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.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory

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

At surface

At proposed prod. zone

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

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

12. County or Parish

13. State

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

16. No of acres in lease

17. Spacing Unit dedicated to this well

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

19. Proposed Depth

20. BLM/BIA Bond No. in file

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

22. Approximate date work will start*

23. Estimated duration

24. Attachments

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

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

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

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

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED WITH CONDITIONS

Approval Date: 08/09/2024

(Continued on page 2)

*(Instructions on page 2)

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
	96776	JABALINA;WOLFCAMP, SOUTHWEST

Property Code	Property Name	Well Number
	ARENA ROJA FED UNIT	813H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3064.5'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	27	26-S	35-E		600	NORTH	1895	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 2	34	26-S	35-E		20	SOUTH	2010	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
466.88			

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

ARENA ROJA FED UNIT 813H
EL: 3064.5'
GEODETIC COORDINATES NAD 83
NMSP EAST SURFACE LOCATION
N: 372336.12
E: 845190.94
LAT: 32.019843
LON: 103.352933

KICK OFF POINT
CALLS: 61' FNL, 2009' FEL
N: 372874
E: 845072
LAT: 32.0212
LON: -103.3534

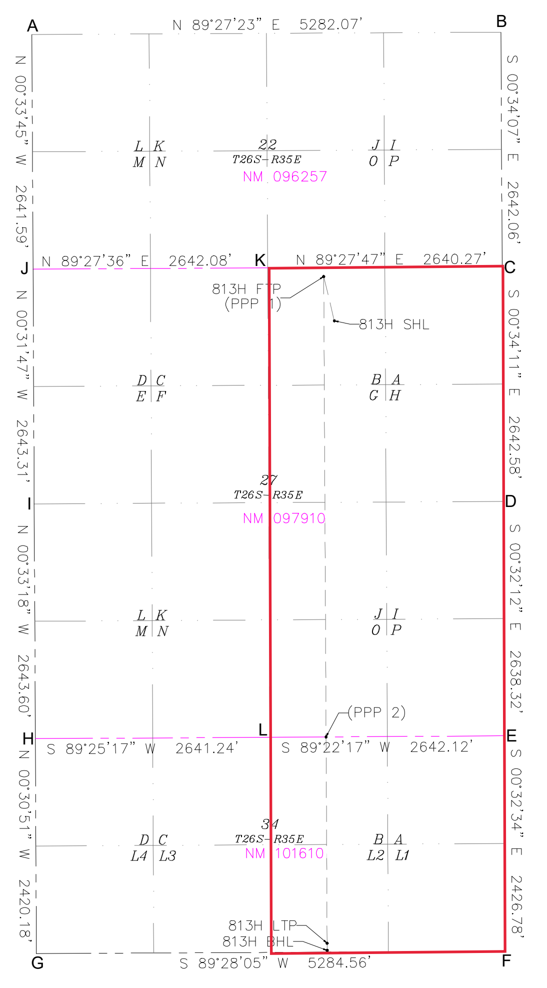
FIRST TAKE POINT (PPP 1)
100' FNL 2010' FEL SEC. 27
N: 372835.03
E: 845070.84
LAT: 32.021217
LON: 103.353306

LAST TAKE POINT
100' FSL 2010' FEL SEC. 34
N: 365327.87
E: 845142.88
LAT: 32.000581
LON: 103.353293

BOTTOM OF HOLE
N: 365247.87
E: 845143.64
LAT: 32.000361
LON: 103.353293

PPP 2
0' FNL 2010' FEL SEC. 34
N: 367651.15
E: 845120.59
LAT: 32.006967
LON: 103.353297

A=N:375545.67 E:841771.71
B=N:375595.79 E:847053.54
C=N:372953.86 E:847079.76
D=N:370311.41 E:847106.04
E=N:367673.21 E:847130.76
F=N:365246.54 E:847153.74
G=N:365197.46 E:841869.41
H=N:367617.55 E:841847.69
I=N:370261.02 E:841822.08
J=N:372904.21 E:841797.65
K=N:372929.11 E:844439.61
L=N:367644.22 E:844488.79



OPERATOR CERTIFICATION

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

Rebecca Deal 11/1/2023
Signature Date

Rebecca Deal, Regulatory Analyst
Printed Name

Rebecca.deal@dvn.com
E-mail Address

SURVEYOR CERTIFICATION

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

08/2023
Date of Survey

Signature & Seal of Professional Surveyor

B. L. LAMAN
NEW MEXICO
22404
PROFESSIONAL SURVEYOR

REV: 10/5/23 CM

Certificate No. 22404 B.L. LAMAN

DRAWN BY: DS

Intent X As Drilled

API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	ARENA ROJA FED UNIT	813H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	27	26S	35E		61	FNL	2009	FEL	LEA

Latitude	Longitude	NAD
32.0212	-103.3534	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	27	26-S	35-E		100	NORTH	2010	EAST	LEA

Latitude	Longitude	NAD
32.021217	103.353306	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	34	26-S	35-E	2	100	SOUTH	2010	EAST	LEA

Latitude	Longitude	NAD
32.000581	103.353293	83

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

Is this well an infill well? Y

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
Devon Energy Production Company, L.P.	ARENA ROJA FED UNIT	814H

KZ 06/29/2018

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, L.P. **OGRID:** 6137 **Date:** 11 / 14 / 2023

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

If Other, please describe: ______

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
See Attached						

IV. Central Delivery Point Name: Arena Roja 27 CTB 1 & 2 [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
See Attached						

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

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

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

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature:	
Printed Name:	Jeff Walla
Title:	Surface Land and Regulatory Manager
E-mail Address:	
Date:	
Phone:	

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

ARENA ROJA 27 CTB 1

Well Name	API	ULSTR	N/S Footage	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
ARENA ROJA FED UNIT 712H		27-26S-35E	655 FNL & 1605 FWL	(+/-)2180bopd	(+/-)4030mcfd	(+/-)14908bwpd
ARENA ROJA FED UNIT 811H		27-26S-35E	655 FNL & 1575 FWL	(+/-)850bopd	(+/-)1245mcfd	(+/-)4110bwpd
ARENA ROJA FED UNIT 812H		27-26S-35E	600 FNL & 1635 FWL	(+/-)850bopd	(+/-)1245mcfd	(+/-)4110bwpd

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
ARENA ROJA FED UNIT 712H		11/23/2024	12/23/2024	4/22/2025	4/22/2025	4/22/2025
ARENA ROJA FED UNIT 811H		12/12/2024	1/11/2025	5/11/2025	5/11/2025	5/11/2025
ARENA ROJA FED UNIT 812H		10/28/2024	11/27/2024	3/27/2025	3/27/2025	3/27/2025

*Dates and Volumes are subject to change

ARENA ROJA 27 CTB 2

Well Name	API	ULSTR	N/S Footage	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
ARENA ROJA FED UNIT 713H		27-26S-35E	600 FNL & 1925 FEL	(+/-)2180bopd	(+/-)4030mcfd	(+/-)14908bwpd
ARENA ROJA FED UNIT 714H		27-26S-35E	600 FNL & 1865 FEL	(+/-)2180bopd	(+/-)4030mcfd	(+/-)14908bwpd
ARENA ROJA FED UNIT 715H		22-26S-35E	275 FSL & 738 FEL	(+/-)2180bopd	(+/-)4030mcfd	(+/-)14908bwpd
ARENA ROJA FED UNIT 716H		22-26S-35E	275 FSL & 798 FEL	(+/-)2180bopd	(+/-)4030mcfd	(+/-)14908bwpd
ARENA ROJA FED UNIT 813H		27-26S-35E	600 FNL & 1895 FEL	(+/-)850bopd	(+/-)1245mcfd	(+/-)4110bwpd
ARENA ROJA FED UNIT 814H		22-26S-35E	275 FSL & 768 FEL	(+/-)850bopd	(+/-)1245mcfd	(+/-)4110bwpd
ARENA ROJA FED UNIT 815H		22-26S-35E	275 FSL & 708 FEL	(+/-)850bopd	(+/-)1245mcfd	(+/-)4110bwpd

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
ARENA ROJA FED UNIT 713H		11/25/2024	12/25/2024	4/24/2025	4/24/2025	4/24/2025
ARENA ROJA FED UNIT 714H		11/5/2024	12/5/2024	4/4/2025	4/4/2025	4/4/2025
ARENA ROJA FED UNIT 715H		11/22/2024	12/22/2024	4/21/2025	4/21/2025	4/21/2025
ARENA ROJA FED UNIT 716H		10/22/2024	11/21/2024	3/21/2025	3/21/2025	3/21/2025
ARENA ROJA FED UNIT 813H		10/10/2024	11/9/2024	3/9/2025	3/9/2025	3/9/2025
ARENA ROJA FED UNIT 814H		11/2/2024	12/2/2024	4/1/2025	4/1/2025	4/1/2025
ARENA ROJA FED UNIT 815H		12/12/2024	1/11/2025	5/11/2025	5/11/2025	5/11/2025

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

devon

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.

1. Geologic Formations

TVD of target	13000	Pilot hole depth	N/A
MD at TD:	20426	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	967		
Salt	1430		
Base of Salt	4880		
Delaware	4880		
Cherry Canyon	6211		
Brushy Canyon	7684		
1st Bone Spring Lime	9083		
Bone Spring 1st	10370		
Bone Spring 2nd	10884		
3rd Bone Spring Lime	11330		
Bone Spring 3rd	12020		
Wolfcamp	12317		

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

2. Casing Program

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
14 3/4	10 3/4	45 1/2	J-55	BTC	0	992	0	992
9 7/8	8 5/8	32	P110	Sprint FJ	0	12372	0	12372
7 7/8	5 1/2	20	P110	DWC/IS-IS+	0	20426	0	13000

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.

3. Cementing Program

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the 8-5/8’’intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	599	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	543	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
	538	7729	13.2	1.44	Tail: Class H / C + additives
Production	117	10472.67	9	3.27	Lead: Class H /C + additives
	1053	12472.67	13.2	1.44	Tail: Class H / C + additives

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Prod	10%

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type		✓	Tested to:
Int 1	13-5/8"	5M	Annular		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram			
			Double Ram		X	
			Other*			
Production	13-5/8"	10M	Annular (5M)		X	100% of rated working pressure
			Blind Ram		X	10M
			Pipe Ram			
			Double Ram		X	
			Other*			
			Annular (5M)			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
Y	A variance is requested to run a 5 M annular on a 10M system

ARENA ROJA FED UNIT 813H

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
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	7098
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 Energy
APD VARIANCE DATA

OPERATOR NAME: Devon Energy

1. SUMMARY OF Variance:

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

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

2. Description of Operations

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

AFMSS

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

Drilling Plan Data Report

08/14/2024

APD ID: 10400095834

Submission Date: 11/14/2023

Highlighted data reflects the most recent changes

Show Final Text

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: ARENA ROJA FED UNIT

Well Number: 813H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13932189	---	3091	0	0	OTHER : Surface	NONE	N
13932190	RUSTLER	2124	967	967	SANDSTONE	NONE	N
13932191	TOP SALT	1661	1430	1430	SALT	NONE	N
13932199	BASE OF SALT	-1789	4880	4880	ANHYDRITE	NONE	N
13932206	LAMAR	-1789	4880	4880	LIMESTONE	NATURAL GAS, OIL	N
13932207	BELL CANYON	-2065	5156	5156	LIMESTONE	NATURAL GAS, OIL	N
13932208	CHERRY CANYON	-3120	6211	6211	LIMESTONE	NATURAL GAS, OIL	N
13932209	BRUSHY CANYON	-4593	7684	7684	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
13932188	BONE SPRING 1ST	-5992	9083	9083	LIMESTONE	NATURAL GAS, OIL	N
13932210	FIRST BONE SPRING SAND	-7279	10370	10370	SANDSTONE	NATURAL GAS, OIL	N
13932212	BONE SPRING 2ND	-7420	10511	10511	LIMESTONE	NATURAL GAS, OIL	N
13932197	BONE SPRING 2ND	-7793	10884	10884	SANDSTONE	NATURAL GAS, OIL	N
13932213	BONE SPRING 3RD	-8239	11330	11330	LIMESTONE	NATURAL GAS, OIL	N
13932195	BONE SPRING 3RD	-8929	12020	12020	SANDSTONE	NATURAL GAS, OIL	N
13932198	WOLFCAMP	-9226	12317	12317	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

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.

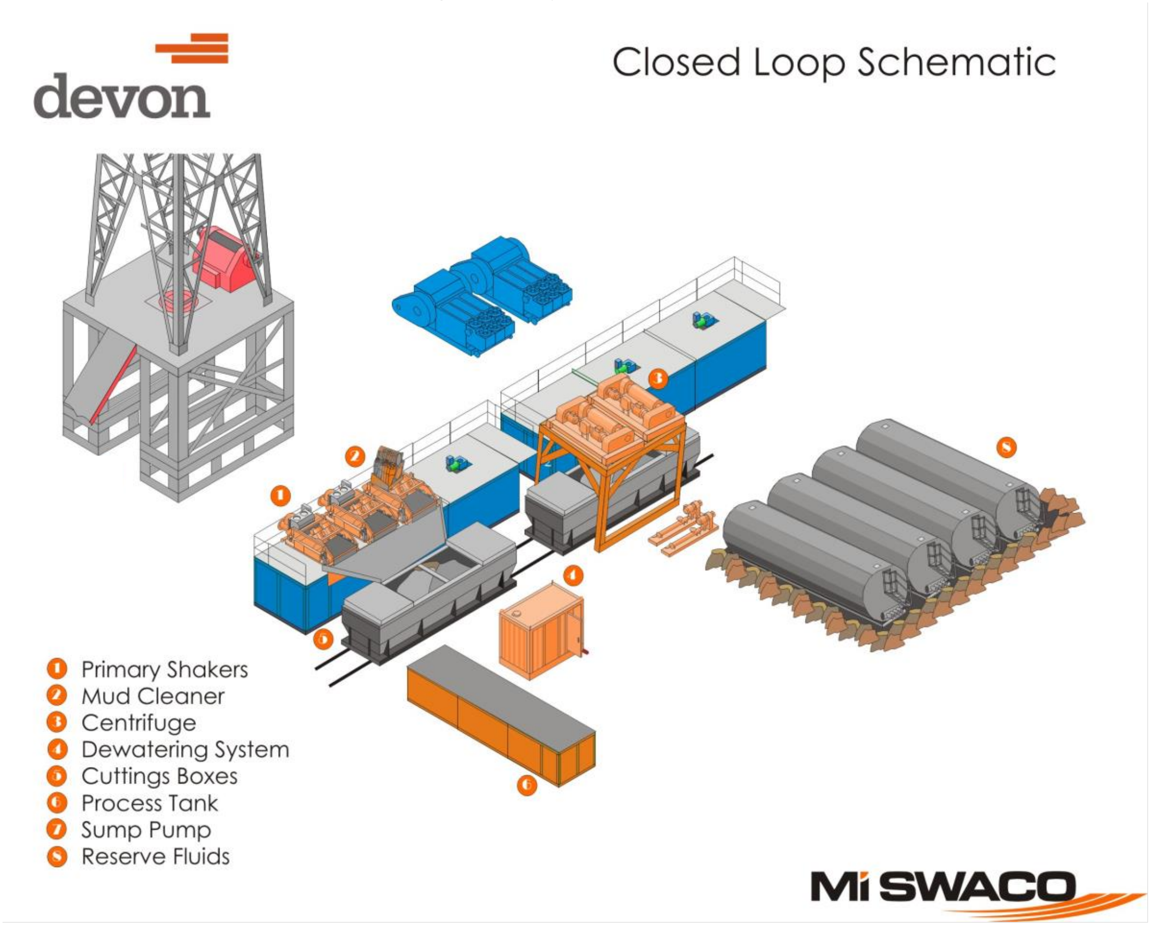
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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.

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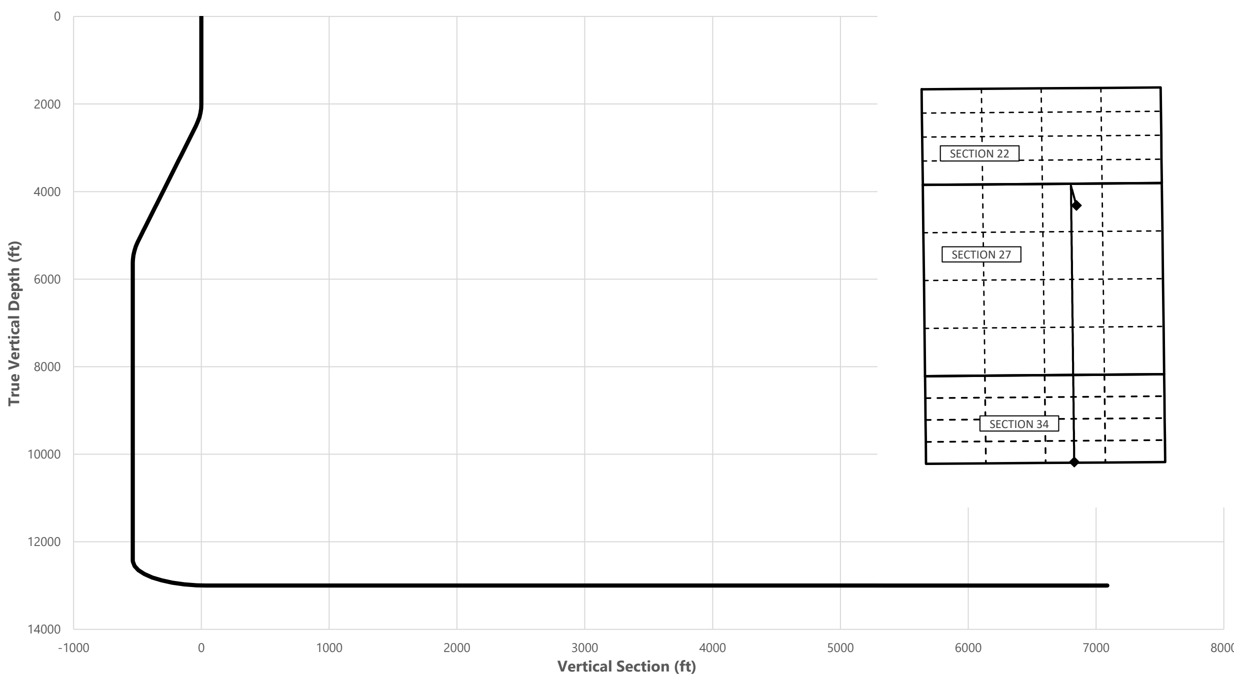
Well: ARENA ROJA FED UNIT 813H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	347.50	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	347.50	2497.47	42.49	-9.42	-42.43	2.00	Hold Tangent
5169.55	10.00	347.50	5126.46	495.07	-109.75	-494.32	0.00	Drop to Vertical
5669.55	0.00	347.50	5623.92	537.56	-119.17	-536.75	2.00	Hold Vertical
12472.67	0.00	179.46	12427.04	537.56	-119.17	-536.75	0.00	KOP
13372.67	90.00	179.46	13000.00	-35.38	-113.77	36.14	10.00	Landing Point
20425.85	90.00	179.46	13000.00	-7088.25	-47.30	7088.41	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	967.00	967.00
Salt	1430.00	1430.00
Base of Salt	4919.29	4880.00
Delaware	4919.29	4880.00
Cherry Canyon	6256.63	6211.00
Brushy Canyon	7729.63	7684.00
1st Bone Spring Lime	9128.63	9083.00
Bone Spring 1st	10415.63	10370.00
Bone Spring 2nd	10929.63	10884.00
3rd Bone Spring Lime	11375.63	11330.00
Bone Spring 3rd	12065.63	12020.00
Wolfcamp / Point of Penetration	12362.63	12317.00
exit	20345.85	13000.01

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.0197	-103.3530	600' FNL, 1895' FEL of Sec 27 in T26S, R35E
KOP	12472.67	12427.04	32.0212	-103.3534	61' FNL, 2009' FEL of Sec 27 in T26S, R35E
Point of Penetration	12362.63	12317.00	32.0212	-103.3533	100' FNL , 2010' FEL of Sec 27 in T26S, R35E
Exit	20345.85	13000.01	32.0006	-103.3533	100' FSL, 2010' FEL of Sec 34 in T26S, R35E
BHL	20425.85	13000.00	32.0003	-103.3534	20' FSL, 2010' FEL of Sec 34 in T26S, R35E

	Y	X	MD
KOP	372874	845072	12472.67

devon

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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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	347.50	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	347.50	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	347.50	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	347.50	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	347.50	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	347.50	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	347.50	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	347.50	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	347.50	900.00	0.00	0.00	0.00	0.00	
967.00	0.00	347.50	967.00	0.00	0.00	0.00	0.00	Rustler
1000.00	0.00	347.50	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	347.50	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	347.50	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	347.50	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	347.50	1400.00	0.00	0.00	0.00	0.00	
1430.00	0.00	347.50	1430.00	0.00	0.00	0.00	0.00	Salt
1500.00	0.00	347.50	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	347.50	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	347.50	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	347.50	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	347.50	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	347.50	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	347.50	2099.98	1.70	-0.38	-1.70	2.00	
2200.00	4.00	347.50	2199.84	6.81	-1.51	-6.80	2.00	
2300.00	6.00	347.50	2299.45	15.32	-3.40	-15.30	2.00	
2400.00	8.00	347.50	2398.70	27.22	-6.03	-27.18	2.00	
2500.00	10.00	347.50	2497.47	42.49	-9.42	-42.43	2.00	Hold Tangent
2600.00	10.00	347.50	2595.95	59.44	-13.18	-59.35	0.00	
2700.00	10.00	347.50	2694.43	76.40	-16.94	-76.28	0.00	
2800.00	10.00	347.50	2792.91	93.35	-20.70	-93.21	0.00	
2900.00	10.00	347.50	2891.39	110.30	-24.45	-110.14	0.00	
3000.00	10.00	347.50	2989.87	127.26	-28.21	-127.07	0.00	
3100.00	10.00	347.50	3088.35	144.21	-31.97	-143.99	0.00	
3200.00	10.00	347.50	3186.83	161.16	-35.73	-160.92	0.00	
3300.00	10.00	347.50	3285.31	178.12	-39.49	-177.85	0.00	
3400.00	10.00	347.50	3383.79	195.07	-43.25	-194.78	0.00	
3500.00	10.00	347.50	3482.27	212.02	-47.01	-211.70	0.00	
3600.00	10.00	347.50	3580.75	228.98	-50.76	-228.63	0.00	
3700.00	10.00	347.50	3679.23	245.93	-54.52	-245.56	0.00	
3800.00	10.00	347.50	3777.72	262.88	-58.28	-262.49	0.00	
3900.00	10.00	347.50	3876.20	279.84	-62.04	-279.41	0.00	
4000.00	10.00	347.50	3974.68	296.79	-65.80	-296.34	0.00	
4100.00	10.00	347.50	4073.16	313.74	-69.56	-313.27	0.00	
4200.00	10.00	347.50	4171.64	330.69	-73.31	-330.20	0.00	
4300.00	10.00	347.50	4270.12	347.65	-77.07	-347.13	0.00	
4400.00	10.00	347.50	4368.60	364.60	-80.83	-364.05	0.00	
4500.00	10.00	347.50	4467.08	381.55	-84.59	-380.98	0.00	
4600.00	10.00	347.50	4565.56	398.51	-88.35	-397.91	0.00	
4700.00	10.00	347.50	4664.04	415.46	-92.11	-414.84	0.00	
4800.00	10.00	347.50	4762.52	432.41	-95.87	-431.76	0.00	
4900.00	10.00	347.50	4861.00	449.37	-99.62	-448.69	0.00	
4919.29	10.00	347.50	4880.00	452.64	-100.35	-451.96	0.00	Base of Salt, Delaware
5000.00	10.00	347.50	4959.48	466.32	-103.38	-465.62	0.00	
5100.00	10.00	347.50	5057.97	483.27	-107.14	-482.55	0.00	
5169.55	10.00	347.50	5126.46	495.07	-109.75	-494.32	0.00	Drop to Vertical
5200.00	9.39	347.50	5156.47	500.07	-110.86	-499.32	2.00	
5300.00	7.39	347.50	5255.40	514.32	-114.02	-513.55	2.00	
5400.00	5.39	347.50	5354.77	525.18	-116.43	-524.40	2.00	
5500.00	3.39	347.50	5454.47	532.66	-118.09	-531.86	2.00	
5600.00	1.39	347.50	5554.38	536.73	-118.99	-535.93	2.00	
5669.55	0.00	347.50	5623.92	537.56	-119.17	-536.75	2.00	Hold Vertical
5700.00	0.00	179.46	5654.37	537.56	-119.17	-536.75	0.00	
5800.00	0.00	179.46	5754.37	537.56	-119.17	-536.75	0.00	
5900.00	0.00	179.46	5854.37	537.56	-119.17	-536.75	0.00	
6000.00	0.00	179.46	5954.37	537.56	-119.17	-536.75	0.00	
6100.00	0.00	179.46	6054.37	537.56	-119.17	-536.75	0.00	
6200.00	0.00	179.46	6154.37	537.56	-119.17	-536.75	0.00	
6256.63	0.00	179.46	6211.00	537.56	-119.17	-536.75	0.00	Cherry Canyon
6300.00	0.00	179.46	6254.37	537.56	-119.17	-536.75	0.00	

devon

Well: ARENA ROJA FED UNIT 813H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6400.00	0.00	179.46	6354.37	537.56	-119.17	-536.75	0.00	
6500.00	0.00	179.46	6454.37	537.56	-119.17	-536.75	0.00	
6600.00	0.00	179.46	6554.37	537.56	-119.17	-536.75	0.00	
6700.00	0.00	179.46	6654.37	537.56	-119.17	-536.75	0.00	
6800.00	0.00	179.46	6754.37	537.56	-119.17	-536.75	0.00	
6900.00	0.00	179.46	6854.37	537.56	-119.17	-536.75	0.00	
7000.00	0.00	179.46	6954.37	537.56	-119.17	-536.75	0.00	
7100.00	0.00	179.46	7054.37	537.56	-119.17	-536.75	0.00	
7200.00	0.00	179.46	7154.37	537.56	-119.17	-536.75	0.00	
7300.00	0.00	179.46	7254.37	537.56	-119.17	-536.75	0.00	
7400.00	0.00	179.46	7354.37	537.56	-119.17	-536.75	0.00	
7500.00	0.00	179.46	7454.37	537.56	-119.17	-536.75	0.00	
7600.00	0.00	179.46	7554.37	537.56	-119.17	-536.75	0.00	
7700.00	0.00	179.46	7654.37	537.56	-119.17	-536.75	0.00	
7729.63	0.00	179.46	7684.00	537.56	-119.17	-536.75	0.00	Brushy Canyon
7800.00	0.00	179.46	7754.37	537.56	-119.17	-536.75	0.00	
7900.00	0.00	179.46	7854.37	537.56	-119.17	-536.75	0.00	
8000.00	0.00	179.46	7954.37	537.56	-119.17	-536.75	0.00	
8100.00	0.00	179.46	8054.37	537.56	-119.17	-536.75	0.00	
8200.00	0.00	179.46	8154.37	537.56	-119.17	-536.75	0.00	
8300.00	0.00	179.46	8254.37	537.56	-119.17	-536.75	0.00	
8400.00	0.00	179.46	8354.37	537.56	-119.17	-536.75	0.00	
8500.00	0.00	179.46	8454.37	537.56	-119.17	-536.75	0.00	
8600.00	0.00	179.46	8554.37	537.56	-119.17	-536.75	0.00	
8700.00	0.00	179.46	8654.37	537.56	-119.17	-536.75	0.00	
8800.00	0.00	179.46	8754.37	537.56	-119.17	-536.75	0.00	
8900.00	0.00	179.46	8854.37	537.56	-119.17	-536.75	0.00	
9000.00	0.00	179.46	8954.37	537.56	-119.17	-536.75	0.00	
9100.00	0.00	179.46	9054.37	537.56	-119.17	-536.75	0.00	
9128.63	0.00	179.46	9083.00	537.56	-119.17	-536.75	0.00	1st Bone Spring Lime
9200.00	0.00	179.46	9154.37	537.56	-119.17	-536.75	0.00	
9300.00	0.00	179.46	9254.37	537.56	-119.17	-536.75	0.00	
9400.00	0.00	179.46	9354.37	537.56	-119.17	-536.75	0.00	
9500.00	0.00	179.46	9454.37	537.56	-119.17	-536.75	0.00	
9600.00	0.00	179.46	9554.37	537.56	-119.17	-536.75	0.00	
9700.00	0.00	179.46	9654.37	537.56	-119.17	-536.75	0.00	
9800.00	0.00	179.46	9754.37	537.56	-119.17	-536.75	0.00	
9900.00	0.00	179.46	9854.37	537.56	-119.17	-536.75	0.00	
10000.00	0.00	179.46	9954.37	537.56	-119.17	-536.75	0.00	
10100.00	0.00	179.46	10054.37	537.56	-119.17	-536.75	0.00	
10200.00	0.00	179.46	10154.37	537.56	-119.17	-536.75	0.00	
10300.00	0.00	179.46	10254.37	537.56	-119.17	-536.75	0.00	
10400.00	0.00	179.46	10354.37	537.56	-119.17	-536.75	0.00	
10415.63	0.00	179.46	10370.00	537.56	-119.17	-536.75	0.00	Bone Spring 1st
10500.00	0.00	179.46	10454.37	537.56	-119.17	-536.75	0.00	
10600.00	0.00	179.46	10554.37	537.56	-119.17	-536.75	0.00	
10700.00	0.00	179.46	10654.37	537.56	-119.17	-536.75	0.00	
10800.00	0.00	179.46	10754.37	537.56	-119.17	-536.75	0.00	
10900.00	0.00	179.46	10854.37	537.56	-119.17	-536.75	0.00	
10929.63	0.00	179.46	10884.00	537.56	-119.17	-536.75	0.00	Bone Spring 2nd
11000.00	0.00	179.46	10954.37	537.56	-119.17	-536.75	0.00	
11100.00	0.00	179.46	11054.37	537.56	-119.17	-536.75	0.00	
11200.00	0.00	179.46	11154.37	537.56	-119.17	-536.75	0.00	
11300.00	0.00	179.46	11254.37	537.56	-119.17	-536.75	0.00	
11375.63	0.00	179.46	11330.00	537.56	-119.17	-536.75	0.00	3rd Bone Spring Lime
11400.00	0.00	179.46	11354.37	537.56	-119.17	-536.75	0.00	
11500.00	0.00	179.46	11454.37	537.56	-119.17	-536.75	0.00	
11600.00	0.00	179.46	11554.37	537.56	-119.17	-536.75	0.00	
11700.00	0.00	179.46	11654.37	537.56	-119.17	-536.75	0.00	
11800.00	0.00	179.46	11754.37	537.56	-119.17	-536.75	0.00	
11900.00	0.00	179.46	11854.37	537.56	-119.17	-536.75	0.00	
12000.00	0.00	179.46	11954.37	537.56	-119.17	-536.75	0.00	
12065.63	0.00	179.46	12020.00	537.56	-119.17	-536.75	0.00	Bone Spring 3rd
12100.00	0.00	179.46	12054.37	537.56	-119.17	-536.75	0.00	
12200.00	0.00	179.46	12154.37	537.56	-119.17	-536.75	0.00	
12300.00	0.00	179.46	12254.37	537.56	-119.17	-536.75	0.00	
12362.63	0.00	179.46	12317.00	537.56	-119.17	-536.75	0.00	Wolfcamp / Point of Penetration
12400.00	0.00	179.46	12354.37	537.56	-119.17	-536.75	0.00	
12472.67	0.00	179.46	12427.04	537.56	-119.17	-536.75	0.00	KOP
12500.00	2.73	179.46	12454.36	536.90	-119.17	-536.10	10.00	

devon

Well: ARENA ROJA FED UNIT 813H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12600.00	12.73	179.46	12553.33	523.47	-119.04	-522.66	10.00	
12700.00	22.73	179.46	12648.46	493.05	-118.75	-492.24	10.00	
12800.00	32.73	179.46	12736.86	446.57	-118.32	-445.77	10.00	
12900.00	42.73	179.46	12815.84	385.45	-117.74	-384.66	10.00	
13000.00	52.73	179.46	12883.02	311.55	-117.04	-310.76	10.00	
13100.00	62.73	179.46	12936.33	227.10	-116.25	-226.32	10.00	
13200.00	72.73	179.46	12974.18	134.68	-115.38	-133.91	10.00	
13300.00	82.73	179.46	12995.40	37.09	-114.46	-36.33	10.00	
13372.67	90.00	179.46	13000.00	-35.38	-113.77	36.14	10.00	Landing Point
13400.00	90.00	179.46	13000.00	-62.71	-113.52	63.46	0.00	
13500.00	90.00	179.46	13000.00	-162.70	-112.57	163.45	0.00	
13600.00	90.00	179.46	13000.00	-262.70	-111.63	263.44	0.00	
13700.00	90.00	179.46	13000.00	-362.69	-110.69	363.43	0.00	
13800.00	90.00	179.46	13000.00	-462.69	-109.74	463.41	0.00	
13900.00	90.00	179.46	13000.00	-562.69	-108.80	563.40	0.00	
14000.00	90.00	179.46	13000.00	-662.68	-107.86	663.39	0.00	
14100.00	90.00	179.46	13000.00	-762.68	-106.92	763.37	0.00	
14200.00	90.00	179.46	13000.00	-862.67	-105.97	863.36	0.00	
14300.00	90.00	179.46	13000.00	-962.67	-105.03	963.35	0.00	
14400.00	90.00	179.46	13000.00	-1062.66	-104.09	1063.33	0.00	
14500.00	90.00	179.46	13000.00	-1162.66	-103.15	1163.32	0.00	
14600.00	90.00	179.46	13000.00	-1262.65	-102.20	1263.31	0.00	
14700.00	90.00	179.46	13000.00	-1362.65	-101.26	1363.30	0.00	
14800.00	90.00	179.46	13000.00	-1462.65	-100.32	1463.28	0.00	
14900.00	90.00	179.46	13000.00	-1562.64	-99.37	1563.27	0.00	
15000.00	90.00	179.46	13000.00	-1662.64	-98.43	1663.26	0.00	
15100.00	90.00	179.46	13000.00	-1762.63	-97.49	1763.24	0.00	
15200.00	90.00	179.46	13000.00	-1862.63	-96.55	1863.23	0.00	
15300.00	90.00	179.46	13000.00	-1962.62	-95.60	1963.22	0.00	
15400.00	90.00	179.46	13000.00	-2062.62	-94.66	2063.20	0.00	
15500.00	90.00	179.46	13000.00	-2162.61	-93.72	2163.19	0.00	
15600.00	90.00	179.46	13000.00	-2262.61	-92.78	2263.18	0.00	
15700.00	90.00	179.46	13000.00	-2362.61	-91.83	2363.17	0.00	
15800.00	90.00	179.46	13000.00	-2462.60	-90.89	2463.15	0.00	
15900.00	90.00	179.46	13000.00	-2562.60	-89.95	2563.14	0.00	
16000.00	90.00	179.46	13000.00	-2662.59	-89.00	2663.13	0.00	
16100.00	90.00	179.46	13000.00	-2762.59	-88.06	2763.11	0.00	
16200.00	90.00	179.46	13000.00	-2862.58	-87.12	2863.10	0.00	
16300.00	90.00	179.46	13000.00	-2962.58	-86.18	2963.09	0.00	
16400.00	90.00	179.46	13000.00	-3062.57	-85.23	3063.08	0.00	
16500.00	90.00	179.46	13000.00	-3162.57	-84.29	3163.06	0.00	
16600.00	90.00	179.46	13000.00	-3262.57	-83.35	3263.05	0.00	
16700.00	90.00	179.46	13000.00	-3362.56	-82.41	3363.04	0.00	
16800.00	90.00	179.46	13000.00	-3462.56	-81.46	3463.02	0.00	
16900.00	90.00	179.46	13000.00	-3562.55	-80.52	3563.01	0.00	
17000.00	90.00	179.46	13000.00	-3662.55	-79.58	3663.00	0.00	
17100.00	90.00	179.46	13000.00	-3762.54	-78.63	3762.98	0.00	
17200.00	90.00	179.46	13000.01	-3862.54	-77.69	3862.97	0.00	
17300.00	90.00	179.46	13000.01	-3962.53	-76.75	3962.96	0.00	
17400.00	90.00	179.46	13000.01	-4062.53	-75.81	4062.95	0.00	
17500.00	90.00	179.46	13000.01	-4162.53	-74.86	4162.93	0.00	
17600.00	90.00	179.46	13000.01	-4262.52	-73.92	4262.92	0.00	
17700.00	90.00	179.46	13000.01	-4362.52	-72.98	4362.91	0.00	
17800.00	90.00	179.46	13000.01	-4462.51	-72.04	4462.89	0.00	
17900.00	90.00	179.46	13000.01	-4562.51	-71.09	4562.88	0.00	
18000.00	90.00	179.46	13000.01	-4662.50	-70.15	4662.87	0.00	
18100.00	90.00	179.46	13000.01	-4762.50	-69.21	4762.85	0.00	
18200.00	90.00	179.46	13000.01	-4862.49	-68.26	4862.84	0.00	
18300.00	90.00	179.46	13000.01	-4962.49	-67.32	4962.83	0.00	
18400.00	90.00	179.46	13000.01	-5062.49	-66.38	5062.82	0.00	
18500.00	90.00	179.46	13000.01	-5162.48	-65.44	5162.80	0.00	
18600.00	90.00	179.46	13000.01	-5262.48	-64.49	5262.79	0.00	
18700.00	90.00	179.46	13000.01	-5362.47	-63.55	5362.78	0.00	
18800.00	90.00	179.46	13000.01	-5462.47	-62.61	5462.76	0.00	
18900.00	90.00	179.46	13000.01	-5562.46	-61.67	5562.75	0.00	
19000.00	90.00	179.46	13000.01	-5662.46	-60.72	5662.74	0.00	
19100.00	90.00	179.46	13000.01	-5762.45	-59.78	5762.73	0.00	
19200.00	90.00	179.46	13000.01	-5862.45	-58.84	5862.71	0.00	
19300.00	90.00	179.46	13000.01	-5962.45	-57.89	5962.70	0.00	
19400.00	90.00	179.46	13000.01	-6062.44	-56.95	6062.69	0.00	

devon

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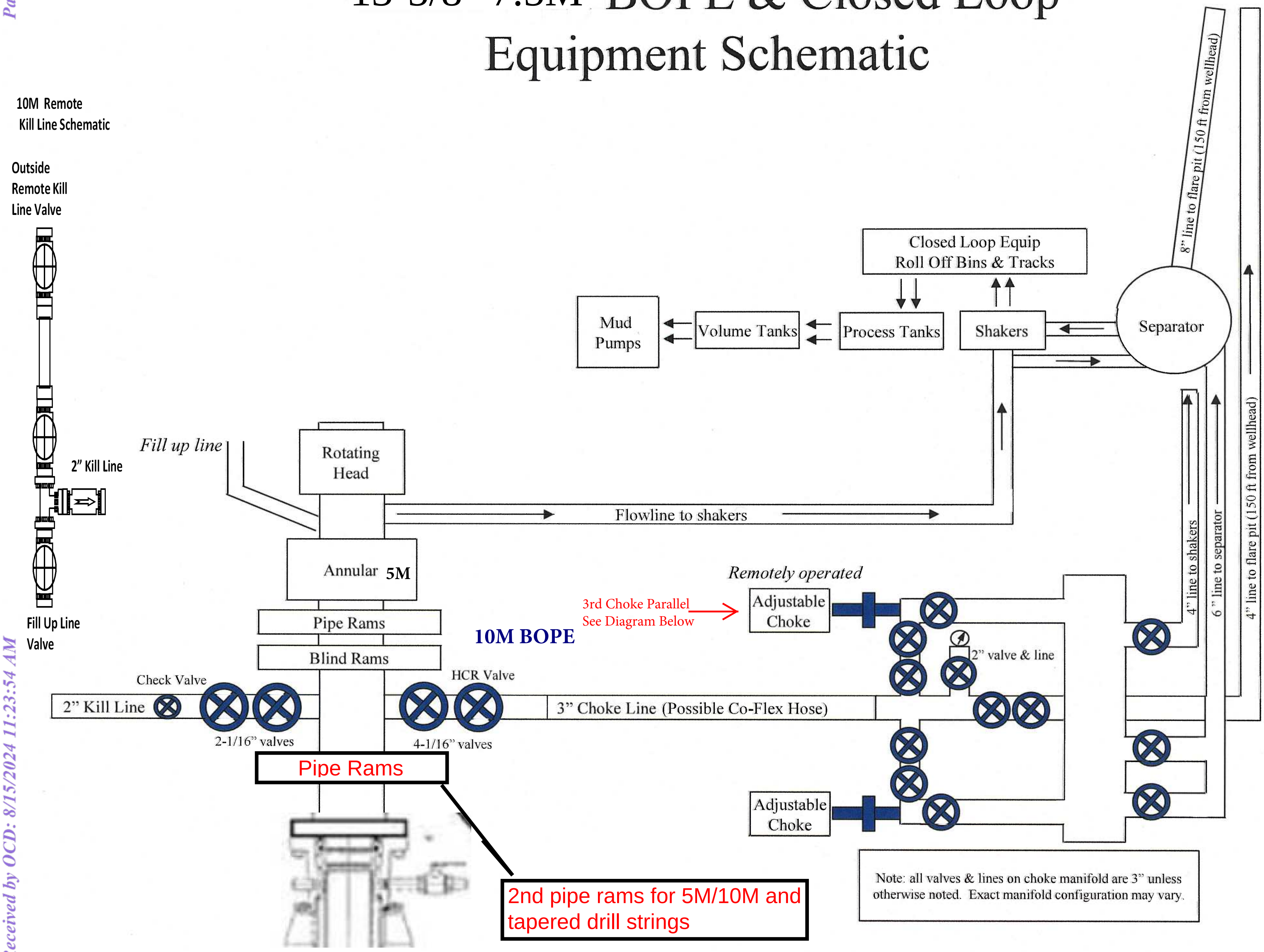
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19500.00	90.00	179.46	13000.01	-6162.44	-56.01	6162.67	0.00	
19600.00	90.00	179.46	13000.01	-6262.43	-55.07	6262.66	0.00	
19700.00	90.00	179.46	13000.01	-6362.43	-54.12	6362.65	0.00	
19800.00	90.00	179.46	13000.01	-6462.42	-53.18	6462.63	0.00	
19900.00	90.00	179.46	13000.01	-6562.42	-52.24	6562.62	0.00	
20000.00	90.00	179.46	13000.01	-6662.41	-51.30	6662.61	0.00	
20100.00	90.00	179.46	13000.01	-6762.41	-50.35	6762.60	0.00	
20200.00	90.00	179.46	13000.01	-6862.41	-49.41	6862.58	0.00	
20300.00	90.00	179.46	13000.01	-6962.40	-48.47	6962.57	0.00	
20345.85	90.00	179.46	13000.01	-7008.25	-48.04	7008.42	0.00	exit
20400.00	90.00	179.46	13000.01	-7062.40	-47.52	7062.56	0.00	
20425.85	90.00	179.46	13000.00	-7088.25	-47.30	7088.41	0.00	BHL

13-5/8" 7.5M BOPE & Closed Loop Equipment Schematic



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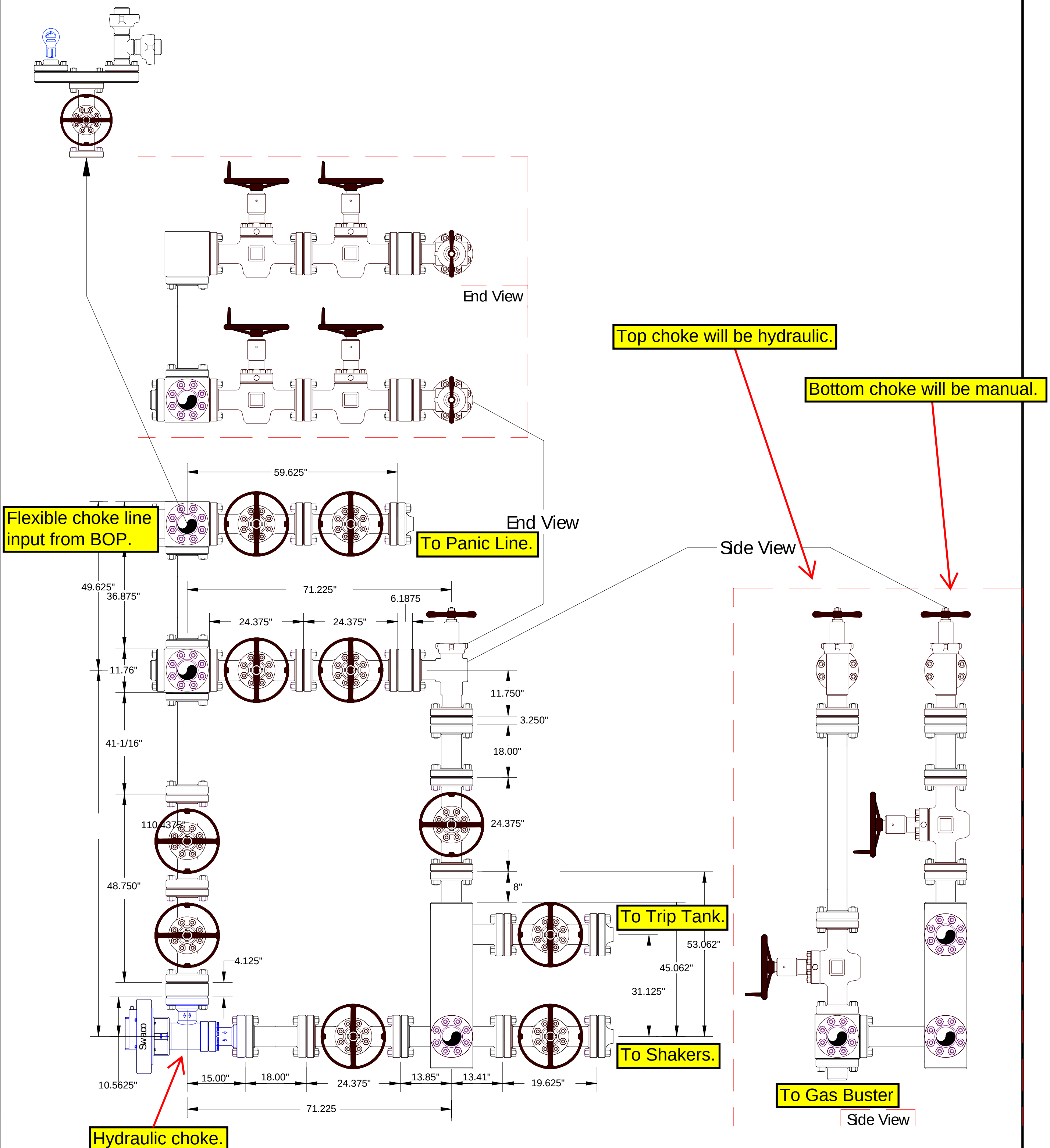


Helmerich & Payne

Flex 3 Rig w/ 3 Chokes

devon

Name: Mike Potts	Date: 6-23-2010	Working Pressure: 10M	J-5132-E

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

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

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

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

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed and tested, with 5M annular being tested to 100% of rated working pressure.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller’s log. A 2” kill line and 3” choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 10,000 psi WP.

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

Devon Energy Annular Preventer Summary

1. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

6-3/4” Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drillpipe	4.5”	Fixed lower 4.5” Upper 4.5-7” VBR	10M
HWDP	4.5”	Fixed lower 4.5” Upper 4.5-7” VBR	10M
Drill collars and MWD tools	4.75”	Upper 4.5-7” VBR	10M
Mud Motor	4.75”	Upper 4.5-7” VBR	10M
Production casing	5.5”	Upper 4.5-7” VBR	10M
ALL	0-13-5/8”	Annular	5M
Open-hole	-	Blind Rams	10M

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

2. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission their operating pressure limit. The operator may chose an operating pressure less than or equal to RWP, but in no case will it exceed the RWP of the annular preventer.

General Procedure While Drilling

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

Devon Energy Annular Preventer Summary

General Procedure While Tripping

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

General Procedure While Running Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

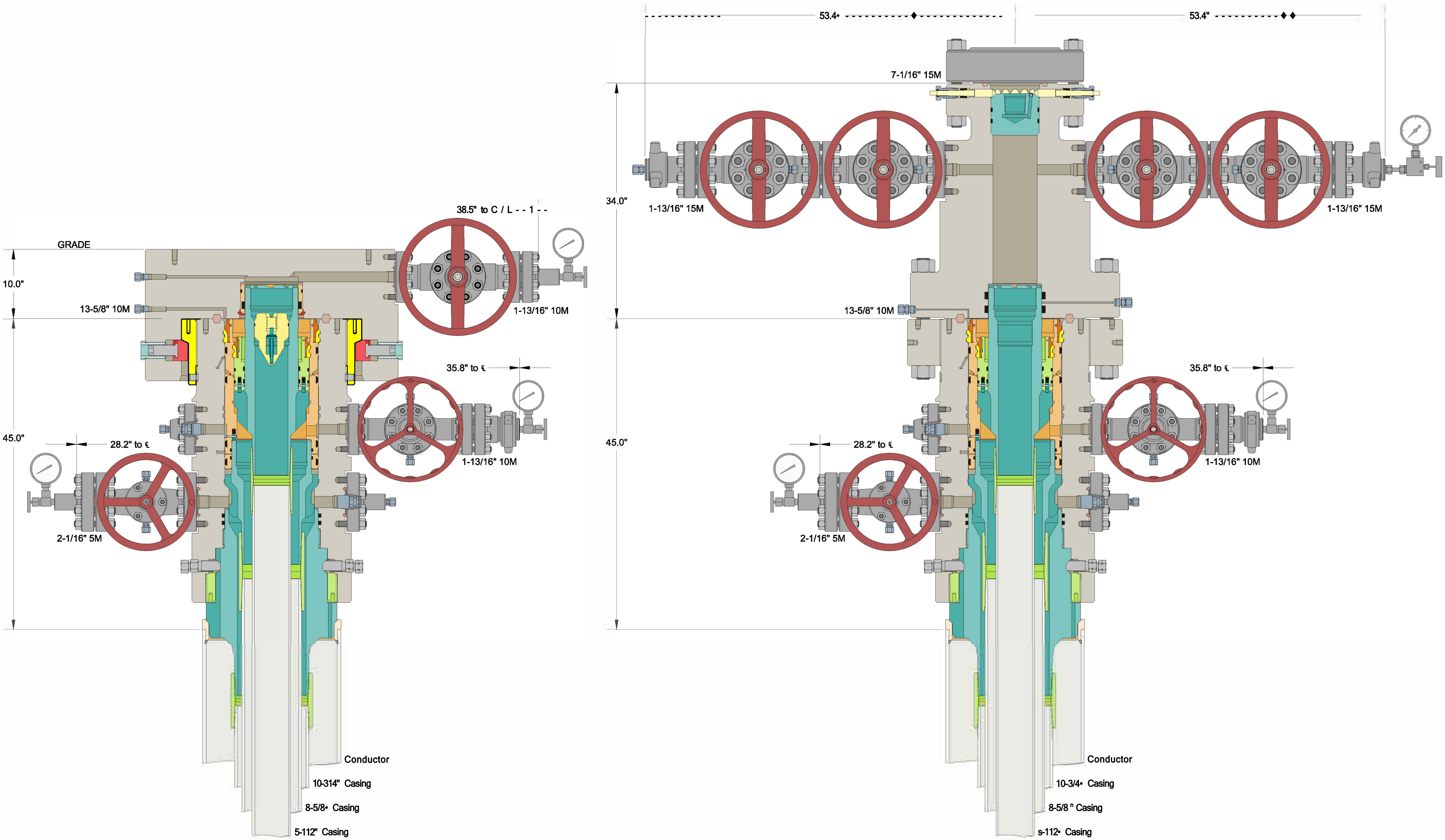
Devon Energy Annular Preventer Summary

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
    a. Perform flowcheck, if flowing:
    b. Sound alarm (alert crew)
    c. Stab full opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper pipe ram.
    e. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan

2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
    a. Sound alarm (alert crew)
    b. Stab crossover and full opening safety valve and close
    c. Space out drill string with upset just beneath the compatible pipe ram.
    d. Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
    a. Sound alarm (alert crew)
    b. If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario.
    c. If impossible to pick up high enough to pull the string clear of the stack:
    d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
    e. Space out drill string with tooljoint just beneath the upper pipe ram.
    f. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    g. Confirm shut-in
    h. Notify toolpusher/company representative
    i. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    j. Regroup and identify forward plan



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	DEVON ENERGY CORPORATION DELAWARE BASIN		
10-3/4" x 8-5/8" x 5-1/2" 10M MBU-3T-CFL-R-DBLO Wellhead Sys. With 8-5/8" And 5-1/2" Mandrel Casing Hangers And 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head	DRAWN	OLE	16SEP21
	APPRV		
	DRAWING NO.	HBE0000595	

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LEASE NO.:	**NMNM97910**
LOCATION:	Section 27, T.26 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**Arena Roja Fed Unit 811H**
BOTTOM HOLE FOOTAGE	20'/S & 1590'/W
ATS/API ID:	**ATS-24-337**
APD ID:	**104000**
Sundry ID:	**N/a**
Date APD Submitted:	**N/a**

WELL NAME & NO.:	**Arena Roja Fed Unit 812H**
BOTTOM HOLE FOOTAGE	20'/S & 2430'/W
ATS/API ID:	**ATS-24-338**
APD ID:	**104000**
Sundry ID:	**N/a**
Date APD Submitted:	**N/a**

WELL NAME & NO.:	**Arena Roja Fed Unit 813H**
BOTTOM HOLE FOOTAGE	20'/S & 2010'/E
ATS/API ID:	**ATS-24-341**
APD ID:	**104000**
Sundry ID:	**N/a**
Date APD Submitted:	**N/a**

Approval Date: 08/09/2024

COA

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

 Approval Date: 08/09/2024

A. HYDROGEN SULFIDE

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

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1040 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **14 3/4** inch in diameter.

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

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

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

Option 1 (Single Stage):

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

Option 2:

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

a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 7684' (539 sxs Class H/C+ additives)**.

b. Second stage:

- Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. **(Squeeze 541 sxs Class C)**

Operator has proposed to pump down **10-3/4**" X **8-5/8**" annulus after primary cementing stage. <u>Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the **8-5/8**" casing to surface after the second stage BH to verify TOC.</u>
Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

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

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

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.

<u>Option 1:</u>

a. 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.

b. 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 **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

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

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

GENERAL REQUIREMENTS

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

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

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

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

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

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

A. CASING

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

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

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

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

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

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

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

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

B. PRESSURE CONTROL

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

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke

manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

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

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

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

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

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

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

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

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

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

Long Vo (LVO) 7/19/2024

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

Hydrogen Sulfide (H_2S) Contingency Plan

For

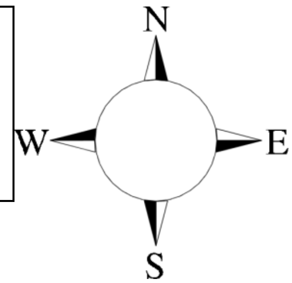
Arena Roja Fed Unit 813H

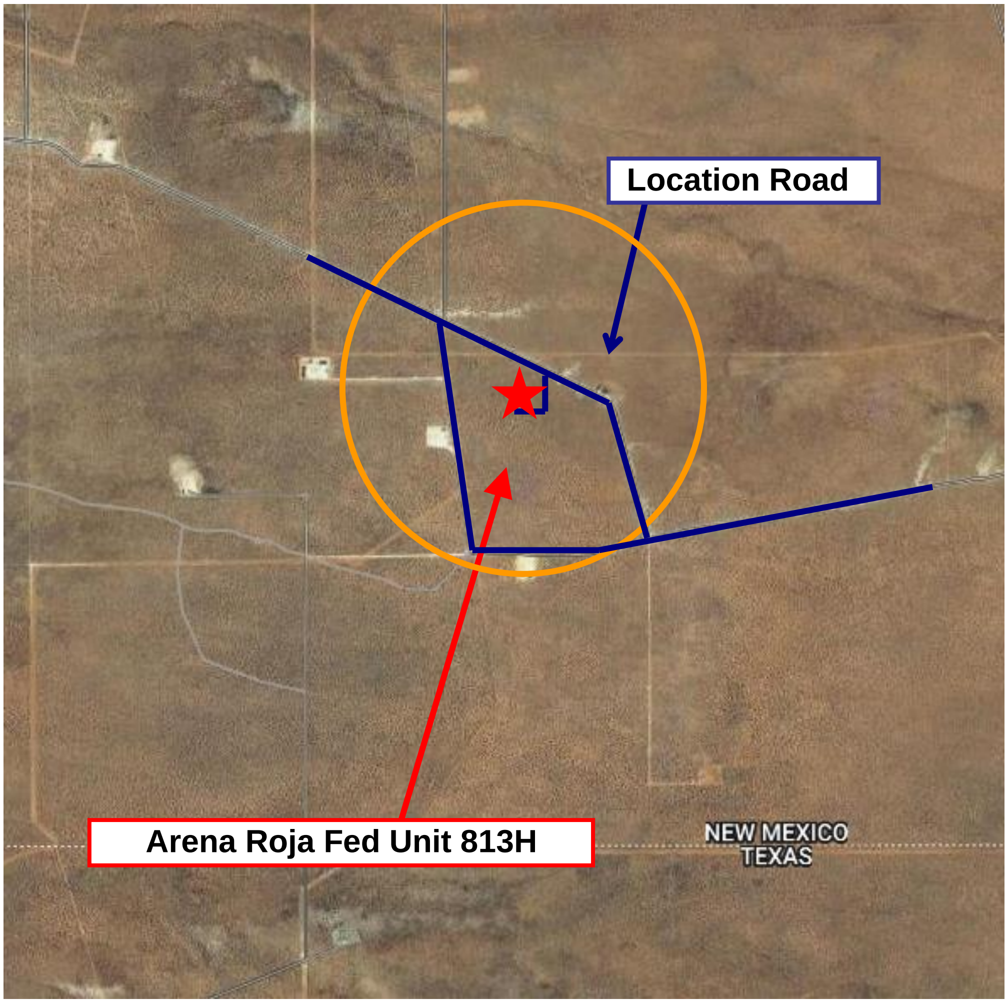
Sec-27 T-26S R-35E
600’ FNL & 1895’ FEL
LAT. = 32.019843º N (NAD83)
LONG = 103.352933º W

Lea County NM

Arena Roja Fed Unit 813H.

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. <u>There are no homes or buildings in or near the ROE</u>.

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)

I. HYDROGEN SULFIDE (H_2S) TRAINING

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

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

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

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

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

II. HYDROGEN SULFIDE TRAINING

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

1. **Well Control Equipment**

    A. Flare line

    B. Choke manifold – Remotely Operated

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

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

    E. Mud/Gas Separator

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

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

3. H_2S detection and monitoring equipment:

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

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

Visual warning systems:

A. Wind direction indicators as shown on well site diagram

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

4. Mud program:

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

5. Metallurgy:

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

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

6. Communication:

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

B. Land line (telephone) communications at Office

7. Well testing:

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

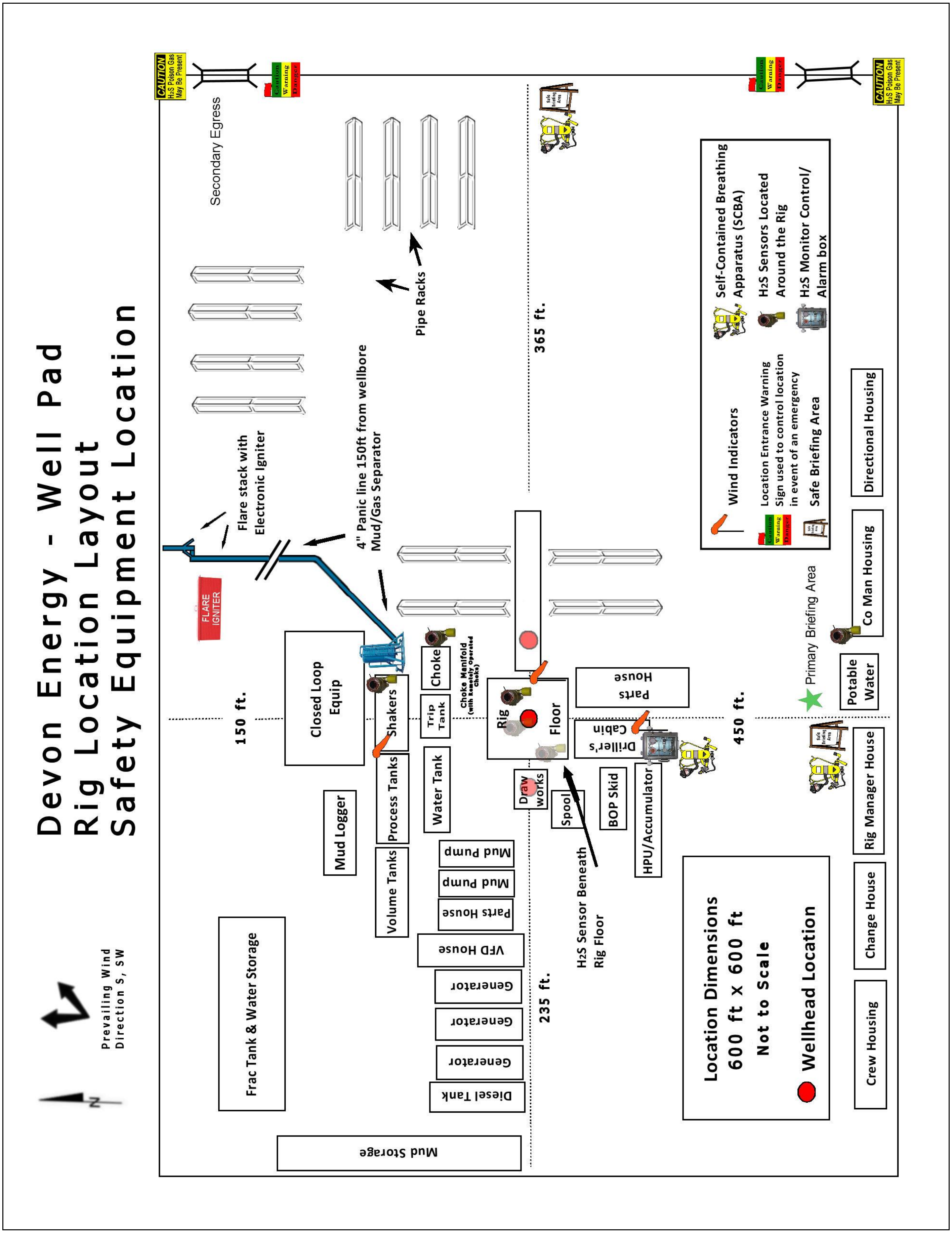
B. There will be no drill stem testing.

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

Agency Call List

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

Prepared in conjunction with
Dave Small


Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location
Prevailing Wind Direction S, SW
N
CAUTION H2S Poison Gas May Be Present
Caution Warning Danger
Secondary Egress
Pipe Racks
365 ft.
Flare stack with Electronic Igniter
FLARE IGNITER
4" Panic line 150ft from wellbore Mud/Gas Separator
Closed Loop Equip
150 ft.
Shakers
Choke
Choke Manifold (with Remotely Operated Choke)
Trip Tank
Rig Floor
Parts House
Driller's Cabin
450 ft.
Primary Briefing Area
Potable Water
Co Man Housing
Directional Housing
Mud Logger
Process Tanks
Water Tank
Draw works
Spool
BOP Skid
HPU/Accumulator
Rig Manager House
Volume Tanks
Mud Pump
Mud Pump
Parts House
VFD House
Generator
Generator
Generator
Diesel Tank
Frac Tank & Water Storage
Mud Storage
H2S Sensor Beneath Rig Floor
235 ft.
Change House
Crew Housing
Location Dimensions 600 ft x 600 ft
Not to Scale
Wellhead Location
Wind Indicators
Location Entrance Warning Sign used to control location in event of an emergency
Safe Briefing Area
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors Located Around the Rig
H2S Monitor Control/ Alarm box

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

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

CONDITIONS

Action 374251

CONDITIONS

Operator:	
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 374251
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	9/3/2024
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	9/3/2024
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	9/3/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	9/3/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	9/3/2024