

Form 3160-3  
(June 2015)FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No.  6. If Indian, Allottee or Tribe Name  7. If Unit or CA Agreement, Name and No.  8. Lease Name and Well No.
2. Name of Operator		9. API Well No. <div style="text-align: center; color: red;">30-015-55314</div>
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
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
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |   |   |
|---|---|
| 1. Well plat certified by a registered surveyor.<br>2. A Drilling Plan.<br>3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must 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).<br>5. Operator certification.<br>6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
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.

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.

(Continued on page 2)

\*(Instructions on page 2)



## Additional Operator Remarks

### Location of Well

0. SHL: NENE / 519 FNL / 1205 FEL / TWSP: 23S / RANGE: 31E / SECTION: 31 / LAT: 32.266748 / LONG: -103.812251 ( TVD: 0 feet, MD: 0 feet )  
PPP: SESE / 1 FSL / 447 FEL / TWSP: 23S / RANGE: 31E / SECTION: 18 / LAT: 32.2972 / LONG: -103.809837 ( TVD: 12160 feet, MD: 22991 feet )  
PPP: SENE / 2642 FSL / 450 FEL / TWSP: 23S / RANGE: 31E / SECTION: 30 / LAT: 32.275436 / LONG: -103.809818 ( TVD: 12160 feet, MD: 15072 feet )  
PPP: NENE / 1317 FNL / 449 FEL / TWSP: 23S / RANGE: 31E / SECTION: 19 / LAT: 32.293579 / LONG: -103.809834 ( TVD: 12160 feet, MD: 21673 feet )  
PPP: SESE / 100 FSL / 450 FEL / TWSP: 23S / RANGE: 31E / SECTION: 30 / LAT: 32.268451 / LONG: -103.809812 ( TVD: 12160 feet, MD: 12533 feet )  
PPP: NESE / 1321 FSL / 451 FEL / TWSP: 23S / RANGE: 31E / SECTION: 19 / LAT: 32.286328 / LONG: -103.809828 ( TVD: 12160 feet, MD: 19035 feet )  
BHL: NESE / 2626 FSL / 450 FEL / TWSP: 23S / RANGE: 31E / SECTION: 18 / LAT: 32.304416 / LONG: -103.809843 ( TVD: 12160 feet, MD: 25617 feet )

### BLM Point of Contact

Name: TENILLE C MOLINA  
Title: Land Law Examiner  
Phone: (575) 234-2224  
Email: TCMOLINA@BLM.GOV

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-55314	<sup>2</sup> Pool Code 98236	<sup>3</sup> Pool Name WC-015 G-08 S233135D, WOLFCAMP
<sup>4</sup> Property Code 326187	<sup>5</sup> Property Name PRECIOUS 30 18 FED COM	
<sup>7</sup> OGRID No. 16696	<sup>8</sup> Operator Name OXY USA INC.	<sup>9</sup> Elevation 3348.6'

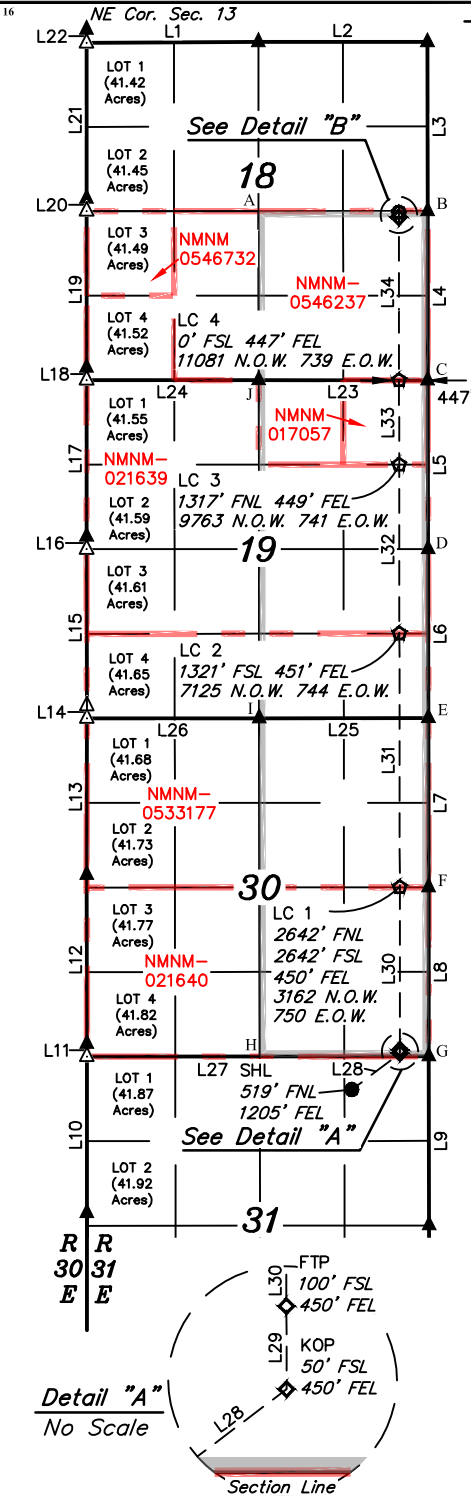
<sup>10</sup> Surface Location

UL or lot no. A	Section 31	Township 23S	Range 31E	Lot Idn	Feet from the 519	North/South line NORTH	Feet from the 1205	East/West line EAST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. I	Section 18	Township 23S	Range 31E	Lot Idn	Feet from the 2626	North/South line SOUTH	Feet from the 450	East/West line EAST	County EDDY
<sup>12</sup> Dedicated Acres 800		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.			

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.



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°40'52"W	2684.48'
L2	N89°59'32"W	2641.89'
L3	N00°03'25"W	2640.16'
L4	N00°00'24"W	2646.93'
L5	N00°10'14"W	2633.72'
L6	N00°05'08"W	2641.85'
L7	N00°04'18"W	2642.11'
L8	N00°04'21"W	2641.63'
L9	N00°06'04"W	2641.03'
L10	N00°01'09"W	2443.02'
L11	N00°01'09"W	198.37'
L12	N00°00'59"W	2641.81'
L13	N00°00'32"E	2444.71'
L14	N00°00'32"E	197.02'
L15	N00°03'28"W	2444.98'
L16	N00°03'28"W	196.76'
L17	N00°00'41"W	2445.09'
L18	N00°00'41"W	194.84'
L19	N00°00'07"E	2446.00'
L20	N00°00'07"E	196.95'
L21	N00°00'46"W	2430.00'
L22	N00°00'46"W	210.20'
L23	N89°52'33"W	2639.54'
L24	S89°58'44"W	2689.23'
L25	S89°57'51"W	2643.20'
L26	S89°57'33"W	2694.24'
L27	S89°56'58"W	5343.63'
L28	N52°54'21"E	945.03'
L29	N00°04'21"W	50.00'
L30	N00°04'55"W	2541.70'
L31	N00°04'55"W	3963.08'
L32	N00°04'55"W	2638.41'
L33	N00°04'55"W	1317.48'
L34	N00°04'55"W	2545.85'
L35	N00°00'24"W	80.00'

<b>NAD 83 (SURFACE HOLE LOCATION)</b> LATITUDE = 32°16'00.29" (32.266748°) LONGITUDE = -103°48'44.10" (-103.812251°)
<b>NAD 27 (SURFACE HOLE LOCATION)</b> LATITUDE = 32°15'59.85" (32.266625°) LONGITUDE = -103°48'42.35" (-103.811765°) STATE PLANE NAD 83 (N.M. EAST) N: 461167.12' E: 702398.28' STATE PLANE NAD 27 (N.M. EAST) N: 461107.84' E: 661214.72'
<b>NAD 83 (KICK OFF POINT)</b> LATITUDE = 32°16'05.93" (32.268313°) LONGITUDE = -103°48'35.32" (-103.809812°)
<b>NAD 27 (KICK OFF POINT)</b> LATITUDE = 32°16'05.49" (32.268190°) LONGITUDE = -103°48'33.57" (-103.809326°) STATE PLANE NAD 83 (N.M. EAST) N: 461740.14' E: 703149.54' STATE PLANE NAD 27 (N.M. EAST) N: 461680.84' E: 661965.99'
<b>NAD 83 (FIRST TAKE POINT)</b> LATITUDE = 32°16'06.42" (32.268451°) LONGITUDE = -103°48'35.32" (-103.809812°)
<b>NAD 27 (FIRST TAKE POINT)</b> LATITUDE = 32°16'05.98" (32.268328°) LONGITUDE = -103°48'33.57" (-103.809326°) STATE PLANE NAD 83 (N.M. EAST) N: 461790.13' E: 703149.27' STATE PLANE NAD 27 (N.M. EAST) N: 461730.83' E: 661965.72'
<b>NAD 83 (LEASE CROSSING #1)</b> LATITUDE = 32°16'31.57" (32.275436°) LONGITUDE = -103°48'35.34" (-103.809818°)
<b>NAD 27 (LEASE CROSSING #1)</b> LATITUDE = 32°16'31.13" (32.275313°) LONGITUDE = -103°48'33.59" (-103.809332°) STATE PLANE NAD 83 (N.M. EAST) N: 464331.29' E: 703134.98' STATE PLANE NAD 27 (N.M. EAST) N: 464271.93' E: 661951.51'
<b>NAD 83 (LEASE CROSSING #2)</b> LATITUDE = 32°17'10.78" (32.286328°) LONGITUDE = -103°48'35.38" (-103.809828°)
<b>NAD 27 (LEASE CROSSING #2)</b> LATITUDE = 32°17'10.34" (32.286205°) LONGITUDE = -103°48'33.63" (-103.809341°) STATE PLANE NAD 83 (N.M. EAST) N: 468293.54' E: 703112.70' STATE PLANE NAD 27 (N.M. EAST) N: 468234.08' E: 661929.34'
<b>NAD 83 (LEASE CROSSING #3)</b> LATITUDE = 32°17'36.88" (32.293579°) LONGITUDE = -103°48'35.40" (-103.809834°)
<b>NAD 27 (LEASE CROSSING #3)</b> LATITUDE = 32°17'36.44" (32.293456°) LONGITUDE = -103°48'33.65" (-103.809347°) STATE PLANE NAD 83 (N.M. EAST) N: 470931.40' E: 703097.86' STATE PLANE NAD 27 (N.M. EAST) N: 470871.86' E: 661914.58'
<b>NAD 83 (LAST TAKE POINT)</b> LATITUDE = 32°18'15.11" (32.304196°) LONGITUDE = -103°48'35.44" (-103.809843°)
<b>NAD 27 (LAST TAKE POINT)</b> LATITUDE = 32°18'14.66" (32.304073°) LONGITUDE = -103°48'33.68" (-103.809356°) STATE PLANE NAD 83 (N.M. EAST) N: 474793.91' E: 703076.13' STATE PLANE NAD 27 (N.M. EAST) N: 474734.28' E: 661892.96'

<sup>17</sup> 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.

Roni Mathew 12/12/2023

Signature Date

Roni Mathew

Printed Name

roni\_mathew@oxy.com

E-mail Address

<sup>18</sup> SURVEYOR  
CERTIFICATION

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

May 11, 2023

Date of Survey

Signature and Seal of Professional Surveyor:

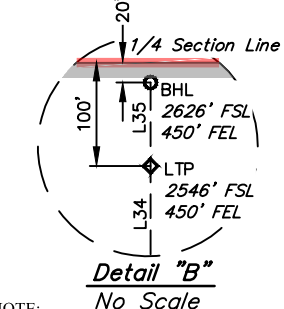


Certificate Number:

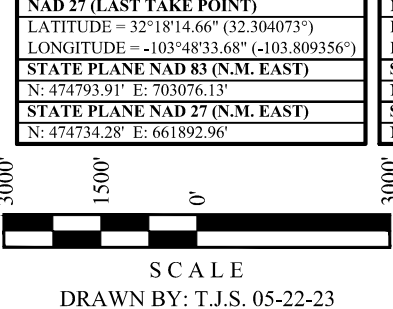
<b>NAD 83 (LEASE CROSSING #4)</b> LATITUDE = 32°17'49.92" (32.297200°) LONGITUDE = -103°48'35.41" (-103.809837°)	<b>NAD 27 (LEASE CROSSING #4)</b> LATITUDE = 32°17'49.48" (32.297077°) LONGITUDE = -103°48'33.66" (-103.809350°) STATE PLANE NAD 83 (N.M. EAST) N: 472248.60' E: 703090.45' STATE PLANE NAD 27 (N.M. EAST) N: 472189.03' E: 661907.21'
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<b>NAD 83 (BOTTOM HOLE LOCATION)</b> LATITUDE = 32°18'15.90" (32.304416°) LONGITUDE = -103°48'35.43" (-103.809843°)	<b>NAD 27 (BOTTOM HOLE LOCATION)</b> LATITUDE = 32°18'15.46" (32.304293°) LONGITUDE = -103°48'33.68" (-103.809355°) STATE PLANE NAD 83 (N.M. EAST) N: 474873.90' E: 703075.78' STATE PLANE NAD 27 (N.M. EAST) N: 474814.26' E: 661892.62'
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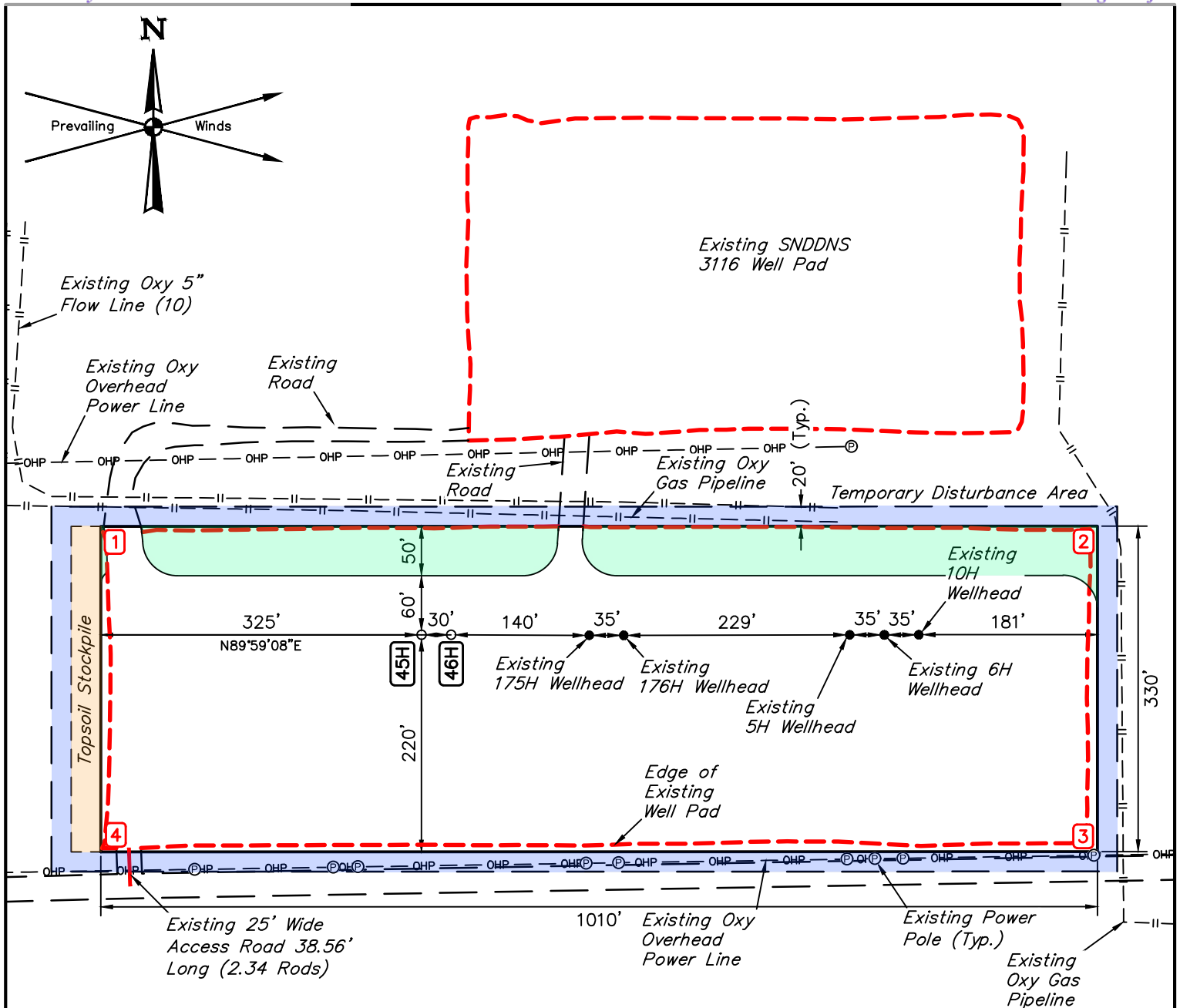
HSU COORDINATES			
POINT	NAD 27 N.M. STATE PLANE, EAST ZONE	NAD 83 N.M. STATE PLANE, EAST ZONE	
	NORTHING	EASTING	NORTHING
A	474824.50'	659701.12'	474884.13'
B	474836.26'	662342.44'	474895.90'
C	472189.94'	662353.78'	472249.51'
D	469556.87'	662372.58'	469616.37'
E	466915.64'	662387.53'	466975.07'
F	464274.15'	662401.83'	464333.51'
G	461633.14'	662416.17'	461692.43'
H	461619.73'	659775.34'	461679.02'
I	466902.90'	659744.89'	466962.33'
J	472184.59'	659714.76'	472244.15'



NOTE:  
• Distances referenced on plat to section lines are perpendicular.  
• Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)  
• Section breakdown information for this plat may be obtained from Uintah Engineering & Land Surveying.



- = SURFACE HOLE LOCATION
- = KICK OFF POINT/TAKE POINTS
- = LEASE CROSSING
- = BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- △ = TRUE POSITION W/CLOSING CORNER RE-EST. (Not Set on Ground.)
- △ = CORNER RE-EST. BY GRANT BOUNDARY METHOD (Not Set on Ground.)
- = LEASE LINE.
- = HORIZONTAL SPACING UNIT
- N.O.W. = NORTH OF WELL.
- E.O.W. = EAST OF WELL.



FAA PERMIT: NO

Reclamation

Topsoil Piles

Temporary Disturbance

PRECIOUS 30.18 FED COM 45H  
519' FNL 1235' FELPRECIOUS 30.18 FED COM 46H  
519' FNL 1205' FEL

Sheet 1 of 2

## NOTES:

- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

OXY USA INC.

SNDDNS 3101  
NE 1/4 NE 1/4, SECTION 31, T23S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.N.	05-11-23	SCALE
DRAWN BY	Z.L.	05-18-23	1" = 150'
SITE PLAN			



UELS, LLC  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017



<b>45H - EL: 3348.6'</b>	<b>46H - EL: 3348.6'</b>
NAD 83	NAD 83
LATITUDE = 32°16'00.30" (32.266749°)	LATITUDE = 32°16'00.29" (32.266748°)
LONGITUDE = -103°48'44.45" (-103.812348°)	LONGITUDE = -103°48'44.10" (-103.812251°)
NAD 27	NAD 27
LATITUDE = 32°15'59.85" (32.266626°)	LATITUDE = 32°15'59.85" (32.266625°)
LONGITUDE = -103°48'42.70" (-103.811862°)	LONGITUDE = -103°48'42.35" (-103.811765°)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 461167.08' E: 702368.31'	N: 461167.12' E: 702398.28'
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 461107.80' E: 661184.75'	N: 461107.84' E: 661214.72'

<b>1 - EL: 3348.6'</b>	<b>2 - EL: 3349.1'</b>
NAD 83	NAD 83
LATITUDE = 32°16'01.33" (32.267035°)	LATITUDE = 32°16'01.35" (32.267043°)
LONGITUDE = -103°48'48.21" (-103.813392°)	LONGITUDE = -103°48'36.57" (-103.810157°)
NAD 27	NAD 27
LATITUDE = 32°16'00.89" (32.266913°)	LATITUDE = 32°16'00.91" (32.266920°)
LONGITUDE = -103°48'46.46" (-103.812906°)	LONGITUDE = -103°48'34.82" (-103.809671°)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 461269.86' E: 702045.25'	N: 461277.38' E: 703045.02'
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 461210.57' E: 660861.68'	N: 461218.10' E: 661861.46'

<b>3 - EL: 3349.1'</b>	<b>4 - EL: 3349.1'</b>
NAD 83	NAD 83
LATITUDE = 32°15'58.16" (32.266155°)	LATITUDE = 32°15'58.22" (32.266172°)
LONGITUDE = -103°48'48.22" (-103.813396°)	LONGITUDE = -103°48'36.63" (-103.810174°)
NAD 27	NAD 27
LATITUDE = 32°15'57.71" (32.266032°)	LATITUDE = 32°15'57.78" (32.266049°)
LONGITUDE = -103°48'46.47" (-103.812910°)	LONGITUDE = -103°48'34.88" (-103.809688°)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 460949.46' E: 702045.62'	N: 460960.57' E: 703041.22'
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 460890.18' E: 660862.05'	N: 460901.30' E: 661857.65'

NOTES:

• Corner Coordinate Shown are based on existing pad corners.

• Coordinates Show are New Mexico Coordinate System East Zone, U.S. Feet.

OXY USA INC.


SNDDNS 3101

NE 1/4 NE 1/4, SECTION 31, T23S, R31E, N.M.P.M.

EDDY COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.N.	05-11-23	SCALE
DRAWN BY	Z.L.	05-18-23	N/A

SITE PLAN

UIN TAH  
ENGINEERING & LAND SURVEYING

UELS, LLC

Corporate Office \* 85 South 200 East

Vernal, UT 84078 \* (435) 789-1017

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description

Effective May 25, 2021

**I. Operator:** OXY USA INC. **OGRID:** 16696 **Date:** 1 2/ 1 2/ 2 3

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
SEE ATTACHED						

**IV. Central Delivery Point Name:** PRECIOUS CTB [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
SEE ATTACHED						

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

**Section 2 – Enhanced Plan**  
**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

**IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

**X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

Page 8

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: <i>Roni Mathew</i>
Printed Name: Roni Mathew
Title: Regulatory Advisor
E-mail Address: roni_mathew@oxy.com
Date: 12/12/2023
Phone: 713-215-7827
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:



## III. Well(s)

WELL NAME	API	WELL LOCATION (U	FOOTAGES	ANTICIPATED OIL BBL/D	ANTICIPATED GAS MCF/D	ANTICIPATED PROD WATER BBL/D
PRECIOUS 30_18 FED COM 11H	PENDING	C-31-23S-31E	128 FNL X 2361 FWL	1100	3000	3300
PRECIOUS 30_18 FED COM 12H	PENDING	C-31-23S-31E	128 FNL X 2391 FWL	1100	3000	3300
PRECIOUS 30_18 FED COM 13H	PENDING	B-31-23S-31E	339 FNL X 2151 FEL	1100	3000	3300
PRECIOUS 30_18 FED COM 14H	PENDING	B-31-23S-31E	369 FNL X 2151 FEL	1100	3000	3300
PRECIOUS 30_18 FED COM 173H	PENDING	C-31-23S-31E	128 FNL X 2221 FWL	2300	3400	4100
PRECIOUS 30_18 FED COM 174H	PENDING	C-31-23S-31E	128 FNL X 2251 FWL	2300	3400	4100
PRECIOUS 30_18 FED COM 21H	PENDING	1-31-23S-31E	569 FNL X 380 FWL	1600	7,500	4600
PRECIOUS 30_18 FED COM 22H	PENDING	1-31-23S-31E	569 FNL X 410 FWL	1600	7,500	4600
PRECIOUS 30_18 FED COM 23H	PENDING	1-31-23S-31E	569 FNL X 440 FWL	1600	7,500	4600
PRECIOUS 30_18 FED COM 24H	PENDING	A-31-23S-31E	100 FNL X 1035 FEL	1600	7,500	4600
PRECIOUS 30_18 FED COM 25H	PENDING	A-31-23S-31E	100 FNL X 1005 FEL	1600	7,500	4600
PRECIOUS 30_18 FED COM 26H	PENDING	A-31-23S-31E	100 FNL X 975 FEL	1600	7,500	4600
PRECIOUS 30_18 FED COM 33H	PENDING	A-31-23S-31E	100 FNL X 1175 FEL	2300	3400	4100
PRECIOUS 30_18 FED COM 34H	PENDING	A-31-23S-31E	100 FNL X 1145 FEL	2300	3400	4100
PRECIOUS 30_18 FED COM 41H	PENDING	1-31-23S-31E	570 FNL X 1070 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 42H	PENDING	1-31-23S-31E	570 FNL X 1100 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 45H	PENDING	A-31-23S-31E	519 FNL X 1235 FEL	850	6,500	4200
PRECIOUS 30_18 FED COM 46H	PENDING	A-31-23S-31E	519 FNL X 1205 FEL	850	6,500	4200
PRECIOUS 30_18 FED COM 51H	PENDING	1-31-23S-31E	130 FNL X 726 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 52H	PENDING	1-31-23S-31E	130 FNL X 756 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 53H	PENDING	C-31-23S-31E	568 FNL X 2503 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 54H	PENDING	C-31-23S-31E	568 FNL X 2563 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 55H	PENDING	1-31-23S-31E	130 FNL X 786 FWL	850	6,500	4200
PRECIOUS 30_18 FED COM 56H	PENDING	C-31-23S-31E	568 FNL X 2533 FWL	850	6,500	4200

**V. Anticipated Schedule**

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
PRECIOUS 30_18 FED COM 11H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 12H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 13H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 14H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 173H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 174H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 21H	PENDING	7/20/2025	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 22H	PENDING	7/20/2025	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 23H	PENDING	7/20/2025	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 24H	PENDING	7/20/2025	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 25H	PENDING	7/20/2025	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 26H	PENDING	7/20/2025	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 33H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 34H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 41H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 42H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 45H	PENDING	10/11/2024	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 46H	PENDING	10/12/2024	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 51H	PENDING	10/10/2024	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 52H	PENDING	10/10/2024	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 53H	PENDING	10/10/2024	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 54H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 55H	PENDING	TBD	TBD	TBD	TBD	TBD
PRECIOUS 30_18 FED COM 56H	PENDING	TBD	TBD	TBD	TBD	TBD

## **Part VI. Separation Equipment**

Operator will size the flowback separator to handle 12,000 Bbls of fluid and 6-10MMscfd which is more than the expected peak rates for these wells. Each separator is rated to 1440psig, and pressure control valves and automated communication will cause the wells to shut in in the event of an upset at the facility, therefore no gas will be flared on pad during an upset. Current Oxy practices avoid use of flare or venting on pad, therefore if there is an upset or emergency condition at the facility, the wells will immediately shut down, and reassume production once the condition has cleared.

## VII. Operational Practices

### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, where a gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services, LLC ("Enterprise") and is connected to Enterprise low/high pressure gathering system located in Eddy County, New Mexico. OXY USA INC. ("OXY") provides (periodically) to Enterprise a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, OXY and Enterprise have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enterprise's Processing Plant located in Sec. 36, Twn. 24S, Rng. 30E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enterprise system at that time. Based on current information, it is OXY's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### **VIII. Best Management Practices**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease

- oOnly a portion of gas is consumed operating the generator, remainder of gas will be flared

- Compressed Natural Gas – On lease

- oGas flared would be minimal, but might be uneconomical to operate when gas volume declines

- NGL Removal – On lease

- oPlants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



# Oxy USA Inc. - PRECIOUS 30\_18 FED COM 46H

## Drill Plan

### 1. Geologic Formations

TVD of Target (ft):	12160	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	25617	Deepest Expected Fresh Water (ft):	382

### Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	382	382	
Salado	710	710	Salt
Castile	2605	2605	Salt
Delaware	4083	4083	Oil/Gas/Brine
Bell Canyon	4120	4120	Oil/Gas/Brine
Cherry Canyon	5003	5003	Oil/Gas/Brine
Brushy Canyon	6282	6282	Losses
Bone Spring	7964	7964	Oil/Gas
Bone Spring 1st	9010	8997	Oil/Gas
Bone Spring 2nd	9675	9639	Oil/Gas
Bone Spring 3rd	10898	10820	Oil/Gas
Wolfcamp	11387	11298	Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

### 2. Casing Program

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	17.5	0	442	0	442	13.375	54.5	J-55	BTC
Salt	12.25	0	4183	0	4183	10.75	45.5	L-80 HC	BTC-SC
Intermediate	9.875	0	11888	0	11786	7.625	29.7	L-80 HC	BTC
Production	6.75	0	25617	0	12160	5.5	23	P-110	Sprint-SF

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172

All Casing SF Values will meet or exceed those below			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	1.4	1.4

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**3. Cementing Program**

Section	Stage	Slurry:	Sacks	Yield (ft <sup>3</sup> /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	462	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.1	1	Intermediate - Tail	85	1.33	14.8	20%	3,683	Circulate	Class C+Accel.
Int.1	1	Intermediate - Lead	590	1.73	12.9	50%	-	Circulate	Class Pozz+Ret.
Int. 2	1	Intermediate 1S - Tail	336	1.68	13.2	5%	6,532	Circulate	Class C+Ret., Disper.
Int. 2	2	Intermediate 2S - Tail BH	238	1.71	13.3	25%	3,683	Bradenhead Post-Frac	Class C+Accel.
Prod.	1	Production - Tail	804	1.84	13.3	25%	11,388	Circulate	Class C+Ret.

**Offline Cementing Request**

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365. Please see Offline Cementing Variance attachment for further details.

**Bradenhead CBL Request**

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.

**4. Pressure Control Equipment**

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:	TVD Depth (ft) per Section:
12.25" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	4183
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
9.875" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	11786
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
6.75" Hole	13-5/8"	5M	Annular	✓	100% of working pressure	12160
		10M	Blind Ram	✓	250 psi / 10000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			

\*Specify if additional ram is utilized

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

**5M Annular BOP Request**

Per BLM's Memorandum No. NM-2017-008: *Decision and Rationale for a Variance Allowing the Use of a 5M Annular Preventer with a 10M BOP Stack*, Oxy requests to employ a 5M annular with a 10M BOPE stack in the pilot and lateral sections of the well and will ensure that two barriers to flow are maintained at all times. Please see Annular BOP Variance attachment for further details.

	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR part 3170 Subpart 3172.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015.  See attached schematics.

**BOP Break Testing Request**

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see BOP Break Testing Variance attachment for further details.

**Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.**



**5. Mud Program**

Section	Depth		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	442	0	442	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate 1	442	4183	442	4183	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Intermediate 2	4183	11888	4183	11786	Water-Based or Oil-Based Mud	8.0 - 10.0	38-50	N/C
Production	11888	25617	11786	12160	Water-Based or Oil-Based Mud	9.5 - 13.5	38-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
---	--------------------------------

**6. Logging and Testing Procedures**

Logging, Coring and Testing.		
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole).	
	Stated logs run will be in the Completion Report and submitted to the BLM.	
No	Logs are planned based on well control or offset log information.	
No	Drill stem test? If yes, explain	
No	Coring? If yes, explain	
Additional logs planned		Interval
No	Resistivity	
No	Density	
Yes	CBL	Production string
Yes	Mud log	Bone Spring – TD
No	PEX	

**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	8537 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	178°F

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR part 3170 Subpart 3172. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H <sub>2</sub> S is present
Y	H <sub>2</sub> S Plan attached

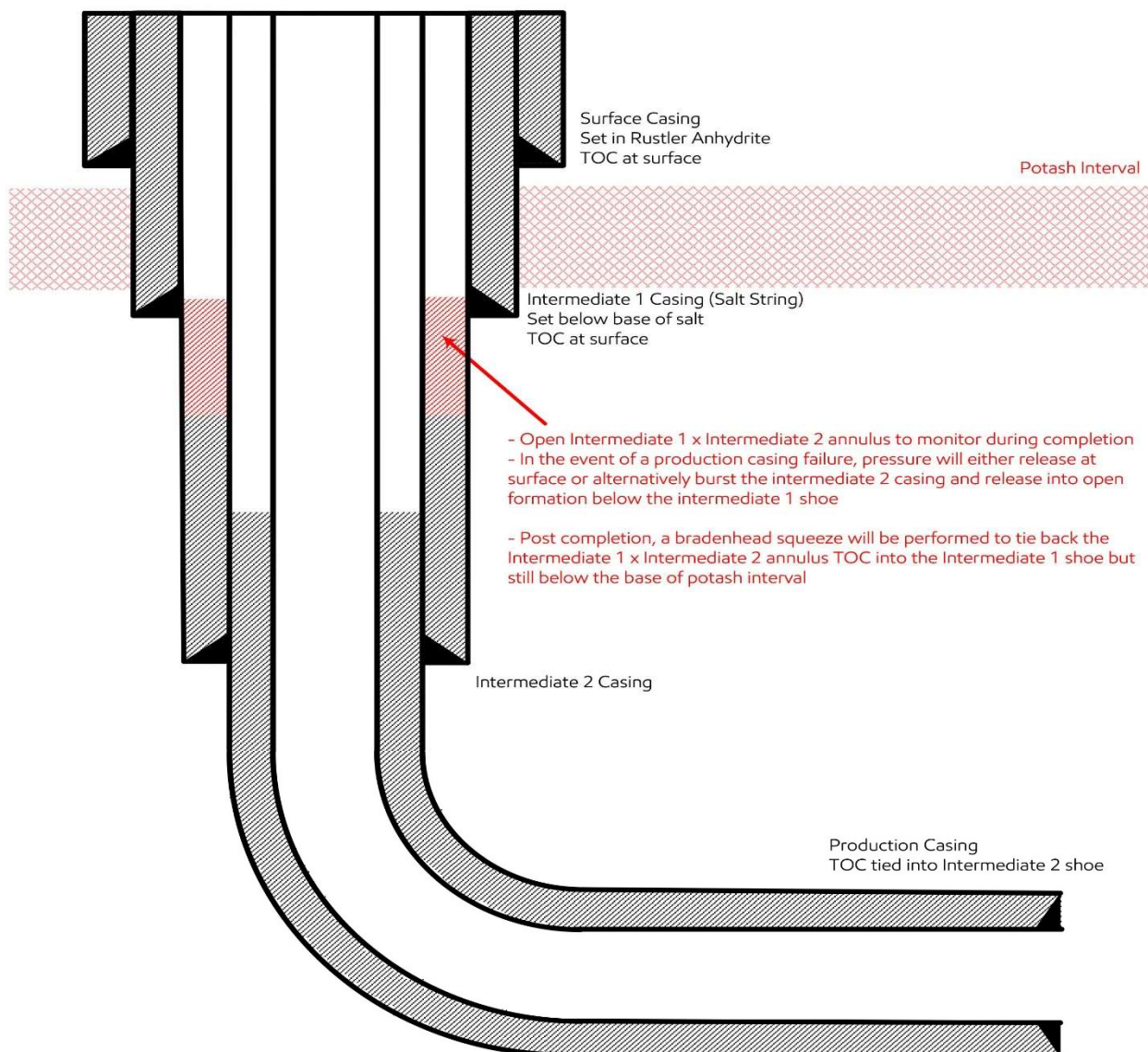
**8. Other facets of operation**

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 6 well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

**Total Estimated Cuttings Volume:** 2015 bbls

Revision Date – May 21, 2024

## 4-String Design – Open Int 1 x Int 2 Annulus



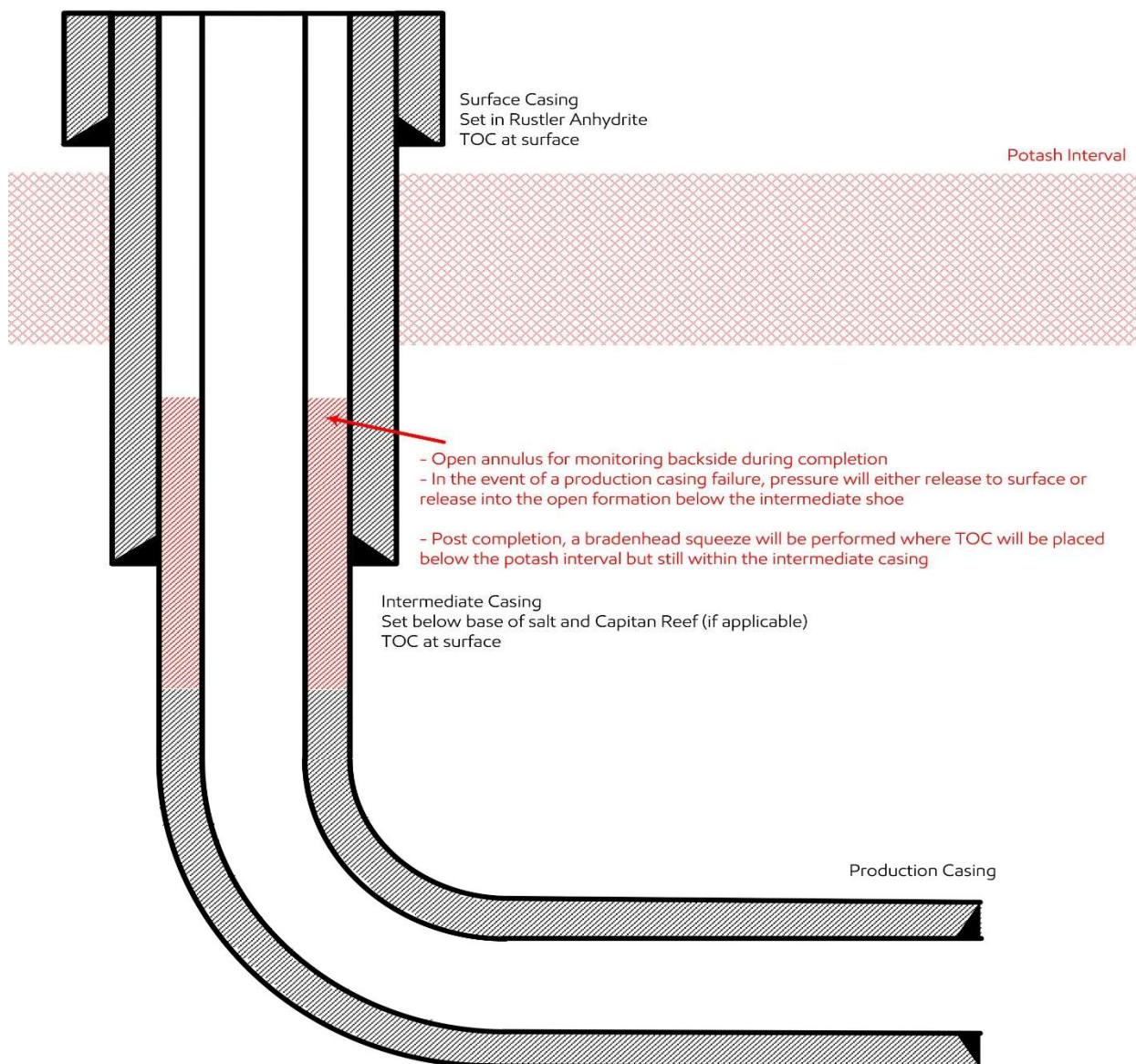
### Update May 2024:

OXY is aware of the R111-Q update and will comply with these requirements including (but not limited to):

- 1) Alignment with KPLA requirements per schematic above, leaving open annulus for pressure monitoring during frac and utilizing new casing that meets API standards
- 2) Contingency plans in place to divert formation fluids away from salt interval in event of production casing failure
- 3) Bradenhead squeeze to be completed within 180days to tie back TOC to salt string at least 500ft but with top below Marker Bed 126
- 4) Production cement to be tied back no less than 500ft inside previous casing shoe
- 5) While drilling salt interval, separation distance to any active/inactive producing offset well will be ensured such that  $SF > 1.0$ ; Anti-Collision Reports will be provided with APD Packages for review where  $SF < 1.5$  against any applicable offset well, or where center-to-center separation against a blind or inclination only surveyed offset well is less than 500ft

Revision Date – May 21, 2024

### 3-String Design – Open Production Casing Annulus



#### Update May 2024:

OXY is aware of the R111-Q update and will comply with these requirements including (but not limited to):

- 1) Alignment with KPLA requirements per schematic above, leaving open annulus for pressure monitoring during frac and utilizing new casing that meets API standards
- 2) Contingency plans in place to divert formation fluids away from salt interval in event of production casing failure
- 3) Bradenhead squeeze for Production cement to be completed within 180days to tie back TOC to previous casing string at least 500ft but with top below Marker Bed 126
- 4) While drilling salt interval, separation distance to any active/inactive producing offset well will be ensured such that  $SF > 1.0$ ; Anti-Collision Reports will be provided with APD Packages for review where  $SF < 1.5$  against any applicable offset well, or where center-to-center separation against a blind or inclination only surveyed offset well is less than 500ft

**OXY USA Inc**  
**APD ATTACHMENT: SPUDDER RIG DATA**

**OPERATOR NAME / NUMBER:** OXY USA Inc

**1. SUMMARY OF REQUEST:**

Oxy USA respectfully requests approval for the following operations for the surface hole in the drill plan:

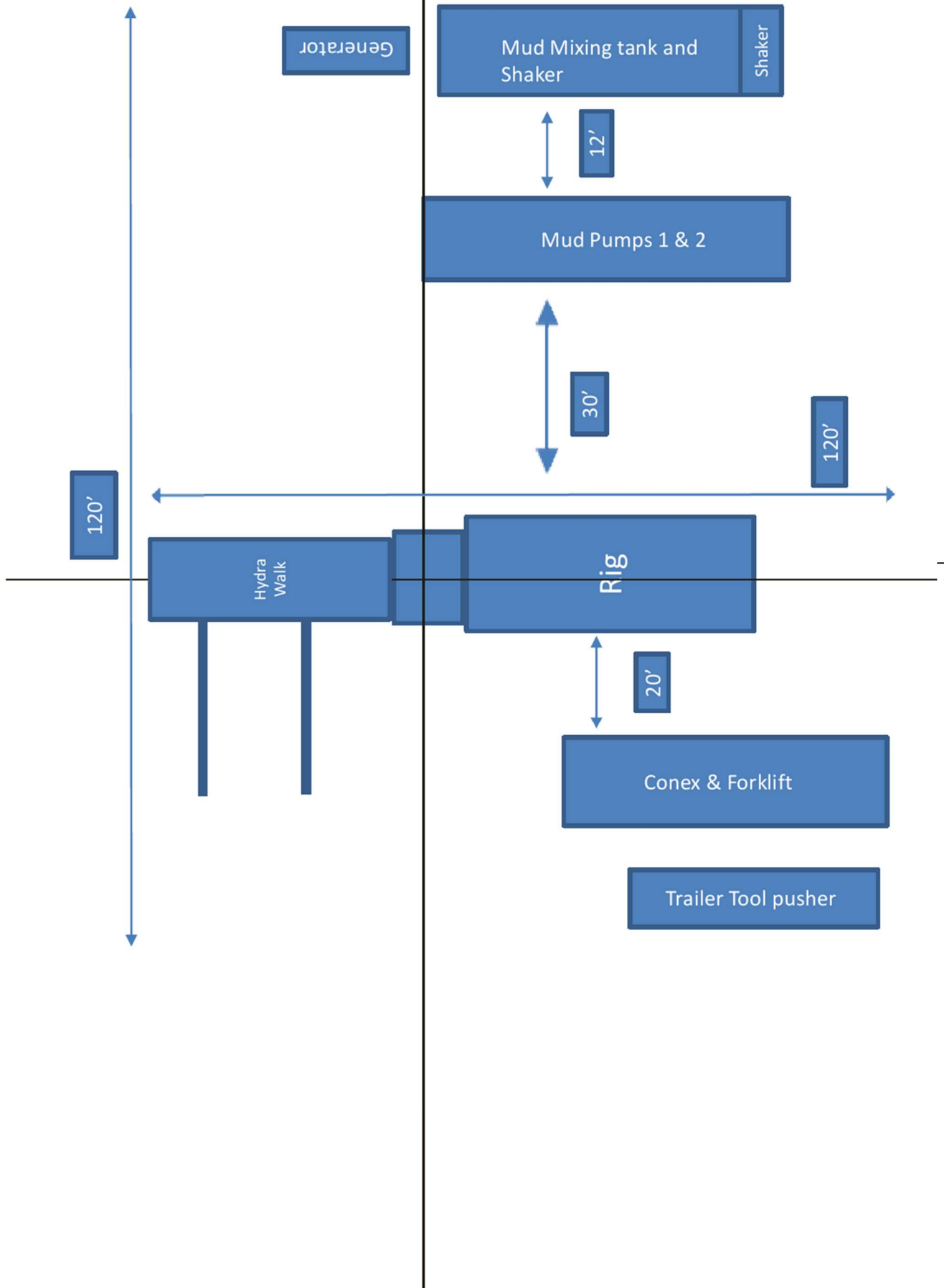
1. Utilize a spudder rig to pre-set surface casing for time and cost savings.

**2. Description of Operations**

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
  - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR part 3170 Subpart 3172, all COAs and NMOCD regulations).
  - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and the WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
  - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
  - a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
  - b. The BLM will be contacted / notified 24 hours before the larger rig moves back on the pre-set locations.
7. Oxy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, Oxy will secure the wellhead area by placing a guard rail around the cellar area.



# Spudder Rig Layout



## **Bradenhead Cement CBL Variance Request**

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

### **Three string wells:**

- CBL will be required on one well per pad
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

### **Four string wells:**

- CBL is not required
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

## 5M Annular BOP Variance Request

Per BLM's Memorandum No. NM-2017-008: *Decision and Rationale for a Variance Allowing the Use of a 5M Annular Preventer with a 10M BOP Stack*, Oxy requests to employ a 5M annular with a 10M BOPE stack in the pilot and lateral sections of the well and will ensure that two barriers to flow are maintained at all times. Please see Well Control Plan below.

### Oxy Well Control Plan

#### A. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the >5M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Pilot hole and Lateral sections, 10M requirement

Component	OD	Preventer	RWP
Drillpipe	4-1/2"-5"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
HWDP	4-1/2"-5"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
Drill collars and MWD tools	4-3/4" – 5-1/2"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
Mud Motor	4-3/4"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
Production casing	5-1/2"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
ALL	0" - 13-5/8"	Annular	5M
Open-hole	6-3/4"	Blind Rams	10M

VBR = Variable Bore Ram. Compatible range listed in chart.

HWDP = Heavy Weight Drill Pipe

MWD = Measurement While Drilling

#### B. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the Bottom Hole Assembly (BHA) through the Blowout Preventers (BOP). The pressure at which control is swapped from the annular to another compatible ram will occur when the anticipated pressure is approaching or envisioned to exceed 70% of the 5M annular Rated Working Pressure (RWP) or 3500 PSI.

#### General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. The Hydraulic Control Remote (HCR) valve and choke will already be in the closed position).
5. Confirm shut-in
6. Notify tool pusher/company representative
7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
8. Regroup and identify forward plan
9. If pressure has built or expected to reach 70% of the annular RWP during kill operations, crew will reconfirm spacing and swap to the upper pipe ram

#### General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. The HCR and choke will already be in the closed position)
5. Confirm shut-in
6. Notify tool pusher/company representative
7. Read and record the following
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
  - d. Regroup and identify forward plan
  - e. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram

#### General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. The HCR and choke will already be in the closed position).
5. Confirm shut-in
6. Notify tool pusher/company representative
7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
  - d. Regroup and identify forward plan.
  - e. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams or BSR. (The HCR and choke will already be in the closed position)
3. Confirm shut-in
4. Notify tool pusher/company representative
5. Read and record the following:
  - a. SICP
  - b. Pit gain
  - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drill pipe thru the stack.
  - a. Perform flow check, if flowing:
  - b. Sound alarm (alert crew)
  - c. Stab full opening safety valve and close
  - d. Space out drill string with tool joint just beneath the upper pipe ram
  - e. Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position)
  - f. Confirm shut-in
  - g. Notify tool pusher/company representative
  - h. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
    - iv. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
  - a. Sound alarm (alert crew)
  - b. Stab crossover and full opening safety valve and close
  - c. Space out drill string with upset just beneath the compatible pipe ram
  - d. Shut-in using compatible pipe ram. (The HCR and choke will already be in the closed position.)
  - e. Confirm shut-in
  - f. Notify tool pusher/company representative
  - g. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
    - iv. Regroup and identify forward plan
3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.

- a. Sound alarm (alert crew)
- b. If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario
- c. If impossible to pick up high enough to pull the string clear of the stack
- d. Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
- e. Space out drill string with tool joint just beneath the upper pipe ram
- f. Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position)
- g. Confirm shut-in
- h. Notify tool pusher/company representative
- i. Read and record the following:
  - i. SIDPP and SICP
  - ii. Pit gain
  - iii. Time
- j. Regroup and identify forward plan

## **Falcon SL1 Production Casing Annular Clearance Variance Request**

If Production Casing Connection OD does not meet 0.422" annular clearance inside casing:

- Cement excess will be circulated from Top of Liner to surface (Cement Confirmation)
- Liner Top will be tested to confirm seal.
- If ICP in Bone Spring Pool and lateral landed in Wolfcamp Pool, a CBL will be ran.

## Offline Cementing Variance Request

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

### 1. Cement Program

No changes to the cement program will take place for offline cementing.

### 2. Offline Cementing Procedure

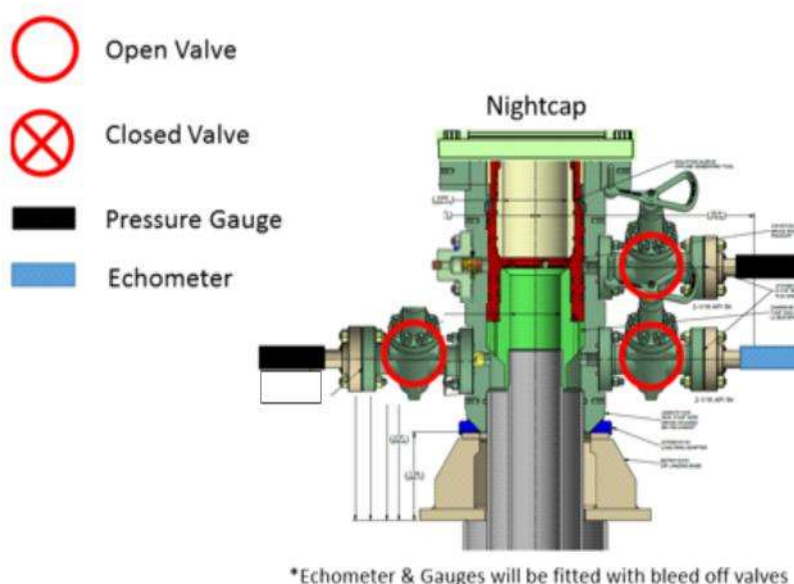
The operational sequence will be as follows:

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal.  
Pressure ratings of wellhead components and valves is 5,000 psi

Annular packoff with both external and internal seals

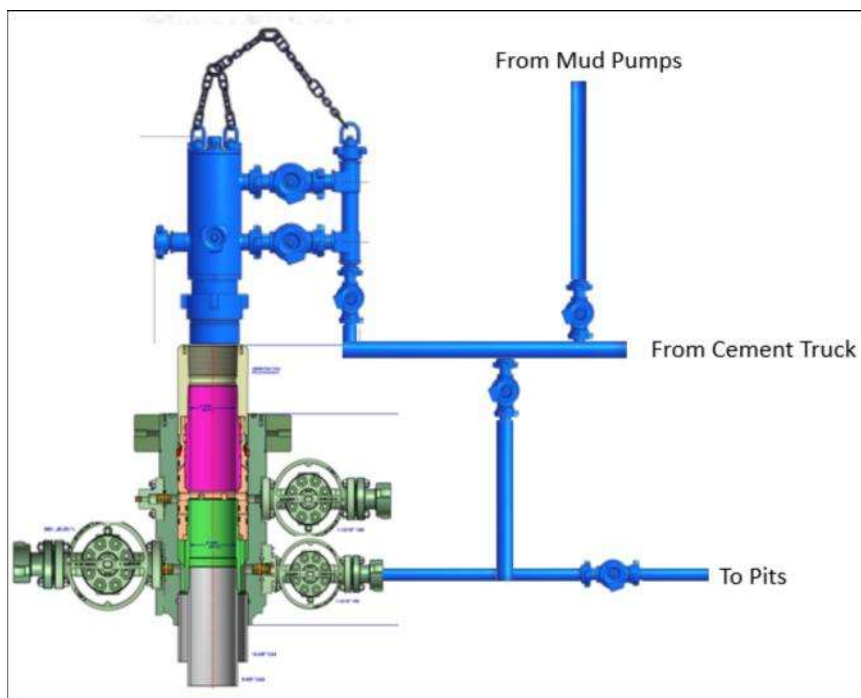






Wellhead diagram during skidding operations

5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
  - a. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50 psi compressive strength if cannot be verified.
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nipping up for further remediation.
  - a. Well Control Plan
    - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
    - ii. Rig pumps or a 3<sup>rd</sup> party pump will be tied into the upper casing valve to pump down the casing ID
    - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
    - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
    - v. Well will be confirmed static
    - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment



Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
  - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
  - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

## BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

BOP break test under the following conditions:

- After a full BOP test is conducted
- When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower.
- When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper.

If the kill line is broken prior to skid, two tests will be performed.

- 1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams
- 2) Wellhead flange, HCR valve, check valve, upper pipe rams

If the kill line is not broken prior to skid, only one test will be performed.

- 1) Wellhead flange, co-flex hose, check valve, upper pipe rams

See supporting information below:

**Subject:** Request for a Variance Allowing Break Testing of a Blowout Preventer Stack

OXY USA Inc. (OXY) requests a variance to allow break testing of the Blowout Preventer (BOP) stack when skidding a drilling rig between wells on multi-well pads. This practice entails retesting only the connections of the **BOP** stack that have been disconnected during this operation and not a complete **BOP** test.

### Background

43 CFR part 3170 Subpart 3172 states that a **BOP** test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) is this requires a complete **BOP** test and not just a test of the affected component. 43 CFR part 3170 Subpart 3172, Section I.D.2. states, "Some situations may exist either on a well-by-well basis or field-wide basis whereby it is commonly accepted practice to vary a particular minimum standard(s) established in this Order. This situation can be resolved by requesting a variance...". OXY feels the practice of break testing the **BOP** stack is such a situation. Therefore, as per 43 CFR part 3170 Subpart 3172, Section IV., OXY submits this request for the variance.

### Supporting Rationale

43 CFR part 3170 Subpart 3172 became effective on December 19, 1988, and has remained the standard for regulating BLM onshore drilling operations for almost 30 years. During this time there have been significant changes in drilling technology. **BLM** continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since 43 CFR part 3170 Subpart 3172 was originally released. The drilling rig fleet OXY utilizes in New Mexico was built with many modern upgrades. One of which allows the rigs to skid between wells on multi-well pads. A part of this rig package is a hydraulic winch system which safely installs and removes the BOP from the wellhead and carries it during skidding operations. This technology has made break testing a safe and reliable procedure.

American Petroleum Institute (API) standards, specifications and recommended practices are considered industry standards and are consistently utilized and referenced by the industry. 43 CFR part 3170 Subpart 3172 recognized API Recommended Practices (RP) 53 in its original development. API Standard 53,

*Blowout Prevention Equipment Systems for Drilling Wells* (Fourth Edition, November 2012, Addendum 1, July 2016) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 6.5.3.4.1.b states "Pressure tests on the well control equipment shall be conducted after the disconnection or repair of any pressure containment seal in the **BOP** stack, choke line, kill line, choke manifold, or wellhead assembly but limited to the affected component."

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specifications and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations. BSEE issued new offshore regulations under 30 CFR Part 250, *Oil and Gas and Sulphur Operations in the Outer Continental Shelf - Blowout Preventer Systems and Well Control*, which became effective on July 28, 2016. Section 250.737(d.1) states "Follow the testing requirements of API Standard 53". In addition, Section 250.737(d.8) has adopted language from **API** Standard 53 as it states "Pressure test affected **BOP** components following the disconnection or repair of any well-pressure containment seal in the wellhead or **BOP** stack assembly".

Break testing has been approved by the BLM in the past. See the Appendix for a Sundry Notice that was approved in 2015 by the Farmington Field Office. This approval granted permission for the operator to break test when skidding its Aztec 1000 rig on multi-well pads.

Oxy feels break testing and our current procedures meet the intent of 43 CFR part 3170 Subpart 3172 and often exceed it. We have not seen any evidence that break testing results in more components failing tests than seen on full BOP tests. As skidding operations take place within the 30-day full BOPE test window, the BOP shell and components such as the pipe rams and check valve get tested to the full rated working pressure more often. Therefore, there are more opportunities to ensure components are in good working order. Also, Oxy's standard requires complete BOP tests more often than that of 43 CFR part 3170 Subpart 3172. In addition to function testing the annular at least weekly and the pipe and blind rams on each trip, Oxy also performs a choke drill prior to drilling out every casing shoe. As a crew's training is a vital part of well control, this procedure to simulate step one of the Driller's Method exceeds the requirements of 43 CFR part 3170 Subpart 3172.

### Procedures

- 1) OXY to submit the break testing plan in the APD or Sundry Notice (SN) and receive approval prior to implementing (See Appendix for examples)
- 2) OXY would perform BOP break testing on multi-well pads where multiple intermediate sections can be drilled and cased within the 30-day BOP test window
- 3) After performing a complete BOP test on the first well and drilling and casing the hole section, three breaks would be made on the BOP.
  - Between the check valve and the kill line
  - Between the HCR valve and the co-flex hose or the co-flex hose and the manifold
  - Between the BOP flange and the wellhead
- 4) The BOP is then lifted and removed from the wellhead by the hydraulic winch system
- 5) After skidding to the next well, the BOP is moved to the wellhead by the hydraulic winch system and installed
- 6) The choke line and kill line are reconnected
- 7) A test plug is installed in the wellhead with a joint of drill pipe and the internal parts of the check valve are removed
- 8) A shell test is performed against the upper pipe rams testing all three breaks
- 9) The internal parts of the check valve are reinstalled and the HCR valve is closed. A second test is performed on them
- 10) These tests consist of a 250 psi low test and a high test to the value submitted in the APD or SN (e.g., 5000 psi)
- 11) Perform a function test of components not pressure tested to include the lower pipe rams, the blind rams and the annular
- 12) If this were a three well pad, the same three breaks on the BOP would be made and steps 4 through 11 would be repeated
- 13) A second break test would only be done if the third hole section could be completed within the 30-day BOP test window
- 14) If a second break test is performed, additional components that were not tested on the initial break test will be tested on this break test

### Notes:

- a. If any parts of the BOP are changed out or any additional breaks are made during the skidding operation, these affected components would also be tested as in step 10.
- b. As the choke manifold remains stationary during the skidding operation and the only break to the manifold is tested in step 8 above, no further testing of the manifold is done until the next full BOP test.

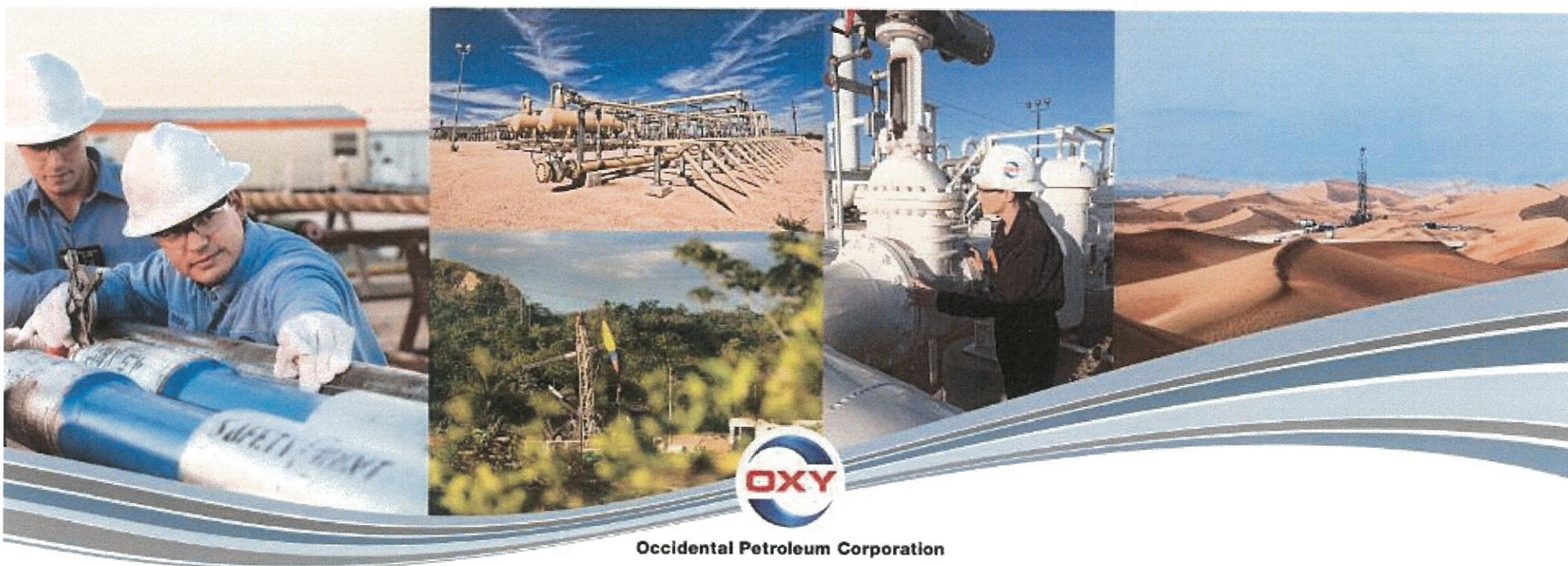
## **Summary**

OXY requests a variance to allow break testing of the BOP stack when skidding drilling rigs between wells on multi-well pads. API standards, specifications and recommended practices are considered industry standards and are consistently utilized and referenced by the industry and the BLM. API Standard 53 recognizes break testing as an acceptable practice and BSEE adopted language from this standard into its newly created 30 CFR Part 250 which also supports break testing. Due to this, OXY feels this request meets the intent of 43 CFR part 3170



# REQUEST FOR A VARIANCE TO BREAK TEST THE BOP

Permian Resources New Mexico



# Request for Variance

OXY USA Inc. (OXY) requests a variance to allow break testing of the Blowout Preventer (BOP) stack when skidding a drilling rig between wells on multi-well pads

- This practice entails retesting only the connections of the BOP stack that have been disconnected during this operation and not a complete BOP test.
- As the choke manifold remains stationary during the skidding operation and the only break to the manifold is tested, no further testing of the manifold is done until the next full BOP test.
- This request is being made as per Section IV of the *Onshore Oil and Gas Order (OOGO) No. 2*



# Rationale for Allowing BOP Break Testing

American Petroleum Institute (API) standards, specifications and recommended practices are considered industry standards and are consistently utilized and referenced by the industry

- API Standard 53, *Blowout Prevention Equipment Systems for Drilling Wells* (Fourth Edition, November 2012, Addendum 1, July 2016) recognizes break testing as an acceptable practice.
- Specifically, API Standard 53, Section 6.5.3.4.1.b states “Pressure tests on the well control equipment shall be conducted after the disconnection or repair of any pressure containment seal in the BOP stack, choke line, kill line, choke manifold, or wellhead assembly but limited to the affected component.”



# Rationale for Allowing BOP Break Testing

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specifications and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

- BSEE issued new offshore regulations in July 2016 under 30 CFR Part 250, *Oil and Gas and Sulphur Operations in the Outer Continental Shelf - Blowout Preventer Systems and Well Control*. Within these regulations is language adopted from API Standard 53 which also supports break testing.
- Specifically, Section 250.737(d.8) states “Pressure test affected BOP components following the disconnection or repair of any well-pressure containment seal in the wellhead or BOP stack assembly.”





# Rationale for Allowing BOP Break Testing

Break testing has been approved by the BLM in the past

- The Farmington Field Office approved a Sundry Notice (SN) to allow break testing in 2015
- This SN granted permission for the operator to break test when skidding its Aztec 1000 rig on multi-well pads

Oxy feels break testing and our current procedures meet or exceed the intent of OOGO No. 2

- As skidding operations take place within the 30-day full BOPE test window, the BOP shell and components such as the pipe rams and check valve get tested to the full rated working pressure more often
- Oxy's standard requires complete BOP tests more often than that of OOGO No. 2
- Oxy performs a choke drill prior to drilling out every casing shoe. As a crew's training is a vital part of well control, this procedure to simulate step one of the Driller's Method exceeds the requirements of OOGO No. 2



# Break Testing Procedures

- 1) OXY to submit the break testing plan in the APD or Sundry Notice (SN) and receive approval prior to implementing
- 2) OXY would perform BOP break testing on multi-well pads where multiple intermediate sections can be drilled and cased within the full BOP test window
- 3) After performing a complete BOP test on the first well and drilling and casing the hole section, three breaks would be made on the BOP.
  - Between the check valve and the kill line
  - Between the HCR valve and the co-flex hose or the co-flex hose and the manifold
  - Between the BOP flange and the wellhead
- 4) The BOP is then lifted and removed from the wellhead by the hydraulic winch system
- 5) After skidding to the next well, the BOP is moved to the wellhead by the hydraulic winch system and installed
- 6) The choke line and kill line are reconnected
- 7) A test plug is installed in the wellhead with a joint of drill pipe and the internal parts of the check valve are removed



## Break Testing Procedures

- 8) A shell test is performed against the upper pipe rams testing all three breaks
- 9) The internal parts of the check valve are reinstalled and the HCR valve is closed.  
A second test is performed on them
- 10) These tests consist of a 250 psi low test and a high test to the value submitted in the APD or SN (e.g., 5000 psi)
- 11) Perform a function test of components not pressure tested to include the lower pipe rams, the blind rams and the annular
- 12) If this were a three well pad, the same three breaks on the BOP would be made and steps 4 through 11 would be repeated
- 13) A second break test would only be done if the third hole section could be completed within the 30-day BOP test window
- 14) If a second break test is performed, additional components that were not tested on the first break test will be tested

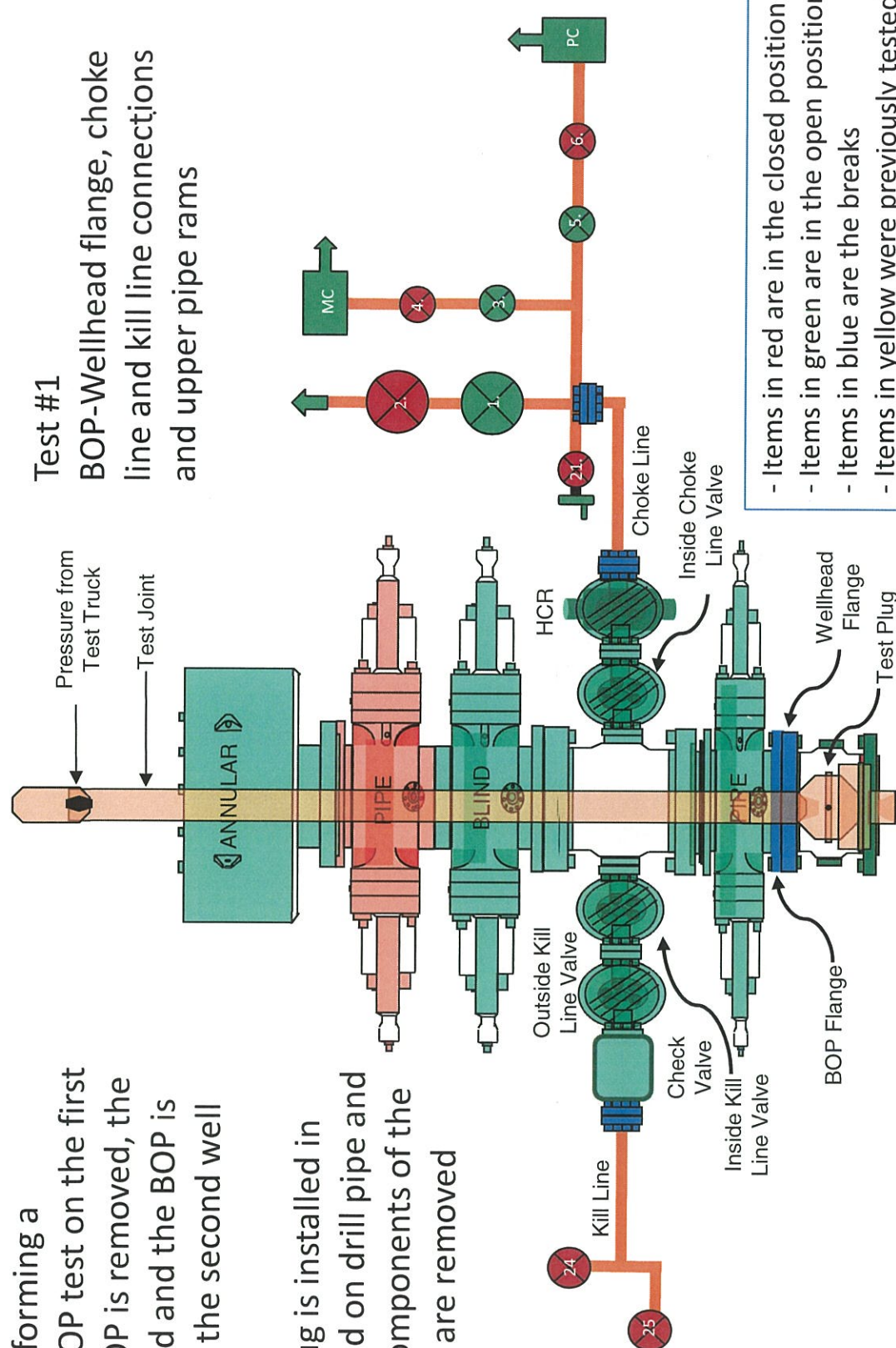




# Break Testing Procedures and Tests

1. After performing a complete BOP test on the first well, the BOP is removed, the rig is skidded and the BOP is installed on the second well

2. A test plug is installed in the wellhead on drill pipe and the inner components of the check valve are removed





# Break Testing Procedures and Tests

3. After Test #1, the inner components of the check valve are reinstalled and the HCR valve is closed



- Items in red are in the closed position
- Items in green are in the open position
- Items in blue are the breaks
- Items in yellow were previously tested





# Second Break Testing Procedures and Tests

Procedures 1 and 2 and Test #1 will be completed as in the first break test (see slide 8)

3. After Test #1, the inner components of the check valve are reinstalled and the inside choke line valve is closed





# BOP Handling System



Hydraulic winch system which moves the BOP from its carrier to the wellhead

BOP standing in its carrier







12

# BOP Handling System



Hydraulic winch  
system moving  
the BOP over to  
the wellhead

Wellhead



## Summary for Variance Request for Break Testing

- API standards, specifications and recommended practices are considered industry standards
  - OOGO No. 2 recognized API Recommended Practices (RP) 53 in its original development
  - API Standard 53 recognizes break testing as an acceptable practice
  - The Bureau of Safety and Environmental Enforcement has utilized API standards, specifications and best practices in the development of its offshore oil and gas regulations
  - API Standard 53 recognizes break testing as an acceptable practice
- OXY feels break testing meets the intent of OOGO No. 2 to protect public health and safety and the environment

# **OXY**

**PRD NM DIRECTIONAL PLANS (NAD 1983)**

**Precious 30\_18**

**Precious 30\_18 Fed Com 46H**

**Wellbore #1**

**Plan: Permitting Plan**

## **Standard Planning Report**

**03 July, 2024**

OXY  
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Project	PRD NM DIRECTIONAL PLANS (NAD 1983)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Precious 30_18		
Site Position:		Northing:	461,098.38 usft
From:	Map	Easting:	698,809.83 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	32.266607
		Longitude:	-103.823862

Well	Precious 30_18 Fed Com 46H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty		0.89 ft	Wellhead Elevation:
Grid Convergence:		0.28 °	
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	8/23/2019	6.78	59.97	47,935.20000000

Design	Permitting Plan			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	2.83

Plan Survey Tool Program	Date	7/3/2024		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	25,617.18	Permitting Plan (Wellbore #1)	B001Mc_MWD+HRGM_R5
				MWD+HRGM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,105.00	0.00	0.00	8,105.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,855.18	15.00	88.04	8,846.64	3.35	97.61	2.00	2.00	0.00	88.04	
10,868.29	15.00	88.04	10,791.12	21.22	618.45	0.00	0.00	0.00	0.00	
11,907.55	15.00	359.68	11,806.11	161.86	753.63	2.00	0.00	-8.50	-133.19	
12,532.55	90.00	359.68	12,160.00	623.05	751.04	12.00	12.00	0.00	0.00	FTP (Precious)
25,617.35	90.00	359.68	12,160.00	13,707.65	677.54	0.00	0.00	0.00	0.00	PBHL (Precious)

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00

OXY  
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,105.00	0.00	0.00	8,105.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	1.90	88.04	8,199.98	0.05	1.57	0.13	2.00	2.00	0.00
8,300.00	3.90	88.04	8,299.85	0.23	6.63	0.55	2.00	2.00	0.00
8,400.00	5.90	88.04	8,399.48	0.52	15.17	1.27	2.00	2.00	0.00
8,500.00	7.90	88.04	8,498.75	0.93	27.17	2.27	2.00	2.00	0.00
8,600.00	9.90	88.04	8,597.54	1.46	42.63	3.57	2.00	2.00	0.00
8,700.00	11.90	88.04	8,695.73	2.11	61.53	5.15	2.00	2.00	0.00
8,800.00	13.90	88.04	8,793.20	2.88	83.84	7.01	2.00	2.00	0.00
8,855.18	15.00	88.04	8,846.64	3.35	97.61	8.16	2.00	2.00	0.00
8,900.00	15.00	88.04	8,889.93	3.75	109.20	9.13	0.00	0.00	0.00
9,000.00	15.00	88.04	8,986.52	4.63	135.07	11.30	0.00	0.00	0.00
9,100.00	15.00	88.04	9,083.11	5.52	160.95	13.46	0.00	0.00	0.00
9,200.00	15.00	88.04	9,179.70	6.41	186.82	15.62	0.00	0.00	0.00
9,300.00	15.00	88.04	9,276.29	7.30	212.69	17.79	0.00	0.00	0.00
9,400.00	15.00	88.04	9,372.88	8.18	238.57	19.95	0.00	0.00	0.00
9,500.00	15.00	88.04	9,469.47	9.07	264.44	22.11	0.00	0.00	0.00
9,600.00	15.00	88.04	9,566.06	9.96	290.31	24.28	0.00	0.00	0.00
9,700.00	15.00	88.04	9,662.66	10.85	316.18	26.44	0.00	0.00	0.00
9,800.00	15.00	88.04	9,759.25	11.73	342.06	28.61	0.00	0.00	0.00
9,900.00	15.00	88.04	9,855.84	12.62	367.93	30.77	0.00	0.00	0.00
10,000.00	15.00	88.04	9,952.43	13.51	393.80	32.93	0.00	0.00	0.00
10,100.00	15.00	88.04	10,049.02	14.40	419.68	35.10	0.00	0.00	0.00
10,200.00	15.00	88.04	10,145.61	15.28	445.55	37.26	0.00	0.00	0.00
10,300.00	15.00	88.04	10,242.20	16.17	471.42	39.42	0.00	0.00	0.00
10,400.00	15.00	88.04	10,338.79	17.06	497.29	41.59	0.00	0.00	0.00
10,500.00	15.00	88.04	10,435.38	17.95	523.17	43.75	0.00	0.00	0.00
10,600.00	15.00	88.04	10,531.97	18.83	549.04	45.92	0.00	0.00	0.00
10,700.00	15.00	88.04	10,628.56	19.72	574.91	48.08	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,800.00	15.00	88.04	10,725.16	20.61	600.79	50.24	0.00	0.00	0.00
10,868.29	15.00	88.04	10,791.12	21.22	618.45	51.72	0.00	0.00	0.00
10,900.00	14.58	86.20	10,821.78	21.62	626.54	52.53	2.00	-1.35	-5.79
11,000.00	13.34	79.68	10,918.83	24.52	650.44	56.60	2.00	-1.24	-6.51
11,100.00	12.29	71.98	11,016.34	29.88	671.92	63.02	2.00	-1.04	-7.71
11,200.00	11.50	63.05	11,114.20	37.69	690.93	71.76	2.00	-0.79	-8.92
11,300.00	11.02	53.10	11,212.29	47.95	707.46	82.82	2.00	-0.48	-9.95
11,400.00	10.88	42.58	11,310.48	60.64	721.50	96.19	2.00	-0.14	-10.52
11,500.00	11.10	32.15	11,408.65	75.75	733.01	111.84	2.00	0.22	-10.44
11,600.00	11.67	22.41	11,506.69	93.25	741.99	129.77	2.00	0.56	-9.74
11,700.00	12.52	13.77	11,604.48	113.13	748.42	149.94	2.00	0.86	-8.64
11,800.00	13.62	6.35	11,701.89	135.36	752.30	172.33	2.00	1.09	-7.41
11,900.00	14.90	0.11	11,798.82	159.91	753.63	196.92	2.00	1.28	-6.25
11,907.55	15.00	359.68	11,806.11	161.86	753.63	198.87	2.00	1.36	-5.67
12,000.00	26.09	359.68	11,892.55	194.26	753.45	231.22	12.00	12.00	0.00
12,100.00	38.09	359.68	11,977.11	247.29	753.15	284.17	12.00	12.00	0.00
12,200.00	50.09	359.68	12,048.80	316.75	752.76	353.52	12.00	12.00	0.00
12,300.00	62.09	359.68	12,104.48	399.59	752.29	436.24	12.00	12.00	0.00
12,400.00	74.09	359.68	12,141.72	492.20	751.77	528.71	12.00	12.00	0.00
12,500.00	86.09	359.68	12,158.89	590.53	751.22	626.89	12.00	12.00	0.00
12,532.55	90.00	359.68	12,160.00	623.05	751.04	659.37	12.00	12.00	0.00
12,600.00	90.00	359.68	12,160.00	690.50	750.66	726.72	0.00	0.00	0.00
12,700.00	90.00	359.68	12,160.00	790.50	750.10	826.56	0.00	0.00	0.00
12,800.00	90.00	359.68	12,160.00	890.50	749.54	926.41	0.00	0.00	0.00
12,900.00	90.00	359.68	12,160.00	990.49	748.97	1,026.26	0.00	0.00	0.00
13,000.00	90.00	359.68	12,160.00	1,090.49	748.41	1,126.11	0.00	0.00	0.00
13,100.00	90.00	359.68	12,160.00	1,190.49	747.85	1,225.96	0.00	0.00	0.00
13,200.00	90.00	359.68	12,160.00	1,290.49	747.29	1,325.81	0.00	0.00	0.00
13,300.00	90.00	359.68	12,160.00	1,390.49	746.73	1,425.66	0.00	0.00	0.00
13,400.00	90.00	359.68	12,160.00	1,490.49	746.17	1,525.51	0.00	0.00	0.00
13,500.00	90.00	359.68	12,160.00	1,590.48	745.60	1,625.35	0.00	0.00	0.00
13,600.00	90.00	359.68	12,160.00	1,690.48	745.04	1,725.20	0.00	0.00	0.00
13,700.00	90.00	359.68	12,160.00	1,790.48	744.48	1,825.05	0.00	0.00	0.00
13,800.00	90.00	359.68	12,160.00	1,890.48	743.92	1,924.90	0.00	0.00	0.00
13,900.00	90.00	359.68	12,160.00	1,990.48	743.36	2,024.75	0.00	0.00	0.00
14,000.00	90.00	359.68	12,160.00	2,090.48	742.80	2,124.60	0.00	0.00	0.00
14,100.00	90.00	359.68	12,160.00	2,190.47	742.23	2,224.45	0.00	0.00	0.00
14,200.00	90.00	359.68	12,160.00	2,290.47	741.67	2,324.30	0.00	0.00	0.00
14,300.00	90.00	359.68	12,160.00	2,390.47	741.11	2,424.14	0.00	0.00	0.00
14,400.00	90.00	359.68	12,160.00	2,490.47	740.55	2,523.99	0.00	0.00	0.00
14,500.00	90.00	359.68	12,160.00	2,590.47	739.99	2,623.84	0.00	0.00	0.00
14,600.00	90.00	359.68	12,160.00	2,690.47	739.43	2,723.69	0.00	0.00	0.00
14,700.00	90.00	359.68	12,160.00	2,790.47	738.86	2,823.54	0.00	0.00	0.00
14,800.00	90.00	359.68	12,160.00	2,890.46	738.30	2,923.39	0.00	0.00	0.00
14,900.00	90.00	359.68	12,160.00	2,990.46	737.74	3,023.24	0.00	0.00	0.00
15,000.00	90.00	359.68	12,160.00	3,090.46	737.18	3,123.09	0.00	0.00	0.00
15,100.00	90.00	359.68	12,160.00	3,190.46	736.62	3,222.93	0.00	0.00	0.00
15,200.00	90.00	359.68	12,160.00	3,290.46	736.05	3,322.78	0.00	0.00	0.00
15,300.00	90.00	359.68	12,160.00	3,390.46	735.49	3,422.63	0.00	0.00	0.00
15,400.00	90.00	359.68	12,160.00	3,490.45	734.93	3,522.48	0.00	0.00	0.00
15,500.00	90.00	359.68	12,160.00	3,590.45	734.37	3,622.33	0.00	0.00	0.00
15,600.00	90.00	359.68	12,160.00	3,690.45	733.81	3,722.18	0.00	0.00	0.00
15,700.00	90.00	359.68	12,160.00	3,790.45	733.25	3,822.03	0.00	0.00	0.00
15,800.00	90.00	359.68	12,160.00	3,890.45	732.68	3,921.88	0.00	0.00	0.00
15,900.00	90.00	359.68	12,160.00	3,990.45	732.12	4,021.72	0.00	0.00	0.00



OXY  
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,000.00	90.00	359.68	12,160.00	4,090.45	731.56	4,121.57	0.00	0.00	0.00
16,100.00	90.00	359.68	12,160.00	4,190.44	731.00	4,221.42	0.00	0.00	0.00
16,200.00	90.00	359.68	12,160.00	4,290.44	730.44	4,321.27	0.00	0.00	0.00
16,300.00	90.00	359.68	12,160.00	4,390.44	729.88	4,421.12	0.00	0.00	0.00
16,400.00	90.00	359.68	12,160.00	4,490.44	729.31	4,520.97	0.00	0.00	0.00
16,500.00	90.00	359.68	12,160.00	4,590.44	728.75	4,620.82	0.00	0.00	0.00
16,600.00	90.00	359.68	12,160.00	4,690.44	728.19	4,720.67	0.00	0.00	0.00
16,700.00	90.00	359.68	12,160.00	4,790.43	727.63	4,820.51	0.00	0.00	0.00
16,800.00	90.00	359.68	12,160.00	4,890.43	727.07	4,920.36	0.00	0.00	0.00
16,900.00	90.00	359.68	12,160.00	4,990.43	726.51	5,020.21	0.00	0.00	0.00
17,000.00	90.00	359.68	12,160.00	5,090.43	725.94	5,120.06	0.00	0.00	0.00
17,100.00	90.00	359.68	12,160.00	5,190.43	725.38	5,219.91	0.00	0.00	0.00
17,200.00	90.00	359.68	12,160.00	5,290.43	724.82	5,319.76	0.00	0.00	0.00
17,300.00	90.00	359.68	12,160.00	5,390.42	724.26	5,419.61	0.00	0.00	0.00
17,400.00	90.00	359.68	12,160.00	5,490.42	723.70	5,519.46	0.00	0.00	0.00
17,500.00	90.00	359.68	12,160.00	5,590.42	723.14	5,619.30	0.00	0.00	0.00
17,600.00	90.00	359.68	12,160.00	5,690.42	722.57	5,719.15	0.00	0.00	0.00
17,700.00	90.00	359.68	12,160.00	5,790.42	722.01	5,819.00	0.00	0.00	0.00
17,800.00	90.00	359.68	12,160.00	5,890.42	721.45	5,918.85	0.00	0.00	0.00
17,900.00	90.00	359.68	12,160.00	5,990.42	720.89	6,018.70	0.00	0.00	0.00
18,000.00	90.00	359.68	12,160.00	6,090.41	720.33	6,118.55	0.00	0.00	0.00
18,100.00	90.00	359.68	12,160.00	6,190.41	719.77	6,218.40	0.00	0.00	0.00
18,200.00	90.00	359.68	12,160.00	6,290.41	719.20	6,318.25	0.00	0.00	0.00
18,300.00	90.00	359.68	12,160.00	6,390.41	718.64	6,418.09	0.00	0.00	0.00
18,400.00	90.00	359.68	12,160.00	6,490.41	718.08	6,517.94	0.00	0.00	0.00
18,500.00	90.00	359.68	12,160.00	6,590.41	717.52	6,617.79	0.00	0.00	0.00
18,600.00	90.00	359.68	12,160.00	6,690.40	716.96	6,717.64	0.00	0.00	0.00
18,700.00	90.00	359.68	12,160.00	6,790.40	716.40	6,817.49	0.00	0.00	0.00
18,800.00	90.00	359.68	12,160.00	6,890.40	715.83	6,917.34	0.00	0.00	0.00
18,900.00	90.00	359.68	12,160.00	6,990.40	715.27	7,017.19	0.00	0.00	0.00
19,000.00	90.00	359.68	12,160.00	7,090.40	714.71	7,117.04	0.00	0.00	0.00
19,100.00	90.00	359.68	12,160.00	7,190.40	714.15	7,216.88	0.00	0.00	0.00
19,200.00	90.00	359.68	12,160.00	7,290.39	713.59	7,316.73	0.00	0.00	0.00
19,300.00	90.00	359.68	12,160.00	7,390.39	713.03	7,416.58	0.00	0.00	0.00
19,400.00	90.00	359.68	12,160.00	7,490.39	712.46	7,516.43	0.00	0.00	0.00
19,500.00	90.00	359.68	12,160.00	7,590.39	711.90	7,616.28	0.00	0.00	0.00
19,600.00	90.00	359.68	12,160.00	7,690.39	711.34	7,716.13	0.00	0.00	0.00
19,700.00	90.00	359.68	12,160.00	7,790.39	710.78	7,815.98	0.00	0.00	0.00
19,800.00	90.00	359.68	12,160.00	7,890.39	710.22	7,915.83	0.00	0.00	0.00
19,900.00	90.00	359.68	12,160.00	7,990.38	709.66	8,015.67	0.00	0.00	0.00
20,000.00	90.00	359.68	12,160.00	8,090.38	709.09	8,115.52	0.00	0.00	0.00
20,100.00	90.00	359.68	12,160.00	8,190.38	708.53	8,215.37	0.00	0.00	0.00
20,200.00	90.00	359.68	12,160.00	8,290.38	707.97	8,315.22	0.00	0.00	0.00
20,300.00	90.00	359.68	12,160.00	8,390.38	707.41	8,415.07	0.00	0.00	0.00
20,400.00	90.00	359.68	12,160.00	8,490.38	706.85	8,514.92	0.00	0.00	0.00
20,500.00	90.00	359.68	12,160.00	8,590.37	706.29	8,614.77	0.00	0.00	0.00
20,600.00	90.00	359.68	12,160.00	8,690.37	705.72	8,714.62	0.00	0.00	0.00
20,700.00	90.00	359.68	12,160.00	8,790.37	705.16	8,814.46	0.00	0.00	0.00
20,800.00	90.00	359.68	12,160.00	8,890.37	704.60	8,914.31	0.00	0.00	0.00
20,900.00	90.00	359.68	12,160.00	8,990.37	704.04	9,014.16	0.00	0.00	0.00
21,000.00	90.00	359.68	12,160.00	9,090.37	703.48	9,114.01	0.00	0.00	0.00
21,100.00	90.00	359.68	12,160.00	9,190.36	702.92	9,213.86	0.00	0.00	0.00
21,200.00	90.00	359.68	12,160.00	9,290.36	702.35	9,313.71	0.00	0.00	0.00
21,300.00	90.00	359.68	12,160.00	9,390.36	701.79	9,413.56	0.00	0.00	0.00
21,400.00	90.00	359.68	12,160.00	9,490.36	701.23	9,513.41	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,500.00	90.00	359.68	12,160.00	9,590.36	700.67	9,613.26	0.00	0.00	0.00
21,600.00	90.00	359.68	12,160.00	9,690.36	700.11	9,713.10	0.00	0.00	0.00
21,700.00	90.00	359.68	12,160.00	9,790.36	699.55	9,812.95	0.00	0.00	0.00
21,800.00	90.00	359.68	12,160.00	9,890.35	698.98	9,912.80	0.00	0.00	0.00
21,900.00	90.00	359.68	12,160.00	9,990.35	698.42	10,012.65	0.00	0.00	0.00
22,000.00	90.00	359.68	12,160.00	10,090.35	697.86	10,112.50	0.00	0.00	0.00
22,100.00	90.00	359.68	12,160.00	10,190.35	697.30	10,212.35	0.00	0.00	0.00
22,200.00	90.00	359.68	12,160.00	10,290.35	696.74	10,312.20	0.00	0.00	0.00
22,300.00	90.00	359.68	12,160.00	10,390.35	696.18	10,412.05	0.00	0.00	0.00
22,400.00	90.00	359.68	12,160.00	10,490.34	695.61	10,511.89	0.00	0.00	0.00
22,500.00	90.00	359.68	12,160.00	10,590.34	695.05	10,611.74	0.00	0.00	0.00
22,600.00	90.00	359.68	12,160.00	10,690.34	694.49	10,711.59	0.00	0.00	0.00
22,700.00	90.00	359.68	12,160.00	10,790.34	693.93	10,811.44	0.00	0.00	0.00
22,800.00	90.00	359.68	12,160.00	10,890.34	693.37	10,911.29	0.00	0.00	0.00
22,900.00	90.00	359.68	12,160.00	10,990.34	692.81	11,011.14	0.00	0.00	0.00
23,000.00	90.00	359.68	12,160.00	11,090.33	692.24	11,110.99	0.00	0.00	0.00
23,100.00	90.00	359.68	12,160.00	11,190.33	691.68	11,210.84	0.00	0.00	0.00
23,200.00	90.00	359.68	12,160.00	11,290.33	691.12	11,310.68	0.00	0.00	0.00
23,300.00	90.00	359.68	12,160.00	11,390.33	690.56	11,410.53	0.00	0.00	0.00
23,400.00	90.00	359.68	12,160.00	11,490.33	690.00	11,510.38	0.00	0.00	0.00
23,500.00	90.00	359.68	12,160.00	11,590.33	689.44	11,610.23	0.00	0.00	0.00
23,600.00	90.00	359.68	12,160.00	11,690.33	688.87	11,710.08	0.00	0.00	0.00
23,700.00	90.00	359.68	12,160.00	11,790.32	688.31	11,809.93	0.00	0.00	0.00
23,800.00	90.00	359.68	12,160.00	11,890.32	687.75	11,909.78	0.00	0.00	0.00
23,900.00	90.00	359.68	12,160.00	11,990.32	687.19	12,009.63	0.00	0.00	0.00
24,000.00	90.00	359.68	12,160.00	12,090.32	686.63	12,109.47	0.00	0.00	0.00
24,100.00	90.00	359.68	12,160.00	12,190.32	686.07	12,209.32	0.00	0.00	0.00
24,200.00	90.00	359.68	12,160.00	12,290.32	685.50	12,309.17	0.00	0.00	0.00
24,300.00	90.00	359.68	12,160.00	12,390.31	684.94	12,409.02	0.00	0.00	0.00
24,400.00	90.00	359.68	12,160.00	12,490.31	684.38	12,508.87	0.00	0.00	0.00
24,500.00	90.00	359.68	12,160.00	12,590.31	683.82	12,608.72	0.00	0.00	0.00
24,600.00	90.00	359.68	12,160.00	12,690.31	683.26	12,708.57	0.00	0.00	0.00
24,700.00	90.00	359.68	12,160.00	12,790.31	682.70	12,808.42	0.00	0.00	0.00
24,800.00	90.00	359.68	12,160.00	12,890.31	682.13	12,908.26	0.00	0.00	0.00
24,900.00	90.00	359.68	12,160.00	12,990.30	681.57	13,008.11	0.00	0.00	0.00
25,000.00	90.00	359.68	12,160.00	13,090.30	681.01	13,107.96	0.00	0.00	0.00
25,100.00	90.00	359.68	12,160.00	13,190.30	680.45	13,207.81	0.00	0.00	0.00
25,200.00	90.00	359.68	12,160.00	13,290.30	679.89	13,307.66	0.00	0.00	0.00
25,300.00	90.00	359.68	12,160.00	13,390.30	679.33	13,407.51	0.00	0.00	0.00
25,400.00	90.00	359.68	12,160.00	13,490.30	678.76	13,507.36	0.00	0.00	0.00
25,500.00	90.00	359.68	12,160.00	13,590.30	678.20	13,607.21	0.00	0.00	0.00
25,600.00	90.00	359.68	12,160.00	13,690.29	677.64	13,707.05	0.00	0.00	0.00
25,617.35	90.00	359.68	12,160.00	13,707.65	677.54	13,724.38	0.00	0.00	0.00

OXY  
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 46H
Company:	ENGINEERING DESIGNS	TVD Reference:	25' RKB @ 3373.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	25' RKB @ 3373.60ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP (Precious 30_18 - plan misses target center by 944.91ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) - Circle (radius 50.00)	0.00	0.00	0.00	573.06	751.31	461,740.14	703,149.54	32.268314	-103.809812
FTP (Precious 30_18 - plan hits target center - Point	0.00	0.01	12,160.00	623.05	751.04	461,790.13	703,149.27	32.268451	-103.809812
PBHL (Precious 30_18 - plan hits target center - Point	0.00	0.00	12,160.00	13,707.65	677.54	474,873.90	703,075.78	32.304416	-103.809843

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
381.60	381.60	RUSTLER			
709.60	709.60	SALADO			
2,604.60	2,604.60	CASTILE			
4,082.60	4,082.60	DELAWARE			
4,119.60	4,119.60	BELL CANYON			
5,002.60	5,002.60	CHERRY CANYON			
6,281.60	6,281.60	BRUSHY CANYON			
7,963.60	7,963.60	BONE SPRING			
9,010.44	8,996.60	BONE SPRING 1ST			
9,675.10	9,638.60	BONE SPRING 2ND			
10,897.75	10,819.60	BONE SPRING 3RD			
11,386.89	11,297.60	WOLFCAMP			
11,537.67	11,445.60	WOLFCAMP A			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,105.00	8,105.00	0.00	0.00	Build 2°/100'
8,855.18	8,846.64	3.35	97.61	Hold 15° Tangent
10,868.29	10,791.12	21.22	618.45	Turn 2°/100'
11,907.55	11,806.11	161.86	753.63	KOP, Build 12°/100'
12,532.55	12,160.00	623.05	751.04	Landing Point
25,617.35	12,160.00	13,707.65	677.54	TD at 25617.35' MD

## Precious 30 18 Federal Com 46H

**APD - Geology COAs (Potash or WIPP)**

- For at least one well per pad (deepest well within initial development preferred) the record of the drilling rate (ROP) along with the Gamma Ray (GR) and Neutron (CNL) well logs run from TVD to surface in the vertical section of the hole shall be submitted to the BLM office as well as all other logs run on the full borehole 30 days from completion. Any other logs run on the wellbore, excluding cement remediation, should also be sent. Only digital copies of the logs in .TIF or .LAS formats are necessary; paper logs are no longer required. Logs shall be emailed to blm-cfo-geology@doimspp.onmicrosoft.com. Well completion report should have .pdf copies of any CBLs or Temp Logs run on the wellbore.
- Exceptions: In areas where there is extensive log coverage (in particular the salt zone adjacent to a pad), Operators are encouraged to contact BLM Geologists to discuss if additional GR and N logs are necessary on a pad. Operator may request a waiver of the GR and N log requirement due to good well control or other reasons to be approved by BLM Geologist prior to well completion. A waiver approved by BLM must be attached to completion well report to satisfy COAs.
- The top of the Rustler, top and bottom of the Salt, and the top of the Capitan Reef (if present) are to be recorded on the Completion Report.
- No H2S has been encountered within one-mile of the proposed project

**Drilling COAs within Known Potash Leasing Area:**

Any oil and gas well operator within the KPLA must notify both potash operators as soon as possible if any of the following conditions are encountered during oil and gas operations: (1) Indication of any well collision event, (2) Suspected well fluid flow (oil, gas, or produced water) outside of casing, (3) Sustained annulus pressure between the 1st intermediate and next innermost casing string in excess of 500 psi above the baseline pressure of the well, or above 1500 psi total, (4) Increasing pressure buildup rates (psi/day) across multiple successive bleed-off cycles on the annulus between the 1st intermediate and next innermost casing during well production, or (5) Sustained losses in excess of 50% through the salt interval during drilling.

Questions? Contact Thomas Evans, BLM Geologist at 575-234-5965 or tvevans@blm.gov

PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL

OPERATOR’S NAME:	Oxy USA Inc.
LEASE NO.:	NMNM21640
COUNTY:	Eddy County, New Mexico

Wells:

- SNDDNS 3105 Pad**
  - Precious 30-18 Fed Com 13H
  - Precious 30-18 Fed Com 14H
- SNDDNS 3102 Pad**
  - Precious 30-18 Fed Com 51H
  - Precious 30-18 Fed Com 52H
  - Precious 30-18 Fed Com 55H
- SNDDNS 3116 Pad**
  - Precious 30-18 Fed Com 24H
  - Precious 30-18 Fed Com 25H
  - Precious 30-18 Fed Com 26H
- SNDDNS 3101 Pad**
  - Precious 30-18 Fed Com 45H
  - Precious 30-18 Fed Com 46H
- SNDDNS 3103 Pad**
  - Precious 30-18 Fed Com 21H
  - Precious 30-18 Fed Com 22H
  - Precious 30-18 Fed Com 23H
  - Precious 30-18 Fed Com 41H
  - Precious 30-18 Fed Com 42H
- SNDDNS 3117 Pad**
  - Precious 30-18 Fed Com 53H
  - Precious 30-18 Fed Com 54H
  - Precious 30-18 Fed Com 56H

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## 1. GENERAL PROVISIONS

The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

### 1.1. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the operator, or any person working on the operator's behalf, on the public or federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area (within 100ft) 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, in conjunction with a BLM Cultural Resource Specialist, to determine appropriate actions to prevent the loss of significant scientific values. The operator shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

Traditional Cultural Properties (TCPs) are protected by NHPA as codified in 36 CFR 800 for possessing traditional, religious, and cultural significance tied to a certain group of individuals. Though there are currently no designated TCPs within the project area or within a mile of the project area, but it is possible for a TCP to be designated after the approval of this project. **If a TCP is designated in the project area after the project's approval, the BLM Authorized Officer will notify the operator of the following conditions and the duration for which these conditions are required.**

1. Temporary halting of all construction, drilling, and production activities to lower noise.
2. Temporary shut-off of all artificial lights at night.

The operator is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA), specifically NAGPRA Subpart B regarding discoveries, to protect human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered during project work. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and a BLM-CFO Authorized Officer will be notified immediately. The BLM will then be required to be notified, in writing, within 24 hours of the discovery. The written notification should include the geographic location by county and state, the contents of the discovery, and the steps taken to protect said discovery. You must also include any potential threats to the discovery and a conformation that all activity within 100ft of the discovery has ceased and work will not resume until written certification is issued. All work on the entire project must halt for a minimum of 3 days and work cannot resume until an Authorized Officer grants permission to do so.

Any paleontological resource discovered by the operator, or any person working on the operator's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The operator will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

### 1.2. 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, New Mexico Department of Agriculture, and BLM requirements and policies.

#### 1.3.1 African Rue (*Peganum harmala*)

**Spraying:** The spraying of African Rue must be completed by a licensed or certified applicator. In order to attempt to kill or remove African Rue the proper mix of chemical is needed. The mix consists of 2% Arsenal



(Imazapyr) and 2% Roundup (Glyphosate) along with a nonionic surfactant. Any other chemicals or combinations shall be approved by the BLM Noxious Weeds Coordinator prior to treatment. African Rue shall be sprayed in connection to any dirt working activities or disturbances to the site being sprayed. Spraying of African Rue shall be done on immature plants at initial growth through flowering and mature plants between budding and flowering stages. Spraying shall not be conducted after flowering when plant is fruiting. This will ensure optimal intake of chemical and decrease chances of developing herbicide resistance. After spraying, the operator or necessary parties must contact the Carlsbad Field Office to inspect the effectiveness of the application treatment to the plant species. No ground disturbing activities can take place until the inspection by the authorized officer is complete. The operator may contact the Environmental Protection Department or the BLM Noxious Weed Coordinator at (575) 234-5972 or BLM\_NM\_CFO\_NoxiousWeeds@blm.gov.

**Management Practices:** In addition to spraying for African Rue, good management practices should be followed. All equipment should be washed off using a power washer in a designated containment area. The containment area shall be bermed to allow for containment of the seed to prevent it from entering any open areas of the nearby landscape. The containment area shall be excavated near or adjacent to the well pad at a depth of three feet and just large enough to get equipment inside it to be washed off. This will allow all seeds to be in a centrally located area that can be treated at a later date if the need arises.

### 1.3. LIGHT POLLUTION

#### 1.3.1. Downfacing

All permanent lighting will be pointed straight down at the ground in order to prevent light spill beyond the edge of approved surface disturbance.

#### 1.3.2. Shielding

All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source).

#### 1.3.3. Lighting Color

Lighting shall be 3,500 Kelvin or less (Warm White) except during drilling, completion, and workover operations. No bluish-white lighting shall be used in permanent outdoor lighting.

## 2. SPECIAL REQUIREMENTS

### 2.1 WILDLIFE

#### 2.1.1 Lesser Prairie Chicken

##### 2.1.1.1 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, geophysical exploration other than 3-D operations, 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. 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 ft. from the source of the noise.

##### 2.1.1.2 Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey

information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

#### 2.1.1.3 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 [BLM\\_NM\\_CFO\\_Construction\\_Reclamation@blm.gov](mailto:BLM_NM_CFO_Construction_Reclamation@blm.gov).

## 2.2 VISUAL RESOURCE MANAGEMENT

### 2.2.1 VRM IV

Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

## 2.3 POTASH RESOURCES

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Arkenstone Drill Island.

# 3. CONSTRUCTION REQUIREMENTS

## 3.1 CONSTRUCTION NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at [BLM\\_NM\\_CFO\\_Construction\\_Reclamation@blm.gov](mailto:BLM_NM_CFO_Construction_Reclamation@blm.gov) 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 COAs on the well site and they shall be made available upon request by the Authorized Officer.

## 3.2 TOPSOIL

The operator shall strip the topsoil (the A horizon) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. No more than the top 6 inches of topsoil shall be removed. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (the B horizon and below) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

## 3.3 CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No reserve pits will be used for drill cuttings. The operator shall properly dispose of drilling contents at an authorized disposal site.

### 3.4 FEDERAL MINERAL 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.

### 3.5 WELL PAD & SURFACING

Any surfacing material used to surface the well pad will be removed at the time of interim and final reclamation.

### 3.6 EXCLOSURE FENCING (CELLARS & PITS)

The operator will install and maintain enclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the well cellar is free of fluids and the operator initiates backfilling. (For examples of enclosure fencing design, refer to BLM's Oil and Gas Gold Book, Enclosure Fence Illustrations, Figure 1, Page 18.)

The operator will also install and maintain mesh netting for all open well cellars to prevent access to smaller wildlife before and after drilling operations until the well cellar is free of fluids and the operator. Use a maximum netting mesh size of 1 ½ inches. The netting must not have holes or gaps.

### 3.7 ON LEASE ACCESS ROAD

#### 3.7.1 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-five (25) feet.

#### 3.7.2 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 will 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.

#### 3.7.3 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.

#### 3.7.4 Ditching

Ditching shall be required on both sides of the road.

#### 3.7.5 Turnouts

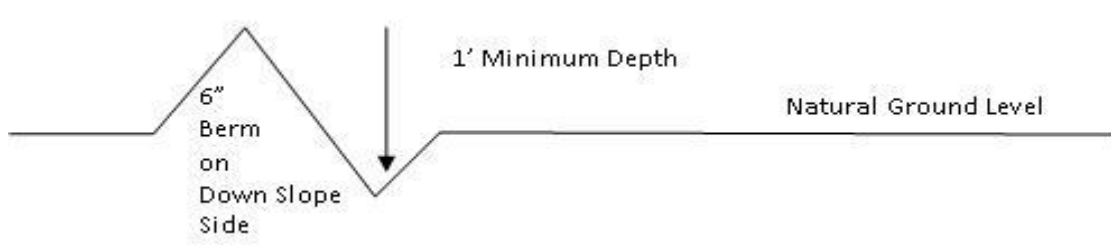
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

#### 3.7.6 Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and insloping, leadoff 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:

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

#### 3.7.7 Public Access

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

- Construction Steps**
1. Salvage topsoil
  2. Construct road
  3. Redistribute topsoil
  4. Revegetate slopes

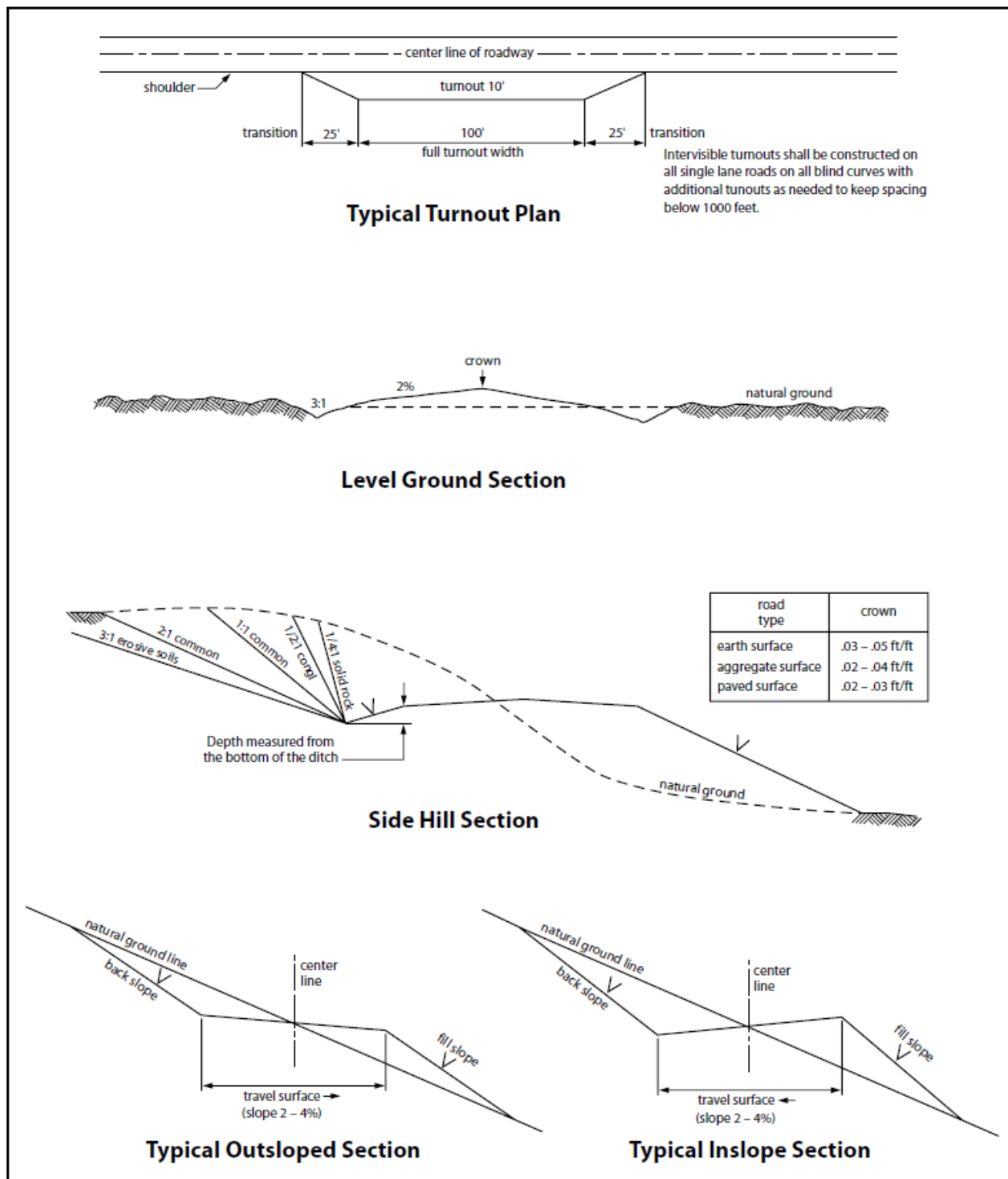


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## 4. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, siting values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

### 4.1 SURFACE PIPELINES

**A copy of the APD and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.**

Operator agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Operator 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 APD.
2. Operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Operator shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 et seq. (1982) with regard to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this APD (see 40 CFR, Part 702-799 and in particular, 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. Operator 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 Pipeline corridor (unless the release or threatened release is wholly unrelated to activity of the Operator's activity on the Pipeline corridor), or resulting from the activity of the Operator on the pipeline corridor. This provision applies without regard to whether a release is caused by Operator, its agent, or unrelated third parties.
4. Operator shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Operator 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 pipeline corridor or permit area:
  - a. Activities of Operator 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 is 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 Operator, regardless of fault. Upon failure of Operator 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 they deem 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 Operator. Such action by the Authorized Officer shall not relieve Operator of any responsibility as provided herein.
6. All construction and maintenance activity shall be confined to the authorized pipeline corridor width of 30-feet. If the pipeline route follows an existing road or buried pipeline corridor, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline corridor. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or pipeline corridors.
7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.
8. Operator 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 or dune areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.
9. The pipeline shall be buried with a minimum of 6 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 operator shall minimize disturbance to existing fences and other improvements on public lands. The operator is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The operator 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 operator 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 operator 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 pipeline corridor and at all road crossings. At a minimum, signs will state the operator'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 operator 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 operator. The operator will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.
15. 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.
16. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

## 4.2 RANGLAND MITIGATION FOR PIPELINES

### 4.5.1 Fence Requirement

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment operator prior to crossing any fence(s).

### 4.5.2 Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at road-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 on one side of the cattleguard and fastened securely to H-braces.

### 4.5.3 Livestock Watering Requirement

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment operator if any damage occurs to structures that provide water to livestock.

- Livestock operators will be contacted, and adequate crossing facilities will be provided as needed to ensure livestock are not prevented from reaching water sources because of the open trench.
- Wildlife and livestock trails will remain open and passable by adding soft plugs (areas where the trench is excavated and replaced with minimal compaction) during the construction phase. Soft plugs with ramps on either side will be left at all well-defined livestock and wildlife trails along the open trench to allow passage across the trench and provide a means of escape for livestock and wildlife that may enter the trench.

- Trenches will be backfilled as soon as feasible to minimize the amount of open trench. The Operator will avoid leaving trenches open overnight to the extent possible and open trenches that cannot be backfilled immediately will have escape ramps (wooden) placed at no more than 2,500 feet intervals and sloped no more than 45 degrees.

## 5. PRODUCTION (POST DRILLING)

### 5.1 WELL STRUCTURES & FACILITIES

#### 5.1.1 Placement of Production Facilities

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

#### 5.1.2 Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### 5.1.3. Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### 5.1.4. Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. *(Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.)* Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### 5.1.5. Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

## 6. RECLAMATION

Stipulations required by the Authorized Officer on specific actions may differ from the

following general guidelines

## 6.1 ROAD AND SITE RECLAMATION

Any roads constructed during the life of the well will have the caliche removed or linear burial. If contaminants are indicated then testing will be required for chlorides and applicable contaminate anomalies for final disposal determination (disposed of in a manner approved by the Authorized Officer within Federal, State and Local statutes, regulations, and ordinances) and seeded to the specifications in sections 6.5 and 6.6.

## 6.2 EROSION CONTROL

Install erosion control berms, windrows, and hummocks. Windrows must be level and constructed perpendicular to down-slope drainage; steeper slopes will require greater windrow density. Topsoil between windrows must be ripped to a depth of at least 12", unless bedrock is encountered. Any large boulders pulled up during ripping must be deep-buried on location. Ripping must be perpendicular to down-slope. The surface must be left rough in order to catch and contain rainfall on-site. Any trenches resulting from erosion cause by run-off shall be addressed immediately.

## 6.3 INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations must 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 must work with BLM surface protection specialists (BLM\_NM\_CFO\_Construction\_Reclamation@blm.gov) to devise the best strategies to reduce the size of the location. Interim reclamation must allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche and any other surface material is required. 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 in section 6.6.

Upon completion of interim reclamation, the operator shall submit a Sundry Notice, Subsequent Report of Reclamation (Form 3160-5).

## 6.4 FINAL ABANDONMENT & RECLAMATION

Prior to surface abandonment, the operator shall submit a Notice of Intent Sundry Notice and reclamation plan.

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 will 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. After earthwork and seeding is completed, the operator is required to submit a Sundry Notice, Subsequent Report of Reclamation.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (BLM\_NM\_CFO\_Construction\_Reclamation@blm.gov).

## 6.5 SEEDING TECHNIQUES

Seeds shall be hydro-seeded, mechanically drilled, or broadcast, with the broadcast-seeded area raked, ripped or dragged to aid in covering the seed. The seed mixture shall be evenly and uniformly planted over the disturbed area.

## 6.6 SOIL SPECIFIC SEED MIXTURE

The lessee/permittee 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 land application will be accomplished by mechanical planting 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 tend to drop the bottom of the drill and are planted first; the operator 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 BLM or Soil Conservation

District 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 or until several months of precipitation have occurred, enabling a full four months of growth, with one or more seed generations being established

**Seed Mixture 2, for Sandy Site**

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

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

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



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b> OXY USA INC.
<b>WELL NAME &amp; NO.:</b> PRECIOUS 30-18 FEDERAL COM 46H
<b>LOCATION:</b> Sec31, T23S, R31E
<b>COUNTY:</b> <span style="border: 1px solid black; padding: 2px;">Eddy County, New Mexico</span> ▼

COA

H <sub>2</sub> S	<input type="radio"/> No <span style="float: right;"><input checked="" type="radio"/> Yes</span>			
<b>Potash / WIPP</b>	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-Q	<input checked="" type="checkbox"/> Open Annulus <span style="color: red;">4-String Design: Open 1st Int x 2nd Annulus (ICP 2 below Relief Zone)</span> <input type="checkbox"/> WIPP
<b>Cave / Karst</b>	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High	<input type="radio"/> Critical
<b>Wellhead</b>	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
<b>Cementing</b>	<input checked="" type="checkbox"/> Primary Squeeze	<input type="checkbox"/> Cont. Squeeze	<input checked="" type="checkbox"/> EchoMeter	<input type="checkbox"/> DV Tool
<b>Special Req</b>	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
<b>Waste Prev.</b>	<input type="radio"/> Self-Certification	<input type="radio"/> Waste Min. Plan	<input checked="" type="radio"/> APD Submitted prior to 06/10/2024	
<b>Additional Language</b>	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input checked="" type="checkbox"/> Break Testing
	<input checked="" type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Fluid-Filled	

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet all requirements from 43 CFR 3176, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

*APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.*

### B. CASING

*Set points in COA reflects requirements from BLM Geology. Please review.*

1. The **13-3/8** inch surface casing shall be set at approximately **442** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **10-3/4** inch intermediate salt protection casing shall be set at approximately **4,050** feet **TVD**. *BLM Geology Note: The operator proposes to set intermediate casing at 4157 feet, which will be in the Bell canyon formation this is not an acceptable set point. BLM suggests to set the first intermediate casing in the Lamar Limestone at a depth of 4050'.* The minimum required fill of cement behind the **10-3/4** inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
3. The **7-5/8** inch second intermediate casing shall be set at approximately **11,888** feet. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

**NOTE: CEMENT PROGRAM LISTED IN THE ATTACHED DRILL PLAN IS INADEQUATE TO COVER THE DEPTHS ON BOTH PRIMARY AND BRADENHEAD. PLEASE REVIEW VOLUMES PRIOR TO CEMENTING THE INTERVAL.**

**Option 1 (Primary + Post Frac Bradenhead):**

- Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
- ❖ **A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing 1 x Intermediate Casing 2 annulus un-cemented and monitored inside the Intermediate String.** Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within **180 days**.

Operator has proposed to pump down **intermediate 1 x intermediate 2** annulus post completion. **Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the intermediate 2 casing to surface after the second stage BH to verify TOC.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage

bradenhead when running Echo-meter if cement is required to surface. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on both the intermediate annulus and the production annulus for the life of the well.**

**In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-361-2822 Eddy County).**

4. The 5-1/2 inch production casing shall be set at approximately 25,617 feet. The minimum required fill of cement behind the 5-1/2 inch production casing is:

**Option 1 (Single Stage):**

- Cement should tie-back 500 feet into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

**C. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
1. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 psi.**
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

## D. SPECIAL REQUIREMENT (S)

### Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

### BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

### **Offline Cementing**

Approved for surface and intermediate intervals. Notify the BLM prior to the commencement of any offline cementing procedure.

### **Casing Clearance**

Overlap clearance OK.



## GENERAL REQUIREMENTS

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

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

### Contact Eddy County Petroleum Engineering Inspection Staff:

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220;

[BLM NM CFO DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV); (575) 361-2822

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

### A. CASING

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

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

## **B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's

requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - i. 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 cement), 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).
  - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve

- open. (only applies to single stage cement jobs, prior to the cement setting up.)
- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - v. The results of the test shall be reported to the appropriate BLM office.
  - vi. 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.
  - vii. 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.
  - viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

### **C. DRILLING MUD**

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

### **D. WASTE MATERIAL AND FLUIDS**

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

disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**KPI -7/15/2024**



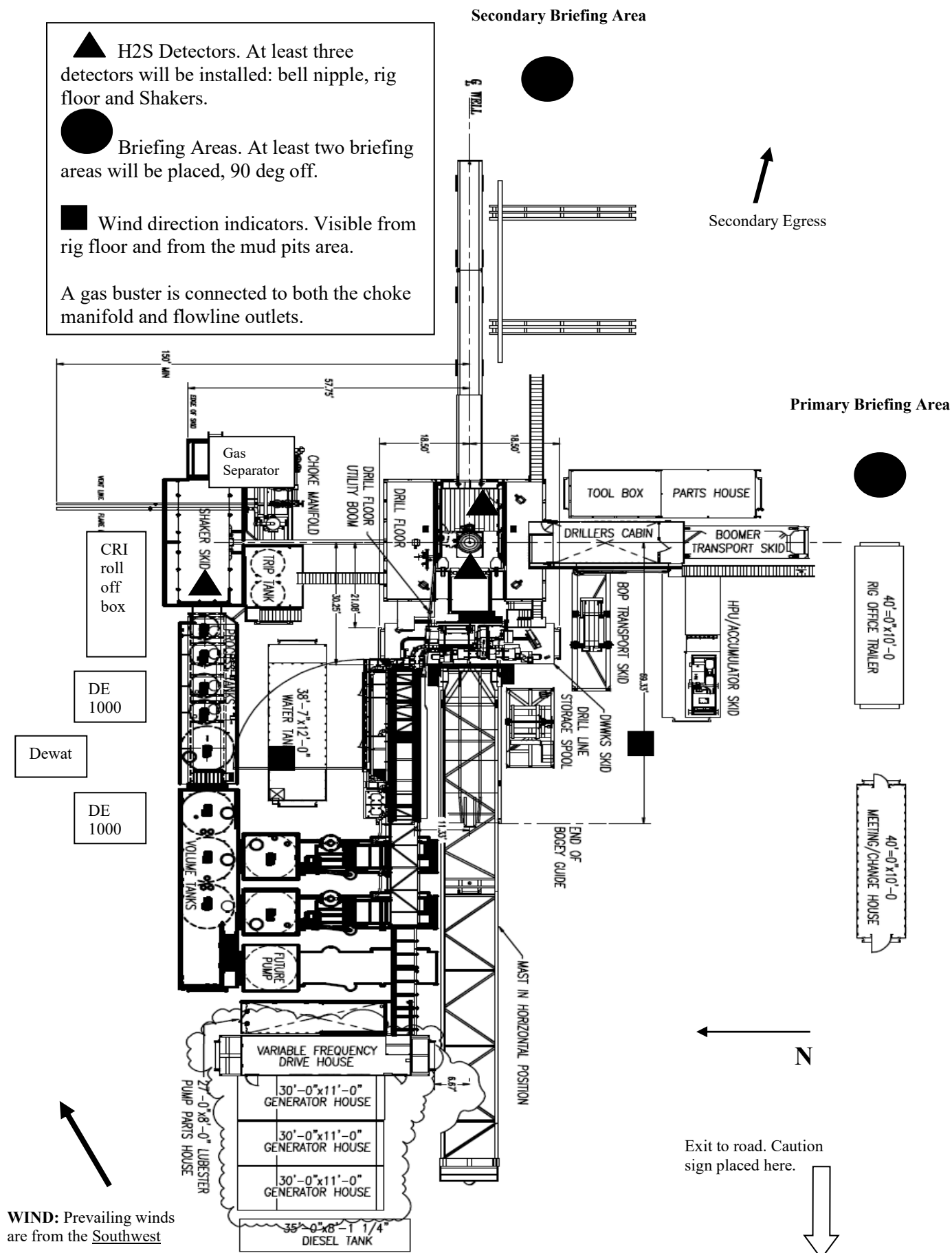


## **Permian Drilling Hydrogen Sulfide Drilling Operations Plan**

Open drill site. No homes or buildings are near the proposed location.

### **1. Escape**

Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.





## **Permian Drilling Hydrogen Sulfide Drilling Operations Plan New Mexico**

### **Scope**

This contingency plan establishes guidelines for the public, all company employees, and contract employees who's work activities may involve exposure to hydrogen sulfide (H<sub>2</sub>S) gas.

While drilling this well, it is possible to encounter H<sub>2</sub>S bearing formations. At all times, the first barrier to control H<sub>2</sub>S emissions will be the drilling fluid, which will have a density high enough to control influx.

### **Objective**

1. Provide an immediate and predetermined response plan to any condition when H<sub>2</sub>S is detected. All H<sub>2</sub>S detections in excess of 10 parts per million (ppm) concentration are considered an Emergency.
2. Prevent any and all accidents, and prevent the uncontrolled release of hydrogen sulfide into the atmosphere.
3. Provide proper evacuation procedures to cope with emergencies.
4. Provide immediate and adequate medical attention should an injury occur.

### **Discussion**

Implementation:	This plan with all details is to be fully implemented before drilling to <u>commence</u> .
Emergency response Procedure:	This section outlines the conditions and denotes steps to be taken in the event of an emergency.
Emergency equipment 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 prior to drilling.
Drilling emergency call lists:	Included are the telephone numbers of all persons to be contacted should an emergency exist.
Briefing:	This section deals with the briefing of all people involved in the drilling operation.
Public safety:	Public safety personnel will be made aware of any potential evacuation and any additional support needed.
Check lists:	Status check lists and procedural check lists have been included to insure adherence to the plan.
General information:	A general information section has been included to supply support information.

### **Hydrogen Sulfide Training**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on the well:

1. The hazards and characteristics of H<sub>2</sub>S.
2. Proper use and maintenance of personal protective equipment and life support systems.
3. H<sub>2</sub>S detection.
4. Proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
5. Proper techniques for first aid and rescue procedures.
6. Physical effects of hydrogen sulfide on the human body.
7. Toxicity of hydrogen sulfide and sulfur dioxide.
8. Use of SCBA and supplied air equipment.
9. First aid and artificial respiration.
10. Emergency rescue.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S on metal components. If high tensile strength tubular is to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling a well, blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan.

H<sub>2</sub>S training refresher must have been taken within one year prior to drilling the well. Specifics on the well to be drilled will be discussed during the pre-spud meeting. H<sub>2</sub>S and well control (choke) drills will be performed while drilling the well, at least on a weekly basis. This plan shall be available in the well site. All personnel will be required to carry the documentation proving that the H<sub>2</sub>S training has been taken.

#### **Service company and visiting personnel**

- A. Each service company that will be on this well will be notified if the zone contains H<sub>2</sub>S.
- B. Each service company must provide for the training and equipment of their employees before they arrive at the well site.
- C. Each service company will be expected to attend a well site



### **Emergency Equipment Requirements**

#### 1. Well control equipment

The well shall have hydraulic BOP equipment for the anticipated pressures. Equipment is to be tested on installation and follow Oxy Well Control standard, as well as 43 CFR part 3170 Subpart 3172.

*Special control equipment:*

- A. Hydraulic BOP equipment with remote control on ground.  
Remotely operated choke.
- B. Rotating head
- C. Gas buster equipment shall be installed before drilling out of surface pipe.

#### 2. Protective equipment for personnel

- A. Four (4) 30-minute positive pressure air packs (2 at each briefing area) on location.
- B. Adequate fire extinguishers shall be located at strategic locations.
- C. Radio / cell telephone communication will be available at the rig.
  - Rig floor and trailers.
  - Vehicle.

#### 3. Hydrogen sulfide sensors and alarms

- A. H<sub>2</sub>S sensor with alarms will be located on the rig floor, at the bell nipple, and at the flow line. These monitors will be set to alarm at 10 ppm with strobe light, and audible alarm.
- B. Hand operated detectors with tubes.
- C. H<sub>2</sub>S monitor tester (to be provided by contract Safety Company.)
- D. There shall be one combustible gas detector on location at all times.

#### 4. Visual Warning Systems

- A. One sign located at each location entrance with the following language:

**Caution – potential poison gas  
Hydrogen sulfide  
No admittance without authorization**

*Wind sock – wind streamers:*

- A. One 36” (in length) wind sock located at protection center, at height visible from rig floor.
- B. One 36” (in length) wind sock located at height visible from pit areas.

*Condition flags*

- A. One each condition flag to be displayed to denote conditions.

**green – normal conditions**

**yellow – potential danger**

**red – danger, H2S present**

- B. Condition flag shall be posted at each location sign entrance.

5. Mud Program

The mud program is designed to minimize the risk of having H2S and other formation fluids at surface. Proper mud weight and safe drilling practices will be applied. H2S scavengers will be used to minimize the hazards while drilling. Below is a summary of the drilling program.

*Mud inspection devices:*

Garrett gas train or hatch tester for inspection of sulfide concentration in mud system.

6. Metallurgy

- A. Drill string, casing, tubing, wellhead, blowout preventers, drilling spools or adapters, kill lines, choke manifold, lines and valves shall be suitable for the H2S service.
- B. All the elastomers, packing, seals and ring gaskets shall be suitable for H2S service.

7. Well Testing

No drill stem test will be performed on this well.

8. Evacuation plan

Evacuation routes should be established prior to well spud for each well and discussed with all rig personnel.

9. Designated area

- A. Parking and visitor area: all vehicles are to be parked at a predetermined safe distance from the wellhead.
- B. There will be a designated smoking area.
- C. Two briefing areas on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds perpendicularly, or at a 45-degree angle if wind direction tends to shift in the area.

**Emergency procedures**

- A. In the event of any evidence of H<sub>2</sub>S level above 10 ppm, take the following steps:
  - 1. The Driller will pick up off bottom, shut down the pumps, slow down the pipe rotation.
  - 2. Secure and don escape breathing equipment, report to the upwind designated safe briefing / muster area.
  - 3. All personnel on location will be accounted for and emergency search should begin for any missing, the Buddy System will be implemented.
  - 4. Order non-essential personnel to leave the well site, order all essential personnel out of the danger zone and upwind to the nearest designated safe briefing / muster area.
  - 5. Entrance to the location will be secured to a higher level than our usual "Meet and Greet" requirement, and the proper condition flag will be displayed at the entrance to the location.
  - 6. Take steps to determine if the H<sub>2</sub>S level can be corrected or suppressed and, if so, proceed as required.
- B. If uncontrollable conditions occur:
  - 1. Take steps to protect and/or remove any public in the down-wind area from the rig – partial evacuation and isolation. Notify necessary public safety personnel and appropriate regulatory entities (i.e. BLM) of the situation.

2. Remove all personnel to the nearest upwind designated safe briefing / muster area or off location.
3. Notify public safety personnel of safe briefing / muster area.
4. An assigned crew member will blockade the entrance to the location. No unauthorized personnel will be allowed entry to the location.
5. Proceed with best plan (at the time) to regain control of the well. Maintain tight security and safety procedures.

C. Responsibility:

1. Designated personnel.
  - a. Shall be responsible for the total implementation of this plan.
  - b. Shall be in complete command during any emergency.
  - c. Shall designate a back-up.

- All personnel:
1. On alarm, don escape unit and report to the nearest upwind designated safe briefing / muster area upw
  2. Check status of personnel (buddy system).
  3. Secure breathing equipment.
  4. Await orders from supervisor.

- Drill site manager:
1. Don escape unit if necessary and report to nearest upwind designated safe briefing / muster area.
  2. Coordinate preparations of individuals to return to point of release with tool pusher and driller (using the buddy system).
  3. Determine H2S concentrations.
  4. Assess situation and take control measures.

- Tool pusher:
1. Don escape unit Report to up nearest upwind designated safe briefing / muster area.
  2. Coordinate preparation of individuals to return to point of release with tool pusher drill site manager (using the buddy system).
  3. Determine H2S concentration.
  4. Assess situation and take control measures.

- Driller:
1. Don escape unit, shut down pumps, continue

- rotating DP.
2. Check monitor for point of release.
  3. Report to nearest upwind designated safe briefing / muster area.
  4. Check status of personnel (in an attempt to rescue, use the buddy system).
  5. Assigns least essential person to notify Drill Site Manager and tool pusher by quickest means in case of their absence.
  6. Assumes the responsibilities of the Drill Site Manager and tool pusher until they arrive should they be absent.
- Derrick man
- Floor man #1
- Floor man #2
1. Will remain in briefing / muster area until instructed by supervisor.
- Mud engineer:
1. Report to nearest upwind designated safe briefing / muster area.
  2. When instructed, begin check of mud for ph and H2S level. (Garett gas train.)
- Safety personnel:
1. Mask up and check status of all personnel and secure operations as instructed by drill site manager.

### **Taking a kick**

When taking a kick during an H2S emergency, all personnel will follow standard Well control procedures after reporting to briefing area and masking up.

### **Open-hole logging**

All unnecessary personnel off floor. Drill Site Manager and safety personnel should monitor condition, advise status and determine need for use of air equipment.

### **Running casing or plugging**

Following the same “tripping” procedure as above. Drill Site Manager and safety personnel should determine if all personnel have access to protective equipment.



### **Ignition procedures**

The decision to ignite the well is the responsibility of the operator (Oxy Drilling Management). The 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 controlling the blowout under the prevailing conditions at the well.

#### **Instructions for igniting the well**

1. Two people are required for the actual igniting operation. They must wear self-contained breathing units and have a safety rope attached. One man (tool pusher or safety engineer) will check the atmosphere for explosive gases with the gas monitor. The other man is responsible for igniting the well.
2. Primary method to ignite: 25 mm flare gun with range of approximately 500 feet.
3. Ignite upwind and do not approach any closer than is warranted.
4. Select the ignition site best for protection, and which offers an easy escape route.
5. Before firing, check for presence of combustible gas.
6. After lighting, continue emergency action and procedure as before.
7. All unassigned personnel will remain in briefing area until instructed by supervisor or directed by the Drill Site Manager.

**Remember:** After well is ignited, burning hydrogen sulfide will convert to sulfur dioxide, which is also highly toxic. **Do not assume the area is safe after the well is ignited.**

**Status check list**

Note: All items on this list must be completed before drilling to production casing point.

1. H2S sign at location entrance.
2. Two (2) wind socks located as required.
3. Four (4) 30-minute positive pressure air packs (2 at each Briefing area) on location for all rig personnel and mud loggers.
4. Air packs inspected and ready for use.
5. Cascade system and hose line hook-up as needed.
6. Cascade system for refilling air bottles as needed.
7. Condition flag on location and ready for use.
8. H2S detection system hooked up and tested.
9. H2S alarm system hooked up and tested.
10. Hand operated H2S detector with tubes on location.
11. 1 – 100' length of nylon rope on location.
12. All rig crew and supervisors trained as required.
13. All outside service contractors advised of potential H2S hazard on well.
14. No smoking sign posted and a designated smoking area identified.
15. Calibration of all H2S equipment shall be noted on the IADC report.

Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

**Procedural check list during H2S events**

**Perform each tour:**

1. Check fire extinguishers to see that they have the proper charge.
2. Check breathing equipment to ensure that it is in proper working order.
3. Make sure all the H2S detection system is operative.

**Perform each week:**

1. Check each piece of breathing equipment to make sure that demand or forced air regulator is working. This requires that the bottle be opened and the mask assembly be put on tight enough so that when you inhale, you receive air or feel air flow.
2. BOP skills (well control drills).
3. Check supply pressure on BOP accumulator stand by source.
4. Check breathing equipment mask assembly to see that straps are loosened and turned back, ready to put on.
5. Check pressure on breathing equipment air bottles to make sure they are charged to full volume. ( Air quality checked for proper air grade "D" before bringing to location)
6. Confirm pressure on all supply air bottles.
7. Perform breathing equipment drills with on-site personnel.
8. Check the following supplies for availability.
  - A. Emergency telephone list.
  - B. Hand operated H2S detectors and tubes.

**General evacuation plan**

1. When the company approved supervisor (Drill Site Manager, consultant, rig pusher, or driller) determines the H2S gas cannot be limited to the well location and the public will be involved, he will activate the evacuation plan.
2. Drill Site Manager or designee will notify local government agency that a hazardous condition exists and evacuation needs to be implemented.
3. Company or contractor safety personnel that have been trained in the use of H2S detection equipment and self-contained breathing equipment will monitor H2S concentrations, wind directions, and area of exposure. They will delineate the outer perimeter of the hazardous gas area. Extension to the evacuation area will be determined from information gathered.
4. Law enforcement personnel (state police, police dept., fire dept., and sheriff's dept.) Will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.
5. After the discharge of gas has been controlled, company safety personnel will determine when the area is safe for re-entry.

**Important: 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.**

### **Emergency actions**

#### **Well blowout – if emergency**

1. Evacuate all personnel to “Safe Briefing / Muster Areas” or off location if needed.
2. If sour gas – evacuate rig personnel.
3. If sour gas – evacuate public within 3000 ft radius of exposure.
4. Don SCBA and shut well in if possible using the buddy system.
5. Notify Drilling Superintendent and call 911 for emergency help (fire dept and ambulance) if needed.
6. Implement the Blowout Contingency Plan, and Drilling Emergency Action Plan.
6. Give first aid as needed.

#### **Person down location/facility**

1. If immediately possible, contact 911. Give location and wait for confirmation.
2. Don SCBA and perform rescue operation using buddy system.

### 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 above 5% in air	

- 1) threshold limit – concentration at which it is believed that all workers 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.

### Toxic effects of hydrogen sulfide

Table ii  
Physical effects of hydrogen sulfide

Percent (%)	Ppm	Concentration	Physical effects
		Grains 100 std. Ft3*	
0.001	<10	00.65	Obvious and unpleasant odor.



0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kill smell in 3 – 15 minutes. May sting eyes and throat.
0.020	200	12.96	Kills smell shortly; stings eyes and 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 equipment (SCBA)**

1. Written procedures shall be prepared covering safe use of SCBA's in dangerous atmosphere, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available SCBA.
2. SCBA's shall be inspected frequently at random to insure that they are properly used, cleaned, and maintained.
3. Anyone who may use the SCBA's shall be trained in how to insure proper face-piece to face seal. They shall wear SCBA's in normal air and then wear them in a test atmosphere. (note: such items as facial hair {beard or sideburns} and eyeglasses will not allow proper seal.) Anyone that may be reasonably expected to wear SCBA's should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses or contact lenses.
4. Maintenance and care of SCBA's:
  - a. A program for maintenance and care of SCBA's shall include the following:
    1. Inspection for defects, including leak checks.
    2. Cleaning and disinfecting.
    3. Repair.
    4. Storage.
  - b. Inspection, self-contained breathing apparatus for emergency use shall be inspected monthly.
    1. Fully charged cylinders.
    2. Regulator and warning device operation.
    3. Condition of face piece and connections.
    4. Rubber parts shall be maintained to keep them pliable and prevent deterioration.
  - c. Routinely used SCBA's shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.
5. Persons assigned tasks that requires use of self-contained breathing equipment shall be certified physically fit (medically cleared) for breathing equipment usage at least annually.
6. SCBA's should be worn when:
  - A. Any employee works near the top or on top of any tank unless test reveals less than 10 ppm of H<sub>2</sub>S.

- B. When breaking out any line where H<sub>2</sub>S can reasonably be expected.
- C. When sampling air in areas to determine if toxic concentrations of H<sub>2</sub>S exists.
- D. When working in areas where over 10 ppm H<sub>2</sub>S has been detected.
- E. At any time there is a doubt as to the H<sub>2</sub>S level in the area to be entered.

**Rescue**  
**First aid for H<sub>2</sub>S poisoning**

Do not panic!

Remain calm – think!

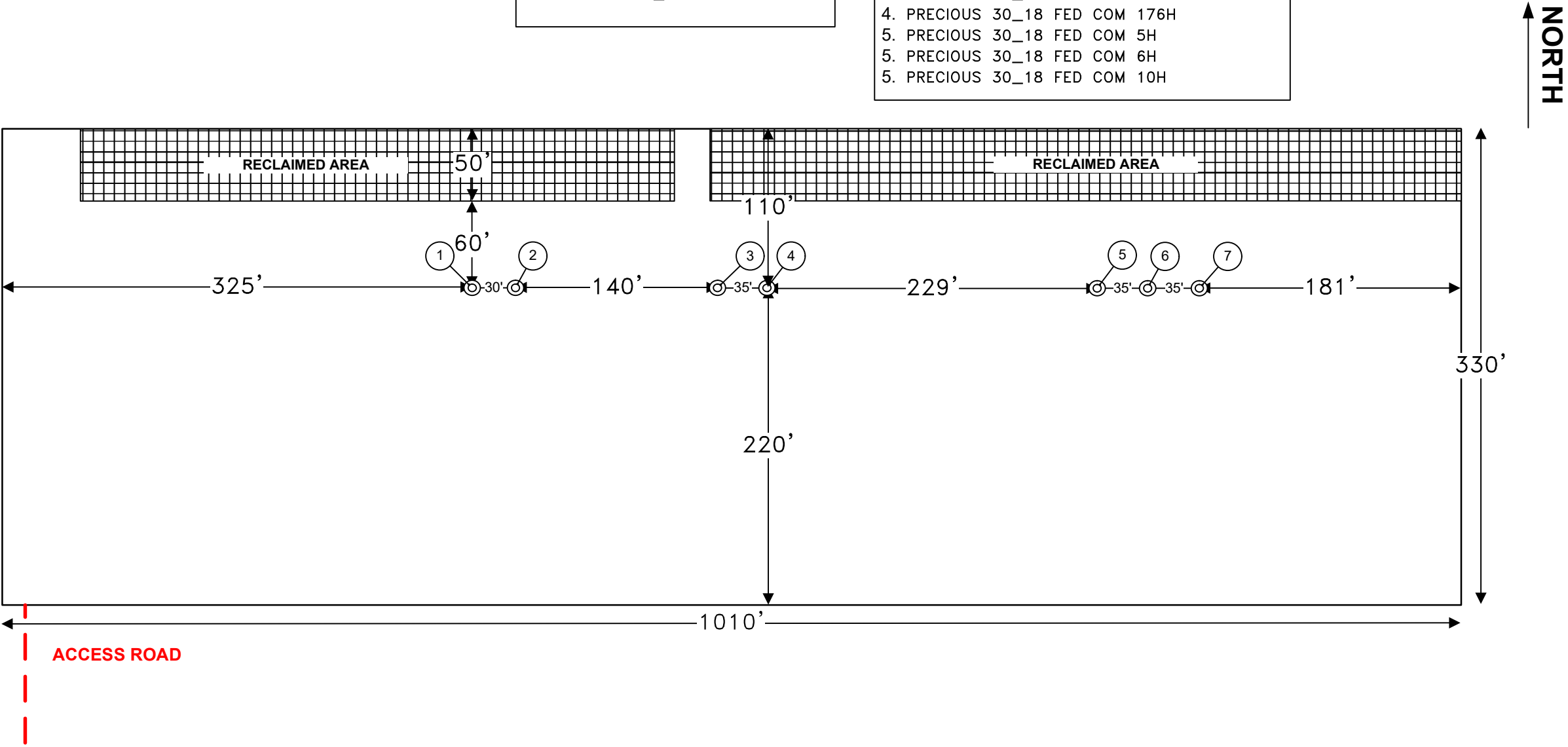
1. Don SCBA breathing equipment.
2. Remove victim(s) utilizing buddy system to fresh air as quickly as possible. (go up-wind from source or at right angle to the wind. Not down wind.)
3. Briefly apply chest pressure – arm lift method of artificial respiration to clean the victim's lungs and to avoid inhaling any toxic gas directly from the victim's lungs.
4. Provide for prompt transportation to the hospital, and continue giving artificial respiration if needed.
5. Hospital(s) or medical facilities need to be informed, before-hand, of the possibility of H<sub>2</sub>S gas poisoning – no matter how remote the possibility is.
6. Notify emergency room personnel that the victim(s) has been exposed to H<sub>2</sub>S gas.

Besides basic first aid, everyone on location should have a good working knowledge of artificial respiration.

Revised CM 6/27/2012

1. PRECIOUS 30\_18 FED COM 45H  
2. PRECIOUS 30\_18 FED COM 46H

- EXISTING WELLS  
3. PRECIOUS 30\_18 FED COM 175H  
4. PRECIOUS 30\_18 FED COM 176H  
5. PRECIOUS 30\_18 FED COM 5H  
5. PRECIOUS 30\_18 FED COM 6H  
5. PRECIOUS 30\_18 FED COM 10H

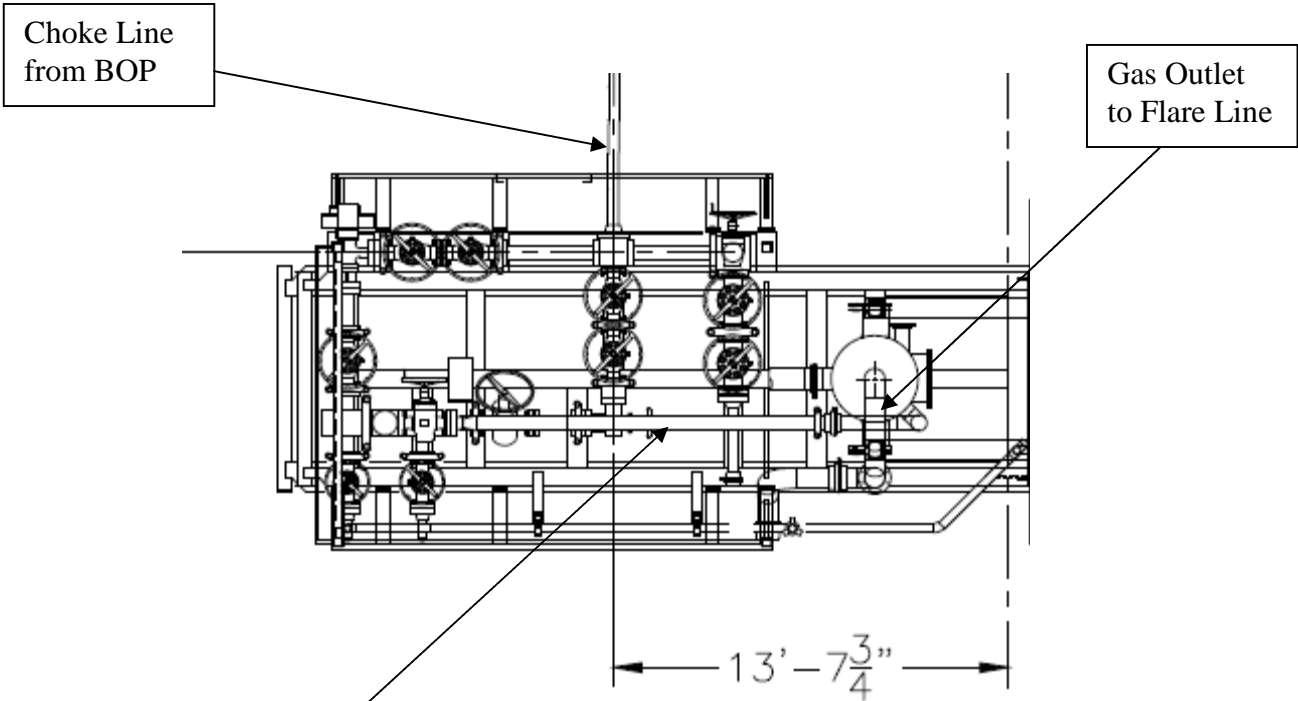


REVISION BLOCK						ENGINEERING RECORD		SNDDNS 3101 PRECIOUS 30_18 FED COM 45H, 46H EXISTING Wells: PRECIOUS 30_18 FED COM 175H, 176H, 5H, 6H, 10H Section 31, T23S, R31E EDDY COUNTY, NM
NO.	DATE	DESCRIPTION	BY	CHK	APP	BY	DATE	
						CH	08/10/2023	

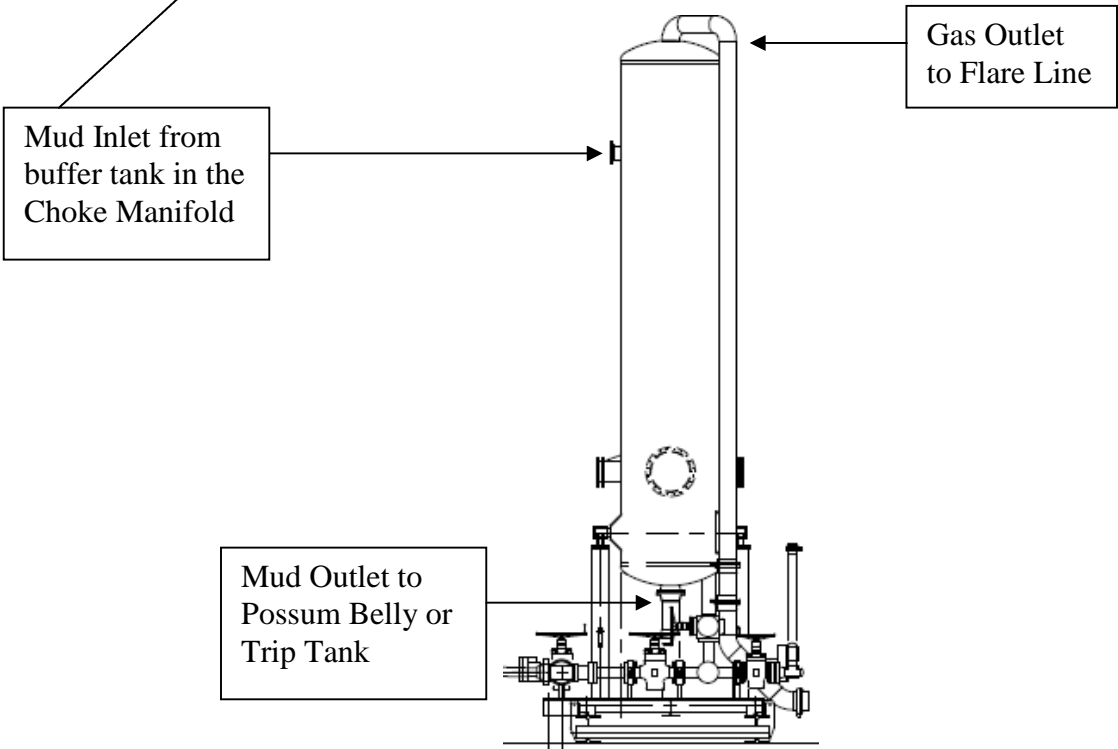
## Gas Separator Routing Flex III Rigs



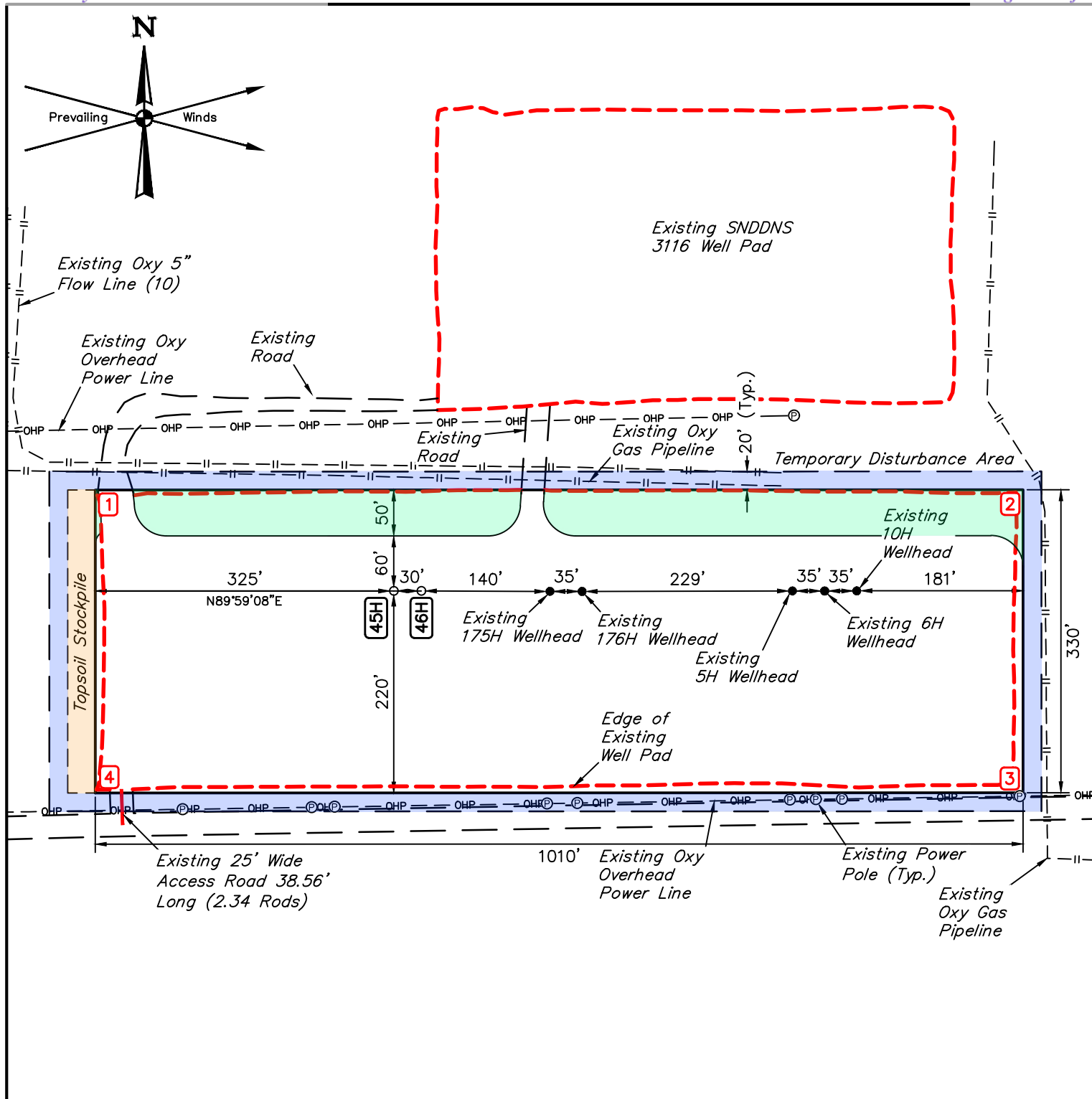
Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)







FAA PERMIT: NO

Reclamation

Topsoil Piles

Temporary Disturbance

PRECIOUS 30.18 FED COM 45H  
519' FNL 1235' FELPRECIOUS 30.18 FED COM 46H  
519' FNL 1205' FEL

Sheet 1 of 2

**NOTES:**

- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

**OXY USA INC.**

**SNDDNS 3101**  
**NE 1/4 NE 1/4, SECTION 31, T23S, R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**

SURVEYED BY	C.T., J.N.	05-11-23	SCALE
DRAWN BY	Z.L.	05-18-23	1" = 150'
<b>SITE PLAN</b>			



**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

<b>45H - EL: 3348.6'</b>	<b>46H - EL: 3348.6'</b>
NAD 83	NAD 83
LATITUDE = 32°16'00.30" (32.266749°)	LATITUDE = 32°16'00.29" (32.266748°)
LONGITUDE = -103°48'44.45" (-103.812348°)	LONGITUDE = -103°48'44.10" (-103.812251°)
NAD 27	NAD 27
LATITUDE = 32°15'59.85" (32.266626°)	LATITUDE = 32°15'59.85" (32.266625°)
LONGITUDE = -103°48'42.70" (-103.811862°)	LONGITUDE = -103°48'42.35" (-103.811765°)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 461167.08' E: 702368.31'	N: 461167.12' E: 702398.28'
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 461107.80' E: 661184.75'	N: 461107.84' E: 661214.72'

<b>1 - EL: 3348.6'</b>	<b>2 - EL: 3349.1'</b>
NAD 83	NAD 83
LATITUDE = 32°16'01.33" (32.267035°)	LATITUDE = 32°16'01.35" (32.267043°)
LONGITUDE = -103°48'48.21" (-103.813392°)	LONGITUDE = -103°48'36.57" (-103.810157°)
NAD 27	NAD 27
LATITUDE = 32°16'00.89" (32.266913°)	LATITUDE = 32°16'00.91" (32.266920°)
LONGITUDE = -103°48'46.46" (-103.812906°)	LONGITUDE = -103°48'34.82" (-103.809671°)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 461269.86' E: 702045.25'	N: 461277.38' E: 703045.02'
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 461210.57' E: 660861.68'	N: 461218.10' E: 661861.46'

<b>3 - EL: 3349.1'</b>	<b>4 - EL: 3349.1'</b>
NAD 83	NAD 83
LATITUDE = 32°15'58.16" (32.266155°)	LATITUDE = 32°15'58.22" (32.266172°)
LONGITUDE = -103°48'48.22" (-103.813396°)	LONGITUDE = -103°48'36.63" (-103.810174°)
NAD 27	NAD 27
LATITUDE = 32°15'57.71" (32.266032°)	LATITUDE = 32°15'57.78" (32.266049°)
LONGITUDE = -103°48'46.47" (-103.812910°)	LONGITUDE = -103°48'34.88" (-103.809688°)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 460949.46' E: 702045.62'	N: 460960.57' E: 703041.22'
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 460890.18' E: 660862.05'	N: 460901.30' E: 661857.65'

NOTES:

• Corner Coordinate Shown are based on existing pad corners.

• Coordinates Show are New Mexico Coordinate System East Zone, U.S. Feet.

OXY USA INC.

SNDDNS 3101  
NE 1/4 NE 1/4, SECTION 31, T23S, R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.N.	05-11-23	SCALE
DRAWN BY	Z.L.	05-18-23	N/A
SITE PLAN			

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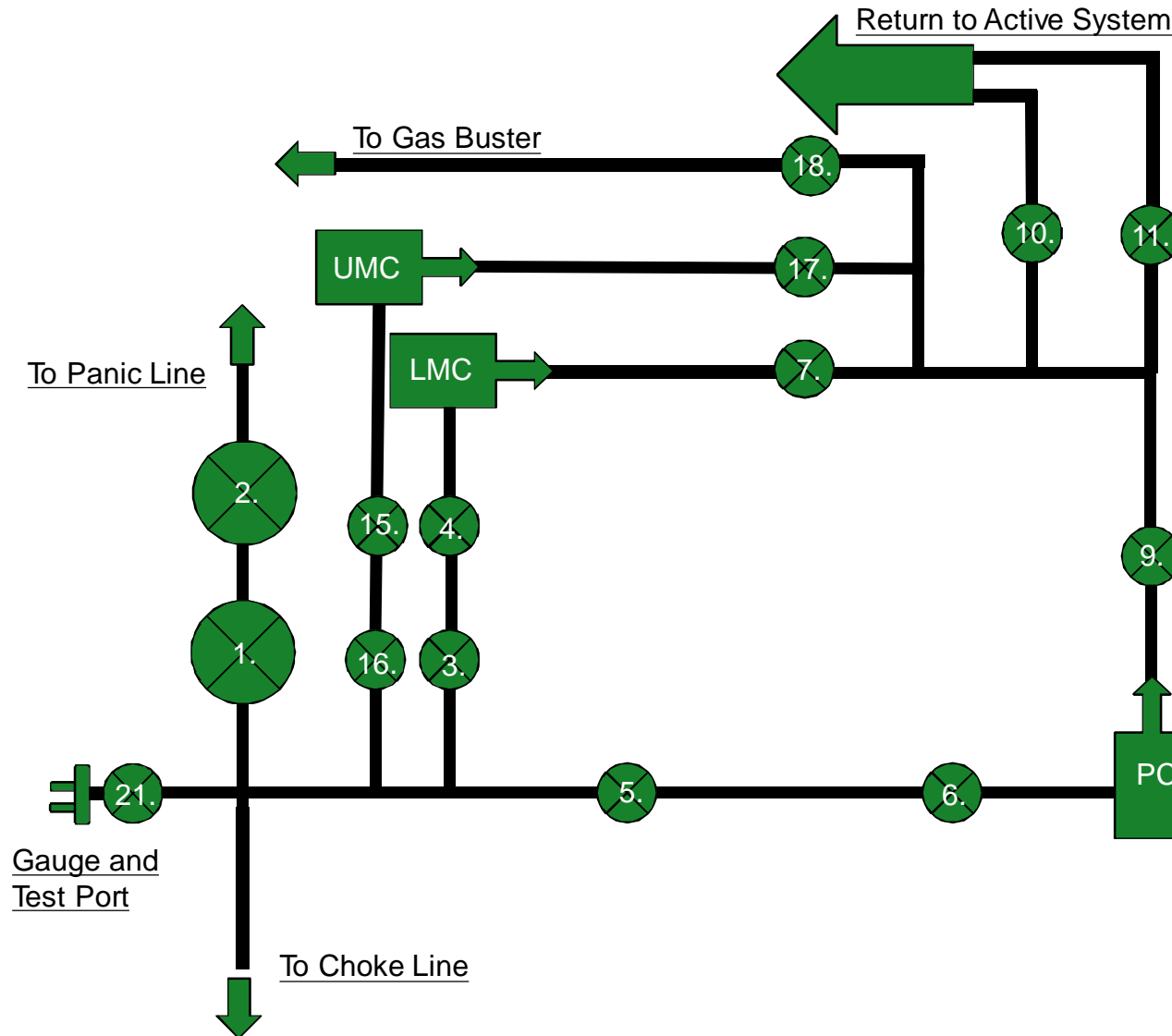
H

ENGINEERING & LAND SURVEYING

UELS, LLC

Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

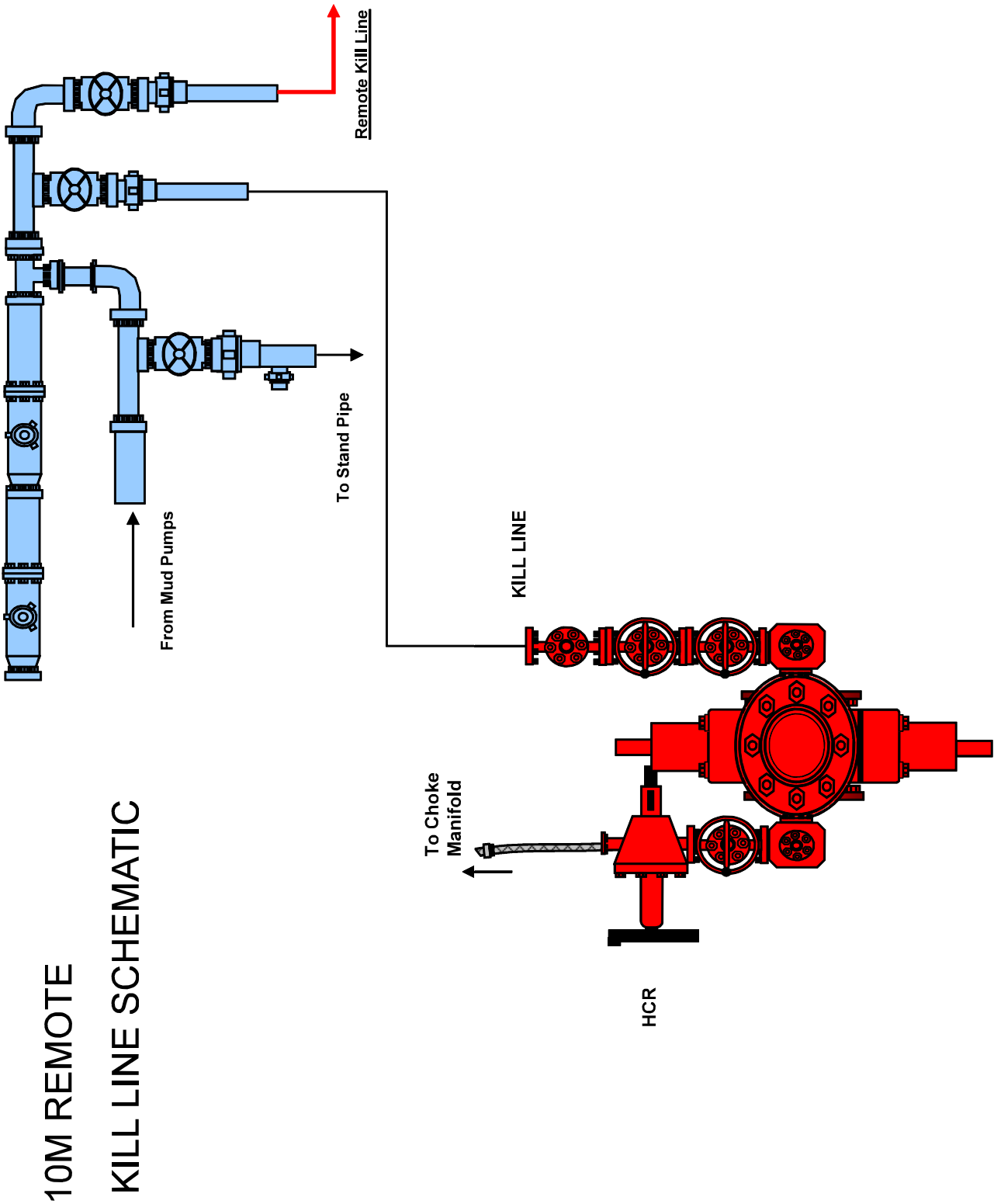
# 10M Choke Panel



1. Choke Manifold Valve
2. Choke Manifold Valve
3. Choke Manifold Valve
4. Choke Manifold Valve
5. Choke Manifold Valve
6. Choke Manifold Valve
7. Choke Manifold Valve
8. PC – Power Choke
9. Choke Manifold Valve
10. Choke Manifold Valve
11. Choke Manifold Valve
12. LMC – Lower Manual Choke
13. UMC – Upper manual choke
15. Choke Manifold Valve
16. Choke Manifold Valve
17. Choke Manifold Valve
18. Choke Manifold Valve

21. Vertical Choke Manifold Valve

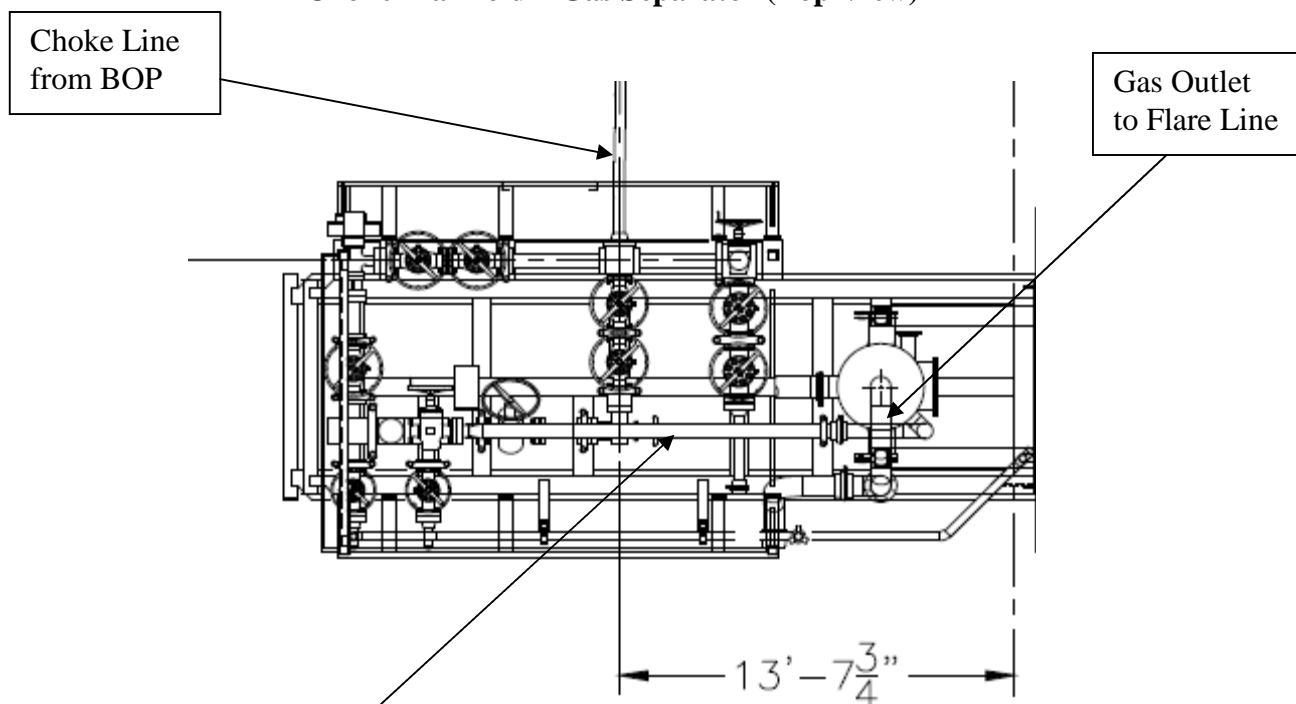
**\*All Valves 3" minimum**



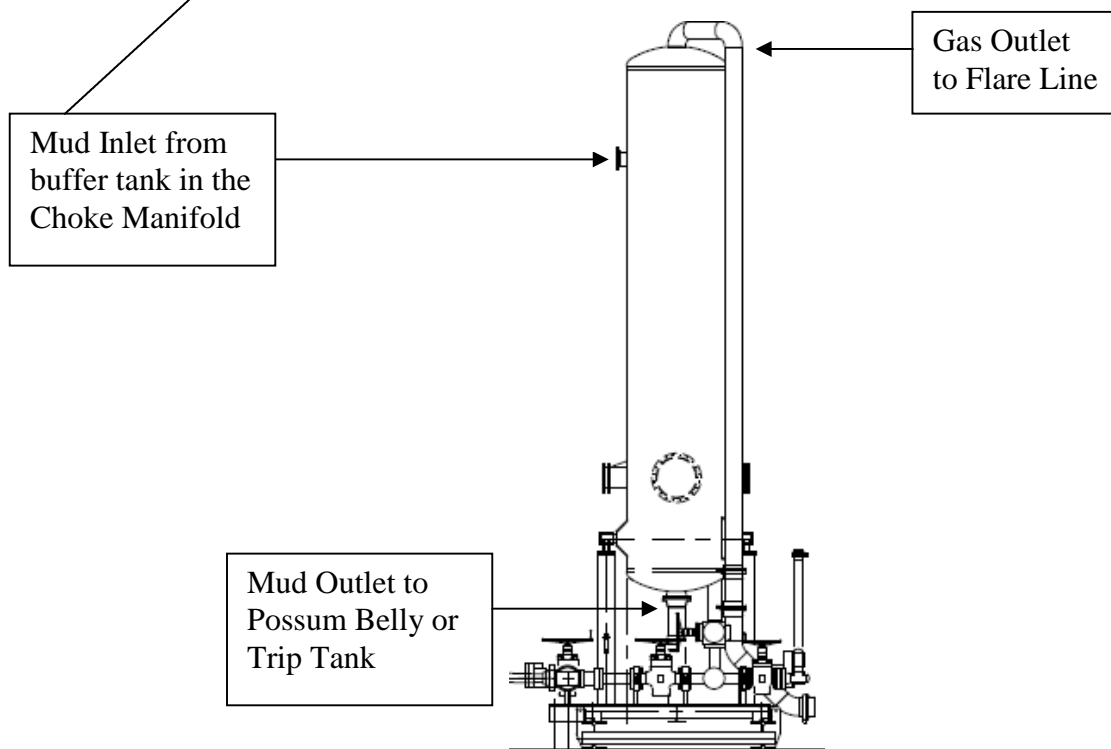
## Gas Separator Routing Flex III Rigs



**Choke Manifold – Gas Separator (Top View)**



**Choke Manifold – Gas Separator (Side View)**







Fluid Technology

Quality Document

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## CERTIFICATE OF CONFORMITY

**Supplier** : CONTITECH RUBBER INDUSTRIAL KFT.  
**Equipment** : 6 pcs. Choke and Kill Hose with installed couplings  
**Type** : 3" x 10,67 m WP: 10000 psi  
**Supplier File Number** : 412638  
**Date of Shipment** : April. 2008  
**Customer** : Phoenix Beattie Co.  
**Customer P.o.** : 002491  
**Referenced Standards**  
**/ Codes / Specifications** : API Spec 16 C  
**Serial No.:** 52754,52755,52776,52777,52778,52782

### STATEMENT OF CONFORMITY

We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Signed : .....

A handwritten signature in black ink, appearing to read "Jack G. G.", written over a dotted line.

ContiTech Rubber  
Industrial Kft.  
Quality Control Dept.  
(1)

Date: 04. April. 2008

Position: Q.C. Manager

Coflex Hose Certification

Page: 1/1

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Back  
ContiTech Rubber  
Industrial Kft.  
Quality Control Dept.  
(2)

## Material Identification Certificate

We hereby certify that these goods have been inspected by our Quality Management System, and to the best of our knowledge are found to conform to relevant industry standards within the requirements of the purchase order as issued to Phoenix Beattie Corporation.

05/23/08

Coflex Hose Certification

Form No 100/12

**Phoenix Beattie Corp**

11535 Brittmoore Park Drive  
Houston, TX 77041  
Tel: (832) 327-0141  
Fax: (832) 327-0148  
E-mail mail@phoenixbeattie.com  
www.phoenixbeattie.com

**Delivery Note**

<b>Customer Order Number</b>	370-369-001	<b>Delivery Note Number</b>	003078	<b>Page</b>	1
<b>Customer / Invoice Address</b> HELMERICH & PAYNE INT'L DRILLING CO 1437 SOUTH BOULDER TULSA, OK 74119		<b>Delivery / Address</b> HELMERICH & PAYNE IDC ATTN: JOE STEPHENSON - RIG 370 13609 INDUSTRIAL ROAD HOUSTON, TX 77015			

<b>Customer Acc No</b>	<b>Phoenix Beattie Contract Manager</b>	<b>Phoenix Beattie Reference</b>	<b>Date</b>
H01	JJL	006330	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
1	HP10CK3A-35-4F1 3" 10K 16C C&K HOSE x 35ft OAL CW 4.1/16" API SPEC FLANGE E/ End 1: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange End 2: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange c/w BX155 Standard ring groove at each end Suitable for H2S Service Working pressure: 10,000psi Test pressure: 15,000psi Standard: API 16C Full specification Armor Guarding: Included Fire Rating: Not Included Temperature rating: -20 Deg C to +100 Deg C	1	1	0
2	SECK3-HPF3 LIFTING & SAFETY EQUIPMENT TO SUIT HP10CK3-35-F1 2 x 160mm ID Safety Clamps 2 x 244mm ID Lifting Collars & element C's 2 x 7ft Stainless Steel wire rope 3/4" OD 4 x 7.75t Shackles	1	1	0
3	SC725-200CS SAFETY CLAMP 200MM 7.25T C/S GALVANISED	1	1	0

Continued...

All goods remain the property of Phoenix Beattie until paid for in full. Any damage or shortage on this delivery must be advised within 5 days.  
Returns may be subject to a handling charge.

Coflex Hose Certification

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 746	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 002491	
CONTITECH ORDER N°: 412638		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 52777		NOMINAL / ACTUAL LENGTH: 10,67 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 ~ min.	
Pressure test with water at ambient temperature  <p style="text-align: center;">See attachment. (1 page)</p>					
↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS					
Type	Serial N°		Quality	Heat N°	
3" coupling with 4 1/16" Flange end	917	913	AISI 4130	T7998A	
			AISI 4130	26984	
INFOCHIP INSTALLED				API Spec 16 C Temperature rate: "B"	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date:	Inspector		Quality Control		
04. April. 2008					



Coflex Hose Certification

Form No 100/12

**Phoenix Beattie Corp**

11535 Brittmoore Park Drive  
Houston, TX 77041  
Tel: (832) 327-0141  
Fax: (832) 327-0148  
E-mail mail@phoenixbeattie.com  
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<b>Customer Order Number</b>	370-369-001	<b>Delivery Note Number</b>	003078	<b>Page</b>	2
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<b>Customer Acc No</b>	<b>Phoenix Beattie Contract Manager</b>	<b>Phoenix Beattie Reference</b>	<b>Date</b>
H01	JJL	006330	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
4	SC725-132CS SAFETY CLAMP 132MM 7.25T C/S GALVANIZED C/W BOLTS	1	1	0
5	00CERT-HYDRO HYDROSTATIC PRESSURE TEST CERTIFICATE	1	1	0
6	00CERT-LOAD LOAD TEST CERTIFICATES	1	1	0
7	00FREIGHT INBOUND / OUTBOUND FREIGHT PRE-PAY & ADD TO FINAL INVOICE NOTE: MATERIAL MUST BE ACCOMPANIED BY PAPERWORK INCLUDING THE PURCHASE ORDER, RIG NUMBER TO ENSURE PROPER PAYMENT	1	1	0

Phoenix Beattie Inspection Signature :

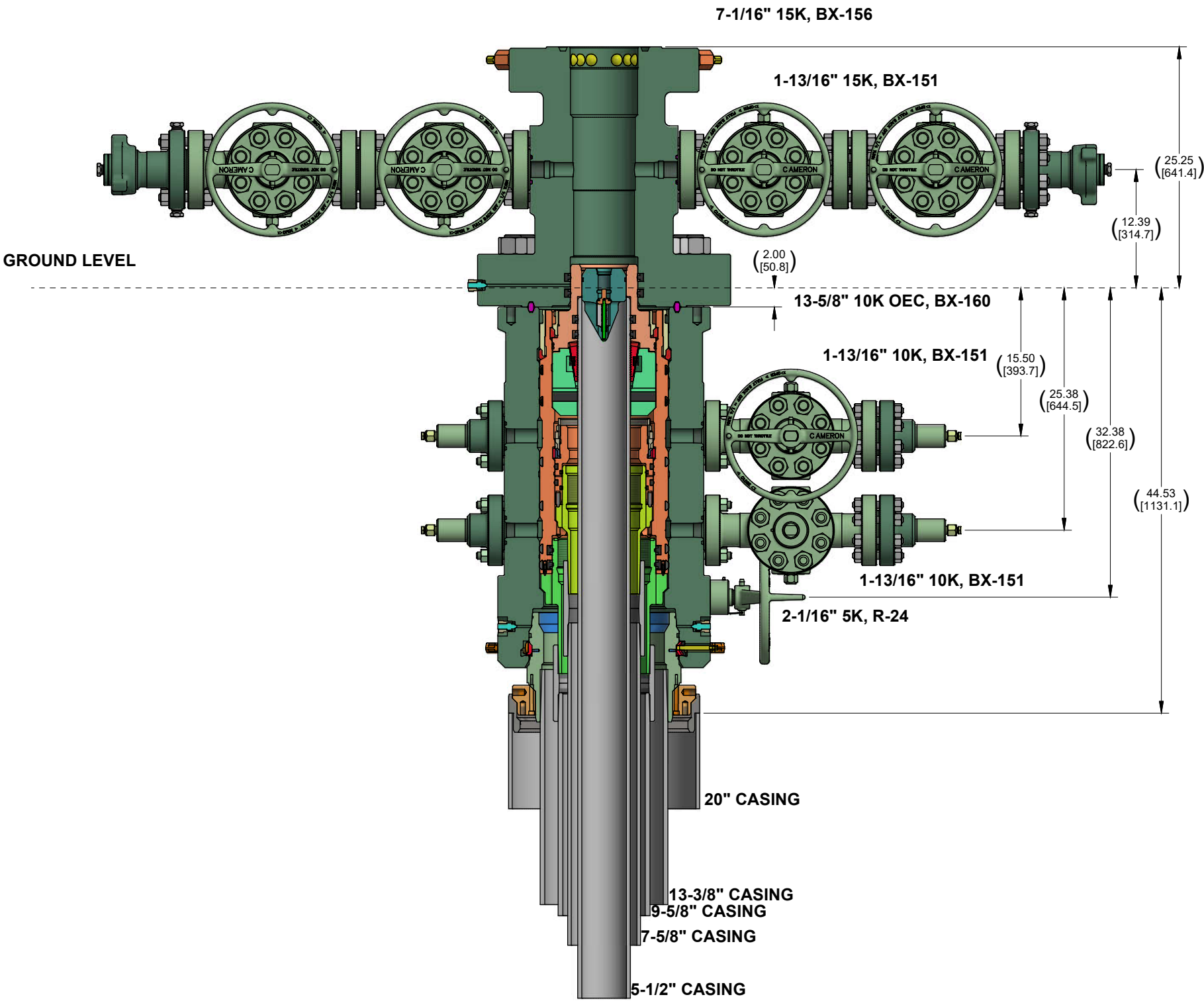
Received In Good Condition : Signature


Print Name

Date

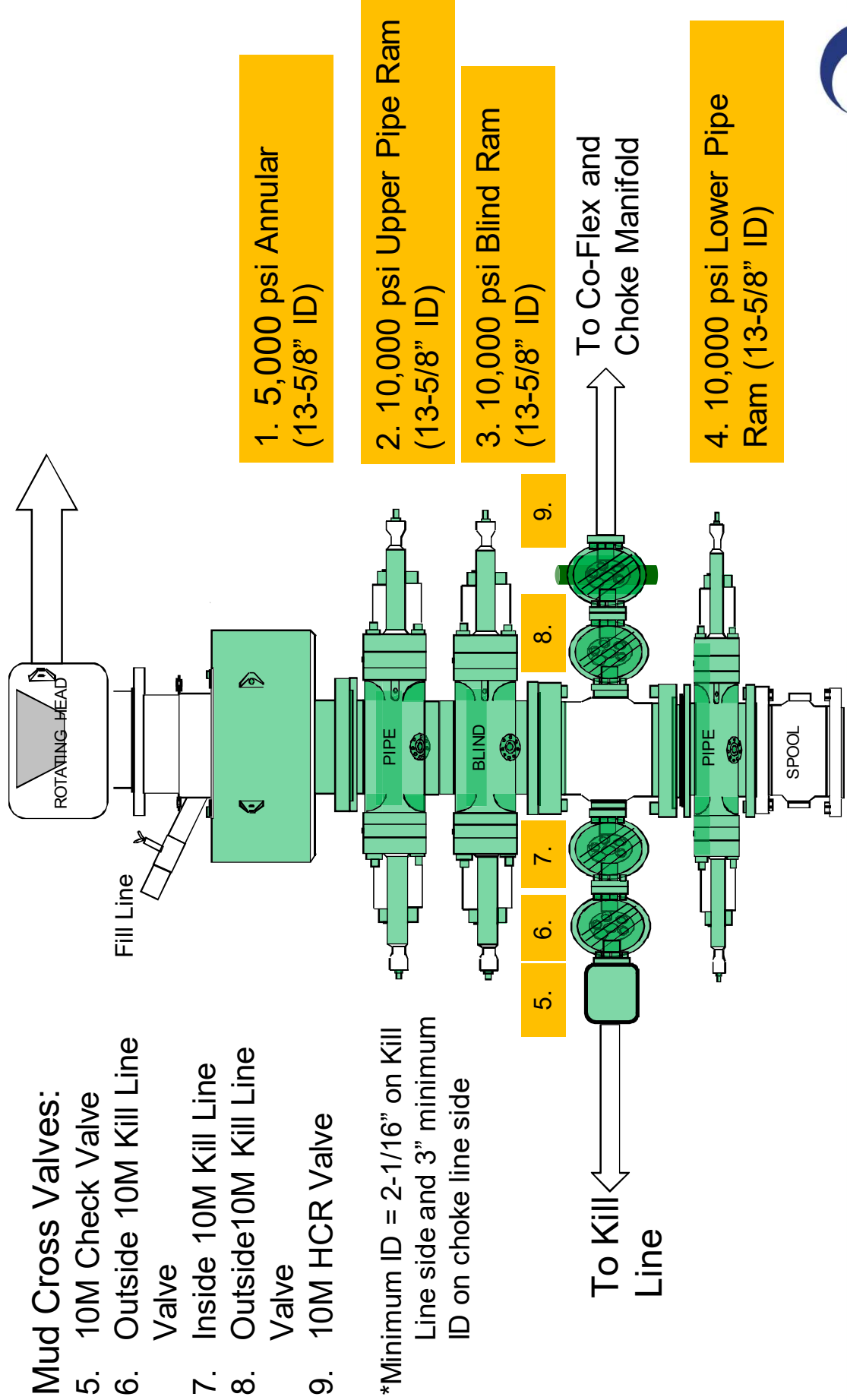
All goods remain the property of Phoenix Beattie until paid for in full. Any damage or shortage on this delivery must be advised within 5 days.  
Returns may be subject to a handling charge.





CONFIDENTIAL						
SURFACE TREATMENT	DO NOT SCALE		 <b>CAMERON</b> A Schlumberger Company	SURFACE SYSTEMS		
MATERIAL & HEAT TREAT	DRAWN BY:	DATE	OXY ADAPT NST 10K 3 STAGE WELLHEAD STANDARD / EMERGENCY SYSTEM			
	A. SKLENKA	26 Apr 22				
	CHECKED BY:	DATE				
	A. SKLENKA	26 Apr 22				
	APPROVED BY:	DATE				
	A. SKLENKA	26 Apr 22				
ESTIMATED WEIGHT:	7968.4 LBS (3614.4 KG) INITIAL USE BOM: IT# 7836394		SHEET 1 of 1	REV: 01 INVENTOR: D		

# 5/10M BOP Stack





# TenarisHydril Wedge 463®



Coupling	Pipe Body
Grade: P110-S	Grade: P110-S
Body: White	1st Band: White
1st Band: Orange	2nd Band: Orange
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	7.827 in.	Wall Thickness	0.500 in.	Grade	P110-S
Min. Wall Thickness	87.50 %	Pipe Body Drift	Special Drift	Type	Casing
Connection OD Option	REGULAR				

## Pipe Body Data

Geometry				Performance	
Nominal OD	7.827 in.	Wall Thickness	0.500 in.	Body Yield Strength	1266 x1000 lb
Nominal Weight	39.30 lb/ft	Plain End Weight	39.16 lb/ft	Min. Internal Yield Pressure	12,300 psi
Drift	6.750 in.	OD Tolerance	API	SMYS	110,000 psi
Nominal ID	6.827 in.			Collapse Pressure	10,490 psi

## Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	8.500 in.	Tension Efficiency	100 %	Minimum	22,000 ft-lb
Coupling Length	10.950 in.	Joint Yield Strength	1266 x1000 lb	Optimum	23,000 ft-lb
Connection ID	6.814 in.	Internal Pressure Capacity	12,300 psi	Maximum	27,000 ft-lb
Make-up Loss	4.520 in.	Compression Efficiency	100 %	Operation Limit Torques	
Threads per inch	3.25	Compression Strength	1266 x1000 lb	Operating Torque	61,000 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	64.42 °/100 ft	Yield Torque	70,000 ft-lb
		External Pressure Capacity	10,490 psi	Buck-On	
		Coupling Face Load	414,177 lb	Minimum	26,000 ft-lb
				Maximum	29,000 ft-lb

## Notes

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)  
For further information on concepts indicated in this datasheet, download the Datasheet Manual from [www.tenaris.com](http://www.tenaris.com)

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P11/C11



CONNECTION DATA SHEET

OD: 5.500 in.

Weight: 23.00 lb/ft

Wall Th.: 0.415 in.

Grade: P110 RY

Drift: 4.545 in. (API)

VAM<sup>®</sup> SPRINT-SF



Semi-Flush

Field Torque Values

Make-up Torque (ft-lb)

20,250 MIN

22,750 OPTI

25,250 MAX

Torque with Sealability (ft-lb)

40,000 MTS

Locked Flank Torque (ft-lb)

4,550 MIN

15,920 MAX

(2) MTS: Maximum Torque with Sealability.

PIPE BODY PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.670	in.
Nominal Wall Thickness	0.415	in.
Minimum Wall Thickness	87.5	%
Nominal Weight (API)	23.00	lb/ft
Plain End Weight	22.56	lb/ft
Drift	4.545	in.
Grade Type	Controlled Yield	
Minimum Yield Strength	110	ksi
Maximum Yield Strength	125	ksi
Minimum Ultimate Tensile Strength	140	ksi
Pipe Body Yield Strength	729	klb
Internal Yield Pressure	14,530	psi
Collapse Pressure	14,540	psi


CONNECTION PROPERTIES

Connection Type	Semi-Premium Integral	
Nominal Connection OD	5.779	in.
Nominal Connection ID	4.615	in.
Make-up Loss	5.606	in.
Tension Efficiency	92	% Pipe Body
Compression Efficiency	92	% Pipe Body
Internal Pressure Efficiency	100	% Pipe Body
External Pressure Efficiency	100	% Pipe Body

JOINT PERFORMANCES

Tension Strength	671	klb
Compression Strength	671	klb
Internal Pressure Resistance	14,530	psi
External Pressure Resistance	14,540	psi
Maximum Bending, Structural	80	°/100 ft
Maximum Bending, with Sealability(1)	30	°/100 ft


(1) Sealability rating demonstrated as per API RP 5C5 / ISO 13679



BOOST YOUR EFFICIENCY, REDUCE COSTS  
AND ENSURE 100% WELL INTEGRITY WITH

VAM<sup>®</sup> FIELD SERVICE

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Released to Imaging: 8/12/2024 8:45:12 AM



# API BTC -Special Clearance

Coupling	Pipe Body
Grade: L80-IC	Grade: L80-IC
Body: Red	1st Band: Red
1st Band: Brown	2nd Band: Brown
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -

Outside Diameter	10.750 in.	Wall Thickness	0.400 in.	Grade	L80-IC
Min. Wall Thickness	87.50 %	Pipe Body Drift	Alternative Drift	Type	Casing
Connection OD Option	Special Clearance				

## Pipe Body Data

Geometry				Performance	
Nominal OD	10.750 in.	Drift	9.875 in.	SMYS	80,000 psi
Wall Thickness	0.400 in.	Plain End Weight	44.26 lb/ft	Min UTS	95,000 psi
Nominal Weight	45.500 lb/ft	OD Tolerance	API	Body Yield Strength	1040 x1000 lb
Nominal ID	9.950 in.			Min. Internal Yield Pressure	5210 psi
				Collapse Pressure	2950 psi
				Max. Allowed Bending	34 °/100 ft

## Connection Data

Geometry		Performance	
Thread per In	5	Joint Strength	1041 x1000 lb
Connection OD	11.250 in.	Coupling Face Load	478 x1000 lb
Hand Tight Stand Off	1 in.	Internal Pressure Capacity	4150 psi

## Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations.  
For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.  
Couplings OD are shown according to current API 5CT 10th Edition.  
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## OXY's Minimum Design Criteria

Burst, Collapse, and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software. A sundry will be requested if any lesser grade or different size casing is substituted.

### 1) Casing Design Assumptions

#### a) Burst Loads

##### CSG Test (Surface)

- Internal: Displacement fluid + pressure required to comply with regulatory casing test pressures. This will comply with both 43 CFR part 3170 Subpart 3172 and 19.15.16 of the OCD Rules.
- External: Pore pressure in open hole.

##### CSG Test (Intermediate)

- Internal: Displacement fluid + pressure required to comply with regulatory casing test pressures. This will comply with both 43 CFR part 3170 Subpart 3172 and 19.15.16 of the OCD Rules.
- External: Mud Weight to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

##### CSG Test (Production)

- Internal:
  - For Drilling: Displacement fluid + pressure required to comply with regulatory casing test pressures. This will comply with both 43 CFR part 3170 Subpart 3172 and 19.15.16 of the OCD Rules.
  - For Production: The design pressure test should be the greater of (1) the planned test pressure prior to stimulation down the casing. (2) the regulatory test pressure, and (3) the expected gas lift system pressure. The design test fluid should be the fluid associated with pressure test having the greatest pressure.
- External:
  - For Drilling: Mud Weight to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.
  - For Production: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

##### Gas Column (Surface)

- Internal: Assumes a full column of gas in the casing with a Gas/Oil Gradient of 0.1 psi/ft in the absence of better information. It is limited to the controlling pressure based on the fracture pressure at the shoe or the maximum expected pore pressure within the next drilling interval, whichever results in a lower surface pressure.
- External: Fluid gradient below TOC, pore pressure from the TOC to the Intermediate CSG shoe (if applicable), and MW of the drilling mud that was in the hole when the CSG was run from Intermediate CSG shoe to surface.

##### Bullheading (Surface / Intermediate)

- Internal: The string must be designed to withstand a pressure profile based on the fracture pressure at the casing shoe with a column of water above the shoe plus an additional surface pressure (in psi) of  $0.02 \times \text{MD of the shoe}$  to account for pumping friction pressure.
- External: Mud weight to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.



**Gas Kick (Intermediate)**

- The string must be designed to at least a gas kick load case unless the rig is unable to detect a kick. For the gas kick load case, the internal pressure profile must be based on a minimum volume of 50 bbl or the minimum kick detection capability of the rig, whichever is greater, and a kick intensity of 2.0 ppg for Class 1, 1.0 ppg of Class 2, and 0.5 ppg for Class 3 and 4 wells.
- Internal: Influx depth of the maximum pore pressure of 0.55 “gas kick gravity” of gas to surface while drilling the next hole section.
- External: Mud weight to the TOC, cement mix water gradient below TOC, and pore pressure in open hole.

**Tubing Leak Near Surface While Producing (Production)**

- Internal: SITP plus a packer fluid gradient to the shoe or top of packer.
- External: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

**Tubing Leak Near Surface While Stimulating (Production)**

- Internal: Surface pressure or pressure-relief system pressure, whichever is lower plus packer fluid gradient.
- External: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

**Injection / Stimulation Down Casing (Production)**

- Internal: Surface pressure plus injection fluid gradient.
- External: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

**b) Collapse Loads****Lost Circulation (Surface / Intermediate)**

- Internal: Lost circulation at the TD of the next hole section, and the fluid level falls to a depth where the hydrostatic of the mud equals pore pressure at the depth of the lost circulation zone.
- External: MW of the drilling mud that was in the hole when the casing was run. Cementing (Surface / Intermediate / Production)

- Internal: Displacement fluid density.
- External: Mud weight from TOC to surface and cement slurry weight from TOC to casing shoe.

**Full Evacuation (Production)**

- Internal: Full void pipe.
- External: MW of drilling mud in the hole when the casing was run.

**c) Tension Loads****Running Casing (Surface / Intermediate / Production)**

- Axial: Buoyant weight of the string plus the lesser of 100,000 lb or the string weight in air.

**Green Cement (Surface / Intermediate / Production)**

- Axial: Buoyant weight of the string plus cement plug bump pressure load.

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 370167

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:
	16696
	Action Number:
	370167
Action Type:	
[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)	

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	8/12/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/12/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	8/12/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/12/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	8/12/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	8/12/2024
ward.rikala	Operator must comply with all of the requirements for R-111-Q.	8/12/2024