

**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 Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101  
August 1, 2011  
Permit 286729

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address KAISER-FRANCIS OIL CO P.O. Box 21468 Tulsa, OK 74121		2. OGRID Number 12361
		3. API Number 30-025-47732
4. Property Code 316706	5. Property Name BELL LAKE UNIT SOUTH	6. Well No. 227H

**7. Surface Location**

UL - Lot J	Section 6	Township 24S	Range 34E	Lot Idn J	Feet From 2001	N/S Line S	Feet From 2314	E/W Line E	County Lea
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**8. Proposed Bottom Hole Location**

UL - Lot C	Section 31	Township 23S	Range 34E	Lot Idn C	Feet From 330	N/S Line N	Feet From 2110	E/W Line W	County Lea
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**9. Pool Information**

BELL LAKE;BONE SPRING, SOUTH	98264
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3606
16. Multiple N	17. Proposed Depth 19016	18. Formation Bone Spring	19. Contractor	20. Spud Date 9/30/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1400	260	0
Int1	12.25	9.625	40	5300	1450	0
Prod	7.875	5.5	20	19016	450	4000

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type Double Ram	Working Pressure 10000	Test Pressure 5000	Manufacturer Cameron
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23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. <b>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.</b>  Signature: _____ Printed Name: Electronically filed by Kristin L Gray Title: _____ Email Address: kristing@kfoc.net Date: 9/17/2020	<b>OIL CONSERVATION DIVISION</b>  Approved By: Paul F Kautz Title: Geologist Approved Date: 9/25/2020 Expiration Date: 9/25/2022 Conditions of Approval Attached
Phone: 918-491-4209	

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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, 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	Pool Code	Pool Name
	98264	Bell Lake; Bone Spring, South
Property Code	Property Name	Well Number
316706	BELL LAKE UNIT SOUTH	227H
OGRID No.	Operator Name	Elevation
12361	KAISER-FRANCIS OIL COMPANY	3606'

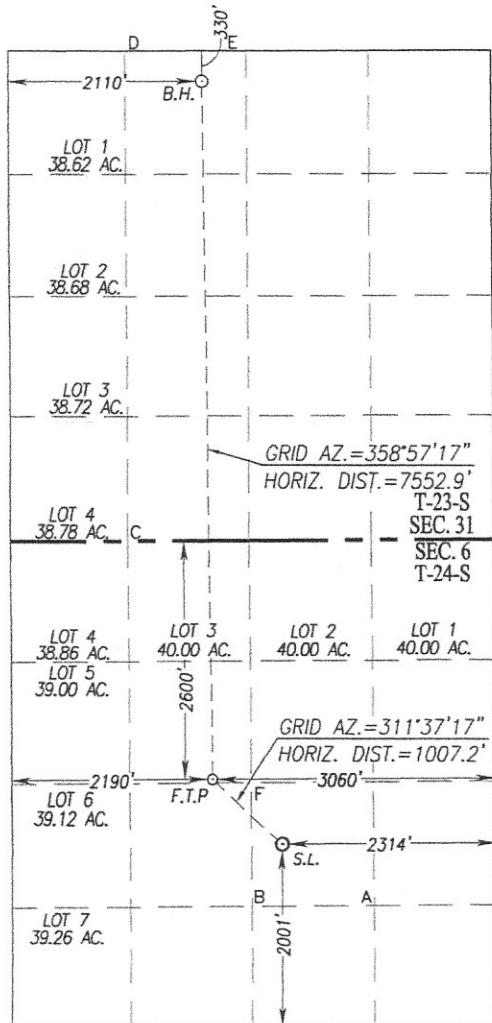
UL or lot No.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County
J	6	24-S	34-E	J	2001	SOUTH	2314	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County
C	31	23-S	34-E	C	330	NORTH	2110	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
472.66		-	-

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'

BOTTOM HOLE LOCATION	BOTTOM HOLE LOCATION
NAD 27 NME	NAD 83 NME
Y = 461946.0 N	Y = 462005.2 N
X = 754421.6 E	X = 795605.3 E
LAT. = 32.267324° N	LAT. = 32.267448° N
LONG. = 103.510219° W	LONG. = 103.510698° W

CORNER COORDINATES TABLE	
NAD 27 NME	
A - Y = 453055.3 N, X = 756313.1 E	
B - Y = 453044.2 N, X = 754993.4 E	
C - Y = 456988.9 N, X = 753631.4 E	
D - Y = 462271.4 N, X = 753583.6 E	
E - Y = 462278.5 N, X = 754903.2 E	
F - Y = 454363.7 N, X = 754979.3 E	

CORNER COORDINATES TABLE	
NAD 83 NME	
A - Y = 453114.2 N, X = 797497.0 E	
B - Y = 453103.1 N, X = 796177.3 E	
C - Y = 457047.9 N, X = 794815.2 E	
D - Y = 462330.6 N, X = 794767.3 E	
E - Y = 462337.7 N, X = 796086.8 E	
F - Y = 454422.7 N, X = 796163.2 E	

FIRST TAKE POINT	FIRST TAKE POINT
NAD 27 NME	NAD 83 NME
Y = 454396.0 N	Y = 454454.9 N
X = 754559.2 E	X = 795743.0 E
LAT. = 32.246568° N	LAT. = 32.246692° N
LONG. = 103.509962° W	LONG. = 103.510440° W

GEODETIC COORDINATES	GEODETIC COORDINATES
NAD 27 NME	NAD 83 NME
SURFACE LOCATION	SURFACE LOCATION
Y = 453727.1 N	Y = 453786.1 N
X = 755311.9 E	X = 796495.8 E
LAT. = 32.244714° N	LAT. = 32.244838° N
LONG. = 103.507544° W	LONG. = 103.508022° W

**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.

*Charlotte Van Valkenburg* 9/17/2020  
Signature Date

Charlotte Van Valkenburg  
Printed Name

Charlotv@kfoc.net  
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.

AUGUST 4, 2017

Date of Survey  
Signature & Seal of Professional Surveyor:

Certificate Number Gary G. Eidson 12641  
Ronald J. Eidson 3239

ACK REV.: 9/29/17 JWSC W.O.: 17.11.0786

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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**

**GAS CAPTURE PLAN**

Date: 9/25/2020

Original Operator & OGRID No.: [12361] KAISER-FRANCIS OIL CO

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, recomplete 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 #227H	30-025-47732	J-6-24S-34E	2001S 2314E	2000	None	

**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 MIDSTREAM SERVICES LLC and will be connected to TARGA MIDSTREAM SERVICES LLC High/Low Pressure gathering system located in Lea County, New Mexico. It will require 11000' of pipeline to connect the facility to High/Low Pressure gathering system. KAISER-FRANCIS OIL CO provides (periodically) to TARGA MIDSTREAM SERVICES LLC 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 CO and TARGA MIDSTREAM SERVICES LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at TARGA MIDSTREAM SERVICES LLC 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 MIDSTREAM SERVICES LLC system at that time. Based on current information, it is KAISER-FRANCIS OIL CO'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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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Comments

Permit 286729

**PERMIT COMMENTS**

Operator Name and Address: KAISER-FRANCIS OIL CO [12361] P.O. Box 21468 Tulsa, OK 74121	API Number: 30-025-47732
	Well: BELL LAKE UNIT SOUTH #227H

Created By	Comment	Comment Date
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Form APD Conditions

Permit 286729

**PERMIT CONDITIONS OF APPROVAL**

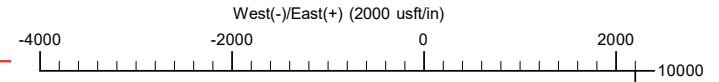
Operator Name and Address: KAISER-FRANCIS OIL CO [12361] P.O. Box 21468 Tulsa, OK 74121	API Number: 30-025-47732
	Well: BELL LAKE UNIT SOUTH #227H

OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required
pkautz	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.

# KAISER-FRANCIS OIL COMPANY

Kaiser-Francis Oil Company

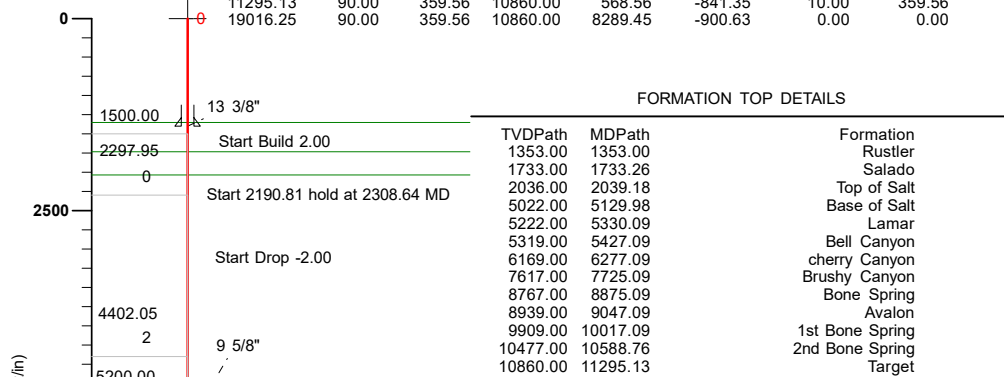
Project: Lea County, NM (NMEZ) NAD83 Grid 3605.9 @ 3605.90usft (GLOnly)  
 Site: Bell Lake Unit South 227H,228H,327H,428H North American Datum 1983  
 Well: BLUS 227H  
 Wellbore: Lateral  
 Design: Plan #1



### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
2308.64	16.17	269.70	2297.95	-0.59	-113.37	2.00	269.70	0.28	
4499.45	16.17	269.70	4402.05	-3.79	-723.58	0.00	0.00	1.77	
5308.09	0.00	0.00	5200.00	-4.38	-836.95	2.00	180.00	2.04	
10395.13	0.00	0.00	10287.04	-4.38	-836.95	0.00	0.00	2.04	BLUS 227H KOP_2163FSL_1950WL
11295.13	90.00	359.56	10860.00	568.56	-841.35	10.00	359.56	575.00	
19016.25	90.00	359.56	10860.00	8289.45	-900.63	0.00	0.00	8296.12	BLUS 227H PBHL_100FNL_1950FWL

### FORMATION TOP DETAILS



TVDPATH	MDPATH	FORMATION
1353.00	1353.00	Rustler
1733.00	1733.26	Salado
2036.00	2039.18	Top of Salt
5022.00	5129.98	Base of Salt
5222.00	5330.09	Lamar
5319.00	5427.09	Bell Canyon
6169.00	6277.09	cherry Canyon
7617.00	7725.09	Brushy Canyon
8767.00	8875.09	Bone Spring
8939.00	9047.09	Avalon
9909.00	10017.09	1st Bone Spring
10477.00	10588.76	2nd Bone Spring
10860.00	11295.13	Target



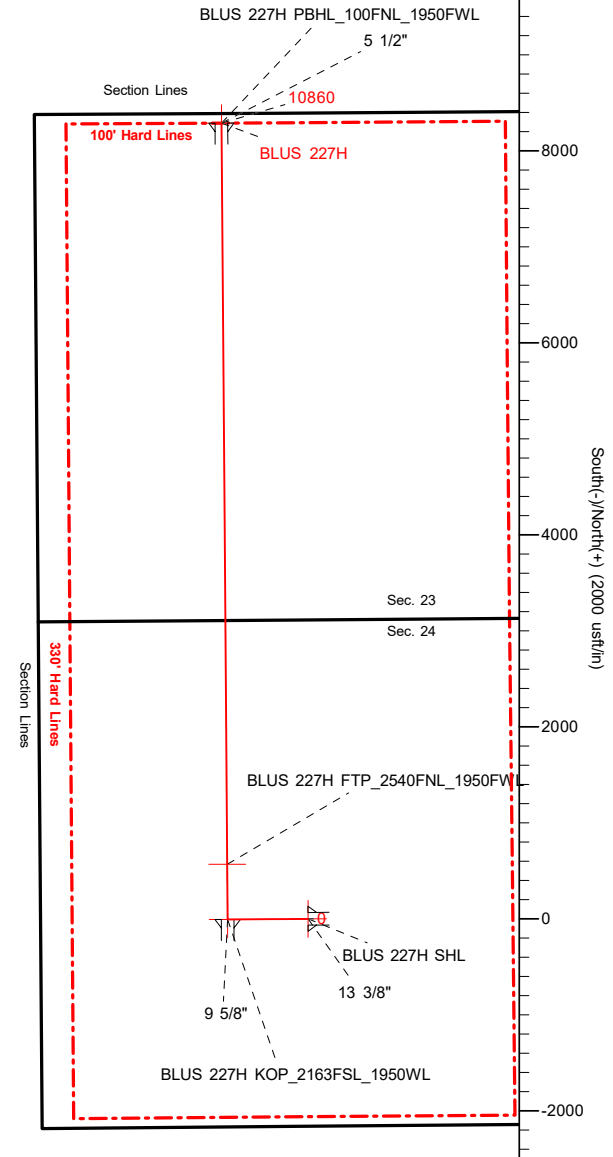
Azimuths to Grid North  
 True North: -0.44°  
 Magnetic North: 6.17°  
 Magnetic Field  
 Strength: 47595.2nT  
 Dip Angle: 59.96°  
 Date: 08/27/2020  
 Model: IGRF2020

### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
BLUS 227H SHL	0.00	0.00	0.00	453944.96	796343.61
BLUS 227H KOP_2163FSL_1950WL	10287.04	-4.38	-836.95	453940.58	795506.66
BLUS 227H FTP_2540FNL_1950FWL	10860.00	568.56	-841.35	454513.52	795502.26
BLUS 227H PBHL_100FNL_1950FWL	10860.00	8289.45	-900.63	462234.41	795442.98

### CASING DETAILS

TVD	MD	Name	Size
1400.00	1400.00	13 3/8"	13.37
5300.00	5408.09	9 5/8"	9.62
10860.00	19016.25	5 1/2"	5.50



To convert a Magnetic Direction to a Grid Direction, Add 6.17°  
 To convert a Magnetic Direction to a True Direction, Add 6.61° East  
 Magnetic North is 6.17° East of Grid North (Magnetic Convergence)  
 Magnetic North is 6.61° East of True North (Magnetic Declination)

Plan: Plan #1 (BLUS 227H/Lateral)  
 Created By: Mekka Williams  
 13:13, August 27 2020

**SB DIRECTIONAL SERVICES**  
 5135 SW 29TH ST  
 OKLAHOMA CITY, OK 73179



Received by OCD: 9/25/2020 1:22:43 PM

Page 6 of 26

Kaiser-Francis Oil Company

# KAISER-FRANCIS OIL COMPANY

Lea County, NM (NMEZ) NAD83 Grid  
Bell Lake Unit South 227H,228H,327H,428H  
BLUS 227H - Slot 227H  
Lateral

Plan: Plan #1

## Survey Report Landscape

27 August, 2020





Survey Report Landscape

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

<b>Project</b>	Lea County, NM (NMEZ) NAD83 Grid		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Bell Lake Unit South 227H,228H,327H,428H				
<b>Site Position:</b>		<b>Northing:</b>	453,944.96 usft	<b>Latitude:</b>	32.2452781°N
<b>From:</b>	Map	<b>Easting:</b>	796,343.61 usft	<b>Longitude:</b>	103.5085103°W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b>	0.44 °

<b>Well</b>	BLUS 227H - Slot 227H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	453,944.96 usft	<b>Latitude:</b>	32.2452781°N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	796,343.61 usft	<b>Longitude:</b>	103.5085103°W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,605.90 usft

<b>Wellbore</b>	Lateral				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	08/27/20	6.61	59.96	47,595.15947226

<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	359.56	

<b>Survey Tool Program</b>	<b>Date</b>	08/27/20			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	19,016.25	Plan #1 (Lateral)			





Survey Report Landscape

Kaiser-Francis Oil Company

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
<b>BLUS 227H SHL</b>											
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
1,353.00	0.00	0.00	1,353.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
<b>Rustler</b>											
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
<b>13 3/8"</b>											
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	
1,600.00	2.00	269.70	1,599.98	-0.01	-1.75	1.75	269.70	2.00	453,944.95	796,341.86	
1,700.00	4.00	269.70	1,699.84	-0.04	-6.98	6.98	269.70	2.00	453,944.92	796,336.63	
1,733.26	4.67	269.70	1,733.00	-0.05	-9.49	9.49	269.70	2.00	453,944.91	796,334.12	
<b>Salado</b>											
1,800.00	6.00	269.70	1,799.45	-0.08	-15.69	15.69	269.70	2.00	453,944.88	796,327.92	
1,900.00	8.00	269.70	1,898.70	-0.15	-27.88	27.88	269.70	2.00	453,944.81	796,315.73	
2,000.00	10.00	269.70	1,997.47	-0.23	-43.52	43.52	269.70	2.00	453,944.73	796,300.09	



Survey Report Landscape

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)
2,039.18	10.78	269.70	2,036.00	-0.26	-50.59	50.59	269.70	2.00	453,944.70	796,293.02
<b>Top of Salt</b>										
2,100.00	12.00	269.70	2,095.62	-0.33	-62.60	62.60	269.70	2.00	453,944.63	796,281.01
2,200.00	14.00	269.70	2,193.06	-0.45	-85.10	85.10	269.70	2.00	453,944.51	796,258.51
2,308.64	16.17	269.70	2,297.95	-0.59	-113.37	113.37	269.70	2.00	453,944.37	796,230.24
2,400.00	16.17	269.70	2,385.69	-0.73	-138.82	138.82	269.70	0.00	453,944.23	796,204.79
2,500.00	16.17	269.70	2,481.73	-0.87	-166.67	166.67	269.70	0.00	453,944.09	796,176.94
2,600.00	16.17	269.70	2,577.77	-1.02	-194.52	194.53	269.70	0.00	453,943.94	796,149.09
2,700.00	16.17	269.70	2,673.82	-1.16	-222.38	222.38	269.70	0.00	453,943.80	796,121.23
2,800.00	16.17	269.70	2,769.86	-1.31	-250.23	250.23	269.70	0.00	453,943.65	796,093.38
2,900.00	16.17	269.70	2,865.90	-1.46	-278.08	278.09	269.70	0.00	453,943.50	796,065.53
3,000.00	16.17	269.70	2,961.94	-1.60	-305.94	305.94	269.70	0.00	453,943.36	796,037.67
3,100.00	16.17	269.70	3,057.99	-1.75	-333.79	333.79	269.70	0.00	453,943.21	796,009.82
3,200.00	16.17	269.70	3,154.03	-1.89	-361.64	361.65	269.70	0.00	453,943.07	795,981.97
3,300.00	16.17	269.70	3,250.07	-2.04	-389.50	389.50	269.70	0.00	453,942.92	795,954.11
3,400.00	16.17	269.70	3,346.11	-2.19	-417.35	417.35	269.70	0.00	453,942.77	795,926.26
3,500.00	16.17	269.70	3,442.16	-2.33	-445.20	445.21	269.70	0.00	453,942.63	795,898.41
3,600.00	16.17	269.70	3,538.20	-2.48	-473.06	473.06	269.70	0.00	453,942.48	795,870.55
3,700.00	16.17	269.70	3,634.24	-2.62	-500.91	500.92	269.70	0.00	453,942.34	795,842.70
3,800.00	16.17	269.70	3,730.29	-2.77	-528.76	528.77	269.70	0.00	453,942.19	795,814.85
3,900.00	16.17	269.70	3,826.33	-2.91	-556.61	556.62	269.70	0.00	453,942.05	795,787.00
4,000.00	16.17	269.70	3,922.37	-3.06	-584.47	584.48	269.70	0.00	453,941.90	795,759.14
4,100.00	16.17	269.70	4,018.41	-3.21	-612.32	612.33	269.70	0.00	453,941.75	795,731.29
4,200.00	16.17	269.70	4,114.46	-3.35	-640.17	640.18	269.70	0.00	453,941.61	795,703.44
4,300.00	16.17	269.70	4,210.50	-3.50	-668.03	668.04	269.70	0.00	453,941.46	795,675.58
4,400.00	16.17	269.70	4,306.54	-3.64	-695.88	695.89	269.70	0.00	453,941.32	795,647.73
4,499.45	16.17	269.70	4,402.05	-3.79	-723.58	723.59	269.70	0.00	453,941.17	795,620.03



Survey Report Landscape

Kaiser-Francis Oil Company

**Company:** KAISER-FRANCIS OIL COMPANY  
**Project:** Lea County, NM (NMEZ) NAD83 Grid  
**Site:** Bell Lake Unit South 227H,228H,327H,428H  
**Well:** BLUS 227H  
**Wellbore:** Lateral  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well BLUS 227H - Slot 227H  
**TVD Reference:** 3605.9 @ 3605.90usft (GLOnly)  
**MD Reference:** 3605.9 @ 3605.90usft (GLOnly)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** SBDIR\_EDM

**Planned Survey**

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)
4,600.00	14.16	269.70	4,499.10	-3.93	-749.89	749.90	269.70	2.00	453,941.03	795,593.72
4,700.00	12.16	269.70	4,596.47	-4.05	-772.66	772.67	269.70	2.00	453,940.91	795,570.95
4,800.00	10.16	269.70	4,694.57	-4.15	-792.01	792.02	269.70	2.00	453,940.81	795,551.60
4,900.00	8.16	269.70	4,793.29	-4.23	-807.93	807.95	269.70	2.00	453,940.73	795,535.68
5,000.00	6.16	269.70	4,892.50	-4.30	-820.40	820.41	269.70	2.00	453,940.66	795,523.21
5,100.00	4.16	269.70	4,992.09	-4.34	-829.40	829.41	269.70	2.00	453,940.62	795,514.21
5,129.98	3.56	269.70	5,022.00	-4.35	-831.42	831.43	269.70	2.00	453,940.61	795,512.19
<b>Base of Salt</b>										
5,200.00	2.16	269.70	5,091.94	-4.37	-834.91	834.92	269.70	2.00	453,940.59	795,508.70
5,308.09	0.00	0.00	5,200.00	-4.38	-836.95	836.96	269.70	2.00	453,940.58	795,506.66
5,330.09	0.00	0.00	5,222.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
<b>Lamar</b>										
5,400.00	0.00	0.00	5,291.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
5,408.09	0.00	0.00	5,300.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
<b>9 5/8"</b>										
5,427.09	0.00	0.00	5,319.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
<b>Bell Canyon</b>										
5,500.00	0.00	0.00	5,391.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
5,600.00	0.00	0.00	5,491.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
5,700.00	0.00	0.00	5,591.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
5,800.00	0.00	0.00	5,691.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
5,900.00	0.00	0.00	5,791.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
6,000.00	0.00	0.00	5,891.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
6,100.00	0.00	0.00	5,991.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
6,200.00	0.00	0.00	6,091.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
6,277.09	0.00	0.00	6,169.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66
<b>cherry Canyon</b>										
6,300.00	0.00	0.00	6,191.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66



Survey Report Landscape

Kaiser-Francis Oil Company

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)	
6,400.00	0.00	0.00	6,291.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
6,500.00	0.00	0.00	6,391.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
6,600.00	0.00	0.00	6,491.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
6,700.00	0.00	0.00	6,591.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
6,800.00	0.00	0.00	6,691.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
6,900.00	0.00	0.00	6,791.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,000.00	0.00	0.00	6,891.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,100.00	0.00	0.00	6,991.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,200.00	0.00	0.00	7,091.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,300.00	0.00	0.00	7,191.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,400.00	0.00	0.00	7,291.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,500.00	0.00	0.00	7,391.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,600.00	0.00	0.00	7,491.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,700.00	0.00	0.00	7,591.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,725.09	0.00	0.00	7,617.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
Brushy Canyon											
7,800.00	0.00	0.00	7,691.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
7,900.00	0.00	0.00	7,791.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,000.00	0.00	0.00	7,891.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,100.00	0.00	0.00	7,991.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,200.00	0.00	0.00	8,091.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,300.00	0.00	0.00	8,191.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,400.00	0.00	0.00	8,291.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,500.00	0.00	0.00	8,391.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,600.00	0.00	0.00	8,491.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,700.00	0.00	0.00	8,591.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	
8,800.00	0.00	0.00	8,691.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66	



Survey Report Landscape

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)		
8,875.09	0.00	0.00	8,767.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
<b>Bone Spring</b>												
8,900.00	0.00	0.00	8,791.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,000.00	0.00	0.00	8,891.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,047.09	0.00	0.00	8,939.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
<b>Avalon</b>												
9,100.00	0.00	0.00	8,991.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,200.00	0.00	0.00	9,091.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,300.00	0.00	0.00	9,191.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,400.00	0.00	0.00	9,291.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,500.00	0.00	0.00	9,391.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,600.00	0.00	0.00	9,491.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,700.00	0.00	0.00	9,591.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,800.00	0.00	0.00	9,691.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
9,900.00	0.00	0.00	9,791.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
10,000.00	0.00	0.00	9,891.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
10,017.09	0.00	0.00	9,909.00	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
<b>1st Bone Spring</b>												
10,100.00	0.00	0.00	9,991.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
10,200.00	0.00	0.00	10,091.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
10,300.00	0.00	0.00	10,191.91	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
10,395.13	0.00	0.00	10,287.04	-4.38	-836.95	836.96	269.70	0.00	453,940.58	795,506.66		
<b>BLUS 227H KOP_2163FSL_1950WL</b>												
10,400.00	0.49	359.56	10,291.91	-4.36	-836.95	836.96	269.70	10.00	453,940.60	795,506.66		
10,450.00	5.49	359.56	10,341.83	-1.76	-836.97	836.97	269.88	10.00	453,943.20	795,506.64		
10,500.00	10.49	359.56	10,391.32	5.19	-837.02	837.04	270.36	10.00	453,950.15	795,506.59		
10,550.00	15.49	359.56	10,440.03	16.42	-837.11	837.27	271.12	10.00	453,961.38	795,506.50		



Survey Report Landscape

Kaiser-Francis Oil Company

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)		
10,588.76	19.36	359.56	10,477.00	28.02	-837.20	837.67	271.92	10.00	453,972.98	795,506.41		
<b>2nd Bone Spring</b>												
10,600.00	20.49	359.56	10,487.57	31.85	-837.23	837.83	272.18	10.00	453,976.81	795,506.38		
10,650.00	25.49	359.56	10,533.59	51.37	-837.38	838.95	273.51	10.00	453,996.33	795,506.23		
10,700.00	30.49	359.56	10,577.73	74.83	-837.56	840.90	275.11	10.00	454,019.79	795,506.05		
10,750.00	35.49	359.56	10,619.65	102.04	-837.77	843.96	276.94	10.00	454,047.00	795,505.84		
10,800.00	40.49	359.56	10,659.05	132.81	-838.00	848.46	279.01	10.00	454,077.77	795,505.61		
10,850.00	45.49	359.56	10,695.61	166.89	-838.27	854.72	281.26	10.00	454,111.85	795,505.34		
10,900.00	50.49	359.56	10,729.06	204.02	-838.55	863.01	283.67	10.00	454,148.98	795,505.06		
10,950.00	55.49	359.56	10,759.16	243.93	-838.86	873.60	286.21	10.00	454,188.89	795,504.75		
11,000.00	60.49	359.56	10,785.65	286.31	-839.18	886.68	288.84	10.00	454,231.27	795,504.43		
11,050.00	65.49	359.56	10,808.35	330.84	-839.52	902.36	291.51	10.00	454,275.80	795,504.09		
11,100.00	70.49	359.56	10,827.09	377.18	-839.88	920.69	294.18	10.00	454,322.14	795,503.73		
11,150.00	75.49	359.56	10,841.71	424.98	-840.25	941.61	296.83	10.00	454,369.94	795,503.36		
11,200.00	80.49	359.56	10,852.12	473.87	-840.62	964.99	299.41	10.00	454,418.83	795,502.99		
11,250.00	85.49	359.56	10,858.22	523.48	-841.00	990.61	301.90	10.00	454,468.44	795,502.61		
11,295.13	90.00	359.56	10,860.00	568.56	-841.35	1,015.45	304.05	10.00	454,513.52	795,502.26		
<b>Target - BLUS 227H FTP_2540FNL_1950FWL</b>												
11,300.00	90.00	359.56	10,860.00	573.43	-841.39	1,018.21	304.28	0.00	454,518.39	795,502.22		
11,400.00	90.00	359.56	10,860.00	673.42	-842.16	1,078.30	308.65	0.00	454,618.38	795,501.45		
11,500.00	90.00	359.56	10,860.00	773.42	-842.92	1,143.98	312.54	0.00	454,718.38	795,500.69		
11,600.00	90.00	359.56	10,860.00	873.42	-843.69	1,214.36	315.99	0.00	454,818.38	795,499.92		
11,700.00	90.00	359.56	10,860.00	973.42	-844.46	1,288.66	319.06	0.00	454,918.38	795,499.15		
11,800.00	90.00	359.56	10,860.00	1,073.41	-845.23	1,366.24	321.78	0.00	455,018.37	795,498.38		
11,900.00	90.00	359.56	10,860.00	1,173.41	-845.99	1,446.58	324.21	0.00	455,118.37	795,497.62		
12,000.00	90.00	359.56	10,860.00	1,273.41	-846.76	1,529.24	326.38	0.00	455,218.37	795,496.85		
12,100.00	90.00	359.56	10,860.00	1,373.40	-847.53	1,613.86	328.32	0.00	455,318.36	795,496.08		



Survey Report Landscape

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)		
12,200.00	90.00	359.56	10,860.00	1,473.40	-848.30	1,700.15	330.07	0.00	455,418.36	795,495.31		
12,300.00	90.00	359.56	10,860.00	1,573.40	-849.07	1,787.87	331.65	0.00	455,518.36	795,494.54		
12,400.00	90.00	359.56	10,860.00	1,673.40	-849.83	1,876.82	333.08	0.00	455,618.36	795,493.78		
12,500.00	90.00	359.56	10,860.00	1,773.39	-850.60	1,966.84	334.38	0.00	455,718.35	795,493.01		
12,600.00	90.00	359.56	10,860.00	1,873.39	-851.37	2,057.77	335.56	0.00	455,818.35	795,492.24		
12,700.00	90.00	359.56	10,860.00	1,973.39	-852.14	2,149.51	336.64	0.00	455,918.35	795,491.47		
12,800.00	90.00	359.56	10,860.00	2,073.38	-852.90	2,241.96	337.64	0.00	456,018.34	795,490.71		
12,900.00	90.00	359.56	10,860.00	2,173.38	-853.67	2,335.02	338.56	0.00	456,118.34	795,489.94		
13,000.00	90.00	359.56	10,860.00	2,273.38	-854.44	2,428.64	339.40	0.00	456,218.34	795,489.17		
13,100.00	90.00	359.56	10,860.00	2,373.37	-855.21	2,522.75	340.18	0.00	456,318.33	795,488.40		
13,200.00	90.00	359.56	10,860.00	2,473.37	-855.97	2,617.30	340.91	0.00	456,418.33	795,487.64		
13,300.00	90.00	359.56	10,860.00	2,573.37	-856.74	2,712.24	341.59	0.00	456,518.33	795,486.87		
13,400.00	90.00	359.56	10,860.00	2,673.37	-857.51	2,807.53	342.22	0.00	456,618.33	795,486.10		
13,500.00	90.00	359.56	10,860.00	2,773.36	-858.28	2,903.13	342.80	0.00	456,718.32	795,485.33		
13,600.00	90.00	359.56	10,860.00	2,873.36	-859.05	2,999.03	343.35	0.00	456,818.32	795,484.56		
13,700.00	90.00	359.56	10,860.00	2,973.36	-859.81	3,095.18	343.87	0.00	456,918.32	795,483.80		
13,800.00	90.00	359.56	10,860.00	3,073.35	-860.58	3,191.57	344.36	0.00	457,018.31	795,483.03		
13,900.00	90.00	359.56	10,860.00	3,173.35	-861.35	3,288.17	344.81	0.00	457,118.31	795,482.26		
14,000.00	90.00	359.56	10,860.00	3,273.35	-862.12	3,384.97	345.24	0.00	457,218.31	795,481.49		
14,100.00	90.00	359.56	10,860.00	3,373.35	-862.88	3,481.96	345.65	0.00	457,318.31	795,480.73		
14,200.00	90.00	359.56	10,860.00	3,473.34	-863.65	3,579.11	346.04	0.00	457,418.30	795,479.96		
14,300.00	90.00	359.56	10,860.00	3,573.34	-864.42	3,676.41	346.40	0.00	457,518.30	795,479.19		
14,400.00	90.00	359.56	10,860.00	3,673.34	-865.19	3,773.85	346.75	0.00	457,618.30	795,478.42		
14,500.00	90.00	359.56	10,860.00	3,773.33	-865.96	3,871.42	347.07	0.00	457,718.29	795,477.65		
14,600.00	90.00	359.56	10,860.00	3,873.33	-866.72	3,969.12	347.39	0.00	457,818.29	795,476.89		
14,700.00	90.00	359.56	10,860.00	3,973.33	-867.49	4,066.92	347.68	0.00	457,918.29	795,476.12		
14,800.00	90.00	359.56	10,860.00	4,073.32	-868.26	4,164.83	347.97	0.00	458,018.28	795,475.35		



Survey Report Landscape

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)		
14,900.00	90.00	359.56	10,860.00	4,173.32	-869.03	4,262.84	348.24	0.00	458,118.28	795,474.58		
15,000.00	90.00	359.56	10,860.00	4,273.32	-869.79	4,360.94	348.50	0.00	458,218.28	795,473.82		
15,100.00	90.00	359.56	10,860.00	4,373.32	-870.56	4,459.12	348.74	0.00	458,318.28	795,473.05		
15,200.00	90.00	359.56	10,860.00	4,473.31	-871.33	4,557.38	348.98	0.00	458,418.27	795,472.28		
15,300.00	90.00	359.56	10,860.00	4,573.31	-872.10	4,655.72	349.20	0.00	458,518.27	795,471.51		
15,400.00	90.00	359.56	10,860.00	4,673.31	-872.87	4,754.12	349.42	0.00	458,618.27	795,470.74		
15,500.00	90.00	359.56	10,860.00	4,773.30	-873.63	4,852.59	349.63	0.00	458,718.26	795,469.98		
15,600.00	90.00	359.56	10,860.00	4,873.30	-874.40	4,951.13	349.83	0.00	458,818.26	795,469.21		
15,700.00	90.00	359.56	10,860.00	4,973.30	-875.17	5,049.71	350.02	0.00	458,918.26	795,468.44		
15,800.00	90.00	359.56	10,860.00	5,073.30	-875.94	5,148.36	350.20	0.00	459,018.26	795,467.67		
15,900.00	90.00	359.56	10,860.00	5,173.29	-876.70	5,247.05	350.38	0.00	459,118.25	795,466.91		
16,000.00	90.00	359.56	10,860.00	5,273.29	-877.47	5,345.80	350.55	0.00	459,218.25	795,466.14		
16,100.00	90.00	359.56	10,860.00	5,373.29	-878.24	5,444.59	350.72	0.00	459,318.25	795,465.37		
16,200.00	90.00	359.56	10,860.00	5,473.28	-879.01	5,543.42	350.88	0.00	459,418.24	795,464.60		
16,300.00	90.00	359.56	10,860.00	5,573.28	-879.78	5,642.29	351.03	0.00	459,518.24	795,463.83		
16,400.00	90.00	359.56	10,860.00	5,673.28	-880.54	5,741.20	351.18	0.00	459,618.24	795,463.07		
16,500.00	90.00	359.56	10,860.00	5,773.27	-881.31	5,840.15	351.32	0.00	459,718.23	795,462.30		
16,600.00	90.00	359.56	10,860.00	5,873.27	-882.08	5,939.14	351.46	0.00	459,818.23	795,461.53		
16,700.00	90.00	359.56	10,860.00	5,973.27	-882.85	6,038.16	351.59	0.00	459,918.23	795,460.76		
16,800.00	90.00	359.56	10,860.00	6,073.27	-883.61	6,137.21	351.72	0.00	460,018.23	795,460.00		
16,900.00	90.00	359.56	10,860.00	6,173.26	-884.38	6,236.29	351.85	0.00	460,118.22	795,459.23		
17,000.00	90.00	359.56	10,860.00	6,273.26	-885.15	6,335.40	351.97	0.00	460,218.22	795,458.46		
17,100.00	90.00	359.56	10,860.00	6,373.26	-885.92	6,434.54	352.09	0.00	460,318.22	795,457.69		
17,200.00	90.00	359.56	10,860.00	6,473.25	-886.69	6,533.70	352.20	0.00	460,418.21	795,456.92		
17,300.00	90.00	359.56	10,860.00	6,573.25	-887.45	6,632.89	352.31	0.00	460,518.21	795,456.16		
17,400.00	90.00	359.56	10,860.00	6,673.25	-888.22	6,732.10	352.42	0.00	460,618.21	795,455.39		
17,500.00	90.00	359.56	10,860.00	6,773.24	-888.99	6,831.34	352.52	0.00	460,718.20	795,454.62		





Survey Report Landscape

Kaiser-Francis Oil Company

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (usft)	Easting (usft)	
17,600.00	90.00	359.56	10,860.00	6,873.24	-889.76	6,930.59	352.62	0.00	460,818.20	795,453.85	
17,700.00	90.00	359.56	10,860.00	6,973.24	-890.52	7,029.87	352.72	0.00	460,918.20	795,453.09	
17,800.00	90.00	359.56	10,860.00	7,073.24	-891.29	7,129.17	352.82	0.00	461,018.20	795,452.32	
17,900.00	90.00	359.56	10,860.00	7,173.23	-892.06	7,228.49	352.91	0.00	461,118.19	795,451.55	
18,000.00	90.00	359.56	10,860.00	7,273.23	-892.83	7,327.82	353.00	0.00	461,218.19	795,450.78	
18,100.00	90.00	359.56	10,860.00	7,373.23	-893.60	7,427.18	353.09	0.00	461,318.19	795,450.01	
18,200.00	90.00	359.56	10,860.00	7,473.22	-894.36	7,526.55	353.18	0.00	461,418.18	795,449.25	
18,300.00	90.00	359.56	10,860.00	7,573.22	-895.13	7,625.94	353.26	0.00	461,518.18	795,448.48	
18,400.00	90.00	359.56	10,860.00	7,673.22	-895.90	7,725.34	353.34	0.00	461,618.18	795,447.71	
18,500.00	90.00	359.56	10,860.00	7,773.22	-896.67	7,824.76	353.42	0.00	461,718.18	795,446.94	
18,600.00	90.00	359.56	10,860.00	7,873.21	-897.43	7,924.19	353.50	0.00	461,818.17	795,446.18	
18,700.00	90.00	359.56	10,860.00	7,973.21	-898.20	8,023.64	353.57	0.00	461,918.17	795,445.41	
18,800.00	90.00	359.56	10,860.00	8,073.21	-898.97	8,123.10	353.65	0.00	462,018.17	795,444.64	
18,900.00	90.00	359.56	10,860.00	8,173.20	-899.74	8,222.58	353.72	0.00	462,118.16	795,443.87	
19,000.00	90.00	359.56	10,860.00	8,273.20	-900.51	8,322.06	353.79	0.00	462,218.16	795,443.10	
19,016.25	90.00	359.56	10,860.00	8,289.45	-900.63	8,338.23	353.80	0.00	462,234.41	795,442.98	
BLUS 227H PBHL_100FNL_1950FWL											

Casing Points						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
	5,408.09	5,300.00	9 5/8"	9.62	12.25	
	19,016.25	10,860.00	5 1/2"	5.50	6.00	
	1,400.00	1,400.00	13 3/8"	13.37	17.50	



Survey Report Landscape

<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Well:</b>	BLUS 227H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Lateral	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	SBDIR_EDM

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
10,588.76	10,477.00	2nd Bone Spring				
9,047.09	8,939.00	Avalon				
8,875.09	8,767.00	Bone Spring				
6,277.09	6,169.00	cherry Canyon				
5,330.09	5,222.00	Lamar				
10,017.09	9,909.00	1st Bone Spring				
2,039.18	2,036.00	Top of Salt				
7,725.09	7,617.00	Brushy Canyon				
5,427.09	5,319.00	Bell Canyon				
1,353.00	1,353.00	Rustler				
5,129.98	5,022.00	Base of Salt				
11,295.13	10,860.00	Target				
1,733.26	1,733.00	Salado				

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

Kaiser-Francis Oil Company

# KAISER-FRANCIS OIL COMPANY

Lea County, NM (NMEZ) NAD83 Grid  
Bell Lake Unit South 227H,228H,327H,428H  
BLUS 227H - Slot 227H

Lateral

Plan: Plan #1

## Standard Planning Report

27 August, 2020





Planning Report

Kaiser-Francis Oil Company

<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

<b>Project</b>	Lea County, NM (NMEZ) NAD83 Grid		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Bell Lake Unit South 227H,228H,327H,428H				
<b>Site Position:</b>	<b>Northing:</b>	453,944.96 usft	<b>Latitude:</b>	32.2452781°N	
<b>From:</b> Map	<b>Easting:</b>	796,343.61 usft	<b>Longitude:</b>	103.5085103°W	
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b>	0.44 °

<b>Well</b>	BLUS 227H - Slot 227H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	453,944.96 usft	<b>Latitude:</b>	32.2452781°N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	796,343.61 usft	<b>Longitude:</b>	103.5085103°W
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,605.90 usft	

<b>Wellbore</b>	Lateral				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	08/27/20	6.61	59.96	47,595.15947225

<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	359.56

<b>Plan Survey Tool Program</b>	<b>Date</b>	08/27/20		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	19,016.25	Plan #1 (Lateral)	

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,308.64	16.17	269.70	2,297.95	-0.59	-113.37	2.00	2.00	0.00	269.70	
4,499.45	16.17	269.70	4,402.05	-3.79	-723.58	0.00	0.00	0.00	0.00	
5,308.09	0.00	0.00	5,200.00	-4.38	-836.95	2.00	-2.00	0.00	180.00	
10,395.13	0.00	0.00	10,287.04	-4.38	-836.95	0.00	0.00	0.00	0.00	BLUS 227H KOP_216
11,295.13	90.00	359.56	10,860.00	568.56	-841.35	10.00	10.00	-0.05	359.56	
19,016.25	90.00	359.56	10,860.00	8,289.45	-900.63	0.00	0.00	0.00	0.00	BLUS 227H PBHL_110



Planning Report

Kaiser-Francis Oil Company

<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>BLUS 227H SHL</b>										
100.00	0.00	0.00	100.00	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	
300.00	0.00	0.00	300.00	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	
500.00	0.00	0.00	500.00	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	
700.00	0.00	0.00	700.00	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	
900.00	0.00	0.00	900.00	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	
1,100.00	0.00	0.00	1,100.00	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	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,353.00	0.00	0.00	1,353.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Rustler</b>										
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>13 3/8"</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	2.00	269.70	1,599.98	-0.01	-1.75	0.00	2.00	2.00	0.00	
1,700.00	4.00	269.70	1,699.84	-0.04	-6.98	0.02	2.00	2.00	0.00	
1,733.26	4.67	269.70	1,733.00	-0.05	-9.49	0.02	2.00	2.00	0.00	
<b>Salado</b>										
1,800.00	6.00	269.70	1,799.45	-0.08	-15.69	0.04	2.00	2.00	0.00	
1,900.00	8.00	269.70	1,898.70	-0.15	-27.88	0.07	2.00	2.00	0.00	
2,000.00	10.00	269.70	1,997.47	-0.23	-43.52	0.11	2.00	2.00	0.00	
2,039.18	10.78	269.70	2,036.00	-0.26	-50.59	0.12	2.00	2.00	0.00	
<b>Top of Salt</b>										
2,100.00	12.00	269.70	2,095.62	-0.33	-62.60	0.15	2.00	2.00	0.00	
2,200.00	14.00	269.70	2,193.06	-0.45	-85.10	0.21	2.00	2.00	0.00	
2,308.64	16.17	269.70	2,297.95	-0.59	-113.37	0.28	2.00	2.00	0.00	
2,400.00	16.17	269.70	2,385.69	-0.73	-138.82	0.34	0.00	0.00	0.00	
2,500.00	16.17	269.70	2,481.73	-0.87	-166.67	0.41	0.00	0.00	0.00	
2,600.00	16.17	269.70	2,577.77	-1.02	-194.52	0.48	0.00	0.00	0.00	
2,700.00	16.17	269.70	2,673.82	-1.16	-222.38	0.54	0.00	0.00	0.00	
2,800.00	16.17	269.70	2,769.86	-1.31	-250.23	0.61	0.00	0.00	0.00	
2,900.00	16.17	269.70	2,865.90	-1.46	-278.08	0.68	0.00	0.00	0.00	
3,000.00	16.17	269.70	2,961.94	-1.60	-305.94	0.75	0.00	0.00	0.00	
3,100.00	16.17	269.70	3,057.99	-1.75	-333.79	0.82	0.00	0.00	0.00	
3,200.00	16.17	269.70	3,154.03	-1.89	-361.64	0.88	0.00	0.00	0.00	
3,300.00	16.17	269.70	3,250.07	-2.04	-389.50	0.95	0.00	0.00	0.00	
3,400.00	16.17	269.70	3,346.11	-2.19	-417.35	1.02	0.00	0.00	0.00	
3,500.00	16.17	269.70	3,442.16	-2.33	-445.20	1.09	0.00	0.00	0.00	
3,600.00	16.17	269.70	3,538.20	-2.48	-473.06	1.16	0.00	0.00	0.00	
3,700.00	16.17	269.70	3,634.24	-2.62	-500.91	1.22	0.00	0.00	0.00	
3,800.00	16.17	269.70	3,730.29	-2.77	-528.76	1.29	0.00	0.00	0.00	
3,900.00	16.17	269.70	3,826.33	-2.91	-556.61	1.36	0.00	0.00	0.00	
4,000.00	16.17	269.70	3,922.37	-3.06	-584.47	1.43	0.00	0.00	0.00	
4,100.00	16.17	269.70	4,018.41	-3.21	-612.32	1.50	0.00	0.00	0.00	
4,200.00	16.17	269.70	4,114.46	-3.35	-640.17	1.56	0.00	0.00	0.00	
4,300.00	16.17	269.70	4,210.50	-3.50	-668.03	1.63	0.00	0.00	0.00	
4,400.00	16.17	269.70	4,306.54	-3.64	-695.88	1.70	0.00	0.00	0.00	



Planning Report

Kaiser-Francis Oil Company

<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,499.45	16.17	269.70	4,402.05	-3.79	-723.58	1.77	0.00	0.00	0.00	
4,600.00	14.16	269.70	4,499.10	-3.93	-749.89	1.83	2.00	-2.00	0.00	
4,700.00	12.16	269.70	4,596.47	-4.05	-772.66	1.89	2.00	-2.00	0.00	
4,800.00	10.16	269.70	4,694.57	-4.15	-792.01	1.93	2.00	-2.00	0.00	
4,900.00	8.16	269.70	4,793.29	-4.23	-807.93	1.97	2.00	-2.00	0.00	
5,000.00	6.16	269.70	4,892.50	-4.30	-820.40	2.00	2.00	-2.00	0.00	
5,100.00	4.16	269.70	4,992.09	-4.34	-829.40	2.03	2.00	-2.00	0.00	
5,129.98	3.56	269.70	5,022.00	-4.35	-831.42	2.03	2.00	-2.00	0.00	
<b>Base of Salt</b>										
5,200.00	2.16	269.70	5,091.94	-4.37	-834.91	2.04	2.00	-2.00	0.00	
5,308.09	0.00	0.00	5,200.00	-4.38	-836.95	2.04	2.00	-2.00	0.00	
5,330.09	0.00	0.00	5,222.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>Lamar</b>										
5,400.00	0.00	0.00	5,291.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
5,408.09	0.00	0.00	5,300.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>9 5/8"</b>										
5,427.09	0.00	0.00	5,319.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>Bell Canyon</b>										
5,500.00	0.00	0.00	5,391.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,491.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,591.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,691.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,791.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,891.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,991.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,091.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,277.09	0.00	0.00	6,169.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>cherry Canyon</b>										
6,300.00	0.00	0.00	6,191.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,291.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,391.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,491.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,591.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,691.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,791.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,891.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,991.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,091.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,191.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,291.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,391.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,491.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,591.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,725.09	0.00	0.00	7,617.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>Brushy Canyon</b>										
7,800.00	0.00	0.00	7,691.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,791.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,891.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,991.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,091.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,191.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,291.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,391.91	-4.38	-836.95	2.04	0.00	0.00	0.00	



Planning Report

Kaiser-Francis Oil Company

<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,600.00	0.00	0.00	8,491.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,591.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,691.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
8,875.09	0.00	0.00	8,767.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>Bone Spring</b>										
8,900.00	0.00	0.00	8,791.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,891.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,047.09	0.00	0.00	8,939.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>Avalon</b>										
9,100.00	0.00	0.00	8,991.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,091.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,191.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,291.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,391.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,491.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,591.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,691.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,791.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,891.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
10,017.09	0.00	0.00	9,909.00	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>1st Bone Spring</b>										
10,100.00	0.00	0.00	9,991.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,091.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,191.91	-4.38	-836.95	2.04	0.00	0.00	0.00	
10,395.13	0.00	0.00	10,287.04	-4.38	-836.95	2.04	0.00	0.00	0.00	
<b>BLUS 227H KOP_2163FSL_1950WL</b>										
10,400.00	0.49	359.56	10,291.91	-4.36	-836.95	2.06	10.00	10.00	0.00	
10,450.00	5.49	359.56	10,341.83	-1.76	-836.97	4.67	10.00	10.00	0.00	
10,500.00	10.49	359.56	10,391.33	5.19	-837.02	11.61	10.00	10.00	0.00	
10,550.00	15.49	359.56	10,440.03	16.42	-837.11	22.85	10.00	10.00	0.00	
10,588.76	19.36	359.56	10,477.00	28.02	-837.20	34.45	10.00	10.00	0.00	
<b>2nd Bone Spring</b>										
10,600.00	20.49	359.56	10,487.57	31.85	-837.23	38.28	10.00	10.00	0.00	
10,650.00	25.49	359.56	10,533.59	51.37	-837.38	57.80	10.00	10.00	0.00	
10,700.00	30.49	359.56	10,577.73	74.83	-837.56	81.26	10.00	10.00	0.00	
10,750.00	35.49	359.56	10,619.65	102.04	-837.77	108.47	10.00	10.00	0.00	
10,800.00	40.49	359.56	10,659.05	132.81	-838.00	139.24	10.00	10.00	0.00	
10,850.00	45.49	359.56	10,695.61	166.89	-838.27	173.32	10.00	10.00	0.00	
10,900.00	50.49	359.56	10,729.07	204.02	-838.55	210.46	10.00	10.00	0.00	
10,950.00	55.49	359.56	10,759.16	243.93	-838.86	250.37	10.00	10.00	0.00	
11,000.00	60.49	359.56	10,785.65	286.31	-839.18	292.75	10.00	10.00	0.00	
11,050.00	65.49	359.56	10,808.35	330.84	-839.52	337.28	10.00	10.00	0.00	
11,100.00	70.49	359.56	10,827.09	377.18	-839.88	383.62	10.00	10.00	0.00	
11,150.00	75.49	359.56	10,841.71	424.98	-840.25	431.42	10.00	10.00	0.00	
11,200.00	80.49	359.56	10,852.12	473.87	-840.62	480.31	10.00	10.00	0.00	
11,250.00	85.49	359.56	10,858.22	523.48	-841.00	529.92	10.00	10.00	0.00	
11,295.13	90.00	359.56	10,860.00	568.56	-841.35	575.00	10.00	10.00	0.00	
<b>Target - BLUS 227H FTP_2540FNL_1950FWL</b>										
11,300.00	90.00	359.56	10,860.00	573.43	-841.39	579.87	0.00	0.00	0.00	
11,400.00	90.00	359.56	10,860.00	673.42	-842.16	679.87	0.00	0.00	0.00	
11,500.00	90.00	359.56	10,860.00	773.42	-842.92	779.87	0.00	0.00	0.00	
11,600.00	90.00	359.56	10,860.00	873.42	-843.69	879.87	0.00	0.00	0.00	
11,700.00	90.00	359.56	10,860.00	973.42	-844.46	979.87	0.00	0.00	0.00	



Planning Report

Kaiser-Francis Oil Company

<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,800.00	90.00	359.56	10,860.00	1,073.41	-845.23	1,079.87	0.00	0.00	0.00
11,900.00	90.00	359.56	10,860.00	1,173.41	-845.99	1,179.87	0.00	0.00	0.00
12,000.00	90.00	359.56	10,860.00	1,273.41	-846.76	1,279.87	0.00	0.00	0.00
12,100.00	90.00	359.56	10,860.00	1,373.40	-847.53	1,379.87	0.00	0.00	0.00
12,200.00	90.00	359.56	10,860.00	1,473.40	-848.30	1,479.87	0.00	0.00	0.00
12,300.00	90.00	359.56	10,860.00	1,573.40	-849.07	1,579.87	0.00	0.00	0.00
12,400.00	90.00	359.56	10,860.00	1,673.40	-849.83	1,679.87	0.00	0.00	0.00
12,500.00	90.00	359.56	10,860.00	1,773.39	-850.60	1,779.87	0.00	0.00	0.00
12,600.00	90.00	359.56	10,860.00	1,873.39	-851.37	1,879.87	0.00	0.00	0.00
12,700.00	90.00	359.56	10,860.00	1,973.39	-852.14	1,979.87	0.00	0.00	0.00
12,800.00	90.00	359.56	10,860.00	2,073.38	-852.90	2,079.87	0.00	0.00	0.00
12,900.00	90.00	359.56	10,860.00	2,173.38	-853.67	2,179.87	0.00	0.00	0.00
13,000.00	90.00	359.56	10,860.00	2,273.38	-854.44	2,279.87	0.00	0.00	0.00
13,100.00	90.00	359.56	10,860.00	2,373.37	-855.21	2,379.87	0.00	0.00	0.00
13,200.00	90.00	359.56	10,860.00	2,473.37	-855.97	2,479.87	0.00	0.00	0.00
13,300.00	90.00	359.56	10,860.00	2,573.37	-856.74	2,579.87	0.00	0.00	0.00
13,400.00	90.00	359.56	10,860.00	2,673.37	-857.51	2,679.87	0.00	0.00	0.00
13,500.00	90.00	359.56	10,860.00	2,773.36	-858.28	2,779.87	0.00	0.00	0.00
13,600.00	90.00	359.56	10,860.00	2,873.36	-859.05	2,879.87	0.00	0.00	0.00
13,700.00	90.00	359.56	10,860.00	2,973.36	-859.81	2,979.87	0.00	0.00	0.00
13,800.00	90.00	359.56	10,860.00	3,073.35	-860.58	3,079.87	0.00	0.00	0.00
13,900.00	90.00	359.56	10,860.00	3,173.35	-861.35	3,179.87	0.00	0.00	0.00
14,000.00	90.00	359.56	10,860.00	3,273.35	-862.12	3,279.87	0.00	0.00	0.00
14,100.00	90.00	359.56	10,860.00	3,373.35	-862.88	3,379.87	0.00	0.00	0.00
14,200.00	90.00	359.56	10,860.00	3,473.34	-863.65	3,479.87	0.00	0.00	0.00
14,300.00	90.00	359.56	10,860.00	3,573.34	-864.42	3,579.87	0.00	0.00	0.00
14,400.00	90.00	359.56	10,860.00	3,673.34	-865.19	3,679.87	0.00	0.00	0.00
14,500.00	90.00	359.56	10,860.00	3,773.33	-865.96	3,779.87	0.00	0.00	0.00
14,600.00	90.00	359.56	10,860.00	3,873.33	-866.72	3,879.87	0.00	0.00	0.00
14,700.00	90.00	359.56	10,860.00	3,973.33	-867.49	3,979.87	0.00	0.00	0.00
14,800.00	90.00	359.56	10,860.00	4,073.32	-868.26	4,079.87	0.00	0.00	0.00
14,900.00	90.00	359.56	10,860.00	4,173.32	-869.03	4,179.87	0.00	0.00	0.00
15,000.00	90.00	359.56	10,860.00	4,273.32	-869.79	4,279.87	0.00	0.00	0.00
15,100.00	90.00	359.56	10,860.00	4,373.32	-870.56	4,379.87	0.00	0.00	0.00
15,200.00	90.00	359.56	10,860.00	4,473.31	-871.33	4,479.87	0.00	0.00	0.00
15,300.00	90.00	359.56	10,860.00	4,573.31	-872.10	4,579.87	0.00	0.00	0.00
15,400.00	90.00	359.56	10,860.00	4,673.31	-872.87	4,679.87	0.00	0.00	0.00
15,500.00	90.00	359.56	10,860.00	4,773.30	-873.63	4,779.87	0.00	0.00	0.00
15,600.00	90.00	359.56	10,860.00	4,873.30	-874.40	4,879.87	0.00	0.00	0.00
15,700.00	90.00	359.56	10,860.00	4,973.30	-875.17	4,979.87	0.00	0.00	0.00
15,800.00	90.00	359.56	10,860.00	5,073.30	-875.94	5,079.87	0.00	0.00	0.00
15,900.00	90.00	359.56	10,860.00	5,173.29	-876.70	5,179.87	0.00	0.00	0.00
16,000.00	90.00	359.56	10,860.00	5,273.29	-877.47	5,279.87	0.00	0.00	0.00
16,100.00	90.00	359.56	10,860.00	5,373.29	-878.24	5,379.87	0.00	0.00	0.00
16,200.00	90.00	359.56	10,860.00	5,473.28	-879.01	5,479.87	0.00	0.00	0.00
16,300.00	90.00	359.56	10,860.00	5,573.28	-879.78	5,579.87	0.00	0.00	0.00
16,400.00	90.00	359.56	10,860.00	5,673.28	-880.54	5,679.87	0.00	0.00	0.00
16,500.00	90.00	359.56	10,860.00	5,773.27	-881.31	5,779.87	0.00	0.00	0.00
16,600.00	90.00	359.56	10,860.00	5,873.27	-882.08	5,879.87	0.00	0.00	0.00
16,700.00	90.00	359.56	10,860.00	5,973.27	-882.85	5,979.87	0.00	0.00	0.00
16,800.00	90.00	359.56	10,860.00	6,073.27	-883.61	6,079.87	0.00	0.00	0.00
16,900.00	90.00	359.56	10,860.00	6,173.26	-884.38	6,179.87	0.00	0.00	0.00
17,000.00	90.00	359.56	10,860.00	6,273.26	-885.15	6,279.87	0.00	0.00	0.00
17,100.00	90.00	359.56	10,860.00	6,373.26	-885.92	6,379.87	0.00	0.00	0.00





Planning Report

Kaiser-Francis Oil Company

<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
17,200.00	90.00	359.56	10,860.00	6,473.25	-886.69	6,479.87	0.00	0.00	0.00	
17,300.00	90.00	359.56	10,860.00	6,573.25	-887.45	6,579.87	0.00	0.00	0.00	
17,400.00	90.00	359.56	10,860.00	6,673.25	-888.22	6,679.87	0.00	0.00	0.00	
17,500.00	90.00	359.56	10,860.00	6,773.25	-888.99	6,779.87	0.00	0.00	0.00	
17,600.00	90.00	359.56	10,860.00	6,873.24	-889.76	6,879.87	0.00	0.00	0.00	
17,700.00	90.00	359.56	10,860.00	6,973.24	-890.52	6,979.87	0.00	0.00	0.00	
17,800.00	90.00	359.56	10,860.00	7,073.24	-891.29	7,079.87	0.00	0.00	0.00	
17,900.00	90.00	359.56	10,860.00	7,173.23	-892.06	7,179.87	0.00	0.00	0.00	
18,000.00	90.00	359.56	10,860.00	7,273.23	-892.83	7,279.87	0.00	0.00	0.00	
18,100.00	90.00	359.56	10,860.00	7,373.23	-893.60	7,379.87	0.00	0.00	0.00	
18,200.00	90.00	359.56	10,860.00	7,473.22	-894.36	7,479.87	0.00	0.00	0.00	
18,300.00	90.00	359.56	10,860.00	7,573.22	-895.13	7,579.87	0.00	0.00	0.00	
18,400.00	90.00	359.56	10,860.00	7,673.22	-895.90	7,679.87	0.00	0.00	0.00	
18,500.00	90.00	359.56	10,860.00	7,773.22	-896.67	7,779.87	0.00	0.00	0.00	
18,600.00	90.00	359.56	10,860.00	7,873.21	-897.43	7,879.87	0.00	0.00	0.00	
18,700.00	90.00	359.56	10,860.00	7,973.21	-898.20	7,979.87	0.00	0.00	0.00	
18,800.00	90.00	359.56	10,860.00	8,073.21	-898.97	8,079.87	0.00	0.00	0.00	
18,900.00	90.00	359.56	10,860.00	8,173.20	-899.74	8,179.87	0.00	0.00	0.00	
19,000.00	90.00	359.56	10,860.00	8,273.20	-900.51	8,279.87	0.00	0.00	0.00	
19,016.25	90.00	359.56	10,860.00	8,289.45	-900.63	8,296.12	0.00	0.00	0.00	
<b>BLUS 227H PBHL_100FNL_1950FWL</b>										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BLUS 227H SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	453,944.96	796,343.61	32.2452781°N	103.5085103°W	
BLUS 227H KOP_2163F - plan hits target center - Point	0.00	0.00	10,287.04	-4.38	-836.95	453,940.58	795,506.66	32.2452837°N	103.5112173°W	
BLUS 227H FTP_2540F - plan hits target center - Point	0.00	0.00	10,860.00	568.56	-841.35	454,513.52	795,502.26	32.2468586°N	103.5112174°W	
BLUS 227H PBHL_100F - plan hits target center - Point	0.00	0.00	10,860.00	8,289.45	-900.63	462,234.41	795,442.98	32.2680815°N	103.5112178°W	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,400.00	1,400.00	13 3/8"	13.37	17.50		
5,408.09	5,300.00	9 5/8"	9.62	12.25		
19,016.25	10,860.00	5 1/2"	5.50	6.00		



Planning Report



<b>Database:</b>	SBDIR_EDM	<b>Local Co-ordinate Reference:</b>	Well BLUS 227H - Slot 227H
<b>Company:</b>	KAISER-FRANCIS OIL COMPANY	<b>TVD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Project:</b>	Lea County, NM (NMEZ) NAD83 Grid	<b>MD Reference:</b>	3605.9 @ 3605.90usft (GLOnly)
<b>Site:</b>	Bell Lake Unit South 227H,228H,327H,428H	<b>North Reference:</b>	Grid
<b>Well:</b>	BLUS 227H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,353.00	1,353.00	Rustler				
1,733.26	1,733.00	Salado				
2,039.18	2,036.00	Top of Salt				
5,129.98	5,022.00	Base of Salt				
5,330.09	5,222.00	Lamar				
5,427.09	5,319.00	Bell Canyon				
6,277.09	6,169.00	cherry Canyon				
7,725.09	7,617.00	Brushy Canyon				
8,875.09	8,767.00	Bone Spring				
9,047.09	8,939.00	Avalon				
10,017.09	9,909.00	1st Bone Spring				
10,588.76	10,477.00	2nd Bone Spring				
11,295.13	10,860.00	Target				