APD ID: 10400012030 **Submission Date:** 03/23/2017

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST UNIT **Well Number:** 18H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
17691	UNKNOWN	3195	27	27		NONE	No
17746	RUSTLER	2230	1010	1010	DOLOMITE,ANHYDRITE	USEABLE WATER	No
17718	TOP SALT	1835	1360	1360	SALT	NONE	No
17723	BOTTOM SALT	-924	4119	4119	SALT	NONE	No
17719	LAMAR	-1140	4335	4335	LIMESTONE	NATURAL GAS,OIL	No
15332	BELL CANYON	-1180	4375	4375	SANDSTONE	NATURAL GAS,OIL	No
15316	CHERRY CANYON	-2173	5368	5368	SANDSTONE	NATURAL GAS,OIL	No
17766	MANZANITA	-2319	5514	5514	LIMESTONE	NATURAL GAS,OIL	No
17713	BRUSHY CANYON	-3814	7009	7009	SANDSTONE	NATURAL GAS,OIL	No
17721	BONE SPRING LIME	-5184	8379	8379	LIMESTONE,SHALE	NATURAL GAS,OIL	No
15338	BONE SPRING 1ST	-6168	9363	9363	SANDSTONE	NATURAL GAS,OIL	No
17737	BONE SPRING 2ND	-6897	10092	10092	SANDSTONE	NATURAL GAS,OIL	No
17738	BONE SPRING 3RD	-7991	11186	11186	SANDSTONE	NATURAL GAS,OIL	No
17709	WOLFCAMP	-8422	11617	11617	LIMESTONE,SHALE,SANDSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST UNIT **Well Number:** 18H

Pressure Rating (PSI): 10M **Rating Depth:** 19225

Equipment: Annular, Pipe Rams, Blind Rams

Requesting Variance? YES

Variance request: Request variance for the use of a flexible choke line from the BOP to Choke Manifold. Anchors not required by manufacturer. A multi-bowl wellhead will be used. See attached schematic.
Testing Procedure: Test annular to 5000# Test BOPE to 10000#

Choke Diagram Attachment:

Red_Hills_West_Unit_018H_10M_BOPE_Choke_Diagram_07-10-2017.pdf

BOP Diagram Attachment:

Red_Hills_West_Unit_018H_10M_BOPE_Schematic_07-10-2017.pdf

Red_Hills_West_Unit_018H_Multi_Bowl_WH_07-10-2017.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	1100	0	1100	-8697	-9797	1100	H-40	48	STC	1.35	3.02	DRY	6.1	DRY	10.25
2	INTERMEDIATE	12.25	9.625	NEW	API	Y	0	4260	0	4260	-8697	-12957	4260	J-55	36	LTC	1.16	1.78	DRY	16.11	DRY	19.52
3	PRODUCTION	8.75	7.0	NEW	API	N	0	12025	0	12025	-8697	-20722	12025	P-110	26	LTC	1.33	1.69	DRY	2.09	DRY	2.65
4	LINER	6.125	4.5	NEW	API	N	11319	16575	11319	11892	-20016	-20589	5256	P-110	13.5	LTC	1.33	1.54	DRY	5.27	DRY	6.58

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST UNIT **Well Number:** 18H

Casing Attachments

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

Inspection Document:

Spec Document:

Taperd String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_West_Unit_018H_Csg_Assumptions_03-16-2017.pdf

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

Inspection Document:

Spec Document:

Taperd String Spec:

Red_Hills_West_Unit_018H_TaperedCsg_03-16-2017.pdf

Casing Design Assumptions and Worksheet(s):

Red_Hills_West_Unit_018H_Csg_Assumptions_03-16-2017.pdf

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

Inspection Document:

Spec Document:

Taperd String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_West_Unit_018H_Csg_Assumptions_03-16-2017.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST UNIT **Well Number:** 18H

Casing Attachments

Casing ID: 4 **String Type:** LINER

Inspection Document:

Spec Document:

Taperd String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_West_Unit_018H_Csg_Assumptions_03-16-2017.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	908	600	2.12	12.5	1272	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		908	1100	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	3615	710	2.12	12.5	1505	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		3615	4260	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	5514	4060	4849	75	2.12	12.5	159		Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		4849	5514	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	5514	5514	9535	360	2.12	12.5	763		Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		9535	12025	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		11319	16575	220	2.97	11.2	653		Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST UNIT **Well Number:** 18H

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: Lost circulation material Sweeps Mud scavengers in surface hole

Describe the mud monitoring system utilized: Pason/PVT/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	1100	SPUD MUD	8.6	8.8							
1100	4260	SALT SATURATED	10	10							
4260	11319	WATER-BASED MUD	8.6	9.5							
11319	11892	OIL-BASED MUD	10	13							

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST UNIT **Well Number:** 18H

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (11319') to surface.
Will run MWD GR from KOP (11319') to TD.

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

CNL,DS,GR,MWD,MUDLOG

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8039 **Anticipated Surface Pressure:** 5422.76

Anticipated Bottom Hole Temperature(F): 165

Anticipated abnormal proessures, 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:

Red_Hills_West_Unit_018H_H2S_Plan_03-16-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Red_Hills_West_Unit_018H_Dir_Plot_03-16-2017.pdf
Red_Hills_West_Unit_018H_Dir_Plan_03-16-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Red_Hills_West_Unit_018H_Drlg_Program_03-16-2017.doc

Other Variance attachment:

Red_Hills_West_Unit_018H_Flex_Line_Specs_03-16-2017.pdf
Red_Hills_West_Unit_018H_Multi_Bowl_WH_03-16-2017.pdf

10M BOPE & Closed Loop Equipment Schematic

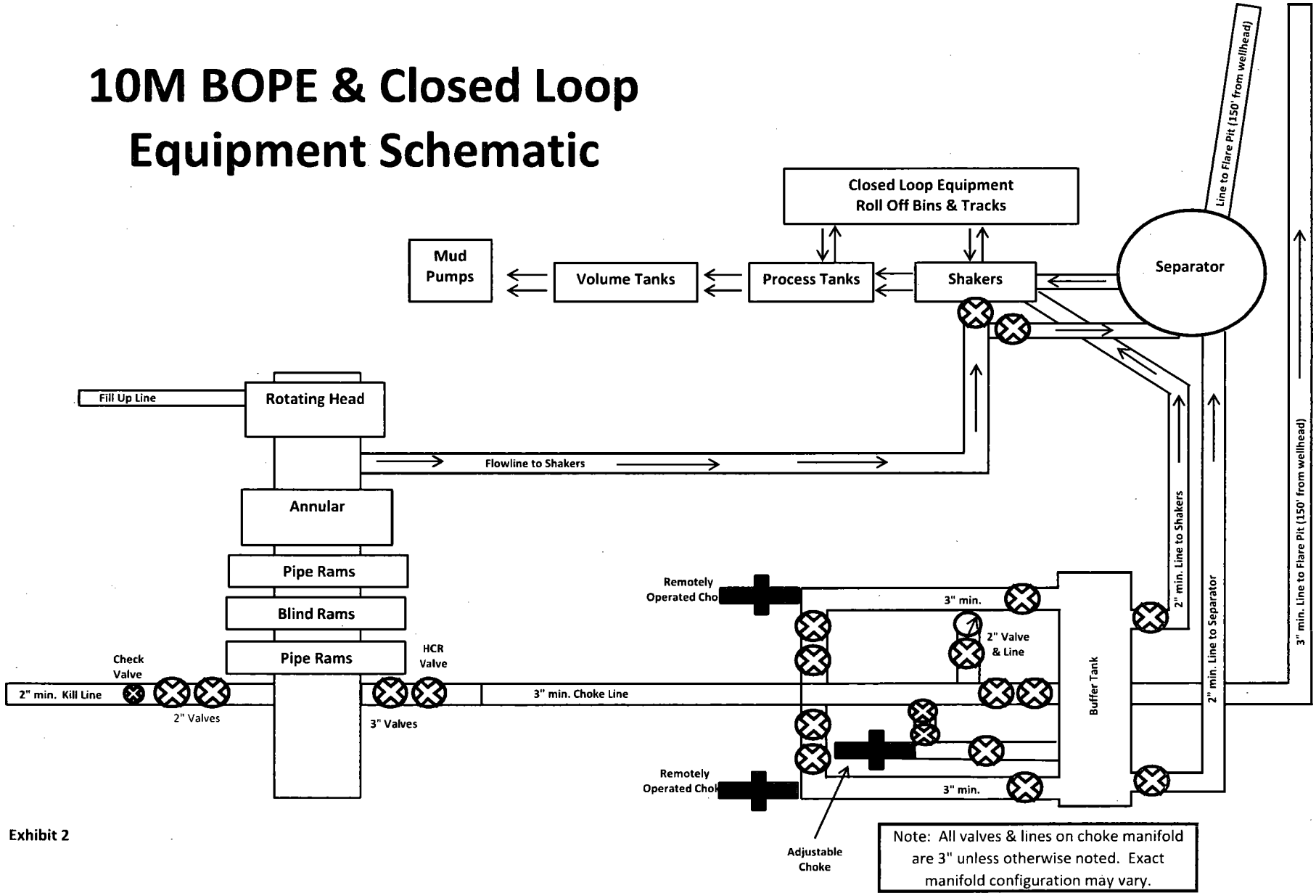

Exhibit 2

Note: All valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.

10M BOPE Schematic