

APD ID: 10400030791

Submission Date: 06/15/2018

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Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: JULIET FEDERAL COM

Well Number: 707H

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Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	-1989	1160	1160	SANDSTONE	NONE	No
2	BELL CANYON	-7497	5508	5518	SANDSTONE	NONE	No
3	AVALON SAND	-11293	9304	9334	SHALE	OIL	No
4	FIRST BONE SPRING SAND	-12279	10290	10327	SANDSTONE	OIL	No
5	BONE SPRING 2ND	-12869	10880	10920	SANDSTONE	OIL	No
6	BONE SPRING 3RD	-13853	11864	11902	SANDSTONE	OIL	No
7	WOLFCAMP	-14175	12186	12251	SHALE,SANDSTONE	OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 12346

Equipment: The BOP and related equipment will meet or exceed the requirements of a 10M/5M-psi system as set forth in On Shore Order No. 2. See attached BOP Schematic. A. Casinghead: 13 5/8" – 10,000 psi SOW x 13" – 10,000 psi WP Intermediate Spool: 13" – 10,000 psi WP x 11" – 10,000 psi WP Tubinghead: 11" – 10,000 psi WP x 7 1/16" – 15,000 psi WP B. Minimum Specified Pressure Control Equipment • Annular preventer • One Pipe ram, One blind ram • Drilling spool, or blowout preventer with 2 side outlets. Choke side will be a 3-inch minimum diameter, kill line shall be at least 2-inch diameter • 3 inch diameter choke line • 2 – 3 inch choke line valves • 2 inch kill line • 2 chokes with 1 remotely controlled from rig floor (see Figure 2) • 2 – 2 inch kill line valves and a check valve • Upper kelly cock valve with handle available • When the expected pressures approach working pressure of the system, 1 remote kill line tested to stack pressure (which shall run to the outer edge of the substructure and be unobstructed) • Lower kelly cock valve with handle available • Safety valve(s) and subs to fit all drill string connections in use • Inside BOP or float sub available • Pressure gauge on choke manifold • All BOPE connections subjected to well pressure shall be flanged, welded, or clamped • Fill-up line above the uppermost preventer. C. Auxiliary Equipment • Audio and visual mud monitoring equipment shall be placed to detect volume changes indicating loss or gain of circulating fluid volume. (OOS 1, III.C.2) • Gas Buster will be used below intermediate casing setting depth. • Upper and lower kelly cocks with handles, safety valve and subs to fit all drill string connections and a pressure gauge installed on choke manifold.

Requesting Variance? YES

Variance request: Centennial is requesting to use a 5M Annular Preventer, as well as a flex hose on the choke manifold for the Juliet Federal Com 707H well. Please see Section 8 for additional related attachments.

Testing Procedure: The BOP test shall be performed before drilling out of the surface casing shoe and will occur at a minimum: a. when initially installed b. whenever any seal subject to test pressure is broken c. following related repairs d. at

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Well Number: 707H

30 day intervals e. checked daily as to mechanical operating conditions. The ram type preventer(s) will be tested using a test plug to 250 psi (low) and 10,000 psi (high) (casinghead WP) with a test plug upon its installation onto the 13" surface casing. If a test plug is not used, the ram type preventer(s) shall be tested to 70% of the minimum internal yield pressure of the casing. The annular type preventer(s) shall be tested to 50% of its working pressure. Pressure will be maintained for at least 10 minutes or until provisions of the test are met, whichever is longer. • A Sundry Notice (Form 3160 5), along with a copy of the BOP test report, shall be submitted to the local BLM office within 5 working days following the test. • If the bleed line is connected into the buffer tank (header), all BOP equipment including the buffer tank and associated valves will be rated at the required BOP pressure. • The BLM office will be provided with a minimum of four (4) hours' notice of BOP testing to allow witnessing. The BOP Configuration, choke manifold layout, and accumulator system, will be in compliance with Onshore Order 2 for a 10,000 psi system. A remote accumulator will be used. Pressures, capacities, and specific placement and use of the manual and/or hydraulic controls, accumulator controls, bleed lines, etc., will be identified at the time of the BLM 'witnessed BOP test. Any remote controls will be capable of both opening and closing all preventers and shall be readily accessible

Choke Diagram Attachment:

Choke_Diagram_20180531172214.pdf

BOP Diagram Attachment:

BOP_Schematic_10K_WC_20180531172240.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	CONDUCTOR	26	20.0	NEW	API	N	0	120	0	120	3535	3415	120	H-40	94	OTHER - WELD						
2	SURFACE	17.5	13.375	NEW	API	N	0	1300	0	1300	3535	2235	1300	J-55	54.5	OTHER - BTC	1.76	4.26	DRY	7.25	DRY	12.04
3	PRODUCTION	6.75	5.5	NEW	API	Y	0	11610	0	11600	3535	-8065	11610	P-110	20	OTHER - TMK UP DQX	1.27	1.45	DRY	2.61	DRY	2.61
4	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11610	0	11600	3535	-8065	11610	HCP-110	29.7	LTC	1.4	1.75	DRY	2.23	DRY	2.73
5	PRODUCTION	6.75	5.0	NEW	API	Y	11610	19806	11600	12346	-8065	-8783	8196	P-110	18	OTHER - TMK UP DQX	1.45	1.5	DRY	43.19	DRY	43.19

Casing Attachments

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: JULIET FEDERAL COM

Well Number: 707H

Casing Attachments

Casing ID: 1 **String Type:** CONDUCTOR

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180601091207.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180601091539.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: JULIET FEDERAL COM

Well Number: 707H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

3._TMK_UP_DQX_5.5_x_20_P110_HC_20180601091512.pdf

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180601091530.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

3._TMK_UP_DQX_5_x_18_P110_HC_20180601091548.pdf

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20180601091556.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
CONDUCTOR	Lead		0	120	121	1.49	12.9	180.6		Grout	Bentonite 4% BWOC, Cellophane #/sx, CaCl2 2% BWOC.

SURFACE	Lead		0	800	798	1.74	13.5	1389	150	Class C Premium	Premium Gel Bentonite 4%, C-45 Econolite 0.25%, Phenoseal 0.25#/sk, CaCl 1%, Defoamer C-41P 0.75%
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Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: JULIET FEDERAL COM

Well Number: 707H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Tail		800	1300	522	1.33	14.8	695	100	Class C Premium	C-45 Econolite 0.10%, CaCl 2.0%
INTERMEDIATE	Lead		0	5173	700	3.4	10.7	2380	100	TXI Lightweight	Salt 1.74#/sk, C-45 Econolite 2.25%, Phenoseal 1.50#/sk, STE 6.0%, Citric Acid 0.05%, C-19 Fluid Loss Add've 0.10%, CSA-1000 Fluid Loss Add've 0.20%, Kol Seal 6.0#/sk, Defoamer C-503P 0.30%, Gyp seal 8
INTERMEDIATE	Tail		5173	5473	73	1.33	14.8	97	50	Class H Premium	C-51 Susp Agent 0.05%, C-503P Defoamer 0.30%
INTERMEDIATE	Lead	5473	5473	10610	649	3.4	10.7	2206	100	TXI Lightweight	Salt 0.81#/sk, C-45 Econolite 0.80%, Phenoseal 1.50#/sk, STE 6.0%, Citric Acid 0.20%, C-19 Fluid Loss Add've 0.10%, CSA-1000 Fluid Loss Add've 0.25%, Kol Seal 6.0#/sk, Defoamer C-41P 0.75%.
INTERMEDIATE	Tail		10610	11610	242	1.33	14.8	322	50	Class H Premium	C-51 Susp Agent 0.05%, Retarder C-20 0.10%, C-503P Defoamer 0.30%
PRODUCTION	Lead		6610	11610	163	3.51	10.6	572	25	TXI Lightweight	Salt 9.0#/sk, Phenoseal 2.50#/sk, STE 6.0%, Citric Acid 0.20%, CSA-1000 Fluid Loss Add've 0.28%, Kol Seal 6.0#/sk, C-47B Fluid Loss Add've 0.10%, Defoamer C-503P 0.30%.
PRODUCTION	Tail		11610	19806	851	1.35	14.2	1149	25	Class H Premium	CSA-1000 Fluid Loss Add've 0.07%, C47B Fluid Loss Add've 0.25%, Retarder C-20 0.15%
PRODUCTION	Lead		6610	11610	163	3.51	10.6	572	25	TXI Lightweight	Salt 9.0#/sk, Phenoseal 2.50#/sk, STE 6.0%, Citric Acid 0.20%, CSA-1000 Fluid Loss Add've 0.28%, Kol Seal 6.0

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: JULIET FEDERAL COM

Well Number: 707H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		11610	19806	851	1.35	14.2	1149	25	Class H Premium	#/sk, C-47B Fluid Loss Add've 0.10%, Defoamer C-503P 0.30%. CSA-1000 Fluid Loss Add've 0.07%, C47B Fluid Loss Add've 0.25%, Retarder C-20 0.15%

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 quantities of mud materials will be on the well site at all times for the purpose of assuring well control and maintaining wellbore integrity. Surface interval will employ fresh water mud. The intermediate hole will utilize a diesel emulsified brine fluid to inhibit salt washout and prevent severe fluid losses. The production hole will employ oil base fluid to inhibit formation reactivity and of the appropriate density to maintain well control.

Describe the mud monitoring system utilized: Centrifuge separation system. Open tank monitoring with EDR will be used for drilling fluids and return volumes. Open tank monitoring will be used for cement and cuttings return volumes. Mud properties will be monitored at least every 24 hours using industry accepted mud check practices.

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	1300	OTHER : Fresh water	8.6	9.5							
1300	11610	OTHER : OBM/Brine	8.6	9							
11610	19806	OIL-BASED MUD	11.5	14.5							

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Well Number: 707H

Section 6 - Test, Logging, Coring

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

Will utilize MWD/LWD (Gamma ray logging) from intermediate hole to TD of the well.

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

GR

Coring operation description for the well:

n/a

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 9291

Anticipated Surface Pressure: 6574.88

Anticipated Bottom Hole Temperature(F): 170

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Romeo_Federal_Pad_H2S_Plan_20181030144238.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

H_P_650___Juliet_Federal_Com_707H_Plan__1_20180601112852.pdf

Other proposed operations facets description:

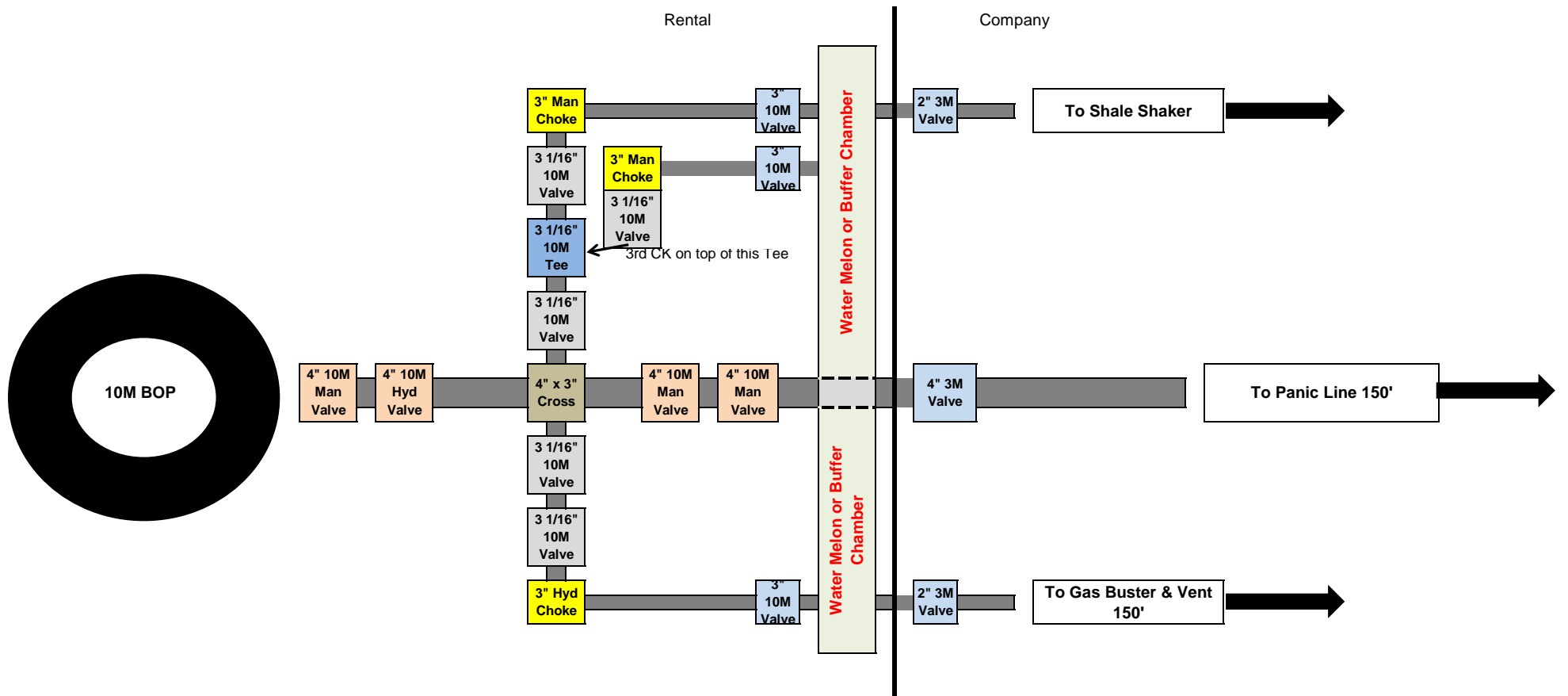
Other proposed operations facets attachment:

Centennial_Resource_Development__Well_Control_Plan_v2_20181003154939.pdf

Flex_Hose_Specs_20181003155052.pdf

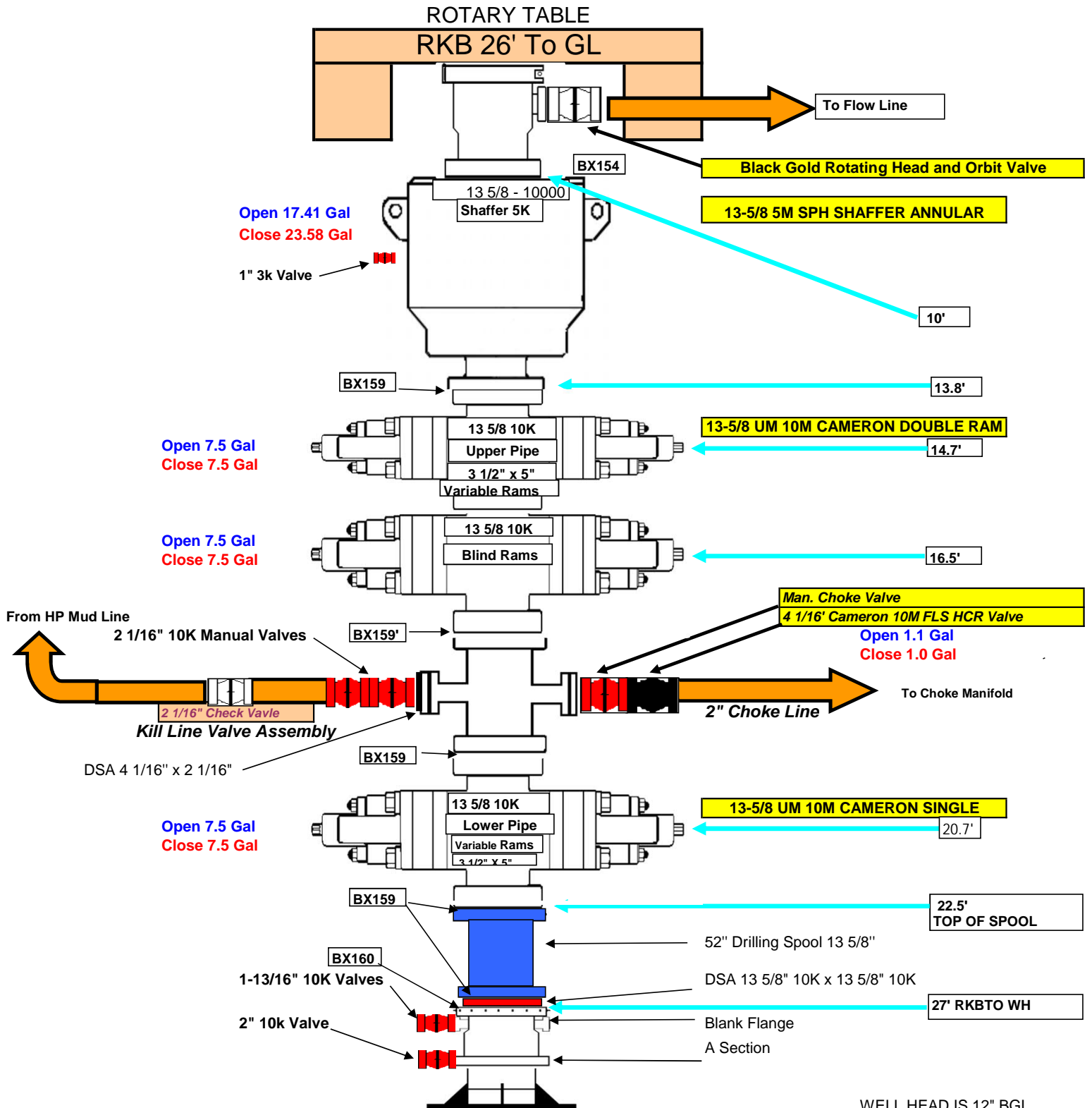
GasCapturePlanRomeoPad_20181030144258.pdf

Other Variance attachment:



H&P 650

Lea County, NM BOP Configuration 10K Wellhead



WELL HEAD IS 12" BGL