

District I
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Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (505) 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
As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API-Number 30-025-46628	² Pool Code 98266	³ Pool Name Bell Lake; Wolfcamp, South
⁴ Property Code 316706	⁵ Property Name BELL LAKE UNIT SOUTH	⁶ Well Number 434H
⁷ OGRID No. 12361	⁸ Operator Name KAISER-FRANCIS OIL CO.	⁹ Elevation 3587.7

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	5	24 S	34 E	J	1950	SOUTH	1980	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	32	23 S	34 E	B	104	NORTH	1913	EAST	LEA

¹² Dedicated Acres 480	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

NW CORNER SEC. 32 LAT. = 32.2683519°N LONG. = 103.5005984°W NMSP EAST (FT) N = 462358.10 E = 798724.66 W/4 CORNER SEC. 32 LAT. = 32.2610941°N LONG. = 103.5005861°W NMSP EAST (FT) N = 459717.74 E = 798748.94 AS-DRILLED KOP 2107' FSL, 2018' FEL LAT. = 32.2450966°N LONG. = 103.490053°W NMSP EAST (FT) N = 453923.37 E = 802065.40 NW CORNER SEC. 5 LAT. = 32.2538360°N LONG. = 103.5005766°W NMSP EAST (FT) N = 457077.27 E = 798772.36 W/4 CORNER SEC. 5 LAT. = 32.2466023°N LONG. = 103.5005464°W NMSP EAST (FT) N = 454445.73 E = 798802.12 SW CORNER SEC. 5 LAT. = 32.2393444°N LONG. = 103.5005242°W NMSP EAST (FT) N = 451805.34 E = 798829.47		N89°36'55"E 2645.19 FT N/4 CORNER SEC. 32 LAT. = 32.2683440°N LONG. = 103.4920425°W NMSP EAST (FT) N = 462375.86 E = 801369.28 AS-DRILLED BOTTOM OF HOLE LAT. = 32.2680566°N LONG. = 103.4897099°W NMSP EAST (FT) N = 462276.95 E = 802091.08 NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD83. N89°33'36"E 2640.66 FT N/4 CORNER SEC. 5 LAT. = 32.2538352°N LONG. = 103.4920367°W NMSP EAST (FT) N = 457097.54 E = 801412.43 N03°20'03"E 853.28 FT BELL LAKE UNIT SOUTH 434H ELEV. = 3587.7 LAT. = 32.2446667°N (NAD83) LONG. = 103.4898808°W NMSP EAST (FT) N = 453767.27 E = 802105.12 S/4 CORNER SEC. 5 LAT. = 32.2392987°N LONG. = 103.4919593°W NMSP EAST (FT) N = 451809.38 E = 801477.80		N89°04'03"E 2634.35 FT NE CORNER SEC. 32 LAT. = 32.2683416°N LONG. = 103.4835217°W NMSP EAST (FT) N = 462395.74 E = 804003.04 E/4 CORNER SEC. 32 LAT. = 32.2610849°N LONG. = 103.4835095°W NMSP EAST (FT) N = 459755.76 E = 804027.70 AS-DRILLED FIRST TAKE POINT 2494' FNL, 1920' FEL LAT. = 32.2470040°N LONG. = 103.4896947°W NMSP EAST (FT) N = 454618.04 E = 802155.98 NE CORNER SEC. 5 LAT. = 32.2539207°N LONG. = 103.4835560°W NMSP EAST (FT) N = 457149.32 E = 804033.96 E/4 CORNER SEC. 5 LAT. = 32.2465905°N LONG. = 103.4834825°W NMSP EAST (FT) N = 454482.78 E = 804077.79 SE CORNER SEC. 5 LAT. = 32.2393344°N LONG. = 103.4834649°W NMSP EAST (FT) N = 451843.03 E = 804104.13	
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¹⁷ OPERATOR CERTIFICATION

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.

Signature: *Charlotte Van Valkenburg* Date: 11/20/2020

Printed Name: Charlotte Van Valkenburg

E-mail Address: Charlotv@kfoc.net

¹⁸ SURVEYOR CERTIFICATION

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

Date of Survey: JANUARY 21, 2020

Signature and Seal of Professional Surveyor: *William F. Jaramila*

Certificate Number: F12797
Survey No. 7759A

Intent ☐ As Drilled ☒API #
30-025-46628

Operator Name: KAISER-FRANCIS OIL CO.	Property Name: BELL LAKE UNIT SOUTH	Well Number 434H
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Kick Off Point (KOP) ^{Type text here}

UL J	Section 5	Township 24S	Range 34E	Lot	Feet 2107	From N/S SOUTH	Feet 2018	From E/W EAST	County LEA
Latitude 32.2450966					Longitude 103.4900053			NAD 83	

First Take Point (FTP)

UL G	Section 5	Township 24S	Range 34E	Lot	Feet 2494	From N/S NORTH	Feet 1920	From E/W EAST	County LEA
Latitude 32.2470040					Longitude 103.4896947			NAD 83	

Last Take Point (LTP)

UL B	Section 32	Township 23S	Range 34E	Lot	Feet 104	From N/S NORTH	Feet 1913	From E/W EAST	County LEA
Latitude 32.2680566					Longitude 103.4897099			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

☒

Is this well an infill well?

☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

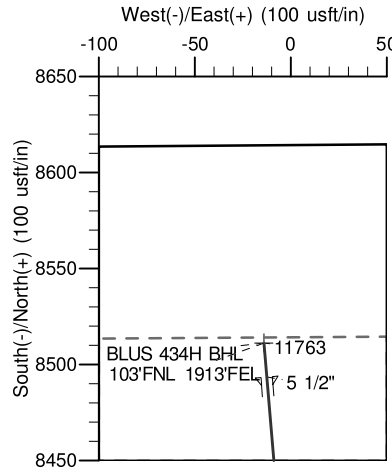
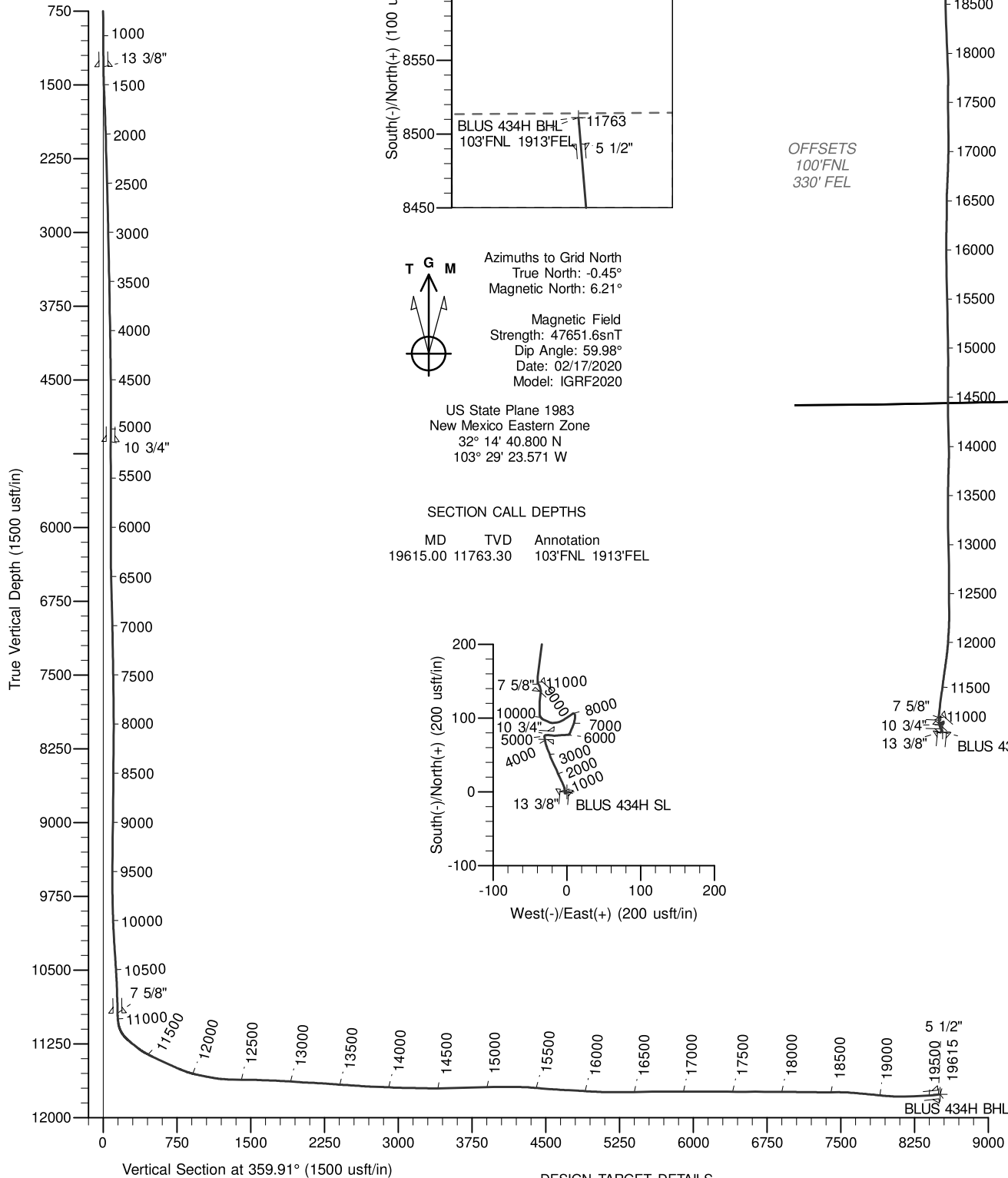
API #

Operator Name:	Property Name:	Well Number
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CASING DETAILS

TVD	MD	Name
1314.96	1315.00	13 3/8"
5127.71	5129.00	10 3/4"
10937.16	10941.00	7 5/8"
11765.37	19597.00	5 1/2"

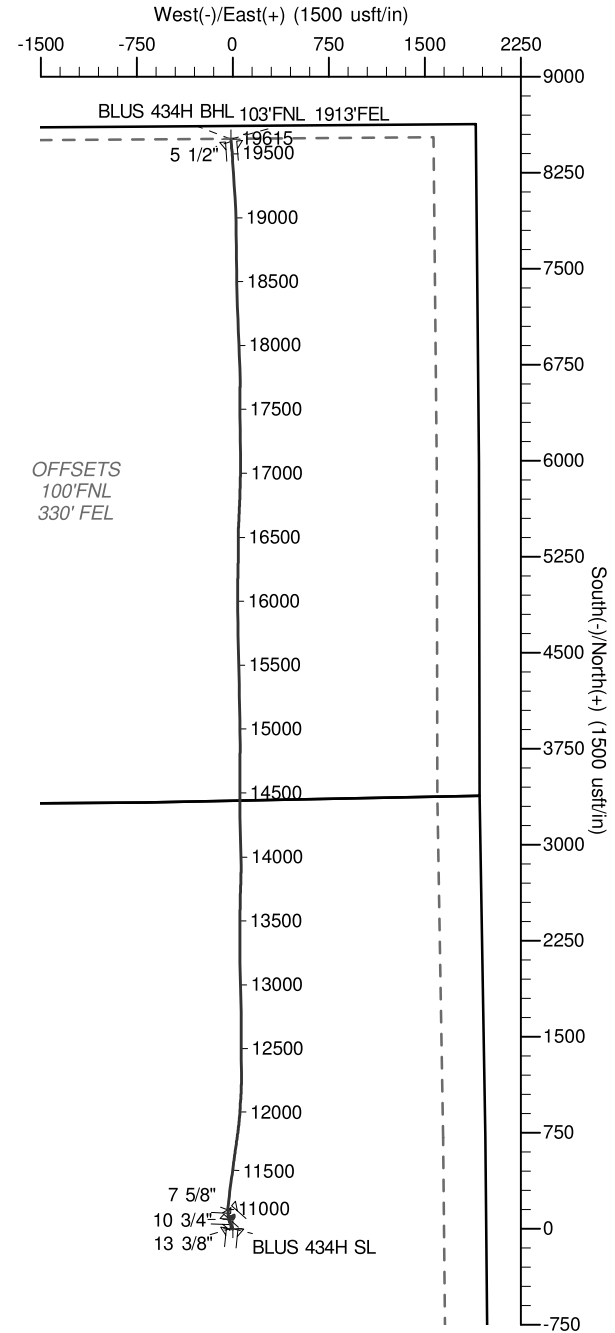
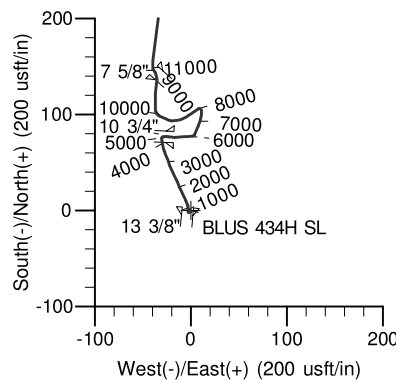


Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 6.21°
 Magnetic Field
 Strength: 47651.6snT
 Dip Angle: 59.98°
 Date: 02/17/2020
 Model: IGRF2020

US State Plane 1983
 New Mexico Eastern Zone
 32° 14' 40.800 N
 103° 29' 23.571 W

SECTION CALL DEPTHS

MD	TVD	Annotation
19615.00	11763.30	103'FNL 1913'FEL



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BLUS 434H SL	0.00	0.00	0.00	453767.27	802105.12	32° 14' 40.800 N	03° 29' 23.571 W
BLUS 434H BHL	11763.30	8511.37	-14.05	462278.53	802091.07	32° 16' 5.019 N	03° 29' 22.956 W

S5-T24S-R34E SL
 1950'FSL 1980'FEL
 S32-T23S-R34E BHL
 103'FNL 1913'FEL

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

Project	Permian NM E'83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	BLUS Pad 15, Centered on 434H final stake 1950'FSL,1980'FEL S5		
Site Position:		Northing:	453,767.27 usft
From:	Map	Easting:	802,105.12 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 14' 40.800 N
		Longitude:	103° 29' 23.571 W
		Grid Convergence:	0.45 °

Well	Bell Lake Unit South 434H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	#434H OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	02/17/20	6.66	59.98	47,651.55187065

Design	#434H OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.91

Survey Program	Date	03/21/20		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
75.05	1,286.00	Survey #1 (#434H OH)	GYRO-NS	Gyrocompass Gyro
1,384.00	19,559.00	Survey #2 (#434H OH)	MWD	MWD - Standard
19,615.00	19,615.00	Projection (#434H OH)	ZERO-ERROR	Zero Error

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLUS 434H SL									
75.05	0.15	140.21	75.05	-0.08	0.06	-0.08	0.20	0.20	0.00
168.20	0.70	208.30	168.20	-0.67	-0.13	-0.67	0.71	0.59	73.10
261.35	0.80	282.59	261.34	-1.03	-1.03	-1.03	0.98	0.11	79.75
354.50	0.72	218.71	354.48	-1.34	-2.03	-1.34	0.87	-0.09	-68.58
447.65	0.36	267.60	447.63	-1.81	-2.69	-1.81	0.59	-0.39	52.49
540.80	0.25	5.27	540.78	-1.62	-2.97	-1.62	0.50	-0.12	104.85
633.95	0.30	15.17	633.93	-1.19	-2.88	-1.18	0.07	0.05	10.63

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

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)
727.10	0.40	338.63	727.08	-0.65	-2.94	-0.64	0.26	0.11	-39.23
820.25	0.43	355.35	820.22	0.00	-3.09	0.01	0.13	0.03	17.95
913.40	0.59	345	913.37	0.83	-3.08	0.84	0.19	0.17	8.70
1,006.55	0.39	116.60	1,006.52	1.17	-2.77	1.17	0.89	-0.21	121.47
1,099.70	0.33	261.70	1,099.67	0.99	-2.75	0.99	0.74	-0.06	155.77
1,192.85	0.58	349.01	1,192.82	1.41	-3.11	1.42	0.70	0.27	93.73
1,286.00	0.90	7.92	1,285.96	2.60	-3.10	2.60	0.43	0.34	20.30
1,315.00	0.84	5.43	1,314.96	3.04	-3.05	3.04	0.25	-0.21	-8.58
13 3/8"									
1,384.00	0.70	357.80	1,383.95	3.96	-3.02	3.96	0.25	-0.20	-11.06
1,473.00	2.20	339.30	1,472.92	6.10	-3.64	6.11	1.74	1.69	-20.79
1,599.00	2.60	336.70	1,598.81	10.99	-5.63	11.00	0.33	0.32	-2.06
1,694.00	2.40	335.10	1,693.72	14.77	-7.32	14.78	0.22	-0.21	-1.68
1,788.00	2.20	334.40	1,787.64	18.18	-8.92	18.20	0.21	-0.21	-0.74
1,882.00	2.10	333.70	1,881.58	21.35	-10.47	21.37	0.11	-0.11	-0.74
1,977.00	1.80	336.90	1,976.52	24.29	-11.82	24.31	0.34	-0.32	3.37
2,072.00	1.80	336.50	2,071.47	27.03	-13.00	27.05	0.01	0.00	-0.42
2,166.00	1.80	335.80	2,165.43	29.73	-14.20	29.75	0.02	0.00	-0.74
2,261.00	1.80	336.00	2,260.38	32.45	-15.42	32.48	0.01	0.00	0.21
2,355.00	1.80	334.40	2,354.33	35.13	-16.65	35.16	0.05	0.00	-1.70
2,449.00	1.70	335.60	2,448.29	37.73	-17.87	37.76	0.11	-0.11	1.28
2,543.00	1.70	334.20	2,542.25	40.26	-19.05	40.29	0.04	0.00	-1.49
2,638.00	1.60	335.60	2,637.21	42.73	-20.21	42.77	0.11	-0.11	1.47
2,733.00	1.50	335.80	2,732.17	45.08	-21.27	45.11	0.11	-0.11	0.21
2,828.00	1.50	339.00	2,827.14	47.37	-22.22	47.41	0.09	0.00	3.37
2,922.00	1.40	341.60	2,921.11	49.61	-23.03	49.65	0.13	-0.11	2.77
3,017.00	1.30	340.00	3,016.09	51.72	-23.76	51.76	0.11	-0.11	-1.68
3,111.00	1.30	340.90	3,110.06	53.73	-24.48	53.77	0.02	0.00	0.96
3,206.00	1.20	335.10	3,205.04	55.65	-25.25	55.70	0.17	-0.11	-6.11
3,300.00	1.30	339.30	3,299.02	57.54	-26.04	57.59	0.14	0.11	4.47
3,395.00	1.30	339.10	3,393.99	59.56	-26.80	59.60	0.00	0.00	-0.21
3,489.00	1.20	339.50	3,487.97	61.48	-27.53	61.52	0.11	-0.11	0.43
3,583.00	1.10	340.40	3,581.95	63.25	-28.18	63.30	0.11	-0.11	0.96
3,677.00	1.10	342.30	3,675.93	64.96	-28.75	65.01	0.04	0.00	2.02
3,771.00	1.00	348.80	3,769.92	66.62	-29.19	66.67	0.17	-0.11	6.91
3,865.00	0.90	354.40	3,863.90	68.16	-29.42	68.21	0.15	-0.11	5.96
3,960.00	0.90	351.10	3,958.89	69.64	-29.61	69.69	0.05	0.00	-3.47
4,054.00	1.00	353.40	4,052.88	71.19	-29.82	71.24	0.11	0.11	2.45
4,148.00	1.10	348.10	4,146.86	72.88	-30.10	72.93	0.15	0.11	-5.64
4,242.00	0.90	344.60	4,240.85	74.48	-30.48	74.53	0.22	-0.21	-3.72
4,336.00	0.40	0.20	4,334.84	75.52	-30.67	75.57	0.56	-0.53	16.60
4,430.00	0.50	50.30	4,428.84	76.11	-30.36	76.16	0.42	0.11	53.30
4,523.00	0.50	47.90	4,521.84	76.64	-29.74	76.69	0.02	0.00	-2.58

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

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)	
4,617.00	0.70	76.70	4,615.83	77.05	-28.88	77.09	0.38	0.21	30.64	
4,711.00	1.00	90.10	4,709.82	77.18	-27.50	77.22	0.38	0.32	14.26	
4,805.00	1.30	94.80	4,803.80	77.09	-25.62	77.13	0.33	0.32	5.00	
4,899.00	1.50	96.00	4,897.77	76.87	-23.33	76.91	0.22	0.21	1.28	
4,994.00	1.40	95.30	4,992.74	76.63	-20.94	76.67	0.11	-0.11	-0.74	
5,073.00	1.20	94.60	5,071.72	76.48	-19.15	76.51	0.25	-0.25	-0.89	
5,129.00	1.20	92.33	5,127.71	76.41	-17.98	76.44	0.08	0.00	-4.05	
10 3/4"										
5,189.00	1.20	89.90	5,187.70	76.38	-16.73	76.41	0.08	0.00	-4.05	
5,283.00	1.10	87.60	5,281.68	76.42	-14.84	76.44	0.12	-0.11	-2.45	
5,378.00	1.10	86.70	5,376.66	76.51	-13.02	76.53	0.02	0.00	-0.95	
5,472.00	1.10	84.10	5,470.64	76.66	-11.22	76.67	0.05	0.00	-2.77	
5,566.00	1.10	85.00	5,564.63	76.83	-9.43	76.84	0.02	0.00	0.96	
5,661.00	1.20	82.30	5,659.61	77.04	-7.53	77.05	0.12	0.11	-2.84	
5,755.00	1.00	84.10	5,753.59	77.26	-5.74	77.27	0.22	-0.21	1.91	
5,849.00	0.90	90.20	5,847.58	77.34	-4.19	77.34	0.15	-0.11	6.49	
5,943.00	1.00	87.10	5,941.56	77.38	-2.63	77.38	0.12	0.11	-3.30	
6,038.00	0.80	87.60	6,036.55	77.45	-1.14	77.45	0.21	-0.21	0.53	
6,132.00	0.80	92.70	6,130.54	77.44	0.17	77.44	0.08	0.00	5.43	
6,227.00	0.80	78.30	6,225.53	77.55	1.48	77.54	0.21	0.00	-15.16	
6,321.00	0.70	71.80	6,319.53	77.86	2.67	77.85	0.14	-0.11	-6.91	
6,415.00	1.40	25.40	6,413.51	79.08	3.71	79.07	1.11	0.74	-49.36	
6,510.00	1.60	22.70	6,508.48	81.35	4.72	81.34	0.22	0.21	-2.84	
6,604.00	1.60	22.60	6,602.44	83.77	5.73	83.76	0.00	0.00	-0.11	
6,698.00	1.60	23.10	6,696.41	86.19	6.75	86.18	0.01	0.00	0.53	
6,792.00	1.40	23.80	6,790.37	88.45	7.73	88.43	0.21	-0.21	0.74	
6,887.00	1.40	18.90	6,885.35	90.61	8.57	90.59	0.13	0.00	-5.16	
6,981.00	1.30	18.70	6,979.32	92.70	9.29	92.69	0.11	-0.11	-0.21	
7,075.00	1.10	12.70	7,073.30	94.59	9.83	94.58	0.25	-0.21	-6.38	
7,171.00	1.00	11.10	7,169.28	96.31	10.19	96.30	0.11	-0.10	-1.67	
7,265.00	1.00	11.80	7,263.27	97.92	10.52	97.90	0.01	0.00	0.74	
7,359.00	1.10	9.50	7,357.25	99.61	10.83	99.60	0.12	0.11	-2.45	
7,454.00	1.10	3.20	7,452.24	101.42	11.03	101.41	0.13	0.00	-6.63	
7,549.00	0.90	358.10	7,547.22	103.08	11.06	103.06	0.23	-0.21	-5.37	
7,644.00	0.60	342.00	7,642.21	104.30	10.88	104.28	0.38	-0.32	-16.95	
7,738.00	0.60	336.20	7,736.21	105.22	10.53	105.20	0.06	0.00	-6.17	
7,832.00	0.40	324.00	7,830.20	105.93	10.14	105.92	0.24	-0.21	-12.98	
7,927.00	0.40	296.20	7,925.20	106.35	9.65	106.33	0.20	0.00	-29.26	
8,021.00	0.40	274.60	8,019.20	106.52	9.03	106.50	0.16	0.00	-22.98	
8,116.00	0.40	246.70	8,114.20	106.41	8.39	106.40	0.20	0.00	-29.37	
8,210.00	0.50	240.20	8,208.19	106.08	7.73	106.07	0.12	0.11	-6.91	
8,305.00	0.60	233.80	8,303.19	105.58	6.97	105.57	0.12	0.11	-6.74	
8,399.00	0.80	232.30	8,397.18	104.89	6.06	104.88	0.21	0.21	-1.60	
8,494.00	1.00	235.30	8,492.17	104.01	4.85	104.00	0.22	0.21	3.16	

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,588.00	1.00	235.80	8,586.16	103.08	3.50	103.08	0.01	0.00	0.53	
8,682.00	1.10	238.80	8,680.14	102.15	2.05	102.15	0.12	0.11	3.19	
8,777.00	1.10	236.00	8,775.12	101.17	0.51	101.17	0.06	0.00	-2.95	
8,871.00	1.10	236.80	8,869.11	100.17	-0.99	100.18	0.02	0.00	0.85	
8,966.00	1.30	236.30	8,964.09	99.08	-2.65	99.08	0.21	0.21	-0.53	
9,060.00	1.30	237.00	9,058.06	97.90	-4.43	97.91	0.02	0.00	0.74	
9,155.00	1.20	243.30	9,153.04	96.87	-6.23	96.88	0.18	-0.11	6.63	
9,249.00	1.50	247.00	9,247.01	95.95	-8.24	95.96	0.33	0.32	3.94	
9,344.00	1.80	250.70	9,341.97	94.97	-10.79	94.99	0.33	0.32	3.89	
9,439.00	1.90	262.30	9,436.92	94.26	-13.76	94.29	0.41	0.11	12.21	
9,533.00	1.90	258.50	9,530.87	93.74	-16.83	93.77	0.13	0.00	-4.04	
9,628.00	1.70	272.30	9,625.83	93.49	-19.78	93.52	0.50	-0.21	14.53	
9,722.00	2.70	290.80	9,719.76	94.33	-23.25	94.37	1.29	1.06	19.68	
9,815.00	3.00	294.00	9,812.64	96.10	-27.52	96.14	0.37	0.32	3.44	
9,910.00	3.00	296.40	9,907.51	98.21	-32.01	98.27	0.13	0.00	2.53	
10,004.00	2.70	322.30	10,001.40	101.06	-35.57	101.12	1.39	-0.32	27.55	
10,099.00	3.30	357.80	10,096.28	105.56	-37.04	105.62	2.02	0.63	37.37	
10,193.00	3.30	3.00	10,190.12	110.97	-37.01	111.03	0.32	0.00	5.53	
10,287.00	3.60	359.50	10,283.95	116.62	-36.89	116.68	0.39	0.32	-3.72	
10,382.00	3.50	358.80	10,378.77	122.50	-36.98	122.56	0.11	-0.11	-0.74	
10,476.00	3.90	10.10	10,472.57	128.52	-36.48	128.58	0.88	0.43	12.02	
10,571.00	3.10	6.70	10,567.39	134.25	-35.61	134.31	0.87	-0.84	-3.58	
10,665.00	2.20	347.20	10,661.29	138.53	-35.71	138.59	1.34	-0.96	-20.74	
10,759.00	2.00	345.60	10,755.23	141.88	-36.52	141.94	0.22	-0.21	-1.70	
10,854.00	1.50	331.80	10,850.19	144.58	-37.52	144.65	0.68	-0.53	-14.53	
10,905.00	1.50	321.00	10,901.17	145.69	-38.26	145.75	0.55	0.00	-21.18	
10,941.00	1.55	312.01	10,937.16	146.38	-38.92	146.45	0.68	0.15	-24.99	
7 5/8"										
10,962.00	1.60	307.10	10,958.15	146.75	-39.36	146.82	0.68	0.23	-23.36	
11,057.00	10.40	4.60	11,052.57	156.12	-39.73	156.19	10.14	9.26	60.53	
11,152.00	32.40	8.00	11,140.48	190.29	-35.45	190.35	23.19	23.16	3.58	
11,199.00	42.90	7.30	11,177.64	218.71	-31.65	218.76	22.36	22.34	-1.49	
11,247.00	48.20	6.90	11,211.25	252.70	-27.43	252.75	11.06	11.04	-0.83	
11,294.00	51.20	6.70	11,241.64	288.29	-23.18	288.33	6.39	6.38	-0.43	
11,342.00	51.90	6.20	11,271.49	325.64	-18.96	325.67	1.67	1.46	-1.04	
11,389.00	52.80	7.80	11,300.20	362.57	-14.42	362.60	3.31	1.91	3.40	
11,437.00	59.00	8.80	11,327.10	401.88	-8.68	401.90	13.03	12.92	2.08	
11,461.00	60.20	8.10	11,339.24	422.36	-5.64	422.37	5.60	5.00	-2.92	
11,556.00	64.90	7.80	11,383.02	505.83	6.02	505.82	4.96	4.95	-0.32	
11,651.00	65.50	7.40	11,422.87	591.31	17.42	591.28	0.74	0.63	-0.42	
11,746.00	65.50	8.00	11,462.27	676.98	29.00	676.93	0.57	0.00	0.63	
11,841.00	66.70	7.60	11,500.76	763.03	40.79	762.96	1.32	1.26	-0.42	
11,936.00	70.70	5.50	11,535.26	850.94	50.86	850.85	4.69	4.21	-2.21	

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

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)
12,031.00	77.80	3.00	11,561.03	942.06	57.60	941.96	7.89	7.47	-2.63
12,125.00	78.90	4.10	11,580.02	1,033.94	63.30	1,033.83	1.64	1.17	1.17
12,220.00	80.00	1.10	11,597.41	1,127.22	67.53	1,127.11	3.31	1.16	-3.16
12,315.00	86.10	359.20	11,608.90	1,221.48	67.77	1,221.36	6.72	6.42	-2.00
12,410.00	88.50	359.50	11,613.38	1,316.36	66.69	1,316.25	2.55	2.53	0.32
12,505.00	88.60	0.20	11,615.78	1,411.33	66.44	1,411.22	0.74	0.11	0.74
12,600.00	90.00	0.90	11,616.94	1,506.31	67.36	1,506.20	1.65	1.47	0.74
12,695.00	88.10	359.20	11,618.52	1,601.29	67.44	1,601.18	2.68	-2.00	-1.79
12,790.00	87.70	359.40	11,622.00	1,696.22	66.28	1,696.11	0.47	-0.42	0.21
12,885.00	87.10	358.10	11,626.31	1,791.10	64.21	1,790.99	1.51	-0.63	-1.37
12,980.00	86.00	358.10	11,632.03	1,885.87	61.06	1,885.77	1.16	-1.16	0.00
13,075.00	86.10	358.30	11,638.57	1,980.60	58.09	1,980.50	0.23	0.11	0.21
13,170.00	87.40	359.20	11,643.96	2,075.42	56.02	2,075.33	1.66	1.37	0.95
13,265.00	87.00	359.70	11,648.60	2,170.30	55.11	2,170.21	0.67	-0.42	0.53
13,360.00	86.00	359.70	11,654.40	2,265.12	54.61	2,265.03	1.05	-1.05	0.00
13,455.00	85.40	0.40	11,661.52	2,359.85	54.69	2,359.76	0.97	-0.63	0.74
13,550.00	86.80	1.30	11,667.98	2,454.62	56.10	2,454.52	1.75	1.47	0.95
13,645.00	86.00	1.50	11,673.95	2,549.40	58.42	2,549.30	0.87	-0.84	0.21
13,740.00	85.60	1.10	11,680.90	2,644.12	60.57	2,644.02	0.59	-0.42	-0.42
13,835.00	88.30	2.20	11,685.96	2,738.94	63.30	2,738.83	3.07	2.84	1.16
13,930.00	88.20	359.70	11,688.86	2,833.88	64.87	2,833.76	2.63	-0.11	-2.63
14,025.00	86.80	358.80	11,693.00	2,928.77	63.63	2,928.66	1.75	-1.47	-0.95
14,120.00	88.50	358.10	11,696.90	3,023.65	61.06	3,023.55	1.93	1.79	-0.74
14,215.00	88.90	358.30	11,699.05	3,118.58	58.08	3,118.48	0.47	0.42	0.21
14,310.00	89.50	359.50	11,700.38	3,213.55	56.26	3,213.46	1.41	0.63	1.26
14,405.00	89.10	359.70	11,701.54	3,308.54	55.59	3,308.45	0.47	-0.42	0.21
14,500.00	90.90	359.90	11,701.54	3,403.54	55.26	3,403.44	1.91	1.89	0.21
14,595.00	90.50	0.10	11,700.38	3,498.53	55.26	3,498.44	0.47	-0.42	0.21
14,690.00	91.20	0.40	11,698.97	3,593.52	55.68	3,593.42	0.80	0.74	0.32
14,785.00	92.20	0.80	11,696.15	3,688.47	56.67	3,688.37	1.13	1.05	0.42
14,880.00	92.00	359.70	11,692.67	3,783.41	57.09	3,783.31	1.18	-0.21	-1.16
14,975.00	91.50	359.40	11,689.77	3,878.36	56.34	3,878.26	0.61	-0.53	-0.32
15,070.00	91.10	359.50	11,687.62	3,973.33	55.43	3,973.23	0.43	-0.42	0.11
15,165.00	90.00	358.70	11,686.70	4,068.31	53.94	4,068.22	1.43	-1.16	-0.84
15,260.00	88.90	359.40	11,687.62	4,163.29	52.36	4,163.20	1.37	-1.16	0.74
15,355.00	88.80	358.70	11,689.52	4,258.26	50.79	4,258.17	0.74	-0.11	-0.74
15,450.00	85.10	358.00	11,694.58	4,353.07	48.06	4,352.98	3.96	-3.89	-0.74
15,545.00	85.60	358.70	11,702.28	4,447.71	45.33	4,447.63	0.90	0.53	0.74
15,640.00	85.60	358.80	11,709.57	4,542.41	43.26	4,542.33	0.10	0.00	0.11
15,735.00	86.20	359.20	11,716.36	4,637.15	41.61	4,637.08	0.76	0.63	0.42
15,830.00	87.10	359.00	11,721.91	4,731.98	40.12	4,731.91	0.97	0.95	-0.21
15,925.00	87.20	359.00	11,726.63	4,826.85	38.46	4,826.78	0.11	0.11	0.00
16,020.00	86.10	359.90	11,732.18	4,921.68	37.55	4,921.61	1.50	-1.16	0.95
16,115.00	87.60	0.60	11,737.40	5,016.53	37.97	5,016.46	1.74	1.58	0.74

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

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)
16,210.00	89.20	1.60	11,740.06	5,111.47	39.79	5,111.40	1.99	1.68	1.05
16,305.00	90.70	1.30	11,740.14	5,206.44	42.20	5,206.36	1.61	1.58	-0.32
16,400.00	90.00	0.10	11,739.56	5,301.43	43.36	5,301.35	1.46	-0.74	-1.26
16,495.00	89.40	0.20	11,740.06	5,396.42	43.60	5,396.35	0.64	-0.63	0.11
16,590.00	92.00	2.00	11,738.90	5,491.39	45.43	5,491.31	3.33	2.74	1.89
16,685.00	90.80	3.20	11,736.58	5,586.26	49.74	5,586.17	1.79	-1.26	1.26
16,780.00	89.50	1.60	11,736.33	5,681.17	53.71	5,681.07	2.17	-1.37	-1.68
16,875.00	90.40	2.20	11,736.41	5,776.12	56.86	5,776.01	1.14	0.95	0.63
16,970.00	89.70	1.50	11,736.33	5,871.07	59.93	5,870.96	1.04	-0.74	-0.74
17,065.00	90.40	359.70	11,736.24	5,966.06	60.92	5,965.95	2.03	0.74	-1.89
17,160.00	89.60	359.20	11,736.24	6,061.05	60.01	6,060.94	0.99	-0.84	-0.53
17,255.00	90.40	359.40	11,736.24	6,156.04	58.85	6,155.94	0.87	0.84	0.21
17,350.00	89.90	358.70	11,736.00	6,251.03	57.28	6,250.93	0.91	-0.53	-0.74
17,445.00	89.30	359.50	11,736.66	6,346.01	55.79	6,345.91	1.05	-0.63	0.84
17,540.00	89.30	359.70	11,737.82	6,441.00	55.12	6,440.90	0.21	0.00	0.21
17,635.00	90.90	1.50	11,737.65	6,535.99	56.12	6,535.89	2.54	1.68	1.89
17,730.00	89.40	0.20	11,737.40	6,630.98	57.53	6,630.87	2.09	-1.58	-1.37
17,825.00	89.50	357.40	11,738.32	6,725.94	55.54	6,725.84	2.95	0.11	-2.95
17,920.00	90.30	357.40	11,738.48	6,820.84	51.23	6,820.75	0.84	0.84	0.00
18,015.00	89.40	357.20	11,738.73	6,915.74	46.75	6,915.65	0.97	-0.95	-0.21
18,110.00	90.30	358.30	11,738.98	7,010.66	43.02	7,010.58	1.50	0.95	1.16
18,205.00	88.60	357.60	11,739.89	7,105.59	39.62	7,105.52	1.94	-1.79	-0.74
18,300.00	89.60	358.30	11,741.38	7,200.52	36.23	7,200.45	1.28	1.05	0.74
18,395.00	88.80	357.60	11,742.71	7,295.44	32.83	7,295.38	1.12	-0.84	-0.74
18,490.00	91.10	359.90	11,742.79	7,390.41	30.76	7,390.35	3.42	2.42	2.42
18,585.00	89.90	0.10	11,741.96	7,485.40	30.76	7,485.34	1.28	-1.26	0.21
18,680.00	86.20	358.70	11,745.20	7,580.32	29.76	7,580.27	4.16	-3.89	-1.47
18,775.00	84.80	358.50	11,752.65	7,675.00	27.45	7,674.95	1.49	-1.47	-0.21
18,870.00	84.90	359.50	11,761.18	7,769.60	25.80	7,769.55	1.05	0.11	1.05
18,965.00	83.80	0.10	11,770.53	7,864.14	25.47	7,864.09	1.32	-1.16	0.63
19,060.00	85.20	357.40	11,779.64	7,958.67	23.40	7,958.62	3.19	1.47	-2.84
19,155.00	88.90	356.40	11,784.53	8,053.38	18.27	8,053.34	4.03	3.89	-1.05
19,250.00	91.20	356.00	11,784.44	8,148.17	11.98	8,148.14	2.46	2.42	-0.42
19,345.00	91.10	356.70	11,782.54	8,242.96	5.93	8,242.94	0.74	-0.11	0.74
19,440.00	92.90	356.00	11,779.22	8,337.70	-0.11	8,337.69	2.03	1.89	-0.74
19,535.00	95.50	355.30	11,772.26	8,432.16	-7.30	8,432.17	2.83	2.74	-0.74
19,559.00	96.60	355.10	11,769.73	8,455.95	-9.29	8,455.95	4.66	4.58	-0.83
19,597.00	96.60	355.10	11,765.37	8,493.56	-12.52	8,493.57	0.00	0.00	0.00
5 1/2"									
19,615.00	96.60	355.10	11,763.30	8,511.37	-14.05	8,511.38	0.00	0.00	0.00
103'FNL 1913'FEL - BLUS 434H BHL									

Titan Directional Drilling

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well Bell Lake Unit South 434H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 3614.00usft
Site:	BLUS Pad 15	MD Reference:	GL+KB @ 3614.00usft
Well:	Bell Lake Unit South 434H	North Reference:	Grid
Wellbore:	#434H OH	Survey Calculation Method:	Minimum Curvature
Design:	#434H OH	Database:	EDM 5k-14

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
BLUS 434H SL	0.00	0.00	0.00	0.00	0.00	453,767.27	802,105.12	32° 14' 40.800 N	103° 29' 23.571 W
- actual wellpath hits target center									
- Point									
BLUS 434H BHL	0.00	0.00	11,763.30	8,511.37	-14.05	462,278.53	802,091.07	32° 16' 5.019 N	103° 29' 22.956 W
- actual wellpath hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,315.00	1,314.96	13 3/8"	13-3/8	17-1/2
	5,129.00	5,127.71	10 3/4"	10-3/4	12-1/4
	10,941.00	10,937.16	7 5/8"	7-5/8	9-7/8
	19,597.00	11,765.37	5 1/2"	5-1/2	6-3/4

Design Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment
	19,615.00	11,763.30	8,511.37	-14.05	103°FNL 1913°FEL