



PHOENIX
TECHNOLOGY SERVICES

30-025-44690

November 27, 2018

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

HOBBS OCD
DEC 04 2018
RECEIVED

Dear District 1 - Hobbs

Re: Kaiser Francis
Bell Lake Unit North 201H
Lea County, NM
API #30-025-44690
Job No. 63506

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced well by Phoenix Technology Services, Inc. Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Peter Mavrelis	201H	137	18,842	9/7/18	9/26/18	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
MWD Operations Administrator- EOW

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER

63506

ENERGY COMPANY

Kaiser Francis

WELL NAME

Bell Lake Unit North 201H

COUNTY & STATE

Lea County, NM

API WELL NUMBER

30-025-44690

PROPOSED DIRECTION

179.59

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
. ft	.00 ft	0.00	0.00	.00 ft	.00 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
7-Sep-18	137.00 ft	0.80	194.11

SURVEY INSTRUMENT
TYPE
Phoenix MWD Velocity

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
26-Sep-18	18,842.00 ft	92.51	177.47

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
26-Sep-18	18,915.00 ft	92.51	177.47

Peter Mavrelis

PRINT YOUR NAME ABOVE

Peter Mavrelis

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	
6.26	
DECLINATION OR GRID	GRID

9/26/2018

TODAY'S DATE

MWD SUPERVISOR 1

Peter Mavrelis

DIRECTIONAL DRILLER 1

Jed Smith

MWD SUPERVISOR 2

Fred Galindo

DIRECTIONAL DRILLER 2

Joe Lilley

12329 Cutten Rd.,

Houston, Texas 777066

(713)337-0600 (Voice), (713)337-0599 (Fax)



PHOENIX
TECHNOLOGY SERVICES

Kaiser-Francis Oil Company

Lea County, NM (NAD 83)

Bell Lake Unit North

201H

OH / 63506

Survey: Phoenix MWD Surveys

Standard Survey Report

21 November, 2018

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well 201H
Project:	Lea County, NM (NAD 83)	TVD Reference:	RKB @ 3540.00usft (Cactus 171)
Site:	Bell Lake Unit North	MD Reference:	RKB @ 3540.00usft (Cactus 171)
Well:	201H	North Reference:	Grid
Wellbore:	OH / 63506	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Cactus 171)	Database:	USA Compass

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	Bell Lake Unit North				
Site Position:		Northing:	486,616.80 usft	Latitude:	32° 20' 6.88640 N
From:	Map	Easting:	788,354.75 usft	Longitude:	103° 32' 0.81690 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	201H					
Well Position	+N/-S	0.00 usft	Northing:	486,546.90 usft	Latitude:	32° 20' 6.19472 N
	+E/-W	0.00 usft	Easting:	788,355.10 usft	Longitude:	103° 32' 0.81895 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,517.00 usft

Wellbore	OH / 63506				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	9/30/2018	6.69	60.05	48,054.40683159

Design	Surveys (Cactus 171)				
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	179.59	

Survey Program	Date 11/21/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,915.00	Phoenix MWD Surveys (OH / 63506)	MWD+HDGM	OWSG Rev.2 MWD + HDGM	

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	
137.00	0.80	194.11	137.00	-0.93	-0.23	0.93	0.58	0.58	0.00	
First Phoenix MWD Survey										
228.00	0.90	196.10	227.99	-2.23	-0.59	2.23	0.11	0.11	2.19	
320.00	0.48	193.02	319.98	-3.30	-0.87	3.29	0.46	-0.46	-3.35	
423.00	0.74	205.74	422.97	-4.32	-1.26	4.31	0.28	0.25	12.35	
517.00	0.67	213.07	516.97	-5.33	-1.82	5.31	0.12	-0.07	7.80	
610.00	0.98	226.86	609.96	-6.33	-2.70	6.31	0.39	0.33	14.83	
704.00	1.42	228.45	703.94	-7.65	-4.16	7.62	0.47	0.47	1.69	
798.00	1.45	227.67	797.91	-9.22	-5.91	9.18	0.04	0.03	-0.83	
892.00	1.05	240.08	891.88	-10.45	-7.53	10.40	0.51	-0.43	13.20	

Survey Report

Company: Kaiser-Francis Oil Company
Project: Lea County, NM (NAD 83)
Site: Bell Lake Unit North
Well: 201H
Wellbore: OH / 63506
Design: Surveys (Cactus 171)

Local Co-ordinate Reference: Well 201H
TVD Reference: RKB @ 3540.00usft (Cactus 171)
MD Reference: RKB @ 3540.00usft (Cactus 171)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

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)
985.00	1.08	257.47	984.87	-11.07	-9.13	11.00	0.35	0.03	18.70
1,079.00	1.04	257.11	1,078.85	-11.45	-10.83	11.37	0.04	-0.04	-0.38
1,159.00	1.26	260.03	1,158.84	-11.76	-12.40	11.68	0.28	0.28	3.65
1,266.00	0.62	260.18	1,265.82	-12.07	-14.13	11.97	0.60	-0.60	0.14
1,360.00	0.59	281.16	1,359.82	-12.06	-15.10	11.95	0.24	-0.03	22.32
1,455.00	0.47	278.77	1,454.81	-11.91	-15.97	11.79	0.13	-0.13	-2.52
1,549.00	0.19	261.26	1,548.81	-11.87	-16.50	11.75	0.31	-0.30	-18.63
1,642.00	0.29	233.60	1,641.81	-12.03	-16.85	11.91	0.16	0.11	-29.74
1,736.00	0.15	141.45	1,735.81	-12.27	-16.96	12.15	0.35	-0.15	-98.03
1,831.00	0.06	38.44	1,830.81	-12.33	-16.85	12.21	0.18	-0.09	-108.43
1,926.00	0.35	81.17	1,925.81	-12.25	-16.53	12.13	0.32	0.31	44.98
2,020.00	0.40	58.59	2,019.81	-12.03	-15.97	11.92	0.16	0.05	-24.02
2,114.00	0.27	25.38	2,113.80	-11.66	-15.60	11.55	0.24	-0.14	-35.33
2,209.00	0.47	18.24	2,208.80	-11.09	-15.38	10.98	0.22	0.21	-7.52
2,304.00	0.87	25.54	2,303.80	-10.07	-14.95	9.96	0.43	0.42	7.68
2,399.00	1.07	34.15	2,398.78	-8.58	-14.14	8.58	0.26	0.21	9.06
2,493.00	0.98	44.18	2,492.77	-7.38	-13.08	7.29	0.21	-0.10	10.67
2,587.00	1.17	97.70	2,586.75	-6.93	-11.57	6.85	1.05	0.20	56.94
2,682.00	2.62	130.18	2,681.70	-8.46	-8.95	8.40	1.84	1.53	34.19
2,776.00	4.13	142.91	2,775.54	-12.55	-5.27	12.51	1.78	1.61	13.54
2,871.00	4.13	144.67	2,870.29	-18.07	-1.23	18.06	0.13	0.00	1.85
2,965.00	4.06	136.67	2,964.05	-23.25	3.01	23.27	0.61	-0.07	-8.51
3,060.00	5.09	144.30	3,058.75	-29.12	7.78	29.17	1.26	1.08	8.03
3,155.00	5.25	142.24	3,153.36	-35.98	12.90	36.07	0.26	0.17	-2.17
3,250.00	4.86	160.18	3,248.00	-43.20	16.93	43.32	1.71	-0.41	18.88
3,344.00	4.53	162.40	3,341.68	-50.48	19.40	50.62	0.40	-0.35	2.36
3,439.00	3.97	154.54	3,436.42	-57.03	21.95	57.19	0.85	-0.59	-8.27
3,534.00	4.45	166.66	3,531.17	-63.59	24.21	63.76	1.06	0.51	12.76
3,628.00	4.33	165.41	3,624.89	-70.57	25.95	70.75	0.16	-0.13	-1.33
3,723.00	4.19	164.73	3,719.63	-77.39	27.76	77.58	0.16	-0.15	-0.72
3,818.00	5.77	168.58	3,814.27	-85.42	29.62	85.63	1.70	1.66	4.05
3,912.00	6.15	176.89	3,907.76	-95.08	30.83	95.29	1.00	0.40	8.84
4,007.00	6.00	183.91	4,002.23	-105.11	30.77	105.33	0.80	-0.16	7.39
4,101.00	4.79	182.11	4,095.81	-113.93	30.29	114.15	1.30	-1.29	-1.91
4,195.00	5.32	191.09	4,189.44	-122.13	29.31	122.34	1.01	0.56	9.55
4,290.00	3.89	188.27	4,284.14	-129.64	28.00	129.84	1.52	-1.51	-2.97
4,384.00	2.65	184.41	4,377.98	-134.97	27.37	135.16	1.34	-1.32	-4.11
4,478.00	1.93	183.99	4,471.91	-138.71	27.09	138.90	0.77	-0.77	-0.45
4,573.00	0.13	137.03	4,566.89	-140.39	27.06	140.58	1.94	-1.89	-49.43
4,667.00	0.14	306.87	4,660.89	-140.40	27.04	140.59	0.29	0.01	180.68
4,762.00	0.71	223.79	4,755.88	-140.75	26.54	140.94	0.74	0.60	-87.45
4,857.00	0.57	220.95	4,850.88	-141.53	25.82	141.71	0.15	-0.15	-2.99
4,952.00	0.22	212.38	4,945.88	-142.04	25.41	142.22	0.37	-0.37	-9.02

Survey Report

Company: Kaiser-Francis Oil Company
Project: Lea County, NM (NAD 83)
Site: Bell Lake Unit North
Well: 201H
Wellbore: OH / 63506
Design: Surveys (Cactus 171)

Local Co-ordinate Reference: Well 201H
TVD Reference: RKB @ 3540.00usft (Cactus 171)
MD Reference: RKB @ 3540.00usft (Cactus 171)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,046.00	0.23	202.77	5,039.87	-142.37	25.24	142.55	0.04	0.01	-10.22
5,140.00	0.24	193.52	5,133.87	-142.74	25.12	142.91	0.04	0.01	-9.84
5,235.00	0.04	63.44	5,228.87	-142.91	25.11	143.09	0.28	-0.21	-136.93
5,300.00	0.11	190.52	5,293.87	-142.97	25.12	143.14	0.21	0.11	195.51
5,427.00	0.28	283.16	5,420.87	-143.01	24.79	143.19	0.24	0.13	72.94
5,522.00	0.14	271.94	5,515.87	-142.96	24.45	143.13	0.15	-0.15	-11.81
5,617.00	0.21	255.19	5,610.87	-143.00	24.17	143.17	0.09	0.07	-17.63
5,711.00	0.14	203.23	5,704.87	-143.15	23.95	143.32	0.18	-0.07	-55.28
5,806.00	0.28	205.20	5,799.87	-143.46	23.81	143.63	0.15	0.15	2.07
5,901.00	0.31	205.72	5,894.87	-143.91	23.60	144.07	0.03	0.03	0.55
5,995.00	0.15	161.78	5,988.87	-144.25	23.53	144.42	0.24	-0.17	-46.74
6,090.00	0.16	131.45	6,083.87	-144.46	23.67	144.62	0.09	0.01	-31.93
6,184.00	0.14	97.02	6,177.87	-144.56	23.88	144.73	0.10	-0.02	-36.63
6,279.00	0.21	93.93	6,272.87	-144.59	24.17	144.75	0.07	0.07	-3.25
6,372.00	0.19	106.04	6,365.87	-144.64	24.48	144.81	0.05	-0.02	13.02
6,466.00	0.11	136.21	6,459.87	-144.75	24.70	144.92	0.12	-0.09	32.10
6,561.00	0.10	204.70	6,554.87	-144.89	24.73	145.06	0.12	-0.01	72.09
6,656.00	0.12	206.48	6,649.87	-145.05	24.65	145.23	0.02	0.02	1.87
6,750.00	0.11	145.60	6,743.87	-145.22	24.65	145.39	0.12	-0.01	-64.77
6,845.00	0.13	107.42	6,838.87	-145.32	24.81	145.50	0.08	0.02	-40.19
6,939.00	0.11	132.51	6,932.87	-145.42	24.98	145.59	0.06	-0.02	26.69
7,034.00	0.15	155.89	7,027.87	-145.59	25.09	145.77	0.07	0.04	24.61
7,128.00	0.06	211.76	7,121.87	-145.75	25.12	145.92	0.13	-0.10	59.44
7,223.00	0.06	265.17	7,216.87	-145.79	25.04	145.97	0.06	0.00	56.22
7,318.00	0.09	121.42	7,311.87	-145.84	25.06	146.01	0.15	0.03	-151.32
7,413.00	0.34	136.14	7,406.86	-146.08	25.32	146.25	0.27	0.26	15.49
7,507.00	0.58	130.45	7,500.86	-146.59	25.87	146.77	0.26	0.26	-6.05
7,602.00	0.69	108.16	7,595.86	-147.08	26.78	147.27	0.28	0.12	-23.46
7,697.00	0.86	106.05	7,690.85	-147.45	28.01	147.65	0.18	0.18	-2.22
7,792.00	0.91	115.00	7,785.84	-147.97	29.38	148.18	0.15	0.05	9.42
7,887.00	0.95	124.43	7,880.82	-148.73	30.71	148.95	0.17	0.04	9.93
7,981.00	1.07	117.60	7,974.81	-149.58	32.13	149.81	0.18	0.13	-7.27
8,075.00	1.23	117.13	8,068.79	-150.45	33.81	150.68	0.17	0.17	-0.50
8,169.00	1.18	112.69	8,162.77	-151.28	35.60	151.53	0.11	-0.05	-4.72
8,263.00	1.45	104.61	8,256.74	-151.95	37.64	152.22	0.35	0.29	-8.60
8,358.00	1.60	102.68	8,351.71	-152.55	40.10	152.83	0.17	0.16	-2.03
8,452.00	1.76	105.14	8,445.67	-153.21	42.77	153.51	0.19	0.17	2.62
8,547.00	1.69	102.20	8,540.63	-153.89	45.55	154.21	0.12	-0.07	-3.09
8,642.00	1.57	102.79	8,635.59	-154.47	48.19	154.81	0.13	-0.13	0.62
8,737.00	1.72	98.82	8,730.55	-154.98	50.87	155.34	0.20	0.16	-4.18
8,831.00	2.21	100.33	8,824.49	-155.52	54.04	155.90	0.52	0.52	1.61
8,925.00	1.66	95.65	8,918.44	-155.98	57.18	156.39	0.61	-0.59	-4.98
9,019.00	2.08	91.79	9,012.39	-156.17	60.24	156.60	0.47	0.45	-4.11

Survey Report

Company:	Kaiser-Francis Oil Company	Local Co-ordinate Reference:	Well 201H
Project:	Lea County, NM (NAD 83)	TVD Reference:	RKB @ 3540.00usft (Cactus 171)
Site:	Bell Lake Unit North	MD Reference:	RKB @ 3540.00usft (Cactus 171)
Well:	201H	North Reference:	Grid
Wellbore:	OH / 63506	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Cactus 171)	Database:	USA Compass

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,113.00	2.92	98.41	9,106.30	-156.57	64.32	157.03	0.94	0.89	7.04	
9,207.00	2.91	105.64	9,200.18	-157.57	68.98	158.05	0.39	-0.01	7.69	
9,301.00	2.37	98.62	9,294.08	-158.50	73.20	159.02	0.67	-0.57	-7.47	
9,395.00	1.18	71.67	9,388.03	-158.49	76.04	159.03	1.51	-1.27	-28.67	
9,490.00	1.55	70.29	9,483.01	-157.75	78.18	158.30	0.39	0.39	-1.45	
9,585.00	1.90	82.32	9,577.96	-157.10	80.95	157.68	0.53	0.37	12.66	
9,680.00	3.11	73.78	9,672.87	-156.17	84.99	156.78	1.33	1.27	-8.99	
9,774.00	4.50	74.66	9,766.66	-154.48	90.99	155.13	1.48	1.48	0.94	
9,869.00	4.76	86.87	9,861.35	-153.28	98.52	153.98	1.07	0.27	12.85	
9,964.00	1.31	115.84	9,956.21	-153.54	103.44	154.28	3.86	-3.63	30.49	
10,058.00	1.49	239.10	10,050.20	-154.64	103.35	155.37	2.62	0.19	131.13	
10,153.00	1.02	217.61	10,145.17	-155.94	101.78	156.67	0.69	-0.49	-22.62	
10,247.00	1.36	152.35	10,239.16	-157.59	101.78	158.32	1.40	0.36	-69.43	
10,342.00	1.67	119.65	10,334.13	-159.28	103.51	160.01	0.95	0.33	-34.42	
10,436.00	6.19	161.51	10,427.89	-164.76	106.31	165.52	5.39	4.81	44.53	
10,484.00	11.92	165.29	10,475.28	-172.02	108.39	172.79	12.00	11.94	7.88	
10,530.00	17.05	166.35	10,519.80	-183.17	111.19	183.96	11.17	11.15	2.30	
10,578.00	19.65	173.55	10,565.36	-198.04	113.76	198.84	7.18	5.42	15.00	
10,625.00	23.21	172.55	10,609.10	-215.08	115.85	215.90	7.61	7.57	-2.13	
10,673.00	28.02	173.53	10,652.37	-235.67	118.35	236.51	10.06	10.02	2.04	
10,719.00	32.88	175.93	10,692.02	-258.88	120.45	259.73	10.89	10.57	5.22	
10,767.00	37.67	179.95	10,731.20	-286.56	121.39	287.42	11.08	9.98	8.38	
10,813.00	41.73	181.97	10,766.59	-315.93	120.88	316.79	9.26	8.83	4.39	
10,861.00	45.07	184.36	10,801.46	-348.85	119.03	349.69	7.75	6.96	4.98	
10,908.00	50.15	182.66	10,833.14	-383.48	116.93	384.31	11.13	10.81	-3.62	
10,956.00	56.28	181.21	10,861.87	-421.88	115.65	422.70	13.00	12.77	-3.02	
11,002.00	61.08	179.07	10,885.77	-461.17	115.58	461.98	11.17	10.43	-4.65	
11,050.00	64.85	177.93	10,907.59	-503.90	116.70	504.72	8.13	7.85	-2.38	
11,096.00	69.48	177.25	10,925.43	-546.24	118.49	547.08	10.16	10.07	-1.48	
11,142.00	73.41	177.88	10,940.07	-589.80	120.34	590.65	8.64	8.54	1.37	
11,189.00	77.19	179.36	10,951.99	-635.24	121.43	636.09	8.60	8.04	3.15	
11,237.00	80.51	179.82	10,961.27	-682.33	121.76	683.18	6.98	6.92	0.96	
11,283.00	83.59	182.04	10,967.64	-727.87	121.02	728.72	8.23	6.70	4.83	
11,378.00	87.10	182.92	10,975.35	-822.45	116.92	823.27	3.81	3.69	0.93	
11,472.00	88.08	182.77	10,979.30	-916.25	112.26	917.03	1.05	1.04	-0.16	
11,567.00	89.10	182.61	10,981.64	-1,011.12	107.80	1,011.86	1.09	1.07	-0.17	
11,661.00	88.47	182.61	10,983.63	-1,105.00	103.52	1,105.71	0.67	-0.67	0.00	
11,756.00	89.55	182.72	10,985.27	-1,199.88	99.11	1,200.56	1.14	1.14	0.12	
11,851.00	89.41	183.09	10,986.13	-1,294.76	94.29	1,295.40	0.42	-0.15	0.39	
11,945.00	89.75	182.43	10,986.82	-1,388.64	89.77	1,389.25	0.79	0.36	-0.70	
12,039.00	91.33	183.34	10,985.94	-1,482.52	85.04	1,483.09	1.94	1.68	0.97	
12,134.00	89.78	182.24	10,985.02	-1,577.39	80.41	1,577.93	2.00	-1.63	-1.16	
12,228.00	89.36	182.56	10,985.72	-1,671.31	76.48	1,671.81	0.56	-0.45	0.34	
12,322.00	88.82	180.79	10,987.21	-1,765.25	73.73	1,765.74	1.97	-0.57	-1.88	

Survey Report

Company: Kaiser-Francis Oil Company
Project: Lea County, NM (NAD 83)
Site: Bell Lake Unit North
Well: 201H
Wellbore: OH / 63506
Design: Surveys (Cactus 171)

Local Co-ordinate Reference: Well 201H
TVD Reference: RKB @ 3540.00usft (Cactus 171)
MD Reference: RKB @ 3540.00usft (Cactus 171)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

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)
12,417.00	88.24	179.03	10,989.65	-1,860.22	73.88	1,860.70	1.95	-0.61	-1.85
12,511.00	88.44	179.17	10,992.37	-1,954.17	75.35	1,954.66	0.26	0.21	0.15
12,606.00	88.01	179.74	10,995.32	-2,049.12	76.26	2,049.61	0.75	-0.45	0.60
12,701.00	88.02	178.12	10,998.61	-2,144.04	78.03	2,144.54	1.70	0.01	-1.71
12,795.00	87.91	178.72	11,001.95	-2,237.94	80.62	2,238.46	0.65	-0.12	0.64
12,889.00	87.50	178.29	11,005.71	-2,331.84	83.07	2,332.37	0.63	-0.44	-0.46
12,984.00	87.40	177.71	11,009.94	-2,426.68	86.38	2,427.24	0.62	-0.11	-0.61
13,078.00	87.33	177.85	11,014.26	-2,520.51	90.02	2,521.09	0.17	-0.07	0.15
13,173.00	87.40	178.16	11,018.63	-2,615.36	93.32	2,615.96	0.33	0.07	0.33
13,268.00	88.65	178.03	11,021.90	-2,710.24	96.48	2,710.87	1.32	1.32	-0.14
13,363.00	88.70	177.69	11,024.10	-2,805.15	100.03	2,805.80	0.36	0.05	-0.36
13,457.00	88.65	177.68	11,026.27	-2,899.05	103.82	2,899.72	0.05	-0.05	-0.01
13,552.00	88.87	178.48	11,028.33	-2,993.97	107.01	2,994.66	0.87	0.23	0.84
13,646.00	87.87	178.74	11,031.00	-3,087.91	109.28	3,088.61	1.10	-1.06	0.28
13,741.00	88.77	180.78	11,033.79	-3,182.86	109.68	3,183.56	2.35	0.95	2.15
13,836.00	88.78	180.98	11,035.82	-3,277.83	108.22	3,278.52	0.21	0.01	0.21
13,931.00	88.42	181.01	11,038.14	-3,372.78	106.57	3,373.46	0.38	-0.38	0.03
14,025.00	88.25	179.07	11,040.87	-3,466.74	106.51	3,467.41	2.07	-0.18	-2.06
14,120.00	88.45	179.29	11,043.60	-3,561.69	107.87	3,562.37	0.31	0.21	0.23
14,215.00	88.71	179.41	11,045.96	-3,656.66	108.94	3,657.34	0.30	0.27	0.13
14,309.00	88.95	180.37	11,047.88	-3,750.63	109.13	3,751.32	1.05	0.26	1.02
14,403.00	89.78	179.22	11,048.92	-3,844.63	109.46	3,845.31	1.51	0.88	-1.22
14,497.00	89.50	179.96	11,049.51	-3,938.62	110.13	3,939.31	0.84	-0.30	0.79
14,592.00	89.47	178.67	11,050.36	-4,033.61	111.27	4,034.30	1.36	-0.03	-1.36
14,686.00	90.32	179.03	11,050.54	-4,127.59	113.16	4,128.29	0.98	0.90	0.38
14,780.00	89.76	179.21	11,050.47	-4,221.58	114.60	4,222.29	0.63	-0.60	0.19
14,874.00	88.34	179.49	11,052.03	-4,315.56	115.67	4,316.27	1.54	-1.51	0.30
14,969.00	87.81	179.23	11,055.22	-4,410.50	116.73	4,411.22	0.62	-0.56	-0.27
15,064.00	88.36	179.11	11,058.39	-4,505.43	118.10	4,506.16	0.59	0.58	-0.13
15,159.00	88.68	179.57	11,060.85	-4,600.39	119.20	4,601.13	0.59	0.34	0.48
15,253.00	88.25	178.64	11,063.37	-4,694.35	120.66	4,695.09	1.09	-0.46	-0.99
15,348.00	88.82	177.92	11,065.80	-4,789.27	123.51	4,790.03	0.97	0.60	-0.76
15,442.00	88.75	179.49	11,067.79	-4,883.22	125.64	4,884.00	1.67	-0.07	1.67
15,537.00	88.50	179.65	11,070.07	-4,978.19	126.35	4,978.97	0.31	-0.26	0.17
15,631.00	89.10	180.01	11,072.04	-5,072.17	126.63	5,072.95	0.74	0.64	0.38
15,725.00	89.71	181.32	11,073.01	-5,166.16	125.54	5,166.92	1.54	0.65	1.39
15,820.00	89.33	180.98	11,073.81	-5,261.14	123.63	5,261.89	0.54	-0.40	-0.36
15,914.00	88.84	180.69	11,075.31	-5,355.11	122.26	5,355.85	0.61	-0.52	-0.31
16,008.00	87.95	178.63	11,077.94	-5,449.07	122.82	5,449.81	2.39	-0.95	-2.19
16,103.00	90.12	178.58	11,079.54	-5,544.02	125.13	5,544.77	2.28	2.28	-0.05
16,197.00	89.73	177.91	11,079.67	-5,637.98	128.01	5,638.75	0.82	-0.41	-0.71
16,292.00	90.81	178.12	11,079.22	-5,732.92	131.30	5,733.71	1.16	1.14	0.22
16,386.00	92.74	179.31	11,076.31	-5,826.84	133.41	5,827.65	2.41	2.05	1.27

Survey Report

Company: Kaiser-Francis Oil Company
Project: Lea County, NM (NAD 83)
Site: Bell Lake Unit North
Well: 201H
Wellbore: OH / 63506
Design: Surveys (Cactus 171)

Local Co-ordinate Reference: Well 201H
TVD Reference: RKB @ 3540.00usft (Cactus 171)
MD Reference: RKB @ 3540.00usft (Cactus 171)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

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)
16,480.00	92.90	181.59	11,071.68	-5,920.72	132.67	5,921.52	2.43	0.17	2.43
16,574.00	92.77	182.73	11,067.03	-6,014.54	129.13	6,015.31	1.22	-0.14	1.21
16,668.00	91.72	182.86	11,063.35	-6,108.35	124.55	6,109.09	1.13	-1.12	0.14
16,763.00	89.85	184.05	11,062.05	-6,203.16	118.83	6,203.85	2.33	-1.97	1.25
16,858.00	89.31	183.45	11,062.74	-6,297.96	112.62	6,298.60	0.85	-0.57	-0.63
16,952.00	89.05	184.42	11,064.09	-6,391.72	106.17	6,392.32	1.07	-0.28	1.03
17,047.00	88.70	184.05	11,065.96	-6,486.45	99.15	6,486.99	0.54	-0.37	-0.39
17,141.00	89.76	182.87	11,067.22	-6,580.26	93.48	6,580.76	1.69	1.13	-1.26
17,236.00	89.08	181.88	11,068.18	-6,675.18	89.54	6,675.64	1.26	-0.72	-1.04
17,330.00	88.23	180.22	11,070.39	-6,769.13	87.82	6,769.58	1.98	-0.90	-1.77
17,424.00	89.68	180.29	11,072.10	-6,863.11	87.40	6,863.56	1.54	1.54	0.07
17,519.00	89.41	180.44	11,072.86	-6,958.11	86.80	6,958.55	0.33	-0.28	0.16
17,613.00	90.32	179.95	11,073.08	-7,052.10	86.48	7,052.54	1.10	0.97	-0.52
17,707.00	90.52	180.52	11,072.39	-7,146.10	86.09	7,146.53	0.64	0.21	0.61
17,802.00	90.93	180.63	11,071.19	-7,241.09	85.14	7,241.51	0.45	0.43	0.12
17,896.00	91.30	180.75	11,069.36	-7,335.06	84.01	7,335.48	0.41	0.39	0.13
17,991.00	91.49	180.00	11,067.04	-7,430.03	83.38	7,430.44	0.81	0.20	-0.79
18,086.00	91.73	179.99	11,064.37	-7,524.99	83.39	7,525.40	0.25	0.25	-0.01
18,181.00	91.89	179.35	11,061.37	-7,619.94	83.94	7,620.35	0.69	0.17	-0.67
18,275.00	91.73	180.54	11,058.41	-7,713.90	84.03	7,714.30	1.28	-0.17	1.27
18,370.00	91.39	179.35	11,055.82	-7,808.86	84.12	7,809.26	1.30	-0.36	-1.25
18,464.00	91.67	178.79	11,053.31	-7,902.81	85.65	7,903.22	0.67	0.30	-0.60
18,558.00	91.23	178.90	11,050.93	-7,996.76	87.54	7,997.18	0.48	-0.47	0.12
18,653.00	91.27	178.07	11,048.86	-8,091.71	90.05	8,092.14	0.87	0.04	-0.87
18,747.00	92.10	178.30	11,046.09	-8,185.62	93.03	8,186.07	0.92	0.88	0.24
18,842.00	92.51	177.47	11,042.27	-8,280.47	96.53	8,280.95	0.97	0.43	-0.87
Final Phoenix MWD Survey									
18,915.00	92.51	177.47	11,039.08	-8,353.33	99.75	8,353.83	0.00	0.00	0.00
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
137.00	137.00	-0.93	-0.23	First Phoenix MWD Survey
18,842.00	11,042.27	-8,280.47	96.53	Final Phoenix MWD Survey
18,915.00	11,039.08	-8,353.33	99.75	Projection to TD

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 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, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-44690		Pool Code	Pool Name
Property Code	Property Name BELL LAKE UNIT NORTH		Well Number 201H
OGRID No.	Operator Name KAISER-FRANCIS OIL COMPANY		Elevation 3517'

Surface Location

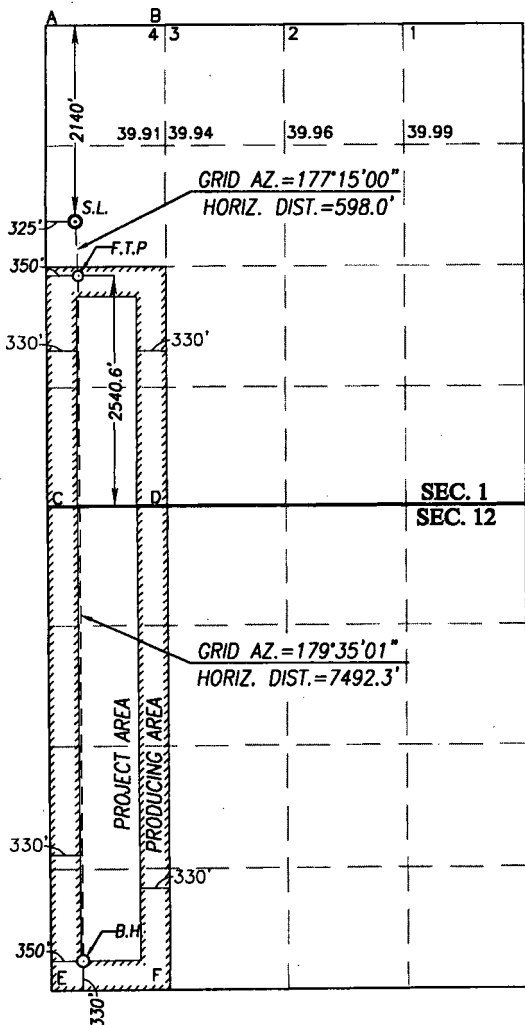
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	1	23-S	33-E		2140	NORTH	325	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	12	23-S	33-E		330	SOUTH	350	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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'

GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 486546.9 N X= 788355.1 E LAT.=32.335054° N LONG.=103.533561° W	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 486486.9 N X= 747172.0 E LAT.=32.334930° N LONG.=103.533079° W
FIRST TAKE POINT NAD 83 NME Y= 485949.6 N X= 788383.8 E LAT.=32.333412° N LONG.=103.533482° W	FIRST TAKE POINT NAD 27 NME Y= 485889.7 N X= 747200.7 E LAT.=32.333288° N LONG.=103.533001° W

CORNER COORDINATES TABLE

NAD 27 NME

A - Y= 488624.8 N, X= 746833.9 E
B - Y= 488631.4 N, X= 748154.4 E
C - Y= 483348.0 N, X= 746866.4 E
D - Y= 483354.2 N, X= 748188.1 E
E - Y= 478067.4 N, X= 746907.6 E
F - Y= 478074.3 N, X= 748228.8 E

CORNER COORDINATES TABLE

NAD 83 NME

A - Y= 488684.8 N, X= 788016.9 E
B - Y= 488691.4 N, X= 789337.5 E
C - Y= 483407.9 N, X= 788049.6 E
D - Y= 483414.1 N, X= 789371.3 E
E - Y= 478127.1 N, X= 788090.9 E
F - Y= 478134.0 N, X= 789412.2 E

BOTTOM HOLE LOCATION

NAD 83 NME
Y= 478458.9 N
X= 788438.2 E
LAT.=32.312822° N
LONG.=103.533487° W

BOTTOM HOLE LOCATION

NAD 27 NME
Y= 478399.2 N
X= 747254.9 E
LAT.=32.312698° N
LONG.=103.533006° 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.

Signature _____ Date _____

Printed Name _____

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.

MAX 04, 2017

Date of Survey _____
Signature of Professional Surveyor _____



Certificate Number _____
Ronald J. Eidson 12641
Ronald J. Eidson 3239

ACK _____ JWSC W.O.: 17.11.0396