

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-015-55464
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 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)



Approval Date: 08/09/2024

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: NENW / 568 FNL / 2563 FWL / TWSP: 23S / RANGE: 31E / SECTION: 31 / LAT: 32.266614 / LONG: -103.81735 (TVD: 0 feet, MD: 0 feet)
PPP: NWNE / 1319 FNL / 1369 FEL / TWSP: 23S / RANGE: 31E / SECTION: 19 / LAT: 32.293582 / LONG: -103.812811 (TVD: 12151 feet, MD: 21739 feet)
PPP: SWNE / 2642 FSL / 1370 FEL / TWSP: 23S / RANGE: 31E / SECTION: 30 / LAT: 32.275436 / LONG: -103.812794 (TVD: 12151 feet, MD: 15136 feet)
PPP: SWSE / 100 FSL / 1370 FEL / TWSP: 23S / RANGE: 31E / SECTION: 30 / LAT: 32.26845 / LONG: -103.812788 (TVD: 12151 feet, MD: 12600 feet)
PPP: NWSE / 1321 FSL / 1371 FEL / TWSP: 23S / RANGE: 31E / SECTION: 19 / LAT: 32.286328 / LONG: -103.812804 (TVD: 12151 feet, MD: 19099 feet)
BHL: NWSE / 2624 FSL / 1370 FEL / TWSP: 23S / RANGE: 31E / SECTION: 18 / LAT: 32.304417 / LONG: -103.81282 (TVD: 12151 feet, MD: 25686 feet)

BLM Point of Contact

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

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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

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

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

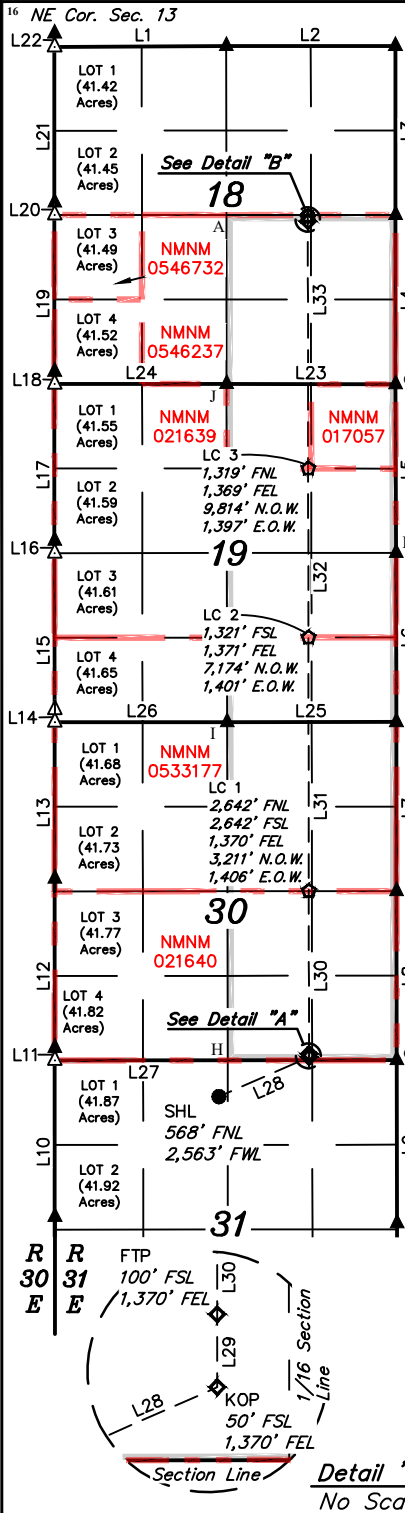
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015- 55464	² Pool Code 98236	³ Pool Name WC-015 G-08 S233135D, WOLFCAMP
⁴ Property Code 326187	⁵ Property Name PRECIOUS 30_18 FED COM	⁶ Well Number 54H
⁷ OGRID No. 16696	⁸ Operator Name OXY USA INC.	⁹ Elevation 3348.7'

¹⁰ Surface Location									
UL or lot no. C	Section 31	Township 23S	Range 31E	Lot Idn	Feet from the 568	North/South line NORTH	Feet from the 2563	East/West line WEST	County EDDY

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. J	Section 18	Township 23S	Range 31E	Lot Idn	Feet from the 2624	North/South line SOUTH	Feet from the 1370	East/West line EAST	County EDDY
¹² Dedicated Acres 800	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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	N89°40'52"E	2684.48'
L2	S89°59'32"E	2641.89'
L3	S00°03'25"E	2640.16'
L4	S00°00'24"E	2646.93'
L5	S00°10'14"E	2633.72'
L6	S00°05'08"E	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°03'10"W	2642.00'
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°03'32"W	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	534.363'
L28	N66°17'33"E	1539.98'
L29	N00°04'21"W	50.00'
L30	N00°04'55"W	2541.84'
L31	N00°04'55"W	3963.17'
L32	N00°04'55"W	2639.69'
L33	N00°04'55"W	3862.39'
L34	N00°00'24"W	80.00'

NAD 83 (SURFACE HOLE LOCATION) LATITUDE = 32°15'59.81" (32.266614°) LONGITUDE = -103°49'02.46" (-103.817350°)
NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 32°15'59.37" (32.266491°) LONGITUDE = -103°49'00.71" (-103.816864°)
STATE PLANE NAD 83 (N.M. EAST) N: 461110.51' E: 700822.59'
STATE PLANE NAD 27 (N.M. EAST) N: 461051.23' E: 659639.02'

NAD 83 (KICK OFF POINT) LATITUDE = 32°16'05.93" (32.268313°) LONGITUDE = -103°48'46.04" (-103.812788°)
NAD 27 (KICK OFF POINT) LATITUDE = 32°16'05.48" (32.268190°) LONGITUDE = -103°48'44.29" (-103.812301°)
STATE PLANE NAD 83 (N.M. EAST) N: 461735.47' E: 702229.73'
STATE PLANE NAD 27 (N.M. EAST) N: 461676.17' E: 661046.18'

NAD 83 (FIRST TAKE POINT) LATITUDE = 32°16'06.42" (32.268450°) LONGITUDE = -103°48'46.04" (-103.812788°)
NAD 27 (FIRST TAKE POINT) LATITUDE = 32°16'05.98" (32.268327°) LONGITUDE = -103°48'44.29" (-103.812302°)
STATE PLANE NAD 83 (N.M. EAST) N: 461785.46' E: 702229.46'
STATE PLANE NAD 27 (N.M. EAST) N: 461726.16' E: 661045.91'

NAD 83 (LEASE CROSSING 1) LATITUDE = 32°16'31.57" (32.275436°) LONGITUDE = -103°48'46.06" (-103.812794°)
NAD 27 (LEASE CROSSING 1) LATITUDE = 32°16'31.13" (32.275313°) LONGITUDE = -103°48'44.31" (-103.812308°)
STATE PLANE NAD 83 (N.M. EAST) N: 464326.76' E: 702215.17'
STATE PLANE NAD 27 (N.M. EAST) N: 464267.40' E: 661031.70'

NAD 83 (LEASE CROSSING 2) LATITUDE = 32°17'10.78" (32.286328°) LONGITUDE = -103°48'46.09" (-103.812804°)
NAD 27 (LEASE CROSSING 2) LATITUDE = 32°17'10.34" (32.286205°) LONGITUDE = -103°48'44.34" (-103.812317°)
STATE PLANE NAD 83 (N.M. EAST) N: 468289.10' E: 702192.88'
STATE PLANE NAD 27 (N.M. EAST) N: 468229.64' E: 661009.53'

NAD 83 (LEASE CROSSING 3) LATITUDE = 32°17'36.90" (32.293582°) LONGITUDE = -103°48'46.12" (-103.812811°)
NAD 27 (LEASE CROSSING 3) LATITUDE = 32°17'36.45" (32.293460°) LONGITUDE = -103°48'44.36" (-103.812323°)
STATE PLANE NAD 83 (N.M. EAST) N: 470928.24' E: 702178.04'
STATE PLANE NAD 27 (N.M. EAST) N: 470868.71' E: 660994.76'

NAD 83 (BOTTOM HOLE LOCATION) LATITUDE = 32°18'15.90" (32.304417°) LONGITUDE = -103°48'46.15" (-103.812820°)
NAD 27 (BOTTOM HOLE LOCATION) LATITUDE = 32°18'15.46" (32.304294°) LONGITUDE = -103°48'44.40" (-103.812332°)
STATE PLANE NAD 83 (N.M. EAST) N: 474869.80' E: 702155.97'
STATE PLANE NAD 27 (N.M. EAST) N: 474810.17' E: 660972.81'

17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.
Roni Mathew 12/12/2023
Signature Date

Roni Mathew
Printed Name
roni_mathew@oxy.com
E-mail Address

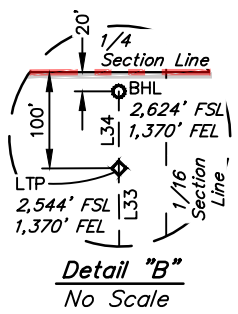
18 SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
MAY 11, 2023
Date of Survey
Signature and Seal of Professional Surveyor:



NAD 83 (LAST TAKE POINT) LATITUDE = 32°18'15.11" (32.304197°) LONGITUDE = -103°48'46.15" (-103.812820°)
NAD 27 (LAST TAKE POINT) LATITUDE = 32°18'14.67" (32.304075°) LONGITUDE = -103°48'44.40" (-103.812333°)
STATE PLANE NAD 83 (N.M. EAST) N: 474789.82' E: 702156.31'
STATE PLANE NAD 27 (N.M. EAST) N: 474730.19' E: 660973.15'

- = 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.

HSU COORDINATES				
POINT	NAD 27 N.M. STATE PLANE, EAST ZONE		NAD 83 N.M. STATE PLANE, EAST ZONE	
A	474824.50'	659701.12'	474884.13'	700884.28'
B	474836.26'	662342.44'	474895.90'	703525.60'
C	472189.94'	662353.78'	472249.51'	703537.02'
D	469556.87'	662372.58'	469616.37'	703555.90'
E	466915.64'	662387.53'	466975.07'	703570.93'
F	464274.15'	662401.83'	464333.51'	703585.31'
G	461633.14'	662416.17'	461692.43'	703599.72'
H	461619.73'	659775.34'	461679.02'	700958.89'
I	466902.90'	659744.89'	466962.33'	700928.28'
J	472184.59'	659714.76'	472244.15'	700897.99'



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.

3000' 1500' 0' 3000'
SCALE
DRAWN BY: L.M.W. 05-22-23
REV: 1 D.M.C. 06-20-23 (WELL BORE CHANGES)

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
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
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.

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

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 54H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	12151	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	25686	Deepest Expected Fresh Water (ft):	376

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	376	376	
Salado	699	699	Salt
Castile	2607	2607	Salt
Delaware	4070	4070	Oil/Gas/Brine
Bell Canyon	4110	4110	Oil/Gas/Brine
Cherry Canyon	5004	4992	Oil/Gas/Brine
Brushy Canyon	6308	6276	Losses
Bone Spring	8019	7961	Oil/Gas
Bone Spring 1st	9068	8995	Oil/Gas
Bone Spring 2nd	9719	9636	Oil/Gas
Bone Spring 3rd	10926	10824	Oil/Gas
Wolfcamp	11409	11300	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	436	0	436	13.375	54.5	J-55	BTC
Salt	12.25	0	4170	0	4169	10.75	45.5	L-80 HC	BTC-SC
Intermediate	9.875	0	11607	0	11493	7.625	29.7	L-80 HC	BTC
Production	6.75	0	25686	0	12151	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 rd 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 nd 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 ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	455	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.1	1	Intermediate - Tail	85	1.33	14.8	20%	3,670	Circulate	Class C+Accel.
Int.1	1	Intermediate - Lead	588	1.73	12.9	50%	-	Circulate	Class Pozz+Ret.
Int. 2	1	Intermediate 1S - Tail	317	1.68	13.2	5%	6,558	Circulate	Class C+Ret., Disper.
Int. 2	2	Intermediate 2S - Tail BH	241	1.71	13.3	25%	3,670	Bradenhead Post-Frac	Class C+Accel.
Prod.	1	Production - Tail	824	1.84	13.3	25%	11,107	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	4169
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
9.875" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	11493
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
6.75" Hole	13-5/8"	5M	Annular	✓	100% of working pressure	12151
		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	436	0	436	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate 1	436	4170	436	4169	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Intermediate 2	4170	11607	4169	11493	Water-Based or Oil-Based Mud	8.0 - 10.0	38-50	N/C
Production	11607	25686	11493	12151	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
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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	8531 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 (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S 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	H2S is present
Y	H2S 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 4 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: 2002 bbls

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Precious 30_18

Precious 30_18 Fed Com 54H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

17 November, 2023

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	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 54H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	2.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.28 °		
		Latitude:	32.266614
		Longitude:	-103.817350
		Ground Level:	3,348.70 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	11/17/2023	6.40	59.83	47,486.10000000

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	5.54

Plan Survey Tool Program	Date	11/17/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	25,685.56	Permitting Plan (Wellbore #1)	B005Mc_MWD+HRGM+SA ISCWSA 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	
3,880.00	0.00	0.00	3,880.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,380.07	10.00	85.58	4,377.54	3.36	43.41	2.00	2.00	0.00	85.58	
11,707.30	10.00	85.58	11,593.42	101.54	1,312.15	0.00	0.00	0.00	0.00	
12,600.18	90.00	359.68	12,150.70	674.99	1,406.96	10.00	8.96	-9.62	-85.96	FTP (Precious
25,685.56	90.00	359.68	12,150.70	13,760.17	1,333.47	0.00	0.00	0.00	0.00	PBHLV(Precious

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	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
3,880.00	0.00	0.00	3,880.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.40	85.58	3,900.00	0.01	0.07	0.01	2.00	2.00	0.00
4,000.00	2.40	85.58	3,999.97	0.19	2.51	0.43	2.00	2.00	0.00
4,100.00	4.40	85.58	4,099.78	0.65	8.42	1.46	2.00	2.00	0.00
4,200.00	6.40	85.58	4,199.34	1.38	17.80	3.09	2.00	2.00	0.00
4,300.00	8.40	85.58	4,298.50	2.37	30.64	5.32	2.00	2.00	0.00
4,380.07	10.00	85.58	4,377.54	3.36	43.41	7.53	2.00	2.00	0.00
4,400.00	10.00	85.58	4,397.16	3.63	46.86	8.13	0.00	0.00	0.00
4,500.00	10.00	85.58	4,495.64	4.97	64.17	11.13	0.00	0.00	0.00
4,600.00	10.00	85.58	4,594.12	6.31	81.49	14.14	0.00	0.00	0.00
4,700.00	10.00	85.58	4,692.60	7.65	98.80	17.14	0.00	0.00	0.00
4,800.00	10.00	85.58	4,791.08	8.99	116.12	20.14	0.00	0.00	0.00
4,900.00	10.00	85.58	4,889.56	10.33	133.43	23.15	0.00	0.00	0.00
5,000.00	10.00	85.58	4,988.04	11.67	150.75	26.15	0.00	0.00	0.00
5,100.00	10.00	85.58	5,086.52	13.01	168.06	29.16	0.00	0.00	0.00
5,200.00	10.00	85.58	5,185.00	14.35	185.38	32.16	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	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)
5,300.00	10.00	85.58	5,283.48	15.69	202.70	35.16	0.00	0.00	0.00
5,400.00	10.00	85.58	5,381.96	17.03	220.01	38.17	0.00	0.00	0.00
5,500.00	10.00	85.58	5,480.45	18.36	237.33	41.17	0.00	0.00	0.00
5,600.00	10.00	85.58	5,578.93	19.70	254.64	44.17	0.00	0.00	0.00
5,700.00	10.00	85.58	5,677.41	21.04	271.96	47.18	0.00	0.00	0.00
5,800.00	10.00	85.58	5,775.89	22.38	289.27	50.18	0.00	0.00	0.00
5,900.00	10.00	85.58	5,874.37	23.72	306.59	53.19	0.00	0.00	0.00
6,000.00	10.00	85.58	5,972.85	25.06	323.90	56.19	0.00	0.00	0.00
6,100.00	10.00	85.58	6,071.33	26.40	341.22	59.19	0.00	0.00	0.00
6,200.00	10.00	85.58	6,169.81	27.74	358.54	62.20	0.00	0.00	0.00
6,300.00	10.00	85.58	6,268.29	29.08	375.85	65.20	0.00	0.00	0.00
6,400.00	10.00	85.58	6,366.77	30.42	393.17	68.21	0.00	0.00	0.00
6,500.00	10.00	85.58	6,465.25	31.76	410.48	71.21	0.00	0.00	0.00
6,600.00	10.00	85.58	6,563.73	33.10	427.80	74.21	0.00	0.00	0.00
6,700.00	10.00	85.58	6,662.21	34.44	445.11	77.22	0.00	0.00	0.00
6,800.00	10.00	85.58	6,760.69	35.78	462.43	80.22	0.00	0.00	0.00
6,900.00	10.00	85.58	6,859.17	37.12	479.74	83.22	0.00	0.00	0.00
7,000.00	10.00	85.58	6,957.65	38.46	497.06	86.23	0.00	0.00	0.00
7,100.00	10.00	85.58	7,056.13	39.80	514.37	89.23	0.00	0.00	0.00
7,200.00	10.00	85.58	7,154.61	41.14	531.69	92.24	0.00	0.00	0.00
7,300.00	10.00	85.58	7,253.09	42.48	549.01	95.24	0.00	0.00	0.00
7,400.00	10.00	85.58	7,351.57	43.82	566.32	98.24	0.00	0.00	0.00
7,500.00	10.00	85.58	7,450.05	45.16	583.64	101.25	0.00	0.00	0.00
7,600.00	10.00	85.58	7,548.53	46.50	600.95	104.25	0.00	0.00	0.00
7,700.00	10.00	85.58	7,647.01	47.84	618.27	107.26	0.00	0.00	0.00
7,800.00	10.00	85.58	7,745.49	49.18	635.58	110.26	0.00	0.00	0.00
7,900.00	10.00	85.58	7,843.97	50.52	652.90	113.26	0.00	0.00	0.00
8,000.00	10.00	85.58	7,942.45	51.86	670.21	116.27	0.00	0.00	0.00
8,100.00	10.00	85.58	8,040.93	53.20	687.53	119.27	0.00	0.00	0.00
8,200.00	10.00	85.58	8,139.41	54.54	704.85	122.27	0.00	0.00	0.00
8,300.00	10.00	85.58	8,237.89	55.88	722.16	125.28	0.00	0.00	0.00
8,400.00	10.00	85.58	8,336.38	57.22	739.48	128.28	0.00	0.00	0.00
8,500.00	10.00	85.58	8,434.86	58.56	756.79	131.29	0.00	0.00	0.00
8,600.00	10.00	85.58	8,533.34	59.90	774.11	134.29	0.00	0.00	0.00
8,700.00	10.00	85.58	8,631.82	61.24	791.42	137.29	0.00	0.00	0.00
8,800.00	10.00	85.58	8,730.30	62.58	808.74	140.30	0.00	0.00	0.00
8,900.00	10.00	85.58	8,828.78	63.92	826.05	143.30	0.00	0.00	0.00
9,000.00	10.00	85.58	8,927.26	65.26	843.37	146.31	0.00	0.00	0.00
9,100.00	10.00	85.58	9,025.74	66.60	860.69	149.31	0.00	0.00	0.00
9,200.00	10.00	85.58	9,124.22	67.94	878.00	152.31	0.00	0.00	0.00
9,300.00	10.00	85.58	9,222.70	69.28	895.32	155.32	0.00	0.00	0.00
9,400.00	10.00	85.58	9,321.18	70.62	912.63	158.32	0.00	0.00	0.00
9,500.00	10.00	85.58	9,419.66	71.96	929.95	161.33	0.00	0.00	0.00
9,600.00	10.00	85.58	9,518.14	73.30	947.26	164.33	0.00	0.00	0.00
9,700.00	10.00	85.58	9,616.62	74.64	964.58	167.33	0.00	0.00	0.00
9,800.00	10.00	85.58	9,715.10	75.98	981.89	170.34	0.00	0.00	0.00
9,900.00	10.00	85.58	9,813.58	77.32	999.21	173.34	0.00	0.00	0.00
10,000.00	10.00	85.58	9,912.06	78.66	1,016.52	176.34	0.00	0.00	0.00
10,100.00	10.00	85.58	10,010.54	80.00	1,033.84	179.35	0.00	0.00	0.00
10,200.00	10.00	85.58	10,109.02	81.34	1,051.16	182.35	0.00	0.00	0.00
10,300.00	10.00	85.58	10,207.50	82.68	1,068.47	185.36	0.00	0.00	0.00
10,400.00	10.00	85.58	10,305.98	84.02	1,085.79	188.36	0.00	0.00	0.00
10,500.00	10.00	85.58	10,404.46	85.36	1,103.10	191.36	0.00	0.00	0.00
10,600.00	10.00	85.58	10,502.94	86.70	1,120.42	194.37	0.00	0.00	0.00
10,700.00	10.00	85.58	10,601.42	88.04	1,137.73	197.37	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	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	10.00	85.58	10,699.90	89.38	1,155.05	200.38	0.00	0.00	0.00
10,900.00	10.00	85.58	10,798.38	90.72	1,172.36	203.38	0.00	0.00	0.00
11,000.00	10.00	85.58	10,896.86	92.06	1,189.68	206.38	0.00	0.00	0.00
11,100.00	10.00	85.58	10,995.34	93.40	1,207.00	209.39	0.00	0.00	0.00
11,200.00	10.00	85.58	11,093.82	94.74	1,224.31	212.39	0.00	0.00	0.00
11,300.00	10.00	85.58	11,192.31	96.08	1,241.63	215.39	0.00	0.00	0.00
11,400.00	10.00	85.58	11,290.79	97.42	1,258.94	218.40	0.00	0.00	0.00
11,500.00	10.00	85.58	11,389.27	98.76	1,276.26	221.40	0.00	0.00	0.00
11,600.00	10.00	85.58	11,487.75	100.10	1,293.57	224.41	0.00	0.00	0.00
11,700.00	10.00	85.58	11,586.23	101.44	1,310.89	227.41	0.00	0.00	0.00
11,707.30	10.00	85.58	11,593.42	101.54	1,312.15	227.63	0.00	0.00	0.00
11,800.00	14.08	44.23	11,684.22	110.26	1,328.08	237.84	10.00	4.40	-44.61
11,900.00	22.24	25.15	11,779.24	136.17	1,344.64	265.23	10.00	8.17	-19.07
12,000.00	31.45	16.39	11,868.40	178.43	1,360.09	308.79	10.00	9.21	-8.76
12,100.00	41.00	11.35	11,948.99	235.77	1,373.95	367.20	10.00	9.55	-5.04
12,200.00	50.71	7.95	12,018.56	306.44	1,385.79	438.68	10.00	9.70	-3.40
12,300.00	60.48	5.39	12,075.01	388.29	1,395.26	521.06	10.00	9.78	-2.56
12,400.00	70.30	3.29	12,116.61	478.83	1,402.06	611.83	10.00	9.82	-2.10
12,500.00	80.13	1.43	12,142.10	575.31	1,406.01	708.25	10.00	9.84	-1.86
12,600.00	89.98	359.68	12,150.70	674.81	1,406.96	807.37	10.00	9.85	-1.75
12,600.18	90.00	359.68	12,150.70	674.99	1,406.96	807.56	10.00	9.85	-1.73
12,700.00	90.00	359.68	12,150.70	774.81	1,406.40	906.85	0.00	0.00	0.00
12,800.00	90.00	359.68	12,150.70	874.81	1,405.84	1,006.33	0.00	0.00	0.00
12,900.00	90.00	359.68	12,150.70	974.81	1,405.28	1,105.81	0.00	0.00	0.00
13,000.00	90.00	359.68	12,150.70	1,074.80	1,404.71	1,205.29	0.00	0.00	0.00
13,100.00	90.00	359.68	12,150.70	1,174.80	1,404.15	1,304.76	0.00	0.00	0.00
13,200.00	90.00	359.68	12,150.70	1,274.80	1,403.59	1,404.24	0.00	0.00	0.00
13,300.00	90.00	359.68	12,150.70	1,374.80	1,403.03	1,503.72	0.00	0.00	0.00
13,400.00	90.00	359.68	12,150.70	1,474.80	1,402.47	1,603.20	0.00	0.00	0.00
13,500.00	90.00	359.68	12,150.70	1,574.80	1,401.91	1,702.68	0.00	0.00	0.00
13,600.00	90.00	359.68	12,150.70	1,674.79	1,401.34	1,802.15	0.00	0.00	0.00
13,700.00	90.00	359.68	12,150.70	1,774.79	1,400.78	1,901.63	0.00	0.00	0.00
13,800.00	90.00	359.68	12,150.70	1,874.79	1,400.22	2,001.11	0.00	0.00	0.00
13,900.00	90.00	359.68	12,150.70	1,974.79	1,399.66	2,100.59	0.00	0.00	0.00
14,000.00	90.00	359.68	12,150.70	2,074.79	1,399.10	2,200.07	0.00	0.00	0.00
14,100.00	90.00	359.68	12,150.70	2,174.79	1,398.54	2,299.54	0.00	0.00	0.00
14,200.00	90.00	359.68	12,150.70	2,274.79	1,397.97	2,399.02	0.00	0.00	0.00
14,300.00	90.00	359.68	12,150.70	2,374.78	1,397.41	2,498.50	0.00	0.00	0.00
14,400.00	90.00	359.68	12,150.70	2,474.78	1,396.85	2,597.98	0.00	0.00	0.00
14,500.00	90.00	359.68	12,150.70	2,574.78	1,396.29	2,697.46	0.00	0.00	0.00
14,600.00	90.00	359.68	12,150.70	2,674.78	1,395.73	2,796.93	0.00	0.00	0.00
14,700.00	90.00	359.68	12,150.70	2,774.78	1,395.17	2,896.41	0.00	0.00	0.00
14,800.00	90.00	359.68	12,150.70	2,874.78	1,394.60	2,995.89	0.00	0.00	0.00
14,900.00	90.00	359.68	12,150.70	2,974.77	1,394.04	3,095.37	0.00	0.00	0.00
15,000.00	90.00	359.68	12,150.70	3,074.77	1,393.48	3,194.85	0.00	0.00	0.00
15,100.00	90.00	359.68	12,150.70	3,174.77	1,392.92	3,294.32	0.00	0.00	0.00
15,200.00	90.00	359.68	12,150.70	3,274.77	1,392.36	3,393.80	0.00	0.00	0.00
15,300.00	90.00	359.68	12,150.70	3,374.77	1,391.80	3,493.28	0.00	0.00	0.00
15,400.00	90.00	359.68	12,150.70	3,474.77	1,391.23	3,592.76	0.00	0.00	0.00
15,500.00	90.00	359.68	12,150.70	3,574.77	1,390.67	3,692.24	0.00	0.00	0.00
15,600.00	90.00	359.68	12,150.70	3,674.76	1,390.11	3,791.71	0.00	0.00	0.00
15,700.00	90.00	359.68	12,150.70	3,774.76	1,389.55	3,891.19	0.00	0.00	0.00
15,800.00	90.00	359.68	12,150.70	3,874.76	1,388.99	3,990.67	0.00	0.00	0.00
15,900.00	90.00	359.68	12,150.70	3,974.76	1,388.43	4,090.15	0.00	0.00	0.00
16,000.00	90.00	359.68	12,150.70	4,074.76	1,387.86	4,189.63	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	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)
16,100.00	90.00	359.68	12,150.70	4,174.76	1,387.30	4,289.10	0.00	0.00	0.00
16,200.00	90.00	359.68	12,150.70	4,274.75	1,386.74	4,388.58	0.00	0.00	0.00
16,300.00	90.00	359.68	12,150.70	4,374.75	1,386.18	4,488.06	0.00	0.00	0.00
16,400.00	90.00	359.68	12,150.70	4,474.75	1,385.62	4,587.54	0.00	0.00	0.00
16,500.00	90.00	359.68	12,150.70	4,574.75	1,385.06	4,687.02	0.00	0.00	0.00
16,600.00	90.00	359.68	12,150.70	4,674.75	1,384.49	4,786.49	0.00	0.00	0.00
16,700.00	90.00	359.68	12,150.70	4,774.75	1,383.93	4,885.97	0.00	0.00	0.00
16,800.00	90.00	359.68	12,150.70	4,874.74	1,383.37	4,985.45	0.00	0.00	0.00
16,900.00	90.00	359.68	12,150.70	4,974.74	1,382.81	5,084.93	0.00	0.00	0.00
17,000.00	90.00	359.68	12,150.70	5,074.74	1,382.25	5,184.41	0.00	0.00	0.00
17,100.00	90.00	359.68	12,150.70	5,174.74	1,381.69	5,283.88	0.00	0.00	0.00
17,200.00	90.00	359.68	12,150.70	5,274.74	1,381.12	5,383.36	0.00	0.00	0.00
17,300.00	90.00	359.68	12,150.70	5,374.74	1,380.56	5,482.84	0.00	0.00	0.00
17,400.00	90.00	359.68	12,150.70	5,474.74	1,380.00	5,582.32	0.00	0.00	0.00
17,500.00	90.00	359.68	12,150.70	5,574.73	1,379.44	5,681.79	0.00	0.00	0.00
17,600.00	90.00	359.68	12,150.70	5,674.73	1,378.88	5,781.27	0.00	0.00	0.00
17,700.00	90.00	359.68	12,150.70	5,774.73	1,378.32	5,880.75	0.00	0.00	0.00
17,800.00	90.00	359.68	12,150.70	5,874.73	1,377.75	5,980.23	0.00	0.00	0.00
17,900.00	90.00	359.68	12,150.70	5,974.73	1,377.19	6,079.71	0.00	0.00	0.00
18,000.00	90.00	359.68	12,150.70	6,074.73	1,376.63	6,179.18	0.00	0.00	0.00
18,100.00	90.00	359.68	12,150.70	6,174.72	1,376.07	6,278.66	0.00	0.00	0.00
18,200.00	90.00	359.68	12,150.70	6,274.72	1,375.51	6,378.14	0.00	0.00	0.00
18,300.00	90.00	359.68	12,150.70	6,374.72	1,374.95	6,477.62	0.00	0.00	0.00
18,400.00	90.00	359.68	12,150.70	6,474.72	1,374.38	6,577.10	0.00	0.00	0.00
18,500.00	90.00	359.68	12,150.70	6,574.72	1,373.82	6,676.57	0.00	0.00	0.00
18,600.00	90.00	359.68	12,150.70	6,674.72	1,373.26	6,776.05	0.00	0.00	0.00
18,700.00	90.00	359.68	12,150.70	6,774.71	1,372.70	6,875.53	0.00	0.00	0.00
18,800.00	90.00	359.68	12,150.70	6,874.71	1,372.14	6,975.01	0.00	0.00	0.00
18,900.00	90.00	359.68	12,150.70	6,974.71	1,371.58	7,074.49	0.00	0.00	0.00
19,000.00	90.00	359.68	12,150.70	7,074.71	1,371.01	7,173.96	0.00	0.00	0.00
19,100.00	90.00	359.68	12,150.70	7,174.71	1,370.45	7,273.44	0.00	0.00	0.00
19,200.00	90.00	359.68	12,150.70	7,274.71	1,369.89	7,372.92	0.00	0.00	0.00
19,300.00	90.00	359.68	12,150.70	7,374.71	1,369.33	7,472.40	0.00	0.00	0.00
19,400.00	90.00	359.68	12,150.70	7,474.70	1,368.77	7,571.88	0.00	0.00	0.00
19,500.00	90.00	359.68	12,150.70	7,574.70	1,368.21	7,671.35	0.00	0.00	0.00
19,600.00	90.00	359.68	12,150.70	7,674.70	1,367.64	7,770.83	0.00	0.00	0.00
19,700.00	90.00	359.68	12,150.70	7,774.70	1,367.08	7,870.31	0.00	0.00	0.00
19,800.00	90.00	359.68	12,150.70	7,874.70	1,366.52	7,969.79	0.00	0.00	0.00
19,900.00	90.00	359.68	12,150.70	7,974.70	1,365.96	8,069.27	0.00	0.00	0.00
20,000.00	90.00	359.68	12,150.70	8,074.69	1,365.40	8,168.74	0.00	0.00	0.00
20,100.00	90.00	359.68	12,150.70	8,174.69	1,364.84	8,268.22	0.00	0.00	0.00
20,200.00	90.00	359.68	12,150.70	8,274.69	1,364.28	8,367.70	0.00	0.00	0.00
20,300.00	90.00	359.68	12,150.70	8,374.69	1,363.71	8,467.18	0.00	0.00	0.00
20,400.00	90.00	359.68	12,150.70	8,474.69	1,363.15	8,566.66	0.00	0.00	0.00
20,500.00	90.00	359.68	12,150.70	8,574.69	1,362.59	8,666.13	0.00	0.00	0.00
20,600.00	90.00	359.68	12,150.70	8,674.68	1,362.03	8,765.61	0.00	0.00	0.00
20,700.00	90.00	359.68	12,150.70	8,774.68	1,361.47	8,865.09	0.00	0.00	0.00
20,800.00	90.00	359.68	12,150.70	8,874.68	1,360.91	8,964.57	0.00	0.00	0.00
20,900.00	90.00	359.68	12,150.70	8,974.68	1,360.34	9,064.05	0.00	0.00	0.00
21,000.00	90.00	359.68	12,150.70	9,074.68	1,359.78	9,163.52	0.00	0.00	0.00
21,100.00	90.00	359.68	12,150.70	9,174.68	1,359.22	9,263.00	0.00	0.00	0.00
21,200.00	90.00	359.68	12,150.70	9,274.68	1,358.66	9,362.48	0.00	0.00	0.00
21,300.00	90.00	359.68	12,150.70	9,374.67	1,358.10	9,461.96	0.00	0.00	0.00
21,400.00	90.00	359.68	12,150.70	9,474.67	1,357.54	9,561.44	0.00	0.00	0.00
21,500.00	90.00	359.68	12,150.70	9,574.67	1,356.97	9,660.91	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	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)
21,600.00	90.00	359.68	12,150.70	9,674.67	1,356.41	9,760.39	0.00	0.00	0.00
21,700.00	90.00	359.68	12,150.70	9,774.67	1,355.85	9,859.87	0.00	0.00	0.00
21,800.00	90.00	359.68	12,150.70	9,874.67	1,355.29	9,959.35	0.00	0.00	0.00
21,900.00	90.00	359.68	12,150.70	9,974.66	1,354.73	10,058.83	0.00	0.00	0.00
22,000.00	90.00	359.68	12,150.70	10,074.66	1,354.17	10,158.30	0.00	0.00	0.00
22,100.00	90.00	359.68	12,150.70	10,174.66	1,353.60	10,257.78	0.00	0.00	0.00
22,200.00	90.00	359.68	12,150.70	10,274.66	1,353.04	10,357.26	0.00	0.00	0.00
22,300.00	90.00	359.68	12,150.70	10,374.66	1,352.48	10,456.74	0.00	0.00	0.00
22,400.00	90.00	359.68	12,150.70	10,474.66	1,351.92	10,556.22	0.00	0.00	0.00
22,500.00	90.00	359.68	12,150.70	10,574.65	1,351.36	10,655.69	0.00	0.00	0.00
22,600.00	90.00	359.68	12,150.70	10,674.65	1,350.80	10,755.17	0.00	0.00	0.00
22,700.00	90.00	359.68	12,150.70	10,774.65	1,350.23	10,854.65	0.00	0.00	0.00
22,800.00	90.00	359.68	12,150.70	10,874.65	1,349.67	10,954.13	0.00	0.00	0.00
22,900.00	90.00	359.68	12,150.70	10,974.65	1,349.11	11,053.61	0.00	0.00	0.00
23,000.00	90.00	359.68	12,150.70	11,074.65	1,348.55	11,153.08	0.00	0.00	0.00
23,100.00	90.00	359.68	12,150.70	11,174.65	1,347.99	11,252.56	0.00	0.00	0.00
23,200.00	90.00	359.68	12,150.70	11,274.64	1,347.43	11,352.04	0.00	0.00	0.00
23,300.00	90.00	359.68	12,150.70	11,374.64	1,346.86	11,451.52	0.00	0.00	0.00
23,400.00	90.00	359.68	12,150.70	11,474.64	1,346.30	11,551.00	0.00	0.00	0.00
23,500.00	90.00	359.68	12,150.70	11,574.64	1,345.74	11,650.47	0.00	0.00	0.00
23,600.00	90.00	359.68	12,150.70	11,674.64	1,345.18	11,749.95	0.00	0.00	0.00
23,700.00	90.00	359.68	12,150.70	11,774.64	1,344.62	11,849.43	0.00	0.00	0.00
23,800.00	90.00	359.68	12,150.70	11,874.63	1,344.06	11,948.91	0.00	0.00	0.00
23,900.00	90.00	359.68	12,150.70	11,974.63	1,343.49	12,048.39	0.00	0.00	0.00
24,000.00	90.00	359.68	12,150.70	12,074.63	1,342.93	12,147.86	0.00	0.00	0.00
24,100.00	90.00	359.68	12,150.70	12,174.63	1,342.37	12,247.34	0.00	0.00	0.00
24,200.00	90.00	359.68	12,150.70	12,274.63	1,341.81	12,346.82	0.00	0.00	0.00
24,300.00	90.00	359.68	12,150.70	12,374.63	1,341.25	12,446.30	0.00	0.00	0.00
24,400.00	90.00	359.68	12,150.70	12,474.62	1,340.69	12,545.78	0.00	0.00	0.00
24,500.00	90.00	359.68	12,150.70	12,574.62	1,340.12	12,645.25	0.00	0.00	0.00
24,600.00	90.00	359.68	12,150.70	12,674.62	1,339.56	12,744.73	0.00	0.00	0.00
24,700.00	90.00	359.68	12,150.70	12,774.62	1,339.00	12,844.21	0.00	0.00	0.00
24,800.00	90.00	359.68	12,150.70	12,874.62	1,338.44	12,943.69	0.00	0.00	0.00
24,900.00	90.00	359.68	12,150.70	12,974.62	1,337.88	13,043.17	0.00	0.00	0.00
25,000.00	90.00	359.68	12,150.70	13,074.62	1,337.32	13,142.64	0.00	0.00	0.00
25,100.00	90.00	359.68	12,150.70	13,174.61	1,336.75	13,242.12	0.00	0.00	0.00
25,200.00	90.00	359.68	12,150.70	13,274.61	1,336.19	13,341.60	0.00	0.00	0.00
25,300.00	90.00	359.68	12,150.70	13,374.61	1,335.63	13,441.08	0.00	0.00	0.00
25,400.00	90.00	359.68	12,150.70	13,474.61	1,335.07	13,540.56	0.00	0.00	0.00
25,500.00	90.00	359.68	12,150.70	13,574.61	1,334.51	13,640.03	0.00	0.00	0.00
25,600.00	90.00	359.68	12,150.70	13,674.61	1,333.95	13,739.51	0.00	0.00	0.00
25,685.56	90.00	359.68	12,150.70	13,760.17	1,333.47	13,824.63	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Precious 30_18 Fed Com 54H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3373.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3373.70ft
Site:	Precious 30_18	North Reference:	Grid
Well:	Precious 30_18 Fed Com 54H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
KOP (Precious 30_18	0.00	0.00	0.00	625.00	1,407.23	461,735.47	702,229.73	32.268313	-103.812788
- plan misses target center by 1539.78ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
FTP (Precious 30_18	0.00	0.00	12,150.70	674.99	1,406.96	461,785.46	702,229.46	32.268450	-103.812788
- plan hits target center									
- Point									
PBHLV(Precious	0.00	0.00	12,150.70	13,760.17	1,333.47	474,869.80	702,155.97	32.304417	-103.812820
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
375.70	375.70	RUSTLER				
698.70	698.70	SALADO				
2,606.70	2,606.70	CASTILE				
4,069.84	4,069.70	DELAWARE				
4,109.95	4,109.70	BELL CANYON				
5,003.71	4,991.70	CHERRY CANYON				
6,307.53	6,275.70	BRUSHY CANYON				
8,018.53	7,960.70	BONE SPRING				
9,068.48	8,994.70	BONE SPRING 1ST				
9,719.38	9,635.70	BONE SPRING 2ND				
10,925.71	10,823.70	BONE SPRING 3RD				
11,409.05	11,299.70	WOLFCAMP				
11,561.37	11,449.70	WOLFCAMP A				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
3,880.00	3,880.00	0.00	0.00	Build 2°/100'
4,380.07	4,377.54	3.36	43.41	Hold 10° Tangent
11,707.30	11,593.42	101.54	1,312.15	KOP, Build 10°/100'
12,600.18	12,150.70	674.99	1,406.96	Landing Point
25,685.56	12,150.70	13,760.17	1,333.47	TD at 25685.56' MD

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

TABLE OF CONTENTS

1.	GENERAL PROVISIONS	4
1.1.	ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES	4
1.2.	NOXIOUS WEEDS.....	4
1.3.1	African Rue (Peganum harmala)	4
1.3.	LIGHT POLLUTION	5
1.3.1.	Downfacing.....	5
1.3.2.	Shielding.....	5
1.3.3.	Lighting Color	5
2.	SPECIAL REQUIREMENTS	5
2.1	WILDLIFE.....	5
2.1.1	Lesser Prairie Chicken	5
2.2	VISUAL RESOURCE MANAGEMENT.....	6
2.2.1	VRM IV	6
3.	CONSTRUCTION REQUIREMENTS	6
3.1	CONSTRCUTION NOTIFICATION	6
3.2	TOPSOIL	6
3.3	CLOSED LOOP SYSTEM	6
3.4	FEDERAL MINERAL PIT.....	7
3.5	WELL PAD & SURFACING	7
3.6	EXCLOSURE FENCING (CELLARS & PITS)	7
3.7	ON LEASE ACESS ROAD.....	7
3.7.1	Road Width	7
3.7.2	Surfacing.....	7
3.7.3	Crowning.....	7
3.7.4	Ditching	7
3.7.5	Turnouts	7
3.7.6	Drainage.....	7
3.7.7	Public Access.....	8
4.	PIPELINES	10
4.1	SURFACE PIPELINES.....	10
4.2	RANGLAND MITIGATION FOR PIPELINES	12
4.5.1	Fence Requirement	12
4.5.2	Cattleguards	12
4.5.3	Livestock Watering Requirement	12

5. PRODUCTION (POST DRILLING) 13

5.1 WELL STRUCTURES & FACILITIES..... 13

5.1.1 Placement of Production Facilities 13

5.1.2 Exclosure Netting (Open-top Tanks) 13

5.1.3. Chemical and Fuel Secondary Containment and Exclosure Screening 13

5.1.4. Open-Vent Exhaust Stack Exclosures 13

5.1.5. Containment Structures 13

6. RECLAMATION 13

6.1 ROAD AND SITE RECLAMATION 14

6.2 EROSION CONTROL 14

6.3 INTERIM RECLAMATION 14

6.4 FINAL ABANDONMENT & RECLAMATION..... 14

6.5 SEEDING TECHNIQUES..... 15

6.6 SOIL SPECIFIC SEED MIXTURE 15

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.

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 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

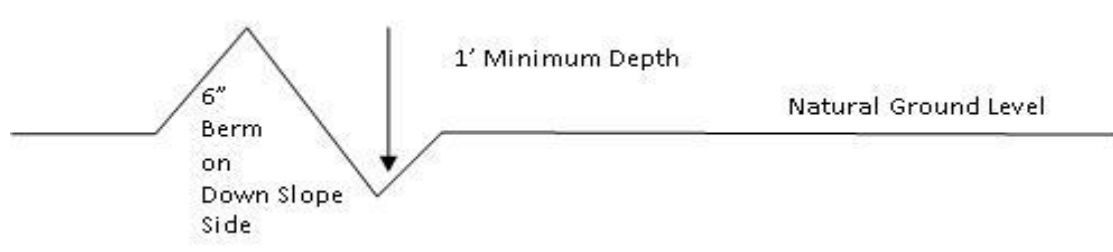
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

3.7.6 Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping 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

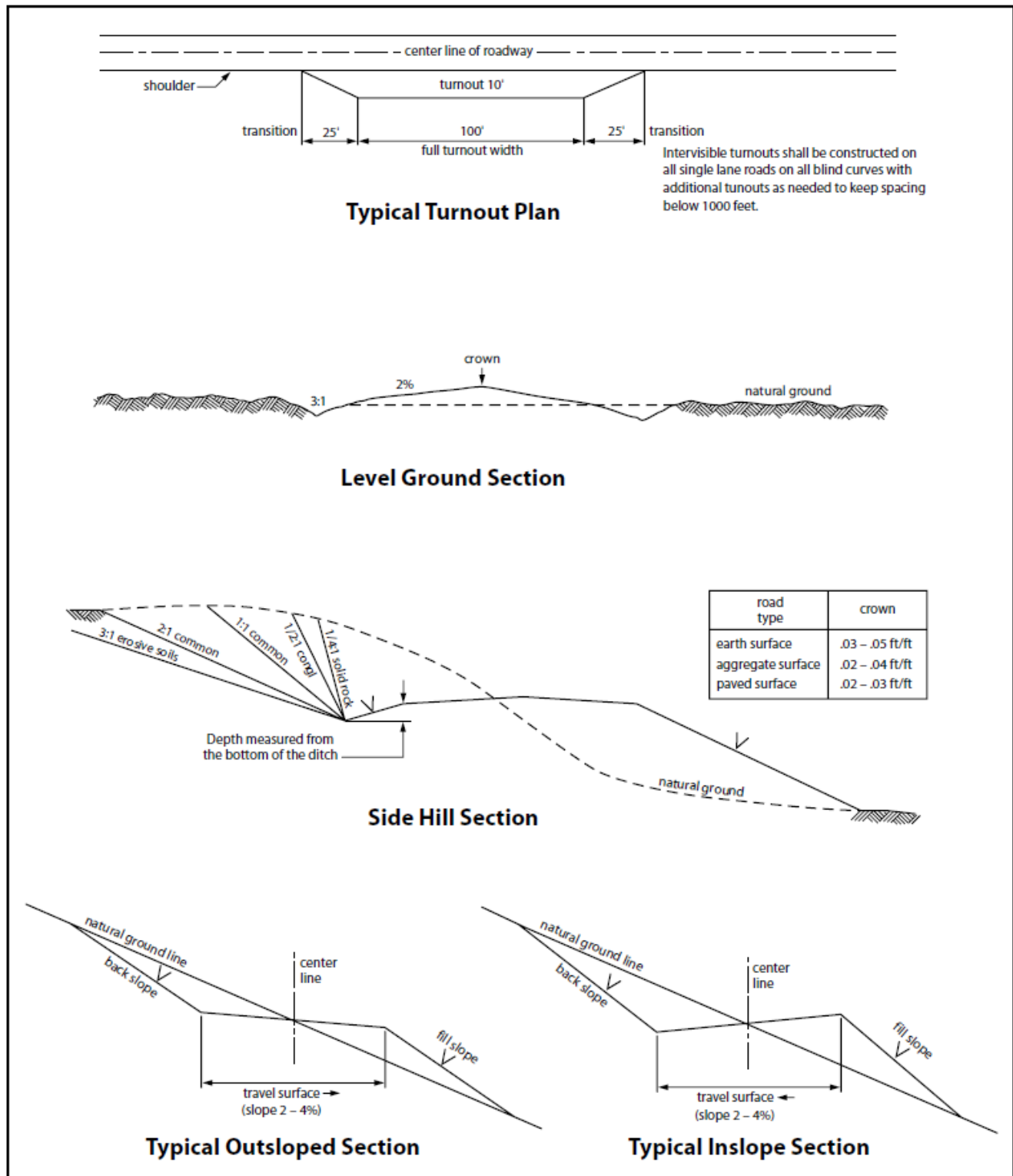


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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 valves 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 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



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 (H₂S) gas.

While drilling this well, it is possible to encounter H₂S bearing formations. At all times, the first barrier to control H₂S 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 H₂S is detected. All H₂S 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 H₂S.
2. Proper use and maintenance of personal protective equipment and life support systems.
3. H₂S detection.
4. Proper use of H₂S 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 H₂S 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 H₂S Drilling Operations Plan.

H₂S 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. H₂S 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 H₂S 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 H₂S.
- 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. H₂S 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. H₂S 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 H₂S 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 H₂S 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
- Mud engineer:
- 1. Will remain in briefing / muster area until instructed by supervisor.
- 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 H₂S.

- B. When breaking out any line where H₂S can reasonably be expected.
- C. When sampling air in areas to determine if toxic concentrations of H₂S exists.
- D. When working in areas where over 10 ppm H₂S has been detected.
- E. At any time there is a doubt as to the H₂S level in the area to be entered.

Rescue
First aid for H₂S 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 H₂S gas poisoning – no matter how remote the possibility is.
6. Notify emergency room personnel that the victim(s) has been exposed to H₂S gas.

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

Revised CM 6/27/2012

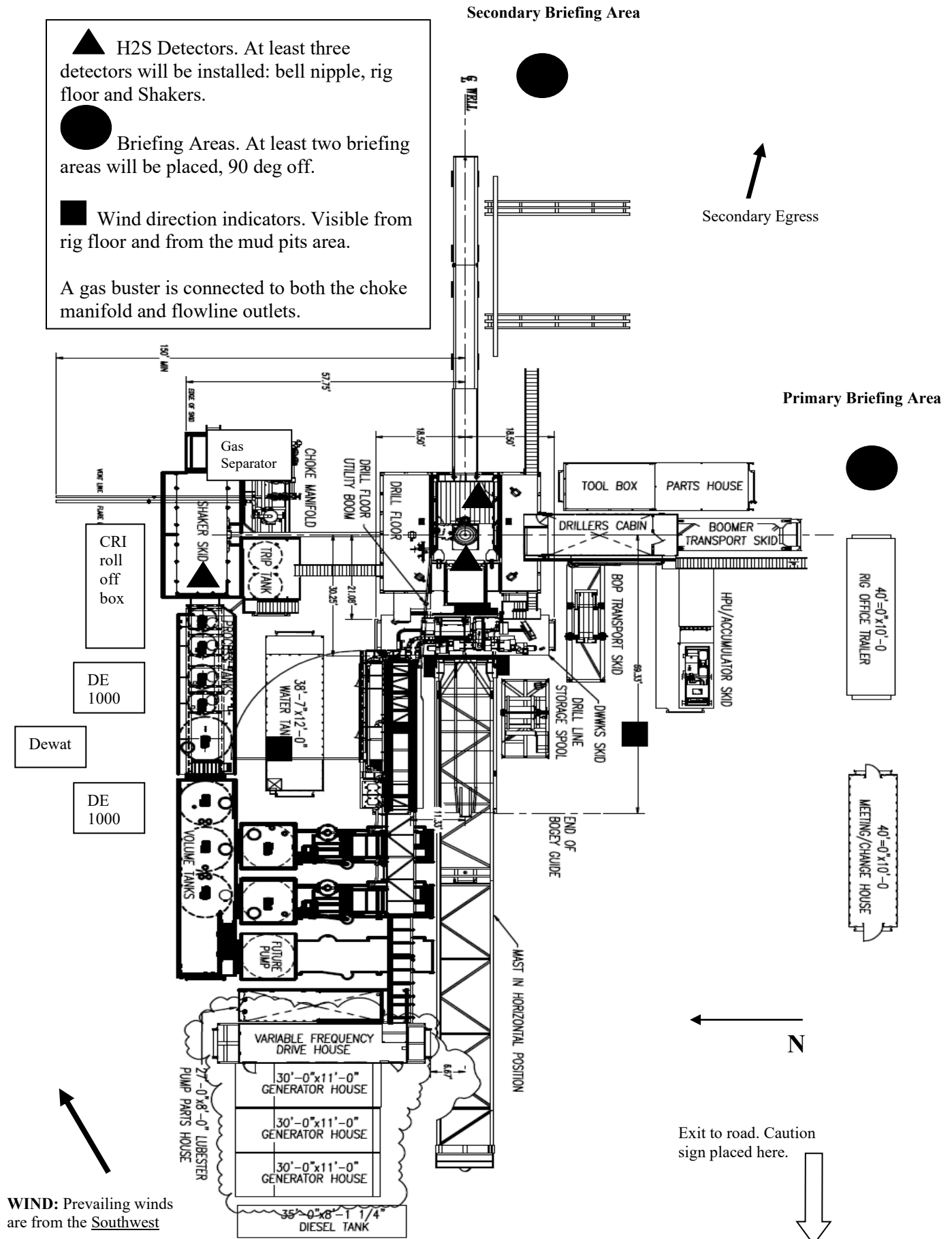


Permian Drilling Hydrogen Sulfide Drilling Operations Plan

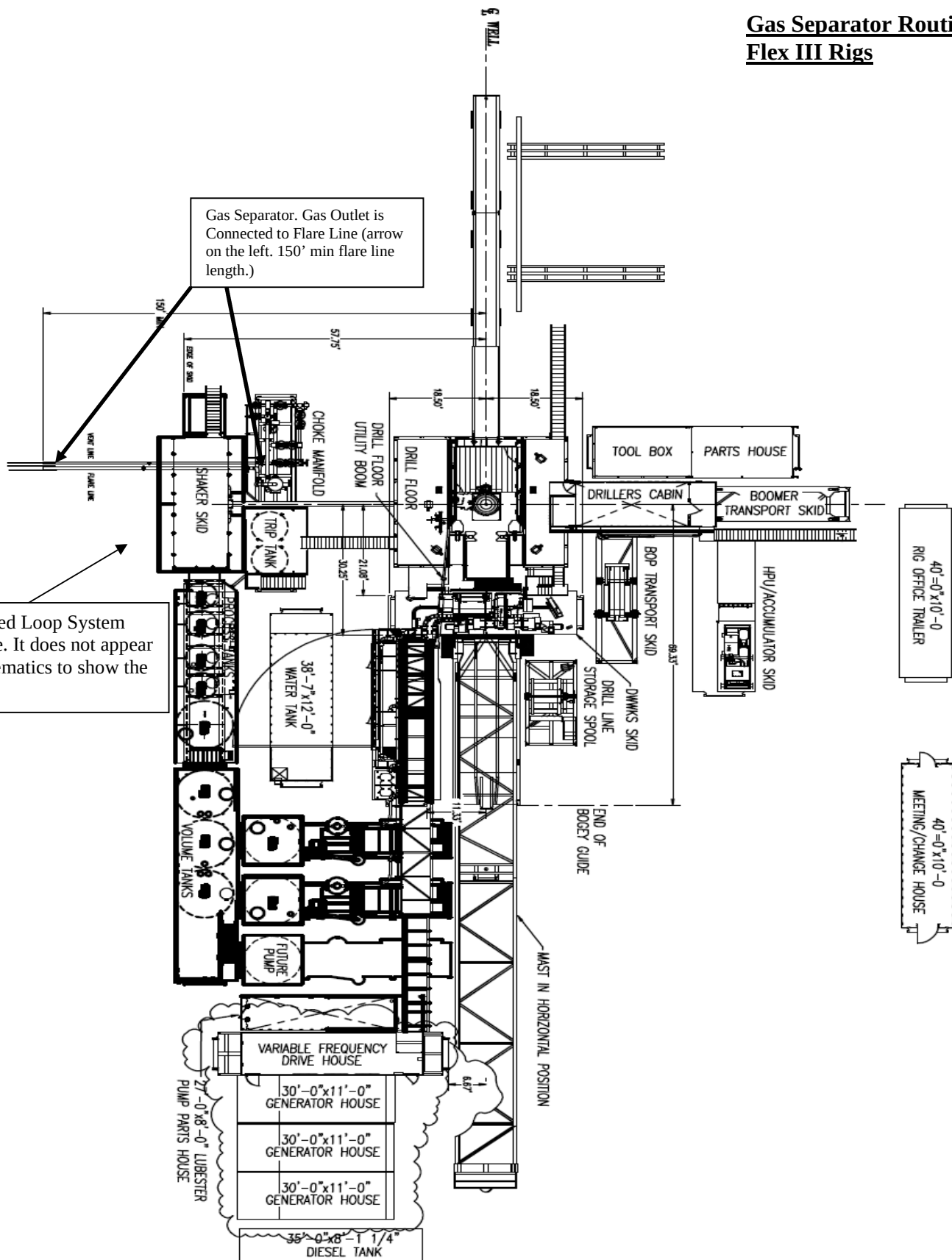
Open drill site. No homes or buildings are near the proposed location.

1. Escape

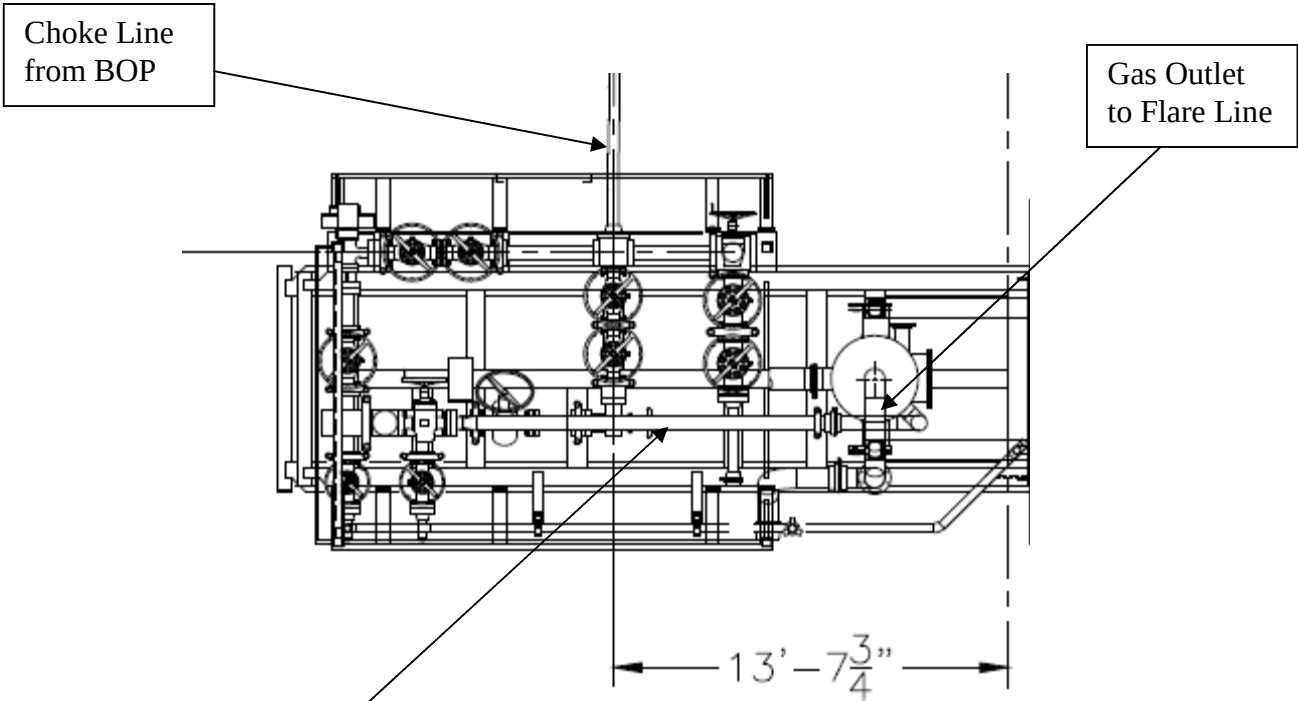
Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction,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



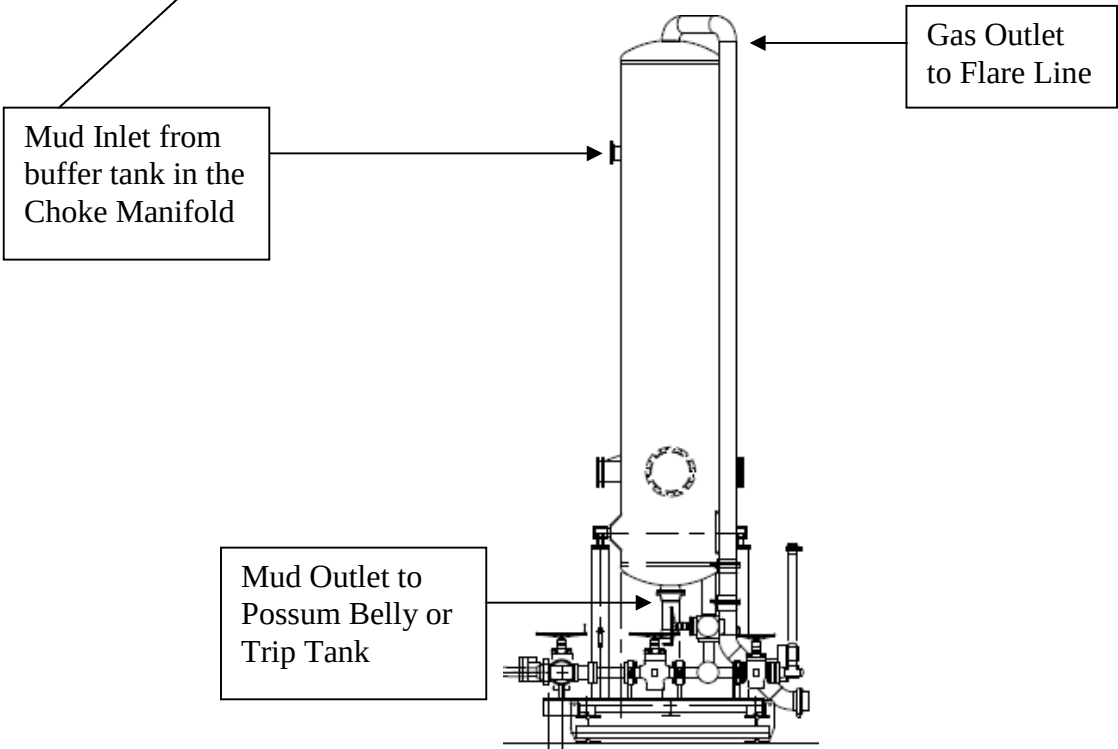
Gas Separator Routing Flex III Rigs



Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)



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 382624

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:
	16696
	Action Number:
	382624
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	9/30/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	9/30/2024
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	9/30/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	9/30/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	9/30/2024
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	9/30/2024
ward.rikala	Submit C-102 on new C-102 form.	9/30/2024