

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**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.**Carlsbad Field Office**
OCD ArtesiaNIMNM02860
Applicant or Operator Name**SUBMIT IN TRIPLICATE - Other instructions on page 2**7. If Unit or CA/Agreement, Name and/or No.
891000303X

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other8. Well Name and No.
POKER LAKE UNIT 359H2. Name of Operator
BOPCO LPContact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com9. API Well No.
30-015-43230-00-X13a. Address
6401 HOLIDAY HILL RD BLDG 5 SUITE 200
MIDLAND, TX 797073b. Phone No. (include area code)
Ph: 432-620-437410. Field and Pool or Exploratory Area
NASH DRAW

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 8 T24S R30E SWNW 1980FNL 0660FWL
32.142156 N Lat, 103.544205 W Lon

11. County or Parish, State

EDDY COUNTY, NM

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

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must 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, LP requests approval of the following changes to the original APD:

Directional Drill Plan
Drilling Program
C102
BOP/Choke Design
Flex Hose Variance

Please see attached....

BLM OIL CONSERVATION
ARTESIA DISTRICT

JAN 16 2018

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #387855 verified by the BLM Well Information System

For BOPCO LP, sent to the Carlsbad

Committed to AFMSS for processing by MUSTAFA HAQUE on 09/12/2017 (17MH0055SE)

Name (Printed/Typed) KELLY KARDOS

Title REGULATORY COORDINATOR

Signature (Electronic Submission)

Date 09/07/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS

Title PETROLEUM ENGINEER

Date 01/05/2018

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 Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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

RNP 1-16-18

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

BOPCO, LP
Poker Lake Unit 359H
Projected TD: 21568' MD / 9387' TVD
SHL: 1980' FNL & 660' FWL , Section 8, T24S, R30E
BHL: 200' FNL & 330' FWL , Section 32, T23S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	854'	Water
Top of Salt	1218'	Water
Base of Salt	3282'	Water
Delaware	3496'	Water
Bone Spring	7299'	Water/Oil/Gas
1st Bone Spring Ss	8290'	Water/Oil/Gas
2nd Bone Spring Ss	9145'	Water/Oil/Gas
Target/Land Curve	9387'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8 inch casing @ 1190' (28' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9-5/8 inch casing at 3310', and circulating cement to surface. An 8-3/4 inch curve and 8-1/2 inch lateral hole will be drilled to MD/TD and 5-1/2 inch casing will be set at TD and cemented back up to the 9-5/8 inch casing shoe.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' - 1190'	13-3/8"	48#	STC	H-40	New	3.18	1.41	5.64
12-1/4"	0' - 3310'	9-5/8"	36#	LTC	J-55	New	1.42	1.94	3.80
8-3/4" x 8-1/2"	0' - 21568'	5-1/2"	17#	BTC	P-110	New	1.12	1.65	2.31

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Manufacturer will witness installation of test plug for initial test.
- Operator will test the 9-5/8" casing to 70% of casing burst before drilling out.

4. Cement Program

Surface Casing: 13-3/8", 48# New H-40, STC casing to be set at +/- 1190'

Lead: 660 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)

Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Intermediate Casing: 9-5/8", 36# New J-55, LTC casing to be set at +/- 3310'

Lead: 930 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing: 5-1/2", 17# New P-110, BTC casing to be set at +/- 21568'

Lead: 660 sxs NeoCem (mixed at 10.5 ppg, 2.69 ft3/sx, 12.26 gal/sx water)

Tail: 2490 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft3/sx, 8.38 gal/sx water)

Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

5. Pressure Control Equipment

The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. MASP should not exceed 2474 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13-5/8" 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nipping up on the 9-5/8", the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 1190'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
1190' to 3310'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
3310' to 21568'	8-3/4" x 8-1/2"	FW / Cut Brine / Polymer	9 - 9.3	29-32	NC - 20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. A 9.8ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a

closed loop system.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-43230	² Pool Code 47545 96473	³ Well Name Pierce Crossing Bore Spring Nash Draw, Delaware/BS (Avalon Sand) East
⁴ Property Code 306402	⁵ Property Name POKER LAKE UNIT	⁶ Well Number 359H
⁷ OGRID No. 260737	⁸ Operator Name BOPCO, LP	⁹ Elevation 3231'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	8	24 S	30 E		1980	NORTH	660	WEST	EDDY

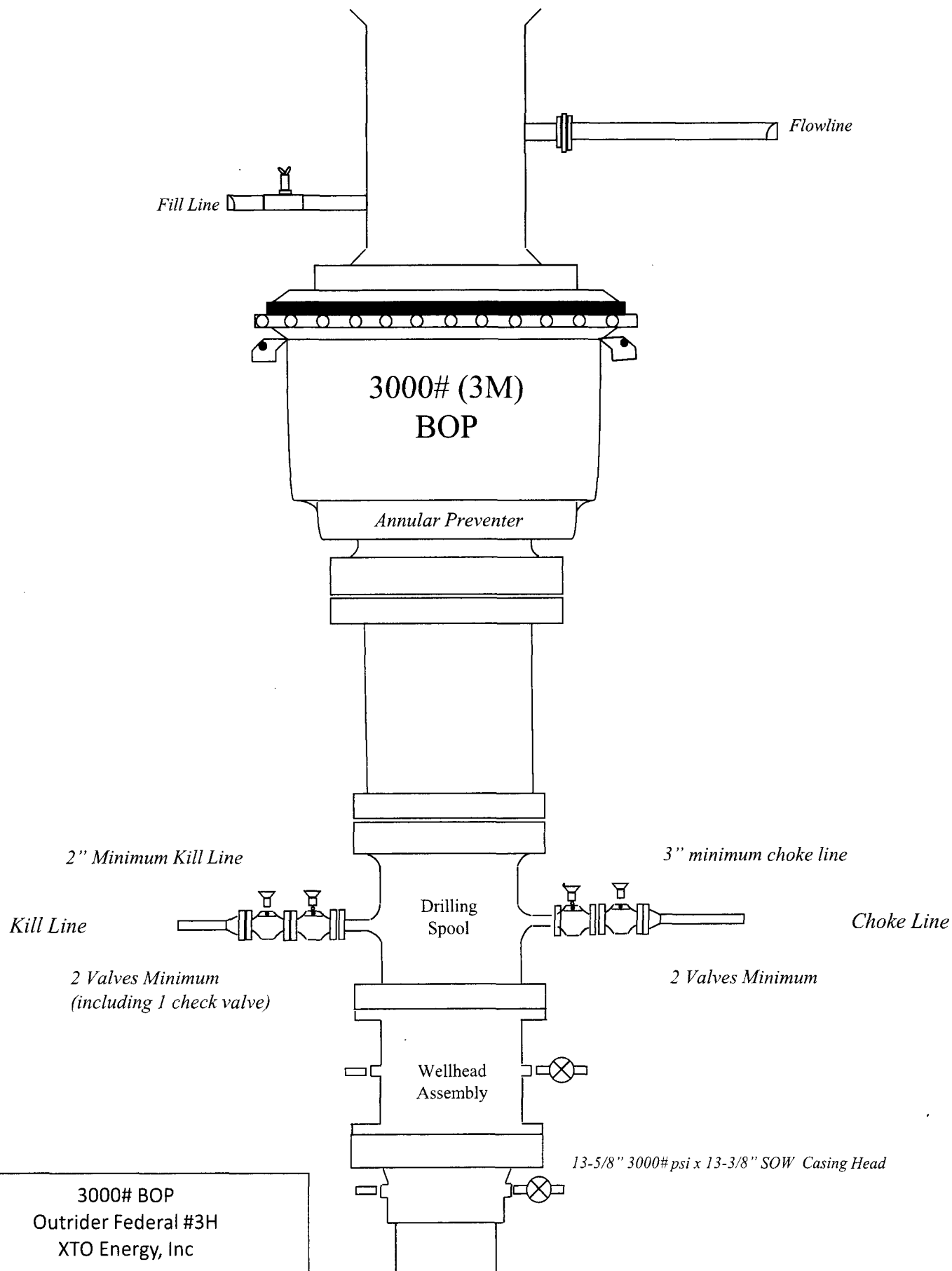
¹¹ Bottom Hole Location If Different From Surface

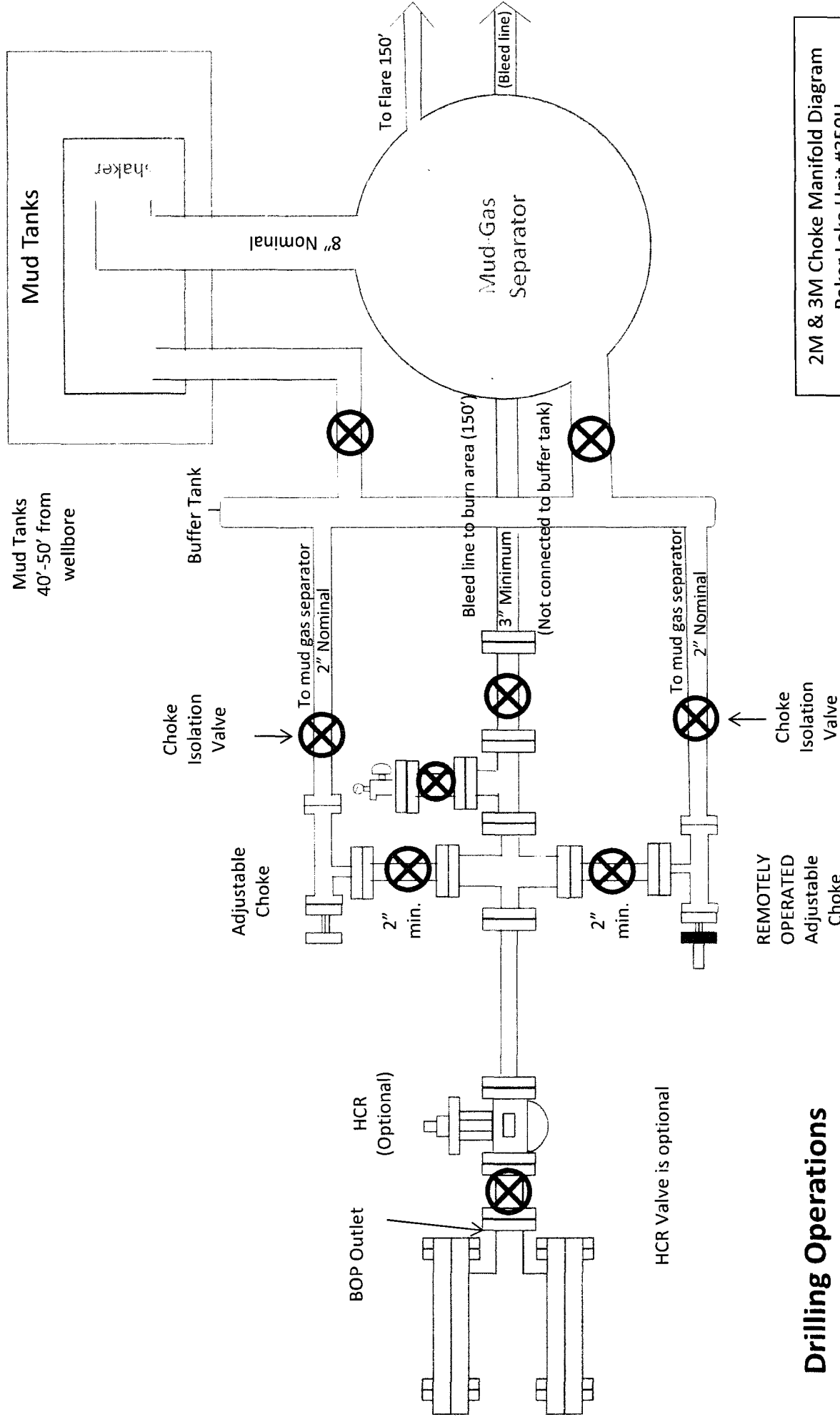
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	32	23 S	30 E		200	NORTH	330	WEST	EDDY

¹² Dedicated Acres 360	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ SURFACE LOCATION NAD 27 NME Y= 449,065.8 X= 631,039.9 LAT.= 32.233888°N LONG.= 103.909539°W FIRST TAKE POINT NAD 27 NME Y= 449,663.0 X= 630,706.8 LAT.= 32.235534°N LONG.= 103.910609°W SURFACE LOCATION NAD 83 NME Y= 449,124.8 X= 672,223.4 LAT.= 32.234011°N LONG.= 103.910028°W FIRST TAKE POINT NAD 83 NME Y= 449,722.1 X= 671,890.3 LAT.= 32.235657°N LONG.= 103.911097°W CORNER COORDINATES TABLE NAD 27 NME A - Y= 461,628.6 N, X= 630,315.6 E B - Y= 461,640.3 N, X= 631,654.3 E C - Y= 458,977.1 N, X= 630,333.3 E D - Y= 458,988.5 N, X= 631,672.0 E E - Y= 456,327.8 N, X= 630,351.7 E F - Y= 456,337.0 N, X= 631,689.8 E G - Y= 453,685.8 N, X= 630,359.2 E H - Y= 453,695.6 N, X= 631,698.4 E I - Y= 451,040.2 N, X= 630,370.0 E J - Y= 451,051.3 N, X= 631,707.2 E K - Y= 448,394.5 N, X= 630,383.2 E L - Y= 448,406.0 N, X= 631,719.3 E CORNER COORDINATES TABLE NAD 83 NME A - Y= 461,687.9 N, X= 671,498.7 E B - Y= 461,699.6 N, X= 672,837.4 E C - Y= 459,036.4 N, X= 671,516.5 E D - Y= 459,047.8 N, X= 672,855.2 E E - Y= 456,387.0 N, X= 671,535.0 E F - Y= 456,396.2 N, X= 672,873.1 E G - Y= 453,744.9 N, X= 671,542.6 E H - Y= 453,754.7 N, X= 672,881.8 E I - Y= 451,099.3 N, X= 671,553.4 E J - Y= 451,110.4 N, X= 672,890.6 E K - Y= 448,453.5 N, X= 671,566.7 E L - Y= 448,465.0 N, X= 672,902.8 E	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division <i>Kelly Kardos</i> 9/7/17 Signature Date Kelly Kardos Printed Name kelly_kardos@xtoenergy.com E-mail Address 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 06-05-2017 Date of Survey Signature and Seal of Professional Surveyor: MARK DILLON HARP 23786 Certificate Number RR 2017050743
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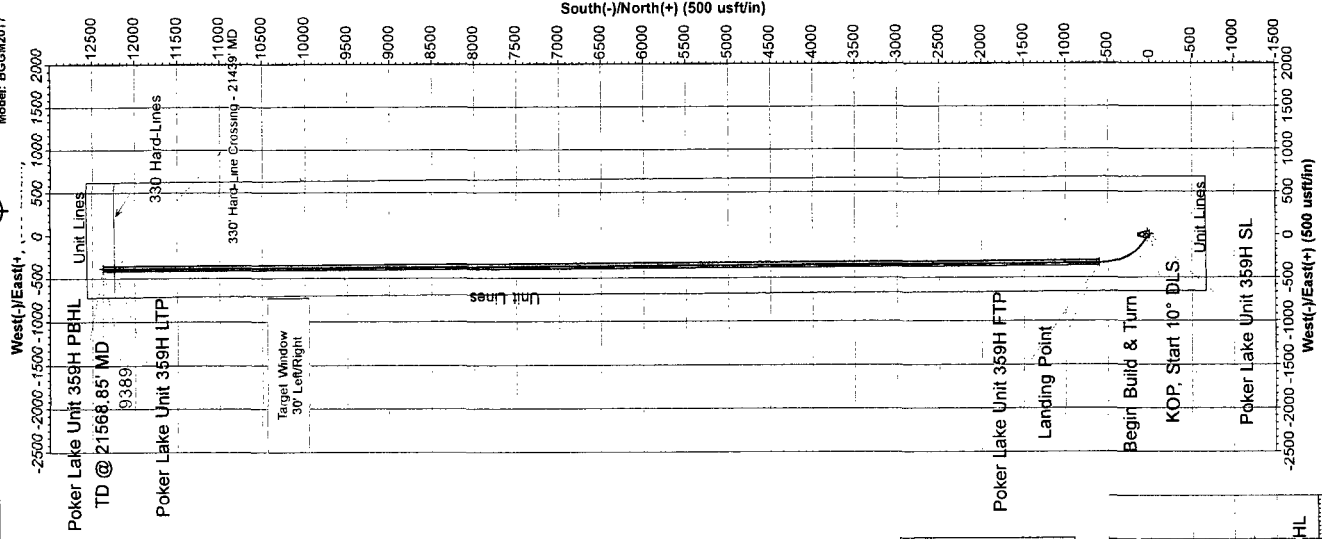
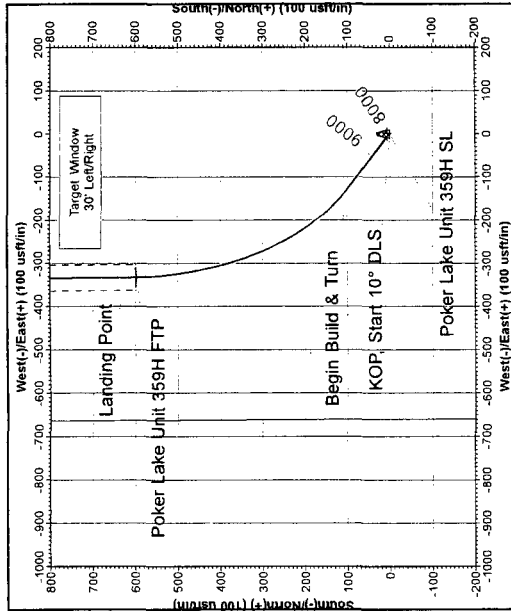
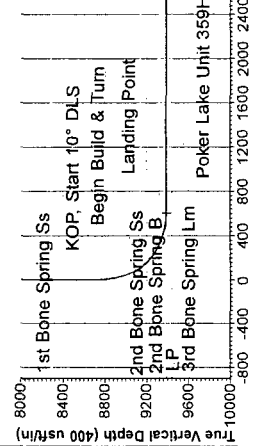
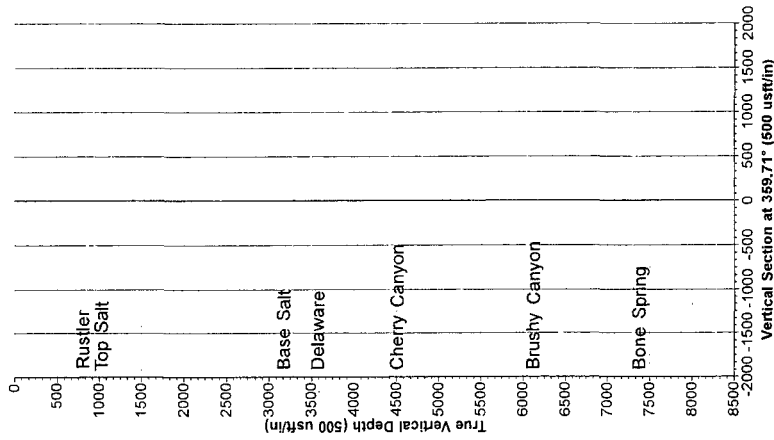
2M & 3M Choke Manifold Diagram
Poker Lake Unit #359H
BOPCO, LP

Drilling Operations
Choke Manifold
2M & 3M Service

Project: Eddy County, NM (NAD27)
Site: Poker Lake Unit
Well: Poker Lake Unit #359H
Wellbore: Wellbore #1
Design: Plan #1
Rig: TBD

WELL DETAILS

+E/-W	Northing	Ground Level: Easting	Latitude	Longitude
0.00	449065.80	631039.90	32° 14' 1.998 N	103° 54' 34.341 W



	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	V/Sect	Annotation
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	8730.20	0.00	0.00	8730.20	0.00	0.00	0.00	0.00	
	9180.20	45.00	308.00	9135.34	103.32	-132.24	10.00	103.99	KOP, Start 10° DLS
	9250.34	90.00	359.71	9388.57	617.34	-333.60	10.00	619.02	Begin Build & Turn
	9156.85	85.00	350.71	9388.50	12365.70	-393.00	0.00	12367.53	Landing Point
	21568.85	85.00	350.71	9388.50	12365.70	-393.00	0.00	12367.53	TD @ 21568.85; MD

Name	TVD	+N/+S	+E/+W	Northing	Easting	Latitude	Longitude
Poker Lake Unit 359H SL	0.00	0.00	0.00	449653.80	630706.90	32° 14' 1.998 N	103° 54' 38.192 W
Poker Lake Unit 359H FTP	9388.50	597.20	-333.10	449663.00	630706.80	32° 14' 7.921 N	103° 54' 38.192 W
Poker Lake Unit 359H LTP	9388.50	12235.70	-392.10	461301.50	630647.80	32° 16' 3.099 N	103° 54' 38.345 W
Poker Lake Unit 359H PBHL	9388.50	12365.70	-393.00	461431.50	630647.80	32° 16' 4.385 N	103° 54' 38.350 W
Poker Lake Unit 359H PBHL	9388.50	12365.85	-392.34	461301.65	630647.56	32° 16' 3.100 N	103° 54' 38.348 W
3307 Crossing - 214339 MD							

Vertical Section at 359.71° (400 usft/in)

HALLIBURTON

XTO Energy Inc.
Eddy County, NM (NAD27) Poker Lake Unit
API#
Poker Lake Unit #359H

Wellbore #1
Plan: Plan #1

Sperry Drilling Services

Combo Report

01 September, 2017

Well Coordinates: 32° 14' 02.00" N
103° 54' 34.34" W

NAD 1927 (NADCON CONUS)
New Mexico East 3001
449,065.80 N
631,039.90 E

Ground Level: 3,230.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well Poker Lake Unit #359H
GE 3230+ 26.5 KB @ 3256.50usft (TBD)
N

Grid
API US Survey Feet

Version: 5000.1 Build: 81D

Report Version: Midcon Combo v1.11

HALLIBURTON

TBD

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Eastng (usft)	Map Coordinates Northing (usft)	Eastng (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
0.00	0.00	0.00	0.00	0.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
100.00	0.00	0.00	-3,256.50	100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
200.00	0.00	0.00	-3,056.50	200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
300.00	0.00	0.00	-2,956.50	300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
400.00	0.00	0.00	-2,856.50	400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
500.00	0.00	0.00	-2,756.50	500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
600.00	0.00	0.00	-2,656.50	600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
700.00	0.00	0.00	-2,556.50	700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
800.00	0.00	0.00	-2,456.50	800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
900.00	0.00	0.00	-2,356.50	900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,000.00	0.00	0.00	-2,256.50	1,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,100.00	0.00	0.00	-2,156.50	1,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,200.00	0.00	0.00	-2,056.50	1,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,300.00	0.00	0.00	-1,956.50	1,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,400.00	0.00	0.00	-1,856.50	1,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,500.00	0.00	0.00	-1,756.50	1,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,600.00	0.00	0.00	-1,656.50	1,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,700.00	0.00	0.00	-1,556.50	1,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,800.00	0.00	0.00	-1,456.50	1,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
1,900.00	0.00	0.00	-1,356.50	1,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,000.00	0.00	0.00	-1,256.50	2,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,100.00	0.00	0.00	-1,156.50	2,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,200.00	0.00	0.00	-1,056.50	2,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,300.00	0.00	0.00	-956.50	2,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,400.00	0.00	0.00	-856.50	2,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,500.00	0.00	0.00	-756.50	2,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,600.00	0.00	0.00	-656.50	2,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,700.00	0.00	0.00	-556.50	2,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,800.00	0.00	0.00	-456.50	2,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
2,900.00	0.00	0.00	-356.50	2,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,000.00	0.00	0.00	-256.50	3,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,100.00	0.00	0.00	-156.50	3,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,200.00	0.00	0.00	-56.50	3,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,300.00	0.00	0.00	43.50	3,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,400.00	0.00	0.00	143.50	3,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,500.00	0.00	0.00	243.50	3,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,600.00	0.00	0.00	343.50	3,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,700.00	0.00	0.00	443.50	3,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,800.00	0.00	0.00	543.50	3,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
3,900.00	0.00	0.00	643.50	3,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,000.00	0.00	0.00	743.50	4,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Eastings (usft)	Map Coordinates Northing (usft)	Eastings (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
4,100.00	0.00	0.00	843.50	4,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,200.00	0.00	0.00	943.50	4,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,300.00	0.00	0.00	1,043.50	4,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,400.00	0.00	0.00	1,143.50	4,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,500.00	0.00	0.00	1,243.50	4,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,600.00	0.00	0.00	1,343.50	4,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,700.00	0.00	0.00	1,443.50	4,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,800.00	0.00	0.00	1,543.50	4,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
4,900.00	0.00	0.00	1,643.50	4,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,000.00	0.00	0.00	1,743.50	5,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,100.00	0.00	0.00	1,843.50	5,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,200.00	0.00	0.00	1,943.50	5,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,300.00	0.00	0.00	2,043.50	5,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,400.00	0.00	0.00	2,143.50	5,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,500.00	0.00	0.00	2,243.50	5,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,600.00	0.00	0.00	2,343.50	5,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,700.00	0.00	0.00	2,443.50	5,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,800.00	0.00	0.00	2,543.50	5,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
5,900.00	0.00	0.00	2,643.50	5,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,000.00	0.00	0.00	2,743.50	6,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,100.00	0.00	0.00	2,843.50	6,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,200.00	0.00	0.00	2,943.50	6,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,300.00	0.00	0.00	3,043.50	6,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,400.00	0.00	0.00	3,143.50	6,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,500.00	0.00	0.00	3,243.50	6,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,600.00	0.00	0.00	3,343.50	6,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,700.00	0.00	0.00	3,443.50	6,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,800.00	0.00	0.00	3,543.50	6,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
6,900.00	0.00	0.00	3,643.50	6,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,000.00	0.00	0.00	3,743.50	7,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,100.00	0.00	0.00	3,843.50	7,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,200.00	0.00	0.00	3,943.50	7,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,300.00	0.00	0.00	4,043.50	7,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,400.00	0.00	0.00	4,143.50	7,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,500.00	0.00	0.00	4,243.50	7,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,600.00	0.00	0.00	4,343.50	7,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,700.00	0.00	0.00	4,443.50	7,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,800.00	0.00	0.00	4,543.50	7,800.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
7,900.00	0.00	0.00	4,643.50	7,900.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,000.00	0.00	0.00	4,743.50	8,000.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,100.00	0.00	0.00	4,843.50	8,100.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Eastings (usft)	Map Coordinates Northing (usft)	Eastings (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
8,200.00	0.00	0.00	4,943.50	8,200.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,300.00	0.00	0.00	5,043.50	8,300.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,400.00	0.00	0.00	5,143.50	8,400.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,500.00	0.00	0.00	5,243.50	8,500.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,600.00	0.00	0.00	5,343.50	8,600.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,700.00	0.00	0.00	5,443.50	8,700.00	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,730.20	0.00	0.00	5,473.70	8,730.20	0.00 N	0.00 E	449,065.80	631,039.90	0.00	0.00	
8,750.00	1.98	308.00	5,493.50	8,750.00	0.21 N	0.27 W	449,066.01	631,039.63	10.00	0.21	
8,800.00	6.98	308.00	5,543.33	8,799.83	2.61 N	3.35 W	449,068.41	631,036.55	10.00	2.63	
8,850.00	11.98	308.00	5,592.63	8,849.13	7.68 N	9.83 W	449,073.48	631,030.07	10.00	7.73	
8,900.00	16.98	308.00	5,641.03	8,897.53	15.38 N	19.68 W	449,081.18	631,020.22	10.00	15.48	
8,950.00	21.98	308.00	5,688.15	8,944.65	25.64 N	32.82 W	449,091.44	631,007.08	10.00	25.81	
9,000.00	26.98	308.00	5,733.64	8,990.14	38.39 N	49.14 W	449,104.19	630,990.76	10.00	38.64	
9,050.00	31.98	308.00	5,777.15	9,033.65	53.54 N	68.52 W	449,119.34	630,971.38	10.00	53.88	
9,100.00	36.98	308.00	5,818.35	9,074.85	70.96 N	90.82 W	449,136.76	630,949.08	10.00	71.42	
9,150.00	41.98	308.00	5,856.93	9,113.43	90.52 N	115.86 W	449,156.32	630,924.04	10.00	91.11	
9,180.20	45.00	308.00	5,878.84	9,135.34	103.32 N	132.24 W	449,169.12	630,907.66	10.00	103.99	
9,200.00	45.99	310.40	5,892.72	9,149.22	112.24 N	143.18 W	449,178.04	630,896.72	10.00	112.97	
9,250.00	48.70	316.12	5,926.61	9,183.11	137.45 N	169.91 W	449,203.25	630,869.99	10.00	138.31	
9,300.00	51.67	321.36	5,958.64	9,215.14	166.33 N	195.19 W	449,232.13	630,844.71	10.00	167.31	
9,350.00	54.86	326.17	5,988.55	9,245.05	198.65 N	218.83 W	449,264.45	630,821.07	10.00	199.75	
9,400.00	58.22	330.61	6,016.13	9,272.63	234.17 N	240.66 W	449,299.97	630,799.24	10.00	235.38	
9,450.00	61.72	334.73	6,041.15	9,297.65	272.62 N	260.50 W	449,338.42	630,779.40	10.00	273.93	
9,500.00	65.34	338.59	6,063.44	9,319.94	313.70 N	278.20 W	449,379.50	630,761.70	10.00	315.11	
9,550.00	69.05	342.22	6,082.83	9,339.33	357.12 N	293.63 W	449,422.92	630,746.27	10.00	358.60	
9,600.00	72.84	345.68	6,099.15	9,355.65	402.52 N	306.68 W	449,468.32	630,733.22	10.00	404.07	
9,650.00	76.68	349.00	6,112.30	9,368.80	449.58 N	317.23 W	449,515.38	630,722.67	10.00	451.18	
9,700.00	80.56	352.21	6,122.17	9,378.67	497.92 N	325.22 W	449,563.72	630,714.68	10.00	499.56	
9,750.00	84.47	355.35	6,128.68	9,385.18	547.19 N	330.58 W	449,612.99	630,709.32	10.00	548.86	
9,800.00	88.40	358.45	6,131.79	9,388.29	597.00 N	333.27 W	449,662.80	630,706.63	10.00	598.68	
9,820.34	90.00	359.71	6,132.07	9,388.57	617.34 N	333.60 W	449,683.14	630,706.30	10.00	619.02	
9,900.00	90.00	359.71	6,132.07	9,388.57	697.00 N	334.00 W	449,762.80	630,705.90	0.00	698.68	
10,000.00	90.00	359.71	6,132.07	9,388.57	797.00 N	334.51 W	449,862.80	630,705.39	0.00	798.68	
10,100.00	90.00	359.71	6,132.07	9,388.57	896.99 N	335.01 W	449,962.79	630,704.89	0.00	898.68	
10,200.00	90.00	359.71	6,132.07	9,388.57	996.99 N	335.52 W	450,062.79	630,704.38	0.00	998.68	
10,300.00	90.00	359.71	6,132.07	9,388.57	1,096.99 N	336.03 W	450,162.79	630,703.87	0.00	1,098.68	
10,400.00	90.00	359.71	6,132.07	9,388.57	1,196.99 N	336.53 W	450,262.79	630,703.37	0.00	1,198.68	
10,500.00	90.00	359.71	6,132.07	9,388.57	1,296.99 N	337.04 W	450,362.79	630,702.86	0.00	1,298.68	
10,600.00	90.00	359.71	6,132.07	9,388.57	1,396.99 N	337.54 W	450,462.79	630,702.36	0.00	1,398.68	
10,700.00	90.00	359.71	6,132.07	9,388.57	1,496.99 N	338.05 W	450,562.79	630,701.85	0.00	1,498.68	
10,800.00	90.00	359.71	6,132.07	9,388.57	1,596.99 N	338.55 W	450,662.79	630,701.35	0.00	1,598.68	

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Easting (usft)	Map Coordinates Northing (usft)	Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
10,900.00	90.00	359.71	6,132.07	9,388.57	1,696.98 N	339.06 W	450,762.78	630,700.84	0.00	1,698.68	
11,000.00	90.00	359.71	6,132.06	9,388.56	1,796.98 N	339.56 W	450,862.78	630,700.34	0.00	1,798.68	
11,100.00	90.00	359.71	6,132.06	9,388.56	1,896.98 N	340.07 W	450,962.78	630,699.83	0.00	1,898.68	
11,200.00	90.00	359.71	6,132.06	9,388.56	1,996.98 N	340.58 W	451,062.78	630,699.32	0.00	1,998.68	
11,300.00	90.00	359.71	6,132.06	9,388.56	2,096.98 N	341.08 W	451,162.78	630,698.82	0.00	2,098.68	
11,400.00	90.00	359.71	6,132.06	9,388.56	2,196.98 N	341.59 W	451,262.78	630,698.31	0.00	2,198.68	
11,500.00	90.00	359.71	6,132.06	9,388.56	2,296.98 N	342.09 W	451,362.78	630,697.81	0.00	2,298.68	
11,600.00	90.00	359.71	6,132.06	9,388.56	2,396.98 N	342.60 W	451,462.78	630,697.30	0.00	2,398.68	
11,700.00	90.00	359.71	6,132.06	9,388.56	2,496.97 N	343.10 W	451,562.77	630,696.80	0.00	2,498.68	
11,800.00	90.00	359.71	6,132.06	9,388.56	2,596.97 N	343.61 W	451,662.77	630,696.29	0.00	2,598.68	
11,900.00	90.00	359.71	6,132.06	9,388.56	2,696.97 N	344.11 W	451,762.77	630,695.79	0.00	2,698.68	
12,000.00	90.00	359.71	6,132.06	9,388.56	2,796.97 N	344.62 W	451,862.77	630,695.28	0.00	2,798.68	
12,100.00	90.00	359.71	6,132.06	9,388.56	2,896.97 N	345.13 W	451,962.77	630,694.77	0.00	2,898.68	
12,200.00	90.00	359.71	6,132.06	9,388.56	2,996.97 N	345.63 W	452,062.77	630,694.27	0.00	2,998.68	
12,300.00	90.00	359.71	6,132.06	9,388.56	3,096.97 N	346.14 W	452,162.77	630,693.76	0.00	3,098.68	
12,400.00	90.00	359.71	6,132.06	9,388.56	3,196.96 N	346.64 W	452,262.76	630,693.26	0.00	3,198.68	
12,500.00	90.00	359.71	6,132.06	9,388.56	3,296.96 N	347.15 W	452,362.76	630,692.75	0.00	3,298.68	
12,600.00	90.00	359.71	6,132.05	9,388.55	3,396.96 N	347.65 W	452,462.76	630,692.25	0.00	3,398.68	
12,700.00	90.00	359.71	6,132.05	9,388.55	3,496.96 N	348.16 W	452,562.76	630,691.74	0.00	3,498.68	
12,800.00	90.00	359.71	6,132.05	9,388.55	3,596.96 N	348.67 W	452,662.76	630,691.23	0.00	3,598.68	
12,900.00	90.00	359.71	6,132.05	9,388.55	3,696.96 N	349.17 W	452,762.76	630,690.73	0.00	3,698.68	
13,000.00	90.00	359.71	6,132.05	9,388.55	3,796.96 N	349.68 W	452,862.76	630,690.22	0.00	3,798.68	
13,100.00	90.00	359.71	6,132.05	9,388.55	3,896.96 N	350.18 W	452,962.76	630,689.72	0.00	3,898.68	
13,200.00	90.00	359.71	6,132.05	9,388.55	3,996.95 N	350.69 W	453,062.75	630,689.21	0.00	3,998.68	
13,300.00	90.00	359.71	6,132.05	9,388.55	4,096.95 N	351.19 W	453,162.75	630,688.71	0.00	4,098.68	
13,400.00	90.00	359.71	6,132.05	9,388.55	4,196.95 N	351.70 W	453,262.75	630,688.20	0.00	4,198.68	
13,500.00	90.00	359.71	6,132.05	9,388.55	4,296.95 N	352.20 W	453,362.75	630,687.70	0.00	4,298.68	
13,600.00	90.00	359.71	6,132.05	9,388.55	4,396.95 N	352.71 W	453,462.75	630,687.19	0.00	4,398.68	
13,700.00	90.00	359.71	6,132.05	9,388.55	4,496.95 N	353.22 W	453,562.75	630,686.68	0.00	4,498.68	
13,800.00	90.00	359.71	6,132.05	9,388.55	4,596.95 N	353.72 W	453,662.75	630,686.18	0.00	4,598.68	
13,900.00	90.00	359.71	6,132.05	9,388.55	4,696.95 N	354.23 W	453,762.75	630,685.67	0.00	4,698.68	
14,000.00	90.00	359.71	6,132.05	9,388.55	4,796.94 N	354.73 W	453,862.74	630,685.17	0.00	4,798.68	
14,100.00	90.00	359.71	6,132.05	9,388.55	4,896.94 N	355.24 W	453,962.74	630,684.66	0.00	4,898.68	
14,200.00	90.00	359.71	6,132.05	9,388.55	4,996.94 N	355.74 W	454,062.74	630,684.16	0.00	4,998.68	
14,300.00	90.00	359.71	6,132.04	9,388.54	5,096.94 N	356.25 W	454,162.74	630,683.65	0.00	5,098.68	
14,400.00	90.00	359.71	6,132.04	9,388.54	5,196.94 N	356.75 W	454,262.74	630,683.15	0.00	5,198.68	
14,500.00	90.00	359.71	6,132.04	9,388.54	5,296.94 N	357.26 W	454,362.74	630,682.64	0.00	5,298.68	
14,600.00	90.00	359.71	6,132.04	9,388.54	5,396.94 N	357.77 W	454,462.74	630,682.13	0.00	5,398.68	
14,700.00	90.00	359.71	6,132.04	9,388.54	5,496.94 N	358.27 W	454,562.74	630,681.63	0.00	5,498.68	
14,800.00	90.00	359.71	6,132.04	9,388.54	5,596.93 N	358.78 W	454,662.73	630,681.12	0.00	5,598.68	
14,900.00	90.00	359.71	6,132.04	9,388.54	5,696.93 N	359.28 W	454,762.73	630,680.62	0.00	5,698.68	

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Easting (usft)	Map Coordinates Northing (usft)	Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
15,000.00	90.00	359.71	6,132.04	9,388.54	5,796.93 N	359.79 W	454,862.73	630,680.11	0.00	5,798.68	
15,100.00	90.00	359.71	6,132.04	9,388.54	5,896.93 N	360.29 W	454,962.73	630,679.61	0.00	5,898.68	
15,200.00	90.00	359.71	6,132.04	9,388.54	5,996.93 N	360.80 W	455,062.73	630,679.10	0.00	5,998.68	
15,300.00	90.00	359.71	6,132.04	9,388.54	6,096.93 N	361.31 W	455,162.73	630,678.59	0.00	6,098.68	
15,400.00	90.00	359.71	6,132.04	9,388.54	6,196.93 N	361.81 W	455,262.73	630,678.09	0.00	6,198.68	
15,500.00	90.00	359.71	6,132.04	9,388.54	6,296.93 N	362.32 W	455,362.73	630,677.58	0.00	6,298.68	
15,600.00	90.00	359.71	6,132.04	9,388.54	6,396.92 N	362.82 W	455,462.72	630,677.08	0.00	6,398.68	
15,700.00	90.00	359.71	6,132.04	9,388.54	6,496.92 N	363.33 W	455,562.72	630,676.57	0.00	6,498.68	
15,800.00	90.00	359.71	6,132.04	9,388.54	6,596.92 N	363.83 W	455,662.72	630,676.07	0.00	6,598.68	
15,900.00	90.00	359.71	6,132.03	9,388.53	6,696.92 N	364.34 W	455,762.72	630,675.56	0.00	6,698.68	
16,000.00	90.00	359.71	6,132.03	9,388.53	6,796.92 N	364.84 W	455,862.72	630,675.06	0.00	6,798.68	
16,100.00	90.00	359.71	6,132.03	9,388.53	6,896.92 N	365.35 W	455,962.72	630,674.55	0.00	6,898.68	
16,200.00	90.00	359.71	6,132.03	9,388.53	6,996.92 N	365.86 W	456,062.72	630,674.04	0.00	6,998.68	
16,300.00	90.00	359.71	6,132.03	9,388.53	7,096.92 N	366.36 W	456,162.72	630,673.54	0.00	7,098.68	
16,400.00	90.00	359.71	6,132.03	9,388.53	7,196.91 N	366.87 W	456,262.71	630,673.03	0.00	7,198.68	
16,500.00	90.00	359.71	6,132.03	9,388.53	7,296.91 N	367.37 W	456,362.71	630,672.53	0.00	7,298.68	
16,600.00	90.00	359.71	6,132.03	9,388.53	7,396.91 N	367.88 W	456,462.71	630,672.02	0.00	7,398.68	
16,700.00	90.00	359.71	6,132.03	9,388.53	7,496.91 N	368.38 W	456,562.71	630,671.52	0.00	7,498.68	
16,800.00	90.00	359.71	6,132.03	9,388.53	7,596.91 N	368.89 W	456,662.71	630,671.01	0.00	7,598.68	
16,900.00	90.00	359.71	6,132.03	9,388.53	7,696.91 N	369.39 W	456,762.71	630,670.51	0.00	7,698.68	
17,000.00	90.00	359.71	6,132.03	9,388.53	7,796.91 N	369.90 W	456,862.71	630,670.00	0.00	7,798.68	
17,100.00	90.00	359.71	6,132.03	9,388.53	7,896.90 N	370.41 W	456,962.70	630,669.49	0.00	7,898.68	
17,200.00	90.00	359.71	6,132.03	9,388.53	7,996.90 N	370.91 W	457,062.70	630,668.99	0.00	7,998.68	
17,300.00	90.00	359.71	6,132.03	9,388.53	8,096.90 N	371.42 W	457,162.70	630,668.48	0.00	8,098.68	
17,400.00	90.00	359.71	6,132.03	9,388.53	8,196.90 N	371.92 W	457,262.70	630,667.98	0.00	8,198.68	
17,500.00	90.00	359.71	6,132.02	9,388.52	8,296.90 N	372.43 W	457,362.70	630,667.47	0.00	8,298.68	
17,600.00	90.00	359.71	6,132.02	9,388.52	8,396.90 N	372.93 W	457,462.70	630,666.97	0.00	8,398.68	
17,700.00	90.00	359.71	6,132.02	9,388.52	8,496.90 N	373.44 W	457,562.70	630,666.46	0.00	8,498.68	
17,800.00	90.00	359.71	6,132.02	9,388.52	8,596.90 N	373.94 W	457,662.70	630,665.96	0.00	8,598.68	
17,900.00	90.00	359.71	6,132.02	9,388.52	8,696.89 N	374.45 W	457,762.69	630,665.45	0.00	8,698.68	
18,000.00	90.00	359.71	6,132.02	9,388.52	8,796.89 N	374.96 W	457,862.69	630,664.94	0.00	8,798.68	
18,100.00	90.00	359.71	6,132.02	9,388.52	8,896.89 N	375.46 W	457,962.69	630,664.44	0.00	8,898.68	
18,200.00	90.00	359.71	6,132.02	9,388.52	8,996.89 N	375.97 W	458,062.69	630,663.93	0.00	8,998.68	
18,300.00	90.00	359.71	6,132.02	9,388.52	9,096.89 N	376.47 W	458,162.69	630,663.43	0.00	9,098.68	
18,400.00	90.00	359.71	6,132.02	9,388.52	9,196.89 N	376.98 W	458,262.69	630,662.92	0.00	9,198.68	
18,500.00	90.00	359.71	6,132.02	9,388.52	9,296.89 N	377.48 W	458,362.69	630,662.42	0.00	9,298.68	
18,600.00	90.00	359.71	6,132.02	9,388.52	9,396.89 N	377.99 W	458,462.69	630,661.91	0.00	9,398.68	
18,700.00	90.00	359.71	6,132.02	9,388.52	9,496.88 N	378.50 W	458,562.68	630,661.40	0.00	9,498.68	
18,800.00	90.00	359.71	6,132.02	9,388.52	9,596.88 N	379.00 W	458,662.68	630,660.90	0.00	9,598.68	
18,900.00	90.00	359.71	6,132.02	9,388.52	9,696.88 N	379.51 W	458,762.68	630,660.39	0.00	9,698.68	
19,000.00	90.00	359.71	6,132.02	9,388.52	9,796.88 N	380.01 W	458,862.68	630,659.89	0.00	9,798.68	

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Eastings (usft)	Map Coordinates Northing (usft)	Eastings (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
19,100.00	90.00	359.71	6,132.02	9,388.52	9,896.88 N	380.52 W	458,962.68	630,659.38	0.00	9,898.68	
19,200.00	90.00	359.71	6,132.01	9,388.51	9,996.88 N	381.02 W	459,062.68	630,658.88	0.00	9,998.68	
19,300.00	90.00	359.71	6,132.01	9,388.51	10,096.88 N	381.53 W	459,162.68	630,658.37	0.00	10,098.68	
19,400.00	90.00	359.71	6,132.01	9,388.51	10,196.88 N	382.03 W	459,262.68	630,657.87	0.00	10,198.68	
19,500.00	90.00	359.71	6,132.01	9,388.51	10,296.87 N	382.54 W	459,362.67	630,657.36	0.00	10,298.68	
19,600.00	90.00	359.71	6,132.01	9,388.51	10,396.87 N	383.05 W	459,462.67	630,656.85	0.00	10,398.68	
19,700.00	90.00	359.71	6,132.01	9,388.51	10,496.87 N	383.55 W	459,562.67	630,656.35	0.00	10,498.68	
19,800.00	90.00	359.71	6,132.01	9,388.51	10,596.87 N	384.06 W	459,662.67	630,655.84	0.00	10,598.68	
19,900.00	90.00	359.71	6,132.01	9,388.51	10,696.87 N	384.56 W	459,762.67	630,655.34	0.00	10,698.68	
20,000.00	90.00	359.71	6,132.01	9,388.51	10,796.87 N	385.07 W	459,862.67	630,654.83	0.00	10,798.68	
20,100.00	90.00	359.71	6,132.01	9,388.51	10,896.87 N	385.57 W	459,962.67	630,654.33	0.00	10,898.68	
20,200.00	90.00	359.71	6,132.01	9,388.51	10,996.87 N	386.08 W	460,062.67	630,653.82	0.00	10,998.68	
20,300.00	90.00	359.71	6,132.01	9,388.51	11,096.86 N	386.58 W	460,162.66	630,653.32	0.00	11,098.68	
20,400.00	90.00	359.71	6,132.01	9,388.51	11,196.86 N	387.09 W	460,262.66	630,652.81	0.00	11,198.68	
20,500.00	90.00	359.71	6,132.01	9,388.51	11,296.86 N	387.60 W	460,362.66	630,652.30	0.00	11,298.68	
20,600.00	90.00	359.71	6,132.01	9,388.51	11,396.86 N	388.10 W	460,462.66	630,651.80	0.00	11,398.68	
20,700.00	90.00	359.71	6,132.01	9,388.51	11,496.86 N	388.61 W	460,562.66	630,651.29	0.00	11,498.68	
20,800.00	90.00	359.71	6,132.00	9,388.50	11,596.86 N	389.11 W	460,662.66	630,650.79	0.00	11,598.68	
20,900.00	90.00	359.71	6,132.00	9,388.50	11,696.86 N	389.62 W	460,762.66	630,650.28	0.00	11,698.68	
21,000.00	90.00	359.71	6,132.00	9,388.50	11,796.86 N	390.12 W	460,862.66	630,649.78	0.00	11,798.68	
21,100.00	90.00	359.71	6,132.00	9,388.50	11,896.85 N	390.63 W	460,962.65	630,649.27	0.00	11,898.68	
21,200.00	90.00	359.71	6,132.00	9,388.50	11,996.85 N	391.14 W	461,062.65	630,648.76	0.00	11,998.68	
21,300.00	90.00	359.71	6,132.00	9,388.50	12,096.85 N	391.64 W	461,162.65	630,648.26	0.00	12,098.68	
21,400.00	90.00	359.71	6,132.00	9,388.50	12,196.85 N	392.15 W	461,262.65	630,647.75	0.00	12,198.68	
21,500.00	90.00	359.71	6,132.00	9,388.50	12,296.85 N	392.65 W	461,362.65	630,647.25	0.00	12,298.68	
21,568.85	90.00	359.71	6,132.00	9,388.50	12,365.70 N	393.00 W	461,431.50	630,646.90	0.00	12,367.53	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N-S (usft)	Local Coordinates +E-W (usft)	Comment
8,730.20	8,730.20	0.00	0.00	KOP, Start 10° DLS
9,180.20	9,135.34	103.32	-132.24	Begin Build & Turn
9,820.34	9,388.57	617.34	-333.60	Landing Point
21,568.85	9,388.50	12,365.70	-393.00	TD @ 21568.85' MD

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	+N/_S (usft)	+E/_W (usft)	Start TVD (usft)
User	No Target (Freehand)	359.71	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	21,568.85	Plan #1	Blind

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	TVDSS (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
855.50	855.50	-2,401.00	Rustler		0.0000	359.71
949.50	949.50	-2,307.00	Top Salt		0.0000	359.71
3,283.50	3,283.50	27.00	Base Salt		0.0000	359.71
3,497.50	3,497.50	241.00	Delaware		0.0000	359.71
4,430.50	4,430.50	1,174.00	Cherry Canyon		0.0000	359.71
6,042.50	6,042.50	2,786.00	Brushy Canyon		0.0000	359.71
7,300.50	7,300.50	4,044.00	Bone Spring		0.0000	359.71
8,291.50	8,291.50	5,035.00	1st Bone Spring Ss		0.0000	359.71
9,196.09	9,146.50	5,890.00	2nd Bone Spring Ss		0.0000	359.71
9,503.75	9,321.50	6,065.00	2nd Bone Spring B		0.0000	359.71
9,810.11	9,388.50	6,132.00	LP		0.0000	359.71

HALLIBURTON

Plan Report for Poker Lake Unit #359H - Plan #1

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Poker Lake Unit 359H SL ()	0.00	0.00	0.00	0.00	0.00	449,065.80	631,039.90	32° 14' 1.998 N	103° 54' 34.341 W
- plan hits target center									
- Point									
330' Hard-Line Crossing - 21439' MD ()	0.00	0.00	9,388.50	12,235.85	-392.34	461,301.65	630,647.56	32° 16' 3.100 N	103° 54' 38.348 W
- plan hits target center									
- Point									
Poker Lake Unit 359H LTP ()	0.00	0.00	9,388.50	12,235.70	-392.10	461,301.50	630,647.80	32° 16' 3.099 N	103° 54' 38.345 W
- plan misses target center by 0.24usft at 21438.85usft MD (9388.50 TVD, 12235.70 N, -392.34 E)									
- Point									
Poker Lake Unit 359H FTP ()	0.00	0.00	9,388.50	597.20	-333.10	449,663.00	630,706.80	32° 14' 7.921 N	103° 54' 38.192 W
- plan misses target center by 0.27usft at 9800.20usft MD (9388.29 TVD, 597.20 N, -333.28 E)									
- Point									
Poker Lake Unit 359H PBHL ()	0.00	0.00	9,388.50	12,365.70	-393.00	461,431.50	630,646.90	32° 16' 4.385 N	103° 54' 38.350 W
- plan hits target center									
- Rectangle (sides W11,768.00 H60.00 D0.00)									

Directional Difficulty Index

Average Dogleg over Survey:	0.51 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 9,820.34 usft
Net Tortousity applicable to Plans:	0.51 °/100usft	Directional Difficulty Index:	6.641

Audit Info

HALLIBURTON

North Reference Sheet for Poker Lake Unit - Poker Lake Unit #359H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GE 3230+ 26.5 KB @ 3256.50usft (TBD). Northing and Easting are relative to Poker Lake Unit #359H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin: 0° 0' 0.000 E°, Latitude Origin: 0° 0' 0.000 N°

False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 0.99992876

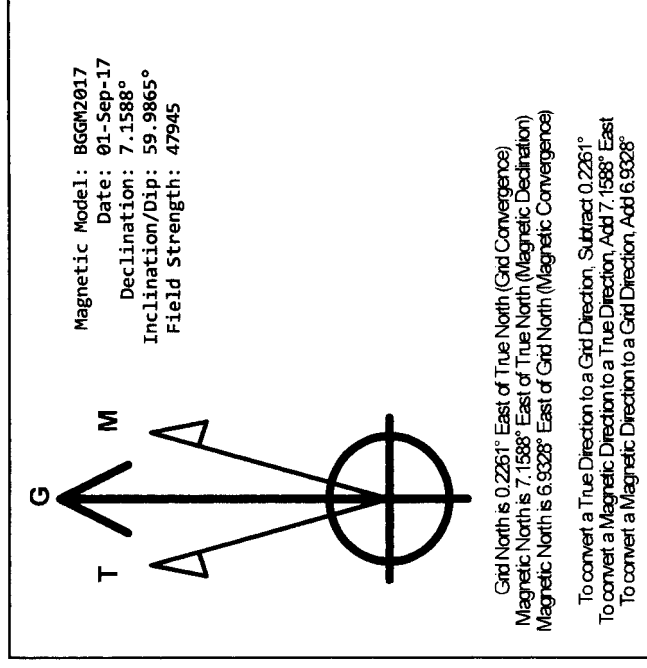
Grid Coordinates of Well: 449,065.80 usft N, 631,039.90 usft E

Geographical Coordinates of Well: 32° 14' 02.00" N, 103° 54' 34.34" W

Grid Convergence at Surface is: 0.2261°

Based upon Minimum Curvature type calculations, at a Measured Depth of 21,568.85usft the Bottom Hole Displacement is 12,371.94usft in the Direction of 358.18° (Grid).

Magnetic Convergence at surface is: -6.9300° (1 September 2017, , BGGM2017)





GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

Customer: AUSTIN DISTRIBUTING	Customer Ref: PENDING	Invoice No: 201709
Test Date: 6/8/2014	Hose Serial No: D-060814-1	Created By: NORMAN

Product Description: FDJ-042-0R41/16.5KRLGE/E LE

End fitting 1: 4 1/16 in. 5K FLG	End fitting 2: 4 1/16 in. 5K FLG	Assembly Code: L33090011513D-060814-1	Test Pressure: 7,500 PSI
Gates Part No.: 4274-6001	Working Pressure: 5,000 PSI		

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality: [Signature]	Date: 6/8/2014	Signature: [Signature]
QUALITY	6/8/2014	Signature: [Signature]
Technical Supervisor:	Date:	Signature:
PRODUCTION	6/8/2014	Signature: [Signature]

1F14-76

XTO

choke
line

Nor
Am
#25

16

JOSE L. DIAZ LENGTH 4'10" 170 SKIN 4'10" 170

TEST PRESENTED / \$00.00
12296011513100

[Handwritten signature]

6380760115130-060814-1004

150613

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMLC068431
WELL NAME & NO.:	Poker Lake Unit 359H
SURFACE HOLE FOOTAGE:	1980' FNL & 0660' FWL
BOTTOM HOLE FOOTAGE	0800' FNL & 0550' FEL Sec. 17, T. 24 S., R 30 E.
LOCATION:	Section 08, T. 24 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☐ None	☒ Secretary	☐ R-111-P
Cave Karst Potential	☒ Low	☐ Medium	☐ High
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☒ Conventional	☐ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **800** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Operator shall filled 1/3rd intermediate casing with fluid to maintain collapse safety factor and set intermediate casing at 3450ft.

- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Additional cement maybe required. Excess calculates to -16%.**

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
- 2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 intermediate casing shoe shall be **3000 (3M)** psi.

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. 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. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - 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. 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.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
5. 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. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE.

If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

- 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. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

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

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

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

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