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.
30-015-53795

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.

Dean R McClure
05/18/2023

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/25/2023

Additional Operator Remarks

Location of Well

0. SHL: LOT 5 / 2077 FNL / 387 FWL / TWSP: 21S / RANGE: 27E / SECTION: 3 / LAT: 32.516975 / LONG: -104.184701 (TVD: 0 feet, MD: 0 feet)

PPP: LOT 7 / 1900 FNL / 2465 FEL / TWSP: 21S / RANGE: 27E / SECTION: 1 / LAT: 32.5174604 / LONG: -104.1424694 (TVD: 9081 feet, MD: 22100 feet)

PPP: LOT 5 / 1900 FNL / 120 FWL / TWSP: 21S / RANGE: 27E / SECTION: 1 / LAT: 32.5174617 / LONG: -104.1512285 (TVD: 9054 feet, MD: 19400 feet)

PPP: LOT 6 / 1900 FNL / 1520 FWL / TWSP: 21S / RANGE: 27E / SECTION: 1 / LAT: 32.5174611 / LONG: -104.1466867 (TVD: 9068 feet, MD: 20800 feet)

PPP: LOT 7 / 1899 FNL / 2479 FEL / TWSP: 21S / RANGE: 27E / SECTION: 2 / LAT: 32.5174624 / LONG: -104.1596631 (TVD: 9027 feet, MD: 16800 feet)

PPP: LOT 5 / 1900 FNL / 114 FWL / TWSP: 21S / RANGE: 27E / SECTION: 2 / LAT: 32.5174625 / LONG: -104.1684222 (TVD: 8999 feet, MD: 14100 feet)

PPP: LOT 5 / 1899 FNL / 608 FWL / TWSP: 21S / RANGE: 27E / SECTION: 3 / LAT: 32.5174612 / LONG: -104.1839854 (TVD: 8950 feet, MD: 9302 feet)

BHL: LOT 8 / 1900 FNL / 20 FEL / TWSP: 21S / RANGE: 27E / SECTION: 1 / LAT: 32.517459 / LONG: -104.134537 (TVD: 9106 feet, MD: 24545 feet)

BLM Point of Contact

Name: Candy Vigil
Title: LIE
Phone: (575) 234-5982
Email: cvigil@blm.gov

Review and Appeal Rights

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

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 RIO BRAZOS 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
30-015-53795	98315	WC BURTON FLAT UPPER WC

Property Code	Property Name	Well Number
334043	BURTON FLAT 3-1 FED STATE COM	622H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3184.8'

Surface Location

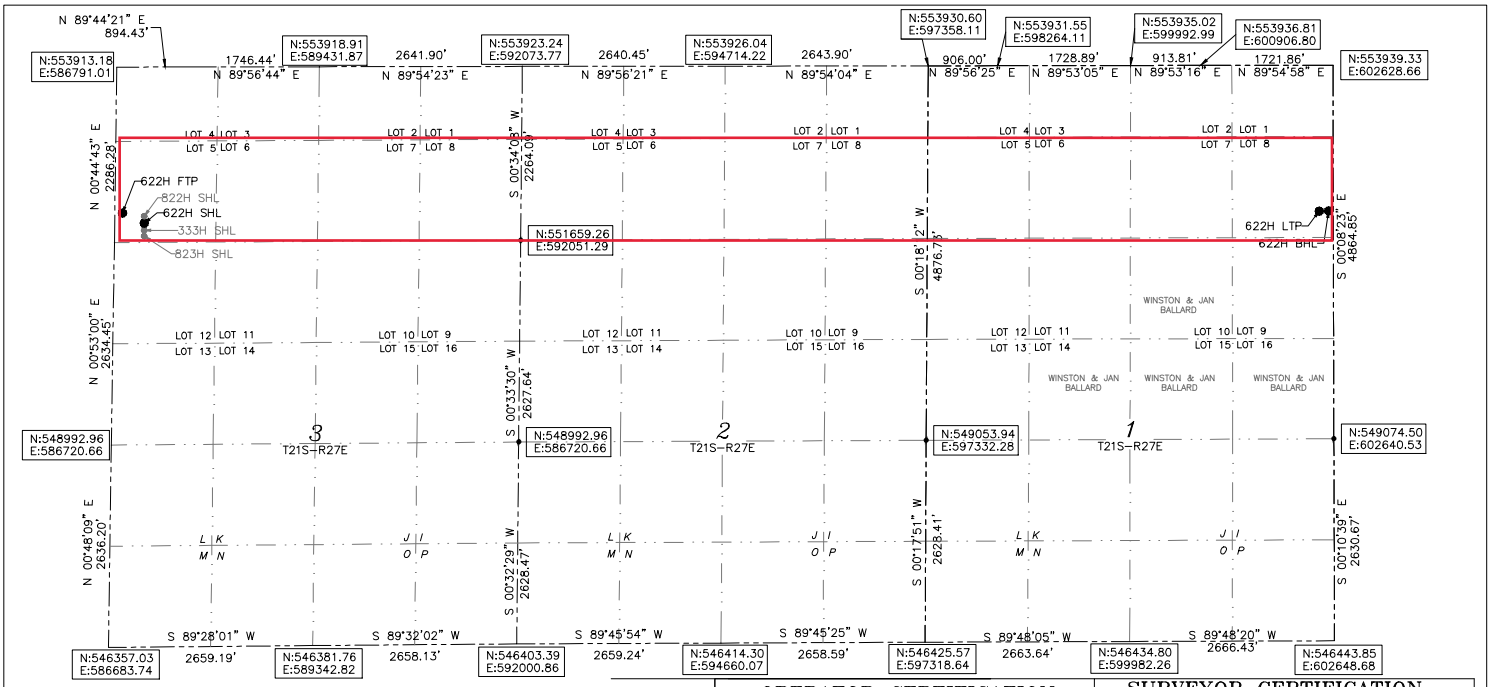
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 5	3	21-S	27-E		2077	NORTH	387	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 8	1	21-S	27-E		1900	NORTH	20	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
480			

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



BURTON FLAT 3-1
FED STATE COM 622H
LAT:32.516975
LON:104.184701
N:551838.03
E:587151.38

FIRST TAKE POINT
1900' FNL 100' FWL SEC. 3
LAT:32.517458
LON:104.185625
N:552013.50
E:586866.31

LAST TAKE POINT
1900' FNL 100' FEL SEC. 1
LAT:32.517459
LON:104.134797
N:552039.19
E:602533.29

BOTTOM OF HOLE
LAT:32.517459
LON:104.134537
N:552039.31
E:602613.29

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83,New Mexico East Zone 3001, US Survey Feet, all distances are grid.

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.

Arianna Evans 10/26/22
Signature Date

Arianna Evans
Printed Name

arianna.evans@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.

04/10/2022
Signature & Seal of Professional Surveyor

B. L. LAMAN
NEW MEXICO
22404
PROFESSIONAL SURVEYOR

4/18/22
Certificate No. 22404 B.L. LAMAN
DRAWN BY: CM

Intent ☐ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County

Latitude	Longitude	NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County

Latitude	Longitude	NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County

Latitude	Longitude	NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

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

BURTON FLAT 3-1 FED STATE COM 622H

1. Geologic Formations

TVD of target	9106	Pilot hole depth	N/A
MD at TD:	24545	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	42		
Salt	200		
Base of Salt	310		
Capitan Reef Top	767		
Delaware	2650		
Cherry Canyon	2802		
Brushy Canyon	3684		
1st Bone Spring Lime	5090		
Bone Spring 1st	6318		
Bone Spring 2nd	7034		
3rd Bone Spring Lime	7468		
Bone Spring 3rd	8425		
Wolfcamp	8812		

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

2. Casing Program (Primary Design)

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Top (MD)	Bottom (MD)	Top (TVD)	Bottom (TVD)
17 1/2	13 3/8	54.5	J-55	BTC	0.0	200 MD	0	200 TVD
12 1/4	10 3/4	45.5	J-55	BTC SC	0.0	717 MD	0	717 TVD
9 7/8	8 5/8	32.0	P110	TLW	0	2700 MD	0	2700 TVD
7 7/8	5 1/2	17.0	P110EC	)WC/C IS	0	24545 MD	0	9106 TVD

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.
• The Rustler top will be validated via drilling parameters (i.e. reduction in ROP), and the surface casing setting depth will be revised accordingly. In addition, surface casing will be set a minimum of 25' above the top of the salt.

3. Cementing Program (Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	183	Surf	13.2	1.44	Lead: Class C Cement + additives
Int	17	Surf	9	3.27	Lead: Class C Cement + additives
	101	500' above shoe	13.2	1.44	Tail: Class H / C + additives
Int 1	83	Surf	9	3.27	Lead: Class C Cement + additives
	67	4000' above shoe	13.2	1.44	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9	1.44	Squeeze Lead: Class C Cement + additives
	17	Surf	9	3.27	Lead: Class C Cement + additives
	101	4000' above shoe	13.2	1.44	Tail: Class H / C + additives
Production	448	717	9	3.27	Lead: Class H /C + additives
	2136	8409	13.2	1.44	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 and Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

BURTON FLAT 3-1 FED STATE COM 622H

4. Pressure Control Equipment (Four String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Int 1	13-5/8"	5M	Annular (5M)	X	100% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular (5M)	X	100% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.				
N	A variance is requested to run a 5 M annular on a 10M system				

5. Mud Program (Four String Design)

Section	Type	Weight (ppg)
Surface	WBM	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Intermediate 1	WBM	8.5-9
Production	OBM	10-10.5

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 Rpeort 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	Int. shoe to KOP
	Density	Int. shoe to KOP
X	CBL	Production casing
X	Mud log	Intermediate shoe to TD
	PEX	

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	4972
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 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

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 (OnShore Order 2, 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 pa.
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. A 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

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.

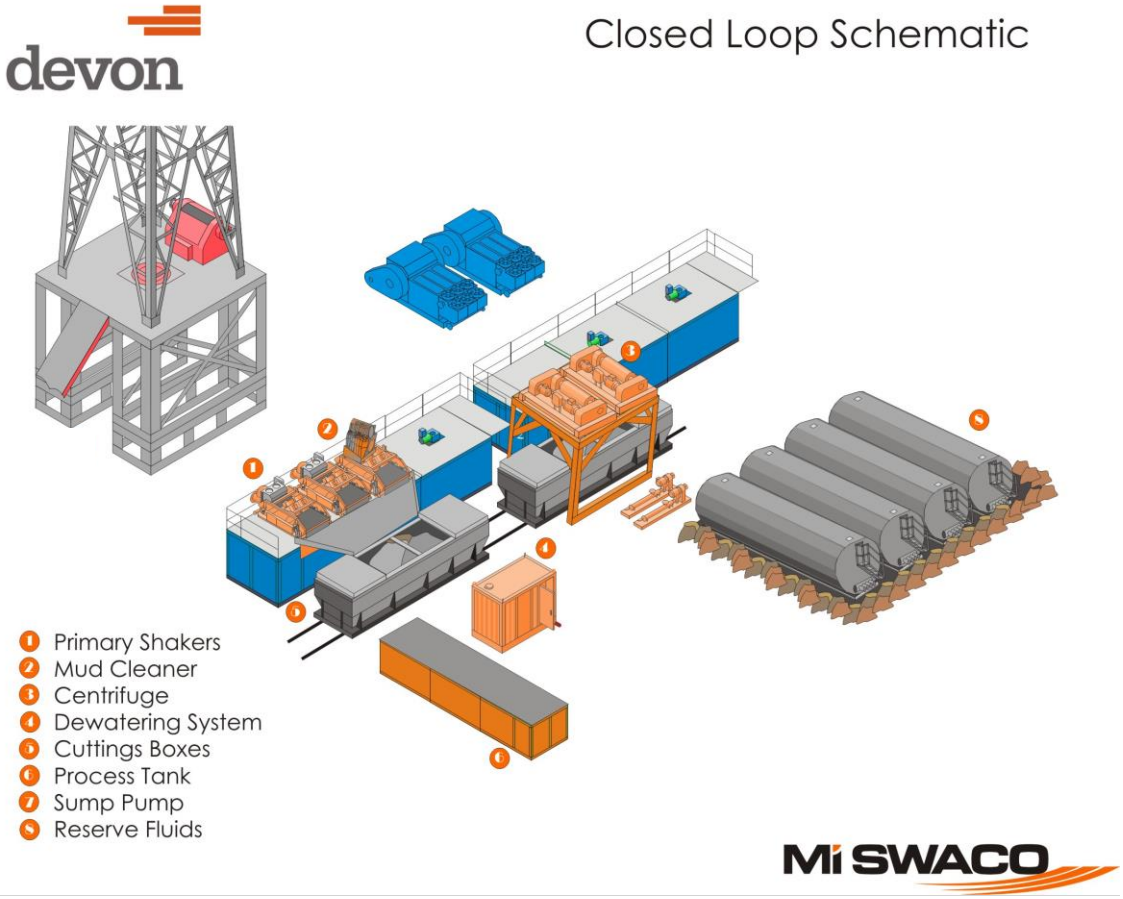
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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.

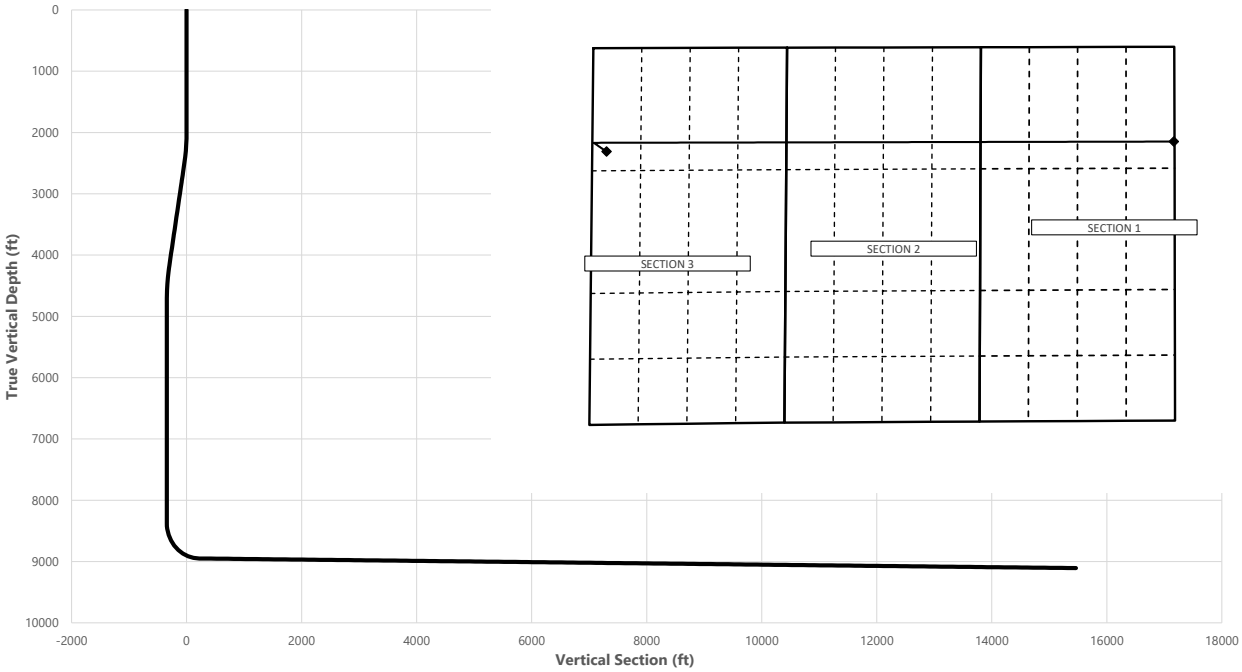
III. Closure Plan

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.

Well: BURTON FLAT 3-1 FED STATE COM 622H
County: Eddy
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	297.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	297.00	2497.47	19.76	-38.78	-38.52	2.00	Hold Tangent
4237.31	10.00	297.00	4208.38	156.72	-307.58	-305.51	0.00	Drop to Vertical
4737.31	0.00	297.00	4705.84	176.48	-346.36	-344.03	2.00	Hold Vertical
8408.54	0.00	89.91	8377.07	176.48	-346.36	-344.03	0.00	KOP
9302.63	89.41	89.91	8950.00	177.37	220.70	222.99	10.00	Landing Point
24545.05	89.41	89.91	9107.00	201.31	15462.29	15463.60	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	42.00	42.00
Salt	200.00	200.00
Base of Salt	310.00	310.00
Capitan Reef Top	767.00	767.00
Delaware	2654.89	2650.00
Cherry Canyon	2809.23	2802.00
Brushy Canyon	3704.84	3684.00
1st Bone Spring Lime	5121.46	5090.00
Bone Spring 1st	6349.46	6318.00
Bone Spring 2nd	7065.46	7034.00
3rd Bone Spring Lime	7499.46	7468.00
Bone Spring 3rd	8456.52	8425.00
Wolfcamp / Point of Penetration	8902.38	8812.00
exit	24465.05	9106.20

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.5169	-104.1848	2077' FNL, 387' FWL of Sec 3 in T21S, R27E
KOP	8408.54	8377.07	32.5174	-104.1859	1899' FNL, 41' FWL of Sec 3 in T21S, R27E
Point of Penetration	8902.38	8812.00	32.5175	-104.1856	1900' FNL , 100' FWL of Sec 3 in T21S, R27E
Exit	24465.05	9106.20	32.5175	-104.1348	1900' FNL, 100' FEL of Sec 1 in T21S, R27E
BHL	24545.05	9107.00	32.5174	-104.1346	1900' FNL, 20' FEL of Sec 1 in T21S, R27E

devon

Well: BURTON FLAT 3-1 FED STATE COM 622H
County: Eddy
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
42.00	0.00	297.00	42.00	0.00	0.00	0.00	0.00	Rustler
100.00	0.00	297.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	297.00	200.00	0.00	0.00	0.00	0.00	Salt,
300.00	0.00	297.00	300.00	0.00	0.00	0.00	0.00	
310.00	0.00	297.00	310.00	0.00	0.00	0.00	0.00	Base of Salt
400.00	0.00	297.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	297.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	297.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	297.00	700.00	0.00	0.00	0.00	0.00	
767.00	0.00	297.00	767.00	0.00	0.00	0.00	0.00	Capitan Reef Top
800.00	0.00	297.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	297.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	297.00	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	297.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	297.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	297.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	297.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	297.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	297.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	297.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	297.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	297.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	297.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	297.00	2099.98	0.79	-1.55	-1.54	2.00	
2200.00	4.00	297.00	2199.84	3.17	-6.22	-6.18	2.00	
2300.00	6.00	297.00	2299.45	7.12	-13.98	-13.89	2.00	
2400.00	8.00	297.00	2398.70	12.66	-24.84	-24.67	2.00	
2500.00	10.00	297.00	2497.47	19.76	-38.78	-38.52	2.00	Hold Tangent
2600.00	10.00	297.00	2595.95	27.64	-54.25	-53.89	0.00	
2654.89	10.00	297.00	2650.00	31.97	-62.74	-62.32	0.00	Delaware
2700.00	10.00	297.00	2694.43	35.53	-69.72	-69.25	0.00	
2800.00	10.00	297.00	2792.91	43.41	-85.20	-84.62	0.00	
2809.23	10.00	297.00	2802.00	44.14	-86.62	-86.04	0.00	Cherry Canyon
2900.00	10.00	297.00	2891.39	51.29	-100.67	-99.99	0.00	
3000.00	10.00	297.00	2989.87	59.18	-116.14	-115.36	0.00	
3100.00	10.00	297.00	3088.35	67.06	-131.61	-130.73	0.00	
3200.00	10.00	297.00	3186.83	74.94	-147.08	-146.10	0.00	
3300.00	10.00	297.00	3285.31	82.83	-162.56	-161.46	0.00	
3400.00	10.00	297.00	3383.79	90.71	-178.03	-176.83	0.00	
3500.00	10.00	297.00	3482.27	98.59	-193.50	-192.20	0.00	
3600.00	10.00	297.00	3580.75	106.48	-208.97	-207.57	0.00	
3700.00	10.00	297.00	3679.23	114.36	-224.45	-222.94	0.00	
3704.84	10.00	297.00	3684.00	114.74	-225.19	-223.68	0.00	Brushy Canyon
3800.00	10.00	297.00	3777.72	122.24	-239.92	-238.31	0.00	
3900.00	10.00	297.00	3876.20	130.13	-255.39	-253.67	0.00	
4000.00	10.00	297.00	3974.68	138.01	-270.86	-269.04	0.00	
4100.00	10.00	297.00	4073.16	145.89	-286.33	-284.41	0.00	
4200.00	10.00	297.00	4171.64	153.78	-301.81	-299.78	0.00	
4237.31	10.00	297.00	4208.38	156.72	-307.58	-305.51	0.00	Drop to Vertical
4300.00	8.75	297.00	4270.23	161.35	-316.68	-314.55	2.00	
4400.00	6.75	297.00	4369.32	167.47	-328.68	-326.48	2.00	
4500.00	4.75	297.00	4468.81	172.02	-337.60	-335.34	2.00	
4600.00	2.75	297.00	4568.59	174.98	-343.43	-341.12	2.00	
4700.00	0.75	297.00	4668.54	176.37	-346.14	-343.82	2.00	
4737.31	0.00	297.00	4705.84	176.48	-346.36	-344.03	2.00	Hold Vertical
4800.00	0.00	89.91	4768.54	176.48	-346.36	-344.03	0.00	
4900.00	0.00	89.91	4868.54	176.48	-346.36	-344.03	0.00	
5000.00	0.00	89.91	4968.54	176.48	-346.36	-344.03	0.00	
5100.00	0.00	89.91	5068.54	176.48	-346.36	-344.03	0.00	
5121.46	0.00	89.91	5090.00	176.48	-346.36	-344.03	0.00	1st Bone Spring Lime
5200.00	0.00	89.91	5168.54	176.48	-346.36	-344.03	0.00	
5300.00	0.00	89.91	5268.54	176.48	-346.36	-344.03	0.00	
5400.00	0.00	89.91	5368.54	176.48	-346.36	-344.03	0.00	
5500.00	0.00	89.91	5468.54	176.48	-346.36	-344.03	0.00	
5600.00	0.00	89.91	5568.54	176.48	-346.36	-344.03	0.00	
5700.00	0.00	89.91	5668.54	176.48	-346.36	-344.03	0.00	
5800.00	0.00	89.91	5768.54	176.48	-346.36	-344.03	0.00	
5900.00	0.00	89.91	5868.54	176.48	-346.36	-344.03	0.00	
6000.00	0.00	89.91	5968.54	176.48	-346.36	-344.03	0.00	

devon

Well: BURTON FLAT 3-1 FED STATE COM 622H
County: Eddy
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
6100.00	0.00	89.91	6068.54	176.48	-346.36	-344.03	0.00	
6200.00	0.00	89.91	6168.54	176.48	-346.36	-344.03	0.00	
6300.00	0.00	89.91	6268.54	176.48	-346.36	-344.03	0.00	
6349.46	0.00	89.91	6318.00	176.48	-346.36	-344.03	0.00	Bone Spring 1st
6400.00	0.00	89.91	6368.54	176.48	-346.36	-344.03	0.00	
6500.00	0.00	89.91	6468.54	176.48	-346.36	-344.03	0.00	
6600.00	0.00	89.91	6568.54	176.48	-346.36	-344.03	0.00	
6700.00	0.00	89.91	6668.54	176.48	-346.36	-344.03	0.00	
6800.00	0.00	89.91	6768.54	176.48	-346.36	-344.03	0.00	
6900.00	0.00	89.91	6868.54	176.48	-346.36	-344.03	0.00	
7000.00	0.00	89.91	6968.54	176.48	-346.36	-344.03	0.00	
7065.46	0.00	89.91	7034.00	176.48	-346.36	-344.03	0.00	Bone Spring 2nd
7100.00	0.00	89.91	7068.54	176.48	-346.36	-344.03	0.00	
7200.00	0.00	89.91	7168.54	176.48	-346.36	-344.03	0.00	
7300.00	0.00	89.91	7268.54	176.48	-346.36	-344.03	0.00	
7400.00	0.00	89.91	7368.54	176.48	-346.36	-344.03	0.00	
7499.46	0.00	89.91	7468.00	176.48	-346.36	-344.03	0.00	3rd Bone Spring Lime
7500.00	0.00	89.91	7468.54	176.48	-346.36	-344.03	0.00	
7600.00	0.00	89.91	7568.54	176.48	-346.36	-344.03	0.00	
7700.00	0.00	89.91	7668.54	176.48	-346.36	-344.03	0.00	
7800.00	0.00	89.91	7768.54	176.48	-346.36	-344.03	0.00	
7900.00	0.00	89.91	7868.54	176.48	-346.36	-344.03	0.00	
8000.00	0.00	89.91	7968.54	176.48	-346.36	-344.03	0.00	
8100.00	0.00	89.91	8068.54	176.48	-346.36	-344.03	0.00	
8200.00	0.00	89.91	8168.54	176.48	-346.36	-344.03	0.00	
8300.00	0.00	89.91	8268.54	176.48	-346.36	-344.03	0.00	
8400.00	0.00	89.91	8368.54	176.48	-346.36	-344.03	0.00	
8408.54	0.00	89.91	8377.07	176.48	-346.36	-344.03	0.00	KOP
8456.52	4.80	89.91	8425.00	176.48	-344.35	-342.02	10.00	Bone Spring 3rd
8500.00	9.15	89.91	8468.15	176.49	-339.07	-336.75	10.00	
8600.00	19.15	89.91	8564.99	176.53	-314.66	-312.34	10.00	
8700.00	29.15	89.91	8656.13	176.59	-273.81	-271.49	10.00	
8800.00	39.15	89.91	8738.78	176.68	-217.75	-215.43	10.00	
8900.00	49.15	89.91	8810.45	176.79	-148.19	-145.87	10.00	
8902.38	49.38	89.91	8812.00	176.79	-146.39	-144.07	10.00	Wolfcamp / Point of Penetration
9000.00	59.15	89.91	8868.95	176.92	-67.24	-64.93	10.00	
9100.00	69.15	89.91	8912.50	177.06	22.64	24.94	10.00	
9200.00	79.15	89.91	8939.78	177.21	118.71	121.01	10.00	
9300.00	89.15	89.91	8949.97	177.36	218.07	220.36	10.00	
9302.63	89.41	89.91	8950.00	177.37	220.70	222.99	10.00	Landing Point
9400.00	89.41	89.91	8951.00	177.52	318.06	320.34	0.00	
9500.00	89.41	89.91	8952.03	177.68	418.05	420.33	0.00	
9600.00	89.41	89.91	8953.06	177.84	518.05	520.32	0.00	
9700.00	89.41	89.91	8954.09	177.99	618.04	620.31	0.00	
9800.00	89.41	89.91	8955.12	178.15	718.04	720.30	0.00	
9900.00	89.41	89.91	8956.15	178.31	818.03	820.28	0.00	
10000.00	89.41	89.91	8957.18	178.46	918.03	920.27	0.00	
10100.00	89.41	89.91	8958.21	178.62	1018.02	1020.26	0.00	
10200.00	89.41	89.91	8959.24	178.78	1118.02	1120.25	0.00	
10300.00	89.41	89.91	8960.27	178.94	1218.01	1220.24	0.00	
10400.00	89.41	89.91	8961.30	179.09	1318.01	1320.23	0.00	
10500.00	89.41	89.91	8962.33	179.25	1418.00	1420.21	0.00	
10600.00	89.41	89.91	8963.36	179.41	1517.99	1520.20	0.00	
10700.00	89.41	89.91	8964.39	179.57	1617.99	1620.19	0.00	
10800.00	89.41	89.91	8965.43	179.72	1717.98	1720.18	0.00	
10900.00	89.41	89.91	8966.46	179.88	1817.98	1820.17	0.00	
11000.00	89.41	89.91	8967.49	180.04	1917.97	1920.15	0.00	
11100.00	89.41	89.91	8968.52	180.19	2017.97	2020.14	0.00	
11200.00	89.41	89.91	8969.55	180.35	2117.96	2120.13	0.00	
11300.00	89.41	89.91	8970.58	180.51	2217.96	2220.12	0.00	
11400.00	89.41	89.91	8971.61	180.67	2317.95	2320.11	0.00	
11500.00	89.41	89.91	8972.64	180.82	2417.95	2420.10	0.00	
11600.00	89.41	89.91	8973.67	180.98	2517.94	2520.08	0.00	
11700.00	89.41	89.91	8974.70	181.14	2617.94	2620.07	0.00	
11800.00	89.41	89.91	8975.73	181.29	2717.93	2720.06	0.00	
11900.00	89.41	89.91	8976.76	181.45	2817.92	2820.05	0.00	
12000.00	89.41	89.91	8977.79	181.61	2917.92	2920.04	0.00	
12100.00	89.41	89.91	8978.82	181.77	3017.91	3020.02	0.00	
12200.00	89.41	89.91	8979.85	181.92	3117.91	3120.01	0.00	
12300.00	89.41	89.91	8980.88	182.08	3217.90	3220.00	0.00	

devon

Well: BURTON FLAT 3-1 FED STATE COM 622H
County: Eddy
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
12400.00	89.41	89.91	8981.91	182.24	3317.90	3319.99	0.00	
12500.00	89.41	89.91	8982.94	182.39	3417.89	3419.98	0.00	
12600.00	89.41	89.91	8983.97	182.55	3517.89	3519.96	0.00	
12700.00	89.41	89.91	8985.00	182.71	3617.88	3619.95	0.00	
12800.00	89.41	89.91	8986.03	182.87	3717.88	3719.94	0.00	
12900.00	89.41	89.91	8987.06	183.02	3817.87	3819.93	0.00	
13000.00	89.41	89.91	8988.09	183.18	3917.86	3919.92	0.00	
13100.00	89.41	89.91	8989.12	183.34	4017.86	4019.91	0.00	
13200.00	89.41	89.91	8990.15	183.50	4117.85	4119.89	0.00	
13300.00	89.41	89.91	8991.18	183.65	4217.85	4219.88	0.00	
13400.00	89.41	89.91	8992.21	183.81	4317.84	4319.87	0.00	
13500.00	89.41	89.91	8993.24	183.97	4417.84	4419.86	0.00	
13600.00	89.41	89.91	8994.27	184.12	4517.83	4519.85	0.00	
13700.00	89.41	89.91	8995.30	184.28	4617.83	4619.83	0.00	
13800.00	89.41	89.91	8996.33	184.44	4717.82	4719.82	0.00	
13900.00	89.41	89.91	8997.36	184.60	4817.82	4819.81	0.00	
14000.00	89.41	89.91	8998.39	184.75	4917.81	4919.80	0.00	
14100.00	89.41	89.91	8999.42	184.91	5017.80	5019.79	0.00	
14200.00	89.41	89.91	9000.45	185.07	5117.80	5119.78	0.00	
14300.00	89.41	89.91	9001.48	185.22	5217.79	5219.76	0.00	
14400.00	89.41	89.91	9002.51	185.38	5317.79	5319.75	0.00	
14500.00	89.41	89.91	9003.54	185.54	5417.78	5419.74	0.00	
14600.00	89.41	89.91	9004.57	185.70	5517.78	5519.73	0.00	
14700.00	89.41	89.91	9005.60	185.85	5617.77	5619.72	0.00	
14800.00	89.41	89.91	9006.63	186.01	5717.77	5719.70	0.00	
14900.00	89.41	89.91	9007.66	186.17	5817.76	5819.69	0.00	
15000.00	89.41	89.91	9008.69	186.32	5917.76	5919.68	0.00	
15100.00	89.41	89.91	9009.72	186.48	6017.75	6019.67	0.00	
15200.00	89.41	89.91	9010.75	186.64	6117.75	6119.66	0.00	
15300.00	89.41	89.91	9011.78	186.80	6217.74	6219.64	0.00	
15400.00	89.41	89.91	9012.81	186.95	6317.73	6319.63	0.00	
15500.00	89.41	89.91	9013.84	187.11	6417.73	6419.62	0.00	
15600.00	89.41	89.91	9014.87	187.27	6517.72	6519.61	0.00	
15700.00	89.41	89.91	9015.90	187.43	6617.72	6619.60	0.00	
15800.00	89.41	89.91	9016.93	187.58	6717.71	6719.59	0.00	
15900.00	89.41	89.91	9017.96	187.74	6817.71	6819.57	0.00	
16000.00	89.41	89.91	9018.99	187.90	6917.70	6919.56	0.00	
16100.00	89.41	89.91	9020.02	188.05	7017.70	7019.55	0.00	
16200.00	89.41	89.91	9021.05	188.21	7117.69	7119.54	0.00	
16300.00	89.41	89.91	9022.08	188.37	7217.69	7219.53	0.00	
16400.00	89.41	89.91	9023.11	188.53	7317.68	7319.51	0.00	
16500.00	89.41	89.91	9024.14	188.68	7417.67	7419.50	0.00	
16600.00	89.41	89.91	9025.17	188.84	7517.67	7519.49	0.00	
16700.00	89.41	89.91	9026.20	189.00	7617.66	7619.48	0.00	
16800.00	89.41	89.91	9027.23	189.15	7717.66	7719.47	0.00	
16900.00	89.41	89.91	9028.26	189.31	7817.65	7819.45	0.00	
17000.00	89.41	89.91	9029.29	189.47	7917.65	7919.44	0.00	
17100.00	89.41	89.91	9030.32	189.63	8017.64	8019.43	0.00	
17200.00	89.41	89.91	9031.35	189.78	8117.64	8119.42	0.00	
17300.00	89.41	89.91	9032.39	189.94	8217.63	8219.41	0.00	
17400.00	89.41	89.91	9033.42	190.10	8317.63	8319.40	0.00	
17500.00	89.41	89.91	9034.45	190.25	8417.62	8419.38	0.00	
17600.00	89.41	89.91	9035.48	190.41	8517.61	8519.37	0.00	
17700.00	89.41	89.91	9036.51	190.57	8617.61	8619.36	0.00	
17800.00	89.41	89.91	9037.54	190.73	8717.60	8719.35	0.00	
17900.00	89.41	89.91	9038.57	190.88	8817.60	8819.34	0.00	
18000.00	89.41	89.91	9039.60	191.04	8917.59	8919.32	0.00	
18100.00	89.41	89.91	9040.63	191.20	9017.59	9019.31	0.00	
18200.00	89.41	89.91	9041.66	191.36	9117.58	9119.30	0.00	
18300.00	89.41	89.91	9042.69	191.51	9217.58	9219.29	0.00	
18400.00	89.41	89.91	9043.72	191.67	9317.57	9319.28	0.00	
18500.00	89.41	89.91	9044.75	191.83	9417.57	9419.27	0.00	
18600.00	89.41	89.91	9045.78	191.98	9517.56	9519.25	0.00	
18700.00	89.41	89.91	9046.81	192.14	9617.56	9619.24	0.00	
18800.00	89.41	89.91	9047.84	192.30	9717.55	9719.23	0.00	
18900.00	89.41	89.91	9048.87	192.46	9817.54	9819.22	0.00	
19000.00	89.41	89.91	9049.90	192.61	9917.54	9919.21	0.00	
19100.00	89.41	89.91	9050.93	192.77	10017.53	10019.19	0.00	
19200.00	89.41	89.91	9051.96	192.93	10117.53	10119.18	0.00	
19300.00	89.41	89.91	9052.99	193.08	10217.52	10219.17	0.00	

devon

Well: BURTON FLAT 3-1 FED STATE COM 622H
County: Eddy
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
19400.00	89.41	89.91	9054.02	193.24	10317.52	10319.16	0.00	
19500.00	89.41	89.91	9055.05	193.40	10417.51	10419.15	0.00	
19600.00	89.41	89.91	9056.08	193.56	10517.51	10519.13	0.00	
19700.00	89.41	89.91	9057.11	193.71	10617.50	10619.12	0.00	
19800.00	89.41	89.91	9058.14	193.87	10717.50	10719.11	0.00	
19900.00	89.41	89.91	9059.17	194.03	10817.49	10819.10	0.00	
20000.00	89.41	89.91	9060.20	194.19	10917.48	10919.09	0.00	
20100.00	89.41	89.91	9061.23	194.34	11017.48	11019.08	0.00	
20200.00	89.41	89.91	9062.26	194.50	11117.47	11119.06	0.00	
20300.00	89.41	89.91	9063.29	194.66	11217.47	11219.05	0.00	
20400.00	89.41	89.91	9064.32	194.81	11317.46	11319.04	0.00	
20500.00	89.41	89.91	9065.35	194.97	11417.46	11419.03	0.00	
20600.00	89.41	89.91	9066.38	195.13	11517.45	11519.02	0.00	
20700.00	89.41	89.91	9067.41	195.29	11617.45	11619.00	0.00	
20800.00	89.41	89.91	9068.44	195.44	11717.44	11718.99	0.00	
20900.00	89.41	89.91	9069.47	195.60	11817.44	11818.98	0.00	
21000.00	89.41	89.91	9070.50	195.76	11917.43	11918.97	0.00	
21100.00	89.41	89.91	9071.53	195.91	12017.42	12018.96	0.00	
21200.00	89.41	89.91	9072.56	196.07	12117.42	12118.95	0.00	
21300.00	89.41	89.91	9073.59	196.23	12217.41	12218.93	0.00	
21400.00	89.41	89.91	9074.62	196.39	12317.41	12318.92	0.00	
21500.00	89.41	89.91	9075.65	196.54	12417.40	12418.91	0.00	
21600.00	89.41	89.91	9076.68	196.70	12517.40	12518.90	0.00	
21700.00	89.41	89.91	9077.71	196.86	12617.39	12618.89	0.00	
21800.00	89.41	89.91	9078.74	197.01	12717.39	12718.87	0.00	
21900.00	89.41	89.91	9079.77	197.17	12817.38	12818.86	0.00	
22000.00	89.41	89.91	9080.80	197.33	12917.38	12918.85	0.00	
22100.00	89.41	89.91	9081.83	197.49	13017.37	13018.84	0.00	
22200.00	89.41	89.91	9082.86	197.64	13117.37	13118.83	0.00	
22300.00	89.41	89.91	9083.89	197.80	13217.36	13218.81	0.00	
22400.00	89.41	89.91	9084.92	197.96	13317.35	13318.80	0.00	
22500.00	89.41	89.91	9085.95	198.12	13417.35	13418.79	0.00	
22600.00	89.41	89.91	9086.98	198.27	13517.34	13518.78	0.00	
22700.00	89.41	89.91	9088.01	198.43	13617.34	13618.77	0.00	
22800.00	89.41	89.91	9089.04	198.59	13717.33	13718.76	0.00	
22900.00	89.41	89.91	9090.07	198.74	13817.33	13818.74	0.00	
23000.00	89.41	89.91	9091.10	198.90	13917.32	13918.73	0.00	
23100.00	89.41	89.91	9092.13	199.06	14017.32	14018.72	0.00	
23200.00	89.41	89.91	9093.16	199.22	14117.31	14118.71	0.00	
23300.00	89.41	89.91	9094.19	199.37	14217.31	14218.70	0.00	
23400.00	89.41	89.91	9095.22	199.53	14317.30	14318.68	0.00	
23500.00	89.41	89.91	9096.25	199.69	14417.29	14418.67	0.00	
23600.00	89.41	89.91	9097.28	199.84	14517.29	14518.66	0.00	
23700.00	89.41	89.91	9098.31	200.00	14617.28	14618.65	0.00	
23800.00	89.41	89.91	9099.34	200.16	14717.28	14718.64	0.00	
23900.00	89.41	89.91	9100.38	200.32	14817.27	14818.62	0.00	
24000.00	89.41	89.91	9101.41	200.47	14917.27	14918.61	0.00	
24100.00	89.41	89.91	9102.44	200.63	15017.26	15018.60	0.00	
24200.00	89.41	89.91	9103.47	200.79	15117.26	15118.59	0.00	
24300.00	89.41	89.91	9104.50	200.94	15217.25	15218.58	0.00	
24400.00	89.41	89.91	9105.53	201.10	15317.25	15318.57	0.00	
24465.05	89.41	89.91	9106.20	201.20	15382.29	15383.61	0.00	exit
24500.00	89.41	89.91	9106.56	201.26	15417.24	15418.55	0.00	
24545.05	89.41	89.91	9107.00	201.31	15462.29	15463.60	0.00	BHL

Well: BURTON FLAT 3-1 FED STATE COM 622H
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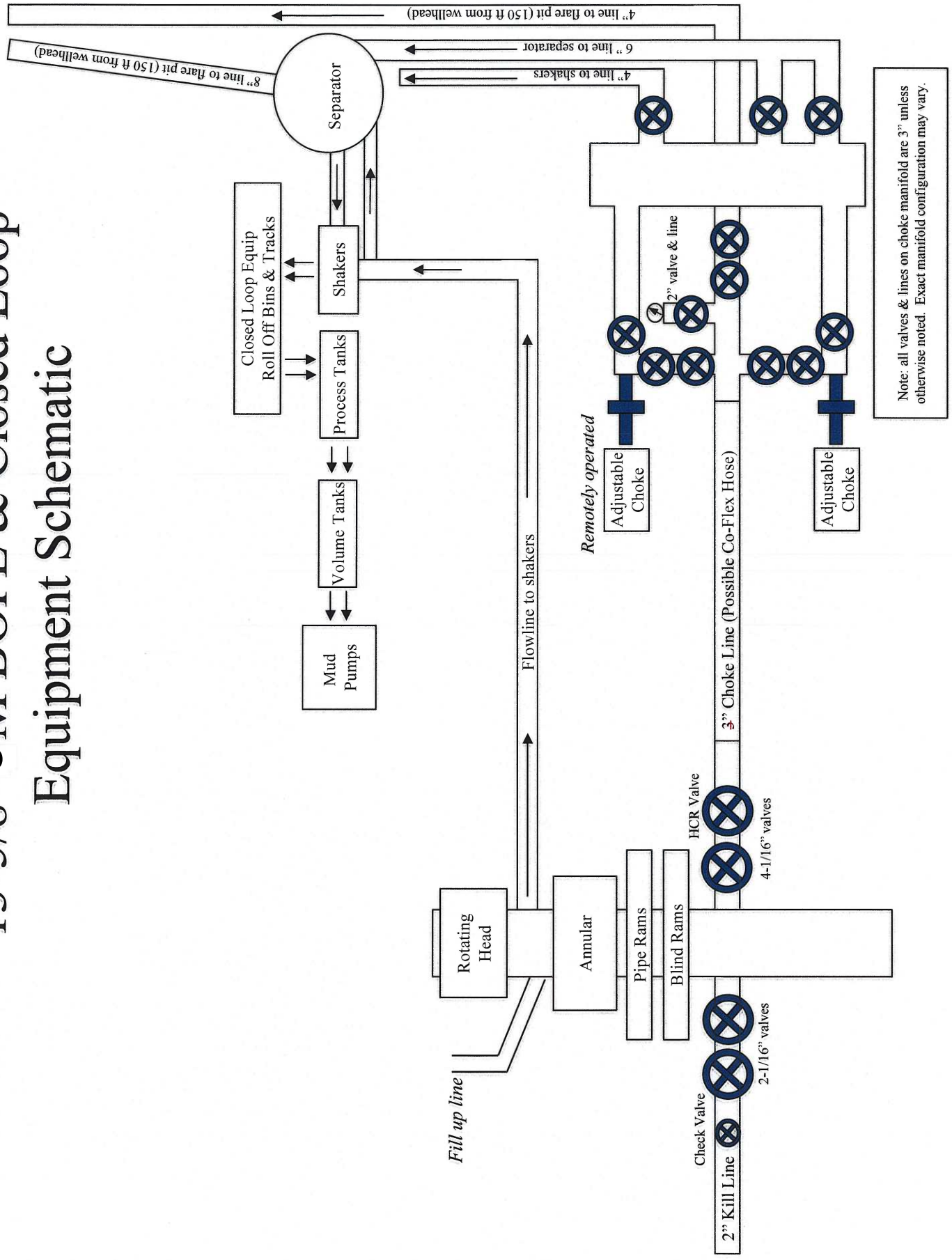
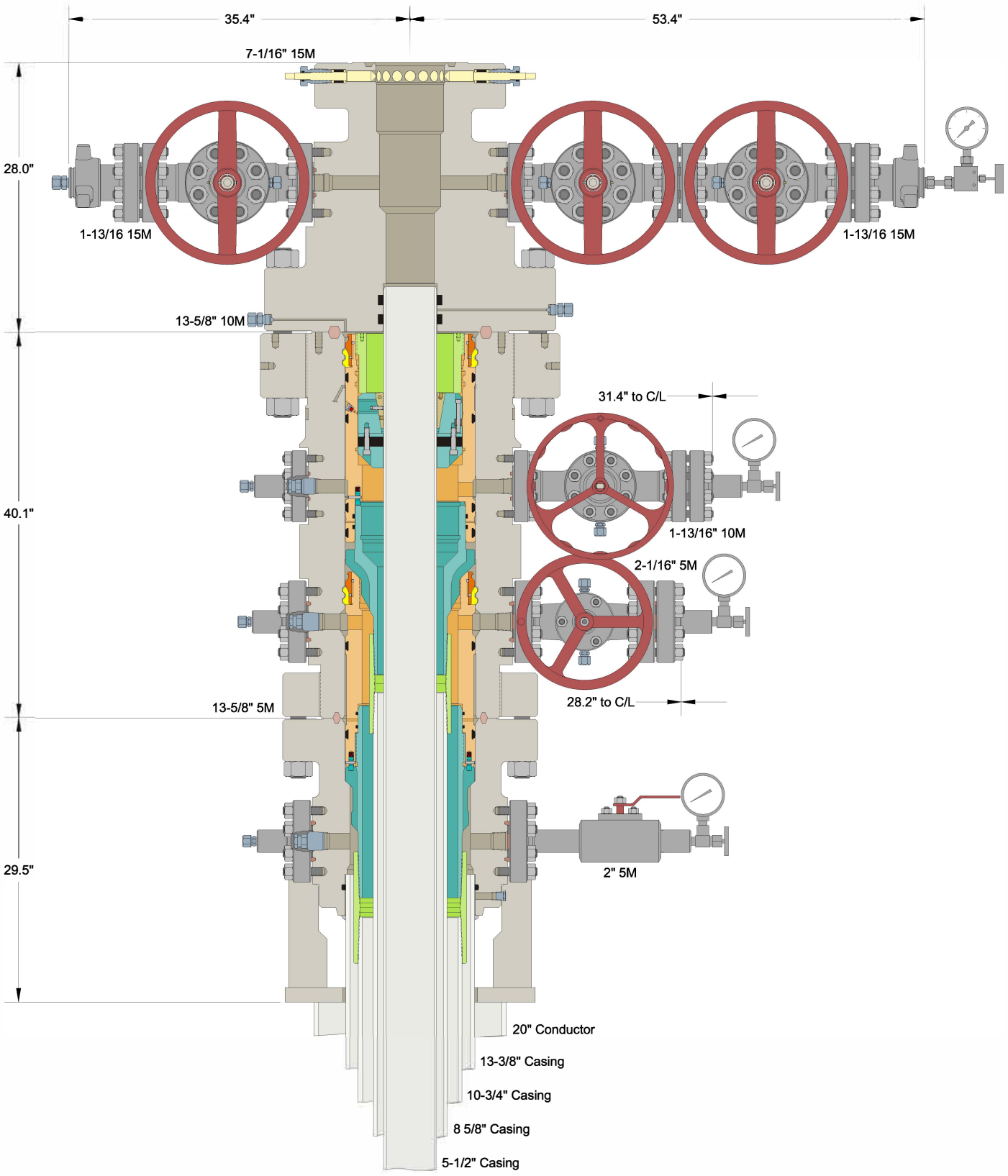
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment

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





ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	MATADOR RESOURCES WOLFCAMP A WELLS (TEXAS)		
20" x 13-3/8" x 10-3/4" x 8-5/8" x 5-1/2" MBU-4T-SOW Wellhead With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head, 10-3/4" & 8-5/8" Mandrel Hangers And 5-1/2" Slip Casing Hanger	DRAWN	DLE	09AUG19
	APPRV		
	DRAWING NO.	HBE0000156	

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LEASE NO.:	**NMNM109754**
LOCATION:	Section 3, T.21 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	**Burton Flat 3-1 Fed State Com 332H**
SURFACE HOLE FOOTAGE:	1061'/N & 369'/W
BOTTOM HOLE FOOTAGE	1150'/N & 20'/E
ATS/API ID:	**ATS-22-2112**
APD ID:	**10400069096**
Sundry ID:	**N/A**

WELL NAME & NO.:	**Burton Flat 3-1 Fed State Com 622H**
SURFACE HOLE FOOTAGE:	2077'/N & 387'/W
BOTTOM HOLE FOOTAGE	1900'/N & 20'/E
ATS/API ID:	**ATS-22-2110**
APD ID:	**10400069125**
Sundry ID:	**N/A**

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	☐ Primary Cement Squeeze
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit
Special Requirements Variance	☑ Break Testing	☐ Offline Cementing	☐ Batch Sundry

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Bone Springs** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public

Approval Date: 04/25/2023

protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **350 feet** (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

   Burton Flat 3-1 Fed State Com 332H: Additional 200 sacks is required.

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

2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing shall be set at approximately **750 feet** is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
     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.

   ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

   ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Operator has proposed to pump down 13-3/8" X 10-3/4" annulus after primary cementing stage. Operator must run a CBL from TD of the 10-3/4" casing to surface. Submit results to the BLM.

 Approval Date: 04/25/2023

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 **8-5/8** inch intermediate casing shall be set at approximately **2400** is:

    - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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.

4. 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.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
      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 **10-3/4** intermediate casing shoe shall be **3000 (3M)** psi.

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

Approval Date: 04/25/2023

Option 2:

a. 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 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 2.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**

- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **14**-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Approval Date: 04/25/2023

GENERAL REQUIREMENTS

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

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

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

☒ 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 Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

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

Approval Date: 04/25/2023

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 intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

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

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

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

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

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

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

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i 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 when specified), whichever is greater. However, if the float does not

Approval Date: 04/25/2023

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

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (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 Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

LVO 1/9/2023

Approval Date: 04/25/2023

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

Hydrogen Sulfide (H_2S) Contingency Plan

For

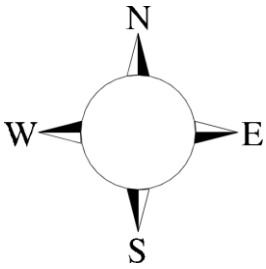
Burton Flat 3-1 Fed State Com 622H

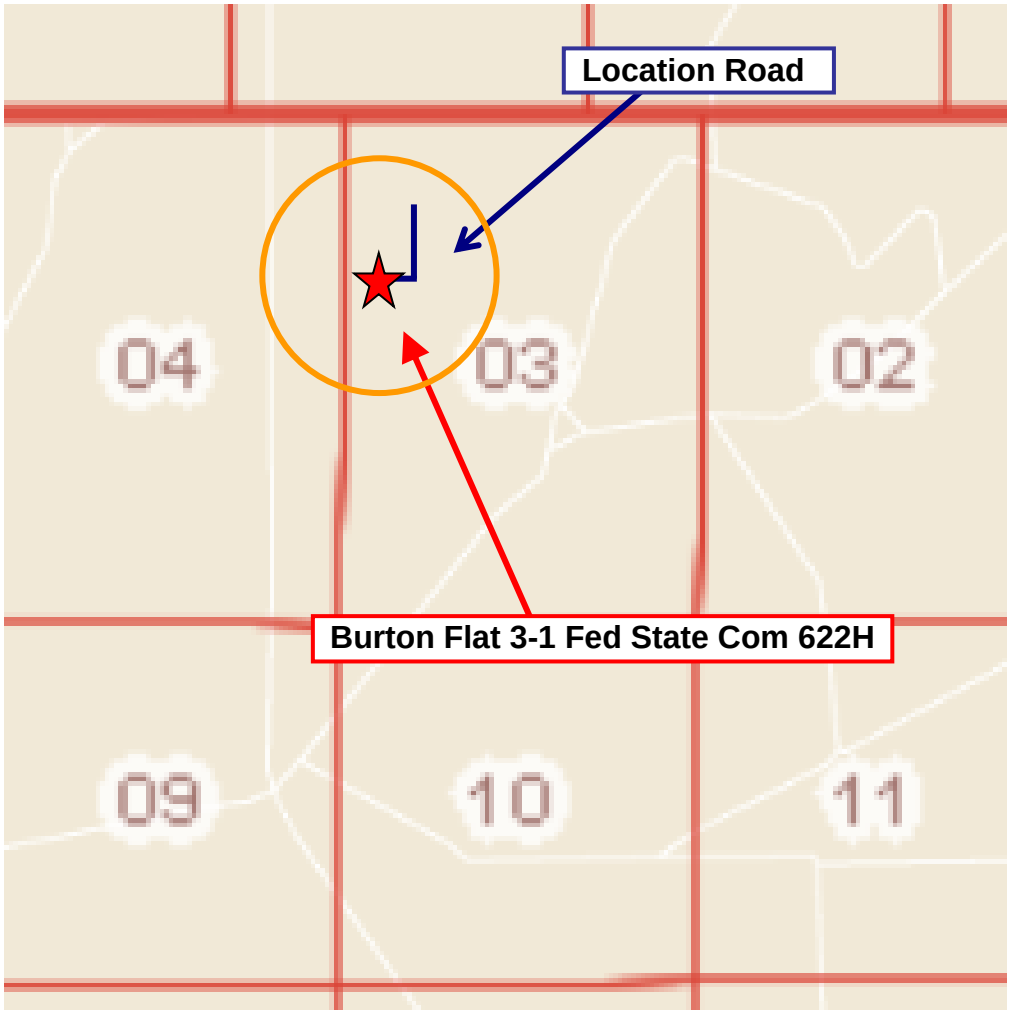
Sec-3 T-21S R-27E
2077’ FNL & 387 FWL
LAT. = 32.516975 N (NAD83)
LONG = 104.184701 W

Eddy County NM

Burton Flat 3-1 Fed State Com 622H

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.

   Fire extinguishers are located at various locations around the rig. First Aid supplies are located in the top doghouse and the rig manger's office.

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**

4. **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.

5. **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.

6. **Metallurgy:**

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

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

7. **Communication:**

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

   b. Land line (telephone) communications at Office

8. **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

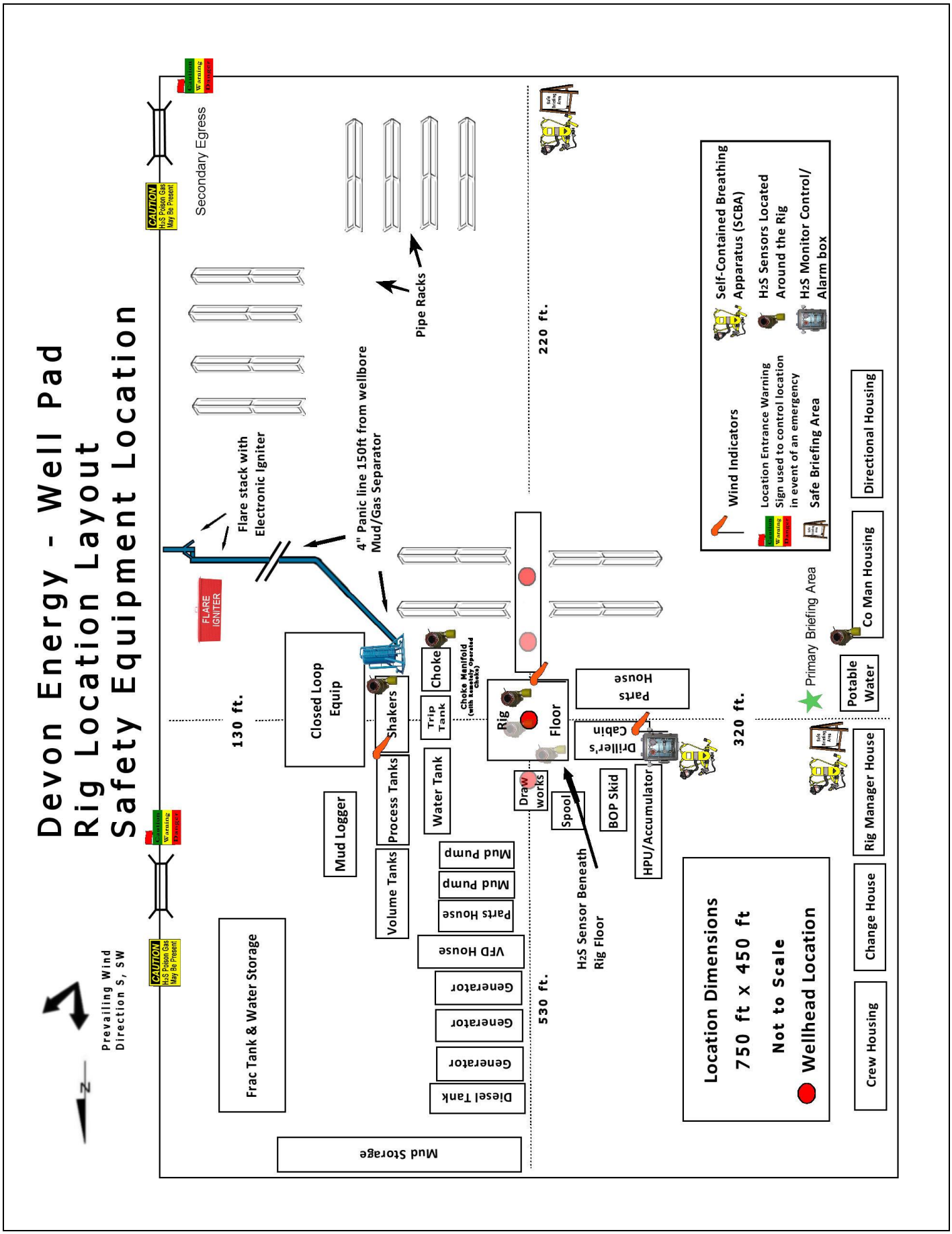
Employee/Company Contact Representative	Position	Phone Number	After Hours Number
Jonathan Fisher (North)	Drilling Manager	832-967-7912	
Jason Hildebrand (South)	Drilling Manager	405-552-6514	
Rich Downey	Drilling VP	405-228-2415	
Josh Harvey	EHS Manger	405-228-2440	918-500-5536
Laura Wright	EHS Supervisor	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
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 (Hobbs Office 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 (Carlsbad) BLM – CFO **BLM – PET Petroleum Engineering Tech. ON CALL – Cement Notifications or Emergency issues.**	(575)-706-1920 (575)-234-5909 (575) 234-5972 **(575) 689-5981**
	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
	BNSF Railroad Resource Operations	800-832-5452
	NM OSHA – Santa Fe	505-222-9595
	NM OSHA (Reporting)	877-610-6742 505-476-8700

Prepared in conjunction with
Dave Small SHARP communications and consulting


Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location
Secondary Egress
CAUTION H2S Poison Gas May Be Present
Pipe Racks
220 ft.
Flare stack with Electronic Igniter
FLARE IGNITER
4" Panic line 150ft from wellbore Mud/Gas Separator
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors Located Around the Rig
H2S Monitor Control/ Alarm box
Wind Indicators
Location Entrance Warning Sign used to control location in event of an emergency
Safe Briefing Area
Primary Briefing Area
Directional Housing
Co Man Housing
Potable Water
130 ft.
Closed Loop Equip
Shakers
Choke
Choke Manifold (with assembly Operated Choke)
Trip Tank
Rig Floor
Parts House
Driller's Cabin
320 ft.
Mud Logger
Process Tanks
Water Tank
Draw works
Spool
BOP Skid
HPU/Accumulator
Volume Tanks
Mud Pump
Mud Pump
Parts House
VFD House
Generator
Generator
Generator
Diesel Tank
530 ft.
H2S Sensor Beneath Rig Floor
Mud Storage
Frac Tank & Water Storage
Prevailing Wind Direction S, SW
N
Location Dimensions
750 ft x 450 ft
Not to Scale
Wellhead Location
Crew Housing
Change House
Rig Manager House

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: DEVON ENERGY PRODUCTION COMPANY, LP **OGRID:** 6137 **Date:** 11 / 18 / 2022

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 attachment						

IV. Central Delivery Point Name: See attachment [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 attachment						

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.

NATURAL GAS MANAGEMENT PLAN
Section 1 - Plan Description

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	Central Delivery Point Name:
BURTON FLAT 3-1 FED STATE COM 331H		3-21S-27E	1001	FNL	369	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 621H		3-21S-27E	1031	FNL	369	FWL	(+/-)1245bopd	(+/-)2995mcfd	(+/-)3115bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 332H		3-21S-27E	1061	FNL	369	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 822H		3-21S-27E	2047	FNL	387	FWL	(+/-)626bopd	(+/-)6778mcfd	(+/-)2539bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 622H		3-21S-27E	2077	FNL	387	FWL	(+/-)1245bopd	(+/-)2995mcfd	(+/-)3115bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 333H		3-21S-27E	2107	FNL	387	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 823H		3-21S-27E	2137	FNL	387	FWL	(+/-)626bopd	(+/-)6778mcfd	(+/-)2539bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 623H		3-21S-27E	2988	FSL	150	FWL	(+/-)1245bopd	(+/-)2995mcfd	(+/-)3115bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 335H		3-21S-27E	2958	FSL	150	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 625H		3-21S-27E	2928	FSL	150	FWL	(+/-)1245bopd	(+/-)2995mcfd	(+/-)3115bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 824H		3-21S-27E	2186	FSL	150	FWL	(+/-)626bopd	(+/-)6778mcfd	(+/-)2539bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 337H		3-21S-27E	2156	FSL	150	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 624H		3-21S-27E	2126	FSL	150	FWL	(+/-)1245bopd	(+/-)2995mcfd	(+/-)3115bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 338H		3-21S-27E	2096	FSL	150	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 825H		3-21S-27E	265	FSL	205	FWL	(+/-)626bopd	(+/-)6778mcfd	(+/-)2539bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 626H		3-21S-27E	235	FSL	205	FWL	(+/-)1245bopd	(+/-)2995mcfd	(+/-)3115bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 339H		3-21S-27E	205	FSL	205	FWL	(+/-)973bopd	(+/-)2194mcfd	(+/-)2965bwpd	BFDU 3 Facility 1
BURTON FLAT 3-1 FED STATE COM 826H		3-21S-27E	175	FSL	205	FWL	(+/-)626bopd	(+/-)6778mcfd	(+/-)2539bwpd	BFDU 3 Facility 1

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
BURTON FLAT 3-1 FED STATE COM 331H	n/a	8/16/2023	9/15/2023	1/13/2024	1/13/2024	1/13/2024
BURTON FLAT 3-1 FED STATE COM 621H	n/a	9/28/2023	10/28/2023	2/25/2024	2/25/2024	2/25/2024
BURTON FLAT 3-1 FED STATE COM 332H	n/a	9/2/2023	10/2/2023	1/30/2024	1/30/2024	1/30/2024
BURTON FLAT 3-1 FED STATE COM 822H	n/a	8/15/2023	9/14/2023	1/12/2024	1/12/2024	1/12/2024
BURTON FLAT 3-1 FED STATE COM 622H	n/a	10/10/2023	11/9/2023	3/8/2024	3/8/2024	3/8/2024
BURTON FLAT 3-1 FED STATE COM 333H	n/a	9/13/2023	10/13/2023	2/10/2024	2/10/2024	2/10/2024
BURTON FLAT 3-1 FED STATE COM 823H	n/a	10/8/2023	11/7/2023	3/6/2024	3/6/2024	3/6/2024
BURTON FLAT 3-1 FED STATE COM 623H	n/a	3/12/2024	4/11/2024	8/9/2024	8/9/2024	8/9/2024
BURTON FLAT 3-1 FED STATE COM 335H	n/a	2/14/2024	3/15/2024	7/13/2024	7/13/2024	7/13/2024
BURTON FLAT 3-1 FED STATE COM 625H	n/a	4/20/2024	5/20/2024	9/17/2024	9/17/2024	9/17/2024
BURTON FLAT 3-1 FED STATE COM 824H	n/a	3/26/2024	4/25/2024	8/23/2024	8/23/2024	8/23/2024
BURTON FLAT 3-1 FED STATE COM 337H	n/a	3/21/2024	4/20/2024	8/18/2024	8/18/2024	8/18/2024
BURTON FLAT 3-1 FED STATE COM 624H	n/a	2/19/2024	3/20/2024	7/18/2024	7/18/2024	7/18/2024
BURTON FLAT 3-1 FED STATE COM 338H	n/a	4/16/2024	5/16/2024	9/13/2024	9/13/2024	9/13/2024
BURTON FLAT 3-1 FED STATE COM 825H	n/a	5/10/2024	6/9/2024	10/7/2024	10/7/2024	10/7/2024
BURTON FLAT 3-1 FED STATE COM 626H	n/a	6/14/2024	7/14/2024	11/11/2024	11/11/2024	11/11/2024
BURTON FLAT 3-1 FED STATE COM 339H	n/a	2/16/2024	3/17/2024	7/15/2024	7/15/2024	7/15/2024
BURTON FLAT 3-1 FED STATE COM 826H	n/a	5/15/2024	6/14/2024	10/12/2024	10/12/2024	10/12/2024

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

D 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;
- **(t)** 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:	
Printed Name:	Jeff Walla
Title:	Surface Land and Regulatory Manager
E-mail Address:	jeff.walla@dvn.com
Date:	11-18-2022
Phone:	405-552-8154

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment

Devon Energy Production Company, L.P. utilizes a "stage separation" process in which oil and gas separation is carried out through a series of separators operating at successively reduced pressures. Hydrocarbon liquids are produced into a high-pressure inlet separator, then carried through one or more lower pressure separation vessels before entering the storage tanks. The purpose of this separation process is to attain maximum recovery of liquid hydrocarbons from the fluids and allow maximum capture of produced gas into the sales pipeline. Devon utilizes a series of Low-Pressure Compression units to capture gas off the staged separation and send it to the sales pipeline. This process minimizes the amount of flash gas that enters the end-stage storage tanks that is subsequently vented or flared.

VII. Operational Practices

Devon Energy Production Company, L. P. will employ best management practices and control technologies to maximize the recovery and minimize waste of natural gas through venting and flaring.

- During drilling operations, Devon will utilize flares and/or combustors to capture and control natural gas, where technically feasible. If flaring is deemed technically in-feasible, Devon will employ best management practices to minimize or reduce venting to the extent possible.
- During completions operations, Devon will utilize Green Completion methods to capture gas produced during well completions that is otherwise vented or flared. If capture is technically in-feasible, flares and/or combustors will be used to capture and control flow back fluids entering into frac tanks during initial flowback. Upon indication of first measurable hydrocarbon volumes, Devon will turn operations to onsite separation vessels and flow to the gathering pipeline.
- During production operations, Devon will take every practical effort to minimize waste of natural gas through venting and flaring by:
    - Designing and constructing facilities in a manner consistent to achieve maximum capture and control of hydrocarbon liquids & produced gas
    - Utilizing a closed-loop capture system to collect and route produced gas to sales line via low pressure compression, or to a flare/combustor
    - Flaring in lieu of venting, where technically feasible
    - Utilizing auto-ignitors or continuous pilots, with thermocouples connected to Scada, to quickly detect and resolve issues related to malfunctioning flares/combustors
    - Employ the use of automatic tank gauging to minimize storage tank venting during loading events
    - Installing air-driven or electric-driven pneumatics & combustion engines, where technically feasible to minimize venting to the atmosphere
    - Confirm equipment is properly maintained and repaired through a preventative maintenance and repair program to ensure equipment meets all manufacturer specifications
    - Conduct and document AVO inspections on the frequency set forth in Part 27 to detect and repair any onsite leaks as quickly and efficiently as is feasible

VIII. Best Management Practices during Maintenance

Devon Energy Production Company, L.P. will utilize best management practices to minimize venting during active and planned maintenance activities. Devon is operating under guidance that production facilities permitted under NOI permits have no provisions to allow high pressure flaring and high pressure flaring is only allowed in disruption scenarios so long as the duration is less than eight hours. When technically feasible, flaring during maintenance activities will be utilized in lieu of venting to the atmosphere. Devon will work with third-party operators during scheduled maintenance of downstream pipeline or processing plants to address those events ahead of time to minimize venting. Actions considered include identifying alternative capture approaches or planning to temporarily reduce production or shut in the well to address these circumstances.

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: 214350
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	Notify OCD 24 hours prior to casing & cement	5/18/2023
dmcclure	Will require a File As Drilled C-102 and a Directional Survey with the C-104	5/18/2023
dmcclure	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	5/18/2023
dmcclure	Cement is required to circulate on both surface and intermediate1 strings of casing	5/18/2023
dmcclure	Cement is required to circulate on the intermediate 2 string of casing	5/18/2023
dmcclure	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	5/18/2023