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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMNM092199

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No. (316229) RIO BLANCO 4-33 FED COM 38H

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

9. API Well No. 30-025-44829

3a. Address 333 West Sheridan Avenue Oklahoma City OK

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

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

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

At surface SWNW / 2630 FNL / 470 FWL / LAT 32.3336805 / LONG -103.4820895

At proposed prod. zone NENW / 330 FNL / 1750 FWL / LAT 32.3545103 / LONG -103.4779343

11. Sec., T. R. M. or Blk. and Survey or Area SEC 4 / T23S / R34E / NMP

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

12. County or Parish LEA

13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 10 feet

16. No. of acres in lease 560

17. Spacing Unit dedicated to this well 240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1050 feet

19. Proposed Depth 10159 feet / 17658 feet

20. BLM/BIA Bond No. on file FED: CO1104

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3415 feet

22. Approximate date work will start* 05/20/2018

23. Estimated duration 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

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 required by the BLM.

25. Signature	Name (Printed/Typed)	Date
(Electronic Submission)	Rebecca Deal / Ph: (405)228-8429	01/04/2018

Title: Regulatory Compliance Professional

Approved by (Signature)	Name (Printed/Typed)	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	05/16/2018

Title	Office
Supervisor Multiple Resources	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.

(Continued on page 2)

Rec GCP 05/23/18

*(Instructions on page 2)

KZ 05/29/18

APPROVED WITH CONDITIONS

Approval Date: 05/16/2018

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

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

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

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

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

PRELIMINARY

NOTICES

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

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to allow 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 Collection 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: SWNW / 2630 FNL / 470 FWL / TWSP: 23S / RANGE: 34E / SECTION: 4 / LAT: 32.3336805 / LONG: -103.4820895 (TVD: 0 feet, MD: 0 feet)
   PPP: SESW / 330 FSL / 1750 FWL / TWSP: 22S / RANGE: 34E / SECTION: 33 / LAT: 32.33508 / LONG: -103.44795 (TVD: 10150 feet, MD: 10590 feet)
   BHL: NENW / 330 FNL / 1750 FWL / TWSP: 22S / RANGE: 34E / SECTION: 33 / LAT: 32.3545103 / LONG: -103.4779343 (TVD: 10159 feet, MD: 17658 feet)

BLM Point of Contact

Name: Judith Yeager
Title: Legal Instruments Examiner
Phone: 5752345936
Email: jyeager@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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AFMSS

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

Application Data Report

05/16/2018

APD ID: 10400025944 **Submission Date:** 01/04/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400025944 **Tie to previous NOS?** **Submission Date:** 01/04/2018

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: NMNM092199 **Lease Acres:** 560

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? EXISTING **Mater Development Plan name:** Gaucho 1 MDP

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

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

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H **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: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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:** RIO BLANCO 4-33 PAD **Number:** 1H, 2H, 3H, 38H

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:** 1050 FT **Distance to lease line:** 10 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: RIO_BLANCO_4_33_FED_COM_38H_C_102_20180102130116.pdf

Well work start Date: 05/20/2018 **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	2630	FNL	470	FWL	23S	34E	4	Aliquot SWNW	32.3336805	-103.4820895	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 092199	3415	0	0
KOP Leg #1	50	FSL	1750	FWL	22S	34E	33	Aliquot SESW	32.33365	-103.47795	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 092199	-6214	9773	9629
PPP Leg #1	330	FSL	1750	FWL	22S	34E	33	Aliquot SESW	32.33508	-103.44795	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 092199	-6735	10590	10150

Drilling Plan Data Report

05/16/2018

APD ID: 10400025944 **Submission Date:** 01/04/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	3398	0	0	OTHER : Surface	NONE	No
2	RUSTLER	1997	1475	1475	SANDSTONE	NONE	No
3	TOP SALT	1232	2240	2240	SALT	NONE	No
4	BASE OF SALT	-1085	4557	4557	LIMESTONE,SALT	NONE	No
5	DELAWARE	-1668	5140	5140	SANDSTONE	NONE	No
6	BRUSHY CANYON	-3728	7200	7200	SANDSTONE	NATURAL GAS,OIL	No
7	BONE SPRINGS	-5033	8505	8505	LIMESTONE	NATURAL GAS,OIL	No
8	BONE SPRING 1ST	-6055	9527	9527	SANDSTONE	NATURAL GAS,OIL	No
9	BONE SPRING 2ND	-6513	9985	9985	SANDSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 5170

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:

RIO_BLANCO_4_33_FED_COM_38H_3M_BOPE_CK_20180102102246.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

RIO_BLANCO_4_33_FED_COM_38H_3M_BOPE_CK_20180102102246.pdf

BOP Diagram Attachment:

RIO_BLANCO_4_33_FED_COM_38H_3M_BOPE_CK_20180102102317.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 10159

Equipment: OP/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:

RIO_BLANCO_4_33_FED_COM_38H_3M_BOPE_CK_20180102102343.pdf

BOP Diagram Attachment:

RIO_BLANCO_4_33_FED_COM_38H_3M_BOPE_CK_20180102102403.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	600	0	600			600	J-55	75	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
2	OTHER	18.125	16.0	NEW	API	N	600	2340	600	2340	-7874	-9474	1740	J-55	75	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	13.5	11.875	NEW	API	N	0	3500	0	3500	-7874	-12874	3500	OTHER	71.8	OTHER - VAM HD-I	1.125	1	BUOY	1.6	BUOY	1.6
4	INTERMEDIATE	10.625	8.625	NEW	API	N	0	5170	0	5170	-12174	-12874	5170	OTHER	32	LTC	1.125	1	BUOY	1.6	BUOY	1.6
5	PRODUCTION	7.875	5.5	NEW	API	N	0	17658	0	10159	-7874	-7939	17658	P-110	17	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RIO_BLANCO_4_33_FED_COM_38H_Surf_Csg_Ass_20180102102422.pdf

Casing ID: 2 **String Type:** OTHER - SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RIO_BLANCO_4_33_FED_COM_38H_Surf_Csg_Ass_20180102102624.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RIO_BLANCO_4_33_FED_COM_38H_Int_Csg_Ass_20180102102717.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

Casing Attachments

Casing ID: 4 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RIO_BLANCO_4_33_FED_COM_38H_Int_Csg_Ass_20180102102822.pdf

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RIO_BLANCO_4_33_FED_COM_38H_Prod_Csg_Ass_20180102102907.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	0	0	0	0	0		See Drilling Contingency Attachment	N/A
OTHER	Lead		0	1840	1692	1.73	13.5	2927	75	C	100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
OTHER	Tail		1840	2340	328	1.33	14.8	436	75	C	0.125 lbs/sack Poly-E-Flake

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
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/sks Poly-R-Flake
INTERMEDIATE	Lead		0	4670	587	1.96	12.5	1151	25	C	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake
INTERMEDIATE	Tail		4670	5170	112	1.18	15.6	132	25	C	0.125 lbs/sks Poly-R-Flake
PRODUCTION	Lead		4650	9773	338	2.81	11	950	10	NEOCEM	N/A
PRODUCTION	Tail		9773	17658	678	1.47	13.2	997	10	NEOCOM	N/A

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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
3500	5170	SALT SATURATED	8.8	10				2			
600	2340	WATER-BASED MUD	8.6	8.8				2			
0	600	WATER-BASED MUD	8.6	8.8				2			
2340	3500	SALT SATURATED	10	10.2				2			
5170	17658	SALT SATURATED	8.5	9				12			

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

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4754 **Anticipated Surface Pressure:** 2519.02

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:

Rio_Blanco_4_33_Fed_Com_38H_H2S_Plan_20180103072149.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

RIO_BLANCO_4_33_FED_COM_38H_Dir_Svy_20180102112036.pdf

RIO_BLANCO_4_33_FED_COM_38H_ACReport_20180102114046.pdf

Other proposed operations facets description:

PRIMARY DRILLING PLAN
PRIMARY DRILLING CONTINGENCY
OPTIONAL DRILLING PLAN
OPTIONAL DRILLING CONTINGENCY PLAN
MULTI-BOWL VERBIAGE
MULTI-BOWL WELLHEAD
CLOSED-LOOP DESIGN PLAN
CO-FLEX
ANTICOLLISION PLAN
SPUDDER RIG REQUEST
GCP FORM
SPEC SHEET

Other proposed operations facets attachment:

RIO_BLANCO_4_33_FED_COM_38H_Clsd_Loop_20180102111959.pdf

RIO_BLANCO_4_33_FED_COM_38H_Spudder_Rig_Info_20180102113939.pdf

Rio_Blanco_4_33_Fed_Com_38H_GCP_20180104080927.pdf

RIO_BLANCO_4_33_FED_COM_38H_Drlg_Cont_Option_20180104092120.pdf

RIO_BLANCO_4_33_FED_COM_38H_Drlg_Contingency_20180104092120.pdf

RIO_BLANCO_4_33_FED_COM_38H_Drlg_Option_20180104092121.pdf

RIO_BLANCO_4_33_FED_COM_38H_MB_Verb_3M_20180305083214.pdf

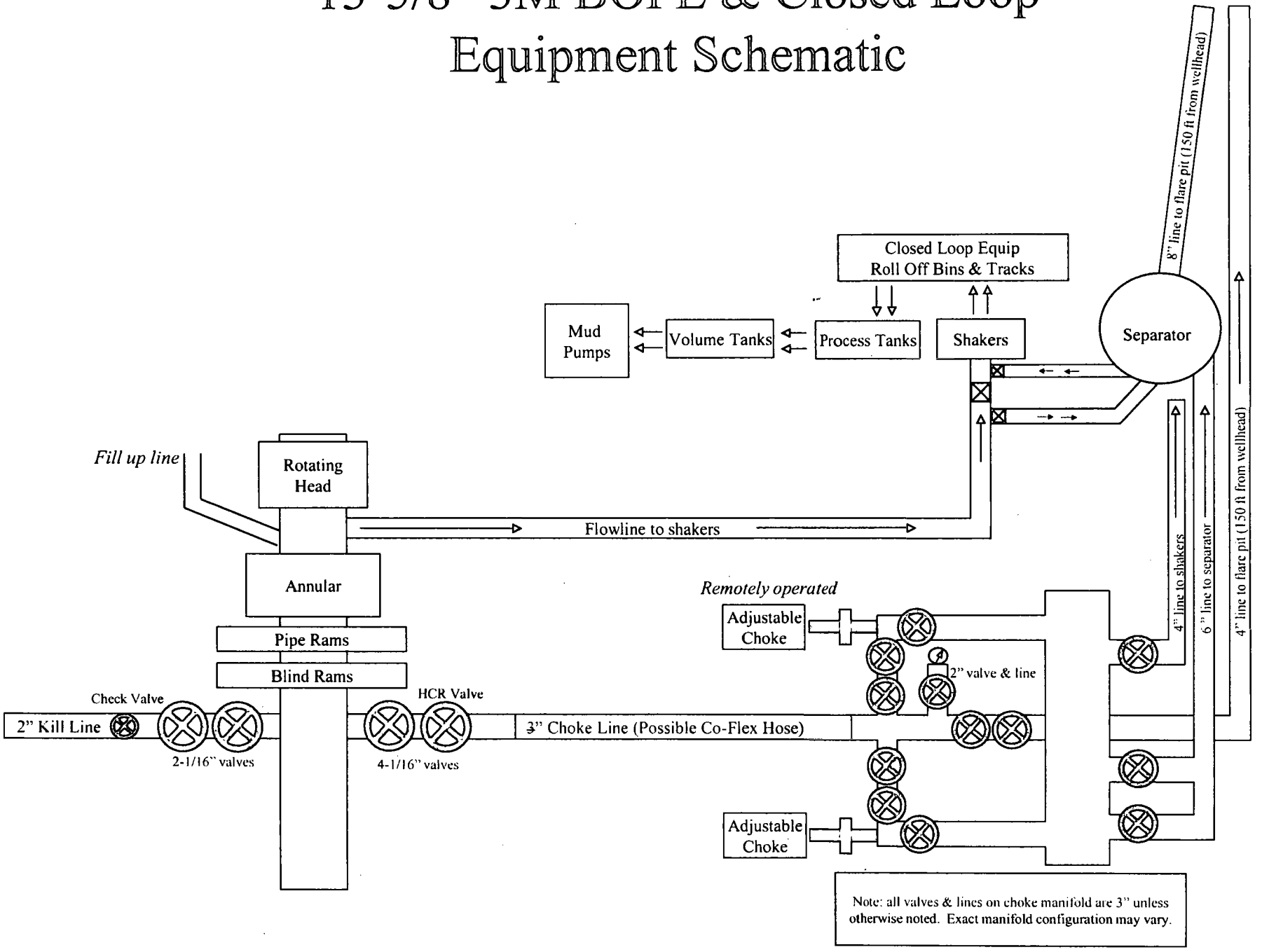
RIO_BLANCO_4_33_FED_COM_38H_11.875_71.80_Q125_HDL_20180305084830.pdf

RIO_BLANCO_4_33_FED_COM_38H_4_STRING_WH_SCHEM_20180307061503.pdf

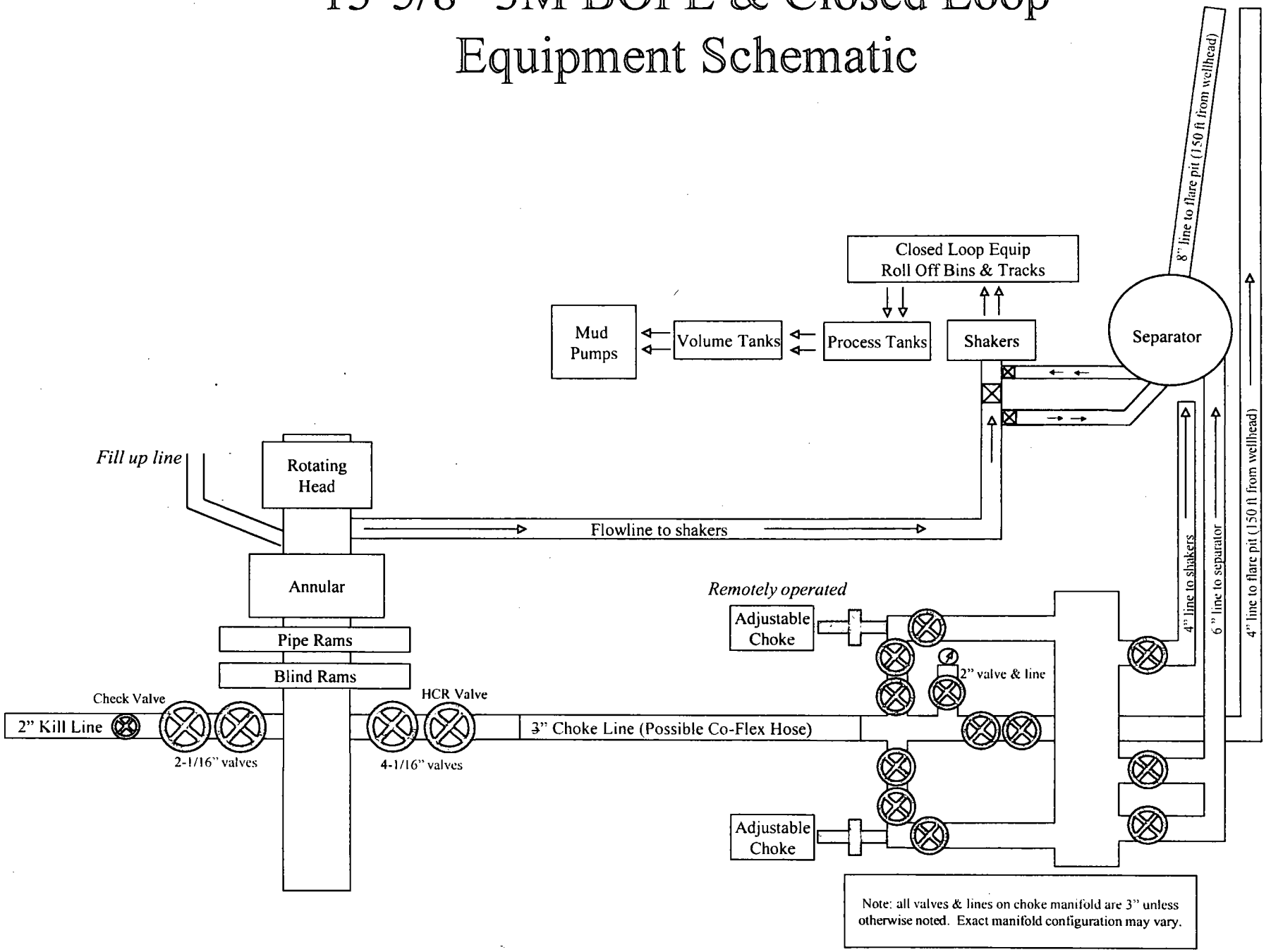
Other Variance attachment:

RIO_BLANCO_4_33_FED_COM_38H_Co_flex_20180102114136.pdf

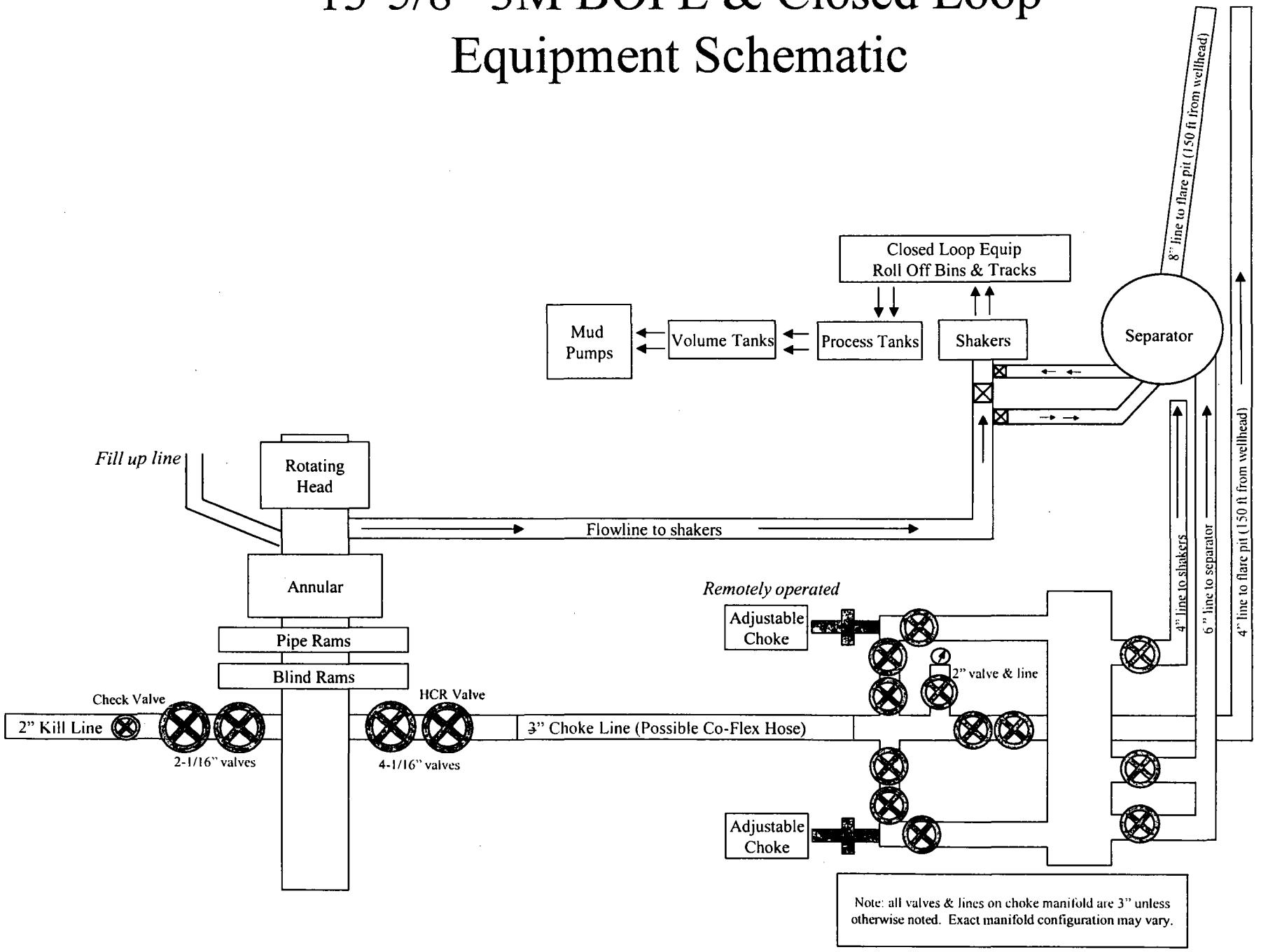
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



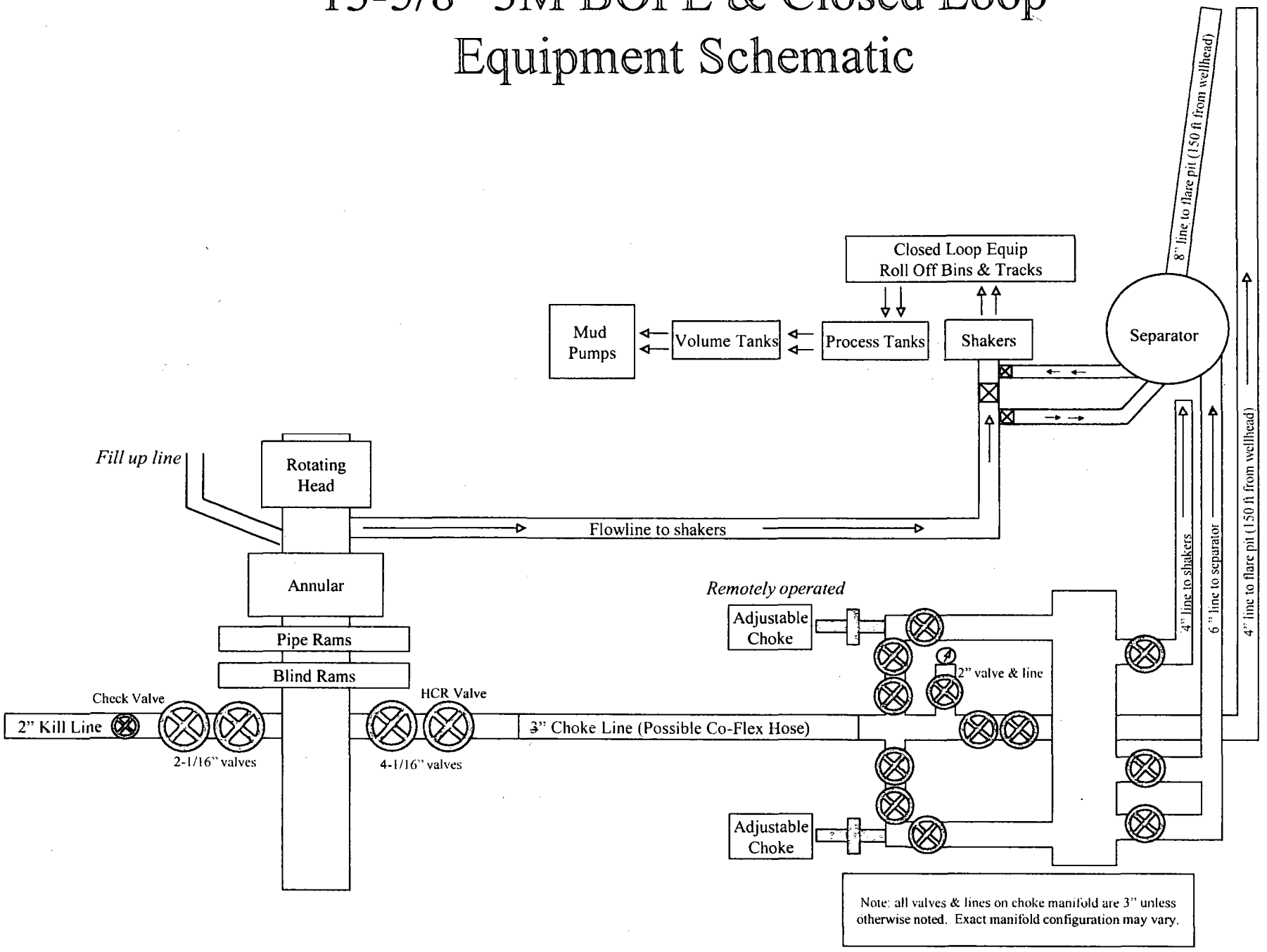
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



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



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



Casing Assumptions and Load Cases

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

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

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

Optional Drilling Contingency

Contingency Production Cement

Additional Info for String	3	Additional String Description	Contingency Cement Stage 1
Stage Tool Depth	2360		

Lead

Top MD of Segment	2320	Btm MD of Segment	2750	Cement Type	Class C
Additives	% BWOC Bentonite + 5% BWOW Sodium Chlor	Quanity (sks)	240	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	449	Percent Excess	30

Tail

Top MD of Segment	2750	Top MD of Segment	3500	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	615	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	818	Percent Excess	30

Contingency Production Cement

Additional Info for String	3	Additional String Description	Contingency Cement Stage 2
Stage Tool Depth	2360		

Lead

Top MD of Segment	0	Btm MD of Segment	2110	Cement Type	Class C
Additives	% BWOC Bentonite + 5% BWOW Sodium Chlor	Quanity (sks)	1055	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	1973	Percent Excess	30

Tail

Top MD of Segment	2110	Top MD of Segment	2320	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	180	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	239	Percent Excess	30

Contingency Production Cement

Additional Info for String	4	Additional String Description	Contingency Cement Stage 1
Stage Tool Depth	4170		

Lead

Top MD of Segment	3550	Btm MD of Segment	4170	Cement Type	Class C
Additives	% BWOC Bentonite + 5% BWOW Sodium Chlor	Quanity (sks)	150	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	281	Percent Excess	30

Tail

Top MD of Segment	4170	Top MD of Segment	5170	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	375	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	499	Percent Excess	30

Contingency Production Cement

Additional Info for String	4	Additional String Description	**Contingency Cement Stage 2**
Stage Tool Depth			

Lead

Top MD of Segment	0	Btm MD of Segment	3300	Cement Type	Class C
Additives	% BWOC Bentonite + 5% BWOW Sodium Chlor	Quanity (sks)	590	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	1103	Percent Excess	30

Tail

Top MD of Segment	3300	Top MD of Segment	3550	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	85	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	113	Percent Excess	30

Primary Drilling Contingency

Contingency Production Cement

Additional Info for String	3	Additional String Description	Contingency Cement Stage 1
Stage Tool Depth	3550		

Lead

Top MD of Segment	3300	Btm MD of Segment	4670	Cement Type	Class C
Additives	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	390	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.5	Volume (cu.ft.)	729	Percent Excess	50

Tail

Top MD of Segment	4670	Top MD of Segment	5170	Cement Type	Class C
Additives	0.125 lbs/sack Poly-E-Flake	Quanity (sks)	55	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	73	Percent Excess	50

Contingency Production Cement

Additional Info for String	3	Additional String Description	Contingency Cement Stage 2
Stage Tool Depth	3550		

Lead

Top MD of Segment	0	Btm MD of Segment	3050	Cement Type	Class C
Additives	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	135	Yield (cu.ft./sk)	1.96
Density (lbs/gal)	12.5	Volume (cu.ft.)	265	Percent Excess	50

Tail

Top MD of Segment	3050	Top MD of Segment	3550	Cement Type	Class C
Additives	0.125 lbs/sack Poly-E-Flake	Quanity (sks)	120	Yield (cu.ft./sk)	1.18
Density (lbs/gal)	14.8	Volume (cu.ft.)	142	Percent Excess	50

Optional Drilling Plan (Two Surf, Two Intermediate, and one Production String) and BOPE

String 1 (Drilling Section 3)

String Type	Surface	Hole Size	26	Casing assumption workseet uploaded			Yes
Top Setting Depth MD	0			Top Setting Depth TVD	0		
Bottom Setting Depth MD	1500			Bottom Setting Depth TVD	1500		
Size	20	Grade	J-55	Weight (lbs/ft)	106.5	Joint	BTC
Condition	New	Standard	API	Tapered String?	No		

Safety Factors

Collapse Design Safety Factor	1.125	Burst Design Safety Factor	1.25
Body Tensile Design Safety Factor	Buoyant	Body Tensile Design Safety Factor	1.6
Joint Tensile Design Safety Factor	Buoyant	Joint Tensile Design Safety Factor	1.6

String Cement Data (Drilling Section 4)

Stage Tool Depth

Additional string data needed
If yes additonal string data box at the bottom of the page

Lead

Top MD of Segment		Btm MD of Segment		Cement Type	
Additives		Quanity (sks)		Yield (cu.ft./sk)	
Density (lbs/gal)		Volume (cu.ft.)		Percent Excess	

Tail

Top MD of Segment		Top MD of Segment		Cement Type	
Additives		Quanity (sks)		Yield (cu.ft./sk)	
Density (lbs/gal)		Volume (cu.ft.)		Percent Excess	

Mud System (Drilling Section 5)

Mud System Type: Closed

Will an air or gas system be used? No

Describe what will be on location to control well or mitigate 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

Mud Type	Water-Based Mud	Top Depth	0	Bottom Depth	1500
Min Weight (lbs/Gal)	8.6	Max Weight (lbs/Gal)	8.8		
Density (lbs/Gal)		Gel Strength (lbs/100 sq ft)			
PH		Viscosity (CP)		Filtration (CC)		Salinity (ppm)	

String 2 (Drilling Section 3)

String Type	Surface	Hole Size	26	Casing assumption workseet uploaded	Yes
Top Setting Depth MD	1500			Top Setting Depth TVD	1500
Bottom Setting Depth MD	2310			Bottom Setting Depth TVD	2310
Size	20	Grade	K-55	Weight (lbs/ft)	133
Joint	BTC				
Condition	New	Standard	API	Tapered String?	No

Safety Factors

Collapse Design Safety Factor	1.125.	Burst Design Safety Factor	1.25
Body Tensile Design Safety Factor	Buoyant	Body Tensile Design Safety Factor	1.6
Joint Tensile Design Safety Factor	Buoyant	Joint Tensile Design Safety Factor	1.6

String Cement Data (Drilling Section 4)

Stage Tool Depth

Additional string data needed
If yes additonal string data box at the bottom of the page

Lead

Top MD of Segment	0	Btm MD of Segment	1770	Cement Type	Class C
Additives	Class C Cement: Poz (Fly Ash): 6% BWOC	Quanity (sks)	2175	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	4067	Percent Excess	50

Tail

Top MD of Segment	1770	Top MD of Segment	2310	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	910	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	1210	Percent Excess	50

Mud System (Drilling Section 5)

Mud System Type: Closed

Will an air or gas system be used?

Describe what will be on location to control well or mitigate 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

Mud Type	Water-Based Mud	Top Depth	1500	Bottom Depth	2310
Min Weight (lbs/Gal)	8.6	Max Weight (lbs/Gal)	8.8		
Density (lbs/Gal)		Gel Strength (lbs/100 sq ft)			
PH		Viscosity (CP)		Filtration (CC)	
Salinity (ppm)					

String 3 (Drilling Section 3)

String Type	Intermediate	Hole Size	17.5	Casing assumption workseet uploaded	Yes
Top Setting Depth MD	0			Top Setting Depth TVD	0
Bottom Setting Depth MD	3500			Bottom Setting Depth TVD	3500
Size	13.375	Grade	J-55	Weight (lbs/ft)	68	Joint	BTC
Condition	New	Standard	API	Tapered String?	No		

Safety Factors

Collapse Design Safety Factor	1.125	Burst Design Safety Factor	1.25
Body Tensile Design Safety Factor	Buoyant	Body Tensile Design Safety Factor	1.6
Joint Tensile Design Safety Factor	Buoyant	Joint Tensile Design Safety Factor	1.6

String Cement Data (Drilling String 4)

Stage Tool Depth

Additional string data needed
If yes additonal string data box at the bottom of the page

Lead

Top MD of Segment	0	Btm MD of Segment	2750	Cement Type	Class C
Additives	Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	1440	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	2693	Percent Excess	30

Toil

Top MD of Segment	2750	Top MD of Segment	3500	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	745	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	991	Percent Excess	30

Mud System (Drilling Section 5)

Mud System Type: Closed

Will an air or gas system be used? No

Describe what will be on location to control well or mitigate 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

Mud Type	Salt Saturated	Top Depth	2310	Bottom Depth	3500
Min Weight (lbs/Gal)	10	Max Weight (lbs/Gal)	10.2		
Density (lbs/Gal)		Gel Strength (lbs/100 sq ft)			
PH		Viscosity (CP)		Filtration (CC)		Salinity (ppm)	

String 4 (if applicable) (Drilling Section 3)

String Type	Intermediate	Hole Size	12.25	Casing assumption workseet uploaded	Yes
Top Setting Depth MD	0			Top Setting Depth TVD	0
Bottom Setting Depth MD	5170			Bottom Setting Depth TVD	5170
Size	9.625	Grade	J-55	Weight (lbs/ft)	40	Joint	BTC
Condition	New	Standard	API	Tapered String?	No		

Safety Factors

Collapse Design Safety Factor	1.125	Burst Design Safety Factor	1.25
Body Tensile Design Safety Factor	Buoyant	Body Tensile Design Safety Factor	1.6
Joint Tensile Design Safety Factor	Buoyant	Joint Tensile Design Safety Factor	1.6

String Cement Data (Drilling String 4)

Stage Tool Depth

Additional string data needed
If yes additonal string data box at the bottom of the page

Lead

Top MD of Segment	0	Btm MD of Segment	4120	Cement Type	Class C
Additives	Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	780	Yield (cu.ft./sk)	1.87
Density (lbs/gal)	12.9	Volume (cu.ft.)	1459	Percent Excess	30

Tail

Top MD of Segment	4120	Top MD of Segment	5170	Cement Type	Class C
Additives	Class C Cement + 0.125 lbs/sack Poly-E-Flake	Quanity (sks)	385	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	512	Percent Excess	30

Mud System (Drilling Section 5)

Mud System Type: Closed

Will an air or gas system be used? No

Describe what will be on location to control well or mitigate 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

Mud Type	Salt Saturated	Top Depth	3500	Bottom Depth	5170
Min Weight (lbs/Gal)	8.8	Max Weight (lbs/Gal)	10		
Density (lbs/Gal)		Gel Strength (lbs/100 sq ft)			
PH		Viscosity (CP)		Filtration (CC)		Salinity (ppm)	

String 5 (if applicable) (Drilling Section 3)

String Type	Production	Hole Size	8.75	Casing assumption workseet uploaded	Yes
Top Setting Depth MD	0			Top Setting Depth TVD	0
Bottom Setting Depth MD	17659			Bottom Setting Depth TVD	10159
Size	5.5	Grade	P-110	Weight (lbs/ft)	17	Joint	BTC
Condition	New	Standard	API	Tapered String?	No		

Safety Factors

Collapse Design Safety Factor	1.125	Burst Design Safety Factor	1.25
Body Tensile Design Safety Factor	Buoyant	Body Tensile Design Safety Factor	1.6
Joint Tensile Design Safety Factor	Buoyant	Joint Tensile Design Safety Factor	1.6

String Cement Data (Drilling String 5)

Stage Tool Depth

Additional string data needed
if yes add tonal string data box at the bottom of the page

Lead

Top MD of Segment	4670	Btm MD of Segment	9646	Cement Type	NeoCem
Additives		Quanity (sks)	825	Yield (cu.ft./sk)	2.81
Density (lbs/gal)	11	Volume (cu.ft.)	2318	Percent Excess	25

Tail

Top MD of Segment	7646	Btm MD of Segment	17659	Cement Type	NeoCem
Additives		Quanity (sks)	1765	Yield (cu.ft./sk)	1.47
Density (lbs/gal)	13.2	Volume (cu.ft.)	2595	Percent Excess	25

Mud System (Drilling Section 5)

Mud System Type: Closed — Will an air or gas system be used? No

Describe what will be on location to control well or mitigate 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

Mud Type	Salt Saturated	Top Depth	5170	Bottom Depth	17659
Min Weight (lbs/Gal)	8.5	Max Weight (lbs/Gal)	9		
Density (lbs/Gal)		Gel Strength (lbs/100 sq ft)			
PH		Viscosity (CP)		Filtration (CC)		Salinity (ppm)	

BOP Data (Drilling Section 2)

Pressure Rating: 2M | Rating Depth: 3500' TVD

Equipment (Describe ant ancillary equip. such as rotating head, remote kill line, mud-gas seperator, etc. that could be used.

BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 20" surface casing, a 21-1/4" BOP/BOPE system with a minimum rating of 2M 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

Requesting Variance: | If Yes please fill out Variance Request.

Variance Reqest

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 Prodedure

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.

BOP Data (Drilling Section 2)

Pressure Rating: 10M | Rating Depth: 10159' TVD

Equipment (Describe ant ancillary equip. such as rotating head, remote kill line, mud-gas seperator, etc. that could be used.

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

Requesting Variance: | If Yes please fill out Variance Request.

Variance Reqest

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 Prodedure

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.

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.

Technical Specifications

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
HD-L Casing STANDARD	11-7/8 in	71.80 lb/ft (0.582 in)	Q-125

	Material
Q-125	Grade
125,000	Minimum Yield Strength (psi.)
135,000	Minimum Ultimate Strength (psi.)
	Pipe Dimensions
11.875	Nominal Pipe Body O.D. (in.)
10.711	Nominal Pipe Body I.D. (in.)
0.582	Nominal Wall Thickness (in.)
71.80	Nominal Weight (lbs./ft.)
70.26	Plain End Weight (lbs./ft.)
20.648	Nominal Pipe Body Area (sq. in.)
	Pipe Body Performance Properties
2,581,000	Minimum Pipe Body Yield Strength (lbs.)
5,630	Minimum Collapse Pressure (psi.)
10,720	Minimum Internal Yield Pressure (psi.)
9,800	Hydrostatic Test Pressure (psi.)
	Connection Dimensions
11.875	Connection O.D. (in.)
10.687	Connection I.D. (in.)
10.625	Connection Drift Diameter (in.)
6.00	Make-up Loss (in.)
13.378	Critical Area (sq. in.)
64.8	Joint Efficiency (%)
	Connection Performance Properties
1,672,000 (1)	Joint Strength (lbs.)
1,806,000 (2)	Reference Minimum Parting Load (lbs.)
17,000	Reference String Length (ft) 1.4 Design Factor
1,672,000	Compression Rating (lbs.)
5,630	Collapse Pressure Rating (psi.)
10,720	Internal Pressure Rating (psi.)
31.3	Maximum Uniaxial Bend Rating [degrees/100 ft]
	Recommended Torque Values
24,500 (3)	Minimum Final Torque (ft.-lbs.)
28,300 (3)	Maximum Final Torque (ft.-lbs.)

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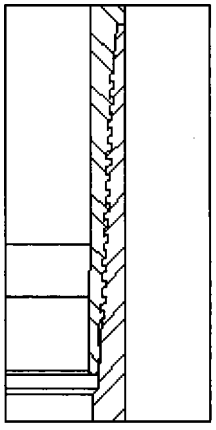

(1) Joint strength is the elastic limit or yield strength of the connection.
(2) Reference minimum parting load is the ultimate strength or parting load of the connection.
(3) Torque values are recommended and can be affected by field conditions.

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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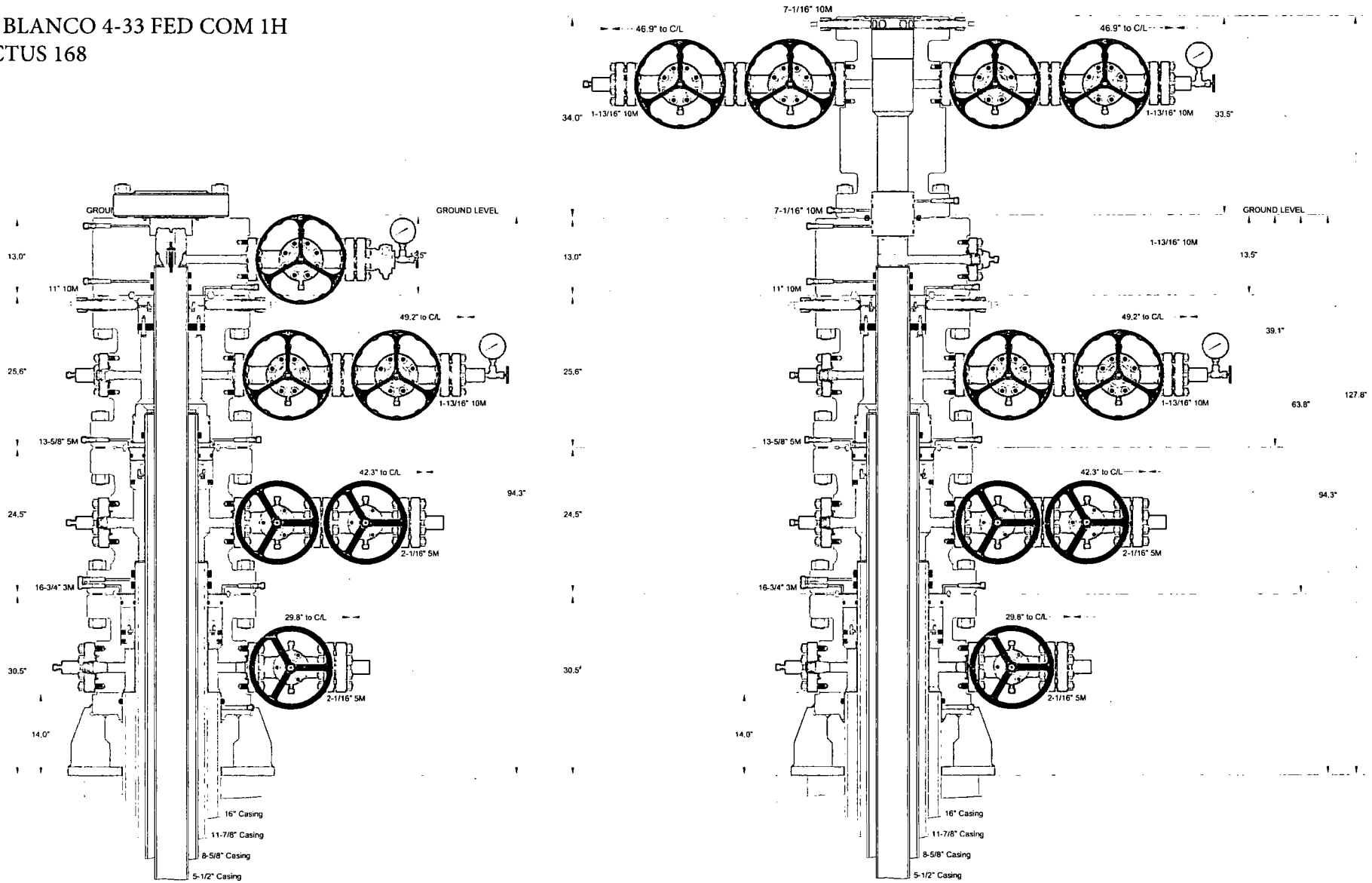
RIO BLANCO 4-33 FED COM 1H
CACTUS 168



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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

DLE 01DEC17

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	0.00	2,950.00	0.00
	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			
49	50019	1.00	690.00	690.00
	CSGHGR,C22,11 X 5-1/2			
				10,769.68
	TUBING HEAD ASSEMBLY			
50	191012	1.00	7,999.00	7,999.00
	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			
51	107412	4.00	1,650.00	6,600.00
	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			
52	200010	2.00	74.33	148.66
	FLG,COMP,1-13/16 10M X 2 LP,5000 PSI MAX WP,4130 60K,6A-KU-EE-NL-1			
53	BP2T	2.00	25.04	50.08
	BULL PLUG,CW,2 LP X 1/2 LP,API 6A DD-NL			
54	FTG1	1.00	6.85	6.85
	FTG,GRS,VENTED CAP,1/2 NPT,ALLOY NON-NACE			
55	BX151	6.00	6.26	37.56
	RING GASKET,BX151,1-13/16 10/15/20M			
56	780080	32.00	1.96	62.72
	STUD,ALL-THD W/2 NUTS,BLK,3/4-10UNC X 5-1/2,A193 GR B7/A194 GR 2H,NO PLATING			
57	BX156	1.00	31.30	31.30
	RING GASKET,BX156,7-1/16 10/15/20M			
58	105119	1.00	704.21	704.21
	SEAL SUB,CW,7 X 7.38 LG,W/5.13 ID,6A-PU-EE-NL-1			
59	NVA	1.00	47.25	47.25
	NEEDLE VALVE,MFA,1/2 10M			
60	PG10M	1.00	47.88	47.88
	PRESSURE GAUGE,10M,4-1/2 FACE, LIQUID FILLED,1/2 NPT			

15,735.51

			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

Continental CONTITECH

Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly It is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com

RIG 212

PHOENIX

QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 568-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 · Fax: (361) 217-2972, 456-4273 · www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE					CERT. N°: 552
PURCHASER: Phoenix Beattie Co.					P.O. N°: 1519FA-871
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID		Choke and Kill Hose	
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH:		11,43 m	
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60	min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 25 MPa

COUPLINGS

Type	Serial N°	Quality	Heat N°
3" coupling with 4 1/16" Flange end	720 719	AISI 4130 AISI 4130	C7626 47357

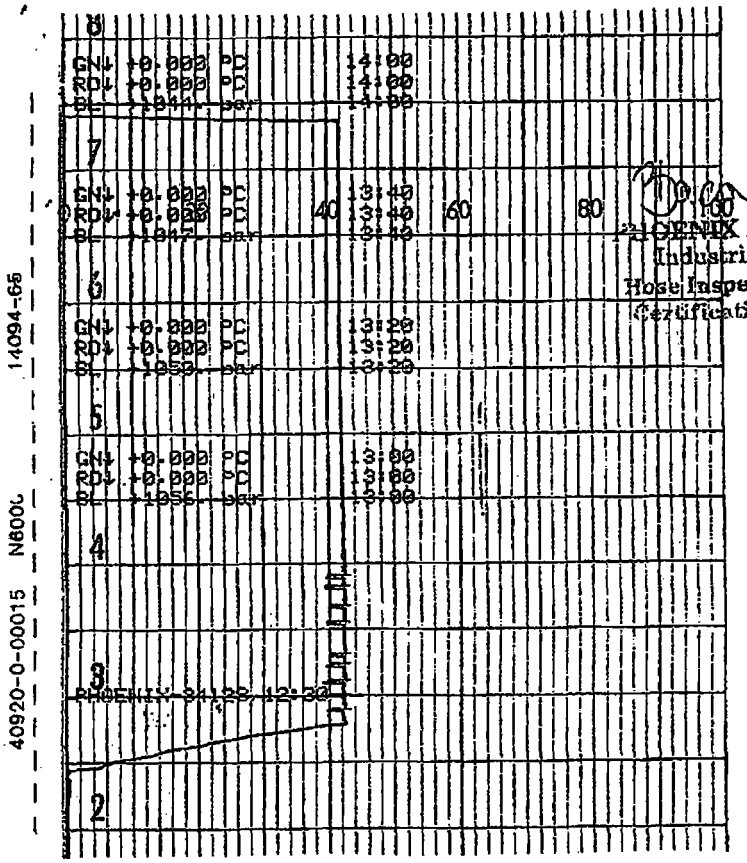
API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

Date:	Inspector	Quality Control
29. April. 2002.		PHOENIX RUBBER Industrial Ltd. Hose Inspection and Certification Dept.

CERTIFIED TRUE COPY
PHOENIX RUBBER Q.C.



PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE CO
PHOENIX RUBBER C.C.

APD ID: 10400025944 **Submission Date:** 01/04/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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:

RIO_BLANCO_4_33_FED_COM_38H_Access_Rd_20180102114902.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:

RIO_BLANCO_4_33_FED_COM_38H_New_Access_Rd_20180102114949.pdf

New road type: LOCAL

Length: 45.02 Miles **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:

RIO_BLANCO_4_33_FED_COM_38H_New_Access_Rd_20180102115049.pdf

Access road engineering design? YES

Access road engineering design attachment:

RIO_BLANCO_4_33_FED_COM_38H_New_Access_Rd_20180102115058.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: Water Drainage Ditch

Road Drainage Control Structures (DCS) description: N/A

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:

RIO_BLANCO_4_33_FED_COM_38H_1mi_Radius_Map_20180102115720.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: Part of Gaucho 1 MDP. NO ADDITIONAL SURFACE DISTURBANCE NECESSARY. Pipeline infrastructure is already approved and currently being constructed by a third party. The flow line will stay 100% on pad, as all production from the Rio Blanco 4-33 Fed Com 38H will go to adjoining Rio Blanco 4-33 CTB 1. A Sundry has been submitted and is pending approval for the Rio Blanco 4-33 CTB 1 - Electric Line. This electric line will provide electricity for both the Rio Blanco 4-33 pad 1 AND Rio Blanco 4-33 CTB 1. No additional roads will be necessary.

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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:

RIO_BLANCO_4_33_FED_COM_38H_Water_Map_20180102123210.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:

State appropriation permit:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Dirt fill and caliche will be used to construct well pad. Caliche Location Map attached.

Construction Materials source location attachment:

RIO_BLANCO_4_33_FED_COM_38H_Caliche_Map_20180102123313.pdf

Section 7 - Methods for Handling Waste

Waste type: FLOWBACK

Waste content description: Average produced BWPD over the flowback period (first 30 days of production).

Amount of waste: 1300 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: RECYCLE **Disposal location ownership:** STATE

Disposal type description:

Disposal location description: All produced water will be recycled at our North Gaucho water reuse facility. Any excess water that cannot be recycled will be sent to one of our 3 SWD's (Caballo 9 St 1, Rio Blanco 33 Fed 2, Rio Blanco 4 Fed Com 3) or to OWL (third-party; state tie-in).

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: Average produced BWPD over the first year of production.

Amount of waste: 475 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

Waste disposal type: RECYCLE **Disposal location ownership:** STATE

Disposal type description:

Disposal location description: All produced water will be recycled at our North Gaucho water reuse facility. Any excess water that cannot be recycled will be sent to one of our 3 SWD's (Caballo 9 St 1, Rio Blanco 33 Fed 2, Rio Blanco 4 Fed Com 3) or to OWL (third-party; state tie-in).

Waste type: DRILLING

Waste content description: Water and oil based cuttings

Amount of waste: 1929 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 cutting will be disposed of at R360, Sundance, or equivalent.

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: RIO BLANCO 4-33 FED COM **Well Number:** 38H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

RIO_BLANCO_4_33_FED_COM_38H_Well_Layout_20180103072217.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: RIO BLANCO 4-33 PAD

Multiple Well Pad Number: 1H, 2H, 3H, 38H

Recontouring attachment:

RIO_BLANCO_4_33_FED_COM_38H_Interim_Recl_20180102124450.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): 4.18
Road proposed disturbance (acres): 0.031
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 0
Other proposed disturbance (acres): 0

Total proposed disturbance: 4.211

Well pad interim reclamation (acres): 1.793
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0.85692835
Other interim reclamation (acres): 0

Total interim reclamation: 2.6499283

Well pad long term disturbance (acres): 2.387
Road long term disturbance (acres): 0.031
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0.85692835
Other long term disturbance (acres): 0

Total long term disturbance: 3.2749283

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: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

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: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

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,PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

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: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

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,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites,289001 ROW-O&G Well Pad,FLPMA (Powerline)

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

ROW Applications

SUPO Additional Information: Part of Gaucho 1 MDP. NO ADDITIONAL SURFACE DISTURBANCE NECESSARY. Pipeline infrastructure is already approved and currently being constructed by a third party. The flow line will stay 100% on pad, as all production from the Rio Blanco 4-33 Fed Com 38H will go to adjoining Rio Blanco 4-33 CTB 1. A Sundry has been submitted and is pending approval for the Rio Blanco 4-33 CTB 1 - Electric Line. This electric line will provide electricity for both the Rio Blanco 4-33 pad 1 AND Rio Blanco 4-33 CTB 1. No additional roads will be nece
Use a previously conducted onsite? YES

Previous Onsite information: CONDUCTED 5/9/16

Other SUPO Attachment

RIO_BLANCO_4_33_FED_COM_38H_Grading_Plan_20180102130414.pdf

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:

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

Bond Info Data Report

05/16/2018

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: RIO BLANCO 4-33 FED COM **Well Number:** 38H

	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	330	FNL	1750	FWL	22S	34E	33	Aliquot NENW	32.35451	-103.47793	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 100864	-6744	17658	10159
BHL Leg #1	330	FNL	1750	FWL	22S	34E	33	Aliquot NENW	32.3545103	-103.4779343	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 100864	-6744	17658	10159

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

Operator Certification Data Report

05/16/2018

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:** 01/04/2018

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