

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

HOBBS OCD
DEC 18 2019
RECEIVED

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMLC0061374A
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 (12361)		8. Lease Name and Well No. BELL LAKE UNIT SOUTH 232H (316706)
3a. Address 6733 S. Yale Ave. Tulsa OK 74121	3b. Phone No. (include area code) (918)491-0000	9. API Well No. 30-025-46632 (98268)
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESW / 1832 FSL / 1945 FWL / LAT 32.2443456 / LONG -103.4942498 At proposed prod. zone NWNW / 330 FNL / 1230 FWL / LAT 32.2674415 / LONG -103.4966184		10. Field and Pool, or Exploratory BELL LAKE / WOLF CAMP, SOUTH
11. Sec., T. R. M. or Blk. and Survey or Area SEC 5 / T24S / R34E / NMP		12. County or Parish LEA
13. State NM		14. Distance in miles and direction from nearest town or post office* 19 miles
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1832 feet	16. No of acres in lease 440	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 10822 feet / 18996 feet	20. BLM/BIA Bond No. in file FED: WYB000055
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3596 feet	22. Approximate date work will start* 07/01/2019	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) Stormi Davis / Ph: (918)491-4339	Date 03/11/2019
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 12/13/2019
Title Assistant Field Manager Lands & Minerals		
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 12/18/19

APPROVED WITH CONDITIONS
Approval Date: 12/13/2019

KZ
12/20/19

PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Kaiser Francis
LEASE NO.:	NMLC0061374A
WELL NAME & NO.:	Bell Lake Unit South 232H
SURFACE HOLE FOOTAGE:	1832' FSL & 1945' FWL
BOTTOM HOLE FOOTAGE:	330' FNL & 1230' FEL
LOCATION:	Section 5, T 24S, 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. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated **500 feet** prior to drilling into the **Bell Lake** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8"** surface casing shall be set at approximately **1350'** (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 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 **2000 (2M)** psi.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.
3. Variance for the use of a flex hose between the BOP and choke manifold is approved, however, the hose must meet API 16C specification as described in the attachments following these conditions.

D. SPECIAL REQUIREMENTS

1. 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 11/5/2019

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.
4. 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.



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

Operator Certification Data Report

12/16/2019

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: 03/11/2019

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:



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

Application Data Report

12/16/2019

APD ID: 10400039833

Submission Date: 03/11/2019

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data
reflects the most
recent changes

[Show Final Text](#)

Section 1 - General

APD ID: 10400039833

Tie to previous NOS?

Submission Date: 03/11/2019

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: NMLC0061374A

Lease Acres: 440

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 SOUTH

Well Number: 232H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: BELL LAKE

Pool Name: WOLFCAMP,
SOUTH

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 SOUTH

Well Number: 232H

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:
SOUTH BELL LAKE UNIT
Number of Legs: 1

Number: 13

Well Class: HORIZONTAL

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 19 Miles

Distance to nearest well: 30 FT

Distance to lease line: 1832 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: BLUS_232H_C102_20190311130657.pdf

Pay.gov_20190311145344.pdf

Well work start Date: 07/01/2019

Duration: 40 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 6763

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
SHL Leg #1	183 2	FSL	194 5	FWL	24S	34E	5	Aliquot NESW	32.24434 56	- 103.4942 498	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061374 A	359 6	0	0
KOP Leg #1	184 2	FSL	135 3	FWL	24S	34E	5	Aliquot NESW	32.24537 74	- 103.4932 384	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061374 A	- 662 3	102 50	102 19

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

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
PPP Leg #1-1	0	FNL	136 0	FWL	23S	34E	32	Aliquot SESW	32.25384 89	- 103.4963 101	LEA	NEW MEXI CO	NEW MEXI CO	F	FEE	- 722 6	139 20	108 22
PPP Leg #1-2	132 0	FNL	136 0	FWL	24S	34E	5	Aliquot NENW	32.25023	- 103.4962 4	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 000233 5B	- 722 6	126 30	108 22
PPP Leg #1-3	260 0	FNL	136 0	FWL	24S	34E	5	Aliquot SENW	32.24646 62	- 103.4961 482	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061374 A	- 722 6	113 50	108 22
EXIT Leg #1	330	FNL	123 0	FWL	23S	34E	32	Aliquot NWN W	32.26744 15	- 103.4966 184	LEA	NEW MEXI CO	NEW MEXI CO	F	FEE	- 722 6	189 96	108 22
BHL Leg #1	330	FNL	123 0	FWL	23S	34E	32	Aliquot NWN W	32.26744 15	- 103.4966 184	LEA	NEW MEXI CO	NEW MEXI CO	F	FEE	- 722 6	189 96	108 22



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

Drilling Plan Data Report

12/16/2019

APD ID: 10400039833

Submission Date: 03/11/2019

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

Well Type: OIL WELL

Well Work Type: Drill

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	---					NONE	N
2	RUSTLER					NONE	N
3	SALADO					NONE	N
4	TOP SALT					NONE	N
5	BASE OF SALT					NONE	N
6	LAMAR					NATURAL GAS,OIL	N
7	BELL CANYON					NATURAL GAS,OIL	N
8	CHERRY CANYON					NATURAL GAS,OIL	N
9	BRUSHY CANYON					NATURAL GAS,OIL	N
10	BONE SPRING					NATURAL GAS,OIL	N
11	AVALON SAND					NATURAL GAS,OIL	N
12	BONE SPRING 1ST					NATURAL GAS,OIL	N
13	BONE SPRING 2ND					NATURAL GAS,OIL	Y
14	BONE SPRING LIME					NATURAL GAS,OIL	N
15	BONE SPRING 3RD					NATURAL GAS,OIL	N
16	WOLFCAMP					NATURAL GAS,OIL	N

Section 2 - Blowout Prevention

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

Pressure Rating (PSI): 5M

Rating Depth: 18000

Equipment: A 10M 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:

BLUS_232H__Choke_Manifold_20190311072901.pdf

BOP Diagram Attachment:

BLUS_232H__BOP_20190311073452.pdf

BLUS_232H_FlexHose_Data_20190311073620.pdf

BLUS_232H_Wellhead_Diagram_20190311073615.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	1397	0	1397			1397	J-55	54.5	OTHER - BTC	1.8	4.3	DRY	12.4	DRY	11.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5200	0	5200			5200	HCP -110	40	LT&C	1.8	3.3	DRY	6.1	DRY	6.1
3	PRODUCTION	8.75	5.5	NEW	API	N	0	18996	0	10822			18996	P-110	20	OTHER - GBCD	2.2	2.5	DRY	3	DRY	3

Casing Attachments

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUS_232H_Casing_Assumptions_20190918071225.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUS_232H_Casing_Assumptions_20190918071244.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUS_232H_5.5_P110_GBCD_20190311074018.PDF

BLUS_232H_Casing_Assumptions_20190918071310.pdf

Section 4 - Cement

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

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					
SURFACE	Tail										
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
5200	1082 2	OTHER : Cut Brine	8.7	8.9							
1397	5200	OTHER : Brine	8.7	8.9							
0	1397	OTHER : Fresh Water	8.4	9							

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 232H

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 Pressure: 4686

Anticipated Surface Pressure: 2305.16

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

BLUS_232H_H2S_Contingency_Plan_PAD_13_20190311074327.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BLUS_232H___Directional_Plan_20190311074449.pdf

Other proposed operations facets description:

Gas Capture Plan attached

Other proposed operations facets attachment:

BLUS_232H_Pad_13_Gas_Capture_Plan_20190311074436.pdf

Other Variance attachment:

BLUS_232H_FlexHose_Data_20190311074506.pdf

Kaiser-Francis Oil Company
BLUS 232H

Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor	Joint Tensile Safety Factor
Conductor	120'	20"				New		120														
Surface	1397'	13-3/8"	54.5	J-55	BTC	New	17-1/2"	1397	FW	8.4 - 9.0	32 - 34	NC	9	632	1130	2730	853000	909000	1.8	4.3	11.6	12.4
Intermediate	5200'	9-5/8"	40	HCP-110	LTC	New	12-1/4"	5200	Brine	8.7 - 8.9	28	NC	8.9	2407	4230	7900	1260000	1266000	1.8	3.3	6.1	6.1
Production	18996'	5-1/2"	20	P110	GBCD	New	8-3/4"	10822	Cut Brine	8.7 - 8.9	28-29	NC	8.9	5008	11100	12640	641000	654000	2.2	2.5	3.0	3.0

Kaiser Francis

Bell Lake Unit South 232H

Bell Lake Unit South 232H

Bell Lake Unit South 232H

Bell Lake Unit South 232H

Plan: 190302 Bell Lake Unit South 232H

Morcor Standard Plan

02 March, 2019

Morcor Engineering

Morcor Standard Plan

Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit South 232H
Project:	Bell Lake Unit South 232H	TVD Reference:	WELL @ 3618.4usft (Original Well Elev)
Site:	Bell Lake Unit South 232H	MD Reference:	WELL @ 3618.4usft (Original Well Elev)
Well:	Bell Lake Unit South 232H	North Reference:	Grid
Wellbore:	Bell Lake Unit South 232H	Survey Calculation Method:	Minimum Curvature
Design:	190302 Bell Lake Unit South 232H	Database:	EDM 5000.1 Single User Db

Project	Bell Lake Unit South 232H		
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 South 232H		
Site Position:		Northing:	453,639.89 usft
From:	Lat/Long	Easting:	800,755.25 usft
Position Uncertainty:	1.0 usft	Slot Radius:	17-1/2 "
		Latitude:	32° 14' 39.644 N
		Longitude:	103° 29' 39.299 W
		Grid Convergence:	0.45 °

Well							Bell Lake Unit South 232H						
Well Position		+N/-S	0.0 usft	Northing:		453,639.89 usft		Latitude:		32° 14' 39.644 N			
		+E/-W	0.0 usft									Easting:	
Position Uncertainty			1.0 usft	Wellhead Elevation:		usft		Ground Level:		3,596.4 usft			

Wellbore	Bell Lake Unit South 232H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.72	60.27	48,813

Design	190302 Bell Lake Unit South 232H			
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	354.57

Survey Tool Program	Date	3/2/2019		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
0.0	18,996.0	190302 Bell Lake Unit South 232H (Bell La	MWD	MWD - Standard

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
Project: Bell Lake Unit South 232H
Site: Bell Lake Unit South 232H
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Wellbore: Bell Lake Unit South 232H
Design: 190302 Bell Lake Unit South 232H

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MD Reference: WELL @ 3618.4usft (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)
0.0	0.00	0.00	0.0	-3,618.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
50.0	0.00	0.00	50.0	-3,568.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
100.0	0.00	271.00	100.0	-3,518.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
120.0	0.00	271.00	120.0	-3,498.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
20" Conductor										
150.0	0.00	271.00	150.0	-3,468.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
200.0	0.00	271.00	200.0	-3,418.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
250.0	0.00	271.00	250.0	-3,368.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
300.0	0.00	271.00	300.0	-3,318.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
350.0	0.00	271.00	350.0	-3,268.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
400.0	0.00	271.00	400.0	-3,218.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
450.0	0.00	271.00	450.0	-3,168.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
500.0	0.00	271.00	500.0	-3,118.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
550.0	0.00	271.00	550.0	-3,068.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
600.0	0.00	271.00	600.0	-3,018.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
650.0	0.00	271.00	650.0	-2,968.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
700.0	0.00	271.00	700.0	-2,918.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
750.0	0.00	271.00	750.0	-2,868.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
800.0	0.00	271.00	800.0	-2,818.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
850.0	0.00	271.00	850.0	-2,768.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
900.0	0.00	271.00	900.0	-2,718.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
950.0	0.00	271.00	950.0	-2,668.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,000.0	0.00	271.00	1,000.0	-2,618.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,050.0	0.00	271.00	1,050.0	-2,568.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,100.0	0.00	271.00	1,100.0	-2,518.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,150.0	0.00	271.00	1,150.0	-2,468.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,200.0	0.00	271.00	1,200.0	-2,418.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00

Morcor Engineering

Morcor Standard Plan

DATE: 3/2/2019 6:47:05PM

Company: Kaiser Francis
Project: Bell Lake Unit South 232H
Site: Bell Lake Unit South 232H
Well: Bell Lake Unit South 232H
Wellbore: Bell Lake Unit South 232H
Design: 190302 Bell Lake Unit South 232H

Local Co-ordinate Reference: Well Bell Lake Unit South 232H
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MD Reference: WELL @ 3618.4usft (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)
1,250.0	0.00	271.00	1,250.0	-2,368.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,300.0	0.00	271.00	1,300.0	-2,318.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,350.0	0.00	271.00	1,350.0	-2,268.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,400.0	0.00	271.00	1,400.0	-2,218.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,422.0	0.00	271.00	1,422.0	-2,196.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
Rustier										
1,447.0	0.00	271.00	1,447.0	-2,171.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
13 3/8" Surface Casing										
1,450.0	0.00	271.00	1,450.0	-2,168.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,500.0	0.00	271.00	1,500.0	-2,118.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,550.0	0.00	271.00	1,550.0	-2,068.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,600.0	0.00	271.00	1,600.0	-2,018.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,650.0	0.00	271.00	1,650.0	-1,968.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,700.0	0.00	271.00	1,700.0	-1,918.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,750.0	0.00	271.00	1,750.0	-1,868.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,800.0	0.00	271.00	1,800.0	-1,818.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,847.0	0.00	271.00	1,847.0	-1,771.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
Salado										
1,850.0	0.00	271.00	1,850.0	-1,768.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,900.0	0.00	271.00	1,900.0	-1,718.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
1,950.0	0.00	271.00	1,950.0	-1,668.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,000.0	0.00	271.00	2,000.0	-1,618.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,022.0	0.00	271.00	2,022.0	-1,596.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
Top Salt										
2,050.0	0.00	271.00	2,050.0	-1,568.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,100.0	0.00	271.00	2,100.0	-1,518.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,150.0	0.00	271.00	2,150.0	-1,468.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,200.0	0.00	271.00	2,200.0	-1,418.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00

Morcor Engineering

Morcor Standard Plan

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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	271.00	2,250.0	-1,368.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,300.0	0.00	271.00	2,300.0	-1,318.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,350.0	0.00	271.00	2,350.0	-1,268.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,400.0	0.00	271.00	2,400.0	-1,218.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,450.0	0.00	271.00	2,450.0	-1,168.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,500.0	0.00	271.00	2,500.0	-1,118.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,550.0	0.00	271.00	2,550.0	-1,068.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,600.0	0.00	271.00	2,600.0	-1,018.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,650.0	0.00	271.00	2,650.0	-968.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,700.0	0.00	271.00	2,700.0	-918.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,750.0	0.00	271.00	2,750.0	-868.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,800.0	0.00	271.00	2,800.0	-818.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,850.0	0.00	271.00	2,850.0	-768.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,900.0	0.00	271.00	2,900.0	-718.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
2,950.0	0.00	271.00	2,950.0	-668.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,000.0	0.00	271.00	3,000.0	-618.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,050.0	0.00	271.00	3,050.0	-568.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,100.0	0.00	271.00	3,100.0	-518.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,150.0	0.00	271.00	3,150.0	-468.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,200.0	0.00	271.00	3,200.0	-418.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,250.0	0.00	271.00	3,250.0	-368.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,300.0	0.00	271.00	3,300.0	-318.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,350.0	0.00	271.00	3,350.0	-268.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,400.0	0.00	271.00	3,400.0	-218.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,450.0	0.00	271.00	3,450.0	-168.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,500.0	0.00	271.00	3,500.0	-118.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,550.0	0.00	271.00	3,550.0	-68.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00

Morcor Engineering

Morcor Standard Plan

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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	271.00	3,600.0	-18.4	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,650.0	0.00	271.00	3,650.0	31.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,700.0	0.00	271.00	3,700.0	81.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,750.0	0.00	271.00	3,750.0	131.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,800.0	0.00	271.00	3,800.0	181.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,850.0	0.00	271.00	3,850.0	231.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,900.0	0.00	271.00	3,900.0	281.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
3,950.0	0.00	271.00	3,950.0	331.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,000.0	0.00	271.00	4,000.0	381.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,050.0	0.00	271.00	4,050.0	431.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,100.0	0.00	271.00	4,100.0	481.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,150.0	0.00	271.00	4,150.0	531.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,200.0	0.00	271.00	4,200.0	581.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,250.0	0.00	271.00	4,250.0	631.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,300.0	0.00	271.00	4,300.0	681.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
4,330.0	0.00	271.00	4,330.0	711.6	0.0	0.0	800,755.25	453,639.89	0.00	0.00
Start Build 3.00										
4,350.0	0.60	271.00	4,350.0	731.6	0.0	-0.1	800,755.14	453,639.89	0.01	3.00
4,400.0	2.10	271.00	4,400.0	781.6	0.0	-1.3	800,753.96	453,639.91	0.14	3.00
4,450.0	3.60	271.00	4,449.9	831.5	0.1	-3.8	800,751.48	453,639.96	0.42	3.00
4,500.0	5.10	271.00	4,499.8	881.4	0.1	-7.6	800,747.69	453,640.02	0.85	3.00
4,530.0	6.00	271.00	4,529.6	911.2	0.2	-10.5	800,744.78	453,640.07	1.17	3.00
Start 5470.0 hold at 4530.0 MD										
4,550.0	6.00	271.00	4,549.5	931.1	0.2	-12.6	800,742.69	453,640.11	1.41	0.00
4,600.0	6.00	271.00	4,599.3	980.9	0.3	-17.8	800,737.47	453,640.20	1.99	0.00
4,650.0	6.00	271.00	4,649.0	1,030.6	0.4	-23.0	800,732.24	453,640.29	2.58	0.00
4,700.0	6.00	271.00	4,698.7	1,080.3	0.5	-28.2	800,727.02	453,640.38	3.16	0.00

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
Project: Bell Lake Unit South 232H
Site: Bell Lake Unit South 232H
Well: Bell Lake Unit South 232H
Wellbore: Bell Lake Unit South 232H
Design: 190302 Bell Lake Unit South 232H

Local Co-ordinate Reference: Well Bell Lake Unit South 232H
TVD Reference: WELL @ 3618.4usft (Original Well Elev)
MD Reference: WELL @ 3618.4usft (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)
4,750.0	6.00	271.00	4,748.4	1,130.0	0.6	-33.5	800,721.79	453,640.48	3.75	0.00
4,800.0	6.00	271.00	4,798.2	1,179.8	0.7	-38.7	800,716.57	453,640.57	4.33	0.00
4,850.0	6.00	271.00	4,847.9	1,229.5	0.8	-43.9	800,711.34	453,640.66	4.92	0.00
4,900.0	6.00	271.00	4,897.6	1,279.2	0.9	-49.1	800,706.11	453,640.75	5.50	0.00
4,950.0	6.00	271.00	4,947.3	1,328.9	0.9	-54.4	800,700.89	453,640.84	6.09	0.00
5,000.0	6.00	271.00	4,997.1	1,378.7	1.0	-59.6	800,695.66	453,640.93	6.67	0.00
5,025.1	6.00	271.00	5,022.0	1,403.6	1.1	-62.2	800,693.04	453,640.98	6.96	0.00
Base of Salt										
5,050.0	6.00	271.00	5,046.8	1,428.4	1.1	-64.8	800,690.44	453,641.02	7.26	0.00
5,100.0	6.00	271.00	5,096.5	1,478.1	1.2	-70.0	800,685.21	453,641.11	7.84	0.00
5,150.0	6.00	271.00	5,146.2	1,527.8	1.3	-75.3	800,679.99	453,641.20	8.43	0.00
5,200.0	6.00	271.00	5,196.0	1,577.6	1.4	-80.5	800,674.76	453,641.30	9.01	0.00
5,226.2	6.00	271.00	5,222.0	1,603.6	1.5	-83.2	800,672.02	453,641.34	9.32	0.00
Lamar Lime										
5,247.0	6.00	271.00	5,242.7	1,624.3	1.5	-85.4	800,669.85	453,641.38	9.56	0.00
9 5/8" Intermediate Casing										
5,250.0	6.00	271.00	5,245.7	1,627.3	1.5	-85.7	800,669.54	453,641.39	9.60	0.00
5,300.0	6.00	271.00	5,295.4	1,677.0	1.6	-90.9	800,664.31	453,641.48	10.18	0.00
5,350.0	6.00	271.00	5,345.1	1,726.7	1.7	-96.2	800,659.08	453,641.57	10.77	0.00
5,400.0	6.00	271.00	5,394.9	1,776.5	1.8	-101.4	800,653.86	453,641.66	11.35	0.00
5,427.3	6.00	271.00	5,422.0	1,803.6	1.8	-104.2	800,651.01	453,641.71	11.67	0.00
Bell Canyon										
5,450.0	6.00	271.00	5,444.6	1,826.2	1.9	-106.6	800,648.63	453,641.75	11.94	0.00
5,500.0	6.00	271.00	5,494.3	1,875.9	2.0	-111.8	800,643.41	453,641.84	12.52	0.00
5,550.0	6.00	271.00	5,544.0	1,925.6	2.0	-117.1	800,638.18	453,641.93	13.11	0.00
5,600.0	6.00	271.00	5,593.8	1,975.4	2.1	-122.3	800,632.96	453,642.03	13.69	0.00
5,650.0	6.00	271.00	5,643.5	2,025.1	2.2	-127.5	800,627.73	453,642.12	14.28	0.00

Morcor Engineering

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5,700.0	6.00	271.00	5,693.2	2,074.8	2.3	-132.7	800,622.50	453,642.21	14.86	0.00
5,750.0	6.00	271.00	5,743.0	2,124.6	2.4	-138.0	800,617.28	453,642.30	15.45	0.00
5,800.0	6.00	271.00	5,792.7	2,174.3	2.5	-143.2	800,612.05	453,642.39	16.03	0.00
5,850.0	6.00	271.00	5,842.4	2,224.0	2.6	-148.4	800,606.83	453,642.48	16.62	0.00
5,900.0	6.00	271.00	5,892.1	2,273.7	2.7	-153.6	800,601.60	453,642.57	17.20	0.00
5,950.0	6.00	271.00	5,941.9	2,323.5	2.8	-158.9	800,596.38	453,642.66	17.79	0.00
6,000.0	6.00	271.00	5,991.6	2,373.2	2.9	-164.1	800,591.15	453,642.76	18.37	0.00
6,050.0	6.00	271.00	6,041.3	2,422.9	3.0	-169.3	800,585.93	453,642.85	18.96	0.00
6,100.0	6.00	271.00	6,091.0	2,472.6	3.0	-174.5	800,580.70	453,642.94	19.54	0.00
6,150.0	6.00	271.00	6,140.8	2,522.4	3.1	-179.8	800,575.47	453,643.03	20.13	0.00
6,200.0	6.00	271.00	6,190.5	2,572.1	3.2	-185.0	800,570.25	453,643.12	20.71	0.00
6,250.0	6.00	271.00	6,240.2	2,621.8	3.3	-190.2	800,565.02	453,643.21	21.30	0.00
6,282.0	6.00	271.00	6,272.0	2,653.6	3.4	-193.6	800,561.68	453,643.27	21.67	0.00
Cherry Canyon										
6,300.0	6.00	271.00	6,289.9	2,671.5	3.4	-195.4	800,559.80	453,643.30	21.88	0.00
6,350.0	6.00	271.00	6,339.7	2,721.3	3.5	-200.7	800,554.57	453,643.39	22.47	0.00
6,400.0	6.00	271.00	6,389.4	2,771.0	3.6	-205.9	800,549.35	453,643.49	23.05	0.00
6,450.0	6.00	271.00	6,439.1	2,820.7	3.7	-211.1	800,544.12	453,643.58	23.64	0.00
6,500.0	6.00	271.00	6,488.8	2,870.4	3.8	-216.4	800,538.89	453,643.67	24.22	0.00
6,550.0	6.00	271.00	6,538.6	2,920.2	3.9	-221.6	800,533.67	453,643.76	24.81	0.00
6,600.0	6.00	271.00	6,588.3	2,969.9	4.0	-226.8	800,528.44	453,643.85	25.39	0.00
6,650.0	6.00	271.00	6,638.0	3,019.6	4.1	-232.0	800,523.22	453,643.94	25.98	0.00
6,700.0	6.00	271.00	6,687.7	3,069.3	4.1	-237.3	800,517.99	453,644.03	26.56	0.00
6,750.0	6.00	271.00	6,737.5	3,119.1	4.2	-242.5	800,512.77	453,644.12	27.15	0.00
6,800.0	6.00	271.00	6,787.2	3,168.8	4.3	-247.7	800,507.54	453,644.22	27.73	0.00
6,850.0	6.00	271.00	6,836.9	3,218.5	4.4	-252.9	800,502.32	453,644.31	28.32	0.00
6,900.0	6.00	271.00	6,886.7	3,268.3	4.5	-258.2	800,497.09	453,644.40	28.90	0.00

Morcor Engineering

Morcor Standard Plan

REFERENCE TO DRAWING

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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	271.00	6,936.4	3,318.0	4.6	-263.4	800,491.86	453,644.49	29.49	0.00
7,000.0	6.00	271.00	6,986.1	3,367.7	4.7	-268.6	800,486.64	453,644.58	30.07	0.00
7,050.0	6.00	271.00	7,035.8	3,417.4	4.8	-273.8	800,481.41	453,644.67	30.66	0.00
7,100.0	6.00	271.00	7,085.6	3,467.2	4.9	-279.1	800,476.19	453,644.76	31.24	0.00
7,150.0	6.00	271.00	7,135.3	3,516.9	5.0	-284.3	800,470.96	453,644.85	31.83	0.00
7,200.0	6.00	271.00	7,185.0	3,566.6	5.1	-289.5	800,465.74	453,644.94	32.41	0.00
7,250.0	6.00	271.00	7,234.7	3,616.3	5.1	-294.7	800,460.51	453,645.04	33.00	0.00
7,300.0	6.00	271.00	7,284.5	3,666.1	5.2	-300.0	800,455.28	453,645.13	33.58	0.00
7,350.0	6.00	271.00	7,334.2	3,715.8	5.3	-305.2	800,450.06	453,645.22	34.17	0.00
7,400.0	6.00	271.00	7,383.9	3,765.5	5.4	-310.4	800,444.83	453,645.31	34.75	0.00
7,450.0	6.00	271.00	7,433.6	3,815.2	5.5	-315.6	800,439.61	453,645.40	35.34	0.00
7,500.0	6.00	271.00	7,483.4	3,865.0	5.6	-320.9	800,434.38	453,645.49	35.92	0.00
7,550.0	6.00	271.00	7,533.1	3,914.7	5.7	-326.1	800,429.16	453,645.58	36.51	0.00
7,600.0	6.00	271.00	7,582.8	3,964.4	5.8	-331.3	800,423.93	453,645.67	37.10	0.00
7,650.0	6.00	271.00	7,632.5	4,014.1	5.9	-336.5	800,418.71	453,645.77	37.68	0.00
7,700.0	6.00	271.00	7,682.3	4,063.9	6.0	-341.8	800,413.48	453,645.86	38.27	0.00
7,750.0	6.00	271.00	7,732.0	4,113.6	6.1	-347.0	800,408.25	453,645.95	38.85	0.00
7,765.1	6.00	271.00	7,747.0	4,128.6	6.1	-348.6	800,406.68	453,645.98	39.03	0.00
Brushy Canyon										
7,800.0	6.00	271.00	7,781.7	4,163.3	6.1	-352.2	800,403.03	453,646.04	39.44	0.00
7,850.0	6.00	271.00	7,831.4	4,213.0	6.2	-357.4	800,397.80	453,646.13	40.02	0.00
7,900.0	6.00	271.00	7,881.2	4,262.8	6.3	-362.7	800,392.58	453,646.22	40.61	0.00
7,950.0	6.00	271.00	7,930.9	4,312.5	6.4	-367.9	800,387.35	453,646.31	41.19	0.00
8,000.0	6.00	271.00	7,980.6	4,362.2	6.5	-373.1	800,382.13	453,646.40	41.78	0.00
8,050.0	6.00	271.00	8,030.4	4,412.0	6.6	-378.3	800,376.90	453,646.50	42.36	0.00
8,100.0	6.00	271.00	8,080.1	4,461.7	6.7	-383.6	800,371.67	453,646.59	42.95	0.00
8,150.0	6.00	271.00	8,129.8	4,511.4	6.8	-388.8	800,366.45	453,646.68	43.53	0.00

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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	271.00	8,179.5	4,561.1	6.9	-394.0	800,361.22	453,646.77	44.12	0.00
8,250.0	6.00	271.00	8,229.3	4,610.9	7.0	-399.2	800,356.00	453,646.86	44.70	0.00
8,300.0	6.00	271.00	8,279.0	4,660.6	7.1	-404.5	800,350.77	453,646.95	45.29	0.00
8,350.0	6.00	271.00	8,328.7	4,710.3	7.2	-409.7	800,345.55	453,647.04	45.87	0.00
8,400.0	6.00	271.00	8,378.4	4,760.0	7.2	-414.9	800,340.32	453,647.13	46.46	0.00
8,450.0	6.00	271.00	8,428.2	4,809.8	7.3	-420.1	800,335.10	453,647.23	47.04	0.00
8,500.0	6.00	271.00	8,477.9	4,859.5	7.4	-425.4	800,329.87	453,647.32	47.63	0.00
8,550.0	6.00	271.00	8,527.6	4,909.2	7.5	-430.6	800,324.64	453,647.41	48.21	0.00
8,600.0	6.00	271.00	8,577.3	4,958.9	7.6	-435.8	800,319.42	453,647.50	48.80	0.00
8,650.0	6.00	271.00	8,627.1	5,008.7	7.7	-441.1	800,314.19	453,647.59	49.38	0.00
8,700.0	6.00	271.00	8,676.8	5,058.4	7.8	-446.3	800,308.97	453,647.68	49.97	0.00
8,750.0	6.00	271.00	8,726.5	5,108.1	7.9	-451.5	800,303.74	453,647.77	50.55	0.00
8,800.0	6.00	271.00	8,776.2	5,157.8	8.0	-456.7	800,298.52	453,647.86	51.14	0.00
8,850.0	6.00	271.00	8,826.0	5,207.6	8.1	-462.0	800,293.29	453,647.95	51.72	0.00
8,900.0	6.00	271.00	8,875.7	5,257.3	8.2	-467.2	800,288.06	453,648.05	52.31	0.00
8,911.4	6.00	271.00	8,887.0	5,268.6	8.2	-468.4	800,286.88	453,648.07	52.44	0.00
Bone Spring										
8,950.0	6.00	271.00	8,925.4	5,307.0	8.2	-472.4	800,282.84	453,648.14	52.89	0.00
9,000.0	6.00	271.00	8,975.1	5,356.7	8.3	-477.6	800,277.61	453,648.23	53.48	0.00
9,050.0	6.00	271.00	9,024.9	5,406.5	8.4	-482.9	800,272.39	453,648.32	54.06	0.00
9,100.0	6.00	271.00	9,074.6	5,456.2	8.5	-488.1	800,267.16	453,648.41	54.65	0.00
9,102.4	6.00	271.00	9,077.0	5,458.6	8.5	-488.3	800,266.91	453,648.42	54.68	0.00
Avalon										
9,150.0	6.00	271.00	9,124.3	5,505.9	8.6	-493.3	800,261.94	453,648.50	55.23	0.00
9,200.0	6.00	271.00	9,174.1	5,555.7	8.7	-498.5	800,256.71	453,648.59	55.82	0.00
9,250.0	6.00	271.00	9,223.8	5,605.4	8.8	-503.8	800,251.49	453,648.68	56.40	0.00
9,300.0	6.00	271.00	9,273.5	5,655.1	8.9	-509.0	800,246.26	453,648.78	56.99	0.00

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9,350.0	6.00	271.00	9,323.2	5,704.8	9.0	-514.2	800,241.03	453,648.87	57.57	0.00
9,400.0	6.00	271.00	9,373.0	5,754.6	9.1	-519.4	800,235.81	453,648.96	58.16	0.00
9,450.0	6.00	271.00	9,422.7	5,804.3	9.2	-524.7	800,230.58	453,649.05	58.74	0.00
9,500.0	6.00	271.00	9,472.4	5,854.0	9.2	-529.9	800,225.36	453,649.14	59.33	0.00
9,550.0	6.00	271.00	9,522.1	5,903.7	9.3	-535.1	800,220.13	453,649.23	59.91	0.00
9,600.0	6.00	271.00	9,571.9	5,953.5	9.4	-540.3	800,214.91	453,649.32	60.50	0.00
9,650.0	6.00	271.00	9,621.6	6,003.2	9.5	-545.6	800,209.68	453,649.41	61.08	0.00
9,700.0	6.00	271.00	9,671.3	6,052.9	9.6	-550.8	800,204.45	453,649.51	61.67	0.00
9,750.0	6.00	271.00	9,721.0	6,102.6	9.7	-556.0	800,199.23	453,649.60	62.25	0.00
9,800.0	6.00	271.00	9,770.8	6,152.4	9.8	-561.2	800,194.00	453,649.69	62.84	0.00
9,850.0	6.00	271.00	9,820.5	6,202.1	9.9	-566.5	800,188.78	453,649.78	63.42	0.00
9,900.0	6.00	271.00	9,870.2	6,251.8	10.0	-571.7	800,183.55	453,649.87	64.01	0.00
9,950.0	6.00	271.00	9,919.9	6,301.5	10.1	-576.9	800,178.33	453,649.96	64.59	0.00
10,000.0	6.00	271.00	9,969.7	6,351.3	10.2	-582.1	800,173.10	453,650.05	65.18	0.00
Start Drop -3.00										
10,050.0	4.50	271.00	10,019.5	6,401.1	10.2	-586.7	800,168.53	453,650.13	65.69	3.00
10,100.0	3.00	271.00	10,069.3	6,450.9	10.3	-590.0	800,165.26	453,650.19	66.06	3.00
10,150.0	1.50	271.00	10,119.3	6,500.9	10.3	-592.0	800,163.29	453,650.22	66.28	3.00
10,152.7	1.42	271.00	10,122.0	6,503.6	10.3	-592.0	800,163.23	453,650.23	66.28	3.00
1st Bone Spring Sand										
10,200.0	0.00	0.00	10,169.3	6,550.9	10.3	-592.6	800,162.64	453,650.24	66.35	3.00
Start 80.0 hold at 10200.0 MD										
10,250.0	0.00	0.00	10,219.3	6,600.9	10.3	-592.6	800,162.64	453,650.24	66.35	0.00
10,280.0	0.00	0.00	10,249.3	6,630.9	10.3	-592.6	800,162.64	453,650.24	66.35	0.00
Start Build 10.00										
10,300.0	2.00	0.00	10,269.3	6,650.9	10.7	-592.6	800,162.64	453,650.58	66.70	10.00
10,350.0	7.00	0.00	10,319.1	6,700.7	14.6	-592.6	800,162.64	453,654.51	70.60	10.00

Morcor Engineering

Morcor Standard Plan

Company: Kaiser Francis
Project: Bell Lake Unit South 232H
Site: Bell Lake Unit South 232H
Well: Bell Lake Unit South 232H
Wellbore: Bell Lake Unit South 232H
Design: 190302 Bell Lake Unit South 232H

Local Co-ordinate Reference: Well Bell Lake Unit South 232H
TVD Reference: WELL @ 3618.4usft (Original Well Elev)
MD Reference: WELL @ 3618.4usft (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)
10,400.0	12.00	0.00	10,368.4	6,750.0	22.9	-592.6	800,162.64	453,662.76	78.81	10.00
10,450.0	17.00	0.00	10,416.8	6,798.4	35.4	-592.6	800,162.64	453,675.27	91.27	10.00
10,500.0	22.00	0.00	10,463.9	6,845.5	52.1	-592.6	800,162.64	453,691.96	107.88	10.00
10,550.0	27.00	0.00	10,509.4	6,891.0	72.8	-592.6	800,162.64	453,712.68	128.52	10.00
10,600.0	32.00	0.00	10,552.9	6,934.5	97.4	-592.6	800,162.64	453,737.30	153.02	10.00
10,650.0	37.00	0.00	10,594.1	6,975.7	125.7	-592.6	800,162.64	453,765.61	181.21	10.00
10,700.0	42.00	0.00	10,632.7	7,014.3	157.5	-592.6	800,162.64	453,797.40	212.86	10.00
10,733.6	45.36	0.00	10,657.0	7,038.6	180.7	-592.6	800,162.64	453,820.62	235.97	10.00
2nd Bone Spring Sand										
10,750.0	47.00	0.00	10,668.3	7,049.9	192.5	-592.6	800,162.64	453,832.44	247.73	10.00
10,800.0	52.00	0.00	10,700.8	7,082.4	230.6	-592.6	800,162.64	453,870.45	285.57	10.00
10,850.0	57.00	0.00	10,729.8	7,111.4	271.2	-592.6	800,162.64	453,911.14	326.08	10.00
10,900.0	62.00	0.00	10,755.2	7,136.8	314.3	-592.6	800,162.64	453,954.21	368.96	10.00
10,950.0	67.00	0.00	10,776.7	7,158.3	359.4	-592.6	800,162.64	453,999.32	413.87	10.00
11,000.0	72.00	0.00	10,794.2	7,175.8	406.2	-592.6	800,162.64	454,046.14	460.48	10.00
11,050.0	77.00	0.00	10,807.6	7,189.2	454.4	-592.6	800,162.64	454,094.31	508.43	10.00
11,100.0	82.00	0.00	10,816.7	7,198.3	503.6	-592.6	800,162.64	454,143.45	557.36	10.00
11,150.0	87.00	0.00	10,821.5	7,203.1	553.3	-592.6	800,162.64	454,193.21	606.89	10.00
11,180.0	90.00	0.00	10,822.3	7,203.9	583.3	-592.6	800,162.64	454,223.19	636.74	10.00
Start 181.0 hold at 11180.0 MD										
11,200.0	90.00	0.00	10,822.3	7,203.9	603.3	-592.6	800,162.64	454,243.19	656.65	0.00
11,250.0	90.00	0.00	10,822.3	7,203.9	653.3	-592.6	800,162.64	454,293.19	706.43	0.00
11,300.0	90.00	0.00	10,822.3	7,203.9	703.3	-592.6	800,162.64	454,343.19	756.20	0.00
11,350.0	90.00	0.00	10,822.3	7,203.9	753.3	-592.6	800,162.64	454,393.19	805.98	0.00
11,361.0	90.00	0.00	10,822.3	7,203.9	764.3	-592.6	800,162.64	454,404.19	816.93	0.00
Start Turn -1.55										
11,400.0	90.00	359.40	10,822.3	7,203.9	803.3	-592.8	800,162.43	454,443.19	855.77	1.55
11,450.0	90.00	358.62	10,822.3	7,203.9	853.3	-593.7	800,161.57	454,493.18	905.62	1.55

Morcor Engineering

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
11,461.0	90.00	358.45	10,822.3	7,203.9	864.3	-594.0	800,161.29	454,504.18	916.59	1.55
Start 7535.0 hold at 11461.0 MD										
11,500.0	90.00	358.45	10,822.3	7,203.9	903.3	-595.0	800,160.23	454,543.17	955.51	0.00
11,550.0	90.00	358.45	10,822.3	7,203.9	953.3	-596.4	800,158.88	454,593.15	1,005.39	0.00
11,600.0	90.00	358.45	10,822.3	7,203.9	1,003.2	-597.7	800,157.53	454,643.13	1,055.28	0.00
11,650.0	90.00	358.45	10,822.3	7,203.9	1,053.2	-599.1	800,156.17	454,693.11	1,105.16	0.00
11,700.0	90.00	358.45	10,822.3	7,203.9	1,103.2	-600.4	800,154.82	454,743.09	1,155.05	0.00
11,750.0	90.00	358.45	10,822.3	7,203.9	1,153.2	-601.8	800,153.47	454,793.08	1,204.93	0.00
11,800.0	90.00	358.45	10,822.3	7,203.9	1,203.2	-603.1	800,152.12	454,843.06	1,254.82	0.00
11,850.0	90.00	358.45	10,822.3	7,203.9	1,253.1	-604.5	800,150.77	454,893.04	1,304.70	0.00
11,900.0	90.00	358.45	10,822.3	7,203.9	1,303.1	-605.8	800,149.41	454,943.02	1,354.59	0.00
11,950.0	90.00	358.45	10,822.3	7,203.9	1,353.1	-607.2	800,148.06	454,993.00	1,404.48	0.00
12,000.0	90.00	358.45	10,822.3	7,203.9	1,403.1	-608.5	800,146.71	455,042.98	1,454.36	0.00
12,050.0	90.00	358.45	10,822.3	7,203.9	1,453.1	-609.9	800,145.36	455,092.97	1,504.25	0.00
12,100.0	90.00	358.45	10,822.3	7,203.9	1,503.1	-611.2	800,144.00	455,142.95	1,554.13	0.00
12,150.0	90.00	358.45	10,822.3	7,203.9	1,553.0	-612.6	800,142.65	455,192.93	1,604.02	0.00
12,200.0	90.00	358.45	10,822.3	7,203.9	1,603.0	-613.9	800,141.30	455,242.91	1,653.90	0.00
12,250.0	90.00	358.45	10,822.3	7,203.9	1,653.0	-615.3	800,139.95	455,292.89	1,703.79	0.00
12,300.0	90.00	358.45	10,822.3	7,203.9	1,703.0	-616.7	800,138.59	455,342.87	1,753.67	0.00
12,350.0	90.00	358.45	10,822.3	7,203.9	1,753.0	-618.0	800,137.24	455,392.86	1,803.56	0.00
12,400.0	90.00	358.45	10,822.3	7,203.9	1,802.9	-619.4	800,135.89	455,442.84	1,853.45	0.00
12,450.0	90.00	358.45	10,822.3	7,203.9	1,852.9	-620.7	800,134.54	455,492.82	1,903.33	0.00
12,500.0	90.00	358.45	10,822.3	7,203.9	1,902.9	-622.1	800,133.18	455,542.80	1,953.22	0.00
12,550.0	90.00	358.45	10,822.3	7,203.9	1,952.9	-623.4	800,131.83	455,592.78	2,003.10	0.00
12,600.0	90.00	358.45	10,822.3	7,203.9	2,002.9	-624.8	800,130.48	455,642.76	2,052.99	0.00
12,650.0	90.00	358.45	10,822.3	7,203.9	2,052.9	-626.1	800,129.13	455,692.75	2,102.87	0.00
12,700.0	90.00	358.45	10,822.3	7,203.9	2,102.8	-627.5	800,127.77	455,742.73	2,152.76	0.00

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)
12,750.0	90.00	358.45	10,822.3	7,203.9	2,152.8	-628.8	800,126.42	455,792.71	2,202.64	0.00
12,800.0	90.00	358.45	10,822.3	7,203.9	2,202.8	-630.2	800,125.07	455,842.69	2,252.53	0.00
12,850.0	90.00	358.45	10,822.3	7,203.9	2,252.8	-631.5	800,123.72	455,892.67	2,302.42	0.00
12,900.0	90.00	358.45	10,822.3	7,203.9	2,302.8	-632.9	800,122.36	455,942.65	2,352.30	0.00
12,950.0	90.00	358.45	10,822.3	7,203.9	2,352.7	-634.2	800,121.01	455,992.64	2,402.19	0.00
13,000.0	90.00	358.45	10,822.3	7,203.9	2,402.7	-635.6	800,119.66	456,042.62	2,452.07	0.00
13,050.0	90.00	358.45	10,822.3	7,203.9	2,452.7	-636.9	800,118.31	456,092.60	2,501.96	0.00
13,100.0	90.00	358.45	10,822.3	7,203.9	2,502.7	-638.3	800,116.95	456,142.58	2,551.84	0.00
13,150.0	90.00	358.45	10,822.3	7,203.9	2,552.7	-639.6	800,115.60	456,192.56	2,601.73	0.00
13,200.0	90.00	358.45	10,822.3	7,203.9	2,602.7	-641.0	800,114.25	456,242.54	2,651.61	0.00
13,250.0	90.00	358.45	10,822.3	7,203.9	2,652.6	-642.3	800,112.90	456,292.53	2,701.50	0.00
13,300.0	90.00	358.45	10,822.3	7,203.9	2,702.6	-643.7	800,111.54	456,342.51	2,751.39	0.00
13,350.0	90.00	358.45	10,822.3	7,203.9	2,752.6	-645.1	800,110.19	456,392.49	2,801.27	0.00
13,400.0	90.00	358.45	10,822.3	7,203.9	2,802.6	-646.4	800,108.84	456,442.47	2,851.16	0.00
13,450.0	90.00	358.45	10,822.3	7,203.9	2,852.6	-647.8	800,107.49	456,492.45	2,901.04	0.00
13,500.0	90.00	358.45	10,822.3	7,203.9	2,902.5	-649.1	800,106.13	456,542.43	2,950.93	0.00
13,550.0	90.00	358.45	10,822.3	7,203.9	2,952.5	-650.5	800,104.78	456,592.42	3,000.81	0.00
13,600.0	90.00	358.45	10,822.3	7,203.9	3,002.5	-651.8	800,103.43	456,642.40	3,050.70	0.00
13,650.0	90.00	358.45	10,822.3	7,203.9	3,052.5	-653.2	800,102.08	456,692.38	3,100.58	0.00
13,700.0	90.00	358.45	10,822.3	7,203.9	3,102.5	-654.5	800,100.72	456,742.36	3,150.47	0.00
13,750.0	90.00	358.45	10,822.3	7,203.9	3,152.5	-655.9	800,099.37	456,792.34	3,200.36	0.00
13,800.0	90.00	358.45	10,822.3	7,203.9	3,202.4	-657.2	800,098.02	456,842.33	3,250.24	0.00
13,850.0	90.00	358.45	10,822.3	7,203.9	3,252.4	-658.6	800,096.67	456,892.31	3,300.13	0.00
13,900.0	90.00	358.45	10,822.3	7,203.9	3,302.4	-659.9	800,095.31	456,942.29	3,350.01	0.00
13,950.0	90.00	358.45	10,822.3	7,203.9	3,352.4	-661.3	800,093.96	456,992.27	3,399.90	0.00
14,000.0	90.00	358.45	10,822.3	7,203.9	3,402.4	-662.6	800,092.61	457,042.25	3,449.78	0.00
14,050.0	90.00	358.45	10,822.3	7,203.9	3,452.3	-664.0	800,091.26	457,092.23	3,499.67	0.00

Morcor Engineering

Morcor Standard Plan

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
14,100.0	90.00	358.45	10,822.3	7,203.9	3,502.3	-665.3	800,089.90	457,142.22	3,549.55	0.00
14,150.0	90.00	358.45	10,822.3	7,203.9	3,552.3	-666.7	800,088.55	457,192.20	3,599.44	0.00
14,200.0	90.00	358.45	10,822.3	7,203.9	3,602.3	-668.0	800,087.20	457,242.18	3,649.33	0.00
14,250.0	90.00	358.45	10,822.3	7,203.9	3,652.3	-669.4	800,085.85	457,292.16	3,699.21	0.00
14,300.0	90.00	358.45	10,822.3	7,203.9	3,702.3	-670.8	800,084.49	457,342.14	3,749.10	0.00
14,350.0	90.00	358.45	10,822.3	7,203.9	3,752.2	-672.1	800,083.14	457,392.12	3,798.98	0.00
14,400.0	90.00	358.45	10,822.3	7,203.9	3,802.2	-673.5	800,081.79	457,442.11	3,848.87	0.00
14,450.0	90.00	358.45	10,822.3	7,203.9	3,852.2	-674.8	800,080.44	457,492.09	3,898.75	0.00
14,500.0	90.00	358.45	10,822.3	7,203.9	3,902.2	-676.2	800,079.08	457,542.07	3,948.64	0.00
14,550.0	90.00	358.45	10,822.3	7,203.9	3,952.2	-677.5	800,077.73	457,592.05	3,998.52	0.00
14,600.0	90.00	358.45	10,822.3	7,203.9	4,002.1	-678.9	800,076.38	457,642.03	4,048.41	0.00
14,650.0	90.00	358.45	10,822.3	7,203.9	4,052.1	-680.2	800,075.03	457,692.01	4,098.30	0.00
14,700.0	90.00	358.45	10,822.3	7,203.9	4,102.1	-681.6	800,073.67	457,742.00	4,148.18	0.00
14,750.0	90.00	358.45	10,822.3	7,203.9	4,152.1	-682.9	800,072.32	457,791.98	4,198.07	0.00
14,800.0	90.00	358.45	10,822.3	7,203.9	4,202.1	-684.3	800,070.97	457,841.96	4,247.95	0.00
14,850.0	90.00	358.45	10,822.3	7,203.9	4,252.0	-685.6	800,069.62	457,891.94	4,297.84	0.00
14,900.0	90.00	358.45	10,822.3	7,203.9	4,302.0	-687.0	800,068.26	457,941.92	4,347.72	0.00
14,950.0	90.00	358.45	10,822.3	7,203.9	4,352.0	-688.3	800,066.91	457,991.90	4,397.61	0.00
15,000.0	90.00	358.45	10,822.3	7,203.9	4,402.0	-689.7	800,065.56	458,041.89	4,447.49	0.00
15,050.0	90.00	358.45	10,822.3	7,203.9	4,452.0	-691.0	800,064.21	458,091.87	4,497.38	0.00
15,100.0	90.00	358.45	10,822.3	7,203.9	4,502.0	-692.4	800,062.85	458,141.85	4,547.26	0.00
15,150.0	90.00	358.45	10,822.3	7,203.9	4,551.9	-693.7	800,061.50	458,191.83	4,597.15	0.00
15,200.0	90.00	358.45	10,822.3	7,203.9	4,601.9	-695.1	800,060.15	458,241.81	4,647.04	0.00
15,250.0	90.00	358.45	10,822.3	7,203.9	4,651.9	-696.4	800,058.80	458,291.79	4,696.92	0.00
15,300.0	90.00	358.45	10,822.3	7,203.9	4,701.9	-697.8	800,057.45	458,341.78	4,746.81	0.00
15,350.0	90.00	358.45	10,822.3	7,203.9	4,751.9	-699.2	800,056.09	458,391.76	4,796.69	0.00
15,400.0	90.00	358.45	10,822.3	7,203.9	4,801.8	-700.5	800,054.74	458,441.74	4,846.58	0.00

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	EW (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
15,450.0	90.00	358.45	10,822.3	7,203.9	4,851.8	-701.9	800,053.39	458,491.72	4,896.46	0.00
15,500.0	90.00	358.45	10,822.3	7,203.9	4,901.8	-703.2	800,052.04	458,541.70	4,946.35	0.00
15,550.0	90.00	358.45	10,822.3	7,203.9	4,951.8	-704.6	800,050.68	458,591.68	4,996.23	0.00
15,600.0	90.00	358.45	10,822.3	7,203.9	5,001.8	-705.9	800,049.33	458,641.67	5,046.12	0.00
15,650.0	90.00	358.45	10,822.3	7,203.9	5,051.8	-707.3	800,047.98	458,691.65	5,096.01	0.00
15,700.0	90.00	358.45	10,822.3	7,203.9	5,101.7	-708.6	800,046.63	458,741.63	5,145.89	0.00
15,750.0	90.00	358.45	10,822.3	7,203.9	5,151.7	-710.0	800,045.27	458,791.61	5,195.78	0.00
15,800.0	90.00	358.45	10,822.3	7,203.9	5,201.7	-711.3	800,043.92	458,841.59	5,245.66	0.00
15,850.0	90.00	358.45	10,822.3	7,203.9	5,251.7	-712.7	800,042.57	458,891.57	5,295.55	0.00
15,900.0	90.00	358.45	10,822.3	7,203.9	5,301.7	-714.0	800,041.22	458,941.56	5,345.43	0.00
15,950.0	90.00	358.45	10,822.3	7,203.9	5,351.6	-715.4	800,039.86	458,991.54	5,395.32	0.00
16,000.0	90.00	358.45	10,822.3	7,203.9	5,401.6	-716.7	800,038.51	459,041.52	5,445.20	0.00
16,050.0	90.00	358.45	10,822.3	7,203.9	5,451.6	-718.1	800,037.16	459,091.50	5,495.09	0.00
16,100.0	90.00	358.45	10,822.3	7,203.9	5,501.6	-719.4	800,035.81	459,141.48	5,544.98	0.00
16,150.0	90.00	358.45	10,822.3	7,203.9	5,551.6	-720.8	800,034.45	459,191.47	5,594.86	0.00
16,200.0	90.00	358.45	10,822.3	7,203.9	5,601.6	-722.1	800,033.10	459,241.45	5,644.75	0.00
16,250.0	90.00	358.45	10,822.3	7,203.9	5,651.5	-723.5	800,031.75	459,291.43	5,694.63	0.00
16,300.0	90.00	358.45	10,822.3	7,203.9	5,701.5	-724.8	800,030.40	459,341.41	5,744.52	0.00
16,350.0	90.00	358.45	10,822.3	7,203.9	5,751.5	-726.2	800,029.04	459,391.39	5,794.40	0.00
16,400.0	90.00	358.45	10,822.3	7,203.9	5,801.5	-727.6	800,027.69	459,441.37	5,844.29	0.00
16,450.0	90.00	358.45	10,822.3	7,203.9	5,851.5	-728.9	800,026.34	459,491.36	5,894.17	0.00
16,500.0	90.00	358.45	10,822.3	7,203.9	5,901.4	-730.3	800,024.99	459,541.34	5,944.06	0.00
16,550.0	90.00	358.45	10,822.3	7,203.9	5,951.4	-731.6	800,023.63	459,591.32	5,993.95	0.00
16,600.0	90.00	358.45	10,822.3	7,203.9	6,001.4	-733.0	800,022.28	459,641.30	6,043.83	0.00
16,650.0	90.00	358.45	10,822.3	7,203.9	6,051.4	-734.3	800,020.93	459,691.28	6,093.72	0.00
16,700.0	90.00	358.45	10,822.3	7,203.9	6,101.4	-735.7	800,019.58	459,741.26	6,143.60	0.00
16,750.0	90.00	358.45	10,822.3	7,203.9	6,151.4	-737.0	800,018.22	459,791.25	6,193.49	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)	DLeg (°/100usft)
16,800.0	90.00	358.45	10,822.3	7,203.9	6,201.3	-738.4	800,016.87	459,841.23	6,243.37	0.00
16,850.0	90.00	358.45	10,822.3	7,203.9	6,251.3	-739.7	800,015.52	459,891.21	6,293.26	0.00
16,900.0	90.00	358.45	10,822.3	7,203.9	6,301.3	-741.1	800,014.17	459,941.19	6,343.14	0.00
16,950.0	90.00	358.45	10,822.3	7,203.9	6,351.3	-742.4	800,012.81	459,991.17	6,393.03	0.00
17,000.0	90.00	358.45	10,822.3	7,203.9	6,401.3	-743.8	800,011.46	460,041.15	6,442.92	0.00
17,050.0	90.00	358.45	10,822.3	7,203.9	6,451.2	-745.1	800,010.11	460,091.14	6,492.80	0.00
17,100.0	90.00	358.45	10,822.3	7,203.9	6,501.2	-746.5	800,008.76	460,141.12	6,542.69	0.00
17,150.0	90.00	358.45	10,822.3	7,203.9	6,551.2	-747.8	800,007.40	460,191.10	6,592.57	0.00
17,200.0	90.00	358.45	10,822.3	7,203.9	6,601.2	-749.2	800,006.05	460,241.08	6,642.46	0.00
17,250.0	90.00	358.45	10,822.3	7,203.9	6,651.2	-750.5	800,004.70	460,291.06	6,692.34	0.00
17,300.0	90.00	358.45	10,822.3	7,203.9	6,701.2	-751.9	800,003.35	460,341.04	6,742.23	0.00
17,350.0	90.00	358.45	10,822.3	7,203.9	6,751.1	-753.3	800,001.99	460,391.03	6,792.11	0.00
17,400.0	90.00	358.45	10,822.3	7,203.9	6,801.1	-754.6	800,000.64	460,441.01	6,842.00	0.00
17,450.0	90.00	358.45	10,822.3	7,203.9	6,851.1	-756.0	799,999.29	460,490.99	6,891.89	0.00
17,500.0	90.00	358.45	10,822.3	7,203.9	6,901.1	-757.3	799,997.94	460,540.97	6,941.77	0.00
17,550.0	90.00	358.45	10,822.3	7,203.9	6,951.1	-758.7	799,996.58	460,590.95	6,991.66	0.00
17,600.0	90.00	358.45	10,822.3	7,203.9	7,001.0	-760.0	799,995.23	460,640.93	7,041.54	0.00
17,650.0	90.00	358.45	10,822.3	7,203.9	7,051.0	-761.4	799,993.88	460,690.92	7,091.43	0.00
17,700.0	90.00	358.45	10,822.3	7,203.9	7,101.0	-762.7	799,992.53	460,740.90	7,141.31	0.00
17,750.0	90.00	358.45	10,822.3	7,203.9	7,151.0	-764.1	799,991.17	460,790.88	7,191.20	0.00
17,800.0	90.00	358.45	10,822.3	7,203.9	7,201.0	-765.4	799,989.82	460,840.86	7,241.08	0.00
17,850.0	90.00	358.45	10,822.3	7,203.9	7,251.0	-766.8	799,988.47	460,890.84	7,290.97	0.00
17,900.0	90.00	358.45	10,822.3	7,203.9	7,300.9	-768.1	799,987.12	460,940.82	7,340.86	0.00
17,950.0	90.00	358.45	10,822.3	7,203.9	7,350.9	-769.5	799,985.76	460,990.81	7,390.74	0.00
18,000.0	90.00	358.45	10,822.3	7,203.9	7,400.9	-770.8	799,984.41	461,040.79	7,440.63	0.00
18,050.0	90.00	358.45	10,822.3	7,203.9	7,450.9	-772.2	799,983.06	461,090.77	7,490.51	0.00
18,100.0	90.00	358.45	10,822.3	7,203.9	7,500.9	-773.5	799,981.71	461,140.75	7,540.40	0.00

Morcor Engineering

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
18,150.0	90.00	358.45	10,822.3	7,203.9	7,550.8	-774.9	799,980.35	461,190.73	7,590.28	0.00
18,200.0	90.00	358.45	10,822.3	7,203.9	7,600.8	-776.2	799,979.00	461,240.72	7,640.17	0.00
18,250.0	90.00	358.45	10,822.3	7,203.9	7,650.8	-777.6	799,977.65	461,290.70	7,690.05	0.00
18,300.0	90.00	358.45	10,822.3	7,203.9	7,700.8	-778.9	799,976.30	461,340.68	7,739.94	0.00
18,350.0	90.00	358.45	10,822.3	7,203.9	7,750.8	-780.3	799,974.94	461,390.66	7,789.83	0.00
18,400.0	90.00	358.45	10,822.3	7,203.9	7,800.8	-781.7	799,973.59	461,440.64	7,839.71	0.00
18,450.0	90.00	358.45	10,822.3	7,203.9	7,850.7	-783.0	799,972.24	461,490.62	7,889.60	0.00
18,500.0	90.00	358.45	10,822.3	7,203.9	7,900.7	-784.4	799,970.89	461,540.61	7,939.48	0.00
18,550.0	90.00	358.45	10,822.3	7,203.9	7,950.7	-785.7	799,969.53	461,590.59	7,989.37	0.00
18,600.0	90.00	358.45	10,822.3	7,203.9	8,000.7	-787.1	799,968.18	461,640.57	8,039.25	0.00
18,650.0	90.00	358.45	10,822.3	7,203.9	8,050.7	-788.4	799,966.83	461,690.55	8,089.14	0.00
18,700.0	90.00	358.45	10,822.3	7,203.9	8,100.6	-789.8	799,965.48	461,740.53	8,139.02	0.00
18,750.0	90.00	358.45	10,822.3	7,203.9	8,150.6	-791.1	799,964.12	461,790.51	8,188.91	0.00
18,800.0	90.00	358.45	10,822.3	7,203.9	8,200.6	-792.5	799,962.77	461,840.50	8,238.80	0.00
18,850.0	90.00	358.45	10,822.3	7,203.9	8,250.6	-793.8	799,961.42	461,890.48	8,288.68	0.00
18,900.0	90.00	358.45	10,822.3	7,203.9	8,300.6	-795.2	799,960.07	461,940.46	8,338.57	0.00
18,950.0	90.00	358.45	10,822.3	7,203.9	8,350.5	-796.5	799,958.72	461,990.44	8,388.45	0.00
18,996.0	90.00	358.45	10,822.3	7,203.9	8,396.5	-797.8	799,957.47	462,036.42	8,434.35	0.00

TD at 18996.0 - 5 1/2" Production Casing

Morcor Engineering

Morcor Standard Plan

DATE: 3/2/2019 6:47:05 PM

Company: Kaiser Francis
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Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,247.0	5,242.7	9 5/8" Intermediate Casing	9-5/8	12-1/4
18,996.0	10,822.3	5 1/2" Production Casing	5-1/2	8-3/4
120.0	120.0	20" Conductor	20	26
1,447.0	1,447.0	13 3/8" Surface Casing	13-3/8	17-1/2

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
9,102.4	9,077.0	Avalon		0.00	
5,226.2	5,222.0	Lamar Lime		0.00	
1,847.0	1,847.0	Salado		0.00	
5,427.3	5,422.0	Bell Canyon		0.00	
8,911.4	8,887.0	Bone Spring		0.00	
7,765.1	7,747.0	Brushy Canyon		0.00	
10,152.7	10,122.0	1st Bone Spring Sand		0.00	
2,022.0	2,022.0	Top Salt		0.00	
5,025.1	5,022.0	Base of Salt		0.00	
1,422.0	1,422.0	Rustler		0.00	
6,282.0	6,272.0	Cherry Canyon		0.00	
10,733.6	10,657.0	2nd Bone Spring Sand		0.00	

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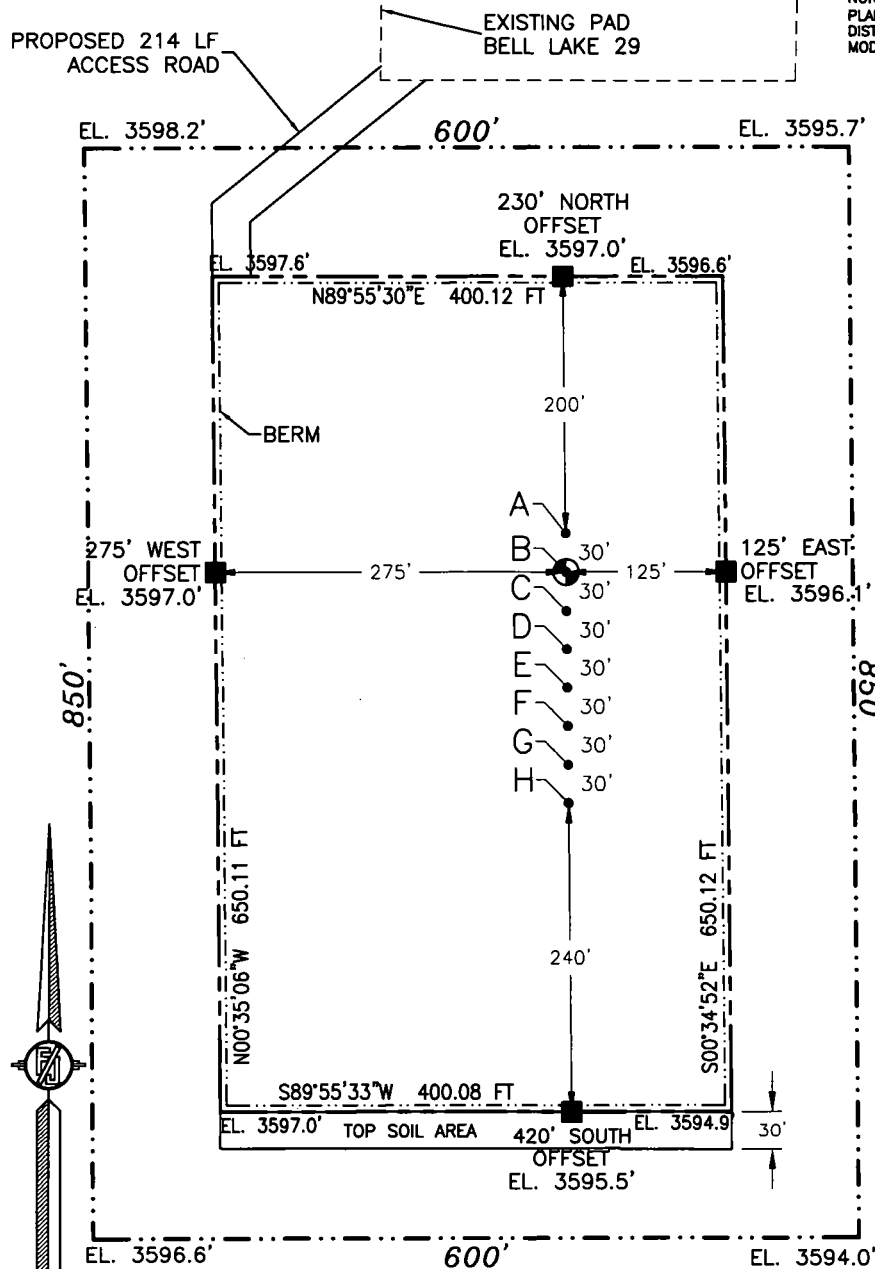
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,330.0	4,330.0	0.0	0.0	Start Build 3.00
4,530.0	4,529.6	0.2	-10.5	Start 5470.0 hold at 4530.0 MD
10,000.0	9,969.7	10.2	-582.1	Start Drop -3.00
10,200.0	10,169.3	10.3	-592.6	Start 80.0 hold at 10200.0 MD
10,280.0	10,249.3	10.3	-592.6	Start Build 10.00
11,180.0	10,822.3	-583.3	-592.6	Start 181.0 hold at 11180.0 MD
11,361.0	10,822.3	764.3	-592.6	Start Turn -1.55
11,461.0	10,822.3	864.3	-594.0	Start 7535.0 hold at 11461.0 MD
18,996.0	10,822.3	8,396.5	-797.8	TD at 18996.0

Checked By: _____ Approved By: _____ Date: _____

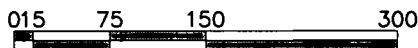
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD88.



E = 800755.23

- | | | | | | | |
|---|---|------|------|------|-------|------|
| A | - | BELL | LAKE | UNIT | SOUTH | 233H |
| B | - | BELL | LAKE | UNIT | SOUTH | 232H |
| C | - | BELL | LAKE | UNIT | SOUTH | 333H |
| D | - | BELL | LAKE | UNIT | SOUTH | 332H |
| E | - | BELL | LAKE | UNIT | SOUTH | 433H |
| F | - | BELL | LAKE | UNIT | SOUTH | 432H |
| G | - | BELL | LAKE | UNIT | SOUTH | 133H |
| H | - | BELL | LAKE | UNIT | SOUTH | 132H |



SCALE 1" = 150'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 AND CR 21
(DELAWARE BASIN ROAD) GO NORTH ON CR E21 APPROX. 3.0 MILES
TO CR J-21 (SHELL ROAD) TURN RIGHT ON LEASE ROAD AND GO
EAST APPROX. 0.9 OF A MILE, TURN RIGHT AND GO SOUTH APPROX.
0.5 OF A MILE TO "Y". KEEP LEFT AND GO SOUTHEAST APPROX. 575'
TO AN EXISTING PAD, THEN FROM THE SOUTHWEST PAD CORNER GO
SOUTHWEST--SOUTH 214' TO THE NORTHWEST PAD CORNER FOR THIS
LOCATION.

I, FILMON F. JARAMILLO A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I AM DIRECTED AND RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY WAS CONDUCTED TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT I HAVE COMPLIANT WITH THE MINIMUM STANDARDS FOR THIS TYPE OF SURVEY.

8/12/19

DATE _____

MADDOCK & ASSOCIATES, INC. 301 SOUTH CANAL
(575) 234-3341

**KAISER-FRANCIS OIL CO.
BELL LAKE UNIT SOUTH 232H
LOCATED 1832 FT. FROM THE SOUTH LINE
AND 1945 FT. FROM THE WEST LINE OF
SECTION 5, TOWNSHIP 24 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO**

AUGUST 12, 2019

SURVEY NO. 6763A

CARLSBAD, NEW MEXICO