HOBBS OCD
FEB 06 2018
RECEIVED

Form 3160-3
(March 2012)

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

F/F

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM114992

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.: (319566) FIGHTING OKRA 18-19 FED 5H

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

9. API Well No.: 30-025-44427

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

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

10. Field and Pool, or Exploratory: (98094) WC-025 G-09 S253336D / UPPER WOLF

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

At surface: NENW / 375 FNL / 2605 FWL / LAT 32.0496671 / LONG -103.5091289

At proposed prod. zone: SWSE / 330 FNL / 2340 FEL / LAT 32.0225727 / LONG -103.507964

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 18 / T26S / R34E / NMP

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

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 375 feet

16. No. of acres in lease: 1283.96

17. Spacing Unit dedicated to this well: 320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 1723 feet

19. Proposed Depth: 12794 feet / 22746 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3365 feet

22. Approximate date work will start*: 02/01/2018

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	10/10/2017

Title: Regulatory Compliance Professional

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	01/31/2018

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)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ 02/06/18

Approval Date: 01/31/2018

* Double Sided

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.

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: NENW / 375 FNL / 2605 FWL / TWSP: 26S / RANGE: 34E / SECTION: 18 / LAT: 32.0496671 / LONG: -103.5091289 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNE / 330 FNL / 2340 FEL / TWSP: 26S / RANGE: 34E / SECTION: 18 / LAT: 32.050814 / LONG: -103.50789 (TVD: 12721 feet, MD: 12850 feet)
   BHL: SWSE / 330 FNL / 2340 FEL / TWSP: 26S / RANGE: 34E / SECTION: 19 / LAT: 32.0225727 / LONG: -103.507964 (TVD: 12794 feet, MD: 22746 feet)

BLM Point of Contact

Name: Deborah Ham
Title: Legal Landlaw Examiner
Phone: 5752345965
Email: dham@blm.gov

Review and Appeal Rights

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

AFMSS

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

Operator Certification Data Report

02/02/2018

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:** 10/10/2017

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

HOBBS OCD

FEB 06 2018

RECEIVED

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

02/02/2018

APD ID: 10400023190 **Submission Date:** 10/10/2017

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400023190 **Tie to previous NOS?** **Submission Date:** 10/10/2017

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: NMNM114992 **Lease Acres:** 1283.96

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: aletha.dewbre@dvn.com

Section 2 - Well Information

Well in Master Development Plan? EXISTING **Mater Development Plan name:** Rattlesnake 1 MDP

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

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

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** WC-025 G-09 S253336D **Pool Name:** UPPER WOLFCAMP

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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:** RATTLESNAKE 1 MDP PAD **Number:** 18-2

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:** 1723 FT **Distance to lease line:** 375 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Fighting_Okra_18_19_Fed_5H_C_102_Signed_20171010091527.pdf

Well work start Date: 02/01/2018 **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	375	FNL	2605	FWL	26S	34E	18	Aliquot NENW	32.0496671	-103.5091289	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 114992	3365	0	0
KOP Leg #1	330	FNL	2340	FEL	26S	34E	18	Aliquot NWNE	32.050814	-103.50789	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 114992	-8865	12250	12230
PPP Leg #1	330	FNL	2340	FEL	26S	34E	18	Aliquot NWNE	32.050814	-103.50789	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 114992	-9356	12850	12721

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

	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	2340	FEL	26S	34E	19	Aliquot SWSE	32.0225727	-103.507964	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 114992	-9429	22746	12794
BHL Leg #1	330	FNL	2340	FEL	26S	34E	19	Aliquot SWSE	32.0225727	-103.507964	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 114992	-9429	22746	12794

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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:

Fighting_Okra_18_19_Fed_5H_10M_BOPE_CHK_20171010152643.pdf

BOP Diagram Attachment:

Fighting_Okra_18_19_Fed_5H_10M_BOPE_CHK_20171010152701.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 12762

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M 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 to Choke Manifold. See attached for specs and 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:

Fighting_Okra_18_19_Fed_5H_5M_BOPE__CK_20171010094435.pdf

BOP Diagram Attachment:

Fighting_Okra_18_19_Fed_5H_5M_BOPE__CK_20171010094457.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	14.75	10.75	NEW	API	N	0	875	0	875	-9434	-10209	875	J-55	40.5	STC	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	9500	0	9484	-9434	-21034	9500	P-110	29.7	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	8.75	7.625	NEW	API	N	9500	12950	9484	12762			3450	P-110	29.7	OTHER - FLUSHMAX	1.125	1.25	BUOY	1.6	BUOY	1.6
4	PRODUCTION	6.75	5.5	NEW	API	N	0	22746	0	12794	-9434	-22221	22746	P-110	20	OTHER - VAM SG	1.125	1.25	BUOY	1.6	BUOY	1.6

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Fighting_Okra_18_19_Fed_5H_Surf_Csg_Ass_20171010094658.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Fighting_Okra_18_19_Fed_5H_Int_Csg_Ass_20171010094758.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Fighting_Okra_18_19_Fed_5H_Int_Csg_Ass_20171010094929.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Fighting_Okra_18_19_Fed_5H_Prod_Csg_Ass_20171010095009.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
INTERMEDIATE	Lead		0	0	0	0	0	0	0	SEE DRILLING CONTINGENCY ATTACHMENT	N/A
SURFACE	Lead		0	875	529	1.34	14.8	708.86	50	C	1% Calcium Chloride
INTERMEDIATE	Lead		0	11450	890	3.27	9	2911	30	TUNED	TUNED LIGHT
INTERMEDIATE	Tail		11450	12950	163	1.2	14.5	196	30	H	Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
PRODUCTION	Lead		12750	22746	798	1.33	14.8	1061	25	C	0.125 lbs/sack Poly-E-Flake

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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
0	875	SPUD MUD	8.33	9.1				2			
875	12950	SALT SATURATED	8.6	10				2			
875	12950	SALT SATURATED	8.6	10				2			
12950	22746	OIL-BASED MUD	11	13				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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7320 **Anticipated Surface Pressure:** 4505.32

Anticipated Bottom Hole Temperature(F): 165

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:

Fighting_Okra_18_19_Fed_5H_H2S_Plan_20171010140746.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Fighting_Okra_18_19_Fed_5H_Dir_Svy_20171010140833.pdf

Other proposed operations facets description:

MULTI-BOWL VERBIAGE
MULTI-BOWL WELLHEAD
CLOSED-LOOP PLAN
SPUDDER RIG INFO
DRILLING CONTINGENCY
DRILLING PLAN INCLUDING AC REPORT
GCP FORM
3 Drilling Spec Sheets

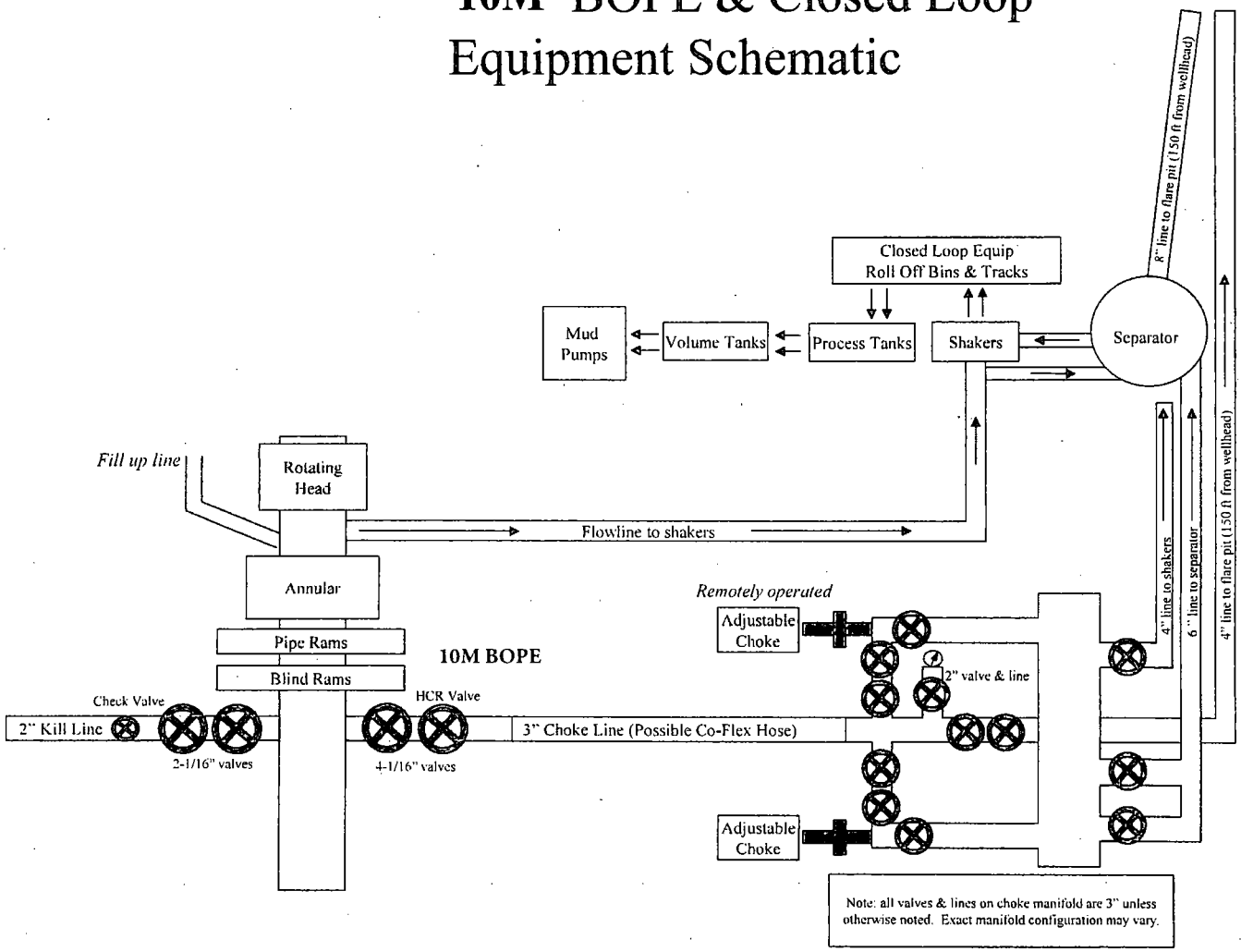
Other proposed operations facets attachment:

Fighting_Okra_18_19_Fed_5H_Clsd_Loop_20171010140905.pdf
Fighting_Okra_18_19_Fed_5H_MB_Verb_20171010140906.pdf
Fighting_Okra_18_19_Fed_5H_DRLG_CONT_20171010140905.pdf
Fighting_Okra_18_19_Fed_5H_MB_Wellhd_20171010140906.pdf
Fighting_Okra_18_19_Fed_5H_GCP_Form_20171010141231.pdf
Fighting_Okra_18_19_Fed_5H_5.5_x_20_P110_EC_VAMSG_V2_20171101145256.pdf
Fighting_Okra_18_19_Fed_5H_5.5_x_20_P110_EC_VAMTOP_HT_20171101145256.pdf
Fighting_Okra_18_19_Fed_5H_7.625_29.70_P110_Flushmax_20171101145257.pdf

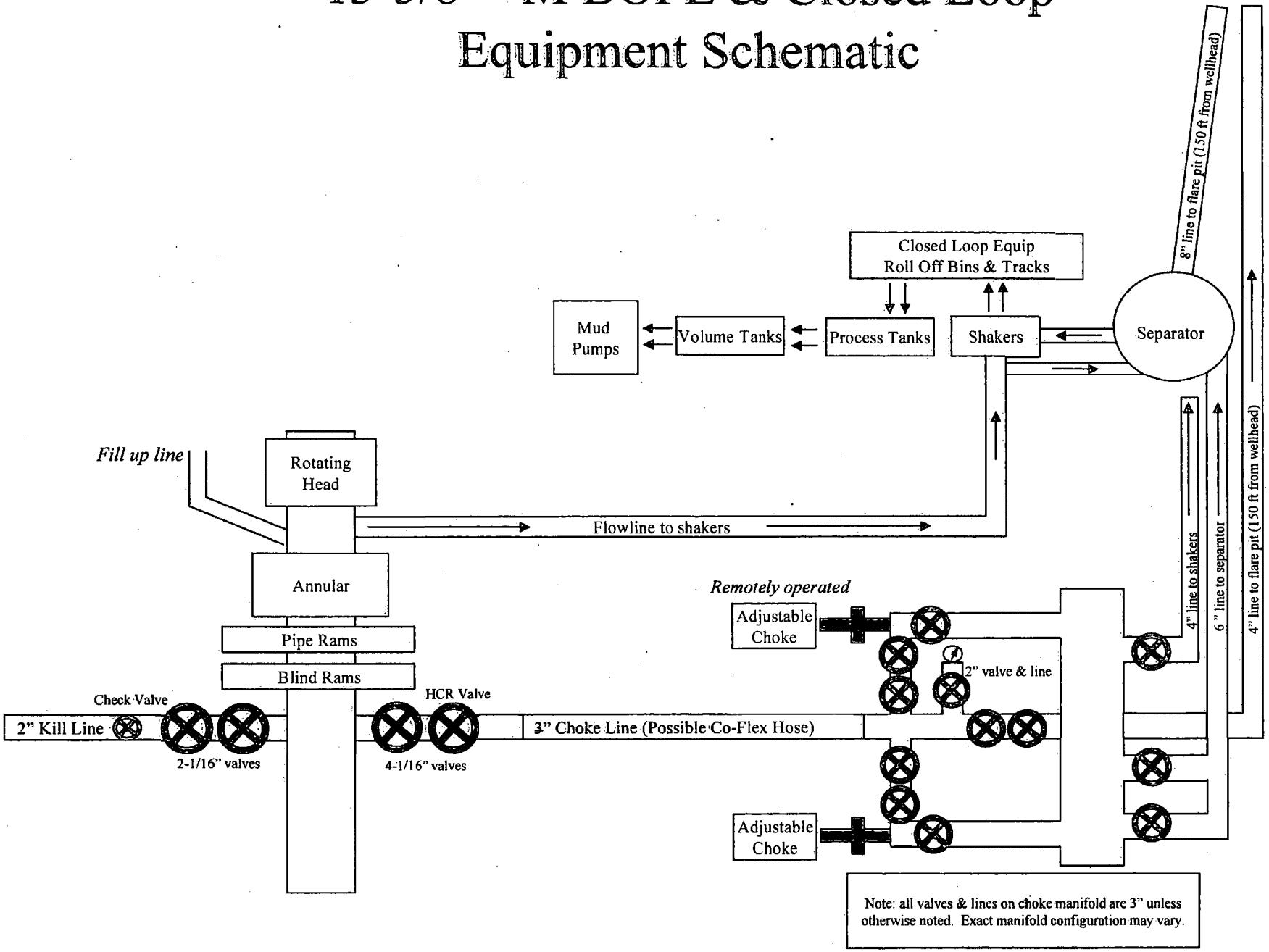
Other Variance attachment:

Fighting_Okra_18_19_Fed_5H_Co_flex_20171010141005.pdf
Fighting_Okra_18_19_Fed_5H_Spudder_Rig_Info_20171010141005.pdf

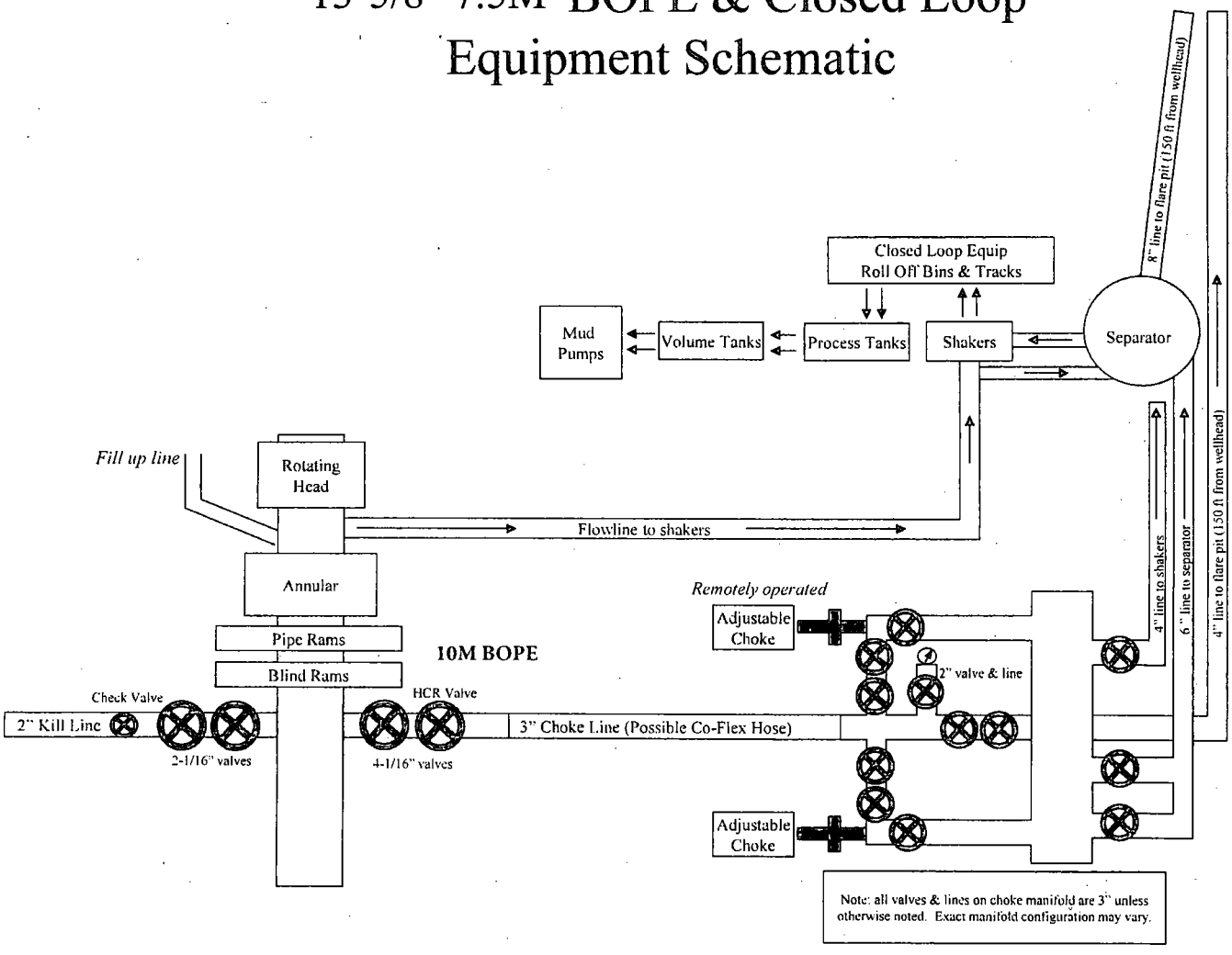
10M BOPE & Closed Loop Equipment Schematic



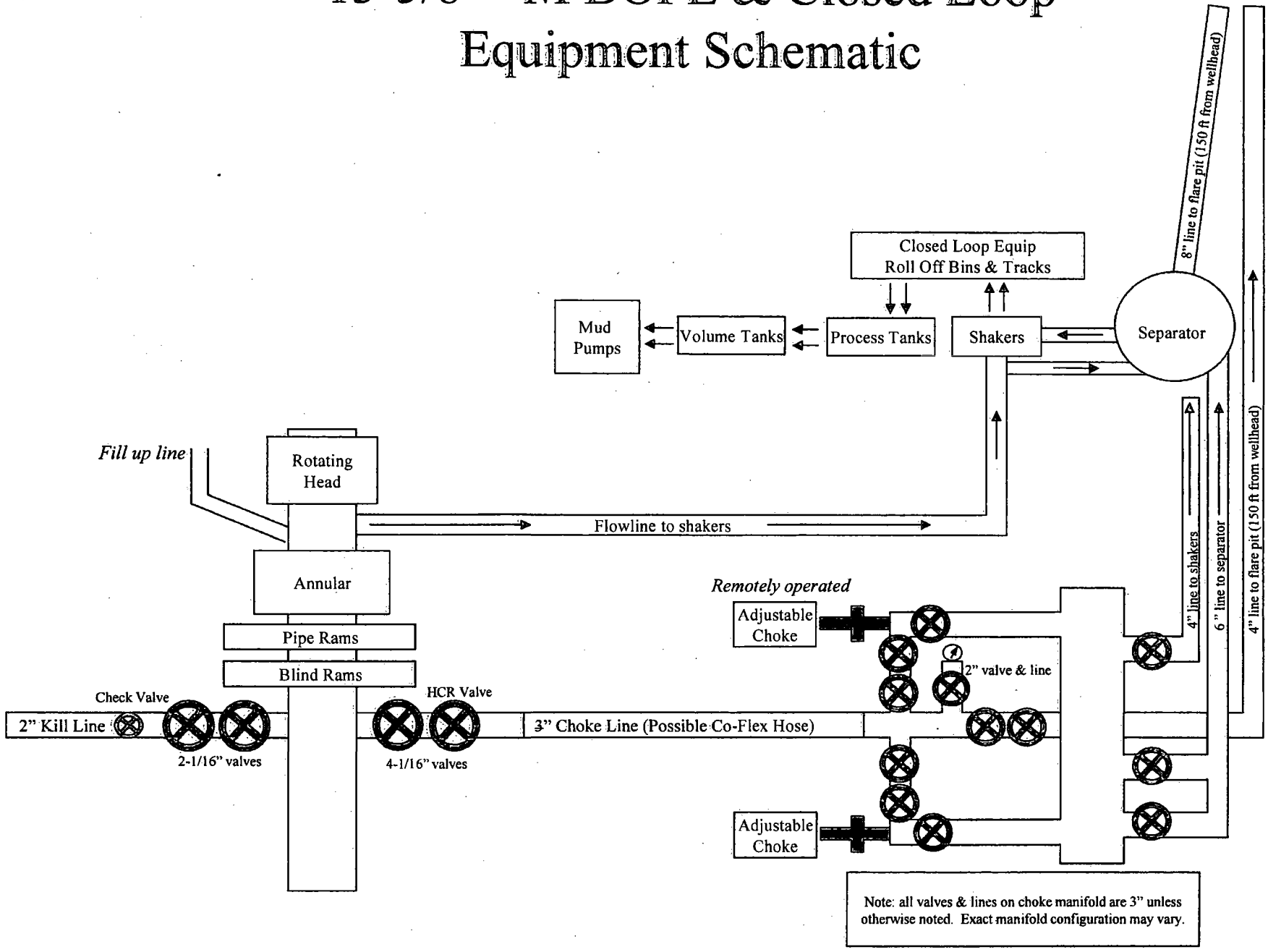
13-5/8" 5M BOPE & Closed Loop Equipment Schematic



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



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



Issued on: 31 Mar. 2014

VAM TOP HT
Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
5 1/2 in.	20.00 lb/ft	0.361 in.	P110 EC	4.653 in.	VAM® TOP HT

PIPE PROPERTIES

Nominal OD	5.500 in.
Nominal ID	4.778 in.
Nominal Cross Section Area	5.828 sqin.
Grade Type	High Yield
Min. Yield Strength	125 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	135 ksi

CONNECTION PROPERTIES

Connection Type	Premium T&C
Connection OD (nom)	6.071 in.
Connection ID (nom)	4.715 in.
Make-up Loss	4.382 in.
Coupling Length	10.748 in.
Critical Cross Section	5.828 sqin.
Tension Efficiency	100 % of pipe
Compression Efficiency	80 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	100 % of pipe

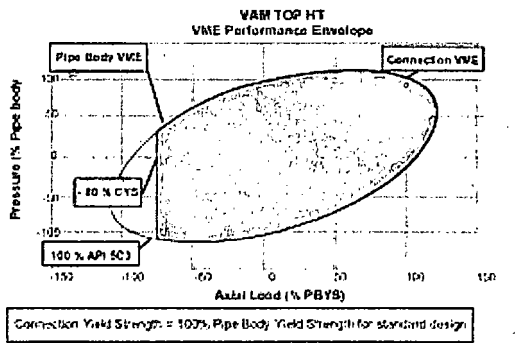
CONNECTION PERFORMANCES

Tensile Yield Strength	729 klb
Compression Resistance	583 klb
Internal Yield Pressure	14360 psi
External pressure resistance	12090 psi
Max. bending with sealability	30 °/100 ft
Max. Load on Coupling Face	388 klb

TORQUE VALUES

Min. Make-up torque	10850	ft.lb
Opti. Make-up torque	11950	ft.lb
Max. Make-up torque	13050	ft.lb
Field Liner Max	15900	ft.lb
Mill and Licensees Torque - Min	15900	ft.lb
Mill and Licensees Torque - Max	17500	ft.lb

VAM® TOP HT (High Torque) is a T&C connection based on the main features of the VAM® TOP connection.
This connection provides reinforced torque capability for liners and where High Torque is anticipated due to string rotation during running operations (torque rotating liner while running, rotating casing when cementing).It has been tested as per ISO13679 CAL IV requirements.
VAM® TOP HT is interchangeable with VAM® TOP product line with the exception of 4 1/2" size.



Do you need help on this product? - Remember no one knows VAM® like VAM

canada@vamfieldservice.com
usa@vamfieldservice.com
mexico@vamfieldservice.com
brazil@vamfieldservice.com
uk@vamfieldservice.com
dubai@vamfieldservice.com
nigeria@vamfieldservice.com
angola@vamfieldservice.com
china@vamfieldservice.com
baku@vamfieldservice.com
singapore@vamfieldservice.com
australia@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

VAM USA

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

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

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

APD ID: 10400023190 **Submission Date:** 10/10/2017

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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:

Fighting_Okra_18_19_Fed_5H_Access_Rd_20171010143339.pdf

Existing Road Purpose: ACCESS **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:

Fighting_Okra_18_19_Fed_5H_New_Access_Rd_20171010145842.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_NEW_ACC_RD_20171010145859.pdf

New road type: COLLECTOR,RESOURCE

Length: 224 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:

Fighting_Okra_18_19_Fed_5H_New_Access_Rd_20171010145948.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_NEW_ACC_RD_20171010145954.pdf

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.

Access road engineering design? YES

Access road engineering design attachment:

Fighting_Okra_18_19_Fed_5H_RS_1_MDP_NEW_ACC_RD_20171010150024.pdf

Fighting_Okra_18_19_Fed_5H_New_Access_Rd_20171010150041.pdf

Access surfacing type: GRAVEL

Access topsoil source: ONSITE

Access surfacing type description:

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: See attached Interim reclamation diagram; Interim reclamation will be postponed in accordance to the stipulations within the MDP document.

Access other construction information:

Access miscellaneous information:

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

Drainage Control

New road drainage crossing: LOW WATER

Drainage Control comments: N/A

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:

Fighting_Okra_18_19_Fed_5H_1mi_Radius_Map_20171010150133.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: PART OF APPROVED RATTLESNAKE 1 MDP - 9 ATTACHMENTS - 5H FLOWLINE (FLOWLINES BURIED), MDP FLOWLINE CORRIDOR, MDP BATTERY CONNECT GAS & CRUDE, CTB ELECTRIC, CTB PLAT, PRIMARY ELECTRIC PLAT, PAD PLAT, PAD ELECTRIC

Production Facilities map:

Fighting_Okra_18_19_Fed_5H_Flowline_RS_MDP_20171010150215.pdf
Fighting_Okra_18_19_Fed_5H_RS__1_MDP_FL_CORR_20171010150217.PDF
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_BATCON_CRUDE_20171010150219.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_BATCON_GAS_20171010150221.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_CTB_ELE_20171010150223.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_CTB_PLAT_20171010150227.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_ELE_20171010150228.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_PAD_PLAT_20171010150252.pdf
Fighting_Okra_18_19_Fed_5H_RS_1_MDP_PAD_ELE_20171010150251.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): 350000

Source volume (acre-feet): 45.112583

Source volume (gal): 14700000

Water source and transportation map:

FIGHTING_OKRA_18_19_FED_5H_Water_Map_20171010151106.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.):

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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:

Additional information attachment:

Section 6 - Construction Materials

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

Construction Materials source location attachment:

Fighting_Okra_18_19_Fed_5H_Caliche_Map_20171010151145.pdf

Fighting_Okra_18_19_Fed_5H_Grading_Plan_20171010151146.pdf

Section 7 - Methods for Handling Waste

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: FLOWBACK

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

Amount of waste: 8917 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Produced water during flowback will be disposed of at our Rattlesnake 16 SWD.

Waste type: PRODUCED WATER

Waste content description: Average produced BWPD over the first year of production.

Amount of waste: 1907 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Produced water will be primarily disposed of at our Rattlesnake 16 SWD. At certain times during the year, some of the water will be recycled and used for completions.

Waste type: DRILLING

Waste content description: Water and oil based cuttings

Amount of waste: 1740 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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Fighting_Okra_18_19_Fed_5H_WELL_LAYOUT_20171010151414.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** RATTLESNAKE 1 MDP PAD

Multiple Well Pad Number: 18-2

Recontouring attachment:

Fighting_Okra_18_19_Fed_5H_Interim_Recl_20171010151436.pdf

Drainage/Erosion control construction: Water Drainage Ditch

Drainage/Erosion control reclamation: Water Drainage Ditch

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

Well pad proposed disturbance (acres):	**Well pad interim reclamation (acres):** 8.269	**Well pad long term disturbance (acres):** 3.221
Road proposed disturbance (acres):	**Road interim reclamation (acres):** 0.154	**Road long term disturbance (acres):** 0.154
Powerline proposed disturbance (acres):	**Powerline interim reclamation (acres):**	**Powerline long term disturbance (acres):**
Pipeline proposed disturbance (acres):	**Pipeline interim reclamation (acres):** 0.06887052	**Pipeline long term disturbance (acres):** 0.06887052
Other proposed disturbance (acres):	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance:	**Total interim reclamation:** 8.491871	**Total long term disturbance:** 3.4438705

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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	
Seed Type	**Pounds/Acre**

Total 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: 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: 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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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:

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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,FLPMA (Powerline),Other

ROW Applications

SUPO Additional Information: Part of approved Rattlesnake 1 MDP. See section 4 for flowline and MDP reference plats.

Use a previously conducted onsite? YES

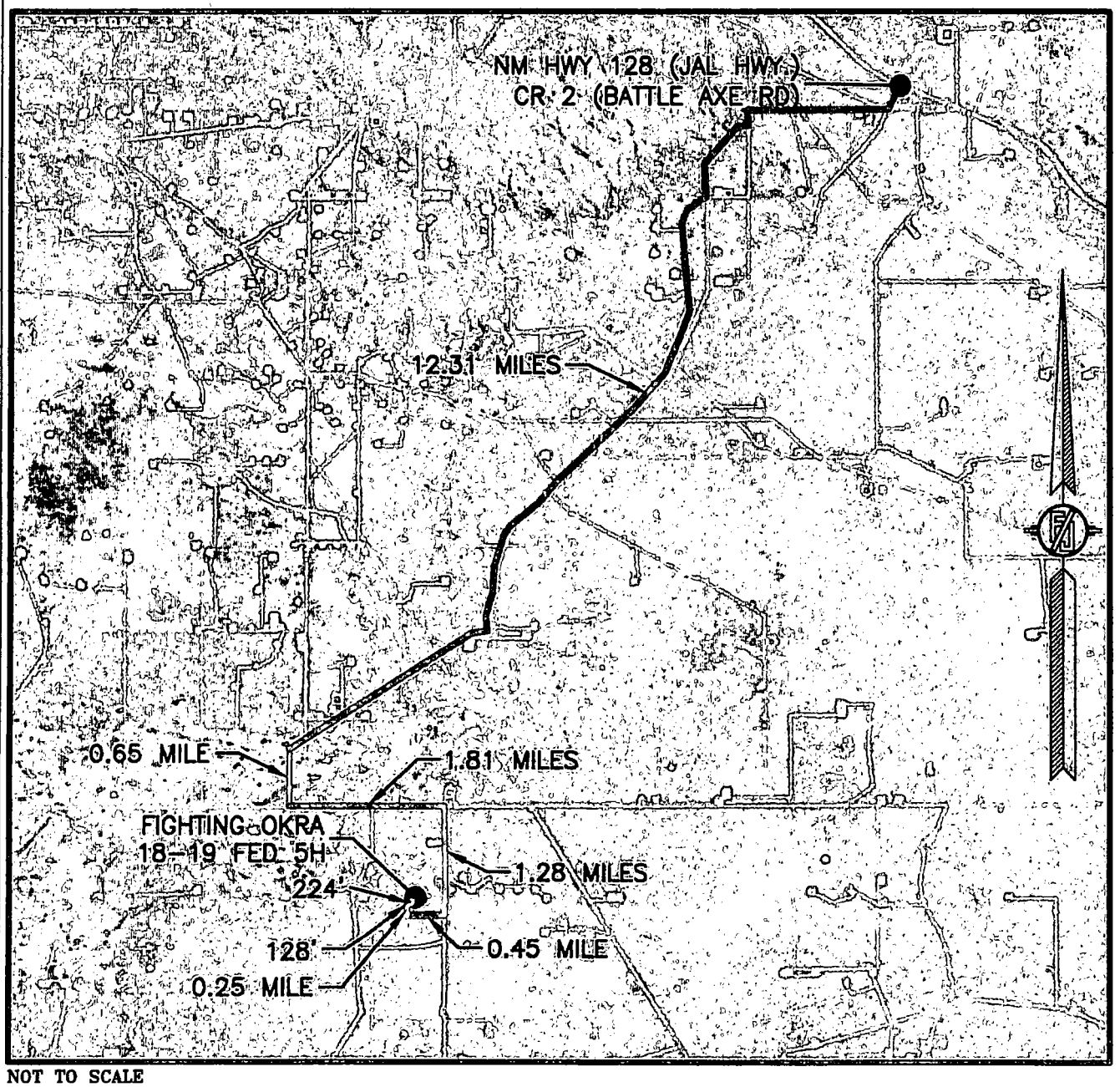
Previous Onsite information: CONDUCTED 11/29/2016

Other SUPO Attachment

Fighting_Okra_18_19_Fed_5H_Misc_Plats_20171010152911.pdf

SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOV. 2015

DEVON ENERGY PRODUCTION COMPANY, L.P.

FIGHTING OKRA 18-19 FED 5H

LOCATED 375 FT. FROM THE NORTH LINE
AND 2605 FT. FROM THE WEST LINE OF
SECTION 18, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AUGUST 28, 2017

SURVEY NO. 5549

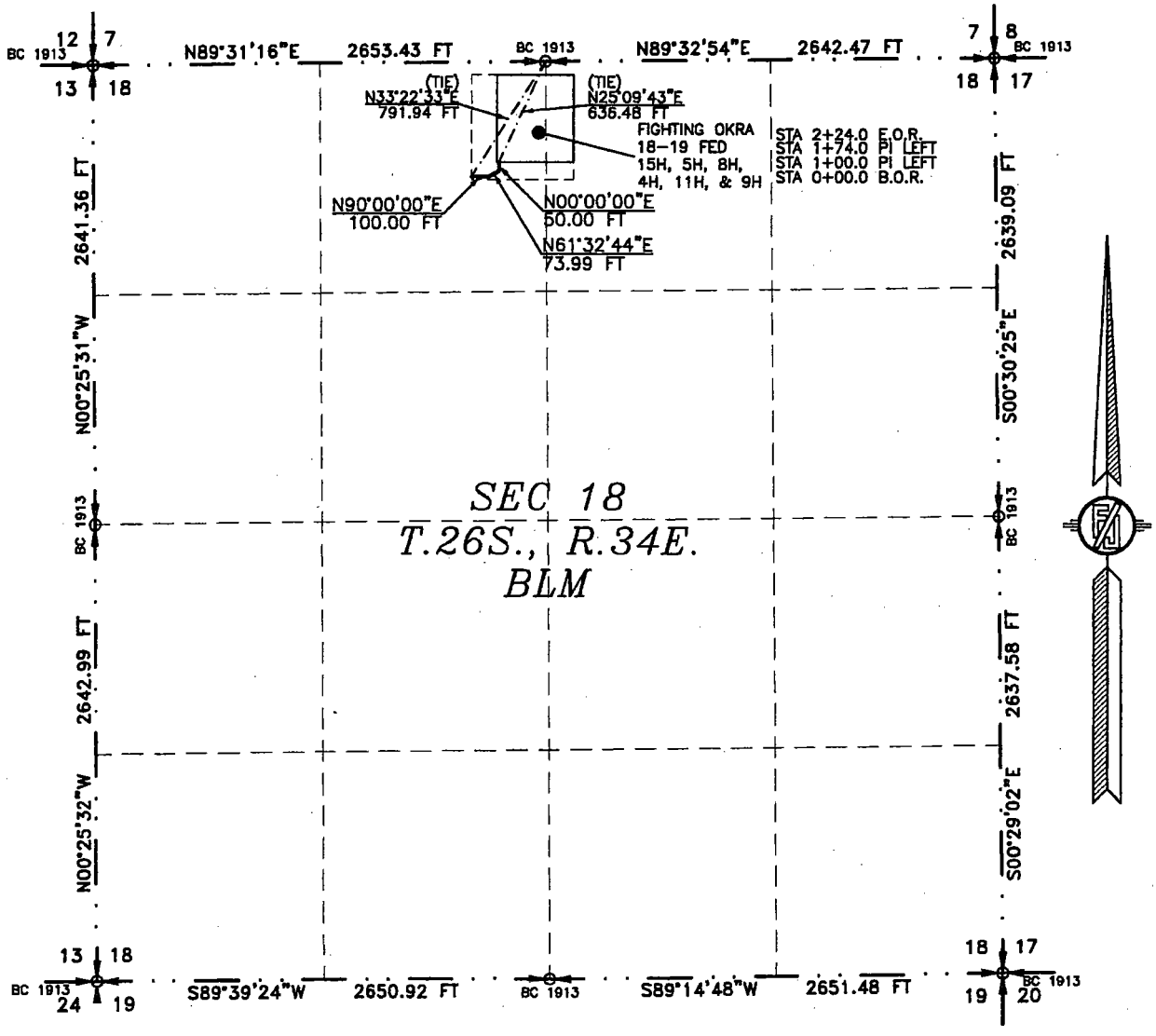
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR FIGHTING OKRA 18-19 FED 15H, 5H, 8H, 4H, 11H, & 9H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AUGUST 28, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 30 DAY OF AUGUST 2017.

FILIMON F. JARAMILLO 12797 REGISTERED PROFESSIONAL SURVEYOR

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3341

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 1-2

SURVEY NO. 5549

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

AFMSS

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

PWD Data Report

02/02/2018

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

02/02/2018

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:

AFMSS

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

Drilling Plan Data Report

02/02/2018

APD ID: 10400023190 **Submission Date:** 10/10/2017

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 5H

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	3365	0	0	OTHER : Surface	NONE	No
2	RUSTLER	2561	804	804	SANDSTONE,ANHYDRITE	NONE	No
3	TOP SALT	2211	1154	1154	SALT	NONE	No
4	BASE OF SALT	-1639	5004	5004	LIMESTONE	NONE	No
5	BELL CANYON	-1899	5264	5264	SANDSTONE	NATURAL GAS,OIL	No
6	CHERRY CANYON	-2979	6344	6344	SANDSTONE	NATURAL GAS,OIL	No
7	BRUSHY CANYON	-4709	8074	8074	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRING	-6179	9544	9544	SHALE	NATURAL GAS,OIL	No
9	BONE SPRING 1ST	-7094	10459	10459	SANDSTONE	NATURAL GAS,OIL	No
10	BONE SPRING 2ND	-7649	11014	11014	SANDSTONE	NATURAL GAS,OIL	No
11	BONE SPRING 3RD	-8729	12094	12094	SANDSTONE	NATURAL GAS,OIL	No
12	WOLFCAMP	-9159	12524	12524	SHALE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 12794

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 10M 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.