



7821 Will Rogers Blvd.
Fort Worth, Texas 76140
817.568.1038 (office)
817.568.1499 (fax)
www.msdir.com

MS Directional Survey Data Certification

HOBBS OCD

APR 25 2019

RECEIVED

MS Directional Job Number: MSMO-56379
Survey Type: MWD
Operating Company: Kaiser-Francis Oil Company
Well Name & Number: ~~XXXXXXXXXX North #10001~~
Location: Lea County, NM
API Number: 30-025-45079
Tie In Depth: Surface
Surveyed Depths: 172' – 18,757' MD
Projected TD Survey: 18,820' MD
Dates Performed: 09/27/2018 – 10/17/2018

I certify that the data is true, correct and complete and within the limitations of the tool set forth by MS Directional; that I am authorized and qualified to make this report and that I have reviewed this report and find it conforms to the principles and procedures as set forth by MS Directional.

Digitally signed by: B. Elebe
MWD Surveyor Name: Babatunde Elebe
Date: 12-05-2018
Email: belebe@msdir.com

CONFIDENTIALITY NOTICE: This document contains MS Directional's proprietary and confidential information and may not be copied, published, distributed or transmitted, in whole or in part, by any medium or in any form without MS Directional's prior written consent. The information contained in this document is not to be used by or disclosed to any individuals other than those who need to know such information and who have been given notice that such information is proprietary and confidential.

V09.04.02

Company:	Kaiser-Francis Oil Company		
Well Name:	Bell Lake Unit North #101H		
Location:	Lea County, NM		
Rig:	Cactus #171	Magnetic Declination:	6.44
Job Number:	MSMO-56379		
API #:	30-025-45079		

REFERENCED TO GRID NORTH

Vertical Section Azimuth:	179.58	Proposed Direction:	179.58
---------------------------	--------	---------------------	--------

Survey Calculation Method:	Minimum Curvature
----------------------------	-------------------

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	18,820	92.1	177.9	10807.46	-8364.55	540.35	8368.29

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
TIE IN	0	0.00	0.00	0.00	0.00	0.00			0.00		
1	172	0.40	112.47	172.00	-0.23	0.55	0.23	0.60	112.47	0.23	0.23
2	263	0.04	283.27	263.00	-0.34	0.82	0.35	0.89	112.80	0.48	-0.40
3	355	0.13	188.26	355.00	-0.44	0.77	0.45	0.89	119.68	0.15	0.10
4	449	0.18	279.83	449.00	-0.52	0.61	0.52	0.80	130.42	0.24	0.05
5	543	0.22	171.12	543.00	-0.67	0.49	0.68	0.83	143.79	0.35	0.04
6	636	0.18	226.25	636.00	-0.95	0.41	0.95	1.04	156.42	0.20	-0.04
7	730	0.27	209.50	730.00	-1.25	0.20	1.25	1.26	170.92	0.12	0.10
8	824	0.53	237.18	823.99	-1.67	-0.28	1.67	1.70	189.34	0.34	0.28
9	918	0.27	334.83	917.99	-1.71	-0.73	1.70	1.86	203.27	0.67	-0.28
10	1,011	0.13	170.28	1010.99	-1.61	-0.81	1.61	1.81	206.65	0.43	-0.15
11	1,105	0.31	318.48	1104.99	-1.53	-0.96	1.52	1.81	212.14	0.45	0.19
12	1,139	0.31	25.70	1138.99	-1.38	-0.98	1.37	1.69	215.48	1.01	0.00
13	1,288	0.44	351.22	1287.99	-0.45	-0.89	0.44	1.00	243.35	0.17	0.09
14	1,382	0.13	323.59	1381.99	-0.01	-1.01	0.00	1.01	269.64	0.35	-0.33
15	1,477	0.10	16.90	1476.99	0.16	-1.05	-0.17	1.06	278.63	0.11	-0.03
16	1,571	0.20	294.00	1570.99	0.30	-1.18	-0.31	1.22	284.51	0.23	0.11
17	1,664	0.22	324.69	1663.99	0.52	-1.43	-0.53	1.52	289.86	0.12	0.02
18	1,758	0.22	332.32	1757.99	0.82	-1.62	-0.84	1.82	296.98	0.03	0.00
19	1,853	0.22	294.20	1852.98	1.06	-1.87	-1.07	2.15	299.55	0.15	0.00
20	1,948	0.22	331.26	1947.98	1.29	-2.12	-1.31	2.49	301.37	0.15	0.00
21	2,042	0.09	304.19	2041.98	1.49	-2.27	-1.51	2.72	303.34	0.16	-0.14
22	2,136	0.31	357.04	2135.98	1.79	-2.35	-1.81	2.95	307.35	0.28	0.23
23	2,231	0.44	17.72	2230.98	2.39	-2.25	-2.41	3.28	316.80	0.20	0.14
24	2,326	0.62	6.88	2325.98	3.25	-2.08	-3.27	3.86	327.45	0.22	0.19
25	2,421	0.80	30.99	2420.97	4.33	-1.67	-4.34	4.64	338.89	0.36	0.19
26	2,515	0.88	37.51	2514.96	5.47	-0.89	-5.47	5.54	350.70	0.13	0.09
27	2,609	0.70	51.26	2608.95	6.40	-0.01	-6.40	6.40	359.93	0.28	-0.19
28	2,704	0.79	53.81	2703.94	7.15	0.97	-7.14	7.21	7.76	0.10	0.09
29	2,798	1.10	52.85	2797.93	8.08	2.22	-8.06	8.37	15.35	0.33	0.33
30	2,893	1.01	41.95	2892.91	9.25	3.50	-9.22	9.89	20.74	0.23	-0.09
31	2,987	1.32	55.57	2986.89	10.48	4.95	-10.44	11.59	25.29	0.44	0.33
32	3,082	1.71	55.57	3081.86	11.90	7.02	-11.85	13.81	30.55	0.41	0.41
33	3,177	1.80	60.76	3176.82	13.43	9.49	-13.36	16.44	35.26	0.19	0.09

Company:	Kaiser-Francis Oil Company		
Well Name:	Bell Lake Unit North #101H		
Location:	Lea County, NM		
Rig:	Cactus #171	Magnetic Declination:	6.44
Job Number:	MSMO-56379		
API #:	30-025-45079		
Vertical Section Azimuth:	179.58	Proposed Direction:	179.58
Survey Calculation Method:	Minimum Curvature		

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	18,820	92.1	177.9	10807.46	-8364.55	540.35	8368.29				
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
34	3,272	2.12	58.97	3271.76	15.06	12.30	-14.97	19.45	39.24	0.34	0.34
35	3,366	1.98	56.01	3365.70	16.87	15.14	-16.75	22.66	41.91	0.19	-0.15
36	3,461	1.80	60.68	3460.65	18.51	17.80	-18.38	25.68	43.87	0.25	-0.19
37	3,556	1.41	52.32	3555.61	19.96	20.02	-19.81	28.27	45.09	0.48	-0.41
38	3,650	0.70	49.51	3649.60	21.04	21.38	-20.88	29.99	45.45	0.76	-0.76
39	3,745	0.62	249.11	3744.59	21.23	21.34	-21.08	30.10	45.14	1.37	-0.08
40	3,840	0.70	226.61	3839.59	20.65	20.43	-20.50	29.05	44.70	0.28	0.08
41	3,934	0.79	225.61	3933.58	19.80	19.55	-19.66	27.83	44.64	0.10	0.10
42	4,029	1.32	217.20	4028.56	18.47	18.42	-18.34	26.09	44.93	0.58	0.56
43	4,123	1.19	215.88	4122.54	16.82	17.20	-16.69	24.06	45.64	0.14	-0.14
44	4,217	1.01	229.59	4216.52	15.49	16.00	-15.37	22.27	45.92	0.34	-0.19
45	4,312	1.41	227.66	4311.50	14.16	14.49	-14.05	20.26	45.66	0.42	0.42
46	4,406	1.71	231.00	4405.47	12.50	12.55	-12.41	17.71	45.11	0.33	0.32
47	4,595	3.12	233.90	4594.29	7.69	6.20	-7.65	9.88	38.87	0.75	0.75
48	4,689	3.38	232.41	4688.14	4.50	1.94	-4.48	4.90	23.32	0.29	0.28
49	4,784	3.12	232.85	4782.99	1.23	-2.34	-1.24	2.64	297.67	0.27	-0.27
50	4,879	2.90	236.45	4877.86	-1.66	-6.40	1.61	6.62	255.45	0.31	-0.23
51	4,974	2.81	232.41	4972.74	-4.41	-10.25	4.34	11.16	246.72	0.23	-0.09
52	5,068	2.51	230.12	5066.64	-7.14	-13.66	7.04	15.41	242.41	0.34	-0.32
53	5,116	2.39	233.78	5114.60	-8.40	-15.27	8.29	17.43	241.18	0.41	-0.25
54	5,244	1.90	239.40	5242.51	-11.06	-19.25	10.92	22.20	240.13	0.42	-0.38
55	5,339	1.20	171.70	5337.48	-12.84	-20.46	12.69	24.16	237.88	1.92	-0.74
56	5,433	4.10	124.20	5431.37	-15.71	-17.54	15.58	23.55	228.16	3.62	3.09
57	5,528	6.20	111.60	5525.99	-19.51	-9.96	19.43	21.90	207.05	2.50	2.21
58	5,623	6.30	95.60	5620.43	-21.90	0.00	21.90	21.90	180.01	1.83	0.11
59	5,717	6.00	95.80	5713.89	-22.90	10.02	22.98	25.00	156.38	0.32	-0.32
60	5,812	6.00	97.10	5808.37	-24.02	19.88	24.16	31.18	140.38	0.14	0.00
61	5,906	7.30	91.40	5901.74	-24.77	30.73	25.00	39.47	128.87	1.55	1.38
62	6,001	8.90	93.30	5995.79	-25.34	44.10	25.66	50.86	119.88	1.71	1.68
63	6,095	8.80	92.00	6088.67	-26.01	58.55	26.44	64.06	113.96	0.24	-0.11
64	6,190	8.30	92.50	6182.61	-26.56	72.66	27.10	77.36	110.08	0.53	-0.53
65	6,284	9.20	90.20	6275.52	-26.89	86.95	27.52	91.01	107.18	1.03	0.96
66	6,378	9.30	89.60	6368.29	-26.86	102.06	27.61	105.54	104.74	0.15	0.11
67	6,472	9.10	88.90	6461.08	-26.66	117.09	27.52	120.09	102.83	0.24	-0.21

Company:	Kaiser-Francis Oil Company
Well Name:	Bell Lake Unit North #101H
Location:	Lea County, NM
Rig:	Cactus #171
Job Number:	MSMO-56379
API #:	30-025-45079

Magnetic Declination: 6.44 REFERENCED TO GRID NORTH

Vertical Section Azimuth:	179.58	Proposed Direction:	179.58
---------------------------	--------	---------------------	--------

Survey Calculation Method: Minimum Curvature

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	18,820	92.1	177.9	10807.46	-8364.55	540.35	8368.29

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
68	6,567	9.60	96.10	6554.82	-27.36	132.48	28.33	135.27	101.67	1.34	0.53
69	6,662	9.30	94.20	6648.54	-28.77	148.01	29.85	150.78	101.00	0.46	-0.32
70	6,756	8.70	95.20	6741.38	-29.97	162.66	31.16	165.40	100.44	0.66	-0.64
71	6,850	10.00	94.40	6834.13	-31.24	177.88	32.54	180.60	99.96	1.39	1.38
72	6,944	10.00	94.40	6926.70	-32.49	194.16	33.91	196.86	99.50	0.00	0.00
73	7,040	9.60	93.10	7021.30	-33.56	210.46	35.10	213.12	99.06	0.48	-0.42
74	7,134	9.40	93.00	7114.01	-34.39	225.95	36.04	228.56	98.65	0.21	-0.21
75	7,229	9.40	94.00	7207.73	-35.33	241.44	37.10	244.01	98.33	0.17	0.00
76	7,324	9.30	92.30	7301.47	-36.18	256.85	38.07	259.39	98.02	0.31	-0.11
77	7,419	9.10	92.10	7395.25	-36.77	272.03	38.76	274.50	97.70	0.21	-0.21
78	7,513	8.00	92.90	7488.20	-37.37	285.99	39.47	288.42	97.44	1.18	-1.17
79	7,608	8.60	93.20	7582.21	-38.10	299.68	40.30	302.10	97.25	0.63	0.63
80	7,703	8.60	93.00	7676.14	-38.87	313.87	41.17	316.27	97.06	0.03	0.00
81	7,798	8.10	92.70	7770.13	-39.56	327.65	41.96	330.03	96.88	0.53	-0.53
82	7,892	8.10	94.50	7863.19	-40.39	340.86	42.89	343.25	96.76	0.27	0.00
83	7,987	7.70	92.70	7957.29	-41.21	353.89	43.81	356.28	96.64	0.50	-0.42
84	8,081	7.60	93.00	8050.46	-41.83	366.39	44.52	368.77	96.51	0.11	-0.11
85	8,175	7.10	91.40	8143.68	-42.30	378.41	45.07	380.76	96.38	0.57	-0.53
86	8,269	6.40	88.90	8237.03	-42.34	389.45	45.20	391.75	96.21	0.81	-0.74
87	8,363	4.70	90.00	8330.59	-42.24	398.54	45.16	400.77	96.05	1.81	-1.81
88	8,458	2.80	111.80	8425.38	-43.10	404.59	46.07	406.88	96.08	2.47	-2.00
89	8,553	2.80	112.50	8520.27	-44.85	408.89	47.85	411.34	96.26	0.04	0.00
90	8,648	2.60	112.50	8615.17	-46.57	413.02	49.59	415.64	96.43	0.21	-0.21
91	8,743	2.90	108.50	8710.06	-48.15	417.29	51.21	420.06	96.58	0.37	0.32
92	8,837	2.70	107.80	8803.94	-49.59	421.65	52.67	424.56	96.71	0.22	-0.21
93	8,931	2.70	103.60	8897.84	-50.78	425.91	53.90	428.93	96.80	0.21	0.00
94	9,025	2.80	97.60	8991.73	-51.61	430.34	54.76	433.43	96.84	0.32	0.11
95	9,119	3.10	90.90	9085.61	-51.95	435.16	55.14	438.25	96.81	0.49	0.32
96	9,213	3.30	84.00	9179.46	-51.71	440.39	54.93	443.42	96.70	0.46	0.21
97	9,307	3.90	85.80	9273.28	-51.19	446.27	54.46	449.20	96.54	0.65	0.64
98	9,401	2.40	83.30	9367.13	-50.73	451.41	54.03	454.25	96.41	1.60	-1.60
99	9,496	2.40	101.70	9462.05	-50.90	455.34	54.23	458.17	96.38	0.81	0.00
100	9,591	2.80	92.20	9556.95	-51.39	459.60	54.76	462.47	96.38	0.62	0.42
101	9,685	4.40	76.30	9650.76	-50.62	465.40	54.04	468.15	96.21	1.99	1.70

V09.04.02

Company:	Kaiser-Francis Oil Company		
Well Name:	Bell Lake Unit North #101H		
Location:	Lea County, NM		
Rig:	Cactus #171	Magnetic Declination:	6.44
Job Number:	MSMO-56379		
API #:	30-025-45079		

REFERENCED TO GRID NORTH

Vertical Section Azimuth:	179.58	Proposed Direction:	179.58
---------------------------	--------	---------------------	--------

Survey Calculation Method:	Minimum Curvature
----------------------------	-------------------

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	18,820	92.1	177.9	10807.46	-8364.55	540.35	8368.29

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
102	9,780	2.80	75.10	9745.57	-49.17	471.18	52.62	473.74	95.96	1.69	-1.68
103	9,875	3.10	66.00	9840.45	-47.52	475.77	51.01	478.14	95.70	0.58	0.32
104	9,969	2.50	38.30	9934.34	-44.88	479.37	48.39	481.46	95.35	1.55	-0.64
105	10,063	1.40	61.00	10028.29	-42.72	481.64	46.24	483.53	95.07	1.41	-1.17
106	10,156	1.50	77.80	10121.26	-41.91	483.82	45.45	485.64	94.95	0.47	0.11
107	10,203	3.80	160.60	10168.21	-43.25	484.94	46.80	486.87	95.10	8.31	4.89
108	10,250	10.10	179.70	10214.85	-48.84	485.48	52.40	487.93	95.75	14.10	13.40
109	10,297	14.12	188.30	10260.80	-58.64	484.68	62.19	488.21	96.90	9.35	8.55
110	10,345	19.30	192.50	10306.76	-72.19	482.11	75.72	487.49	98.52	11.07	10.79
111	10,392	22.50	193.70	10350.66	-88.51	478.30	92.02	486.42	100.48	6.87	6.81
112	10,439	26.40	188.60	10393.44	-107.59	474.61	111.07	486.65	102.77	9.43	8.30
113	10,486	32.30	188.00	10434.39	-130.38	471.29	133.83	489.00	105.46	12.57	12.55
114	10,533	39.60	186.60	10472.41	-157.73	467.82	161.16	493.69	108.63	15.63	15.53
115	10,580	44.50	184.70	10507.31	-189.05	464.75	192.45	501.73	112.14	10.77	10.43
116	10,628	49.40	184.00	10540.06	-224.01	462.10	227.39	513.53	115.86	10.26	10.21
117	10,675	54.60	183.40	10568.99	-260.96	459.71	264.32	528.62	119.58	11.11	11.06
118	10,722	58.80	183.40	10594.79	-300.16	457.38	303.51	547.08	123.28	8.94	8.94
119	10,768	62.30	181.70	10617.40	-340.17	455.61	343.50	568.59	126.75	8.26	7.61
120	10,816	63.90	179.60	10639.12	-382.97	455.13	386.30	594.82	130.08	5.13	3.33
121	10,852	64.80	179.30	10654.70	-415.42	455.44	418.75	616.45	132.37	2.61	2.50
122	10,900	68.10	178.90	10673.88	-459.41	456.14	462.74	647.40	135.21	6.92	6.87
123	10,947	70.50	178.50	10690.49	-503.36	457.14	506.70	679.96	137.76	5.17	5.11
124	10,994	74.50	177.30	10704.62	-548.15	458.78	551.50	714.81	140.07	8.85	8.51
125	11,041	78.00	175.60	10715.79	-593.70	461.61	597.07	752.05	142.13	8.23	7.45
126	11,088	80.60	174.60	10724.52	-639.71	465.56	643.11	791.19	143.95	5.91	5.53
127	11,135	82.10	174.60	10731.59	-685.97	469.93	689.40	831.50	145.59	3.19	3.19
128	11,182	83.80	174.00	10737.35	-732.38	474.57	735.84	872.70	147.06	3.83	3.62
129	11,229	85.30	174.60	10741.82	-778.94	479.21	782.43	914.54	148.40	3.44	3.19
130	11,276	86.80	175.30	10745.06	-825.64	483.34	829.16	956.72	149.65	3.52	3.19
131	11,323	87.20	175.30	10747.52	-872.42	487.19	875.97	999.23	150.82	0.85	0.85
132	11,418	90.10	176.00	10749.75	-967.11	494.39	970.71	1086.15	152.92	3.14	3.05
133	11,512	90.80	176.70	10749.02	-1060.92	500.37	1064.56	1172.99	154.75	1.05	0.74
134	11,607	90.20	178.60	10748.19	-1155.83	504.27	1159.49	1261.04	156.43	2.10	-0.63
135	11,701	89.70	179.90	10748.27	-1249.82	505.50	1253.49	1348.17	157.98	1.48	-0.53

V09.04.02

Company:	Kaiser-Francis Oil Company
Well Name:	Bell Lake Unit North #101H
Location:	Lea County, NM
Rlg:	Cactus #171
Job Number:	MSMO-56379
API #:	30-025-45079

Magnetic Declination: 6.44 REFERENCED TO GRID NORTH

Vertical Section Azimuth:	179.58	Proposed Direction:	179.58
---------------------------	--------	---------------------	--------

Survey Calculation Method: Minimum Curvature

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	18,820	92.1	177.9	10807.46	-8364.55	540.35	8368.29

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm	DLS/ 100	BUR/ 100'
136	11,796	90.30	180.00	10748.27	-1344.82	505.58	1348.49	1436.71 159.40	0.64	0.63
137	11,891	90.60	179.10	10747.52	-1439.81	506.33	1443.48	1526.24 160.63	1.00	0.32
138	11,985	89.60	180.50	10747.36	-1533.81	506.65	1537.48	1615.32 161.72	1.83	-1.06
139	12,079	91.00	180.40	10746.87	-1627.80	505.92	1631.46	1704.61 162.73	1.49	1.49
140	12,174	89.40	180.00	10746.53	-1722.79	505.58	1726.45	1795.45 163.64	1.74	-1.68
141	12,268	89.50	179.20	10747.44	-1816.79	506.24	1820.45	1886.00 164.43	0.86	0.11
142	12,362	90.50	179.20	10747.44	-1910.78	507.55	1914.45	1977.04 165.12	1.06	1.06
143	12,457	89.50	179.70	10747.44	-2005.77	508.46	2009.44	2069.22 165.78	1.18	-1.05
144	12,552	88.40	179.60	10749.18	-2100.75	509.04	2104.43	2161.55 166.38	1.16	-1.16
145	12,646	87.80	180.60	10752.29	-2194.70	508.88	2198.37	2252.92 166.95	1.24	-0.64
146	12,741	87.50	179.10	10756.19	-2289.61	509.13	2293.29	2345.54 167.46	1.61	-0.32
147	12,835	88.40	178.80	10759.55	-2383.54	510.85	2387.22	2437.67 167.90	1.01	0.96
148	12,930	90.20	180.00	10760.71	-2478.52	511.85	2482.21	2530.82 168.33	2.28	1.89
149	13,024	88.80	179.60	10761.53	-2572.51	512.17	2576.20	2623.00 168.74	1.55	-1.49
150	13,118	86.70	179.50	10765.22	-2666.43	512.91	2670.12	2715.32 169.11	2.24	-2.23
151	13,213	86.40	180.10	10770.94	-2761.26	513.24	2764.95	2808.55 169.47	0.71	-0.32
152	13,308	86.50	179.70	10776.82	-2856.08	513.41	2859.76	2901.85 169.81	0.43	0.11
153	13,403	86.40	179.90	10782.70	-2950.89	513.74	2954.58	2995.28 170.12	0.24	-0.11
154	13,498	86.50	180.10	10788.59	-3045.71	513.74	3049.40	3088.74 170.43	0.24	0.11
155	13,592	86.10	180.20	10794.65	-3139.52	513.49	3143.19	3181.23 170.71	0.44	-0.43
156	13,686	88.10	181.00	10799.41	-3233.38	512.51	3237.05	3273.75 170.99	2.29	2.13
157	13,781	89.10	181.10	10801.73	-3328.34	510.77	3331.99	3367.30 171.28	1.06	1.05
158	13,876	90.40	180.30	10802.14	-3423.33	509.61	3426.97	3461.05 171.53	1.61	1.37
159	13,971	89.30	180.40	10802.39	-3518.32	509.03	3521.96	3554.96 171.77	1.16	-1.16
160	14,066	88.10	180.30	10804.55	-3613.30	508.45	3616.93	3648.89 171.99	1.27	-1.26
161	14,160	87.00	179.70	10808.57	-3707.21	508.45	3710.84	3741.91 172.19	1.33	-1.17
162	14,255	87.10	179.20	10813.46	-3802.08	509.36	3805.71	3836.04 172.37	0.54	0.11
163	14,349	87.60	179.00	10817.80	-3895.97	510.83	3899.61	3929.31 172.53	0.57	0.53
164	14,443	87.00	178.30	10822.23	-3989.83	513.05	3993.49	4022.68 172.67	0.98	-0.64
165	14,537	86.70	178.40	10827.39	-4083.65	515.75	4087.32	4116.09 172.80	0.34	-0.32
166	14,632	85.30	179.10	10834.02	-4178.40	517.82	4182.08	4210.36 172.94	1.65	-1.47
167	14,726	87.30	179.60	10840.09	-4272.19	518.88	4275.88	4303.58 173.08	2.19	2.13
168	14,820	89.40	180.60	10842.79	-4366.14	518.72	4369.83	4396.85 173.22	2.47	2.23
169	14,914	91.40	180.10	10842.14	-4460.13	518.14	4463.81	4490.13 173.37	2.19	2.13

Company:		Kaiser-Francis Oil Company												
Well Name:		Bell Lake Unit North #101H												
Location:		Lea County, NM												
Rig:		Cactus #171					Magnetic Declination:		6.44		REFERENCED TO GRID NORTH			
Job Number:		MSMO-56379												
API #:		30-025-45079												
Vertical Section Azimuth:					179.58			Proposed Direction:		179.58				
Survey Calculation Method:					Minimum Curvature									
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	18,820		92.1		177.9		10807.46		-8364.55		540.35		8368.29	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm		DLS/ 100	BUR/ 100'			
170	15,009	92.30	179.90	10839.07	-4555.08	518.14	4558.76	4584.46	173.51	0.97	0.95			
171	15,104	90.40	180.00	10836.83	-4650.05	518.22	4653.73	4678.84	173.64	2.00	-2.00			
172	15,199	89.00	180.00	10837.33	-4745.05	518.22	4748.72	4773.26	173.77	1.47	-1.47			
173	15,294	91.40	181.10	10837.00	-4840.04	517.31	4843.70	4867.60	173.90	2.78	2.53			
174	15,388	91.90	180.00	10834.29	-4933.99	516.41	4937.64	4960.94	174.02	1.28	0.53			
175	15,483	90.20	179.60	10832.55	-5028.97	516.74	5032.62	5055.45	174.13	1.84	-1.79			
176	15,577	90.50	179.30	10831.98	-5122.96	517.64	5126.62	5149.05	174.23	0.45	0.32			
177	15,671	91.70	180.10	10830.17	-5216.94	518.14	5220.60	5242.61	174.33	1.53	1.28			
178	15,766	90.90	180.10	10828.02	-5311.92	517.97	5315.57	5337.11	174.43	0.84	-0.84			
179	15,860	90.40	180.30	10826.95	-5405.91	517.64	5409.56	5430.64	174.53	0.57	-0.53			
180	15,954	91.60	180.00	10825.31	-5499.89	517.40	5503.54	5524.18	174.63	1.32	1.28			
181	16,048	89.90	180.00	10824.08	-5593.88	517.40	5597.53	5617.76	174.72	1.81	-1.81			
182	16,143	91.20	181.00	10823.17	-5688.87	516.57	5692.51	5712.28	174.81	1.73	1.37			
183	16,238	90.30	180.40	10821.92	-5783.85	515.41	5787.48	5806.77	174.91	1.14	-0.95			
184	16,332	90.00	179.30	10821.68	-5877.85	515.65	5881.47	5900.43	174.99	1.21	-0.32			
185	16,426	89.90	178.50	10821.76	-5971.83	517.46	5975.47	5994.21	175.05	0.86	-0.11			
186	16,520	90.50	177.60	10821.43	-6065.78	520.66	6069.43	6088.08	175.09	1.15	0.64			
187	16,615	90.20	179.50	10820.85	-6160.74	523.06	6164.41	6182.91	175.15	2.02	-0.32			
188	16,709	91.90	179.50	10819.13	-6254.72	523.88	6258.39	6276.62	175.21	1.81	1.81			
189	16,803	89.90	180.60	10817.65	-6348.70	523.80	6352.37	6370.27	175.28	2.43	-2.13			
190	16,898	89.40	180.10	10818.23	-6443.70	523.22	6447.36	6464.90	175.36	0.74	-0.53			
191	16,993	90.10	180.80	10818.65	-6538.69	522.47	6542.35	6559.53	175.43	1.04	0.74			
192	17,087	91.80	181.70	10817.09	-6632.65	520.42	6636.29	6653.04	175.51	2.05	1.81			
193	17,182	90.40	182.80	10815.27	-6727.56	516.69	6731.16	6747.37	175.61	1.87	-1.47			
194	17,277	90.20	183.70	10814.77	-6822.40	511.31	6825.97	6841.54	175.71	0.97	-0.21			
195	17,371	90.20	182.10	10814.44	-6916.28	506.55	6919.81	6934.80	175.81	1.70	0.00			
196	17,465	90.00	178.90	10814.28	-7010.26	505.73	7013.78	7028.48	175.87	3.41	-0.21			
197	17,560	90.00	178.10	10814.28	-7105.23	508.22	7108.76	7123.38	175.91	0.84	0.00			
198	17,654	91.20	178.00	10813.29	-7199.17	511.42	7202.72	7217.31	175.94	1.28	1.28			
199	17,748	90.80	178.90	10811.65	-7293.12	513.96	7296.69	7311.21	175.97	1.05	-0.43			
200	17,843	89.20	179.00	10811.65	-7388.10	515.70	7391.68	7406.08	176.01	1.69	-1.68			
201	17,937	88.70	178.70	10813.37	-7482.06	517.58	7485.66	7499.94	176.04	0.62	-0.53			
202	18,032	89.10	179.50	10815.20	-7577.03	519.08	7580.63	7594.79	176.08	0.94	0.42			
203	18,127	89.30	179.20	10816.52	-7672.02	520.15	7675.62	7689.63	176.12	0.38	0.21			

V09.04.02

Company:	Kaiser-Francis Oil Company		
Well Name:	Bell Lake Unit North #101H		
Location:	Lea County, NM		
Rig:	Cactus #171	Magnetic Declination:	6.44
Job Number:	MSMO-56379		REFERENCED TO GRID NORTH
API #:	30-025-45079		

Vertical Section Azimuth:	179.58	Proposed Direction:	179.58
---------------------------	--------	---------------------	--------

Survey Calculation Method:	Minimum Curvature
----------------------------	-------------------

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	18,820	92.1	177.9	10807.46	-8364.55	540.35	8368.29

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
204	18,222	89.70	178.60	10817.35	-7767.00	521.98	7770.61	7784.52	176.16	0.76	0.42
205	18,316	89.90	177.70	10817.68	-7860.95	525.01	7864.58	7878.46	176.18	0.98	0.21
206	18,411	90.00	178.10	10817.76	-7955.88	528.49	7959.54	7973.42	176.20	0.43	0.11
207	18,505	91.20	178.90	10816.78	-8049.84	530.95	8053.52	8067.33	176.23	1.53	1.28
208	18,599	91.70	178.70	10814.40	-8143.79	532.92	8147.48	8161.21	176.26	0.57	0.53
209	18,694	91.50	177.90	10811.75	-8238.71	535.74	8242.42	8256.11	176.28	0.87	-0.21
210	18,757	92.10	177.90	10809.77	-8301.64	538.05	8305.36	8319.06	176.29	0.95	0.95
PTB:	18,820	92.10	177.90	10807.46	-8364.55	540.35	8368.29	8381.99	176.30	0.00	0.00