05        | 9.19                 | 612.26               | 612.33        | 10.00                | 398747.79           | 646253.61          |         |
| 8000.00                                                                           | 84.97      | 89.14     | 7589.44        | 10.66                | 710.60               | 710.68        | 10.00                | 398749.26           | 646351.95          |         |
| 8032.43                                                                           | 88.22      | 89.14     | 7591.36        | 11.15                | 742.97               | 743.05        | 10.00                | 398749.75           | 646384.32          | LP      |
| 8100.00                                                                           | 88.22      | 89.14     | 7593.47        | 12.16                | 810.49               | 810.58        | 0.00                 | 398750.76           | 646451.84          |         |
| 8200.00                                                                           | 88.22      | 89.14     | 7596.58        | 13.66                | 910.43               | 910.54        | 0.00                 | 398752.26           | 646551.78          |         |
| 8300.00                                                                           | 88.22      | 89.14     | 7599.70        | 15.16                | 1010.37              | 1010.49       | 0.00                 | 398753.76           | 646651.72          |         |
| 8400.00                                                                           | 88.22      | 89.14     | 7602.81        | 16.65                | 1110.31              | 1110.44       | 0.00                 | 398755.25           | 646751.66          |         |
| 8500.00                                                                           | 88.22      | 89.14     | 7605.93        | 18.15                | 1210.25              | 1210.39       | 0.00                 | 398756.75           | 646851.60          |         |
| 8600.00                                                                           | 88.22      | 89.14     | 7609.04        | 19.65                | 1310.19              | 1310.34       | 0.00                 | 398758.25           | 646951.54          |         |
| 8700.00                                                                           | 88.22      | 89.14     | 7612.16        | 21.14                | 1410.13              | 1410.29       | 0.00                 | 398759.74           | 647051.48          |         |
| 8800.00                                                                           | 88.22      | 89.14     | 7615.27        | 22.64                | 1510.07              | 1510.24       | 0.00                 | 398761.24           | 647151.42          |         |
| 8900.00                                                                           | 88.22      | 89.14     | 7618.39        | 24.14                | 1610.01              | 1610.19       | 0.00                 | 398762.74           | 647251.36          |         |
| 9000.00                                                                           | 88.22      | 89.14     | 7621.50        | 25.64                | 1709.95              | 1710.15       | 0.00                 | 398764.24           | 647351.30          |         |
| 9100.00                                                                           | 88.22      | 89.14     | 7624.62        | 27.13                | 1809.89              | 1810.10       | 0.00                 | 398765.73           | 647451.24          |         |
| 9200.00                                                                           | 88.22      | 89.14     | 7627.73        | 28.63                | 1909.83              | 1910.05       | 0.00                 | 398767.23           | 647551.18          |         |
| 9300.00                                                                           | 88.22      | 89.14     | 7630.84        | 30.13                | 2009.77              | 2010.00       | 0.00                 | 398768.73           | 647651.12          |         |
| 9400.00                                                                           | 88.22      | 89.14     | 7633.96        | 31.62                | 2109.71              | 2109.95       | 0.00                 | 398770.22           | 647751.06          |         |
| 9499.99                                                                           | 88.22      | 89.14     | 7637.07        | 33.12                | 2209.65              | 2209.90       | 0.00                 | 398771.72           | 647851.00          |         |
| 9599.99                                                                           | 88.22      | 89.14     | 7640.19        | 34.62                | 2309.59              | 2309.85       | 0.00                 | 398773.22           | 647950.94          |         |
| 9699.99                                                                           | 88.22      | 89.14     | 7643.30        | 36.11                | 2409.53              | 2409.80       | 0.00                 | 398774.71           | 648050.88          |         |
| 9799.99                                                                           | 88.22      | 89.14     | 7646.42        | 37.61                | 2509.47              | 2509.76       | 0.00                 | 398776.21           | 648150.82          |         |
| 9899.99                                                                           | 88.22      | 89.14     | 7649.53        | 39.11                | 2609.41              | 2609.71       | 0.00                 | 398777.71           | 648250.76          |         |
| 9999.99                                                                           | 88.22      | 89.14     | 7652.65        | 40.61                | 2709.35              | 2709.66       | 0.00                 | 398779.21           | 648350.70          |         |
| 10099.99                                                                          | 88.22      | 89.14     | 7655.76        | 42.10                | 2809.29              | 2809.61       | 0.00                 | 398780.70           | 648450.64          |         |
| 10199.99                                                                          | 88.22      | 89.14     | 7658.88        | 43.60                | 2909.23              | 2909.56       | 0.00                 | 398782.20           | 648550.58          |         |
| 10299.99                                                                          | 88.22      | 89.14     | 7661.99        | 45.10                | 3009.17              | 3009.51       | 0.00                 | 398783.70           | 648650.52          |         |
| 10399.99                                                                          | 88.22      | 89.14     | 7665.11        | 46.59                | 3109.11              | 3109.46       | 0.00                 | 398785.19           | 648750.46          |         |
| 10499.99                                                                          | 88.22      | 89.14     | 7668.22        | 48.09                | 3209.05              | 3209.41       | 0.00                 | 398786.69           | 648850.40          |         |
| 10599.99                                                                          | 88.22      | 89.14     | 7671.34        | 49.59                | 3308.99              | 3309.37       | 0.00                 | 398788.19           | 648950.34          |         |
| 10699.99                                                                          | 88.22      | 89.14     | 7674.45        | 51.09                | 3408.93              | 3409.32       | 0.00                 | 398789.69           | 649050.28          |         |
| 10799.99                                                                          | 88.22      | 89.14     | 7677.57        | 52.58                | 3508.87              | 3509.27       | 0.00                 | 398791.18           | 649150.22          |         |
| 10899.99                                                                          | 88.22      | 89.14     | 7680.68        | 54.08                | 3608.81              | 3609.22       | 0.00                 | 398792.68           | 649250.16          |         |
| 10999.99                                                                          | 88.22      | 89.14     | 7683.79        | 55.58                | 3708.75              | 3709.17       | 0.00                 | 398794.18           | 649350.10          |         |
| 11099.99                                                                          | 88.22      | 89.14     | 7686.91        | 57.07                | 3808.69              | 3809.12       | 0.00                 | 398795.67           | 649450.04          |         |
| 11199.99                                                                          | 88.22      | 89.14     | 7690.02        | 58.57                | 3908.63              | 3909.07       | 0.00                 | 398797.17           | 649549.98          |         |
| 11299.99                                                                          | 88.22      | 89.14     | 7693.14        | 60.07                | 4008.58              | 4009.03       | 0.00                 | 398798.67           | 649649.93          |         |
| 11399.99                                                                          | 88.22      | 89.14     | 7696.25        | 61.57                | 4108.52              | 4108.98       | 0.00                 | 398800.17           | 649749.87          |         |
| 11499.99                                                                          | 88.22      | 89.14     | 7699.37        | 63.06                | 4208.46              | 4208.93       | 0.00                 | 398801.66           | 649849.81          |         |
| 11599.99                                                                          | 88.22      | 89.14     | 7702.48        | 64.56                | 4308.40              | 4308.88       | 0.00                 | 398803.16           | 649949.75          |         |
| 11699.99                                                                          | 88.22      | 89.14     | 7705.60        | 66.06                | 4408.34              | 4408.83       | 0.00                 | 398804.66           | 650049.69          |         |
| 11799.99                                                                          | 88.22      | 89.14     | 7708.71        | 67.55                | 4508.28              | 4508.78       | 0.00                 | 398806.15           | 650149.63          |         |
| 11899.99                                                                          | 88.22      | 89.14     | 7711.83        | 69.05                | 4608.22              | 4608.73       | 0.00                 | 398807.65           | 650249.57          |         |
| 11999.99                                                                          | 88.22      | 89.14     | 7714.94        | 70.55                | 4708.16              | 4708.68       | 0.00                 | 398809.15           | 650349.51          |         |
| 12099.99                                                                          | 88.22      | 89.14     | 7718.06        | 72.04                | 4808.10              | 4808.64       | 0.00                 | 398810.64           | 650449.45          |         |
| 12199.99                                                                          | 88.22      | 89.14     | 7721.17        | 73.54                | 4908.04              | 4908.59       | 0.00                 | 398812.14           | 650549.39          |         |
| 12299.99                                                                          | 88.22      | 89.14     | 7724.29        | 75.04                | 5007.98              | 5008.54       | 0.00                 | 398813.64           | 650649.33          |         |
| 12399.99                                                                          | 88.22      | 89.14     | 7727.40        | 76.54                | 5107.92              | 5108.49       | 0.00                 | 398815.14           | 650749.27          |         |
| 12499.99                                                                          | 88.22      | 89.14     | 7730.52        | 78.03                | 5207.86              | 5208.44       | 0.00                 | 398816.63           | 650849.21          |         |
| 12599.99                                                                          | 88.22      | 89.14     | 7733.63        | 79.53                | 5307.80              | 5308.39       | 0.00                 | 398818.13           | 650949.15          |         |
| 12699.99                                                                          | 88.22      | 89.14     | 7736.74        | 81.03                | 5407.74              | 5408.34       | 0.00                 | 398819.63           | 651049.09          |         |
| 12799.99                                                                          | 88.22      | 89.14     | 7739.86        | 82.52                | 5507.68              | 5508.29       | 0.00                 | 398821.12           | 651149.03          |         |
| 12899.99                                                                          | 88.22      | 89.14     | 7742.97        | 84.02                | 5607.62              | 5608.25       | 0.00                 | 398822.62           | 651248.97          |         |
| 12999.99                                                                          | 88.22      | 89.14     | 7746.09        | 85.52                | 5707.56              | 5708.20       | 0.00                 | 398824.12           | 651348.91          |         |
| 13099.99                                                                          | 88.22      | 89.14     | 7749.20        | 87.02                | 5807.50              | 5808.15       | 0.00                 | 398825.62           | 651448.85          |         |
| 13199.99                                                                          | 88.22      | 89.14     | 7752.32        | 88.51                | 5907.44              | 5908.10       | 0.00                 | 398827.11           | 651548.79          |         |
| 13299.99                                                                          | 88.22      | 89.14     | 7755.43        | 90.01                | 6007.38              | 6008.05       | 0.00                 | 398828.61           | 651648.73          |         |
| 13399.99                                                                          | 88.22      | 89.14     | 7758.55        | 91.51                | 6107.32              | 6108.00       | 0.00                 | 398830.11           | 651748.67          |         |
| 13499.99                                                                          | 88.22      | 89.14     | 7761.66        | 93.00                | 6207.26              | 6207.95       | 0.00                 | 398831.60           | 651848.61          |         |
| 13599.99                                                                          | 88.22      | 89.14     | 7764.78        | 94.50                | 6307.20              | 6307.90       | 0.00                 | 398833.10           | 651948.55          |         |

## 5D Plan Report

| Interpolated Points (Relative to Slot centre, TVD relative to Well TVD Reference) |            |           |                |                     |                     |               |                      |                     |                    |         |
|-----------------------------------------------------------------------------------|------------|-----------|----------------|---------------------|---------------------|---------------|----------------------|---------------------|--------------------|---------|
| MD<br>(US ft)                                                                     | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N.Offset<br>(US ft) | E.Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(%/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment |
| 13699.99                                                                          | 88.22      | 89.14     | 7767.89        | 96.00               | 6407.14             | 6407.86       | 0.00                 | 398834.60           | 652048.49          |         |
| 13799.99                                                                          | 88.22      | 89.14     | 7771.01        | 97.49               | 6507.08             | 6507.81       | 0.00                 | 398836.09           | 652148.43          |         |
| 13899.99                                                                          | 88.22      | 89.14     | 7774.12        | 98.99               | 6607.02             | 6607.76       | 0.00                 | 398837.59           | 652248.37          |         |
| 13999.99                                                                          | 88.22      | 89.14     | 7777.24        | 100.49              | 6706.96             | 6707.71       | 0.00                 | 398839.09           | 652348.31          |         |
| 14099.99                                                                          | 88.22      | 89.14     | 7780.35        | 101.99              | 6806.90             | 6807.66       | 0.00                 | 398840.59           | 652448.25          |         |
| 14199.99                                                                          | 88.22      | 89.14     | 7783.47        | 103.48              | 6906.84             | 6907.61       | 0.00                 | 398842.08           | 652548.19          |         |
| 14201.10                                                                          | 88.22      | 89.14     | 7783.50        | 103.50              | 6907.95             | 6908.73       | 0.00                 | 398842.10           | 652549.30          | PBHL    |

| Formation Points (Relative to Slot centre, TVD relative to Well TVD Reference) |            |           |                |                     |                     |                     |                    |        |         |  |
|--------------------------------------------------------------------------------|------------|-----------|----------------|---------------------|---------------------|---------------------|--------------------|--------|---------|--|
| MD<br>(US ft)                                                                  | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N.Offset<br>(US ft) | E.Offset<br>(US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Name   | Comment |  |
| 7613.49                                                                        | 66.32      | 89.14     | 7475.00        | 5.15                | 342.81              | 398743.75           | 645984.16          | LBC 8A |         |  |
| 7865.17                                                                        | 71.49      | 89.14     | 7562.00        | 8.69                | 578.93              | 398747.29           | 646220.28          | LBC Y  |         |  |

**5D Anti-Collision Report**

**BOPCO, L.P.**

**Field Name:** *Eddy Co, NM Nad27 NMEZ*

**Site Name:** *Poker Lake Unit 421H*

**Well Name:** *PLU 421H*

28 January 2014



**Weatherford®**



# Weatherford®

## PLU 421H

|                                                |                                                                |                                   |                                     |                                               |
|------------------------------------------------|----------------------------------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------------------|
| <b>Field Name</b><br>Eddy Co. NM<br>Nad27 NMEZ | <b>Map Units :</b> US ft                                       |                                   | <b>Company Name :</b> BOPCO, L.P.   |                                               |
|                                                | <b>Vertical Reference Datum (VRD) :</b> Mean Sea Level         |                                   |                                     |                                               |
|                                                | <b>Projected Coordinate System :</b> NAD27 / New Mexico East   |                                   |                                     |                                               |
|                                                | <b>Comment :</b>                                               |                                   |                                     |                                               |
| <b>Site Name</b><br>Poker Lake Unit<br>421H    | <b>Units :</b> US ft                                           | <b>North Reference :</b> Grid     | <b>Convergence Angle :</b> 0.25     |                                               |
|                                                | <b>Position</b>                                                | <b>Northing :</b> 398738.60 US ft | <b>Latitude :</b> 32° 5' 43.35"     |                                               |
|                                                |                                                                | <b>Easting :</b> 645641.35 US ft  | <b>Longitude :</b> -103° 51' 46.91" |                                               |
|                                                | <b>Elevation above Mean Sea Level:</b> 3273.00 US ft           |                                   |                                     |                                               |
| <b>Comment :</b>                               |                                                                |                                   |                                     |                                               |
| <b>Slot Name</b><br>PLU 421H                   | <b>Position (Offsets relative to Site Centre)</b>              |                                   |                                     |                                               |
|                                                | <b>+N / -S :</b> 0.00 US ft                                    | <b>Northing :</b> 398738.60 US ft | <b>Latitude :</b> 32° 5' 43.35"     |                                               |
|                                                | <b>+E / -W :</b> 0.00 US ft                                    | <b>Easting :</b> 645641.35 US ft  | <b>Longitude :</b> -103° 51' 46.91" |                                               |
|                                                | <b>Elevation above Mean Sea Level :</b> 3273.00 US ft          |                                   |                                     |                                               |
| <b>Comment :</b>                               |                                                                |                                   |                                     |                                               |
| <b>Well Name</b><br>PLU 421H                   | <b>Type :</b> Main well                                        |                                   | <b>UWI :</b>                        | <b>Plan :</b> Working Plan                    |
|                                                | <b>Rig Height Well TVD Reference :</b> 19.00 US ft             |                                   | <b>Comment :</b>                    |                                               |
|                                                | <b>Relative to Mean Sea Level:</b> 3292.00 US ft               |                                   |                                     |                                               |
|                                                | <b>Closure Distance :</b> 6908.73 US ft                        |                                   | <b>Closure Azimuth :</b> 89.1416°   |                                               |
|                                                | <b>Vertical Section (Position of Origin Relative to Slot )</b> |                                   |                                     |                                               |
|                                                | <b>+N / -S :</b> 0.00 US ft                                    |                                   | <b>+E / -W :</b> 0.00 US ft         | <b>Az :</b> 89.14°                            |
|                                                | <b>Magnetic Parameters</b>                                     |                                   |                                     |                                               |
|                                                | <b>Model :</b> BGGM                                            | <b>Field Strength :</b> 48233.7nT | <b>Dec :</b> 7.49°                  | <b>Dip :</b> 59.93° <b>Date :</b> 15/Mar/2014 |

| Collision / Uncertainty Analysis |                  |                |                         |                                            |
|----------------------------------|------------------|----------------|-------------------------|--------------------------------------------|
| Primary Well                     | Start MD (US ft) | End MD (US ft) | Collision Risk Interval | No. of Std Deviations in Error Computation |
| PLU 421H (p)                     | 0.00             | 14201.10       | 100.00                  | 2                                          |

| Secondary Well Names |
|----------------------|
| PLU 457H (p)         |

| Anti-Collision Report Terminology                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------|
| S.Minor, S.Major :Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.                             |
| PHI :Angle between high-side vector and semi-minor axis                                                                                        |
| TVD Spread :Total TVD range of the ellipsoid of uncertainty at the current location                                                            |
| ES :Distance between the primary and secondary uncertainty ellipsoids in the direction Cr-Cr                                                   |
| T.Face to Sec :Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells |

Separation factors calculated using Vector Separation (Independent Uncertainty) 5 Well path created using minimum curvature

## 5D Anti-Collision Report

**Anti-Collision Proximity Summary (TVD Relative to)**

| Secondary Well Name | Pri. MD (US ft) | Sec MD (US ft) | TVD (US ft) | CC (US ft) | ES (US ft) | SF   | Risk     |
|---------------------|-----------------|----------------|-------------|------------|------------|------|----------|
| PLU 457H (p)        | 6988.28         | 6987.25        | 6988.25     | 41.72      | 9.95       | 1.31 | SF (Med) |

| Secondary Well: PLU 457H (p) (TVD Relative to Well TVD Reference (Primary)) / All Azimuth Relative to GRID (NORTH) |             |                |                   |                 |                 |            |            |       |         |
|--------------------------------------------------------------------------------------------------------------------|-------------|----------------|-------------------|-----------------|-----------------|------------|------------|-------|---------|
| Pri MD (US ft)                                                                                                     | TVD (US ft) | Sec MD (US ft) | T Face to Sec (°) | S Major (US ft) | S Minor (US ft) | CC (US ft) | ES (US ft) | SF    | Risk    |
| 0.00                                                                                                               | 1.00        | 0.00           | 182.27            | 0.00            | 0.00            | 41.64      | 41.06      | 71.39 |         |
| 100.00                                                                                                             | 100.00      | 99.00          | 182.27            | 0.11            | 0.11            | 41.63      | 40.82      | 51.15 |         |
| 200.00                                                                                                             | 200.00      | 199.00         | 182.27            | 0.34            | 0.34            | 41.63      | 40.37      | 32.97 |         |
| 300.00                                                                                                             | 300.00      | 299.00         | 182.27            | 0.56            | 0.56            | 41.63      | 39.92      | 24.32 |         |
| 400.00                                                                                                             | 400.00      | 399.00         | 182.27            | 0.79            | 0.79            | 41.63      | 39.47      | 19.26 |         |
| 500.00                                                                                                             | 500.00      | 499.00         | 182.27            | 1.01            | 1.01            | 41.63      | 39.02      | 15.94 |         |
| 600.00                                                                                                             | 600.00      | 599.00         | 182.27            | 1.24            | 1.24            | 41.63      | 38.57      | 13.60 |         |
| 700.00                                                                                                             | 700.00      | 699.00         | 182.27            | 1.46            | 1.46            | 41.63      | 38.12      | 11.86 |         |
| 800.00                                                                                                             | 800.00      | 799.00         | 182.27            | 1.69            | 1.69            | 41.63      | 37.67      | 10.51 |         |
| 900.00                                                                                                             | 900.00      | 899.00         | 182.27            | 1.91            | 1.91            | 41.63      | 37.22      | 9.44  |         |
| 1000.00                                                                                                            | 1000.00     | 999.00         | 182.27            | 2.14            | 2.14            | 41.63      | 36.77      | 8.57  |         |
| 1100.00                                                                                                            | 1100.00     | 1099.00        | 182.27            | 2.36            | 2.36            | 41.63      | 36.32      | 7.84  |         |
| 1200.00                                                                                                            | 1200.00     | 1199.00        | 182.27            | 2.59            | 2.59            | 41.63      | 35.88      | 7.23  |         |
| 1300.00                                                                                                            | 1300.00     | 1299.00        | 182.27            | 2.81            | 2.81            | 41.63      | 35.43      | 6.71  |         |
| 1400.00                                                                                                            | 1400.00     | 1399.00        | 182.27            | 3.04            | 3.04            | 41.63      | 34.98      | 6.25  |         |
| 1500.00                                                                                                            | 1500.00     | 1499.00        | 182.27            | 3.26            | 3.26            | 41.63      | 34.53      | 5.86  |         |
| 1600.00                                                                                                            | 1600.00     | 1599.00        | 182.27            | 3.49            | 3.49            | 41.63      | 34.08      | 5.51  |         |
| 1700.00                                                                                                            | 1700.00     | 1699.00        | 182.27            | 3.71            | 3.71            | 41.63      | 33.63      | 5.20  |         |
| 1800.00                                                                                                            | 1800.00     | 1799.00        | 182.27            | 3.93            | 3.93            | 41.63      | 33.18      | 4.92  |         |
| 1900.00                                                                                                            | 1900.00     | 1899.00        | 182.27            | 4.16            | 4.16            | 41.63      | 32.73      | 4.68  |         |
| 2000.00                                                                                                            | 2000.00     | 1999.00        | 182.27            | 4.38            | 4.38            | 41.63      | 32.28      | 4.45  |         |
| 2100.00                                                                                                            | 2100.00     | 2099.00        | 182.27            | 4.61            | 4.61            | 41.63      | 31.83      | 4.25  |         |
| 2200.00                                                                                                            | 2200.00     | 2199.00        | 182.27            | 4.83            | 4.83            | 41.63      | 31.38      | 4.06  |         |
| 2300.00                                                                                                            | 2300.00     | 2299.00        | 182.27            | 5.06            | 5.06            | 41.63      | 30.93      | 3.89  |         |
| 2400.00                                                                                                            | 2400.00     | 2399.00        | 182.27            | 5.28            | 5.28            | 41.63      | 30.48      | 3.73  |         |
| 2500.00                                                                                                            | 2500.00     | 2499.00        | 182.27            | 5.51            | 5.51            | 41.63      | 30.03      | 3.59  |         |
| 2600.00                                                                                                            | 2600.00     | 2599.00        | 182.27            | 5.73            | 5.73            | 41.63      | 29.58      | 3.45  |         |
| 2700.00                                                                                                            | 2700.00     | 2699.00        | 182.27            | 5.96            | 5.96            | 41.63      | 29.13      | 3.33  |         |
| 2800.00                                                                                                            | 2800.00     | 2799.00        | 182.27            | 6.18            | 6.18            | 41.63      | 28.68      | 3.21  |         |
| 2900.00                                                                                                            | 2900.00     | 2899.00        | 182.27            | 6.41            | 6.41            | 41.63      | 28.23      | 3.11  |         |
| 3000.00                                                                                                            | 3000.00     | 2999.00        | 182.27            | 6.63            | 6.63            | 41.63      | 27.78      | 3.01  |         |
| 3100.00                                                                                                            | 3100.00     | 3099.00        | 182.27            | 6.86            | 6.86            | 41.63      | 27.33      | 2.91  |         |
| 3200.00                                                                                                            | 3200.00     | 3199.00        | 182.27            | 7.08            | 7.08            | 41.63      | 26.88      | 2.82  |         |
| 3300.00                                                                                                            | 3300.00     | 3299.00        | 182.27            | 7.31            | 7.31            | 41.63      | 26.44      | 2.74  |         |
| 3400.00                                                                                                            | 3400.00     | 3399.00        | 182.27            | 7.53            | 7.53            | 41.63      | 25.99      | 2.66  |         |
| 3500.00                                                                                                            | 3500.00     | 3499.00        | 182.27            | 7.76            | 7.76            | 41.63      | 25.54      | 2.59  |         |
| 3600.00                                                                                                            | 3600.00     | 3599.00        | 182.27            | 7.98            | 7.98            | 41.63      | 25.09      | 2.52  |         |
| 3700.00                                                                                                            | 3700.00     | 3699.00        | 182.27            | 8.20            | 8.20            | 41.63      | 24.64      | 2.45  |         |
| 3800.00                                                                                                            | 3800.00     | 3799.00        | 182.27            | 8.43            | 8.43            | 41.63      | 24.19      | 2.39  |         |
| 3900.00                                                                                                            | 3900.00     | 3899.00        | 182.27            | 8.65            | 8.65            | 41.63      | 23.74      | 2.33  |         |
| 4000.00                                                                                                            | 4000.00     | 3999.00        | 182.27            | 8.88            | 8.88            | 41.63      | 23.29      | 2.27  |         |
| 4100.00                                                                                                            | 4100.00     | 4099.00        | 182.27            | 9.10            | 9.10            | 41.63      | 22.84      | 2.22  |         |
| 4200.00                                                                                                            | 4200.00     | 4199.00        | 182.27            | 9.33            | 9.33            | 41.63      | 22.39      | 2.16  |         |
| 4300.00                                                                                                            | 4300.00     | 4299.00        | 182.27            | 9.55            | 9.55            | 41.63      | 21.94      | 2.11  |         |
| 4400.00                                                                                                            | 4400.00     | 4399.00        | 182.27            | 9.78            | 9.78            | 41.63      | 21.49      | 2.07  |         |
| 4500.00                                                                                                            | 4500.00     | 4499.00        | 182.27            | 10.00           | 10.00           | 41.63      | 21.04      | 2.02  |         |
| 4600.00                                                                                                            | 4600.00     | 4599.00        | 182.27            | 10.23           | 10.23           | 41.63      | 20.59      | 1.98  | SF (Lo) |
| 4700.00                                                                                                            | 4700.00     | 4699.00        | 182.27            | 10.45           | 10.45           | 41.63      | 20.14      | 1.94  | SF (Lo) |
| 4800.00                                                                                                            | 4800.00     | 4799.00        | 182.27            | 10.68           | 10.68           | 41.63      | 19.69      | 1.90  | SF (Lo) |
| 4900.00                                                                                                            | 4900.00     | 4899.00        | 182.27            | 10.90           | 10.90           | 41.63      | 19.24      | 1.86  | SF (Lo) |
| 5000.00                                                                                                            | 5000.00     | 4999.00        | 182.27            | 11.13           | 11.13           | 41.63      | 18.79      | 1.82  | SF (Lo) |
| 5100.00                                                                                                            | 5100.00     | 5099.00        | 182.27            | 11.35           | 11.35           | 41.63      | 18.34      | 1.79  | SF (Lo) |
| 5200.00                                                                                                            | 5200.00     | 5199.00        | 182.27            | 11.58           | 11.58           | 41.63      | 17.89      | 1.75  | SF (Lo) |

## 5D Anti-Collision Report

| Secondary Well : PLU 457H (p) (TVD Relative to Well TVD Reference (Primary)) : All Azimuth Relative to GRID NORTH |                |                   |                      |                    |                    |               |               |        |          |
|-------------------------------------------------------------------------------------------------------------------|----------------|-------------------|----------------------|--------------------|--------------------|---------------|---------------|--------|----------|
| Pri MD<br>(US ft)                                                                                                 | TVD<br>(US ft) | Sec MD<br>(US ft) | T Face to Sec<br>(°) | S Major<br>(US ft) | S Minor<br>(US ft) | CE<br>(US ft) | ES<br>(US ft) | SF     | Risk     |
| 5300.00                                                                                                           | 5300.00        | 5299.00           | 182.27               | 11.80              | 11.80              | 41.63         | 17.44         | 1.72   | SF (Lo)  |
| 5400.00                                                                                                           | 5400.00        | 5399.00           | 182.27               | 12.03              | 12.03              | 41.63         | 17.00         | 1.69   | SF (Lo)  |
| 5500.00                                                                                                           | 5500.00        | 5499.00           | 182.27               | 12.25              | 12.25              | 41.63         | 16.55         | 1.66   | SF (Lo)  |
| 5600.00                                                                                                           | 5600.00        | 5599.00           | 182.27               | 12.48              | 12.48              | 41.63         | 16.10         | 1.63   | SF (Lo)  |
| 5700.00                                                                                                           | 5700.00        | 5699.00           | 182.27               | 12.70              | 12.70              | 41.63         | 15.65         | 1.60   | SF (Lo)  |
| 5800.00                                                                                                           | 5800.00        | 5799.00           | 182.27               | 12.92              | 12.92              | 41.63         | 15.20         | 1.57   | SF (Lo)  |
| 5900.00                                                                                                           | 5900.00        | 5899.00           | 182.27               | 13.15              | 13.15              | 41.63         | 14.75         | 1.55   | SF (Lo)  |
| 6000.00                                                                                                           | 6000.00        | 5999.00           | 182.27               | 13.37              | 13.37              | 41.63         | 14.30         | 1.52   | SF (Lo)  |
| 6100.00                                                                                                           | 6100.00        | 6099.00           | 182.27               | 13.60              | 13.60              | 41.63         | 13.85         | 1.50   | SF (Med) |
| 6200.00                                                                                                           | 6200.00        | 6199.00           | 182.27               | 13.82              | 13.82              | 41.63         | 13.40         | 1.47   | SF (Med) |
| 6300.00                                                                                                           | 6300.00        | 6299.00           | 182.27               | 14.05              | 14.05              | 41.63         | 12.95         | 1.45   | SF (Med) |
| 6400.00                                                                                                           | 6400.00        | 6399.00           | 182.27               | 14.27              | 14.27              | 41.63         | 12.50         | 1.43   | SF (Med) |
| 6500.00                                                                                                           | 6500.00        | 6499.00           | 182.27               | 14.50              | 14.50              | 41.63         | 12.05         | 1.41   | SF (Med) |
| 6600.00                                                                                                           | 6600.00        | 6599.00           | 182.27               | 14.72              | 14.72              | 41.63         | 11.60         | 1.39   | SF (Med) |
| 6700.00                                                                                                           | 6700.00        | 6699.00           | 182.27               | 14.95              | 14.95              | 41.63         | 11.15         | 1.37   | SF (Med) |
| 6800.00                                                                                                           | 6800.00        | 6799.00           | 182.27               | 15.17              | 15.17              | 41.63         | 10.70         | 1.35   | SF (Med) |
| 6900.00                                                                                                           | 6900.00        | 6899.00           | 182.27               | 15.40              | 15.40              | 41.63         | 10.25         | 1.33   | SF (Med) |
| 7000.00                                                                                                           | 6999.94        | 6998.94           | 96.06                | 15.62              | 15.62              | 41.81         | 9.98          | 1.31   | SF (Med) |
| 7100.00                                                                                                           | 7094.38        | 7093.66           | 121.82               | 15.82              | 15.65              | 50.02         | 17.98         | 1.56   | SF (Lo)  |
| 7200.00                                                                                                           | 7169.96        | 7171.04           | 146.13               | 15.97              | 15.56              | 91.02         | 60.13         | 2.95   |          |
| 7300.00                                                                                                           | 7221.70        | 7225.70           | 154.71               | 16.09              | 15.32              | 161.54        | 131.96        | 5.46   |          |
| 7400.00                                                                                                           | 7252.47        | 7259.16           | 154.42               | 16.15              | 15.12              | 248.73        | 219.96        | 8.65   |          |
| 7500.00                                                                                                           | 7267.27        | 7275.58           | 141.63               | 16.18              | 15.04              | 344.52        | 316.13        | 12.14  |          |
| 7600.00                                                                                                           | 7270.40        | 7279.09           | 71.62                | 16.19              | 15.02              | 443.68        | 415.35        | 15.66  |          |
| 7700.00                                                                                                           | 7265.95        | 7274.11           | 34.40                | 16.18              | 15.05              | 542.88        | 514.39        | 19.05  |          |
| 7800.00                                                                                                           | 7261.28        | 7268.92           | 32.23                | 16.17              | 15.07              | 642.09        | 613.39        | 22.37  |          |
| 7900.00                                                                                                           | 7256.46        | 7263.57           | 17.22                | 16.16              | 15.10              | 741.19        | 712.19        | 25.56  |          |
| 8000.00                                                                                                           | 7246.77        | 7252.90           | 8.45                 | 16.14              | 15.15              | 837.68        | 808.35        | 28.56  |          |
| 8100.00                                                                                                           | 7233.73        | 7238.68           | 7.00                 | 16.11              | 15.24              | 930.83        | 901.07        | 31.28  |          |
| 8200.00                                                                                                           | 7221.82        | 7225.82           | 6.77                 | 16.09              | 15.32              | 1024.52       | 994.35        | 33.96  |          |
| 8300.00                                                                                                           | 7211.14        | 7214.39           | 6.57                 | 16.06              | 15.38              | 1118.94       | 1088.41       | 36.64  |          |
| 8400.00                                                                                                           | 7201.53        | 7204.18           | 6.41                 | 16.04              | 15.43              | 1213.97       | 1183.11       | 39.34  |          |
| 8500.00                                                                                                           | 7192.85        | 7195.00           | 6.27                 | 16.02              | 15.47              | 1309.52       | 1278.37       | 42.04  |          |
| 8600.00                                                                                                           | 7184.96        | 7186.71           | 6.15                 | 16.00              | 15.51              | 1405.51       | 1374.11       | 44.76  |          |
| 8700.00                                                                                                           | 7177.78        | 7179.19           | 6.04                 | 15.99              | 15.53              | 1501.88       | 1470.26       | 47.50  |          |
| 8800.00                                                                                                           | 7171.21        | 7172.34           | 5.94                 | 15.97              | 15.56              | 1598.58       | 1566.76       | 50.24  |          |
| 8900.00                                                                                                           | 7165.18        | 7166.07           | 5.86                 | 15.96              | 15.57              | 1695.56       | 1663.57       | 53.00  |          |
| 9000.00                                                                                                           | 7159.63        | 7160.32           | 5.78                 | 15.95              | 15.59              | 1792.80       | 1760.65       | 55.77  |          |
| 9100.00                                                                                                           | 7154.51        | 7155.02           | 5.71                 | 15.94              | 15.60              | 1890.26       | 1857.97       | 58.54  |          |
| 9200.00                                                                                                           | 7149.76        | 7150.13           | 5.65                 | 15.93              | 15.61              | 1987.91       | 1955.50       | 61.33  |          |
| 9300.00                                                                                                           | 7145.36        | 7145.60           | 5.59                 | 15.92              | 15.62              | 2085.74       | 2053.22       | 64.12  |          |
| 9400.00                                                                                                           | 7141.26        | 7141.39           | 5.54                 | 15.92              | 15.63              | 2183.73       | 2151.10       | 66.92  |          |
| 9500.00                                                                                                           | 7137.44        | 7137.47           | 5.49                 | 15.91              | 15.63              | 2281.85       | 2249.13       | 69.73  |          |
| 9600.00                                                                                                           | 7133.86        | 7133.81           | 5.45                 | 15.90              | 15.64              | 2380.11       | 2347.29       | 72.53  |          |
| 9700.00                                                                                                           | 7130.52        | 7130.38           | 5.41                 | 15.89              | 15.64              | 2478.47       | 2445.58       | 75.34  |          |
| 9800.00                                                                                                           | 7127.37        | 7127.17           | 5.37                 | 15.89              | 15.65              | 2576.94       | 2543.97       | 78.15  |          |
| 9900.00                                                                                                           | 7124.42        | 7124.16           | 5.34                 | 15.88              | 15.65              | 2675.50       | 2642.46       | 80.96  |          |
| 10000.00                                                                                                          | 7121.64        | 7121.32           | 5.31                 | 15.88              | 15.65              | 2774.15       | 2741.04       | 83.77  |          |
| 10100.00                                                                                                          | 7119.01        | 7118.64           | 5.28                 | 15.87              | 15.65              | 2872.88       | 2839.70       | 86.58  |          |
| 10200.00                                                                                                          | 7116.53        | 7116.12           | 5.25                 | 15.87              | 15.65              | 2971.68       | 2938.43       | 89.39  |          |
| 10300.00                                                                                                          | 7114.18        | 7113.73           | 5.22                 | 15.86              | 15.65              | 3070.54       | 3037.23       | 92.19  |          |
| 10400.00                                                                                                          | 7111.95        | 7111.47           | 5.20                 | 15.86              | 15.65              | 3169.46       | 3136.10       | 94.99  |          |
| 10500.00                                                                                                          | 7109.84        | 7109.32           | 5.17                 | 15.85              | 15.66              | 3268.44       | 3235.02       | 97.79  |          |
| 10600.00                                                                                                          | 7107.83        | 7107.28           | 5.15                 | 15.85              | 15.65              | 3367.47       | 3333.99       | 100.57 |          |
| 10700.00                                                                                                          | 7105.92        | 7105.34           | 5.13                 | 15.84              | 15.65              | 3466.55       | 3433.01       | 103.36 |          |
| 10800.00                                                                                                          | 7104.10        | 7103.50           | 5.11                 | 15.84              | 15.65              | 3565.68       | 3532.08       | 106.14 |          |
| 10900.00                                                                                                          | 7102.36        | 7101.74           | 5.09                 | 15.84              | 15.65              | 3664.84       | 3631.19       | 108.91 |          |
| 11000.00                                                                                                          | 7100.70        | 7100.06           | 5.08                 | 15.83              | 15.65              | 3764.04       | 3730.34       | 111.68 |          |

## 5D Anti-Collision Report

| Secondary Well : PLU457H (p) (TVD Relative to Well TVD Reference (Primary) : All Azimuth Relative to GRID NORTH) |                |                   |                      |                    |                    |               |               |        |      |
|------------------------------------------------------------------------------------------------------------------|----------------|-------------------|----------------------|--------------------|--------------------|---------------|---------------|--------|------|
| Pr MD<br>(US ft)                                                                                                 | TVD<br>(US ft) | Sec MD<br>(US ft) | T Face to Sec<br>(°) | S Major<br>(US ft) | S Minor<br>(US ft) | CC<br>(US ft) | ES<br>(US ft) | SF     | Risk |
| 11100.00                                                                                                         | 7099.12        | 7098.46           | 5.06                 | 15.83              | 15.65              | 3863.28       | 3829.52       | 114.43 |      |
| 11200.00                                                                                                         | 7097.60        | 7096.92           | 5.04                 | 15.83              | 15.65              | 3962.55       | 3928.74       | 117.19 |      |
| 11300.00                                                                                                         | 7096.15        | 7095.46           | 5.03                 | 15.82              | 15.65              | 4061.86       | 4027.99       | 119.93 |      |
| 11400.00                                                                                                         | 7094.76        | 7094.05           | 5.01                 | 15.82              | 15.65              | 4161.19       | 4127.27       | 122.66 |      |
| 11500.00                                                                                                         | 7093.42        | 7092.70           | 5.00                 | 15.82              | 15.66              | 4260.55       | 4226.57       | 125.39 |      |
| 11600.00                                                                                                         | 7092.14        | 7091.41           | 4.99                 | 15.82              | 15.66              | 4359.94       | 4325.90       | 128.11 |      |
| 11700.00                                                                                                         | 7090.91        | 7090.17           | 4.97                 | 15.81              | 15.66              | 4459.35       | 4425.26       | 130.82 |      |
| 11800.00                                                                                                         | 7089.73        | 7088.97           | 4.96                 | 15.81              | 15.66              | 4558.78       | 4524.64       | 133.51 |      |
| 11900.00                                                                                                         | 7088.59        | 7087.82           | 4.95                 | 15.81              | 15.67              | 4658.24       | 4624.04       | 136.20 |      |
| 12000.00                                                                                                         | 7087.50        | 7086.72           | 4.94                 | 15.81              | 15.67              | 4757.71       | 4723.46       | 138.88 |      |
| 12100.00                                                                                                         | 7086.44        | 7085.65           | 4.93                 | 15.80              | 15.67              | 4857.21       | 4822.89       | 141.55 |      |
| 12200.00                                                                                                         | 7085.42        | 7084.62           | 4.92                 | 15.80              | 15.67              | 4956.72       | 4922.35       | 144.21 |      |
| 12300.00                                                                                                         | 7084.44        | 7083.63           | 4.91                 | 15.80              | 15.67              | 5056.25       | 5021.82       | 146.86 |      |
| 12400.00                                                                                                         | 7083.49        | 7082.68           | 4.90                 | 15.80              | 15.67              | 5155.80       | 5121.31       | 149.50 |      |
| 12500.00                                                                                                         | 7082.57        | 7081.75           | 4.89                 | 15.80              | 15.68              | 5255.36       | 5220.81       | 152.13 |      |
| 12600.00                                                                                                         | 7081.69        | 7080.86           | 4.88                 | 15.79              | 15.68              | 5354.94       | 5320.33       | 154.75 |      |
| 12700.00                                                                                                         | 7080.83        | 7080.00           | 4.87                 | 15.79              | 15.68              | 5454.53       | 5419.86       | 157.35 |      |
| 12800.00                                                                                                         | 7080.00        | 7079.16           | 4.87                 | 15.79              | 15.68              | 5554.13       | 5519.41       | 159.95 |      |
| 12900.00                                                                                                         | 7079.20        | 7078.35           | 4.86                 | 15.79              | 15.68              | 5653.75       | 5618.96       | 162.53 |      |
| 13000.00                                                                                                         | 7078.42        | 7077.57           | 4.85                 | 15.79              | 15.68              | 5753.38       | 5718.53       | 165.10 |      |
| 13100.00                                                                                                         | 7077.67        | 7076.81           | 4.84                 | 15.79              | 15.68              | 5853.02       | 5818.11       | 167.66 |      |
| 13200.00                                                                                                         | 7076.94        | 7076.08           | 4.84                 | 15.79              | 15.68              | 5952.67       | 5917.70       | 170.21 |      |
| 13300.00                                                                                                         | 7076.23        | 7075.36           | 4.83                 | 15.78              | 15.68              | 6052.33       | 6017.30       | 172.75 |      |
| 13400.00                                                                                                         | 7075.54        | 7074.67           | 4.82                 | 15.78              | 15.68              | 6152.00       | 6116.90       | 175.27 |      |
| 13500.00                                                                                                         | 7074.87        | 7074.00           | 4.82                 | 15.78              | 15.68              | 6251.69       | 6216.52       | 177.78 |      |
| 13600.00                                                                                                         | 7074.22        | 7073.35           | 4.81                 | 15.78              | 15.68              | 6351.38       | 6316.15       | 180.28 |      |
| 13700.00                                                                                                         | 7073.59        | 7072.71           | 4.80                 | 15.78              | 15.69              | 6451.08       | 6415.78       | 182.77 |      |
| 13800.00                                                                                                         | 7072.98        | 7072.09           | 4.80                 | 15.78              | 15.69              | 6550.79       | 6515.42       | 185.25 |      |
| 13900.00                                                                                                         | 7072.38        | 7071.50           | 4.79                 | 15.78              | 15.69              | 6650.50       | 6615.07       | 187.71 |      |
| 14000.00                                                                                                         | 7071.80        | 7070.91           | 4.79                 | 15.77              | 15.69              | 6750.23       | 6714.73       | 190.16 |      |
| 14100.00                                                                                                         | 7071.24        | 7070.34           | 4.78                 | 15.77              | 15.69              | 6849.96       | 6814.39       | 192.60 |      |
| 14200.00                                                                                                         | 7070.69        | 7069.79           | 4.78                 | 15.77              | 15.69              | 6949.70       | 6914.06       | 195.02 |      |
| 14201.10                                                                                                         | 7070.68        | 7069.79           | 4.78                 | 15.77              | 15.69              | 6950.79       | 6915.16       | 195.05 |      |

## CONDITIONS OF APPROVAL

|                              |                                                             |
|------------------------------|-------------------------------------------------------------|
| <b>OPERATOR'S NAME:</b>      | <b>BOPCO, L. P.</b>                                         |
| <b>LEASE NO.:</b>            | <b>NM-005039</b>                                            |
| <b>WELL NAME &amp; NO.:</b>  | <b>POKER LAKE UNIT 421H</b>                                 |
| <b>SURFACE HOLE FOOTAGE:</b> | <b>0600' FSL &amp; 0950' FEL</b>                            |
| <b>BOTTOM HOLE FOOTAGE</b>   | <b>1000' FSL &amp; 1350' FEL Sec. 12, T. 35S., R 30 E.,</b> |
| <b>LOCATION:</b>             | <b>Section 27, T. 25S., R 30 E., NMPM</b>                   |
| <b>COUNTY:</b>               | <b>Eddy County, New Mexico</b>                              |

### **A. 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. 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**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - 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 with a corresponding chart (i.e. two hour clock-two hour chart, one hour clock-one hour chart).
  - 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.

CRW 020514