

Form 3160-3  
(June 2015)

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC0061374A
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. BELL LAKE / NMNM 068292X
2. Name of Operator KAISER FRANCIS OIL COMPANY [12361]		8. Lease Name and Well No. BELL LAKE UNIT SOUTH [316706] 331H
3a. Address 6733 S. Yale Ave., Tulsa, OK 74121	3b. Phone No. (include area code) (918) 491-0000	9. API Well No. 30-025-48204
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESW / 1652 FSL / 1945 FWL / LAT 32.2438515 / LONG -103.4942484 At proposed prod. zone NWNW / 330 FNL / 350 FWL / LAT 32.26744 / LONG -103.4994545		10. Field and Pool, or Exploratory [98264] BELL LAKE/WOLFCAMP, SOUTH
14. Distance in miles and direction from nearest town or post office* 19 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 5/T24S/R34E/NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1652 feet		12. County or Parish LEA
16. No of acres in lease 440		13. State NM
17. Spacing Unit dedicated to this well 480.0		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet		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* 03/01/2020
		23. Estimated duration 40 days
24. Attachments		

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) STORMI DAVIS / Ph: (918) 491-0000	Date 12/03/2019
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 11/23/2020
Title Assistant Field Manager Lands & Minerals Office Carlsbad Field Office		

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.

**INCORRECT GCP filed**  
**GCP Rec 12/23/2020**

SL



*KZ*  
12/23/2020

(Continued on page 2)

\*(Instructions on page 2)

## INSTRUCTIONS

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

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

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

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

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

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

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

## NOTICES

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

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

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

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

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

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

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

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

### Additional Operator Remarks

#### Location of Well

0. SHL: NESW / 1652 FSL / 1945 FWL / TWSP: 24S / RANGE: 34E / SECTION: 5 / LAT: 32.2438515 / LONG: -103.4942484 ( TVD: 0 feet, MD: 0 feet )  
PPP: SWSW / 0 FNL / 350 FWL / TWSP: 23S / RANGE: 34E / SECTION: 32 / LAT: 32.2537617 / LONG: -103.4994301 ( TVD: 11652 feet, MD: 16000 feet )  
PPP: NWNW / 1320 FNL / 350 FWL / TWSP: 24S / RANGE: 34E / SECTION: 5 / LAT: 32.25024 / LONG: -103.49992 ( TVD: 11652 feet, MD: 14056 feet )  
PPP: SWNW / 2302 FNL / 350 FWL / TWSP: 24S / RANGE: 34E / SECTION: 5 / LAT: 32.2475085 / LONG: -103.4994183 ( TVD: 11652 feet, MD: 13724 feet )  
BHL: NWNW / 330 FNL / 350 FWL / TWSP: 23S / RANGE: 34E / SECTION: 32 / LAT: 32.26744 / LONG: -103.4994545 ( TVD: 11652 feet, MD: 20976 feet )

#### BLM Point of Contact

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

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**Review and Appeal Rights**

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

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

# Application Data Report

11/24/2020

APD ID: 10400050921

Submission Date: 12/03/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 331H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400050921

Tie to previous NOS? N

Submission Date: 12/03/2019

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: BELL LAKE

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 SOUTH

Well Number: 331H

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:** 331H

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

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

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**  
SOUTH BELL LAKE UNIT

**Number:** 13

**Well Class:** HORIZONTAL

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** EXPLORATORY (WILDCAT)

**Describe sub-type:**

**Distance to town:** 19 Miles

**Distance to nearest well:** 30 FT

**Distance to lease line:** 1652 FT

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

**Well plat:** BLUS\_331H\_C102\_20191111094942.pdf

Pay.gov\_20191203105444.pdf

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

**Duration:** 40 DAYS

**Section 3 - Well Location Table**

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 7249A

**Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	165 2	FSL	194 5	FW L	24S	34E	5	Aliquot NESW	32.24385 15	- 103.4942 484	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061374 A	359 6	0	0	Y
KOP Leg #1	165 2	FSL	194 5	FW L	24S	34E	5	Aliquot NESW	32.24385 15	- 103.4942 484	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061374 A	- 748 3	110 79	110 79	Y

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 331H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	230	FNL	350	FWL	24S	34E	5	Aliquot SWN W	32.2475085	-103.4994183	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0061374A	-8056	13724	11652	Y
PPP Leg #1-2	132	FNL	350	FWL	24S	34E	5	Aliquot NWN W	32.25024	-103.49992	LEA	NEW MEXICO	NEW MEXICO	F	NMNM0002335B	-8056	14056	11652	Y
PPP Leg #1-3	0	FNL	350	FWL	23S	34E	32	Aliquot SWS W	32.2537617	-103.4994301	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8056	16000	11652	Y
EXIT Leg #1	330	FNL	350	FWL	23S	34E	32	Aliquot NWN W	32.26744	-103.4994545	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8056	20976	11652	Y
BHL Leg #1	330	FNL	350	FWL	23S	34E	32	Aliquot NWN W	32.26744	-103.4994545	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8056	20976	11652	Y



Melanie Wilson <nmogrservices@gmail.com>

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

1 message

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

Tue, Dec 3, 2019 at 10:53 AM



An official email of the United States government



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

Application Name: BLM Oil and Gas Online Payment  
Pay.gov Tracking ID: 26LU4RIU  
Agency Tracking ID: 75898193161  
Transaction Type: Sale  
Transaction Date: 12/03/2019 12:53:03 PM EST  
Account Holder Name: George B Kaiser  
Transaction Amount: \$10,230.00  
Card Type: Visa  
Card Number: \*\*\*\*\*0061

Company: Kaiser-Francis Oil Company  
APD IDs: 10400050921  
Lease Numbers: NMLC0061374A  
Well Numbers: 331H

Note: You will need your Pay.gov Tracking ID to complete your APD transaction in AFMSS II. Please ensure you write this number down upon completion of payment.

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.



Pay.gov is a program of the U.S. Department of the Treasury, Bureau of the Fiscal Service



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

# Drilling Plan Data Report

11/24/2020

APD ID: 10400050921

Submission Date: 12/03/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 331H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
584287	---	3596	0	0	OTHER : Surface	NONE	N
584288	RUSTLER	2196	1400	1400	SANDSTONE	NONE	N
584289	SALADO	1796	1800	1800	SALT	NONE	N
584290	TOP SALT	1471	2125	2125	SALT	NONE	N
584291	BASE OF SALT	-1504	5100	5100	SALT	NONE	N
584292	LAMAR	-1679	5275	5275	SANDSTONE	NATURAL GAS, OIL	N
584293	BELL CANYON	-1754	5350	5350	SANDSTONE	NATURAL GAS, OIL	N
584294	CHERRY CANYON	-2629	6225	6225	SANDSTONE	NATURAL GAS, OIL	N
584295	BRUSHY CANYON	-4104	7700	7700	SANDSTONE	NATURAL GAS, OIL	N
584296	BONE SPRING	-5204	8800	8800	LIMESTONE	NATURAL GAS, OIL	N
584297	AVALON SAND	-5377	8973	8973	SANDSTONE	NATURAL GAS, OIL	N
584298	BONE SPRING 1ST	-6304	9900	9900	SANDSTONE	NATURAL GAS, OIL	N
584299	BONE SPRING 2ND	-6889	10485	10485	SANDSTONE	NATURAL GAS, OIL	N
584300	BONE SPRING LIME	-7364	10960	10960	LIMESTONE	NATURAL GAS, OIL	N
584301	BONE SPRING 3RD	-7674	11270	11270	SANDSTONE	NATURAL GAS, OIL	Y
584302	WOLFCAMP	-8139	11735	11735	SANDSTONE	NATURAL GAS, OIL	N

## Section 2 - Blowout Prevention

**Operator Name:** KAISER FRANCIS OIL COMPANY**Well Name:** BELL LAKE UNIT SOUTH**Well Number:** 331H**Pressure Rating (PSI):** 10M**Rating Depth:** 18000

**Equipment:** A 10M system will be installed according to Onshore Order #2 consisting of an Annular Preventer, BOP with two rams, a blind ram and safety valves and appropriate handles located on 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 stated. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. The Annular shall be functionally operated at least weekly. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

**Choke Diagram Attachment:**

BLUS\_331H\_\_Choke\_Manifold\_20200109102403.pdf

**BOP Diagram Attachment:**

Cactus\_Flex\_Hose\_16C\_Certification\_20191018093027.pdf

BLUS\_331H\_Multi\_Bowl\_Wellhead\_20191111100248.pdf

BLUS\_331H\_BOP\_20191111100418.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	14.75	10.75	NEW	API	N	0	1397	0	1397	3596	2199	1397	J-55	40.5	ST&C	2.4	4.8	DRY	7.4	DRY	11.1
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11376	0	11376		-7780	11376	HCP-110	29.7	LT&C	1.3	1.8	DRY	2.3	DRY	2.8
3	PRODUCTION	6.75	5.5	NEW	API	N	0	20976	0	11652		-8056	20976	P-110	20	OTHER - USS Eagle SFH	1.8	2	DRY	2.7	DRY	3.1

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 331H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

BLUS\_331H\_Casing\_Assumptions\_20191111100845.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

BLUS\_331H\_Casing\_Assumptions\_20191111100700.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

5.5\_x\_20\_P110\_HP\_USS\_EAGLE\_SFH\_Performance\_Sheet\_20190314162832.pdf

BLUS\_331H\_Casing\_Assumptions\_20191111100751.pdf

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**Section 4 - Cement**

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 331H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1397	669	1.74	13.5	1006	50	Halcem	Cemex Premium+ C

INTERMEDIATE	Lead		0	1137 6	825	2.77	11	2277	15	Class H	Extender
INTERMEDIATE	Tail		0	1137 6	450	1.23	15.6	537	15	Class H	Halad
PRODUCTION	Lead		1000 0	2097 6	862	1.22	14.5	960	15	Class H	5% Salt

### 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
1137 6	1165 2	OIL-BASED MUD	10	12							
1397	1137 6	OTHER : Brine	8.7	9							
0	1397	OTHER : Fresh Water	8.4	9							

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 331H

## 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:** 7270

**Anticipated Surface Pressure:** 4706

**Anticipated Bottom Hole Temperature(F):** 199

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

BLUS\_331H\_H2S\_Contingency\_Plan\_PAD\_13\_20191111101623.pdf

## Section 8 - Other Information

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

BLUS\_331H\_\_Directional\_Plan\_20191111101644.pdf

**Other proposed operations facets description:**

Gas Capture Plan attached

**Other proposed operations facets attachment:**

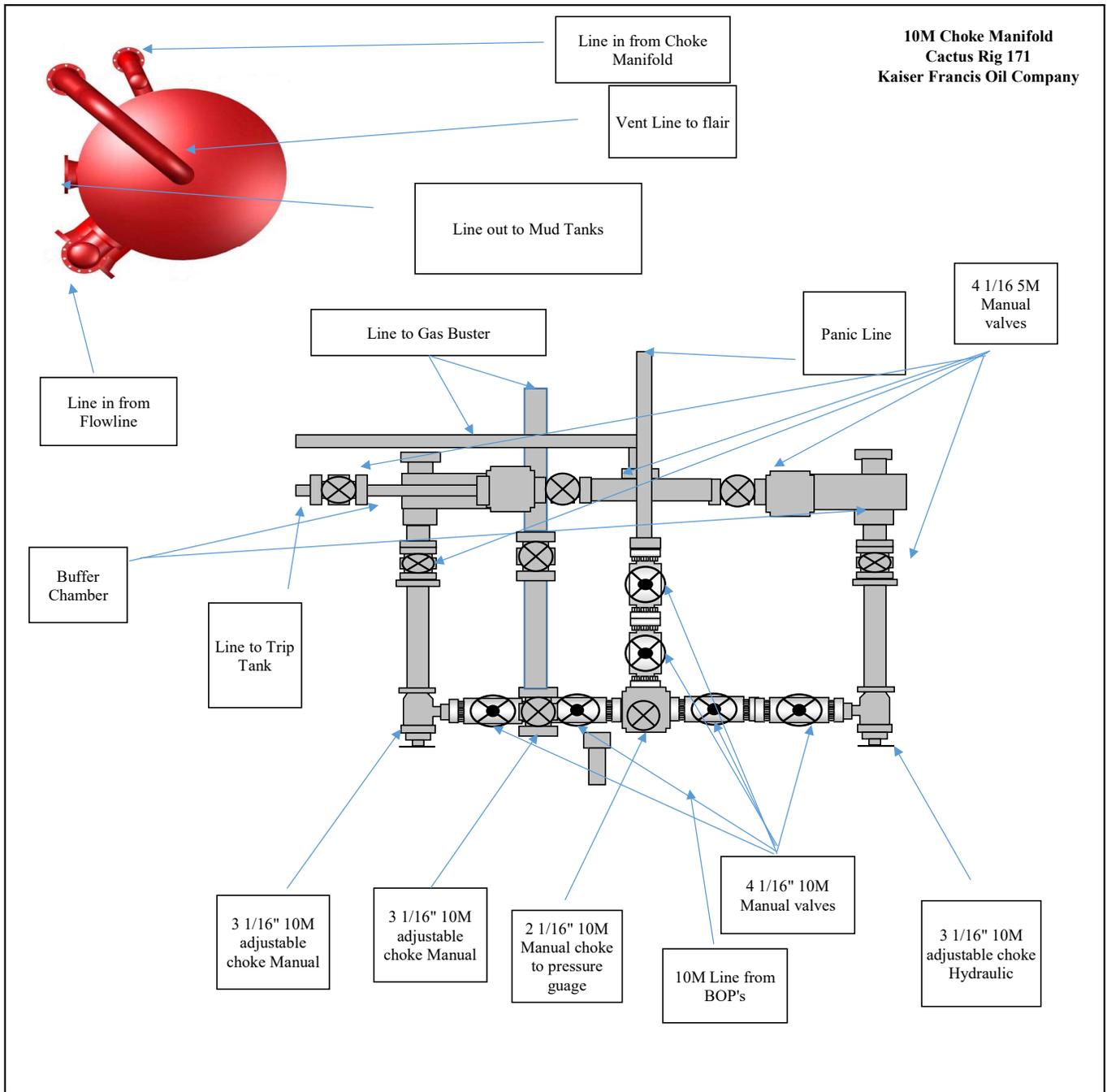
BLUS\_Pad\_13\_Gas\_Capture\_Plan\_20190314165007.pdf

**Other Variance attachment:**

Cactus\_Flex\_Hose\_16C\_Certification\_20191018093059.pdf

BLUS\_331H\_Well\_Control\_Plan\_20191111101705.pdf

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# Certificate of Registration

**APIQR® REGISTRATION NUMBER**

**3042**

*This certifies that the quality management system of*

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

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

**ISO 9001:2015**

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

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

**No Exclusions Identified as Applicable**

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

*Vice President of Global  
Industry Services*

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



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



2018-152 | 02.19  
Digital

Kaiser-Francis Oil Company  
BLUS 331H

**Casing Assumptions**

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)
Conductor	120	20"				New		120
Surface	1397	10-3/4"	40.5	J-55	STC	New	14-3/4"	1397
Intermediate	11376	7-5/8"	29.7	HCP110	LTC	New	9-7/8"	11376
Production	20976	5-1/2"	20	P110 HP	USS Eagle SFH	New	6-3/4"	11652

Mud Type	Mud Weight Hole Control	Viscosity	Fluid Loss
FW	8.4 - 9.0	32 - 34	NC
Brine	8.7 - 9.0	28-29	NC
OBM	10.0-12.0	55-70	NC

Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength
9	654	1580	3130	629000	420000
9	5324	6700	9460	940000	769000
12	7271	13150	14360	729000	629000

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)
2.4	4.8	11.1	7.4
1.3	1.8	2.8	2.3
1.8	2.0	3.1	2.7



## U. S. Steel Tubular Products

5 1/2 20.00 lb (0.361) P110 HP

USS-EAGLE SFH™

	PIPE	CONNECTION	
<b>MECHANICAL PROPERTIES</b>			
Minimum Yield Strength	125,000		psi
Maximum Yield Strength	140,000		psi
Minimum Tensile Strength	130,000		psi
<b>DIMENSIONS</b>			
Outside Diameter	5.500	5.830	in.
Wall Thickness	0.361		in.
Inside Diameter	4.778	4.693	in.
Drift - API	4.653	4.653	in.
Nominal Linear Weight, T&C	20.00		lbs/ft
Plain End Weight	19.83		lbs/ft
<b>SECTION AREA</b>			
Cross Sectional Area   Critical Area	5.828	5.027	sq. in.
Joint Efficiency		86.25	%
<b>PERFORMANCE</b>			
Minimum Collapse Pressure	13,150	13,150	psi
External Pressure Leak Resistance		10,000	psi
Minimum Internal Yield Pressure	14,360	14,360	psi
Minimum Pipe Body Yield Strength	729,000		lbs
Joint Strength		629,000	lbs
Compression Rating		629,000	lbs
Reference Length		21,146	ft
Maximum Uniaxial Bend Rating		89.9	deg/100 ft
<b>MAKE-UP DATA</b>			
Minimum Make-Up Torque		14,200	ft-lbs
Maximum Make-Up Torque		16,800	ft-lbs
Maximum Operating Torque		25,700	ft-lbs
Make-Up Loss		5.92	in.

## Notes:

- 1) Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- 2) Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
- 3) Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- 4) Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- 5) Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.
- 6) Connection external pressure resistance has been verified to 10,000 psi (Fit-For-Service testing protocol).

Legal Notice: All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability, and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.  
Manual USS Product Data Sheet 2017 rev26 (Sept)

Kaiser-Francis Oil Company  
BLUS 331H

**Casing Assumptions**

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)
Conductor	120	20"				New		120
Surface	1397	10-3/4"	40.5	J-55	STC	New	14-3/4"	1397
Intermediate	11376	7-5/8"	29.7	HCP110	LTC	New	9-7/8"	11376
Production	20976	5-1/2"	20	P110 HP	USS Eagle SFH	New	6-3/4"	11652

Mud Type	Mud Weight Hole Control	Viscosity	Fluid Loss
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OBM	10.0-12.0	55-70	NC

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BLUS 331H

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1.8	2.0	3.1	2.7

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

**BELL LAKE UNIT SOUTH Pad 13  
SECTION 5 -T24S-R34E  
LEA COUNTY, NM**

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

TABLE OF CONTENTS

Emergency Response Activation and General Responsibilities	3
Individual Responsibilities During An H <sub>2</sub> S Release	4
Procedure For Igniting An Uncontrollable Condition	5
Emergency Phone Numbers	6
Protection Of The General Public/Roe	7
Characteristics Of H <sub>2</sub> S And SO <sub>2</sub>	8
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## **EMERGENCY RESPONSE ACTIVATION AND GENERAL RESPONSIBILITIES**

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

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

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

### **General Responsibilities**

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

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

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

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

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

#### **All Personnel:**

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

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

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

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

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

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

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

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

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

**PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION:**

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

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

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

**INSTRUCTIONS FOR IGNITION:**

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

**CONTACTING AUTHORITIES**

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

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

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

EMERGENCY RESPONSE NUMBERS: Lea County, New Mexico

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

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

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

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

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

**Calculation for the 100 ppm ROE:**

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

(H<sub>2</sub>S concentrations in decimal form)  
 10,000 ppm +=1.+  
 1,000 ppm +=.1+

**Calculation for the 500 ppm ROE:**

$$X+[(0.4546)(\text{concentration})(Q)]^{(0.6258)}$$

100 ppm +=.01+  
 10 ppm +=.001+

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

ROE for 100 PPM      X=[(1.589)(.0150)(200)]<sup>(0.6258)</sup>  
    X=2.65'

ROE for 500 PPM      X=[(.4546)(.0150)(200)]<sup>(0.6258)</sup>  
    X=1.2'

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

**PUBLIC EVACUATION PLAN:**

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

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

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

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

**TRAINING:**

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

**PUBLIC RELATIONS**

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

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

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



## **Kaiser Francis**

**Bell Lake Unit South 331H  
Bell Lake Unit South 331H  
Bell Lake Unit South 331H  
Bell Lake Unit South 331H**

**Plan: 190830 Bell Lake Unit South 331H**

## **Morcor Standard Plan**

**30 August, 2019**

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	Bell Lake Unit South 331H		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Bell Lake Unit South 331H				
<b>Site Position:</b>		<b>Northing:</b>	453,460.15 usft	<b>Latitude:</b>	32° 14' 37.865 N
<b>From:</b>	Map	<b>Easting:</b>	800,757.07 usft	<b>Longitude:</b>	103° 29' 39.294 W
<b>Position Uncertainty:</b>	1.0 usft	<b>Slot Radius:</b>	17-1/2 "	<b>Grid Convergence:</b>	0.45 °

<b>Well</b>	Bell Lake Unit South 331H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	453,460.15 usft	<b>Latitude:</b>	32° 14' 37.865 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	800,757.07 usft	<b>Longitude:</b>	103° 29' 39.294 W
<b>Position Uncertainty</b>	1.0 usft		<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,596.0 usft

<b>Wellbore</b>	Bell Lake Unit South 331H				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/30/2019	6.53	60.01	47,814

<b>Design</b>	190830 Bell Lake Unit South 331H			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	348.93

<b>Survey Tool Program</b>	<b>Date</b>	8/30/2019		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	20,976.0	190830 Bell Lake Unit South 331H (Bell La	MWD	MWD - Standard

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
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<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
0.0	0.00	0.00	0.0	-3,618.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
100.0	0.00	0.00	100.0	-3,518.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
120.0	0.00	0.00	120.0	-3,498.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>20" Conductor</b>											
200.0	0.00	0.00	200.0	-3,418.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
300.0	0.00	0.00	300.0	-3,318.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
400.0	0.00	0.00	400.0	-3,218.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
500.0	0.00	0.00	500.0	-3,118.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
600.0	0.00	0.00	600.0	-3,018.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
700.0	0.00	0.00	700.0	-2,918.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
800.0	0.00	0.00	800.0	-2,818.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
900.0	0.00	0.00	900.0	-2,718.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	-2,618.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	-2,518.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	-2,418.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	-2,318.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,372.0	0.00	0.00	1,372.0	-2,246.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>Rustler</b>											
1,397.0	0.00	0.00	1,397.0	-2,221.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>13 3/8" Surface</b>											
1,400.0	0.00	0.00	1,400.0	-2,218.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	-2,118.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	-2,018.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	-1,918.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,747.0	0.00	0.00	1,747.0	-1,871.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>Salado</b>											
1,800.0	0.00	0.00	1,800.0	-1,818.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	-1,718.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
2,000.0	0.00	0.00	2,000.0	-1,618.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,072.0	0.00	0.00	2,072.0	-1,546.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>Top of Salt</b>											
2,100.0	0.00	0.00	2,100.0	-1,518.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	-1,418.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	-1,318.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	-1,218.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	-1,118.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	-1,018.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	-918.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	-818.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	-718.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	-618.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	-518.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	-418.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	-318.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	-218.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	-118.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	-18.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	82.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
4,500.0	0.00	0.00	4,500.0	882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
4,600.0	0.00	0.00	4,600.0	982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
4,700.0	0.00	0.00	4,700.0	1,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
4,800.0	0.00	0.00	4,800.0	1,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
4,900.0	0.00	0.00	4,900.0	1,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,000.0	0.00	0.00	5,000.0	1,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,072.0	0.00	0.00	5,072.0	1,454.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
<b>Base of Salt</b>										
5,100.0	0.00	0.00	5,100.0	1,482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,200.0	0.00	0.00	5,200.0	1,582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,247.0	0.00	0.00	5,247.0	1,629.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
<b>Lamar</b>										
5,297.0	0.00	0.00	5,297.0	1,679.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
<b>9 5/8" Intermediate</b>										
5,300.0	0.00	0.00	5,300.0	1,682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,322.0	0.00	0.00	5,322.0	1,704.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
<b>Bell Canyon</b>										
5,400.0	0.00	0.00	5,400.0	1,782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,500.0	0.00	0.00	5,500.0	1,882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,600.0	0.00	0.00	5,600.0	1,982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,700.0	0.00	0.00	5,700.0	2,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,800.0	0.00	0.00	5,800.0	2,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
5,900.0	0.00	0.00	5,900.0	2,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
6,000.0	0.00	0.00	6,000.0	2,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
6,100.0	0.00	0.00	6,100.0	2,482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
6,197.0	0.00	0.00	6,197.0	2,579.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00
<b>Cherry Canyon</b>										
6,200.0	0.00	0.00	6,200.0	2,582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
6,300.0	0.00	0.00	6,300.0	2,682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	2,782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	2,882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	2,982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	3,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
6,800.0	0.00	0.00	6,800.0	3,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
6,900.0	0.00	0.00	6,900.0	3,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,000.0	0.00	0.00	7,000.0	3,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,100.0	0.00	0.00	7,100.0	3,482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,200.0	0.00	0.00	7,200.0	3,582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,300.0	0.00	0.00	7,300.0	3,682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,400.0	0.00	0.00	7,400.0	3,782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,500.0	0.00	0.00	7,500.0	3,882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,600.0	0.00	0.00	7,600.0	3,982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,622.0	0.00	0.00	7,622.0	4,004.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>Brushy Canyon</b>											
7,700.0	0.00	0.00	7,700.0	4,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,800.0	0.00	0.00	7,800.0	4,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
7,900.0	0.00	0.00	7,900.0	4,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,000.0	0.00	0.00	8,000.0	4,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,100.0	0.00	0.00	8,100.0	4,482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,200.0	0.00	0.00	8,200.0	4,582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,300.0	0.00	0.00	8,300.0	4,682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,400.0	0.00	0.00	8,400.0	4,782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,500.0	0.00	0.00	8,500.0	4,882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,600.0	0.00	0.00	8,600.0	4,982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,700.0	0.00	0.00	8,700.0	5,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
8,797.0	0.00	0.00	8,797.0	5,179.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>Bone Spring</b>											
8,800.0	0.00	0.00	8,800.0	5,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
8,900.0	0.00	0.00	8,900.0	5,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,000.0	0.00	0.00	9,000.0	5,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,090.0	0.00	0.00	9,090.0	5,472.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>Avalon</b>											
9,100.0	0.00	0.00	9,100.0	5,482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,200.0	0.00	0.00	9,200.0	5,582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,300.0	0.00	0.00	9,300.0	5,682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,400.0	0.00	0.00	9,400.0	5,782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,500.0	0.00	0.00	9,500.0	5,882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,600.0	0.00	0.00	9,600.0	5,982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,700.0	0.00	0.00	9,700.0	6,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,800.0	0.00	0.00	9,800.0	6,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,900.0	0.00	0.00	9,900.0	6,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
9,952.0	0.00	0.00	9,952.0	6,334.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>1st Bone Spring Sand</b>											
10,000.0	0.00	0.00	10,000.0	6,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,100.0	0.00	0.00	10,100.0	6,482.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,200.0	0.00	0.00	10,200.0	6,582.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,300.0	0.00	0.00	10,300.0	6,682.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,400.0	0.00	0.00	10,400.0	6,782.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,500.0	0.00	0.00	10,500.0	6,882.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,502.0	0.00	0.00	10,502.0	6,884.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>2nd Bone Spring Sand</b>											
10,600.0	0.00	0.00	10,600.0	6,982.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
10,700.0	0.00	0.00	10,700.0	7,082.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,800.0	0.00	0.00	10,800.0	7,182.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,900.0	0.00	0.00	10,900.0	7,282.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
10,982.0	0.00	0.00	10,982.0	7,364.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
<b>3rd Bone Srping Lime</b>											
11,000.0	0.00	0.00	11,000.0	7,382.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
11,079.0	0.00	0.00	11,079.0	7,461.0	0.0	0.0	800,757.07	453,460.15	0.00	0.00	
11,100.0	2.10	279.56	11,100.0	7,482.0	0.1	-0.4	800,756.69	453,460.21	0.14	10.00	
11,200.0	12.10	279.56	11,199.1	7,581.1	2.1	-12.6	800,744.52	453,462.26	4.49	10.00	
11,300.0	22.10	279.56	11,294.6	7,676.6	7.0	-41.5	800,715.56	453,467.14	14.83	10.00	
11,319.0	24.00	279.56	11,312.0	7,694.0	8.2	-48.8	800,708.22	453,468.38	17.45	10.00	
<b>Start Build 10.00</b>											
11,400.0	32.10	279.56	11,383.5	7,765.5	14.6	-86.4	800,670.70	453,474.70	30.86	10.00	
11,485.2	40.62	279.56	11,452.0	7,834.0	22.9	-136.1	800,620.95	453,483.08	48.64	10.00	
<b>3rd Bone Spring Sand</b>											
11,500.0	42.10	279.56	11,463.1	7,845.1	24.6	-145.8	800,611.29	453,484.71	52.09	10.00	
11,600.0	52.10	279.56	11,531.1	7,913.1	36.7	-217.9	800,539.14	453,496.87	77.87	10.00	
11,700.0	62.10	279.56	11,585.4	7,967.4	50.6	-300.6	800,456.45	453,510.80	107.42	10.00	
11,800.0	72.10	279.56	11,624.2	8,006.2	65.9	-391.3	800,365.73	453,526.09	139.84	10.00	
11,900.0	82.10	279.56	11,646.5	8,028.5	82.1	-487.3	800,269.73	453,542.26	174.14	10.00	
11,979.0	90.00	279.56	11,652.0	8,034.0	95.2	-565.0	800,192.10	453,555.34	201.89	10.00	
12,000.0	90.00	280.53	11,652.0	8,034.0	98.9	-585.7	800,171.40	453,559.01	209.46	4.58	
12,100.0	90.00	285.10	11,652.0	8,034.0	121.0	-683.2	800,073.92	453,581.18	249.93	4.58	
12,200.0	90.00	289.68	11,652.0	8,034.0	150.9	-778.6	799,978.51	453,611.06	297.57	4.58	
12,219.0	90.00	290.55	11,652.0	8,034.0	157.4	-796.4	799,960.69	453,617.59	307.40	4.58	
<b>Start DLS 4.58 TFO 90.00</b>											
12,300.0	90.00	294.26	11,652.0	8,034.0	188.3	-871.3	799,885.80	453,648.46	352.08	4.58	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
12,400.0	90.00	298.83	11,652.0	8,034.0	233.0	-960.7	799,796.36	453,693.14	413.09	4.58	
12,500.0	90.00	303.41	11,652.0	8,034.0	284.7	-1,046.3	799,710.78	453,744.81	480.24	4.58	
12,600.0	90.00	307.99	11,652.0	8,034.0	343.0	-1,127.5	799,629.59	453,803.15	553.08	4.58	
12,700.0	90.00	312.56	11,652.0	8,034.0	407.6	-1,203.8	799,553.32	453,867.78	631.15	4.58	
12,800.0	90.00	317.14	11,652.0	8,034.0	478.1	-1,274.6	799,482.45	453,938.29	713.95	4.58	
12,900.0	90.00	321.72	11,652.0	8,034.0	554.1	-1,339.6	799,417.43	454,014.23	800.96	4.58	
13,000.0	90.00	326.30	11,652.0	8,034.0	635.0	-1,398.4	799,358.68	454,095.12	891.63	4.58	
13,100.0	90.00	330.87	11,652.0	8,034.0	720.3	-1,450.5	799,306.57	454,180.44	985.36	4.58	
13,200.0	90.00	335.45	11,652.0	8,034.0	809.5	-1,495.6	799,261.43	454,269.65	1,081.57	4.58	
13,300.0	90.00	340.03	11,652.0	8,034.0	902.0	-1,533.5	799,223.56	454,362.17	1,179.65	4.58	
13,400.0	90.00	344.60	11,652.0	8,034.0	997.3	-1,563.9	799,193.19	454,457.42	1,278.95	4.58	
13,500.0	90.00	349.18	11,652.0	8,034.0	1,094.6	-1,586.6	799,170.52	454,554.79	1,378.86	4.58	
13,600.0	90.00	353.76	11,652.0	8,034.0	1,193.5	-1,601.4	799,155.69	454,653.65	1,478.74	4.58	
13,700.0	90.00	358.34	11,652.0	8,034.0	1,293.2	-1,608.3	799,148.79	454,753.39	1,577.94	4.58	
13,724.7	90.00	359.47	11,652.0	8,034.0	1,317.9	-1,608.7	799,148.32	454,778.10	1,602.29	4.58	
13,800.0	90.00	359.47	11,652.0	8,034.0	1,393.2	-1,609.5	799,147.62	454,853.38	1,676.30	0.00	
13,900.0	90.00	359.47	11,652.0	8,034.0	1,493.2	-1,610.4	799,146.69	454,953.38	1,774.61	0.00	
13,964.7	90.00	359.47	11,652.0	8,034.0	1,557.9	-1,611.0	799,146.09	455,018.09	1,838.24	0.00	
<b>Start 7251.3 hold at 13964.7 MD</b>											
14,000.0	90.00	359.47	11,652.0	8,034.0	1,593.2	-1,611.3	799,145.76	455,053.37	1,872.93	0.00	
14,100.0	90.00	359.47	11,652.0	8,034.0	1,693.2	-1,612.2	799,144.83	455,153.37	1,971.24	0.00	
14,200.0	90.00	359.47	11,652.0	8,034.0	1,793.2	-1,613.2	799,143.90	455,253.36	2,069.56	0.00	
14,300.0	90.00	359.47	11,652.0	8,034.0	1,893.2	-1,614.1	799,142.96	455,353.36	2,167.87	0.00	
14,400.0	90.00	359.47	11,652.0	8,034.0	1,993.2	-1,615.0	799,142.03	455,453.35	2,266.19	0.00	
14,500.0	90.00	359.47	11,652.0	8,034.0	2,093.2	-1,616.0	799,141.10	455,553.35	2,364.50	0.00	
14,600.0	90.00	359.47	11,652.0	8,034.0	2,193.2	-1,616.9	799,140.17	455,653.35	2,462.81	0.00	
14,700.0	90.00	359.47	11,652.0	8,034.0	2,293.2	-1,617.8	799,139.24	455,753.34	2,561.13	0.00	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
14,800.0	90.00	359.47	11,652.0	8,034.0	2,393.2	-1,618.8	799,138.31	455,853.34	2,659.44	0.00
14,900.0	90.00	359.47	11,652.0	8,034.0	2,493.2	-1,619.7	799,137.38	455,953.33	2,757.76	0.00
15,000.0	90.00	359.47	11,652.0	8,034.0	2,593.2	-1,620.6	799,136.45	456,053.33	2,856.07	0.00
15,100.0	90.00	359.47	11,652.0	8,034.0	2,693.2	-1,621.6	799,135.52	456,153.32	2,954.39	0.00
15,200.0	90.00	359.47	11,652.0	8,034.0	2,793.2	-1,622.5	799,134.59	456,253.32	3,052.70	0.00
15,300.0	90.00	359.47	11,652.0	8,034.0	2,893.2	-1,623.4	799,133.65	456,353.31	3,151.01	0.00
15,400.0	90.00	359.47	11,652.0	8,034.0	2,993.2	-1,624.3	799,132.72	456,453.31	3,249.33	0.00
15,500.0	90.00	359.47	11,652.0	8,034.0	3,093.2	-1,625.3	799,131.79	456,553.31	3,347.64	0.00
15,600.0	90.00	359.47	11,652.0	8,034.0	3,193.2	-1,626.2	799,130.86	456,653.30	3,445.96	0.00
15,700.0	90.00	359.47	11,652.0	8,034.0	3,293.1	-1,627.1	799,129.93	456,753.30	3,544.27	0.00
15,800.0	90.00	359.47	11,652.0	8,034.0	3,393.1	-1,628.1	799,129.00	456,853.29	3,642.59	0.00
15,900.0	90.00	359.47	11,652.0	8,034.0	3,493.1	-1,629.0	799,128.07	456,953.29	3,740.90	0.00
16,000.0	90.00	359.47	11,652.0	8,034.0	3,593.1	-1,629.9	799,127.14	457,053.28	3,839.21	0.00
16,100.0	90.00	359.47	11,652.0	8,034.0	3,693.1	-1,630.9	799,126.21	457,153.28	3,937.53	0.00
16,200.0	90.00	359.47	11,652.0	8,034.0	3,793.1	-1,631.8	799,125.27	457,253.28	4,035.84	0.00
16,300.0	90.00	359.47	11,652.0	8,034.0	3,893.1	-1,632.7	799,124.34	457,353.27	4,134.16	0.00
16,400.0	90.00	359.47	11,652.0	8,034.0	3,993.1	-1,633.7	799,123.41	457,453.27	4,232.47	0.00
16,500.0	90.00	359.47	11,652.0	8,034.0	4,093.1	-1,634.6	799,122.48	457,553.26	4,330.79	0.00
16,600.0	90.00	359.47	11,652.0	8,034.0	4,193.1	-1,635.5	799,121.55	457,653.26	4,429.10	0.00
16,700.0	90.00	359.47	11,652.0	8,034.0	4,293.1	-1,636.5	799,120.62	457,753.25	4,527.41	0.00
16,800.0	90.00	359.47	11,652.0	8,034.0	4,393.1	-1,637.4	799,119.69	457,853.25	4,625.73	0.00
16,900.0	90.00	359.47	11,652.0	8,034.0	4,493.1	-1,638.3	799,118.76	457,953.25	4,724.04	0.00
17,000.0	90.00	359.47	11,652.0	8,034.0	4,593.1	-1,639.2	799,117.83	458,053.24	4,822.36	0.00
17,100.0	90.00	359.47	11,652.0	8,034.0	4,693.1	-1,640.2	799,116.90	458,153.24	4,920.67	0.00
17,200.0	90.00	359.47	11,652.0	8,034.0	4,793.1	-1,641.1	799,115.96	458,253.23	5,018.99	0.00
17,300.0	90.00	359.47	11,652.0	8,034.0	4,893.1	-1,642.0	799,115.03	458,353.23	5,117.30	0.00
17,400.0	90.00	359.47	11,652.0	8,034.0	4,993.1	-1,643.0	799,114.10	458,453.22	5,215.62	0.00

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
17,500.0	90.00	359.47	11,652.0	8,034.0	5,093.1	-1,643.9	799,113.17	458,553.22	5,313.93	0.00	
17,600.0	90.00	359.47	11,652.0	8,034.0	5,193.1	-1,644.8	799,112.24	458,653.22	5,412.24	0.00	
17,700.0	90.00	359.47	11,652.0	8,034.0	5,293.1	-1,645.8	799,111.31	458,753.21	5,510.56	0.00	
17,800.0	90.00	359.47	11,652.0	8,034.0	5,393.1	-1,646.7	799,110.38	458,853.21	5,608.87	0.00	
17,900.0	90.00	359.47	11,652.0	8,034.0	5,493.1	-1,647.6	799,109.45	458,953.20	5,707.19	0.00	
18,000.0	90.00	359.47	11,652.0	8,034.0	5,593.0	-1,648.6	799,108.52	459,053.20	5,805.50	0.00	
18,100.0	90.00	359.47	11,652.0	8,034.0	5,693.0	-1,649.5	799,107.59	459,153.19	5,903.82	0.00	
18,200.0	90.00	359.47	11,652.0	8,034.0	5,793.0	-1,650.4	799,106.65	459,253.19	6,002.13	0.00	
18,300.0	90.00	359.47	11,652.0	8,034.0	5,893.0	-1,651.3	799,105.72	459,353.18	6,100.44	0.00	
18,400.0	90.00	359.47	11,652.0	8,034.0	5,993.0	-1,652.3	799,104.79	459,453.18	6,198.76	0.00	
18,500.0	90.00	359.47	11,652.0	8,034.0	6,093.0	-1,653.2	799,103.86	459,553.18	6,297.07	0.00	
18,600.0	90.00	359.47	11,652.0	8,034.0	6,193.0	-1,654.1	799,102.93	459,653.17	6,395.39	0.00	
18,700.0	90.00	359.47	11,652.0	8,034.0	6,293.0	-1,655.1	799,102.00	459,753.17	6,493.70	0.00	
18,800.0	90.00	359.47	11,652.0	8,034.0	6,393.0	-1,656.0	799,101.07	459,853.16	6,592.02	0.00	
18,900.0	90.00	359.47	11,652.0	8,034.0	6,493.0	-1,656.9	799,100.14	459,953.16	6,690.33	0.00	
19,000.0	90.00	359.47	11,652.0	8,034.0	6,593.0	-1,657.9	799,099.21	460,053.15	6,788.64	0.00	
19,100.0	90.00	359.47	11,652.0	8,034.0	6,693.0	-1,658.8	799,098.28	460,153.15	6,886.96	0.00	
19,200.0	90.00	359.47	11,652.0	8,034.0	6,793.0	-1,659.7	799,097.34	460,253.15	6,985.27	0.00	
19,300.0	90.00	359.47	11,652.0	8,034.0	6,893.0	-1,660.7	799,096.41	460,353.14	7,083.59	0.00	
19,400.0	90.00	359.47	11,652.0	8,034.0	6,993.0	-1,661.6	799,095.48	460,453.14	7,181.90	0.00	
19,500.0	90.00	359.47	11,652.0	8,034.0	7,093.0	-1,662.5	799,094.55	460,553.13	7,280.22	0.00	
19,600.0	90.00	359.47	11,652.0	8,034.0	7,193.0	-1,663.4	799,093.62	460,653.13	7,378.53	0.00	
19,700.0	90.00	359.47	11,652.0	8,034.0	7,293.0	-1,664.4	799,092.69	460,753.12	7,476.84	0.00	
19,800.0	90.00	359.47	11,652.0	8,034.0	7,393.0	-1,665.3	799,091.76	460,853.12	7,575.16	0.00	
19,900.0	90.00	359.47	11,652.0	8,034.0	7,493.0	-1,666.2	799,090.83	460,953.12	7,673.47	0.00	
20,000.0	90.00	359.47	11,652.0	8,034.0	7,593.0	-1,667.2	799,089.90	461,053.11	7,771.79	0.00	
20,100.0	90.00	359.47	11,652.0	8,034.0	7,693.0	-1,668.1	799,088.97	461,153.11	7,870.10	0.00	

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
20,200.0	90.00	359.47	11,652.0	8,034.0	7,793.0	-1,669.0	799,088.03	461,253.10	7,968.42	0.00	
20,300.0	90.00	359.47	11,652.0	8,034.0	7,892.9	-1,670.0	799,087.10	461,353.10	8,066.73	0.00	
20,400.0	90.00	359.47	11,652.0	8,034.0	7,992.9	-1,670.9	799,086.17	461,453.09	8,165.04	0.00	
20,500.0	90.00	359.47	11,652.0	8,034.0	8,092.9	-1,671.8	799,085.24	461,553.09	8,263.36	0.00	
20,600.0	90.00	359.47	11,652.0	8,034.0	8,192.9	-1,672.8	799,084.31	461,653.09	8,361.67	0.00	
20,700.0	90.00	359.47	11,652.0	8,034.0	8,292.9	-1,673.7	799,083.38	461,753.08	8,459.99	0.00	
20,800.0	90.00	359.47	11,652.0	8,034.0	8,392.9	-1,674.6	799,082.45	461,853.08	8,558.30	0.00	
20,900.0	90.00	359.47	11,652.0	8,034.0	8,492.9	-1,675.6	799,081.52	461,953.07	8,656.62	0.00	
20,976.0	90.00	359.47	11,652.0	8,034.0	8,568.9	-1,676.3	799,080.81	462,029.07	8,731.34	0.00	
5 1/2" Production											

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
120.0	120.0	20" Conductor	20	26		
20,976.0	11,652.0	5 1/2" Production	5-1/2	8-3/4		
5,297.0	5,297.0	9 5/8" Intermediate	9-5/8	12-1/4		
1,397.0	1,397.0	13 3/8" Surface	13-3/8	17-1/2		

**Morcor Engineering**  
Morcor Standard Plan



<b>Company:</b>	Kaiser Francis	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 331H
<b>Project:</b>	Bell Lake Unit South 331H	<b>TVD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Site:</b>	Bell Lake Unit South 331H	<b>MD Reference:</b>	WELL @ 3618.0usft (Original Well Elev)
<b>Well:</b>	Bell Lake Unit South 331H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Bell Lake Unit South 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	190830 Bell Lake Unit South 331H	<b>Database:</b>	EDM 5000.1 Single User Db

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
5,247.0	5,247.0	Lamar		0.00		
10,982.0	10,982.0	3rd Bone Spring Lime		0.00		
5,072.0	5,072.0	Base of Salt		0.00		
5,322.0	5,322.0	Bell Canyon		0.00		
9,952.0	9,952.0	1st Bone Spring Sand		0.00		
9,090.0	9,090.0	Avalon		0.00		
8,797.0	8,797.0	Bone Spring		0.00		
1,372.0	1,372.0	Rustler		0.00		
2,072.0	2,072.0	Top of Salt		0.00		
7,622.0	7,622.0	Brushy Canyon		0.00		
6,197.0	6,197.0	Cherry Canyon		0.00		
1,747.0	1,747.0	Salado		0.00		
10,502.0	10,502.0	2nd Bone Spring Sand		0.00		
11,485.2	11,452.0	3rd Bone Spring Sand		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
11,319.0	11,319.0	0.0	0.0	Start Build 10.00	
12,219.0	11,892.0	95.2	-565.0	Start DLS 4.58 TFO 90.00	
13,964.7	11,892.0	1,317.9	-1,608.7	Start 7251.3 hold at 13964.7 MD	
21,216.0	11,892.0	8,568.9	-1,676.3	TD at 21216.0	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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

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

Submit Original  
to Appropriate  
District Office

## GAS CAPTURE PLAN

Date: 01/26/2018

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

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

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

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

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Bell Lake Unit South 232H		5-24S-34E		2000	0	
Bell Lake Unit South 233H		5-24S-34E		2000	0	
Bell Lake Unit South 332H		5-24S-34E		2000	0	
Bell Lake Unit South 333H		5-24S-34E		2000	0	
Bell Lake Unit South 432H		5-24S-34E		2000	0	
Bell Lake Unit South 433H		5-24S-34E		2000	0	

### Gathering System and Pipeline Notification

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

### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Targa system at that time. Based on current information, it is Kaiser-Francis Oil Company's belief the system can take this gas upon completion of the well(s).

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

### Alternatives to Reduce Flaring

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

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**District I**  
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 Phone:(575) 393-6161 Fax:(575) 393-0720  
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**District III**  
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 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 13121

**CONDITIONS OF APPROVAL**

Operator:	KAISER-FRANCIS OIL CO	P.O. Box 21468	Tulsa, OK74121	OGRID:	12361	Action Number:	13121	Action Type:	FORM 3160-3
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OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until freshwater zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.