

HOBBS OCD

FEB 19 2020

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM0000587
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☒ Multiple Zone		7. If Unit or CA Agreement, Name and No. BELL LAKE / NMNM068292X
2. Name of Operator KAISER FRANCIS OIL COMPANY		8. Lease Name and Well No. BELL LAKE UNIT NORTH 435H (316207)
3a. Address 6733 S. Yale Ave. Tulsa OK 74121	3b. Phone No. (include area code) (918)491-0000	9. API Well No. 30-025-46887
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESE / 1985 FSL / 1275 FEL / LAT 32.3318427 / LONG -103.4877343 At proposed prod. zone NWNE / 330 FNL / 1410 FEL / LAT 32.3545111 / LONG -103.4881853		10. Field and Pool, or Exploratory Well Name OJO CHISO / BONE SPRING, SOUTHWEST (94265)
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) 655 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 11492 feet / 19378 feet	20. BLM/BIA Bond No. in file FED: WYB000055
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3424 feet	22. Approximate date work will start* 11/01/2019	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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature (Electronic Submission)	Name (Printed/Typed) Melanie Wilson / Ph: (575)914-1461	Date 09/05/2019
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 02/12/2020
Title Assistant Field Manager Lands & Minerals		

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.

OCD Res 02/19/2020

KZ
02/22/2020

APPROVED WITH CONDITIONS
Approval Date: 02/12/2020

Additional Operator Remarks

Location of Well

I. SHL: NESE / 1985 FSL / 1275 FEL / TWSP: 23S / RANGE: 34E / SECTION: 5 / LAT: 32.3318427 / LONG: -103.4877343 (TVD: 0 feet, MD: 0 feet)
PPP: SESE / 0 FSL / 1410 FEL / TWSP: 22S / RANGE: 34E / SECTION: 32 / LAT: 32.340942 / LONG: -103.487901 (TVD: 11492 feet, MD: 14400 feet)
PPP: SENE / 2600 FNL / 1250 FEL / TWSP: 23S / RANGE: 34E / SECTION: 5 / LAT: 32.3337618 / LONG: -103.4876578 (TVD: 11492 feet, MD: 11828 feet)
PPP: SENE / 2640 FNL / 1250 FEL / TWSP: 23S / RANGE: 34E / SECTION: 5 / LAT: 32.333684 / LONG: -103.487764 (TVD: 11491 feet, MD: 11788 feet)
BHL: NWNB / 330 FNL / 1410 FEL / TWSP: 22S / RANGE: 34E / SECTION: 32 / LAT: 32.3545111 / LONG: -103.4881653 (TVD: 11492 feet, MD: 19378 feet)

BLM Point of Contact

Name:

Title:

Phone:

Email:

CONFIDENTIAL

Review and Appeal Rights

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

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**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Kaiser Franel's Oil Company
LEASE NO.:	NMNM0000587
WELL NAME & NO.:	Bell Lake Unit North 435H
SURFACE HOLE FOOTAGE:	1985' FSL & 1275' FEL
BOTTOM HOLE FOOTAGE:	330' FNL & 1410' FEL
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 10-3/4" surface casing shall be set at approximately 1685' (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 7-5/8" intermediate casing shall be 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 02032020

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 integrity 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 integrity 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.

Operator Certification

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

NAME: Melanie Wilson

Signed on: 09/05/2019

Title: Regulatory Analyst

Street Address: 106 W. Riverside Drive

City: Carlsbad

State: NM

Zip: 88220

Phone: (575)914-1461

Email address: nmogrservices@gmail.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone: (918)527-5260

Email address: erich@kfoc.net

APD ID: 10400040970

Submission Date: 09/05/2019

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

Well Type: OIL WELL

Well Work Type: Drill

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reflects the most
recent changes

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Section 1 - General

APD ID: 10400040970

Tie to previous NOS? N

Submission Date: 09/05/2019

BLM Office: CARLSBAD

User: Melanie Wilson

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM0000587

Lease Acres: 634.55

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM000292X

Agreement name:

Keep application confidential? Y

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: 435H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: OJO CHISO

Pool Name: ^{Wolfcamp} 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: 435H

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

Is the proposed well in a Hellum production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: 17

Well Class: HORIZONTAL

NORTH BELL LAKE UNIT

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: 655 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: Bell_Lake_Unit_North_435H_C102_20190904121101.pdf

Bell_Lake_Unit_North_435H_Pymt_20190905064023.pdf

Well work start Date: 11/01/2019

Duration: 40 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 7092

Reference Datum: GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twisp	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	198 6	FSL	127 6	FEL	23S	34E	6	Aliquot NESE	32.33184 27	- 103.4877 343	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 000124 4A	342 4	0	0	N
KOP Leg #1	211 7	FSL	127 7	FEL	23S	34E	5	Aliquot NESE	32.33220 5	- 103.4877 37	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 000124 4A	- 758 2	110 15	110 06	N

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

Wellbore	NS Foot	NS Indicator	EW Foot	EW Indicator	Twp	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	264 0	FNL	126 0	FEL	23S	34E	5	Aliquet SENE	32.33368 4	- 103.4877 64	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 000058 7	- 806 7	117 88	114 91	Y
PPP Leg #1-2	260 0	FNL	126 0	FEL	23S	34E	5	Aliquet SENE	32.33376 18	- 103.4876 573	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 000058 7	- 806 8	118 28	114 92	Y
PPP Leg #1-3	0	FSL	141 0	FEL	22S	34E	32	Aliquet SESE	32.34094 2	- 103.4879 01	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	- 806 8	144 00	114 92	Y
EXIT Leg #1	330	FNL	141 0	FEL	22S	34E	32	Aliquet NWNE	32.35451 11	- 103.4881 653	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	- 806 8	193 78	114 92	Y
BHL Leg #1	330	FNL	141 0	FEL	22S	34E	32	Aliquet NWNE	32.35451 11	- 103.4881 653	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	- 806 8	193 78	114 92	Y

APD ID: 10400046970

Submission Date: 09/05/2019

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

Well Type: OIL WELL

Well Work Type: Drill

High-impact data
reflects the most
recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
930176	---	3425	0	0	OTHER : Surface	NONE	N
930177	RUSTLER	2203	1222	1222	SANDSTONE	NONE	N
930178	SALADO	1803	1622	1622	SALT	NONE	N
930179	TOP SALT	1603	1622	1622	SALT	NONE	N
930180	BASE OF SALT	-1297	4722	4722	SALT	NONE	N
930181	LAMAR	-1547	4972	4972	SANDSTONE	NATURAL GAS, OIL	N
930182	BELL CANYON	-1747	5172	5172	SANDSTONE	NATURAL GAS, OIL	N
930183	CHERRY CANYON	-2772	6197	6197	SANDSTONE	NATURAL GAS, OIL	N
930184	BRUSHY CANYON	-4097	7522	7522	SANDSTONE	NATURAL GAS, OIL	N
930185	BONE SPRING	-5197	8622	8622	LIMESTONE	NATURAL GAS, OIL	N
930186	AVALON SAND	-5292	8717	8717	SANDSTONE	NATURAL GAS, OIL	N
930187	BONE SPRING 1ST	-6097	9522	9522	SANDSTONE	NATURAL GAS, OIL	N
930194	BONE SPRING 2ND	-6592	10017	10017	SANDSTONE	NATURAL GAS, OIL	Y
930292	BONE SPRING LIME	-7097	10522	10522	LIMESTONE	NATURAL GAS, OIL	N
930293	BONE SPRING 3RD	-7507	10932	10932	SANDSTONE	NATURAL GAS, OIL	N
930294	WOLFCAMP	-7867	11292	11292	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: KAISER FRANCIS OIL COMPANY**Well Name: BELL LAKE UNIT NORTH****Well Number: 435H****Pressure Rating (PSI): 10M****Rating Depth: 13000**

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

Requesting Variance? YES**Variance request: Flex Hose Variance**

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:

Bell_Lake_Unit_North_435H_Choke_Manifold_20190904133957.pdf

BOP Diagram Attachment:

Bell_Lake_Unit_North_435H_BOP_20190904134017.pdf

Bell_Lake_Unit_North_435H_Flex_Hose_Data_20191205170122.pdf

Bell_Lake_Unit_North_435H_Wellhead_20191205170400.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MID	Bottom Set MID	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MID	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	14.75	10.75	NEW	API	N	0	1247	0	1247	3424	2177	1247	J-55	40.5	ST&C	2.7	5.4	DRY	0.3	DRY	12.5
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	10748	0	10742		-7318	10748	HCP-110	29.7	LT&C	1.3	1.9	DRY	2.4	DRY	2.9
3	PRODUCTION	6.75	5.5	NEW	API	N	0	19378	0	11492		-8068	19378	P-110	20	OTHER - USS Eagle SFH	1.8	2	DRY	2.7	DRY	3.2

Casing Attachments

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Bell_Lake_Unit_North_435H_Casing_Assumptions_20190904134823.pdf

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Bell_Lake_Unit_North_435H_Casing_Assumptions_20190904134428.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Bell_Lake_Unit_North_435H_5.5_Csg_Specs_20190904134709.pdf

Section 4 - Cement

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

String Type	Lead/Tail	Stage Tool Depth	Top MID	Bottom MID	Quantity(ss)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1247	801	1.73	13.5	1033	50	ExpendoCem	Poly F Flake

INTERMEDIATE	Lead		0	1074	813	2.73	11	2219	25	NapCem	Expendo
INTERMEDIATE	Tail		0	1074	888	1.2	15.5	504	25	NapCem	None
PRODUCTION	Lead		50.00	1937	827	1.22	14.5	1077	15	VersaCem	None

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 time.

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
1074 2	1149 2	OIL-BASED MUD	10	12							
1247	1074 2	OTHER : DIESEL-BRINE EMULSION	8.8	9.2							

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1247	OTHER : Fresh Water	8.4	9							

Section 6 - Test, Logging, Coring

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

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

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

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

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7171

Anticipated Surface Pressure: 4642

Anticipated Bottom Hole Temperature(F): 199

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Bell_Lake_Unit_North_435H_H2S_Plan_20190905061846.pdf

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 435H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Bell_Lake_Unit_North_435H_Directional_Plan_20190905061902.pdf

Other proposed operations facets description:

Gas Capture Plan attached

Other proposed operations facets attachment:

Bell_Lake_Unit_North_435H_GCP_20190905061912.pdf

Other Variance attachment:

Bell_Lake_Unit_North_435H_Flex_Hose_20190905061926.pdf

Kaiser-Francis Oil Company
 Bad Lake Unit North 435H
 Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Depth	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor (Min 1.8)	Joint Tensile Safety Factor (Min 1.8)
Conductor	120	20"				New		120															
Surface	1247	10-3/4"	40.5	J-55	STC	New	14-3/4"	1247	FW	8.4-9.0	11850	32-34	MC	9	584	1580	3130	629000	420000	2.7	5.4	12.5	8.3
Intermediate	10748	7-5/8"	29.7	KOP-110	UTC	New	9-7/8"	10742	Brine	8.7-9.0	11426	28-29	MC	9	5027	6700	9460	940000	769000	1.3	1.9	2.9	2.4
Production	19378	5-1/2"	20	P110 HP	USS Eagle SFH	New	6-3/4"	11492	DBM	10.0-12.0	18882	55-70		12	77171	13150	14360	729000	629000	1.8	2.0	3.2	2.7

Kaiser Francis

Bell Lake Unit North 435H

Bell Lake Unit North 435H

Bell Lake Unit North 435H

Bell Lake Unit North 435H

Plan: 190621 Bell Lake Unit North 435H

Morcor Standard Plan

21 June, 2019

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
 Project: Bell Lake Unit North 435H
 Site: Bell Lake Unit North 435H
 Well: Bell Lake Unit North 435H
 Wellbore: Bell Lake Unit North 435H
 Design: 190621 Bell Lake Unit North 435H

Local Co-ordinate Reference: Well/Bell Lake Unit North 435H
 TVD Reference: WELL @ 3446.1usft (Original Well Elev)
 MD Reference: WELL @ 3446.1usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Project	Bell Lake Unit North 435H		
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 435H		
Site Position:		Northing:	485,487.30 usft
From:	Map	Easting:	802,518.72 usft
Position Uncertainty:	1.0 usft	Slot Radius:	177-1/2 "
		Latitude:	32° 19' 54.634 IN
		Longitude:	103° 29' 15.844 W
		Grid Convergence:	0.45 °

Well	Bell Lake Unit North 435H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	1.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 19' 54.634 IN
		Longitude:	103° 29' 15.844 W
		Ground Level:	3,424.1 usft

Wellbore	Bell Lake Unit North 435H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	6/21/2019	6.56
			Dip Angle
			(°)
			Field Strength
			(nT)
			47.887

Design	190621 Bell Lake Unit North 435H		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			358.62

Survey Tool Program	Date 6/21/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
0.0	19,378.1	190621 Bell Lake Unit North 435H (Bell La	MWD
			MWD - Standard

Morcor Engineering

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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)
0.0	0.00	0.00	0.0	-3,446.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
100.0	0.00	0.00	100.0	-3,346.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
120.0	0.00	0.00	120.0	-3,326.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
20" Conductor										
200.0	0.00	0.00	200.0	-3,246.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
300.0	0.00	0.00	300.0	-3,146.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
400.0	0.00	0.00	400.0	-3,046.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
500.0	0.00	0.00	500.0	-2,946.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
600.0	0.00	0.00	600.0	-2,846.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
700.0	0.00	0.00	700.0	-2,746.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
800.0	0.00	0.00	800.0	-2,646.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
900.0	0.00	0.00	900.0	-2,546.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,000.0	0.00	0.00	1,000.0	-2,446.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,100.0	0.00	0.00	1,100.0	-2,346.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,200.0	0.00	0.00	1,200.0	-2,246.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,222.0	0.00	0.00	1,222.0	-2,224.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Rustler										
1,247.0	0.00	0.00	1,247.0	-2,189.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
10 3/4" Surface Casing										
1,300.0	0.00	0.00	1,300.0	-2,146.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,400.0	0.00	0.00	1,400.0	-2,046.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,500.0	0.00	0.00	1,500.0	-1,946.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,600.0	0.00	0.00	1,600.0	-1,846.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,622.0	0.00	0.00	1,622.0	-1,824.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Salado										
1,700.0	0.00	0.00	1,700.0	-1,746.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1,800.0	0.00	0.00	1,800.0	-1,646.1	0.0	0.0	802,518.72	485,487.30	0.00	0.00

Morcor Engineering

Morcor Standard Plan

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 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLog (°/100usft)
1,822.0	0.00	0.00	1,822.0	-1,624.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
Top of Salt										
1,900.0	0.00	0.00	1,900.0	-1,546.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,000.0	0.00	0.00	2,000.0	-1,446.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,100.0	0.00	0.00	2,100.0	-1,346.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,200.0	0.00	0.00	2,200.0	-1,246.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,300.0	0.00	0.00	2,300.0	-1,146.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,400.0	0.00	0.00	2,400.0	-1,046.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,500.0	0.00	0.00	2,500.0	-946.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,600.0	0.00	0.00	2,600.0	-846.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,700.0	0.00	0.00	2,700.0	-746.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,800.0	0.00	0.00	2,800.0	-646.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
2,900.0	0.00	0.00	2,900.0	-546.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,000.0	0.00	0.00	3,000.0	-446.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,100.0	0.00	0.00	3,100.0	-346.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,200.0	0.00	0.00	3,200.0	-246.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,300.0	0.00	0.00	3,300.0	-146.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,400.0	0.00	0.00	3,400.0	-46.1	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,500.0	0.00	0.00	3,500.0	53.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,600.0	0.00	0.00	3,600.0	153.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,700.0	0.00	0.00	3,700.0	253.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,800.0	0.00	0.00	3,800.0	353.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
3,900.0	0.00	0.00	3,900.0	453.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
4,000.0	0.00	0.00	4,000.0	553.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
4,100.0	0.00	0.00	4,100.0	653.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
4,200.0	0.00	0.00	4,200.0	753.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00
4,300.0	0.00	0.00	4,300.0	853.9	0.00	0.00	802,518.72	485,487.30	0.00	0.00

Morcor Engineering

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Local Co-ordinate Reference: Well Bell Lake Unit North 435H
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Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLog (°/100usft)
4,400.0	0.00	0.00	4,400.0	953.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
4,500.0	0.00	0.00	4,500.0	1,053.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
4,600.0	0.00	0.00	4,600.0	1,153.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
4,700.0	0.00	0.00	4,700.0	1,253.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
4,722.0	0.00	0.00	4,722.0	1,275.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Base of Salt										
4,800.0	0.00	0.00	4,800.0	1,353.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
4,900.0	0.00	0.00	4,900.0	1,453.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
4,972.0	0.00	0.00	4,972.0	1,525.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Lamar										
5,000.0	0.00	0.00	5,000.0	1,553.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,100.0	0.00	0.00	5,100.0	1,653.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,172.0	0.00	0.00	5,172.0	1,725.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Bell Canyon										
5,200.0	0.00	0.00	5,200.0	1,753.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,300.0	0.00	0.00	5,300.0	1,853.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,400.0	0.00	0.00	5,400.0	1,953.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,500.0	0.00	0.00	5,500.0	2,053.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,600.0	0.00	0.00	5,600.0	2,153.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,700.0	0.00	0.00	5,700.0	2,253.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,800.0	0.00	0.00	5,800.0	2,353.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
5,900.0	0.00	0.00	5,900.0	2,453.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,000.0	0.00	0.00	6,000.0	2,553.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,100.0	0.00	0.00	6,100.0	2,653.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,197.0	0.00	0.00	6,197.0	2,750.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Cherry Canyon										
6,200.0	0.00	0.00	6,200.0	2,753.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00

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6,300.0	0.00	0.00	6,300.0	2,853.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,400.0	0.00	0.00	6,400.0	2,953.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,500.0	0.00	0.00	6,500.0	3,053.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,600.0	0.00	0.00	6,600.0	3,153.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,700.0	0.00	0.00	6,700.0	3,253.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,800.0	0.00	0.00	6,800.0	3,353.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
6,900.0	0.00	0.00	6,900.0	3,453.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,000.0	0.00	0.00	7,000.0	3,553.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,100.0	0.00	0.00	7,100.0	3,653.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,200.0	0.00	0.00	7,200.0	3,753.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,300.0	0.00	0.00	7,300.0	3,853.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,400.0	0.00	0.00	7,400.0	3,953.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,500.0	0.00	0.00	7,500.0	4,053.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,522.0	0.00	0.00	7,522.0	4,075.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Brushy Canyon										
7,600.0	0.00	0.00	7,600.0	4,153.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,700.0	0.00	0.00	7,700.0	4,253.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,800.0	0.00	0.00	7,800.0	4,353.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
7,900.0	0.00	0.00	7,900.0	4,453.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,000.0	0.00	0.00	8,000.0	4,553.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,100.0	0.00	0.00	8,100.0	4,653.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,200.0	0.00	0.00	8,200.0	4,753.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,300.0	0.00	0.00	8,300.0	4,853.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,400.0	0.00	0.00	8,400.0	4,953.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,500.0	0.00	0.00	8,500.0	5,053.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,600.0	0.00	0.00	8,600.0	5,153.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
 Project: Bell Lake Unit North 435H
 Site: Bell Lake Unit North 435H
 Well: Bell Lake Unit North 435H
 Wellbore: Bell Lake Unit North 435H
 Design: 180621 Bell Lake Unit North 435H

Local Co-ordinate Reference: Well Bell Lake Unit North 435H
 TVD Reference: WELL @ 3446.1 usft (Original Well Elev)
 MD Reference: WELL @ 3446.1 usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
8,622.0	0.00	0.00	8,622.0	5,175.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Bone Spring										
8,700.0	0.00	0.00	8,700.0	5,253.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,717.0	0.00	0.00	8,717.0	5,270.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Avalon										
8,800.0	0.00	0.00	8,800.0	5,353.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
8,900.0	0.00	0.00	8,900.0	5,453.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,000.0	0.00	0.00	9,000.0	5,553.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,100.0	0.00	0.00	9,100.0	5,653.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,200.0	0.00	0.00	9,200.0	5,753.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,300.0	0.00	0.00	9,300.0	5,853.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,400.0	0.00	0.00	9,400.0	5,953.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,500.0	0.00	0.00	9,500.0	6,053.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,522.0	0.00	0.00	9,522.0	6,075.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
1st Bone Spring Sand										
9,600.0	0.00	0.00	9,600.0	6,153.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,700.0	0.00	0.00	9,700.0	6,253.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,800.0	0.00	0.00	9,800.0	6,353.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
9,900.0	0.00	0.00	9,900.0	6,453.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
10,000.0	0.00	0.00	10,000.0	6,553.9	0.0	0.0	802,518.72	485,487.30	0.00	0.00
Start Build 3.00										
10,017.0	0.51	359.09	10,017.0	6,570.9	0.1	0.0	802,518.72	485,487.38	0.08	3.00
2nd Bone Spring Sand										
10,100.0	3.00	359.09	10,100.0	6,653.9	2.6	0.0	802,518.68	485,489.92	2.62	3.00
10,200.0	6.00	359.09	10,199.6	6,753.5	10.5	-0.2	802,518.55	485,497.76	10.46	3.00
10,290.6	8.72	359.09	10,289.5	6,843.4	22.1	-0.4	802,518.37	485,509.36	22.07	3.00
Start 724.8 hold at 10290.6 MD										
10,300.0	8.72	359.09	10,298.8	6,852.7	23.5	-0.4	802,518.35	485,510.79	23.49	0.00

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
 Project: Bell Lake Unit North 435H
 Site: Bell Lake Unit North 435H
 Well: Bell Lake Unit North 435H
 Wellbore: Bell Lake Unit North 435H
 Design: 190621 Bell Lake Unit North 435H

Local Co-ordinate Reference: Well Bell Lake Unit North 435H
 TVD Reference: WELL @ 3446.1usft (Original Well Elev)
 MD Reference: WELL @ 3446.1usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
110,400.0	8.72	359.09	110,397.6	6,951.5	38.6	-0.6	802,518.110	485,525.94	38.65	0.00
110,500.0	8.72	359.09	110,496.5	7,050.4	53.8	-0.9	802,517.86	485,541.110	53.80	0.00
110,525.8	8.72	359.09	110,522.0	7,075.9	57.7	-0.9	802,517.80	485,545.02	57.72	0.00
3rd Bone Spring Lime										
110,600.0	8.72	359.09	110,595.3	7,149.2	69.0	-1.1	802,517.62	485,556.25	68.96	0.00
110,700.0	8.72	359.09	110,694.1	7,248.0	84.1	-1.3	802,517.38	485,571.411	84.12	0.00
110,748.4	8.72	359.09	110,742.0	7,295.9	91.4	-1.5	802,517.28	485,578.75	91.46	0.00
7 5/8" Intermediate Casing										
110,800.0	8.72	359.09	110,793.0	7,346.9	99.3	-1.6	802,517.14	485,588.57	99.28	0.00
110,900.0	8.72	359.09	110,891.8	7,445.7	114.4	-1.8	802,516.89	485,601.72	114.43	0.00
110,940.6	8.72	359.09	110,932.0	7,485.9	120.6	-1.9	802,516.80	485,607.88	120.59	0.00
3rd Bone Spring Sand										
111,000.0	8.72	359.09	110,990.7	7,544.6	129.6	-2.1	802,516.65	485,616.88	129.59	0.00
111,015.4	8.72	359.09	111,005.9	7,559.8	131.9	-2.1	802,516.62	485,619.21	131.92	0.00
Start DLS 10.00 TFO -0.48										
111,050.0	12.18	358.95	111,039.9	7,593.8	138.2	-2.2	802,516.51	485,625.49	138.20	110.00
111,100.0	17.18	358.85	111,088.3	7,642.2	150.9	-2.5	802,516.28	485,638.15	150.87	110.00
111,150.0	22.18	358.79	111,135.3	7,689.2	167.7	-2.8	802,515.91	485,654.98	167.70	110.00
111,200.0	27.18	358.75	111,180.8	7,734.7	188.5	-3.3	802,515.46	485,675.85	188.57	110.00
111,250.0	32.18	358.73	111,224.2	7,778.1	213.3	-3.8	802,514.92	485,700.59	213.32	110.00
111,300.0	37.18	358.71	111,265.3	7,819.2	241.7	-4.4	802,514.28	485,729.02	241.76	110.00
111,334.3	40.61	358.70	111,292.0	7,845.9	263.3	-4.9	802,513.79	485,750.57	263.31	110.00
Wolfcamp										
111,350.0	42.18	358.69	111,303.8	7,857.7	273.6	-5.2	802,513.56	485,760.93	273.67	110.00
111,400.0	47.18	358.68	111,339.3	7,893.2	308.8	-6.0	802,512.75	485,796.07	308.82	110.00
111,450.0	52.18	358.67	111,371.6	7,925.5	346.9	-6.9	802,511.87	485,834.17	346.93	110.00
111,500.0	57.18	358.66	111,400.5	7,954.4	387.6	-7.8	802,510.92	485,874.94	387.71	110.00
111,550.0	62.18	358.65	111,425.8	7,979.7	430.8	-8.8	802,509.90	485,918.07	430.86	110.00

Morcor Engineering
Morcor Standard Plan

Company: Kabiser Francis
Project: Bell Lake Unit North 435H
Site: Bell Lake Unit North 435H
Well: Bell Lake Unit North 435H
Wellbore: Bell Lake Unit North 435H
Design: 15021 Bell Lake Unit North 435H

Local Co-ordinate Reference:
TVD Reference: WELL @ 3446.11usft (Original Well Elev)
MD Reference: WELL @ 3446.11usft (Original Well Elev)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: EDM:5000.11 Single Waser Db

Planned Survey

MD	Inc	Azi (azimuth)	TVD	TVDSS	N/S	EW	Easting	Northng	V. Sec	Dleg
111.600.00	67.118	358.164	111.447.2	18.001.1	475.9	-49.9	1802.509.89	485.969.24	476.04	110.00
111.650.10	72.118	358.163	111.464.5	18.018.4	522.8	-11.0	1802.507.72	486.010.10	522.92	110.00
111.700.10	77.118	358.163	111.477.7	18.031.6	571.0	-12.2	1802.506.57	486.058.30	571.13	110.00
111.750.10	82.118	358.162	111.486.7	18.040.6	620.2	-13.3	1802.505.39	486.107.46	620.30	110.00
111.800.10	87.118	358.161	111.491.3	18.045.2	668.9	-14.5	1802.504.19	486.157.21	670.07	110.00
111.828.2		358.161	111.492.0	18.045.9	698.1	-15.2	1802.503.51	486.195.40	688.26	110.00
Start 7549.9 inch at 111828.2 MD										
111.900.10	90.000	358.161	111.492.0	18.045.9	768.9	-17.0	1802.501.77	486.257.17	770.06	110.00
112.000.10	90.000	358.161	111.492.0	18.045.9	868.8	-19.4	1802.499.34	486.357.14	870.06	110.00
112.100.10	90.000	358.161	111.492.0	18.045.9	968.8	-21.8	1802.498.92	486.457.11	970.06	110.00
112.200.10	90.000	358.161	111.492.0	18.045.9	1,069.8	-24.2	1802.494.49	486.557.09	1,107.06	110.00
112.300.10	90.000	358.161	111.492.0	18.045.9	1,169.8	-26.7	1802.492.07	486.657.06	1,170.06	110.00
112.400.10	90.000	358.161	111.492.0	18.045.9	1,269.7	-29.1	1802.489.65	486.757.03	1,270.06	110.00
112.500.10	90.000	358.161	111.492.0	18.045.9	1,369.7	-31.5	1802.487.22	486.857.00	1,370.06	110.00
112.600.10	90.000	358.161	111.492.0	18.045.9	1,469.7	-33.9	1802.484.80	486.956.97	1,470.06	110.00
112.700.10	90.000	358.161	111.492.0	18.045.9	1,569.6	-36.3	1802.482.37	487.056.94	1,570.06	110.00
112.800.10	90.000	358.161	111.492.0	18.045.9	1,669.6	-38.8	1802.479.95	487.156.91	1,670.06	110.00
112.900.10	90.000	358.161	111.492.0	18.045.9	1,769.6	-41.2	1802.477.53	487.256.88	1,770.06	110.00
113.000.10	90.000	358.161	111.492.0	18.045.9	1,869.6	-43.6	1802.475.10	487.356.85	1,870.06	110.00
113.100.10	90.000	358.161	111.492.0	18.045.9	1,969.5	-46.0	1802.472.68	487.456.82	1,970.06	110.00
113.200.10	90.000	358.161	111.492.0	18.045.9	2,069.5	-48.5	1802.470.25	487.556.79	2,070.06	110.00
113.300.10	90.000	358.161	111.492.0	18.045.9	2,169.5	-50.9	1802.467.83	487.656.76	2,170.06	110.00
113.400.10	90.000	358.161	111.492.0	18.045.9	2,269.4	-53.3	1802.465.41	487.756.73	2,270.06	110.00
113.500.10	90.000	358.161	111.492.0	18.045.9	2,369.4	-55.7	1802.462.98	487.856.70	2,370.06	110.00
113.600.10	90.000	358.161	111.492.0	18.045.9	2,469.4	-58.2	1802.460.56	487.956.67	2,470.06	110.00
113.700.10	90.000	358.161	111.492.0	18.045.9	2,569.3	-60.6	1802.458.13	488.056.64	2,570.06	110.00
113.800.10	90.000	358.161	111.492.0	18.045.9	2,669.3	-63.0	1802.455.71	488.156.62	2,670.06	110.00

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
 Project: Bell Lake Unit North 435H
 Site: Bell Lake Unit North 435H
 Well: Bell Lake Unit North 435H
 Wellbore: Bell Lake Unit North 435H
 Design: 190621 Bell Lake Unit North 435H

Local Co-ordinate Reference: Well Bell Lake Unit North 435H
 TVD Reference: WELL @ 3446.1usft (Original Well Elev)
 MD Reference: WELL @ 3446.1usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
113,900.0	90.00	358.61	111,482.0	8,045.9	2,769.3	-65.4	802,453.29	488,256.59	2,770.06	0.00
114,000.0	90.00	358.61	111,482.0	8,045.9	2,869.3	-67.9	802,450.86	488,356.56	2,870.06	0.00
114,100.0	90.00	358.61	111,482.0	8,045.9	2,969.2	-70.3	802,448.44	488,456.53	2,970.06	0.00
114,200.0	90.00	358.61	111,482.0	8,045.9	3,069.2	-72.7	802,446.01	488,556.50	3,070.06	0.00
114,300.0	90.00	358.61	111,482.0	8,045.9	3,169.2	-75.1	802,443.59	488,656.47	3,170.06	0.00
114,400.0	90.00	358.61	111,482.0	8,045.9	3,269.1	-77.6	802,441.17	488,756.44	3,270.06	0.00
114,500.0	90.00	358.61	111,482.0	8,045.9	3,369.1	-80.0	802,438.74	488,856.41	3,370.06	0.00
114,600.0	90.00	358.61	111,482.0	8,045.9	3,469.1	-82.4	802,436.32	488,956.38	3,470.06	0.00
114,700.0	90.00	358.61	111,482.0	8,045.9	3,569.1	-84.8	802,433.90	489,056.35	3,570.06	0.00
114,800.0	90.00	358.61	111,482.0	8,045.9	3,669.0	-87.2	802,431.47	489,156.32	3,670.06	0.00
114,900.0	90.00	358.61	111,482.0	8,045.9	3,769.0	-89.7	802,429.05	489,256.29	3,770.06	0.00
115,000.0	90.00	358.61	111,482.0	8,045.9	3,869.0	-92.1	802,426.62	489,356.26	3,870.06	0.00
115,100.0	90.00	358.61	111,482.0	8,045.9	3,968.9	-94.5	802,424.20	489,456.23	3,970.06	0.00
115,200.0	90.00	358.61	111,482.0	8,045.9	4,068.9	-96.9	802,421.78	489,556.20	4,070.06	0.00
115,300.0	90.00	358.61	111,482.0	8,045.9	4,168.9	-99.4	802,419.35	489,656.17	4,170.06	0.00
115,400.0	90.00	358.61	111,482.0	8,045.9	4,268.8	-101.8	802,416.93	489,756.14	4,270.06	0.00
115,500.0	90.00	358.61	111,482.0	8,045.9	4,368.8	-104.2	802,414.50	489,856.12	4,370.06	0.00
115,600.0	90.00	358.61	111,482.0	8,045.9	4,468.8	-106.6	802,412.08	489,956.09	4,470.06	0.00
115,700.0	90.00	358.61	111,482.0	8,045.9	4,568.8	-109.1	802,409.66	490,056.06	4,570.06	0.00
115,800.0	90.00	358.61	111,482.0	8,045.9	4,668.7	-111.5	802,407.23	490,156.03	4,670.06	0.00
115,900.0	90.00	358.61	111,482.0	8,045.9	4,768.7	-113.9	802,404.81	490,256.00	4,770.06	0.00
116,000.0	90.00	358.61	111,482.0	8,045.9	4,868.7	-116.3	802,402.38	490,355.97	4,870.06	0.00
116,100.0	90.00	358.61	111,482.0	8,045.9	4,968.6	-118.8	802,399.96	490,455.94	4,970.06	0.00
116,200.0	90.00	358.61	111,482.0	8,045.9	5,068.6	-121.2	802,397.54	490,555.91	5,070.06	0.00
116,300.0	90.00	358.61	111,482.0	8,045.9	5,168.6	-123.6	802,395.11	490,655.88	5,170.06	0.00
116,400.0	90.00	358.61	111,482.0	8,045.9	5,268.6	-126.0	802,392.69	490,755.85	5,270.06	0.00
116,500.0	90.00	358.61	111,482.0	8,045.9	5,368.5	-128.5	802,390.26	490,855.82	5,370.06	0.00

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
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Local Co-ordinate Reference: Well Bell Lake Unit North 435H
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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)
116,600.0	90.00	358.61	111,482.0	8,045.9	5,468.5	-1130.9	802,387.84	480,955.79	5,470.06	0.00
116,700.0	90.00	358.61	111,482.0	8,045.9	5,568.5	-1133.3	802,385.42	481,055.76	5,570.06	0.00
116,800.0	90.00	358.61	111,482.0	8,045.9	5,668.4	-1135.7	802,382.99	481,155.73	5,670.06	0.00
116,900.0	90.00	358.61	111,482.0	8,045.9	5,768.4	-1138.2	802,380.57	481,255.70	5,770.06	0.00
117,000.0	90.00	358.61	111,482.0	8,045.9	5,868.4	-1140.6	802,378.14	481,355.67	5,870.06	0.00
117,100.0	90.00	358.61	111,482.0	8,045.9	5,968.3	-1143.0	802,375.72	481,455.65	5,970.06	0.00
117,200.0	90.00	358.61	111,482.0	8,045.9	6,068.3	-1145.4	802,373.30	481,555.62	6,070.06	0.00
117,300.0	90.00	358.61	111,482.0	8,045.9	6,168.3	-1147.8	802,370.87	481,655.59	6,170.06	0.00
117,400.0	90.00	358.61	111,482.0	8,045.9	6,268.3	-1150.3	802,368.45	481,755.56	6,270.06	0.00
117,500.0	90.00	358.61	111,482.0	8,045.9	6,368.2	-1152.7	802,366.02	481,855.53	6,370.06	0.00
117,600.0	90.00	358.61	111,482.0	8,045.9	6,468.2	-1155.1	802,363.60	481,955.50	6,470.06	0.00
117,700.0	90.00	358.61	111,482.0	8,045.9	6,568.2	-1157.5	802,361.18	482,055.47	6,570.06	0.00
117,800.0	90.00	358.61	111,482.0	8,045.9	6,668.1	-1160.0	802,358.75	482,155.44	6,670.06	0.00
117,900.0	90.00	358.61	111,482.0	8,045.9	6,768.1	-1162.4	802,356.33	482,255.41	6,770.06	0.00
118,000.0	90.00	358.61	111,482.0	8,045.9	6,868.1	-1164.8	802,353.91	482,355.38	6,870.06	0.00
118,100.0	90.00	358.61	111,482.0	8,045.9	6,968.1	-1167.2	802,351.48	482,455.35	6,970.06	0.00
118,200.0	90.00	358.61	111,482.0	8,045.9	7,068.0	-1169.7	802,349.06	482,555.32	7,070.06	0.00
118,300.0	90.00	358.61	111,482.0	8,045.9	7,168.0	-1172.1	802,346.63	482,655.29	7,170.06	0.00
118,400.0	90.00	358.61	111,482.0	8,045.9	7,268.0	-1174.5	802,344.21	482,755.26	7,270.06	0.00
118,500.0	90.00	358.61	111,482.0	8,045.9	7,367.9	-1176.9	802,341.79	482,855.23	7,370.06	0.00
118,600.0	90.00	358.61	111,482.0	8,045.9	7,467.9	-1179.4	802,339.36	482,955.20	7,470.06	0.00
118,700.0	90.00	358.61	111,482.0	8,045.9	7,567.9	-1181.8	802,336.94	483,055.18	7,570.06	0.00
118,800.0	90.00	358.61	111,482.0	8,045.9	7,667.8	-1184.2	802,334.51	483,155.15	7,670.06	0.00
118,900.0	90.00	358.61	111,482.0	8,045.9	7,767.8	-1186.6	802,332.09	483,255.12	7,770.06	0.00
119,000.0	90.00	358.61	111,482.0	8,045.9	7,867.8	-1189.1	802,329.67	483,355.09	7,870.06	0.00
119,100.0	90.00	358.61	111,482.0	8,045.9	7,967.8	-1191.5	802,327.24	483,455.06	7,970.06	0.00
119,200.0	90.00	358.61	111,482.0	8,045.9	8,067.7	-1193.9	802,324.82	483,555.03	8,070.06	0.00

Morcor Engineering

Morcor Standard Plan:

Company: Kaiser Francis
 Project: Bell Lake Unit North 435H
 Site: Bell Lake Unit North 435H
 Well: Bell Lake Unit North 435H
 Wellbore: Bell Lake Unit North 435H
 Design: 190621 Bell Lake Unit North 435H

Local Co-ordinate Reference: Well Bell Lake Unit North 435H
 TVD Reference: WELL @ 3446.1usft (Original Well Elev)
 MD Reference: WELL @ 3446.1usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
119,300.0	90.00	358.61	111,482.0	8,045.9	8,167.7	-196.3	802,322.39	493,655.00	8,170.06	0.00
119,378.1	90.00	358.61	111,492.0	8,045.9	8,245.8	-198.2	802,320.50	493,733.08	8,248.16	0.00
TD at 119378.1 - 5 1/2" Production Casing										

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
119,378.1	111,482.0	5 1/2" Production Casing	5-1/2	6-3/4
110,748.4	110,742.0	7 5/8" Intermediate Casing	7-5/8	9-7/8
11,247.0	11,247.0	10 3/4" Surface Casing	10-3/4	14-3/4
1120.0	1120.0	20" Conductor	20	26

Morcor Engineering

Morcor Standard Plan:

Company: Kaiser Francis
Project: Bell Lake Unit North 435H
Site: Bell Lake Unit North 435H
Well: Bell Lake Unit North 435H
Wellbore: Bell Lake Unit North 435H
Design: 180621 Bell Lake Unit North 435H

Local Co-ordinate Reference: Well Bell Lake Unit North 435H
TVD Reference: WELL @ 3446.1usft (Original Well Elev)
MD Reference: WELL @ 3446.1usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User.Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
110,017.0	110,017.0	2nd Bone Spring Sand		0.00	
4,972.0	4,972.0	Lamar		0.00	
110,940.6	110,932.0	3rd Bone Spring Sand		0.00	
4,722.0	4,722.0	Base of Salt		0.00	
110,525.8	110,522.0	3rd Bone Spring Lime		0.00	
8,622.0	8,622.0	Bone Spring		0.00	
111,334.3	111,292.0	Wildcamp		0.00	
8,717.0	8,717.0	Avalon		0.00	
9,522.0	9,522.0	1st Bone Spring Sand		0.00	
7,522.0	7,522.0	Brushy Canyon		0.00	
6,137.0	6,137.0	Cherry Canyon		0.00	
5,172.0	5,172.0	Bell Canyon		0.00	
1,622.0	1,622.0	Salado		0.00	
1,822.0	1,822.0	Top of Salt		0.00	
1,222.0	1,222.0	Rustler		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
110,000.0	110,000.0	0.0	0.0	Start Build 3.00
110,290.6	110,289.5	22.1	-0.4	Start 724.8 hold at 110290.6 MD
111,015.4	111,005.9	131.9	-2.1	Start DLS 110.00 TFO -0.48
111,828.2	111,492.0	698.1	-15.2	Start 7549.9 hold at 111828.2 MD
119,378.1	111,492.0	8,245.8	-198.2	TFO at 119378.1

Checked By: _____ Approved By: _____ Date: _____