

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTCarlsbad Field Office
OCD Hobbs
FORM APPROVED
NO. 1004-0137
Expires: January 31, 2018
5. Lease Serial No.
NMNM15321
6. Indian, Allottee or Tribe Name**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other Instructions on page 2**

AUG 21 2019

RECEIVED

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		7. If Unit or CA/Agreement, Name and/or No.
2. Name of Operator KAISER FRANCIS OIL COMPANY Contact: ERIC HANSEN E-Mail: EricH@KFOC.net		8. Well Name and No. RED HILLS 402H
3a. Address TULSA, OK 74121-1468	3b. Phone No. (include area code) Ph: 918-491-4339	9. API Well No. 30-025-45387-00-X1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 31 T25S R33E NESW 2400FSL 1795FWL 32.086391 N Lat, 103.614319 W Lon		10. Field and Pool or Exploratory Area JENNINGS
		11. County or Parish, State LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Kaiser Francis Oil Company request to change the casing plan for the Red Hills 402H API# 30-025-45387.

Due to offset operators completing nearby wells, Kaiser Francis proposes to change the casing design. Changing the design should not affect the wells production. It will be used to protect the salt formations, and aid in well control due to close proximity of offset hydraulic fracturing being performed on shallower intervals. Kaiser Francis Oil Company would like to proceed with the following four string casing design.

17-1/2" hole size --> set 13-3/8" set to 950'
12-1/4" hole size --> set 10-3/4" set to 5000'

14. I hereby certify that the foregoing is true and correct. Electronic Submission #465592 verified by the BLM Well Information System For KAISER FRANCIS OIL COMPANY, sent to the Hobbs Committed to AFMSS for processing by PRISCILLA PEREZ on 05/16/2019 (19PP1935SE)	
Name (Printed/Typed) ERIC HANSEN	Title DRILLING ENGINEER
Signature (Electronic Submission)	Date 05/15/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By DYLAN ROSSMANGO	Title PETROLEUM ENGINEER	Date 07/09/2019
Approval of this notice 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.		Office Hobbs

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

KE

Additional data for EC transaction #465592 that would not fit on the form

32. Additional remarks, continued

9-7/8" hole size -> set 7-5/8" set to 11,500'

6-3/4" hole size -> set to 19,900'MD.

Attached is casing detail and updated WBD. Cement will be brought to surface on Surface hole, Intermediate I, and Intermediate II strings. Cement will be attempted to be brought to surface on the production string.

Lea County, NM
Lea County, NM

Conductor 20" @ 80'
Surface Hole
13 3/8" J-55 54.5# BTC
Set 0' to 950'
TOC @ surface

2500' of 10 3/4" J-55 40.5 BTC & 2500' of 10 3/4" L-80HC BTS (both BTC SCC)
Set 0' to 5000'
TOC @ surface

Interval	Mud Type	MW
Surface (100' - 950')	FW	8.4 - 8.8
Intermediate 1 (950' -5,000')	Brine	10
Intermediate 2 (5,000' -11,500')	FW	9.0-9.3
Lateral (11,500' - 19,900')	OBM	12.5-13

Intermediate Csg
7 5/8" 29.7 HCP-110 BTC
Set 0' to 11,500'
TOC @ surface
DV Tool @ 5,000'

6 3/4"

6 3/4"

Cemented.- TOC @ Surface'

TD = 19,800' MD
12,250' TVD

10.25" OD

Equipment Location	Formation Type	TYD
Rustler	860	
Salt	1200	
Top of Salt	2000	
Base of Salt	4450	
Lamar	4750	
Red Canyon	4870	
Cherry Canyon	5860	
Brushy Canyon	8600	
West of Canyon	8800	
2 BSS	9000	
2 BSS	10510	
3 BSS	10950	
3 BSS	11645	
West Camp	12070	

Interval	Length	Casing Size	Weight (lb/ft)	Grade	Thrust	Formation	Table Size	TYD (ft)
Conductor	120	20"				New	17.5	960
Surface	950	12-3/8"	54.5	155	BTC	New	12.25	2,500
Intermediate	0-1500	10-3/4"	40.5	155	140 HC	New	12.25	5,000
Intermediate	2500-5000	10-3/4"	45.5	140 HC	140 HC	New	9.875	11,500
Intermediate	11500	7-5/8"	29.7	NCP-110	BTC	New	6.75	12,250
Intermediate	11900	7-5/8"	29.7	NCP-110	BTC	New	6.75	12,250

Head Type	Head Weight (lb)	Depth	Velocity	Field Loss
FW	8.4-9.0	910	31-34	NC
Cut Bore	8.8-10	2500	34	NC
Cut Bore	8.8-10	5000	34	NC
Cut Bore	8.8-9.2	11700	34	NC
OBM	12.5-13.0	15644	48-52	<10

Anticipated Head Weight (lb)	Min Flow Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength
9	445	1540	3130	679000	420000
10	1300	1540	3130	679000	420000
10	2060	2940	5210	1040000	1040000
5-2	5502	6700	9460	940000	795000
13	8281	13150	14560	779000	629000

Collapse Safety Factor (Table 2.3)	Design Safety Factor (Table 2.4)	Body Tensile Safety Factor (Table 2.5)	Joint Tensile Safety Factor (Table 2.6)
1.6	7.0	12.1	8.1
1.2	2.4	6.2	4.1
1.1	2.0	4.6	4.7
1.2	1.7	2.8	2.3
1.5	1.7	3.0	2.6



U. S. Steel Tubular Products

5 1/2 20.00 lb (0.361) P110 HP

USS-EAGLE SFH™

	PIPE	CONNECTION	
MECHANICAL PROPERTIES			
Minimum Yield Strength	125,000		psi
Maximum Yield Strength	140,000		psi
Minimum Tensile Strength	130,000		psi
DIMENSIONS			
Outside Diameter	5.500	5.830	in.
Wall Thickness	0.361		in.
Inside Diameter	4.778	4.693	in.
Drift - API	4.653	4.653	in.
Nominal Linear Weight, T&C	20.00		lbs/ft
Plain End Weight	19.83		lbs/ft
SECTION AREA			
Cross Sectional Area Critical Area	5.828	5.027	sq. in.
Joint Efficiency		86.25	%
PERFORMANCE			
Minimum Collapse Pressure	13,150	13,150	psi
External Pressure Leak Resistance		10,000	psi
Minimum Internal Yield Pressure	14,360	14,360	psi
Minimum Pipe Body Yield Strength	729,000		lbs
Joint Strength		629,000	lbs
Compression Rating		629,000	lbs
Reference Length		21,146	ft
Maximum Uniaxial Bend Rating		89.9	deg/100 ft
MAKE-UP DATA			
Minimum Make-Up Torque		14,200	ft-lbs
Maximum Make-Up Torque		16,800	ft-lbs
Maximum Operating Torque		25,700	ft-lbs
Make-Up Loss		5.92	in.

Notes:

- 1) Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- 2) Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
- 3) Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- 4) Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- 5) Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.
- 6) Connection external pressure resistance has been verified to 10,000 psi (Fit-For-Service testing protocol).

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Manuel USS Product Data Sheet 2017 rev26 (Sept)

U. S. Steel Tubular Products
10343 Sam Houston Park Dr., #120
Houston, TX 77064

1-877-893-9461
connections@uss.com
www.usstubular.com

PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Kaiser Francis Oil Company
LEASE NO.:	NMNM15321
WELL NAME & NO.:	Red Hills 402H
SURFACE HOLE FOOTAGE:	2400' FSL & 1735' FWL
BOTTOM HOLE FOOTAGE:	100' FNL & 1122' FWL
LOCATION:	Section 31, T 25S, R 33E, NMPM
COUNTY:	Lea County, New Mexico

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both

Besides those listed below, all previous Conditions of Approval still apply.

A. CASING

1. The 13-3/8" surface casing shall be set at approximately **950'** (a minimum of 25' into the Rustler Anhydrite and above the salt) and cemented to surface.
 - a. **If cement does not circulate to surface**, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of **6 hours** after pumping cement, ideally between 8-10 hours after completing the cement job.
 - b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.
 - c. If cement falls back, remedial cementing will be done prior to drilling out that string.
 - d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
2. The 10-3/4" intermediate casing shall be cemented to surface.
 - a. **If cement does not circulate to surface**, see A.1.a, c & d.
 - b. Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- i. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with the second stage.
 - ii. Second stage via DV tool: Cement to surface. If cement does not circulate, contact the appropriate BLM office.
3. The 7-5/8" intermediate casing shall be cemented shall be cemented with at least 200'tie-back into the previous casing:
 - a. In Medium Cave/Karst Areas, if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
4. The 5-1/2" production casing shall be cemented with at least 200'tie-back into the previous casing:
 - a. In Medium Cave/Karst Areas, if cement does not circulate to surface on two of the first three casing strings, the cement on the 4th casing string must come to surface.

All other applicable Conditions of Approval still apply.

DR 7/9/2019