

OCD - HOBBS  
10/06/2020  
RECEIVED

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. NMNM0000587
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 NORTH [316707] 209H
3a. Address 6733 S. Yale Ave., Tulsa, OK 74121	3b. Phone No. (include area code) (918) 491-0000	9. API Well No. 30-025-47838
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWNE / 2065 FNL / 1985 FEL / LAT 32.3352274 / LONG -103.5071365 At proposed prod. zone SESW / 100 FSL / 2110 FWL / LAT 32.3121548 / LONG -103.5106844		10. Field and Pool, or Exploratory [98259] OJO CHISO/WOLFCAMP, SOUTHWEST
14. Distance in miles and direction from nearest town or post office* 20 miles		11. Sec., T, R, M, or Blk. and Survey or Area SEC 6/T23S/R34E/NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 575 feet	16. No of acres in lease 634.55	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	19. Proposed Depth 10290 feet / 18479 feet	20. BLM/BIA Bond No. in file FED: WYB000055
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3462 feet	22. Approximate date work will start* 06/01/2020	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 02/07/2020
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 09/15/2020
Title Assistant Field Manager Lands & Minerals 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 10/06/2020

SL

APPROVED WITH CONDITIONS  
Approval Date: 09/15/2020

KZ  
10/19/2020

## 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.



APD ID: 10400054021

Submission Date: 02/07/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 209H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400054021

Tie to previous NOS? N

Submission Date: 02/07/2020

BLM Office: CARLSBAD

User: Stormi Davis

Title: Regulatory Analyst

Federal/Indian APD: FED

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

Lease number: NMNM0000587

Lease Acres: 634.55

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM068292X

Agreement name: 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 NORTH

Well Number: 209H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: OJO CHISO

Pool Name: WOLFCAMP,  
SOUTHWEST

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

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT NORTH

**Well Number:** 209H

**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:**

**Number:** 8

NORTH BELL LAKE UNIT

**Well Class:** HORIZONTAL

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

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

**Describe sub-type:**

**Distance to town:** 20 Miles

**Distance to nearest well:** 30 FT

**Distance to lease line:** 575 FT

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

**Well plat:** BLUN\_209H\_C102\_20200205151441.pdf

Pay.gov\_20200207110408.pdf

**Well work start Date:** 06/01/2020

**Duration:** 40 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 7646A

**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	2065	FNL	1985	FEL	23S	34E	6	Aliquot SWNE	32.3352274	-103.5071365	LEA	NEW MEXICO	NEW MEXICO	F	NMNM0000587	3462	0	0	N
KOP Leg #1	2065	FNL	1985	FEL	23S	34E	6	Aliquot SWNE	32.3352274	-103.5071365	LEA	NEW MEXICO	NEW MEXICO	F	NMNM0000587	-6255	9800	9717	N



**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT NORTH

**Well Number:** 209H

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	2098	FNL	2640	FWL	23S	34E	6	Aliquot SENW	32.3351508	- 103.5092586	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0001244A	- 6786	14813	10248	Y
PPP Leg #1-2	2640	FSL	2190	FWL	23S	34E	6	Aliquot NESW	32.3336457	- 103.5104142	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0000587	- 6825	10660	10287	Y
PPP Leg #1-3	2600	FSL	2190	FWL	23S	34E	6	Aliquot NESW	32.3335332	- 103.5104158	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0000587	- 6828	10700	10290	Y
PPP Leg #1-4	0	FNL	2175	FWL	23S	34E	7	Aliquot NENW	32.3263898	- 103.5105054	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0 065194	- 6828	13300	10290	Y
PPP Leg #1-5	2640	FSL	2140	FEL	23S	34E	7	Aliquot NESW	32.3191338	- 103.5105966	LEA	NEW MEXICO	NEW MEXICO	S	STATE	- 6828	15940	10290	Y
EXIT Leg #1	100	FSL	2110	FWL	23S	34E	7	Aliquot SESW	32.3121548	- 103.5106844	LEA	NEW MEXICO	NEW MEXICO	S	STATE	- 6828	18479	10290	Y
BHL Leg #1	100	FSL	2110	FWL	23S	34E	7	Aliquot SESW	32.3121548	- 103.5106844	LEA	NEW MEXICO	NEW MEXICO	S	STATE	- 6828	18479	10290	Y

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-	<sup>2</sup> Pool Code 98259	<sup>3</sup> Pool Name Ojo Chiso; Bone Spring, Southwest
<sup>4</sup> Property Code	<sup>5</sup> Property Name BELL LAKE UNIT NORTH	<sup>6</sup> Well Number 209H
<sup>7</sup> OGRID No. 12361	<sup>8</sup> Operator Name KAISER-FRANCIS OIL COMPANY	<sup>9</sup> Elevation 3462.2

<sup>10</sup> Surface Location

UL or lot no. G	Section 6	Township 23 S	Range 34 E	Lot Idn	Feet from the 2065	North/South line NORTH	Feet from the 1985	East/West line EAST	County LEA
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. N	Section 7	Township 23 S	Range 34 E	Lot Idn	Feet from the 100	North/South line SOUTH	Feet from the 2110	East/West line WEST	County LEA
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<sup>12</sup> Dedicated Acres 480	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-14527A
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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.

<p>NW CORNER SEC. 6 LAT. = 32.3409003°N LONG. = 103.5175014°W NMSP EAST (FT) N = 488711.17 E = 793299.16</p> <p>W/4 CORNER SEC. 6 LAT. = 32.3336453°N LONG. = 103.5175046°W NMSP EAST (FT) N = 486071.76 E = 793318.27</p> <p>SECTION CORNER LAT. = 32.3263895°N LONG. = 103.5175066°W NMSP EAST (FT) N = 483432.09 E = 793337.75</p> <p>W/4 CORNER SEC. 7 SCALED</p> <p>SW CORNER SEC. 7 LAT. = 32.3118795°N LONG. = 103.5175128°W NMSP EAST (FT) N = 478153.30 E = 793376.02</p>	<p>N89°32'55"E 2546.53 FT</p> <p>N89°32'29"E 2641.19 FT</p> <p>N/4 CORNER SEC. 6 LAT. = 32.3409018°N LONG. = 103.5092579°W NMSP EAST (FT) N = 488731.23 E = 795845.16</p> <p>2065</p> <p>L2/L1</p> <p>NE CORNER SEC. 6 LAT. = 32.3409038°N LONG. = 103.5007079°W NMSP EAST (FT) N = 488752.37 E = 798485.80</p> <p>E/4 CORNER SEC. 6 LAT. = 32.3336332°N LONG. = 103.5007116°W NMSP EAST (FT) N = 486107.27 E = 798505.21</p> <p>SECTION CORNER LAT. = 32.3263820°N LONG. = 103.5007113°W NMSP EAST (FT) N = 483469.26 E = 798525.81</p> <p>SECTION CORNER LAT. = 32.3191330°N LONG. = 103.5006990°W NMSP EAST (FT) N = 480832.11 E = 798550.10</p> <p>SE CORNER SEC. 7 LAT. = 32.3118770°N LONG. = 103.5006806°W NMSP EAST (FT) N = 478192.39 E = 798576.30</p>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Stormi Davis</i> 2/5/20 Signature Date</p> <p>Stormi Davis Printed Name</p> <p>ssdavis104@gmail.com E-mail Address</p> <p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>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.</p> <p>DECEMBER 19, 2019 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: Certificate Number: 12797 Survey No. 7646A</p>
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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

Fri, Feb 7, 2020 at 11:01 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: 26NCQVTA  
Agency Tracking ID: 75947185764  
Transaction Type: Sale  
Transaction Date: 02/07/2020 01:01:23 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: 10400054021  
Lease Numbers: NMNM0000587  
Well Numbers: 209H

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



APD ID: 10400054021

Submission Date: 02/07/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 209H

[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
655443	---	3462	0	0	OTHER : Surface	NONE	N
655444	RUSTLER	2312	1150	1150	SANDSTONE	NONE	N
655445	SALADO	2012	1450	1450	SALT	NONE	N
655446	TOP SALT	1712	1750	1750	SALT	NONE	N
655447	BASE OF SALT	-1078	4540	4540	SALT	NONE	N
655448	LAMAR	-1363	4825	4825	SANDSTONE	NATURAL GAS, OIL	N
655449	BELL CANYON	-1688	5150	5150	SANDSTONE	NATURAL GAS, OIL	N
655450	CHERRY CANYON	-2913	6375	6375	SANDSTONE	NATURAL GAS, OIL	N
655451	BRUSHY CANYON	-4538	8000	8000	SANDSTONE	NATURAL GAS, OIL	N
655452	BONE SPRING	-4813	8275	8275	LIMESTONE	NATURAL GAS, OIL	N
655453	AVALON SAND	-5173	8635	8635	SANDSTONE	NATURAL GAS, OIL	N
655454	BONE SPRING 1ST	-6113	9575	9575	SANDSTONE	NATURAL GAS, OIL	N
655461	BONE SPRING 2ND	-6628	10090	10090	SANDSTONE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 209H

Pressure Rating (PSI): 5M

Rating Depth: 13000

**Equipment:** A 10M BOP Stack with a 5M Annular Variance 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 Annular BOP Variance

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

**Choke Diagram Attachment:**

BLUN\_209H\_Choke\_Manifold\_20200206080059.pdf

**BOP Diagram Attachment:**

BLUN\_209H\_BOP\_20200206080115.pdf

BLUN\_209H\_Wellhead\_20200206080116.pdf

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

Annular\_BOP\_Variance\_Request\_20200827155311.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	1300	0	1300	3462	2162	1300	J-55	54.5	BUTT	2	4.9	DRY	13.9	DRY	13
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4872	0	4825		-1363	4872	HCP-110	40	LT&C	1.9	3.5	DRY	6.6	DRY	6.5
3	PRODUCTION	8.75	5.5	NEW	API	N	0	18479	0	10290		-6828	18479	P-110	20	OTHER - GBCD	2.3	2.7	DRY	3.2	DRY	3.1



**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT NORTH

**Well Number:** 209H

#### 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):**

BLUN\_209H\_Casing\_Assumptions\_20200827155514.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

BLUN\_209H\_Casing\_Assumptions\_20200827155418.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

GBCD\_5.5in\_Connection\_Spec\_Sheet\_20200124075519.pdf

BLUN\_209H\_Casing\_Assumptions\_20200827155450.pdf

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#### Section 4 - Cement

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT NORTH

**Well Number:** 209H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1300	700	1.7	13.5	1223	75	HALCEM	4% Bentonite
SURFACE	Tail		0	1300	248	1.3	14.8	331	75	Halcem	0.125 #/sk Poly Flake
INTERMEDIATE	Lead		0	4872	787	2.08	12.5	1644	50	EconoCem	3#/sk Kol Seal
INTERMEDIATE	Tail		0	4872	484	1.3	14.8	644	50	Halcem	none
PRODUCTION	Lead		4000	1847 9	397	3.5	10.5	1386	10	NeoCem	2#/sk Kol Seal
PRODUCTION	Tail		4000	1847 9	1850	1.2	14.5	2263	10	Versacem	none

### Section 5 - Circulating Medium

**Mud System Type:** Closed

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

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

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

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

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

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
4825	1029 0	OIL-BASED MUD	8.7	8.9							
1300	4825	OTHER : Diesel- Brine Emulsion	8.7	8.9							
0	1300	OTHER : Fresh Water	8.4	9							

**Operator Name:** KAISER FRANCIS OIL COMPANY

**Well Name:** BELL LAKE UNIT NORTH

**Well Number:** 209H

## 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

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4762

**Anticipated Surface Pressure:** 2498

**Anticipated Bottom Hole Temperature(F):** 165

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

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

**Hydrogen sulfide drilling operations plan:**

BLUN\_H2S\_Plan\_20200114113955.pdf

## Section 8 - Other Information

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

BLUN\_209H\_Directional\_Plan\_20200206081108.pdf

**Other proposed operations facets description:**

Gas Capture Plan attached

**Other proposed operations facets attachment:**

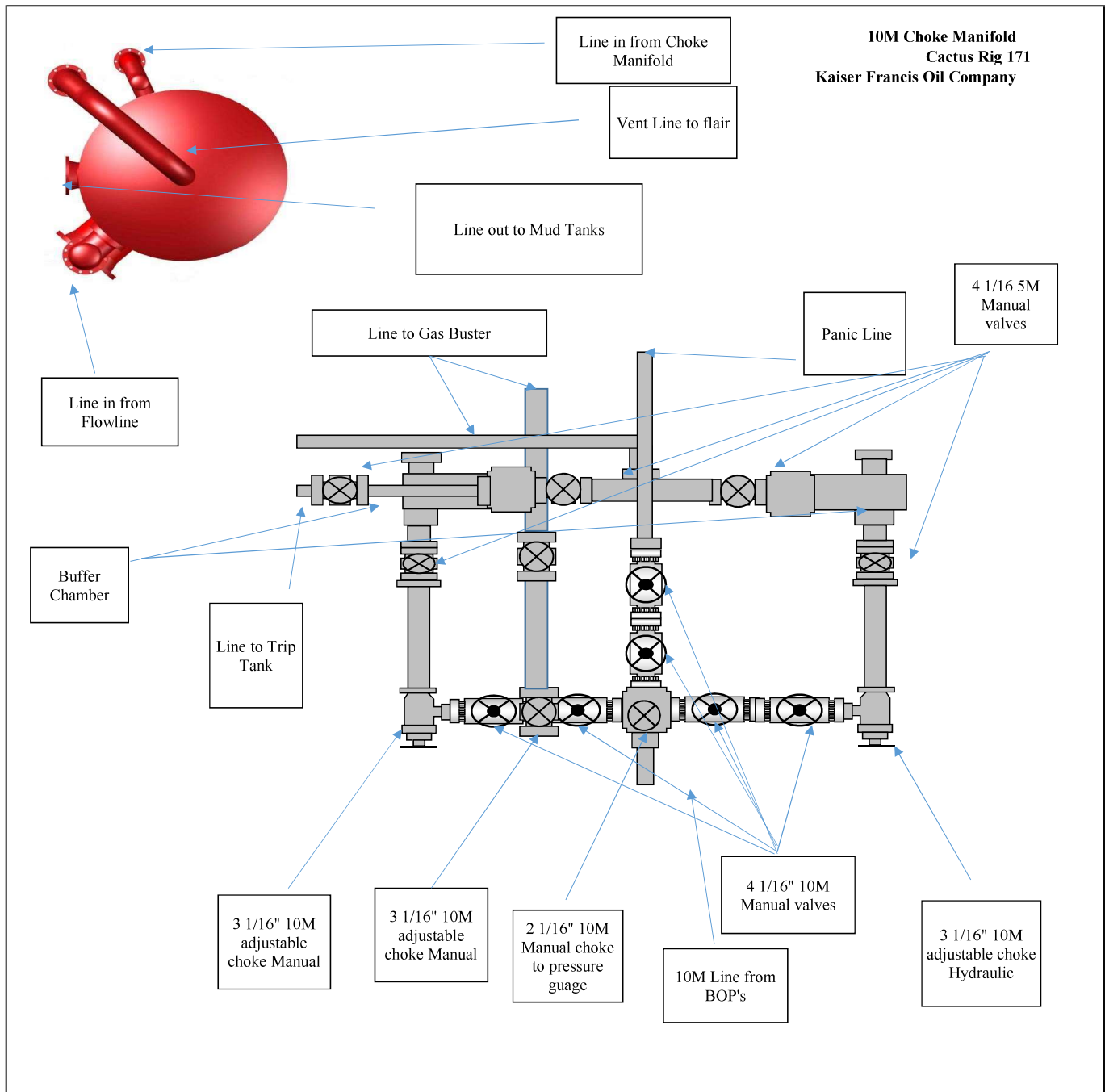
BLUN\_Pad\_8\_GCP\_20200206081419.pdf

**Other Variance attachment:**

BLUN\_209H\_Wellhead\_20200206081440.pdf

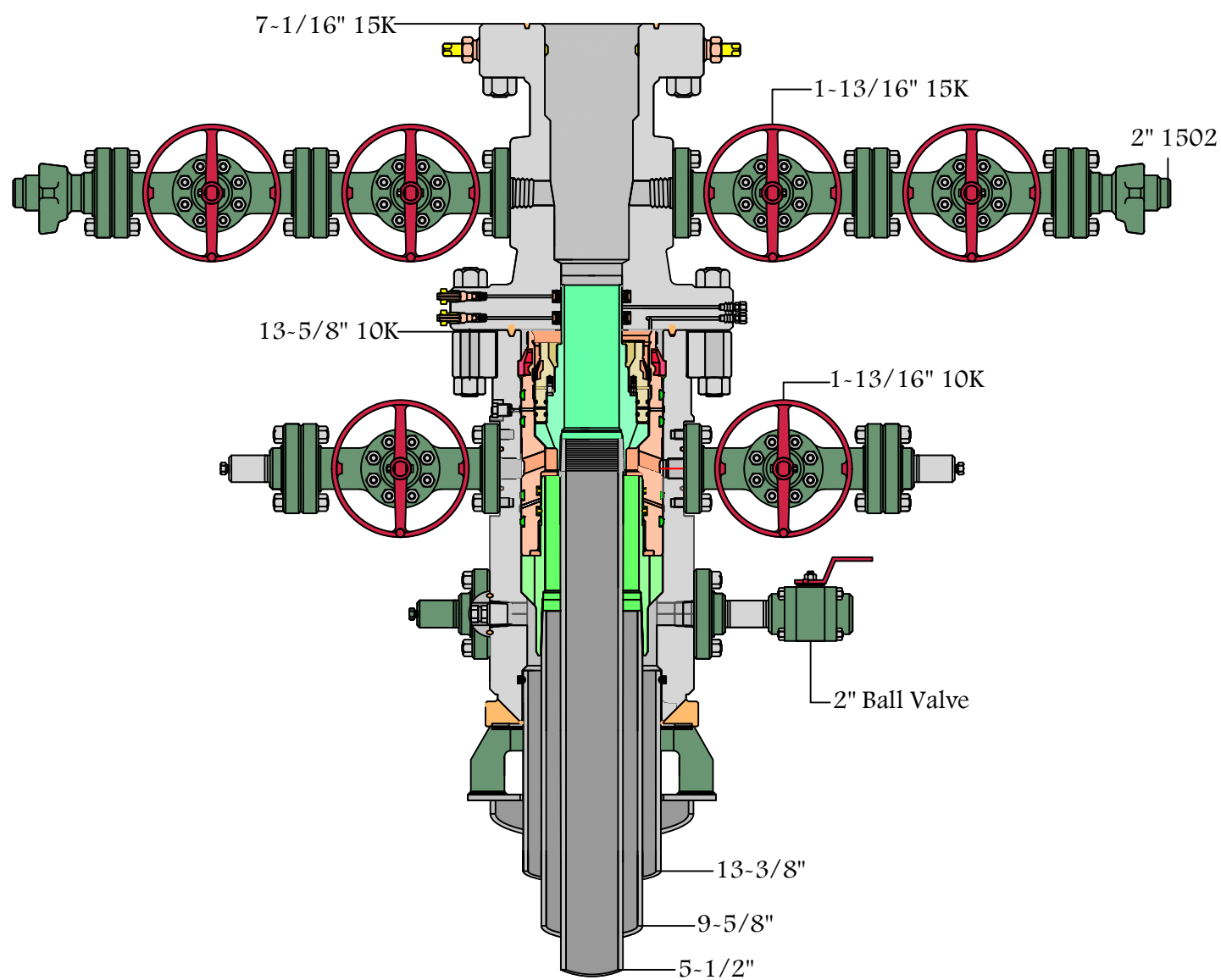
Cactus\_Flex\_Hose\_16C\_Certification\_20200206081511.pdf







**Hole Sections Utilized**  
**\*12 1/4" Hole below Surface Casing**  
**\*8 3/4"-8 1/2" Hole below Intermediate casing**



RKI

## Worksheet for determining GB Connection Running Torque at the beginning of a Casing Run


Ignore joints that are assembled with threadlock compounds. See "Addendum Procedure for GB Connections Assembled with Threadlocking Compounds" available at [www.gbtubulars.com](http://www.gbtubulars.com).

### Pertinent Excerpt from GB Running Procedure

5. Stab the pin carefully into the coupling of the joint hanging in the rotary table. A stabbing guide is recommended to protect the pin nose and leading thread from physical damage that may contribute to thread galling. Make up each connection until shoulder engagement plus delta torque  $\geq 10\%$  of the shoulder torque without exceeding the Maximum Makeup Torque. Record the shoulder torque observed for the first 10 joints (excluding threadlocked accessory joints). The Running Torque is (a) the Minimum Makeup Torque shown on the GB Connection Performance Property Sheets or (b) the Maximum Shoulder Torque recorded from the first 10 makeups + 10%, whichever is higher (rounded to the next highest 500 ft.-lbs.) When making up the initial joints for establishing the Running Torque carefully watch the torque gauge for the shoulder torque and try to manually shut down the tongs before reaching Maximum Makeup Torque shown on the GB Connection Performance Property Sheets. Alternately, the dump valve should be set to the Maximum Makeup Torque during this initial process.

6. After the first 10 makeups (more if necessary due to conditions at the time of the run), use the "Running Torque" established in Step 5 for the remainder of the string. A dump valve is strongly recommended to stop makeup once the established Running Torque is achieved.

Casing Data		Comment
OD (in)		See GB Connection Data Sheet
Weight (ppf)		See GB Connection Data Sheet
Grade		See GB Connection Data Sheet
Min MU Torque (ft-lbs)		See GB Connection Data Sheet
Max MU Torque (ft-lbs)		(2 X Min MU Tq)
Max Operating Torque (ft-lbs)		The Maximum Operating Torque is <b>NOT</b> the Maximum Makeup Torque and is <b>NOT</b> a sustainable rotating torque. Operating at the Maximum Operating Torque for any length of time will likely damage the connection.

Notes	Joint No.	Shoulder Torque (ft-lbs)	Final Torque (ft-lbs)	Triangle Stamp Position Sketch (  )
Required	1			
Required	2			
Required	3			
Required	4			
Required	5			
Required	6			
Required	7			
Required	8			
Required	9			
Required	10			
Optional	11			
Optional	12			
Optional	13			
Optional	14			
Optional	15			
Max. Shoulder Torque				
<b>A</b> Max. Shoulder Torque + 10%				
<b>B</b> Min. Makeup Torque (from GB Conn. Data Sheet)				
<b>Running Torque (ft-lbs)</b>			<b>A or B, whichever is greater.</b>	

Optional joints should be added if there is wide variability in shoulder torques recorded during the initial 10 joints. Judgement should be used to determine if more than 10 joints are needed for the purpose of establishing the Running Torque and, if so, how many more should be added.

Wide variations in Shoulder Torque during the first ten (10) joints suggest other issues requiring attention such as poor alignment, improper amount and distribution of thread compound, etc. Refer to 2nd paragraph of GB Running Procedure for possible contributing factors to aid troubleshooting.

**GB Tubulars**  
 950 Threadneedle, Suite 130  
 Houston TX 77079  
 Toll Free: 1-888-245-3848  
 Main: 713-465-3585  
 Fax: 713-984-1529

For Technical Information, contact:  
 Gene Mannella  
[genem@gbtubulars.com](mailto:genem@gbtubulars.com)  
 Qing Lu  
[qingl@gbtubulars.com](mailto:qingl@gbtubulars.com)

Kaiser-Francis Oil  
Company Bell Lake Unit  
North 209H  
Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor (Min 1.8)	Joint Tensile Safety Factor (Min 1.8)
Conductor	120'	20"				New		120														
Surface	1300	13-3/8"	54.5	J-55	BTC	New	17-1/2"	1300	FW	8.4 - 9.0	32 - 34	NC	9	562	1130	2730	853000	909000	2.0	4.9	13.0	13.9
Intermediate	4872	9-5/8"	40	HCP-110	LTC	New	12-1/4"	4825	DBE	8.7 - 8.9	28	NC	8.9	2233	4230	7900	1260000	1266000	1.9	3.5	6.5	6.6
Production	18479	5-1/2"	20	P110	GBCD	New	8-3/4"	10290	OBM	8.7 - 8.9	28-29	NC	8.9	4762	11100	12640	641000	667000	2.3	2.7	3.1	3.2

Kaiser-Francis Oil  
Company Bell Lake Unit  
North 209H  
Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor (Min 1.8)	Joint Tensile Safety Factor (Min 1.8)
Conductor	120'	20"				New		120														
Surface	1300	13-3/8"	54.5	J-55	BTC	New	17-1/2"	1300	FW	8.4 - 9.0	32 - 34	NC	9	562	1130	2730	853000	909000	2.0	4.9	13.0	13.9
Intermediate	4872	9-5/8"	40	HCP-110	LTC	New	12-1/4"	4825	DBE	8.7 - 8.9	28	NC	8.9	2233	4230	7900	1260000	1266000	1.9	3.5	6.5	6.6
Production	18479	5-1/2"	20	P110	GBCD	New	8-3/4"	10290	OBM	8.7 - 8.9	28-29	NC	8.9	4762	11100	12640	641000	667000	2.3	2.7	3.1	3.2



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

**Bell Lake Unit North  
SECTION 1 -T23S-R33E  
SECTION 6 -T23S-R34E  
SECTION 5 -T23S-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
Training	8
Public Relations	8
Maps	

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

### **Calculation for the 500 ppm ROE:**

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

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  $X=[(1.589)(.0150)(200)]^{(0.6258)}$

$$X=2.65'$$

ROE for 500 PPM  $X=[(.4546)(.0150)(200)]^{(0.6258)}$

$$X=1.2'$$

(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.

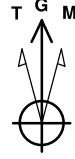
Our objective is to see that all reports of any emergency are factual and represent the company's position fairly and accurately. Cooperation with news media representatives is the most reliable guarantee that this objective will be met.

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: BLUN Pad 8  
 Well: Bell Lake Unit North 209H  
 Wellbore: #209H OH  
 Design: Plan #1

## CASING DETAILS

TVD	MD	Name
1200.00	1200.00	13 3/8"
4825.00	4871.75	9 5/8"

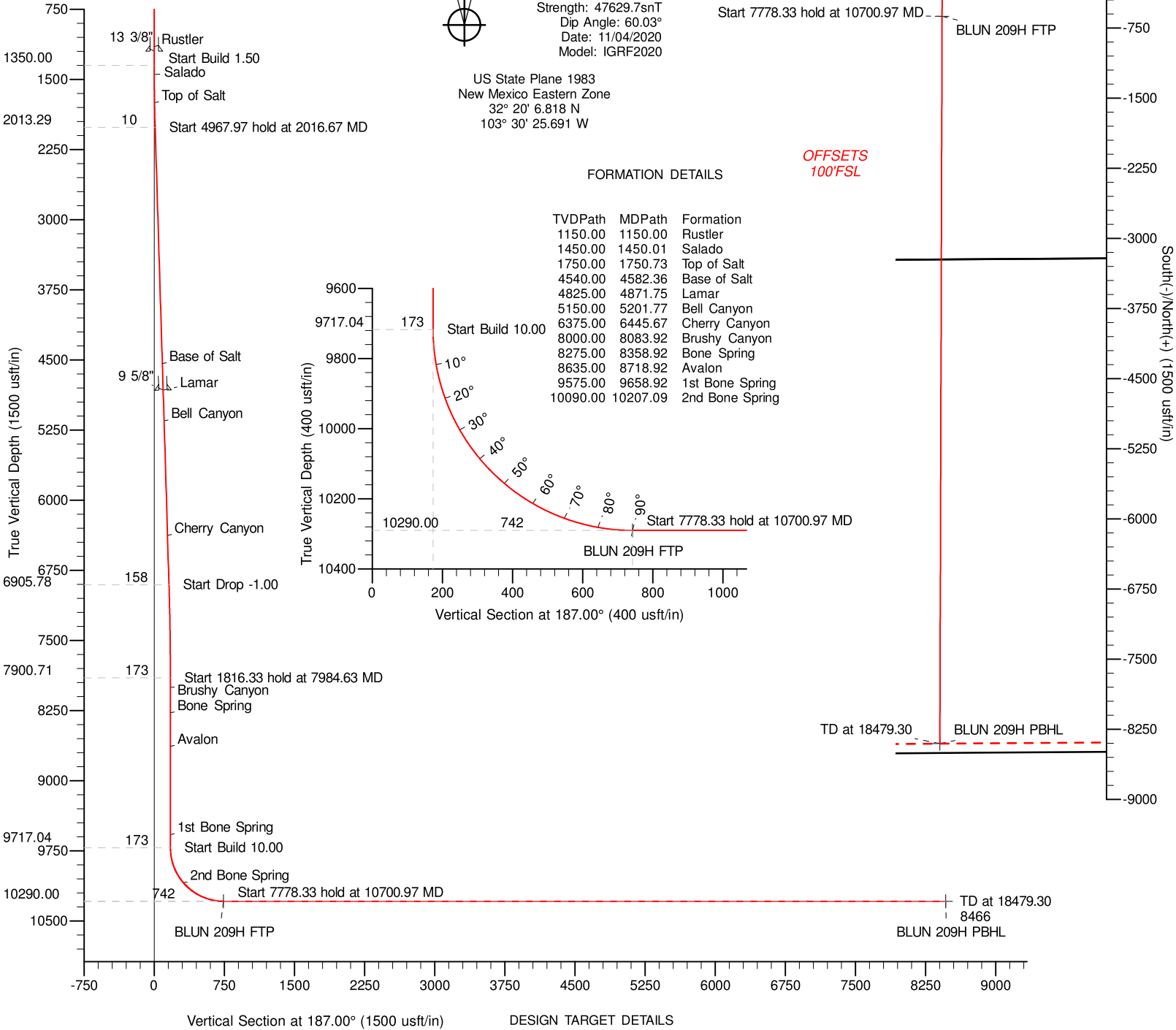


Azimuths to Grid North  
 True North: -0.44°  
 Magnetic North: 6.15°

Magnetic Field  
 Strength: 47629.7nT  
 Dip Angle: 60.03°  
 Date: 11/04/2020  
 Model: IGRF2020

US State Plane 1983  
 New Mexico Eastern Zone  
 32° 20' 6.818 N  
 103° 30' 25.691 W

West(-)/East(+) (1500 usft/in)  
 -1500 -750 0 750



Vertical Section at 187.00° (1500 usft/in)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BLUN 209H SL	0.00	0.00	0.00	486671.88	796516.28	32° 20' 6.818 N 03° 30' 25.691 W	
BLUN 209H FTP	10290.00	-624.15	-1008.17	486047.74	795508.13	32° 20' 0.720 N 03° 30' 37.497 W	
BLUN 209H PBHL	10290.00	-8402.44	-1031.44	478269.58	795484.86	32° 18' 43.757 N 03° 30' 38.464 W	

## SECTION DETAILS

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	1350.00	0.00	0.00	1350.00	0.00	0.00	0.00	0.00	0.00	
3	2016.67	10.00	267.09	2013.29	-2.95	-57.96	1.50	267.09	9.99	
4	6984.63	10.00	267.09	6905.78	-46.76	-919.52	0.00	0.00	158.45	
5	7984.63	0.00	0.00	7900.71	-51.19	-1006.45	1.00	180.00	173.43	
6	9800.97	0.00	0.00	9717.04	-51.19	-1006.45	0.00	0.00	173.43	
7	10700.97	90.00	180.17	10290.00	-624.14	-1008.17	10.00	180.17	742.33	
8	18479.30	90.00	180.17	10290.00	-8402.44	-1031.44	0.00	0.00	8465.51	BLUN 209H PBHL

S6-T23S-R34E SL  
 2065'FNL 1985'FEL  
 S6-T23S-R34E FTP  
 2600'FSL 2190'FWL  
 S7-T23S-R34E 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 North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H 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>	BLUN Pad 8, Centered on 209H		
<b>Site Position:</b>		<b>Northing:</b>	486,671.88 usft
<b>From:</b>	Map	<b>Easting:</b>	796,516.28 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 20' 6.818 N
		<b>Longitude:</b>	103° 30' 25.691 W
		<b>Grid Convergence:</b>	0.44 °

<b>Well</b>	Bell Lake Unit North 209H - Slot H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 486,671.88 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 796,516.28 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	32° 20' 6.818 N
		<b>Longitude:</b>	103° 30' 25.691 W
		<b>Ground Level:</b>	3,462.20 usft

<b>Wellbore</b>	#209H 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	11/04/20	6.60	60.03	47,629.74086497

<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	187.00	

<b>Planned Survey</b>										
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	
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Rustler</b>										
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>13 3/8"</b>										
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.75	267.09	1,400.00	-0.02	-0.33	0.06	1.50	1.50	0.00	
1,450.01	1.50	267.09	1,450.00	-0.07	-1.31	0.23	1.50	1.50	0.00	
<b>Salado</b>										
1,500.00	2.25	267.09	1,499.96	-0.15	-2.94	0.51	1.50	1.50	0.00	
1,600.00	3.75	267.09	1,599.82	-0.42	-8.17	1.41	1.50	1.50	0.00	
1,700.00	5.25	267.09	1,699.51	-0.81	-16.00	2.76	1.50	1.50	0.00	
1,750.73	6.01	267.09	1,750.00	-1.07	-20.97	3.61	1.50	1.50	0.00	
<b>Top of Salt</b>										
1,800.00	6.75	267.09	1,798.96	-1.34	-26.44	4.56	1.50	1.50	0.00	
1,900.00	8.25	267.09	1,898.10	-2.01	-39.48	6.80	1.50	1.50	0.00	

# Titan Directional Drilling

## Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H 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)
2,000.00	9.75	267.09	1,996.87	-2.80	-55.10	9.49	1.50	1.50	0.00
2,016.67	10.00	267.09	2,013.29	-2.95	-57.96	9.99	1.50	1.50	0.00
2,100.00	10.00	267.09	2,095.35	-3.68	-72.41	12.48	0.00	0.00	0.00
2,200.00	10.00	267.09	2,193.84	-4.56	-89.75	15.47	0.00	0.00	0.00
2,300.00	10.00	267.09	2,292.32	-5.45	-107.09	18.45	0.00	0.00	0.00
2,400.00	10.00	267.09	2,390.80	-6.33	-124.43	21.44	0.00	0.00	0.00
2,500.00	10.00	267.09	2,489.28	-7.21	-141.78	24.43	0.00	0.00	0.00
2,600.00	10.00	267.09	2,587.76	-8.09	-159.12	27.42	0.00	0.00	0.00
2,700.00	10.00	267.09	2,686.24	-8.97	-176.46	30.41	0.00	0.00	0.00
2,800.00	10.00	267.09	2,784.72	-9.86	-193.80	33.40	0.00	0.00	0.00
2,900.00	10.00	267.09	2,883.20	-10.74	-211.15	36.38	0.00	0.00	0.00
3,000.00	10.00	267.09	2,981.68	-11.62	-228.49	39.37	0.00	0.00	0.00
3,100.00	10.00	267.09	3,080.16	-12.50	-245.83	42.36	0.00	0.00	0.00
3,200.00	10.00	267.09	3,178.64	-13.38	-263.17	45.35	0.00	0.00	0.00
3,300.00	10.00	267.09	3,277.12	-14.27	-280.52	48.34	0.00	0.00	0.00
3,400.00	10.00	267.09	3,375.60	-15.15	-297.86	51.33	0.00	0.00	0.00
3,500.00	10.00	267.09	3,474.09	-16.03	-315.20	54.31	0.00	0.00	0.00
3,600.00	10.00	267.09	3,572.57	-16.91	-332.54	57.30	0.00	0.00	0.00
3,700.00	10.00	267.09	3,671.05	-17.79	-349.89	60.29	0.00	0.00	0.00
3,800.00	10.00	267.09	3,769.53	-18.68	-367.23	63.28	0.00	0.00	0.00
3,900.00	10.00	267.09	3,868.01	-19.56	-384.57	66.27	0.00	0.00	0.00
4,000.00	10.00	267.09	3,966.49	-20.44	-401.91	69.26	0.00	0.00	0.00
4,100.00	10.00	267.09	4,064.97	-21.32	-419.26	72.25	0.00	0.00	0.00
4,200.00	10.00	267.09	4,163.45	-22.20	-436.60	75.23	0.00	0.00	0.00
4,300.00	10.00	267.09	4,261.93	-23.09	-453.94	78.22	0.00	0.00	0.00
4,400.00	10.00	267.09	4,360.41	-23.97	-471.28	81.21	0.00	0.00	0.00
4,500.00	10.00	267.09	4,458.89	-24.85	-488.62	84.20	0.00	0.00	0.00
4,582.36	10.00	267.09	4,540.00	-25.58	-502.91	86.66	0.00	0.00	0.00
<b>Base of Salt</b>									
4,600.00	10.00	267.09	4,557.37	-25.73	-505.97	87.19	0.00	0.00	0.00
4,700.00	10.00	267.09	4,655.85	-26.61	-523.31	90.18	0.00	0.00	0.00
4,800.00	10.00	267.09	4,754.34	-27.50	-540.65	93.16	0.00	0.00	0.00
4,871.75	10.00	267.09	4,825.00	-28.13	-553.10	95.31	0.00	0.00	0.00
<b>Lamar - 9 5/8"</b>									
4,900.00	10.00	267.09	4,852.82	-28.38	-557.99	96.15	0.00	0.00	0.00
5,000.00	10.00	267.09	4,951.30	-29.26	-575.34	99.14	0.00	0.00	0.00
5,100.00	10.00	267.09	5,049.78	-30.14	-592.68	102.13	0.00	0.00	0.00
5,200.00	10.00	267.09	5,148.26	-31.02	-610.02	105.12	0.00	0.00	0.00
5,201.77	10.00	267.09	5,150.00	-31.04	-610.33	105.17	0.00	0.00	0.00
<b>Bell Canyon</b>									
5,300.00	10.00	267.09	5,246.74	-31.91	-627.36	108.11	0.00	0.00	0.00
5,400.00	10.00	267.09	5,345.22	-32.79	-644.71	111.09	0.00	0.00	0.00
5,500.00	10.00	267.09	5,443.70	-33.67	-662.05	114.08	0.00	0.00	0.00
5,600.00	10.00	267.09	5,542.18	-34.55	-679.39	117.07	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 North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H 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)
5,700.00	10.00	267.09	5,640.66	-35.43	-696.73	120.06	0.00	0.00	0.00
5,800.00	10.00	267.09	5,739.14	-36.32	-714.08	123.05	0.00	0.00	0.00
5,900.00	10.00	267.09	5,837.62	-37.20	-731.42	126.04	0.00	0.00	0.00
6,000.00	10.00	267.09	5,936.10	-38.08	-748.76	129.03	0.00	0.00	0.00
6,100.00	10.00	267.09	6,034.59	-38.96	-766.10	132.01	0.00	0.00	0.00
6,200.00	10.00	267.09	6,133.07	-39.84	-783.45	135.00	0.00	0.00	0.00
6,300.00	10.00	267.09	6,231.55	-40.73	-800.79	137.99	0.00	0.00	0.00
6,400.00	10.00	267.09	6,330.03	-41.61	-818.13	140.98	0.00	0.00	0.00
6,445.67	10.00	267.09	6,375.00	-42.01	-826.05	142.34	0.00	0.00	0.00
<b>Cherry Canyon</b>									
6,500.00	10.00	267.09	6,428.51	-42.49	-835.47	143.97	0.00	0.00	0.00
6,600.00	10.00	267.09	6,526.99	-43.37	-852.82	146.96	0.00	0.00	0.00
6,700.00	10.00	267.09	6,625.47	-44.25	-870.16	149.94	0.00	0.00	0.00
6,800.00	10.00	267.09	6,723.95	-45.14	-887.50	152.93	0.00	0.00	0.00
6,900.00	10.00	267.09	6,822.43	-46.02	-904.84	155.92	0.00	0.00	0.00
6,984.63	10.00	267.09	6,905.78	-46.76	-919.52	158.45	0.00	0.00	0.00
7,000.00	9.85	267.09	6,920.92	-46.90	-922.16	158.91	1.00	-1.00	0.00
7,100.00	8.85	267.09	7,019.59	-47.72	-938.38	161.70	1.00	-1.00	0.00
7,200.00	7.85	267.09	7,118.53	-48.46	-952.88	164.20	1.00	-1.00	0.00
7,300.00	6.85	267.09	7,217.70	-49.11	-965.65	166.40	1.00	-1.00	0.00
7,400.00	5.85	267.09	7,317.09	-49.67	-976.69	168.30	1.00	-1.00	0.00
7,500.00	4.85	267.09	7,416.65	-50.15	-985.99	169.91	1.00	-1.00	0.00
7,600.00	3.85	267.09	7,516.37	-50.53	-993.56	171.21	1.00	-1.00	0.00
7,700.00	2.85	267.09	7,616.19	-50.83	-999.39	172.21	1.00	-1.00	0.00
7,800.00	1.85	267.09	7,716.11	-51.03	-1,003.48	172.92	1.00	-1.00	0.00
7,900.00	0.85	267.09	7,816.08	-51.15	-1,005.83	173.32	1.00	-1.00	0.00
7,984.63	0.00	0.00	7,900.71	-51.19	-1,006.45	173.43	1.00	-1.00	0.00
8,000.00	0.00	0.00	7,916.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,083.92	0.00	0.00	8,000.00	-51.19	-1,006.45	173.43	0.00	0.00	0.00
<b>Brushy Canyon</b>									
8,100.00	0.00	0.00	8,016.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,200.00	0.00	0.00	8,116.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,300.00	0.00	0.00	8,216.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,358.92	0.00	0.00	8,275.00	-51.19	-1,006.45	173.43	0.00	0.00	0.00
<b>Bone Spring</b>									
8,400.00	0.00	0.00	8,316.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,500.00	0.00	0.00	8,416.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,600.00	0.00	0.00	8,516.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,700.00	0.00	0.00	8,616.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,718.92	0.00	0.00	8,635.00	-51.19	-1,006.45	173.43	0.00	0.00	0.00
<b>Avalon</b>									
8,800.00	0.00	0.00	8,716.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
8,900.00	0.00	0.00	8,816.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,000.00	0.00	0.00	8,916.08	-51.19	-1,006.45	173.43	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 North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H 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)
9,100.00	0.00	0.00	9,016.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,200.00	0.00	0.00	9,116.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,300.00	0.00	0.00	9,216.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,400.00	0.00	0.00	9,316.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,500.00	0.00	0.00	9,416.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,600.00	0.00	0.00	9,516.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,658.92	0.00	0.00	9,575.00	-51.19	-1,006.45	173.43	0.00	0.00	0.00
<b>1st Bone Spring</b>									
9,700.00	0.00	0.00	9,616.08	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,800.97	0.00	0.00	9,717.04	-51.19	-1,006.45	173.43	0.00	0.00	0.00
9,850.00	4.90	180.17	9,766.02	-53.28	-1,006.46	175.51	10.00	10.00	0.00
9,900.00	9.90	180.17	9,815.58	-59.72	-1,006.48	181.91	10.00	10.00	0.00
9,950.00	14.90	180.17	9,864.40	-70.46	-1,006.51	192.57	10.00	10.00	0.00
10,000.00	19.90	180.17	9,912.10	-85.41	-1,006.55	207.41	10.00	10.00	0.00
10,050.00	24.90	180.17	9,958.31	-104.46	-1,006.61	226.33	10.00	10.00	0.00
10,100.00	29.90	180.17	10,002.68	-127.47	-1,006.68	249.17	10.00	10.00	0.00
10,150.00	34.90	180.17	10,044.89	-154.25	-1,006.76	275.77	10.00	10.00	0.00
10,200.00	39.90	180.17	10,084.59	-184.61	-1,006.85	305.91	10.00	10.00	0.00
10,207.09	40.61	180.17	10,090.00	-189.19	-1,006.87	310.46	10.00	10.00	0.00
<b>2nd Bone Spring</b>									
10,250.00	44.90	180.17	10,121.50	-218.32	-1,006.95	339.38	10.00	10.00	0.00
10,300.00	49.90	180.17	10,155.33	-255.11	-1,007.06	375.91	10.00	10.00	0.00
10,350.00	54.90	180.17	10,185.83	-294.72	-1,007.18	415.24	10.00	10.00	0.00
10,400.00	59.90	180.17	10,212.76	-336.83	-1,007.31	457.05	10.00	10.00	0.00
10,450.00	64.90	180.17	10,235.91	-381.13	-1,007.44	501.03	10.00	10.00	0.00
10,500.00	69.90	180.17	10,255.12	-427.27	-1,007.58	546.85	10.00	10.00	0.00
10,550.00	74.90	180.17	10,270.23	-474.92	-1,007.72	594.16	10.00	10.00	0.00
10,600.00	79.90	180.17	10,281.13	-523.70	-1,007.87	642.59	10.00	10.00	0.00
10,650.00	84.90	180.17	10,287.74	-573.24	-1,008.01	691.79	10.00	10.00	0.00
10,700.97	90.00	180.17	10,290.00	-624.14	-1,008.17	742.33	10.00	10.00	0.00
10,800.00	90.00	180.17	10,290.00	-723.18	-1,008.46	840.66	0.00	0.00	0.00
10,900.00	90.00	180.17	10,290.00	-823.17	-1,008.76	939.95	0.00	0.00	0.00
11,000.00	90.00	180.17	10,290.00	-923.17	-1,009.06	1,039.24	0.00	0.00	0.00
11,100.00	90.00	180.17	10,290.00	-1,023.17	-1,009.36	1,138.53	0.00	0.00	0.00
11,200.00	90.00	180.17	10,290.00	-1,123.17	-1,009.66	1,237.82	0.00	0.00	0.00
11,300.00	90.00	180.17	10,290.00	-1,223.17	-1,009.96	1,337.11	0.00	0.00	0.00
11,400.00	90.00	180.17	10,290.00	-1,323.17	-1,010.26	1,436.40	0.00	0.00	0.00
11,500.00	90.00	180.17	10,290.00	-1,423.17	-1,010.56	1,535.70	0.00	0.00	0.00
11,600.00	90.00	180.17	10,290.00	-1,523.17	-1,010.86	1,634.99	0.00	0.00	0.00
11,700.00	90.00	180.17	10,290.00	-1,623.17	-1,011.16	1,734.28	0.00	0.00	0.00
11,800.00	90.00	180.17	10,290.00	-1,723.17	-1,011.45	1,833.57	0.00	0.00	0.00
11,900.00	90.00	180.17	10,290.00	-1,823.17	-1,011.75	1,932.86	0.00	0.00	0.00
12,000.00	90.00	180.17	10,290.00	-1,923.17	-1,012.05	2,032.15	0.00	0.00	0.00
12,100.00	90.00	180.17	10,290.00	-2,023.17	-1,012.35	2,131.44	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 North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H 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)
12,200.00	90.00	180.17	10,290.00	-2,123.17	-1,012.65	2,230.73	0.00	0.00	0.00
12,300.00	90.00	180.17	10,290.00	-2,223.17	-1,012.95	2,330.02	0.00	0.00	0.00
12,400.00	90.00	180.17	10,290.00	-2,323.17	-1,013.25	2,429.31	0.00	0.00	0.00
12,500.00	90.00	180.17	10,290.00	-2,423.17	-1,013.55	2,528.61	0.00	0.00	0.00
12,600.00	90.00	180.17	10,290.00	-2,523.17	-1,013.85	2,627.90	0.00	0.00	0.00
12,700.00	90.00	180.17	10,290.00	-2,623.17	-1,014.15	2,727.19	0.00	0.00	0.00
12,800.00	90.00	180.17	10,290.00	-2,723.17	-1,014.45	2,826.48	0.00	0.00	0.00
12,900.00	90.00	180.17	10,290.00	-2,823.17	-1,014.75	2,925.77	0.00	0.00	0.00
13,000.00	90.00	180.17	10,290.00	-2,923.17	-1,015.04	3,025.06	0.00	0.00	0.00
13,100.00	90.00	180.17	10,290.00	-3,023.16	-1,015.34	3,124.35	0.00	0.00	0.00
13,200.00	90.00	180.17	10,290.00	-3,123.16	-1,015.64	3,223.64	0.00	0.00	0.00
13,300.00	90.00	180.17	10,290.00	-3,223.16	-1,015.94	3,322.93	0.00	0.00	0.00
13,400.00	90.00	180.17	10,290.00	-3,323.16	-1,016.24	3,422.22	0.00	0.00	0.00
13,500.00	90.00	180.17	10,290.00	-3,423.16	-1,016.54	3,521.52	0.00	0.00	0.00
13,600.00	90.00	180.17	10,290.00	-3,523.16	-1,016.84	3,620.81	0.00	0.00	0.00
13,700.00	90.00	180.17	10,290.00	-3,623.16	-1,017.14	3,720.10	0.00	0.00	0.00
13,800.00	90.00	180.17	10,290.00	-3,723.16	-1,017.44	3,819.39	0.00	0.00	0.00
13,900.00	90.00	180.17	10,290.00	-3,823.16	-1,017.74	3,918.68	0.00	0.00	0.00
14,000.00	90.00	180.17	10,290.00	-3,923.16	-1,018.04	4,017.97	0.00	0.00	0.00
14,100.00	90.00	180.17	10,290.00	-4,023.16	-1,018.34	4,117.26	0.00	0.00	0.00
14,200.00	90.00	180.17	10,290.00	-4,123.16	-1,018.63	4,216.55	0.00	0.00	0.00
14,300.00	90.00	180.17	10,290.00	-4,223.16	-1,018.93	4,315.84	0.00	0.00	0.00
14,400.00	90.00	180.17	10,290.00	-4,323.16	-1,019.23	4,415.13	0.00	0.00	0.00
14,500.00	90.00	180.17	10,290.00	-4,423.16	-1,019.53	4,514.42	0.00	0.00	0.00
14,600.00	90.00	180.17	10,290.00	-4,523.16	-1,019.83	4,613.72	0.00	0.00	0.00
14,700.00	90.00	180.17	10,290.00	-4,623.16	-1,020.13	4,713.01	0.00	0.00	0.00
14,800.00	90.00	180.17	10,290.00	-4,723.16	-1,020.43	4,812.30	0.00	0.00	0.00
14,900.00	90.00	180.17	10,290.00	-4,823.16	-1,020.73	4,911.59	0.00	0.00	0.00
15,000.00	90.00	180.17	10,290.00	-4,923.16	-1,021.03	5,010.88	0.00	0.00	0.00
15,100.00	90.00	180.17	10,290.00	-5,023.16	-1,021.33	5,110.17	0.00	0.00	0.00
15,200.00	90.00	180.17	10,290.00	-5,123.16	-1,021.63	5,209.46	0.00	0.00	0.00
15,300.00	90.00	180.17	10,290.00	-5,223.16	-1,021.93	5,308.75	0.00	0.00	0.00
15,400.00	90.00	180.17	10,290.00	-5,323.15	-1,022.22	5,408.04	0.00	0.00	0.00
15,500.00	90.00	180.17	10,290.00	-5,423.15	-1,022.52	5,507.33	0.00	0.00	0.00
15,600.00	90.00	180.17	10,290.00	-5,523.15	-1,022.82	5,606.63	0.00	0.00	0.00
15,700.00	90.00	180.17	10,290.00	-5,623.15	-1,023.12	5,705.92	0.00	0.00	0.00
15,800.00	90.00	180.17	10,290.00	-5,723.15	-1,023.42	5,805.21	0.00	0.00	0.00
15,900.00	90.00	180.17	10,290.00	-5,823.15	-1,023.72	5,904.50	0.00	0.00	0.00
16,000.00	90.00	180.17	10,290.00	-5,923.15	-1,024.02	6,003.79	0.00	0.00	0.00
16,100.00	90.00	180.17	10,290.00	-6,023.15	-1,024.32	6,103.08	0.00	0.00	0.00
16,200.00	90.00	180.17	10,290.00	-6,123.15	-1,024.62	6,202.37	0.00	0.00	0.00
16,300.00	90.00	180.17	10,290.00	-6,223.15	-1,024.92	6,301.66	0.00	0.00	0.00
16,400.00	90.00	180.17	10,290.00	-6,323.15	-1,025.22	6,400.95	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 North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H 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)
16,500.00	90.00	180.17	10,290.00	-6,423.15	-1,025.52	6,500.24	0.00	0.00	0.00
16,600.00	90.00	180.17	10,290.00	-6,523.15	-1,025.81	6,599.54	0.00	0.00	0.00
16,700.00	90.00	180.17	10,290.00	-6,623.15	-1,026.11	6,698.83	0.00	0.00	0.00
16,800.00	90.00	180.17	10,290.00	-6,723.15	-1,026.41	6,798.12	0.00	0.00	0.00
16,900.00	90.00	180.17	10,290.00	-6,823.15	-1,026.71	6,897.41	0.00	0.00	0.00
17,000.00	90.00	180.17	10,290.00	-6,923.15	-1,027.01	6,996.70	0.00	0.00	0.00
17,100.00	90.00	180.17	10,290.00	-7,023.15	-1,027.31	7,095.99	0.00	0.00	0.00
17,200.00	90.00	180.17	10,290.00	-7,123.15	-1,027.61	7,195.28	0.00	0.00	0.00
17,300.00	90.00	180.17	10,290.00	-7,223.15	-1,027.91	7,294.57	0.00	0.00	0.00
17,400.00	90.00	180.17	10,290.00	-7,323.15	-1,028.21	7,393.86	0.00	0.00	0.00
17,500.00	90.00	180.17	10,290.00	-7,423.15	-1,028.51	7,493.15	0.00	0.00	0.00
17,600.00	90.00	180.17	10,290.00	-7,523.14	-1,028.81	7,592.45	0.00	0.00	0.00
17,700.00	90.00	180.17	10,290.00	-7,623.14	-1,029.11	7,691.74	0.00	0.00	0.00
17,800.00	90.00	180.17	10,290.00	-7,723.14	-1,029.40	7,791.03	0.00	0.00	0.00
17,900.00	90.00	180.17	10,290.00	-7,823.14	-1,029.70	7,890.32	0.00	0.00	0.00
18,000.00	90.00	180.17	10,290.00	-7,923.14	-1,030.00	7,989.61	0.00	0.00	0.00
18,100.00	90.00	180.17	10,290.00	-8,023.14	-1,030.30	8,088.90	0.00	0.00	0.00
18,200.00	90.00	180.17	10,290.00	-8,123.14	-1,030.60	8,188.19	0.00	0.00	0.00
18,300.00	90.00	180.17	10,290.00	-8,223.14	-1,030.90	8,287.48	0.00	0.00	0.00
18,400.00	90.00	180.17	10,290.00	-8,323.14	-1,031.20	8,386.77	0.00	0.00	0.00
18,479.30	90.00	180.17	10,290.00	-8,402.44	-1,031.44	8,465.51	0.00	0.00	0.00

### Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,200.00	1,200.00	13 3/8"	13-3/8	17-1/2
4,871.75	4,825.00	9 5/8"	9-5/8	12-1/4

# Titan Directional Drilling

## Survey Report

<b>Company:</b>	Kaiser-Francis Oil Company	<b>Local Co-ordinate Reference:</b>	Well Bell Lake Unit North 209H - Slot H
<b>Project:</b>	Permian NM E'83	<b>TVD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Site:</b>	BLUN Pad 8	<b>MD Reference:</b>	est.GL+KB @ 3488.00usft (planning)
<b>Well:</b>	Bell Lake Unit North 209H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#209H OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5k-14

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,150.00	1,150.00	Rustler		0.00		
1,450.01	1,450.00	Salado		0.00		
1,750.73	1,750.00	Top of Salt		0.00		
4,582.36	4,540.00	Base of Salt		0.00		
4,871.75	4,825.00	Lamar		0.00		
5,201.77	5,150.00	Bell Canyon		0.00		
6,445.67	6,375.00	Cherry Canyon		0.00		
8,083.92	8,000.00	Brushy Canyon		0.00		
8,358.92	8,275.00	Bone Spring		0.00		
8,718.92	8,635.00	Avalon		0.00		
9,658.92	9,575.00	1st Bone Spring		0.00		
10,207.09	10,090.00	2nd Bone Spring		0.00		

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: **01/26/2020**

☒ 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 North 209H		6-23S-34E		2000	0	
Bell Lake Unit North 210H		6-23S-34E		2000	0	
Bell Lake Unit North 309H		6-23S-34E		2000	0	
Bell Lake Unit North 310H		6-23S-34E		2000	0	
Bell Lake Unit North 409H		6-23S-34E		2000	0	
Bell Lake Unit North 410H		6-23S-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