APD ID: 10400030352 **Submission Date:** 05/21/2018

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400030352 **Tie to previous NOS?** **Submission Date:** 05/21/2018

BLM Office: CARLSBAD **User:** Melanie Wilson **Title:** Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM015321 **Lease Acres:** 838.8

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:** KAISER FRANCIS OIL COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: KAISER FRANCIS OIL COMPANY

Operator Address: 6733 S. Yale Ave.

Zip: 74121

Operator PO Box: PO Box 21468

Operator City: Tulsa **State:** OK

Operator Phone: (918)491-0000

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

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

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

Well Name: RED HILLS **Well Number:** 401H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** JENNINGS **Pool Name:** WOLFCAMP (GAS)

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

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:** RED HILLS **Number:** 1

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 25 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 330 FT

Reservoir well spacing assigned acres Measurement: 278.8 Acres

Well plat: Red_Hills_401H__Pmt_Rec_20180521102507.pdf

Red_Hills_401H__C102_20180828140855.pdf

Well work start Date: 09/06/2018 **Duration:** 40 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD27 **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	2250	FSL	390	FWL	25S	33E	31	Lot 3	32.0858566	-103.6181873	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 015321	3305	0	0
KOP Leg #1	2600	FSL	490	FWL	25S	33E	31	Lot 3	32.086816	-103.617856	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 015321	-8408	11743	11713
PPP Leg #1	2310	FSL	350	FWL	25S	33E	31	Lot 3	32.0868186	-103.6183199	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 015321	-8975	12400	12280

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

	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	FSL	350	FWL	26S	33E	6	Lot 4	32.0660753	-103.6023843	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 015321	-9045	19661	12350
BHL Leg #1	330	FSL	350	FWL	26S	33E	6	Lot 4	32.0660753	-103.6023843	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 015321	-9045	19661	12350

Receipt

Your payment is complete

Pay.gov Tracking ID: 269QOHTO
Agency Tracking ID: 75491986640
Form Name: Bureau of Land Management (BLM) Application for Permit to Drill (APD) Fee
Application Name: BLM Oil and Gas Online Payment

Payment Information

Payment Type: Debit or credit card
Payment Amount: $9,790.00
Transaction Date: 05/21/2018 12:22:30 PM EDT
Payment Date: 05/21/2018
Company: KAISER-FRANCIS OIL COMPANY
APD IDs: 10400030352
Lease Numbers: NMNM015321
Well Numbers: 401H
Note: You will need your Pay.gov Tracking ID to complete your APD transaction in AFMSS II. Please ensure you write this number down upon completion of payment.

Account Information

Cardholder Name: GEORGE B KAISER
Card Type: Master Card
Card Number: **********6602

Email Confirmation Receipt

Confirmation Receipts have been emailed to:
mjp1692@gmail.com

APD ID: 10400030352 **Submission Date:** 05/21/2018

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

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	---	3305	0	0		NONE	No
2	RUSTLER	2548	860	860		NONE	No
3	SALADO	2208	1200	1200		NONE	No
4	TOP SALT	1408	2000	2000		NONE	No
5	BASE OF SALT	-1042	4450	4450		NONE	No
6	LAMAR	-1162	4570	4750		NATURAL GAS,OIL	No
7	BELL CANYON	-1462	4870	4870		NATURAL GAS,OIL	No
8	CHERRY CANYON	-2452	5860	5860		NATURAL GAS,OIL	No
9	BRUSHY CANYON	-5192	8600	8600		NATURAL GAS,OIL	No
10	BONE SPRING	-5495	8800	8800		NATURAL GAS,OIL	No
11	AVALON SAND	-5705	9010	9010		NATURAL GAS,OIL	No
12	BONE SPRING 1ST	-6645	9950	9950		NATURAL GAS,OIL	No
13	BONE SPRING 2ND	-7205	10510	10510		NATURAL GAS,OIL	No
14	BONE SPRING LIME	-7645	10950	10950		NATURAL GAS,OIL	No
15	BONE SPRING 3RD	-8380	11685	11685		NATURAL GAS,OIL	No
16	WOLFCAMP	-8765	12070	12070		NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

Pressure Rating (PSI): 10M **Rating Depth:** 15000

Equipment: A 10M system will be installed according to Onshore Order #2 consisting of an Annular Preventer, BOP with two rams and a blind ram. BOP will be equipped with 2 side outlets (choke side shall be a minimum 3" line, and kill side will be a minimum 2" line). Kill line will be installed with (2) valves and a check valve (2" min) of proper pressure rating for the system. Remote kill line (2' min) will be installed and ran to the outer edge of the substructure and be unobstructed. A manual and hydraulic valve (3'' min) will be installed on the choke line, 3 chokes will be used with one being remotely controlled. Fill up line will be installed above the uppermost preventer. Pressure gauge of proper pressure rating will be installed on choke manifold. Upper and lower kelly cocks will be utilized with handles readily available in plain sight. A float sub will be available at all times. All connections subject to well pressure will be flanged, welded, or clamped.
Requesting Variance? YES

Variance request: Flex Hose Variance

Testing Procedure: See Attached Testing Procedure

Choke Diagram Attachment:

Red_Hills_401H___10M_Chk_Diagram_Rev3_20181113085804.pdf

BOP Diagram Attachment:

Red_Hills_401H___BOP_20181113085840.pdf

Red_Hills_401H_BOP_Testing_Procedure_20181113085913.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	910	0	910			910	J-55	40.5	STC	3.7	7.3	DRY	11.4	DRY	17.1
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11700	0	11700			11700	HCP-110	29.7	LTC	1.3	1.7	DRY	2.7	DRY	2.7
3	PRODUCTION	6.75	5.5	NEW	API	N	0	19661	0	19661			19661	P-110	20	OTHER - Eagle SSF	1.3	1.5	DRY	2.5	DRY	2.6

Casing Attachments

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_401H___Csg_Assumptions_20180520191939.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_401H___Csg_Assumptions_20180520192141.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_401H___Csg_Assumptions_20180520192604.pdf

Red_Hills_401H__Prod_Csg_Specs_20180520192621.pdf

Red_Hills_401H_5.5_x_20_P110_HP_USS_EAGLE_SFH_Perf_Sheet_20180809061606.pdf

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

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	910	590	1.34	14.8	506	50	Premium C	Accelerator
INTERMEDIATE	Lead		0	11700	1037	2.45	12	2031	25	Class H	Extender
INTERMEDIATE	Tail		0	11700	391	1.34	14.8	418	25	Class H	Accelerator
PRODUCTION	Lead		11000	19661	435	1.91	13.2	723	15	Class H	Retarder

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	11700	OTHER : Diesel-Brine Emulsion	8.8	9.2							
11000	19661	OTHER : Oil Based Mud	10.5	11.9							

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

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	910	OTHER : FRESH WATER	8.4	9							

Section 6 - Test, Logging, Coring

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

None planned

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

DS,GR,MUDLOG

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8349 **Anticipated Surface Pressure:** 5632

Anticipated Bottom Hole Temperature(F): 199

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:

Red_Hills_401H__H2S_Plan_20180520193852.pdf

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS **Well Number:** 401H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Red_Hills_401H___Directional_Plan_20180520194002.pdf

Other proposed operations facets description:

Gas Capture Plan attached

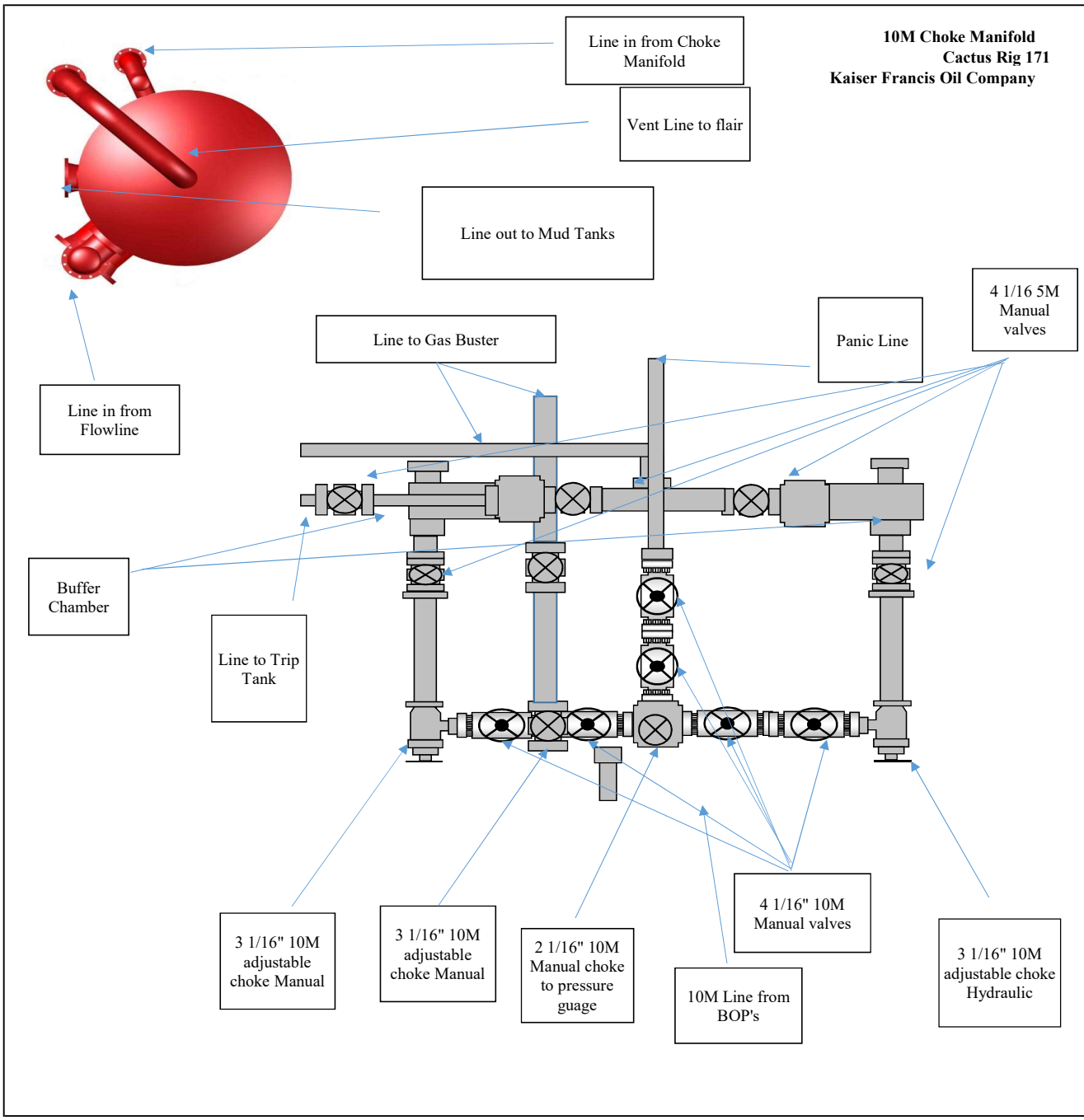
Other proposed operations facets attachment:

Red_Hills_401H_Gas_Capture_Plan_20180809062817.pdf

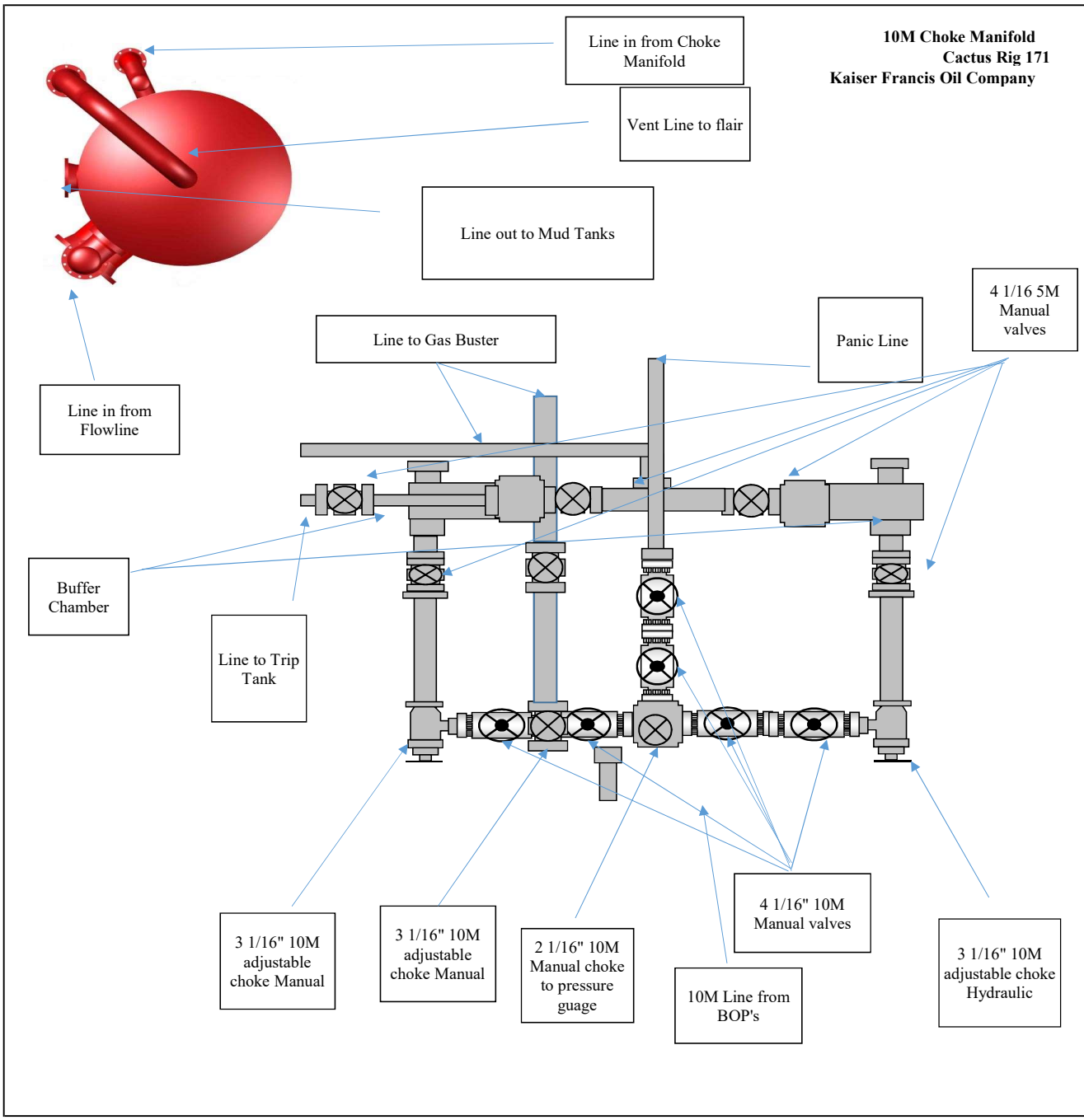
Other Variance attachment:

Red_Hills_401H___Flex_Hose_20180520194022.pdf

10M Choke Manifold
Cactus Rig 171
Kaiser Francis Oil Company

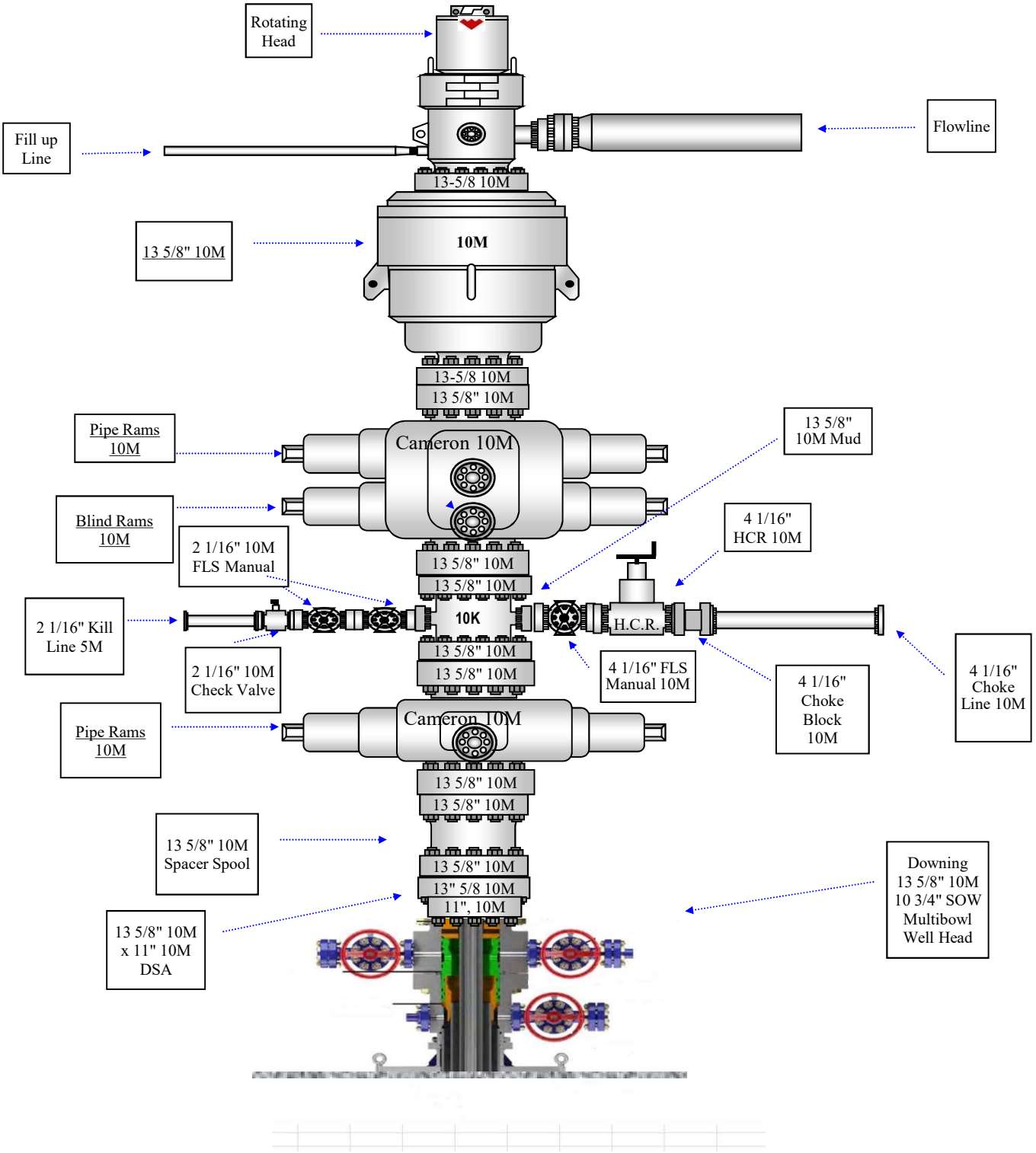


10M Choke Manifold
Cactus Rig 171
Kaiser Francis Oil Company



Cactus Rig 171
10M BOP with 10M Annular
Kaiser Francis Oil Company

Hole Sections Utilized
***9 7/8" Hole below Surface Casing**
***6 3/4"Hole below Intermediate casing**



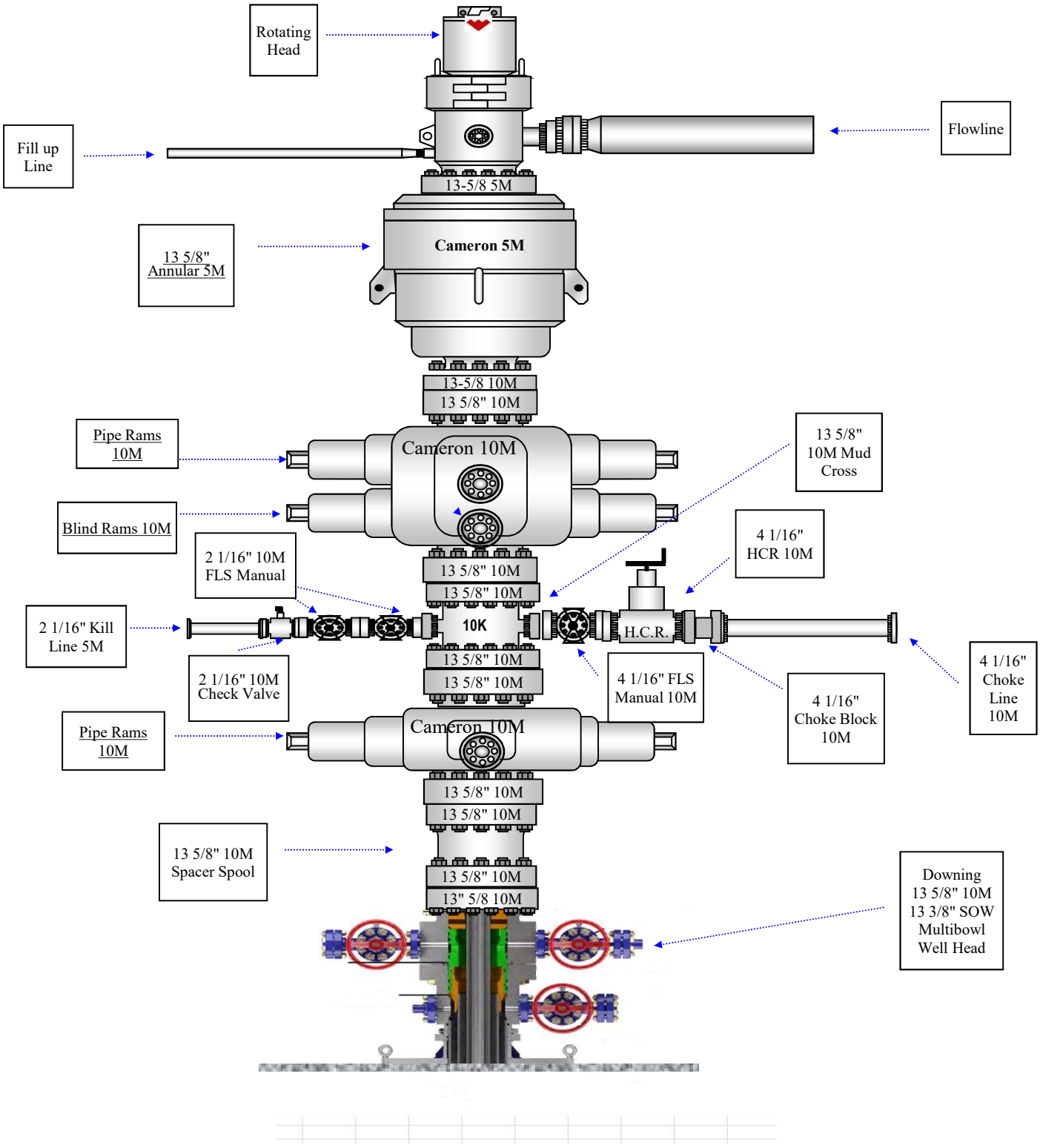
Kaiser Francis Oil Company
Red Hills 401H

BOP Testing Procedure

BOP and BOPE shall be installed, used, maintained and tested in a manner necessary to assure well control and shall be in place and operational prior to drilling the surface casing shoe, unless otherwise stated by APD. The Annular shall be functionally operated at least weekly, and pipe and blind rams shall be activated each trip. The surface (13 3/8”) BOP/BOPE pressure test will be made to hold 250 psi low, and 2000 psi high. The first intermediate (10 3/4”) BOP/BOPE pressure tests will be made to hold 250 psi low, and 5,000 psi high before drilling out the 1st intermediate shoe. The second intermediate (7 5/8”) BOP/BOPE pressure tests will be made to hold 250 psi low, and 10,000 psi high.

10M BOP with 5M Annular
Kaiser Francis Oil Company
Red Hills 401H

Hole Sections Utilized
***12 1/4" Hole below Surface Casing**
***8 3/4"-8 1/2" Hole below Intermediate casing**



Kaiser-Francis Oil Company
Red Hills 401H
Flex Hose Data

GATES E & S NORTH AMERICA, INC.
7603 Prairie Oak Dr.
Houston, TX 77086

PHONE: 281-602-4119
FAX:
EMAIL: **Troy.Schmidt@gat**
WEB: **www.gates.com**

10K ASSEMBLY PRESSURE TEST CERTIFICATE

Customer :	A-7 AUSTIN INC DBA AUSTIN HOSE	Test Date:	10/3/2017
Customer Ref. :	4086301	Hose Serial No.:	H-100317-2
Invoice No. :	508588	Created By:	Irene Pizana

Product Description:	10K3.035.0CM4.1/16FLGE/E

End Fitting 1 :	4 -1/16 10K FLANGE - FIXED	End Fitting 2 :	4 -1/16 10K FLANGE - FLOATING
Gates Part No. :	68603010-9710398	Assembly Code :	L39789092117H-100317-2
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has successfully passed all pressure testing requirements set forth in Section 9.7.7 and Table 10 of API 7K, Sixth Edition (December 2015).

Quality:	QUALITY	Produciton:	PRODUCTION
Date :	10/3/2017	Date :	10/3/2017
Signature :		Signature :	

Form PTC - 01 Rev.0 2

POWERING PROGRESS™

Gates E&S North America, Inc.
7603 Prairie Oak Dr.
Houston, TX. 77086
PHONE :
FAX:
Troy.Schmidt@gates.com

CERTIFICATE OF CONFORMANCE

This is to verify that all Parts and/or Materials included in this shipment have been manufactured and/or processed in Conformance with applicable drawings and specifications, and that Records of Required Tests are on file and subject to examination. The following items were assembled at **Gates E & S, North America Inc.**, facilities in Houston, TX, USA. This hose assembly was designed and manufactured to meet requirements of API Spec 7K.

CUSTOMER: A-7 AUSTIN INC DBA AUSTIN HOSE
CUSTOMERS P.O.#: 4086301
PART DESCRIPTION: 10K3.035.0CM4.1/16FLGE/E
SALES ORDER #: 508588
QUANTITY: 1
SERIAL #: H-100317-2

SIGNATURE: _____

TITLE: QUALITY ASSURANCE

DATE: 10/3/2017

JOB REPORT

COMPANY DETAILS

Company: Austin
Contact:
Phone:

Email: Irene.pizana@gates.com

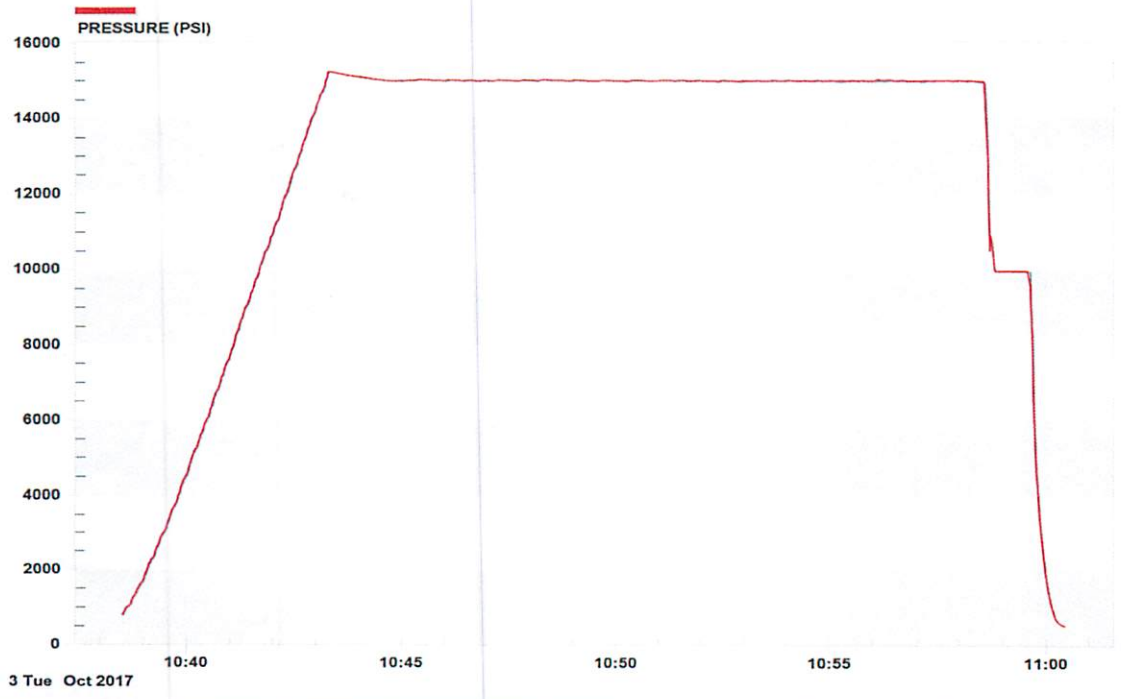
JOB DETAILS

DATE October 03, 2017
START TIME 10:38:29
END TIME 11:00:25
Gates Rep: Chris Olivo
Recommendation: H-100317-2
Working Pressure: 10000
Ext Inspection: Pass
Fitting Inspection: Pass
Test pressure: 15000
Serial No: H-100317-2

Length: 35'
Inner Diameter: 3.0"
Pressure Test: Pass
Internal Inspection: N/A
Fitting Type: 10K Flange ExE

GATES ENGINEERING & SERVICES NA
QA/QC
OCT 03 2017
APPROVED

SUMMARY GRAPH



Report Created: 3-Oct-17

Formation Name	Formation Top TVD
Rustler	860
Salado	1200
Top of Salt	2000
Base of Salt	4450
Lamar	4750
Bell Canyon	4870
Cherry Canyon	5860
Brushy Canyon	8600
Lower Brushy Canyon	8800
Avalon	9010
1 BSS	9950
2 BSS	10510
3 BSL	10950
3 BSS	11685
Wolfcamp	12070

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)
Conductor	120	20"				New		120
Surface	910	10-3/4"	40.5	J-55	STC	New	14.75	910
Intermediate	11700	7-5/8"	29.7	HCP-110	LTC	New	9.875	11700
Production	19661	5-1/2"	20	P110 HP	Eagle SF	New	6.75	12350

Mud Type	Mud Weight Hole Control	Depth	Viscosity	Fluid Loss
FW	8.4 - 9.0	910	32 - 34	NC
DBE	8.8-9.2	11700	34	NC
OBM	12.5-13.0	19661	48-52	<10

Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength
9	426	1580	3130	629000	420000
9.2	5597	7150	9470	940000	922000
13	8349	11080	12640	641000	629000

Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor	Joint Tensile Safety Factor
3.7	7.3	17.1	11.4
1.3	1.7	2.7	2.7
1.3	1.5	2.6	2.5

Formation Name	Formation Top TVD
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Salado	1200
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Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor	Joint Tensile Safety Factor
3.7	7.3	17.1	11.4
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Formation Name	Formation Top TVD
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13	8349	11080	12640	641000	629000

Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor	Joint Tensile Safety Factor
3.7	7.3	17.1	11.4
1.3	1.7	2.7	2.7
1.3	1.5	2.6	2.5

Worksheet for determining GB Connection Running Torque at the beginning of a Casing Run

Ignore joints that are assembled with threadlock compounds. See "Addendum Procedure for GB Connections Assembled with Threadlocking Compounds" available at www.gbtubulars.com.

Pertinent Excerpt from GB Running Procedure

5. Stab the pin carefully into the coupling of the joint hanging in the rotary table. A stabbing guide is recommended to protect the pin nose and leading thread from physical damage that may contribute to thread galling. Make up each connection until shoulder engagement plus delta torque ≥ 10% of the shoulder torque without exceeding the Maximum Makeup Torque. Record the shoulder torque observed for the first 10 joints (excluding threadlocked accessory joints). The Running Torque is (a) the Minimum Makeup Torque shown on the GB Connection Performance Property Sheets or (b) the Maximum Shoulder Torque recorded from the first 10 makeups + 10%, whichever is higher (rounded to the next highest 500 ft.-lbs.) When making up the initial joints for establishing the Running Torque carefully watch the torque gauge for the shoulder torque and try to manually shut down the tongs before reaching Maximum Makeup Torque shown on the GB Connection Performance Property Sheets. Alternately, the dump valve should be set to the Maximum Makeup Torque during this initial process.

6. After the first 10 makeups (more if necessary due to conditions at the time of the run), use the "Running Torque" established in Step 5 for the remainder of the string. A dump valve is strongly recommended to stop makeup once the established Running Torque is achieved.

Casing Data		Comment
OD (in)		See GB Connection Data Sheet
Weight (ppf)		See GB Connection Data Sheet
Grade		See GB Connection Data Sheet
Min MU Torque (ft-lbs)		See GB Connection Data Sheet
Max MU Torque (ft-lbs)		(2 X Min MU Tq)
Max Operating Torque (ft-lbs)		The Maximum Operating Torque is **NOT** the Maximum Makeup Torque and is **NOT** a sustainable rotating torque. Operating at the Maximum Operating Torque for any length of time will likely damage the connection.

Notes	Joint No.	Shoulder Torque (ft-lbs)	Final Torque (ft-lbs)	Triangle Stamp Position Sketch (△)
Required	1			
Required	2			
Required	3			
Required	4			
Required	5			
Required	6			
Required	7			
Required	8			
Required	9			
Required	10			
Optional	11			
Optional	12			
Optional	13			
Optional	14			
Optional	15			
Max. Shoulder Torque				
A Max. Shoulder Torque + 10%				
B Min. Makeup Torque (from GB Conn. Data Sheet)				
Running Torque (ft-lbs)			**A** or **B**, whichever is greater.	

Optional joints should be added if there is wide variability in shoulder torques recorded during the initial 10 joints. Judgement should be used to determine if more than 10 joints are needed for the purpose of establishing the Running Torque and, if so, how many more should be added.

Wide variations in Shoulder Torque during the first ten (10) joints suggest other issues requiring attention such as poor alignment, improper amount and distribution of thread compound, etc. Refer to 2nd paragraph of GB Running Procedure for possible contributing factors to aid troubleshooting.

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