

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMNM01244A

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 27. If Unit or CA/Agreement, Name and/or No.
891001066X

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other8. Well Name and No.
BELL LAKE UNIT NORTH 227H

2. Name of Operator

KAISER FRANCIS OIL COMPANY

Contact: ERIC HANSEN

E-Mail: EricH@KFOC.net

9. API Well No.

30-025-47771-00-X1

3a. Address

TULSA, OK 74121-1468

3b. Phone No. (include area code)

Ph: 918-491-4339

10. Field and Pool or Exploratory Area
OJO CHISO

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 6 T23S R34E NWSE 2130FSL 2425FEL
32.332241 N Lat, 103.508560 W Lon

11. County or Parish, State

LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Kaiser-Francis Oil Company request a SHL move for the Bell Lake Unit North 227H, 228H, 427H, and 428H. Located on pad 9 6-23S-34E Lea County New Mexico.

This includes the following wells:

Bell Lake Unit North 428H
APD ID# 10400050265

Approved SHL 2130' FSL 2575' FEL 6-23S-34E Lea County New Mexico.
Proposed SHL 2095' FSL 2455' FEL 6-23S-34E Lea County New Mexico.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #533507 verified by the BLM Well Information System
For KAISER FRANCIS OIL COMPANY, sent to the Hobbs
Committed to AFMSS for processing by JUANA MEDRANO on 10/09/2020 (21JM0011SE)

Name (Printed/Typed) ERIC HANSEN

Title DRILLING ENGINEER

Signature (Electronic Submission)

Date 10/09/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By (BLM Approver Not Specified)

Title

Date 10/14/2020

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Hobbs

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #533507 that would not fit on the form

32. Additional remarks, continued

Bell Lake Unit North 427H
APD ID# 10400050137

Approved SHL 2130' FSL 2545' FEL 6-23S-34E Lea County New Mexico.
Proposed SHL 2115' FSL 2455' FEL 6-23S-34E Lea County New Mexico

Bell Lake Unit North 228H
APD ID# 10400050126

Approved SHL 2130' FSL 2455' FEL 6-23S-34E Lea County New Mexico.
Proposed SHL 2135' FSL 2455' FEL 6-23S-34E Lea County New Mexico.

Bell Lake Unit North 227
APD ID#10400050021

Approved SHL 2130' FSL 2425' FEL 6-23S-34E Lea County New Mexico.
Proposed SHL 2155' FSL 2455' FEL 6-23S-34E Lea County New Mexico.

Revisions to Operator-Submitted EC Data for Sundry Notice #533507

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMLC070544A	NMNM01244A
Agreement:		891001066X (NMNM68292X)
Operator:	KAISER FRANCIS OIL COMPANY 6733 SOUTH YALE AVE TULSA, OK 74136 Ph: 918-491-4339	KAISER FRANCIS OIL COMPANY TULSA, OK 74121-1468 Ph: 918-491-4314
Admin Contact:	ERIC HANSEN DRILLING ENGINEER E-Mail: EricH@KFOC.net Ph: 918-491-4339	ERIC HANSEN DRILLING ENGINEER E-Mail: EricH@KFOC.net Ph: 918-491-4339
Tech Contact:	ERIC HANSEN DRILLING ENGINEER E-Mail: EricH@KFOC.net Ph: 918-491-4339	ERIC HANSEN DRILLING ENGINEER E-Mail: EricH@KFOC.net Ph: 918-491-4339
Location: State: County:	NM LEA	NM LEA
Field/Pool:	OJO CHISO BONE SPRING SW	OJO CHISO
Well/Facility:	BELL LAKE UNIT NORTH 227H Sec 6 T23S R34E Mer NMP FSL FEL	BELL LAKE UNIT NORTH 227H Sec 6 T23S R34E NWSE 2130FSL 2425FEL 32.332241 N Lat, 103.508560 W Lon

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-47845	² Pool Code 98259	³ Pool Name Ojo Chiso; Bone Spring, Southwest
⁴ Property Code 316707	⁵ Property Name BELL LAKE UNIT NORTH	⁶ Well Number 228H
⁷ OGRID No. 12361	⁸ Operator Name KAISER-FRANCIS OIL CO.	⁹ Elevation 3474.9

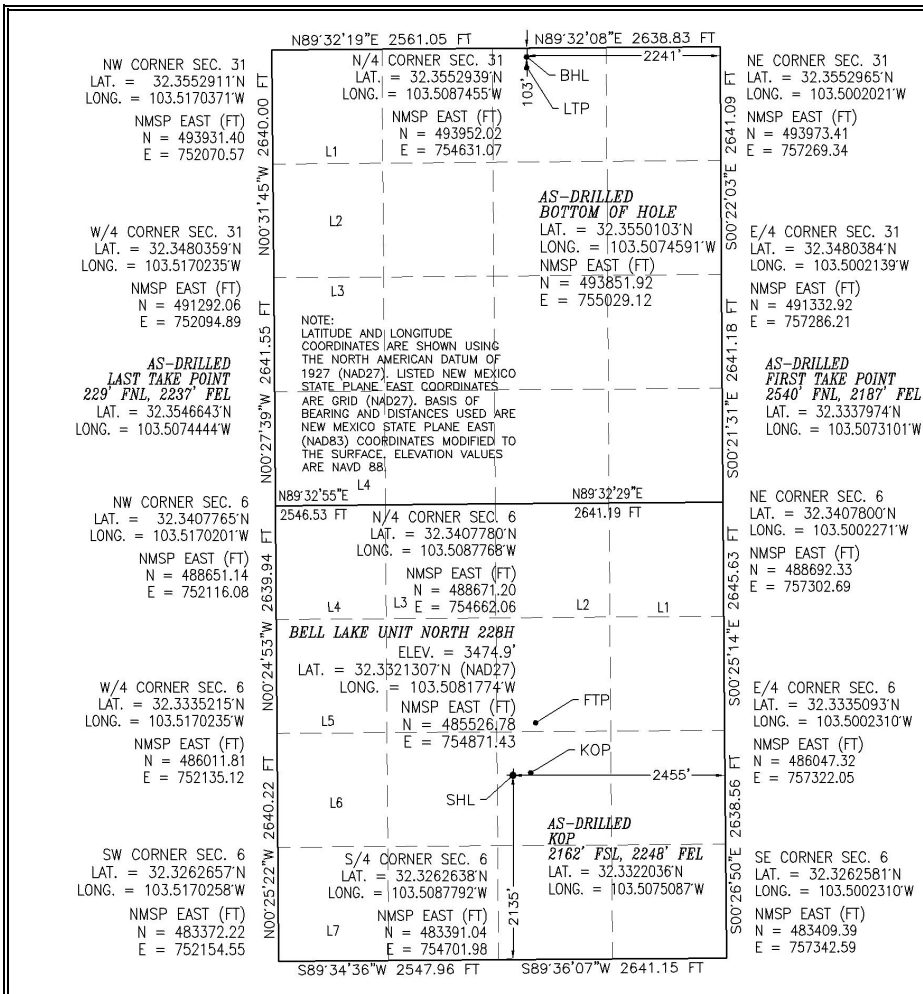
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	6	23 S	34 E		2135	SOUTH	2455	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	31	22 S	34 E		103	NORTH	2241	EAST	LEA
¹² Dedicated Acres 480	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14527-A						

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.

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.

7/15/21

Signature

Date

Erica Miles

Printed Name

EricaM@kfoc.net

E-mail Address

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.

MAY 18, 2021

Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number: F-12797

SURVEY NO. 6998A

Intent ☐ As Drilled ☒

API # 30-025-47845		
Operator Name: KAISER-FRANCIS OIL CO.	Property Name: BELL LAKE UNIT NORTH	Well Number 228H

Kick Off Point (KOP)

UL J	Section 6	Township 23S	Range 34E	Lot	Feet 2162	From N/S SOUTH	Feet 2248	From E/W EAST	County LEA
Latitude 32.3322036					Longitude 103.5075087			NAD 27	

First Take Point (FTP)

UL G	Section 6	Township 23S	Range 34E	Lot	Feet 2540	From N/S NORTH	Feet 2187	From E/W EAST	County LEA
Latitude 32.3337974					Longitude 103.5073101			NAD 27	

Last Take Point (LTP)

UL B	Section 31	Township 22S	Range 34E	Lot	Feet 229	From N/S NORTH	Feet 2237	From E/W EAST	County LEA
Latitude 32.3546643					Longitude 103.5074444			NAD 27	

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 # 30-025-43033		
Operator Name: Kaiser-Francis Oil Company	Property Name: Bell Lake Unit North	Well Number 230H

KZ 06/29/2018

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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1000 Rio Brazos Road, Aztec, NM 87410
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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
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Form C-102
Revised August 1,
2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-47845	² Pool Code 98259	³ Pool Name Ojo Chiso; Bone Spring, Southwest
⁴ Property Code 316707	⁵ Property Name BELL LAKE UNIT NORTH	⁶ Well Number 228H
⁷ OGRID No. 12361	⁸ Operator Name KAISER-FRANCIS OIL CO.	⁹ Elevation 3474.9

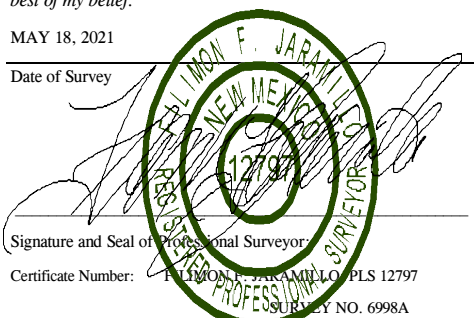
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	6	23 S	34 E		2135	SOUTH	2455	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	31	22 S	34 E		103	NORTH	2241	EAST	LEA
¹² Dedicated Acres 480	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14527-A						

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. 31 LAT. = 32.3554149°N LONG. = 103.5175188°W NMSP EAST (FT) N = 493991.59 E = 793253.54 W/4 CORNER SEC. 31 LAT. = 32.3481597°N LONG. = 103.5175050°W NMSP EAST (FT) N = 491352.17 E = 793277.92 AS-DRILLED LAST TAKE POINT 229' FNL, 2237' FEL LAT. = 32.3547881°N LONG. = 103.5079258°W NW CORNER SEC. 6 LAT. = 32.3409003°N LONG. = 103.5175014°W NMSP EAST (FT) N = 488711.17 E = 793299.16 W/4 CORNER SEC. 6 LAT. = 32.3336453°N LONG. = 103.5175046°W NMSP EAST (FT) N = 486071.76 E = 793318.27 SW CORNER SEC. 6 LAT. = 32.3263895°N LONG. = 103.5175066°W NMSP EAST (FT) N = 483432.09 E = 793337.75		N/4 CORNER SEC. 31 LAT. = 32.3554176°N LONG. = 103.5092270°W NMSP EAST (FT) N = 494012.22 E = 795814.06 AS-DRILLED BOTTOM OF HOLE LAT. = 32.3551340°N LONG. = 103.5079405°W NMSP EAST (FT) N = 493912.11 E = 796212.11 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. N/4 CORNER SEC. 6 LAT. = 32.3409018°N LONG. = 103.5092579°W NMSP EAST (FT) N = 488731.23 E = 795845.16 S/4 CORNER SEC. 6 LAT. = 32.3263876°N LONG. = 103.5092598°W NMSP EAST (FT) N = 483450.91 E = 795885.19			NE CORNER SEC. 31 LAT. = 32.3554203°N LONG. = 103.5006833°W NMSP EAST (FT) N = 494033.60 E = 798452.33 E/4 CORNER SEC. 31 LAT. = 32.3481622°N LONG. = 103.5006950°W NMSP EAST (FT) N = 491393.03 E = 798469.27 AS-DRILLED FIRST TAKE POINT 2540' FNL, 2187' FEL LAT. = 32.3339212°N LONG. = 103.5077909°W NE CORNER SEC. 6 LAT. = 32.3409038°N LONG. = 103.5007079°W NMSP EAST (FT) N = 488752.37 E = 798485.80 E/4 CORNER SEC. 6 LAT. = 32.3336332°N LONG. = 103.5007113°W NMSP EAST (FT) N = 486107.27 E = 798505.21 SE CORNER SEC. 6 LAT. = 32.3263820°N LONG. = 103.5007113°W NMSP EAST (FT) N = 483469.26 E = 798525.81			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. 7/15/21 Signature _____ Date _____ Erica Miles Printed Name _____ EricaM@kfoc.net E-mail Address _____		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. MAY 18, 2021 Date of Survey _____ Signature and Seal of Professional Surveyor:  Certificate Number: _____	
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Intent ☐ As Drilled ☒

API # 30-025-47845		
Operator Name: KAISER-FRANCIS OIL CO.	Property Name: BELL LAKE UNIT NORTH	Well Number 228H

Kick Off Point (KOP)

UL J	Section 6	Township 23S	Range 34E	Lot	Feet 2162	From N/S SOUTH	Feet 2248	From E/W EAST	County LEA
Latitude 32.3323275					Longitude 103.5079895			NAD 83	

First Take Point (FTP)

UL G	Section 6	Township 23S	Range 34E	Lot	Feet 2540	From N/S NORTH	Feet 2187	From E/W EAST	County LEA
Latitude 32.3339212					Longitude 103.5077909			NAD 83	

Last Take Point (LTP)

UL B	Section 31	Township 22S	Range 34E	Lot	Feet 229	From N/S NORTH	Feet 2237	From E/W EAST	County LEA
Latitude 32.3547881					Longitude 103.5079258			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 # 30-025-43033		
Operator Name: Kaiser-Francis Oil Company	Property Name: Bell Lake Unit North	Well Number 230H

KZ 06/29/2018

Kaiser-Francis Oil Company

Kaiser-Francis Oil Co.

Lea County, NM (NAD 83)
SEC 6, T23S, R34E
BELL LAKE UNIT NORTH 228H

OH

Design: FINAL

Standard Survey Report

08 November, 2020



Kaiser-Francis Oil Company



CATHEDRAL

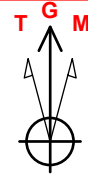
Project: Lea County, NM (NAD 83)
 Site: SEC 6, T23S, R34E
 Well: BELL LAKE UNIT NORTH 228H
 Wellbore: OH
 FINAL

WELL DETAILS: BELL LAKE UNIT NORTH 228H

KB 23.9' @ 3498.80usft (Cactus 171)
 Ground Level: 3474.90

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	485586.71	796054.60	32° 19' 56.116 N	103° 30' 31.169 W

US State Plane 1983
 New Mexico Eastern Zone

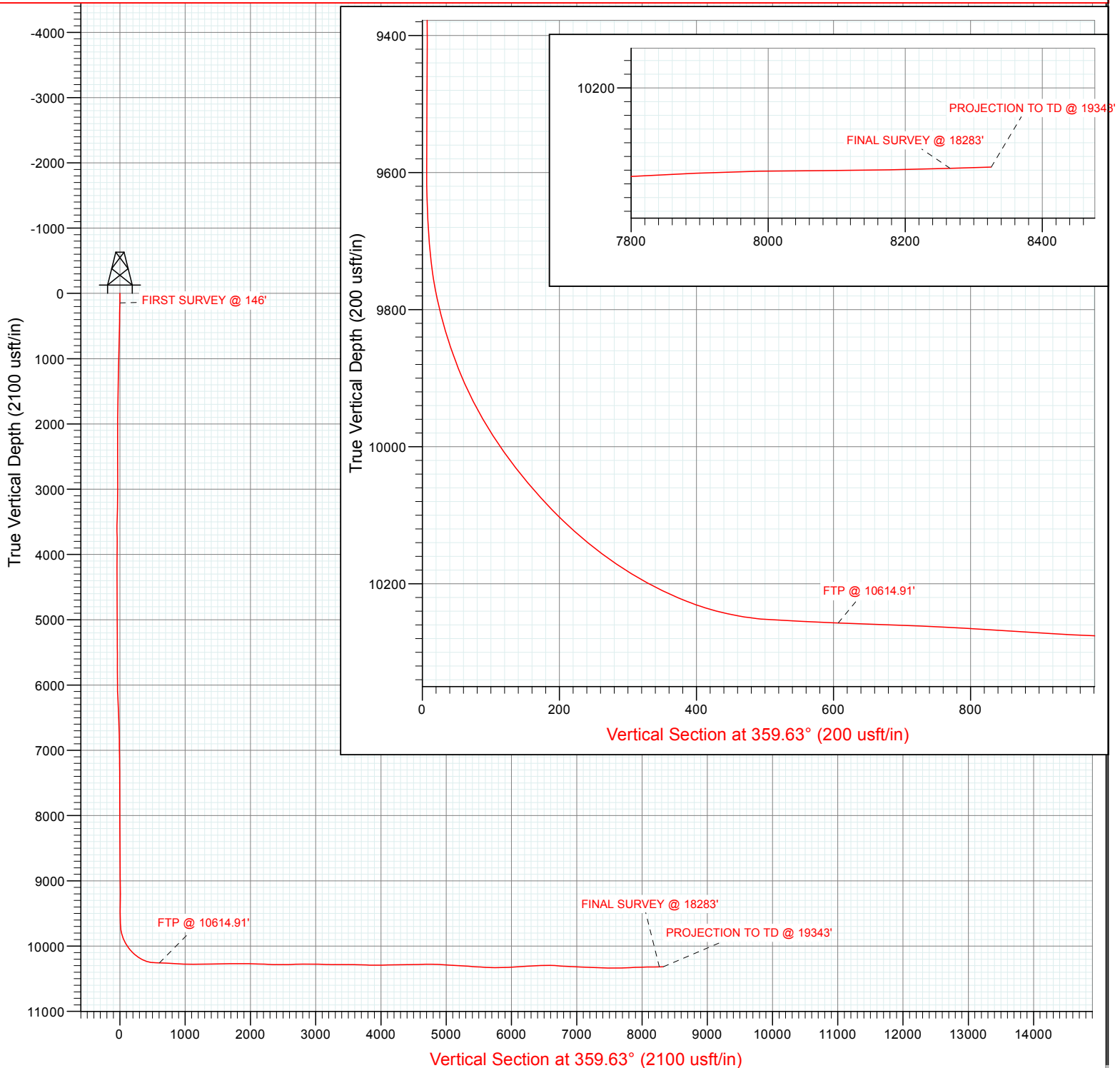


Total Azimuth to Grid North
 True North: -0.44°
 Magnetic North: 6.06°

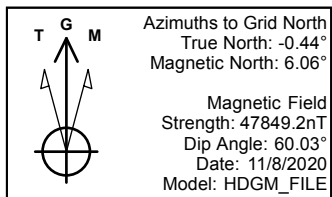
Magnetic Field
 Strength: 47849.2nT
 Dip Angle: 60.03°
 Date: 11/8/2020
 Model: HDGM_FILE

SURVEY DETAILS

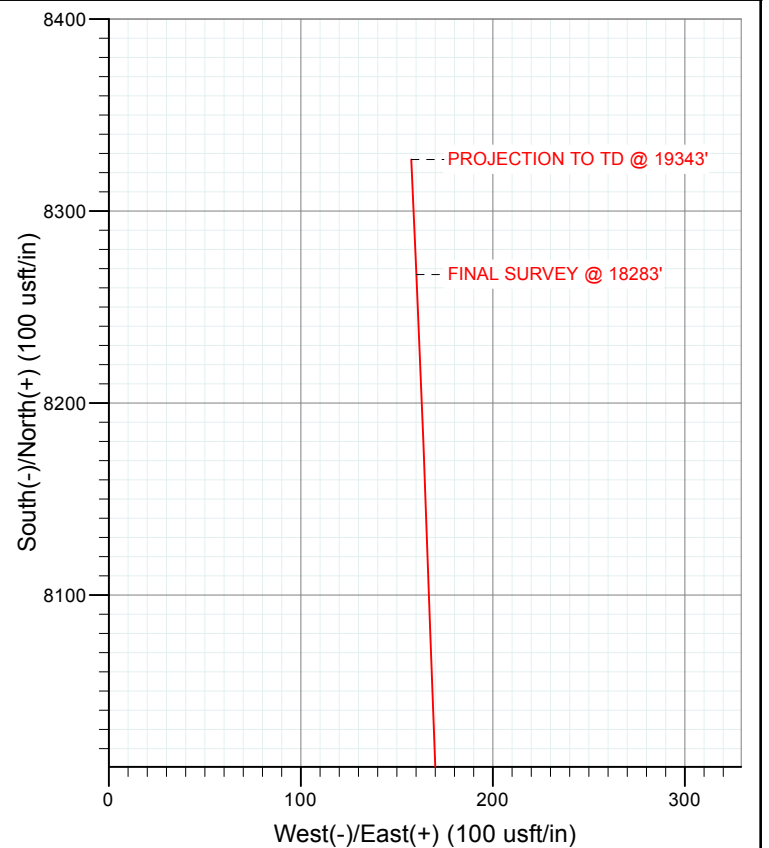
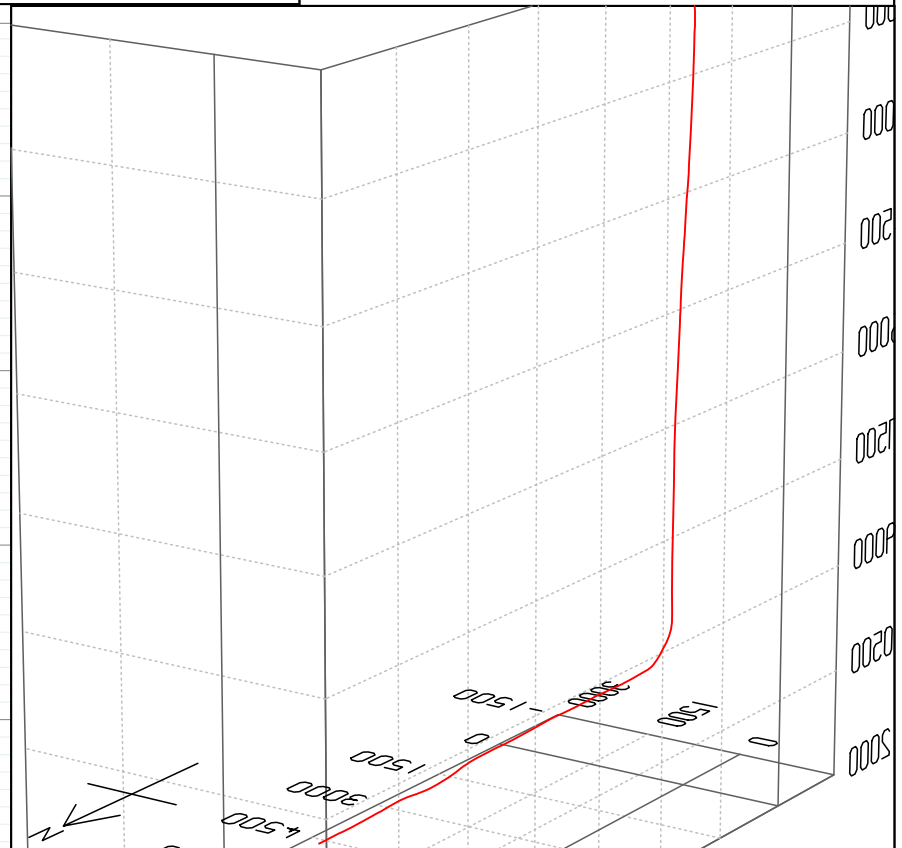
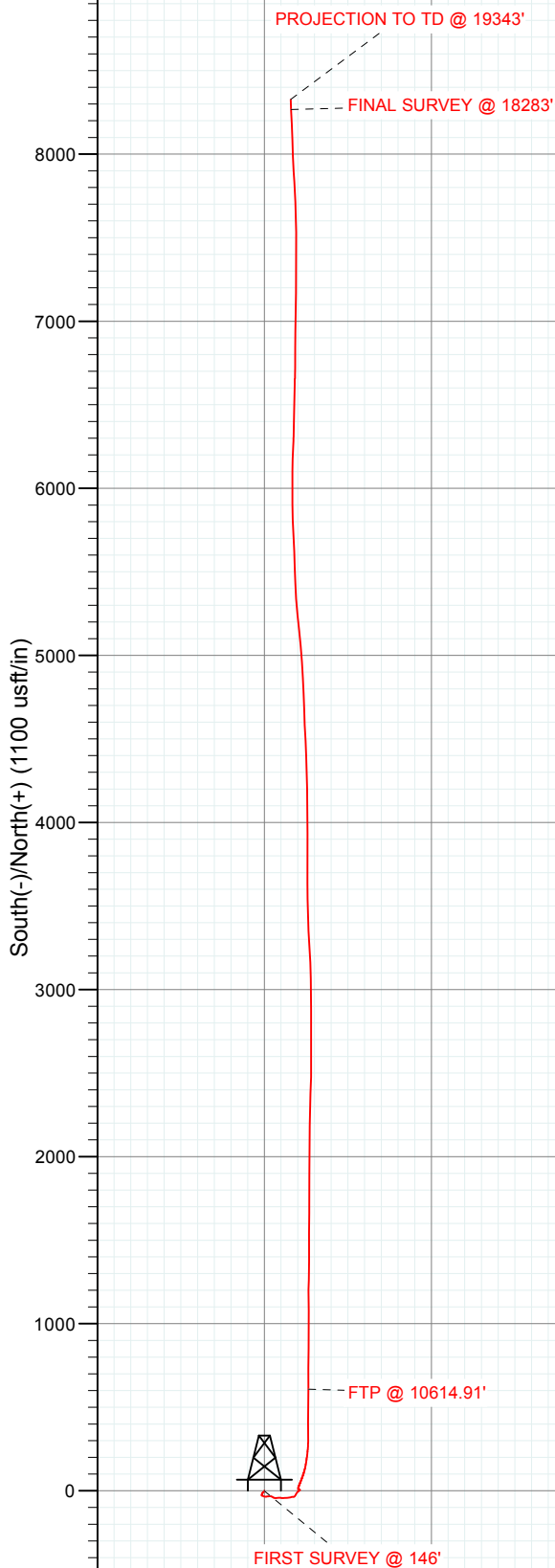
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
146.00	0.86	224.52	145.99	-0.78	-0.77	-0.78	1.10	FIRST SURVEY @ 146'
10614.91	87.87	0.05	10257.26	608.53	263.24	606.82	913.91	FTP @ 10614.91'
18283.00	91.74	357.37	10317.52	8266.95	160.28	8265.74	8576.70	FINAL SURVEY @ 18283'
18343.00	91.74	357.37	10315.70	8326.86	157.53	8325.67	8636.67	PROJECTION TO TD @ 19343'



Kaiser-Francis Oil Company

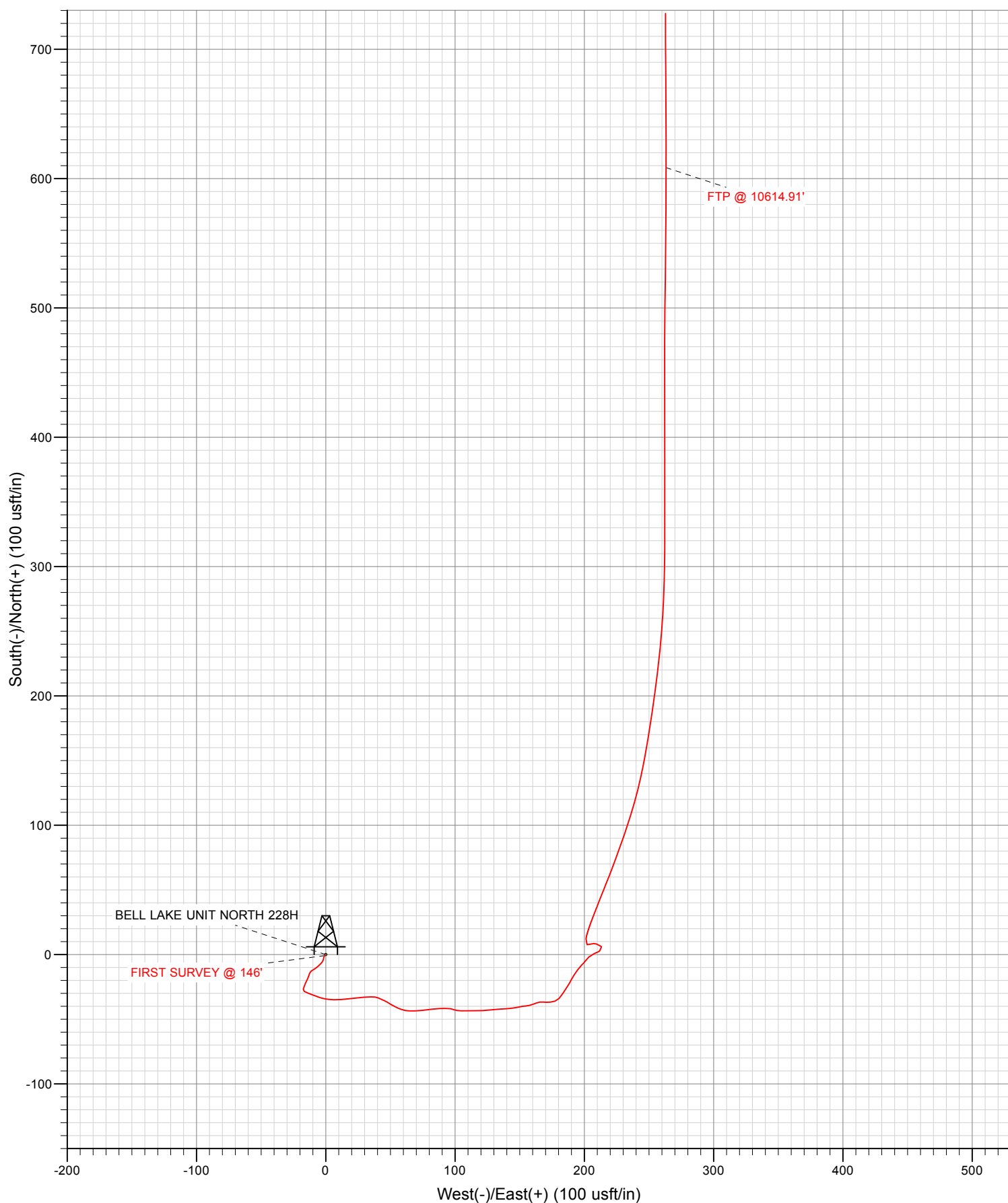


US State Plane 1983
New Mexico Eastern Zone
Project: Lea County, NM (NAD 83)
Site: SEC 6, T23S, R34E
Well: BELL LAKE UNIT NORTH 228H
Wellbore: OH
KB 23.9' @ 3498.80usft (Cactus 171)
Ground Elevation: 3474.90
FINAL



**Kaiser-Francis Oil Company**

US State Plane 1983
New Mexico Eastern Zone
Project: Lea County, NM (NAD 83)
Site: SEC 6, T23S, R34E
Well: BELL LAKE UNIT NORTH 228H
Wellbore: OH
KB 23.9' @ 3498.80usft (Cactus 171)
Ground Elevation: 3474.90
FINAL



Kaiser-Francis Oil Company

Survey Report



Company:	Kaiser-Francis Oil Co.	Local Co-ordinate Reference:	Well BELL LAKE UNIT NORTH 228H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Site:	SEC 6, T23S, R34E	MD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Well:	BELL LAKE UNIT NORTH 228H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		SEC 6, T23S, R34E			
Site Position:		Northing:	484,136.67 usft	Latitude:	32° 19' 41.731 N
From:	Lat/Long	Easting:	796,546.17 usft	Longitude:	103° 30' 25.571 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.44 °

Well	BELL LAKE UNIT NORTH 228H					
Well Position	+N/-S	0.00 usft	Northing:	485,586.71 usft	Latitude:	32° 19' 56.116 N
	+E/-W	0.00 usft	Easting:	796,054.60 usft	Longitude:	103° 30' 31.169 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,474.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	11/8/2020	6.50	60.03	47,849.20000000

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.63	

Survey Program	Date	11/8/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
146.00	18,343.00	GT MWD (OH)	MWD+HDGM	OWSG MWD + HDGM	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
146.00	0.86	224.52	145.99	-0.78	-0.77	-0.78	0.59	0.59	FIRST SURVEY @ 146'	
240.00	0.93	192.05	239.98	-2.03	-1.42	-2.02	0.54	0.07		
334.00	1.20	194.58	333.97	-3.73	-1.83	-3.72	0.29	0.29		
427.00	1.24	212.37	426.95	-5.52	-2.61	-5.50	0.41	0.04		
520.00	1.79	226.31	519.91	-7.37	-4.20	-7.35	0.71	0.59		
614.00	1.57	228.92	613.87	-9.23	-6.23	-9.19	0.25	-0.23		
708.00	1.63	237.01	707.84	-10.81	-8.33	-10.75	0.25	0.06		
801.00	1.86	235.69	800.79	-12.38	-10.68	-12.31	0.25	0.25		
895.00	1.55	201.15	894.75	-14.43	-12.40	-14.35	1.12	-0.33		
988.00	1.75	200.39	987.72	-16.93	-13.35	-16.84	0.22	0.22		
1,082.00	1.57	201.75	1,081.68	-19.47	-14.33	-19.38	0.20	-0.19		
1,141.00	1.67	209.25	1,140.65	-20.97	-15.05	-20.87	0.40	0.17		

Kaiser-Francis Oil Company

Survey Report



Company: Kaiser-Francis Oil Co.
Project: Lea County, NM (NAD 83)
Site: SEC 6, T23S, R34E
Well: BELL LAKE UNIT NORTH 228H
Wellbore: OH
Design: FINAL

Local Co-ordinate Reference: Well BELL LAKE UNIT NORTH 228H
TVD Reference: KB 23.9' @ 3498.80usft (Cactus 171)
MD Reference: KB 23.9' @ 3498.80usft (Cactus 171)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Formations / Comments
1,279.00	1.48	197.57	1,278.60	-24.43	-16.57	-24.32	0.27	-0.14	
1,374.00	1.33	202.97	1,373.57	-26.61	-17.37	-26.50	0.21	-0.16	
1,469.00	1.67	122.02	1,468.55	-28.36	-16.62	-28.25	2.07	0.36	
1,564.00	2.34	110.86	1,563.49	-29.78	-13.64	-29.70	0.81	0.71	
1,659.00	1.83	110.71	1,658.43	-31.01	-10.41	-30.94	0.54	-0.54	
1,753.00	1.76	112.60	1,752.38	-32.10	-7.67	-32.05	0.10	-0.07	
1,848.00	1.44	107.19	1,847.34	-33.01	-5.18	-32.98	0.37	-0.34	
1,943.00	1.38	103.72	1,942.32	-33.63	-2.93	-33.61	0.11	-0.06	
2,038.00	1.45	101.57	2,037.29	-34.15	-0.64	-34.14	0.09	0.07	
2,133.00	1.47	96.14	2,132.26	-34.52	1.75	-34.53	0.15	0.02	
2,228.00	1.69	92.42	2,227.22	-34.71	4.36	-34.73	0.26	0.23	
2,322.00	1.61	94.31	2,321.18	-34.86	7.06	-34.91	0.10	-0.09	
2,417.00	1.63	85.75	2,416.14	-34.87	9.74	-34.93	0.26	0.02	
2,512.00	1.67	85.89	2,511.10	-34.67	12.47	-34.75	0.04	0.04	
2,607.00	1.89	84.46	2,606.06	-34.42	15.41	-34.51	0.24	0.23	
2,702.00	2.33	82.98	2,700.99	-34.03	18.88	-34.15	0.47	0.46	
2,797.00	2.70	84.76	2,795.90	-33.59	23.03	-33.74	0.40	0.39	
2,892.00	3.53	84.94	2,890.76	-33.13	28.17	-33.31	0.87	0.87	
2,986.00	4.01	86.53	2,984.56	-32.67	34.33	-32.89	0.52	0.51	
3,081.00	2.96	109.02	3,079.38	-33.27	39.97	-33.53	1.79	-1.11	
3,176.00	2.93	115.81	3,174.26	-35.13	44.47	-35.41	0.37	-0.03	
3,271.00	3.08	121.68	3,269.13	-37.52	48.83	-37.84	0.36	0.16	
3,366.00	3.16	117.30	3,363.99	-40.06	53.33	-40.41	0.26	0.08	
3,461.00	3.20	110.77	3,458.84	-42.21	58.13	-42.58	0.38	0.04	
3,556.00	3.64	94.92	3,553.67	-43.40	63.62	-43.81	1.09	0.46	
3,651.00	4.13	85.88	3,648.46	-43.42	70.03	-43.87	0.82	0.52	
3,745.00	4.38	84.08	3,742.20	-42.80	76.98	-43.30	0.30	0.27	
3,840.00	4.24	83.21	3,836.93	-42.02	84.08	-42.56	0.16	-0.15	
3,935.00	3.11	89.96	3,931.73	-41.60	90.14	-42.18	1.27	-1.19	
4,029.00	2.50	92.14	4,025.62	-41.67	94.74	-42.28	0.66	-0.65	
4,124.00	2.26	110.29	4,120.54	-42.40	98.57	-43.04	0.83	-0.25	
4,219.00	3.07	95.11	4,215.44	-43.28	102.86	-43.94	1.12	0.85	
4,314.00	4.04	89.06	4,310.25	-43.45	108.74	-44.15	1.09	1.02	
4,409.00	3.81	89.86	4,405.03	-43.38	115.24	-44.13	0.25	-0.24	
4,503.00	3.71	86.88	4,498.83	-43.21	121.40	-43.99	0.23	-0.11	
4,598.00	3.50	84.55	4,593.64	-42.77	127.35	-43.59	0.27	-0.22	
4,693.00	3.14	84.50	4,688.48	-42.24	132.83	-43.10	0.38	-0.38	
4,788.00	2.92	88.15	4,783.35	-41.92	137.84	-42.81	0.31	-0.23	
4,846.00	2.59	86.16	4,841.28	-41.78	140.62	-42.69	0.59	-0.57	
4,959.00	2.06	78.98	4,954.19	-41.22	145.16	-42.16	0.53	-0.47	
5,054.00	2.07	81.01	5,049.12	-40.63	148.54	-41.59	0.08	0.01	
5,149.00	2.02	79.66	5,144.06	-40.06	151.88	-41.04	0.07	-0.05	
5,243.00	1.74	84.02	5,238.01	-39.61	154.93	-40.61	0.33	-0.30	
5,338.00	1.71	75.70	5,332.97	-39.11	157.73	-40.13	0.27	-0.03	
5,433.00	1.74	72.27	5,427.93	-38.32	160.48	-39.36	0.11	0.03	
5,528.00	1.57	66.73	5,522.89	-37.37	163.05	-38.42	0.25	-0.18	
5,623.00	1.75	82.82	5,617.85	-36.67	165.69	-37.74	0.52	0.19	
5,718.00	1.56	94.80	5,712.81	-36.60	168.41	-37.69	0.41	-0.20	
5,812.00	1.58	96.05	5,806.77	-36.85	170.98	-37.95	0.04	0.02	
5,907.00	2.09	79.49	5,901.73	-36.67	173.98	-37.79	0.77	0.54	
6,002.00	2.08	75.67	5,996.66	-35.92	177.36	-37.07	0.15	-0.01	
6,097.00	2.48	42.58	6,091.59	-33.98	180.42	-35.15	1.42	0.42	
6,192.00	3.15	32.76	6,186.48	-30.28	183.22	-31.46	0.87	0.71	

Kaiser-Francis Oil Company

Survey Report



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Project: Lea County, NM (NAD 83)
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Wellbore: OH
Design: FINAL

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
6,287.00	3.05	34.44	6,281.34	-26.00	186.06	-27.20	0.14	-0.11	
6,382.00	2.85	28.00	6,376.21	-21.83	188.60	-23.04	0.41	-0.21	
6,477.00	2.88	30.41	6,471.09	-17.68	190.92	-18.92	0.13	0.03	
6,571.00	1.94	34.82	6,565.01	-14.34	193.02	-15.59	1.02	-1.00	
6,666.00	1.51	37.97	6,659.97	-12.03	194.71	-13.29	0.46	-0.45	
6,761.00	1.56	37.81	6,754.93	-10.03	196.27	-11.29	0.05	0.05	
6,856.00	1.27	45.62	6,849.90	-8.27	197.82	-9.54	0.37	-0.31	
6,951.00	1.43	41.40	6,944.88	-6.64	199.35	-7.93	0.20	0.17	
7,045.00	1.29	40.13	7,038.85	-4.95	200.81	-6.25	0.15	-0.15	
7,140.00	0.79	42.65	7,133.83	-3.65	201.94	-4.96	0.53	-0.53	
7,235.00	0.66	41.60	7,228.83	-2.76	202.75	-4.07	0.14	-0.14	
7,330.00	0.62	41.85	7,323.82	-1.97	203.46	-3.28	0.04	-0.04	
7,424.00	0.34	52.30	7,417.82	-1.42	204.02	-2.74	0.31	-0.30	
7,519.00	0.14	108.44	7,512.82	-1.29	204.35	-2.61	0.30	-0.21	
7,614.00	0.39	61.95	7,607.82	-1.17	204.75	-2.49	0.33	0.26	
7,709.00	0.06	39.18	7,702.81	-0.98	205.06	-2.30	0.35	-0.35	
7,804.00	0.12	25.74	7,797.81	-0.85	205.14	-2.18	0.07	0.06	
7,898.00	0.51	54.24	7,891.81	-0.52	205.52	-1.85	0.43	0.41	
7,992.00	0.37	58.67	7,985.81	-0.12	206.12	-1.45	0.15	-0.15	
8,087.00	0.53	65.76	8,080.81	0.22	206.78	-1.11	0.18	0.17	
8,182.00	0.38	52.18	8,175.80	0.60	207.43	-0.74	0.19	-0.16	
8,276.00	0.48	62.04	8,269.80	0.97	208.03	-0.37	0.13	0.11	
8,371.00	0.61	71.84	8,364.80	1.32	208.86	-0.03	0.17	0.14	
8,466.00	0.77	63.75	8,459.79	1.76	209.91	0.40	0.20	0.17	
8,561.00	0.81	61.56	8,554.78	2.36	211.07	1.00	0.05	0.04	
8,656.00	0.60	38.93	8,649.77	3.07	211.98	1.70	0.36	-0.22	
8,751.00	0.67	19.10	8,744.77	3.98	212.47	2.61	0.24	0.07	
8,846.00	0.60	21.47	8,839.76	4.97	212.83	3.59	0.08	-0.07	
8,941.00	0.48	21.21	8,934.76	5.80	213.16	4.42	0.13	-0.13	
9,036.00	0.28	309.28	9,029.76	6.32	213.12	4.94	0.50	-0.21	
9,131.00	0.67	291.45	9,124.75	6.67	212.43	5.30	0.43	0.41	
9,226.00	1.00	301.99	9,219.74	7.31	211.21	5.95	0.38	0.35	
9,321.00	1.34	294.44	9,314.72	8.21	209.49	6.86	0.39	0.36	
9,416.00	1.47	264.04	9,409.70	8.54	207.27	7.20	0.79	0.14	
9,511.00	1.81	257.77	9,504.66	8.10	204.59	6.78	0.40	0.36	
9,605.00	1.27	266.70	9,598.62	7.72	202.10	6.42	0.63	-0.57	
9,719.00	4.80	6.70	9,712.49	12.39	201.40	11.09	4.54	3.10	
9,814.00	15.38	20.92	9,805.89	28.15	206.37	26.82	11.36	11.14	
9,909.00	24.00	21.88	9,895.26	57.90	218.09	56.49	9.08	9.07	
10,004.00	33.93	18.48	9,978.27	101.09	233.74	99.58	10.59	10.45	
10,099.00	40.29	10.01	10,054.05	156.58	247.50	154.98	8.58	6.69	
10,194.00	48.28	6.84	10,122.01	222.14	257.08	220.48	8.73	8.41	
10,289.00	57.28	0.98	10,179.44	297.50	262.00	295.80	10.66	9.47	
10,384.00	67.72	359.42	10,223.25	381.64	262.24	379.94	11.09	10.99	
10,478.00	81.07	0.42	10,248.48	471.97	262.14	470.27	14.24	14.20	
10,514.00	86.50	0.79	10,252.38	507.75	262.52	506.04	15.12	15.08	
10,609.00	87.87	0.08	10,257.04	602.63	263.24	600.91	1.62	1.44	
10,614.91	87.87	0.05	10,257.26	608.53	263.24	606.82	0.54	0.05	FTP @ 10614.91'
10,704.00	87.92	359.57	10,260.53	697.56	262.95	695.85	0.54	0.05	
10,799.00	86.78	1.40	10,264.92	792.45	263.75	790.73	2.27	-1.20	
10,894.00	86.15	0.78	10,270.78	887.25	265.55	885.52	0.93	-0.66	
10,989.00	87.62	359.21	10,275.94	982.11	265.55	980.37	2.26	1.55	
11,083.00	90.48	359.37	10,277.50	1,076.08	264.38	1,074.35	3.05	3.04	

Kaiser-Francis Oil Company

Survey Report



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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Formations / Comments
11,178.00	90.56	0.57	10,276.64	1,171.07	264.33	1,169.34	1.27	0.08	
11,273.00	89.24	0.86	10,276.81	1,266.06	265.52	1,264.32	1.42	-1.39	
11,368.00	90.39	0.95	10,277.11	1,361.05	267.02	1,359.29	1.21	1.21	
11,463.00	91.26	0.49	10,275.75	1,456.03	268.21	1,454.27	1.04	0.92	
11,557.00	92.16	359.47	10,272.94	1,549.98	268.18	1,548.22	1.45	0.96	
11,652.00	91.54	0.70	10,269.87	1,644.93	268.32	1,643.16	1.45	-0.65	
11,747.00	90.90	0.50	10,267.85	1,739.90	269.31	1,738.13	0.71	-0.67	
11,841.00	88.51	0.45	10,268.33	1,833.89	270.09	1,832.11	2.54	-2.54	
11,936.00	88.77	359.76	10,270.59	1,928.87	270.27	1,927.08	0.78	0.27	
12,031.00	88.79	0.19	10,272.61	2,023.84	270.23	2,022.06	0.45	0.02	
12,126.00	88.71	0.31	10,274.68	2,118.82	270.64	2,117.03	0.15	-0.08	
12,221.00	88.01	0.74	10,277.40	2,213.78	271.51	2,211.98	0.86	-0.74	
12,315.00	88.01	2.17	10,280.67	2,307.69	273.90	2,305.87	1.52	0.00	
12,410.00	89.61	2.04	10,282.64	2,402.60	277.38	2,400.76	1.69	1.68	
12,505.00	89.75	0.81	10,283.17	2,497.57	279.75	2,495.71	1.30	0.15	
12,600.00	91.43	359.66	10,282.19	2,592.56	280.14	2,590.69	2.14	1.77	
12,695.00	92.95	0.04	10,278.56	2,687.48	279.89	2,685.62	1.65	1.60	
12,790.00	90.25	359.98	10,275.91	2,782.44	279.90	2,780.57	2.84	-2.84	
12,884.00	89.41	359.53	10,276.19	2,876.44	279.50	2,874.57	1.01	-0.89	
12,979.00	89.24	359.08	10,277.31	2,971.42	278.35	2,969.56	0.51	-0.18	
13,074.00	88.54	359.56	10,279.15	3,066.40	277.22	3,064.54	0.89	-0.74	
13,169.00	88.83	357.73	10,281.33	3,161.34	274.98	3,159.50	1.95	0.31	
13,264.00	89.64	356.64	10,282.60	3,256.21	270.31	3,254.40	1.43	0.85	
13,359.00	90.73	356.77	10,282.29	3,351.06	264.85	3,349.28	1.16	1.15	
13,453.00	89.64	358.74	10,281.99	3,444.98	261.17	3,443.22	2.40	-1.16	
13,548.00	89.07	358.71	10,283.06	3,539.95	259.06	3,538.20	0.60	-0.60	
13,643.00	87.90	359.56	10,285.57	3,634.90	257.62	3,633.16	1.52	-1.23	
13,738.00	88.27	1.13	10,288.74	3,729.84	258.19	3,728.10	1.70	0.39	
13,833.00	89.49	359.77	10,290.60	3,824.82	258.94	3,823.07	1.92	1.28	
13,928.00	89.86	359.72	10,291.14	3,919.81	258.52	3,918.06	0.39	0.39	
14,022.00	90.25	358.74	10,291.05	4,013.81	257.25	4,012.06	1.12	0.41	
14,117.00	92.16	359.72	10,289.05	4,108.77	255.98	4,107.03	2.26	2.01	
14,212.00	91.04	359.27	10,286.40	4,203.73	255.14	4,201.99	1.27	-1.18	
14,307.00	90.39	358.45	10,285.21	4,298.70	253.25	4,296.97	1.10	-0.68	
14,402.00	90.59	358.05	10,284.40	4,393.65	250.35	4,391.94	0.47	0.21	
14,497.00	91.60	357.32	10,282.59	4,488.56	246.51	4,486.87	1.31	1.06	
14,592.00	90.45	357.10	10,280.89	4,583.43	241.89	4,581.77	1.23	-1.21	
14,686.00	91.01	357.98	10,279.69	4,677.33	237.85	4,675.70	1.11	0.60	
14,781.00	90.11	357.77	10,278.76	4,772.26	234.33	4,770.65	0.97	-0.95	
14,876.00	87.56	357.50	10,280.69	4,867.15	230.41	4,865.56	2.70	-2.68	
14,971.00	87.08	355.38	10,285.13	4,961.86	224.52	4,960.30	2.29	-0.51	
15,065.00	86.61	355.17	10,290.31	5,055.40	216.79	5,053.89	0.55	-0.50	
15,160.00	85.85	354.23	10,296.55	5,149.78	208.03	5,148.33	1.27	-0.80	
15,255.00	86.80	354.06	10,302.64	5,244.09	198.36	5,242.70	1.02	1.00	
15,350.00	85.90	355.93	10,308.69	5,338.53	190.09	5,337.19	2.18	-0.95	
15,445.00	85.63	358.43	10,315.71	5,433.15	185.43	5,431.84	2.64	-0.28	
15,540.00	87.45	357.63	10,321.44	5,527.92	182.17	5,526.63	2.09	1.92	
15,634.00	88.18	358.16	10,325.02	5,621.78	178.72	5,620.51	0.96	0.78	
15,729.00	88.91	356.96	10,327.44	5,716.67	174.68	5,715.42	1.48	0.77	
15,824.00	89.52	357.63	10,328.74	5,811.55	170.19	5,810.33	0.95	0.64	
15,919.00	91.51	358.95	10,327.88	5,906.50	167.36	5,905.29	2.51	2.09	
16,014.00	93.14	0.90	10,324.03	6,001.41	167.23	6,000.21	2.67	1.72	
16,108.00	94.07	359.95	10,318.12	6,095.22	167.93	6,094.01	1.41	0.99	

Kaiser-Francis Oil Company

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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
16,203.00	93.65	2.64	10,311.72	6,189.97	170.07	6,188.74	2.86	-0.44	
16,298.00	93.61	2.22	10,305.71	6,284.70	174.09	6,283.44	0.44	-0.04	
16,393.00	93.28	1.07	10,300.00	6,379.48	176.81	6,378.21	1.26	-0.35	
16,488.00	93.25	1.09	10,294.59	6,474.31	178.60	6,473.02	0.04	-0.03	
16,582.00	88.57	1.17	10,293.10	6,568.26	180.46	6,566.95	4.98	-4.98	
16,677.00	85.39	1.51	10,298.10	6,663.09	182.67	6,661.77	3.37	-3.35	
16,772.00	85.14	0.02	10,305.94	6,757.75	183.94	6,756.42	1.59	-0.26	
16,867.00	87.36	0.85	10,312.16	6,852.54	184.66	6,851.20	2.49	2.34	
16,962.00	88.66	0.51	10,315.46	6,947.47	185.78	6,946.13	1.41	1.37	
17,057.00	87.73	0.71	10,318.45	7,042.42	186.80	7,041.06	1.00	-0.98	
17,152.00	87.84	0.91	10,322.12	7,137.34	188.14	7,135.97	0.24	0.12	
17,247.00	87.76	0.88	10,325.77	7,232.26	189.62	7,230.88	0.09	-0.08	
17,341.00	87.25	0.65	10,329.86	7,326.16	190.87	7,324.77	0.60	-0.54	
17,436.00	87.22	0.66	10,334.44	7,421.04	191.96	7,419.65	0.03	-0.03	
17,531.00	89.10	358.33	10,337.49	7,515.98	191.12	7,514.59	3.15	1.98	
17,626.00	91.40	358.13	10,337.08	7,610.92	188.19	7,609.55	2.43	2.42	
17,721.00	92.61	357.49	10,333.75	7,705.79	184.56	7,704.44	1.44	1.27	
17,816.00	92.69	357.14	10,329.36	7,800.59	180.11	7,799.26	0.38	0.08	
17,911.00	92.92	356.71	10,324.71	7,895.34	175.02	7,894.04	0.51	0.24	
18,005.00	90.70	358.03	10,321.74	7,989.18	170.71	7,987.92	2.75	-2.36	
18,100.00	90.34	357.96	10,320.88	8,084.12	167.39	8,082.87	0.39	-0.38	
18,195.00	91.09	357.87	10,319.70	8,179.05	163.93	8,177.82	0.80	0.79	
18,283.00	91.74	357.37	10,317.52	8,266.95	160.28	8,265.74	0.93	0.74	FINAL SURVEY @ 18283'
18,343.00	91.74	357.37	10,315.70	8,326.86	157.53	8,325.67	0.00	0.00	PROJECTION TO TD @ 19343'

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
146.00	145.99	-0.78	-0.77	FIRST SURVEY @ 146'
10,614.91	10,257.26	608.53	263.24	FTP @ 10614.91'
18,283.00	10,317.52	8,266.95	160.28	FINAL SURVEY @ 18283'
18,343.00	10,315.70	8,326.86	157.53	PROJECTION TO TD @ 19343'

Checked By: _____ Approved By: _____ Date: _____

Kaiser-Francis Oil Company

Kaiser-Francis Oil Co.

Lea County, NM (NAD 83)
SEC 6, T23S, R34E
BELL LAKE UNIT NORTH 228H

OH

Design: FINAL

Survey Report - Geographic

08 November, 2020



Kaiser-Francis Oil Company

Survey Report - Geographic



Company:	Kaiser-Francis Oil Co.	Local Co-ordinate Reference:	Well BELL LAKE UNIT NORTH 228H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Site:	SEC 6, T23S, R34E	MD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Well:	BELL LAKE UNIT NORTH 228H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	SEC 6, T23S, R34E				
Site Position:		Northing:	484,136.67 usft	Latitude:	32° 19' 41.731 N
From:	Lat/Long	Easting:	796,546.16 usft	Longitude:	103° 30' 25.571 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	BELL LAKE UNIT NORTH 228H					
Well Position	+N/-S	0.00 usft	Northing:	485,586.71 usft	Latitude:	32° 19' 56.116 N
	+E/-W	0.00 usft	Easting:	796,054.60 usft	Longitude:	103° 30' 31.169 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,474.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	11/8/2020	6.50	60.03	47,849.20000000

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.63	

Survey Program	Date	11/8/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
146.00	18,343.00	GT MWD (OH)	MWD+HDGM	OWSG MWD + HDGM	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	485,586.71	796,054.60	32° 19' 56.116 N	103° 30' 31.169 W
146.00	0.86	224.52	145.99	-0.78	-0.77	485,585.93	796,053.83	32° 19' 56.108 N	103° 30' 31.178 W
FIRST SURVEY @ 146'									
240.00	0.93	192.05	239.98	-2.03	-1.42	485,584.68	796,053.18	32° 19' 56.096 N	103° 30' 31.186 W
334.00	1.20	194.58	333.97	-3.73	-1.83	485,582.98	796,052.77	32° 19' 56.079 N	103° 30' 31.191 W
427.00	1.24	212.37	426.95	-5.52	-2.61	485,581.19	796,051.98	32° 19' 56.062 N	103° 30' 31.200 W
520.00	1.79	226.31	519.91	-7.37	-4.20	485,579.34	796,050.40	32° 19' 56.043 N	103° 30' 31.219 W
614.00	1.57	228.92	613.87	-9.23	-6.23	485,577.48	796,048.36	32° 19' 56.025 N	103° 30' 31.243 W
708.00	1.63	237.01	707.84	-10.81	-8.33	485,575.90	796,046.27	32° 19' 56.010 N	103° 30' 31.267 W
801.00	1.86	235.69	800.79	-12.38	-10.68	485,574.33	796,043.92	32° 19' 55.994 N	103° 30' 31.295 W
895.00	1.55	201.15	894.75	-14.43	-12.40	485,572.29	796,042.20	32° 19' 55.974 N	103° 30' 31.315 W
988.00	1.75	200.39	987.72	-16.93	-13.35	485,569.78	796,041.25	32° 19' 55.950 N	103° 30' 31.326 W

Kaiser-Francis Oil Company

Survey Report - Geographic



Company:	Kaiser-Francis Oil Co.	Local Co-ordinate Reference:	Well BELL LAKE UNIT NORTH 228H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Site:	SEC 6, T23S, R34E	MD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Well:	BELL LAKE UNIT NORTH 228H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,082.00	1.57	201.75	1,081.68	-19.47	-14.33	485,567.24	796,040.27	32° 19' 55.924 N	103° 30' 31.338 W
1,141.00	1.67	209.25	1,140.65	-20.97	-15.05	485,565.74	796,039.55	32° 19' 55.910 N	103° 30' 31.347 W
1,279.00	1.48	197.57	1,278.60	-24.43	-16.57	485,562.29	796,038.03	32° 19' 55.876 N	103° 30' 31.365 W
1,374.00	1.33	202.97	1,373.57	-26.61	-17.37	485,560.10	796,037.23	32° 19' 55.854 N	103° 30' 31.374 W
1,469.00	1.67	122.02	1,468.55	-28.36	-16.62	485,558.35	796,037.97	32° 19' 55.837 N	103° 30' 31.366 W
1,564.00	2.34	110.86	1,563.49	-29.78	-13.64	485,556.93	796,040.96	32° 19' 55.822 N	103° 30' 31.331 W
1,659.00	1.83	110.71	1,658.43	-31.01	-10.41	485,555.70	796,044.19	32° 19' 55.810 N	103° 30' 31.293 W
1,753.00	1.76	112.60	1,752.38	-32.10	-7.67	485,554.61	796,046.93	32° 19' 55.799 N	103° 30' 31.262 W
1,848.00	1.44	107.19	1,847.34	-33.01	-5.18	485,553.70	796,049.41	32° 19' 55.790 N	103° 30' 31.233 W
1,943.00	1.38	103.72	1,942.32	-33.63	-2.93	485,553.08	796,051.67	32° 19' 55.783 N	103° 30' 31.207 W
2,038.00	1.45	101.57	2,037.29	-34.15	-0.64	485,552.56	796,053.95	32° 19' 55.778 N	103° 30' 31.180 W
2,133.00	1.47	96.14	2,132.26	-34.52	1.75	485,552.19	796,056.34	32° 19' 55.774 N	103° 30' 31.152 W
2,228.00	1.69	92.42	2,227.22	-34.71	4.36	485,552.00	796,058.96	32° 19' 55.772 N	103° 30' 31.122 W
2,322.00	1.61	94.31	2,321.18	-34.86	7.06	485,551.85	796,061.66	32° 19' 55.771 N	103° 30' 31.090 W
2,417.00	1.63	85.75	2,416.14	-34.87	9.74	485,551.85	796,064.34	32° 19' 55.770 N	103° 30' 31.059 W
2,512.00	1.67	85.89	2,511.10	-34.67	12.47	485,552.05	796,067.06	32° 19' 55.772 N	103° 30' 31.027 W
2,607.00	1.89	84.46	2,606.06	-34.42	15.41	485,552.30	796,070.00	32° 19' 55.774 N	103° 30' 30.993 W
2,702.00	2.33	82.98	2,700.99	-34.03	18.88	485,552.68	796,073.48	32° 19' 55.778 N	103° 30' 30.952 W
2,797.00	2.70	84.76	2,795.90	-33.59	23.03	485,553.12	796,077.62	32° 19' 55.782 N	103° 30' 30.904 W
2,892.00	3.53	84.94	2,890.76	-33.13	28.17	485,553.59	796,082.77	32° 19' 55.786 N	103° 30' 30.844 W
2,986.00	4.01	86.53	2,984.56	-32.67	34.33	485,554.04	796,088.93	32° 19' 55.790 N	103° 30' 30.772 W
3,081.00	2.96	109.02	3,079.38	-33.27	39.97	485,553.44	796,094.56	32° 19' 55.784 N	103° 30' 30.707 W
3,176.00	2.93	115.81	3,174.26	-35.13	44.47	485,551.58	796,099.07	32° 19' 55.765 N	103° 30' 30.654 W
3,271.00	3.08	121.68	3,269.13	-37.52	48.83	485,549.19	796,103.43	32° 19' 55.741 N	103° 30' 30.604 W
3,366.00	3.16	117.30	3,363.99	-40.06	53.33	485,546.65	796,107.92	32° 19' 55.716 N	103° 30' 30.551 W
3,461.00	3.20	110.77	3,458.84	-42.21	58.13	485,544.50	796,112.73	32° 19' 55.694 N	103° 30' 30.496 W
3,556.00	3.64	94.92	3,553.67	-43.40	63.62	485,543.31	796,118.21	32° 19' 55.682 N	103° 30' 30.432 W
3,651.00	4.13	85.88	3,648.46	-43.42	70.03	485,543.29	796,124.63	32° 19' 55.681 N	103° 30' 30.357 W
3,745.00	4.38	84.08	3,742.20	-42.80	76.98	485,543.91	796,131.58	32° 19' 55.687 N	103° 30' 30.276 W
3,840.00	4.24	83.21	3,836.93	-42.02	84.08	485,544.70	796,138.67	32° 19' 55.694 N	103° 30' 30.193 W
3,935.00	3.11	89.96	3,931.73	-41.60	90.14	485,545.11	796,144.74	32° 19' 55.698 N	103° 30' 30.123 W
4,029.00	2.50	92.14	4,025.62	-41.67	94.74	485,545.04	796,149.34	32° 19' 55.696 N	103° 30' 30.069 W
4,124.00	2.26	110.29	4,120.54	-42.40	98.57	485,544.31	796,153.16	32° 19' 55.689 N	103° 30' 30.024 W
4,219.00	3.07	95.11	4,215.44	-43.28	102.86	485,543.43	796,157.45	32° 19' 55.680 N	103° 30' 29.975 W
4,314.00	4.04	89.06	4,310.25	-43.45	108.74	485,543.26	796,163.33	32° 19' 55.678 N	103° 30' 29.906 W
4,409.00	3.81	89.86	4,405.03	-43.38	115.24	485,543.33	796,169.84	32° 19' 55.678 N	103° 30' 29.830 W
4,503.00	3.71	86.88	4,498.83	-43.21	121.40	485,543.50	796,176.00	32° 19' 55.679 N	103° 30' 29.758 W
4,598.00	3.50	84.55	4,593.64	-42.77	127.35	485,543.94	796,181.95	32° 19' 55.683 N	103° 30' 29.689 W
4,693.00	3.14	84.50	4,688.48	-42.24	132.83	485,544.47	796,187.43	32° 19' 55.688 N	103° 30' 29.625 W
4,788.00	2.92	88.15	4,783.35	-41.92	137.84	485,544.79	796,192.44	32° 19' 55.691 N	103° 30' 29.567 W
4,846.00	2.59	86.16	4,841.28	-41.78	140.62	485,544.93	796,195.22	32° 19' 55.692 N	103° 30' 29.534 W
4,959.00	2.06	78.98	4,954.19	-41.22	145.16	485,545.49	796,199.76	32° 19' 55.697 N	103° 30' 29.481 W
5,054.00	2.07	81.01	5,049.12	-40.63	148.54	485,546.08	796,203.13	32° 19' 55.703 N	103° 30' 29.442 W
5,149.00	2.02	79.66	5,144.06	-40.06	151.88	485,546.65	796,206.48	32° 19' 55.708 N	103° 30' 29.403 W
5,243.00	1.74	84.02	5,238.01	-39.61	154.93	485,547.10	796,209.52	32° 19' 55.712 N	103° 30' 29.367 W
5,338.00	1.71	75.70	5,332.97	-39.11	157.73	485,547.60	796,212.33	32° 19' 55.717 N	103° 30' 29.335 W
5,433.00	1.74	72.27	5,427.93	-38.32	160.48	485,548.39	796,215.08	32° 19' 55.725 N	103° 30' 29.302 W
5,528.00	1.57	66.73	5,522.89	-37.37	163.05	485,549.34	796,217.65	32° 19' 55.734 N	103° 30' 29.272 W
5,623.00	1.75	82.82	5,617.85	-36.67	165.69	485,550.04	796,220.28	32° 19' 55.741 N	103° 30' 29.242 W
5,718.00	1.56	94.80	5,712.81	-36.60	168.41	485,550.11	796,223.01	32° 19' 55.741 N	103° 30' 29.210 W
5,812.00	1.58	96.05	5,806.77	-36.85	170.98	485,549.87	796,225.58	32° 19' 55.738 N	103° 30' 29.180 W
5,907.00	2.09	79.49	5,901.73	-36.67	173.98	485,550.04	796,228.58	32° 19' 55.740 N	103° 30' 29.145 W
6,002.00	2.08	75.67	5,996.66	-35.92	177.36	485,550.79	796,231.95	32° 19' 55.747 N	103° 30' 29.106 W
6,097.00	2.48	42.58	6,091.59	-33.98	180.42	485,552.73	796,235.02	32° 19' 55.766 N	103° 30' 29.070 W
6,192.00	3.15	32.76	6,186.48	-30.28	183.22	485,556.44	796,237.82	32° 19' 55.803 N	103° 30' 29.037 W

Kaiser-Francis Oil Company

Survey Report - Geographic



Company:	Kaiser-Francis Oil Co.	Local Co-ordinate Reference:	Well BELL LAKE UNIT NORTH 228H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Site:	SEC 6, T23S, R34E	MD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Well:	BELL LAKE UNIT NORTH 228H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,287.00	3.05	34.44	6,281.34	-26.00	186.06	485,560.71	796,240.66	32° 19' 55.845 N	103° 30' 29.003 W
6,382.00	2.85	28.00	6,376.21	-21.83	188.60	485,564.88	796,243.20	32° 19' 55.886 N	103° 30' 28.973 W
6,477.00	2.88	30.41	6,471.09	-17.68	190.92	485,569.03	796,245.52	32° 19' 55.927 N	103° 30' 28.946 W
6,571.00	1.94	34.82	6,565.01	-14.34	193.02	485,572.37	796,247.62	32° 19' 55.959 N	103° 30' 28.921 W
6,666.00	1.51	37.97	6,659.97	-12.03	194.71	485,574.68	796,249.31	32° 19' 55.982 N	103° 30' 28.901 W
6,761.00	1.56	37.81	6,754.93	-10.03	196.27	485,576.69	796,250.87	32° 19' 56.002 N	103° 30' 28.883 W
6,856.00	1.27	45.62	6,849.90	-8.27	197.82	485,578.44	796,252.42	32° 19' 56.019 N	103° 30' 28.865 W
6,951.00	1.43	41.40	6,944.88	-6.64	199.35	485,580.07	796,253.95	32° 19' 56.035 N	103° 30' 28.847 W
7,045.00	1.29	40.13	7,038.85	-4.95	200.81	485,581.76	796,255.41	32° 19' 56.052 N	103° 30' 28.829 W
7,140.00	0.79	42.65	7,133.83	-3.65	201.94	485,583.06	796,256.54	32° 19' 56.065 N	103° 30' 28.816 W
7,235.00	0.66	41.60	7,228.83	-2.76	202.75	485,583.95	796,257.35	32° 19' 56.073 N	103° 30' 28.807 W
7,330.00	0.62	41.85	7,323.82	-1.97	203.46	485,584.74	796,258.06	32° 19' 56.081 N	103° 30' 28.798 W
7,424.00	0.34	52.30	7,417.82	-1.42	204.02	485,585.29	796,258.62	32° 19' 56.086 N	103° 30' 28.792 W
7,519.00	0.14	108.44	7,512.82	-1.29	204.35	485,585.43	796,258.95	32° 19' 56.088 N	103° 30' 28.788 W
7,614.00	0.39	61.95	7,607.82	-1.17	204.75	485,585.54	796,259.34	32° 19' 56.089 N	103° 30' 28.783 W
7,709.00	0.06	39.18	7,702.81	-0.98	205.06	485,585.73	796,259.66	32° 19' 56.091 N	103° 30' 28.780 W
7,804.00	0.12	25.74	7,797.81	-0.85	205.14	485,585.86	796,259.74	32° 19' 56.092 N	103° 30' 28.779 W
7,898.00	0.51	54.24	7,891.81	-0.52	205.52	485,586.19	796,260.12	32° 19' 56.095 N	103° 30' 28.774 W
7,992.00	0.37	58.67	7,985.81	-0.12	206.12	485,586.59	796,260.72	32° 19' 56.099 N	103° 30' 28.767 W
8,087.00	0.53	65.76	8,080.81	0.22	206.78	485,586.93	796,261.38	32° 19' 56.103 N	103° 30' 28.759 W
8,182.00	0.38	52.18	8,175.80	0.60	207.43	485,587.31	796,262.03	32° 19' 56.106 N	103° 30' 28.752 W
8,276.00	0.48	62.04	8,269.80	0.97	208.03	485,587.68	796,262.62	32° 19' 56.110 N	103° 30' 28.745 W
8,371.00	0.61	71.84	8,364.80	1.32	208.86	485,588.03	796,263.45	32° 19' 56.113 N	103° 30' 28.735 W
8,466.00	0.77	63.75	8,459.79	1.76	209.91	485,588.47	796,264.51	32° 19' 56.117 N	103° 30' 28.723 W
8,561.00	0.81	61.56	8,554.78	2.36	211.07	485,589.07	796,265.67	32° 19' 56.123 N	103° 30' 28.709 W
8,656.00	0.60	38.93	8,649.77	3.07	211.98	485,589.78	796,266.57	32° 19' 56.130 N	103° 30' 28.699 W
8,751.00	0.67	19.10	8,744.77	3.98	212.47	485,590.69	796,267.07	32° 19' 56.139 N	103° 30' 28.693 W
8,846.00	0.60	21.47	8,839.76	4.97	212.83	485,591.68	796,267.43	32° 19' 56.149 N	103° 30' 28.688 W
8,941.00	0.48	21.21	8,934.76	5.80	213.16	485,592.51	796,267.76	32° 19' 56.157 N	103° 30' 28.685 W
9,036.00	0.28	309.28	9,029.76	6.32	213.12	485,593.03	796,267.72	32° 19' 56.162 N	103° 30' 28.685 W
9,131.00	0.67	291.45	9,124.75	6.67	212.43	485,593.38	796,267.03	32° 19' 56.166 N	103° 30' 28.693 W
9,226.00	1.00	301.99	9,219.74	7.31	211.21	485,594.02	796,265.81	32° 19' 56.172 N	103° 30' 28.707 W
9,321.00	1.34	294.44	9,314.72	8.21	209.49	485,594.92	796,264.09	32° 19' 56.181 N	103° 30' 28.727 W
9,416.00	1.47	264.04	9,409.70	8.54	207.27	485,595.25	796,261.87	32° 19' 56.185 N	103° 30' 28.753 W
9,511.00	1.81	257.77	9,504.66	8.10	204.59	485,594.81	796,259.19	32° 19' 56.181 N	103° 30' 28.784 W
9,605.00	1.27	266.70	9,598.62	7.72	202.10	485,594.43	796,256.70	32° 19' 56.177 N	103° 30' 28.813 W
9,719.00	4.80	6.70	9,712.49	12.39	201.40	485,599.10	796,255.99	32° 19' 56.223 N	103° 30' 28.821 W
9,814.00	15.38	20.92	9,805.90	28.15	206.37	485,614.86	796,260.97	32° 19' 56.379 N	103° 30' 28.762 W
9,909.00	24.00	21.88	9,895.26	57.90	218.09	485,644.62	796,272.69	32° 19' 56.672 N	103° 30' 28.622 W
10,004.00	33.93	18.48	9,978.27	101.09	233.74	485,687.80	796,288.33	32° 19' 57.099 N	103° 30' 28.436 W
10,099.00	40.29	10.01	10,054.05	156.58	247.50	485,743.29	796,302.10	32° 19' 57.647 N	103° 30' 28.271 W
10,194.00	48.28	6.84	10,122.01	222.14	257.08	485,808.85	796,311.68	32° 19' 58.295 N	103° 30' 28.153 W
10,289.00	57.28	0.98	10,179.44	297.50	262.00	485,884.21	796,316.60	32° 19' 59.040 N	103° 30' 28.089 W
10,384.00	67.72	359.42	10,223.25	381.64	262.24	485,968.35	796,316.84	32° 19' 59.872 N	103° 30' 28.079 W
10,478.00	81.07	0.42	10,248.48	471.97	262.14	486,058.68	796,316.74	32° 20' 0.766 N	103° 30' 28.072 W
10,514.00	86.50	0.79	10,252.38	507.75	262.52	486,094.46	796,317.12	32° 20' 1.120 N	103° 30' 28.064 W
10,609.00	87.87	0.08	10,257.04	602.63	263.24	486,189.34	796,317.84	32° 20' 2.059 N	103° 30' 28.047 W
10,614.91	87.87	0.05	10,257.26	608.53	263.24	486,195.24	796,317.84	32° 20' 2.117 N	103° 30' 28.047 W
FTP @ 10614.91'									
10,704.00	87.92	359.57	10,260.53	697.56	262.95	486,284.27	796,317.55	32° 20' 2.998 N	103° 30' 28.042 W
10,799.00	86.78	1.40	10,264.92	792.45	263.75	486,379.16	796,318.35	32° 20' 3.937 N	103° 30' 28.024 W
10,894.00	86.15	0.78	10,270.78	887.25	265.55	486,473.96	796,320.15	32° 20' 4.875 N	103° 30' 27.995 W
10,989.00	87.62	359.21	10,275.94	982.11	265.55	486,568.82	796,320.14	32° 20' 5.814 N	103° 30' 27.986 W
11,083.00	90.48	359.37	10,277.50	1,076.08	264.38	486,662.79	796,318.98	32° 20' 6.744 N	103° 30' 27.992 W
11,178.00	90.56	0.57	10,276.64	1,171.07	264.33	486,757.78	796,318.93	32° 20' 7.683 N	103° 30' 27.984 W

Kaiser-Francis Oil Company

Survey Report - Geographic



Company:	Kaiser-Francis Oil Co.	Local Co-ordinate Reference:	Well BELL LAKE UNIT NORTH 228H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Site:	SEC 6, T23S, R34E	MD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Well:	BELL LAKE UNIT NORTH 228H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,273.00	89.24	0.86	10,276.81	1,266.06	265.52	486,852.77	796,320.11	32° 20' 8.623 N	103° 30' 27.961 W
11,368.00	90.39	0.95	10,277.11	1,361.05	267.02	486,947.76	796,321.61	32° 20' 9.563 N	103° 30' 27.935 W
11,463.00	91.26	0.49	10,275.75	1,456.03	268.21	487,042.74	796,322.81	32° 20' 10.503 N	103° 30' 27.913 W
11,557.00	92.16	359.47	10,272.94	1,549.98	268.18	487,136.69	796,322.78	32° 20' 11.432 N	103° 30' 27.905 W
11,652.00	91.54	0.70	10,269.87	1,644.93	268.32	487,231.64	796,322.92	32° 20' 12.372 N	103° 30' 27.895 W
11,747.00	90.90	0.50	10,267.85	1,739.90	269.31	487,326.62	796,323.91	32° 20' 13.312 N	103° 30' 27.874 W
11,841.00	88.51	0.45	10,268.33	1,833.89	270.09	487,420.60	796,324.69	32° 20' 14.242 N	103° 30' 27.857 W
11,936.00	88.77	359.76	10,270.59	1,928.87	270.27	487,515.58	796,324.86	32° 20' 15.181 N	103° 30' 27.846 W
12,031.00	88.79	0.19	10,272.61	2,023.84	270.23	487,610.55	796,324.82	32° 20' 16.121 N	103° 30' 27.838 W
12,126.00	88.71	0.31	10,274.68	2,118.82	270.64	487,705.53	796,325.24	32° 20' 17.061 N	103° 30' 27.825 W
12,221.00	88.01	0.74	10,277.40	2,213.78	271.51	487,800.49	796,326.11	32° 20' 18.000 N	103° 30' 27.806 W
12,315.00	88.01	2.17	10,280.67	2,307.69	273.90	487,894.40	796,328.49	32° 20' 18.929 N	103° 30' 27.770 W
12,410.00	89.61	2.04	10,282.64	2,402.60	277.38	487,989.31	796,331.98	32° 20' 19.868 N	103° 30' 27.721 W
12,505.00	89.75	0.81	10,283.17	2,497.57	279.75	488,084.28	796,334.34	32° 20' 20.808 N	103° 30' 27.685 W
12,600.00	91.43	359.66	10,282.19	2,592.56	280.14	488,179.27	796,334.73	32° 20' 21.748 N	103° 30' 27.672 W
12,695.00	92.95	0.04	10,278.56	2,687.48	279.89	488,274.19	796,334.48	32° 20' 22.687 N	103° 30' 27.666 W
12,790.00	90.25	359.98	10,275.91	2,782.44	279.90	488,369.15	796,334.50	32° 20' 23.627 N	103° 30' 27.657 W
12,884.00	89.41	359.53	10,276.19	2,876.44	279.50	488,463.15	796,334.10	32° 20' 24.557 N	103° 30' 27.654 W
12,979.00	89.24	359.08	10,277.31	2,971.42	278.35	488,558.13	796,332.95	32° 20' 25.497 N	103° 30' 27.658 W
13,074.00	88.54	359.56	10,279.15	3,066.40	277.22	488,653.11	796,331.82	32° 20' 26.436 N	103° 30' 27.663 W
13,169.00	88.83	357.73	10,281.33	3,161.34	274.98	488,748.05	796,329.57	32° 20' 27.376 N	103° 30' 27.681 W
13,264.00	89.64	356.64	10,282.60	3,256.21	270.31	488,842.93	796,324.91	32° 20' 28.315 N	103° 30' 27.727 W
13,359.00	90.73	356.77	10,282.29	3,351.06	264.85	488,937.77	796,319.45	32° 20' 29.254 N	103° 30' 27.782 W
13,453.00	89.64	358.74	10,281.99	3,444.98	261.17	489,031.69	796,315.77	32° 20' 30.184 N	103° 30' 27.816 W
13,548.00	89.07	358.71	10,283.06	3,539.95	259.06	489,126.66	796,313.65	32° 20' 31.124 N	103° 30' 27.832 W
13,643.00	87.90	359.56	10,285.57	3,634.90	257.62	489,221.61	796,312.22	32° 20' 32.063 N	103° 30' 27.840 W
13,738.00	88.27	1.13	10,288.74	3,729.84	258.19	489,316.55	796,312.79	32° 20' 33.003 N	103° 30' 27.825 W
13,833.00	89.49	359.77	10,290.60	3,824.82	258.94	489,411.53	796,313.54	32° 20' 33.942 N	103° 30' 27.808 W
13,928.00	89.86	359.72	10,291.14	3,919.82	258.52	489,506.53	796,313.11	32° 20' 34.882 N	103° 30' 27.804 W
14,022.00	90.25	358.74	10,291.05	4,013.81	257.25	489,600.52	796,311.85	32° 20' 35.812 N	103° 30' 27.811 W
14,117.00	92.16	359.72	10,289.05	4,108.77	255.98	489,695.48	796,310.57	32° 20' 36.752 N	103° 30' 27.817 W
14,212.00	91.04	359.27	10,286.40	4,203.73	255.14	489,790.44	796,309.74	32° 20' 37.692 N	103° 30' 27.818 W
14,307.00	90.39	358.45	10,285.21	4,298.70	253.25	489,885.41	796,307.85	32° 20' 38.632 N	103° 30' 27.832 W
14,402.00	90.59	358.05	10,284.40	4,393.65	250.35	489,980.36	796,304.95	32° 20' 39.572 N	103° 30' 27.857 W
14,497.00	91.60	357.32	10,282.59	4,488.56	246.51	490,075.27	796,301.11	32° 20' 40.511 N	103° 30' 27.893 W
14,592.00	90.45	357.10	10,280.89	4,583.43	241.89	490,170.14	796,296.49	32° 20' 41.450 N	103° 30' 27.939 W
14,686.00	91.01	357.98	10,279.69	4,677.33	237.85	490,264.04	796,292.45	32° 20' 42.379 N	103° 30' 27.977 W
14,781.00	90.11	357.77	10,278.76	4,772.26	234.33	490,358.97	796,288.93	32° 20' 43.319 N	103° 30' 28.010 W
14,876.00	87.56	357.50	10,280.69	4,867.15	230.41	490,453.86	796,285.01	32° 20' 44.258 N	103° 30' 28.047 W
14,971.00	87.08	355.38	10,285.13	4,961.86	224.52	490,548.57	796,279.12	32° 20' 45.196 N	103° 30' 28.107 W
15,065.00	86.61	355.17	10,290.31	5,055.40	216.79	490,642.11	796,271.39	32° 20' 46.122 N	103° 30' 28.189 W
15,160.00	85.85	354.23	10,296.55	5,149.78	208.03	490,736.49	796,262.63	32° 20' 47.057 N	103° 30' 28.282 W
15,255.00	86.80	354.06	10,302.64	5,244.09	198.36	490,830.80	796,252.96	32° 20' 47.990 N	103° 30' 28.387 W
15,350.00	85.90	355.93	10,308.69	5,338.53	190.09	490,925.24	796,244.69	32° 20' 48.926 N	103° 30' 28.474 W
15,445.00	85.63	358.43	10,315.71	5,433.15	185.43	491,019.86	796,240.03	32° 20' 49.862 N	103° 30' 28.520 W
15,540.00	87.45	357.63	10,321.44	5,527.92	182.17	491,114.63	796,236.77	32° 20' 50.800 N	103° 30' 28.550 W
15,634.00	88.18	358.16	10,325.02	5,621.78	178.72	491,208.50	796,233.32	32° 20' 51.729 N	103° 30' 28.582 W
15,729.00	88.91	356.96	10,327.44	5,716.67	174.68	491,303.38	796,229.27	32° 20' 52.668 N	103° 30' 28.620 W
15,824.00	89.52	357.63	10,328.74	5,811.55	170.19	491,398.26	796,224.79	32° 20' 53.608 N	103° 30' 28.664 W
15,919.00	91.51	358.95	10,327.88	5,906.50	167.36	491,493.21	796,221.96	32° 20' 54.547 N	103° 30' 28.688 W
16,014.00	93.14	0.90	10,324.03	6,001.41	167.23	491,588.12	796,221.83	32° 20' 55.486 N	103° 30' 28.681 W
16,108.00	94.07	359.95	10,318.12	6,095.22	167.93	491,681.93	796,222.53	32° 20' 56.415 N	103° 30' 28.665 W
16,203.00	93.65	2.64	10,311.72	6,189.97	170.07	491,776.68	796,224.67	32° 20' 57.352 N	103° 30' 28.631 W
16,298.00	93.61	2.22	10,305.71	6,284.70	174.09	491,871.41	796,228.69	32° 20' 58.289 N	103° 30' 28.576 W
16,393.00	93.28	1.07	10,300.00	6,379.48	176.81	491,966.19	796,231.41	32° 20' 59.227 N	103° 30' 28.536 W

Kaiser-Francis Oil Company

Survey Report - Geographic



Company:	Kaiser-Francis Oil Co.	Local Co-ordinate Reference:	Well BELL LAKE UNIT NORTH 228H
Project:	Lea County, NM (NAD 83)	TVD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Site:	SEC 6, T23S, R34E	MD Reference:	KB 23.9' @ 3498.80usft (Cactus 171)
Well:	BELL LAKE UNIT NORTH 228H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,488.00	93.25	1.09	10,294.59	6,474.31	178.60	492,061.02	796,233.20	32° 21' 0.165 N	103° 30' 28.506 W
16,582.00	88.57	1.17	10,293.10	6,568.26	180.46	492,154.97	796,235.05	32° 21' 1.094 N	103° 30' 28.476 W
16,677.00	85.39	1.51	10,298.10	6,663.09	182.67	492,249.80	796,237.27	32° 21' 2.032 N	103° 30' 28.442 W
16,772.00	85.14	0.02	10,305.94	6,757.75	183.94	492,344.46	796,238.54	32° 21' 2.969 N	103° 30' 28.419 W
16,867.00	87.36	0.85	10,312.16	6,852.54	184.66	492,439.25	796,239.26	32° 21' 3.907 N	103° 30' 28.402 W
16,962.00	88.66	0.51	10,315.46	6,947.47	185.78	492,534.18	796,240.38	32° 21' 4.846 N	103° 30' 28.380 W
17,057.00	87.73	0.71	10,318.45	7,042.42	186.80	492,629.13	796,241.39	32° 21' 5.785 N	103° 30' 28.360 W
17,152.00	87.84	0.91	10,322.12	7,137.34	188.14	492,724.05	796,242.74	32° 21' 6.725 N	103° 30' 28.336 W
17,247.00	87.76	0.88	10,325.77	7,232.26	189.62	492,818.97	796,244.22	32° 21' 7.664 N	103° 30' 28.310 W
17,341.00	87.25	0.65	10,329.86	7,326.16	190.87	492,912.87	796,245.47	32° 21' 8.593 N	103° 30' 28.287 W
17,436.00	87.22	0.66	10,334.44	7,421.04	191.96	493,007.75	796,246.56	32° 21' 9.532 N	103° 30' 28.266 W
17,531.00	89.10	358.33	10,337.49	7,515.98	191.12	493,102.69	796,245.72	32° 21' 10.471 N	103° 30' 28.267 W
17,626.00	91.40	358.13	10,337.08	7,610.92	188.19	493,197.64	796,242.78	32° 21' 11.411 N	103° 30' 28.292 W
17,721.00	92.61	357.49	10,333.75	7,705.79	184.56	493,292.51	796,239.16	32° 21' 12.350 N	103° 30' 28.326 W
17,816.00	92.69	357.14	10,329.36	7,800.59	180.11	493,387.30	796,234.71	32° 21' 13.288 N	103° 30' 28.369 W
17,911.00	92.92	356.71	10,324.71	7,895.34	175.02	493,482.05	796,229.62	32° 21' 14.226 N	103° 30' 28.420 W
18,005.00	90.70	358.03	10,321.74	7,989.18	170.71	493,575.90	796,225.31	32° 21' 15.155 N	103° 30' 28.462 W
18,100.00	90.34	357.96	10,320.88	8,084.12	167.39	493,670.83	796,221.99	32° 21' 16.094 N	103° 30' 28.492 W
18,195.00	91.09	357.87	10,319.70	8,179.05	163.93	493,765.76	796,218.53	32° 21' 17.034 N	103° 30' 28.524 W
18,283.00	91.74	357.37	10,317.52	8,266.95	160.28	493,853.66	796,214.88	32° 21' 17.904 N	103° 30' 28.559 W
FINAL SURVEY @ 18283'									
18,343.00	91.74	357.37	10,315.70	8,326.86	157.53	493,913.57	796,212.13	32° 21' 18.497 N	103° 30' 28.585 W
PROJECTION TO TD @ 19343'									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
146.00	145.99	-0.78	-0.77	FIRST SURVEY @ 146'
10,614.91	10,257.26	608.53	263.24	FTP @ 10614.91'
18,283.00	10,317.52	8,266.95	160.28	FINAL SURVEY @ 18283'
18,343.00	10,315.70	8,326.86	157.53	PROJECTION TO TD @ 19343'

Checked By: _____ Approved By: _____ Date: _____

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

CONDITIONS

Action 142105

CONDITIONS

Operator: KAISER-FRANCIS OIL CO PO Box 21468 Tulsa, OK 74121146	OGRID: 12361
	Action Number: 142105
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	9/15/2022