F/S

Form 3160-3
(June 2015)

HOBBS OCD
SEP 06 2018
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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.
NMNM069596

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.
GAUCHO UNIT (308632)
152H

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY LP (6137)

9. API Well No.
30-025-45158

3a. Address
333 West Sheridan Avenue Oklahoma City OK 73102

3b. Phone No. *(include area code)*
(405)552-6571

10. Field and Pool, or Exploratory
WC-025 G-06 S223421L; BONE SPRING (97922)

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

At surface SESW / 351 FSL / 2033 FWL / LAT 32.3563845 / LONG -103.494098

At proposed prod. zone NESW / 2630 FSL / 2017 FEL / LAT 32.3771624 / LONG -103.4900879

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 29 / T22S / R34E / NMP

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
350 feet	830.64	240
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**
1596 feet	10390 feet / 17623 feet	FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3431 feet	01/15/2019	45 days

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Rebecca Deal / Ph: (405)228-8429	03/15/2018
Title: Regulatory Compliance Professional		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 08/23/2018
Title: Assistant Field Manager Lands & Minerals	Office: CARLSBAD	

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.

GCP Received 09/06/18

KG 09/06/18

APPROVED WITH CONDITIONS

Approval Date: 08/23/2018

(Continued on page 2)

*(Instructions on page 2)

Online Draft

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies; when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: SESW / 351 FSL / 2033 FWL / TWSP: 22S / RANGE: 34E / SECTION: 29 / LAT: 32.3563845 / LONG: -103.494098 (TVD: 0 feet, MD: 0 feet)
   PPP: SWSE / 330 FSL / 2017 FEL / TWSP: 22S / RANGE: 34E / SECTION: 29 / LAT: 32.357866 / LONG: -103.490131 (TVD: 10320 feet, MD: 10771 feet)
   BHL: NESW / 2630 FSL / 2017 FEL / TWSP: 22S / RANGE: 34E / SECTION: 20 / LAT: 32.3771624 / LONG: -103.4900879 (TVD: 10390 feet, MD: 17623 feet)

BLM Point of Contact

Name: Tenille Ortiz
Title: Legal Instruments Examiner
Phone: 5752342224
Email: tortiz@blm.gov

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Review and Appeal Rights

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

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Devon Energy, Gaucho Unit 152H

1. Geologic Formations

TVD of target	10390	Pilot hole depth	N/A
MD at TD:	17623	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	1810		
Top of Salt	2000		
Base of Salt	3425		
Capitan	3873		
Delaware	5200		
Brushy Canyon	7420		
1st BSPG Lime	8525		
1st BSPG Sand	9550		
2nd BSPG Sand	10120		
3rd BSPG Lime	10507		
3rd BSPG Sand	11232		

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

Approval Date: 08/23/2018

2. Casing Program (Primary Design)

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
20"	0'	1,860	16"	75	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
13.5"	0	3,500'	11.875"	71.8	Q-125 HC	Vam HD-L	1.125	1.00	1.6 Dry 1.8 Wet
10.625"	0	5,250'	8.625"	32	K55 HC	LTC	1.125	1.00	1.6 Dry 1.8 Wet
7.875"	0	TD	5.5"	17	P110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h Must have table for contingency casing
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Variance is requested for collapse rating on intermediate 1 and 2 casing. Operator will keep pipe full while running casing.
- Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the intermediate and production casing strings if drilling conditions dictate.

Casing Program (Alternate Design)

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
26"	0	1,500'	20"	106.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
		1,850'	20"	133	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
17.5"	0	3,500'	13.375"	68	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
12.25"	0	5,250'	9.625"	40	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
8.75"	0	TD	5.5"	17	P110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h Must have table for contingency casing
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Variance is requested for collapse rating on intermediate 1 and 2 casing. Operator will keep pipe full while running casing.
- Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the intermediate and production casing strings if drilling conditions dictate.

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

3. Cementing Program (Primary Design)

Casing	# Sks	Wt. lb/ gal	H_20 gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
16" Surface	1079	13.5	9.22	1.73	12	Lead: 100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
	584	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
16" Surface Top Out	1200	14.8	6.32	1.33	6	Primary: Neat Class C Cement
11.875" Int 1	696	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	157	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
11.875" Int 1 Top Out	2235	13.5	9.22	1.73	12	Lead: 100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
8.625" Int 2	587	12.5	10.89	1.96	20	Lead: (65:35) Class H Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	112	15.6	5.28	1.18	7.5	Tail: Class H Cement + 0.125 lbs/sack Poly-E-Flake
8.625" Int 2 Two Stage	390	12.5	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	55	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	135	12.5	10.89	1.96	20	Lead: (65:35) Class H Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	120	15.6	5.28	1.18	7.5	Tail: Class H Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	338	11	17.38	2.81	20	Lead: NeoCem®
	678	13.2	7.46	1.47	6	Tail: NeoCem®

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

Casing String	TOC	% Excess
16" Surface	0ft	75%
11.875" Intermediate 1	0ft	50%
8.625" Intermediate 2	0ft	25%
8.625" Intermediate 2 (Two Stage)	1st Stage = 3550ft / 2nd Stage = 0ft	25%
5.5" Prod	4750'	10%

Cementing Program (Alternate Design)

Casing	# Sks	Wt. lb/ gal	H_20 gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
20" Surface	2695	13.7	8.89	1.73	7	Lead: Class C Cement + 2% Bentonite + 5lb/sk Salt
	1200	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
20" Surface Top Out	1200	14.8	6.32	1.33	6	Primary: Neat Class C Cement
13.375" Int 1	618	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	504	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
13.375" Int 1 Two Stage	1020	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	390	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 1960ft					
	915	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Int 2	423	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	177	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Int 2 Two Stage	310	12.9	9.81	1.87	14	Lead Stage 1: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	313	14.8	6.32	1.33	6	Tail Stage 1: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	585	12.9	9.81	1.87	14	Lead Stage 2: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	85	14.8	6.32	1.33	6	Tail Stage 2: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	523	11	17.38	2.811	20	Lead: NeoCem®
	1571	13.2	7.46	1.468	6	Tail: NeoCem®

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

Casing String	TOC	% Excess
20" Surface	0ft	100%
13.375" Intermediate	0ft	75%
13.375" Intermediate (Two Stage)	1st Stage = 1960ft / 2nd Stage = 0ft	75%
9.625" Intermediate	0ft	50%
9.625" Intermediate (Two Stage)	1st Stage = 3450ft / 2nd Stage = 0ft	50%
5.5" Prod	4750'	10%

4. Pressure Control Equipment (Primary Casing Design)

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type	✓	Tested to:
13-1/2"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram		
			Other*		
10-5/8"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
7-5/8"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

Pressure Control Equipment (Alternate Casing Design)

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type	✓	Tested to:
17-1/2"	21-1/4"	2M	Annular	x	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram		10M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram		10M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,860'	FW Gel	8.6-8.8	28-34	N/C
1,860'	3,500'	Saturated Brine	10.0	28-34	N/C
3,500'	5,250'	Cut brine/brine	8.8-10	28-34	N/C
5,250'	TD	Cut brine	8.5-9.2	28-34	N/C

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

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

6. Logging and Testing Procedures

Logging, Coring and Testing.	
x	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted 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	Specify what type and where?
BH Pressure at deepest TVD	4,884 psi
Abnormal Temperature	No

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

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Is this a walking operation? Yes

1. In the event the spudder rig is unable to drill the surface holes the 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 with either OBM or cut brine 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? Yes

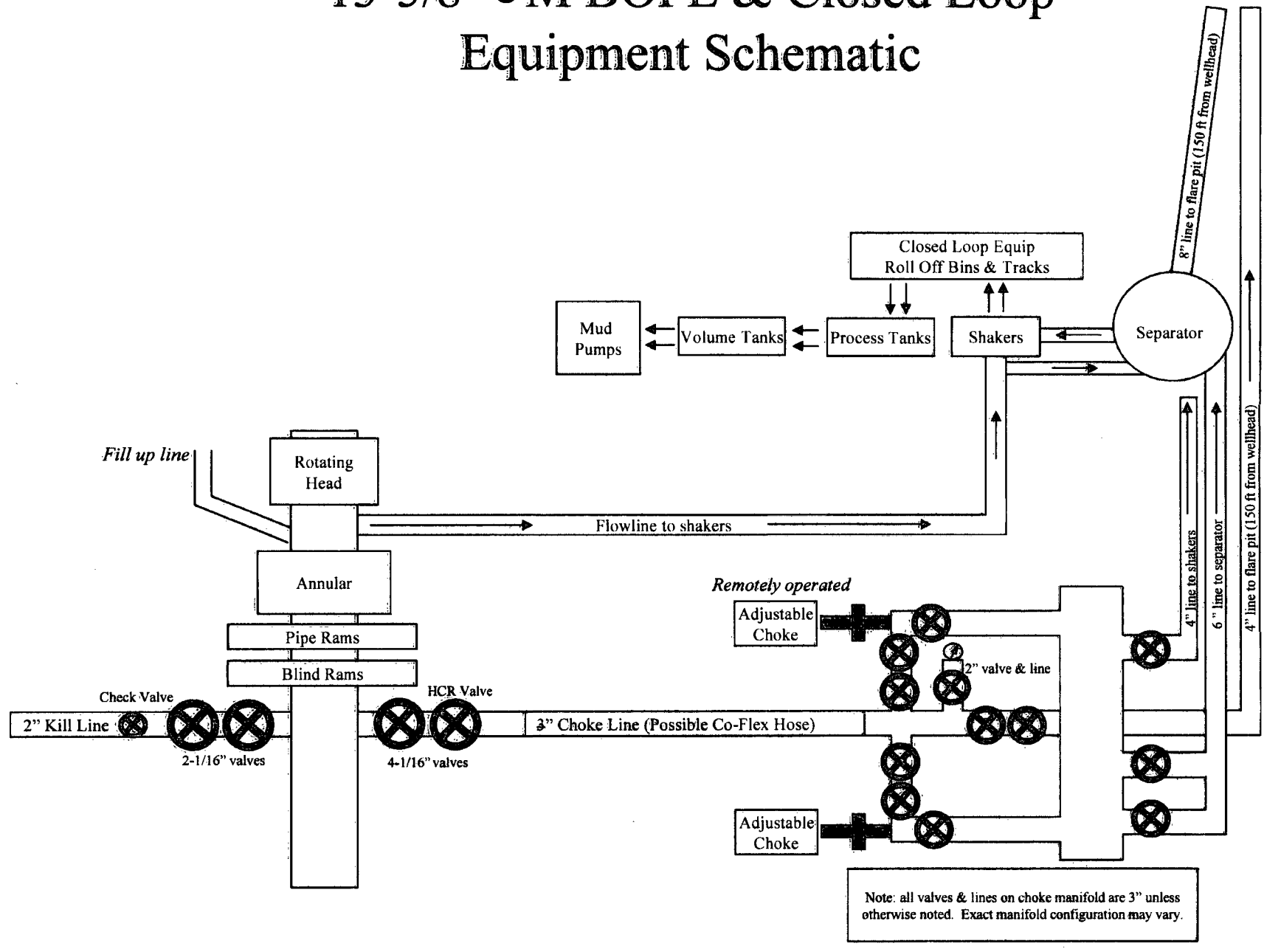
1. Spudder rig will move in and drill surface hole.
    a. Rig will utilize fresh water based mud to drill 17½" surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the 13-3/8" surface casing is cut off and the WOC time has been reached.
4. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5. Spudder rig operations is expected to take 4-5 days per well on a multi well pad.
6. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

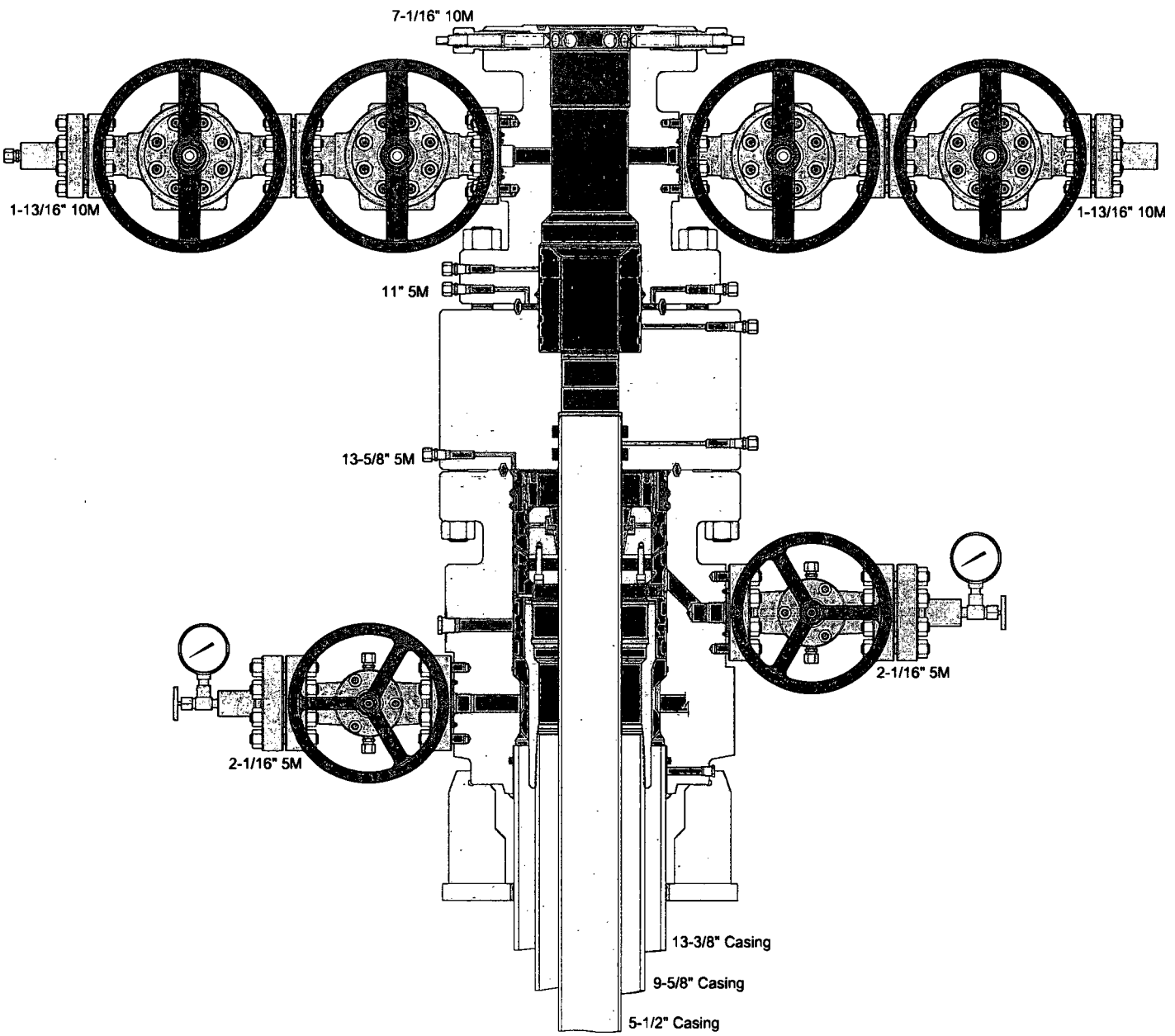
_x_ Directional Plan

___ Other, describe

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



Approval Date: 08/23/2018



Approval Date: 08/23/2018

AFMSS

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

Operator Certification Data Report

08/23/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Rebecca Deal **Signed on:** 03/15/2018

Title: Regulatory Compliance Professional

Street Address: 333 West Sheridan Avenue

City: Oklahoma City **State:** OK **Zip:** 73102

Phone: (405)228-8429

Email address: Rebecca.Deal@dvn.com

Field Representative

Representative Name: Travis Phibbs

Street Address: 6488 Seven Rivers Hwy

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-9929

Email address: travis.phibbs@dvn.com

AFMSS

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

Application Data Report

08/23/2018

APD ID: 10400028382 **Submission Date:** 03/15/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400028382 **Tie to previous NOS?** **Submission Date:** 03/15/2018

BLM Office: CARLSBAD **User:** Rebecca Deal **Title:** Regulatory Compliance Professional

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM069596 **Lease Acres:** 830.64

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

Operator Info

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue **Zip:** 73102

Operator PO Box:

Operator City: Oklahoma City **State:** OK

Operator Phone: (405)552-6571

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: GAUCHO UNIT **Well Number:** 152H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** WC-025 G-06 S223421L; BONE SPRING **Pool Name:** BONE SPRING

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** GAUCHO 29 WELLPAD **Number:** 1

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: **Distance to nearest well:** 1596 FT **Distance to lease line:** 350 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Gaucho_Unit_152H_C_102_Signed_WP_Rev_20180613065458.pdf

Well work start Date: 01/15/2019 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	351	FSL	2033	FWL	22S	34E	29	Aliquot SESW	32.3563845	-103.494098	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 069596	3431	0	0
KOP Leg #1	50	FSL	2017	FEL	22S	34E	29	Aliquot SWSE	32.35677	-103.490134	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 061360	-6316	9877	9747
PPP Leg #1	330	FSL	2017	FEL	22S	34E	29	Aliquot SWSE	32.357866	-103.490131	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 061360	-6889	10771	10320

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	2630	FSL	2017	FEL	22S	34E	20	Aliquot NESW	32.3771624	-103.4900879	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 092781	-6959	17623	10390
BHL Leg #1	2630	FSL	2017	FEL	22S	34E	20	Aliquot NESW	32.3771624	-103.4900879	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 092781	-6959	17623	10390

SECTION 29, T22S-R34E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ACCESS ROAD

LEGAL DESCRIPTION

FOR

DEVON ENERGY PRODUCTION COMPANY, L.P.

STATE OF NEW MEXICO

30' EASEMENT DESCRIPTION:

BEING an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the northeast quarter of the southwest quarter (NE¼ SW¼) and the southeast quarter of the southwest quarter (SE¼ SW¼) of Section 29, Township 22 South, Range 34 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land conveyed to the State of New Mexico. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/BC for the southwest corner of Section 29, T22S-R34E, N.M.P.M., Lea County, New Mexico;

Thence N 48°10' E a distance of 2266.04' to the **Point of Beginning** of this easement having coordinates of Northing=495545.20, Easting=800140.51 feet and continuing the following courses;

Thence S 00°43' E a distance of 744.58' to an angle point;

Thence S 68°15' E a distance of 184.67' to an angle point;

Thence S 13°46' E a distance of 125.55' to the **Point of Ending** having coordinates of Northing=494610.29, Easting=800351.12 feet from said point a 1" iron pipe w/BC for the south quarter corner of Section 29, T22S-R34E bears S 53°00' E a distance of 923.86', covering **1054.80' or 63.92 rods** and having an area of **0.72 acres**.

NOTES:
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 04/12/2018
Horizon Row, LLC
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizon Row, LLC

APD ID: 10400028382 **Submission Date:** 03/15/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

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

Highlighted data reflects the most recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	---	3434	0	0	OTHER : Surface	NONE	No
2	RUSTLER	1567	1867	1867	SANDSTONE	NONE	No
3	TOP SALT	1269	2165	2165	SALT	NONE	No
4	BASE OF SALT	-188	3622	3622	SALT	NONE	No
5	DELAWARE	-1789	5223	5223	SANDSTONE	NATURAL GAS,OIL	No
6	BRUSHY CANYON	-3676	7110	7110	SANDSTONE	NATURAL GAS,OIL	No
7	BONE SPRINGS	-5036	8470	8470	LIMESTONE	NATURAL GAS,OIL	No
8	BONE SPRING 1ST	-6046	9480	9480	SANDSTONE	NATURAL GAS,OIL	No
9	BONE SPRING 2ND	-6579	10013	10013	SANDSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 10390

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.
Testing Procedure: 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.

Choke Diagram Attachment:

Gaucho_Unit_152H_3M_BOPE_CK_20180314152950.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Gaucho_Unit_152H_3M_BOPE_CK_20180314152950.pdf

BOP Diagram Attachment:

Gaucho_Unit_152H_3M_BOPE_CK_20180314153004.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 5250

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

Testing Procedure: 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.

Choke Diagram Attachment:

Gaucho_Unit_152H_3M_BOPE_CK_20180314153014.pdf

BOP Diagram Attachment:

Gaucho_Unit_152H_3M_BOPE_CK_20180314153037.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	20	16.0	NEW	API	N	0	1860	0	1860			1860	J-55	75	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	13.5	11.875	NEW	API	N	0	3500	0	3500			3500	OTHER	71.8	OTHER - VAM HD-L	1.125	1	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	10.625	8.625	NEW	API	N	0	5250	0	5250			5250	OTHER	32	LTC	1.125	1	BUOY	1.6	BUOY	1.6
4	PRODUCTION	7.875	5.5	NEW	API	N	0	17623	0	10390			17623	P-110	17	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Gaucho_Unit_152H_Surf_Csg_Ass_20180315070244.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Gaucho_Unit_152H_Int_Csg_Ass_20180315070305.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Gaucho_Unit_152H_Int_Csg_Ass_20180315070320.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Gaucho_Unit_152H_Prod_Csg_Ass_20180315070345.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1360	1079	1.73	13.5	1867	75	C	100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
SURFACE	Tail		1360	1860	584	1.33	14.8	777	75	C	0.125 lbs/sack Poly-E-Flake
INTERMEDIATE	Lead		0	3000	696	1.87	12.9	1302	50	C	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
INTERMEDIATE	Tail		3000	3500	157	1.33	14.8	209	50	C	0.125 lbs/sack Poly-E-Flake
INTERMEDIATE	Lead		0	4750	587	1.96	12.5	1151	25	C	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
INTERMEDIATE	Tail		4750	5250	112	1.18	15.6	132	25	C	0.125 lbs/sack Poly-E-Flake
PRODUCTION	Lead		4750	9877	338	2.81	11	950	10	NEOCEM	N/A
PRODUCTION	Tail		9877	17623	678	1.47	13.2	997	10	NEOCEM	N/A

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
5250	17623	SALT SATURATED	8.5	9				12			
0	1860	WATER-BASED MUD	8.6	8.8				2			
1860	3500	SALT SATURATED	10	10.5				2			
3500	5250	SALT SATURATED	8.8	10				2			

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Will run GRMWD from TD to from KOP. Cement bond logs will be run in vertical to determine top of cement. Stated logs run will be in the Completion Report and submitted to the BLM.

List of open and cased hole logs run in the well:

CALIPER,CBL,DS,GR,MUDLOG

Coring operation description for the well:

N/A

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4862 **Anticipated Surface Pressure:** 2576.19

Anticipated Bottom Hole Temperature(F): 160

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Gaucho_Unit_152H_H2S_Plan_20180315070510.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Gaucho_Unit_152H_Dir_Svy_20180315071309.pdf

Other proposed operations facets description:

DIRECTIONAL SURVEY & AC PLAN
MULTI-BOWL VERBIAGE
MULTI-BOWL WELLHEAD
CLOSED LOOP DESIGN
CO-FLEX
DRILLING PLAN
SPUDDER RIG
GCP FORM

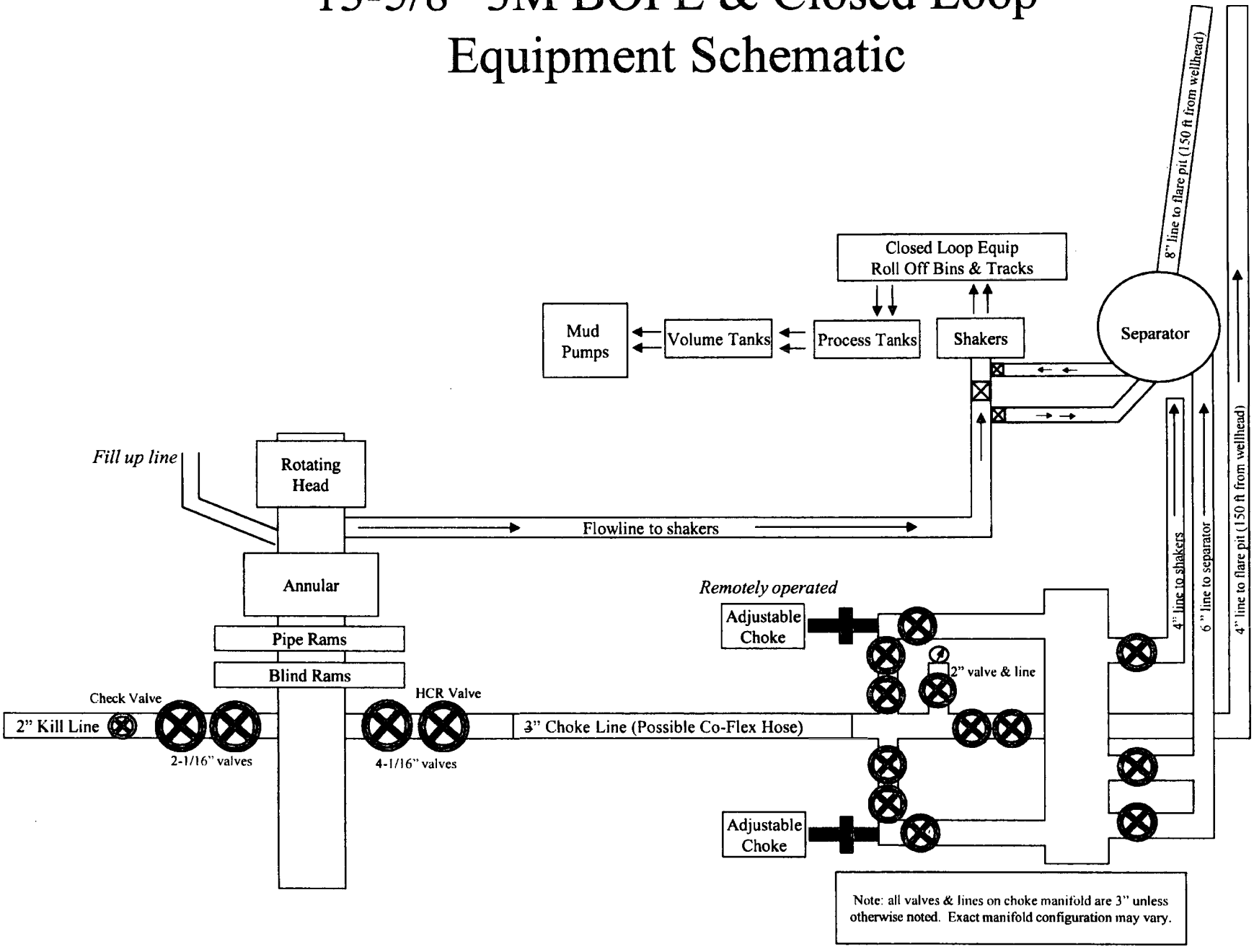
Other proposed operations facets attachment:

Gaucho_Unit_152H_Drlg_Plan_w_Cont_20180315072631.pdf
Gaucho_Unit_152H_MB_Verb_3M_20180315072632.pdf
Gaucho_Unit_152H_MB_Wellhd_3M_4_STRING_20180315072633.pdf
Gaucho_Unit_152H_Spudder_Rig_Info_20180315072633.pdf
Gaucho_Unit_152H_Clsd_Loop_20180315072701.pdf
Gaucho_Unit_152_GCP_Form_20180524064519.pdf
Gaucho_Unit_152H_Speedhead_Diagram_20180613065735.pdf

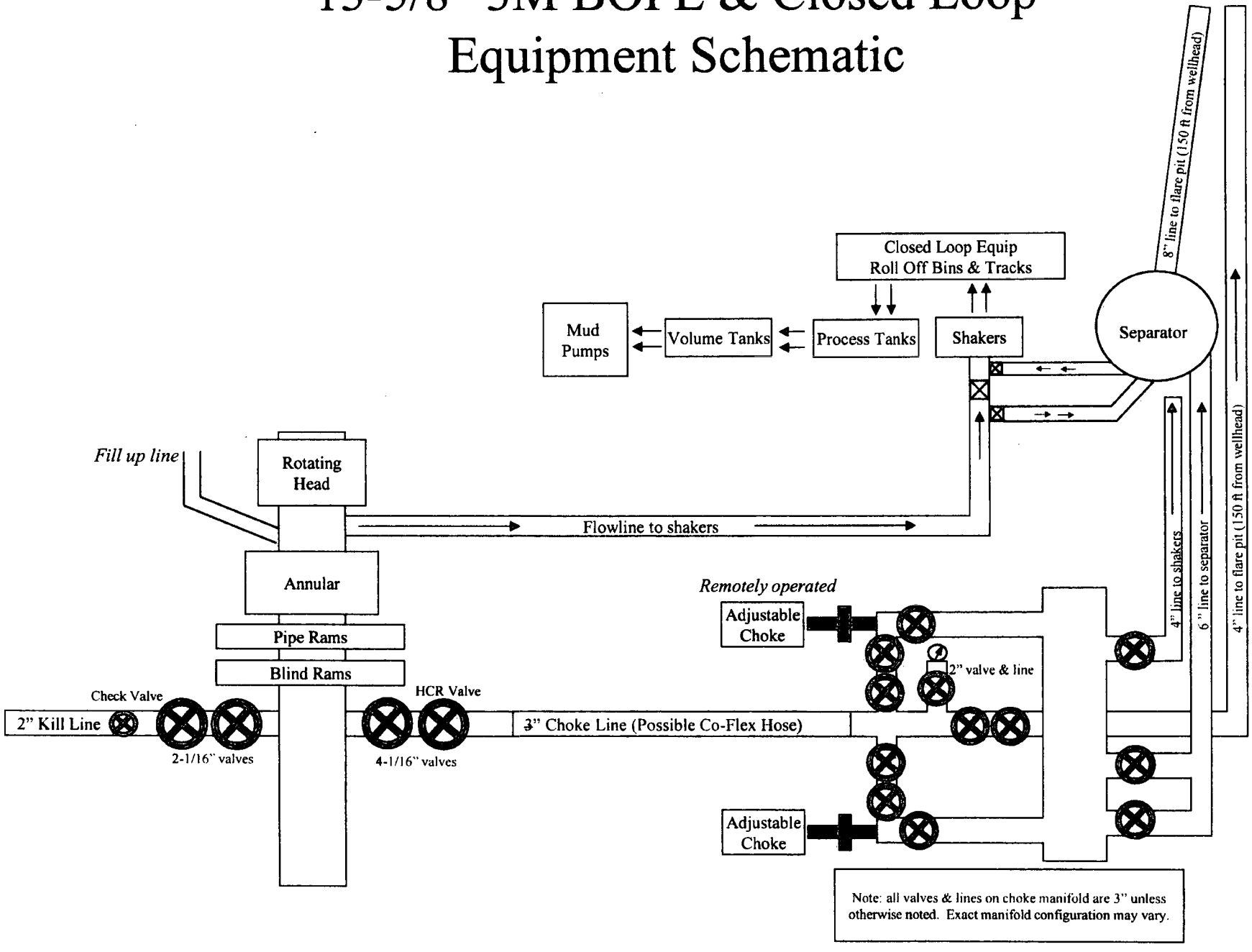
Other Variance attachment:

Gaucho_Unit_152H_Co_flex_20180315072649.pdf

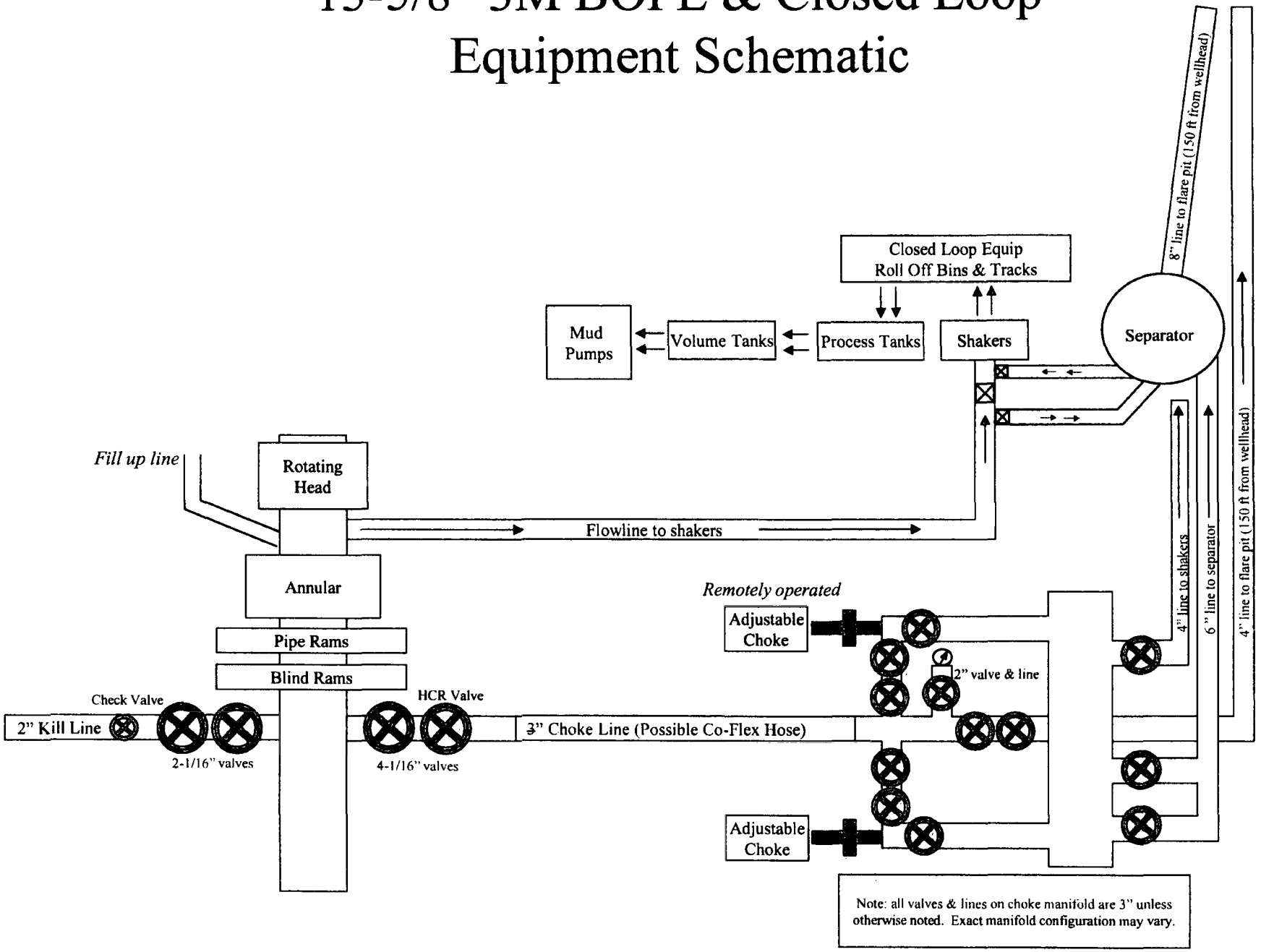
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



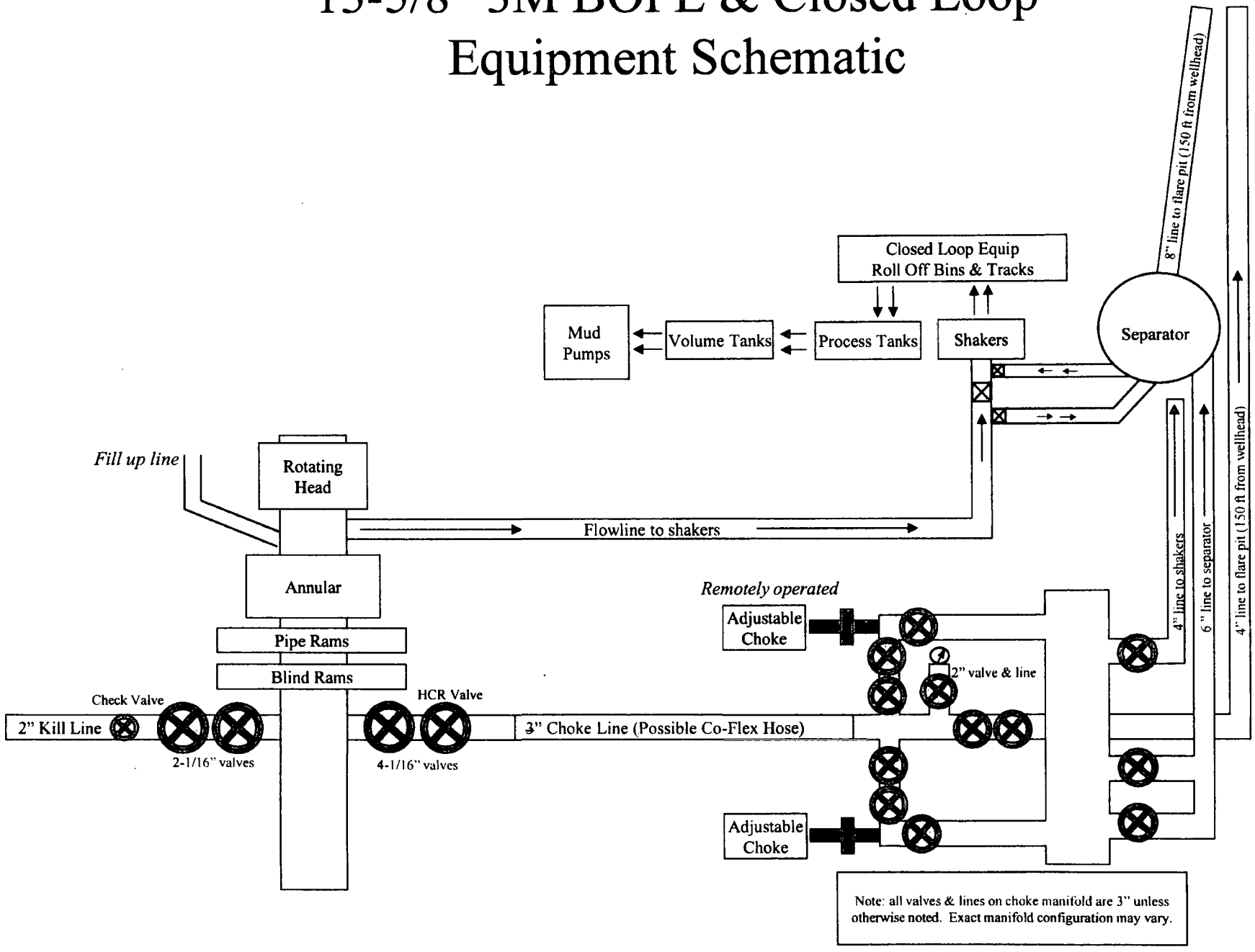
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



13-5/8" 3M BOPE & Closed Loop Equipment Schematic



13-5/8" 3M BOPE & Closed Loop Equipment Schematic



Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Fracture @ Shoe	Formation Pore Pressure	Dry gas

Intermediate Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Intermediate Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Production Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced water) + test psi
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below surface 8.6 ppg packer fluid
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest frac fluid

Production Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC.	None
Cementing	Wet cement weight	Water (8.33ppg)

Production Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Surface Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Displace to Gas	Formation Pore Pressure	Dry gas from next casing point

Surface Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Surface Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	3 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Fracture @ Shoe	Formation Pore Pressure	Dry gas

Intermediate Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Intermediate Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Devon Energy, Gaucho Unit 152H

1. Geologic Formations

TVD of target	10390	Pilot hole depth	N/A
MD at TD:	17623	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	1810		
Top of Salt	2000		
Base of Salt	3425		
Capitan	3873		
Delaware	5200		
Brushy Canyon	7420		
1st BSPG Lime	8525		
1st BSPG Sand	9550		
2nd BSPG Sand	10120		
3rd BSPG Lime	10507		
3rd BSPG Sand	11232		

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

2. Casing Program (Primary Design)

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
20"	0'	1,860	16"	75	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
13.5"	0	3,500'	11.875"	71.8	Q-125 HC	Vam HD-L	1.125	1.00	1.6 Dry 1.8 Wet
10.625"	0	5,250'	8.625"	32	K55 HC	LTC	1.125	1.00	1.6 Dry 1.8 Wet
7.875"	0	TD	5.5"	17	P110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

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

Casing Program (Alternate Design)

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
26"	0	1,500'	20"	106.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
		1,850'	20"	133	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
17.5"	0	3,500'	13.375"	54.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
12.25"	0	5,250'	9.625"	40	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
8.75"	0	TD	5.5"	17	P110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

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

Devon Energy, Gaucho Unit 152H

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

3. Cementing Program (Primary Design)

Casing	# Sks	Wt. lb/ gal	H_20 gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
16" Surface	1079	13.5	9.22	1.73	12	Lead: 100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
	584	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
16" Surface Top Out	1200	14.8	6.32	1.33	6	Primary: Neat Class C Cement
11.875" Int 1	696	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	157	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
11.875" Int 1 Top Out	2235	13.5	9.22	1.73	12	Lead: 100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
8.625" Int 2	587	12.5	10.89	1.96	20	Lead: (65:35) Class H Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	112	15.6	5.28	1.18	7.5	Tail: Class H Cement + 0.125 lbs/sack Poly-E-Flake
8.625" Int 2 Two Stage	390	12.5	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	55	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	135	12.5	10.89	1.96	20	Lead: (65:35) Class H Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	120	15.6	5.28	1.18	7.5	Tail: Class H Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	338	11	17.38	2.81	20	Lead: NeoCem®
	678	13.2	7.46	1.47	6	Tail: NeoCem®

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

Casing String	TOC	% Excess
16" Surface	0ft	75%
11.875" Intermediate 1	0ft	50%
8.625" Intermediate 2	0ft	25%
8.625" Intermediate 2 (Two Stage)	1st Stage = 3550ft / 2nd Stage = 0ft	25%
5.5" Prod	4750'	10%

Devon Energy, Gaucho Unit 152H

Cementing Program (Alternate Design)

Casing	# Sks	Wt. lb/ gal	H_20 gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
20" Surface	2695	13.7	8.89	1.73	7	Lead: Class C Cement + 2% Bentonite + 5lb/sk Salt
	1200	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
20" Surface Top Out	1200	14.8	6.32	1.33	6	Primary: Neat Class C Cement
13.375" Int 1	618	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	504	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
13.375" Int 1 Two Stage	1020	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	390	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 1960ft					
	915	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Int 2	423	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	177	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Int 2 Two Stage	310	12.9	9.81	1.87	14	Lead Stage 1: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	313	14.8	6.32	1.33	6	Tail Stage 1: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	585	12.9	9.81	1.87	14	Lead Stage 2: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	85	14.8	6.32	1.33	6	Tail Stage 2: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	523	11	17.38	2.811	20	Lead: NeoCem®
	1571	13.2	7.46	1.468	6	Tail: NeoCem®

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

Casing String	TOC	% Excess
20" Surface	0ft	100%
13.375" Intermediate	0ft	75%
13.375" Intermediate (Two Stage)	1st Stage = 1960ft / 2nd Stage = 0ft	75%
9.625" Intermediate	0ft	50%
9.625" Intermediate (Two Stage)	1st Stage = 3450ft / 2nd Stage = 0ft	50%
5.5" Prod	4750'	10%

4. Pressure Control Equipment (Primary Casing Design)

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type	✓	Tested to:
13-1/2"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram		
			Other*		
10-5/8"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
7-5/8"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

Devon Energy, Gaucho Unit 152H

Pressure Control Equipment (Alternate Casing Design)

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type	✓	Tested to:
17-1/2"	21-1/4"	2M	Annular	x	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram		10M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram		10M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,860'	FW Gel	8.6-8.8	28-34	N/C
1,860'	3,500'	Saturated Brine	10.0	28-34	N/C
3,500'	5,250'	Cut brine/brine	8.8-10	28-34	N/C
5,250'	TD	Cut brine	8.5-9.2	28-34	N/C

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

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

6. Logging and Testing Procedures

Logging, Coring and Testing.	
x	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted 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	Specify what type and where?
BH Pressure at deepest TVD	4,884 psi
Abnormal Temperature	No

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

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Is this a walking operation? Yes
Will be pre-setting casing? No

Attachments
_x_ Directional Plan
___ Other, describe

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

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

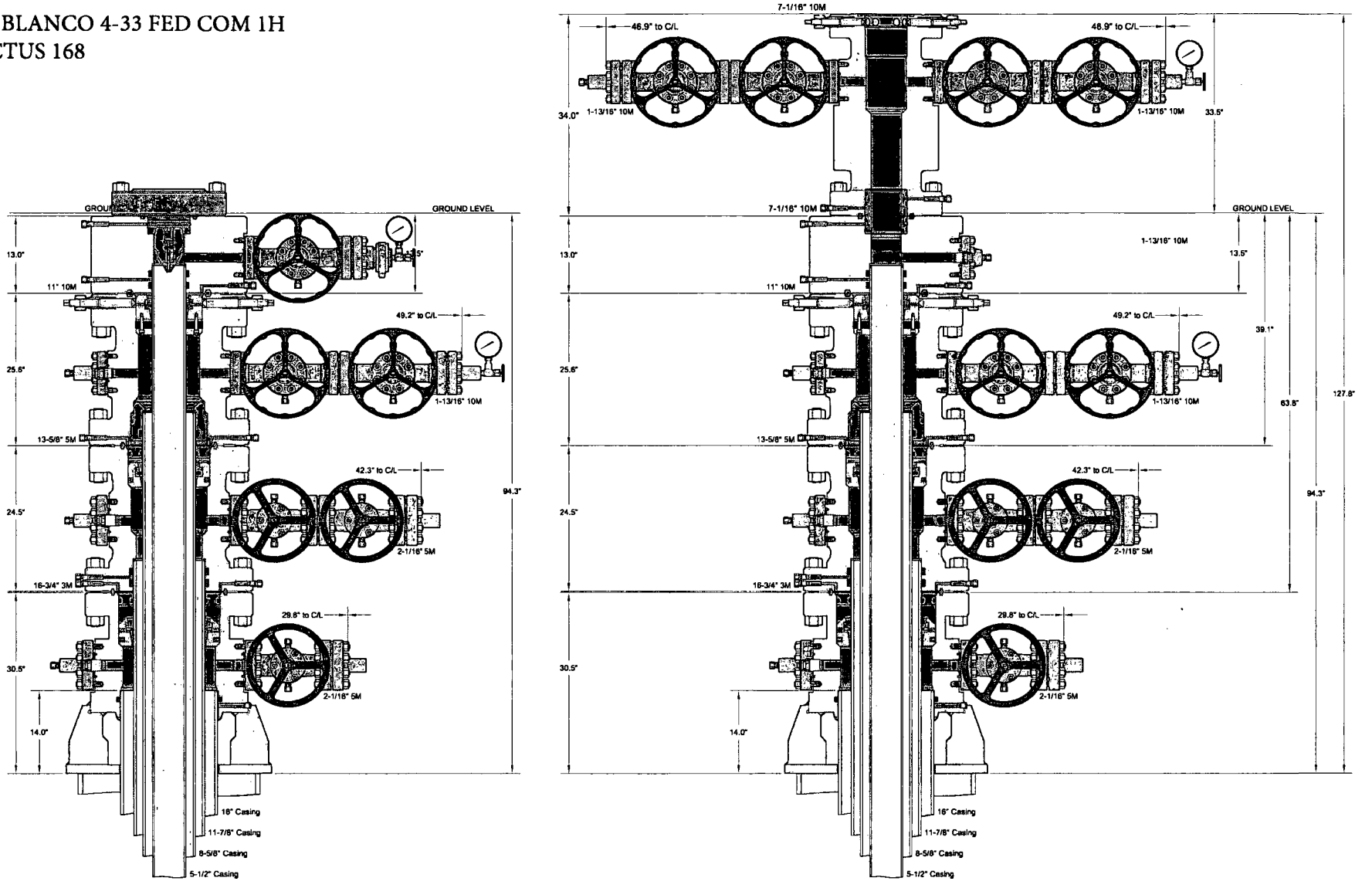
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial 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 3M, 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 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 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 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

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

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

RIO BLANCO 4-33 FED COM 1H
CACTUS 168



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CACTUS WELLHEAD LLC

DEVON ENERGY CORPORATION

(30") x 16" x 11-7/8" x 8-5/8" x 5-1/2" Conventional Wellhead
With 7-1/16" 10M x 7-1/16" 10M CTH-EN Tubing Head,
And Conventional Slip Style Casing Hangers

DRAWN	DLE	01DEC17
APPRV		
DRAWING NO.	ODE0001941	

Cactus Wellhead

Quotation

MIDLAND WAREHOUSE
8001 GROENING STREET
ODESSA TX 79765
Phone: 432-653-0306

Quote Number : ODE0001941

Date: 12/01/2017

Valid For 30 Days

Bill To: 7323

DEVON ENERGY CORPORATION
PO BOX 3198
OKLAHOMA CITY OK 73101-3198
US

Ship To: 0

DEVON ENERGY CORPORATION
PO BOX 3198
OKLAHOMA CITY OK 73101-3198
US

	Quantity	Price	Ext Price

(30") 16" x 11-7/8" x 8-5/8" x 5-1/2"
DEVON ENERGY

DELAWARE BASIN

CONVENTIONAL WELLHEAD ASSEMBLY
(30") 16" x 11-7/8" x 8-5/8" x 5-1/2"

QUOTATION SUMMARY:

- CASING HEAD ASSEMBLY - $14,476.49
- 16" RENTAL TOOLS - $950.00 PER WELL FOR 45 DAYS; $35.00 PER DAY THEREAFTER
- CASING SPOOL ASSEMBLY - $21,258.99
- 13" RENTAL TOOLS - $650.00 PER WELL FOR 45 DAYS; $20.00 PER DAY THEREAFTER
- CASING SPOOL ASSEMBLY - $14,151.54
- 11" RENTAL TOOLS - $650.00 PER WELL FOR 45 DAYS; $20.00 PER DAY THEREAFTER
- DSPA ASSEMBLY - $10,769.68
- TUBING HEAD ASSEMBLY - $15,735.51

CACTUS CONTACT:
DEREK DONNELL
MOBILE: 405-388-6662
EMAIL: derek.donnell@cactuswellhead.com

NOTE: THE FOLLOWING QUOTATION DOES NOT INCLUDE OTHER APPLICABLE MILEAGE AND SERVICES THAT WILL BE CHARGED AT TIME OF INVOICING.

			Quantity	Price	Ext Price
	CASING HEAD ASSEMBLY				
1	122465		1.00	13,439.00	13,439.00
	CSGHD,CW,C2,16-3/4 3M X 16 SOW,W/2 2-1/16 5M FP,ORING,15.25 MIN BORE & 34.0 BASEPLATE,W/6 GUSSETS,W/2 4 X 3 GROUT SLOTS,6A-PU-EE-NL-1-2				
2	610003		1.00	759.00	759.00
	VLV,CW1,2-1/16 3/5M FE AA/DD-NL (API 6A LU AA/DD-NL PSL1 PR2)				
3	VR2		1.00	39.12	39.12
	VR PLUG,CW,1-1/2 (1.900) SHARP VEE X 1-1/4 HEX,API 6A-DD-NL				
4	200002		2.00	73.60	147.20
	FLG,COMP,CW,2-1/16 5M X 2 LP,6A-KU-EE-NL-1				
5	BP2T		2.00	25.04	50.08
	BULL PLUG,CW,2 LP X 1/2 LP,API 6A DD-NL				
6	FTG1		1.00	6.85	6.85
	FTG,GRS,VENTED CAP,1/2 NPT,ALLOY NON-NACE				
7	R24		3.00	5.48	16.44
	RING GASKET,R24,2-1/16 3/5M				
8	780067		8.00	2.35	18.80
	STUD,ALL-THD W/2 NUTS,BLK,7/8-9UNC X 6-1/2,A193 GR B7/A194 GR 2H,NO PLATING				
					14,476.49
	16" RENTAL TOOLS				
9	AR4	Advance Rental Charge 45 Day	1.00	950.00	950.00
	16" CONVENTIONAL RENTAL TOOLS = $ 950.00 PER WELL FOR 45 DAYS; $35.00 PER DAY THEREAFTER				
	RENTAL TOOLS INCLUDE THE FOLLOWING ITEMS:				
	PN 104884: COMB TEST PLUG/RET TOOL,CW,16-3/4 X 4-1/2 IF (NC50) BOX BTM & TOP,W/1-1/4 LP BYPASS,FAB				
	PN 113590: WBUSH,CW,C2-(BP),16-3/4 X 15.25 ID X 12.0 LG,W/ORING GROOVE				
	NOTE: CUSTOMER IS RESPONSIBLE FOR LOST, DAMAGED OR BEYOND REPAIR RENTAL TOOLS. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.				
					950.00
	CASING SPOOL ASSEMBLY				
10	122501		1.00	12,435.00	12,435.00
	CSGSPL,CW,C2-DBLHPS,11-7/8,16-3/4 3M X 13-5/8 5M,W/2 2-1/16 5M FP,FRG,6A-PU-AA-1-2				
11	610003		2.00	759.00	1,518.00
	VLV,CW1,2-1/16 3/5M FE AA/DD-NL (API 6A LU AA/DD-NL PSL1 PR2)				

		Quantity	Price	Ext Price
12	VR2 VR PLUG,CW,1-1/2 (1.900) SHARP VEE X 1-1/4 HEX,API 6A-DD-NL	1.00	39.12	39.12
13	200002 FLG,COMP,CW,2-1/16 5M X 2 LP,6A-KU-EE-NL-1	2.00	73.60	147.20
14	BP2T BULL PLUG,CW,2 LP X 1/2 LP,API 6A DD-NL	2.00	25.04	50.08
15	FTG1 FTG,GRS,VENTED CAP,1/2 NPT,ALLOY NON-NACE	1.00	6.85	6.85
16	R24 RING GASKET,R24,2-1/16 3/5M	4.00	5.48	21.92
17	780067 STUD,ALL-THD W/2 NUTS,BLK,7/8-9UNC X 6-1/2,A193 GR B7/A194 GR 2H,NO PLATING	16.00	2.35	37.60
18	109865 CSGHGR,C21,16-3/4 X 11-7/8,6A-PU-AA-3-1	1.00	4,775.00	4,775.00
19	122499 PRISEAL,H,16-3/4 X 11-7/8,6A-U-AA-1-1	1.00	1,550.00	1,550.00
20	R66 RING GASKET,R66,16-3/4 3M	1.00	78.22	78.22
21	780087 STUD,ALL-THD W/2 NUTS,BLK,1-5/8-8UN X 12-3/4,A193 GR B7/A194 GR 2H,NO PLATING	20.00	30.00	600.00
				21,258.99

13" RENTAL TOOLS

22	AR4	Advance Rental Charge 45 Day	1.00	650.00	650.00

13" CONVENTIONAL RENTAL TOOLS = $ 650.00 PER WELL FOR 45 DAYS; $20.00 PER DAY THEREAFTER

RENTAL TOOLS INCLUDE THE FOLLOWING ITEMS:

PN 104467: COMB TEST PLUG/RET TOOL,CW,13-5/8 X 4-1/2 IF(NC50) BOX BTM & TOP, W/1-1/4 LP BYPASS & SPRING LOADED DOGS

PN 102232: WBUSH,CW,C2-(BP),13-5/8 X 12.50 ID X 12 LG,W/ORING GROOVE

NOTE: CUSTOMER IS RESPONSIBLE FOR LOST, DAMAGED OR BEYOND REPAIR RENTAL TOOLS. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.

650.00

		Quantity	Price	Ext Price
	CASING SPOOL ASSEMBLY			
23	115405 CSGSPL,CW,C2-BP-HPS,12-5/8,13-5/8 5M X 11 10M,W/2 1-13/16 10M FP,RND BAR,6A-PU-AA-1-2	1.00	7,000.00	7,000.00
24	103605 SECSEAL,CW,HPS,12-5/8 X 8-5/8,F/3-1/2 CUTOFF,NACE	1.00	785.00	785.00
25	107412 VLV,CW,SB100,1-13/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR2) QPQ TRIM, API 6A PR2 ANNEX F	2.00	1,650.00	3,300.00
26	VR1 VR PLUG,CW,1-1/4 (1.660) LP X 1-1/4 HEX,API 6A-DD-NL	1.00	39.12	39.12
27	200010 FLG,COMP,1-13/16 10M X 2 LP,5000 PSI MAX WP,4130 60K,6A-KU-EE-NL-1	2.00	74.33	148.66
28	BP2T BULL PLUG,CW,2 LP X 1/2 LP,API 6A DD-NL	2.00	25.04	50.08
29	FTG1 FTG,GRS,VENTED CAP,1/2 NPT,ALLOY NON-NACE	1.00	6.85	6.85
30	BX151 RING GASKET,BX151,1-13/16 10/15/20M	4.00	6.26	25.04
31	780080 STUD,ALL-THD W/2 NUTS,BLK,3/4-10UNC X 5-1/2,A193 GR B7/A194 GR 2H,NO PLATING	16.00	1.96	31.36
32	BX160 RING GASKET,BX160,13-5/8 5M	1.00	78.30	78.30
33	780087 STUD,ALL-THD W/2 NUTS,BLK,1-5/8-8UN X 12-3/4,A193 GR B7/A194 GR 2H,NO PLATING	16.00	30.00	480.00
34	NVA NEEDLE VALVE,MFA,1/2 10M	1.00	47.25	47.25
35	PG5M PRESSURE GAUGE,5M,4-1/2 FACE,LIQUID FILLED,1/2 NPT	1.00	47.88	47.88
36	103603 CSGHGR,C21,13-5/8 X 8-5/8	1.00	1,365.00	1,365.00
37	103611 PRISEAL,H,13-5/8 X 8-5/8	1.00	747.00	747.00

			Quantity	Price	Ext Price
					14,151.54
	11" RENTAL TOOLS				
38	AR4	Advance Rental Charge 45 Day	1.00	650.00	650.00
	11" CONVENTIONAL RENTAL TOOLS = $ 650.00 PER WELL FOR 45 DAYS; $20.00 PER DAY THEREAFTER				
	RENTAL TOOLS INCLUDE THE FOLLOWING ITEMS:				
	PN 800001: COMB TEST PLUG/RET TOOL,CW,11 X 4-1/2 IF (NC50) BOX BTM & TOP,W/1-1/4 LP BYPASS & SPRING LOADED DOGS				
	PN 220004: WBUSH,CW,C2-(BP),11 OD X 9 ID X 12 LG,W/ORING GROOVE				
	NOTE: CUSTOMER IS RESPONSIBLE FOR LOST, DAMAGED OR BEYOND REPAIR RENTAL TOOLS. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.				
39	RNM	Rental Charge Minimum	0.00	65.00	0.00
	STUDDED TA CAP RENTAL = $65.00 PER DAY				
	PN 107928: TA CAP,CW,5-1/2,11 10M FLG,W/2 LP OUTLET,F/5.75 CUTOFF,5000 PSI MAX WP,6A-PU-EE-NL-1-1				
	NOTE: CUSTOMER IS RESPONSIBLE FOR LOST, DAMAGED OR BEYOND REPAIR RENTAL EQUIPMENT. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.				
					650.00
	DSPA ASSEMBLY				
40	110046		1.00	7,665.00	7,665.00
	DSPA,CW,DBLHPS,5-1/2,11 10M X 7-1/16 10M,W/1 1-13/16 10M FP,VR THD & 7 SEAL PKT TOP,W/5 HBPV,6A-PU-EE-NL-1-1				
41	107412		1.00	1,650.00	1,650.00
	VLV,CW,SB100,1-13/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR2) QPQ TRIM, API 6A PR2 ANNEX F				
42	100981		1.00	550.00	550.00
	ADPT,FH,1-13/16 10M X 2 FIG 1502 X 1/2 NPT,NACE SVC				
43	BX151		2.00	6.26	12.52
	RING GASKET,BX151,1-13/16 10/15/20M				
44	780080		8.00	1.96	15.68
	STUD,ALL-THD W/2 NUTS,BLK,3/4-10UNC X 5-1/2,A193 GR B7/A194 GR 2H,NO PLATING				
45	BX158		1.00	91.35	91.35
	RING GASKET,BX158,11 10/15/20M				
46	NVA		1.00	47.25	47.25
	NEEDLE VALVE,MFA,1/2 10M				
47	PG10M		1.00	47.88	47.88
	PRESSURE GAUGE,10M,4-1/2 FACE, LIQUID FILLED,1/2 NPT				

		Quantity	Price	Ext Price
48	BPV5T BPV,H,5 ONE WAY,4130,HYDRO TESTED & API 6A MONOGRAM NOTE: OPTIONAL SALE ITEM; PRICE NOT INCLUDED IN TOTAL OPTIONAL RENTAL RATE = $90.00 PER DAY	0.00	2,950.00	0.00
49	50019 CSGHGR,C22,11 X 5-1/2	1.00	690.00	690.00
				10,769.68
	TUBING HEAD ASSEMBLY			
50	191012 TBGHD,CW,CTH-EN,7,7-1/16 10M FLG X 7-1/16 10M FLG,W/2 1-13/16 10M FP,17-4PH LDS,34.0 LG,6A-PU-EE-0,5-1-1	1.00	7,999.00	7,999.00
51	107412 VLV,CW,SB100,1-13/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR2) QPQ TRIM, API 6A PR2 ANNEX F	4.00	1,650.00	6,600.00
52	200010 FLG,COMP,1-13/16 10M X 2 LP,5000 PSI MAX WP,4130 60K,6A-KU-EE-NL-1	2.00	74.33	148.66
53	BP2T BULL PLUG,CW,2 LP X 1/2 LP,API 6A DD-NL	2.00	25.04	50.08
54	FTG1 FTG,GRS,VENTED CAP,1/2 NPT,ALLOY NON-NACE	1.00	6.85	6.85
55	BX151 RING GASKET,BX151,1-13/16 10/15/20M	6.00	6.26	37.56
56	780080 STUD,ALL-THD W/2 NUTS,BLK,3/4-10UNC X 5-1/2,A193 GR B7/A194 GR 2H,NO PLATING	32.00	1.96	62.72
57	BX156 RING GASKET,BX156,7-1/16 10/15/20M	1.00	31.30	31.30
58	105119 SEAL SUB,CW,7 X 7.38 LG,W/5.13 ID,6A-PU-EE-NL-1	1.00	704.21	704.21
59	NVA NEEDLE VALVE,MFA,1/2 10M	1.00	47.25	47.25
60	PG10M PRESSURE GAUGE,10M,4-1/2 FACE, LIQUID FILLED,1/2 NPT	1.00	47.88	47.88

			Quantity	Price	Ext Price
	RENTAL BLIND FLANGE				
61	RNM	Rental Charge Minimum	1.00	15.00	15.00

RENTAL BLIND FLANGE = $ 15.00 PER DAY

RENTAL INCLUDES THE FOLLOWING ITEM:

PN 191003: FLG,BLIND,CW,7-1/16 10M X 1/2 LP,4.53 LG,W/FOUR 3/4-10UNC-2B LIFT THREADS,6A-PU-EE-NL-1-1

NOTE: CUSTOMER IS RESPONSIBLE FOR LOST, DAMAGED OR BEYOND REPAIR RENTAL EQUIPMENT.
RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.

15.00

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For Acceptance of this Quotation
Please Contact Ph: 713-626-8800
sales@cactuswellhead.com

Matl:	76,392.21
Labor:	0.00
Misc:	2,265.00
Sales Tax:	0.00
Total:	78,657.21

Devon Energy
APD VARIANCE DATA

OPERATOR NAME: Devon Energy

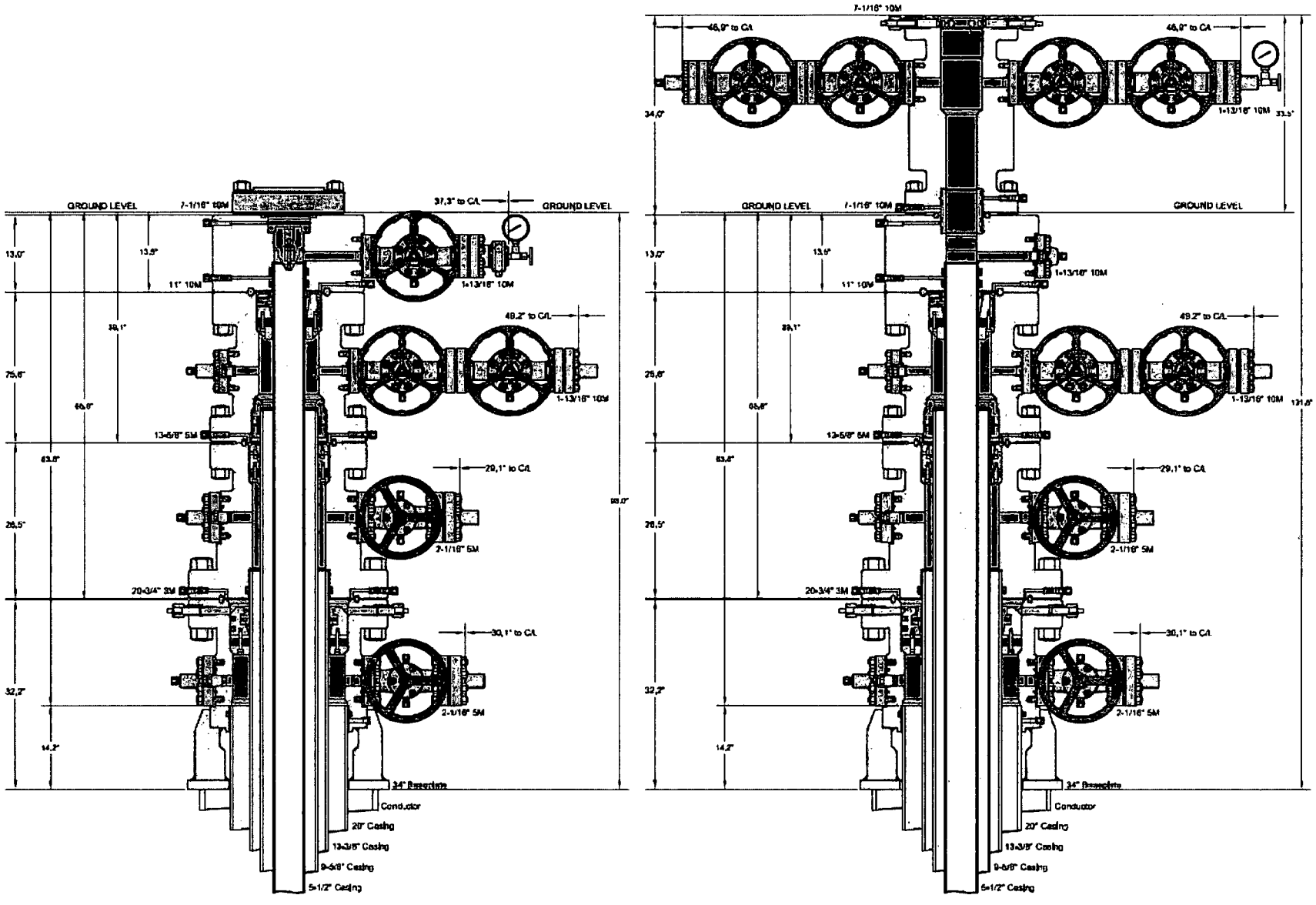
1. SUMMARY OF Variance:

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.



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CACTUS WELLHEAD LLC

DEVON ENERGY CORPORATION

20" x 13-3/8" x 9-5/8" x 5-1/2" Conventional Wellhead Assembly
With 7-1/16" 10M x 7-1/16" 10M CTH-EN Tubing Head
And Conventional Slip Style Casing Hangers

DRAWN	DLE	01DEC17
APPRV		
DRAWING NO.	ODE0001892	

APD ID: 10400028382 **Submission Date:** 03/15/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Gaucho_Unit_152H_Access_Rd_20180315072753.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Improve road to accommodate Drilling and Completion operations.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Gaucho_Unit_152H_New_Access_Rd_20180315072807.pdf

New road type: LOCAL

Length: 1055 Feet **Width (ft.):** 30

Max slope (%): 6 **Max grade (%):** 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water Drainage Ditch

New road access plan or profile prepared? YES

New road access plan attachment:

Gaucho_Unit_152H_New_Access_Rd_20180315072940.pdf

Access road engineering design? YES

Access road engineering design attachment:
Gaucho_Unit_152H_New_Access_Rd_20180315073012.pdf

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: CALICHE

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: See attached Interim reclamation diagram.

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: N/A

Road Drainage Control Structures (DCS) description: Water Drainage Ditch

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Gaucho_Unit_152H_OneMiMap_20180315075657.pdf

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: GAUCHO 29 WELLPAD 1 & GAUCHO 30 CTB1 - FOUR ATTACHMENTS - CTB ELECTRIC & PAD PLAT, WELL PAD ELECTRIC AND FLOWLINE (BURIED). GAS, WATER AND CRUDE CONNECTS WILL BE HANDLED BY THIRD PARTY. SEE C-102 (PG. 2) FOR DETAILED WELL PAD PLAT
Production Facilities map:

Gaucho_Unit_152H_CTB_1_ELE_20180315073233.PDF

Gaucho_Unit_152H_G_29_WP_1_TO_G_30_CTB_1_FL_20180315073234.pdf

Gaucho_Unit_152H_G_29_WP_1_ELE_20180315073234.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Gaucho_Unit_152H_CTB_1_Plat_20180315073243.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: STIMULATION **Water source type:** RECYCLED

Describe type:

Source latitude: **Source longitude:**

Source datum:

Water source permit type: OTHER

Source land ownership: FEDERAL

Water source transport method: PIPELINE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 202500 **Source volume (acre-feet):** 26.100851

Source volume (gal): 8505000

Water source and transportation map:

GAUCHO_UNIT_152H_Water_Map_20180315073312.pdf

Water source comments: The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.
New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Dirt fill and caliche will be used to construct well pad. See attached map.

Construction Materials source location attachment:

Gaucho_Unit_152H_Caliche_Map_20180315075603.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Water Based Cuttings

Amount of waste: 1950 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: All cuttings will disposed of at R360, Sundance, or equivalent.

Waste type: FLOWBACK

Waste content description: Produced water and flowback water

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: OFF-LEASE INJECTION **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: This well will be connected to the Gaucho SWD system that will dispose water in either one of 3 Devon SWDs or a 3rd party SWD.

Waste type: COMPLETIONS/STIMULATION

Waste content description: Flow back water during completion operations.

Amount of waste: 3000 barrels

Waste disposal frequency : One Time Only

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Various disposal locations in Lea and Eddy counties.

Waste type: PRODUCED WATER

Waste content description: Produced water

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: OFF-LEASE INJECTION **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: This well will be connected to the Gaucho SWD system that will dispose water in either one of 3 Devon SWDs or a 3rd party SWD.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Gaucho_Unit_152H_Well_Layout_20180315075643.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** GAUCHO 29 WELLPAD

Multiple Well Pad Number: 1

Recontouring attachment:

Gaucho_Unit_152H_Interim_Recl_20180315075707.pdf

Drainage/Erosion control construction: All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.
Drainage/Erosion control reclamation: Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

Well pad proposed disturbance (acres): 8.266
Road proposed disturbance (acres): 0.151
Powerline proposed disturbance (acres): 0.48
Pipeline proposed disturbance (acres): 0.717
Other proposed disturbance (acres): 0
Total proposed disturbance: 9.614

Well pad interim reclamation (acres): 6.007
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 6.007

Well pad long term disturbance (acres): 2.259
Road long term disturbance (acres): 0.151
Powerline long term disturbance (acres): 0.48
Pipeline long term disturbance (acres): 0.717
Other long term disturbance (acres): 0
Total long term disturbance: 3.607

Disturbance Comments:

Reconstruction method: Operator will use Best Management Practices"BMP" to mechanically recontour to obtain the desired outcome.
Topsoil redistribution: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
Soil treatment: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
Existing Vegetation at the well pad: Shinnery, yucca, grasses and mesquite.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: TRAVIS **Last Name:** PHIBBS

Phone: (575)748-9929 **Email:** TRAVIS.PHIBBS@DVN.COM

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Maintain weeds on an as need basis.

Weed treatment plan attachment:

Monitoring plan description: Monitor as needed.

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? YES **Use APD as ROW?** YES

ROW Type(s): 281001 ROW - ROADS,288101 ROW – O&G Facility Sites,289001 ROW- O&G Well Pad,FLPMA (Powerline),Other

ROW Applications

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: GAUCHO UNIT **Well Number:** 152H

SUPO Additional Information: SEE SEC 4 FOR FACILITY INFO. PERMITTING 5 WELLS ON PAD. SEE C-102 PACKET FOR GRADING PLAN

Use a previously conducted onsite? YES

Previous Onsite information: CONDUCTED 10/3/2017

Other SUPO Attachment

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

08/23/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: CO1104

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: