APD ID: 10400018952 **Submission Date:** 08/15/2017

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 41H

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	—	3357.5	0	0	OTHER : Surface	NONE	No
2	RUSTLER	2574.5	783	808	SANDSTONE	NONE	No
3	TOP SALT	2296.5	1061	1086	SALT	NATURAL GAS,OIL	No
4	BASE OF SALT	-1752.5	5110	5135	SALT	NATURAL GAS,OIL	No
5	DELAWARE	-1898.5	5256	5276	SANDSTONE	NATURAL GAS,OIL	No
6	BELL CANYON	-1943.5	5301	5326	SANDSTONE	NATURAL GAS	No
7	CHERRY CANYON	-2997.5	6355	6380	SANDSTONE	NATURAL GAS,OIL	No
8	BRUSHY CANYON	-4638.5	7996	8021	SANDSTONE	NATURAL GAS,OIL	No
9	BRUSHY CANYON LOWER	-5766.5	9124	9149	SANDSTONE	NATURAL GAS,OIL	No
10	BONE SPRING LIME	-6153.5	9511	9536	LIMESTONE	NATURAL GAS,OIL	No
11	BONE SPRING	-6227.5	9585	9610	SHALE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 9795

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:

FIGHTING_OKRA_18_19_FED_41H_3M_BOPE_CK_08-14-2017.pdf

BOP Diagram Attachment:

FIGHTING_OKRA_18_19_FED_41H_3M_BOPE_CK_08-14-2017.pdf

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

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

FIGHTING_OKRA_18_19_FED_41H_3M_BOPE_CK_08-14-2017.pdf

BOP Diagram Attachment:

FIGHTING_OKRA_18_19_FED_41H_3M_BOPE_CK_08-14-2017.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	17.5	13.375	NEW	API	N	0	930	0	930	0		930	H-40	48	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5250	0	5250			5250	J-55	40	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	PRODUCTION	8.75	5.5	NEW	API	N	0	17496	0	9795			17496	P-110	17	OTHER - BTC	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:** 41H

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_41H_Surf_Csg_Ass_08-14-2017.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_41H_Interim_Recl_08-14-2017.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

FIGHTING_OKRA_18_19_FED_41H_Prod_Csg_Ass_08-14-2017.pdf

Section 4 - Cement

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 41H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	930	584	1.33	14.8	776	50	C	0.125 lbs/sack Poly-F-Flake
INTERMEDIATE	Lead		0	4250	387	1.85	12.9	716	30	C	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake
INTERMEDIATE	Tail		4250	5250	98	1.33	14.8	131	30	C	0.125 lbs/sack Poly-F-Flake
PRODUCTION	Lead		5800	10182	143	3.27	9	468	25	TUNED	Tuned light
PRODUCTION	Tail		10182	19775	2051	1.2	14.5	2462	25	H	(50:50) Clas H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 41H

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	930	WATER-BASED MUD	8.4	9				2			
930	5250	SALT SATURATED	9	10.5				2			
5250	17496	WATER-BASED MUD	8.5	9.3				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: 3711 **Anticipated Surface Pressure:** 1556.1

Anticipated Bottom Hole Temperature(F): 140

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_41H_H2S_Plan_08-14-2017.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: FIGHTING OKRA 18-19 FED **Well Number:** 41H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Fighting_Okra_18_19_Fed_41H_Dir_Svy_08-14-2017.pdf

Other proposed operations facets description:

Multi-Bowl Verbiage
Multi-Bowl Wellhead
Closed-Loop Design Plan
Gas Capture Plan

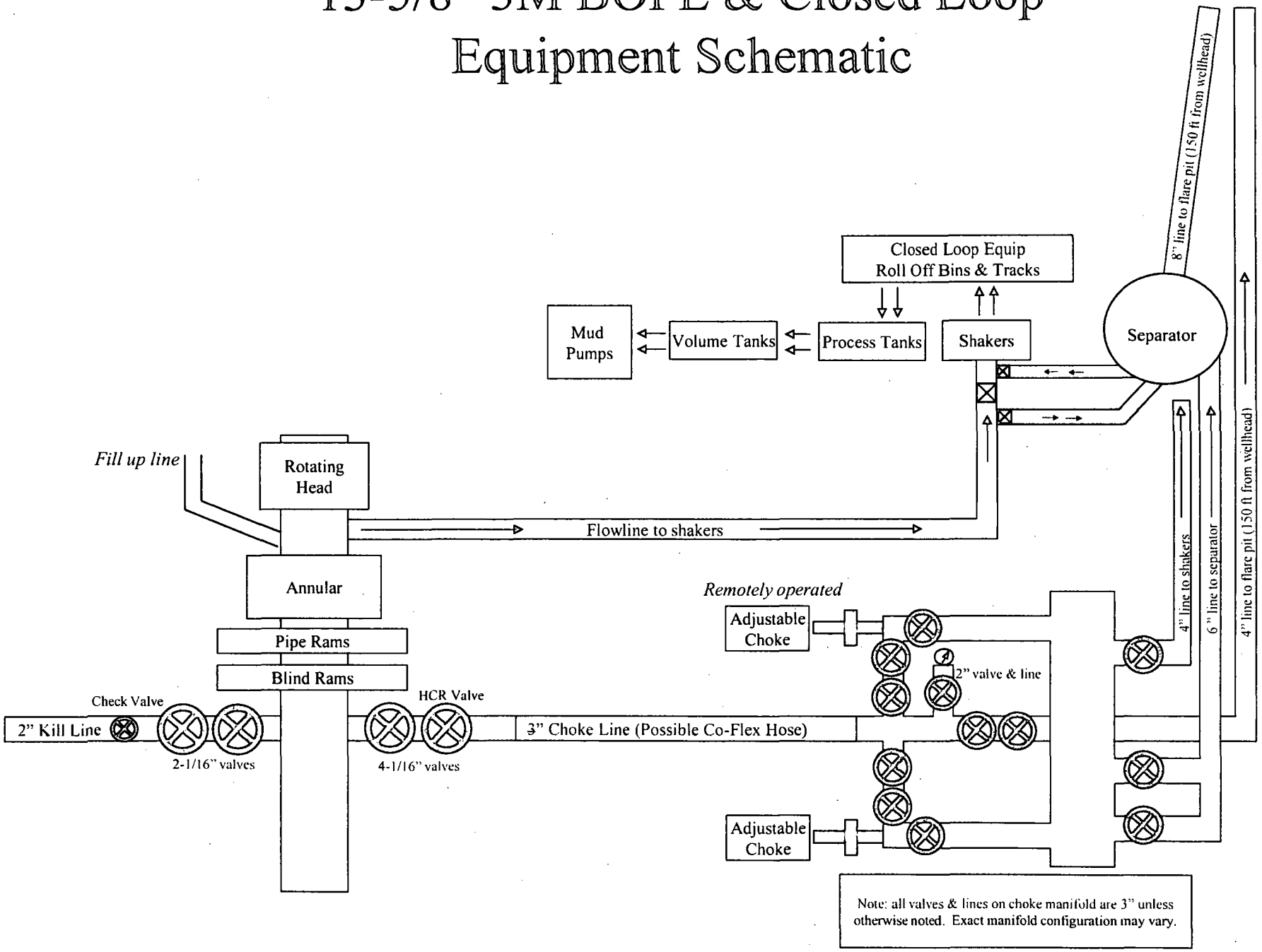
Other proposed operations facets attachment:

FIGHTING_OKRA_18_19_FED_41H_Clsd_Loop_08-09-2017.pdf
FIGHTING_OKRA_18_19_FED_41H_MB_Verb_08-09-2017.pdf
FIGHTING_OKRA_18_19_FED_41H_MB_Wellhd_08-09-2017.pdf

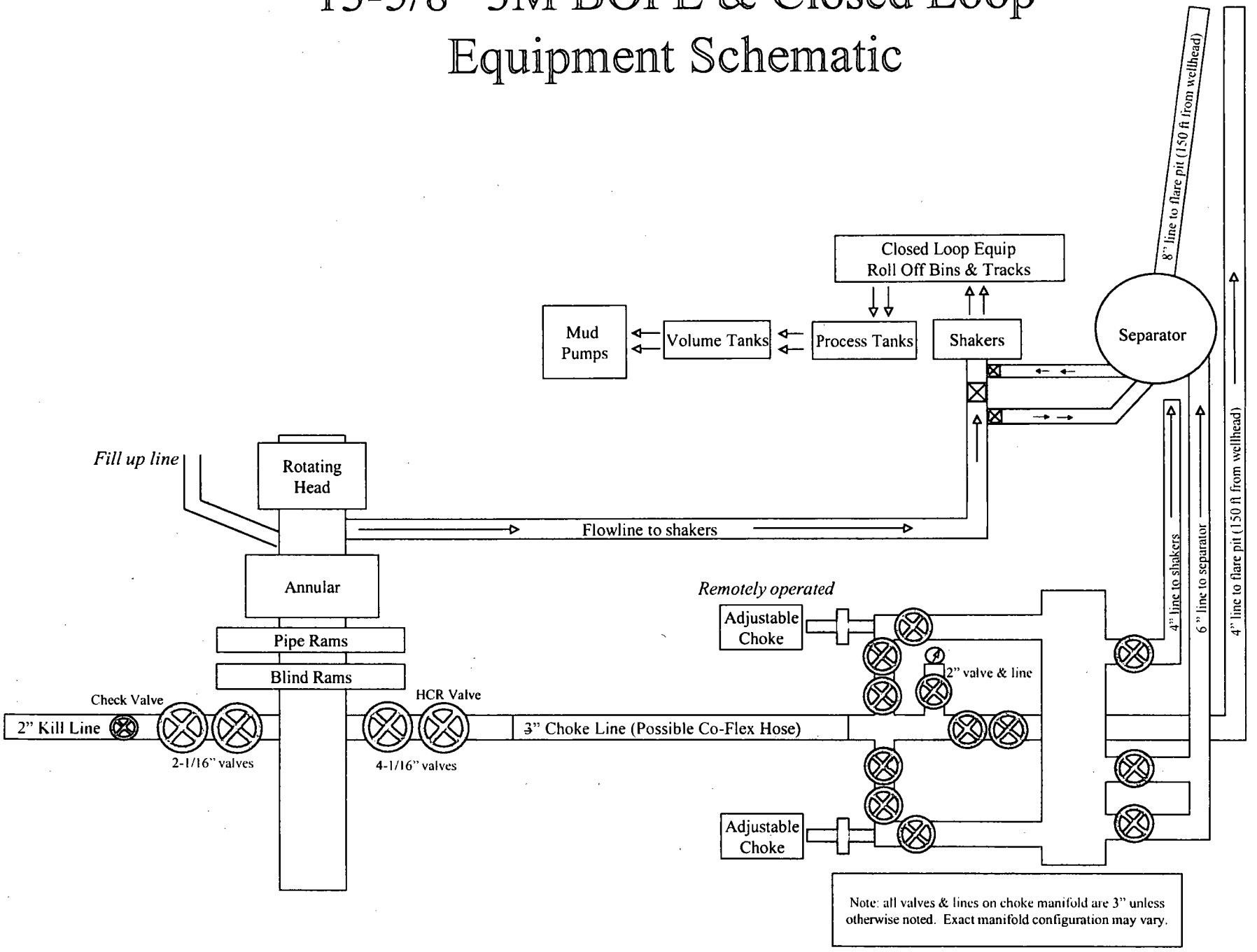
Other Variance attachment:

FIGHTING_OKRA_18_19_FED_41H_Co_flex_08-09-2017.pdf
FIGHTING_OKRA_18_19_FED_41H_GCP_08-14-2017.pdf

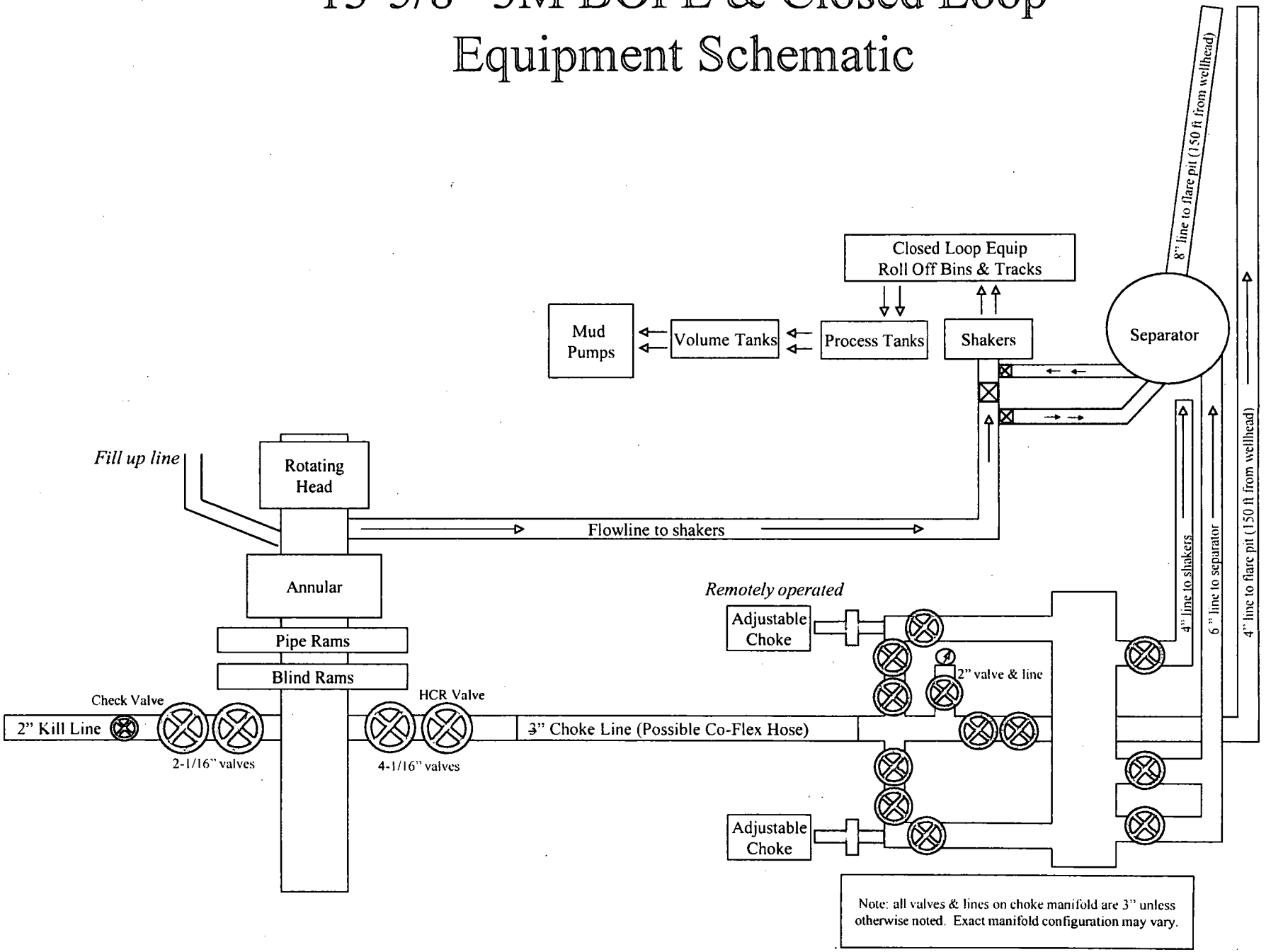
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



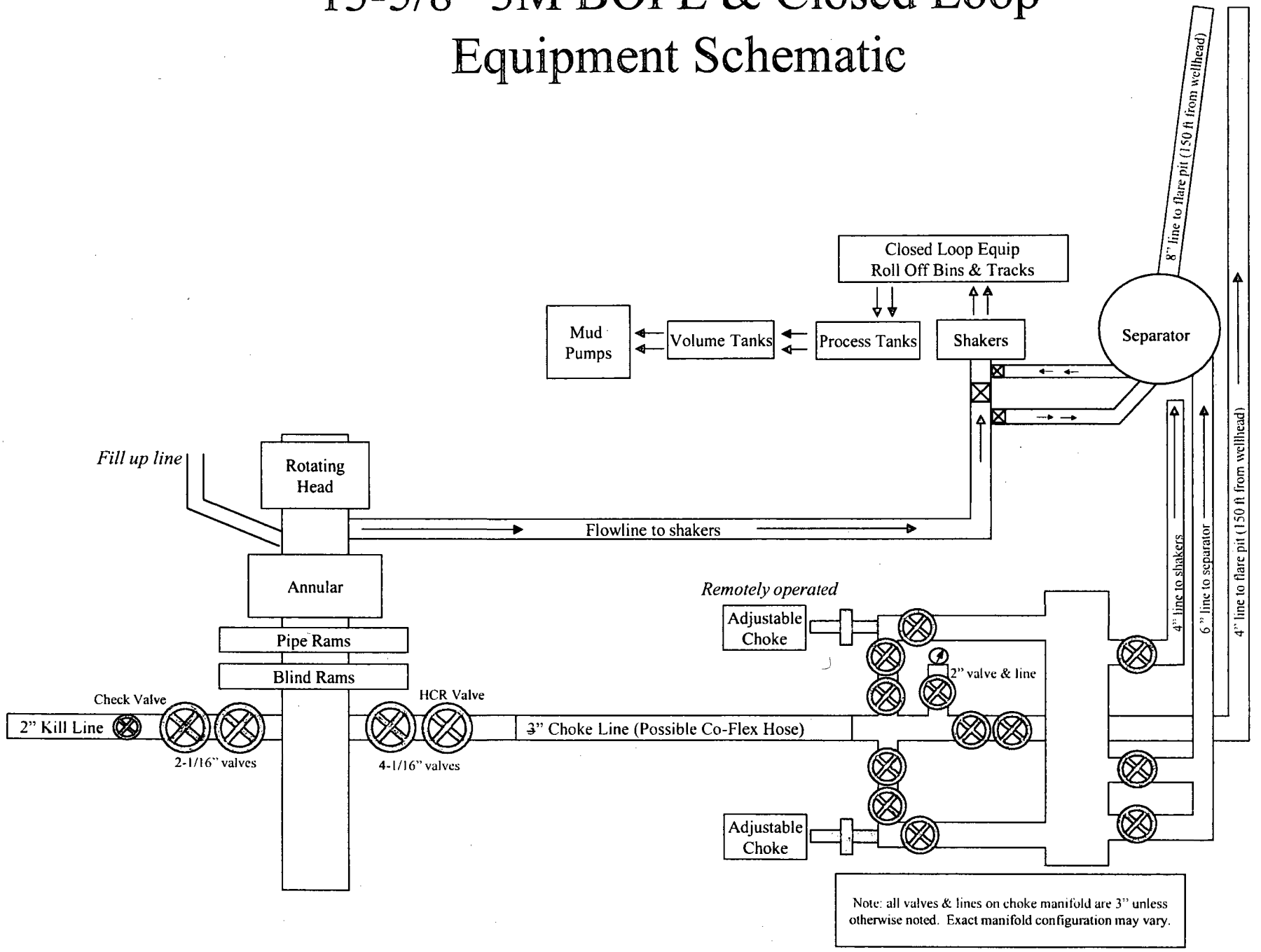
13-5/8" 3M BOPE & Closed Loop Equipment Schematic



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



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



Casing Assumptions and Load Cases

Surface

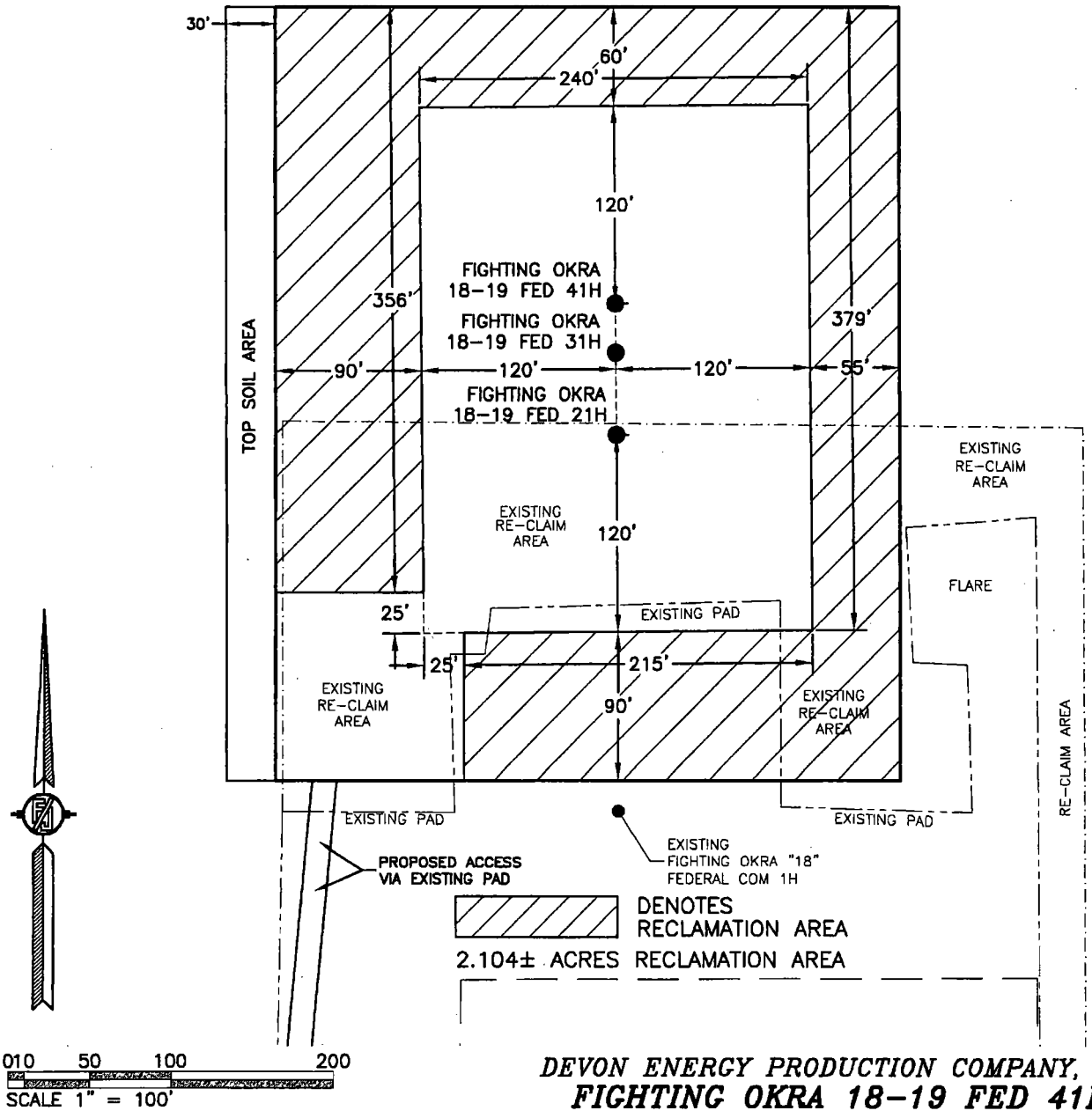
All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

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

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



DEVON ENERGY PRODUCTION COMPANY, L.P.

FIGHTING OKRA 18-19 FED 41H

LOCATED 2280 FT. FROM THE NORTH LINE AND 330 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 1, 2017

SURVEY NO. 5405

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

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