

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. NMLC0063993
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] 403H
3a. Address 6733 S. Yale Ave., Tulsa, OK 74121	3b. Phone No. (include area code) (918) 491-0000	9. API Well No. 30-025-48205
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SENW / 2385 FNL / 2200 FWL / LAT 32.247298 / LONG -103.527498 At proposed prod. zone SESW / 330 FSL / 2110 FWL / LAT 32.225749 / LONG -103.527784		10. Field and Pool, or Exploratory [98264] BELL LAKE/WOLFCAMP, SOUTH
14. Distance in miles and direction from nearest town or post office* 22 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 1/T24S/R33E/NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 feet		12. County or Parish LEA
16. No of acres in lease		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. 20 feet		20. BLM/BIA Bond No. in file FED: WYB000055
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3630 feet		22. Approximate date work will start* 10/01/2020
		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) MELANIE WILSON / Ph: (918) 491-0000	Date 07/05/2020
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 12/04/2020
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.

GCP Rec 12/08/2020

SL



*KZ*  
12/20/2020

(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.







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

# Application Data Report

12/04/2020

APD ID: 10400058650

Submission Date: 07/05/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 403H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400058650

Tie to previous NOS? N

Submission Date: 07/05/2020

BLM Office: CARLSBAD

User: Melanie Wilson

Title: Regulatory Analyst

Federal/Indian APD: FED

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

Lease number: NMLC0063993

Lease Acres:

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? YES

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: 403H

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:** 403H

**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:** 1

**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:** 22 Miles

**Distance to nearest well:** 20 FT

**Distance to lease line:** 330 FT

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

**Well plat:** BLUS\_403H\_Pymt\_20200701110028.pdf

BLUS\_403H\_C102\_20200701110040.pdf

**Well work start Date:** 10/01/2020

**Duration:** 40 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 1051

**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	2385	FNL	2200	FWL	24S	33E	1	Aliquot SENW 8	32.247298	-103.527498	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	3630	0	0	N
KOP Leg #1	2098	FNL	2132	FWL	24S	33E	1	Aliquot SENW 6	32.247966	-103.527243	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	-7882	11522	11512	N

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 403H

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	260	FSL	213	FWL	24S	33E	1	Aliquot NESE	32.246515	-103.527727	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8455	12416	12085	Y
PPP Leg #1-2	0	FNL	211	FWL	24S	33E	12	Aliquot NENW	32.239375	-103.527727	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063798	-8455	15016	12085	Y
PPP Leg #1-3	264	FSL	211	FWL	24S	33E	12	Aliquot NESW	32.232098	-103.527727	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063798	-8455	17656	12085	Y
EXIT Leg #1	330	FSL	211	FWL	24S	33E	12	Aliquot SESW	32.225749	-103.527784	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063798	-8455	20201	12085	Y
BHL Leg #1	330	FSL	211	FWL	24S	33E	12	Aliquot SESW	32.225749	-103.527784	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063798	-8455	20201	12085	Y

**mjp1692@gmail.com**

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**From:** notification@pay.gov  
**Sent:** Wednesday, July 1, 2020 10:59 AM  
**To:** mjp1692@gmail.com  
**Subject:** Pay.gov Payment Confirmation: BLM Oil and Gas Online Payment



An official email of the United States government



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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: 26PBGUUA  
Agency Tracking ID: 76012898779  
Transaction Type: Sale  
Transaction Date: 07/01/2020 12:58:55 PM EDT  
Account Holder Name: GEORGE B KAISER  
Transaction Amount: \$10,230.00  
Card Type: Visa  
Card Number: \*\*\*\*\*0061

Company: Kaiser-Francis Oil Company  
APD IDs: 10400058650  
Lease Numbers: NMLC0063993  
Well Numbers: 403H

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

12/04/2020

APD ID: 10400058650

Submission Date: 07/05/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 403H

[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
776942	---	3630	0	0	OTHER : Surface	NONE	N
776943	RUSTLER	2230	1400	1400	SANDSTONE	NONE	N
776944	SALADO	1830	1800	1800	SALT	NONE	N
776945	TOP SALT	1480	2150	2150	SALT	NONE	N
776946	BASE OF SALT	-1420	5050	5050	SALT	NONE	N
776947	LAMAR	-1670	5300	5300	SANDSTONE	NATURAL GAS, OIL	N
776948	BELL CANYON	-1820	5450	5450	SANDSTONE	NATURAL GAS, OIL	N
776949	CHERRY CANYON	-2670	6300	6300	SANDSTONE	NATURAL GAS, OIL	N
776950	BRUSHY CANYON	-4100	7730	7730	SANDSTONE	NATURAL GAS, OIL	N
776951	BONE SPRING	-5240	8870	8870	LIMESTONE	NATURAL GAS, OIL	N
776952	AVALON SAND	-5400	9030	9030	SANDSTONE	NATURAL GAS, OIL	N
776953	BONE SPRING 1ST	-6370	10000	10000	SANDSTONE	NATURAL GAS, OIL	N
776960	BONE SPRING 2ND	-6960	10590	10590	SANDSTONE	NATURAL GAS, OIL	N
776967	BONE SPRING LIME	-7420	11050	11050	LIMESTONE	NATURAL GAS, OIL	N
777031	BONE SPRING 3RD	-7930	11560	11560	SANDSTONE	NATURAL GAS, OIL	N
777032	WOLFCAMP	-8255	11885	11885	SANDSTONE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

**Operator Name:** KAISER FRANCIS OIL COMPANY**Well Name:** BELL LAKE UNIT SOUTH**Well Number:** 403H**Pressure Rating (PSI):** 5M**Rating Depth:** 13000

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

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

**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\_403H\_Choke\_Manifold\_20200701104440.pdf

**BOP Diagram Attachment:**

Cactus\_Flex\_Hose\_16C\_Certification\_20200206080210.pdf

BLUS\_403H\_Wellhead\_20200701104454.pdf

BLUS\_403H\_BOP\_20200701104454.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	1425	0	1425	3630	2205	1425	J-55	54.5	BUTT	2.4	4.7	DRY	5.4	DRY	8.1
2	INTERMEDIATE	12.25	10.75	NEW	API	N	0	5200	0	5200		-1570	5200	L-80	45.5	BUTT	1.2	2.1	DRY	4.5	DRY	4.4
3	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11104	0	11100	3630	-7470	11104	HCP-110	29.7	BUTT	1.1	1.6	DRY	2.3	DRY	2.9
4	PRODUCTION	6.75	5.5	NEW	API	N	0	20201	0	12085		-8455	20201	P-110	20	OTHER - USS Eagle SFH	1.7	1.9	DRY	2.6	DRY	3

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 403H

**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\_403H\_Casing\_Assumptions\_20200705070904.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\_403H\_Casing\_Assumptions\_20200705070626.pdf

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**Casing ID:** 3            **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

BLUS\_403H\_Casing\_Assumptions\_20200705071146.pdf

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Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT SOUTH

Well Number: 403H

## Casing Attachments

Casing ID: 4 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUS\_403H\_Prod\_Csg\_Specs\_20200705070838.pdf

## Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1425	258	1.7	13.5	451	50	HalCem	Poly Flake

INTERMEDIATE	Lead		0	5201	377	2.5	11.9	940	25	EconoCem	N/A
INTERMEDIATE	Tail		0	5201	212	1.3	14.8	283	25	HalCem	N/A
INTERMEDIATE	Lead		0	1110 4	457	3.5	10.5	1610	25	NeoCem	N/A
INTERMEDIATE	Tail		0	1110 4	1146	1.2	15.6	1370	25	HalCem	N/A
PRODUCTION	Lead		9000	2020 1	918	1.2	14.5	1123	20	Versacem	Halad

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 403H

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all time.

**Describe the mud monitoring system utilized:** PVT/Pason/Visual Monitoring

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1110 0	1208 5	OIL-BASED MUD	10	12							
5200	1110 0	WATER-BASED MUD	8.8	9.2							
1425	5200	OTHER : Brine	8.8	9.2							
0	1425	OTHER : Fresh Water	8.4	9							

### Section 6 - Test, Logging, Coring

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

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

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

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

**Coring operation description for the well:**

None planned

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT SOUTH

**Well Number:** 403H

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 7541

**Anticipated Surface Pressure:** 4882

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

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

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

**Hydrogen sulfide drilling operations plan:**

BLUS\_Pad\_1\_H2S\_Plan\_20200630143559.pdf

### Section 8 - Other Information

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

BLUS\_403H\_Directional\_Plan\_20200705072354.pdf

**Other proposed operations facets description:**

Gas Capture Plan attached

**Other proposed operations facets attachment:**

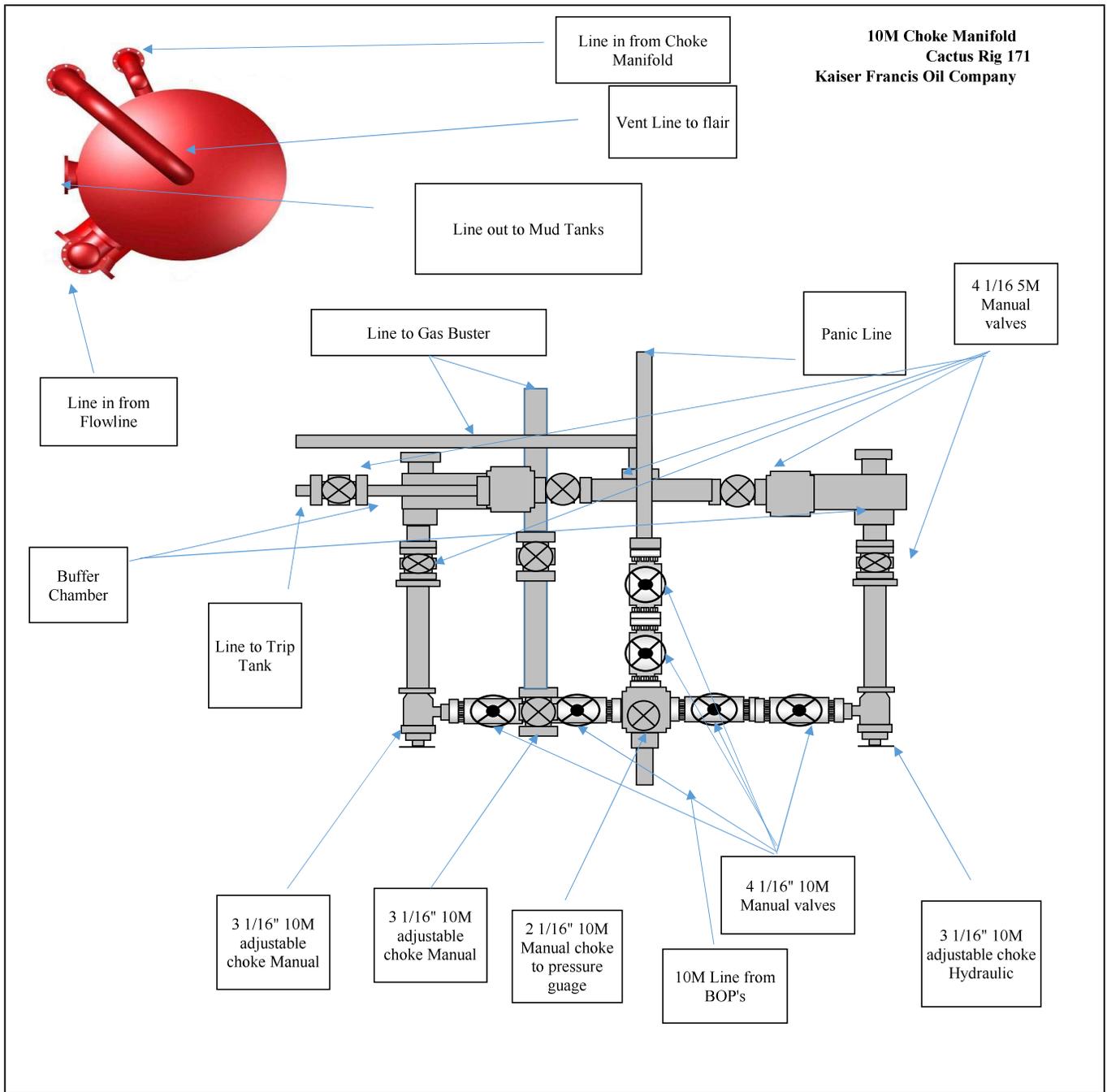
BLUS\_403H\_GCP\_20200701104635.pdf

**Other Variance attachment:**

Cactus\_Flex\_Hose\_16C\_Certification\_20200206081511.pdf

BLUS\_403H\_Wellhead\_20200701104645.pdf

BLUS\_403H\_4\_string\_Variance\_Request\_20200705072454.pdf



Kaiser-Francis Oil Company  
 Bell Lake Unit South 403H  
 Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Depth	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor (Min 1.8)	Joint Tensile Safety Factor (Min 1.8)
Conductor	120	20"				New		120															
Surface	1425	13-3/8"	54.5	J-55	BTC	New	17.5	1425	FW	8.4 - 9.0	910.0	32 - 34	NC	9	667	1580	3130	629000	420000	2.4	4.7	8.1	5.4
Intermediate	5201	10 3/4"	45.5	L-80 HC	BTC	New	12.25	5200	Brine	8.7 - 9.0	5140.0	34.0	NC	9	2434	2940	5210	1040000	1063000	1.2	2.1	4.4	4.5
Intermediate	11104	7-5/8"	29.7	HCP110	BTC	New	9.875	11100	WBM	8.8-9.2	11700.0	34.0	NC	9.2	6091	6700	9460	940000	769000	1.1	1.6	2.9	2.3
Production	20201	5-1/2"	20	P110 HP	USS Eagle SFH	New	6.75	12085	OBM	10.0-12.0	19882'	45-52	<10	12	7541	13150	14360	729000	629000	1.7	1.9	3.0	2.6

Kaiser-Francis Oil Company  
 Bell Lake Unit South 403H  
 Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Depth	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor (Min 1.8)	Joint Tensile Safety Factor (Min 1.8)
Conductor	120	20"				New		120															
Surface	1425	13-3/8"	54.5	J-55	BTC	New	17.5	1425	FW	8.4 - 9.0	910.0	32 - 34	NC	9	667	1580	3130	629000	420000	2.4	4.7	8.1	5.4
Intermediate	5201	10 3/4"	45.5	L-80 HC	BTC	New	12.25	5200	Brine	8.7 - 9.0	5140.0	34.0	NC	9	2434	2940	5210	1040000	1063000	1.2	2.1	4.4	4.5
Intermediate	11104	7-5/8"	29.7	HCP110	BTC	New	9.875	11100	WBM	8.8-9.2	11700.0	34.0	NC	9.2	6091	6700	9460	940000	769000	1.1	1.6	2.9	2.3
Production	20201	5-1/2"	20	P110 HP	USS Eagle SFH	New	6.75	12085	OBM	10.0-12.0	19882'	45-52	<10	12	7541	13150	14360	729000	629000	1.7	1.9	3.0	2.6

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

**BELL LAKE UNIT SOUTH #203H  
SECTION 1 -T24S-R33E  
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.

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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
Matt Warner	918/491-4379	720/556-2313

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:**

$$X = [(1.589)(\text{concentration})(Q)] (.6258)$$

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

$$10,000 \text{ ppm } += 1.+$$

$$1,000 \text{ ppm } += .1+$$

$$100 \text{ ppm } += .01+$$

$$10 \text{ ppm } += .001+$$

**Calculation for the 500 ppm ROE:**

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

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

ROE for 100 PPM       $X = [(1.589)(.0150)(200)] (.6258)$

$$X = 2.65'$$

ROE for 500 PPM       $X = [(.4546)(.0150)(200)] (.06258)$

$$X = 1.2'$$

(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.

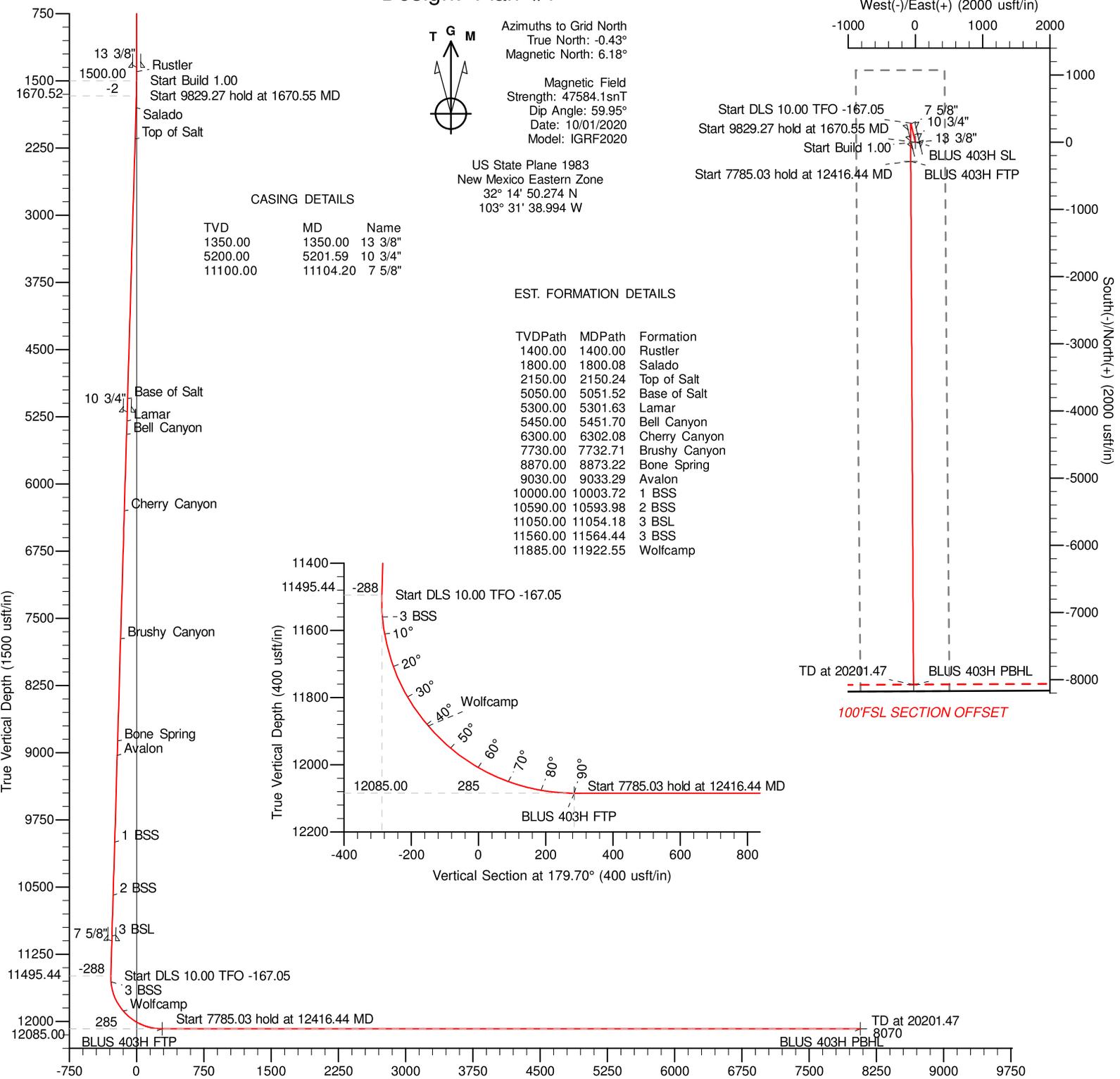
**PUBLIC RELATIONS**

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.

Project: Permian NM E'83  
 County: Lea  
 Site: BLUS Pad 1  
 Well: Bell Lake Unit South 403H  
 Wellbore: #403H OH  
 Design: Plan #1



Vertical Section at 179.70° (1500 usft/in) DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BLUS 403H SL	0.00	0.00	0.00	454635.40	790467.50	32° 14' 50.274 N 03° 31' 38.994 W	
BLUS 403H FTP	12085.00	-285.51	-68.50	454349.90	790399.00	32° 14' 47.454 N 03° 31' 39.817 W	
BLUS 403H PBHL	12085.00	-8070.43	-27.38	446565.13	790440.12	32° 13' 30.421 N 03° 31' 40.018 W	

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
3	1670.55	1.71	346.76	1670.52	2.47	-0.58	1.00	346.76	-2.47	
4	411499.82	1.71	346.76	11495.44	287.22	-67.60	0.00	0.00	-287.57	
5	512416.44	90.00	179.70	12085.00	-285.51	-68.50	10.00	-167.05	285.14	
6	20201.47	90.00	179.70	12085.00	-8070.43	-27.38	0.00	0.00	8070.17	BLUS 403H PBHL

S1-T24S-R33E SL  
 2385'FNL 2200'FWL  
 S1-T24S-R33E FTP  
 2600'FSL 2130'FWL  
 S12-T24S-R33E PBHL  
 100'FSL 2110'FWL

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

<b>Project</b>	Permian NM E'83		
<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		Using geodetic scale factor

<b>Site</b>	BLUS Pad 1, Centered on #204				
<b>Site Position:</b>		<b>Northing:</b>	454,613.80 usft	<b>Latitude:</b>	32° 14' 50.065 N
<b>From:</b>	Map	<b>Easting:</b>	790,411.60 usft	<b>Longitude:</b>	103° 31' 39.647 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.43 °

<b>Well</b>	Bell Lake Unit South 403H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	454,635.40 usft	<b>Latitude:</b>	32° 14' 50.274 N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	790,467.50 usft	<b>Longitude:</b>	103° 31' 38.994 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,630.00 usft

<b>Wellbore</b>	#403H OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	10/01/20	6.61	59.95	47,584.05315360

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	179.70	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>13 3/8"</b>										

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Rustler</b>									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	1.00	346.76	1,599.99	0.85	-0.20	-0.85	1.00	1.00	0.00
1,670.55	1.71	346.76	1,670.52	2.47	-0.58	-2.47	1.00	1.00	0.00
1,700.00	1.71	346.76	1,699.96	3.32	-0.78	-3.33	0.00	0.00	0.00
1,800.00	1.71	346.76	1,799.92	6.22	-1.46	-6.23	0.00	0.00	0.00
1,800.08	1.71	346.76	1,800.00	6.22	-1.46	-6.23	0.00	0.00	0.00
<b>Salado</b>									
1,900.00	1.71	346.76	1,899.87	9.12	-2.15	-9.13	0.00	0.00	0.00
2,000.00	1.71	346.76	1,999.83	12.01	-2.83	-12.03	0.00	0.00	0.00
2,100.00	1.71	346.76	2,099.78	14.91	-3.51	-14.93	0.00	0.00	0.00
2,150.24	1.71	346.76	2,150.00	16.37	-3.85	-16.39	0.00	0.00	0.00
<b>Top of Salt</b>									
2,200.00	1.71	346.76	2,199.74	17.81	-4.19	-17.83	0.00	0.00	0.00
2,300.00	1.71	346.76	2,299.70	20.71	-4.87	-20.73	0.00	0.00	0.00
2,400.00	1.71	346.76	2,399.65	23.60	-5.55	-23.63	0.00	0.00	0.00
2,500.00	1.71	346.76	2,499.61	26.50	-6.24	-26.53	0.00	0.00	0.00
2,600.00	1.71	346.76	2,599.56	29.40	-6.92	-29.43	0.00	0.00	0.00
2,700.00	1.71	346.76	2,699.52	32.29	-7.60	-32.33	0.00	0.00	0.00
2,800.00	1.71	346.76	2,799.47	35.19	-8.28	-35.23	0.00	0.00	0.00
2,900.00	1.71	346.76	2,899.43	38.09	-8.96	-38.13	0.00	0.00	0.00
3,000.00	1.71	346.76	2,999.39	40.98	-9.65	-41.03	0.00	0.00	0.00
3,100.00	1.71	346.76	3,099.34	43.88	-10.33	-43.94	0.00	0.00	0.00
3,200.00	1.71	346.76	3,199.30	46.78	-11.01	-46.84	0.00	0.00	0.00
3,300.00	1.71	346.76	3,299.25	49.68	-11.69	-49.74	0.00	0.00	0.00
3,400.00	1.71	346.76	3,399.21	52.57	-12.37	-52.64	0.00	0.00	0.00
3,500.00	1.71	346.76	3,499.16	55.47	-13.05	-55.54	0.00	0.00	0.00
3,600.00	1.71	346.76	3,599.12	58.37	-13.74	-58.44	0.00	0.00	0.00
3,700.00	1.71	346.76	3,699.08	61.26	-14.42	-61.34	0.00	0.00	0.00
3,800.00	1.71	346.76	3,799.03	64.16	-15.10	-64.24	0.00	0.00	0.00
3,900.00	1.71	346.76	3,898.99	67.06	-15.78	-67.14	0.00	0.00	0.00
4,000.00	1.71	346.76	3,998.94	69.95	-16.46	-70.04	0.00	0.00	0.00
4,100.00	1.71	346.76	4,098.90	72.85	-17.15	-72.94	0.00	0.00	0.00
4,200.00	1.71	346.76	4,198.85	75.75	-17.83	-75.84	0.00	0.00	0.00
4,300.00	1.71	346.76	4,298.81	78.65	-18.51	-78.74	0.00	0.00	0.00
4,400.00	1.71	346.76	4,398.77	81.54	-19.19	-81.64	0.00	0.00	0.00
4,500.00	1.71	346.76	4,498.72	84.44	-19.87	-84.54	0.00	0.00	0.00
4,600.00	1.71	346.76	4,598.68	87.34	-20.55	-87.44	0.00	0.00	0.00
4,700.00	1.71	346.76	4,698.63	90.23	-21.24	-90.34	0.00	0.00	0.00
4,800.00	1.71	346.76	4,798.59	93.13	-21.92	-93.24	0.00	0.00	0.00
4,900.00	1.71	346.76	4,898.54	96.03	-22.60	-96.14	0.00	0.00	0.00
5,000.00	1.71	346.76	4,998.50	98.92	-23.28	-99.05	0.00	0.00	0.00

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,051.52	1.71	346.76	5,050.00	100.42	-23.63	-100.54	0.00	0.00	0.00	
<b>Base of Salt</b>										
5,100.00	1.71	346.76	5,098.46	101.82	-23.96	-101.95	0.00	0.00	0.00	
5,200.00	1.71	346.76	5,198.41	104.72	-24.64	-104.85	0.00	0.00	0.00	
5,201.59	1.71	346.76	5,200.00	104.76	-24.66	-104.89	0.00	0.00	0.00	
<b>10 3/4"</b>										
5,300.00	1.71	346.76	5,298.37	107.62	-25.33	-107.75	0.00	0.00	0.00	
5,301.63	1.71	346.76	5,300.00	107.66	-25.34	-107.79	0.00	0.00	0.00	
<b>Lamar</b>										
5,400.00	1.71	346.76	5,398.32	110.51	-26.01	-110.65	0.00	0.00	0.00	
5,451.70	1.71	346.76	5,450.00	112.01	-26.36	-112.15	0.00	0.00	0.00	
<b>Bell Canyon</b>										
5,500.00	1.71	346.76	5,498.28	113.41	-26.69	-113.55	0.00	0.00	0.00	
5,600.00	1.71	346.76	5,598.23	116.31	-27.37	-116.45	0.00	0.00	0.00	
5,700.00	1.71	346.76	5,698.19	119.20	-28.05	-119.35	0.00	0.00	0.00	
5,800.00	1.71	346.76	5,798.15	122.10	-28.74	-122.25	0.00	0.00	0.00	
5,900.00	1.71	346.76	5,898.10	125.00	-29.42	-125.15	0.00	0.00	0.00	
6,000.00	1.71	346.76	5,998.06	127.89	-30.10	-128.05	0.00	0.00	0.00	
6,100.00	1.71	346.76	6,098.01	130.79	-30.78	-130.95	0.00	0.00	0.00	
6,200.00	1.71	346.76	6,197.97	133.69	-31.46	-133.85	0.00	0.00	0.00	
6,300.00	1.71	346.76	6,297.92	136.59	-32.14	-136.75	0.00	0.00	0.00	
6,302.08	1.71	346.76	6,300.00	136.65	-32.16	-136.81	0.00	0.00	0.00	
<b>Cherry Canyon</b>										
6,400.00	1.71	346.76	6,397.88	139.48	-32.83	-139.65	0.00	0.00	0.00	
6,500.00	1.71	346.76	6,497.84	142.38	-33.51	-142.55	0.00	0.00	0.00	
6,600.00	1.71	346.76	6,597.79	145.28	-34.19	-145.45	0.00	0.00	0.00	
6,700.00	1.71	346.76	6,697.75	148.17	-34.87	-148.35	0.00	0.00	0.00	
6,800.00	1.71	346.76	6,797.70	151.07	-35.55	-151.25	0.00	0.00	0.00	
6,900.00	1.71	346.76	6,897.66	153.97	-36.23	-154.16	0.00	0.00	0.00	
7,000.00	1.71	346.76	6,997.61	156.86	-36.92	-157.06	0.00	0.00	0.00	
7,100.00	1.71	346.76	7,097.57	159.76	-37.60	-159.96	0.00	0.00	0.00	
7,200.00	1.71	346.76	7,197.53	162.66	-38.28	-162.86	0.00	0.00	0.00	
7,300.00	1.71	346.76	7,297.48	165.56	-38.96	-165.76	0.00	0.00	0.00	
7,400.00	1.71	346.76	7,397.44	168.45	-39.64	-168.66	0.00	0.00	0.00	
7,500.00	1.71	346.76	7,497.39	171.35	-40.33	-171.56	0.00	0.00	0.00	
7,600.00	1.71	346.76	7,597.35	174.25	-41.01	-174.46	0.00	0.00	0.00	
7,700.00	1.71	346.76	7,697.30	177.14	-41.69	-177.36	0.00	0.00	0.00	
7,732.71	1.71	346.76	7,730.00	178.09	-41.91	-178.31	0.00	0.00	0.00	
<b>Brushy Canyon</b>										
7,800.00	1.71	346.76	7,797.26	180.04	-42.37	-180.26	0.00	0.00	0.00	
7,900.00	1.71	346.76	7,897.22	182.94	-43.05	-183.16	0.00	0.00	0.00	
8,000.00	1.71	346.76	7,997.17	185.83	-43.73	-186.06	0.00	0.00	0.00	
8,100.00	1.71	346.76	8,097.13	188.73	-44.42	-188.96	0.00	0.00	0.00	
8,200.00	1.71	346.76	8,197.08	191.63	-45.10	-191.86	0.00	0.00	0.00	
8,300.00	1.71	346.76	8,297.04	194.53	-45.78	-194.76	0.00	0.00	0.00	

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,400.00	1.71	346.76	8,396.99	197.42	-46.46	-197.66	0.00	0.00	0.00	
8,500.00	1.71	346.76	8,496.95	200.32	-47.14	-200.56	0.00	0.00	0.00	
8,600.00	1.71	346.76	8,596.91	203.22	-47.83	-203.46	0.00	0.00	0.00	
8,700.00	1.71	346.76	8,696.86	206.11	-48.51	-206.36	0.00	0.00	0.00	
8,800.00	1.71	346.76	8,796.82	209.01	-49.19	-209.27	0.00	0.00	0.00	
8,873.22	1.71	346.76	8,870.00	211.13	-49.69	-211.39	0.00	0.00	0.00	
<b>Bone Spring</b>										
8,900.00	1.71	346.76	8,896.77	211.91	-49.87	-212.17	0.00	0.00	0.00	
9,000.00	1.71	346.76	8,996.73	214.80	-50.55	-215.07	0.00	0.00	0.00	
9,033.29	1.71	346.76	9,030.00	215.77	-50.78	-216.03	0.00	0.00	0.00	
<b>Avalon</b>										
9,100.00	1.71	346.76	9,096.68	217.70	-51.23	-217.97	0.00	0.00	0.00	
9,200.00	1.71	346.76	9,196.64	220.60	-51.92	-220.87	0.00	0.00	0.00	
9,300.00	1.71	346.76	9,296.60	223.50	-52.60	-223.77	0.00	0.00	0.00	
9,400.00	1.71	346.76	9,396.55	226.39	-53.28	-226.67	0.00	0.00	0.00	
9,500.00	1.71	346.76	9,496.51	229.29	-53.96	-229.57	0.00	0.00	0.00	
9,600.00	1.71	346.76	9,596.46	232.19	-54.64	-232.47	0.00	0.00	0.00	
9,700.00	1.71	346.76	9,696.42	235.08	-55.32	-235.37	0.00	0.00	0.00	
9,800.00	1.71	346.76	9,796.37	237.98	-56.01	-238.27	0.00	0.00	0.00	
9,900.00	1.71	346.76	9,896.33	240.88	-56.69	-241.17	0.00	0.00	0.00	
10,000.00	1.71	346.76	9,996.29	243.77	-57.37	-244.07	0.00	0.00	0.00	
10,003.72	1.71	346.76	10,000.00	243.88	-57.40	-244.18	0.00	0.00	0.00	
<b>1 BSS</b>										
10,100.00	1.71	346.76	10,096.24	246.67	-58.05	-246.97	0.00	0.00	0.00	
10,200.00	1.71	346.76	10,196.20	249.57	-58.73	-249.87	0.00	0.00	0.00	
10,300.00	1.71	346.76	10,296.15	252.47	-59.42	-252.77	0.00	0.00	0.00	
10,400.00	1.71	346.76	10,396.11	255.36	-60.10	-255.67	0.00	0.00	0.00	
10,500.00	1.71	346.76	10,496.06	258.26	-60.78	-258.57	0.00	0.00	0.00	
10,593.98	1.71	346.76	10,590.00	260.98	-61.42	-261.30	0.00	0.00	0.00	
<b>2 BSS</b>										
10,600.00	1.71	346.76	10,596.02	261.16	-61.46	-261.47	0.00	0.00	0.00	
10,700.00	1.71	346.76	10,695.98	264.05	-62.14	-264.37	0.00	0.00	0.00	
10,800.00	1.71	346.76	10,795.93	266.95	-62.82	-267.28	0.00	0.00	0.00	
10,900.00	1.71	346.76	10,895.89	269.85	-63.51	-270.18	0.00	0.00	0.00	
11,000.00	1.71	346.76	10,995.84	272.74	-64.19	-273.08	0.00	0.00	0.00	
11,054.18	1.71	346.76	11,050.00	274.31	-64.56	-274.65	0.00	0.00	0.00	
<b>3 BSL</b>										
11,100.00	1.71	346.76	11,095.80	275.64	-64.87	-275.98	0.00	0.00	0.00	
11,104.20	1.71	346.76	11,100.00	275.76	-64.90	-276.10	0.00	0.00	0.00	
<b>7 5/8"</b>										
11,200.00	1.71	346.76	11,195.75	278.54	-65.55	-278.88	0.00	0.00	0.00	
11,300.00	1.71	346.76	11,295.71	281.44	-66.23	-281.78	0.00	0.00	0.00	
11,400.00	1.71	346.76	11,395.67	284.33	-66.92	-284.68	0.00	0.00	0.00	
11,499.82	1.71	346.76	11,495.44	287.22	-67.60	-287.57	0.00	0.00	0.00	

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,550.00	3.38	186.18	11,545.60	286.48	-67.93	-286.83	10.00	3.33	-319.97	
11,564.44	4.82	184.24	11,560.00	285.45	-68.02	-285.81	10.00	9.95	-13.48	
<b>3 BSS</b>										
11,600.00	8.36	182.30	11,595.32	281.38	-68.23	-281.73	10.00	9.98	-5.46	
11,650.00	13.36	181.31	11,644.41	271.96	-68.51	-272.32	10.00	9.99	-1.98	
11,700.00	18.36	180.85	11,692.49	258.30	-68.76	-258.66	10.00	10.00	-0.91	
11,750.00	23.36	180.58	11,739.20	240.51	-68.97	-240.87	10.00	10.00	-0.53	
11,800.00	28.36	180.41	11,784.18	218.71	-69.16	-219.07	10.00	10.00	-0.35	
11,850.00	33.36	180.28	11,827.09	193.07	-69.31	-193.43	10.00	10.00	-0.25	
11,900.00	38.36	180.18	11,867.60	163.79	-69.43	-164.15	10.00	10.00	-0.20	
11,922.55	40.61	180.14	11,885.00	149.45	-69.47	-149.81	10.00	10.00	-0.17	
<b>Wolfcamp</b>										
11,950.00	43.36	180.10	11,905.40	131.09	-69.50	-131.45	10.00	10.00	-0.15	
12,000.00	48.36	180.04	11,940.21	95.22	-69.55	-95.59	10.00	10.00	-0.13	
12,050.00	53.36	179.98	11,971.76	56.46	-69.55	-56.82	10.00	10.00	-0.11	
12,100.00	58.36	179.93	11,999.82	15.09	-69.52	-15.45	10.00	10.00	-0.10	
12,150.00	63.36	179.89	12,024.16	-28.57	-69.45	28.21	10.00	10.00	-0.09	
12,200.00	68.36	179.85	12,044.61	-74.18	-69.35	73.82	10.00	10.00	-0.08	
12,250.00	73.36	179.81	12,061.00	-121.40	-69.21	121.04	10.00	10.00	-0.07	
12,300.00	78.36	179.78	12,073.21	-169.87	-69.03	169.51	10.00	10.00	-0.07	
12,350.00	83.36	179.74	12,081.15	-219.22	-68.83	218.85	10.00	10.00	-0.07	
12,400.00	88.36	179.71	12,084.76	-269.07	-68.59	268.71	10.00	10.00	-0.07	
12,416.44	90.00	179.70	12,085.00	-285.51	-68.50	285.14	10.00	10.00	-0.07	
12,500.00	90.00	179.70	12,085.00	-369.07	-68.06	368.71	0.00	0.00	0.00	
12,600.00	90.00	179.70	12,085.00	-469.07	-67.53	468.71	0.00	0.00	0.00	
12,700.00	90.00	179.70	12,085.00	-569.06	-67.00	568.71	0.00	0.00	0.00	
12,800.00	90.00	179.70	12,085.00	-669.06	-66.48	668.71	0.00	0.00	0.00	
12,900.00	90.00	179.70	12,085.00	-769.06	-65.95	768.71	0.00	0.00	0.00	
13,000.00	90.00	179.70	12,085.00	-869.06	-65.42	868.71	0.00	0.00	0.00	
13,100.00	90.00	179.70	12,085.00	-969.06	-64.89	968.71	0.00	0.00	0.00	
13,200.00	90.00	179.70	12,085.00	-1,069.06	-64.36	1,068.71	0.00	0.00	0.00	
13,300.00	90.00	179.70	12,085.00	-1,169.06	-63.83	1,168.71	0.00	0.00	0.00	
13,400.00	90.00	179.70	12,085.00	-1,269.06	-63.31	1,268.71	0.00	0.00	0.00	
13,500.00	90.00	179.70	12,085.00	-1,369.05	-62.78	1,368.71	0.00	0.00	0.00	
13,600.00	90.00	179.70	12,085.00	-1,469.05	-62.25	1,468.71	0.00	0.00	0.00	
13,700.00	90.00	179.70	12,085.00	-1,569.05	-61.72	1,568.71	0.00	0.00	0.00	
13,800.00	90.00	179.70	12,085.00	-1,669.05	-61.19	1,668.71	0.00	0.00	0.00	
13,900.00	90.00	179.70	12,085.00	-1,769.05	-60.66	1,768.71	0.00	0.00	0.00	
14,000.00	90.00	179.70	12,085.00	-1,869.05	-60.14	1,868.71	0.00	0.00	0.00	
14,100.00	90.00	179.70	12,085.00	-1,969.05	-59.61	1,968.71	0.00	0.00	0.00	
14,200.00	90.00	179.70	12,085.00	-2,069.04	-59.08	2,068.71	0.00	0.00	0.00	
14,300.00	90.00	179.70	12,085.00	-2,169.04	-58.55	2,168.71	0.00	0.00	0.00	
14,400.00	90.00	179.70	12,085.00	-2,269.04	-58.02	2,268.71	0.00	0.00	0.00	
14,500.00	90.00	179.70	12,085.00	-2,369.04	-57.50	2,368.71	0.00	0.00	0.00	

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,600.00	90.00	179.70	12,085.00	-2,469.04	-56.97	2,468.71	0.00	0.00	0.00	
14,700.00	90.00	179.70	12,085.00	-2,569.04	-56.44	2,568.71	0.00	0.00	0.00	
14,800.00	90.00	179.70	12,085.00	-2,669.04	-55.91	2,668.71	0.00	0.00	0.00	
14,900.00	90.00	179.70	12,085.00	-2,769.03	-55.38	2,768.71	0.00	0.00	0.00	
15,000.00	90.00	179.70	12,085.00	-2,869.03	-54.85	2,868.71	0.00	0.00	0.00	
15,100.00	90.00	179.70	12,085.00	-2,969.03	-54.33	2,968.71	0.00	0.00	0.00	
15,200.00	90.00	179.70	12,085.00	-3,069.03	-53.80	3,068.71	0.00	0.00	0.00	
15,300.00	90.00	179.70	12,085.00	-3,169.03	-53.27	3,168.71	0.00	0.00	0.00	
15,400.00	90.00	179.70	12,085.00	-3,269.03	-52.74	3,268.71	0.00	0.00	0.00	
15,500.00	90.00	179.70	12,085.00	-3,369.03	-52.21	3,368.71	0.00	0.00	0.00	
15,600.00	90.00	179.70	12,085.00	-3,469.02	-51.68	3,468.71	0.00	0.00	0.00	
15,700.00	90.00	179.70	12,085.00	-3,569.02	-51.16	3,568.71	0.00	0.00	0.00	
15,800.00	90.00	179.70	12,085.00	-3,669.02	-50.63	3,668.71	0.00	0.00	0.00	
15,900.00	90.00	179.70	12,085.00	-3,769.02	-50.10	3,768.71	0.00	0.00	0.00	
16,000.00	90.00	179.70	12,085.00	-3,869.02	-49.57	3,868.71	0.00	0.00	0.00	
16,100.00	90.00	179.70	12,085.00	-3,969.02	-49.04	3,968.71	0.00	0.00	0.00	
16,200.00	90.00	179.70	12,085.00	-4,069.02	-48.51	4,068.71	0.00	0.00	0.00	
16,300.00	90.00	179.70	12,085.00	-4,169.01	-47.99	4,168.71	0.00	0.00	0.00	
16,400.00	90.00	179.70	12,085.00	-4,269.01	-47.46	4,268.71	0.00	0.00	0.00	
16,500.00	90.00	179.70	12,085.00	-4,369.01	-46.93	4,368.71	0.00	0.00	0.00	
16,600.00	90.00	179.70	12,085.00	-4,469.01	-46.40	4,468.71	0.00	0.00	0.00	
16,700.00	90.00	179.70	12,085.00	-4,569.01	-45.87	4,568.71	0.00	0.00	0.00	
16,800.00	90.00	179.70	12,085.00	-4,669.01	-45.35	4,668.71	0.00	0.00	0.00	
16,900.00	90.00	179.70	12,085.00	-4,769.01	-44.82	4,768.71	0.00	0.00	0.00	
17,000.00	90.00	179.70	12,085.00	-4,869.00	-44.29	4,868.71	0.00	0.00	0.00	
17,100.00	90.00	179.70	12,085.00	-4,969.00	-43.76	4,968.71	0.00	0.00	0.00	
17,200.00	90.00	179.70	12,085.00	-5,069.00	-43.23	5,068.71	0.00	0.00	0.00	
17,300.00	90.00	179.70	12,085.00	-5,169.00	-42.70	5,168.71	0.00	0.00	0.00	
17,400.00	90.00	179.70	12,085.00	-5,269.00	-42.18	5,268.71	0.00	0.00	0.00	
17,500.00	90.00	179.70	12,085.00	-5,369.00	-41.65	5,368.71	0.00	0.00	0.00	
17,600.00	90.00	179.70	12,085.00	-5,469.00	-41.12	5,468.71	0.00	0.00	0.00	
17,700.00	90.00	179.70	12,085.00	-5,569.00	-40.59	5,568.71	0.00	0.00	0.00	
17,800.00	90.00	179.70	12,085.00	-5,668.99	-40.06	5,668.71	0.00	0.00	0.00	
17,900.00	90.00	179.70	12,085.00	-5,768.99	-39.53	5,768.71	0.00	0.00	0.00	
18,000.00	90.00	179.70	12,085.00	-5,868.99	-39.01	5,868.71	0.00	0.00	0.00	
18,100.00	90.00	179.70	12,085.00	-5,968.99	-38.48	5,968.71	0.00	0.00	0.00	
18,200.00	90.00	179.70	12,085.00	-6,068.99	-37.95	6,068.71	0.00	0.00	0.00	
18,300.00	90.00	179.70	12,085.00	-6,168.99	-37.42	6,168.71	0.00	0.00	0.00	
18,400.00	90.00	179.70	12,085.00	-6,268.99	-36.89	6,268.71	0.00	0.00	0.00	
18,500.00	90.00	179.70	12,085.00	-6,368.98	-36.37	6,368.71	0.00	0.00	0.00	
18,600.00	90.00	179.70	12,085.00	-6,468.98	-35.84	6,468.71	0.00	0.00	0.00	
18,700.00	90.00	179.70	12,085.00	-6,568.98	-35.31	6,568.71	0.00	0.00	0.00	
18,800.00	90.00	179.70	12,085.00	-6,668.98	-34.78	6,668.71	0.00	0.00	0.00	

### Titan Directional Drilling

#### Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit South 403H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Site:</b>	BLUS Pad 1	<b>MD Reference:</b>	est.GL+KB @ 3655.00usft (Planning)
<b>Well:</b>	Bell Lake Unit South 403H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#403H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,900.00	90.00	179.70	12,085.00	-6,768.98	-34.25	6,768.71	0.00	0.00	0.00	
19,000.00	90.00	179.70	12,085.00	-6,868.98	-33.72	6,868.71	0.00	0.00	0.00	
19,100.00	90.00	179.70	12,085.00	-6,968.98	-33.20	6,968.71	0.00	0.00	0.00	
19,200.00	90.00	179.70	12,085.00	-7,068.97	-32.67	7,068.71	0.00	0.00	0.00	
19,300.00	90.00	179.70	12,085.00	-7,168.97	-32.14	7,168.71	0.00	0.00	0.00	
19,400.00	90.00	179.70	12,085.00	-7,268.97	-31.61	7,268.71	0.00	0.00	0.00	
19,500.00	90.00	179.70	12,085.00	-7,368.97	-31.08	7,368.71	0.00	0.00	0.00	
19,600.00	90.00	179.70	12,085.00	-7,468.97	-30.55	7,468.71	0.00	0.00	0.00	
19,700.00	90.00	179.70	12,085.00	-7,568.97	-30.03	7,568.71	0.00	0.00	0.00	
19,800.00	90.00	179.70	12,085.00	-7,668.97	-29.50	7,668.71	0.00	0.00	0.00	
19,900.00	90.00	179.70	12,085.00	-7,768.96	-28.97	7,768.71	0.00	0.00	0.00	
20,000.00	90.00	179.70	12,085.00	-7,868.96	-28.44	7,868.71	0.00	0.00	0.00	
20,100.00	90.00	179.70	12,085.00	-7,968.96	-27.91	7,968.71	0.00	0.00	0.00	
20,201.47	90.00	179.70	12,085.00	-8,070.43	-27.38	8,070.17	0.00	0.00	0.00	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,350.00	1,350.00	13 3/8"	13-3/8	17-1/2	
5,201.59	5,200.00	10 3/4"	10-3/4	12-1/4	
11,104.20	11,100.00	7 5/8"	7-5/8	9-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,400.00	1,400.00	Rustler				
1,800.08	1,800.00	Salado				
2,150.24	2,150.00	Top of Salt				
5,051.52	5,050.00	Base of Salt				
5,301.63	5,300.00	Lamar				
5,451.70	5,450.00	Bell Canyon				
6,302.08	6,300.00	Cherry Canyon				
7,732.71	7,730.00	Brushy Canyon				
8,873.22	8,870.00	Bone Spring				
9,033.29	9,030.00	Avalon				
10,003.72	10,000.00	1 BSS				
10,593.98	10,590.00	2 BSS				
11,054.18	11,050.00	3 BSL				
11,564.44	11,560.00	3 BSS				
11,922.55	11,885.00	Wolfcamp				

DISTRICT I  
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DISTRICT IV  
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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-48205	Pool Code 98266	Pool Name BELL LAKE; WOLFCAMP, SOUTH
Property Code 316706	Property Name BELL LAKE UNIT SOUTH	Well Number 403H
OGRID No. 12361	Operator Name KAISER-FRANCIS OIL COMPANY	Elevation 3630'

Surface Location

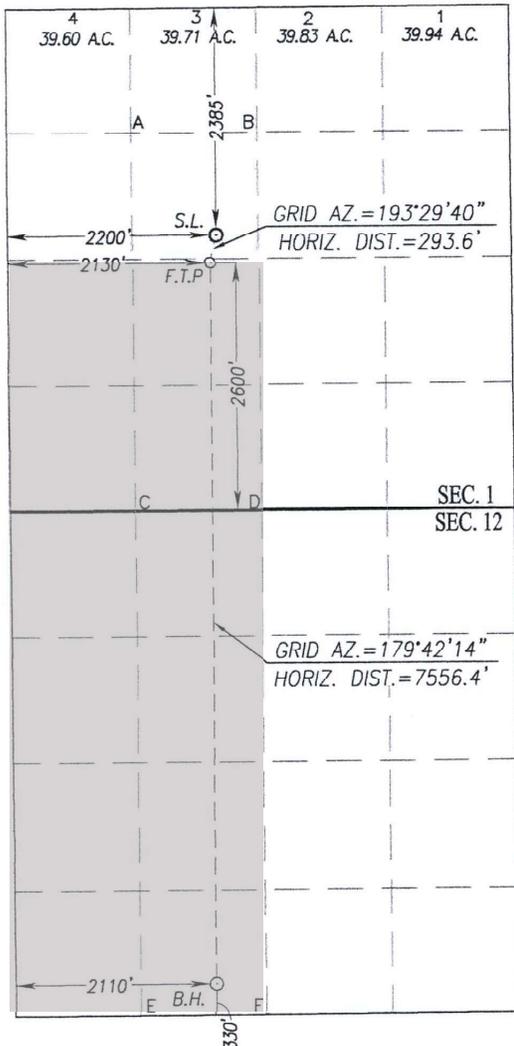
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	1	24-S	33-E		2385	NORTH	2200	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	12	24-S	33-E		330	SOUTH	2110	WEST	LEA

Dedicated Acres 480	Joint or Infill	Consolidation Code	Order No. R-14601
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



SCALE: 1"=2000'

<p>GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 454635.4 N X= 790467.5 E LAT.=32.247298° N LONG.=103.527498° W</p> <p>FIRST TAKE POINT NAD 83 NME Y= 454349.9 N X= 790399.0 E LAT.=32.246515° N LONG.=103.527727° W</p>	<p>GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 454576.4 N X= 749283.6 E LAT.=32.247175° N LONG.=103.527020° W</p> <p>FIRST TAKE POINT NAD 27 NME Y= 454290.9 N X= 749215.1 E LAT.=32.246391° N LONG.=103.527248° W</p>
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CORNER COORDINATES TABLE

NAD 27 NME

A - Y= 455647.2 N, X= 748398.9 E
B - Y= 455651.7 N, X= 749719.1 E
C - Y= 451688.5 N, X= 748422.0 E
D - Y= 451693.5 N, X= 749744.3 E
E - Y= 446402.2 N, X= 748468.3 E
F - Y= 446409.2 N, X= 749789.4 E

CORNER COORDINATES TABLE

NAD 83 NME

A - Y= 455706.3 N, X= 789582.7 E
B - Y= 455710.7 N, X= 790902.9 E
C - Y= 451747.4 N, X= 789606.0 E
D - Y= 451752.4 N, X= 790928.3 E
E - Y= 446460.9 N, X= 789652.5 E
F - Y= 446468.0 N, X= 790973.7 E

<p>BOTTOM HOLE LOCATION NAD 83 NME Y= 446795.1 N X= 790438.1 E LAT.=32.225749° N LONG.=103.527784° W</p>	<p>BOTTOM HOLE LOCATION NAD 27 NME Y= 446736.3 N X= 749253.8 E LAT.=32.225625° N LONG.=103.527306° W</p>
--	--

OPERATOR CERTIFICATION

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

Melanie Wilson 7/1/2020

Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Printed Name  
 mj1692@gmail.com  
 E-mail Address \_\_\_\_\_

SURVEYOR CERTIFICATION

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

Date of Survey \_\_\_\_\_  
 Signature & Seal of Professional Surveyor: \_\_\_\_\_

Ronald J. Eidson 11/01/2017  
 Certificate Number Gary G. Eidson 12641  
 Ronald J. Eidson 3239  
 ACK JWSC W.O.: 17.11.1051

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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: 05/30/2018

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 403H	30-025-48205	F-1-T24S-R33E	2385' FNL & 2200' FWL	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

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

CONDITIONS

Action 12842

**CONDITIONS OF APPROVAL**

Operator:		KAISER-FRANCIS OIL CO	P.O. Box 21468	Tulsa, OK74121	OGRID:	12361	Action Number:	12842	Action Type:	FORM 3160-3
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.									