

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD - HOBBS
05/15/2020
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

| | | |
|---|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NMNM122620 |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other | | 6. If Indian, Allottee or Tribe Name |
| 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone | | 7. If Unit or CA Agreement, Name and No. |
| 2. Name of Operator KAISER FRANCIS OIL COMPANY [12361] | | 8. Lease Name and Well No. RED HILLS FEDERAL [5467] 606H |
| 3a. Address 6733 S. Yale Ave., Tulsa, OK 74121 | 3b. Phone No. (include area code) (918) 491-0000 | 9. API Well No. 30-025-47185 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE / 300 FNL / 995 FEL / LAT 32.093495 / LONG -103.606067 At proposed prod. zone SESE / 100 FSL / 400 FEL / LAT 32.065572 / LONG -103.6041408 | | 10. Field and Pool, or Exploratory [98158] WC-025 G-08 S253236A;UPR WOLFCAMP |
| 14. Distance in miles and direction from nearest town or post office* 25 miles | | 12. County or Parish LEA |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 300 feet | | 13. State NM |
| 16. No of acres in lease 440.2 | | 17. Spacing Unit dedicated to this well 640.0 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20 feet | | 20. BLM/BIA Bond No. in file FED: WYB000055 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3400 feet | | 22. Approximate date work will start* 03/15/2020 |
| | | 23. Estimated duration 40 days |
| 24. Attachments | | |

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

| | | |
|--|--|--------------------|
| 25. Signature (Electronic Submission) | Name (Printed/Typed) Melanie Wilson / Ph: (918) 491-0000 | Date 01/09/2020 |
| Title Regulatory Analyst | | |
| Approved by (Signature) (Electronic Submission) | Name (Printed/Typed) Christopher Walls / Ph: (575) 234-2234 | Date 04/30/2020 |
| Title Petroleum Engineer | | |

Application approval 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.

Conditions of approval, if any, are attached.

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.

GCP Rec 05/15/2020

SL

APPROVED WITH CONDITIONS
Approval Date: 04/30/2020

KZ
05/18/2020



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

05/11/2020

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Melanie Wilson

Signed on: 01/09/2020

Title: Regulatory Analyst

Street Address: 106 W. Riverside Drive

City: Carlsbad

State: NM

Zip: 88220

Phone: (575)914-1461

Email address: nmogrservices@gmail.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



APD ID: 10400052998

Submission Date: 01/09/2020

Highlighted data
reflects the most
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400052998

Tie to previous NOS? N

Submission Date: 01/09/2020

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: NMNM122620

Lease Acres: 440.2

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

Master 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 FEDERAL

Well Number: 606H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: BELL LAKE

Pool Name: BONE SPRING,
SOUTH

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

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

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

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: RED HILLS **Number:** 8

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: 300 FT

Reservoir well spacing assigned acres Measurement: 640 Acres

Well plat: RED_HILLS___PAYMENT_CONF_20200109135922.pdf

Red_Hills_Fed_606H_C102_20200109135937.pdf

Well work start Date: 03/15/2020

Duration: 40 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 6457B

Reference Datum: GROUND LEVEL

| Wellbore | 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 | Will this well produce from this lease? |
|------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|------------|--------------|--------|-------------|-------------|------------|--------------|-----------|-------|-------|---|
| SHL Leg #1 | 300 | FNL | 995 | FEL | 25S | 33E | 31 | Aliquot NENE | 32.093495 | - 103.606067 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 122620 | 3400 | 0 | 0 | Y |
| KOP Leg #1 | 475 | FSL | 438 | FEL | 25S | 33E | 30 | Aliquot NENE | 32.0956168 | - 103.604249 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 110838 | - 8742 | 12184 | 12142 | N |

Operator Name: KAISER FRANCIS OIL COMPANY**Well Name:** RED HILLS FEDERAL**Well Number:** 606H

| Wellbore | 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 | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|-----------|---------------|--------|-------------|-------------|------------|--------------|-----------|-------|-------|---|
| PPP Leg #1-1 | 0 | FNL | 405 | FEL | 25S | 33E | 31 | Aliquot NENE | 32.094305 | - 103.604149 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 122620 | - 9345 | 13025 | 12745 | Y |
| PPP Leg #1-2 | 100 | FNL | 400 | FEL | 25S | 33E | 31 | Aliquot NWN W | 32.094045 | - 103.604146 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 122620 | - 9355 | 13124 | 12755 | Y |
| PPP Leg #1-3 | 1320 | FSL | 400 | FEL | 25S | 33E | 31 | Aliquot SESE | 32.083393 | - 103.604144 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 015321 | - 9355 | 16984 | 12755 | Y |
| EXIT Leg #1 | 100 | FSL | 400 | FEL | 26S | 33E | 6 | Aliquot SESE | 32.065572 | - 103.6041408 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 015321 | - 9355 | 23483 | 12755 | Y |
| BHL Leg #1 | 100 | FSL | 400 | FEL | 26S | 33E | 6 | Aliquot SESE | 32.065572 | - 103.6041408 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 015321 | - 9355 | 23483 | 12755 | Y |

We value your feedback!

Let us know how we did. Complete our [short two minute survey](#).

Tracking Information

Pay.gov Tracking ID: 26MM0MMM

Agency Tracking ID: 75923295565

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: Bank account (ACH)

Payment Amount: \$112,530.00

Transaction Date: 01/07/2020 06:06:24 PM EST

Payment Date: 01/08/2020

Company: KAISER FRANCIS OIL COMPANY

APD IDs: 10400052977, 10400052992, 10400053005, 10400053006, 10400052983, 10400053001, 10400053004, 10400052994, 10400053000, 10400052998, 10400052997

Lease Numbers: NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620, NMNM-122620

Well Numbers: 201H, 701H, 203H, 703H, 604H, 605H, 705H, 206H, 506H, 606H, 706H

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

Account Holder Name: Kaiser-Francis Oil Co

Routing Number: 103900036

Account Number: *****1125



APD ID: 10400052998

Submission Date: 01/09/2020

Highlighted data
reflects the most
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

[Show Final Text](#)

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 |
|--------------|------------------|-----------|---------------------|----------------|-----------------|-------------------|---------------------|
| 628797 | --- | 3400 | 0 | 0 | OTHER : Surface | NONE | N |
| 628798 | RUSTLER | 2540 | 860 | 860 | SANDSTONE | NONE | N |
| 628799 | SALADO | 2200 | 1200 | 1200 | SALT | NONE | N |
| 628800 | TOP SALT | 1400 | 2000 | 2000 | SALT | NONE | N |
| 628801 | BASE OF SALT | -1050 | 4450 | 4450 | SALT | NONE | N |
| 628802 | LAMAR | -1350 | 4750 | 4750 | SANDSTONE | NATURAL GAS, OIL | N |
| 628803 | BELL CANYON | -1470 | 4870 | 4870 | SANDSTONE | NATURAL GAS, OIL | N |
| 628804 | CHERRY CANYON | -2460 | 5860 | 5860 | SANDSTONE | NATURAL GAS, OIL | N |
| 628805 | BRUSHY CANYON | -5200 | 8600 | 8600 | SANDSTONE | NATURAL GAS, OIL | N |
| 628815 | BONE SPRING | -5400 | 8800 | 8800 | SANDSTONE | NATURAL GAS, OIL | N |
| 628814 | AVALON SAND | -5610 | 9010 | 9010 | SANDSTONE | NATURAL GAS, OIL | Y |
| 628816 | BONE SPRING 1ST | -6550 | 9950 | 9950 | SANDSTONE | NATURAL GAS, OIL | N |
| 631043 | BONE SPRING 2ND | -7110 | 10510 | 10510 | SANDSTONE | NATURAL GAS, OIL | N |
| 631044 | BONE SPRING LIME | -7550 | 10950 | 10950 | LIMESTONE | NATURAL GAS, OIL | N |
| 631045 | BONE SPRING 3RD | -8285 | 11685 | 11685 | SANDSTONE | NATURAL GAS, OIL | N |
| 631046 | WOLFCAMP | -8670 | 12070 | 12070 | SANDSTONE | NATURAL GAS, OIL | Y |

Section 2 - Blowout Prevention

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Pressure Rating (PSI): 5M

Rating Depth: 13000

Equipment: A 10M system will be installed according to Onshore Order #2 consisting of an Annular Preventer, BOP with two rams, a blind ram and safety valves and appropriate handles located on the rig floor. 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 5M Annular Variance

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure stated. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. The Annular shall be functionally operated at least weekly. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Choke Diagram Attachment:

Red_Hills_Fed_606H_Choke_Manifold_20200109142014.pdf

BOP Diagram Attachment:

Well_Control_Plan_20200102074248.pdf

Red_Hills_Fed_606H_BOP_20200109142035.pdf

Red_Hills_Fed_606H_Wellhead_20200109142040.pdf

Red_Hills_Fed_606H_Flex_Hose_20200109142044.pdf

Annular_BOP_Variance_Request_20200109142120.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 | 950 | 0 | 950 | 3400 | 2450 | 950 | J-55 | 40.5 | ST&C | 3.6 | 7 | DRY | 10.9 | DRY | 16.3 |
| 2 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 0 | 12083 | 0 | 12042 | | -8642 | 12083 | HCP-110 | 29.7 | LT&C | 1.2 | 1.6 | DRY | 2.6 | DRY | 2.6 |
| 3 | PRODUCTION | 6.75 | 5.5 | NEW | API | N | 0 | 23483 | 0 | 12755 | | -9355 | 23483 | P-110 | 20 | OTHER - Eagle SF | 1.4 | 1.6 | DRY | 2.5 | DRY | 2.5 |

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_Fed_606H_Casing_Assumptions_20200109142605.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_Fed_606H_Casing_Assumptions_20200109142440.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_Fed_606H_Prod_Csg_Specs_20200109142711.pdf

Section 4 - Cement

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|-------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|-------------|-----------|
| SURFACE | Lead | | 0 | 950 | 570 | 1.33 | 14.8 | 761 | 50 | Halcem | Bentonite |

| | | | | | | | | | | | |
|--------------|------|--|-----------|-----------|-----|------|------|------|----|----------|-------------|
| INTERMEDIATE | Lead | | 0 | 1208 3 | 940 | 2.77 | 12 | 2609 | 25 | NeoCem | Extender |
| INTERMEDIATE | Tail | | 0 | 1208 3 | 531 | 1.22 | 15.6 | 648 | 25 | Halcem | Accelerator |
| PRODUCTION | Lead | | 1000 0 | 2348 3 | 723 | 1.95 | 12.5 | 1410 | 25 | EconoCem | Halad |

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 |
|-----------|--------------|-----------------------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 950 | 1204 2 | OTHER : Diesel- Brine Emulsion | 8.8 | 9.2 | | | | | | | |
| 1204 2 | 1275 5 | OTHER : Oil Based Mud | 10 | 12.5 | | | | | | | |
| 0 | 950 | OTHER : FRESH WATER | 8.4 | 9 | | | | | | | |

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Section 6 - Test, Logging, Coring

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

Top of cement on production casing will be determined by calculation.

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

DIRECTIONAL SURVEY, GAMMA RAY LOG, MUD LOG/GEOLOGIC LITHOLOGY LOG,

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8291

Anticipated Surface Pressure: 5484

Anticipated Bottom Hole Temperature(F): 199

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:

Red_Hills_Federal_H2S_Plan_20200107132250.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Red_Hills_Fed_606H_Directional_Plan_20200109143437.pdf

Other proposed operations facets description:

Gas Capture Plan attached

Other proposed operations facets attachment:

Red_Hills_Pad_8_GCP_20200109143450.pdf

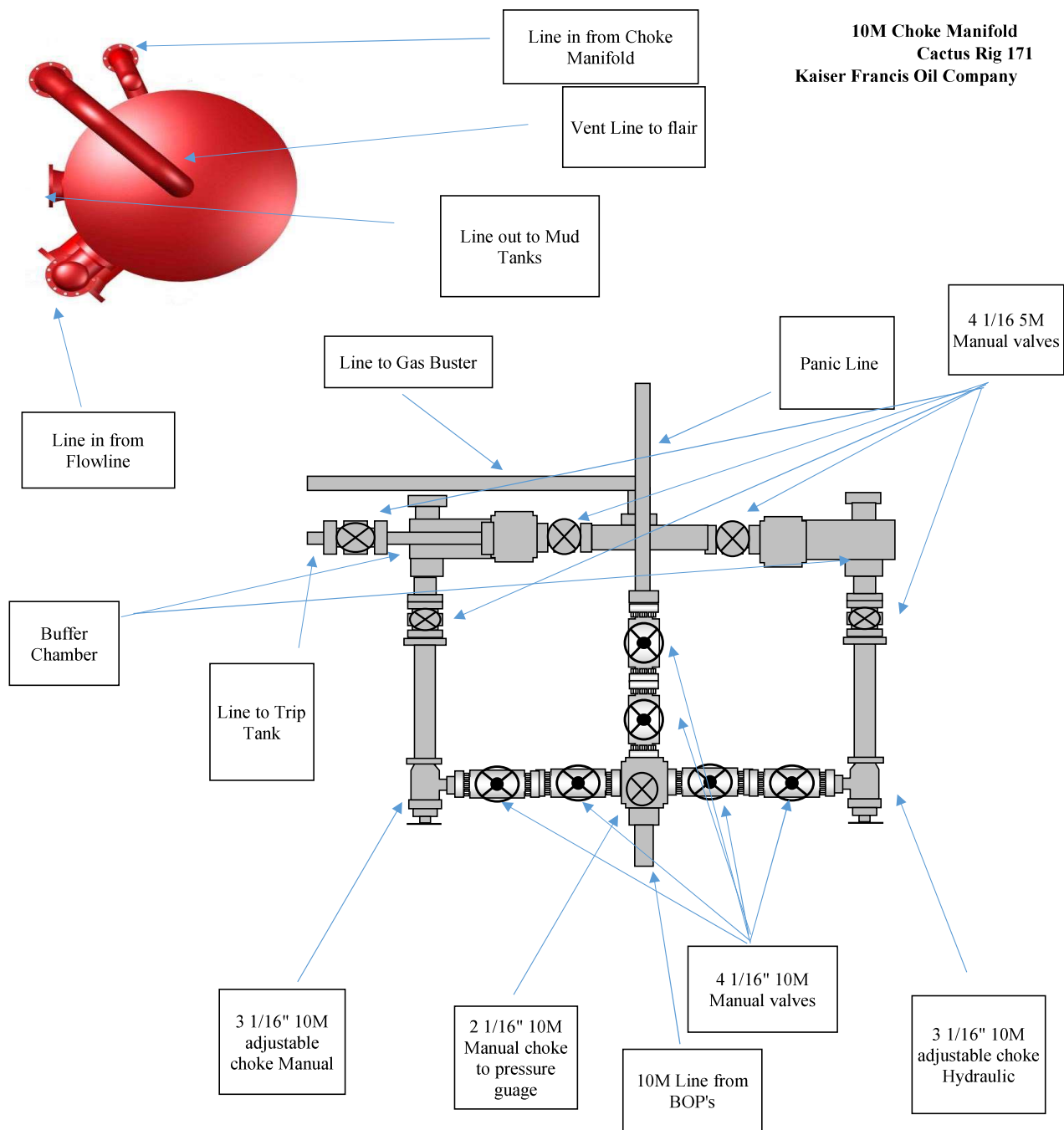
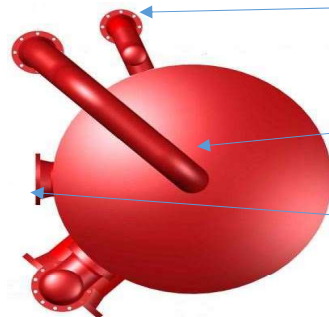
Other Variance attachment:

Annular_BOP_Variance_Request_20200109143512.pdf

Red_Hills_Fed_606H_Flex_Hose_20200109143513.pdf

Red_Hills_Fed_606H_Wellhead_20200109143514.pdf

**10M Choke Manifold
Cactus Rig 171
Kaiser Francis Oil Company**



CASING DETAILS

| TVD | MD | Name |
|----------|----------|---------|
| 950.00 | 950.00 | 13 3/8" |
| 12042.00 | 12083.27 | 7 5/8" |



Azimuths to Grid North
 True North: -0.39°
 Magnetic North: 6.23°

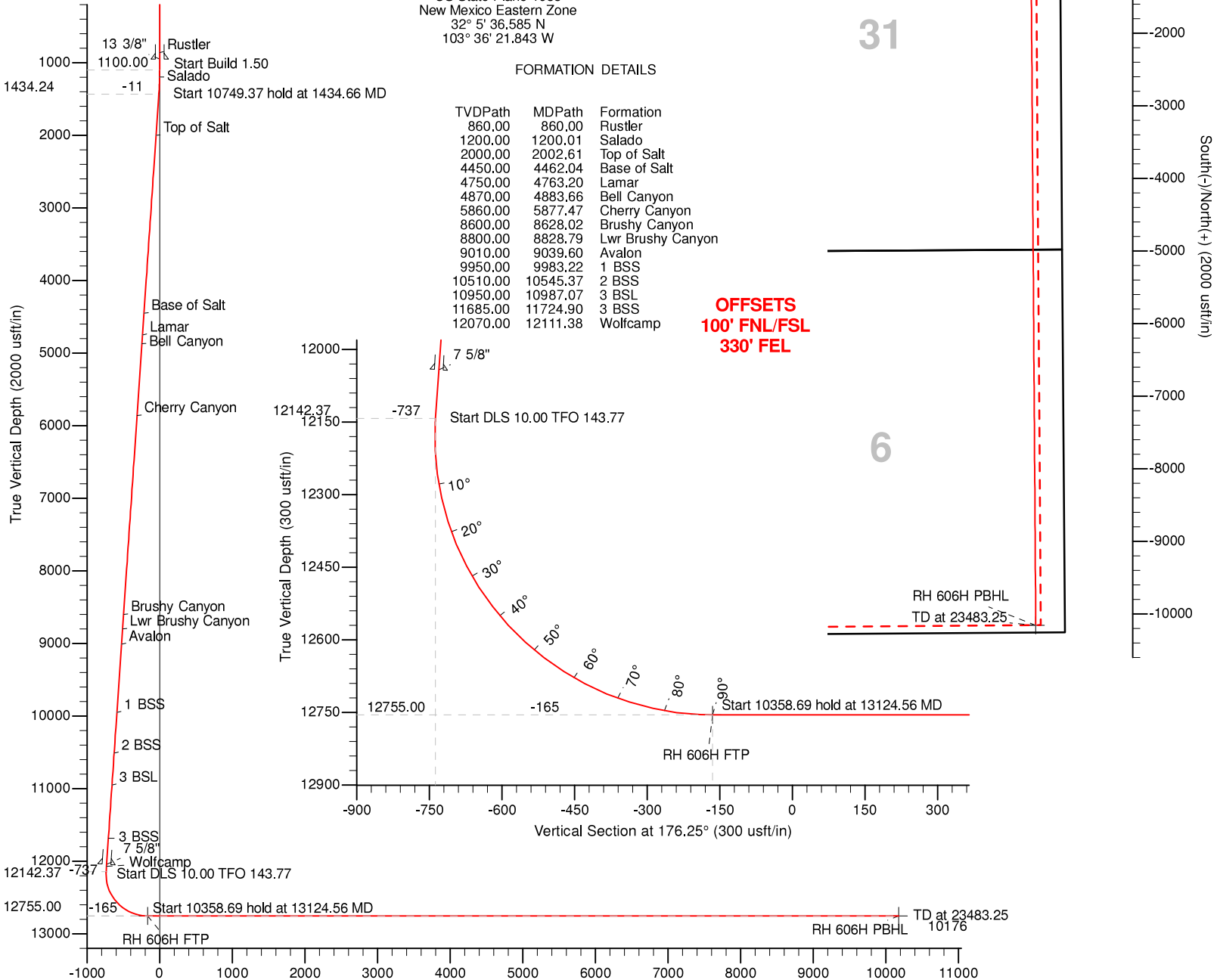
Magnetic Field
 Strength: 47470.4nT
 Dip Angle: 59.79°
 Date: 11/26/2020
 Model: IGRF2020

US State Plane 1983
 New Mexico Eastern Zone
 32° 5' 36.585 N
 103° 36' 21.843 W

FORMATION DETAILS

| TVDPath | MDPath | Formation |
|----------|----------|-------------------|
| 860.00 | 860.00 | Rustler |
| 1200.00 | 1200.01 | Salado |
| 2000.00 | 2002.61 | Top of Salt |
| 4450.00 | 4462.04 | Base of Salt |
| 4750.00 | 4763.20 | Lamar |
| 4870.00 | 4883.66 | Bell Canyon |
| 5860.00 | 5877.47 | Cherry Canyon |
| 8600.00 | 8628.02 | Brushy Canyon |
| 8800.00 | 8828.79 | Lwr Brushy Canyon |
| 9010.00 | 9039.60 | Avalon |
| 9950.00 | 9983.22 | 1 BSS |
| 10510.00 | 10545.37 | 2 BSS |
| 10950.00 | 10987.07 | 3 BSL |
| 11685.00 | 11724.90 | 3 BSS |
| 12070.00 | 12111.38 | Wolfcamp |

OFFSETS
100' FNL/FSL
330' FEL



SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | Vsect | Target | |
|-----|----------|-------|--------|----------|-----------|--------|-------|--------|----------|--------------|-------------------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | S31-T25S-R33E SL |
| 2 | 1100.00 | 0.00 | 0.00 | 1100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 300'FNL 995'FEL |
| 3 | 1434.66 | 5.02 | 35.73 | 1434.24 | 11.89 | 8.56 | 1.50 | 35.73 | -11.31 | | S31-T25S-R33E FTP |
| 4 | 12184.03 | 5.02 | 35.73 | 12142.37 | 775.43 | 557.87 | 0.00 | 0.00 | -737.29 | | 100'FNL 400'FEL |
| 5 | 13124.56 | 90.00 | 179.60 | 12755.00 | 204.14 | 593.56 | 10.00 | 143.77 | -164.89 | RH 606H FTP | S6-T26S-R33E PBHL |
| 6 | 23483.25 | 90.00 | 179.60 | 12755.00 | -10154.30 | 665.39 | 0.00 | 0.00 | 10176.08 | RH 606H PBHL | 100'FSL 400'FEL |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

| | | | |
|--------------------|---------------------------|----------------------|-----------------------------|
| Project | Permian NM E'83 | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | New Mexico Eastern Zone | | Using geodetic scale factor |

| | | | |
|------------------------------|-----------------------------------|--------------------------|-------------------|
| Site | Red Hills Pad 8, Centered on 706H | | |
| Site Position: | | Northing: | 398,509.21 usft |
| From: | Map | Easting: | 766,434.78 usft |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13-3/16 " |
| | | Latitude: | 32° 5' 36.585 N |
| | | Longitude: | 103° 36' 23.238 W |
| | | Grid Convergence: | 0.39 ° |

| | | | |
|-----------------------------|-------------------------|----------------------------|----------------------------------|
| Well | Red Hills 606H - Slot G | | |
| Well Position | +N/-S | 0.00 usft | Northing: 398,510.03 usft |
| | +E/-W | 0.00 usft | Easting: 766,554.78 usft |
| Position Uncertainty | 0.00 usft | Wellhead Elevation: | usft |
| | | Latitude: | 32° 5' 36.585 N |
| | | Longitude: | 103° 36' 21.843 W |
| | | Ground Level: | 3,400.20 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | #606H OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2020 | 11/26/20 | 6.62 | 59.79 | 47,470.43070801 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| Design | Plan #1 | | | | |
| Audit Notes: | | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.00 | |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 176.25 | |

| | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| Planned Survey | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 860.00 | 0.00 | 0.00 | 860.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rustler | | | | | | | | | |
| 950.00 | 0.00 | 0.00 | 950.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13 3/8" | | | | | | | | | |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 1.50 | 35.73 | 1,199.99 | 1.06 | 0.76 | -1.01 | 1.50 | 1.50 | 0.00 |
| 1,200.01 | 1.50 | 35.73 | 1,200.00 | 1.06 | 0.76 | -1.01 | 0.00 | 0.00 | 0.00 |
| Salado | | | | | | | | | |
| 1,300.00 | 3.00 | 35.73 | 1,299.91 | 4.25 | 3.06 | -4.04 | 1.50 | 1.50 | 0.00 |
| 1,400.00 | 4.50 | 35.73 | 1,399.69 | 9.56 | 6.88 | -9.09 | 1.50 | 1.50 | 0.00 |
| 1,434.66 | 5.02 | 35.73 | 1,434.24 | 11.89 | 8.56 | -11.31 | 1.50 | 1.50 | 0.00 |
| 1,500.00 | 5.02 | 35.73 | 1,499.32 | 16.53 | 11.90 | -15.72 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 5.02 | 35.73 | 1,598.94 | 23.64 | 17.01 | -22.47 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 5.02 | 35.73 | 1,698.55 | 30.74 | 22.12 | -29.23 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 5.02 | 35.73 | 1,798.17 | 37.84 | 27.23 | -35.98 | 0.00 | 0.00 | 0.00 |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,900.00 | 5.02 | 35.73 | 1,897.79 | 44.95 | 32.34 | -42.74 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 5.02 | 35.73 | 1,997.40 | 52.05 | 37.45 | -49.49 | 0.00 | 0.00 | 0.00 |
| 2,002.61 | 5.02 | 35.73 | 2,000.00 | 52.23 | 37.58 | -49.67 | 0.00 | 0.00 | 0.00 |
| Top of Salt | | | | | | | | | |
| 2,100.00 | 5.02 | 35.73 | 2,097.02 | 59.15 | 42.56 | -56.24 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 5.02 | 35.73 | 2,196.64 | 66.26 | 47.67 | -63.00 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 5.02 | 35.73 | 2,296.25 | 73.36 | 52.78 | -69.75 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 5.02 | 35.73 | 2,395.87 | 80.46 | 57.89 | -76.50 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 5.02 | 35.73 | 2,495.49 | 87.56 | 63.00 | -83.26 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 5.02 | 35.73 | 2,595.10 | 94.67 | 68.11 | -90.01 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 5.02 | 35.73 | 2,694.72 | 101.77 | 73.22 | -96.77 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 5.02 | 35.73 | 2,794.34 | 108.87 | 78.33 | -103.52 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 5.02 | 35.73 | 2,893.95 | 115.98 | 83.44 | -110.27 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 5.02 | 35.73 | 2,993.57 | 123.08 | 88.55 | -117.03 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 5.02 | 35.73 | 3,093.18 | 130.18 | 93.66 | -123.78 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 5.02 | 35.73 | 3,192.80 | 137.29 | 98.77 | -130.53 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 5.02 | 35.73 | 3,292.42 | 144.39 | 103.88 | -137.29 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 5.02 | 35.73 | 3,392.03 | 151.49 | 108.99 | -144.04 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 5.02 | 35.73 | 3,491.65 | 158.60 | 114.10 | -150.80 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 5.02 | 35.73 | 3,591.27 | 165.70 | 119.21 | -157.55 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 5.02 | 35.73 | 3,690.88 | 172.80 | 124.32 | -164.30 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 5.02 | 35.73 | 3,790.50 | 179.90 | 129.43 | -171.06 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 5.02 | 35.73 | 3,890.12 | 187.01 | 134.54 | -177.81 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 5.02 | 35.73 | 3,989.73 | 194.11 | 139.65 | -184.56 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 5.02 | 35.73 | 4,089.35 | 201.21 | 144.76 | -191.32 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 5.02 | 35.73 | 4,188.97 | 208.32 | 149.87 | -198.07 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 5.02 | 35.73 | 4,288.58 | 215.42 | 154.98 | -204.83 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 5.02 | 35.73 | 4,388.20 | 222.52 | 160.09 | -211.58 | 0.00 | 0.00 | 0.00 |
| 4,462.04 | 5.02 | 35.73 | 4,450.00 | 226.93 | 163.26 | -215.77 | 0.00 | 0.00 | 0.00 |
| Base of Salt | | | | | | | | | |
| 4,500.00 | 5.02 | 35.73 | 4,487.81 | 229.63 | 165.20 | -218.33 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 5.02 | 35.73 | 4,587.43 | 236.73 | 170.31 | -225.09 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 5.02 | 35.73 | 4,687.05 | 243.83 | 175.42 | -231.84 | 0.00 | 0.00 | 0.00 |
| 4,763.20 | 5.02 | 35.73 | 4,750.00 | 248.32 | 178.65 | -236.11 | 0.00 | 0.00 | 0.00 |
| Lamar | | | | | | | | | |
| 4,800.00 | 5.02 | 35.73 | 4,786.66 | 250.94 | 180.53 | -238.59 | 0.00 | 0.00 | 0.00 |
| 4,883.66 | 5.02 | 35.73 | 4,870.00 | 256.88 | 184.81 | -244.24 | 0.00 | 0.00 | 0.00 |
| Bell Canyon | | | | | | | | | |
| 4,900.00 | 5.02 | 35.73 | 4,886.28 | 258.04 | 185.64 | -245.35 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 5.02 | 35.73 | 4,985.90 | 265.14 | 190.75 | -252.10 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 5.02 | 35.73 | 5,085.51 | 272.24 | 195.86 | -258.86 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 5.02 | 35.73 | 5,185.13 | 279.35 | 200.97 | -265.61 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 5.02 | 35.73 | 5,284.75 | 286.45 | 206.08 | -272.36 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 5.02 | 35.73 | 5,384.36 | 293.55 | 211.19 | -279.12 | 0.00 | 0.00 | 0.00 |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,500.00 | 5.02 | 35.73 | 5,483.98 | 300.66 | 216.30 | -285.87 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 5.02 | 35.73 | 5,583.60 | 307.76 | 221.41 | -292.62 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 5.02 | 35.73 | 5,683.21 | 314.86 | 226.52 | -299.38 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 5.02 | 35.73 | 5,782.83 | 321.97 | 231.63 | -306.13 | 0.00 | 0.00 | 0.00 |
| 5,877.47 | 5.02 | 35.73 | 5,860.00 | 327.47 | 235.59 | -311.36 | 0.00 | 0.00 | 0.00 |
| Cherry Canyon | | | | | | | | | |
| 5,900.00 | 5.02 | 35.73 | 5,882.44 | 329.07 | 236.74 | -312.88 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 5.02 | 35.73 | 5,982.06 | 336.17 | 241.85 | -319.64 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 5.02 | 35.73 | 6,081.68 | 343.28 | 246.96 | -326.39 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 5.02 | 35.73 | 6,181.29 | 350.38 | 252.07 | -333.15 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 5.02 | 35.73 | 6,280.91 | 357.48 | 257.18 | -339.90 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 5.02 | 35.73 | 6,380.53 | 364.58 | 262.29 | -346.65 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 5.02 | 35.73 | 6,480.14 | 371.69 | 267.40 | -353.41 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 5.02 | 35.73 | 6,579.76 | 378.79 | 272.51 | -360.16 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 5.02 | 35.73 | 6,679.38 | 385.89 | 277.62 | -366.91 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 5.02 | 35.73 | 6,778.99 | 393.00 | 282.73 | -373.67 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 5.02 | 35.73 | 6,878.61 | 400.10 | 287.84 | -380.42 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 5.02 | 35.73 | 6,978.23 | 407.20 | 292.95 | -387.18 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 5.02 | 35.73 | 7,077.84 | 414.31 | 298.07 | -393.93 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 5.02 | 35.73 | 7,177.46 | 421.41 | 303.18 | -400.68 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 5.02 | 35.73 | 7,277.07 | 428.51 | 308.29 | -407.44 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 5.02 | 35.73 | 7,376.69 | 435.62 | 313.40 | -414.19 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 5.02 | 35.73 | 7,476.31 | 442.72 | 318.51 | -420.94 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 5.02 | 35.73 | 7,575.92 | 449.82 | 323.62 | -427.70 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 5.02 | 35.73 | 7,675.54 | 456.92 | 328.73 | -434.45 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 5.02 | 35.73 | 7,775.16 | 464.03 | 333.84 | -441.21 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 5.02 | 35.73 | 7,874.77 | 471.13 | 338.95 | -447.96 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 5.02 | 35.73 | 7,974.39 | 478.23 | 344.06 | -454.71 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 5.02 | 35.73 | 8,074.01 | 485.34 | 349.17 | -461.47 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 5.02 | 35.73 | 8,173.62 | 492.44 | 354.28 | -468.22 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 5.02 | 35.73 | 8,273.24 | 499.54 | 359.39 | -474.97 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 5.02 | 35.73 | 8,372.86 | 506.65 | 364.50 | -481.73 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 5.02 | 35.73 | 8,472.47 | 513.75 | 369.61 | -488.48 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 5.02 | 35.73 | 8,572.09 | 520.85 | 374.72 | -495.24 | 0.00 | 0.00 | 0.00 |
| 8,628.02 | 5.02 | 35.73 | 8,600.00 | 522.84 | 376.15 | -497.13 | 0.00 | 0.00 | 0.00 |
| Brushy Canyon | | | | | | | | | |
| 8,700.00 | 5.02 | 35.73 | 8,671.70 | 527.96 | 379.83 | -501.99 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 5.02 | 35.73 | 8,771.32 | 535.06 | 384.94 | -508.74 | 0.00 | 0.00 | 0.00 |
| 8,828.79 | 5.02 | 35.73 | 8,800.00 | 537.10 | 386.41 | -510.69 | 0.00 | 0.00 | 0.00 |
| Lwr Brushy Canyon | | | | | | | | | |
| 8,900.00 | 5.02 | 35.73 | 8,870.94 | 542.16 | 390.05 | -515.50 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 5.02 | 35.73 | 8,970.55 | 549.26 | 395.16 | -522.25 | 0.00 | 0.00 | 0.00 |
| 9,039.60 | 5.02 | 35.73 | 9,010.00 | 552.08 | 397.18 | -524.92 | 0.00 | 0.00 | 0.00 |
| Avalon | | | | | | | | | |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,100.00 | 5.02 | 35.73 | 9,070.17 | 556.37 | 400.27 | -529.00 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 5.02 | 35.73 | 9,169.79 | 563.47 | 405.38 | -535.76 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 5.02 | 35.73 | 9,269.40 | 570.57 | 410.49 | -542.51 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 5.02 | 35.73 | 9,369.02 | 577.68 | 415.60 | -549.27 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 5.02 | 35.73 | 9,468.64 | 584.78 | 420.71 | -556.02 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 5.02 | 35.73 | 9,568.25 | 591.88 | 425.82 | -562.77 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 5.02 | 35.73 | 9,667.87 | 598.99 | 430.93 | -569.53 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 5.02 | 35.73 | 9,767.49 | 606.09 | 436.04 | -576.28 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 5.02 | 35.73 | 9,867.10 | 613.19 | 441.15 | -583.03 | 0.00 | 0.00 | 0.00 |
| 9,983.22 | 5.02 | 35.73 | 9,950.00 | 619.10 | 445.40 | -588.65 | 0.00 | 0.00 | 0.00 |
| 1 BSS | | | | | | | | | |
| 10,000.00 | 5.02 | 35.73 | 9,966.72 | 620.29 | 446.26 | -589.79 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 5.02 | 35.73 | 10,066.33 | 627.40 | 451.37 | -596.54 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 5.02 | 35.73 | 10,165.95 | 634.50 | 456.48 | -603.29 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 5.02 | 35.73 | 10,265.57 | 641.60 | 461.59 | -610.05 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 5.02 | 35.73 | 10,365.18 | 648.71 | 466.70 | -616.80 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 5.02 | 35.73 | 10,464.80 | 655.81 | 471.81 | -623.56 | 0.00 | 0.00 | 0.00 |
| 10,545.37 | 5.02 | 35.73 | 10,510.00 | 659.03 | 474.13 | -626.62 | 0.00 | 0.00 | 0.00 |
| 2 BSS | | | | | | | | | |
| 10,600.00 | 5.02 | 35.73 | 10,564.42 | 662.91 | 476.92 | -630.31 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 5.02 | 35.73 | 10,664.03 | 670.02 | 482.03 | -637.06 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 5.02 | 35.73 | 10,763.65 | 677.12 | 487.14 | -643.82 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 5.02 | 35.73 | 10,863.27 | 684.22 | 492.25 | -650.57 | 0.00 | 0.00 | 0.00 |
| 10,987.07 | 5.02 | 35.73 | 10,950.00 | 690.41 | 496.70 | -656.45 | 0.00 | 0.00 | 0.00 |
| 3 BSL | | | | | | | | | |
| 11,000.00 | 5.02 | 35.73 | 10,962.88 | 691.33 | 497.36 | -657.32 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 5.02 | 35.73 | 11,062.50 | 698.43 | 502.47 | -664.08 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 5.02 | 35.73 | 11,162.12 | 705.53 | 507.58 | -670.83 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 5.02 | 35.73 | 11,261.73 | 712.63 | 512.69 | -677.59 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 5.02 | 35.73 | 11,361.35 | 719.74 | 517.80 | -684.34 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 5.02 | 35.73 | 11,460.96 | 726.84 | 522.91 | -691.09 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 5.02 | 35.73 | 11,560.58 | 733.94 | 528.02 | -697.85 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 5.02 | 35.73 | 11,660.20 | 741.05 | 533.13 | -704.60 | 0.00 | 0.00 | 0.00 |
| 11,724.90 | 5.02 | 35.73 | 11,685.00 | 742.82 | 534.41 | -706.28 | 0.00 | 0.00 | 0.00 |
| 3 BSS | | | | | | | | | |
| 11,800.00 | 5.02 | 35.73 | 11,759.81 | 748.15 | 538.24 | -711.35 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 5.02 | 35.73 | 11,859.43 | 755.25 | 543.35 | -718.11 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 5.02 | 35.73 | 11,959.05 | 762.36 | 548.46 | -724.86 | 0.00 | 0.00 | 0.00 |
| 12,083.27 | 5.02 | 35.73 | 12,042.00 | 768.27 | 552.72 | -730.49 | 0.00 | 0.00 | 0.00 |
| 7 5/8" | | | | | | | | | |
| 12,100.00 | 5.02 | 35.73 | 12,058.66 | 769.46 | 553.57 | -731.62 | 0.00 | 0.00 | 0.00 |
| 12,111.38 | 5.02 | 35.73 | 12,070.00 | 770.27 | 554.16 | -732.38 | 0.00 | 0.00 | 0.00 |
| Wolfcamp | | | | | | | | | |
| 12,184.03 | 5.02 | 35.73 | 12,142.37 | 775.43 | 557.87 | -737.29 | 0.00 | 0.00 | 0.00 |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,200.00 | 3.85 | 49.94 | 12,158.29 | 776.34 | 558.69 | -738.15 | 10.00 | -7.33 | 88.95 |
| 12,250.00 | 3.91 | 130.27 | 12,208.21 | 776.32 | 561.27 | -737.96 | 10.00 | 0.11 | 160.66 |
| 12,300.00 | 8.10 | 158.27 | 12,257.93 | 771.94 | 563.88 | -733.42 | 10.00 | 8.39 | 56.00 |
| 12,350.00 | 12.88 | 166.52 | 12,307.09 | 763.24 | 566.48 | -724.57 | 10.00 | 9.56 | 16.49 |
| 12,400.00 | 17.79 | 170.31 | 12,355.29 | 750.29 | 569.07 | -711.47 | 10.00 | 9.80 | 7.59 |
| 12,450.00 | 22.73 | 172.50 | 12,402.19 | 733.17 | 571.62 | -694.23 | 10.00 | 9.89 | 4.38 |
| 12,500.00 | 27.69 | 173.94 | 12,447.41 | 712.03 | 574.11 | -672.97 | 10.00 | 9.93 | 2.88 |
| 12,550.00 | 32.66 | 174.97 | 12,490.62 | 687.02 | 576.52 | -647.85 | 10.00 | 9.95 | 2.06 |
| 12,600.00 | 37.64 | 175.75 | 12,531.49 | 658.33 | 578.83 | -619.08 | 10.00 | 9.96 | 1.57 |
| 12,650.00 | 42.63 | 176.38 | 12,569.70 | 626.19 | 581.04 | -586.86 | 10.00 | 9.97 | 1.25 |
| 12,700.00 | 47.61 | 176.89 | 12,604.97 | 590.83 | 583.11 | -551.44 | 10.00 | 9.97 | 1.03 |
| 12,750.00 | 52.60 | 177.33 | 12,637.03 | 552.53 | 585.03 | -513.09 | 10.00 | 9.98 | 0.88 |
| 12,800.00 | 57.59 | 177.72 | 12,665.63 | 511.57 | 586.80 | -472.11 | 10.00 | 9.98 | 0.77 |
| 12,850.00 | 62.58 | 178.06 | 12,690.55 | 468.28 | 588.39 | -428.80 | 10.00 | 9.98 | 0.69 |
| 12,900.00 | 67.58 | 178.38 | 12,711.61 | 422.97 | 589.79 | -383.50 | 10.00 | 9.98 | 0.63 |
| 12,950.00 | 72.57 | 178.67 | 12,728.65 | 375.99 | 591.00 | -336.54 | 10.00 | 9.98 | 0.59 |
| 13,000.00 | 77.56 | 178.95 | 12,741.53 | 327.71 | 592.01 | -288.30 | 10.00 | 9.99 | 0.55 |
| 13,050.00 | 82.55 | 179.21 | 12,750.16 | 278.48 | 592.79 | -239.12 | 10.00 | 9.99 | 0.53 |
| 13,100.00 | 87.55 | 179.48 | 12,754.47 | 228.69 | 593.36 | -189.40 | 10.00 | 9.99 | 0.52 |
| 13,124.56 | 90.00 | 179.60 | 12,755.00 | 204.14 | 593.56 | -164.89 | 10.00 | 9.99 | 0.52 |
| 13,200.00 | 90.00 | 179.60 | 12,755.00 | 128.70 | 594.08 | -89.57 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 179.60 | 12,755.00 | 28.70 | 594.78 | 10.25 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 179.60 | 12,755.00 | -71.30 | 595.47 | 110.08 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 179.60 | 12,755.00 | -171.30 | 596.16 | 209.91 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 179.60 | 12,755.00 | -271.30 | 596.86 | 309.74 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 179.60 | 12,755.00 | -371.29 | 597.55 | 409.57 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 179.60 | 12,755.00 | -471.29 | 598.24 | 509.40 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 179.60 | 12,755.00 | -571.29 | 598.94 | 609.23 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 179.60 | 12,755.00 | -671.29 | 599.63 | 709.06 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 179.60 | 12,755.00 | -771.28 | 600.32 | 808.89 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 179.60 | 12,755.00 | -871.28 | 601.02 | 908.72 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 179.60 | 12,755.00 | -971.28 | 601.71 | 1,008.54 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 179.60 | 12,755.00 | -1,071.28 | 602.40 | 1,108.37 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 179.60 | 12,755.00 | -1,171.27 | 603.10 | 1,208.20 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 179.60 | 12,755.00 | -1,271.27 | 603.79 | 1,308.03 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 179.60 | 12,755.00 | -1,371.27 | 604.48 | 1,407.86 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 179.60 | 12,755.00 | -1,471.27 | 605.18 | 1,507.69 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 179.60 | 12,755.00 | -1,571.26 | 605.87 | 1,607.52 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 179.60 | 12,755.00 | -1,671.26 | 606.56 | 1,707.35 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 179.60 | 12,755.00 | -1,771.26 | 607.26 | 1,807.18 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 179.60 | 12,755.00 | -1,871.26 | 607.95 | 1,907.00 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 179.60 | 12,755.00 | -1,971.25 | 608.65 | 2,006.83 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 179.60 | 12,755.00 | -2,071.25 | 609.34 | 2,106.66 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 179.60 | 12,755.00 | -2,171.25 | 610.03 | 2,206.49 | 0.00 | 0.00 | 0.00 |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 15,600.00 | 90.00 | 179.60 | 12,755.00 | -2,271.25 | 610.73 | 2,306.32 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 179.60 | 12,755.00 | -2,371.24 | 611.42 | 2,406.15 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 179.60 | 12,755.00 | -2,471.24 | 612.11 | 2,505.98 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 179.60 | 12,755.00 | -2,571.24 | 612.81 | 2,605.81 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 179.60 | 12,755.00 | -2,671.24 | 613.50 | 2,705.64 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 179.60 | 12,755.00 | -2,771.23 | 614.19 | 2,805.47 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 179.60 | 12,755.00 | -2,871.23 | 614.89 | 2,905.29 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 179.60 | 12,755.00 | -2,971.23 | 615.58 | 3,005.12 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 179.60 | 12,755.00 | -3,071.23 | 616.27 | 3,104.95 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.00 | 179.60 | 12,755.00 | -3,171.23 | 616.97 | 3,204.78 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.00 | 179.60 | 12,755.00 | -3,271.22 | 617.66 | 3,304.61 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 90.00 | 179.60 | 12,755.00 | -3,371.22 | 618.35 | 3,404.44 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.00 | 179.60 | 12,755.00 | -3,471.22 | 619.05 | 3,504.27 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.00 | 179.60 | 12,755.00 | -3,571.22 | 619.74 | 3,604.10 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 90.00 | 179.60 | 12,755.00 | -3,671.21 | 620.43 | 3,703.93 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 90.00 | 179.60 | 12,755.00 | -3,771.21 | 621.13 | 3,803.75 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 90.00 | 179.60 | 12,755.00 | -3,871.21 | 621.82 | 3,903.58 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 90.00 | 179.60 | 12,755.00 | -3,971.21 | 622.51 | 4,003.41 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 90.00 | 179.60 | 12,755.00 | -4,071.20 | 623.21 | 4,103.24 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 90.00 | 179.60 | 12,755.00 | -4,171.20 | 623.90 | 4,203.07 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 90.00 | 179.60 | 12,755.00 | -4,271.20 | 624.59 | 4,302.90 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 90.00 | 179.60 | 12,755.00 | -4,371.20 | 625.29 | 4,402.73 | 0.00 | 0.00 | 0.00 |
| 17,800.00 | 90.00 | 179.60 | 12,755.00 | -4,471.19 | 625.98 | 4,502.56 | 0.00 | 0.00 | 0.00 |
| 17,900.00 | 90.00 | 179.60 | 12,755.00 | -4,571.19 | 626.67 | 4,602.39 | 0.00 | 0.00 | 0.00 |
| 18,000.00 | 90.00 | 179.60 | 12,755.00 | -4,671.19 | 627.37 | 4,702.21 | 0.00 | 0.00 | 0.00 |
| 18,100.00 | 90.00 | 179.60 | 12,755.00 | -4,771.19 | 628.06 | 4,802.04 | 0.00 | 0.00 | 0.00 |
| 18,200.00 | 90.00 | 179.60 | 12,755.00 | -4,871.18 | 628.76 | 4,901.87 | 0.00 | 0.00 | 0.00 |
| 18,300.00 | 90.00 | 179.60 | 12,755.00 | -4,971.18 | 629.45 | 5,001.70 | 0.00 | 0.00 | 0.00 |
| 18,400.00 | 90.00 | 179.60 | 12,755.00 | -5,071.18 | 630.14 | 5,101.53 | 0.00 | 0.00 | 0.00 |
| 18,500.00 | 90.00 | 179.60 | 12,755.00 | -5,171.18 | 630.84 | 5,201.36 | 0.00 | 0.00 | 0.00 |
| 18,600.00 | 90.00 | 179.60 | 12,755.00 | -5,271.17 | 631.53 | 5,301.19 | 0.00 | 0.00 | 0.00 |
| 18,700.00 | 90.00 | 179.60 | 12,755.00 | -5,371.17 | 632.22 | 5,401.02 | 0.00 | 0.00 | 0.00 |
| 18,800.00 | 90.00 | 179.60 | 12,755.00 | -5,471.17 | 632.92 | 5,500.85 | 0.00 | 0.00 | 0.00 |
| 18,900.00 | 90.00 | 179.60 | 12,755.00 | -5,571.17 | 633.61 | 5,600.68 | 0.00 | 0.00 | 0.00 |
| 19,000.00 | 90.00 | 179.60 | 12,755.00 | -5,671.17 | 634.30 | 5,700.50 | 0.00 | 0.00 | 0.00 |
| 19,100.00 | 90.00 | 179.60 | 12,755.00 | -5,771.16 | 635.00 | 5,800.33 | 0.00 | 0.00 | 0.00 |
| 19,200.00 | 90.00 | 179.60 | 12,755.00 | -5,871.16 | 635.69 | 5,900.16 | 0.00 | 0.00 | 0.00 |
| 19,300.00 | 90.00 | 179.60 | 12,755.00 | -5,971.16 | 636.38 | 5,999.99 | 0.00 | 0.00 | 0.00 |
| 19,400.00 | 90.00 | 179.60 | 12,755.00 | -6,071.16 | 637.08 | 6,099.82 | 0.00 | 0.00 | 0.00 |
| 19,500.00 | 90.00 | 179.60 | 12,755.00 | -6,171.15 | 637.77 | 6,199.65 | 0.00 | 0.00 | 0.00 |
| 19,600.00 | 90.00 | 179.60 | 12,755.00 | -6,271.15 | 638.46 | 6,299.48 | 0.00 | 0.00 | 0.00 |
| 19,700.00 | 90.00 | 179.60 | 12,755.00 | -6,371.15 | 639.16 | 6,399.31 | 0.00 | 0.00 | 0.00 |
| 19,800.00 | 90.00 | 179.60 | 12,755.00 | -6,471.15 | 639.85 | 6,499.14 | 0.00 | 0.00 | 0.00 |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 19,900.00 | 90.00 | 179.60 | 12,755.00 | -6,571.14 | 640.54 | 6,598.96 | 0.00 | 0.00 | 0.00 |
| 20,000.00 | 90.00 | 179.60 | 12,755.00 | -6,671.14 | 641.24 | 6,698.79 | 0.00 | 0.00 | 0.00 |
| 20,100.00 | 90.00 | 179.60 | 12,755.00 | -6,771.14 | 641.93 | 6,798.62 | 0.00 | 0.00 | 0.00 |
| 20,200.00 | 90.00 | 179.60 | 12,755.00 | -6,871.14 | 642.62 | 6,898.45 | 0.00 | 0.00 | 0.00 |
| 20,300.00 | 90.00 | 179.60 | 12,755.00 | -6,971.13 | 643.32 | 6,998.28 | 0.00 | 0.00 | 0.00 |
| 20,400.00 | 90.00 | 179.60 | 12,755.00 | -7,071.13 | 644.01 | 7,098.11 | 0.00 | 0.00 | 0.00 |
| 20,500.00 | 90.00 | 179.60 | 12,755.00 | -7,171.13 | 644.70 | 7,197.94 | 0.00 | 0.00 | 0.00 |
| 20,600.00 | 90.00 | 179.60 | 12,755.00 | -7,271.13 | 645.40 | 7,297.77 | 0.00 | 0.00 | 0.00 |
| 20,700.00 | 90.00 | 179.60 | 12,755.00 | -7,371.12 | 646.09 | 7,397.60 | 0.00 | 0.00 | 0.00 |
| 20,800.00 | 90.00 | 179.60 | 12,755.00 | -7,471.12 | 646.78 | 7,497.43 | 0.00 | 0.00 | 0.00 |
| 20,900.00 | 90.00 | 179.60 | 12,755.00 | -7,571.12 | 647.48 | 7,597.25 | 0.00 | 0.00 | 0.00 |
| 21,000.00 | 90.00 | 179.60 | 12,755.00 | -7,671.12 | 648.17 | 7,697.08 | 0.00 | 0.00 | 0.00 |
| 21,100.00 | 90.00 | 179.60 | 12,755.00 | -7,771.11 | 648.87 | 7,796.91 | 0.00 | 0.00 | 0.00 |
| 21,200.00 | 90.00 | 179.60 | 12,755.00 | -7,871.11 | 649.56 | 7,896.74 | 0.00 | 0.00 | 0.00 |
| 21,300.00 | 90.00 | 179.60 | 12,755.00 | -7,971.11 | 650.25 | 7,996.57 | 0.00 | 0.00 | 0.00 |
| 21,400.00 | 90.00 | 179.60 | 12,755.00 | -8,071.11 | 650.95 | 8,096.40 | 0.00 | 0.00 | 0.00 |
| 21,500.00 | 90.00 | 179.60 | 12,755.00 | -8,171.11 | 651.64 | 8,196.23 | 0.00 | 0.00 | 0.00 |
| 21,600.00 | 90.00 | 179.60 | 12,755.00 | -8,271.10 | 652.33 | 8,296.06 | 0.00 | 0.00 | 0.00 |
| 21,700.00 | 90.00 | 179.60 | 12,755.00 | -8,371.10 | 653.03 | 8,395.89 | 0.00 | 0.00 | 0.00 |
| 21,800.00 | 90.00 | 179.60 | 12,755.00 | -8,471.10 | 653.72 | 8,495.71 | 0.00 | 0.00 | 0.00 |
| 21,900.00 | 90.00 | 179.60 | 12,755.00 | -8,571.10 | 654.41 | 8,595.54 | 0.00 | 0.00 | 0.00 |
| 22,000.00 | 90.00 | 179.60 | 12,755.00 | -8,671.09 | 655.11 | 8,695.37 | 0.00 | 0.00 | 0.00 |
| 22,100.00 | 90.00 | 179.60 | 12,755.00 | -8,771.09 | 655.80 | 8,795.20 | 0.00 | 0.00 | 0.00 |
| 22,200.00 | 90.00 | 179.60 | 12,755.00 | -8,871.09 | 656.49 | 8,895.03 | 0.00 | 0.00 | 0.00 |
| 22,300.00 | 90.00 | 179.60 | 12,755.00 | -8,971.09 | 657.19 | 8,994.86 | 0.00 | 0.00 | 0.00 |
| 22,400.00 | 90.00 | 179.60 | 12,755.00 | -9,071.08 | 657.88 | 9,094.69 | 0.00 | 0.00 | 0.00 |
| 22,500.00 | 90.00 | 179.60 | 12,755.00 | -9,171.08 | 658.57 | 9,194.52 | 0.00 | 0.00 | 0.00 |
| 22,600.00 | 90.00 | 179.60 | 12,755.00 | -9,271.08 | 659.27 | 9,294.35 | 0.00 | 0.00 | 0.00 |
| 22,700.00 | 90.00 | 179.60 | 12,755.00 | -9,371.08 | 659.96 | 9,394.18 | 0.00 | 0.00 | 0.00 |
| 22,800.00 | 90.00 | 179.60 | 12,755.00 | -9,471.07 | 660.65 | 9,494.00 | 0.00 | 0.00 | 0.00 |
| 22,900.00 | 90.00 | 179.60 | 12,755.00 | -9,571.07 | 661.35 | 9,593.83 | 0.00 | 0.00 | 0.00 |
| 23,000.00 | 90.00 | 179.60 | 12,755.00 | -9,671.07 | 662.04 | 9,693.66 | 0.00 | 0.00 | 0.00 |
| 23,100.00 | 90.00 | 179.60 | 12,755.00 | -9,771.07 | 662.73 | 9,793.49 | 0.00 | 0.00 | 0.00 |
| 23,200.00 | 90.00 | 179.60 | 12,755.00 | -9,871.06 | 663.43 | 9,893.32 | 0.00 | 0.00 | 0.00 |
| 23,300.00 | 90.00 | 179.60 | 12,755.00 | -9,971.06 | 664.12 | 9,993.15 | 0.00 | 0.00 | 0.00 |
| 23,400.00 | 90.00 | 179.60 | 12,755.00 | -10,071.06 | 664.81 | 10,092.98 | 0.00 | 0.00 | 0.00 |
| 23,483.25 | 90.00 | 179.60 | 12,755.00 | -10,154.30 | 665.39 | 10,176.08 | 0.00 | 0.00 | 0.00 |

Titan Directional Drilling

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|------------------------------------|
| Company: | Kaiser-Francis Oil Company | Local Co-ordinate Reference: | Well Red Hills 606H - Slot G |
| Project: | Permian NM E'83 | TVD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Site: | Red Hills Pad 8 | MD Reference: | est.GL+KB @ 3426.00usft (planning) |
| Well: | Red Hills 606H | North Reference: | Grid |
| Wellbore: | #606H OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 5k-14 |

| Casing Points | | | | | |
|-----------------------|-----------------------|---------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 950.00 | 950.00 | 13 3/8" | 13-3/8 | 17-1/2 | |
| 12,083.27 | 12,042.00 | 7 5/8" | 7-5/8 | 9-7/8 | |

| Formations | | | | | | |
|-----------------------|-----------------------|-------------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 860.00 | 860.00 | Rustler | | | | |
| 1,200.01 | 1,200.00 | Salado | | | | |
| 2,002.61 | 2,000.00 | Top of Salt | | | | |
| 4,462.04 | 4,450.00 | Base of Salt | | | | |
| 4,763.20 | 4,750.00 | Lamar | | | | |
| 4,883.66 | 4,870.00 | Bell Canyon | | | | |
| 5,877.47 | 5,860.00 | Cherry Canyon | | | | |
| 8,628.02 | 8,600.00 | Brushy Canyon | | | | |
| 8,828.79 | 8,800.00 | Lwr Brushy Canyon | | | | |
| 9,039.60 | 9,010.00 | Avalon | | | | |
| 9,983.22 | 9,950.00 | 1 BSS | | | | |
| 10,545.37 | 10,510.00 | 2 BSS | | | | |
| 10,987.07 | 10,950.00 | 3 BSL | | | | |
| 11,724.90 | 11,685.00 | 3 BSS | | | | |
| 12,111.38 | 12,070.00 | Wolfcamp | | | | |



APD ID: 10400052998

Submission Date: 01/09/2020

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data Report

05/11/2020

APD ID: 10400052998

Submission Date: 01/09/2020

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: RED HILLS FEDERAL

Well Number: 606H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data
reflects the most
recent changes

[Show Final Text](#)

Bond Information

Federal/Indian APD: FED

BLM Bond number: WYB000055

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: