

Form 3160-3  
(June 2015)

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

|   |   |   |
|---|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER<br>1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other<br>1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |   | 5. Lease Serial No.<br>NMLC0061374A<br><br>6. If Indian, Allottee or Tribe Name<br><br>7. If Unit or CA Agreement, Name and No.<br>BELL LAKE / NMNM 068292X<br><br>8. Lease Name and Well No.<br>BELL LAKE UNIT SOUTH<br>[316706]<br>416H<br><br>9. API Well No. 30-025-48260 |
| 2. Name of Operator [12361]<br>KAISER FRANCIS OIL COMPANY   |   | 10. Field and Pool, or Exploratory [98266]<br>BELL LAKE/WOLFCAMP, SOUTH   |
| 3a. Address<br>6733 S. Yale Ave., Tulsa, OK 74121   | 3b. Phone No. (include area code)<br>(918) 491-0000 | 11. Sec., T. R. M. or Blk. and Survey or Area<br>SEC 5/T24S/R34E/NMP  |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)*<br>At surface SENE / 2042 FNL / 1237 FEL / LAT 32.2482691 / LONG -103.4874999<br>At proposed prod. zone SWSE / 330 FSL / 2290 FEL / LAT 32.2257281 / LONG -103.490852   |   |   |
| 14. Distance in miles and direction from nearest town or post office*<br>20 miles   |   | 12. County or Parish<br>LEA   |
| 13. State<br>NM   |   |   |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1237 feet   | 16. No of acres in lease 440                        | 17. Spacing Unit dedicated to this well 480.0   |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet  | 19. Proposed Depth 11897 feet / 20362 feet          | 20. BLM/BIA Bond No. in file FED: WYB000055   |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3581 feet   | 22. Approximate date work will start* 03/01/2020    | 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)<br>Title<br>Regulatory Analyst                                 | Name (Printed/Typed)<br>STORMI DAVIS / Ph: (918) 491-0000                                   | Date<br>12/11/2019 |
| Approved by (Signature) (Electronic Submission)<br>Title<br>Assistant Field Manager Lands & Minerals | Name (Printed/Typed)<br>Cody Layton / Ph: (575) 234-5959<br>Office<br>Carlsbad Field Office | Date<br>11/23/2020 |

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 12/17/2020



*KZ*  
12/29/2020

SL

(Continued on page 2)

\*(Instructions on page 2)

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM I:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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(Continued on page 3)

**Approval Date: 11/23/2020**

### Additional Operator Remarks

#### Location of Well

0. SHL: SENE / 2042 FNL / 1237 FEL / TWSP: 24S / RANGE: 34E / SECTION: 5 / LAT: 32.2482691 / LONG: -103.4874999 ( TVD: 0 feet, MD: 0 feet )  
PPP: NWSE / 2640 FNL / 2187 FEL / TWSP: 24S / RANGE: 34E / SECTION: 8 / LAT: 32.2321563 / LONG: -103.4907141 ( TVD: 11897 feet, MD: 18006 feet )  
PPP: NWNE / 0 FNL / 2158 FEL / TWSP: 24S / RANGE: 34E / SECTION: 8 / LAT: 32.2394392 / LONG: -103.4905547 ( TVD: 11897 feet, MD: 15366 feet )  
PPP: SWNE / 1320 FNL / 2172 FEL / TWSP: 24S / RANGE: 34E / SECTION: 8 / LAT: 32.2358666 / LONG: -103.4906329 ( TVD: 11897 feet, MD: 16686 feet )  
PPP: NWSE / 2600 FSL / 2140 FEL / TWSP: 24S / RANGE: 34E / SECTION: 5 / LAT: 32.2466014 / LONG: -103.490401 ( TVD: 11897 feet, MD: 12766 feet )  
BHL: SWSE / 330 FSL / 2290 FEL / TWSP: 24S / RANGE: 34E / SECTION: 8 / LAT: 32.2257281 / LONG: -103.490852 ( TVD: 11897 feet, MD: 20362 feet )

#### BLM Point of Contact

Name: Deborah Ham  
Title: Legal Landlaw Examiner  
Phone: (575) 234-5965  
Email: dham@blm.gov

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**Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

|                              |  |
|------------------------------|--|
| <b>OPERATOR'S NAME:</b>      | <b>KAISER FRANCIS OIL COMPANY</b>        |
| <b>LEASE NO.:</b>            | <b>NMLC0061374A</b>                      |
| <b>WELL NAME &amp; NO.:</b>  | <b>BELL LAKE UNIT SOUTH 416H</b>         |
| <b>SURFACE HOLE FOOTAGE:</b> | <b>2042'/N &amp; 1237'/E</b>             |
| <b>BOTTOM HOLE FOOTAGE:</b>  | <b>330'/S &amp; 2290'/E</b>              |
| <b>LOCATION:</b>             | <b>Section 5, T.24 S., R.34 E., NMPM</b> |
| <b>COUNTY:</b>               | <b>Lea County, New Mexico</b>            |

COA

|                      |   |  |  |
|----------------------|---|--|--|
| H2S                  | <input type="radio"/> Yes               | <input checked="" type="radio"/> No        |  |
| Potash               | <input checked="" type="radio"/> None   | <input type="radio"/> Secretary            | <input type="radio"/> R-111-P            |
| Cave/Karst Potential | <input checked="" type="radio"/> Low    | <input type="radio"/> Medium               | <input type="radio"/> High               |
| Cave/Karst Potential | <input type="radio"/> Critical          |  |  |
| 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               |
| Other                | <input type="checkbox"/> 4 String Area  | <input type="checkbox"/> Capitan Reef      | <input type="checkbox"/> WIPP            |
| Other                | <input type="checkbox"/> Fluid Filled   | <input type="checkbox"/> Cement Squeeze    | <input type="checkbox"/> Pilot Hole      |
| Special Requirements | <input type="checkbox"/> Water Disposal | <input type="checkbox"/> COM               | <input checked="" type="checkbox"/> Unit |

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1550 feet** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the 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 six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**



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

# Application Data Report

11/24/2020

|  |                                    |  |
|--|------------------------------------|--|
| <b>APD ID:</b> 10400051993                       | <b>Submission Date:</b> 12/11/2019 | Highlighted data reflects the most recent changes<br><a href="#">Show Final Text</a> |
| <b>Operator Name:</b> KAISER FRANCIS OIL COMPANY |                                    |  |
| <b>Well Name:</b> BELL LAKE UNIT SOUTH           | <b>Well Number:</b> 416H           |  |
| <b>Well Type:</b> OIL WELL                       | <b>Well Work Type:</b> Drill       |  |

## Section 1 - General

|   |  |                                    |
|---|--|------------------------------------|
| <b>APD ID:</b> 10400051993                | <b>Tie to previous NOS?</b> N  | <b>Submission Date:</b> 12/11/2019 |
| <b>BLM Office:</b> CARLSBAD               | <b>User:</b> Stormi Davis  | <b>Title:</b> Regulatory Analyst   |
| <b>Federal/Indian APD:</b> FED            | <b>Is the first lease penetrated for production Federal or Indian?</b> FED |                                    |
| <b>Lease number:</b> NMLC0061374A         | <b>Lease Acres:</b> 440  |                                    |
| <b>Surface access agreement in place?</b> | <b>Allotted?</b>   | <b>Reservation:</b>                |
| <b>Agreement in place?</b> YES            | <b>Federal or Indian agreement:</b> FEDERAL                                |                                    |
| <b>Agreement number:</b> NMNM068292X      |  |                                    |
| <b>Agreement name:</b> BELL LAKE          |  |                                    |
| <b>Keep application confidential?</b> Y   |  |                                    |
| <b>Permitting Agent?</b> YES              | <b>APD Operator:</b> KAISER FRANCIS OIL COMPANY                            |                                    |
| <b>Operator letter of designation:</b>    |  |                                    |

## 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

|  |                                      |                                   |
|--|--------------------------------------|-----------------------------------|
| <b>Well in Master Development Plan?</b> NO   | <b>Master Development Plan name:</b> |                                   |
| <b>Well in Master SUPO?</b> NO   | <b>Master SUPO name:</b>             |                                   |
| <b>Well in Master Drilling Plan?</b> NO  | <b>Master Drilling Plan name:</b>    |                                   |
| <b>Well Name:</b> BELL LAKE UNIT SOUTH   | <b>Well Number:</b> 416H             | <b>Well API Number:</b>           |
| <b>Field/Pool or Exploratory?</b> Field and Pool   | <b>Field Name:</b> BELL LAKE         | <b>Pool Name:</b> WOLFCAMP, SOUTH |
| <b>Is the proposed well in an area containing other mineral resources?</b> NATURAL GAS,OIL |                                      |                                   |

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

Is the proposed well in an area containing other mineral resources? 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:**  
SOUTH BELL LAKE UNIT

**Number:** 14

**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:** 20 Miles

**Distance to nearest well:** 30 FT

**Distance to lease line:** 1237 FT

**Reservoir well spacing assigned acres Measurement:** 480 Acres

**Well plat:** BLUS\_416H\_C102\_20191206065729.pdf

Pay.gov\_20191211113140.pdf

**Well work start Date:** 03/01/2020

**Duration:** 40 DAYS

**Section 3 - Well Location Table**

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 6775

**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 | 2042    | FNL          | 1237    | FEL          | 24S  | 34E   | 5       | Aliquot SENE      | 32.2482691 | -103.4874999 | LEA    | NEW MEXI CO | NEW MEXI CO | F          | FEE          | 3581      | 0     | 0     | N                                       |
| KOP Leg #1 | 2042    | FNL          | 1237    | FEL          | 24S  | 34E   | 5       | Aliquot SENE      | 32.2482691 | -103.4874999 | LEA    | NEW MEXI CO | NEW MEXI CO | F          | FEE          | -7624     | 11205 | 11205 | N                                       |

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

| 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 | 2600    | FSL          | 2140    | FEL          | 24S  | 34E   | 5       | Aliquot NWSE      | 32.2466014 | -103.490401  | LEA    | NEW MEXICO | NEW MEXICO | F          | FEE            | -8316     | 12766 | 11897 | Y                                       |
| PPP Leg #1-2 | 1320    | FNL          | 2172    | FEL          | 24S  | 34E   | 8       | Aliquot SWNE      | 32.2358666 | -103.4906329 | LEA    | NEW MEXICO | NEW MEXICO | F          | NMNM 100594    | -8316     | 16686 | 11897 | Y                                       |
| PPP Leg #1-3 | 0       | FNL          | 2158    | FEL          | 24S  | 34E   | 8       | Aliquot NWNE      | 32.2394392 | -103.4905547 | LEA    | NEW MEXICO | NEW MEXICO | F          | NMLC0 061374 A | -8316     | 15366 | 11897 | Y                                       |
| PPP Leg #1-4 | 2640    | FNL          | 2187    | FEL          | 24S  | 34E   | 8       | Aliquot NWSE      | 32.2321563 | -103.4907141 | LEA    | NEW MEXICO | NEW MEXICO | F          | FEE            | -8316     | 18006 | 11897 | Y                                       |
| EXIT Leg #1  | 330     | FSL          | 2290    | FEL          | 24S  | 34E   | 8       | Aliquot SWSE      | 32.2257281 | -103.490852  | LEA    | NEW MEXICO | NEW MEXICO | F          | FEE            | -8316     | 20362 | 11897 | Y                                       |
| BHL Leg #1   | 330     | FSL          | 2290    | FEL          | 24S  | 34E   | 8       | Aliquot SWSE      | 32.2257281 | -103.490852  | LEA    | NEW MEXICO | NEW MEXICO | F          | FEE            | -8316     | 20362 | 11897 | Y                                       |







Melanie Wilson <nmogrservices@gmail.com>

**Pay.gov Payment Confirmation: BLM Oil and Gas Online Payment**

1 message

**notification@pay.gov** <notification@pay.gov>  
To: nmogrservices@gmail.com

Wed, Dec 11, 2019 at 11:28 AM



An official email of the United States government



Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact BLM OC CBS Customer Service at (303) 236-6795 or [BLM\\_OC\\_CBS\\_Customer\\_Service@blm.gov](mailto:BLM_OC_CBS_Customer_Service@blm.gov).

Application Name: BLM Oil and Gas Online Payment  
Pay.gov Tracking ID: 26M3KBKJ  
Agency Tracking ID: 75903939593  
Transaction Type: Sale  
Transaction Date: 12/11/2019 01:28:53 PM EST  
Account Holder Name: George B Kaiser  
Transaction Amount: \$10,230.00  
Card Type: Visa  
Card Number: \*\*\*\*\*0061

Company: Kaiser-Francis Oil Company  
APD IDs: 10400051993  
Lease Numbers: NMLC0061374A  
Well Numbers: 416H

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.

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

## Drilling Plan Data Report

11/24/2020

APD ID: 10400051993

Submission Date: 12/11/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 416H

[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 |
|--------------|------------------|-----------|---------------------|----------------|--------------|-------------------|---------------------|
| 602915       | ---              | 3581      | 0                   | 0              | OTHER : None | NONE              | N                   |
| 602916       | RUSTLER          | 2209      | 1372                | 1372           | SANDSTONE    | NONE              | N                   |
| 602917       | SALADO           | 1834      | 1747                | 1747           | SALT         | NONE              | N                   |
| 602918       | TOP SALT         | 1509      | 2072                | 2072           | SALT         | NONE              | N                   |
| 602919       | BASE OF SALT     | -1466     | 5047                | 5047           | SALT         | NONE              | N                   |
| 602920       | LAMAR            | -1691     | 5272                | 5272           | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 602921       | BELL CANYON      | -1766     | 5347                | 5347           | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 602922       | CHERRY CANYON    | -2616     | 6197                | 6197           | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 602923       | BRUSHY CANYON    | -4066     | 7647                | 7647           | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 602924       | BONE SPRING      | -5191     | 8772                | 8772           | LIMESTONE    | NATURAL GAS, OIL  | N                   |
| 602925       | AVALON SAND      | -5501     | 9082                | 9082           | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 602926       | BONE SPRING 1ST  | -6391     | 9972                | 9972           | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 602927       | BONE SPRING 2ND  | -6936     | 10517               | 10517          | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 603382       | BONE SPRING LIME | -7391     | 10972               | 10972          | LIMESTONE    | NATURAL GAS, OIL  | N                   |
| 603383       | BONE SPRING 3RD  | -7866     | 11447               | 11447          | SANDSTONE    | NATURAL GAS, OIL  | N                   |
| 603384       | WOLFCAMP         | -8116     | 11697               | 11697          | SANDSTONE    | NATURAL GAS, OIL  | Y                   |

### Section 2 - Blowout Prevention

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

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

**Rating Depth:** 18000

**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 listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

**Choke Diagram Attachment:**

BLUS\_416H\_Choke\_Manifold\_20191206074222.pdf

**BOP Diagram Attachment:**

Cactus\_Flex\_Hose\_16C\_Certification\_20191206074307.pdf

BLUS\_416H\_MultiBowl\_Wellhead\_20191206074431.pdf

BLUS\_416H\_BOP\_20191210134924.pdf

BLUS\_416H\_Well\_Control\_Plan\_20191211112505.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          | 1397          | 0           | 1397           | 3581        | 2184           | 1397                        | J-55    | 40.5   | ST&C                  | 2.4         | 4.8      | DRY           | 7.4      | DRY          | 11.1    |
| 2         | INTERMEDIATE | 9.875     | 7.625    | NEW       | API      | N              | 0          | 11147         | 0           | 11147          |             | -7566          | 11147                       | HCP-110 | 29.7   | LT&C                  | 1.3         | 1.8      | DRY           | 2.3      | DRY          | 2.8     |
| 3         | PRODUCTION   | 6.75      | 5.5      | NEW       | API      | N              | 0          | 20362         | 0           | 11897          |             | -8316          | 20362                       | P-110   | 20     | OTHER - USS Eagle SFH | 1.8         | 1.9      | DRY           | 2.6      | DRY          | 3.1     |

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

**Casing Attachments**

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

BLUS\_416H\_Casing\_Assumptions\_20191206075826.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

BLUS\_416H\_Casing\_Assumptions\_20191206075453.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

BLUS\_416H\_Casing\_Assumptions\_20191206075650.pdf

5.5\_x\_20\_P110\_HP\_USS\_EAGLE\_SFH\_Performance\_Sheet\_20191206075737.pdf

---

**Section 4 - Cement**

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives    |
|-------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|-------------|--------------|
| SURFACE     | Lead      |                  | 0      | 1397      | 673          | 1.72  | 13.5    | 1164  | 50      | ExtendaCem  | Poly E Flake |

|              |      |  |      |           |     |      |      |      |    |          |          |
|--------------|------|--|------|-----------|-----|------|------|------|----|----------|----------|
| INTERMEDIATE | Lead |  | 0    | 1114<br>7 | 843 | 2.73 | 11   | 2303 | 25 | NeoCem   | Extender |
| INTERMEDIATE | Tail |  | 0    | 1114<br>7 | 576 | 1.2  | 15.6 | 689  | 25 | Halcem   | none     |
| PRODUCTION   | Lead |  | 9000 | 2036<br>2 | 892 | 1.22 | 14.5 | 1091 | 15 | VersaCem | 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 |
|-----------|--------------|---------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 1114<br>7 | 1189<br>7    | OIL-BASED MUD       | 10                   | 12                   |                     |                             |    |                |                |                 |                            |
| 1397      | 1114<br>7    | OTHER : Brine       | 8.7                  | 9                    |                     |                             |    |                |                |                 |                            |
| 0         | 1397         | OTHER : Fresh Water | 8.4                  | 9                    |                     |                             |    |                |                |                 |                            |

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

### Section 6 - Test, Logging, Coring

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

TOC on production casing will be determined by calculation.

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

GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,

**Coring operation description for the well:**

None planned

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 7424

**Anticipated Surface Pressure:** 4806

**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:**

BLUS\_Pad\_14\_H2S\_Contingency\_Plan\_20191206105203.pdf

### Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

BLUS\_416H\_\_Directional\_Plan\_20191206105309.pdf

**Other proposed operations facets description:**

Gas Capture Plan attached

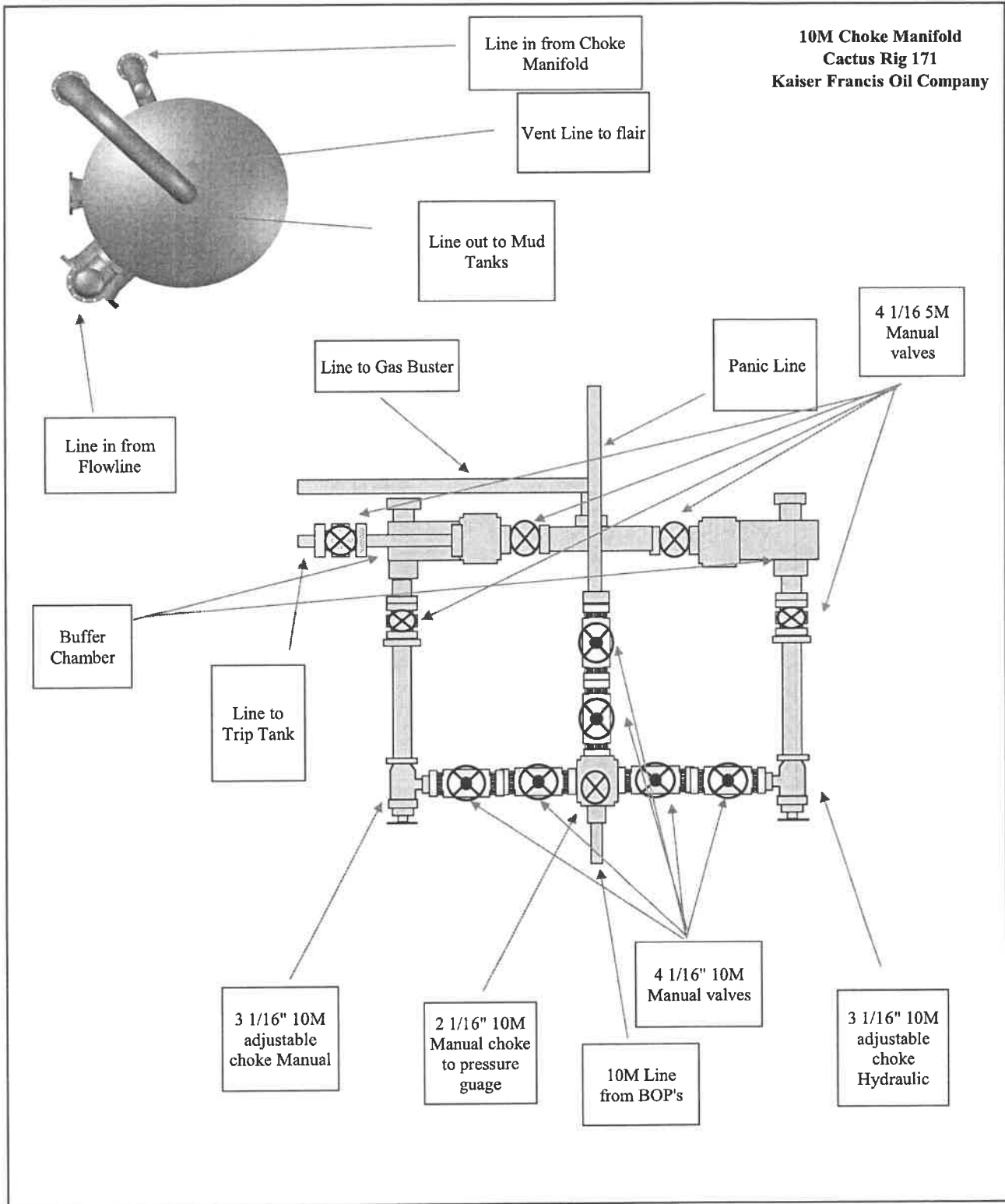
**Other proposed operations facets attachment:**

Gas\_Capture\_Plan\_SOUTH\_Pad\_14\_20191206105608.pdf

**Other Variance attachment:**









# Certificate of Registration

**APIQR® REGISTRATION NUMBER  
3042**

*This certifies that the quality management system of*

**COPPER STATE RUBBER, INC.  
10485 W. Roosevelt Street  
Avondale, AZ**

*has been assessed by the American Petroleum Institute Quality Registrar (APIQR®) and  
found it to be in conformance with the following standard:*

**ISO 9001:2015**

*The scope of this registration and the approved quality management system applies to the*  
**Design and Manufacture of Oilfield, Marine and Other Industrial Hoses**

*APIQR® approves the organization's justification for excluding:*

**No Exclusions Identified as Applicable**

**Effective Date: APRIL 21, 2019**  
**Expiration Date: APRIL 21, 2022**  
**Registered Since: APRIL 21, 2016**

*Vice President of Global  
Industry Services*

Accredited by Member of  
the International  
Accreditation Forum  
Multilateral Recognition  
Arrangement for Quality  
Management Systems



This certificate is valid for the period specified herein. The registered organization must continually meet all requirements of APIQR's Registration Program and the requirements of the Registration Agreement. Registration is maintained and regularly monitored through annual full system audits. Further clarifications regarding the scope of this certificate and the applicability of ISO 9001 standard requirements may be obtained by consulting the registered organization. This certificate has been issued from APIQR offices located at 200 Massachusetts Avenue, NW Suite 1100, Washington, DC 20001-5571, U.S.A., it is the property of APIQR, and must be returned upon request. To verify the authenticity of this certificate, go to [www.api.org/composthelist](http://www.api.org/composthelist).



2016-1521 02.19  
DocId



REGISTRATION NO. Q1-3217

# Certificate of Registration

The American Petroleum Institute certifies that the quality management system of

**COPPER STATE RUBBER, INC.**  
10485 W. Roosevelt Street  
Avondale, AZ

has been assessed by the American Petroleum Institute and found to be in conformance with the following:

## API Specification Q1

The scope of this registration and the approved quality management system applies to the:

**Design and Manufacture of Oilfield, Marine and Other Industrial Hoses**

API approves the organization's justification for excluding:

**No Exclusions Identified as Applicable**



**Effective Date:** APRIL 21, 2019  
**Expiration Date:** APRIL 21, 2022  
**Registered Since:** MAY 4, 2016

Vice President of Global Industry Services

This certificate is valid for the period specified herein. The registered organization must continually meet all requirements of API Spec Q1, *Specification for Quality Programs for the Petroleum, Petrochemical and Natural Gas Industry*, and the requirements of the Registration Agreement. Registration is maintained and regularly monitored through annual full system audits. This certificate has been issued from API offices located at 200 Massachusetts Avenue, NW Suite 1100, Washington, DC 20001-5571, U.S.A. It is the property of API, and must be returned upon request. To verify the authenticity of this certificate, go to [www.api.org/compositelist](http://www.api.org/compositelist).

BLUS 416H

Casing Assumptions

| Interval     | Length  | Casing Size | Weight (#/ft) | Grade   | Thread        | Condition | Hole Size | TVD (ft) | Mud Type | Mud Weight Hole Control | Viscosity | Fluid Loss | Anticipated Mud Weight (ppg) | Max Pore Pressure (psi) | Collapse (psi) | Burst (psi) | Body Tensile Strength | Joint Tensile Strength | Collapse Safety Factor (Min 1.1) | Burst Safety Factor (Min 1.0) | Body Tensile Safety Factor (Min 1.8) | Joint Tensile Safety Factor (Min 1.8) |
|--------------|---------|-------------|---------------|---------|---------------|-----------|-----------|----------|----------|-------------------------|-----------|------------|------------------------------|-------------------------|----------------|-------------|-----------------------|------------------------|----------------------------------|-------------------------------|--------------------------------------|---------------------------------------|
| Conductor    | 120     | 20"         |               |         |               | New       |           | 120      |          |                         |           |            |                              |                         |                |             |                       |                        |                                  |                               |                                      |                                       |
| Surface      | 1397    | 10-3/4"     | 40.5          | J-55    | STC           | New       | 14-3/4"   | 1397     | FW       | 8.4-9.0                 | 32-34     | NC         | 9                            | 654                     | 1580           | 3130        | 629000                | 420000                 | 2.4                              | 4.8                           | 11.1                                 | 7.4                                   |
| Intermediate | 11147   | 7-5/8"      | 29.7          | HCP10   | LTC           | New       | 9-7/8"    | 11147    | Brine    | 8.7-9.0                 | 28-29     | NC         | 9                            | 5217                    | 6700           | 9460        | 940000                | 769000                 | 1.3                              | 1.8                           | 2.8                                  | 2.3                                   |
| Production   | 20961.9 | 5-1/2"      | 20            | P110 HP | USS Eagle SFH | New       | 6-3/4"    | 11897    | OBM      | 10.0-12.0               | 55-70     |            | 12                           | 7424                    | 13150          | 14360       | 729000                | 629000                 | 1.8                              | 1.9                           | 3.1                                  | 2.6                                   |



5 1/2 20.00 lb (0.361) P110 HP

USS-EAGLE SFH™

|                                      | PIPE    | CONNECTION |            |
|--------------------------------------|---------|------------|------------|
| <b>MECHANICAL PROPERTIES</b>         |         |            |            |
| Minimum Yield Strength               | 125,000 |            | psi        |
| Maximum Yield Strength               | 140,000 |            | psi        |
| Minimum Tensile Strength             | 130,000 |            | psi        |
| <b>DIMENSIONS</b>                    |         |            |            |
| 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     |
| <b>SECTION AREA</b>                  |         |            |            |
| Cross Sectional Area   Critical Area | 5.828   | 5.027      | sq. in.    |
| Joint Efficiency                     |         | 86.25      | %          |
| <b>PERFORMANCE</b>                   |         |            |            |
| 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 |
| <b>MAKE-UP DATA</b>                  |         |            |            |
| 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:

- 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).
- Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
- Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- 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.).
- Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.
- Connection external pressure resistance has been verified to 10,000 psi (Fit-For-Service testing protocol).

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 Manual USS Product Data Sheet 2017 rev26 (Sept)

U. S. Steel Tubular Products 1-877-893-9461  
 10343 Sam Houston Park Dr., #120 connections@uss.com  
 Houston, TX 77064 www.usstubular.com

BLUS 416H

Casing Assumptions

| Interval     | Length  | Casing Size | Weight (#/ft) | Grade   | Thread        | Condition | Hole Size | TVD (ft) | Mud Type | Mud Weight Hole Control | Viscosity | Fluid Loss | Anticipated Mud Weight (ppg) | Max Pore Pressure (psi) | Collapse (psi) | Burst (psi) | Body Tensile Strength | Joint Tensile Strength | Collapse Safety Factor (Min 1.1) | Burst Safety Factor (Min 1.0) | Body Tensile Safety Factor (Min 1.6) | Joint Tensile Safety Factor (Min 1.8) |
|--------------|---------|-------------|---------------|---------|---------------|-----------|-----------|----------|----------|-------------------------|-----------|------------|------------------------------|-------------------------|----------------|-------------|-----------------------|------------------------|----------------------------------|-------------------------------|--------------------------------------|---------------------------------------|
| Conductor    | 120     | 20"         |               |         |               | New       |           | 120      |          |                         |           |            |                              |                         |                |             |                       |                        |                                  |                               |                                      |                                       |
| Surface      | 1397    | 10-3/4"     | 40.5          | J-55    | STC           | New       | 14-3/4"   | 1397     | FW       | 8.4 - 9.0               | 32 - 34   | NC         | 9                            | 654                     | 1580           | 3130        | 629000                | 420000                 | 2.4                              | 4.8                           | 11.1                                 | 7.4                                   |
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| Production   | 20361.9 | 5-1/2"      | 20            | P110 HP | USS Earle SFH | New       | 6-3/4"    | 11897    | OBM      | 10.0-12.0               | 55-70     |            | 12                           | 7424                    | 13150          | 14360       | 729000                | 629000                 | 1.8                              | 1.9                           | 3.1                                  | 2.6                                   |

**KAISER-FRANCIS OIL COMPANY  
HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN  
FOR DRILLING/COMPLETION WORKOVER/FACILITY**

**Bell Lake Unit South  
SECTION 1 -T24S-R33E  
SECTION 6 -T24S-R34E  
SECTION 5 -T24S-R34E**

**LEA COUNTY, NM**

This well/facility is not expected to have H<sub>2</sub>S, but due to the sensitive location, the following is submitted as requested.

TABLE OF CONTENTS

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| Emergency Response Activation and General Responsibilities     | 3 |
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| Emergency Phone Numbers  | 6 |
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## **EMERGENCY RESPONSE ACTIVATION AND GENERAL RESPONSIBILITIES**

### **Activation of the Emergency Action Plan**

In the event of any emergency situation, all personnel on location should first ensure that the following items are initiated. After that, they should refer to the appropriate Specific Emergency Guidance sections below for further responsibilities:

1. Notify the senior ranking contract representative on site.
2. Notify Kaiser-Francis representative in charge.
3. Notify civil authorities if the Kaiser-Francis Representative cannot be contacted and the situation dictates.
4. Perform rescue and first aid as required (without jeopardizing additional personnel).

### **General Responsibilities**

In the event of an H<sub>2</sub>S emergency, the following plan will be initiated.

- 1) All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".
- 2) If for any reason a person must enter the hazardous area, they must wear a SCBA (Self contained breathing apparatus).
- 3) Always use the "buddy system".
- 4) Isolate the well/problem if possible.
- 5) Account for all personnel
- 6) Display the proper colors, warning all unsuspecting personnel of the danger at hand
- 7) Contact the Company personnel as soon as possible if not at the location. (use the enclosed call list as instructed)

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

### **INDIVIDUAL RESPONSIBILITIES DURING AN H<sub>2</sub>S RELEASE**

The following procedures and responsibilities will be implemented on activation of the H<sub>2</sub>S siren and lights.

#### **All Personnel:**

1. On alarm, don escape unit (if available) and report to upwind briefing area.

#### **Rig Manager/Tool Pusher:**

1. Check that all personnel are accounted for and their condition.
2. Administer or arrange for first aid treatment, and/or call EMTs as needed.
3. Identify two people best suited to secure well and perform rescue, and instruct them to don SCBA.
4. Notify Contract management and Kaiser-Francis Representative.
5. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.

#### **Two People Responsible for Shut-in and Rescue:**

1. Don SCBA and acquire tools to secure well and perform rescue, i.e., wrenches, retrieval ropes, etc.
2. Utilize the buddy system to secure well and perform rescue(s).
3. Return to the briefing area and stand by for further instructions.

#### **All Other Personnel:**

1. Isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

#### **Kaiser-Francis Oil Company Representative:**

1. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.
2. Notify company management or Local Incident Commander, and Police, Fire Department, or other local emergency services as required.

**PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION:**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police shall be the Incident Command of any major release.

The decision to ignite a well should be a last resort and one if not both of the following pertain.

- 1) Human life and/or property are in danger.
- 2) There is no hope of bringing the situation under control with the prevailing conditions at the site.

**INSTRUCTIONS FOR IGNITION:**

- 1) Two people are required. They must be equipped with positive pressure; self contained breathing apparatus and a "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.
- 2) One of the people will be a qualified safety person who will test the atmosphere for H<sub>2</sub>S, Oxygen, & LFL. The other person will be the company supervisor; he is responsible for igniting the well.
- 3) Ignite up-wind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25mm flare gun shall be used, with a +/-500' range to ignite the gas.
- 4) Prior to ignition, make a final check for combustible gases.
- 5) Following ignition, continue with the emergency actions & procedures as before.

**CONTACTING AUTHORITIES**

Kaiser-Francis personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. This response plan must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER).

EMERGENCY CALL LIST: (Start and continue until ONE of these people have been reached)

|                        | <u>OFFICE</u> | <u>MOBILE</u> |
|------------------------|---------------|---------------|
| Kaiser-Francis Oil Co. | 918/494-0000  |               |
| Bill Wilkinson         | 580/668-2335  | 580/221-4637  |
| David Zerger           | 918/491-4350  | 918/557-6708  |
| Charles Lock           | 918/491-4337  | 918/671-6510  |
| Stuart Blake           | 918/491-4347  | 918/510-4126  |
| Robert Sanford         | 918/491-4201  | 918/770-2682  |
| Eric Hansen            | 918/491-4339  | 918/527-5260  |

EMERGENCY RESPONSE NUMBERS: Lea County, New Mexico

|   |                              |
|---|------------------------------|
| State Police – Artesia                        | 575/748-9718                 |
| State Police – Hobbs                          | 575/392-5580                 |
| State Police – Carlsbad                       | 575/885-3138                 |
| Lea County Sheriff - Lovington                | 575/396-3611                 |
| Local Emergency Planning Center – Lea County  | 575/396-8607                 |
| Local Emergency Planning Center – Eddy County | 575/885-3581                 |
| Fire Fighting, Rescue & Ambulance – Carlsbad  | 911 or 575/885-3125          |
| Fire Fighting, Rescue & Ambulance – Hobbs     | 911 or 575/397-9308          |
| Fire Fighting – Jal Volunteer Fire Department | 911 or 505/395-2221          |
| New Mexico Oil & Gas Commission – Artesia     | 575/748-1283                 |
| New Mexico Oil & Gas Commission – Hobbs       | 575/393-6161                 |
| Air Medical Transport Services – Hobbs        | 800/550-1025                 |
| Med Flight Air Ambulance – Albuquerque        | 505/842-4433                 |
| Angel MedFlight                               | 844/553-9033                 |
| DXP   | 432/580-3770                 |
| BJ Services                                   | 575/392-5556                 |
| Halliburton                                   | 575/392-6531<br>800/844-8451 |

**PROTECTION OF THE GENERAL PUBLIC/ROE:**

In the event of a release with a concentration greater than 100 ppm H<sub>2</sub>S, the ROE (Radius of Exposure) calculations will be done to determine if the following conditions have been met:

- Does the 100 ppm ROE include any public area (any place not associated with this site)
- Does the 500 ppm ROE include any public road (any road which the general public may travel)
- Is the 100 ppm ROE equal to or greater than 3000 feet

If any one of these conditions have been met then the Contingency Plan will be implemented. The following shows how to calculate the radius of exposure and an example.

**Calculation for the 100 ppm ROE:**

$$X = [(1.589)(\text{concentration})(Q)]^{(0.6258)}$$

(H<sub>2</sub>S concentrations in decimal form)

- 10,000 ppm +=1.+
- 1,000 ppm +=.1+
- 100 ppm +=.01+
- 10 ppm +=.001+

**Calculation for the 500 ppm ROE:**

$$X+[(0.4546)(\text{concentration})(Q)]^{(.06258)}$$

EXAMPLE: If a well/facility has been determined to have 150 ppm H<sub>2</sub>S in the gas mixture and the well/facility is producing at a gas rate of 200 MCFPD then:

ROE for 100 PPM       $X=[(1.589)(.0150)(200)]^{(0.6258)}$

$X=2.65'$

ROE for 500 PPM       $X=[(.4546)(.0150)(200)]^{(0.6258)}$

$X=1.2'$

(These calculations will be forwarded to the appropriate District NMOCD office when applicable.)

**PUBLIC EVACUATION PLAN:**

(When the supervisor has determined that the General Public will be involved, the following plan will be implemented)

- 1) Notification of the emergency response agencies of the hazardous condition and Implement evacuation procedures.
- 2) A trained person in H<sub>2</sub>S safety, shall monitor with detection equipment the H<sub>2</sub>S Concentration, wind and area of exposure (ROE). This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. **(All monitoring equipment will be UL approved, for use in class I groups A,B,C & D, Division I, hazardous locations. All monitors will have a minimum capability of measuring H<sub>2</sub>S, oxygen, and flammable values.)**
- 3) Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
- 4) The company supervising personnel shall stay in communication with all agencies through out the duration of the situation and inform such agencies when the situation has been contained and the effected area(s) is safe to enter.

**CHARACTERISTICS OF H<sub>2</sub>S AND SO<sub>2</sub>**

| Common Name      | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|------------------|------------------|------------------|-----------------|-----------------|----------------------|
| Hydrogen Sulfide | H <sub>2</sub> S | 1.189<br>Air = 1 | 10 ppm          | 100 ppm         | 600 ppm              |
| Sulfur Dioxide   | SO <sub>2</sub>  | 2.21<br>Air = 1  | 2 ppm           | N/A             | 1000 ppm             |

**TRAINING:**

All responders must have training in the detection of H<sub>2</sub>S measures for protection against the gas, equipment used for protection and emergency response. Weekly drills by all crews will be conducted and recorded in the IADC daily log. Additionally, responders must be equipped with H<sub>2</sub>S monitors at all times.

**PUBLIC RELATIONS**

Kaiser-Francis recognizes that the news media have a legitimate interest in incidents at Kaiser-Francis facilities that could affect the public. It is to the company's benefit to cooperate with the news media when incidents occur because these media are our best liaison with the public.

Our objective is to see that all reports of any emergency are factual and represent the company's position fairly and accurately. Cooperation with news media representatives is the most reliable guarantee that this objective will be met.

All contract and Kaiser-Francis employees are instructed **NOT** to make any statement to the media concerning the emergency incident. If a media representative contacts any employee, they should refer them to the designated Emergency Command Center where they should contact the Incident Commander or his designated relief for any information concerning the incident.

Kaiser Francis Health Services

## **Kaiser Francis**

**Bell Lake Unit South 416H**  
**Bell Lake Unit South 416H**  
**Bell Lake Unit South 416H**  
**Bell Lake Unit South 416H**

**Plan: 191009 Bell Lake Unit South 416H**

## **Morcor Standard Plan**

**09 October, 2019**

**Morcor Engineering**  
Morcor Standard Plan

|  |                                  |   |                            |                                     |  |                   |
|--|----------------------------------|---|----------------------------|-------------------------------------|--|-------------------|
| <b>Company:</b>                                | Kaiser Francis                   |   |                            | <b>Local Co-ordinate Reference:</b> | Well Bell Lake Unit South 416H         |                   |
| <b>Project:</b>                                | Bell Lake Unit South 416H        |   |                            | <b>TVD Reference:</b>               | WELL @ 3603.3usft (Original Well Elev) |                   |
| <b>Site:</b>                                   | Bell Lake Unit South 416H        |   |                            | <b>MD Reference:</b>                | WELL @ 3603.3usft (Original Well Elev) |                   |
| <b>Well:</b>                                   | Bell Lake Unit South 416H        |   |                            | <b>North Reference:</b>             | Grid                                   |                   |
| <b>Wellbore:</b>                               | Bell Lake Unit South 416H        |   |                            | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |                   |
| <b>Design:</b>                                 | 191009 Bell Lake Unit South 416H |   |                            | <b>Database:</b>                    | EDM 5000.1 Single User Db              |                   |
| <b>Project</b> Bell Lake Unit South 416H       |                                  |   |                            |                                     |  |                   |
| <b>Map System:</b>                             | US State Plane 1983              |   | <b>System Datum:</b>       | Mean Sea Level                      |  |                   |
| <b>Geo Datum:</b>                              | North American Datum 1983        |   |                            |                                     |  |                   |
| <b>Map Zone:</b>                               | New Mexico Eastern Zone          |   |                            |                                     |  |                   |
| <b>Site</b> Bell Lake Unit South 416H          |                                  |   |                            |                                     |  |                   |
| <b>Site Position:</b>                          |                                  |   | <b>Northing:</b>           | 455,083.63 usft                     | <b>Latitude:</b>                       | 32° 14' 53.769 N  |
| <b>From:</b>                                   | Map                              |   | <b>Easting:</b>            | 802,830.91 usft                     | <b>Longitude:</b>                      | 103° 29' 15.000 W |
| <b>Position Uncertainty:</b>                   | 1.0 usft                         |   | <b>Slot Radius:</b>        | 17-1/2 "                            | <b>Grid Convergence:</b>               | 0.45 °            |
| <b>Well</b> Bell Lake Unit South 416H          |                                  |   |                            |                                     |  |                   |
| <b>Well Position</b>                           | +N/-S                            | 0.0 usft                                  | <b>Northing:</b>           | 455,083.63 usft                     | <b>Latitude:</b>                       | 32° 14' 53.769 N  |
|  | +E/-W                            | 0.0 usft                                  | <b>Easting:</b>            | 802,830.91 usft                     | <b>Longitude:</b>                      | 103° 29' 15.000 W |
| <b>Position Uncertainty</b>                    |                                  | 1.0 usft                                  | <b>Wellhead Elevation:</b> | usft                                | <b>Ground Level:</b>                   | 3,581.3 usft      |
| <b>Wellbore</b> Bell Lake Unit South 416H      |                                  |   |                            |                                     |  |                   |
| <b>Magnetics</b>                               | <b>Model Name</b>                | <b>Sample Date</b>                        | <b>Declination</b>         | <b>Dip Angle</b>                    | <b>Field Strength</b>                  |                   |
|  | IGRF2010                         | 10/9/2019                                 | (°)                        | (°)                                 | (nT)                                   |                   |
|  |                                  |   | 6.51                       | 60.01                               | 47,806                                 |                   |
| <b>Design</b> 191009 Bell Lake Unit South 416H |                                  |   |                            |                                     |  |                   |
| <b>Audit Notes:</b>                            |                                  |   |                            |                                     |  |                   |
| <b>Version:</b>                                | <b>Phase:</b>                    | PLAN                                      | <b>Tie On Depth:</b>       | 0.0                                 |  |                   |
| <b>Vertical Section:</b>                       | <b>Depth From (TVD)</b>          | <b>+N/-S</b>                              | <b>+E/-W</b>               | <b>Direction</b>                    |  |                   |
|  | (usft)                           | (usft)                                    | (usft)                     | (°)                                 |  |                   |
|  | 0.0                              | 0.0                                       | 0.0                        | 186.75                              |  |                   |
| <b>Survey Tool Program</b> Date 10/9/2019      |                                  |   |                            |                                     |  |                   |
| <b>From</b>                                    | <b>To</b>                        | <b>Survey (Wellbore)</b>                  | <b>Tool Name</b>           | <b>Description</b>                  |  |                   |
| (usft)   | (usft)                           |   |                            |                                     |  |                   |
| 0.0  | 20,361.9                         | 191009 Bell Lake Unit South 416H (Bell La | MWD                        | MWD - Standard                      |  |                   |



Morcor Engineering  
Morcor Standard Plan

|   |  |
|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

| Planned Survey                |         |                   |            |              |            |           |                |                 |               |                  |      |
|-------------------------------|---------|-------------------|------------|--------------|------------|-----------|----------------|-----------------|---------------|------------------|------|
| MD (usft)                     | Inc (") | Azi (azimuth) (") | TVD (usft) | TVDSS (usft) | N/S (usft) | EW (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg ("/100usft) |      |
| 0.0                           | 0.00    | 0.00              | 0.00       | 0.0          | -3,603.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 100.0                         | 0.00    | 0.00              | 100.0      | 100.0        | -3,503.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 120.0                         | 0.00    | 0.00              | 120.0      | 120.0        | -3,483.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| <b>20" Conductor</b>          |         |                   |            |              |            |           |                |                 |               |                  |      |
| 200.0                         | 0.00    | 0.00              | 200.0      | 200.0        | -3,403.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 300.0                         | 0.00    | 0.00              | 300.0      | 300.0        | -3,303.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 400.0                         | 0.00    | 0.00              | 400.0      | 400.0        | -3,203.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 500.0                         | 0.00    | 0.00              | 500.0      | 500.0        | -3,103.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 600.0                         | 0.00    | 0.00              | 600.0      | 600.0        | -3,003.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 700.0                         | 0.00    | 0.00              | 700.0      | 700.0        | -2,903.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 800.0                         | 0.00    | 0.00              | 800.0      | 800.0        | -2,803.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 900.0                         | 0.00    | 0.00              | 900.0      | 900.0        | -2,703.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,000.0                       | 0.00    | 0.00              | 1,000.0    | 1,000.0      | -2,603.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,100.0                       | 0.00    | 0.00              | 1,100.0    | 1,100.0      | -2,503.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,200.0                       | 0.00    | 0.00              | 1,200.0    | 1,200.0      | -2,403.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,300.0                       | 0.00    | 0.00              | 1,300.0    | 1,300.0      | -2,303.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,372.0                       | 0.00    | 0.00              | 1,372.0    | 1,372.0      | -2,231.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| <b>Rustler</b>                |         |                   |            |              |            |           |                |                 |               |                  |      |
| 1,397.0                       | 0.00    | 0.00              | 1,397.0    | 1,397.0      | -2,206.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| <b>13 3/8" Surface Casing</b> |         |                   |            |              |            |           |                |                 |               |                  |      |
| 1,400.0                       | 0.00    | 0.00              | 1,400.0    | 1,400.0      | -2,203.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,500.0                       | 0.00    | 0.00              | 1,500.0    | 1,500.0      | -2,103.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,600.0                       | 0.00    | 0.00              | 1,600.0    | 1,600.0      | -2,003.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,700.0                       | 0.00    | 0.00              | 1,700.0    | 1,700.0      | -1,903.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,747.0                       | 0.00    | 0.00              | 1,747.0    | 1,747.0      | -1,856.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| <b>Salado</b>                 |         |                   |            |              |            |           |                |                 |               |                  |      |
| 1,800.0                       | 0.00    | 0.00              | 1,800.0    | 1,800.0      | -1,803.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |
| 1,900.0                       | 0.00    | 0.00              | 1,900.0    | 1,900.0      | -1,703.3   | 0.0       | 0.0            | 802,830.91      | 455,083.63    | 0.00             | 0.00 |

Morcor Engineering  
Morcor Standard Plan

|   |  |
|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

| Planned Survey     |         |                   |            |              |            |            |                |                 |               |                  |  |
|--------------------|---------|-------------------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|--|
| MD (usft)          | Inc (") | Azi (azimuth) (") | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg ("/100usft) |  |
| 2,000.0            | 0.00    | 0.00              | 2,000.0    | -1,603.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,072.0            | 0.00    | 0.00              | 2,072.0    | -1,531.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| <b>Top of Salt</b> |         |                   |            |              |            |            |                |                 |               |                  |  |
| 2,100.0            | 0.00    | 0.00              | 2,100.0    | -1,503.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,200.0            | 0.00    | 0.00              | 2,200.0    | -1,403.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,300.0            | 0.00    | 0.00              | 2,300.0    | -1,303.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,400.0            | 0.00    | 0.00              | 2,400.0    | -1,203.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,500.0            | 0.00    | 0.00              | 2,500.0    | -1,103.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,600.0            | 0.00    | 0.00              | 2,600.0    | -1,003.3     | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,700.0            | 0.00    | 0.00              | 2,700.0    | -903.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,800.0            | 0.00    | 0.00              | 2,800.0    | -803.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 2,900.0            | 0.00    | 0.00              | 2,900.0    | -703.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,000.0            | 0.00    | 0.00              | 3,000.0    | -603.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,100.0            | 0.00    | 0.00              | 3,100.0    | -503.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,200.0            | 0.00    | 0.00              | 3,200.0    | -403.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,300.0            | 0.00    | 0.00              | 3,300.0    | -303.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,400.0            | 0.00    | 0.00              | 3,400.0    | -203.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,500.0            | 0.00    | 0.00              | 3,500.0    | -103.3       | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,600.0            | 0.00    | 0.00              | 3,600.0    | -3.3         | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,700.0            | 0.00    | 0.00              | 3,700.0    | 96.7         | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,800.0            | 0.00    | 0.00              | 3,800.0    | 196.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 3,900.0            | 0.00    | 0.00              | 3,900.0    | 296.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 4,000.0            | 0.00    | 0.00              | 4,000.0    | 396.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 4,100.0            | 0.00    | 0.00              | 4,100.0    | 496.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 4,200.0            | 0.00    | 0.00              | 4,200.0    | 596.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 4,300.0            | 0.00    | 0.00              | 4,300.0    | 696.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 4,400.0            | 0.00    | 0.00              | 4,400.0    | 796.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |

**Morcor Engineering**  
Morcor Standard Plan

|                  |                                  |                                     |  |
|------------------|----------------------------------|-------------------------------------|--|
| <b>Company:</b>  | Kaiser Francis                   | <b>Local Co-ordinate Reference:</b> | Well Bell Lake Unit South 416H         |
| <b>Project:</b>  | Bell Lake Unit South 416H        | <b>TVD Reference:</b>               | WELL @ 3603.3usft (Original Well Elev) |
| <b>Site:</b>     | Bell Lake Unit South 416H        | <b>MD Reference:</b>                | WELL @ 3603.3usft (Original Well Elev) |
| <b>Well:</b>     | Bell Lake Unit South 416H        | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Bell Lake Unit South 416H        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | 191009 Bell Lake Unit South 416H | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

| Planned Survey                     |         |                   |      |            |              |            |            |                |                 |               |                  |      |
|------------------------------------|---------|-------------------|------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|------|
| MD (usft)                          | Inc (") | Azi (azimuth) (") |      | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg ("/100usft) |      |
| 4,500.0                            | 0.00    | 0.00              | 0.00 | 4,500.0    | 896.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 4,600.0                            | 0.00    | 0.00              | 0.00 | 4,600.0    | 996.7        | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 4,700.0                            | 0.00    | 0.00              | 0.00 | 4,700.0    | 1,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 4,800.0                            | 0.00    | 0.00              | 0.00 | 4,800.0    | 1,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 4,900.0                            | 0.00    | 0.00              | 0.00 | 4,900.0    | 1,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,000.0                            | 0.00    | 0.00              | 0.00 | 5,000.0    | 1,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,047.0                            | 0.00    | 0.00              | 0.00 | 5,047.0    | 1,443.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| <b>Base of Salt</b>                |         |                   |      |            |              |            |            |                |                 |               |                  |      |
| 5,100.0                            | 0.00    | 0.00              | 0.00 | 5,100.0    | 1,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,200.0                            | 0.00    | 0.00              | 0.00 | 5,200.0    | 1,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,272.0                            | 0.00    | 0.00              | 0.00 | 5,272.0    | 1,668.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| <b>Lamar</b>                       |         |                   |      |            |              |            |            |                |                 |               |                  |      |
| 5,300.0                            | 0.00    | 0.00              | 0.00 | 5,300.0    | 1,696.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,322.0                            | 0.00    | 0.00              | 0.00 | 5,322.0    | 1,718.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| <b>10 3/4" Intermediate Casing</b> |         |                   |      |            |              |            |            |                |                 |               |                  |      |
| 5,347.0                            | 0.00    | 0.00              | 0.00 | 5,347.0    | 1,743.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| <b>Bell Canyon</b>                 |         |                   |      |            |              |            |            |                |                 |               |                  |      |
| 5,400.0                            | 0.00    | 0.00              | 0.00 | 5,400.0    | 1,796.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,500.0                            | 0.00    | 0.00              | 0.00 | 5,500.0    | 1,896.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,600.0                            | 0.00    | 0.00              | 0.00 | 5,600.0    | 1,996.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,700.0                            | 0.00    | 0.00              | 0.00 | 5,700.0    | 2,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,800.0                            | 0.00    | 0.00              | 0.00 | 5,800.0    | 2,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 5,900.0                            | 0.00    | 0.00              | 0.00 | 5,900.0    | 2,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 6,000.0                            | 0.00    | 0.00              | 0.00 | 6,000.0    | 2,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 6,100.0                            | 0.00    | 0.00              | 0.00 | 6,100.0    | 2,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| 6,197.0                            | 0.00    | 0.00              | 0.00 | 6,197.0    | 2,593.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |
| <b>Cherry Canyon</b>               |         |                   |      |            |              |            |            |                |                 |               |                  |      |
| 6,200.0                            | 0.00    | 0.00              | 0.00 | 6,200.0    | 2,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          |                  | 0.00 |

**Morcor Engineering**  
Morcor Standard Plan

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| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

| Planned Survey       |         |                   |            |              |            |            |                |                 |               |                  |  |
|----------------------|---------|-------------------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|--|
| MD (usft)            | Inc (") | Azi (azimuth) (") | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg (*/100usft) |  |
| 6,300.0              | 0.00    | 0.00              | 6,300.0    | 2,696.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 6,400.0              | 0.00    | 0.00              | 6,400.0    | 2,796.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 6,500.0              | 0.00    | 0.00              | 6,500.0    | 2,896.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 6,600.0              | 0.00    | 0.00              | 6,600.0    | 2,996.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 6,700.0              | 0.00    | 0.00              | 6,700.0    | 3,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 6,800.0              | 0.00    | 0.00              | 6,800.0    | 3,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 6,900.0              | 0.00    | 0.00              | 6,900.0    | 3,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,000.0              | 0.00    | 0.00              | 7,000.0    | 3,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,100.0              | 0.00    | 0.00              | 7,100.0    | 3,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,200.0              | 0.00    | 0.00              | 7,200.0    | 3,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,300.0              | 0.00    | 0.00              | 7,300.0    | 3,696.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,400.0              | 0.00    | 0.00              | 7,400.0    | 3,796.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,500.0              | 0.00    | 0.00              | 7,500.0    | 3,896.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,600.0              | 0.00    | 0.00              | 7,600.0    | 3,996.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,647.0              | 0.00    | 0.00              | 7,647.0    | 4,043.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| <b>Brushy Canyon</b> |         |                   |            |              |            |            |                |                 |               |                  |  |
| 7,700.0              | 0.00    | 0.00              | 7,700.0    | 4,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,800.0              | 0.00    | 0.00              | 7,800.0    | 4,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 7,900.0              | 0.00    | 0.00              | 7,900.0    | 4,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,000.0              | 0.00    | 0.00              | 8,000.0    | 4,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,100.0              | 0.00    | 0.00              | 8,100.0    | 4,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,200.0              | 0.00    | 0.00              | 8,200.0    | 4,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,300.0              | 0.00    | 0.00              | 8,300.0    | 4,696.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,400.0              | 0.00    | 0.00              | 8,400.0    | 4,796.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,500.0              | 0.00    | 0.00              | 8,500.0    | 4,896.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,600.0              | 0.00    | 0.00              | 8,600.0    | 4,996.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,700.0              | 0.00    | 0.00              | 8,700.0    | 5,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |

Morcor Engineering  
Morcor Standard Plan

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|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

| Planned Survey     |         |                   |            |              |            |            |                |                 |               |                  |  |
|--------------------|---------|-------------------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|--|
| MD (usft)          | Inc (") | Azi (azimuth) (") | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg (*/100usft) |  |
| 8,772.0            | 0.00    | 0.00              | 8,772.0    | 5,168.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| <b>Bone Spring</b> |         |                   |            |              |            |            |                |                 |               |                  |  |
| 8,800.0            | 0.00    | 0.00              | 8,800.0    | 5,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 8,900.0            | 0.00    | 0.00              | 8,900.0    | 5,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,000.0            | 0.00    | 0.00              | 9,000.0    | 5,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,082.0            | 0.00    | 0.00              | 9,082.0    | 5,478.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| <b>Avalon</b>      |         |                   |            |              |            |            |                |                 |               |                  |  |
| 9,100.0            | 0.00    | 0.00              | 9,100.0    | 5,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,200.0            | 0.00    | 0.00              | 9,200.0    | 5,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,300.0            | 0.00    | 0.00              | 9,300.0    | 5,696.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,400.0            | 0.00    | 0.00              | 9,400.0    | 5,796.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,500.0            | 0.00    | 0.00              | 9,500.0    | 5,896.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,600.0            | 0.00    | 0.00              | 9,600.0    | 5,996.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,700.0            | 0.00    | 0.00              | 9,700.0    | 6,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,800.0            | 0.00    | 0.00              | 9,800.0    | 6,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,900.0            | 0.00    | 0.00              | 9,900.0    | 6,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 9,972.0            | 0.00    | 0.00              | 9,972.0    | 6,368.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| <b>1st BS Sand</b> |         |                   |            |              |            |            |                |                 |               |                  |  |
| 10,000.0           | 0.00    | 0.00              | 10,000.0   | 6,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 10,100.0           | 0.00    | 0.00              | 10,100.0   | 6,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 10,200.0           | 0.00    | 0.00              | 10,200.0   | 6,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 10,300.0           | 0.00    | 0.00              | 10,300.0   | 6,696.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 10,400.0           | 0.00    | 0.00              | 10,400.0   | 6,796.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 10,500.0           | 0.00    | 0.00              | 10,500.0   | 6,896.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| 10,517.0           | 0.00    | 0.00              | 10,517.0   | 6,913.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |
| <b>2nd BS sand</b> |         |                   |            |              |            |            |                |                 |               |                  |  |
| 10,600.0           | 0.00    | 0.00              | 10,600.0   | 6,996.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |  |

**Morcor Engineering**  
Morcor Standard Plan

**Company:** Kaiser Francis  
**Project:** Bell Lake Unit South 416H  
**Site:** Bell Lake Unit South 416H  
**Well:** Bell Lake Unit South 416H  
**Wellbore:** Bell Lake Unit South 416H  
**Design:** 191009 Bell Lake Unit South 416H

**Local Co-ordinate Reference:** Well Bell Lake Unit South 416H  
**TVD Reference:** WELL @ 3603.3usft (Original Well Elev)  
**MD Reference:** WELL @ 3603.3usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Planned Survey**

| MD (usft)                             | Inc (") | Azi (azimuth) (") | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLog ("/100usft) |
|---------------------------------------|---------|-------------------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|
| 10,700.0                              | 0.00    | 0.00              | 10,700.0   | 7,096.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 10,800.0                              | 0.00    | 0.00              | 10,800.0   | 7,196.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 10,900.0                              | 0.00    | 0.00              | 10,900.0   | 7,296.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 10,972.0                              | 0.00    | 0.00              | 10,972.0   | 7,368.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| <b>3rd BS Lime</b>                    |         |                   |            |              |            |            |                |                 |               |                  |
| 11,000.0                              | 0.00    | 0.00              | 11,000.0   | 7,396.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 11,100.0                              | 0.00    | 0.00              | 11,100.0   | 7,496.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 11,147.0                              | 0.00    | 0.00              | 11,147.0   | 7,543.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| <b>7 5/8" 2nd Intermediate Casing</b> |         |                   |            |              |            |            |                |                 |               |                  |
| 11,200.0                              | 0.00    | 0.00              | 11,200.0   | 7,596.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 11,205.0                              | 0.00    | 0.00              | 11,205.0   | 7,601.7      | 0.0        | 0.0        | 802,830.91     | 455,083.63      | 0.00          | 0.00             |
| 11,300.0                              | 9.50    | 262.91            | 11,299.6   | 7,696.3      | -1.0       | -7.8       | 802,823.11     | 455,082.66      | 1.88          | 10.00            |
| 11,400.0                              | 19.50   | 262.91            | 11,396.3   | 7,793.0      | -4.1       | -32.6      | 802,798.30     | 455,079.57      | 7.87          | 10.00            |
| 11,454.8                              | 24.98   | 262.91            | 11,447.0   | 7,843.7      | -6.8       | -53.2      | 802,777.71     | 455,077.01      | 12.83         | 10.00            |
| <b>3rd BS Sand</b>                    |         |                   |            |              |            |            |                |                 |               |                  |
| 11,500.0                              | 29.50   | 262.91            | 11,487.1   | 7,883.8      | -9.2       | -73.7      | 802,757.20     | 455,074.46      | 17.78         | 10.00            |
| 11,600.0                              | 39.50   | 262.91            | 11,569.4   | 7,966.1      | -16.2      | -129.8     | 802,701.06     | 455,067.47      | 31.32         | 10.00            |
| 11,700.0                              | 49.50   | 262.91            | 11,640.7   | 8,037.4      | -24.8      | -199.3     | 802,631.60     | 455,058.83      | 48.07         | 10.00            |
| 11,796.7                              | 59.17   | 262.91            | 11,697.0   | 8,093.7      | -34.5      | -277.2     | 802,553.72     | 455,049.13      | 66.85         | 10.00            |
| <b>Wolfcamp</b>                       |         |                   |            |              |            |            |                |                 |               |                  |
| 11,800.0                              | 59.50   | 262.91            | 11,698.7   | 8,095.4      | -34.8      | -280.0     | 802,550.91     | 455,048.79      | 67.53         | 10.00            |
| 11,900.0                              | 69.50   | 262.91            | 11,741.7   | 8,138.4      | -46.0      | -369.5     | 802,461.46     | 455,037.65      | 89.10         | 10.00            |
| 11,940.6                              | 73.56   | 262.91            | 11,754.5   | 8,151.2      | -50.7      | -407.7     | 802,423.23     | 455,032.90      | 98.32         | 10.00            |
| 12,000.0                              | 73.88   | 256.73            | 11,771.2   | 8,167.9      | -60.8      | -463.7     | 802,367.16     | 455,022.82      | 114.92        | 10.00            |
| 12,100.0                              | 74.81   | 246.39            | 11,798.3   | 8,195.0      | -91.2      | -554.9     | 802,275.97     | 454,992.39      | 155.87        | 10.00            |
| 12,200.0                              | 76.21   | 236.15            | 11,823.3   | 8,220.0      | -137.7     | -639.7     | 802,191.21     | 454,945.90      | 212.00        | 10.00            |
| 12,300.0                              | 78.02   | 226.06            | 11,845.7   | 8,242.4      | -198.9     | -715.4     | 802,115.47     | 454,884.76      | 281.62        | 10.00            |

Morcor Engineering  
Morcor Standard Plan

|   |  |
|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000 1 Single User Db                         |

| Planned Survey |         |                   |  |            |              |            |            |                |                 |               |                  |
|----------------|---------|-------------------|--|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|
| MD (usft)      | Inc (°) | Azi (azimuth) (°) |  | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLog (°/100usft) |
| 12,400.0       | 80.19   | 216.12            |  | 11,864.6   | 8,261.3      | -272.8     | -779.9     | 802,051.04     | 454,810.84      | 362.61        | 10.00            |
| 12,500.0       | 82.64   | 206.31            |  | 11,879.6   | 8,276.3      | -357.3     | -831.0     | 801,999.89     | 454,726.37      | 452.50        | 10.00            |
| 12,600.0       | 85.30   | 196.62            |  | 11,890.1   | 8,286.8      | -449.7     | -867.3     | 801,963.56     | 454,633.93      | 548.57        | 10.00            |
| 12,700.0       | 88.10   | 187.00            |  | 11,895.9   | 8,292.6      | -547.3     | -887.7     | 801,943.17     | 454,536.34      | 647.89        | 10.00            |
| 12,766.7       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -613.8     | -892.1     | 801,938.76     | 454,469.85      | 714.43        | 10.00            |
| 12,800.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -647.1     | -892.5     | 801,938.41     | 454,436.53      | 747.56        | 0.00             |
| 12,900.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -747.1     | -893.6     | 801,937.36     | 454,336.54      | 846.99        | 0.00             |
| 13,000.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -847.1     | -894.6     | 801,936.31     | 454,236.54      | 946.41        | 0.00             |
| 13,100.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -947.1     | -895.7     | 801,935.25     | 454,136.55      | 1,045.84      | 0.00             |
| 13,200.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,047.1   | -896.7     | 801,934.20     | 454,036.55      | 1,145.26      | 0.00             |
| 13,300.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,147.1   | -897.8     | 801,933.15     | 453,936.56      | 1,244.69      | 0.00             |
| 13,400.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,247.1   | -898.8     | 801,932.10     | 453,836.56      | 1,344.11      | 0.00             |
| 13,500.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,347.1   | -899.9     | 801,931.05     | 453,736.57      | 1,443.53      | 0.00             |
| 13,600.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,447.1   | -900.9     | 801,930.00     | 453,636.57      | 1,542.96      | 0.00             |
| 13,700.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,547.0   | -902.0     | 801,928.94     | 453,536.58      | 1,642.38      | 0.00             |
| 13,800.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,647.0   | -903.0     | 801,927.89     | 453,436.59      | 1,741.81      | 0.00             |
| 13,900.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,747.0   | -904.1     | 801,926.84     | 453,336.59      | 1,841.23      | 0.00             |
| 14,000.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,847.0   | -905.1     | 801,925.79     | 453,236.60      | 1,940.66      | 0.00             |
| 14,100.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -1,947.0   | -906.2     | 801,924.74     | 453,136.60      | 2,040.08      | 0.00             |
| 14,200.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,047.0   | -907.2     | 801,923.69     | 453,036.61      | 2,139.50      | 0.00             |
| 14,300.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,147.0   | -908.3     | 801,922.63     | 452,936.61      | 2,238.93      | 0.00             |
| 14,400.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,247.0   | -909.3     | 801,921.58     | 452,836.62      | 2,338.35      | 0.00             |
| 14,500.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,347.0   | -910.4     | 801,920.53     | 452,736.62      | 2,437.78      | 0.00             |
| 14,600.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,447.0   | -911.4     | 801,919.48     | 452,636.63      | 2,537.20      | 0.00             |
| 14,700.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,547.0   | -912.5     | 801,918.43     | 452,536.64      | 2,636.63      | 0.00             |
| 14,800.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,647.0   | -913.5     | 801,917.38     | 452,436.64      | 2,736.05      | 0.00             |
| 14,900.0       | 90.00   | 180.60            |  | 11,897.0   | 8,293.7      | -2,747.0   | -914.6     | 801,916.32     | 452,336.65      | 2,835.47      | 0.00             |

Morcor Engineering  
Morcor Standard Plan

|   |  |
|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

| Planned Survey |         |                   |        |            |              |            |            |                |                 |               |                  |
|----------------|---------|-------------------|--------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|
| MD (usft)      | Inc (") | Azi (azimuth) (") |        | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg (*/100usft) |
| 15,000.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -2,847.0   | -915.6     | 801,915.27     | 452,236.65      | 2,934.90      | 0.00             |
| 15,100.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -2,947.0   | -916.7     | 801,914.22     | 452,136.66      | 3,034.32      | 0.00             |
| 15,200.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,047.0   | -917.7     | 801,913.17     | 452,036.66      | 3,133.75      | 0.00             |
| 15,300.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,147.0   | -918.8     | 801,912.12     | 451,936.67      | 3,233.17      | 0.00             |
| 15,400.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,247.0   | -919.8     | 801,911.06     | 451,836.67      | 3,332.60      | 0.00             |
| 15,500.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,347.0   | -920.9     | 801,910.01     | 451,736.68      | 3,432.02      | 0.00             |
| 15,600.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,446.9   | -921.9     | 801,908.96     | 451,636.69      | 3,531.45      | 0.00             |
| 15,700.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,546.9   | -923.0     | 801,907.91     | 451,536.69      | 3,630.87      | 0.00             |
| 15,800.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,646.9   | -924.1     | 801,906.86     | 451,436.70      | 3,730.29      | 0.00             |
| 15,900.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,746.9   | -925.1     | 801,905.81     | 451,336.70      | 3,829.72      | 0.00             |
| 16,000.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,846.9   | -926.2     | 801,904.75     | 451,236.71      | 3,929.14      | 0.00             |
| 16,100.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -3,946.9   | -927.2     | 801,903.70     | 451,136.71      | 4,028.57      | 0.00             |
| 16,200.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,046.9   | -928.3     | 801,902.65     | 451,036.72      | 4,127.99      | 0.00             |
| 16,300.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,146.9   | -929.3     | 801,901.60     | 450,936.72      | 4,227.42      | 0.00             |
| 16,400.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,246.9   | -930.4     | 801,900.55     | 450,836.73      | 4,326.84      | 0.00             |
| 16,500.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,346.9   | -931.4     | 801,899.50     | 450,736.74      | 4,426.26      | 0.00             |
| 16,600.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,446.9   | -932.5     | 801,898.44     | 450,636.74      | 4,525.69      | 0.00             |
| 16,700.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,546.9   | -933.5     | 801,897.39     | 450,536.75      | 4,625.11      | 0.00             |
| 16,800.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,646.9   | -934.6     | 801,896.34     | 450,436.75      | 4,724.54      | 0.00             |
| 16,900.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,746.9   | -935.6     | 801,895.29     | 450,336.76      | 4,823.96      | 0.00             |
| 17,000.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,846.9   | -936.7     | 801,894.24     | 450,236.76      | 4,923.39      | 0.00             |
| 17,100.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -4,946.9   | -937.7     | 801,893.19     | 450,136.77      | 5,022.81      | 0.00             |
| 17,200.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -5,046.9   | -938.8     | 801,892.13     | 450,036.77      | 5,122.23      | 0.00             |
| 17,300.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -5,146.9   | -939.8     | 801,891.08     | 449,936.78      | 5,221.66      | 0.00             |
| 17,400.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -5,246.8   | -940.9     | 801,890.03     | 449,836.78      | 5,321.08      | 0.00             |
| 17,500.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -5,346.8   | -941.9     | 801,888.98     | 449,736.79      | 5,420.51      | 0.00             |
| 17,600.0       | 90.00   | 180.60            | 180.60 | 11,897.0   | 8,293.7      | -5,446.8   | -943.0     | 801,887.93     | 449,636.80      | 5,519.93      | 0.00             |



Morcor Engineering  
Morcor Standard Plan

Company: Kaiser Francis  
Project: Bell Lake Unit South 416H  
Site: Bell Lake Unit South 416H  
Well: Bell Lake Unit South 416H  
Wellbore: Bell Lake Unit South 416H  
Design: 191009 Bell Lake Unit South 416H

Local Co-ordinate Reference: Well Bell Lake Unit South 416H  
TVD Reference: WELL @ 3603.3usft (Original Well Elev)  
MD Reference: WELL @ 3603.3usft (Original Well Elev)  
North Reference: Grd  
Survey Calculation Method: Minimum Curvature  
Database: EDM 5000.1 Single User Db

Planned Survey

| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg (*/100usft) |
|-----------|---------|-------------------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|
| 17,700.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -5,546.8   | -944.0     | 801,886.88     | 449,536.80      | 5,619.36      | 0.00             |
| 17,800.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -5,646.8   | -945.1     | 801,885.82     | 449,436.81      | 5,718.78      | 0.00             |
| 17,900.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -5,746.8   | -946.1     | 801,884.77     | 449,336.81      | 5,818.21      | 0.00             |
| 18,000.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -5,846.8   | -947.2     | 801,883.72     | 449,236.82      | 5,917.63      | 0.00             |
| 18,100.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -5,946.8   | -948.2     | 801,882.67     | 449,136.82      | 6,017.05      | 0.00             |
| 18,200.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,046.8   | -949.3     | 801,881.62     | 449,036.83      | 6,116.48      | 0.00             |
| 18,300.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,146.8   | -950.3     | 801,880.56     | 448,936.83      | 6,215.90      | 0.00             |
| 18,400.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,246.8   | -951.4     | 801,879.51     | 448,836.84      | 6,315.33      | 0.00             |
| 18,500.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,346.8   | -952.4     | 801,878.46     | 448,736.85      | 6,414.75      | 0.00             |
| 18,600.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,446.8   | -953.5     | 801,877.41     | 448,636.85      | 6,514.18      | 0.00             |
| 18,700.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,546.8   | -954.6     | 801,876.36     | 448,536.86      | 6,613.60      | 0.00             |
| 18,800.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,646.8   | -955.6     | 801,875.31     | 448,436.86      | 6,713.02      | 0.00             |
| 18,900.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,746.8   | -956.7     | 801,874.25     | 448,336.87      | 6,812.45      | 0.00             |
| 19,000.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,846.8   | -957.7     | 801,873.20     | 448,236.87      | 6,911.87      | 0.00             |
| 19,100.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -6,946.8   | -958.8     | 801,872.15     | 448,136.88      | 7,011.30      | 0.00             |
| 19,200.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,046.7   | -959.8     | 801,871.10     | 448,036.88      | 7,110.72      | 0.00             |
| 19,300.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,146.7   | -960.9     | 801,870.05     | 447,936.89      | 7,210.15      | 0.00             |
| 19,400.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,246.7   | -961.9     | 801,869.00     | 447,836.90      | 7,309.57      | 0.00             |
| 19,500.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,346.7   | -963.0     | 801,867.94     | 447,736.90      | 7,408.99      | 0.00             |
| 19,600.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,446.7   | -964.0     | 801,866.89     | 447,636.91      | 7,508.42      | 0.00             |
| 19,700.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,546.7   | -965.1     | 801,865.84     | 447,536.91      | 7,607.84      | 0.00             |
| 19,800.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,646.7   | -966.1     | 801,864.79     | 447,436.92      | 7,707.27      | 0.00             |
| 19,900.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,746.7   | -967.2     | 801,863.74     | 447,336.92      | 7,806.69      | 0.00             |
| 20,000.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,846.7   | -968.2     | 801,862.69     | 447,236.93      | 7,906.12      | 0.00             |
| 20,100.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -7,946.7   | -969.3     | 801,861.63     | 447,136.93      | 8,005.54      | 0.00             |
| 20,200.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -8,046.7   | -970.3     | 801,860.58     | 447,036.94      | 8,104.97      | 0.00             |
| 20,300.0  | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -8,146.7   | -971.4     | 801,859.53     | 446,936.95      | 8,204.39      | 0.00             |

**Morcor Engineering**  
Morcor Standard Plan

|   |  |
|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

| Planned Survey |         |                   |            |              |            |            |                |                 |               |                  |
|----------------|---------|-------------------|------------|--------------|------------|------------|----------------|-----------------|---------------|------------------|
| MD (usft)      | Inc (°) | Azi (azimuth) (°) | TVD (usft) | TVDSS (usft) | N/S (usft) | E/W (usft) | Easting (usft) | Northing (usft) | V. Sec (usft) | DLeg (°/100usft) |
| 20,361.9       | 90.00   | 180.60            | 11,897.0   | 8,293.7      | -8,206.5   | -972.0     | 801,858.88     | 446,875.09      | 8,265.89      | 0.00             |

| Casing Points         |                       |                                |                     |                   |  |
|-----------------------|-----------------------|--------------------------------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name                           | Casing Diameter (") | Hole Diameter (") |  |
| 120.0                 | 120.0                 | 20" Conductor                  | 20                  | 26                |  |
| 1,397.0               | 1,397.0               | 13 3/8" Surface Casing         | 13-3/8              | 17-1/2            |  |
| 5,322.0               | 5,322.0               | 10 3/4" Intermediate Casing    | 10-3/4              | 12-1/4            |  |
| 11,147.0              | 11,147.0              | 7 5/8" 2nd Intermediate Casing | 7-5/8               | 9-7/8             |  |
| 20,361.9              | 11,897.0              | 5 1/2" Production Casing       | 5-1/2               | 6-3/4             |  |

| Formations            |                       |               |           |         |                   |  |
|-----------------------|-----------------------|---------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name          | Lithology | Dip (°) | Dip Direction (°) |  |
| 8,772.0               | 8,772.0               | Bone Spring   |           | 0.00    |                   |  |
| 10,972.0              | 10,972.0              | 3rd BS Lime   |           | 0.00    |                   |  |
| 9,082.0               | 9,082.0               | Avalon        |           | 0.00    |                   |  |
| 1,372.0               | 1,372.0               | Rustler       |           | 0.00    |                   |  |
| 5,347.0               | 5,347.0               | Bell Canyon   |           | 0.00    |                   |  |
| 11,454.8              | 11,447.0              | 3rd BS Sand   |           | 0.00    |                   |  |
| 11,786.7              | 11,697.0              | Wolfcamp      |           | 0.00    |                   |  |
| 5,047.0               | 5,047.0               | Base of Salt  |           | 0.00    |                   |  |
| 9,972.0               | 9,972.0               | 1st BS Sand   |           | 0.00    |                   |  |
| 6,197.0               | 6,197.0               | Cherry Canyon |           | 0.00    |                   |  |
| 1,747.0               | 1,747.0               | Salado        |           | 0.00    |                   |  |
| 7,647.0               | 7,647.0               | Brushy Canyon |           | 0.00    |                   |  |
| 10,517.0              | 10,517.0              | 2nd BS sand   |           | 0.00    |                   |  |
| 2,072.0               | 2,072.0               | Top of Salt   |           | 0.00    |                   |  |
| 5,272.0               | 5,272.0               | Lamar         |           | 0.00    |                   |  |

**Morcor Engineering**  
Morcor Standard Plan

|   |  |
|---|--|
| <b>Company:</b> Kaiser Francis                  | <b>Local Co-ordinate Reference:</b> Well Bell Lake Unit South 416H |
| <b>Project:</b> Bell Lake Unit South 416H       | <b>TVD Reference:</b> WELL @ 3603.3usft (Original Well Elev)       |
| <b>Site:</b> Bell Lake Unit South 416H          | <b>MD Reference:</b> WELL @ 3603.3usft (Original Well Elev)        |
| <b>Well:</b> Bell Lake Unit South 416H          | <b>North Reference:</b> Grid                                       |
| <b>Wellbore:</b> Bell Lake Unit South 416H      | <b>Survey Calculation Method:</b> Minimum Curvature                |
| <b>Design:</b> 191009 Bell Lake Unit South 416H | <b>Database:</b> EDM 5000.1 Single User Db                         |

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit Original  
to Appropriate  
District Office

### GAS CAPTURE PLAN

Date: 01/26/2018

Original Operator & OGRID No.: Kaiser-Francis Oil Company, 12361  
 Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

#### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

| Well Name                 | API | Well Location (ULSTR) | Footages | Expected MCF/D | Flared or Vented | Comments |
|---------------------------|-----|-----------------------|----------|----------------|------------------|----------|
| Bell Lake Unit South 216H |     | 5-24S-34E             |          | 2000           | 0                |          |
| Bell Lake Unit South 217H |     | 5-24S-34E             |          | 2000           | 0                |          |
| Bell Lake Unit South 316H |     | 5-24S-34E             |          | 2000           | 0                |          |
| Bell Lake Unit South 317H |     | 5-24S-34E             |          | 2000           | 0                |          |
| Bell Lake Unit South 416H |     | 5-24S-34E             |          | 2000           | 0                |          |
| Bell Lake Unit South 417H |     | 5-24S-34E             |          | 2000           | 0                |          |

#### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Targa and will be connected to Targa low/high pressure gathering system located in Lea County, New Mexico. It will require 11,000' of pipeline to connect the facility to low/high pressure gathering system. Kaiser-Francis Oil Company provides (periodically) to Targa a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Kaiser-Francis Oil Company and Targa have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Targa Processing Plant located in Sec. 36, Twn. 19S, Rng. 36E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

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Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
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District I

1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1263 Fax: (575) 748-9720

District III

1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

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Phone: (505) 476-3460 Fax: (505) 476-3462

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Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|  |   |   |
|--|---|---|
| <sup>1</sup> API Number<br><b>30-025-48260</b> | <sup>2</sup> Pool Code<br><b>98266</b>                      | <sup>3</sup> Pool Name<br><b>Bell Lake; Wolfcamp, South</b> |
| <sup>4</sup> Property Code<br><b>316706</b>    | <sup>5</sup> Property Name<br><b>BELL LAKE UNIT SOUTH</b>   |   |
| <sup>7</sup> OGRID No.<br><b>12361</b>         | <sup>8</sup> Operator Name<br><b>KAISER-FRANCIS OIL CO.</b> | <sup>6</sup> Well Number<br><b>416H</b>                     |
|  |   | <sup>9</sup> Elevation<br><b>3581.3</b>                     |

<sup>10</sup> Surface Location

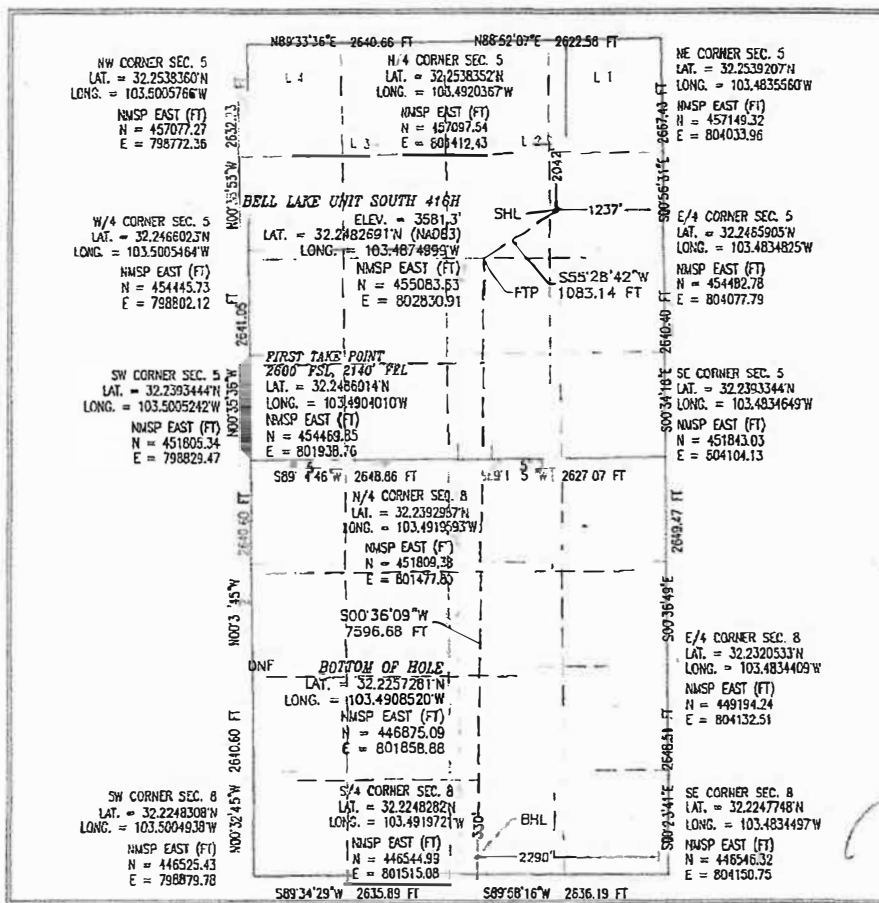
| UL or lot no. | Section  | Township    | Range       | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County     |
|---------------|----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|------------|
| <b>H</b>      | <b>5</b> | <b>24 S</b> | <b>34 E</b> |         | <b>2042</b>   | <b>NORTH</b>     | <b>1237</b>   | <b>EAST</b>    | <b>LEA</b> |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section  | Township    | Range       | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County     |
|---------------|----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|------------|
| <b>O</b>      | <b>8</b> | <b>24 S</b> | <b>34 E</b> |         | <b>330</b>    | <b>SOUTH</b>     | <b>2290</b>   | <b>EAST</b>    | <b>LEA</b> |

|   |                               |                                  |   |
|---|-------------------------------|----------------------------------|---|
| <sup>12</sup> Dedicated Acres<br><b>480</b> | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No.<br><b>R-14601</b> |
|---|-------------------------------|----------------------------------|---|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



<sup>16</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Stormi Davis* 12/16/19  
Signature Date

Stormi Davis  
Printed Name  
ssdavis104@gmail.com  
E-mail Address

<sup>17</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

DECEMBER 19, 2019  
Date of Survey

*Edmundo E. Jaramillo, PLS*  
Signature and Seal of Professional Surveyor  
Certificate Number: EDMUNDO E. JARAMILLO, PLS 12797  
SURVEY NO. 6775

District I  
1625 N. French Dr., Hobbs, NM 88240  
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**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

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

**Rating Depth:** 18000

**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 listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

**Choke Diagram Attachment:**

BLUS\_416H\_Choke\_Manifold\_20191206074222.pdf

**BOP Diagram Attachment:**

Cactus\_Flex\_Hose\_16C\_Certification\_20191206074307.pdf

BLUS\_416H\_MultiBowl\_Wellhead\_20191206074431.pdf

BLUS\_416H\_BOP\_20191210134924.pdf

BLUS\_416H\_Well\_Control\_Plan\_20191211112505.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          | 1397          | 0           | 1397           | 3581        | 2184           | 1397                        | J-55    | 40.5   | ST&C                  | 2.4         | 4.8      | DRY           | 7.4      | DRY          | 11.1    |
| 2         | INTERMEDIATE | 9.875     | 7.625    | NEW       | API      | N              | 0          | 11147         | 0           | 11147          |             | -7566          | 11147                       | HCP-110 | 29.7   | LT&C                  | 1.3         | 1.8      | DRY           | 2.3      | DRY          | 2.8     |
| 3         | PRODUCTION   | 6.75      | 5.5      | NEW       | API      | N              | 0          | 20362         | 0           | 11897          |             | -8316          | 20362                       | P-110   | 20     | OTHER - USS Eagle SFH | 1.8         | 1.9      | DRY           | 2.6      | DRY          | 3.1     |

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 416H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

BLUS\_416H\_Casing\_Assumptions\_20191206075826.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

BLUS\_416H\_Casing\_Assumptions\_20191206075453.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

BLUS\_416H\_Casing\_Assumptions\_20191206075650.pdf

5.5\_x\_20\_P110\_HP\_USS\_EAGLE\_SFH\_Performance\_Sheet\_20191206075737.pdf

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**Section 4 - Cement**



**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 416H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives    |
|-------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|-------------|--------------|
| SURFACE     | Lead      |                  | 0      | 1397      | 673          | 1.72  | 13.5    | 1164  | 50      | ExtendaCem  | Poly E Flake |

|              |      |  |      |           |     |      |      |      |    |          |          |
|--------------|------|--|------|-----------|-----|------|------|------|----|----------|----------|
| INTERMEDIATE | Lead |  | 0    | 1114<br>7 | 843 | 2.73 | 11   | 2303 | 25 | NeoCem   | Extender |
| INTERMEDIATE | Tail |  | 0    | 1114<br>7 | 576 | 1.2  | 15.6 | 689  | 25 | Halcem   | none     |
| PRODUCTION   | Lead |  | 9000 | 2036<br>2 | 892 | 1.22 | 14.5 | 1091 | 15 | VersaCem | 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 |
|-----------|--------------|------------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 1114<br>7 | 1189<br>7    | OIL-BASED<br>MUD       | 10                   | 12                   |                     |                             |    |                |                |                 |                            |
| 1397      | 1114<br>7    | OTHER : Brine          | 8.7                  | 9                    |                     |                             |    |                |                |                 |                            |
| 0         | 1397         | OTHER : Fresh<br>Water | 8.4                  | 9                    |                     |                             |    |                |                |                 |                            |

KAISER-FRANCIS OIL COMPANY

P.O. BOX 21468

TULSA, OKLAHOMA 74121-1468

6733 South Yale Avenue, 74136  
(918) 494-0000

Date: 12/15/2020

To: NMOCD

From: Charlotte Van Valkenburg

Re: Closed-Loop System

It is the intention of Kaiser-Francis Oil Company to use a closed-loop system during drilling of the following well:

Bell Lake Unit South 416H  
SHL Sec. 5-24S-34E  
2042' FNL & 1237' FEL  
Lea Co., NM

Charlotte Van Valkenburg  
Mgr., Regulatory Compliance  
Kaiser-Francis Oil Company

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720  
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**State of New Mexico**  
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CONDITIONS

Action 12303

**CONDITIONS OF APPROVAL**

|   |        |                |              |
|---|--------|----------------|--------------|
| Operator:   | OGRID: | Action Number: | Action Type: |
| KAISER-FRANCIS OIL CO      P.O. Box 21468      Tulsa, OK74121 | 12361  | 12303          | FORM 3160-3  |

| OCD Reviewer | Condition  |
|--------------|--|
| pkautz       | Notify OCD 24 hours prior to casing &cement  |
| pkautz       | Will require a File As Drilled C-102 and a Directional Survey with the C-104   |
| pkautz       | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string |