Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM94118

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.:

8. Lease Name and Well No.: NORTH BLONDIE 3 15 FED COM 102H

2. Name of Operator: DEVON ENERGY PRODUCTION COMPANY LP

9. API Well No.: 30-025-52643

3a. Address: 333 WEST SHERIDAN AVE, OKLAHOMA CITY, OK 7310

3b. Phone No. *(include area code)*: (405) 235-3611

10. Field and Pool, or Exploratory: HARDIN TANK/BONE SPRING

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

At surface: SENW / 1859 FNL / 1503 FWL / LAT 32.045601 / LONG -103.461448

At proposed prod. zone: NENW / 20 FNL / 1760 FEL / LAT 32.065169 / LONG -103.460638

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 15/T26S/R34E/NMP

14. Distance in miles and direction from nearest town or post office*

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 103 feet

16. No of acres in lease:

17. Spacing Unit dedicated to this well: 240.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 1503 feet

19. Proposed Depth: 9700 feet / 17255 feet

20. BLM/BIA Bond No. in file: FED: NMB000801

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3277 feet

22. Approximate date work will start*: 04/15/2024

23. Estimated duration: 45 days

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	REBECCA DEAL / Ph: (405) 235-3611	09/20/2023

Title: Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	03/05/2024

Title	Office
Assistant Field Manager Lands & Minerals	Carlsbad Field Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/05/2024

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) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-52643	96661	HARDIN TANK;BONE SPRING

Property Code	Property Name	Well Number
334567	NORTH BLONDIE 3-15 FED COM	102H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3276.9'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	26-S	34-E		1859	NORTH	1503	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	10	26-S	34-E		20	NORTH	1760	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			Non Standard Spacing

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

NORTH BLONDIE 3-15 FED COM 102H
EL:3276.9'
GEODETIC COORDINATES
NAD 83 NMSP EAST
SURFACE LOCATION
N:381418.52
E:811482.20
LAT:32.045601
LON:103.461448

KICK OFF POINT
CALLS 2586' FNL, 1759' FWL
N: 811675.74
E: 388539.05
LAT: 32.0435
LON: -103.4607

FIRST TAKE POINT (PPP 1)
2538' FNL 1760' FWL SEC. 15
N:380741.88
E:811744.95
LAT:32.043736
LON:103.460618

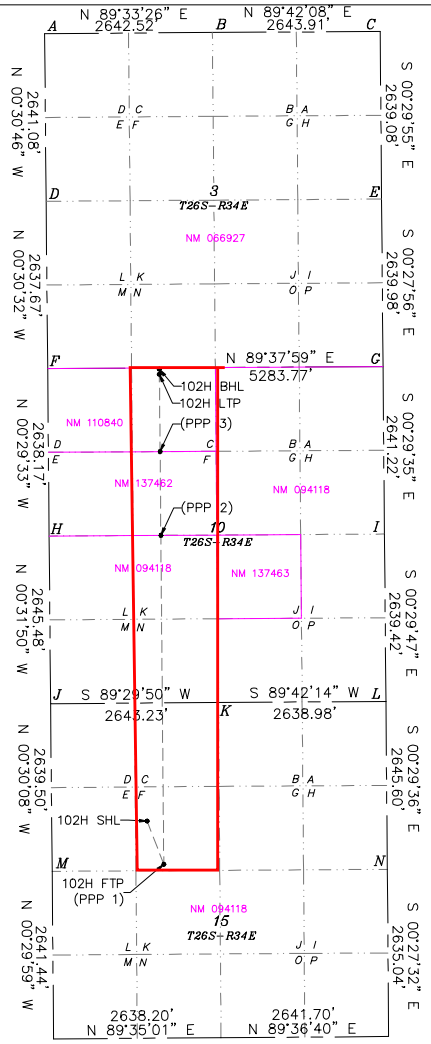
LAST TAKE POINT
100' FNL 1760' FWL SEC. 10
N:388459.05
E:811676.43
LAT:32.064949
LON:103.460638

BOTTOM OF HOLE
N:388539.05
E:811675.74
LAT:32.065169
LON:103.460638

(PPP 2)
2639' FNL 1761' FWL SEC. 10
N:385919.97
E:811698.99
LAT:32.057969
LON:103.460631

(PPP 3)
1320' FNL 1760' FWL SEC. 10
N:387239.51
E:811687.28
LAT:32.061597
LON:103.460635

A=N:393826.32 E:809868.53
B=N:393846.74 E:812510.98
C=N:393860.48 E:815154.85
D=N:391185.34 E:809892.17
E=N:391221.50 E:815177.82
F=N:388547.78 E:809915.60
G=N:388581.61 E:815199.26
H=N:385909.71 E:809938.27
I=N:385940.49 E:815221.99
J=N:383264.34 E:809962.78
K=N:383287.54 E:812605.90
L=N:383301.17 E:815244.85
M=N:380624.94 E:809985.91
N=N:380655.67 E:815267.62



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Rebecca Deal — 1/8/2024
Signature — Date

Rebecca Deal, Regulatory Analyst
Printed Name

rebecca.deal@dvn.com
E-mail Address

SURVEYOR CERTIFICATION

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

08/2023
Date of Survey

Signature & Seal of Professional Surveyor

ALBERT R. DEHOYOS
NEW MEXICO
23261
PROFESSIONAL SURVEYOR

REV: 01/07/2024

Certificate No. 23261 Albert R. DeHoyos

DRAWN BY: CM

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, LP.	NORTH BLONDIE 3-15 FED COM	102H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	15	26S	34E		2586	FNL	1759	FWL	LEA

Latitude	Longitude	NAD
32.0435	-103.4607	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	15	26-S	34-E		2538	NORTH	1760	WEST	LEA

Latitude	Longitude	NAD
32.043736	103.460618	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	10	26-S	34-E		100	NORTH	1760	WEST	LEA

Latitude	Longitude	NAD
32.064949	103.460638	83

Is this well the defining well for the Horizontal Spacing Unit? [Y]

Is this well an infill well? [N]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

NORTH BLONDIE 3-15 FED COM 102H

1. Geologic Formations

TVD of target	9699	Pilot hole depth	N/A
MD at TD:	17259	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	860		
Salt	1300		
Base of Salt	5050		
Delaware	5320		
Cherry Canyon	6320		
Brushy Canyon	7950		
1st Bone Spring Lime	9420		
Leonard	9470		

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

NORTH BLONDIE 3-15 FED COM 102H

2. Casing Program

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
17 1/2	13 3/8	48	H40	BTC	0	885	0	885
12 1/4	9 5/8	40	J-55	BTC	0	5150	0	5150
8 3/4	5 1/2	17	P110	BTC	0	17259	0	9699

•All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.

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3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	679	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	571	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	4650	13.2	1.4	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	742	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	571	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	4650	13.2	1.4	Tail: Class H / C + additives
Production	378	4650	9.0	3.3	Lead: Class H /C + additives
	1577	9086	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	50%
Intermediate	30%
Production	10%

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4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

NORTH BLONDIE 3-15 FED COM 102H

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

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

6. Logging and Testing Procedures

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and sbumitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain.
	Coring? If yes, explain.

Additional logs planned		Interval
	Resistivity	
	Density	
X	CBL	Production casing
X	Mud log	KOP to TD
	PEX	

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	4539
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogren 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 3176.. 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

Is this a walking operation? Potentially

1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1 Spudder rig will move in and batch drill surface hole.
   a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).
3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
   a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan

_____ Other, describe

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
03/07/2024

APD ID: 10400094605 **Submission Date:** 09/20/2023

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: NORTH BLONDIE 3 15 FED COM **Well Number:** 102H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13036193	UNKNOWN	3308	0	0	OTHER : SURFACE	NONE	N
13036194	RUSTLER	2448	860	860	SANDSTONE	NONE	N
13036195	TOP SALT	2008	1300	1300	SALT	NONE	N
13036196	BASE OF SALT	-1742	5050	5050	ANHYDRITE	NONE	N
13036197	BELL CANYON	-2012	5320	5320	SANDSTONE	NATURAL GAS, OIL	N
13036198	CHERRY CANYON	-3012	6320	6320	SANDSTONE	NATURAL GAS, OIL	N
13036199	BRUSHY CANYON	-4642	7950	7950	SANDSTONE	NATURAL GAS, OIL	N
13036200	BONE SPRING 1ST	-6112	9420	9420	LIMESTONE	NATURAL GAS, OIL	Y
13036201	BONE SPRING 1ST	-7192	10500	10500	SANDSTONE	NATURAL GAS, OIL	N
13036202	BONE SPRING 2ND	-7892	11200	11200	SANDSTONE	NATURAL GAS, OIL	N
13036204	BONE SPRING 2ND	-8242	11550	11550	LIMESTONE	NATURAL GAS, OIL	N
13036205	BONE SPRING 3RD	-8842	12150	12150	SANDSTONE, SHALE	NATURAL GAS, OIL	N
13036206	WOLFCAMP	-9282	12590	12590	SHALE	NATURAL GAS, OIL	N
13036207	STRAWN	-11092	14400	14400	LIMESTONE	NATURAL GAS, OIL	N

Section 2 - Blowout Prevention

devon

Commitment Runs Deep

Design Plan
Operation and Maintenance Plan
Closure Plan

SENM – Closed Loop Systems
June 2010

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

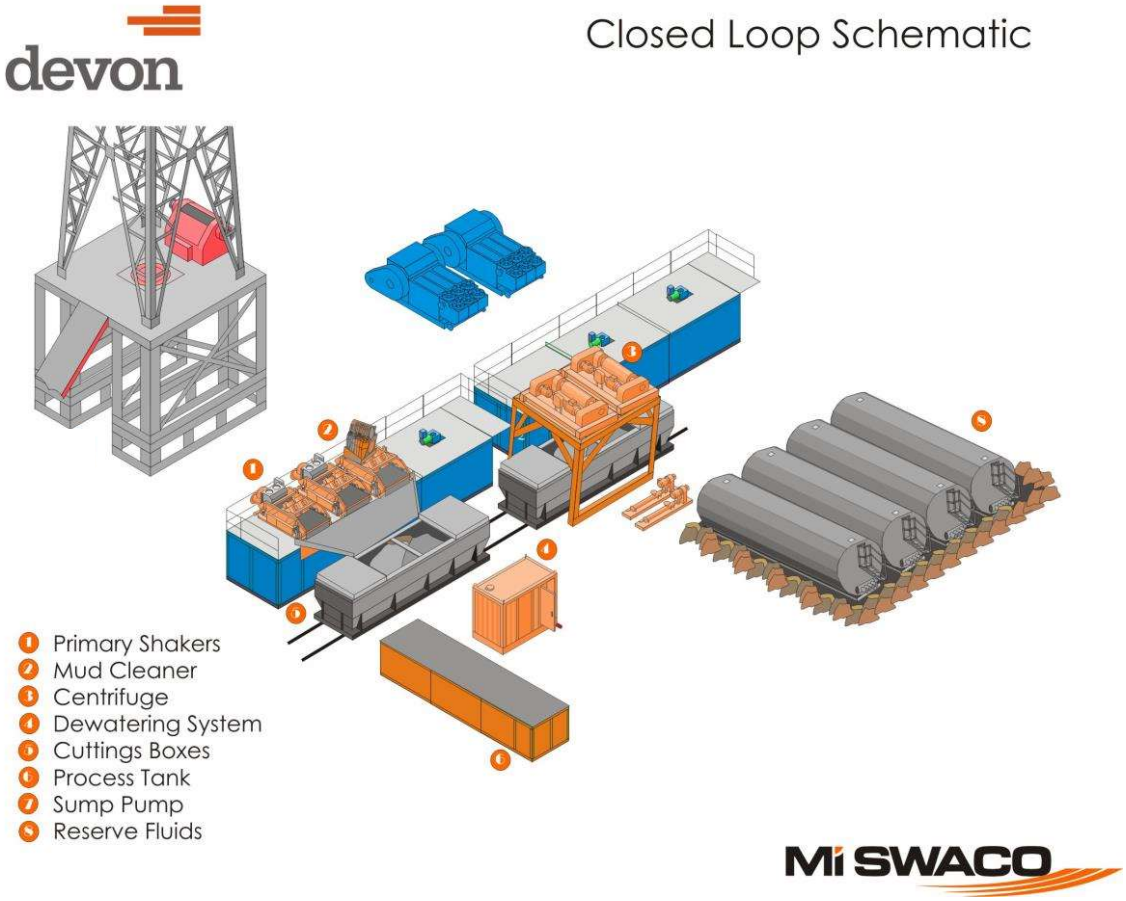
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

Devon Energy
APD VARIANCE DATA

OPERATOR NAME: Devon Energy

1. SUMMARY OF Variance:

Devon Energy respectfully requests approval for the following additions to the drilling plan:

1. Potential utilization of a spudder rig to pre-set surface casing.

2. Description of Operations

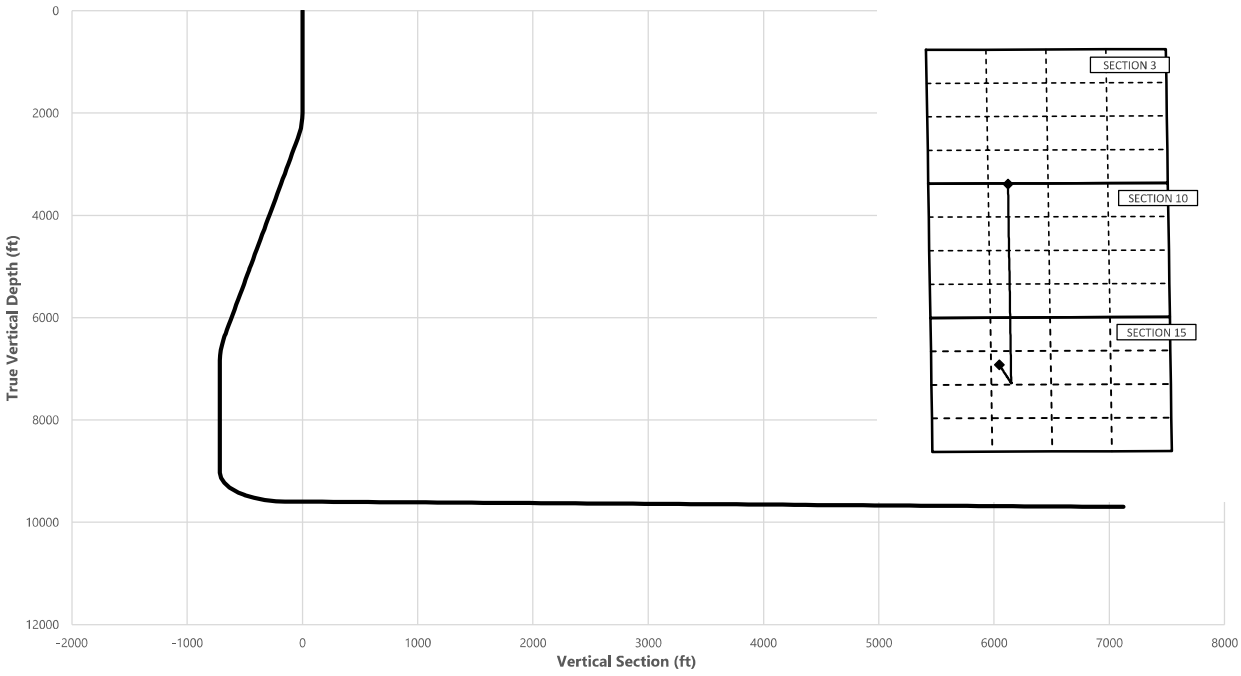
1. A spudder rig contractor may move in their rig to drill the surface hole section and pre-set surface casing on this well.
    a. After drilling the surface hole section, the rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. Rig will utilize fresh water based mud to drill surface hole to TD.
2. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
3. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
5. Drilling operation will be performed with the big rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The BLM will be contacted / notified 24 hours before the big rig moves back on to the pad with the pre-set surface casing.
6. Devon Energy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
7. Once the rig is removed, Devon Energy will secure the wellhead area by placing a guard rail around the cellar area.

devon

Well: NORTH BLONDIE 3-15 FED COM 102H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	160.10	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	160.10	2497.47	-40.92	14.81	-40.51	2.00	Hold Tangent
6434.81	10.00	160.10	6372.49	-683.40	247.39	-676.41	0.00	Drop to Vertical
6934.81	0.00	160.10	6869.96	-724.32	262.20	-716.92	2.00	Hold Vertical
9085.95	0.00	359.50	9021.10	-724.32	262.20	-716.92	0.00	KOP
9977.61	89.17	359.50	9594.00	-159.72	257.27	-152.67	10.00	Landing Point
17258.91	89.17	359.50	9700.00	7120.53	193.74	7123.17	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	860.00	860.00
Salt	1300.00	1300.00
Base of Salt	5091.91	5050.00
Delaware	5366.08	5320.00
Cherry Canyon	6381.50	6320.00
Brushy Canyon	8014.85	7950.00
1st Bone Spring Lime	9527.18	9420.00
Leonard / Point of Penetration	9601.75	9470.00
exit	17178.91	9698.84

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.0455	-103.4615	1859' FNL, 1503' FWL of Sec 15 in T26S, R34E
KOP	9085.95	9021.10	32.0435	-103.4607	2586' FNL, 1759' FWL of Sec 15 in T26S, R34E
Point of Penetration	9601.75	9470.00	32.0437	-103.4606	2538' FNL , 1760' FWL of Sec 15 in T26S, R34E
Exit	17178.91	9698.84	32.0649	-103.4606	100' FNL, 1760' FWL of Sec 10 in T26S, R34E
BHL	17258.91	9700.00	32.0651	-103.4607	20' FNL, 1760' FWL of Sec 10 in T26S, R34E

devon

Well: NORTH BLONDIE 3-15 FED COM 102H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	160.10	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	160.10	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	160.10	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	160.10	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	160.10	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	160.10	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	160.10	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	160.10	800.00	0.00	0.00	0.00	0.00	
860.00	0.00	160.10	860.00	0.00	0.00	0.00	0.00	Rustler
900.00	0.00	160.10	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	160.10	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	160.10	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	160.10	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	160.10	1300.00	0.00	0.00	0.00	0.00	Salt,
1400.00	0.00	160.10	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	160.10	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	160.10	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	160.10	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	160.10	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	160.10	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	160.10	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	160.10	2099.98	-1.64	0.59	-1.62	2.00	
2200.00	4.00	160.10	2199.84	-6.56	2.38	-6.49	2.00	
2300.00	6.00	160.10	2299.45	-14.76	5.34	-14.61	2.00	
2400.00	8.00	160.10	2398.70	-26.22	9.49	-25.95	2.00	
2500.00	10.00	160.10	2497.47	-40.92	14.81	-40.51	2.00	Hold Tangent
2600.00	10.00	160.10	2595.95	-57.25	20.72	-56.67	0.00	
2700.00	10.00	160.10	2694.43	-73.58	26.64	-72.83	0.00	
2800.00	10.00	160.10	2792.91	-89.91	32.55	-88.99	0.00	
2900.00	10.00	160.10	2891.39	-106.24	38.46	-105.15	0.00	
3000.00	10.00	160.10	2989.87	-122.56	44.37	-121.31	0.00	
3100.00	10.00	160.10	3088.35	-138.89	50.28	-137.47	0.00	
3200.00	10.00	160.10	3186.83	-155.22	56.19	-153.63	0.00	
3300.00	10.00	160.10	3285.31	-171.55	62.10	-169.79	0.00	
3400.00	10.00	160.10	3383.79	-187.87	68.01	-185.96	0.00	
3500.00	10.00	160.10	3482.27	-204.20	73.92	-202.12	0.00	
3600.00	10.00	160.10	3580.75	-220.53	79.83	-218.28	0.00	
3700.00	10.00	160.10	3679.23	-236.86	85.74	-234.44	0.00	
3800.00	10.00	160.10	3777.72	-253.19	91.65	-250.60	0.00	
3900.00	10.00	160.10	3876.20	-269.51	97.56	-266.76	0.00	
4000.00	10.00	160.10	3974.68	-285.84	103.47	-282.92	0.00	
4100.00	10.00	160.10	4073.16	-302.17	109.38	-299.08	0.00	
4200.00	10.00	160.10	4171.64	-318.50	115.30	-315.24	0.00	
4300.00	10.00	160.10	4270.12	-334.83	121.21	-331.41	0.00	
4400.00	10.00	160.10	4368.60	-351.15	127.12	-347.57	0.00	
4500.00	10.00	160.10	4467.08	-367.48	133.03	-363.73	0.00	
4600.00	10.00	160.10	4565.56	-383.81	138.94	-379.89	0.00	
4700.00	10.00	160.10	4664.04	-400.14	144.85	-396.05	0.00	
4800.00	10.00	160.10	4762.52	-416.47	150.76	-412.21	0.00	
4900.00	10.00	160.10	4861.00	-432.79	156.67	-428.37	0.00	
5000.00	10.00	160.10	4959.48	-449.12	162.58	-444.53	0.00	
5091.91	10.00	160.10	5050.00	-464.13	168.01	-459.39	0.00	Base of Salt
5100.00	10.00	160.10	5057.97	-465.45	168.49	-460.69	0.00	
5200.00	10.00	160.10	5156.45	-481.78	174.40	-476.86	0.00	
5300.00	10.00	160.10	5254.93	-498.11	180.31	-493.02	0.00	
5366.08	10.00	160.10	5320.00	-508.89	184.22	-503.70	0.00	Delaware
5400.00	10.00	160.10	5353.41	-514.43	186.22	-509.18	0.00	
5500.00	10.00	160.10	5451.89	-530.76	192.13	-525.34	0.00	
5600.00	10.00	160.10	5550.37	-547.09	198.04	-541.50	0.00	
5700.00	10.00	160.10	5648.85	-563.42	203.96	-557.66	0.00	
5800.00	10.00	160.10	5747.33	-579.74	209.87	-573.82	0.00	
5900.00	10.00	160.10	5845.81	-596.07	215.78	-589.98	0.00	
6000.00	10.00	160.10	5944.29	-612.40	221.69	-606.14	0.00	
6100.00	10.00	160.10	6042.77	-628.73	227.60	-622.31	0.00	
6200.00	10.00	160.10	6141.25	-645.06	233.51	-638.47	0.00	
6300.00	10.00	160.10	6239.73	-661.38	239.42	-654.63	0.00	
6381.50	10.00	160.10	6320.00	-674.69	244.24	-667.80	0.00	Cherry Canyon
6400.00	10.00	160.10	6338.22	-677.71	245.33	-670.79	0.00	
6434.81	10.00	160.10	6372.49	-683.40	247.39	-676.41	0.00	Drop to Vertical

devon

Well: NORTH BLONDIE 3-15 FED COM 102H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6500.00	8.70	160.10	6436.82	-693.35	250.99	-686.27	2.00	
6600.00	6.70	160.10	6535.91	-705.94	255.55	-698.73	2.00	
6700.00	4.70	160.10	6635.42	-715.28	258.93	-707.97	2.00	
6800.00	2.70	160.10	6735.20	-721.34	261.12	-713.97	2.00	
6900.00	0.70	160.10	6835.15	-724.12	262.13	-716.72	2.00	
6934.81	0.00	160.10	6869.96	-724.32	262.20	-716.92	2.00	Hold Vertical
7000.00	0.00	359.50	6935.15	-724.32	262.20	-716.92	0.00	
7100.00	0.00	359.50	7035.15	-724.32	262.20	-716.92	0.00	
7200.00	0.00	359.50	7135.15	-724.32	262.20	-716.92	0.00	
7300.00	0.00	359.50	7235.15	-724.32	262.20	-716.92	0.00	
7400.00	0.00	359.50	7335.15	-724.32	262.20	-716.92	0.00	
7500.00	0.00	359.50	7435.15	-724.32	262.20	-716.92	0.00	
7600.00	0.00	359.50	7535.15	-724.32	262.20	-716.92	0.00	
7700.00	0.00	359.50	7635.15	-724.32	262.20	-716.92	0.00	
7800.00	0.00	359.50	7735.15	-724.32	262.20	-716.92	0.00	
7900.00	0.00	359.50	7835.15	-724.32	262.20	-716.92	0.00	
8000.00	0.00	359.50	7935.15	-724.32	262.20	-716.92	0.00	
8014.85	0.00	359.50	7950.00	-724.32	262.20	-716.92	0.00	Brushy Canyon
8100.00	0.00	359.50	8035.15	-724.32	262.20	-716.92	0.00	
8200.00	0.00	359.50	8135.15	-724.32	262.20	-716.92	0.00	
8300.00	0.00	359.50	8235.15	-724.32	262.20	-716.92	0.00	
8400.00	0.00	359.50	8335.15	-724.32	262.20	-716.92	0.00	
8500.00	0.00	359.50	8435.15	-724.32	262.20	-716.92	0.00	
8600.00	0.00	359.50	8535.15	-724.32	262.20	-716.92	0.00	
8700.00	0.00	359.50	8635.15	-724.32	262.20	-716.92	0.00	
8800.00	0.00	359.50	8735.15	-724.32	262.20	-716.92	0.00	
8900.00	0.00	359.50	8835.15	-724.32	262.20	-716.92	0.00	
9000.00	0.00	359.50	8935.15	-724.32	262.20	-716.92	0.00	
9085.95	0.00	359.50	9021.10	-724.32	262.20	-716.92	0.00	KOP
9100.00	1.40	359.50	9035.15	-724.15	262.20	-716.75	10.00	
9200.00	11.40	359.50	9134.40	-713.01	262.10	-705.61	10.00	
9300.00	21.40	359.50	9230.21	-684.80	261.86	-677.43	10.00	
9400.00	31.40	359.50	9319.66	-640.39	261.47	-633.04	10.00	
9500.00	41.40	359.50	9400.04	-581.12	260.95	-573.80	10.00	
9527.18	44.12	359.50	9420.00	-562.66	260.79	-555.36	10.00	1st Bone Spring Lime
9600.00	51.40	359.50	9468.91	-508.79	260.32	-501.52	10.00	
9601.75	51.58	359.50	9470.00	-507.42	260.31	-500.15	10.00	Leonard / Point of Penetration
9700.00	61.40	359.50	9524.17	-425.60	259.59	-418.38	10.00	
9800.00	71.40	359.50	9564.15	-334.08	258.79	-326.92	10.00	
9900.00	81.40	359.50	9587.63	-237.01	257.94	-229.91	10.00	
9977.61	89.17	359.50	9594.00	-159.72	257.27	-152.67	10.00	Landing Point
10000.00	89.17	359.50	9594.33	-137.34	257.08	-130.29	0.00	
10100.00	89.17	359.50	9595.78	-37.35	256.20	-30.37	0.00	
10200.00	89.17	359.50	9597.24	62.63	255.33	69.56	0.00	
10300.00	89.17	359.50	9598.69	162.62	254.46	169.48	0.00	
10400.00	89.17	359.50	9600.15	262.61	253.59	269.41	0.00	
10500.00	89.17	359.50	9601.61	362.59	252.71	369.33	0.00	
10600.00	89.17	359.50	9603.06	462.58	251.84	469.26	0.00	
10700.00	89.17	359.50	9604.52	562.56	250.97	569.18	0.00	
10800.00	89.17	359.50	9605.97	662.55	250.09	669.11	0.00	
10900.00	89.17	359.50	9607.43	762.53	249.22	769.03	0.00	
11000.00	89.17	359.50	9608.89	862.52	248.35	868.95	0.00	
11100.00	89.17	359.50	9610.34	962.50	247.47	968.88	0.00	
11200.00	89.17	359.50	9611.80	1062.49	246.60	1068.80	0.00	
11300.00	89.17	359.50	9613.25	1162.48	245.73	1168.73	0.00	
11400.00	89.17	359.50	9614.71	1262.46	244.85	1268.65	0.00	
11500.00	89.17	359.50	9616.16	1362.45	243.98	1368.58	0.00	
11600.00	89.17	359.50	9617.62	1462.43	243.11	1468.50	0.00	
11700.00	89.17	359.50	9619.08	1562.42	242.23	1568.43	0.00	
11800.00	89.17	359.50	9620.53	1662.40	241.36	1668.35	0.00	
11900.00	89.17	359.50	9621.99	1762.39	240.49	1768.28	0.00	
12000.00	89.17	359.50	9623.44	1862.37	239.62	1868.20	0.00	
12100.00	89.17	359.50	9624.90	1962.36	238.74	1968.13	0.00	
12200.00	89.17	359.50	9626.36	2062.35	237.87	2068.05	0.00	
12300.00	89.17	359.50	9627.81	2162.33	237.00	2167.98	0.00	
12400.00	89.17	359.50	9629.27	2262.32	236.12	2267.90	0.00	
12500.00	89.17	359.50	9630.72	2362.30	235.25	2367.83	0.00	
12600.00	89.17	359.50	9632.18	2462.29	234.38	2467.75	0.00	
12700.00	89.17	359.50	9633.64	2562.27	233.50	2567.68	0.00	
12800.00	89.17	359.50	9635.09	2662.26	232.63	2667.60	0.00	

devon

Well: NORTH BLONDIE 3-15 FED COM 102H
County: Lea
Wellbore: Permit Plan
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Geodetic System: US State Plane 1983
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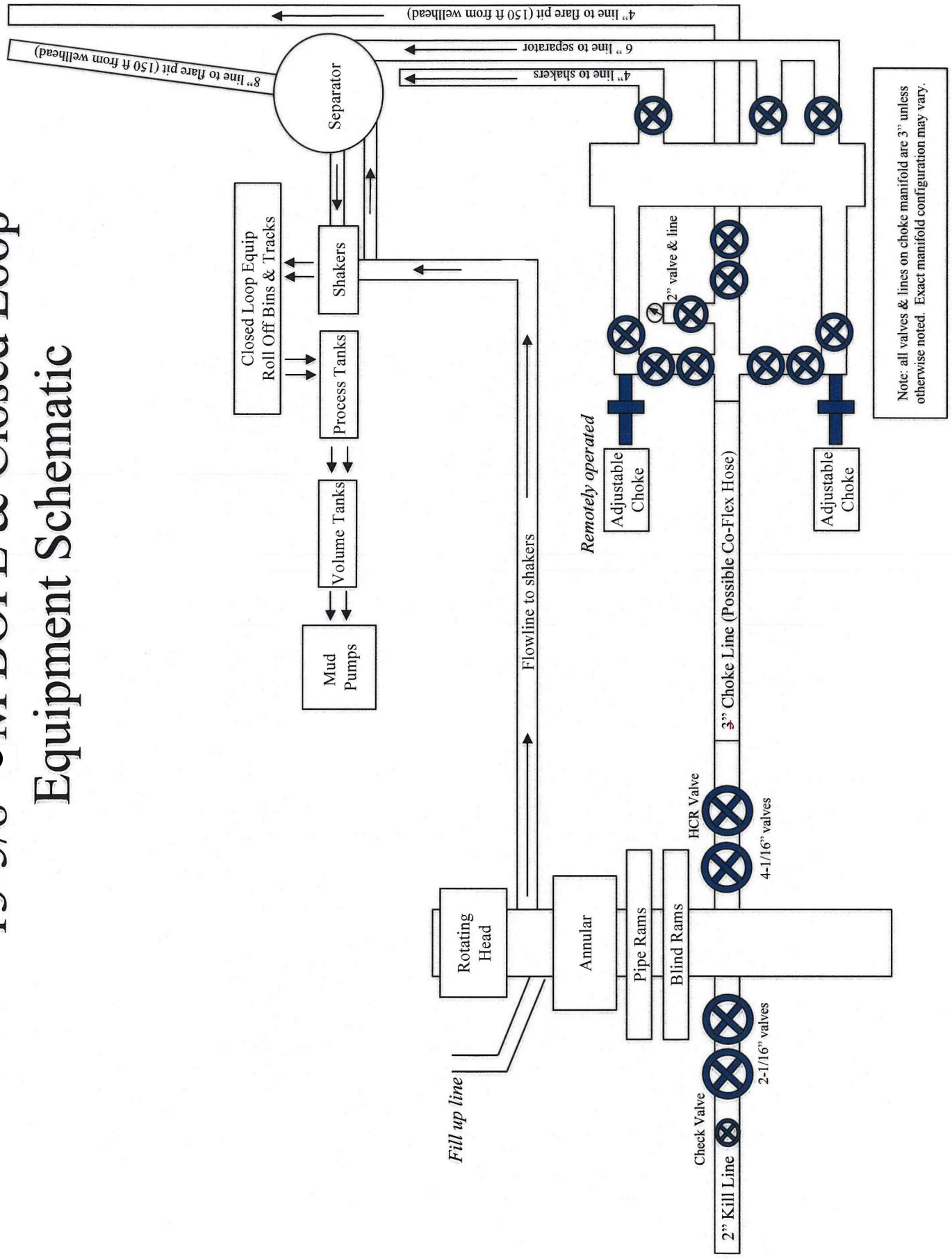
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12900.00	89.17	359.50	9636.55	2762.25	231.76	2767.53	0.00	
13000.00	89.17	359.50	9638.00	2862.23	230.88	2867.45	0.00	
13100.00	89.17	359.50	9639.46	2962.22	230.01	2967.38	0.00	
13200.00	89.17	359.50	9640.92	3062.20	229.14	3067.30	0.00	
13300.00	89.17	359.50	9642.37	3162.19	228.27	3167.23	0.00	
13400.00	89.17	359.50	9643.83	3262.17	227.39	3267.15	0.00	
13500.00	89.17	359.50	9645.28	3362.16	226.52	3367.08	0.00	
13600.00	89.17	359.50	9646.74	3462.14	225.65	3467.00	0.00	
13700.00	89.17	359.50	9648.19	3562.13	224.77	3566.93	0.00	
13800.00	89.17	359.50	9649.65	3662.12	223.90	3666.85	0.00	
13900.00	89.17	359.50	9651.11	3762.10	223.03	3766.78	0.00	
14000.00	89.17	359.50	9652.56	3862.09	222.15	3866.70	0.00	
14100.00	89.17	359.50	9654.02	3962.07	221.28	3966.63	0.00	
14200.00	89.17	359.50	9655.47	4062.06	220.41	4066.55	0.00	
14300.00	89.17	359.50	9656.93	4162.04	219.53	4166.47	0.00	
14400.00	89.17	359.50	9658.39	4262.03	218.66	4266.40	0.00	
14500.00	89.17	359.50	9659.84	4362.01	217.79	4366.32	0.00	
14600.00	89.17	359.50	9661.30	4462.00	216.92	4466.25	0.00	
14700.00	89.17	359.50	9662.75	4561.99	216.04	4566.17	0.00	
14800.00	89.17	359.50	9664.21	4661.97	215.17	4666.10	0.00	
14900.00	89.17	359.50	9665.67	4761.96	214.30	4766.02	0.00	
15000.00	89.17	359.50	9667.12	4861.94	213.42	4865.95	0.00	
15100.00	89.17	359.50	9668.58	4961.93	212.55	4965.87	0.00	
15200.00	89.17	359.50	9670.03	5061.91	211.68	5065.80	0.00	
15300.00	89.17	359.50	9671.49	5161.90	210.80	5165.72	0.00	
15400.00	89.17	359.50	9672.95	5261.89	209.93	5265.65	0.00	
15500.00	89.17	359.50	9674.40	5361.87	209.06	5365.57	0.00	
15600.00	89.17	359.50	9675.86	5461.86	208.18	5465.50	0.00	
15700.00	89.17	359.50	9677.31	5561.84	207.31	5565.42	0.00	
15800.00	89.17	359.50	9678.77	5661.83	206.44	5665.35	0.00	
15900.00	89.17	359.50	9680.22	5761.81	205.57	5765.27	0.00	
16000.00	89.17	359.50	9681.68	5861.80	204.69	5865.20	0.00	
16100.00	89.17	359.50	9683.14	5961.78	203.82	5965.12	0.00	
16200.00	89.17	359.50	9684.59	6061.77	202.95	6065.05	0.00	
16300.00	89.17	359.50	9686.05	6161.76	202.07	6164.97	0.00	
16400.00	89.17	359.50	9687.50	6261.74	201.20	6264.90	0.00	
16500.00	89.17	359.50	9688.96	6361.73	200.33	6364.82	0.00	
16600.00	89.17	359.50	9690.42	6461.71	199.45	6464.75	0.00	
16700.00	89.17	359.50	9691.87	6561.70	198.58	6564.67	0.00	
16800.00	89.17	359.50	9693.33	6661.68	197.71	6664.60	0.00	
16900.00	89.17	359.50	9694.78	6761.67	196.83	6764.52	0.00	
17000.00	89.17	359.50	9696.24	6861.65	195.96	6864.45	0.00	
17100.00	89.17	359.50	9697.70	6961.64	195.09	6964.37	0.00	
17178.91	89.17	359.50	9698.84	7040.54	194.40	7043.22	0.00	exit
17200.00	89.17	359.50	9699.15	7061.63	194.21	7064.30	0.00	
17258.91	89.17	359.50	9700.00	7120.53	193.74	7123.17	0.00	BHL

13-5/8" 5M BOPE & Closed Loop Equipment Schematic



A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 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.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.

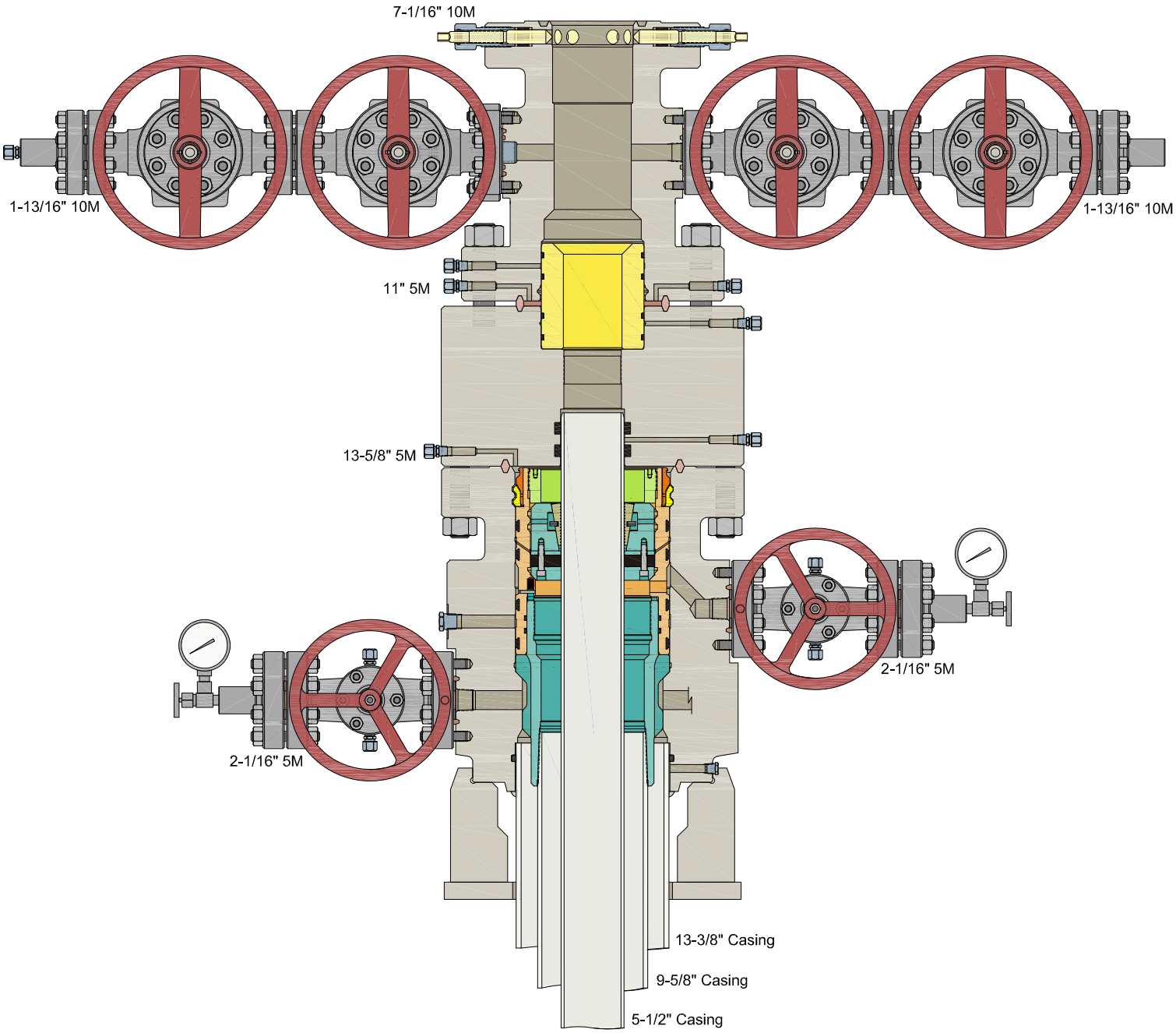
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 5M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.


7-1/16" 10M
1-13/16" 10M
1-13/16" 10M
11" 5M
13-5/8" 5M
2-1/16" 5M
2-1/16" 5M
13-3/8" Casing
9-5/8" Casing
5-1/2" Casing

Section 2 - Blowout Preventer Testing Procedure

Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow OOGO2.III.A.2.i, and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed OOGO2.III.A.2.i per the following: Devon Energy will perform a full BOP test per OOGO2.III.A.2.i before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

1. Well Control Response:

1. Primary barrier remains fluid
2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:
   a) Annular first
   b) If annular were to not hold, Upper pipe rams second (which were tested on the skid BOP test)
   c) If the Upper Pipe Rams were to not hold, Lower Pipe Rams would be third

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LEASE NO.:	**NMNM94118**
LOCATION:	Section 15, T.26 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**North Blondie 3 15 Fed Com 102H**
SURFACE HOLE FOOTAGE:	1859'/N & 1503'/W
BOTTOM HOLE FOOTAGE	20'/N & 1760'/W
ATS/API ID:	**ATS-23-2440**
APD ID:	**10400094605**
Sundry ID:	**N/a**

COA

H2S	No		
Potash	None		
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☐ Flex Hose	☐ Other
Wellhead	Conventional and Multibowl		
Other	☐ 4 String	Capitan Reef: None	☐ WIPP
Other	Pilot Hole: None	☐ Open Annulus	
Cementing	Contingency Squeeze: Int 1	Echo-Meter: None	Primary Cement Squeeze: None
Special Requirements	☐ Water Disposal/Injection	☑ COM	☐ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements Variance	☐ Break Testing	☐ Offline Cementing	☐ Casing Clearance

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet **43 CFR part 3170 Subpart 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **885 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **17 1/2** inch in diameter.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

    Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    Option 1 (Single Stage):

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

Option 2:

Operator has proposed a DV tool(s), the depth may be adjusted as long as the cement is changed proportionally. The DV tool(s) may be cancelled if cement circulates to surface on the first stage.

DV tool(s) shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall contact the BLM if DV tool(s) depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool(s): Cement to circulate. If cement does not circulate off the DV tool(s), contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool(s):

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus after primary cementing stage. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to the BLM.

If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
  Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record),

or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in **43 CFR part 3170 Subpart 3171**
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

☑ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

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

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

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

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-

off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

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

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

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

LVO 2/1/2024

Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015

Hydrogen Sulfide (H_2S) Contingency Plan

For

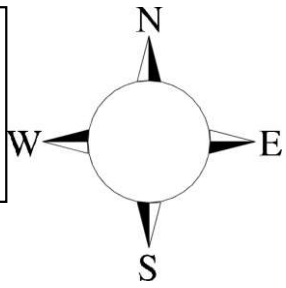
North Blondie 3-15 Fed Com 102H

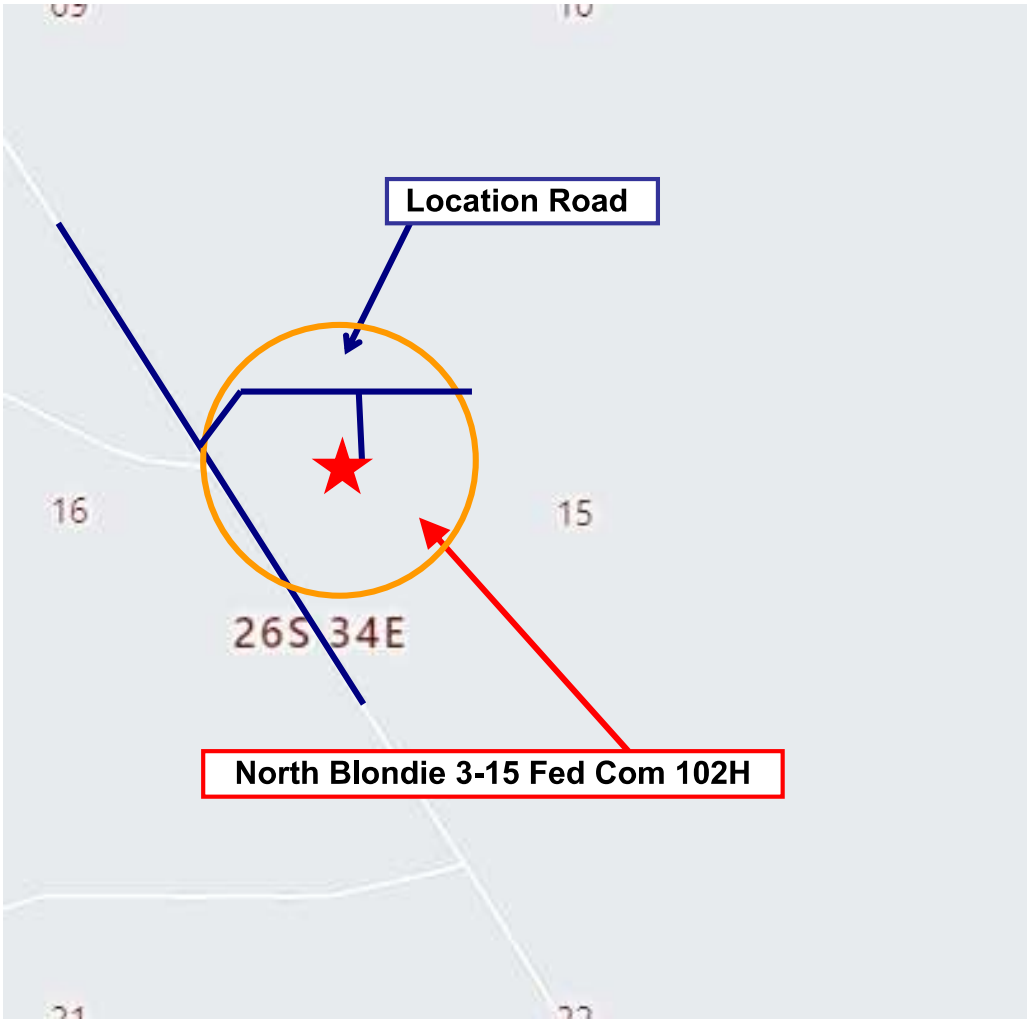
Sec-15 T-26S R-34E
1859’ FNL & 1503’ FWL
LAT. = 32.045601° N (NAD83)
LONG = 103.461448° W

Lea County NM

North Blondie 3-15 Fed Com 102H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.





Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) 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 this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

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

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

There will be weekly H_2S and well control drills for all personnel in each crew.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

   - **Bell nipple**
   - **Rig floor**
   - **Cellar**
   - **Possum Belly/Shale shaker**
   - **Choke manifold**

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. **Mud program:**

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

5. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H_2S trim.

   B. All elastomers used for packing and seals shall be H_2S trim.

6. **Communication:**

   A. Company personnel have/use cellular telephones in the field.

   B. Land line (telephone) communications at Office

7. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H_2S environment will use the closed chamber method of testing.

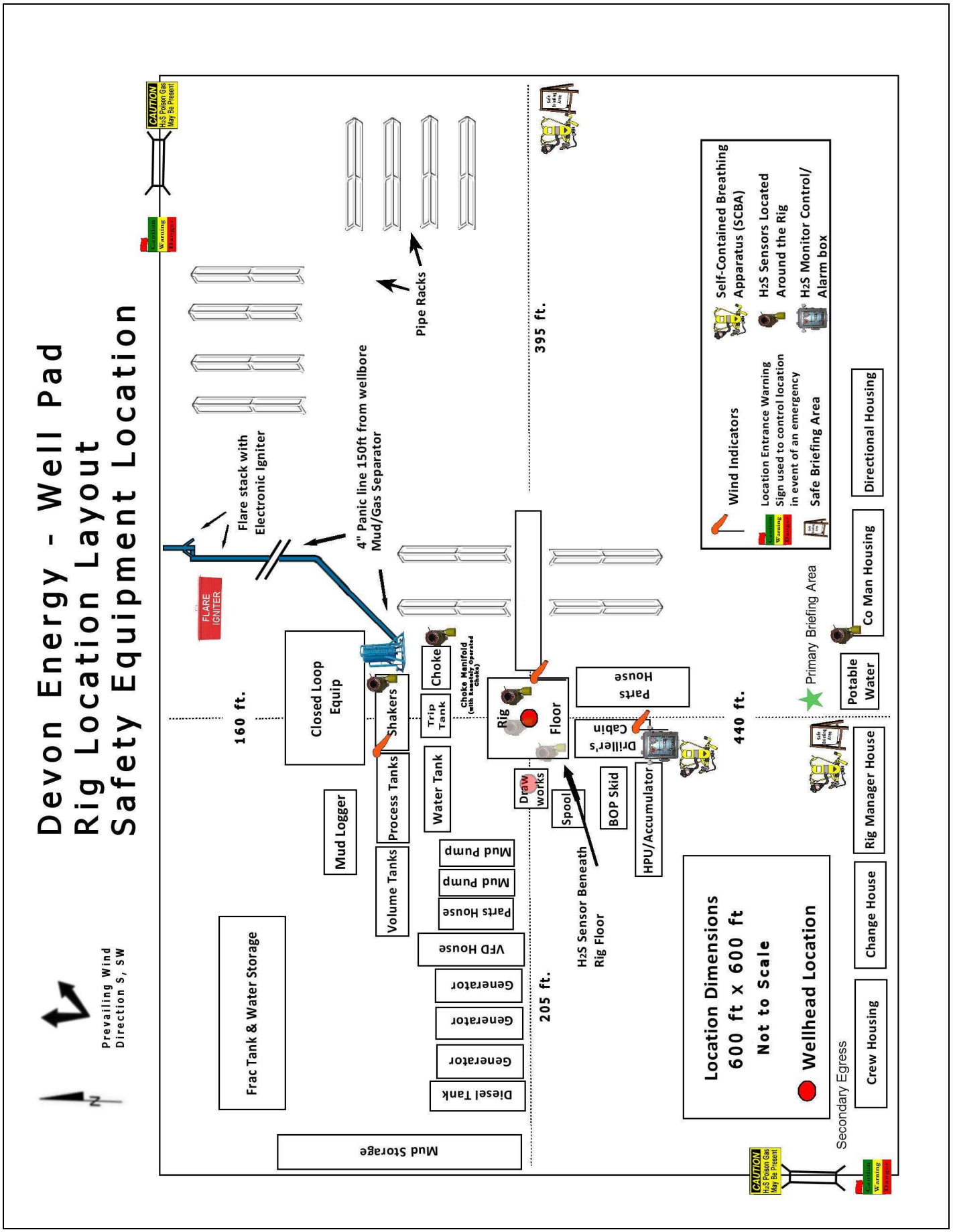
   B. There will be no drill stem testing.

Devon Energy Corp. Company Call List

Employee/Company Contact Representative	Position	Phone Number	After Hours Number
Jonathan Fisher (North)	Drilling Manager	832-967-7912	
Jason Hildebrand (South)	Drilling Manager	405-552-6514	
Rich Downey	Drilling VP	405-228-2415	
Josh Harvey	EHS Manager	405-228-2440	918-500-5536
Laura Wright	EHS Supervisor	405-552-5334	832-969-8145
Robert Glover	EHS Professional	575-703-5712	575-703-5712
Lane Frank	Lead EHS	580-579-7052	580-579-7052
Rickey Porter	Lead EHS	903-720-8315	903-720-8315
Ronnie Handy	Lead EHS	918-839-2046	918-839-2046
Brock Vise	Lead EHS	918-413-3291	918-413-3291

Agency Call List		
Lea County (575)	**Hobbs**	
	Lea County Communication Authority	397-9265
	State Police	885-3138
	City Police	397-9265
	Sheriff's Office	396-3611
	Ambulance	**911**
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management (Closed)	393-0002
Eddy County (575)	**Carlsbad**	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	Ambulance	**911**
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	234-5972
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	Emergency Services	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control (915) 699-0139	(915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs	(575) 347-9836
	For Air Ambulance - **Eddy County** Dispatch	(575)-616-7155
	For Air Ambulance - **Lea County** (LCCA)	(575)-397-9265
	Poison Control (24/7)	(800) 222-1222
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov	
	National Pollution Control Center	202-795-6958
	NPCC – Oil Spills	800-280-7118

Prepared in conjunction with
Dave Small SHARP communications and consulting



Devon Energy Corp. Cont Plan. Page 8

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-025-52620

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

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

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 02/23/2024

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	[2] Pool Code	[3] Pool Name
30-025-52620	5695	BILBREY BASIN, BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
335225	REGAL LAGER 31_19 FED COM	71H

[7] OGRID No.	[8] Operator Name	[9] Elevation
16696	OXY USA INC.	3624'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	31	21S	32E		302	South	2686	East	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 1	19	21S	32E		20	North	330	West	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
522.32			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

BHL (NAD83)
N:535727.87' / E:729917.74'
LAT:32.47129389 / LON:-103.72184296
BHL (NAD27)
N:535666.60' / E:688736.27'
LAT:32.47117162 / LON:-103.72135107

LTP (NAD83)
N:535647.87' / E:729918.18'
LAT:32.47107399 / LON:-103.72184301
LTP (NAD27)
N:535586.61' / E:688736.71'
LAT:32.47095173 / LON:-103.72135112

PPP-5 (NAD83)
N:533106.95' / E:729932.32'
LAT:32.46408969 / LON:-103.72184438
PPP-5 (NAD27)
N:533045.76' / E:688750.78'
LAT:32.46396739 / LON:-103.72135277

PI-2/PPP-4 (NAD83)
N:530466.99' / E:729947.00'
LAT:32.45683314 / LON:-103.72184579
PI-2/PPP-4 (NAD27)
N:530405.87' / E:688765.39'
LAT:32.45671081 / LON:-103.72135446

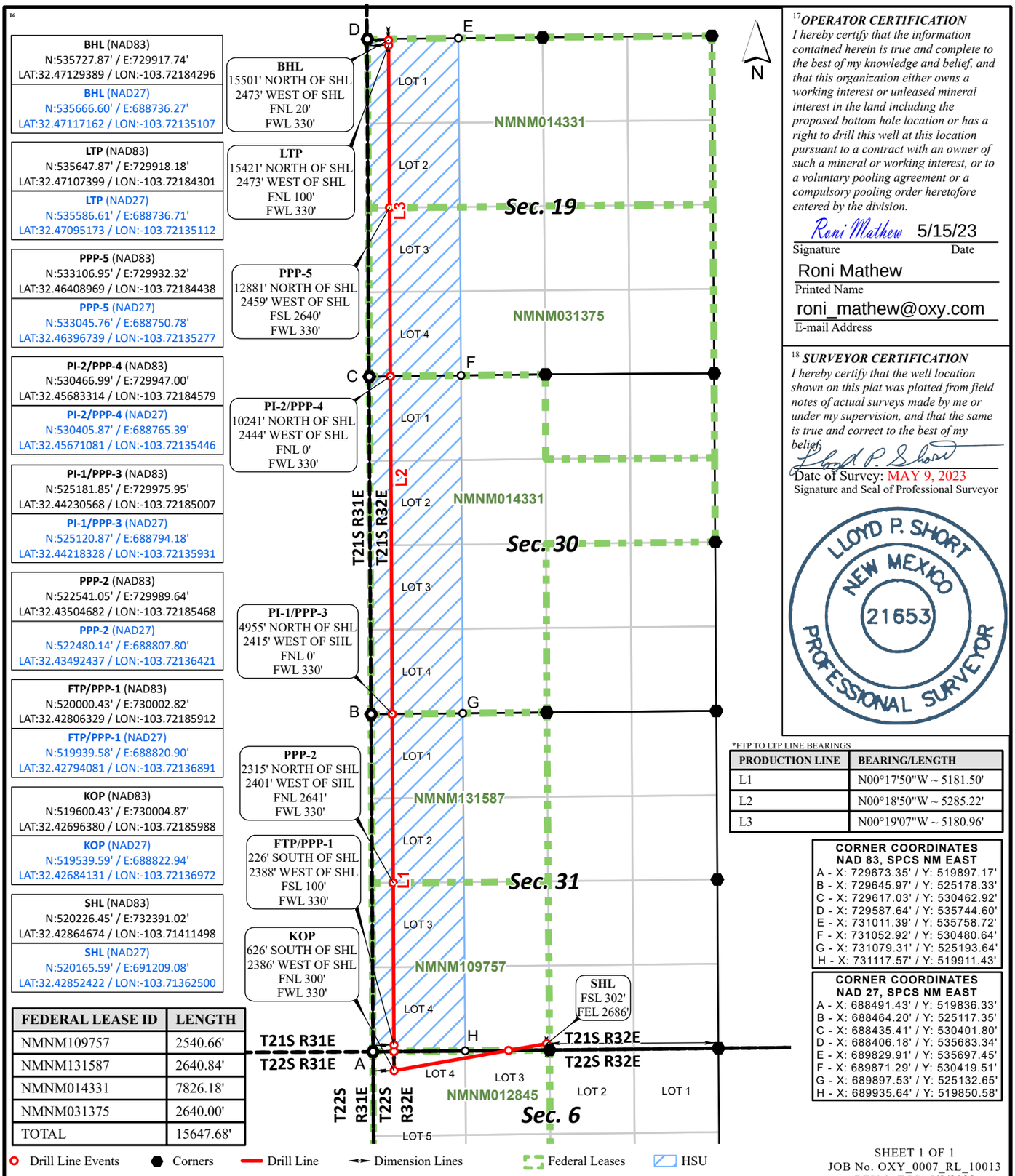
PI-1/PPP-3 (NAD83)
N:525181.85' / E:729975.95'
LAT:32.44230568 / LON:-103.72185007
PI-1/PPP-3 (NAD27)
N:525120.87' / E:688794.18'
LAT:32.44218328 / LON:-103.72135931

PPP-2 (NAD83)
N:522541.05' / E:729989.64'
LAT:32.43504682 / LON:-103.72185468
PPP-2 (NAD27)
N:522480.14' / E:688807.80'
LAT:32.43492437 / LON:-103.72136421

FTP/PPP-1 (NAD83)
N:520000.43' / E:730002.82'
LAT:32.42806329 / LON:-103.72185912
FTP/PPP-1 (NAD27)
N:519939.58' / E:688820.90'
LAT:32.42794081 / LON:-103.72136891

KOP (NAD83)
N:519600.43' / E:730004.87'
LAT:32.42696380 / LON:-103.72185988
KOP (NAD27)
N:519539.59' / E:688822.94'
LAT:32.42684131 / LON:-103.72136972

SHL (NAD83)
N:520226.45' / E:732391.02'
LAT:32.42864674 / LON:-103.71411498
SHL (NAD27)
N:520165.59' / E:691209.08'
LAT:32.42852422 / LON:-103.71362500



FEDERAL LEASE ID	LENGTH
NMNM109757	2540.66'
NMNM131587	2640.84'
NMNM014331	7826.18'
NMNM031375	2640.00'
TOTAL	15647.68'

*FTP TO LTP LINE BEARINGS

PRODUCTION LINE	BEARING/LENGTH
L1	N00°17'50"W ~ 5181.50'
L2	N00°18'50"W ~ 5285.22'
L3	N00°19'07"W ~ 5180.96'

CORNER COORDINATES NAD 83, SPCS NM EAST
A - X: 729673.35' / Y: 519897.17'
B - X: 729645.97' / Y: 525178.33'
C - X: 729617.03' / Y: 530462.92'
D - X: 729587.64' / Y: 535744.60'
E - X: 731011.39' / Y: 535758.72'
F - X: 731052.92' / Y: 530480.64'
G - X: 731079.31' / Y: 525193.64'
H - X: 731117.57' / Y: 519911.43'

CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 688491.43' / Y: 519836.33'
B - X: 688464.20' / Y: 525117.35'
C - X: 688435.41' / Y: 530401.80'
D - X: 688406.18' / Y: 535683.34'
E - X: 689829.91' / Y: 535697.45'
F - X: 689871.29' / Y: 530419.51'
G - X: 689897.53' / Y: 525132.65'
H - X: 689935.64' / Y: 519850.58'

[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 5/15/23
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.

Date of Survey: MAY 9, 2023
Signature and Seal of Professional Surveyor

LLOYD P. SHORT NEW MEXICO 21653 PROFESSIONAL SURVEYOR

Drill Line Events ⬢ Corners — Drill Line ⟷ Dimension Lines ▭ Federal Leases ▭ HSU

All bearings and coordinates refer to New Mexico State Plane coordinate system, East Zone, U.S. Survey Feet.

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99977642 Convergence Angle: 0.32750833°

SHEET 1 OF 1
JOB No. OXY_0007_RL_10013
REV 1 TCS 5/8/2023

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:** 05/15/23

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: LOST TANK 5 CPF [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.

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:	Roni Mathew
Printed Name:	Roni Mathew
Title:	Regulatory Advisor
E-mail Address:	roni_mathew@oxy.com
Date:	05/15/2023
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 (ULSTR)	Footages	ANTICIPATED OIL BBL/D	ANTICIPATED GAS MCF/D	ANTICIPATED PROD WATER BBL/D
REGAL LAGER 31_19 FED COM 11H	PENDING	G-6-T22-R32E	1639 FNL 2452 FEL	1024	3,302	1864
REGAL LAGER 31_19 FED COM 12H	PENDING	G-6-T22-R32E	1639 FNL 2422 FEL	1024	3,302	1864
REGAL LAGER 31_19 FED COM 13H	PENDING	G-6-T22-R32E	1639 FNL 2392 FEL	1024	3,302	1864
REGAL LAGER 31_19 FED COM 14H	PENDING	L 1-6-T22-R32E	763 FNL 976 FEL	1024	3,302	1864
REGAL LAGER 31_19 FED COM 1H	PENDING	N-31-T21-R32E	178 FSL 2689 FWL	861	1,476	2531
REGAL LAGER 31_19 FED COM 21H	PENDING	N-31-T21-R32E	179 FSL 2599 FWL	1086	1,283	2187
REGAL LAGER 31_19 FED COM 22H	PENDING	N-31-T21-R32E	178 FSL 2629 FWL	1086	1,283	2187
REGAL LAGER 31_19 FED COM 23H	PENDING	L 1-6-T22-R32E	764 FNL 857 FEL	1086	1,283	2187
REGAL LAGER 31_19 FED COM 24H	PENDING	L 1-6-T22-R32E	764 FNL 827 FEL	1086	1,283	2187
REGAL LAGER 31_19 FED COM 2H	PENDING	N-31-T21-R32E	177 FSL 2687 FEL	861	1,476	2531
REGAL LAGER 31_19 FED COM 31H	PENDING	N-31-T21-R32E	304 FSL 2599 FWL	2163	3,555	5014
REGAL LAGER 31_19 FED COM 32H	PENDING	N-31-T21-R32E	303 FSL 2629 FWL	2040	3,358	4730
REGAL LAGER 31_19 FED COM 33H	PENDING	N-31-T21-R32E	303 FSL 2659 FWL	2040	3,358	4730
REGAL LAGER 31_19 FED COM 34H	PENDING	L 1-6-T22-R32E	889 FNL 887 FEL	2040	3,358	4730
REGAL LAGER 31_19 FED COM 35H	PENDING	L 1-6-T22-R32E	889 FNL 858 FEL	2040	3,358	4730
REGAL LAGER 31_19 FED COM 36H	PENDING	L 1-6-T22-R32E	889 FNL 827 FEL	1731	2849	4014
REGAL LAGER 31_19 FED COM 3H	PENDING	L 1-6-T22-R32E	763 FNL 947 FEL	861	1,476	2531
REGAL LAGER 31_19 FED COM 4H	PENDING	L 1-6-T22-R32E	763 FNL 917 FEL	861	1,476	2531
REGAL LAGER 31_19 FED COM 71H	PENDING	N-31-T21-R32E	302 FSL 2686 FEL	1055	1833	1609
REGAL LAGER 31_19 FED COM 72H	PENDING	N-31-T21-R32E	302 FSL 2656 FEL	1055	1833	1609
REGAL LAGER 31_19 FED COM 73H	PENDING	L 1-6-T22-R32E	888 FNL 977 FEL	1055	1833	1609
REGAL LAGER 31_19 FED COM 74H	PENDING	L 1-6-T22-R32E	888 FNL 948 FEL	1055	1833	1609

V. Anticipated Schedule

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
REGAL LAGER 31_19 FED COM 11H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 12H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 13H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 14H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 1H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 21H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 22H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 23H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 24H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 2H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 31H	PENDING	23-Dec	TBD	Mar-2024	Apr-2024	Apr-2024
REGAL LAGER 31_19 FED COM 32H	PENDING	23-Dec	TBD	Mar-2024	Apr-2024	Apr-2024
REGAL LAGER 31_19 FED COM 33H	PENDING	23-Dec	TBD	Mar-2024	Apr-2024	Apr-2024
REGAL LAGER 31_19 FED COM 34H	PENDING	23-Dec	TBD	Mar-2024	Apr-2024	Apr-2024
REGAL LAGER 31_19 FED COM 35H	PENDING	23-Dec	TBD	Mar-2024	Apr-2024	Apr-2024
REGAL LAGER 31_19 FED COM 36H	PENDING	23-Dec	TBD	Mar-2024	Apr-2024	Apr-2024
REGAL LAGER 31_19 FED COM 3H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 4H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 71H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 72H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 73H	PENDING	TBD	TBD	TBD	TBD	TBD
REGAL LAGER 31_19 FED COM 74H	PENDING	TBD	TBD	TBD	TBD	TBD

Central Delivery Point: Lost Tank 5 CPF

Part VI. Separation Equipment

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

VII. Operational Practices

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility and fluids will be sent to the facility after initial flowback operations are complete, where a gas transporter system is in place. The gas produced from production facility will be dedicated to MarkWest Energy West Texas Gas Company LLC ("MarkWest") and will be connected to MarkWest's high pressure gathering system located in Lea and Eddy Counties, New Mexico and Loving and Culberson Counties, TX. OXY USA INC. ("OXY") will provide (periodically) to MarkWest a production forecast for wells being sent to their system. In addition, OXY and MarkWest will have periodic conference calls to discuss changes to production forecasts arising out of changes to drilling and completion schedules. Gas from these wells will be processed at MarWest's Preakness and Tornado Processing Plants located in Culberson County, TX and Loving County, Texas respectively. 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 Targa 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

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

Compressed Natural Gas – On lease

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

NGL Removal – On lease

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

Oxy USA Inc. - Regal Lager 31_19 Fed Com 71H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	10879	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	27322	Deepest Expected Fresh Water (ft):	797

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	797	797	
Salado	1063	1063	Salt
Castile	2617	2617	Salt
Delaware	4568	4509	Oil/Gas/Brine
Bell Canyon	4649	4586	Oil/Gas/Brine
Cherry Canyon	5556	5449	Oil/Gas/Brine
Brushy Canyon	6887	6715	Losses
Bone Spring	8739	8476	Oil/Gas
Bone Spring 1st	9838	9521	Oil/Gas
Bone Spring 2nd	10514	10164	Oil/Gas
Bone Spring 3rd			Oil/Gas
Wolfcamp			Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

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

2. Casing Program

		MD		TVD					
Section	Hole Size (in)	From (ft)	To (ft)	From (ft)	To (ft)	Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
Surface	17.5	0	857	0	857	13.375	54.5	J-55	BTC
Salt	12.25	0	4609	0	4549	9.625	40	L-80 HC	BTC
Intermediate	8.75	0	10530	0	10175	7.625	26.4	L-80 HC	Wedge 425
Production	6.75	0	27322	0	10879	5.5	20	P-110	Wedge 461

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

*Oxy requests the option to run production casing with DQX, TORQ DQW, Wedge 425, Wedge 461, and/or Wedge 441 connections to accommodate hole conditions or drilling operations.

All Casing SF Values will meet or exceed those below			
SF Collapse	**SF Burst**	**Body SF Tension**	**Joint SF Tension**
1.125	1.2	1.4	1.4

Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from Onshore Order #2 under the following conditions:

1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	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 3rd 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 2nd 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	895	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.1	1	Intermediate - Tail	141	1.33	14.8	20%	4,109	Circulate	Class C+Accel.
Int.1	1	Intermediate - Lead	1063	1.73	12.9	50%	-	Circulate	Class Pozz+Ret.
Int. 2	1	Intermediate 1S - Tail	217	1.65	13.2	5%	7,137	Circulate	Class H+Accel., Disper., Salt
Int. 2	2	Intermediate 2S - Tail BH	478	1.71	13.3	25%	-	Bradenhead Post-Frac	Class C+Accel.
Prod.	1	Production - Tail	1307	1.38	13.2	25%	10,030	Circulate	Class H+Ret., Disper., Salt

Offline Cementing

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.

The summarized operational sequence will be as follows:
Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).
Land casing.
Fill pipe with kill weight fluid, and confirm well is static.
If well 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.

The summarized operational sequence will be as follows:

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).
2. Land casing.
3. Fill pipe with kill weight fluid, and confirm well is static.
   a. If well is not static notify BLM and kill well.
   b. Once well is static notify BLM with intent to proceed with nipple down and offline cementing.
4. Set and pressure test annular packoff.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange. If any barrier fails to test, the BOP stack will not be nippled down until after the cement job is completed.
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange.
8. If well is not static notify BLM and kill well prior to cementing or nippling up for further remediation.
9. Install offline cement tool.
10. Rig up cement equipment.
    a. Notify BLM prior to cement job.
11. Perform cement job.
12. Confirm well is static and floats are holding after cement job.
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

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.

Four string wells:

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

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	4549
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
8.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	10175
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
6.75" Hole	13-5/8"	5M	Annular	✓	100% of working pressure	10879
		10M	Blind Ram	✓	250 psi / 10000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			

*Specify if additional ram is utilized

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 attached Well Control Plan.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 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.

	Formation integrity test will be performed per Onshore Order #2.	
	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 Onshore Oil and Gas Order #2 III.B.1.i.	
	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 Onshore Order #2 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.

BOP break test under the following conditions:
- After a full BOP test is conducted
- When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower.

If the kill line is broken prior to skid, two tests will be performed.
1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams
2) Wellhead flange, HCR valve, check valve, upper pipe rams

If the kill line is not broken prior to skid, only one test will be performed.
1)Wellhead flange, co-flex hose, check valve, upper pipe rams

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	857	0	857	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate 1	857	4609	857	4549	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Intermediate 2	4609	10530	4549	10175	Water-Based or Oil-Based Mud	8.0 - 10.0	38-50	N/C
Production	10530	27322	10175	10879	Water-Based or Oil-Based Mud	9.5 - 12.5	38-50	N/C

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

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

6. Logging and Testing Procedures

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

Additional logs planned		Interval
No	Resistivity	
No	Density	
Yes	CBL	Production string
Yes	Mud log	Bone Spring – TD
No	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7072 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	168°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 Onshore Oil and Gas Order #6. 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 2 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: 1986 bbls

Attachments
_x__ Directional Plan
_x__ H2S Contingency Plan
_x__ Flex III Attachments
_x__ Spudder Rig Attachment
_x__ Premium Connection Specs

9. Company Personnel

Name	Title	Office Phone	Mobile Phone
Garrett Granier	Drilling Engineer	713-513-6633	832-265-0581
Derek Adam	Drilling Engineer Supervisor	713-366-5170	916-802-8873
Casey Martin	Drilling Superintendent	713-497-2530	337-764-4278
Kevin Threadgill	Drilling Manager	713-366-5958	361-815-0788

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)
Regal Lager 31_19 Fed Com
Regal Lager 31_19 Fed Com 71H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

03 May, 2023

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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 Regal Lager 31_19 Fed Com

Site Position:		**Northing:**	520,226.48 usft	**Latitude:**	32.428649
From:	Map	**Easting:**	732,271.10 usft	**Longitude:**	-103.714504
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in		

Well Regal Lager 31_19 Fed Com 71H

Well Position	**+N/-S**	0.00 ft	**Northing:**	520,226.45 usf	**Latitude:**	32.428647
	+E/-W	0.00 ft	**Easting:**	732,391.02 usf	**Longitude:**	-103.714115
Position Uncertainty		2.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,624.00 ft
Grid Convergence:		0.33 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	5/3/2023	6.43	60.08	47,701.00000000

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	350.93

Plan Survey Tool Program **Date** 5/3/2023

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	27,321.95	Permitting Plan (Wellbore #1)	B001Mb_MWD+HRGM	
				OWSG 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	
2,165.00	0.00	0.00	2,165.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,964.51	18.00	250.05	3,935.07	-95.64	-263.45	1.00	1.00	0.00	250.05	
10,630.07	18.00	250.05	10,274.57	-798.36	-2,199.07	0.00	0.00	0.00	0.00	
11,593.16	90.36	359.69	10,879.00	-226.03	-2,388.32	10.00	7.51	11.38	108.64	FTP (Regal Lager
27,321.95	90.36	359.69	10,779.00	15,502.21	-2,473.41	0.00	0.00	0.00	0.00	PBHL (Regal Lager

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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
2,165.00	0.00	0.00	2,165.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.35	250.05	2,200.00	-0.04	-0.10	-0.02	1.00	1.00	0.00
2,300.00	1.35	250.05	2,299.99	-0.54	-1.49	-0.30	1.00	1.00	0.00
2,400.00	2.35	250.05	2,399.93	-1.64	-4.53	-0.91	1.00	1.00	0.00
2,500.00	3.35	250.05	2,499.81	-3.34	-9.20	-1.85	1.00	1.00	0.00
2,600.00	4.35	250.05	2,599.58	-5.63	-15.51	-3.12	1.00	1.00	0.00
2,700.00	5.35	250.05	2,699.22	-8.52	-23.46	-4.71	1.00	1.00	0.00
2,800.00	6.35	250.05	2,798.70	-12.00	-33.04	-6.64	1.00	1.00	0.00
2,900.00	7.35	250.05	2,897.99	-16.07	-44.25	-8.89	1.00	1.00	0.00
3,000.00	8.35	250.05	2,997.05	-20.73	-57.09	-11.47	1.00	1.00	0.00
3,100.00	9.35	250.05	3,095.86	-25.98	-71.55	-14.38	1.00	1.00	0.00
3,200.00	10.35	250.05	3,194.38	-31.81	-87.63	-17.61	1.00	1.00	0.00
3,300.00	11.35	250.05	3,292.59	-38.24	-105.33	-21.17	1.00	1.00	0.00
3,400.00	12.35	250.05	3,390.46	-45.25	-124.63	-25.04	1.00	1.00	0.00
3,500.00	13.35	250.05	3,487.95	-52.83	-145.53	-29.24	1.00	1.00	0.00
3,600.00	14.35	250.05	3,585.04	-61.00	-168.03	-33.77	1.00	1.00	0.00
3,700.00	15.35	250.05	3,681.70	-69.75	-192.12	-38.61	1.00	1.00	0.00
3,800.00	16.35	250.05	3,777.90	-79.07	-217.80	-43.77	1.00	1.00	0.00
3,900.00	17.35	250.05	3,873.61	-88.96	-245.04	-49.24	1.00	1.00	0.00
3,964.51	18.00	250.05	3,935.07	-95.64	-263.45	-52.94	1.00	1.00	0.00
4,000.00	18.00	250.05	3,968.82	-99.39	-273.76	-55.01	0.00	0.00	0.00
4,100.00	18.00	250.05	4,063.93	-109.93	-302.80	-60.85	0.00	0.00	0.00
4,200.00	18.00	250.05	4,159.04	-120.47	-331.83	-66.68	0.00	0.00	0.00
4,300.00	18.00	250.05	4,254.15	-131.01	-360.87	-72.52	0.00	0.00	0.00
4,400.00	18.00	250.05	4,349.26	-141.56	-389.91	-78.35	0.00	0.00	0.00
4,500.00	18.00	250.05	4,444.37	-152.10	-418.95	-84.19	0.00	0.00	0.00
4,600.00	18.00	250.05	4,539.47	-162.64	-447.99	-90.02	0.00	0.00	0.00
4,700.00	18.00	250.05	4,634.58	-173.18	-477.03	-95.86	0.00	0.00	0.00
4,800.00	18.00	250.05	4,729.69	-183.73	-506.07	-101.69	0.00	0.00	0.00
4,900.00	18.00	250.05	4,824.80	-194.27	-535.11	-107.53	0.00	0.00	0.00
5,000.00	18.00	250.05	4,919.91	-204.81	-564.15	-113.37	0.00	0.00	0.00
5,100.00	18.00	250.05	5,015.02	-215.35	-593.19	-119.20	0.00	0.00	0.00
5,200.00	18.00	250.05	5,110.12	-225.89	-622.23	-125.04	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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	18.00	250.05	5,205.23	-236.44	-651.26	-130.87	0.00	0.00	0.00
5,400.00	18.00	250.05	5,300.34	-246.98	-680.30	-136.71	0.00	0.00	0.00
5,500.00	18.00	250.05	5,395.45	-257.52	-709.34	-142.54	0.00	0.00	0.00
5,600.00	18.00	250.05	5,490.56	-268.06	-738.38	-148.38	0.00	0.00	0.00
5,700.00	18.00	250.05	5,585.67	-278.61	-767.42	-154.21	0.00	0.00	0.00
5,800.00	18.00	250.05	5,680.77	-289.15	-796.46	-160.05	0.00	0.00	0.00
5,900.00	18.00	250.05	5,775.88	-299.69	-825.50	-165.88	0.00	0.00	0.00
6,000.00	18.00	250.05	5,870.99	-310.23	-854.54	-171.72	0.00	0.00	0.00
6,100.00	18.00	250.05	5,966.10	-320.78	-883.58	-177.56	0.00	0.00	0.00
6,200.00	18.00	250.05	6,061.21	-331.32	-912.62	-183.39	0.00	0.00	0.00
6,300.00	18.00	250.05	6,156.32	-341.86	-941.66	-189.23	0.00	0.00	0.00
6,400.00	18.00	250.05	6,251.42	-352.40	-970.69	-195.06	0.00	0.00	0.00
6,500.00	18.00	250.05	6,346.53	-362.95	-999.73	-200.90	0.00	0.00	0.00
6,600.00	18.00	250.05	6,441.64	-373.49	-1,028.77	-206.73	0.00	0.00	0.00
6,700.00	18.00	250.05	6,536.75	-384.03	-1,057.81	-212.57	0.00	0.00	0.00
6,800.00	18.00	250.05	6,631.86	-394.57	-1,086.85	-218.40	0.00	0.00	0.00
6,900.00	18.00	250.05	6,726.97	-405.12	-1,115.89	-224.24	0.00	0.00	0.00
7,000.00	18.00	250.05	6,822.07	-415.66	-1,144.93	-230.07	0.00	0.00	0.00
7,100.00	18.00	250.05	6,917.18	-426.20	-1,173.97	-235.91	0.00	0.00	0.00
7,200.00	18.00	250.05	7,012.29	-436.74	-1,203.01	-241.74	0.00	0.00	0.00
7,300.00	18.00	250.05	7,107.40	-447.29	-1,232.05	-247.58	0.00	0.00	0.00
7,400.00	18.00	250.05	7,202.51	-457.83	-1,261.09	-253.42	0.00	0.00	0.00
7,500.00	18.00	250.05	7,297.61	-468.37	-1,290.13	-259.25	0.00	0.00	0.00
7,600.00	18.00	250.05	7,392.72	-478.91	-1,319.16	-265.09	0.00	0.00	0.00
7,700.00	18.00	250.05	7,487.83	-489.46	-1,348.20	-270.92	0.00	0.00	0.00
7,800.00	18.00	250.05	7,582.94	-500.00	-1,377.24	-276.76	0.00	0.00	0.00
7,900.00	18.00	250.05	7,678.05	-510.54	-1,406.28	-282.59	0.00	0.00	0.00
8,000.00	18.00	250.05	7,773.16	-521.08	-1,435.32	-288.43	0.00	0.00	0.00
8,100.00	18.00	250.05	7,868.26	-531.63	-1,464.36	-294.26	0.00	0.00	0.00
8,200.00	18.00	250.05	7,963.37	-542.17	-1,493.40	-300.10	0.00	0.00	0.00
8,300.00	18.00	250.05	8,058.48	-552.71	-1,522.44	-305.93	0.00	0.00	0.00
8,400.00	18.00	250.05	8,153.59	-563.25	-1,551.48	-311.77	0.00	0.00	0.00
8,500.00	18.00	250.05	8,248.70	-573.80	-1,580.52	-317.60	0.00	0.00	0.00
8,600.00	18.00	250.05	8,343.81	-584.34	-1,609.56	-323.44	0.00	0.00	0.00
8,700.00	18.00	250.05	8,438.91	-594.88	-1,638.59	-329.28	0.00	0.00	0.00
8,800.00	18.00	250.05	8,534.02	-605.42	-1,667.63	-335.11	0.00	0.00	0.00
8,900.00	18.00	250.05	8,629.13	-615.97	-1,696.67	-340.95	0.00	0.00	0.00
9,000.00	18.00	250.05	8,724.24	-626.51	-1,725.71	-346.78	0.00	0.00	0.00
9,100.00	18.00	250.05	8,819.35	-637.05	-1,754.75	-352.62	0.00	0.00	0.00
9,200.00	18.00	250.05	8,914.46	-647.59	-1,783.79	-358.45	0.00	0.00	0.00
9,300.00	18.00	250.05	9,009.56	-658.14	-1,812.83	-364.29	0.00	0.00	0.00
9,400.00	18.00	250.05	9,104.67	-668.68	-1,841.87	-370.12	0.00	0.00	0.00
9,500.00	18.00	250.05	9,199.78	-679.22	-1,870.91	-375.96	0.00	0.00	0.00
9,600.00	18.00	250.05	9,294.89	-689.76	-1,899.95	-381.79	0.00	0.00	0.00
9,700.00	18.00	250.05	9,390.00	-700.31	-1,928.99	-387.63	0.00	0.00	0.00
9,800.00	18.00	250.05	9,485.11	-710.85	-1,958.03	-393.47	0.00	0.00	0.00
9,900.00	18.00	250.05	9,580.21	-721.39	-1,987.06	-399.30	0.00	0.00	0.00
10,000.00	18.00	250.05	9,675.32	-731.93	-2,016.10	-405.14	0.00	0.00	0.00
10,100.00	18.00	250.05	9,770.43	-742.48	-2,045.14	-410.97	0.00	0.00	0.00
10,200.00	18.00	250.05	9,865.54	-753.02	-2,074.18	-416.81	0.00	0.00	0.00
10,300.00	18.00	250.05	9,960.65	-763.56	-2,103.22	-422.64	0.00	0.00	0.00
10,400.00	18.00	250.05	10,055.76	-774.10	-2,132.26	-428.48	0.00	0.00	0.00
10,500.00	18.00	250.05	10,150.86	-784.65	-2,161.30	-434.31	0.00	0.00	0.00
10,600.00	18.00	250.05	10,245.97	-795.19	-2,190.34	-440.15	0.00	0.00	0.00
10,630.07	18.00	250.05	10,274.57	-798.36	-2,199.07	-441.90	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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)
10,700.00	17.05	273.21	10,341.34	-801.47	-2,219.49	-441.76	10.00	-1.35	33.12
10,800.00	20.21	303.32	10,436.30	-791.14	-2,248.64	-426.96	10.00	3.16	30.11
10,900.00	26.84	322.34	10,528.07	-763.70	-2,276.93	-395.41	10.00	6.62	19.02
11,000.00	35.01	333.66	10,613.85	-720.02	-2,303.52	-348.08	10.00	8.17	11.32
11,100.00	43.87	341.01	10,691.05	-661.40	-2,327.58	-286.40	10.00	8.86	7.35
11,200.00	53.06	346.27	10,757.31	-589.63	-2,348.39	-212.25	10.00	9.20	5.27
11,300.00	62.44	350.39	10,810.62	-506.89	-2,365.32	-127.88	10.00	9.38	4.11
11,400.00	71.92	353.84	10,849.37	-415.69	-2,377.85	-35.85	10.00	9.48	3.46
11,500.00	81.46	356.94	10,872.36	-318.81	-2,385.61	61.05	10.00	9.54	3.10
11,593.16	90.36	359.69	10,879.00	-226.03	-2,388.32	153.09	10.00	9.56	2.95
11,600.00	90.36	359.69	10,878.96	-219.19	-2,388.36	159.85	0.00	0.00	0.00
11,700.00	90.36	359.69	10,878.32	-119.19	-2,388.90	258.69	0.00	0.00	0.00
11,800.00	90.36	359.69	10,877.69	-19.20	-2,389.44	357.52	0.00	0.00	0.00
11,900.00	90.36	359.69	10,877.05	80.80	-2,389.98	456.35	0.00	0.00	0.00
12,000.00	90.36	359.69	10,876.41	180.80	-2,390.52	555.19	0.00	0.00	0.00
12,100.00	90.36	359.69	10,875.78	280.79	-2,391.06	654.02	0.00	0.00	0.00
12,200.00	90.36	359.69	10,875.14	380.79	-2,391.60	752.85	0.00	0.00	0.00
12,300.00	90.36	359.69	10,874.51	480.79	-2,392.15	851.68	0.00	0.00	0.00
12,400.00	90.36	359.69	10,873.87	580.78	-2,392.69	950.52	0.00	0.00	0.00
12,500.00	90.36	359.69	10,873.23	680.78	-2,393.23	1,049.35	0.00	0.00	0.00
12,600.00	90.36	359.69	10,872.60	780.77	-2,393.77	1,148.18	0.00	0.00	0.00
12,700.00	90.36	359.69	10,871.96	880.77	-2,394.31	1,247.02	0.00	0.00	0.00
12,800.00	90.36	359.69	10,871.33	980.77	-2,394.85	1,345.85	0.00	0.00	0.00
12,900.00	90.36	359.69	10,870.69	1,080.76	-2,395.39	1,444.68	0.00	0.00	0.00
13,000.00	90.36	359.69	10,870.06	1,180.76	-2,395.93	1,543.51	0.00	0.00	0.00
13,100.00	90.36	359.69	10,869.42	1,280.76	-2,396.47	1,642.35	0.00	0.00	0.00
13,200.00	90.36	359.69	10,868.78	1,380.75	-2,397.01	1,741.18	0.00	0.00	0.00
13,300.00	90.36	359.69	10,868.15	1,480.75	-2,397.56	1,840.01	0.00	0.00	0.00
13,400.00	90.36	359.69	10,867.51	1,580.75	-2,398.10	1,938.84	0.00	0.00	0.00
13,500.00	90.36	359.69	10,866.88	1,680.74	-2,398.64	2,037.68	0.00	0.00	0.00
13,600.00	90.36	359.69	10,866.24	1,780.74	-2,399.18	2,136.51	0.00	0.00	0.00
13,700.00	90.36	359.69	10,865.61	1,880.74	-2,399.72	2,235.34	0.00	0.00	0.00
13,800.00	90.36	359.69	10,864.97	1,980.73	-2,400.26	2,334.18	0.00	0.00	0.00
13,900.00	90.36	359.69	10,864.33	2,080.73	-2,400.80	2,433.01	0.00	0.00	0.00
14,000.00	90.36	359.69	10,863.70	2,180.73	-2,401.34	2,531.84	0.00	0.00	0.00
14,100.00	90.36	359.69	10,863.06	2,280.72	-2,401.88	2,630.67	0.00	0.00	0.00
14,200.00	90.36	359.69	10,862.43	2,380.72	-2,402.42	2,729.51	0.00	0.00	0.00
14,300.00	90.36	359.69	10,861.79	2,480.72	-2,402.96	2,828.34	0.00	0.00	0.00
14,400.00	90.36	359.69	10,861.15	2,580.71	-2,403.51	2,927.17	0.00	0.00	0.00
14,500.00	90.36	359.69	10,860.52	2,680.71	-2,404.05	3,026.00	0.00	0.00	0.00
14,600.00	90.36	359.69	10,859.88	2,780.71	-2,404.59	3,124.84	0.00	0.00	0.00
14,700.00	90.36	359.69	10,859.25	2,880.70	-2,405.13	3,223.67	0.00	0.00	0.00
14,800.00	90.36	359.69	10,858.61	2,980.70	-2,405.67	3,322.50	0.00	0.00	0.00
14,900.00	90.36	359.69	10,857.98	3,080.69	-2,406.21	3,421.34	0.00	0.00	0.00
15,000.00	90.36	359.69	10,857.34	3,180.69	-2,406.75	3,520.17	0.00	0.00	0.00
15,100.00	90.36	359.69	10,856.70	3,280.69	-2,407.29	3,619.00	0.00	0.00	0.00
15,200.00	90.36	359.69	10,856.07	3,380.68	-2,407.83	3,717.83	0.00	0.00	0.00
15,300.00	90.36	359.69	10,855.43	3,480.68	-2,408.37	3,816.67	0.00	0.00	0.00
15,400.00	90.36	359.69	10,854.80	3,580.68	-2,408.92	3,915.50	0.00	0.00	0.00
15,500.00	90.36	359.69	10,854.16	3,680.67	-2,409.46	4,014.33	0.00	0.00	0.00
15,600.00	90.36	359.69	10,853.53	3,780.67	-2,410.00	4,113.16	0.00	0.00	0.00
15,700.00	90.36	359.69	10,852.89	3,880.67	-2,410.54	4,212.00	0.00	0.00	0.00
15,800.00	90.36	359.69	10,852.25	3,980.66	-2,411.08	4,310.83	0.00	0.00	0.00
15,900.00	90.36	359.69	10,851.62	4,080.66	-2,411.62	4,409.66	0.00	0.00	0.00
16,000.00	90.36	359.69	10,850.98	4,180.66	-2,412.16	4,508.50	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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	90.36	359.69	10,850.35	4,280.65	-2,412.70	4,607.33	0.00	0.00	0.00
16,200.00	90.36	359.69	10,849.71	4,380.65	-2,413.24	4,706.16	0.00	0.00	0.00
16,300.00	90.36	359.69	10,849.08	4,480.65	-2,413.78	4,804.99	0.00	0.00	0.00
16,400.00	90.36	359.69	10,848.44	4,580.64	-2,414.32	4,903.83	0.00	0.00	0.00
16,500.00	90.36	359.69	10,847.80	4,680.64	-2,414.87	5,002.66	0.00	0.00	0.00
16,600.00	90.36	359.69	10,847.17	4,780.64	-2,415.41	5,101.49	0.00	0.00	0.00
16,700.00	90.36	359.69	10,846.53	4,880.63	-2,415.95	5,200.33	0.00	0.00	0.00
16,800.00	90.36	359.69	10,845.90	4,980.63	-2,416.49	5,299.16	0.00	0.00	0.00
16,900.00	90.36	359.69	10,845.26	5,080.63	-2,417.03	5,397.99	0.00	0.00	0.00
17,000.00	90.36	359.69	10,844.62	5,180.62	-2,417.57	5,496.82	0.00	0.00	0.00
17,100.00	90.36	359.69	10,843.99	5,280.62	-2,418.11	5,595.66	0.00	0.00	0.00
17,200.00	90.36	359.69	10,843.35	5,380.61	-2,418.65	5,694.49	0.00	0.00	0.00
17,300.00	90.36	359.69	10,842.72	5,480.61	-2,419.19	5,793.32	0.00	0.00	0.00
17,400.00	90.36	359.69	10,842.08	5,580.61	-2,419.73	5,892.15	0.00	0.00	0.00
17,500.00	90.36	359.69	10,841.45	5,680.60	-2,420.27	5,990.99	0.00	0.00	0.00
17,600.00	90.36	359.69	10,840.81	5,780.60	-2,420.82	6,089.82	0.00	0.00	0.00
17,700.00	90.36	359.69	10,840.17	5,880.60	-2,421.36	6,188.65	0.00	0.00	0.00
17,800.00	90.36	359.69	10,839.54	5,980.59	-2,421.90	6,287.49	0.00	0.00	0.00
17,900.00	90.36	359.69	10,838.90	6,080.59	-2,422.44	6,386.32	0.00	0.00	0.00
18,000.00	90.36	359.69	10,838.27	6,180.59	-2,422.98	6,485.15	0.00	0.00	0.00
18,100.00	90.36	359.69	10,837.63	6,280.58	-2,423.52	6,583.98	0.00	0.00	0.00
18,200.00	90.36	359.69	10,837.00	6,380.58	-2,424.06	6,682.82	0.00	0.00	0.00
18,300.00	90.36	359.69	10,836.36	6,480.58	-2,424.60	6,781.65	0.00	0.00	0.00
18,400.00	90.36	359.69	10,835.72	6,580.57	-2,425.14	6,880.48	0.00	0.00	0.00
18,500.00	90.36	359.69	10,835.09	6,680.57	-2,425.68	6,979.31	0.00	0.00	0.00
18,600.00	90.36	359.69	10,834.45	6,780.57	-2,426.23	7,078.15	0.00	0.00	0.00
18,700.00	90.36	359.69	10,833.82	6,880.56	-2,426.77	7,176.98	0.00	0.00	0.00
18,800.00	90.36	359.69	10,833.18	6,980.56	-2,427.31	7,275.81	0.00	0.00	0.00
18,900.00	90.36	359.69	10,832.55	7,080.56	-2,427.85	7,374.65	0.00	0.00	0.00
19,000.00	90.36	359.69	10,831.91	7,180.55	-2,428.39	7,473.48	0.00	0.00	0.00
19,100.00	90.36	359.69	10,831.27	7,280.55	-2,428.93	7,572.31	0.00	0.00	0.00
19,200.00	90.36	359.69	10,830.64	7,380.55	-2,429.47	7,671.14	0.00	0.00	0.00
19,300.00	90.36	359.69	10,830.00	7,480.54	-2,430.01	7,769.98	0.00	0.00	0.00
19,400.00	90.36	359.69	10,829.37	7,580.54	-2,430.55	7,868.81	0.00	0.00	0.00
19,500.00	90.36	359.69	10,828.73	7,680.53	-2,431.09	7,967.64	0.00	0.00	0.00
19,600.00	90.36	359.69	10,828.09	7,780.53	-2,431.63	8,066.47	0.00	0.00	0.00
19,700.00	90.36	359.69	10,827.46	7,880.53	-2,432.18	8,165.31	0.00	0.00	0.00
19,800.00	90.36	359.69	10,826.82	7,980.52	-2,432.72	8,264.14	0.00	0.00	0.00
19,900.00	90.36	359.69	10,826.19	8,080.52	-2,433.26	8,362.97	0.00	0.00	0.00
20,000.00	90.36	359.69	10,825.55	8,180.52	-2,433.80	8,461.81	0.00	0.00	0.00
20,100.00	90.36	359.69	10,824.92	8,280.51	-2,434.34	8,560.64	0.00	0.00	0.00
20,200.00	90.36	359.69	10,824.28	8,380.51	-2,434.88	8,659.47	0.00	0.00	0.00
20,300.00	90.36	359.69	10,823.64	8,480.51	-2,435.42	8,758.30	0.00	0.00	0.00
20,400.00	90.36	359.69	10,823.01	8,580.50	-2,435.96	8,857.14	0.00	0.00	0.00
20,500.00	90.36	359.69	10,822.37	8,680.50	-2,436.50	8,955.97	0.00	0.00	0.00
20,600.00	90.36	359.69	10,821.74	8,780.50	-2,437.04	9,054.80	0.00	0.00	0.00
20,700.00	90.36	359.69	10,821.10	8,880.49	-2,437.59	9,153.64	0.00	0.00	0.00
20,800.00	90.36	359.69	10,820.47	8,980.49	-2,438.13	9,252.47	0.00	0.00	0.00
20,900.00	90.36	359.69	10,819.83	9,080.49	-2,438.67	9,351.30	0.00	0.00	0.00
21,000.00	90.36	359.69	10,819.19	9,180.48	-2,439.21	9,450.13	0.00	0.00	0.00
21,100.00	90.36	359.69	10,818.56	9,280.48	-2,439.75	9,548.97	0.00	0.00	0.00
21,200.00	90.36	359.69	10,817.92	9,380.48	-2,440.29	9,647.80	0.00	0.00	0.00
21,300.00	90.36	359.69	10,817.29	9,480.47	-2,440.83	9,746.63	0.00	0.00	0.00
21,400.00	90.36	359.69	10,816.65	9,580.47	-2,441.37	9,845.46	0.00	0.00	0.00
21,500.00	90.36	359.69	10,816.01	9,680.46	-2,441.91	9,944.30	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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	90.36	359.69	10,815.38	9,780.46	-2,442.45	10,043.13	0.00	0.00	0.00
21,700.00	90.36	359.69	10,814.74	9,880.46	-2,442.99	10,141.96	0.00	0.00	0.00
21,800.00	90.36	359.69	10,814.11	9,980.45	-2,443.54	10,240.80	0.00	0.00	0.00
21,900.00	90.36	359.69	10,813.47	10,080.45	-2,444.08	10,339.63	0.00	0.00	0.00
22,000.00	90.36	359.69	10,812.84	10,180.45	-2,444.62	10,438.46	0.00	0.00	0.00
22,100.00	90.36	359.69	10,812.20	10,280.44	-2,445.16	10,537.29	0.00	0.00	0.00
22,200.00	90.36	359.69	10,811.56	10,380.44	-2,445.70	10,636.13	0.00	0.00	0.00
22,300.00	90.36	359.69	10,810.93	10,480.44	-2,446.24	10,734.96	0.00	0.00	0.00
22,400.00	90.36	359.69	10,810.29	10,580.43	-2,446.78	10,833.79	0.00	0.00	0.00
22,500.00	90.36	359.69	10,809.66	10,680.43	-2,447.32	10,932.62	0.00	0.00	0.00
22,600.00	90.36	359.69	10,809.02	10,780.43	-2,447.86	11,031.46	0.00	0.00	0.00
22,700.00	90.36	359.69	10,808.39	10,880.42	-2,448.40	11,130.29	0.00	0.00	0.00
22,800.00	90.36	359.69	10,807.75	10,980.42	-2,448.95	11,229.12	0.00	0.00	0.00
22,900.00	90.36	359.69	10,807.11	11,080.42	-2,449.49	11,327.96	0.00	0.00	0.00
23,000.00	90.36	359.69	10,806.48	11,180.41	-2,450.03	11,426.79	0.00	0.00	0.00
23,100.00	90.36	359.69	10,805.84	11,280.41	-2,450.57	11,525.62	0.00	0.00	0.00
23,200.00	90.36	359.69	10,805.21	11,380.41	-2,451.11	11,624.45	0.00	0.00	0.00
23,300.00	90.36	359.69	10,804.57	11,480.40	-2,451.65	11,723.29	0.00	0.00	0.00
23,400.00	90.36	359.69	10,803.94	11,580.40	-2,452.19	11,822.12	0.00	0.00	0.00
23,500.00	90.36	359.69	10,803.30	11,680.40	-2,452.73	11,920.95	0.00	0.00	0.00
23,600.00	90.36	359.69	10,802.66	11,780.39	-2,453.27	12,019.78	0.00	0.00	0.00
23,700.00	90.36	359.69	10,802.03	11,880.39	-2,453.81	12,118.62	0.00	0.00	0.00
23,800.00	90.36	359.69	10,801.39	11,980.38	-2,454.35	12,217.45	0.00	0.00	0.00
23,900.00	90.36	359.69	10,800.76	12,080.38	-2,454.90	12,316.28	0.00	0.00	0.00
24,000.00	90.36	359.69	10,800.12	12,180.38	-2,455.44	12,415.12	0.00	0.00	0.00
24,100.00	90.36	359.69	10,799.48	12,280.37	-2,455.98	12,513.95	0.00	0.00	0.00
24,200.00	90.36	359.69	10,798.85	12,380.37	-2,456.52	12,612.78	0.00	0.00	0.00
24,300.00	90.36	359.69	10,798.21	12,480.37	-2,457.06	12,711.61	0.00	0.00	0.00
24,400.00	90.36	359.69	10,797.58	12,580.36	-2,457.60	12,810.45	0.00	0.00	0.00
24,500.00	90.36	359.69	10,796.94	12,680.36	-2,458.14	12,909.28	0.00	0.00	0.00
24,600.00	90.36	359.69	10,796.31	12,780.36	-2,458.68	13,008.11	0.00	0.00	0.00
24,700.00	90.36	359.69	10,795.67	12,880.35	-2,459.22	13,106.95	0.00	0.00	0.00
24,800.00	90.36	359.69	10,795.03	12,980.35	-2,459.76	13,205.78	0.00	0.00	0.00
24,900.00	90.36	359.69	10,794.40	13,080.35	-2,460.31	13,304.61	0.00	0.00	0.00
25,000.00	90.36	359.69	10,793.76	13,180.34	-2,460.85	13,403.44	0.00	0.00	0.00
25,100.00	90.36	359.69	10,793.13	13,280.34	-2,461.39	13,502.28	0.00	0.00	0.00
25,200.00	90.36	359.69	10,792.49	13,380.34	-2,461.93	13,601.11	0.00	0.00	0.00
25,300.00	90.36	359.69	10,791.86	13,480.33	-2,462.47	13,699.94	0.00	0.00	0.00
25,400.00	90.36	359.69	10,791.22	13,580.33	-2,463.01	13,798.77	0.00	0.00	0.00
25,500.00	90.36	359.69	10,790.58	13,680.33	-2,463.55	13,897.61	0.00	0.00	0.00
25,600.00	90.36	359.69	10,789.95	13,780.32	-2,464.09	13,996.44	0.00	0.00	0.00
25,700.00	90.36	359.69	10,789.31	13,880.32	-2,464.63	14,095.27	0.00	0.00	0.00
25,800.00	90.36	359.69	10,788.68	13,980.32	-2,465.17	14,194.11	0.00	0.00	0.00
25,900.00	90.36	359.69	10,788.04	14,080.31	-2,465.71	14,292.94	0.00	0.00	0.00
26,000.00	90.36	359.69	10,787.40	14,180.31	-2,466.26	14,391.77	0.00	0.00	0.00
26,100.00	90.36	359.69	10,786.77	14,280.30	-2,466.80	14,490.60	0.00	0.00	0.00
26,200.00	90.36	359.69	10,786.13	14,380.30	-2,467.34	14,589.44	0.00	0.00	0.00
26,300.00	90.36	359.69	10,785.50	14,480.30	-2,467.88	14,688.27	0.00	0.00	0.00
26,400.00	90.36	359.69	10,784.86	14,580.29	-2,468.42	14,787.10	0.00	0.00	0.00
26,500.00	90.36	359.69	10,784.23	14,680.29	-2,468.96	14,885.93	0.00	0.00	0.00
26,600.00	90.36	359.69	10,783.59	14,780.29	-2,469.50	14,984.77	0.00	0.00	0.00
26,700.00	90.36	359.69	10,782.95	14,880.28	-2,470.04	15,083.60	0.00	0.00	0.00
26,800.00	90.36	359.69	10,782.32	14,980.28	-2,470.58	15,182.43	0.00	0.00	0.00
26,900.00	90.36	359.69	10,781.68	15,080.28	-2,471.12	15,281.27	0.00	0.00	0.00
27,000.00	90.36	359.69	10,781.05	15,180.27	-2,471.66	15,380.10	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Regal Lager 31_19 Fed Com 71H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3649.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3649.00ft
Site:	Regal Lager 31_19 Fed Com	**North Reference:**	Grid
Well:	Regal Lager 31_19 Fed Com 71H	**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)
27,100.00	90.36	359.69	10,780.41	15,280.27	-2,472.21	15,478.93	0.00	0.00	0.00
27,200.00	90.36	359.69	10,779.78	15,380.27	-2,472.75	15,577.76	0.00	0.00	0.00
27,300.00	90.36	359.69	10,779.14	15,480.26	-2,473.29	15,676.60	0.00	0.00	0.00
27,321.95	90.36	359.69	10,779.00	15,502.21	-2,473.41	15,698.29	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Regal Lager - plan hits target center - Point	0.00	0.01	10,779.00	15,502.21	-2,473.41	535,727.87	729,917.74	32.471294	-103.721843
FTP (Regal Lager - plan hits target center - Point	0.00	0.00	10,879.00	-226.03	-2,388.32	520,000.43	730,002.82	32.428063	-103.721859

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
797.00	797.00	RUSTLER			
1,063.00	1,063.00	SALADO			
2,617.47	2,617.00	CASTILE			
4,567.96	4,509.00	DELAWARE			
4,648.92	4,586.00	BELL CANYON			
5,556.31	5,449.00	CHERRY CANYON			
6,887.42	6,715.00	BRUSHY CANYON			
8,738.99	8,476.00	BONE SPRING			
9,837.74	9,521.00	BONE SPRING 1ST			
10,513.81	10,164.00	BONE SPRING 2ND			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,165.00	2,165.00	0.00	0.00	Build 1°/100'
3,964.51	3,935.07	-95.64	-263.45	Hold 18° Tangent
10,630.07	10,274.57	-798.36	-2,199.07	KOP, Build & Turn 10°/100'
11,593.16	10,879.00	-226.03	-2,388.32	Landing Point
27,321.95	10,779.00	15,502.21	-2,473.41	TD at 27321.95' MD

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INCORPORATED
WELL NAME & NO.:	REGAL LAGER 31-19 FEDERAL COM 71H
SURFACE HOLE FOOTAGE:	302'/S & 2686'/W
BOTTOM HOLE FOOTAGE	20'/N & 330'/W
LOCATION:	Section 6, T.22 S., R.32 E.
COUNTY:	Lea County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	( ) None	( ) Secretary	(•) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Wellhead Variance	( ) Diverter		
Other	[ ] 4 String	[ ] Capitan Reef	[ ] WIPP
Other	[ ] Fluid Filled	[ ] Pilot Hole	[ ] Open Annulus
Cementing	[ ] Contingency Cement Squeeze	[ ] EchoMeter	[x] Primary Cement Squeeze
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit
Special Requirements	[ ] Batch Sundry		
Special Requirements Variance	[x] Break Testing	[x] Offline Cementing	[x] Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be AT SPUD. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **857** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

Approval Date: 02/23/2024

a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch salt protection intermediate casing shall be set at approximately **4,609** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

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

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

3. The **7-5/8** inch intermediate casing shall be set at approximately **10,530** feet.
   a. KPLA open annulus design and post frac bradenhead OK
   b. Review bradenhead volume (less than 25% CFO requirement)
   c. EXTERNAL PRESSURE WILL NEED TO BE ACCOUNTED FOR DURING CASING PRESSURE TEST TO MEET REQUIREMENTS
   d. **CASING WILL NEED TO BE KEPT CLOSE TO FULL FOR COLLAPSE SF**

The minimum required fill of cement behind the **7-5/8** inch production casing is:

Option 1 (Single Stage):

Cement to surface. If cement does not circulate, contact the appropriate BLM office.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Option 2:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon**

b. Second stage:

- Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified.

❖ In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 7-5/8" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.

If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

Bradenhead squeeze in the production interval is only as an edge case remediation measure and is NOT approved in this COA. If production cement job experiences losses and a bradenhead squeeze is needed for tie-back, BLM Engineering should be notified prior to job with volumes and planned wellbore schematic. CBL will be needed when this occurs.

4. The **5-1/2** inch production casing shall be set at approximately **27,322** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back 5**00 feet** into the previous casing. Operator shall provide method of verification.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 43 CFR part 3170 Subpart 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)
BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.

Approval Date: 02/23/2024

- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

Operator has been **(Approved)** to pump the proposed cement program offline in the **Surface and intermediate(s) intervals**.

Offline cementing should commence within 24 hours of landing the casing for the interval.

Notify the BLM 4hrs prior to cementing offline at **Lea County: 575-689-5981**.

Casing Clearance:
Production tie-back OK.

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are adequate "coffee ground or less" before cementing.

GENERAL REQUIREMENTS

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

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

- If well located in Eddy County
  EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
  BLM_NM_CFO_DrillingNotifications@BLM.GOV
  (575) 361-2822

- If well located in Lea County
  Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
  (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive

strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

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

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal

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

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

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

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

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

KPI 2/7/2024

OXY Permian Delaware NM Basin Drilling & Completions Incident Reporting

OXY Permian Crisis Team Hotline Notification

Person	Location	Office Phone	Cell/Mobile Phone
Drilling & Completions Department			
Drilling & Completions Manager: John Willis	Houston	(713) 366-5556	(713) 259-1417
Drilling Superintendent: Simon Benavides	Houston	(713) 215-7403	(832) 528-3547
Completions Superintendent: Chris Winter	Houston	(713) 366-5212	(806) 239-8774
Drilling Eng. Supervisor: Diego Tellez	Houston	(713) 350-4602	(713) 303-4932
Drilling Eng. Supervisor: Randy Neel	Houston	(713) 215-7987	(713) 517-5544
Completions Eng. Supervisor: Evan Hinkel	Houston	(713) 366-5436	(281) 236-6153
Drilling & Completions HES Lead. Ryan Green	Houston	713-336-5753	281-520-5216
Drilling & Completions HES Advisor:Kenny Williams	Carlsbad	(432) 686-1434	(337) 208-0911
Drilling & Completions HES Advisor:Kyle Holden	Carlsbad	(432) 686-1435	(661) 369-5328
Drilling & Completions HES Advisor Sr:Dave Schmidt	Carlsbad		(559) 310-8572
Drilling & Completions HES Advisor. :Seth Doyle	Carlsbad		(337) 499-0756
HES / Enviromental & Regulatory Department	Location	Office	Cell Phone
Jon Hamil-HES Manager	Houston	(713) 497-2494	(832) 537-9885
Mark Birk-HES Manager	Houston	(713) 350-4615	(949) 413-3127
Austin Tramell	Midland	(432) 699-4208	(575) 499-4919
Rico Munoz	Midland	(432) 699-8366	(432) 803-4116
Amber DuckWorth	Midland		(832) 966-1879
Kelley Montgomery- Regulatory Manager	Houston	(713) 366-5716	(832) 454-8137
Sandra Musallam -Regulatory Lead	Houston	+1 (713) 366-5106	+1 (713) 504-8577
Bishop, Steve-DOT Pipeline Coordinator	Midland	432-685-5614	
Wilson, Dusty-Safety Advisor	Midland	432-685-5771	(432) 254-2336
John W Dittrich Eniromental Advisor	Midland		(575) 390-2828
William (Jack) Calhoun-Environmental Lead	Houston	+713 (350) 4906	(281) 917-8571
Robert Barrow-Risk Engineer Manager	Houston	(713) 366-5611	(832) 867-5336
Sarah Holmes-HSE Cordinator	Midland	432-685-5758	
Administrative	Location	Office	
Sarah Holmes	Midland	432-685-5830	
Robertson, Debbie	Midland	432-685-5812	
Laci Hollaway	Midland	(432) 685-5716	(432) 631-6341
Administrative	Location	Office	
Rosalinda Escajeda	Midland	432-685-5831	
Moreno, Leslie (contract)	Hobbs	575-397-8247	

Sehon, Angela (contractor)	Levelland	806-894-8347	
Vasquez, Claudia (contractor)	North Cowden	432-385-3120	
XstremeMD	Location	Office	
Medical Case Management	Orla, TX	(337) 205-9314	
Axiom Medical Consulting	Location	Office	
Medical Case Management		(877) 502-9466	
Regulatory Agencies			
Bureau of Land Management	Carlsbad, NM	(505) 887-6544	
Bureau of Land Management	Hobbs, NM	(505) 393-3612	
Bureau of Land Management	Roswell, NM	(505) 393-3612	
Bureau of Land Management	Santa Fe, NM	(505) 988-6030	
DOT Juisdictional Pipelines-Incident Reporting New Mexico Public Regulaion Commission	Santa Fe, NM	(505) 827-3549 (505) 490-2375	
DOT Juisdictional Pipelines-Incident Reporting Texas Railroad Commission	Austin, TX	(512) 463-6788	
EPA Hot Line	Dallas, Texas	(214) 665-6444	
Federal OSHA, Area Office	Lubbock, Texas	(806) 472-7681	
National Response Center	Washington, D. C.	(800) 424-8802	
National Infrastructure Coordinator Center		(202) 282-9201	
New Mexico Air Quality Bureau	Santa Fe, NM	(505) 827-1494	
New Mexico Oil Conservation Division	Artesia, NM	(505) 748-1283	After Hours (505) 370-7545
New Mexico Oil Conservation Division	Hobbs, NM	(505) 393-6161	
New Mexico Oil Conservation Division	Santa Fe, NM	(505) 471-1068	
New Mexico OCD Environmental Bureau	Santa Fe, NM	(505) 476-3470	
New Mexico Environmental Department	Hobbs, NM	(505) 827-9329	
NM State Emergency Response Center	Santa Fe, NM	(505) 827-9222	
Railroad Commission of TX	District 1 San Antonio, TX	(210) 227-1313	
Railroad Commission of TX	District 7C San Angelo, TX	(325) 657-7450	
Railroad Commission of TX	District 8, 8A Midland, TX	(432) 684-5581	
Texas Emergency Response Center	Austin, TX	(512) 463-7727	
TCEQ Air	Region 2 Lubbock, TX	(806) 796-3494	
TCEQ Water/Waste/Air	Region 3 Abilene, TX	(325) 698-9674	
TCEQ Water/Waste/Air	Region 7 Midland, TX	(432) 570-1359	
TCEQ Water/Waste/Air	Region 9 San Antonio, TX	(512) 734-7981	
TCEQ Water/Waste/Air	Region 8 San Angelo	(325) 655-9479	
Medical Facilities			
Abernathy Medical Clinic	Abernathy, TX	(806) 298-2524	
Alliance Hospital	Odessa, TX	(432) 550-1000	
Artesia General Hospital	Artesia, NM	(505) 748-3333	
Brownfield Regional Medical Center	Brownfield, TX	(806) 637-3551	
Cogdell Memorial Hospital	Snyder, TX	(325) 573-6374	
Covenant Hospital Levelland	Levelland, TX	(806) 894-4963	

Covenant Medical Center	Lubbock, TX	(806) 725-1011	
Covenant Medical Center Lakeside	Lubbock, TX	(806) 725-6000	
Covenant Family Health	Synder, TX	(325) 573-1300	
Crockett County Hospital	Ozona, TX	(325) 392-2671	
Guadalupe Medical Center	Carlsbad, NM	(505) 887-6633	
Lea Regional Hospital	Hobbs, NM	(505) 492-5000	
McCamey Hospital	McCamey, TX	(432) 652-8626	
Medical Arts Hospital	Lamesa, TX	(806) 872-2183	
Medical Center Hospital	Odessa, TX	(432) 640-4000	
Medi Center Hospital	San Angelo, TX	(325) 653-6741	
Memorial Hospital	Ft. Stockton	(432) 336-2241	
Memorial Hospital	Seminole, TX	(432) 758-5811	
Midland Memorial Hospital	Midland, TX	(432) 685-1111	
Nor-Lea General Hospital	Lovington, NM	(505) 396-6611	
Odessa Regional Hospital	Odessa, TX	(432) 334-8200	
Permian General Hospital	Andrews, TX	(432) 523-2200	
Reagan County Hospital	Big Lake, TX	(325) 884-2561	
Reeves County Hospital	Pecos, TX	(432) 447-3551	
Shannon Medical Center	San Angelo, TX	(325) 653-6741	
Union County General Hospital	Clayton, NM	(505) 374-2585	
University Medical Center	Lubbock, TX	(806) 725-8200	
Val Verde Regional Medical Center	Del Rio, TX	(830) 775-8566	
Ward Memorial Hospital	Monahans, TX	(432) 943-2511	
Yoakum County Hospital	Denver City, TX	(806) 592-5484	
Law Enforcement - Sheriff			
Andrews Cty Sheriff's Department	Andrews County(Andrews)	(432) 523-5545	
Crane Cty Sheriff's Department	Crane, County (Crane)	(432) 558-3571	
Crockett Cty Sheriff's Department	Crockett County (Ozona)	(325) 392-2661	
Dawson Cty Sheriff's Department	Dawson County (Lamesa)	(806) 872-7560	
Ector Cty Sheriff's Department	Ector County (Odessa)	(432) 335-3050	
Eddy Cty Sheriff's Department	Eddy County (Artesia)	(505) 746-2704	
Eddy Cty Sheriff's Department	Eddy County (Carlsbad)	(505) 887-7551	
Gaines Cty Sheriff's Department	Gaines County (Seminole)	(432) 758-9871	
Hockley Cty Sheriff's Department	Hockley County(Levelland)	(806) 894-3126	
Kent Cty (Jayton City Sheriff's Dept.)	Kent County(Jayton)	(806) 237-3801	
Lea Cty Sheriff's Department	Lea County (Eunice)	(505) 384-2020	
Lea Cty Sheriff's Department	Lea County (Hobbs)	(505) 393-2515	
Lea Cty Sheriff's Department	Lea County (Lovington)	(505) 396-3611	
Lubbock Cty Sheriff's Department	Lubbock Cty (Abernathy)	(806) 296-2724	
Midland Cty Sheriff's Department	Midland County (Midland)	(432) 688-1277	
Pecos Cty Sheriff's Department	Pecos County (Iraan)	(432) 639-2251	
Reeves Cty Sheriff's Department	Reeves County (Pecos)	(432) 445-4901	
Scurry Cty Sheriff's Department	Scurry County (Snyder)	(325) 573-3551	

Terry Cty Sheriff's Department	Terry County (Brownfield)	(806) 637-2212	
Union Cty Sheriff's Department	Union County (Clayton)	(505) 374-2583	
Upton Cty Sheriff's Department	Upton County (Rankin)	(432) 693-2422	
Ward Cty Sheriff's Department	Ward County (Monahans)	(432) 943-3254	
Yoakum City Sheriff's Department	Yoakum Co. (Denever City)	(806) 456-2377	
Law Enforcement - Police			
Abernathy City Police	Abernathy, TX	(806) 298-2545	
Andrews City Police	Andrews, TX	(432) 523-5675	
Artesia City Police	Artesia, NM	(505) 746-2704	
Brownfield City Police	Brownfield, TX	(806) 637-2544	
Carlsbad City Police	Carlsbad, NM	(505) 885-2111	
Clayton City Police	Clayton, NM	(505) 374-2504	
Denver City Police	Denver City, TX	(806) 592-3516	
Eunice City Police	Eunice, NM	(505) 394-2112	
Hobbs City Police	Hobbs, NM	(505) 397-9265 (505) 393-2677	
Jal City Police	Jal, NM	(505) 395-2501	
Jayton City Police	Jayton, TX	(806) 237-3801	
Lamesa City Police	Lamesa, TX	(806) 872-2121	
Levelland City Police	Levelland, TX	(806) 894-6164	
Lovington City Police	Lovington, NM	(505) 396-2811	
Midland City Police	Midland, TX	(432) 685-7113	
Monahans City Police	Monahans, TX	(432) 943-3254	
Odessa City Police	Odessa, TX	(432) 335-3378	
Seminole City Police	Seminole, TX	(432) 758-9871	
Snyder City Police	Snyder, TX	(325) 573-2611	
Sundown City Police	Sundown, TX	(806) 229-8241	
Law Enforcement - FBI			
FBI	Alburqueque, NM	(505) 224-2000	
FBI	Midland, TX	(432) 570-0255	
Law Enforcement - DPS			
NM State Police	Artesia, NM	(505) 746-2704	
NM State Police	Carlsbad, NM	(505) 885-3137	
NM State Police	Eunice, NM	(505) 392-5588	
NM State Police	Hobbs, NM	(505) 392-5588	
NM State Police	Clayton, NM	(505) 374-2473; 911	
TX Dept of Public Safety	Andrews, TX	(432) 524-1443	
TX Dept of Public Safety	Big Lake, TX	(325) 884-2301	
TX Dept of Public Safety	Brownfield, TX	(806) 637-2312	
TX Dept of Public Safety	Iraan, TX	(432) 639-3232	
TX Dept of Public Safety	Lamesa, TX	(806) 872-8675	
TX Dept of Public Safety	Levelland, TX	(806) 894-4385	

TX Dept of Public Safety	Lubbock, TX	(806) 747-4491	
TX Dept of Public Safety	Midland, TX	(432) 697-2211	
TX Dept of Public Safety	Monahans, TX	(432) 943-5857	
TX Dept of Public Safety	Odessa, TX	(432) 332-6100	
TX Dept of Public Safety	Ozona, TX	(325) 392-2621	
TX Dept of Public Safety	Pecos, TX	(432) 447-3533	
TX Dept of Public Safety	Seminole, TX	(432) 758-4041	
TX Dept of Public Safety	Snyder, TX	(325) 573-0113	
TX Dept of Public Safety	Terry County TX	(806) 637-8913	
TX Dept of Public Safety	Yoakum County TX	(806) 456-2377	
Firefighting & Rescue			
Abernathy	Abernathy, TX	(806) 298-2022	
Amistad/Rosebud	Amistad/Rosebud, NM	(505) 633-9113	
Andrews	Andrews, TX	(432) 523-4820; (432) 523-3111	
Artesia	Artesia, NM	(505) 746-5051	
Big Lake	Big Lake, TX	(325) 884-3650	
Brownfield-Administrative & other calls	Brownfield, TX	(816) 637-4547	
Brownfield emergency only	Brownfield, TX	-911	
Carlsbad	Carlsbad, NM	(505) 885-3125	
Clayton	Clayton, NM	(505) 374-2435	
Cotton Center	Cotton Center, TX	(806) 879-2157	
Crane	Crane, TX	(432) 558-2361	
Del Rio	Del Rio, TX	(830) 774-8650	
Denver City	Denver City, TX	(806) 592-3516	
Eldorado	Eldorado, TX	(325) 853-2691	
Eunice	Eunice, NM	(505) 394-2111	
Garden City	Garden City, TX	(432) 354-2404	
Goldsmith	Goldsmith, TX	(432) 827-3445	
Hale Center	Hale Center, TX	(806) 839-2411	
Halfway	Halfway, TX		
Hobbs	Hobbs, NM	(505) 397-9308	
Jal	Jal, NM	(505) 395-2221	
Jayton	Jayton, TX	(806) 237-3801	
Kermit	Kermit, TX	(432) 586-3468	
Lamesa	Lamesa, TX	(806) 872-4352	
Levelland	Levelland, TX	(806) 894-3154	
Lovington	Lovington, NM	(505) 396-2359	
Maljamar	Maljamar, NM	(505) 676-4100	
McCamey	McCamey, TX	(432) 652-8232	
Midland	Midland, TX	(432) 685-7346	
Monahans	Monahans, TX	(432) 943-4343	
Nara Visa	Nara Visa, NM	(505) 461-3300	
Notrees	Notress, TX	(432) 827-3445	

Odessa	Odessa, TX	(432) 335-4659	
Ozona	Ozona, TX	(325) 392-2626	
Pecos	Pecos, TX	(432) 445-2421	
Petersburg	Petersburg, TX	(806) 667-3461	
Plains	Plains, TX	(806) 456-8067	
Plainview	Plainview, TX	(806) 296-1170	
Rankin	Rankin, TX	(432) 693-2252	
San Angelo	San Angelo, TX	(325) 657-4355	
Sanderson	Sanderson, TX	(432) 345-2525	
Seminole	Seminole, TX	(432) 758-3676 (432) 758-9871	
Smyer	Smyer, TX	(806) 234-3861	
Snyder	Snyder, TX	(325) 573-6215	
Sundown	Sundown, TX	**911**	
Tucumcari	Tucumcari, NM	911	
West Odessa	Odessa, TX	(432) 381-3033	
Ambulance			
Abernathy Ambulance	Abernathy, TX	(806) 298-2241	
Amistad/Rosebud	Amistad/Rosebud, NM	(505) 633-9113	
Andrews Ambulance	Andrews, TX	(432) 523-5675	
Artesia Ambulance	Artesia, NM	(505) 746-2701	
Big Lake Ambulance	Big Lake, TX	(325) 884-2423	
Big Spring Ambulance	Big Spring, TX	(432) 264-2550	
Brownfield Ambulance	Brownfield, TX	(806) 637-2511	
Carlsbad Ambulance	Carlsbad, NM	(505) 885-2111; 911	
Clayton, NM	Clayton, NM	(505) 374-2501	
Denver City Ambulance	Denver City, TX	(806) 592-3516	
Eldorado Ambulance	Eldorado, TX	(325) 853-3456	
Eunice Ambulance	Eunice, NM	(505) 394-3258	
Goldsmith Ambulance	Goldsmith, TX	(432) 827-3445	
Hobbs, NM	Hobbs, NM	(505) 397-9308	
Jal, NM	Jal, NM	(505) 395-2501	
Jayton Ambulance	Jayton, TX	(806) 237-3801	
Lamesa Ambulance	Lamesa, TX	(806) 872-3464	
Levelland Ambulance	Levelland, TX	(806) 894-8855	
Lovington Ambulance	Lovington, NM	(505) 396-2811	
McCamey Hospital	McCamey, TX	(432) 652-8626	
Midland Ambulance	Midland, TX	(432) 685-7499	
Monahans Ambulance	Monahans, TX	(432) 943-3385 or 3731	
Nara Visa, NM	Nara Visa, NM	(505) 461-3300	
Odessa Ambulance	Odessa, TX	(432) 335-3378	
Ozona Ambulance	Ozona, TX	(325) 392-2671	
Pecos Ambulance	Pecos, TX	(432) 445-4444	

Rankin Ambulance	Rankin, TX	(432) 693-2443	
San Angelo Ambulance	San Angelo, TX	(325) 657-4357	
Seminole Ambulance	Seminole, TX	(432) 758-8816 (432) 758-9871	
Snyder Ambulance	Snyder, TX	(325) 573-1911	
Stanton Ambulance	Stanton, TX	(432) 756-2211	
Sundown Ambulance	Sundown, TX	**911**	
Tucumcari, NM	Tucumcari, NM	911	
Medical Air Ambulance Service			
AEROCARE - Methodist Hospital	Lubbock, TX	(800) 627-2376	
San Angelo Med-Vac Air Ambulance	San Angelo, TX	(800) 277-4354	
Southwest Air Ambulance Service	Stanford, TX	(800) 242-6199	
Southwest MediVac	Snyder, TX	(800) 242-6199	
Southwest MediVac	Hobbs, NM	(800) 242-6199	
Odessa Care Star	Odessa, TX	(888) 624-3571	
NWTH Medivac	Amarillo, TX	(800) 692-1331	

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 commence.
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 briefing

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 BLM Onshore Order #2.

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	1. Will remain in briefing / muster area until instructed by supervisor.
Mud engineer:	1. Report to nearest upwind designated safe briefing / muster area. 2. When instructed, begin check of mud for ph and H2S level. (Garett gas train.)
Safety personnel:	1. Mask up and check status of all personnel and secure operations as instructed by drill site manager.

Taking a kick

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

Open-hole logging

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

Running casing or plugging

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

Ignition procedures

The decision to ignite the well is the responsibility of the operator (Oxy Drilling Management). The decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope controlling the blowout under the prevailing conditions at the well.

Instructions for igniting the well

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

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

Status check list

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

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

Checked by:_____ Date:_____

Procedural check list during H2S events

Perform each tour:

1. Check fire extinguishers to see that they have the proper charge.

2. Check breathing equipment to ensure that it 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 Grains 100 std. Ft3*	Physical effects
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

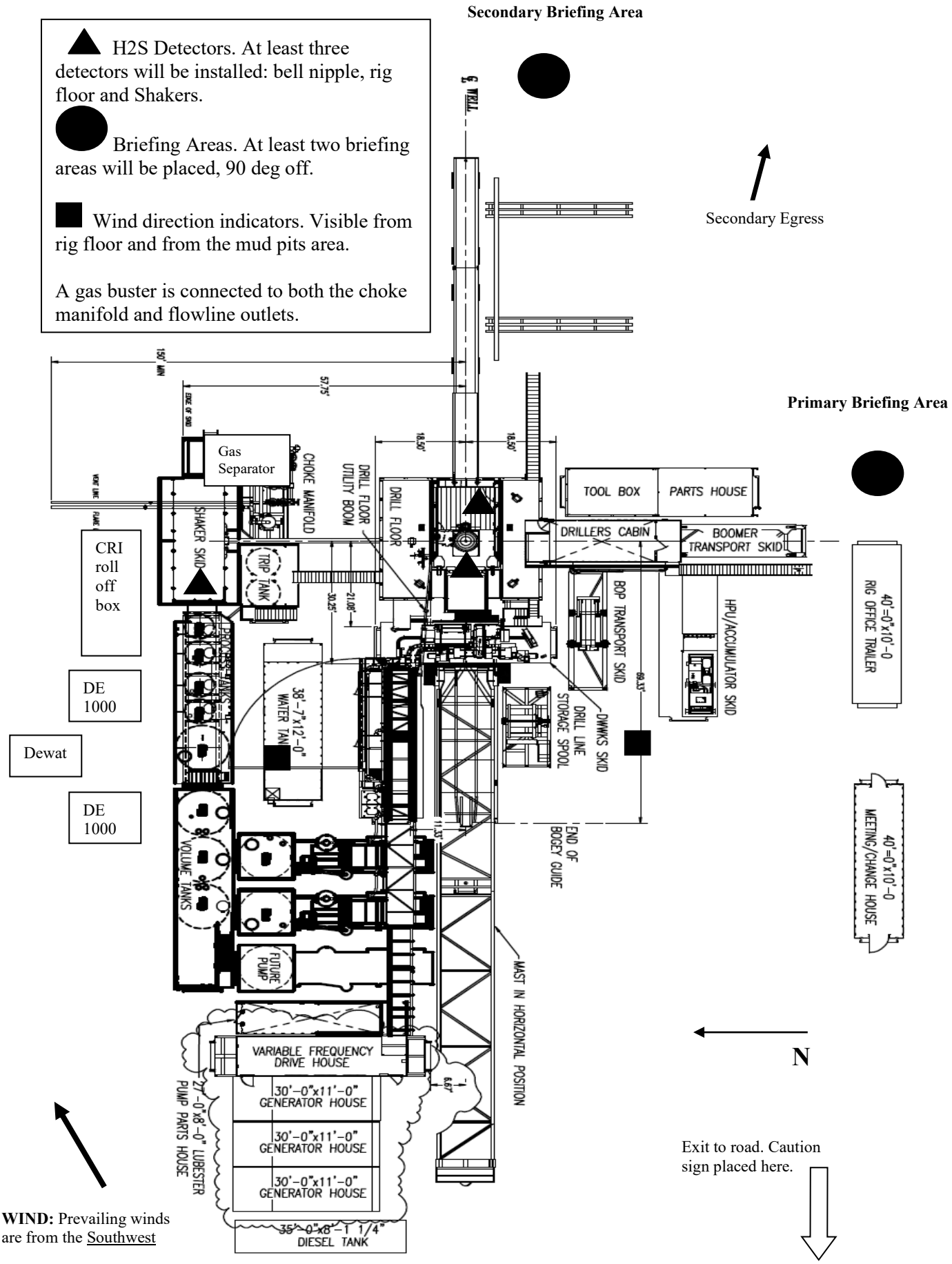
   Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction,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

▲ H2S Detectors. At least three detectors will be installed: bell nipple, rig floor and Shakers.

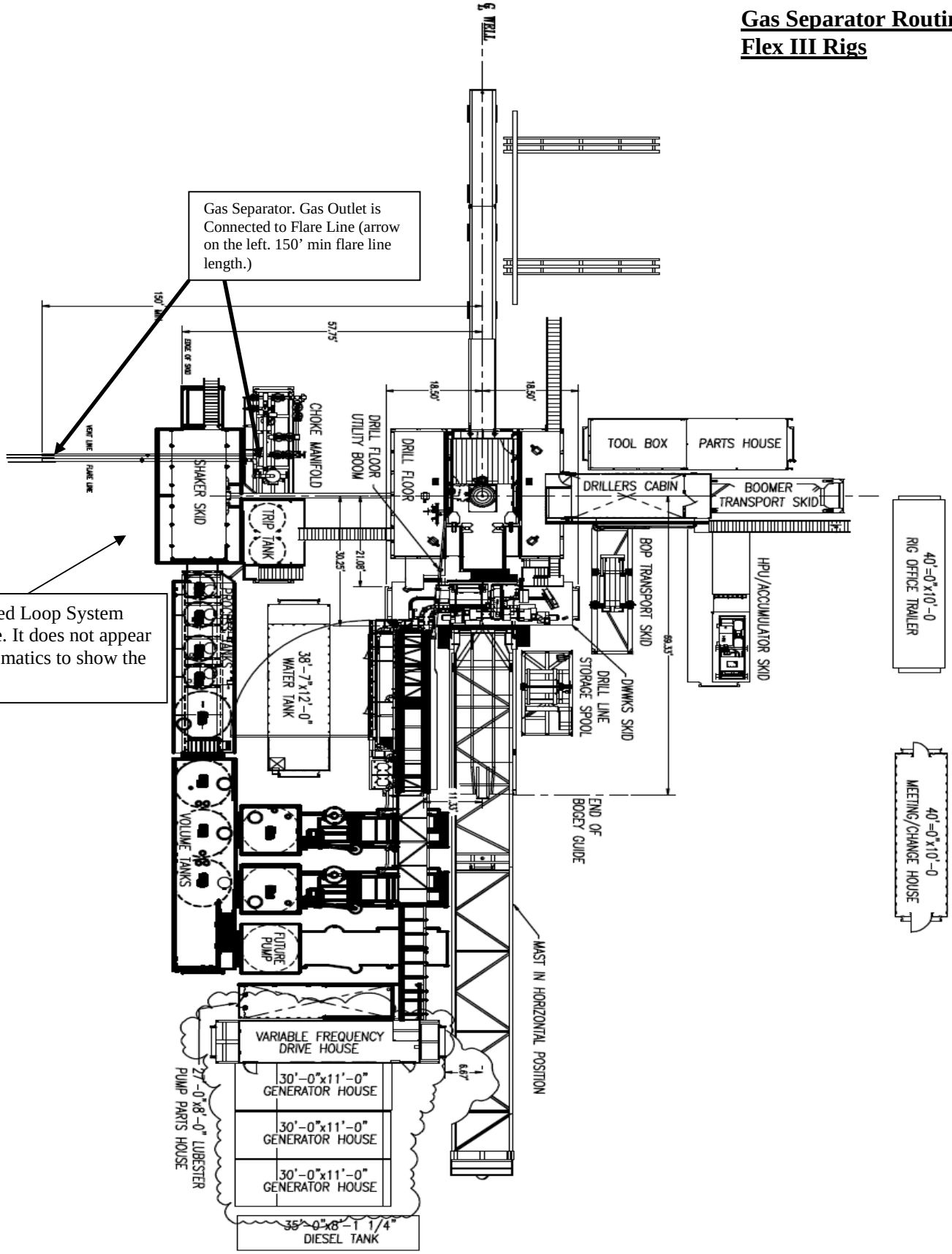
● Briefing Areas. At least two briefing areas will be placed, 90 deg off.

■ Wind direction indicators. Visible from rig floor and from the mud pits area.

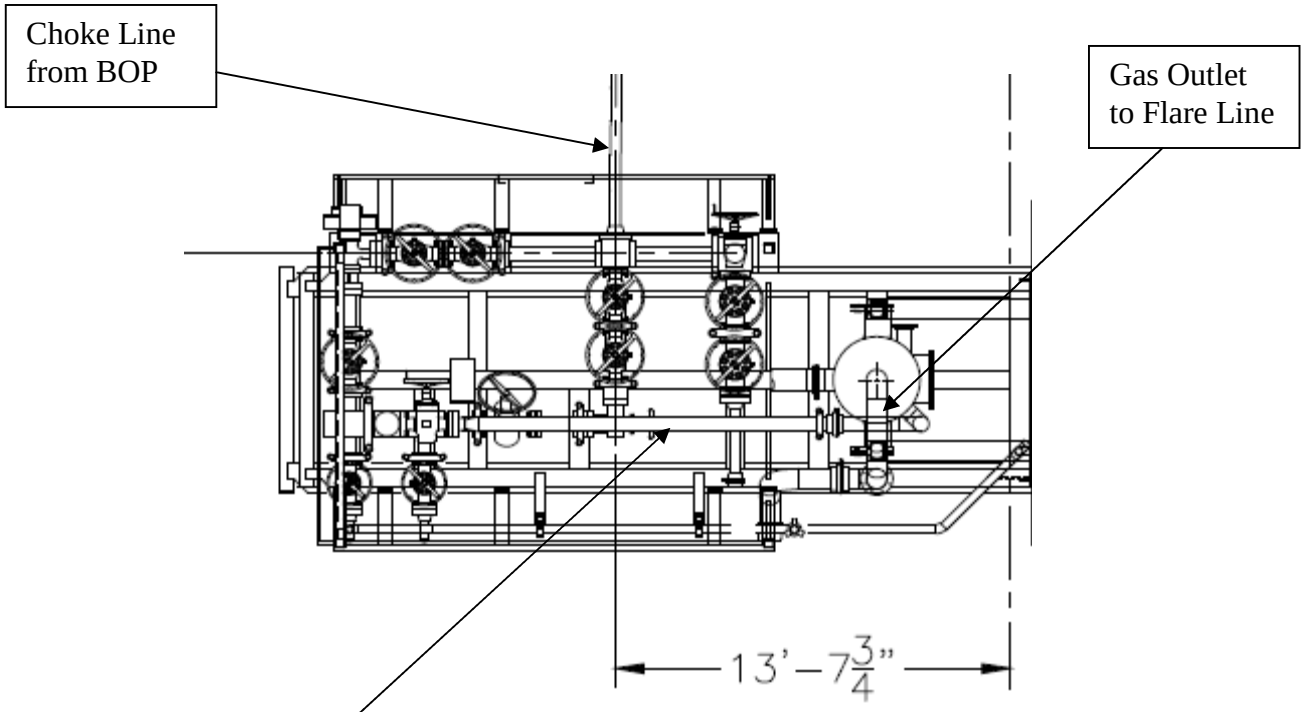
A gas buster is connected to both the choke manifold and flowline outlets.



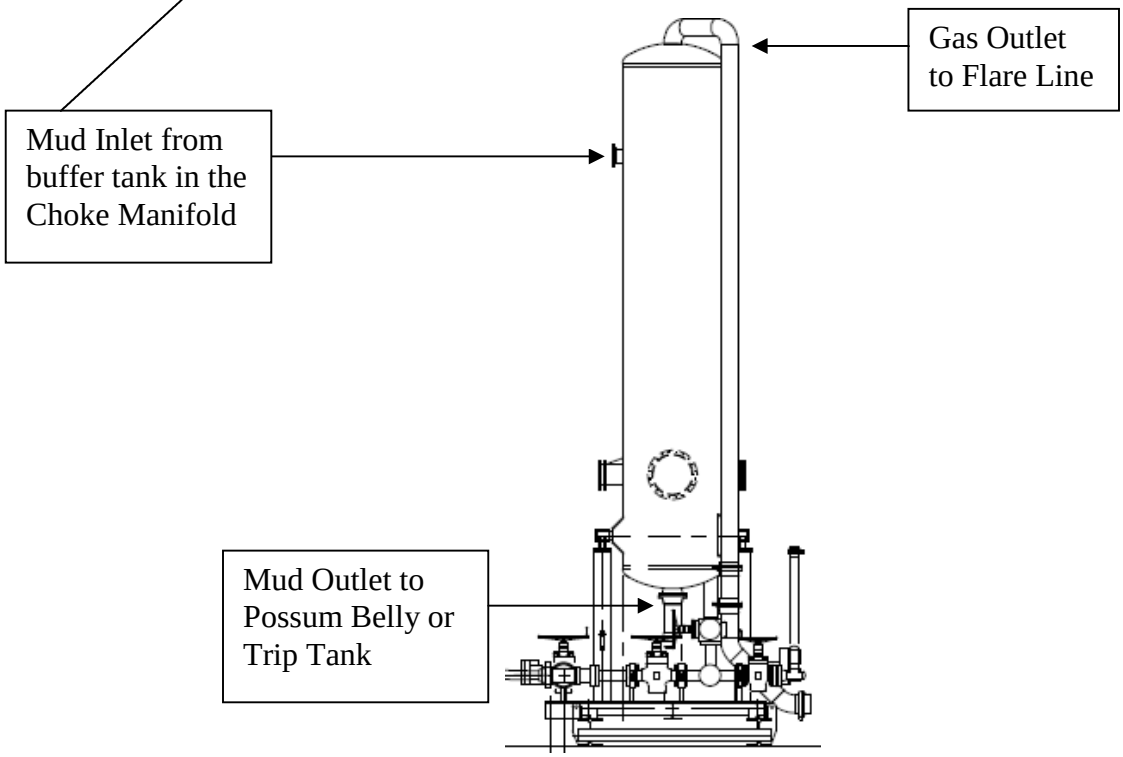
Gas Separator Routing
Flex III Rigs



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

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 321325
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	3/11/2024
pkautz	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	3/11/2024
pkautz	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	3/11/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	3/11/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	3/11/2024