13-151

TCS 3/26/2013

Form 3160-3
(April 2004)

RECEIVED
MAR 22 2013
NMOCD ARTESIA

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FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. A
BHL NM0506,NM0522 (see box six)

6. If Indian, Allotee or Tribe Name A
See pg 1 of 8pt DP for lease info.

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
Poker Lake Unit NMNM 71016X

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. <306402>
Poker Lake Unit 402H

2. Name of Operator <260737>
BOPCO, L. P.

9. API Well No.
30-015-41229

3a. Address
P. O. Box 2760
Midland, TX 79702

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

10. Field and Pool, or Exploratory <96386>
Poker Lake (Delaware) South

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface **SENE,UL H, 1530' FNL&930' FEL, Lat:N32.176722,Long:W103.776711**

At proposed prod. zone **600' FNL&1800' FEL,Sec29-T24S-R31E,Lat:N32.193783,Lg:W103.796622**

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 33, T24S-R31E, Mer, NMP

14. Distance in miles and direction from nearest town or post office*
20 miles East of Malaga

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
250'	**4766.99**	**560**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. ~~541~~ 91	19. Proposed Depth	20. BLM/BIA Bond No. on file
	14,332/8,093	**COB 000050**
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3,466' GL	**04/10/2013**	**30 Days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Jeremy Braden	**Jeremy Braden**	10/31/12

Title: **Engineering Assistant**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson		MAR 20 2013

Title	Office
FIELD MANAGER	**CARLSBAD FIELD OFFICE**

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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)*

Approval Subject to General Requirements & Special Stipulations Attached

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-41229	50386	POKER LAKE SOUTH (Delaware)

Property Code	Property Name	Well Number
306402	POKER LAKE UNIT	402H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3466'

Surface Location

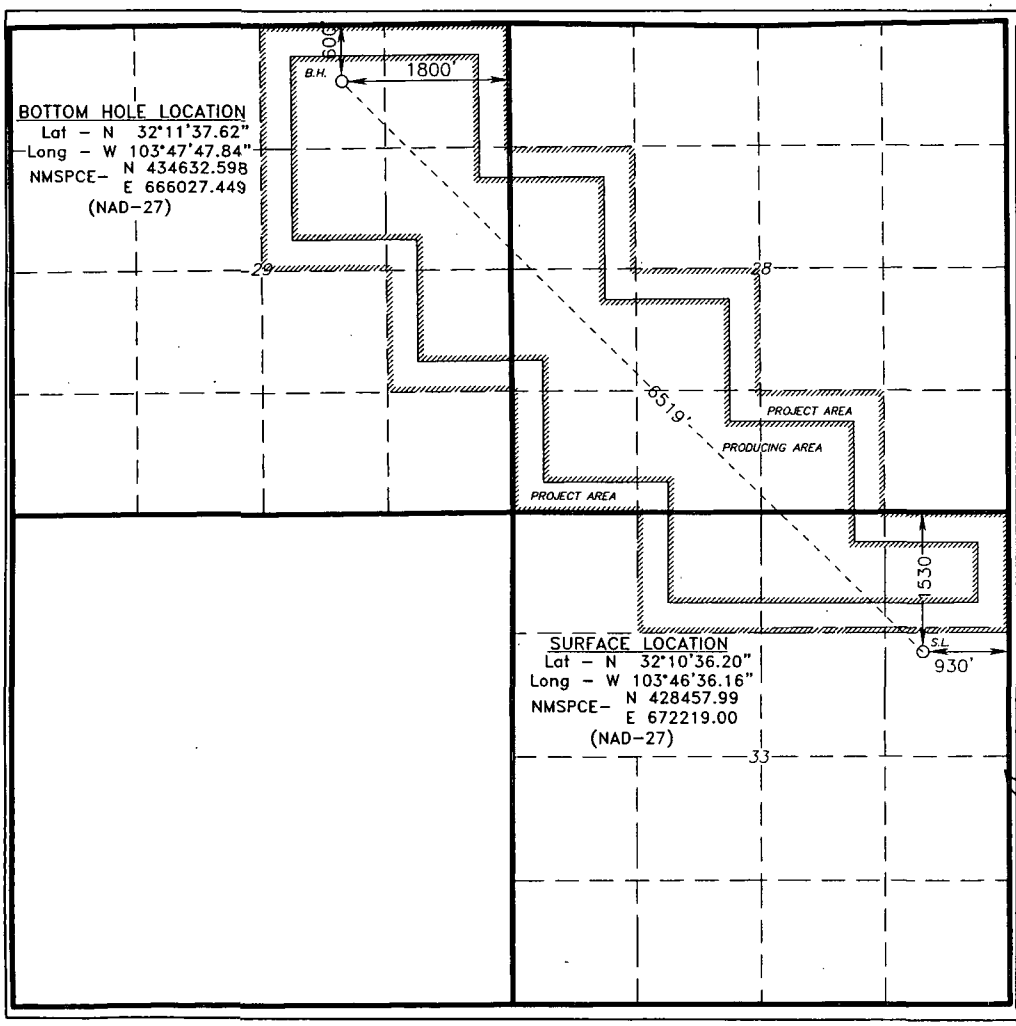
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	33	24 S	31 E		1530	NORTH	930	EAST	EDDY

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
B	29	24 S	31 E		600	NORTH	1800	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
560			

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



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.

Jeremy Braden 10-31-12
Signature Date

Jeremy Braden
Printed Name

jdbraden@basspet.com
Email Address

SURVEYOR CERTIFICATION

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

OCTOBER 20, 2012
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES 7977
NEW MEXICO
REGISTERED PROFESSIONAL LAND SURVEYOR

NM PE/PS 26761

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 26761

BOPCO, L.P.

P. O. Box 2760
Midland, Texas 79702

432-683-2277 FAX-432-687-0329

October 31, 2012

Bureau of Land Management
Carlsbad Field Office
620 East Green Street
Carlsbad, New Mexico 88220-6292

Attn: Mr. Don Peterson – Assistant Field Manager, Minerals

RE: APPLICATION FOR PERMIT TO DRILL
POKER LAKE UNIT #402H
1530' FNL, 930' FEL, Sec. 33, T24S, R31E, Eddy County, NM

Dear Mr. Peterson,

In reference to the above captioned well, I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 31 day of October, 2012.

If you have any questions regarding the accuracy of the plan provided herein, please do not hesitate to contact me at (432) 683-2277.

Sincerely,

Jeremy Braden
Engineering Tech

Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 916' and cement circulated to surface.

7" casing will be set at approximately 8,215' MD, 8,029' TVD (In curve) and cemented in two stages with DV Tool set at approximately 5,000'. Cement will be circulated 500' into the 9-5/8" intermediate casing.

Drilling procedure, BOP diagram, and anticipated tops are attached.

This well is located outside the R111 Potash area and Secretary's Potash area.

The surface location is nonstandard and located inside the Poker Lake Unit.

The bottom hole location is nonstandard and located inside the Poker Lake Unit.

Surface Lease Numbers- Federal Lease: NMNM 0030454

Bottom Hole Lease Numbers – Federal Lease: NMNM 0000506A

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Main Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide).

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Poker Lake Unit 402H
LEGAL DESCRIPTION - SURFACE: 1530' FNL, 930' FEL, Section 33, T24S, R31E, Eddy County, NM.
BHL: 600' FNL, 1800' FEL, Section 29, T24S, R31E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS *(See No. 2 Below)*

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3488' (estimated)
GL 3466'

Formation Description	Est from KB (TVD)	Est (MD)	SUB-SEA TOP	BEARING
T/Fresh Water	400'	400'	+ 3,088'	Fresh Water
T/Rustler	583'	583'	+ 2,905'	Barren
T/Salado	926'	926'	+ 2,562'	Barren
Base/Salt	4,037'	4,037'	- 549	Oil/Gas
T/Lamar	4,343'	4,343'	- 855'	Oil/Gas
T/Ramsey	4,388'	4,388'	- 900'	Oil/Gas
Cherry Canyon	5,251'	5,251'	- 1,763'	Oil/Gas
Brushy Canyon	6,487'	6,487'	- 2,999'	Oil/Gas
KOP	7,515'	7,515'	- 4,027'	Oil/Gas
LBC "8A" Sand	7,934'	8,025'	- 4,446'	Oil/Gas
EOC	8,093'	8,465'	- 4,605'	Oil/Gas
Target #1	8,093'	8,465'	- 4,605'	Oil/Gas
TD Horizontal Hole	8,093'	14,332'	- 4,605'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVAL MD	HOLE SIZE	PURPOSE	INSTALLATION TYPE
20"	0' – 120'	26"	Conductor	Contractor Discretion
13-3/8", 48 ppf, H-40, or 54.5#, J-55 8rd, ST&C*	0' – 916'	17-1/2"	Surface	New
9-5/8", 40 ppf, N-80, 8rd, LT&C or 9-5/8" 40 ppf, J-55, 8rd, LT&C*	0' – 4,363'	12-1/4"	Intermediate	New
7", 26 ppf, N-80, Buttress or 8rd LTC*	0' – 8,215'	8-3/4"	Production	New
Completion System				
4-1/2", 11.6 ppf, HCP-110 8rd LT&C, BTC	8,165' – 14,332'	6-1/8"	Completion System	New

*** Depending on availability.**

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48 ppf, H-40, 8rd, ST&C*	8.52	1.61	1.12
13-3/8", 54.5 ppf, J-55, 8rd, STC*	19.88	2.54	1.77
9-5/8", 40 ppf, N-80, 8rd, LT&C*	4.98	1.24	2.36
9-5/8", 40 ppf, J-55, 8rd, LT&C*	4.26	1.13	1.62
7", 26 ppf, N-80, Buttress*	3.42	1.26	1.65
7", 26 ppf, N-80, 8rd, LTC*	2.94	1.21	1.65
Completion System			
4-1/2", 11.6 ppf, HCP-110 8rd. LT&C	3.45	1.96	2.37
4-1/2", 11.6 ppf, HCP-110 BTC	4.53	2.06	2.37

*** Depending on availability.**

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (13-3/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING - (9-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10.0 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

Production CASING - (7")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

Completion System - (4-1/2")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.0 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM 2)

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed, used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

After running the 9-5/8" intermediate casing, a 13-5/8" or 11" BOP/BOPE system with a minimum rating of 3M will be installed on the 9-5/8" intermediate casing spool (8-3/4" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

After running the 7" intermediate casing, a 13-5/8" or 11" BOP/BOPE system with a minimum rating of 3M will be installed on the 9-5/8" intermediate casing spool (8-3/4" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

H2S contingency

H2S monitors shall be installed prior to drilling out the surface shoe. If H2S is encountered in quantities greater than 10 PPM, the well will be shut in and H2S equipment will be installed, including a flare line that will be extended pursuant to onshore oil and gas order #6.

These tests will be performed:

a) Upon installation
b) After any component changes
c) Thirty days after a previous test
d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

BOPCO, L.P. would like to request a variance to use an armored, 3", 5000 psi WP flex hose for the choke line in the drilling of the well if the rig is equip with hose. (See specification for hose that might be used, attached with APD exhibits). This is rig equipment and will help quicken nipple up time thus saving money without a safety problem. The hose itself is rated to 5000 psi ,and has 5000 psi flanges on each end. This well is to be drilled to 14,332' MD (8,093' TVD) and max surface pressure should be +/-2007 psi as prescribed in onshore order #2 shown as max BHP minus 0.22 psi/ft. Thus 3000 psi BOPE is all that is needed for this well. **Please refer to diagram 2 for choke manifold and closed loop system layout. If an armored flex hose is utilized, the company man will have all of the proper certified paper work for that hose available on location.**

POINT 5: MUD PROGRAM

DEPTH		MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0 -916'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0	9.5 - 10.5
916' - 4,363''	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5	9.5 – 10.5
4,363' – 8,215'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0	9.5 – 10.5
8,215'-14,332'	FW/Gel/Starch	8.7 – 9.0	28-36	NC	NC	<100	9.5 – 10.0	9.5 – 10.5

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING
None anticipated.

B) LOGGING

Run #1: GR with MWD during drilling of build and horizontal portions of 8-3/4" and 6-1/8" hole.

Run #2: Shuttle log w/GR, PE, Density, Neutron, Resistivity in lateral leg open hole.

Mud Logger: Rigged up at 100'

C) CONVENTIONAL CORING

None anticipated

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE:						
Lead: 0' – 616'	500	616	Class C +2% CACL + 4% Bentonite + 0.25 LB/SK Cello Flake + 3 lb/sk LCM-1	8.69	13.50	1.75
Tail: 616' – 916'	340	300	Class C + 2% CACL + 0.25 LB/SK CF	6.35	14.80	1.35
			0.25LB/SK Cello Flake + 3 lb/sk LCM-1			
INTERMEDIATE:						
Lead: 0' – 3,863'	1190	3863	EconoCEM HLC + 5% CaCl + 5#/sk Gilsonite	9.32	12.90	1.85
Tail: 3,863' – 4,363'	270	500	HalCem C	6.34	14.80	1.33
Production						
Stage 1:						
Lead: 5,000' – 7,515'	210	2515	Tuned Light + 0.75% + CFR-3 + 1.5#/sk CaCl	12.41	10.20	2.76
Tail: 7,515' – 8,215'	210	700	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.65
DV Tool @ 5,000'						
Stage 2:						
Lead: 3863' – 4,500'	60	637	EconCem HLC + 1% Econolite + 5% CaCl + 5#/sk Gilsonite	10.71	12.60	2.04
Tail: 4,500' – 5,000'	100	500	HalCem C	6.34	14.80	1.33

Cement excesses will be as follows:

Surface – 100% excess with cement circulated to surface.

1st Intermediate – 50% excess above fluid caliper with cement circulated to surface.

Production – 50% above gauge hole or 35% above electric log caliper with cement circulated 500' up into the 9-5/8" 1st intermediate casing in areas outside the SOPA. Cement will be circulated to surface on areas inside the SOPA.
Cement volumes will be adjusted proportionately for depth changes of the multi stage tool.

E) COMPLETIONS SYSTEM

A 4-1/2" completion system with open hole packers will be run in the producing lateral to a depth of 14,332'. The top of the Completion System will be set at approximately 8,165'. Cement will not be required for this system.

F) DIRECTIONAL DRILLING

BOPCO, L.P. plans to drill out the 9-5/8" intermediate casing with a 8-3/4" bit to a TVD of approximately 7,515' at which point a directional hole will be kicked off and drilled at an azimuth of 314.71 degrees, building angle at 12.00 deg/100' to 60 degrees at a TVD of 7,929' (MD 8,015'). This angle and azimuth will be maintained for 200' to a measured depth of 8,215 (8,029' TVD). At this depth 7", 26#, N80, Buttress, or 8rd LTC casing will be installed and cemented in two stages (DV Tool @ approximately 5000') with cement circulated 500' inside the 9-5/8" intermediate casing. A 6-1/8" open hole lateral will then be drilled out from 7" casing at an azimuth of 314.71 degrees, inclination building to 90 degrees to a measured depth of 14,332', TVD 8,093'. At this depth a 4-1/2" Completion System with packers installed for zone isolation will be run into the producing lateral.

G) H_2S SAFTEY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located inside the H2S area, H_2S equipment will be rigged up after setting surface casing. For the wells located inside the H2S area the flare pit will be located 150' from the location. For wells located outside the H2S area flare pit will be located 100' away from the location. **(See page 6 of Survey plat package and diagram 2)** There is not any H_2S anticipated in the area, although in the event that H_2S is encountered, the H_2S contingency plan attached will be implemented. **(Please refer to diagram 2 for choke manifold and closed loop system layout.) Please refer to H2S location diagram for location of important H2S safety items.**

H) CLOSED LOOP AND CHOKE MANIFLOLD

Please see diagram 2.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3787 psi (max) or MWE of 9.0 ppg is expected. Lost circulation may exist in the Delaware Section from 4,388'-8,093' TVD.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

30 days drilling operations

14 days completion operations

JDB/BTC

BOPCO, L.P.

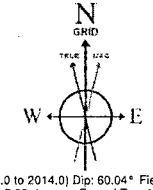
Location: Eddy County, NM
Field: Poker Lake Unit
Facility: Poker Lake Unit No. 402H

Slot: No.402H SHL
Well: No.402H
Wellbore: No.402H PWB

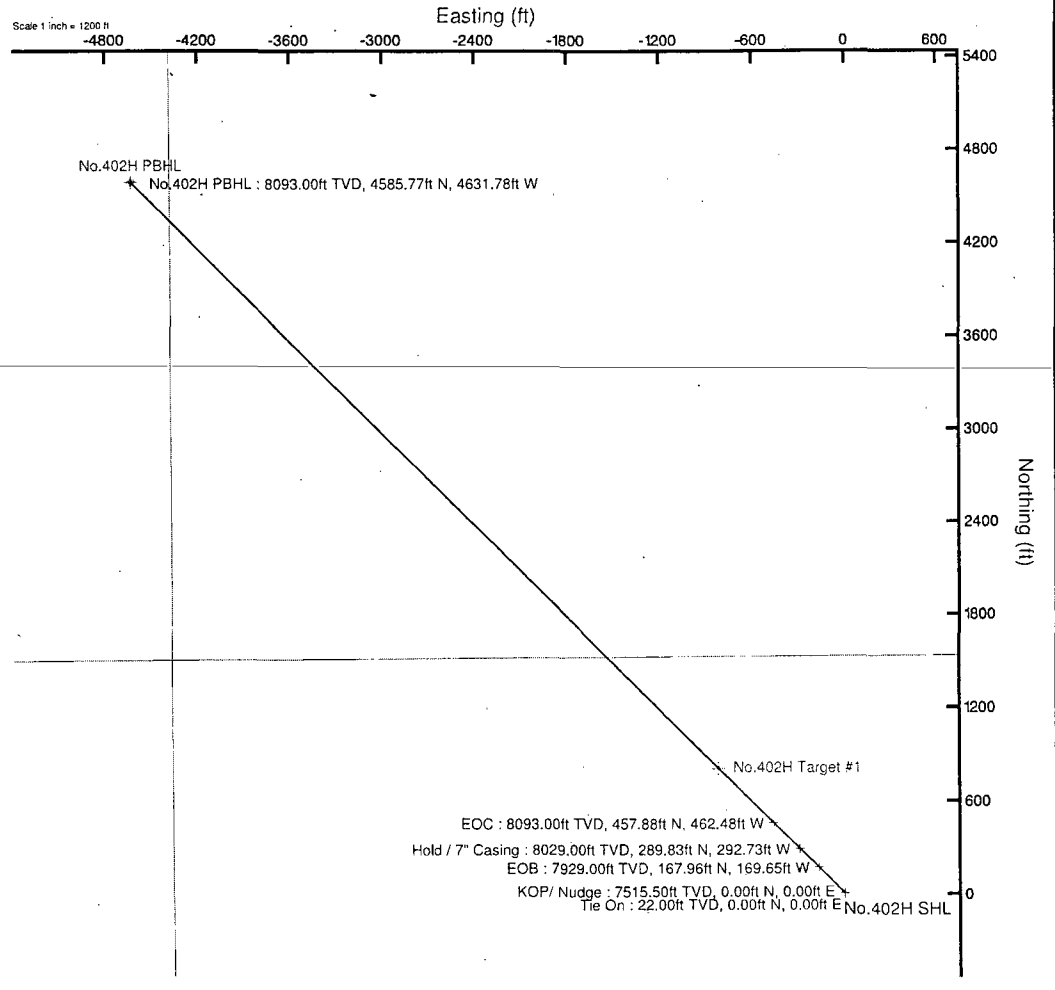
BAKER HUGHES

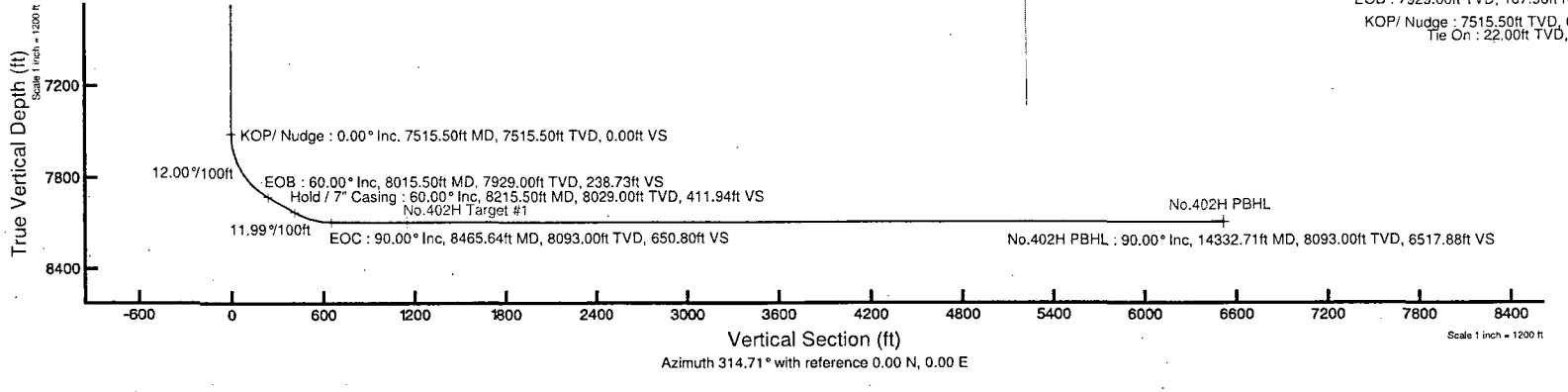
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	22.00	0.000	314.714	22.00	0.00	0.00	0.00	0.00
KOP/ Nudge	7515.50	0.000	314.714	7515.50	0.00	0.00	0.00	0.00
EOB	8015.50	60.000	314.714	7929.00	167.96	-169.65	12.00	238.73
Hold / 7" Casing	8215.50	60.000	314.714	8029.00	289.83	-292.73	0.00	411.94
EOC	8465.64	90.000	314.714	8093.00	457.88	-462.48	11.99	650.80
No.402H PBHL	14332.71	90.000	314.714	8093.00	4585.77	-4631.78	0.00	6517.88

Plot reference wellpath is Rev-C.0	
True vertical depths are referenced to Rig on No.402H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.402H SHL (KB)	North Reference: Grid north
Rig on No.402H SHL (KB) to Mean Sea Level: 3488 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.402H SHL): -3466 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: harrkol on 9/17/2012



BGGM (1945.0 to 2014.0) Dip: 60.04° Field: 48428.8 nT
Magnetic North is 7.62 degrees East of True North (at 9/14/2012)
Grid North is 0.30 degrees East of True North
To correct azimuth from True to Grid subtract 0.30 degrees
To correct azimuth from Magnetic to Grid add 7.33 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.33 = 97.33





Azimuth 314.71° with reference 0.00 N, 0.00 E

Rev-C.0

Planned Wellpath Report

Rev-C.0

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Harrkol
Scale	0.999943	Report Generated	9/17/2012 at 10:50:32 AM
Convergence at slot	0.30° East	Database/Source file	WA Midland/No.402H_PWB.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W
Facility Reference Pt			672219.00	428457.99	32°10'36.204"N	103°46'36.164"W
Field Reference Pt			630272.49	405347.85	32°06'49.387"N	103°54'45.266"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No.402H SHL (KB) to Facility Vertical Datum	22.00ft
Horizontal Reference Pt	Slot	Rig on No.402H SHL (KB) to Mean Sea Level	3488.00ft
Vertical Reference Pt	Rig on No.402H SHL (KB)	Rig on No.402H SHL (KB) to Mud Line at Slot (No.402H SHL)	22.00ft
MD Reference Pt	Rig on No.402H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	314.71°

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.402H SHL**
Area	**Eddy County, NM**	Well	**No.402H**
Field	**Poker Lake Unit**	Wellbore	**No.402H PWB**
Facility	**Poker Lake Unit No. 402H**		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	314.714	0.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
22.00	0.000	314.714	22.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	Tie On
122.00†	0.000	314.714	122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
222.00†	0.000	314.714	222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
322.00†	0.000	314.714	322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
400.00†	0.000	314.714	400.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	T/ Fresh Water
422.00†	0.000	314.714	422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
522.00†	0.000	314.714	522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
583.00†	0.000	314.714	583.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	T/ Rustler
622.00†	0.000	314.714	622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
722.00†	0.000	314.714	722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
822.00†	0.000	314.714	822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
922.00†	0.000	314.714	922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
926.00†	0.000	314.714	926.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	T/ Salado
1022.00†	0.000	314.714	1022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1122.00†	0.000	314.714	1122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1222.00†	0.000	314.714	1222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1322.00†	0.000	314.714	1322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1422.00†	0.000	314.714	1422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1522.00†	0.000	314.714	1522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1622.00†	0.000	314.714	1622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1722.00†	0.000	314.714	1722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1822.00†	0.000	314.714	1822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
1922.00†	0.000	314.714	1922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2022.00†	0.000	314.714	2022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2122.00†	0.000	314.714	2122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2222.00†	0.000	314.714	2222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2322.00†	0.000	314.714	2322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2422.00†	0.000	314.714	2422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2522.00†	0.000	314.714	2522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2622.00†	0.000	314.714	2622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2722.00†	0.000	314.714	2722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2822.00†	0.000	314.714	2822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
2922.00†	0.000	314.714	2922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3022.00†	0.000	314.714	3022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3122.00†	0.000	314.714	3122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3222.00†	0.000	314.714	3222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3322.00†	0.000	314.714	3322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3422.00†	0.000	314.714	3422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3522.00†	0.000	314.714	3522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3622.00†	0.000	314.714	3622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3722.00†	0.000	314.714	3722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3822.00†	0.000	314.714	3822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
3922.00†	0.000	314.714	3922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4022.00†	0.000	314.714	4022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4037.00†	0.000	314.714	4037.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	Base/Salt
4122.00†	0.000	314.714	4122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4222.00†	0.000	314.714	4222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4322.00†	0.000	314.714	4322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4343.00†	0.000	314.714	4343.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	T/Lamar
4388.00†	0.000	314.714	4388.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	T/Ramsey
4422.00†	0.000	314.714	4422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4522.00†	0.000	314.714	4522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4622.00†	0.000	314.714	4622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4722.00†	0.000	314.714	4722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4822.00†	0.000	314.714	4822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
4922.00†	0.000	314.714	4922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5022.00†	0.000	314.714	5022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5122.00†	0.000	314.714	5122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5222.00†	0.000	314.714	5222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	

Planned Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5251.00†	0.000	314.714	5251.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	Cherry Canyon
5322.00†	0.000	314.714	5322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5422.00†	0.000	314.714	5422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5522.00†	0.000	314.714	5522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5622.00†	0.000	314.714	5622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5722.00†	0.000	314.714	5722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5822.00†	0.000	314.714	5822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
5922.00†	0.000	314.714	5922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6022.00†	0.000	314.714	6022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6122.00†	0.000	314.714	6122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6222.00†	0.000	314.714	6222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6322.00†	0.000	314.714	6322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6422.00†	0.000	314.714	6422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6487.00†	0.000	314.714	6487.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	Brushy Canyon
6522.00†	0.000	314.714	6522.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6622.00†	0.000	314.714	6622.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6722.00†	0.000	314.714	6722.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6822.00†	0.000	314.714	6822.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
6922.00†	0.000	314.714	6922.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
7022.00†	0.000	314.714	7022.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
7122.00†	0.000	314.714	7122.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
7222.00†	0.000	314.714	7222.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
7322.00†	0.000	314.714	7322.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
7422.00†	0.000	314.714	7422.00	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	
7515.50	0.000	314.714	7515.50	0.00	0.00	0.00	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W	0.00	KOP/ Nudge
7522.00†	0.780	314.714	7522.00	0.04	0.03	-0.03	672218.97	428458.02	32°10'36.204"N	103°46'36.164"W	12.00	
7622.00†	12.780	314.714	7621.12	11.83	8.32	-8.41	672210.59	428466.31	32°10'36.287"N	103°46'36.261"W	12.00	
7722.00†	24.780	314.714	7715.62	43.96	30.93	-31.24	672187.76	428488.92	32°10'36.512"N	103°46'36.526"W	12.00	
7822.00†	36.780	314.714	7801.38	95.04	66.87	-67.54	672151.46	428524.86	32°10'36.869"N	103°46'36.946"W	12.00	
7922.00†	48.780	314.714	7874.64	162.84	114.57	-115.72	672103.29	428572.55	32°10'37.344"N	103°46'37.503"W	12.00	

Planned Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.402H SHL**
Area	**Eddy County, NM**	Well	**No.402H**
Field	**Poker Lake Unit**	Wellbore	**No.402H PWB**
Facility	**Poker Lake Unit No. 402H**		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8015.50	60.000	314.714	7929.00	238.73	167.96	-169.65	672049.36	428625.94	32°10'37.875"N	103°46'38.128"W	12.00	EOB
8022.00†	60.000	314.714	7932.25	244.36	171.93	-173.65	672045.36	428629.90	32°10'37.914"N	103°46'38.174"W	0.00	
8025.51†	60.000	314.714	7934.00	247.40	174.06	-175.81	672043.20	428632.04	32°10'37.935"N	103°46'38.199"W	0.00	LBC "8A" Sand
8122.00†	60.000	314.714	7982.25	330.96	232.86	-235.19	671983.82	428690.83	32°10'38.520"N	103°46'38.886"W	0.00	
8215.50	60.000	314.714	8029.00	411.94	289.83	-292.73	671926.28	428747.80	32°10'39.087"N	103°46'39.552"W	0.00	Hold / 7" Casing
8222.00†	60.780	314.714	8032.21	417.59	293.80	-296.75	671922.27	428751.77	32°10'39.126"N	103°46'39.599"W	11.99	
8322.00†	72.773	314.714	8071.57	509.32	358.34	-361.94	671857.09	428816.31	32°10'39.768"N	103°46'40.353"W	11.99	
8422.00†	84.766	314.714	8091.01	607.22	427.22	-431.51	671787.52	428885.19	32°10'40.454"N	103°46'41.159"W	11.99	
8465.64	90.000	314.714	8093.00	650.80	457.88	-462.48	671756.55	428915.85	32°10'40.759"N	103°46'41.517"W	11.99	EOC
8522.00†	90.000	314.714	8093.00	707.16	497.54	-502.53	671716.50	428955.50	32°10'41.153"N	103°46'41.981"W	0.00	
8622.00†	90.000	314.714	8093.00	807.16	567.89	-573.59	671645.44	429025.85	32°10'41.853"N	103°46'42.803"W	0.00	
8722.00†	90.000	314.714	8093.00	907.16	638.25	-644.66	671574.38	429096.20	32°10'42.553"N	103°46'43.626"W	0.00	
8822.00†	90.000	314.714	8093.00	1007.16	708.61	-715.72	671503.32	429166.56	32°10'43.253"N	103°46'44.448"W	0.00	
8922.00†	90.000	314.714	8093.00	1107.16	778.97	-786.78	671432.27	429236.91	32°10'43.952"N	103°46'45.271"W	0.00	
9022.00†	90.000	314.714	8093.00	1207.16	849.32	-857.84	671361.21	429307.26	32°10'44.652"N	103°46'46.094"W	0.00	
9122.00†	90.000	314.714	8093.00	1307.16	919.68	-928.91	671290.15	429377.61	32°10'45.352"N	103°46'46.916"W	0.00	
9222.00†	90.000	314.714	8093.00	1407.16	990.04	-999.97	671219.09	429447.97	32°10'46.052"N	103°46'47.739"W	0.00	
9322.00†	90.000	314.714	8093.00	1507.16	1060.39	-1071.03	671148.03	429518.32	32°10'46.752"N	103°46'48.561"W	0.00	
9422.00†	90.000	314.714	8093.00	1607.16	1130.75	-1142.10	671076.97	429588.67	32°10'47.452"N	103°46'49.384"W	0.00	
9522.00†	90.000	314.714	8093.00	1707.16	1201.11	-1213.16	671005.91	429659.03	32°10'48.151"N	103°46'50.206"W	0.00	
9622.00†	90.000	314.714	8093.00	1807.16	1271.46	-1284.22	670934.86	429729.38	32°10'48.851"N	103°46'51.029"W	0.00	
9722.00†	90.000	314.714	8093.00	1907.16	1341.82	-1355.28	670863.80	429799.73	32°10'49.551"N	103°46'51.852"W	0.00	
9822.00†	90.000	314.714	8093.00	2007.16	1412.18	-1426.35	670792.74	429870.08	32°10'50.251"N	103°46'52.674"W	0.00	
9922.00†	90.000	314.714	8093.00	2107.16	1482.53	-1497.41	670721.68	429940.44	32°10'50.951"N	103°46'53.497"W	0.00	
10022.00†	90.000	314.714	8093.00	2207.16	1552.89	-1568.47	670650.62	430010.79	32°10'51.650"N	103°46'54.319"W	0.00	
10122.00†	90.000	314.714	8093.00	2307.16	1623.25	-1639.53	670579.56	430081.14	32°10'52.350"N	103°46'55.142"W	0.00	
10222.00†	90.000	314.714	8093.00	2407.16	1693.60	-1710.60	670508.50	430151.49	32°10'53.050"N	103°46'55.965"W	0.00	
10322.00†	90.000	314.714	8093.00	2507.16	1763.96	-1781.66	670437.45	430221.85	32°10'53.750"N	103°46'56.787"W	0.00	
10422.00†	90.000	314.714	8093.00	2607.16	1834.32	-1852.72	670366.39	430292.20	32°10'54.450"N	103°46'57.610"W	0.00	
10522.00†	90.000	314.714	8093.00	2707.16	1904.67	-1923.79	670295.33	430362.55	32°10'55.149"N	103°46'58.432"W	0.00	

Planned Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10622.00†	90.000	314.714	8093.00	2807.16	1975.03	-1994.85	670224.27	430432.90	32°10'55.849"N	103°46'59.255"W	0.00	
10722.00†	90.000	314.714	8093.00	2907.16	2045.39	-2065.91	670153.21	430503.26	32°10'56.549"N	103°47'00.078"W	0.00	
10822.00†	90.000	314.714	8093.00	3007.16	2115.74	-2136.97	670082.15	430573.61	32°10'57.249"N	103°47'00.900"W	0.00	
10922.00†	90.000	314.714	8093.00	3107.16	2186.10	-2208.04	670011.09	430643.96	32°10'57.949"N	103°47'01.723"W	0.00	
11022.00†	90.000	314.714	8093.00	3207.16	2256.46	-2279.10	669940.03	430714.32	32°10'58.649"N	103°47'02.546"W	0.00	
11122.00†	90.000	314.714	8093.00	3307.16	2326.82	-2350.16	669868.98	430784.67	32°10'59.348"N	103°47'03.368"W	0.00	
11222.00†	90.000	314.714	8093.00	3407.16	2397.17	-2421.22	669797.92	430855.02	32°11'00.048"N	103°47'04.191"W	0.00	
11322.00†	90.000	314.714	8093.00	3507.16	2467.53	-2492.29	669726.86	430925.37	32°11'00.748"N	103°47'05.014"W	0.00	
11422.00†	90.000	314.714	8093.00	3607.16	2537.89	-2563.35	669655.80	430995.73	32°11'01.448"N	103°47'05.836"W	0.00	
11522.00†	90.000	314.714	8093.00	3707.16	2608.24	-2634.41	669584.74	431066.08	32°11'02.147"N	103°47'06.659"W	0.00	
11622.00†	90.000	314.714	8093.00	3807.16	2678.60	-2705.48	669513.68	431136.43	32°11'02.847"N	103°47'07.481"W	0.00	
11722.00†	90.000	314.714	8093.00	3907.16	2748.96	-2776.54	669442.62	431206.78	32°11'03.547"N	103°47'08.304"W	0.00	
11822.00†	90.000	314.714	8093.00	4007.16	2819.31	-2847.60	669371.57	431277.14	32°11'04.247"N	103°47'09.127"W	0.00	
11922.00†	90.000	314.714	8093.00	4107.16	2889.67	-2918.66	669300.51	431347.49	32°11'04.947"N	103°47'09.949"W	0.00	
12022.00†	90.000	314.714	8093.00	4207.16	2960.03	-2989.73	669229.45	431417.84	32°11'05.646"N	103°47'10.772"W	0.00	
12122.00†	90.000	314.714	8093.00	4307.16	3030.38	-3060.79	669158.39	431488.20	32°11'06.346"N	103°47'11.595"W	0.00	
12222.00†	90.000	314.714	8093.00	4407.16	3100.74	-3131.85	669087.33	431558.55	32°11'07.046"N	103°47'12.417"W	0.00	
12322.00†	90.000	314.714	8093.00	4507.16	3171.10	-3202.92	669016.27	431628.90	32°11'07.746"N	103°47'13.240"W	0.00	
12422.00†	90.000	314.714	8093.00	4607.16	3241.45	-3273.98	668945.21	431699.25	32°11'08.446"N	103°47'14.063"W	0.00	
12522.00†	90.000	314.714	8093.00	4707.16	3311.81	-3345.04	668874.16	431769.61	32°11'09.145"N	103°47'14.886"W	0.00	
12622.00†	90.000	314.714	8093.00	4807.16	3382.17	-3416.10	668803.10	431839.96	32°11'09.845"N	103°47'15.708"W	0.00	
12722.00†	90.000	314.714	8093.00	4907.16	3452.52	-3487.17	668732.04	431910.31	32°11'10.545"N	103°47'16.531"W	0.00	
12822.00†	90.000	314.714	8093.00	5007.16	3522.88	-3558.23	668660.98	431980.66	32°11'11.245"N	103°47'17.354"W	0.00	
12922.00†	90.000	314.714	8093.00	5107.16	3593.24	-3629.29	668589.92	432051.02	32°11'11.944"N	103°47'18.176"W	0.00	
13022.00†	90.000	314.714	8093.00	5207.16	3663.60	-3700.35	668518.86	432121.37	32°11'12.644"N	103°47'18.999"W	0.00	
13122.00†	90.000	314.714	8093.00	5307.16	3733.95	-3771.42	668447.80	432191.72	32°11'13.344"N	103°47'19.822"W	0.00	
13222.00†	90.000	314.714	8093.00	5407.16	3804.31	-3842.48	668376.75	432262.07	32°11'14.044"N	103°47'20.644"W	0.00	
13322.00†	90.000	314.714	8093.00	5507.16	3874.67	-3913.54	668305.69	432332.43	32°11'14.744"N	103°47'21.467"W	0.00	
13422.00†	90.000	314.714	8093.00	5607.16	3945.02	-3984.61	668234.63	432402.78	32°11'15.443"N	103°47'22.290"W	0.00	
13522.00†	90.000	314.714	8093.00	5707.16	4015.38	-4055.67	668163.57	432473.13	32°11'16.143"N	103°47'23.113"W	0.00	

Planned Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.402H SHL**
Area	**Eddy County, NM**	Well	**No.402H**
Field	**Poker Lake Unit**	Wellbore	**No.402H PWB**
Facility	**Poker Lake Unit No. 402H**		

WELLPATH DATA (159 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13622.00†	90.000	314.714	8093.00	5807.16	4085.74	-4126.73	668092.51	432543.49	32°11'16.843"N	103°47'23.935"W	0.00	
13722.00†	90.000	314.714	8093.00	5907.16	4156.09	-4197.79	668021.45	432613.84	32°11'17.543"N	103°47'24.758"W	0.00	
13822.00†	90.000	314.714	8093.00	6007.16	4226.45	-4268.86	667950.39	432684.19	32°11'18.242"N	103°47'25.581"W	0.00	
13922.00†	90.000	314.714	8093.00	6107.16	4296.81	-4339.92	667879.34	432754.54	32°11'18.942"N	103°47'26.404"W	0.00	
14022.00†	90.000	314.714	8093.00	6207.16	4367.16	-4410.98	667808.28	432824.90	32°11'19.642"N	103°47'27.226"W	0.00	
14122.00†	90.000	314.714	8093.00	6307.16	4437.52	-4482.05	667737.22	432895.25	32°11'20.342"N	103°47'28.049"W	0.00	
14222.00†	90.000	314.714	8093.00	6407.16	4507.88	-4553.11	667666.16	432965.60	32°11'21.041"N	103°47'28.872"W	0.00	
14322.00†	90.000	314.714	8093.00	6507.16	4578.23	-4624.17	667595.10	433035.95	32°11'21.741"N	103°47'29.695"W	0.00	
14332.71	90.000	314.714	8093.00[1]	6517.88	4585.77	-4631.78	667587.49	433043.49	32°11'21.816"N	103°47'29.783"W	0.00	No.402H PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.402H PBHL	14332.71	8093.00	4585.77	-4631.78	**667587.49**	**433043.49**	32°11'21.816"N	103°47'29.783"W	point
No.402H Target #1		8093.00	806.29	-814.38	671404.67	429264.23	32°10'44.224"N	103°46'45.590"W	point

SURVEY PROGRAM - Ref Wellbore: No.402H PWB Ref Wellpath: Rev-C.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	14332.71	NaviTrak (Standard)		No.402H PWB

Clearance Report

Rev-C.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	**BOPCO, L.P.**	Slot	**No.402H SHL**
Area	**Eddy County, NM**	Well	**No.402H**
Field	**Poker Lake Unit**	Wellbore	**No.402H PWB**
Facility	**Poker Lake Unit No. 402H**		

REPORT SETUP INFORMATION

Projection System	**NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 3.0.0**
North Reference	**Grid**	User	**Gentbry**
Scale	**0.999943**	Report Generated	**10/18/2012** at **2:09:06 PM**
Convergence at slot	**0.30° East**	Database/Source file	**WA Midland/No.402H_PWB_CR.xml**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	**0.00**	**0.00**	672219.00	428457.99	32°10'36.204"N	103°46'36.164"W
Facility Reference Pt			**672219.00**	**428457.99**	32°10'36.204"N	103°46'36.164"W
Field Reference Pt			**630272.49**	**405347.85**	32°06'49.387"N	103°54'45.266"W

WELLPATH DATUM

Calculation method	**Minimum Curvature**	Rig on No.402H SHL (KB) to Facility Vertical Datum	**22.00ft**
Horizontal Reference Pt	**Slot**	Rig on No.402H SHL (KB) to Mean Sea Level	**3488.00ft**
Vertical Reference Pt	**Rig on No.402H SHL (KB)**	Rig on No.402H SHL (KB) to Mud Line at Slot (No.402H SHL)	**22.00ft**
MD Reference Pt	**Rig on No.402H SHL (KB)**		
Field Vertical Reference	**Mean Sea Level**		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS

Ellipse Confidence Limit	**3.00 Std Dev**	Ellipse Start MD	**22.00ft**	Surface Position Uncertainty	**included**
Declination	**7.62° East of TN**	Dip Angle	**60.04°**	Mag Field Strength	**48429 nT**
Slot Surface Uncertainty @1SD		Horizontal	**0.100ft**	Vertical	**0.100ft**
Facility Surface Uncertainty @1SD		Horizontal	**8.200ft**	Vertical	**1.000ft**

ANTI-COLLISION RULE

Rule Name	**R-type Stop Drilling, Closest Approach w/Hole&Csg Limit:1.0, StdDev:3.00 w/Surface Uncert R=(D-HnC)/PU**	Rule Based On	**Ratio**
Plane of Rule	**Closest Approach**	Threshold Value	**1.00**
Subtract Casing & Hole Size	**yes**	Apply Cone of Safety	**no**

SURVEY PROGRAM - Ref Wellbore: No.402H PWB Ref Wellpath: Rev-C.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	14332.71	NaviTrak (Standard)		No.402H PWB

Clearance Report

Rev-C.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**BOPCO, L.P.**	Slot	**No.402H SHL**
Area	**Eddy County, NM**	Well	**No.402H**
Field	**Poker Lake Unit**	Wellbore	**No.402H PWB**
Facility	**Poker Lake Unit No. 402H**		

CALCULATION RANGE & CUTOFF

From: **22.00ft MD**	To: **14332.71ft MD**	C-C Cutoff: **(none)**

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

					C-C Clearance Distance			ACR Separation Ratio			
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
Poker Lake Unit No. 199	No.199 SHL	No.199	No.199 AWB	No.199 AWP	11454.58	87.43	11454.58	11455.64	0.54	11455.64	FAIL

Clearance Report

Rev-C.0

Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

CLEARANCE DATA - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

Facility: Poker Lake Unit No. 199 Slot: No.199 SHL Well: No.199 Threshold Value=1.00 † = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	Scp Ratio	ACR MASD [ft]	ACR Status
22.00	22.00	0.00	0.00	-8.00	22.00	2513.66	-2683.86	313.12	3677.17	101.18	36.34	PASS
122.00†	122.00	0.00	0.00	94.74	124.74	2513.57	-2683.89	313.12	3677.13	74.73	49.21	PASS
222.00†	222.00	0.00	0.00	193.70	223.70	2513.35	-2684.01	313.12	3677.07	74.71	49.22	PASS
322.00†	322.00	0.00	0.00	289.43	319.42	2513.15	-2684.22	313.12	3677.08	74.68	49.24	PASS
422.00†	422.00	0.00	0.00	386.57	416.57	2513.05	-2684.45	313.11	3677.19	74.64	49.27	PASS
522.00†	522.00	0.00	0.00	487.98	517.98	2513.02	-2684.67	313.11	3677.33	74.59	49.30	PASS
622.00†	622.00	0.00	0.00	585.51	615.51	2512.99	-2684.88	313.11	3677.46	74.52	49.35	PASS
722.00†	722.00	0.00	0.00	684.45	714.45	2512.99	-2685.15	313.10	3677.66	74.44	49.40	PASS
822.00†	822.00	0.00	0.00	790.01	820.00	2513.02	-2685.32	313.10	3677.80	74.35	49.47	PASS
922.00†	922.00	0.00	0.00	888.71	918.70	2513.12	-2685.31	313.10	3677.86	74.24	49.54	PASS
1022.00†	1022.00	0.00	0.00	987.19	1017.19	2513.27	-2685.32	313.10	3677.98	74.11	49.63	PASS
1122.00†	1122.00	0.00	0.00	1085.83	1115.82	2513.46	-2685.34	313.11	3678.12	73.98	49.72	PASS
1222.00†	1222.00	0.00	0.00	1179.60	1209.60	2513.75	-2685.39	313.11	3678.37	73.83	49.82	PASS
1322.00†	1322.00	0.00	0.00	1272.04	1302.04	2514.27	-2685.45	313.11	3678.81	73.68	49.93	PASS
1422.00†	1422.00	0.00	0.00	1369.75	1399.74	2514.97	-2685.60	313.12	3679.40	73.51	50.06	PASS
1522.00†	1522.00	0.00	0.00	1470.12	1500.12	2515.67	-2685.77	313.13	3680.00	73.32	50.19	PASS
1622.00†	1622.00	0.00	0.00	1569.77	1599.76	2516.37	-2685.93	313.13	3680.60	73.12	50.34	PASS
1722.00†	1722.00	0.00	0.00	1669.08	1699.06	2517.08	-2686.10	313.14	3681.21	72.91	50.49	PASS
1822.00†	1822.00	0.00	0.00	1768.31	1798.30	2517.81	-2686.28	313.15	3681.85	72.68	50.66	PASS
1922.00†	1922.00	0.00	0.00	1871.37	1901.35	2518.56	-2686.45	313.15	3682.47	72.44	50.83	PASS
2022.00†	2022.00	0.00	0.00	1982.33	2012.30	2519.28	-2686.43	313.16	3682.90	72.19	51.02	PASS
2122.00†	2122.00	0.00	0.00	2107.68	2137.66	2519.80	-2685.83	313.17	3682.84	71.94	51.19	PASS
2222.00†	2222.00	0.00	0.00	2225.42	2255.38	2520.00	-2684.50	313.19	3682.13	71.72	51.34	PASS
2322.00†	2322.00	0.00	0.00	2334.29	2364.25	2519.99	-2683.05	313.21	3681.15	71.49	51.49	PASS
2422.00†	2422.00	0.00	0.00	2446.42	2476.36	2519.52	-2681.36	313.22	3679.76	71.25	51.64	PASS
2522.00†	2522.00	0.00	0.00	2547.56	2577.49	2518.98	-2679.81	313.23	3678.28	71.01	51.80	PASS
2622.00†	2622.00	0.00	0.00	2648.77	2678.69	2518.17	-2678.45	313.23	3676.74	70.75	51.97	PASS
2722.00†	2722.00	0.00	0.00	2745.43	2775.34	2517.31	-2677.23	313.24	3675.23	70.48	52.15	PASS
2822.00†	2822.00	0.00	0.00	2836.82	2866.72	2516.62	-2676.19	313.24	3673.88	70.20	52.33	PASS
2922.00†	2922.00	0.00	0.00	2927.37	2957.26	2516.23	-2675.23	313.25	3672.81	69.92	52.53	PASS
3022.00†	3022.00	0.00	0.00	3020.07	3049.95	2516.06	-2674.26	313.25	3671.92	69.63	52.73	PASS
3122.00†	3122.00	0.00	0.00	3104.98	3134.86	2516.30	-2673.39	313.27	3671.37	69.35	52.94	PASS
3222.00†	3222.00	0.00	0.00	3193.35	3223.22	2517.18	-2672.32	313.29	3671.17	69.05	53.17	PASS
3322.00†	3322.00	0.00	0.00	3279.51	3309.35	2518.89	-2670.89	313.32	3671.33	68.76	53.40	PASS
3422.00†	3422.00	0.00	0.00	3368.66	3398.44	2521.59	-2668.97	313.37	3671.83	68.46	53.63	PASS
3522.00†	3522.00	0.00	0.00	3465.13	3494.83	2525.01	-2666.69	313.44	3672.55	68.16	53.88	PASS
3622.00†	3622.00	0.00	0.00	3561.02	3590.63	2528.45	-2664.46	313.50	3673.33	67.85	54.14	PASS
3722.00†	3722.00	0.00	0.00	3657.70	3687.24	2531.63	-2662.65	313.56	3674.25	67.54	54.40	PASS
3822.00†	3822.00	0.00	0.00	3754.81	3784.28	2534.67	-2661.07	313.61	3675.22	67.22	54.67	PASS
3922.00†	3922.00	0.00	0.00	3861.39	3890.81	2537.84	-2659.52	313.66	3676.23	66.89	54.96	PASS
4022.00†	4022.00	0.00	0.00	4014.51	4043.88	2540.55	-2657.36	313.71	3676.47	66.49	55.29	PASS
4122.00†	4122.00	0.00	0.00	4128.89	4158.25	2540.75	-2655.83	313.73	3675.61	66.13	55.58	PASS
4222.00†	4222.00	0.00	0.00	4224.25	4253.60	2540.54	-2654.77	313.74	3674.66	65.78	55.86	PASS
4322.00†	4322.00	0.00	0.00	4310.37	4339.73	2540.21	-2654.26	313.74	3673.98	65.44	56.14	PASS
4422.00†	4422.00	0.00	0.00	4390.13	4419.47	2539.94	-2654.30	313.74	3673.77	65.11	56.42	PASS

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Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

CLEARANCE DATA - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

Facility: Poker Lake Unit No. 199 Slot: No.199 SHL Well: No.199 Threshold Value=1.00 † = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	Sep Ratio	ACR MASD [ft]	ACR Status
4522.00†	4522.00	0.00	0.00	4486.80	4516.14	2539.69	-2654.73	313.73	3673.91	64.76	56.73	PASS
4622.00†	4622.00	0.00	0.00	4585.57	4614.91	2539.44	-2655.20	313.72	3674.09	64.41	57.04	PASS
4722.00†	4722.00	0.00	0.00	4689.61	4718.95	2539.11	-2655.74	313.71	3674.24	64.05	57.37	PASS
4822.00†	4822.00	0.00	0.00	4795.81	4825.15	2538.54	-2656.28	313.70	3674.24	63.68	57.70	PASS
4922.00†	4922.00	0.00	0.00	4902.81	4932.16	2537.70	-2656.81	313.69	3674.05	63.31	58.03	PASS
5022.00†	5022.00	0.00	0.00	5003.06	5032.40	2536.77	-2657.31	313.67	3673.77	62.95	58.36	PASS
5122.00†	5122.00	0.00	0.00	5104.58	5133.91	2535.81	-2657.80	313.65	3673.47	62.58	58.70	PASS
5222.00†	5222.00	0.00	0.00	5206.51	5235.84	2534.85	-2658.22	313.64	3673.12	62.21	59.04	PASS
5322.00†	5322.00	0.00	0.00	5302.72	5332.05	2534.01	-2658.59	313.63	3672.79	61.85	59.38	PASS
5422.00†	5422.00	0.00	0.00	5400.68	5430.01	2533.21	-2659.02	313.61	3672.55	61.49	59.73	PASS
5522.00†	5522.00	0.00	0.00	5508.18	5537.50	2532.30	-2659.40	313.60	3672.22	61.11	60.09	PASS
5622.00†	5622.00	0.00	0.00	5605.16	5634.47	2531.51	-2659.64	313.59	3671.84	60.74	60.45	PASS
5722.00†	5722.00	0.00	0.00	5707.46	5736.77	2530.66	-2659.93	313.57	3671.47	60.37	60.81	PASS
5822.00†	5822.00	0.00	0.00	5809.51	5838.82	2529.75	-2660.18	313.56	3671.03	60.00	61.18	PASS
5922.00†	5922.00	0.00	0.00	5909.05	5938.35	2528.90	-2660.38	313.55	3670.59	59.63	61.56	PASS
6022.00†	6022.00	0.00	0.00	6017.43	6046.73	2527.83	-2660.57	313.53	3670.04	59.24	61.95	PASS
6122.00†	6122.00	0.00	0.00	6128.50	6157.78	2526.51	-2660.56	313.52	3669.21	58.85	62.35	PASS
6222.00†	6222.00	0.00	0.00	6237.73	6267.00	2525.10	-2660.22	313.51	3668.09	58.46	62.74	PASS
6322.00†	6322.00	0.00	0.00	6341.59	6370.85	2523.68	-2659.72	313.50	3666.80	58.06	63.16	PASS
6422.00†	6422.00	0.00	0.00	6448.56	6477.81	2522.20	-2659.07	313.49	3665.41	57.66	63.57	PASS
6522.00†	6522.00	0.00	0.00	6565.08	6594.31	2520.39	-2658.00	313.48	3663.69	57.24	64.01	PASS
6622.00†	6622.00	0.00	0.00	6672.37	6701.57	2518.51	-2656.66	313.47	3661.56	56.82	64.44	PASS
6722.00†	6722.00	0.00	0.00	6772.84	6802.01	2516.67	-2655.37	313.46	3659.38	56.41	64.87	PASS
6822.00†	6822.00	0.00	0.00	6864.11	6893.26	2515.03	-2654.28	313.46	3657.28	56.02	65.29	PASS
6922.00†	6922.00	0.00	0.00	6956.65	6985.78	2513.49	-2653.42	313.45	3655.46	55.63	65.71	PASS
7022.00†	7022.00	0.00	0.00	7053.77	7082.90	2511.93	-2652.63	313.44	3653.76	55.24	66.15	PASS
7122.00†	7122.00	0.00	0.00	7151.18	7180.29	2510.39	-2651.90	313.43	3652.12	54.84	66.59	PASS
7222.00†	7222.00	0.00	0.00	7247.06	7276.16	2508.92	-2651.25	313.42	3650.58	54.46	67.04	PASS
7322.00†	7322.00	0.00	0.00	7341.11	7370.20	2507.55	-2650.72	313.41	3649.17	54.08	67.48	PASS
7422.00†	7422.00	0.00	0.00	7435.41	7464.49	2506.32	-2650.29	313.40	3647.94	53.70	67.93	PASS
7515.50	7515.50	0.00	0.00	7527.16	7556.23	2505.19	-2649.92	313.39	3646.88	53.34	68.36	PASS
7522.00†	7522.00	0.03	-0.03	7533.68	7562.75	2505.11	-2649.90	313.39	3646.76	53.32	68.39	PASS
7622.00†	7621.12	8.32	-8.41	7632.32	7661.39	2503.94	-2649.49	313.38	3633.87	52.50	69.21	PASS
7722.00†	7715.62	30.93	-31.24	7725.34	7754.40	2502.80	-2649.17	313.36	3600.72	50.72	70.99	PASS
7822.00†	7801.38	66.87	-67.54	7810.49	7839.54	2501.77	-2648.89	313.33	3548.74	48.97	72.46	PASS
7922.00†	7874.64	114.57	-115.72	7882.85	7911.88	2500.89	-2648.65	313.29	3480.18	47.29	73.59	PASS
8015.50	7929.00	167.96	-169.65	7937.02	7966.06	2500.23	-2648.47	313.26	3403.73	45.82	74.28	PASS
8022.00†	7932.25	171.93	-173.65	7940.27	7969.30	2500.19	-2648.46	313.25	3398.07	45.72	74.32	PASS
8122.00†	7982.25	232.86	-235.19	7990.20	8019.22	2499.58	-2648.28	313.21	3310.95	44.43	74.51	PASS
8215.50†	8029.00	289.83	-292.73	8035.76	8064.79	2499.02	-2648.11	313.17	3229.49	43.23	74.70	PASS
8222.00†	8032.21	293.80	-296.75	8038.87	8067.90	2498.98	-2648.10	313.16	3223.80	43.15	74.72	PASS
8322.00†	8071.57	358.34	-361.94	8076.75	8105.77	2498.51	-2647.96	313.11	3131.68	41.80	74.92	PASS
8422.00†	8091.01	427.22	-431.51	8094.90	8123.91	2498.29	-2647.90	313.06	3033.61	40.40	75.10	PASS
8465.64	8093.00	457.88	-462.48	8096.39	8125.41	2498.27	-2647.89	313.03	2990.03	39.81	75.12	PASS
8522.00†	8093.00	497.54	-502.53	8095.77	8124.79	2498.28	-2647.90	313.00	2933.69	39.05	75.12	PASS

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Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

CLEARANCE DATA - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

Facility: Poker Lake Unit No. 199 Slot: No.199 SHL Well: No.199 Threshold Value=1.00 † = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	Sep Ratio	ACR MASD [ft]	ACR Status
8622.00†	8093.00	567.89	-573.59	8094.68	8123.70	2498.29	-2647.90	312.94	2833.75	37.72	75.14	PASS
8722.00†	8093.00	638.25	-644.66	8093.59	8122.61	2498.30	-2647.90	312.88	2733.80	36.38	75.15	PASS
8822.00†	8093.00	708.61	-715.72	8092.50	8121.51	2498.32	-2647.91	312.81	2633.86	35.04	75.17	PASS
8922.00†	8093.00	778.97	-786.78	8091.40	8120.42	2498.33	-2647.91	312.73	2533.92	33.70	75.19	PASS
9022.00†	8093.00	849.32	-857.84	8090.31	8119.32	2498.34	-2647.92	312.65	2433.99	32.36	75.21	PASS
9122.00†	8093.00	919.68	-928.91	8089.21	8118.23	2498.36	-2647.92	312.56	2334.07	31.02	75.23	PASS
9222.00†	8093.00	990.04	-999.97	8088.12	8117.13	2498.37	-2647.92	312.47	2234.15	29.69	75.26	PASS
9322.00†	8093.00	1060.39	-1071.03	8087.02	8116.04	2498.38	-2647.93	312.36	2134.23	28.35	75.29	PASS
9422.00†	8093.00	1130.75	-1142.10	8085.92	8114.94	2498.40	-2647.93	312.25	2034.33	27.01	75.32	PASS
9522.00†	8093.00	1201.11	-1213.16	8084.82	8113.84	2498.41	-2647.93	312.12	1934.43	25.67	75.36	PASS
9622.00†	8093.00	1271.46	-1284.22	8083.72	8112.74	2498.42	-2647.94	311.98	1834.54	24.33	75.41	PASS
9722.00†	8093.00	1341.82	-1355.28	8082.62	8111.64	2498.44	-2647.94	311.82	1734.67	22.99	75.46	PASS
9822.00†	8093.00	1412.18	-1426.35	8081.52	8110.54	2498.45	-2647.95	311.64	1634.81	21.65	75.51	PASS
9922.00†	8093.00	1482.53	-1497.41	8080.42	8109.44	2498.47	-2647.95	311.45	1534.97	20.31	75.58	PASS
10022.00†	8093.00	1552.89	-1568.47	8079.31	8108.33	2498.48	-2647.95	311.22	1435.15	18.97	75.65	PASS
10122.00†	8093.00	1623.25	-1639.53	8078.21	8107.23	2498.49	-2647.96	310.96	1335.35	17.63	75.75	PASS
10222.00†	8093.00	1693.60	-1710.60	8077.11	8106.13	2498.51	-2647.96	310.65	1235.59	16.29	75.86	PASS
10322.00†	8093.00	1763.96	-1781.66	8076.00	8105.02	2498.52	-2647.96	310.30	1135.87	14.95	75.99	PASS
10422.00†	8093.00	1834.32	-1852.72	8074.89	8103.91	2498.53	-2647.97	309.87	1036.20	13.60	76.17	PASS
10522.00†	8093.00	1904.67	-1923.79	8073.79	8102.81	2498.55	-2647.97	309.35	936.60	12.26	76.40	PASS
10622.00†	8093.00	1975.03	-1994.85	8072.68	8101.70	2498.56	-2647.98	308.72	837.10	10.91	76.72	PASS
10722.00†	8093.00	2045.39	-2065.91	8071.57	8100.59	2498.57	-2647.98	307.90	737.73	9.56	77.17	PASS
10822.00†	8093.00	2115.74	-2136.97	8070.46	8099.48	2498.59	-2647.98	306.84	638.55	8.20	77.84	PASS
10922.00†	8093.00	2186.10	-2208.04	8069.35	8098.37	2498.60	-2647.99	305.39	539.67	6.84	78.90	PASS
11022.00†	8093.00	2256.46	-2279.10	8068.24	8097.26	2498.62	-2647.99	303.28	441.29	5.47	80.72	PASS
11122.00†	8093.00	2326.82	-2350.16	8067.13	8096.15	2498.63	-2647.99	299.98	343.85	4.09	84.17	PASS
11222.00†	8093.00	2397.17	-2421.22	8066.02	8095.04	2498.64	-2648.00	294.11	248.45	2.71	91.63	PASS
11322.00†	8093.00	2467.53	-2492.29	8064.90	8093.92	2498.66	-2648.00	281.30	158.80	1.44	110.49	PASS
11422.00†	8093.00	2537.89	-2563.35	8063.79	8092.81	2498.67	-2648.01	245.15	93.30	0.61	154.05	FAIL
11454.58†	8093.00	2560.81	-2586.51	8063.40	8092.43	2498.67	-2648.01	224.71	87.43	0.54	162.39	FAIL
11455.64†	8093.00	2561.55	-2587.25	8063.41	8092.44	2498.67	-2648.01	224.02	87.44	0.54	162.43	FAIL
11522.00†	8093.00	2608.24	-2634.41	8062.67	8091.69	2498.68	-2648.01	187.08	110.41	0.78	140.82	FAIL
11622.00†	8093.00	2678.60	-2705.48	8061.56	8090.58	2498.70	-2648.01	162.29	188.87	1.77	106.58	PASS
11722.00†	8093.00	2748.96	-2776.54	8060.44	8089.46	2498.71	-2648.02	152.82	281.34	3.04	92.69	PASS
11822.00†	8093.00	2819.31	-2847.60	8059.32	8088.34	2498.72	-2648.02	148.10	377.66	4.36	86.55	PASS
11922.00†	8093.00	2889.67	-2918.66	8058.20	8087.23	2498.74	-2648.03	145.31	475.51	5.70	83.40	PASS
12022.00†	8093.00	2960.03	-2989.73	8057.09	8086.11	2498.75	-2648.03	143.47	574.09	7.04	81.60	PASS
12122.00†	8093.00	3030.38	-3060.79	8055.96	8084.99	2498.77	-2648.03	142.17	673.09	8.36	80.49	PASS
12222.00†	8093.00	3100.74	-3131.85	8054.84	8083.87	2498.78	-2648.04	141.21	772.34	9.68	79.76	PASS
12322.00†	8093.00	3171.10	-3202.92	8053.72	8082.74	2498.79	-2648.04	140.47	871.77	11.00	79.27	PASS
12422.00†	8093.00	3241.45	-3273.98	8052.60	8081.62	2498.81	-2648.05	139.87	971.31	12.31	78.92	PASS
12522.00†	8093.00	3311.81	-3345.04	8051.48	8080.50	2498.82	-2648.05	139.39	1070.94	13.61	78.68	PASS
12622.00†	8093.00	3382.17	-3416.10	8050.35	8079.38	2498.84	-2648.05	138.99	1170.62	14.91	78.50	PASS
12722.00†	8093.00	3452.52	-3487.17	8049.23	8078.26	2498.85	-2648.06	138.66	1270.36	16.21	78.38	PASS
12822.00†	8093.00	3522.88	-3558.23	8048.10	8077.13	2498.86	-2648.06	138.37	1370.13	17.50	78.29	PASS

Clearance Report

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Closest Approach

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.402H SHL
Area	Eddy County, NM	Well	No.402H
Field	Poker Lake Unit	Wellbore	No.402H PWB
Facility	Poker Lake Unit No. 402H		

CLEARANCE DATA - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

Facility: Poker Lake Unit No. 199 Slot: No.199 SHL Well: No.199 Threshold Value=1.00 † = interpolated/extrapolated station

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Horiz Bearing [°]	C-C Clear Dist [ft]	Sep Ratio	ACR MASD [ft]	ACR Status
12922.00†	8093.00	3593.24	-3629.29	8046.97	8076.00	2498.88	-2648.07	138.12	1469.94	18.79	78.24	PASS
13022.00†	8093.00	3663.60	-3700.35	8045.85	8074.88	2498.89	-2648.07	137.90	1569.77	20.07	78.20	PASS
13122.00†	8093.00	3733.95	-3771.42	8044.72	8073.75	2498.90	-2648.07	137.71	1669.61	21.35	78.19	PASS
13222.00†	8093.00	3804.31	-3842.48	8043.59	8072.62	2498.92	-2648.08	137.54	1769.48	22.63	78.18	PASS
13322.00†	8093.00	3874.67	-3913.54	8042.46	8071.49	2498.93	-2648.08	137.39	1869.36	23.91	78.19	PASS
13422.00†	8093.00	3945.02	-3984.61	8041.33	8070.36	2498.95	-2648.09	137.26	1969.25	25.18	78.21	PASS
13522.00†	8093.00	4015.38	-4055.67	8040.20	8069.23	2498.96	-2648.09	137.13	2069.15	26.45	78.24	PASS
13622.00†	8093.00	4085.74	-4126.73	8039.06	8068.10	2498.97	-2648.09	137.02	2169.06	27.71	78.28	PASS
13722.00†	8093.00	4156.09	-4197.79	8037.93	8066.96	2498.99	-2648.10	136.92	2268.97	28.97	78.32	PASS
13822.00†	8093.00	4226.45	-4268.86	8036.80	8065.83	2499.00	-2648.10	136.83	2368.89	30.23	78.37	PASS
13922.00†	8093.00	4296.81	-4339.92	8035.66	8064.69	2499.02	-2648.11	136.74	2468.82	31.48	78.42	PASS
14022.00†	8093.00	4367.16	-4410.98	8034.53	8063.56	2499.03	-2648.11	136.66	2568.76	32.73	78.48	PASS
14122.00†	8093.00	4437.52	-4482.05	8033.39	8062.42	2499.04	-2648.12	136.59	2668.69	33.98	78.54	PASS
14222.00†	8093.00	4507.88	-4553.11	8032.25	8061.28	2499.06	-2648.12	136.52	2768.64	35.22	78.60	PASS
14322.00†	8093.00	4578.23	-4624.17	8031.11	8060.15	2499.07	-2648.12	136.46	2868.58	36.46	78.67	PASS
14332.71	8093.00	4585.77	-4631.78	8030.99	8060.02	2499.07	-2648.12	136.45	2879.29	36.60	78.68	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	0.100ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	1.000ft

WELLPATH COMPOSITION - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

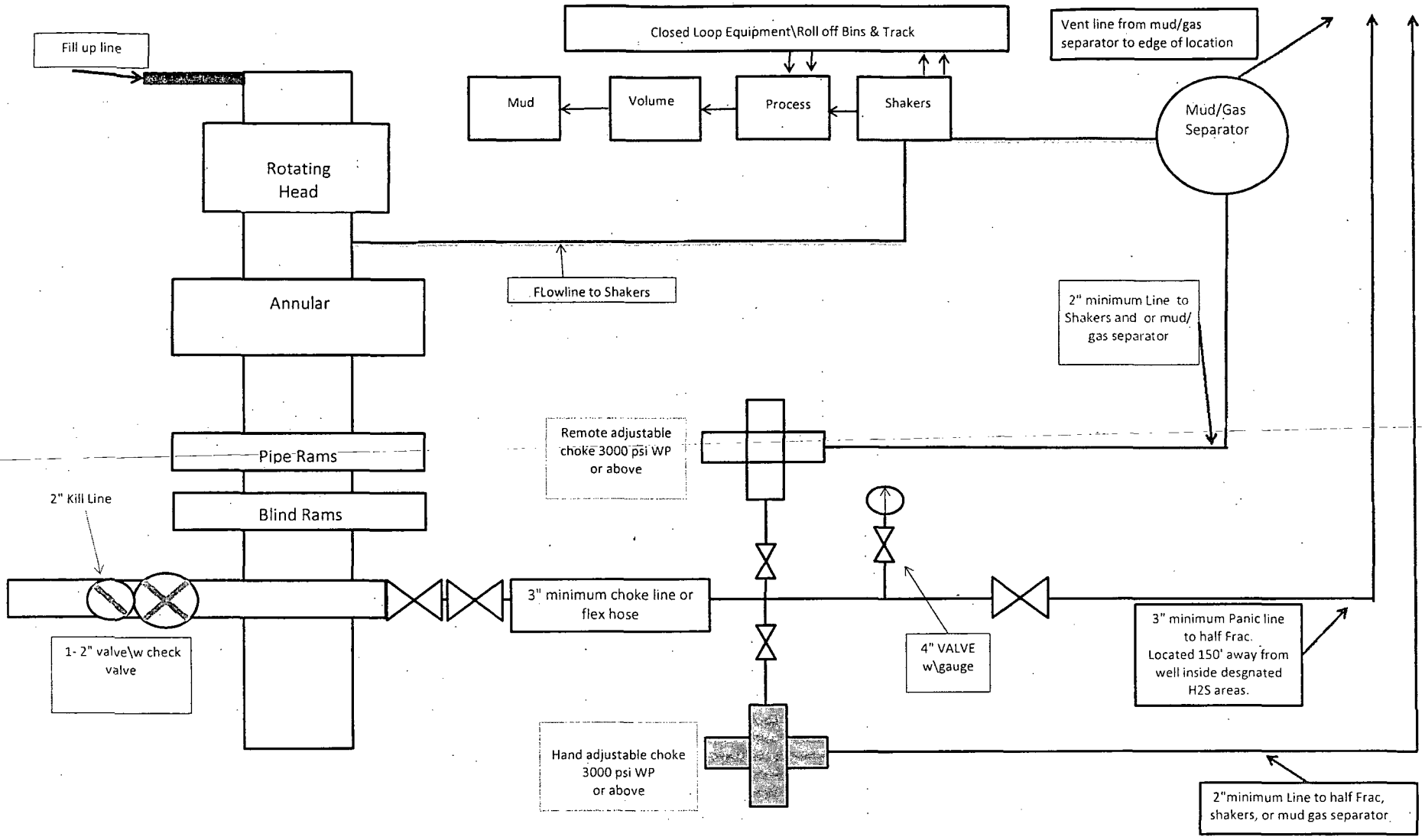
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	9000.00	Generic gyro - northseeking (Standard)	Gyrodata Gyro <100-9000>	No.199 AWB

OFFSET WELLPATH MD REFERENCE - Offset Wellbore: No.199 AWB Offset Wellpath: No.199 AWP

MD Reference: **Rig on No.199 SHL (RT)**

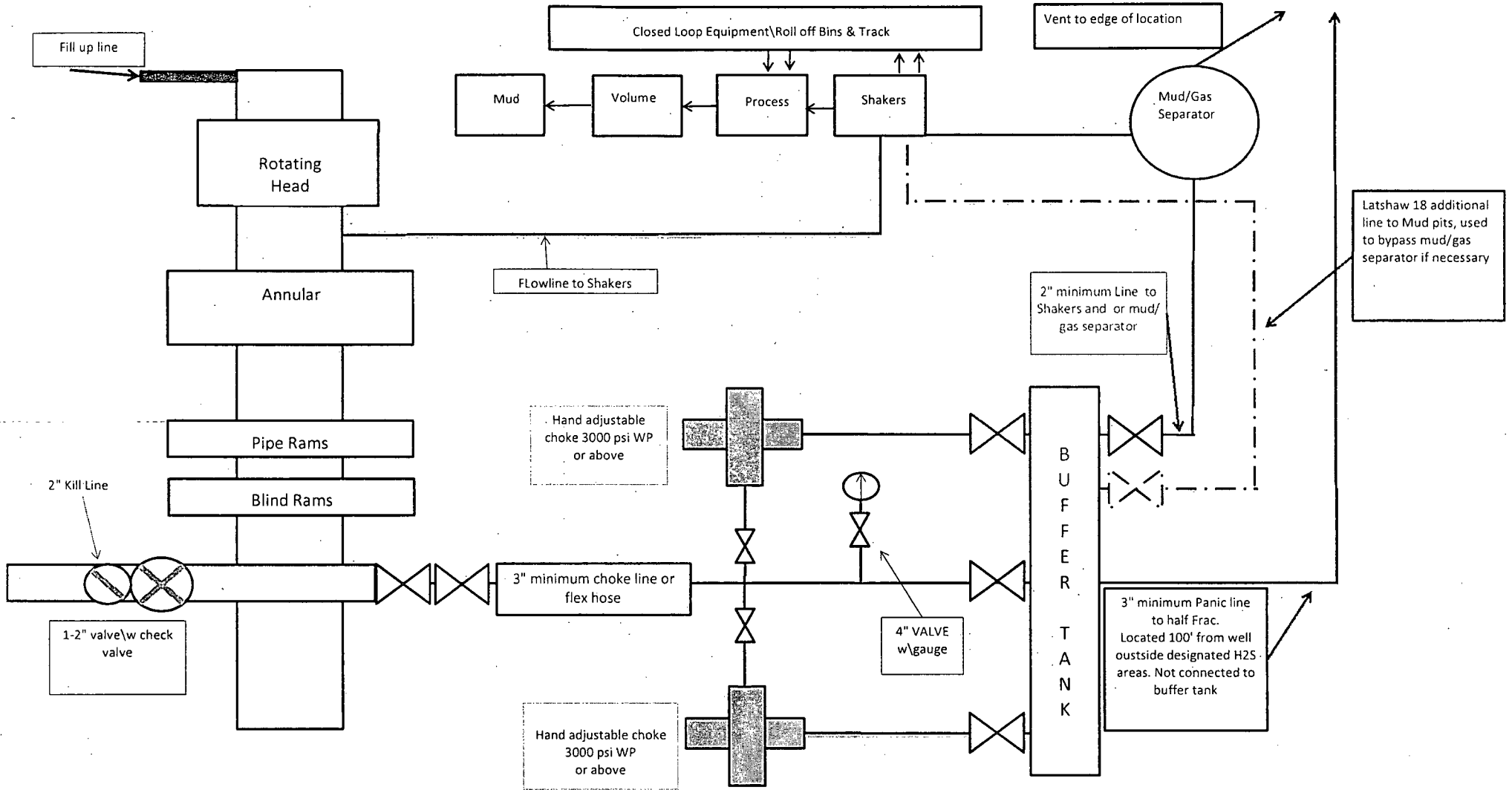
Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)

Ellipse Start MD



13-5/8" X 3-M BOPE (2 Rams and Rotating Head) & Closed Loop System Equipment Schematic
H2S contingency
Diagram 2

Note: all valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.



Latshaw 4 closed loop system, with Latshaw 18 addition "clouded."

Latshaw 13-5/8" X 3-M BOPE (2 Rams and Rotating Head) & Closed Loop System Equipment Schematic Diagram 2

Note: all valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: LATSHAW DRILLING		**P.O. Number:** RIG#4
HOSE SPECIFICATIONS		
Type: CHOKE LINE		**Length:** 30'
I.D. 3" *INCHES*	**O.D.** 6" *INCHES*	
WORKING PRESSURE 5,000 *PSI*	**TEST PRESSURE** 10,000 *PSI*	**BURST PRESSURE** *PSI*
COUPLINGS		
Type of End Fitting 4 1/16 5K FLANGE		
Type of Coupling: SWEDGED	**MANUFACTURED BY** MIDWEST HOSE & SPECIALTY	
PROCEDURE		
Hose assembly pressure tested with water at ambient temperature.		
TIME HELD AT TEST PRESSURE 1 *MIN.*	**ACTUAL BURST PRESSURE:** 0 *PSI*	
COMMENTS: SO#81610 Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
Date: 3/2/2011	**Tested By:** BOBBY FINK	**Approved:** MENDI JACKSON

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

April 4, 2012

Customer: Latshaw

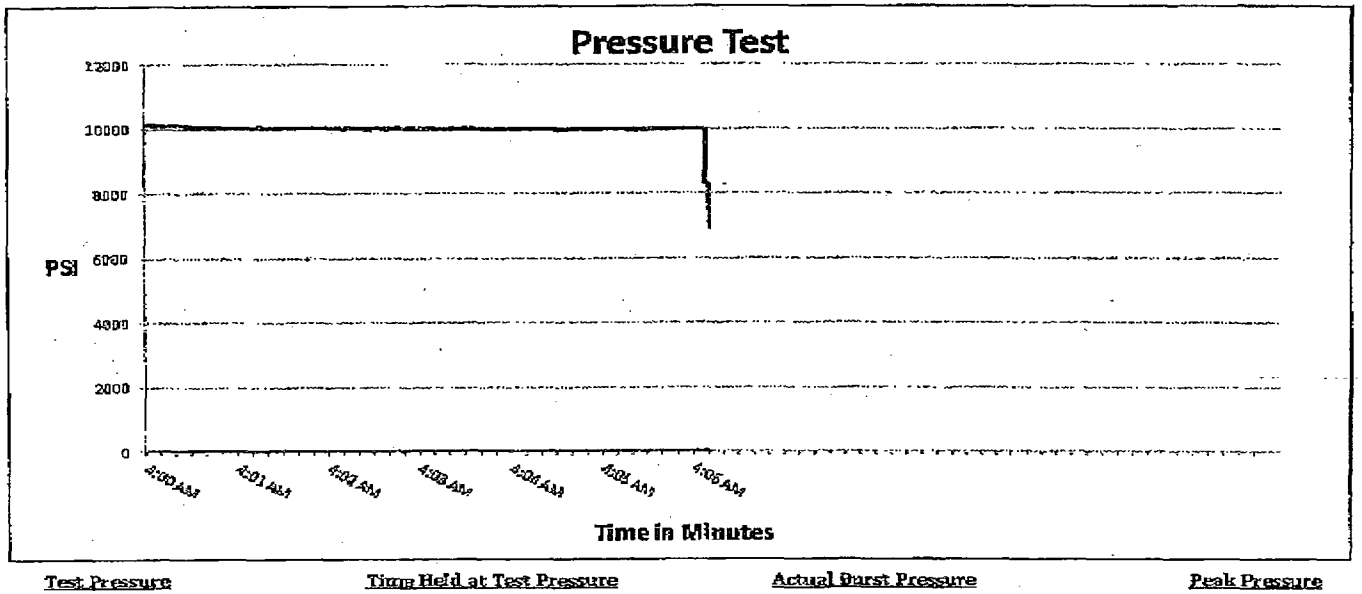
Pick Ticket #: 81610

Hose Specifications

Hose Type	Length
D	30'
I.D.	**O.D.**
3"	4 15/32
Working Pressure	**Burst Pressure**
5000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
41/16 5K	Swage
Die Size	**Final O.D.**
5.12"	5.16"
Hose Serial #	**Hose Assembly Serial #**
6884	81610



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
10000 PSI	6 1/4 Minutes		10195 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Donnie Mclemore*

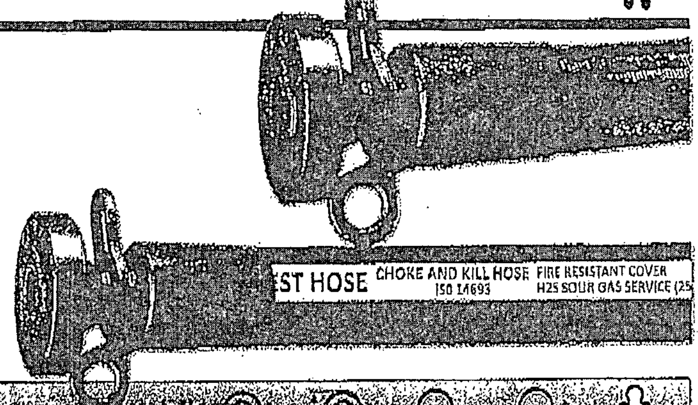
Approved By: *Bobby Fink*

Choke & Kill, BOP

Choke & Kill

Designed as a flexible connection to the choke manifold.
Tube: petroleum resistant for oil based drilling fluids
Cover: ozone, petroleum, and abrasion resistant
Reinforcement: high tensile steel wire spiral layers
Thermal Blanket: 1500° continuous ratings, non-flammable, non-conductive
Armor Wall: .144"
Max Length: 150 feet

-20° F / +212° F
-29° C / +100° C

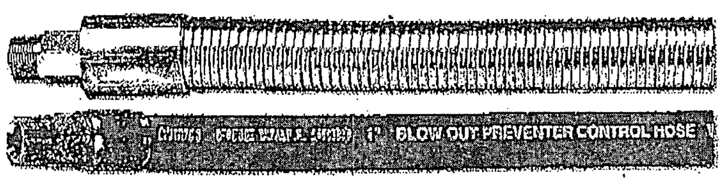


Item	ID	OD	WP	Test	Weight
CK-48 Red	3	4.94	5,000	10,000	14.9
CK-56 Red	3½	5.44			17.7
CK-64 Red	4	6.31			26.4
CK-48 Armor	3	6.5			20.8
CK-56 Armor	3½	7			23.1
CK-64 Armor	4	8			26.3
CK-4810K Red	3	5.31	10,000	15,000	22.3
CK-5610K Red	3½	5.81			25.0
CK-6410K Red	4	4.75			36.1
CK-4810K Armor	3	6.5			26.0
CK-5610K Armor	3½	7			29.0
CK-6410K Armor	4	8			32.8

BOP Control Line

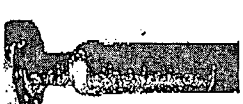
For blowout preventer lines.
Tube: for hydraulic BOP actuation
Thermal Blanket: 1500° continuous rating, non-flammable, non-conductive
Armor Wall: .08"
Popular with a larger hex and longer threads for easier installation of hammer unions.

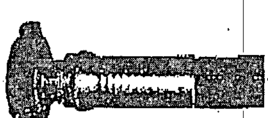
-20° F / +212° F
-29° C / +100° C

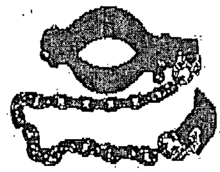


Item	ID	OD	WP	Test	Weight
BOP-16 Armor	1	2.06	5,000	10,000	3.9
BOP-32 Armor	2	3.75			11.7
BOP-16	1	1.77			2.1
BOP-32	2	3.09			10.2

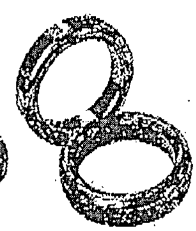
Carbon or stainless steel nipples are available and 1/2", 3/4", 1-1/4", and 1-1/2" sizes are available too.


Weld-on Flanges or Hammer Unions


Integral 1002/1502 Hammer Union Fittings


Safety Clamps


Fire Proof Quick Connects


Ring Gaskets

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT

Customer: LATSHAW DRILLING	P.O. Number: RIG#4

HOSE SPECIFICATIONS

Type: CHOKE & KILL			Length:	30'
I.D.	3"	*INCHES*	O.D.	6-1/2"

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
5,000 *PSI*	10,000	

COUPLINGS

Stem Part No. D3.0X64WB	Ferrule No. D3.0X64WB
Type of Coupling: 4-1/16 5K FLANGE	Die Size:

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
15 *MIN.*	0 *PSI*

COMMENTS: SER#81610

Date:	Tested By:	Approved:
3/1/2011	DONNIE MCLEMORE	BRENT BURNETT

TABLE OF CONTENTS

H_2S CONTINGENCY PLAN SECTION

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H_2S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H_2S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Discussion of Plan:

Suspected Problem Zones:

Implementation: This plan, with all details, is to be fully implemented 500' above or three days prior to drilling into the first known sour zone

Emergency Response and Public Protection Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 500 feet above or three days prior to drilling into the first known sour zone.

Emergency call lists: Included are the telephone numbers of all persons that would need to be contacted should an H_2S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public Safety Personnel will be made aware of the drilling of this well.

EMERGENCY PROCEDURES AND PUBLIC PROTECTION SECTION

I. In the event of any evidence of H_2S levels above 10 ppm, take the following steps immediately:

A. Secure breathing apparatus.

B. Order non-essential personnel out of the danger zone.

C. Take steps to determine if the H_2S level can be corrected or suppressed, and if so, proceed with normal operations.

II. If uncontrollable conditions occur, proceed with the following:

A. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel and the New Mexico Oil & Gas of the situation.

B. Isolate area and prevent entry by unauthorized persons into the 100 ppm ROE.

C. Remove all personnel to the Safe Briefing Area.

D. Notify public safety personnel for help with maintaining roadblocks and implementing evacuation. Phone number list attached.

E. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.

III. Responsibility:

A. The Company Approved Supervisor shall be responsible for the total implementation of the plan.

B. The Company Approved Supervisor shall be in complete command during any emergency.

C. The Company Approved Supervisor shall designate a back up Supervisor in the event that he/she is not available.

EMERGENCY PROCEDURE IMPLEMENTATION

I. Drilling or Tripping

A. All Personnel

1. When alarm sounds, don escape unit and report to upwind Safe Briefing Area.
2. Check status of other personnel (buddy system).
3. Secure breathing apparatus.
4. Wait for orders from supervisor.

B. Drilling Foreman

1. Report to the upwind Safe Briefing Area.
2. Don Breathing Apparatus and return to the point of release with the Tool Pusher or Driller (buddy system).
3. Determine the concentration of H_2S.
4. Assess the situation and take appropriate control measures.

C. Tool Pusher

1. Report to the upwind Safe Briefing Area.
2. Don breathing apparatus and return to the point of release with the Drilling Foreman or the Driller (buddy system).
3. Determine the concentration.
4. Assess the situation and take appropriate control measures.

D. Driller

1. Check the status of other personnel (in a rescue attempt, always use the buddy system).
2. Assign the least essential person to notify the Drilling Foreman and Tool Pusher, in the event of their absence.

3. Assume the responsibility of the Drilling Foreman and the Tool Pusher until they arrive, in the event of their absence.

E. Derrick Man and Floor Hands

1. Remain in the upwind Safe Briefing Area until otherwise instructed by a supervisor.

F. Mud Engineer

1. Report to the upwind Safe Briefing Area.

2. When instructed, begin check of mud for pH level and H_2S level.

G. On-site Safety Personnel

1. Don Breathing Apparatus.

2. Check status of all personnel.

3. Wait for instructions from Drilling Foreman or Tool Pusher.

II. Taking a Kick

A. All personnel report to the upwind Safe Briefing Area.

B. Follow standard BOP procedures.

III. Open Hole Logging

A. All unnecessary personnel should leave the rig floor.

B. Drilling Foreman and Safety Personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging

A. Follow "Drilling or Tripping" procedures.

B. Assure that all personnel have access to protective equipment.

SIMULATED BLOWOUT CONTROL DRILLS

All drills will be initiated by activating alarm devices (air horn). Use one long blast on the air horn for ACTUAL and SIMULATED Blowout Control Drills. This operation will be performed by the Drilling Foreman or Tool Pusher at least one time per week for each of the following conditions, with each crew:

Drill # 1 Bottom Drilling

Drill # 2 Tripping Drill Pipe

In each of these drills, the initial reaction time to shutting in the well shall be timed as well as the total time for the crew to complete its entire pit drill assignment. The times must be recorded on the IADC Driller's Log as "Blowout Control Drill".

Drill No.:		
Reaction Time to Shut-In:	minutes,	seconds.
Total Time to Complete Assignment:	minutes,	seconds.

I. Drill Overviews

A. Drill No. 1- Bottom Drilling

1. Sound the alarm immediately.
2. Stop the rotary and hoist kelly joint above the rotary table.
3. Stop the circulatory pump.
4. Close the drill pipe rams.
5. Record casing and drill pipe shut-in pressures and pit volume increases.

B. Drill No. 2 – Tripping Drill Pipe

1. Sound the alarm immediately.
2. Position the upper tool joint just above the rotary table and set the slips.

3. Install a full opening valve or inside blowout preventor tool in order to close the drill pipe.

4. Close the drill pipe rams.

5. Record the shut-in annular pressure.

II. Crew Assignments

A. Drill No. 1 – Bottom Drilling

1. Driller

   a) Stop the rotary and hoist kelly joint above the rotary table.

   b) Stop the circulatory pump.

   c) Check flow.

   d) If flowing, sound the alarm immediately.

   e) Record the shut-in drill pipe pressure.

   f) Determine the mud weight increase needed or other courses of action.

2. Derrickman

   a) Open choke line valve at BOP.

   b) Signal Floor Man # 1 at accumulator that choke line is open.

   c) Close choke and upstream valve after pipe tams have been closed.

   d) Read the shut-in annular pressure and report readings to Driller.

3. Floor Man # 1

   a) Close the pipe rams after receiving the signal from the Derrickman.

   b) Report to Driller for further instructions.

4. Floor Man # 2

   a) Notify the Tool Pusher and Operator Representative of the H_2S alarms.

   b) Check for open fires and, if safe to do so, extinguish them.

   c) Stop all welding operations.

   d) Turn-off all non-explosion proof lights and instruments.

   e) Report to Driller for further instructions.

5. Tool Pusher

   a) Report to the rig floor.

   b) Have a meeting with all crews.

   c) Compile and summarize all information.

   d) Calculate the proper kill weight.

   e) Ensure that proper well procedures are put into action.

6. Operator Representative

   a) Notify the Drilling Superintendent.

   b) Determine if an emergency exists and if so, activate the contingency plan.

B. Drill No. 2 – Tripping Pipe

1. Driller

   a) Sound the alarm immediately when mud volume increase has been detected.

   b) Position the upper tool joint just above the rotary table and set slips.

   c) Install a full opening valve or inside blowout preventor tool to close the drill pipe.

   d) Check flow.

e) Record all data reported by the crew.

f) Determine the course of action.

2. Derrickman

a) Come down out of derrick.

b) Notify Tool Pusher and Operator Representative.

c) Check for open fires and, if safe to do so, extinguish them.

d) Stop all welding operations.

e) Report to Driller for further instructions.

3. Floor Man # 1

a) Pick up full opening valve or inside blowout preventor tool and stab into tool joint above rotary table (with Floor Man # 2).

b) Tighten valve with back-up tongs.

c) Close pipe rams after signal from Floor Man # 2.

d) Read accumulator pressure and check for possible high pressure fluid leaks in valves or piping.

e) Report to Driller for further instructions.

4. Floor Man # 2

a) Pick-up full opening valve or inside blowout preventor tool and stab into tool joint above rotary table (with Floor Man # 1).

b) Position back-up tongs on drill pipe.

c) Open choke line valve at BOP.

d) Signal Floor Man # 1 at accumulator that choke line is open.

e) Close choke and upstream valve after pipe rams have been closed.

f) Check for leaks on BOP stack and choke manifold.

g) Read annular pressure.

h) Report readings to the Driller.

5. Tool Pusher

a) Report to the rig floor.

b) Have a meeting with all of the crews.

c) Compile and summarize all information.

d) See that proper well kill procedures are put into action.

6. Operator Representative

a) Notify Drilling Superintendent

b) Determine if an emergency exists, and if so, activate the contingency plan.

IGNITION PROCEDURES

Responsibility:

The decision to ignite the well is the responsibility of the DRILLING FOREMAN in concurrence with the STATE POLICE. The State Police shall be the Incident Command on the scene of any major release. Intentional ignition must be coordinated with the NMOCD and local officials. In the event the Drilling Foreman is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.

2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Foreman is responsible for igniting the well.

2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.

3. Ignite from upwind and do not approach any closer than is warranted.

4. Select the ignition site best suited for protection and which offers an easy escape route.

5. Before igniting, check for the presence of combustible gases.

6. After igniting, continue emergency actions and procedures as before.

7. All unassigned personnel will limit their actions to those directed by the Drilling Foreman.

NOTE: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide (SO_2), which is also highly toxic. Do not assume the area is safe after the well is ignited.

TRAINING REQUIREMENTS

When working in an area where Hydrogen Sulfide (H_2S) might be encountered, definite training requirements must be carried out. The Company Supervisor will ensure that all personnel at the well site, whether regularly assigned, contracted, or employed on an unscheduled basis, have had adequate training by a qualified instructor in the following:

1. Hazards and Characteristics of Hydrogen Sulfide and Sulfur Dioxide.
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H_2S detection, emergency alarm and sensor location.
5. Emergency rescue.
6. First aid and artificial resuscitation.
7. The effects of Hydrogen Sulfide on metals.
8. Location safety.

In addition, Supervisory Personnel will be trained in the following areas:

1. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well as well as blowout prevention and well control procedures.
3. The contents and requirements of the H_2S Drilling Operations Contingency Plan and the Public Protection Plan.

Service company personnel and visiting personnel must be notified if the zone contains H_2S, and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

EMERGENCY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located in a known H_2S areas, H_2S equipment will be rigged up after setting surface casing. For wells located inside known H_2S areas, the flare pit will be located 150' from the location and for wells located outside known H_2S areas, the flare pit will be located 100' away from the location. (See page 6 of Survey plat package and diagram 2.)

It is not anticipated that any H_2S is in the area, however in the event that H_2S is encountered, the attached H_2S Contingency Plan will be implemented. (Please refer to diagram 2 for choke manifold and closed loop system layout.) See H_2S location layout diagram for location of all H_2S equipment on location.

All H_2S safety equipment and systems will be installed, tested and be operational when drilling reaches a depth of 500' above, or three days prior to penetrating a known formation containing H_2S.

Lease Entrance Sign:

Caution signs should be located at all roads providing direct access to the location. Signs shall have a yellow background with black lettering and contain the words "CAUTION" and "POISON GAS" that is legible from a distance of at least 50 feet.

LEASE NAME
CAUTION – POTENTIAL POISON GAS
HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

Windsocks or Wind Streamers:

- A minimum of two 10" windsocks located at strategic locations so that they may be seen from any point on location.
- Wind streamers (if preferred) should be placed at various locations on the well site to ensure wind consciousness at all times. (Corners of location)

Hydrogen Sulfide Detector and Alarms:

- H_2S monitors with alarms will be located on the rig floor, at the cellar, and at the mud pits. These monitors will be set to alarm at 10 PPM with a red light and to alarm at 15 PPM with a red light and audible alarm.

Well Condition Flags:

The Well Condition flags should be located at all roads providing direct access to the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN – Normal Operating Conditions
YELLOW – Potential Danger
RED – Danger, H_2S Gas Present

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the company supervision trailer and the safe briefing areas and should include the following:
  - A minimum of two SCBA's at each briefing area and the supervisor company supervision trailer.
  - Enough air line units to operate safely, anytime the H_2S concentration reaches the IDLH level (100 PPM).
  - Cascade system with enough breathing air hose and manifolds to reach the rig floor, the derrickman and the other operation areas.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations.

Mud Program:

The mud program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

Metallurgy:

All drill strings, casing, tubing, wellhead; blowout preventer, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

Well Control Equipment:

- Flare Line (See diagram 2).
- Choke manifold (See diagram 2).
- Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing units.
- Auxiliary equipment may include, if applicable, annular preventer & rotating head.

Communication Equipment:

- Proper communication equipment such as cell phones or 2 – way radios should be available for communication between the company man's trailer, rig floor and tool pusher's trailer.

Well Testing:

- There will be no drill stem testing.

Evacuation Plan:

- Evacuation routes should be established prior to spudding the well.
- Should be discussed with all rig personnel.

Designated Areas:

Parking and Visitor area:

- All vehicles are to be parked at a pre-determined safe distance from the wellhead.
- A smoking area will be designated at a pre-determined safe distance from the wellhead and any other possible flammable areas.

Safe Briefing Areas:

- Two Safe Briefing Areas shall be designated on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds or they are at a 180 degree angle if wind directions tend to shift in the area.

- Personal protective equipment should be stored at both briefing areas or if a moveable cascade trailer is used, it should be kept upwind of existing winds. When wind is from the prevailing direction, both briefing areas should be accessible.

NOTE:

- Additional equipment will be available at Indian Fire and Safety in Hobbs, NM or at Total Safety in Hobbs, NM.

EVACUATION PLAN

General Plan

The direct lines of action to protect the public from hazardous gas situations are as follows:

1. When the company approved supervisor (Drilling Foremen, Tool Pusher or Driller) determine that Hydrogen Sulfide gas cannot be limited to the well location, and the public will be involved, he will activate the evacuation plan. Escape routes are noted on the Area Map.

2. Company safety personnel or designee will notify the appropriate local government agency that a hazardous condition exists and evacuation needs to be implemented.

3. Company approved safety personnel that have been trained in the use of the proper emergency equipment will be utilized.

4. Law enforcement personnel (State Police, Local Police Department, Fire Department, and the Sheriff's Department) will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

NOTE: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

5. After the discharge of gas has been controlled, Company approved safety personnel will determine when the area is safe for re-entry.

See Emergency Action Plan

Contacting Authorities

BOPCO L.P. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S CONTINGENCY PLAN EMERGENCY CONTACTS

BOPCO L.P. Midland Office 432-683-2277

Key Personnel

Name	Title	Cell Phone Number
Stephen Martinez	Drilling Supt.	432-556-0262
Martyn Robertson	Engineer	432-894-4765
Chris Giese	Engineer	432-661-7328
Stephen Ordoyne	Engineer	985-665-7249
Charles Warne	Engineer	432-312-4431

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington, DC)	800-424-8802

Other

Wild Well Control	432-550-6202 (Permian Basin)
Cudd PressureControl	432-580-3544 or 432-570-5300 (Permian Basin)
Flight For Life – 4000 24th St. Lubbock, Texas	806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas	806-747-8923
Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuq., NM	505-842-4433
S B Air Med Service – 2505 Clark Carr Loop SE, Albuq., NM	505-842-4949
Indian Fire and Safety – 3317 NW Cnty Rd, Hobbs, NM	575-393-3093
Total Safety – 3229 Industrial Dr., Hobbs, NM	575-392-2973

TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity = 1.192) and colorless. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. Hydrogen sulfide is almost as toxic as hydrogen cyanide and is between five and six times more toxic than carbon monoxide. Toxicity data for hydrogen sulfide and various other gases are compared in Table I. Physical effects at various Hydrogen Sulfide exposure levels are shown in Table II.

Table I - TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity (SC=1)	Threshold Limit (1)	Hazardous Limit (2)	Lethal Concentration (3)
Hydrogen Cyanide	HCN	0.94	10 PPM	150 PPM/HR	300 PPM
Hydrogen Sulfide	H2S	1.18	10 PPM	250 PPM/HR	600 PPM
Sulfur Dioxide	SO2	2.21	5 PPM	--	1000 PPM
Chlorine	CL2	2.45	1 PPM	4 PPM/HR	1000 PPM
Carbon Monoxide	CO	0.97	50 PPM	400 PPM/HR	1000 PPM
Carbon Dioxide	CO2	1.52	5000 PPM	5%	10%
Methane	CH4	0.55	90,000 PPM	Combustible in air	Above 5%

1) **Threshold Limit – Concentration at which it is believed that all worker may be repeatedly exposed day after day without adverse effects.**

2) **Hazardous Limit – Concentration that will cause death with short-term exposure.**

3) **Lethal Concentration – Concentration that will cause death with short-term exposure.**

Table II – PHYSICAL EFFECTS OF HYDROGEN SULFIDE

Percent (%)	PPM	Concentration Grains 100 STD. FT3*	Physical Effects
0.001	< 10	00.65	Obvious & unpleasant odor.
0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kills smell in 3-15 minutes. May sting eyes & throat.
0.020	200	12.96	Kills smell shortly; stings eyes & throat.
0.050	500	32.96	Dizziness; Breathing ceases in a few minutes. Needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly; Death will result if not rescued promptly.
0.100	1000	64.30	Unconscious at once; Followed by death within minutes.

- At 15.00 PSIA and 60° F.

USE OF SELF-CONTAINED BREATHING APPARATUS

1. Anyone who uses an SCBA shall: Be approved by a physician or licensed health care practitioner; Pass a fit test; Be trained in donning and doffing, proper use, including how to ensure a proper face seal, conducting an inspection of the SCBA, and conduct proper maintenance.

2. Such items as facial hair (beard or sideburns) and eyeglasses will not allow a proper face mask seal.

3. Anyone reasonably expected to wear SCBA's shall have these items removed before entering a toxic atmosphere.

4. A special mask with a mount for prescription glasses must be obtained for anyone who must wear eyeglasses in order to see while using an SCBA.

5. SCBA's should be worn in H_2S concentrations above 10 PPM.

RESCUE & FIRST AID FOR H_2S POISONING

DO NOT PANIC – REMAIN CALM – THINK

1. Hold your breath – do not inhale first.

2. Put on SCBA.

3. Remove victim(s) to fresh air as quickly as possible. Go upwind from source or at right angle to the wind. Do not go downwind.

4. Briefly apply chest pressure – using arm lift method of artificial respiration to clean victim's lungs and to avoid inhaling any toxic gas directly from victim's lungs.

5. Provide artificial respiration if needed.

6. Provide for prompt transportation to the hospital and continue giving artificial respiration if needed.

7. Inform hospital/medical facilities of the possibility of H2S gas poisoning before they treat.

Besides basic first aid, everyone on location should have a good working knowledge of artificial respiration and CPR, as well as first aid for eyes and skin contact with liquid H_2S.

Proposed H2S Safety Schematic

1) Location of windsocks.

2) Location of H2S alarms

3) Location of briefing areas.

4) Terrain of surrounding area (Please refer to page 2 of survey plat package also see point 11 of multi-surface use plan)

5) Location of flare line(s) and pit(s) (Please refer to diagram 2 choke manifold diagram and or page six of survey plat packet)

6) Location of caution and/or danger signs.

(7) Location of Breathing Equipment

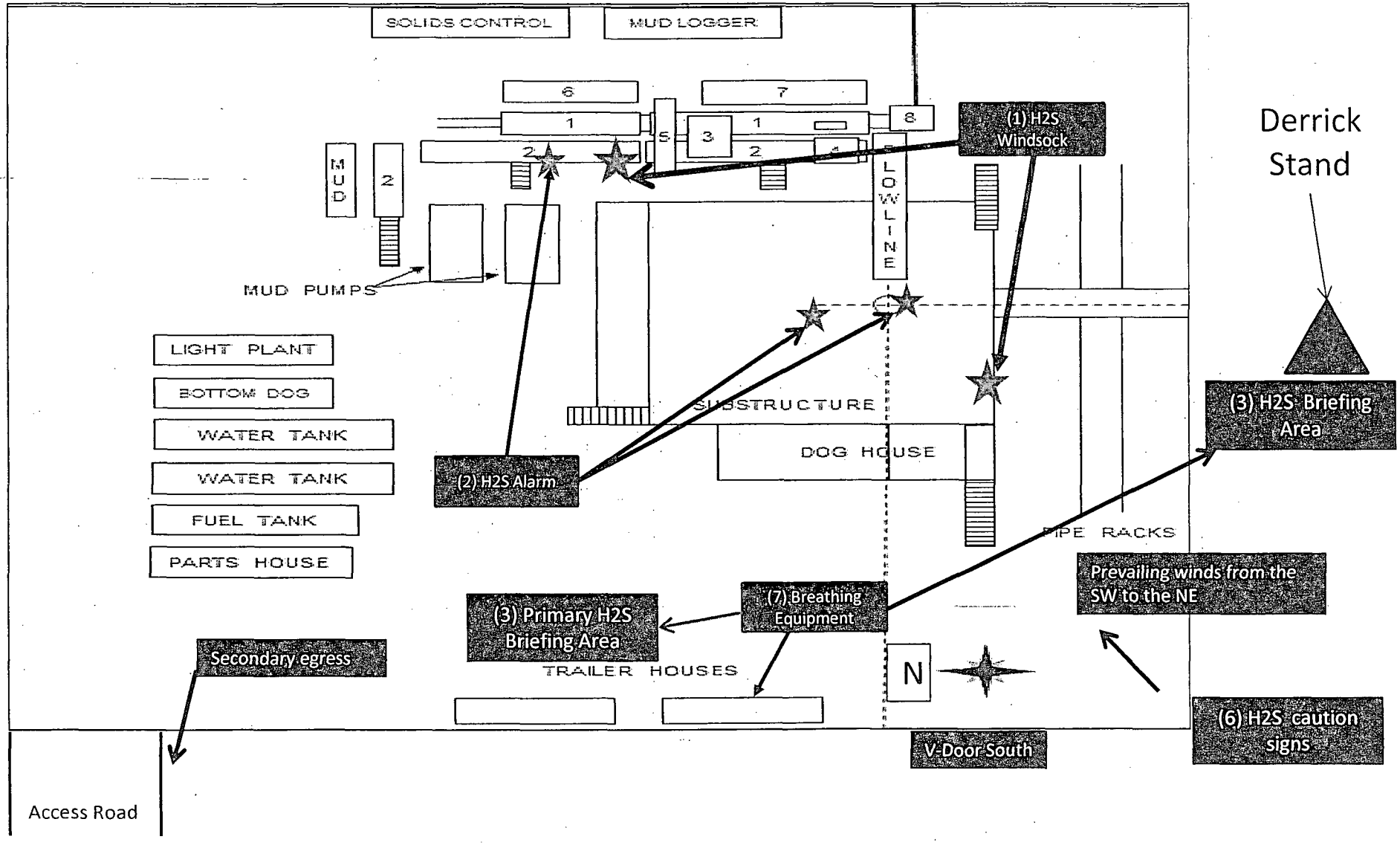
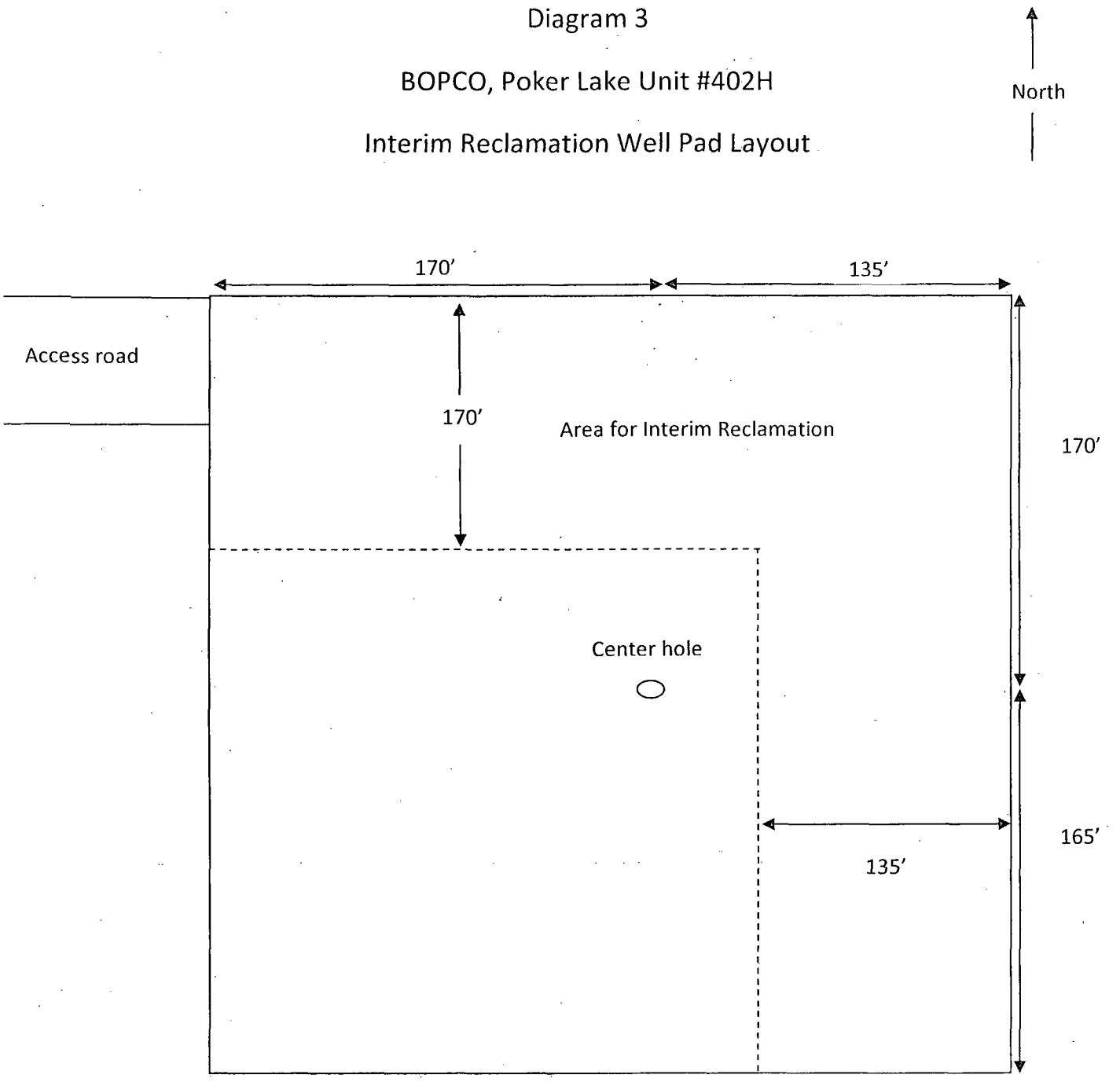


Diagram 3

BOPCO, Poker Lake Unit #402H

Interim Reclamation Well Pad Layout



Location On-Site Notes

Location on-site conducted by Cecil Watkins-BOPCO L.P., Justin Frye-BLM, and Robert Gomez-Basin Survey on 05/29/2012. The Poker Lake Unit 402H was moved in Section 33 to a surface footage call located at 1530' FNL & 930' FEL of Sec 33-T24S-R31E to clear Buck Thorn Road. Frac pad on ENE corner. Access road straight off Buck Thorn Road to NW corner of proposed pad. V-door will face the south. Excess dirt will be stockpiled to the east.

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BOPCO, L. P.**
LEASE NO.:	**NM-000506A**
WELL NAME & NO.:	**POKER LAKE UNIT 402H**
SURFACE HOLE FOOTAGE:	**1530' FNL & 0930' FEL**
BOTTOM HOLE FOOTAGE LOCATION:	**0660' FNL & 1800' FEL Sec. 29, T. 24S., R 31 E., Section 33, T. 24S., R 31 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Commercial Well Determination
A commercial well determination shall be submitted after production has been established for at least six months.

Unit Wells
The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

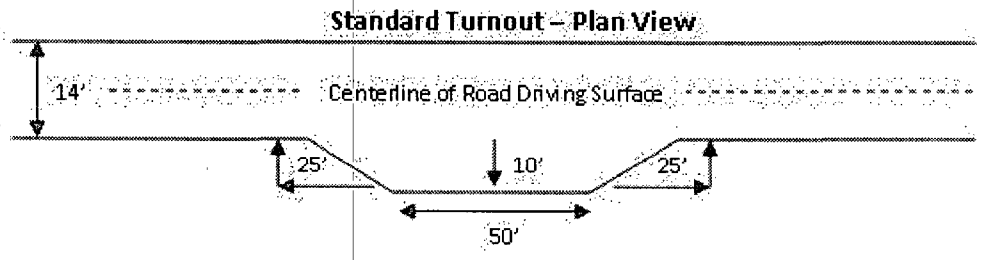
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

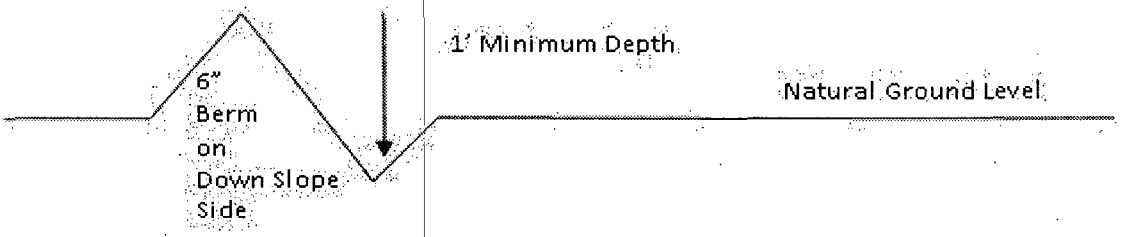
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

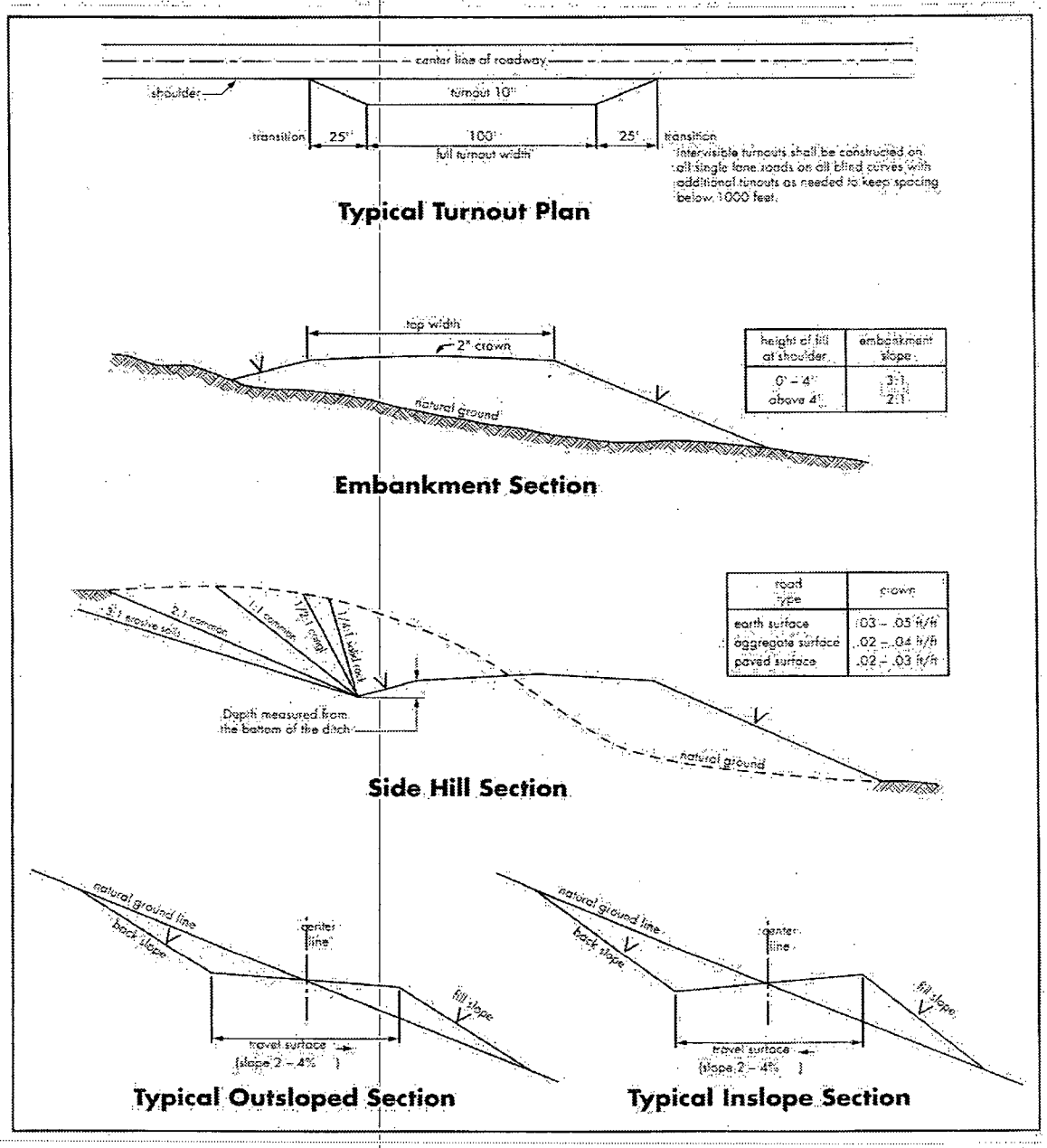
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.
The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

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

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. 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.).

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Possible water and brine flows in the Salado, Castile, Delaware, and Bone Spring formations.
Possible lost circulation in the Delaware and Bone Spring.

1. The **13 3/8** inch surface casing shall be set at approximately **915** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If the salt is encountered set the casing 25 feet above the top of the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

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

2. The minimum required fill of cement behind the **9 5/8** inch intermediate casing shall be set at approximately **4363** feet within the Lamar Limestone.

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

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **7** inch production casing is:

   a. First stage to DV tool:

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

   b. Second stage above DV tool:

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

4. Cement not required on the **4-1/2** inch completion assembly. **Packer system being used.**

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

C. PRESSURE CONTROL

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

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review**. 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. 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. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

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/BOPE. 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.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

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

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

JAM 012413

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation

measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

18. Special Stipulations:

a. **Lesser Prairie-Chicken:** Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted.

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed