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

5. Lease Serial No.
NMNM0000587

6. If Indian, Allotee or Tribe Name

1a. Type of work: [✓] DRILL [ ] REENTER

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other

1c. Type of Completion: [ ] Hydraulic Fracturing [ ] Single Zone [✓] Multiple Zone

7. If Unit or CA Agreement, Name and No.
BELL LAKE / NMNM068292X

8. Lease Name and Well No.
BELL LAKE UNIT NORTH (316702)
234H

2. Name of Operator
KAISER FRANCIS OIL COMPANY (12361)

9. API Well No.
30-025-46744

3a. Address
6733 S. Yale Ave. Tulsa OK 74121

3b. Phone No. *(include area code)*
(918)491-0000

10. Field and Pool, or Exploratory (98259)
OJO CHISO / BONE SPRING SOUTHWE

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NESW / 2032 FSL / 2348 FWL / LAT 32.3319701 / LONG -103.4931114

At proposed prod. zone NWNE / 330 FNL / 2290 FEL / LAT 32.3545128 / LONG -103.4910145

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 5 / T23S / R34E / NMP

14. Distance in miles and direction from nearest town or post office*
20 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
292 feet

16. No of acres in lease
634.55

17. Spacing Unit dedicated to this well
480

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
30 feet

19. Proposed Depth
10227 feet / 18232 feet

20. BLM/BIA Bond No. in file
FED: WYB000055

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3432 feet

22. Approximate date work will start*
10/01/2019

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Stormi Davis / Ph: (918)491-4339	08/06/2019
Title: Regulatory Analyst		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Christopher Walls / Ph: (575)234-2234	Date 01/06/2020
Title: Petroleum Engineer	Office: CARLSBAD	

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 01/10/2020

APPROVED WITH CONDITIONS

Approval Date: 01/06/2020

KZ 01/17/2020

(Continued on page 2)

*(Instructions on page 2)

Additional Operator Remarks

Location of Well

1. SHL: NESW / 2032 FSL / 2348 FWL / TWSP: 23S / RANGE: 34E / SECTION: 5 / LAT: 32.3319701 / LONG: -103.4931114 (TVD: 0 feet, MD: 0 feet)
   PPP: SWNE / 2640 FNL / 2168 FEL / TWSP: 23S / RANGE: 34E / SECTION: 5 / LAT: 32.3336943 / LONG: -103.4906231 (TVD: 10227 feet, MD: 10650 feet)
   PPP: SWNE / 2600 FNL / 2140 FEL / TWSP: 23S / RANGE: 34E / SECTION: 5 / LAT: 32.3337611 / LONG: -103.4905381 (TVD: 10227 feet, MD: 10700 feet)
   PPP: SWSE / 0 FSL / 2140 FEL / TWSP: 22S / RANGE: 34E / SECTION: 32 / LAT: 32.3409602 / LONG: -103.4905606 (TVD: 10227 feet, MD: 13300 feet)
   BHL: NWNE / 330 FNL / 2290 FEL / TWSP: 22S / RANGE: 34E / SECTION: 32 / LAT: 32.3545128 / LONG: -103.4910145 (TVD: 10227 feet, MD: 18232 feet)

BLM Point of Contact

Name: Deborah Ham
Title: Legal Landlaw Examiner
Phone: 5752345965
Email: dham@blm.gov

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.

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Kaiser Francis Oil Company**
LEASE NO.:	**NMNM0000587**
WELL NAME & NO.:	**Bell Lake Unit North 234H**
SURFACE HOLE FOOTAGE:	**2032' FSL & 2348' FWL**
BOTTOM HOLE FOOTAGE	**330' FNL & 2290' FWL**
LOCATION:	**Section 5, T 23S, R 34E, NMPM**
COUNTY:	**Lea County, New Mexico**

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☑ Unit

A. HYDROGEN SULFIDE

1. 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 **13-3/8"** surface casing shall be set at approximately **1272'** (a minimum of 25'into the Rustler Anhydrite and above the salt) and cemented to surface.
   a. **If cement does not circulate to surface,** the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of **6 hours** after pumping cement, ideally between 8-10 hours after.
   b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.
   c. If cement falls back, remedial cementing will be done prior to drilling out the shoe.
   d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.

2. The **9-5/8"** intermediate casing shall be set at approximately **5022'** and cemented to surface.

   a. **If cement does not circulate to surface,** see B.1.a, c & d.

3. The **5-1/2"** production casing shall be cemented with at least **200' tie-back** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
2. Required safety valves, with appropriate wrenches and subs for the drill string being utilized, will be in the open position and accessible on the rig floor.

D. SPECIAL REQUIREMENTS

2. The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number once it has been established.

   a. A commercial well determination shall be submit after production has been established for at least six months. Secondary recovery unit wells are exempt from this requirement.

DR 1/2/2020

GENERAL REQUIREMENTS

1. The BLM is to be notified in advance for a representative to witness:
   a. Spudding the well (minimum of 24 hours)
   b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
   c. BOP/BOPE tests (minimum of 4 hours)
      ☒ Eddy County: Call the Carlsbad Field Office, (575) 361-2822
      ☒ Lea County: Call the Hobbs Field Station, (575) 393-3612
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig:
      i. Notify the BLM when moving in and removing the Spudder Rig.
      ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      iii. BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be available upon request. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the

following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well-specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On the portion of well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

c. Manufacturer representative shall install the test plug for the initial BOP test.

d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

e. Whenever any seal subject to test pressure is broken, all the tests in Onshore Order 2 III.A.2.i must be followed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the BOP/BOPE tests.

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

   b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test which can be initiated immediately after bumping the plug (only applies to single-stage cement jobs).

   c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be made available upon request.

   d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

   e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.

   f. BOP/BOPE must be tested within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth

exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

1. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

1. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.
2. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Kaiser Francis Oil Company
LEASE NO.:	NMNM0000587
COUNTY:	Lea

Wells:

Bell Lake Unit North 233H
Surface Hole Location: 2062' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2110' FWL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 234H
Surface Hole Location: 2032' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2290' FEL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 333H
Surface Hole Location: 2002' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2110' FWL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 334H
Surface Hole Location: 1972' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2290' FEL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 433H
Surface Hole Location: 1942' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2110' FWL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 434H
Surface Hole Location: 1912' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2290' FWL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 133H
Surface Hole Location: 1882' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2110' FWL, Section 32, T. 22 S, R 34 E.

Bell Lake Unit North 134H
Surface Hole Location: 1852' FSL & 2348' FWL, Section 5, T. 23 S., R. 34 E.
Bottom Hole Location: 330' FNL & 2290' FWL, Section 32, T. 22 S, R 34 E.

Approval Date: 01/06/2020

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See information below discussing NAGPRA.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Watershed:
The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:
Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VRM IV:

- Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2013).

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

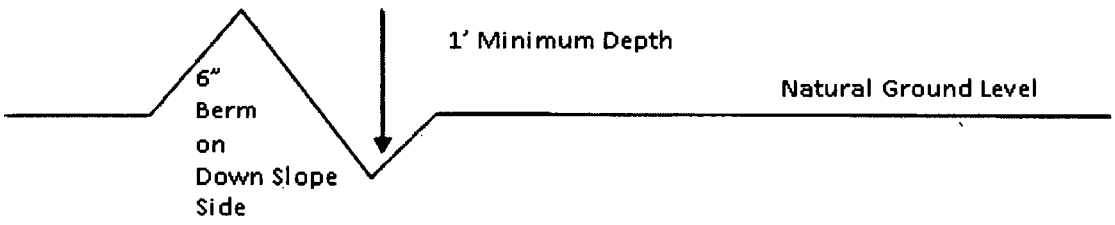
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattle guards
An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

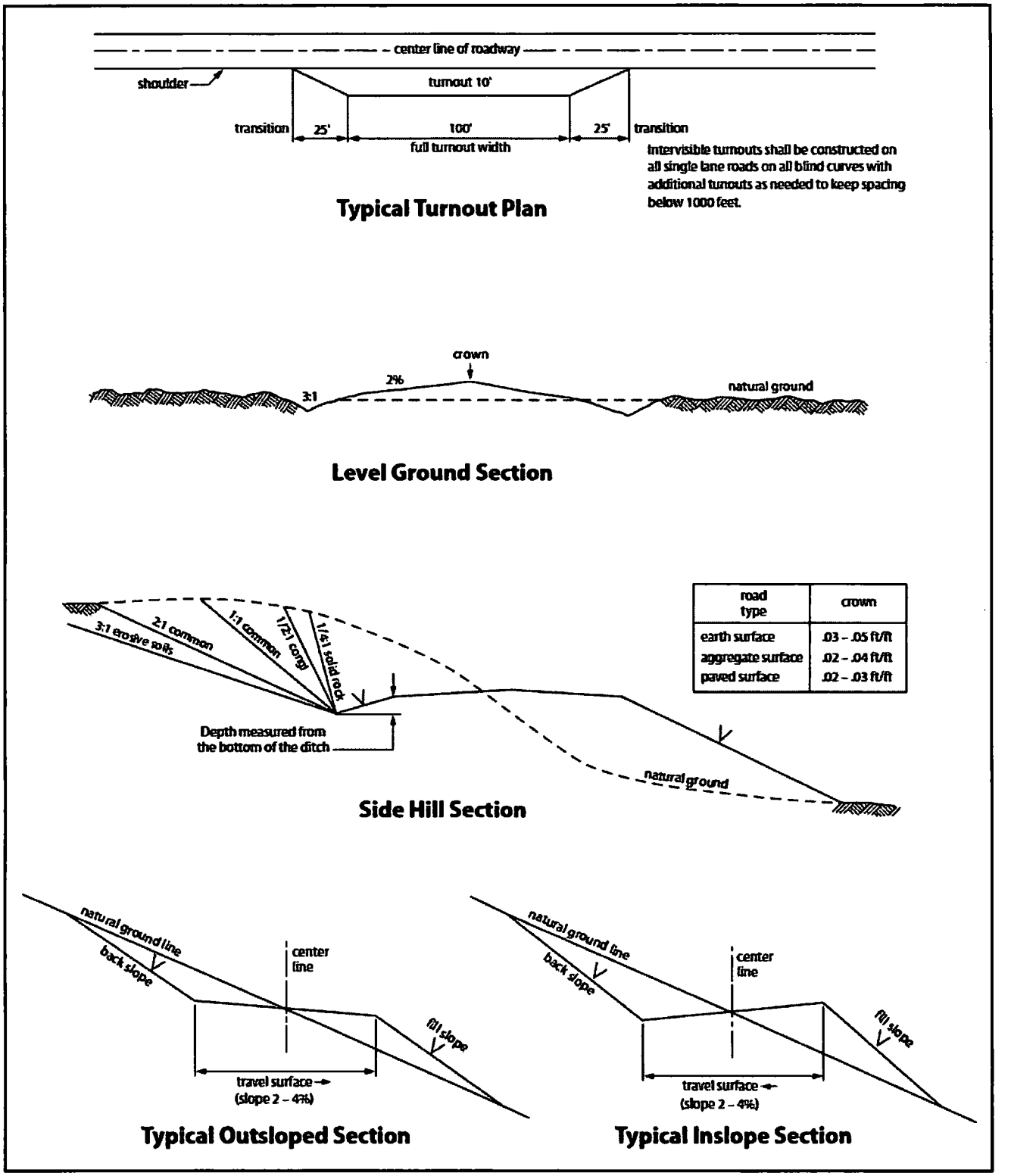


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

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

Operator Certification Data Report

01/07/2020

Operator Certification

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

NAME: Stormi Davis **Signed on:** 07/17/2019

Title: Regulatory Analyst

Street Address:

City: **State:** **Zip:**

Phone: (918)491-4339

Email address: erich@kfoc.net

Field Representative

Representative Name:

Street Address: P.O. Box 21468

City: Tulsa **State:** OK **Zip:** 74121-1468

Phone: (918)527-5260

Email address:

AFMSS

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

Application Data Report

01/07/2020

APD ID: 10400043776 **Submission Date:** 08/06/2019

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

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

Show Final Text

Section 1 - General

APD ID: 10400043776 **Tie to previous NOS?** N **Submission Date:** 08/06/2019

BLM Office: CARLSBAD **User:** Stormi Davis **Title:** Regulatory Analyst

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

Lease number: NMNM0000587 **Lease Acres:** 634.55

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? YES **Federal or Indian agreement:** FEDERAL

Agreement number: NMNM068292X

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** KAISER FRANCIS OIL COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: KAISER FRANCIS OIL COMPANY

Operator Address: 6733 S. Yale Ave.

Zip: 74121

Operator PO Box: PO Box 21468

Operator City: Tulsa **State:** OK

Operator Phone: (918)491-0000

Operator Internet Address:

Section 2 - Well Information

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

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

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

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** OJO CHISO **Pool Name:** BONE SPRING SOUTHWEST

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

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

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?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** NORTH BELL LAKE UNIT **Number:** 15

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:** 292 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: BLUN_234H_C102_20190716142735.pdf

Pay.gov_20190806055805.pdf

Well work start Date: 10/01/2019 **Duration:** 40 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 6970 **Reference Datum:**

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	2032	FSL	2348	FWL	23S	34E	5	Aliquot NESW	32.3319701	-103.4931114	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0000587	3432	0	0	
KOP Leg #1	2032	FSL	2347	FEL	23S	34E	5	Aliquot NWSE	32.3319575	-103.4912146	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0001244A	-6082	9545	9514	

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	0	FSL	2140	FEL	22S	34E	32	Aliquot SWSE	32.3409602	-103.4905606	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6795	13300	10227	
PPP Leg #1-2	2600	FNL	2140	FEL	23S	34E	5	Aliquot SWNE	32.3337611	-103.4905381	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0000587	-6795	10700	10227	
PPP Leg #1-3	2640	FNL	2168	FEL	23S	34E	5	Aliquot SWNE	32.3336943	-103.4906231	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0000587	-6795	10650	10227	
EXIT Leg #1	330	FNL	2290	FEL	22S	34E	32	Aliquot NWNE	32.3545128	-103.4910145	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6795	18232	10227	
BHL Leg #1	330	FNL	2290	FEL	22S	34E	32	Aliquot NWNE	32.3545128	-103.4910145	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6795	18232	10227	

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

Drilling Plan Data Report

01/07/2020

APD ID: 10400043776 **Submission Date:** 08/06/2019

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

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

[redacted]

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
500171	—	3432	0	0		NONE	N
500172	RUSTLER	2210	1222	1222		NONE	N
500173	SALADO	1810	1622	1622		NONE	N
500174	TOP SALT	1610	1822	1822		NONE	N
500175	BASE OF SALT	-1290	4722	4722		NONE	N
500176	LAMAR	-1540	4972	4972		NATURAL GAS, OIL	N
500177	BELL CANYON	-1740	5172	5172		NATURAL GAS, OIL	N
500178	CHERRY CANYON	-2765	6197	6197		NATURAL GAS, OIL	N
500179	BRUSHY CANYON	-4090	7522	7522		NATURAL GAS, OIL	N
500180	BONE SPRING	-5190	8622	8622		NATURAL GAS, OIL	N
500181	AVALON SAND	-5263	8695	8695		NATURAL GAS, OIL	N
500182	BONE SPRING 1ST	-6115	9547	9547		NATURAL GAS, OIL	Y
501766	BONE SPRING 2ND	-6595	10027	10027		NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

Pressure Rating (PSI): 5M **Rating Depth:** 13000

Equipment: A 5M system will be installed according to Onshore Order #2 consisting of an Annular Preventer, BOP with two rams and a blind ram. BOP will be equipped with 2 side outlets (choke side shall be a minimum 3" line, and kill side will be a minimum 2" line). Kill line will be installed with (2) valves and a check valve (2" min) of proper pressure rating for the system. Remote kill line (2' min) will be installed and ran to the outer edge of the substructure and be unobstructed. A manual and hydraulic valve (3" min) will be installed on the choke line, 3 chokes will be used with one being remotely controlled. Fill up line will be installed above the uppermost preventer. Pressure gauge of proper pressure rating will be installed on choke manifold. Upper and lower kelly cocks will be utilized with handles readily available in plain sight. A float sub will be available at all times. All connections subject to well pressure will be flanged, welded, or clamped.

Requesting Variance? YES

Variance request: Flex Hose Variance

Testing Procedure: 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:

BLUN_234H_Choke_Manifold_20190717123521.pdf

BOP Diagram Attachment:

BLUN_234H_BOP_20191202114208.pdf

Cactus_Flex_Hose_16C_Certification_20191202114213.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	17.5	13.375	NEW	API	N	0	1272	0	1272			1272	J-55	54.5	BUTT	1.9	4.6	DRY	13.1	DRY	12.3
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5027	0	5027			5027	HCP-110	40	LT&C	1.8	3.4	DRY	6.3	DRY	6.3
3	PRODUCTION	8.34	5.5	NEW	API	N	0	18232	0	10227			18232	P-110	20	OTHER - GBCD	2.3	2.7	DRY	3.3	DRY	3.1

Casing Attachments

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUN_234H_Casing_Assumptions_20190717123758.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUN_234H_Casing_Assumptions_20190717123858.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

GBCD_5.5in_Connection_Spec_Sheet_20190626062632.pdf

BLUN_234H_Casing_Assumptions_20190717124029.pdf

Section 4 - Cement

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead					1.75					
INTERMEDIATE	Lead					2.09					
INTERMEDIATE	Tail										
PRODUCTION	Lead					3.49					
PRODUCTION	Tail										

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
5027	10227	OIL-BASED MUD	8.7	8.9							
1272	5027	OIL-BASED MUD	8.7	8.9							
0	1272	OTHER : Fresh Water	8.4	9							

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH **Well Number:** 234H

Section 6 - Test, Logging, Coring

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

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

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

DS,GR,MUDLOG

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

BLUN_234H__H2S_Plan_20190717124509.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BLUN_234H___Directional_Plan_20190717124531.pdf

Other proposed operations facets description:

Gas Capture Plan attached

Other proposed operations facets attachment:

BLUN_Pad_15_Gas_Capture_Plan_20190716081227.pdf

Other Variance attachment:

BLUN_234H_FlexHose_Data_20190717124555.pdf

BLUN 234H

Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)
Conductor	120'	20"				New		120
Surface	1272'	13-3/8"	54.5	J-55	BTC	New	17-1/2"	1272
Intermediate	5027'	9-5/8"	40	HCP-110	LTC	New	12-1/4"	5027
Production	18232'	5-1/2"	20	P110	GBCD	New	8-3/4"	10227

Mud Type	Mud Weight Hole Control	Viscosity	Fluid Loss
FW	8.4 - 9.0	32 - 34	NC
OBM	8.7 - 8.9	28	NC
OBM	8.7 - 8.9	28 - 29	NC

Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength
9	595	1130	2730	853000	909000
8.9	2326	4230	7900	1260000	1266000
8.9	4733	11100	12640	641000	667000

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)
1.9	4.6	12.3	13.1
1.8	3.4	6.3	6.3
2.3	2.7	3.1	3.3

KAISER-FRANCIS OIL COMPANY

Kaiser Francis

Bell Lake Unit North 234H
Bell Lake Unit North 234H
Bell Lake Unit North 234H
Bell Lake Unit North 234H

Plan: 190410 Bell Lake Unit North 234H

Morcor Standard Plan

11 April, 2019

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**Database:**	EDM 5000.1 Single User Db

Project Bell Lake Unit North 234H

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Bell Lake Unit North 234H

Site Position:		**Northing:**	485,520.57 usft	**Latitude:**	32° 19' 55.092 N
From:	Lat/Long	**Easting:**	800,857.48 usft	**Longitude:**	103° 29' 35.201 W
Position Uncertainty:	1.0 usft	**Slot Radius:**	17-1/2 "	**Grid Convergence:**	0.45 °

Well Bell Lake Unit North 234H

Well Position	**+N/-S**	0.0 usft	**Northing:**	485,520.57 usft	**Latitude:**	32° 19' 55.092 N
	+E/-W	0.0 usft	**Easting:**	800,857.48 usft	**Longitude:**	103° 29' 35.201 W
Position Uncertainty		1.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,432.1 usft

Wellbore Bell Lake Unit North 234H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/11/2019	6.59	60.10	47,906

Design 190410 Bell Lake Unit North 234H

Audit Notes:

Version:	**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	4.06

Survey Tool Program **Date** 4/11/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,232.0	190410 Bell Lake Unit North 234H (Bell La	MWD	MWD - Standard

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
0.0	0.00	0.00	0.0	-3,454.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
50.0	0.00	0.00	50.0	-3,404.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
100.0	0.00	90.00	100.0	-3,354.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
120.0	0.00	90.00	120.0	-3,334.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
20" Conductor										
150.0	0.00	90.00	150.0	-3,304.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
200.0	0.00	90.00	200.0	-3,254.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
250.0	0.00	90.00	250.0	-3,204.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
300.0	0.00	90.00	300.0	-3,154.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
350.0	0.00	90.00	350.0	-3,104.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
400.0	0.00	90.00	400.0	-3,054.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
450.0	0.00	90.00	450.0	-3,004.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
500.0	0.00	90.00	500.0	-2,954.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
550.0	0.00	90.00	550.0	-2,904.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
600.0	0.00	90.00	600.0	-2,854.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
650.0	0.00	90.00	650.0	-2,804.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
700.0	0.00	90.00	700.0	-2,754.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
750.0	0.00	90.00	750.0	-2,704.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
800.0	0.00	90.00	800.0	-2,654.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
850.0	0.00	90.00	850.0	-2,604.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
900.0	0.00	90.00	900.0	-2,554.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
950.0	0.00	90.00	950.0	-2,504.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,000.0	0.00	90.00	1,000.0	-2,454.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,050.0	0.00	90.00	1,050.0	-2,404.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,100.0	0.00	90.00	1,100.0	-2,354.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,150.0	0.00	90.00	1,150.0	-2,304.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,200.0	0.00	90.00	1,200.0	-2,254.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
1,222.0	0.00	90.00	1,222.0	-2,232.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
Rustler										
1,250.0	0.00	90.00	1,250.0	-2,204.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,272.0	0.00	90.00	1,272.0	-2,182.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
13 3/8" Surface Casing										
1,300.0	0.00	90.00	1,300.0	-2,154.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,350.0	0.00	90.00	1,350.0	-2,104.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,400.0	0.00	90.00	1,400.0	-2,054.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,450.0	0.00	90.00	1,450.0	-2,004.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,500.0	0.00	90.00	1,500.0	-1,954.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,550.0	0.00	90.00	1,550.0	-1,904.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,600.0	0.00	90.00	1,600.0	-1,854.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,622.0	0.00	90.00	1,622.0	-1,832.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
Salado										
1,650.0	0.00	90.00	1,650.0	-1,804.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,700.0	0.00	90.00	1,700.0	-1,754.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,750.0	0.00	90.00	1,750.0	-1,704.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,800.0	0.00	90.00	1,800.0	-1,654.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,822.0	0.00	90.00	1,822.0	-1,632.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
Top of Salt										
1,850.0	0.00	90.00	1,850.0	-1,604.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,900.0	0.00	90.00	1,900.0	-1,554.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
1,950.0	0.00	90.00	1,950.0	-1,504.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,000.0	0.00	90.00	2,000.0	-1,454.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,050.0	0.00	90.00	2,050.0	-1,404.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,100.0	0.00	90.00	2,100.0	-1,354.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,150.0	0.00	90.00	2,150.0	-1,304.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,200.0	0.00	90.00	2,200.0	-1,254.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
2,250.0	0.00	90.00	2,250.0	-1,204.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,300.0	0.00	90.00	2,300.0	-1,154.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,350.0	0.00	90.00	2,350.0	-1,104.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,400.0	0.00	90.00	2,400.0	-1,054.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,450.0	0.00	90.00	2,450.0	-1,004.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,500.0	0.00	90.00	2,500.0	-954.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,550.0	0.00	90.00	2,550.0	-904.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,600.0	0.00	90.00	2,600.0	-854.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,650.0	0.00	90.00	2,650.0	-804.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,700.0	0.00	90.00	2,700.0	-754.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,750.0	0.00	90.00	2,750.0	-704.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,800.0	0.00	90.00	2,800.0	-654.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,850.0	0.00	90.00	2,850.0	-604.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,900.0	0.00	90.00	2,900.0	-554.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
2,950.0	0.00	90.00	2,950.0	-504.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,000.0	0.00	90.00	3,000.0	-454.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,050.0	0.00	90.00	3,050.0	-404.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,100.0	0.00	90.00	3,100.0	-354.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,150.0	0.00	90.00	3,150.0	-304.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,200.0	0.00	90.00	3,200.0	-254.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,250.0	0.00	90.00	3,250.0	-204.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,300.0	0.00	90.00	3,300.0	-154.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,350.0	0.00	90.00	3,350.0	-104.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,400.0	0.00	90.00	3,400.0	-54.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,450.0	0.00	90.00	3,450.0	-4.1	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,500.0	0.00	90.00	3,500.0	45.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,550.0	0.00	90.00	3,550.0	95.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
3,600.0	0.00	90.00	3,600.0	145.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,650.0	0.00	90.00	3,650.0	195.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,700.0	0.00	90.00	3,700.0	245.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,750.0	0.00	90.00	3,750.0	295.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,800.0	0.00	90.00	3,800.0	345.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
3,840.0	0.00	90.00	3,840.0	385.9	0.0	0.0	800,857.48	485,520.57	0.00	0.00
Start Build 3.00										
3,850.0	0.30	90.00	3,850.0	395.9	0.0	0.0	800,857.50	485,520.57	0.00	3.00
3,900.0	1.80	90.00	3,900.0	445.9	0.0	0.9	800,858.42	485,520.57	0.07	3.00
3,950.0	3.30	90.00	3,949.9	495.8	0.0	3.2	800,860.65	485,520.57	0.22	3.00
4,000.0	4.80	90.00	3,999.8	545.7	0.0	6.7	800,864.18	485,520.57	0.47	3.00
4,040.0	6.00	90.00	4,039.6	585.5	0.0	10.5	800,867.94	485,520.57	0.74	3.00
Start 5505.0 hold at 4040.0 MD										
4,050.0	6.00	90.00	4,049.6	595.5	0.0	11.5	800,868.99	485,520.57	0.81	0.00
4,100.0	6.00	90.00	4,099.3	645.2	0.0	16.7	800,874.21	485,520.57	1.18	0.00
4,150.0	6.00	90.00	4,149.0	694.9	0.0	22.0	800,879.44	485,520.57	1.55	0.00
4,200.0	6.00	90.00	4,198.8	744.7	0.0	27.2	800,884.67	485,520.57	1.92	0.00
4,250.0	6.00	90.00	4,248.5	794.4	0.0	32.4	800,889.89	485,520.57	2.29	0.00
4,300.0	6.00	90.00	4,298.2	844.1	0.0	37.6	800,895.12	485,520.57	2.66	0.00
4,350.0	6.00	90.00	4,347.9	893.8	0.0	42.9	800,900.34	485,520.57	3.03	0.00
4,400.0	6.00	90.00	4,397.7	943.6	0.0	48.1	800,905.57	485,520.57	3.40	0.00
4,450.0	6.00	90.00	4,447.4	993.3	0.0	53.3	800,910.80	485,520.57	3.77	0.00
4,500.0	6.00	90.00	4,497.1	1,043.0	0.0	58.5	800,916.02	485,520.57	4.14	0.00
4,550.0	6.00	90.00	4,546.8	1,092.7	0.0	63.8	800,921.25	485,520.57	4.51	0.00
4,600.0	6.00	90.00	4,596.6	1,142.5	0.0	69.0	800,926.48	485,520.57	4.88	0.00
4,650.0	6.00	90.00	4,646.3	1,192.2	0.0	74.2	800,931.70	485,520.57	5.25	0.00
4,700.0	6.00	90.00	4,696.0	1,241.9	0.0	79.5	800,936.93	485,520.57	5.62	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
4,726.1	6.00	90.00	4,722.0	1,267.9	0.0	82.2	800,939.66	485,520.57	5.82	0.00
Base of Salt										
4,750.0	6.00	90.00	4,745.7	1,291.6	0.0	84.7	800,942.16	485,520.57	5.99	0.00
4,800.0	6.00	90.00	4,795.5	1,341.4	0.0	89.9	800,947.38	485,520.57	6.36	0.00
4,850.0	6.00	90.00	4,845.2	1,391.1	0.0	95.1	800,952.61	485,520.57	6.73	0.00
4,900.0	6.00	90.00	4,894.9	1,440.8	0.0	100.4	800,957.84	485,520.57	7.10	0.00
4,950.0	6.00	90.00	4,944.6	1,490.5	0.0	105.6	800,963.06	485,520.57	7.47	0.00
4,977.5	6.00	90.00	4,972.0	1,517.9	0.0	108.5	800,965.94	485,520.57	7.68	0.00
Lamar										
5,000.0	6.00	90.00	4,994.4	1,540.3	0.0	110.8	800,968.29	485,520.57	7.84	0.00
5,027.8	6.00	90.00	5,022.0	1,567.9	0.0	113.7	800,971.19	485,520.57	8.05	0.00
9 5/8" Intermediate Casing										
5,050.0	6.00	90.00	5,044.1	1,590.0	0.0	116.0	800,973.51	485,520.57	8.21	0.00
5,100.0	6.00	90.00	5,093.8	1,639.7	0.0	121.3	800,978.74	485,520.57	8.58	0.00
5,150.0	6.00	90.00	5,143.6	1,689.5	0.0	126.5	800,983.97	485,520.57	8.95	0.00
5,178.6	6.00	90.00	5,172.0	1,717.9	0.0	129.5	800,986.96	485,520.57	9.17	0.00
Bell Canyon										
5,200.0	6.00	90.00	5,193.3	1,739.2	0.0	131.7	800,989.19	485,520.57	9.32	0.00
5,250.0	6.00	90.00	5,243.0	1,788.9	0.0	136.9	800,994.42	485,520.57	9.69	0.00
5,300.0	6.00	90.00	5,292.7	1,838.6	0.0	142.2	800,999.65	485,520.57	10.06	0.00
5,350.0	6.00	90.00	5,342.5	1,888.4	0.0	147.4	801,004.87	485,520.57	10.43	0.00
5,400.0	6.00	90.00	5,392.2	1,938.1	0.0	152.6	801,010.10	485,520.57	10.80	0.00
5,450.0	6.00	90.00	5,441.9	1,987.8	0.0	157.8	801,015.33	485,520.57	11.17	0.00
5,500.0	6.00	90.00	5,491.6	2,037.5	0.0	163.1	801,020.55	485,520.57	11.54	0.00
5,550.0	6.00	90.00	5,541.4	2,087.3	0.0	168.3	801,025.78	485,520.57	11.91	0.00
5,600.0	6.00	90.00	5,591.1	2,137.0	0.0	173.5	801,031.01	485,520.57	12.28	0.00
5,650.0	6.00	90.00	5,640.8	2,186.7	0.0	178.8	801,036.23	485,520.57	12.65	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
5,700.0	6.00	90.00	5,690.5	2,236.4	0.0	184.0	801,041.46	485,520.57	13.02	0.00
5,750.0	6.00	90.00	5,740.3	2,286.2	0.0	189.2	801,046.68	485,520.57	13.39	0.00
5,800.0	6.00	90.00	5,790.0	2,335.9	0.0	194.4	801,051.91	485,520.57	13.76	0.00
5,850.0	6.00	90.00	5,839.7	2,385.6	0.0	199.7	801,057.14	485,520.57	14.13	0.00
5,900.0	6.00	90.00	5,889.4	2,435.3	0.0	204.9	801,062.36	485,520.57	14.50	0.00
5,950.0	6.00	90.00	5,939.2	2,485.1	0.0	210.1	801,067.59	485,520.57	14.87	0.00
6,000.0	6.00	90.00	5,988.9	2,534.8	0.0	215.3	801,072.82	485,520.57	15.24	0.00
6,050.0	6.00	90.00	6,038.6	2,584.5	0.0	220.6	801,078.04	485,520.57	15.61	0.00
6,100.0	6.00	90.00	6,088.3	2,634.2	0.0	225.8	801,083.27	485,520.57	15.98	0.00
6,150.0	6.00	90.00	6,138.1	2,684.0	0.0	231.0	801,088.50	485,520.57	16.35	0.00
6,200.0	6.00	90.00	6,187.8	2,733.7	0.0	236.2	801,093.72	485,520.57	16.72	0.00
6,209.2	6.00	90.00	6,197.0	2,742.9	0.0	237.2	801,094.69	485,520.57	16.79	0.00
Cherry Canyon										
6,250.0	6.00	90.00	6,237.5	2,783.4	0.0	241.5	801,098.95	485,520.57	17.09	0.00
6,300.0	6.00	90.00	6,287.3	2,833.2	0.0	246.7	801,104.18	485,520.57	17.46	0.00
6,350.0	6.00	90.00	6,337.0	2,882.9	0.0	251.9	801,109.40	485,520.57	17.83	0.00
6,400.0	6.00	90.00	6,386.7	2,932.6	0.0	257.1	801,114.63	485,520.57	18.20	0.00
6,450.0	6.00	90.00	6,436.4	2,982.3	0.0	262.4	801,119.85	485,520.57	18.57	0.00
6,500.0	6.00	90.00	6,486.2	3,032.1	0.0	267.6	801,125.08	485,520.57	18.94	0.00
6,550.0	6.00	90.00	6,535.9	3,081.8	0.0	272.8	801,130.31	485,520.57	19.31	0.00
6,600.0	6.00	90.00	6,585.6	3,131.5	0.0	278.1	801,135.53	485,520.57	19.68	0.00
6,650.0	6.00	90.00	6,635.3	3,181.2	0.0	283.3	801,140.76	485,520.57	20.05	0.00
6,700.0	6.00	90.00	6,685.1	3,231.0	0.0	288.5	801,145.99	485,520.57	20.42	0.00
6,750.0	6.00	90.00	6,734.8	3,280.7	0.0	293.7	801,151.21	485,520.57	20.79	0.00
6,800.0	6.00	90.00	6,784.5	3,330.4	0.0	299.0	801,156.44	485,520.57	21.16	0.00
6,850.0	6.00	90.00	6,834.2	3,380.1	0.0	304.2	801,161.67	485,520.57	21.53	0.00
6,900.0	6.00	90.00	6,884.0	3,429.9	0.0	309.4	801,166.89	485,520.57	21.90	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
6,950.0	6.00	90.00	6,933.7	3,479.6	0.0	314.6	801,172.12	485,520.57	22.27	0.00
7,000.0	6.00	90.00	6,983.4	3,529.3	0.0	319.9	801,177.34	485,520.57	22.64	0.00
7,050.0	6.00	90.00	7,033.1	3,579.0	0.0	325.1	801,182.57	485,520.57	23.01	0.00
7,100.0	6.00	90.00	7,082.9	3,628.8	0.0	330.3	801,187.80	485,520.57	23.38	0.00
7,150.0	6.00	90.00	7,132.6	3,678.5	0.0	335.5	801,193.02	485,520.57	23.75	0.00
7,200.0	6.00	90.00	7,182.3	3,728.2	0.0	340.8	801,198.25	485,520.57	24.12	0.00
7,250.0	6.00	90.00	7,232.0	3,777.9	0.0	346.0	801,203.48	485,520.57	24.49	0.00
7,300.0	6.00	90.00	7,281.8	3,827.7	0.0	351.2	801,208.70	485,520.57	24.86	0.00
7,350.0	6.00	90.00	7,331.5	3,877.4	0.0	356.5	801,213.93	485,520.57	25.23	0.00
7,400.0	6.00	90.00	7,381.2	3,927.1	0.0	361.7	801,219.16	485,520.57	25.60	0.00
7,450.0	6.00	90.00	7,431.0	3,976.9	0.0	366.9	801,224.38	485,520.57	25.97	0.00
7,500.0	6.00	90.00	7,480.7	4,026.6	0.0	372.1	801,229.61	485,520.57	26.34	0.00
7,541.5	6.00	90.00	7,522.0	4,067.9	0.0	376.5	801,233.95	485,520.57	26.65	0.00
Brushy Canyon										
7,550.0	6.00	90.00	7,530.4	4,076.3	0.0	377.4	801,234.84	485,520.57	26.71	0.00
7,600.0	6.00	90.00	7,580.1	4,126.0	0.0	382.6	801,240.06	485,520.57	27.08	0.00
7,650.0	6.00	90.00	7,629.9	4,175.8	0.0	387.8	801,245.29	485,520.57	27.45	0.00
7,700.0	6.00	90.00	7,679.6	4,225.5	0.0	393.0	801,250.51	485,520.57	27.82	0.00
7,750.0	6.00	90.00	7,729.3	4,275.2	0.0	398.3	801,255.74	485,520.57	28.19	0.00
7,800.0	6.00	90.00	7,779.0	4,324.9	0.0	403.5	801,260.97	485,520.57	28.56	0.00
7,850.0	6.00	90.00	7,828.8	4,374.7	0.0	408.7	801,266.19	485,520.57	28.93	0.00
7,900.0	6.00	90.00	7,878.5	4,424.4	0.0	413.9	801,271.42	485,520.57	29.30	0.00
7,950.0	6.00	90.00	7,928.2	4,474.1	0.0	419.2	801,276.65	485,520.57	29.67	0.00
8,000.0	6.00	90.00	7,977.9	4,523.8	0.0	424.4	801,281.87	485,520.57	30.04	0.00
8,050.0	6.00	90.00	8,027.7	4,573.6	0.0	429.6	801,287.10	485,520.57	30.41	0.00
8,100.0	6.00	90.00	8,077.4	4,623.3	0.0	434.8	801,292.33	485,520.57	30.78	0.00
8,150.0	6.00	90.00	8,127.1	4,673.0	0.0	440.1	801,297.55	485,520.57	31.15	0.00

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
8,200.0	6.00	90.00	8,176.8	4,722.7	0.0	445.3	801,302.78	485,520.57	31.52	0.00
8,250.0	6.00	90.00	8,226.6	4,772.5	0.0	450.5	801,308.01	485,520.57	31.89	0.00
8,300.0	6.00	90.00	8,276.3	4,822.2	0.0	455.8	801,313.23	485,520.57	32.26	0.00
8,350.0	6.00	90.00	8,326.0	4,871.9	0.0	461.0	801,318.46	485,520.57	32.63	0.00
8,400.0	6.00	90.00	8,375.8	4,921.7	0.0	466.2	801,323.68	485,520.57	33.00	0.00
8,450.0	6.00	90.00	8,425.5	4,971.4	0.0	471.4	801,328.91	485,520.57	33.37	0.00
8,500.0	6.00	90.00	8,475.2	5,021.1	0.0	476.7	801,334.14	485,520.57	33.74	0.00
8,550.0	6.00	90.00	8,524.9	5,070.8	0.0	481.9	801,339.36	485,520.57	34.11	0.00
8,600.0	6.00	90.00	8,574.7	5,120.6	0.0	487.1	801,344.59	485,520.57	34.48	0.00
8,650.0	6.00	90.00	8,624.4	5,170.3	0.0	492.3	801,349.82	485,520.57	34.85	0.00
8,700.0	6.00	90.00	8,674.1	5,220.0	0.0	497.6	801,355.04	485,520.57	35.22	0.00
8,721.0	6.00	90.00	8,695.0	5,240.9	0.0	499.8	801,357.24	485,520.57	35.38	0.00
Avalon										
8,750.0	6.00	90.00	8,723.8	5,269.7	0.0	502.8	801,360.27	485,520.57	35.59	0.00
8,800.0	6.00	90.00	8,773.6	5,319.5	0.0	508.0	801,365.50	485,520.57	35.96	0.00
8,850.0	6.00	90.00	8,823.3	5,369.2	0.0	513.2	801,370.72	485,520.57	36.33	0.00
8,900.0	6.00	90.00	8,873.0	5,418.9	0.0	518.5	801,375.95	485,520.57	36.70	0.00
8,950.0	6.00	90.00	8,922.7	5,468.6	0.0	523.7	801,381.18	485,520.57	37.07	0.00
9,000.0	6.00	90.00	8,972.5	5,518.4	0.0	528.9	801,386.40	485,520.57	37.44	0.00
9,050.0	6.00	90.00	9,022.2	5,568.1	0.0	534.2	801,391.63	485,520.57	37.81	0.00
9,100.0	6.00	90.00	9,071.9	5,617.8	0.0	539.4	801,396.85	485,520.57	38.18	0.00
9,150.0	6.00	90.00	9,121.6	5,667.5	0.0	544.6	801,402.08	485,520.57	38.55	0.00
9,200.0	6.00	90.00	9,171.4	5,717.3	0.0	549.8	801,407.31	485,520.57	38.92	0.00
9,250.0	6.00	90.00	9,221.1	5,767.0	0.0	555.1	801,412.53	485,520.57	39.29	0.00
9,300.0	6.00	90.00	9,270.8	5,816.7	0.0	560.3	801,417.76	485,520.57	39.66	0.00
9,350.0	6.00	90.00	9,320.5	5,866.4	0.0	565.5	801,422.99	485,520.57	40.03	0.00
9,400.0	6.00	90.00	9,370.3	5,916.2	0.0	570.7	801,428.21	485,520.57	40.40	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
9,450.0	6.00	90.00	9,420.0	5,965.9	0.0	576.0	801,433.44	485,520.57	40.77	0.00
9,500.0	6.00	90.00	9,469.7	6,015.6	0.0	581.2	801,438.67	485,520.57	41.14	0.00
9,545.0	6.00	90.00	9,514.5	6,060.4	0.0	585.9	801,443.37	485,520.57	41.47	0.00
Start DLS 4.22 TFO -65.85										
9,550.0	6.09	88.18	9,519.4	6,065.3	0.0	586.4	801,443.90	485,520.58	41.52	4.22
9,577.7	6.68	79.11	9,547.0	6,092.9	0.4	589.5	801,446.95	485,520.93	42.09	4.22
1st Bone Spring Sand										
9,580.0	6.74	78.44	9,549.3	6,095.2	0.4	589.7	801,447.21	485,520.99	42.16	4.22
Start DLS 5.00 TFO -95.65										
9,600.0	6.72	69.90	9,569.1	6,115.0	1.0	592.0	801,449.46	485,521.62	42.95	5.00
9,650.0	7.28	49.78	9,618.8	6,164.7	4.1	597.1	801,454.62	485,524.67	46.36	5.00
9,653.3	7.34	48.60	9,622.0	6,167.9	4.4	597.5	801,454.94	485,524.95	46.65	5.00
Bone Spring										
9,680.0	7.98	39.77	9,648.5	6,194.4	6.9	599.9	801,457.41	485,527.50	49.38	5.00
Start DLS 5.66 TFO -44.41										
9,700.0	8.82	34.60	9,668.3	6,214.2	9.3	601.7	801,459.17	485,529.83	51.83	5.66
9,750.0	11.16	25.30	9,717.5	6,263.4	16.8	605.9	801,463.41	485,537.36	59.64	5.66
9,800.0	13.68	19.28	9,766.4	6,312.3	26.7	610.0	801,467.43	485,547.32	69.86	5.66
9,850.0	16.30	15.14	9,814.6	6,360.5	39.1	613.7	801,471.22	485,559.68	82.45	5.66
Start DLS 10.00 TFO -1.19										
9,900.0	21.30	14.86	9,862.0	6,407.9	54.7	617.9	801,475.38	485,575.24	98.26	10.00
9,950.0	26.30	14.67	9,907.7	6,453.6	74.2	623.0	801,480.52	485,594.74	118.08	10.00
10,000.0	31.29	14.55	9,951.5	6,497.4	97.5	629.1	801,486.59	485,618.04	141.75	10.00
10,050.0	36.29	14.45	9,993.0	6,538.9	124.4	636.1	801,493.55	485,644.95	169.09	10.00
10,093.4	40.63	14.39	10,027.0	6,572.9	150.5	642.8	801,500.27	485,671.07	195.62	10.00
First PP - 2nd Bone Spring Sand										
10,100.0	41.29	14.38	10,032.0	6,577.9	154.7	643.9	801,501.35	485,675.28	199.89	10.00
10,150.0	46.29	14.32	10,068.1	6,614.0	188.2	652.4	801,509.92	485,708.79	233.92	10.00

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
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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)
10,200.0	51.28	14.27	10,101.0	6,646.9	224.6	661.7	801,519.20	485,745.22	270.93	10.00
10,250.0	56.28	14.22	10,130.6	6,676.5	263.7	671.6	801,529.12	485,784.31	310.62	10.00
10,300.0	61.28	14.18	10,156.5	6,702.4	305.2	682.1	801,539.61	485,825.75	352.70	10.00
10,350.0	66.28	14.15	10,178.5	6,724.4	348.7	693.1	801,550.58	485,869.23	396.84	10.00
10,400.0	71.28	14.11	10,196.6	6,742.5	393.8	704.5	801,561.96	485,914.41	442.72	10.00
10,450.0	76.28	14.08	10,210.6	6,756.5	440.4	716.2	801,573.65	485,960.96	489.98	10.00
10,500.0	81.27	14.05	10,220.3	6,766.2	487.9	728.1	801,585.56	486,008.52	538.26	10.00
10,550.0	86.27	14.02	10,225.8	6,771.7	536.2	740.1	801,597.61	486,056.73	587.20	10.00
10,587.3	90.00	14.00	10,227.0	6,772.9	572.3	749.2	801,606.64	486,092.89	623.91	10.00
Start DLS 2.01 TFO -90.00										
10,600.0	90.00	13.74	10,227.0	6,772.9	584.6	752.2	801,609.68	486,105.22	636.42	2.01
10,650.0	90.00	12.74	10,227.0	6,772.9	633.3	763.7	801,621.14	486,153.89	685.78	2.01
10,675.0	90.00	12.24	10,227.0	6,772.9	657.7	769.1	801,626.54	486,178.30	710.51	2.01
First Take Point										
10,700.0	90.00	11.73	10,227.0	6,772.9	682.2	774.3	801,631.73	486,202.75	735.27	2.01
10,750.0	90.00	10.73	10,227.0	6,772.9	731.2	784.0	801,641.47	486,251.80	784.88	2.01
10,800.0	90.00	9.72	10,227.0	6,772.9	780.4	792.9	801,650.35	486,301.00	834.59	2.01
10,850.0	90.00	8.72	10,227.0	6,772.9	829.8	800.9	801,658.36	486,350.35	884.39	2.01
10,900.0	90.00	7.71	10,227.0	6,772.9	879.3	808.0	801,665.51	486,399.84	934.26	2.01
10,950.0	90.00	6.71	10,227.0	6,772.9	928.9	814.3	801,671.78	486,449.44	984.18	2.01
11,000.0	90.00	5.70	10,227.0	6,772.9	978.6	819.7	801,677.19	486,499.15	1,034.15	2.01
11,050.0	90.00	4.70	10,227.0	6,772.9	1,028.4	824.2	801,681.72	486,548.94	1,084.13	2.01
11,100.0	90.00	3.69	10,227.0	6,772.9	1,078.2	827.9	801,685.37	486,598.81	1,134.13	2.01
11,150.0	90.00	2.69	10,227.0	6,772.9	1,128.2	830.7	801,688.16	486,648.73	1,184.13	2.01
11,200.0	90.00	1.68	10,227.0	6,772.9	1,178.1	832.6	801,690.06	486,698.69	1,234.10	2.01
11,250.0	90.00	0.68	10,227.0	6,772.9	1,228.1	833.6	801,691.09	486,748.68	1,284.04	2.01
11,300.0	90.00	359.67	10,227.0	6,772.9	1,278.1	833.8	801,691.24	486,798.68	1,333.92	2.01

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
11,350.0	90.00	358.67	10,227.0	6,772.9	1,328.1	833.0	801,690.52	486,848.68	1,383.74	2.01
11,387.6	90.00	357.91	10,227.0	6,772.9	1,365.7	831.9	801,689.39	486,886.26	1,421.15	2.01
Start 6844.4 hold at 11387.6 MD										
11,400.0	90.00	357.91	10,227.0	6,772.9	1,378.1	831.5	801,688.94	486,898.65	1,433.48	0.00
11,450.0	90.00	357.91	10,227.0	6,772.9	1,428.0	829.6	801,687.12	486,948.62	1,483.19	0.00
11,500.0	90.00	357.91	10,227.0	6,772.9	1,478.0	827.8	801,685.29	486,998.58	1,532.90	0.00
11,550.0	90.00	357.91	10,227.0	6,772.9	1,528.0	826.0	801,683.47	487,048.55	1,582.61	0.00
11,600.0	90.00	357.91	10,227.0	6,772.9	1,577.9	824.2	801,681.65	487,098.52	1,632.32	0.00
11,650.0	90.00	357.91	10,227.0	6,772.9	1,627.9	822.3	801,679.82	487,148.48	1,682.04	0.00
11,700.0	90.00	357.91	10,227.0	6,772.9	1,677.9	820.5	801,678.00	487,198.45	1,731.75	0.00
11,750.0	90.00	357.91	10,227.0	6,772.9	1,727.8	818.7	801,676.18	487,248.42	1,781.46	0.00
11,800.0	90.00	357.91	10,227.0	6,772.9	1,777.8	816.9	801,674.35	487,298.38	1,831.17	0.00
11,850.0	90.00	357.91	10,227.0	6,772.9	1,827.8	815.1	801,672.53	487,348.35	1,880.89	0.00
11,900.0	90.00	357.91	10,227.0	6,772.9	1,877.7	813.2	801,670.71	487,398.32	1,930.60	0.00
11,950.0	90.00	357.91	10,227.0	6,772.9	1,927.7	811.4	801,668.88	487,448.28	1,980.31	0.00
12,000.0	90.00	357.91	10,227.0	6,772.9	1,977.7	809.6	801,667.06	487,498.25	2,030.02	0.00
12,050.0	90.00	357.91	10,227.0	6,772.9	2,027.6	807.8	801,665.24	487,548.22	2,079.74	0.00
12,100.0	90.00	357.91	10,227.0	6,772.9	2,077.6	805.9	801,663.41	487,598.19	2,129.45	0.00
12,150.0	90.00	357.91	10,227.0	6,772.9	2,127.6	804.1	801,661.59	487,648.15	2,179.16	0.00
12,200.0	90.00	357.91	10,227.0	6,772.9	2,177.5	802.3	801,659.77	487,698.12	2,228.87	0.00
12,250.0	90.00	357.91	10,227.0	6,772.9	2,227.5	800.5	801,657.94	487,748.09	2,278.59	0.00
12,300.0	90.00	357.91	10,227.0	6,772.9	2,277.5	798.6	801,656.12	487,798.05	2,328.30	0.00
12,350.0	90.00	357.91	10,227.0	6,772.9	2,327.4	796.8	801,654.30	487,848.02	2,378.01	0.00
12,400.0	90.00	357.91	10,227.0	6,772.9	2,377.4	795.0	801,652.47	487,897.99	2,427.72	0.00
12,450.0	90.00	357.91	10,227.0	6,772.9	2,427.4	793.2	801,650.65	487,947.95	2,477.43	0.00
12,500.0	90.00	357.91	10,227.0	6,772.9	2,477.3	791.3	801,648.83	487,997.92	2,527.15	0.00
12,550.0	90.00	357.91	10,227.0	6,772.9	2,527.3	789.5	801,647.00	488,047.89	2,576.86	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
12,600.0	90.00	357.91	10,227.0	6,772.9	2,577.3	787.7	801,645.18	488,097.85	2,626.57	0.00
12,650.0	90.00	357.91	10,227.0	6,772.9	2,627.2	785.9	801,643.35	488,147.82	2,676.28	0.00
12,700.0	90.00	357.91	10,227.0	6,772.9	2,677.2	784.1	801,641.53	488,197.79	2,726.00	0.00
12,750.0	90.00	357.91	10,227.0	6,772.9	2,727.2	782.2	801,639.71	488,247.75	2,775.71	0.00
12,800.0	90.00	357.91	10,227.0	6,772.9	2,777.1	780.4	801,637.88	488,297.72	2,825.42	0.00
12,850.0	90.00	357.91	10,227.0	6,772.9	2,827.1	778.6	801,636.06	488,347.69	2,875.13	0.00
12,900.0	90.00	357.91	10,227.0	6,772.9	2,877.1	776.8	801,634.24	488,397.65	2,924.85	0.00
12,950.0	90.00	357.91	10,227.0	6,772.9	2,927.0	774.9	801,632.41	488,447.62	2,974.56	0.00
13,000.0	90.00	357.91	10,227.0	6,772.9	2,977.0	773.1	801,630.59	488,497.59	3,024.27	0.00
13,050.0	90.00	357.91	10,227.0	6,772.9	3,027.0	771.3	801,628.77	488,547.55	3,073.98	0.00
13,100.0	90.00	357.91	10,227.0	6,772.9	3,076.9	769.5	801,626.94	488,597.52	3,123.69	0.00
13,150.0	90.00	357.91	10,227.0	6,772.9	3,126.9	767.6	801,625.12	488,647.49	3,173.41	0.00
13,200.0	90.00	357.91	10,227.0	6,772.9	3,176.9	765.8	801,623.30	488,697.45	3,223.12	0.00
13,250.0	90.00	357.91	10,227.0	6,772.9	3,226.8	764.0	801,621.47	488,747.42	3,272.83	0.00
13,300.0	90.00	357.91	10,227.0	6,772.9	3,276.8	762.2	801,619.65	488,797.39	3,322.54	0.00
13,350.0	90.00	357.91	10,227.0	6,772.9	3,326.8	760.3	801,617.83	488,847.35	3,372.26	0.00
13,400.0	90.00	357.91	10,227.0	6,772.9	3,376.7	758.5	801,616.00	488,897.32	3,421.97	0.00
13,450.0	90.00	357.91	10,227.0	6,772.9	3,426.7	756.7	801,614.18	488,947.29	3,471.68	0.00
13,500.0	90.00	357.91	10,227.0	6,772.9	3,476.7	754.9	801,612.36	488,997.25	3,521.39	0.00
13,550.0	90.00	357.91	10,227.0	6,772.9	3,526.6	753.1	801,610.53	489,047.22	3,571.11	0.00
13,600.0	90.00	357.91	10,227.0	6,772.9	3,576.6	751.2	801,608.71	489,097.19	3,620.82	0.00
13,650.0	90.00	357.91	10,227.0	6,772.9	3,626.6	749.4	801,606.89	489,147.15	3,670.53	0.00
13,700.0	90.00	357.91	10,227.0	6,772.9	3,676.5	747.6	801,605.06	489,197.12	3,720.24	0.00
13,750.0	90.00	357.91	10,227.0	6,772.9	3,726.5	745.8	801,603.24	489,247.09	3,769.95	0.00
13,800.0	90.00	357.91	10,227.0	6,772.9	3,776.5	743.9	801,601.42	489,297.05	3,819.67	0.00
13,850.0	90.00	357.91	10,227.0	6,772.9	3,826.4	742.1	801,599.59	489,347.02	3,869.38	0.00
13,900.0	90.00	357.91	10,227.0	6,772.9	3,876.4	740.3	801,597.77	489,396.99	3,919.09	0.00

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
13,950.0	90.00	357.91	10,227.0	6,772.9	3,926.4	738.5	801,595.94	489,446.95	3,968.80	0.00
14,000.0	90.00	357.91	10,227.0	6,772.9	3,976.3	736.6	801,594.12	489,496.92	4,018.52	0.00
14,050.0	90.00	357.91	10,227.0	6,772.9	4,026.3	734.8	801,592.30	489,546.89	4,068.23	0.00
14,100.0	90.00	357.91	10,227.0	6,772.9	4,076.3	733.0	801,590.47	489,596.85	4,117.94	0.00
14,150.0	90.00	357.91	10,227.0	6,772.9	4,126.2	731.2	801,588.65	489,646.82	4,167.65	0.00
14,200.0	90.00	357.91	10,227.0	6,772.9	4,176.2	729.3	801,586.83	489,696.79	4,217.37	0.00
14,250.0	90.00	357.91	10,227.0	6,772.9	4,226.2	727.5	801,585.00	489,746.75	4,267.08	0.00
14,300.0	90.00	357.91	10,227.0	6,772.9	4,276.1	725.7	801,583.18	489,796.72	4,316.79	0.00
14,350.0	90.00	357.91	10,227.0	6,772.9	4,326.1	723.9	801,581.36	489,846.69	4,366.50	0.00
14,400.0	90.00	357.91	10,227.0	6,772.9	4,376.1	722.1	801,579.53	489,896.66	4,416.21	0.00
14,450.0	90.00	357.91	10,227.0	6,772.9	4,426.0	720.2	801,577.71	489,946.62	4,465.93	0.00
14,500.0	90.00	357.91	10,227.0	6,772.9	4,476.0	718.4	801,575.89	489,996.59	4,515.64	0.00
14,550.0	90.00	357.91	10,227.0	6,772.9	4,526.0	716.6	801,574.06	490,046.56	4,565.35	0.00
14,600.0	90.00	357.91	10,227.0	6,772.9	4,575.9	714.8	801,572.24	490,096.52	4,615.06	0.00
14,650.0	90.00	357.91	10,227.0	6,772.9	4,625.9	712.9	801,570.42	490,146.49	4,664.78	0.00
14,700.0	90.00	357.91	10,227.0	6,772.9	4,675.9	711.1	801,568.59	490,196.46	4,714.49	0.00
14,750.0	90.00	357.91	10,227.0	6,772.9	4,725.8	709.3	801,566.77	490,246.42	4,764.20	0.00
14,800.0	90.00	357.91	10,227.0	6,772.9	4,775.8	707.5	801,564.95	490,296.39	4,813.91	0.00
14,850.0	90.00	357.91	10,227.0	6,772.9	4,825.8	705.6	801,563.12	490,346.36	4,863.63	0.00
14,900.0	90.00	357.91	10,227.0	6,772.9	4,875.7	703.8	801,561.30	490,396.32	4,913.34	0.00
14,950.0	90.00	357.91	10,227.0	6,772.9	4,925.7	702.0	801,559.48	490,446.29	4,963.05	0.00
15,000.0	90.00	357.91	10,227.0	6,772.9	4,975.7	700.2	801,557.65	490,496.26	5,012.76	0.00
15,050.0	90.00	357.91	10,227.0	6,772.9	5,025.6	698.4	801,555.83	490,546.22	5,062.47	0.00
15,100.0	90.00	357.91	10,227.0	6,772.9	5,075.6	696.5	801,554.01	490,596.19	5,112.19	0.00
15,150.0	90.00	357.91	10,227.0	6,772.9	5,125.6	694.7	801,552.18	490,646.16	5,161.90	0.00
15,200.0	90.00	357.91	10,227.0	6,772.9	5,175.5	692.9	801,550.36	490,696.12	5,211.61	0.00
15,250.0	90.00	357.91	10,227.0	6,772.9	5,225.5	691.1	801,548.53	490,746.09	5,261.32	0.00

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
15,300.0	90.00	357.91	10,227.0	6,772.9	5,275.5	689.2	801,546.71	490,796.06	5,311.04	0.00
15,350.0	90.00	357.91	10,227.0	6,772.9	5,325.4	687.4	801,544.89	490,846.02	5,360.75	0.00
15,400.0	90.00	357.91	10,227.0	6,772.9	5,375.4	685.6	801,543.06	490,895.99	5,410.46	0.00
15,450.0	90.00	357.91	10,227.0	6,772.9	5,425.4	683.8	801,541.24	490,945.96	5,460.17	0.00
15,500.0	90.00	357.91	10,227.0	6,772.9	5,475.3	681.9	801,539.42	490,995.92	5,509.89	0.00
15,550.0	90.00	357.91	10,227.0	6,772.9	5,525.3	680.1	801,537.59	491,045.89	5,559.60	0.00
15,600.0	90.00	357.91	10,227.0	6,772.9	5,575.3	678.3	801,535.77	491,095.86	5,609.31	0.00
15,650.0	90.00	357.91	10,227.0	6,772.9	5,625.2	676.5	801,533.95	491,145.82	5,659.02	0.00
15,700.0	90.00	357.91	10,227.0	6,772.9	5,675.2	674.6	801,532.12	491,195.79	5,708.74	0.00
15,750.0	90.00	357.91	10,227.0	6,772.9	5,725.2	672.8	801,530.30	491,245.76	5,758.45	0.00
15,800.0	90.00	357.91	10,227.0	6,772.9	5,775.1	671.0	801,528.48	491,295.72	5,808.16	0.00
15,850.0	90.00	357.91	10,227.0	6,772.9	5,825.1	669.2	801,526.65	491,345.69	5,857.87	0.00
15,900.0	90.00	357.91	10,227.0	6,772.9	5,875.1	667.4	801,524.83	491,395.66	5,907.58	0.00
15,950.0	90.00	357.91	10,227.0	6,772.9	5,925.0	665.5	801,523.01	491,445.62	5,957.30	0.00
16,000.0	90.00	357.91	10,227.0	6,772.9	5,975.0	663.7	801,521.18	491,495.59	6,007.01	0.00
16,050.0	90.00	357.91	10,227.0	6,772.9	6,025.0	661.9	801,519.36	491,545.56	6,056.72	0.00
16,100.0	90.00	357.91	10,227.0	6,772.9	6,074.9	660.1	801,517.54	491,595.52	6,106.43	0.00
16,150.0	90.00	357.91	10,227.0	6,772.9	6,124.9	658.2	801,515.71	491,645.49	6,156.15	0.00
16,200.0	90.00	357.91	10,227.0	6,772.9	6,174.9	656.4	801,513.89	491,695.46	6,205.86	0.00
16,250.0	90.00	357.91	10,227.0	6,772.9	6,224.8	654.6	801,512.07	491,745.42	6,255.57	0.00
16,300.0	90.00	357.91	10,227.0	6,772.9	6,274.8	652.8	801,510.24	491,795.39	6,305.28	0.00
16,350.0	90.00	357.91	10,227.0	6,772.9	6,324.8	650.9	801,508.42	491,845.36	6,355.00	0.00
16,400.0	90.00	357.91	10,227.0	6,772.9	6,374.7	649.1	801,506.60	491,895.32	6,404.71	0.00
16,450.0	90.00	357.91	10,227.0	6,772.9	6,424.7	647.3	801,504.77	491,945.29	6,454.42	0.00
16,500.0	90.00	357.91	10,227.0	6,772.9	6,474.7	645.5	801,502.95	491,995.26	6,504.13	0.00
16,550.0	90.00	357.91	10,227.0	6,772.9	6,524.7	643.6	801,501.12	492,045.22	6,553.84	0.00
16,600.0	90.00	357.91	10,227.0	6,772.9	6,574.6	641.8	801,499.30	492,095.19	6,603.56	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
16,650.0	90.00	357.91	10,227.0	6,772.9	6,624.6	640.0	801,497.48	492,145.16	6,653.27	0.00
16,700.0	90.00	357.91	10,227.0	6,772.9	6,674.6	638.2	801,495.65	492,195.13	6,702.98	0.00
16,750.0	90.00	357.91	10,227.0	6,772.9	6,724.5	636.4	801,493.83	492,245.09	6,752.69	0.00
16,800.0	90.00	357.91	10,227.0	6,772.9	6,774.5	634.5	801,492.01	492,295.06	6,802.41	0.00
16,850.0	90.00	357.91	10,227.0	6,772.9	6,824.5	632.7	801,490.18	492,345.03	6,852.12	0.00
16,900.0	90.00	357.91	10,227.0	6,772.9	6,874.4	630.9	801,488.36	492,394.99	6,901.83	0.00
16,950.0	90.00	357.91	10,227.0	6,772.9	6,924.4	629.1	801,486.54	492,444.96	6,951.54	0.00
17,000.0	90.00	357.91	10,227.0	6,772.9	6,974.4	627.2	801,484.71	492,494.93	7,001.26	0.00
17,050.0	90.00	357.91	10,227.0	6,772.9	7,024.3	625.4	801,482.89	492,544.89	7,050.97	0.00
17,100.0	90.00	357.91	10,227.0	6,772.9	7,074.3	623.6	801,481.07	492,594.86	7,100.68	0.00
17,150.0	90.00	357.91	10,227.0	6,772.9	7,124.3	621.8	801,479.24	492,644.83	7,150.39	0.00
17,200.0	90.00	357.91	10,227.0	6,772.9	7,174.2	619.9	801,477.42	492,694.79	7,200.10	0.00
17,250.0	90.00	357.91	10,227.0	6,772.9	7,224.2	618.1	801,475.60	492,744.76	7,249.82	0.00
17,300.0	90.00	357.91	10,227.0	6,772.9	7,274.2	616.3	801,473.77	492,794.73	7,299.53	0.00
17,350.0	90.00	357.91	10,227.0	6,772.9	7,324.1	614.5	801,471.95	492,844.69	7,349.24	0.00
17,400.0	90.00	357.91	10,227.0	6,772.9	7,374.1	612.6	801,470.13	492,894.66	7,398.95	0.00
17,450.0	90.00	357.91	10,227.0	6,772.9	7,424.1	610.8	801,468.30	492,944.63	7,448.67	0.00
17,500.0	90.00	357.91	10,227.0	6,772.9	7,474.0	609.0	801,466.48	492,994.59	7,498.38	0.00
17,550.0	90.00	357.91	10,227.0	6,772.9	7,524.0	607.2	801,464.66	493,044.56	7,548.09	0.00
17,600.0	90.00	357.91	10,227.0	6,772.9	7,574.0	605.4	801,462.83	493,094.53	7,597.80	0.00
17,650.0	90.00	357.91	10,227.0	6,772.9	7,623.9	603.5	801,461.01	493,144.49	7,647.52	0.00
17,700.0	90.00	357.91	10,227.0	6,772.9	7,673.9	601.7	801,459.19	493,194.46	7,697.23	0.00
17,750.0	90.00	357.91	10,227.0	6,772.9	7,723.9	599.9	801,457.36	493,244.43	7,746.94	0.00
17,800.0	90.00	357.91	10,227.0	6,772.9	7,773.8	598.1	801,455.54	493,294.39	7,796.65	0.00
17,850.0	90.00	357.91	10,227.0	6,772.9	7,823.8	596.2	801,453.71	493,344.36	7,846.36	0.00
17,900.0	90.00	357.91	10,227.0	6,772.9	7,873.8	594.4	801,451.89	493,394.33	7,896.08	0.00
17,950.0	90.00	357.91	10,227.0	6,772.9	7,923.7	592.6	801,450.07	493,444.29	7,945.79	0.00

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**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)
18,000.0	90.00	357.91	10,227.0	6,772.9	7,973.7	590.8	801,448.24	493,494.26	7,995.50	0.00
18,050.0	90.00	357.91	10,227.0	6,772.9	8,023.7	588.9	801,446.42	493,544.23	8,045.21	0.00
18,100.0	90.00	357.91	10,227.0	6,772.9	8,073.6	587.1	801,444.60	493,594.19	8,094.93	0.00
18,150.0	90.00	357.91	10,227.0	6,772.9	8,123.6	585.3	801,442.77	493,644.16	8,144.64	0.00
18,200.0	90.00	357.91	10,227.0	6,772.9	8,173.6	583.5	801,440.95	493,694.13	8,194.35	0.00
18,232.0	90.00	357.91	10,227.0	6,772.9	8,205.5	582.3	801,439.78	493,726.11	8,226.17	0.00

TD at 18232.0 - Last Take Point - 5 1/2" Production Casing

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,027.8	5,022.0	9 5/8" Intermediate Casing	9-5/8	12-1/4
120.0	120.0	20" Conductor	20	26
1,272.0	1,272.0	13 3/8" Surface Casing	13-3/8	17-1/2
18,232.0	10,227.0	5 1/2" Production Casing	5-1/2	8-3/4

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	**Local Co-ordinate Reference:**	Well Bell Lake Unit North 234H
Project:	Bell Lake Unit North 234H	**TVD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Site:	Bell Lake Unit North 234H	**MD Reference:**	WELL @ 3454.1usft (Original Well Elev)
Well:	Bell Lake Unit North 234H	**North Reference:**	Grid
Wellbore:	Bell Lake Unit North 234H	**Survey Calculation Method:**	Minimum Curvature
Design:	190410 Bell Lake Unit North 234H	**Database:**	EDM 5000.1 Single User Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,178.6	5,172.0	Bell Canyon		0.00	
8,721.0	8,695.0	Avalon		0.00	
1,222.0	1,222.0	Rustler		0.00	
1,822.0	1,822.0	Top of Salt		0.00	
6,209.2	6,197.0	Cherry Canyon		0.00	
9,653.3	9,622.0	Bone Spring		0.00	
7,541.5	7,522.0	Brushy Canyon		0.00	
4,726.1	4,722.0	Base of Salt		0.00	
4,977.5	4,972.0	Lamar		0.00	
1,622.0	1,622.0	Salado		0.00	
10,093.4	10,027.0	2nd Bone Spring Sand		0.00	
9,577.7	9,547.0	1st Bone Spring Sand		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
3,840.0	3,840.0	0.0	0.0	Start Build 3.00
4,040.0	4,039.6	0.0	10.5	Start 5505.0 hold at 4040.0 MD
9,545.0	9,514.5	0.0	585.9	Start DLS 4.22 TFO -65.85
9,580.0	9,549.3	0.4	589.7	Start DLS 5.00 TFO -95.65
9,680.0	9,648.5	6.9	599.9	Start DLS 5.66 TFO -44.41
9,850.0	9,814.6	39.1	613.7	Start DLS 10.00 TFO -1.19
10,093.4	10,027.0	150.5	642.8	First PP
10,587.3	10,227.0	572.3	749.2	Start DLS 2.01 TFO -90.00
10,675.0	10,227.0	657.7	769.1	First Take Point
11,387.6	10,227.0	1,365.7	831.9	Start 6844.4 hold at 11387.6 MD
18,232.0	10,227.0	8,205.5	582.3	TD at 18232.0 - Last Take Point

Checked By: _____ Approved By: _____ Date: _____