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MS Directional Survey Data Certification

HOBBS OCD

APR 25 2019

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MS Directional Job Number: MSMO-57186
Survey Type: MWD
Operating Company: Kaiser-Francis Oil Company
Well Name & Number: ~~Wolf Lake Unit North #20214~~
Location: Lea County, NM
API Number: 30-025-45153
Tie In Depth: Surface
Surveyed Depths: 147' – 19,049' MD
Projected TD Survey: 19,115' MD
Dates Performed: 10/20/2018 – 11/02/2018

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:

MWD Surveyor Name:

Dereck Scott

Date:

12-04-2018

Email:

dscott@msdir.com

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Company:		Kaiser-Francis Oil Company										
Well Name:		Bell Lake Unit North #202H										
Location:		Lea County, NM										
Rig:		Cactus #171					Magnetic Declination:		6.43		REFERENCED TO GRID NORTH	
Job Number:		MSMO-57186										
API #:		30-025-45153										
Vertical Section Azimuth:			179.65			Proposed Direction:		179.65				
Survey Calculation Method:			Minimum Curvature									
PTB:	MD		INC		AZM	TVD	N/S	E/W	VS			
	19,115		87.7		177	11077.28	-8380.12	1000.23	8386.07			
#	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	147	0.20	208.50	147.00	-0.23	-0.12	0.22	0.26	208.50	0.14	0.14	
2	239	0.60	218.10	239.00	-0.75	-0.50	0.74	0.90	213.65	0.44	0.43	
3	330	0.70	255.30	329.99	-1.26	-1.33	1.25	1.83	226.47	0.47	0.11	
4	430	0.80	260.30	429.98	-1.53	-2.61	1.52	3.02	239.52	0.12	0.10	
5	524	0.80	253.40	523.97	-1.83	-3.88	1.81	4.29	244.74	0.10	0.00	
6	618	1.20	243.60	617.96	-2.46	-5.39	2.42	5.93	245.50	0.46	0.43	
7	713	1.00	264.60	712.94	-2.98	-7.11	2.93	7.71	247.27	0.47	-0.21	
8	806	1.20	249.10	805.93	-3.40	-8.83	3.35	9.46	248.93	0.38	0.22	
9	900	0.70	272.80	899.91	-3.72	-10.32	3.66	10.97	250.16	0.67	-0.53	
10	995	0.70	302.30	994.91	-3.39	-11.39	3.32	11.88	253.44	0.38	0.00	
11	1,089	0.50	302.20	1088.90	-2.86	-12.22	2.79	12.55	256.83	0.21	-0.21	
12	1,275	1.00	326.50	1274.88	-1.07	-13.81	0.99	13.85	265.55	0.31	0.27	
13	1,369	0.90	323.50	1368.87	0.20	-14.70	-0.29	14.70	270.79	0.12	-0.11	
14	1,463	0.60	337.30	1462.86	1.25	-15.33	-1.34	15.38	274.66	0.37	-0.32	
15	1,556	0.60	312.00	1555.86	2.03	-15.88	-2.12	16.00	277.27	0.28	0.00	
16	1,650	0.30	337.30	1649.86	2.58	-16.34	-2.68	16.54	278.98	0.38	-0.32	
17	1,743	0.50	306.00	1742.85	3.04	-16.76	-3.15	17.03	280.30	0.31	0.22	
18	1,838	1.30	85.20	1837.85	3.38	-16.02	-3.48	16.37	281.91	1.80	0.84	
19	1,933	1.80	87.10	1932.81	3.54	-13.46	-3.63	13.92	284.76	0.53	0.53	
20	2,027	1.60	94.90	2026.77	3.51	-10.67	-3.57	11.24	288.19	0.32	-0.21	
21	2,122	1.70	85.20	2121.73	3.51	-7.95	-3.56	8.69	293.83	0.31	0.11	
22	2,217	1.70	84.70	2216.69	3.76	-5.14	-3.79	6.37	306.17	0.02	0.00	
23	2,311	2.10	76.80	2310.64	4.28	-2.08	-4.29	4.76	334.13	0.51	0.43	
24	2,406	1.80	67.00	2405.58	5.26	0.99	-5.26	5.35	10.67	0.47	-0.32	
25	2,500	2.10	62.40	2499.53	6.64	3.88	-6.61	7.69	30.29	0.36	0.32	
26	2,595	2.20	60.30	2594.46	8.35	7.00	-8.30	10.90	40.00	0.13	0.11	
27	2,689	2.20	57.80	2688.39	10.20	10.10	-10.14	14.35	44.70	0.10	0.00	
28	2,784	2.20	62.20	2783.32	12.02	13.25	-11.94	17.89	47.78	0.18	0.00	
29	2,878	2.10	87.00	2877.26	12.96	16.57	-12.85	21.03	51.98	0.99	-0.11	
30	2,973	2.70	85.70	2972.17	13.21	20.54	-13.09	24.42	57.24	0.63	0.63	
31	3,067	2.90	80.30	3066.06	13.78	25.09	-13.63	28.63	61.22	0.35	0.21	
32	3,162	3.40	73.30	3160.92	15.00	30.16	-14.81	33.68	63.56	0.66	0.53	
33	3,257	3.60	76.50	3255.74	16.50	35.76	-16.28	39.38	65.23	0.29	0.21	



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Company:		Kaiser-Francis Oil Company									
Well Name:		Bell Lake Unit North #202H									
Location:		Lea County, NM									
Rig:		Cactus #171					Magnetic Declination:	6.43	REFERENCED TO GRID NORTH		
Job Number:		MSMO-57186									
API #:		30-025-45153									
Vertical Section Azimuth:			179.65		Proposed Direction:			179.65			
Survey Calculation Method:			Minimum Curvature								
PTB:	MD	INC		AZM	TVD	N/S	E/W		VS		
	19,115	87.7		177	11077.28	-8380.12	1000.23		8386.07		
#	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	6,662	12.10	92.90	6645.68	-21.16	266.71	22.79	267.55	94.54	0.31	-0.21
69	6,757	11.50	91.70	6738.67	-21.95	286.12	23.69	286.96	94.39	0.68	-0.63
70	6,851	10.70	91.40	6830.91	-22.44	304.21	24.30	305.04	94.22	0.85	-0.85
71	6,945	10.30	91.60	6923.34	-22.89	321.33	24.85	322.15	94.07	0.43	-0.43
72	7,040	10.20	91.30	7016.82	-23.31	338.23	25.38	339.04	93.94	0.12	-0.11
73	7,135	11.50	94.50	7110.12	-24.25	356.09	26.42	356.91	93.90	1.51	1.37
74	7,230	11.50	96.30	7203.22	-26.03	374.94	28.32	375.84	93.97	0.38	0.00
75	7,324	11.40	95.60	7295.34	-27.96	393.50	30.37	394.49	94.06	0.18	-0.11
76	7,420	11.20	96.20	7389.48	-29.90	412.21	32.41	413.29	94.15	0.24	-0.21
77	7,514	10.00	94.30	7481.88	-31.49	429.42	34.12	430.58	94.19	1.33	-1.28
78	7,609	9.60	100.40	7575.49	-33.54	445.44	36.26	446.70	94.31	1.17	-0.42
79	7,704	11.60	99.40	7668.87	-36.53	462.66	39.36	464.10	94.51	2.11	2.11
80	7,799	10.90	97.50	7762.04	-39.27	480.99	42.20	482.59	94.67	0.83	-0.74
81	7,893	10.50	98.50	7854.41	-41.69	498.27	44.74	500.01	94.78	0.47	-0.43
82	7,987	11.20	94.10	7946.73	-43.61	515.84	46.76	517.69	94.83	1.15	0.74
83	8,082	10.70	92.70	8040.00	-44.69	533.86	47.95	535.72	94.78	0.60	-0.53
84	8,176	12.20	91.10	8132.13	-45.29	552.51	48.66	554.36	94.69	1.63	1.60
85	8,270	11.40	89.80	8224.14	-45.45	571.73	48.94	573.53	94.54	0.90	-0.85
86	8,364	10.60	88.60	8316.41	-45.20	589.66	48.80	591.39	94.38	0.89	-0.85
87	8,459	12.40	93.20	8409.50	-45.56	608.58	49.28	610.28	94.28	2.13	1.89
88	8,554	11.50	94.40	8502.44	-46.85	628.21	50.69	629.95	94.27	0.98	-0.95
89	8,649	10.90	94.10	8595.63	-48.22	646.61	52.17	648.40	94.27	0.63	-0.63
90	8,744	11.40	93.20	8688.84	-49.39	664.94	53.45	666.77	94.25	0.56	0.53
91	8,838	9.80	92.90	8781.23	-50.31	682.21	54.48	684.06	94.22	1.70	-1.70
92	8,932	11.70	92.70	8873.58	-51.17	699.72	55.44	701.59	94.18	2.02	2.02
93	9,026	10.00	91.80	8965.89	-51.87	717.40	56.25	719.27	94.14	1.82	-1.81
94	9,120	10.40	90.70	9058.41	-52.23	734.04	56.71	735.90	94.07	0.47	0.43
95	9,214	12.10	90.30	9150.60	-52.39	752.38	56.98	754.20	93.98	1.81	1.81
96	9,308	10.60	91.50	9242.76	-52.67	770.87	57.37	772.67	93.91	1.62	-1.60
97	9,402	9.20	86.80	9335.36	-52.47	787.02	57.28	788.77	93.81	1.72	-1.49
98	9,497	8.20	85.40	9429.26	-51.50	801.35	56.40	803.01	93.68	1.08	-1.05
99	9,591	6.90	82.30	9522.45	-50.21	813.63	55.18	815.18	93.53	1.45	-1.38
100	9,686	7.40	76.00	9616.71	-47.97	825.22	53.01	826.62	93.33	0.98	0.53
101	9,781	6.80	77.10	9710.98	-45.23	836.64	50.34	837.86	93.09	0.65	-0.63

Company:	Kaiser-Francis Oil Company
Well Name:	Bell Lake Unit North #202H
Location:	Lea County, NM
Rig:	Cactus #171
Job Number:	MSMO-57186
API #:	30-025-45153

Magnetic Declination: 6.43 REFERENCED TO GRID NORTH

Vertical Section Azimuth:	179.65	Proposed Direction:	179.65
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Survey Calculation Method: Minimum Curvature

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	19,115	87.7	177	11077.28	-8380.12	1000.23	8386.07

#	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	9,875	6.50	76.20	9804.35	-42.72	847.23	47.89	848.31	92.89	0.34	-0.32
103	9,969	5.70	73.80	9897.82	-40.15	856.88	45.38	857.82	92.68	0.89	-0.85
104	10,064	5.30	72.70	9992.38	-37.53	865.60	42.81	866.42	92.48	0.44	-0.42
105	10,159	5.10	77.00	10086.99	-35.27	873.91	40.61	874.62	92.31	0.46	-0.21
106	10,253	4.10	83.80	10180.68	-33.97	881.32	39.35	881.97	92.21	1.21	-1.06
107	10,345	3.90	84.10	10272.46	-33.29	887.70	38.71	888.32	92.15	0.22	-0.22
108	10,392	6.20	128.60	10319.29	-34.71	891.28	40.16	891.95	92.23	9.31	4.89
109	10,440	9.80	142.80	10366.82	-39.58	895.77	45.06	896.65	92.53	8.50	7.50
110	10,487	13.00	140.50	10412.89	-46.85	901.56	52.36	902.77	92.97	6.88	6.81
111	10,534	17.80	144.10	10458.19	-56.76	909.13	62.31	910.90	93.57	10.41	10.21
112	10,581	20.30	149.70	10502.61	-69.62	917.46	75.22	920.10	94.34	6.58	5.32
113	10,629	23.20	159.10	10547.21	-85.65	925.04	91.30	929.00	95.29	9.43	6.04
114	10,676	27.10	163.80	10589.75	-104.59	931.33	110.27	937.19	96.41	9.32	8.30
115	10,723	31.00	170.10	10630.84	-126.80	936.40	132.52	944.95	97.71	10.54	8.30
116	10,770	34.90	177.10	10670.28	-152.17	939.17	157.91	951.42	99.20	11.59	8.30
117	10,816	36.00	180.50	10707.76	-178.84	939.71	184.57	956.58	100.78	4.91	2.39
118	10,863	39.80	181.60	10744.84	-207.70	939.17	213.43	961.87	102.47	8.21	8.09
119	10,911	42.80	185.70	10780.90	-239.29	937.12	245.01	967.19	104.32	8.41	6.25
120	10,958	48.00	187.90	10813.89	-272.50	933.14	278.20	972.11	106.28	11.55	11.06
121	11,005	51.80	189.90	10844.16	-308.01	927.56	313.67	977.36	108.37	8.72	8.09
122	11,052	55.80	189.20	10871.92	-345.40	921.27	351.03	983.89	110.55	8.59	8.51
123	11,098	60.40	186.70	10896.22	-384.07	915.89	389.66	993.16	112.75	11.01	10.00
124	11,192	72.50	185.00	10933.71	-469.63	907.19	475.17	1021.54	117.37	12.98	12.87
125	11,240	79.10	185.90	10945.48	-515.93	902.76	521.44	1039.79	119.75	13.87	13.75
126	11,286	85.60	184.60	10951.60	-561.31	898.60	566.78	1059.50	121.99	14.41	14.13
127	11,336	92.50	180.90	10952.43	-611.20	896.20	616.67	1084.78	124.29	15.66	13.80
128	11,384	92.50	181.00	10950.34	-659.15	895.41	664.61	1111.86	126.36	0.21	0.00
129	11,478	92.20	181.00	10946.48	-753.06	893.77	758.50	1168.72	130.12	0.32	-0.32
130	11,525	92.20	181.50	10944.68	-800.01	892.75	805.45	1198.75	131.86	1.06	0.00
131	11,573	92.20	182.60	10942.83	-847.94	891.03	853.37	1230.02	133.58	2.29	0.00
132	11,667	93.30	180.90	10938.32	-941.79	888.16	947.19	1294.52	136.68	2.15	1.17
133	11,762	93.20	180.10	10932.94	-1036.63	887.33	1042.03	1364.54	139.44	0.85	-0.11
134	11,857	93.30	179.30	10927.55	-1131.47	887.83	1136.88	1438.22	141.88	0.85	0.11
135	11,951	93.90	179.70	10921.65	-1225.28	888.65	1230.69	1513.61	144.05	0.77	0.64

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API #:		30-025-45153										
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	19,115	87.7	177	11077.28	-8380.12	1000.23	8386.07					
#	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	12,045	92.60	178.90	10916.32	-1319.12	889.80	1324.53	1591.17	146.00	1.62	-1.38	
137	12,140	92.90	179.00	10911.76	-1414.00	891.53	1419.42	1671.59	147.77	0.33	0.32	
138	12,234	91.10	177.80	10908.48	-1507.90	894.16	1513.33	1753.08	149.33	2.30	-1.91	
139	12,328	91.20	177.40	10906.60	-1601.80	898.09	1607.25	1836.39	150.72	0.44	0.11	
140	12,423	89.30	177.60	10906.18	-1696.70	902.24	1702.18	1921.67	152.00	2.01	-2.00	
141	12,518	86.00	177.60	10910.08	-1791.53	906.21	1797.03	2007.68	153.17	3.47	-3.47	
142	12,612	86.60	178.00	10916.14	-1885.26	909.81	1890.78	2093.31	154.24	0.77	0.64	
143	12,707	85.40	178.80	10922.77	-1979.99	912.46	1985.53	2180.12	155.26	1.52	-1.26	
144	12,801	85.80	179.00	10929.98	-2073.69	914.26	2079.24	2266.29	156.21	0.48	0.43	
145	12,896	89.40	178.10	10933.96	-2168.56	916.66	2174.12	2354.34	157.09	3.91	3.79	
146	12,990	90.80	178.00	10933.79	-2262.51	919.86	2268.08	2442.35	157.87	1.49	1.49	
147	13,084	89.80	178.90	10933.30	-2356.47	922.40	2362.06	2530.57	158.62	1.43	-1.06	
148	13,179	89.90	179.20	10933.55	-2451.46	923.98	2457.05	2619.80	159.35	0.33	0.11	
149	13,274	90.60	178.70	10933.14	-2546.44	925.72	2552.05	2709.48	160.02	0.91	0.74	
150	13,369	88.40	178.10	10933.96	-2641.39	928.37	2647.01	2799.79	160.63	2.40	-2.32	
151	13,464	88.10	177.80	10936.87	-2736.29	931.77	2741.93	2890.58	161.20	0.45	-0.32	
152	13,558	88.00	176.80	10940.06	-2830.13	936.19	2835.79	2980.95	161.70	1.07	-0.11	
153	13,652	88.10	175.60	10943.26	-2923.86	942.42	2929.57	3071.99	162.13	1.28	0.11	
154	13,747	87.20	176.80	10947.16	-3018.57	948.71	3024.31	3164.15	162.55	1.58	-0.95	
155	13,842	86.80	176.70	10952.13	-3113.29	954.09	3119.06	3256.20	162.96	0.43	-0.42	
156	13,937	84.80	177.30	10959.09	-3207.90	959.05	3213.70	3348.19	163.36	2.20	-2.11	
157	14,032	84.70	177.40	10967.78	-3302.40	963.42	3308.22	3440.06	163.74	0.15	-0.11	
158	14,126	85.30	177.00	10975.97	-3395.93	967.99	3401.78	3531.20	164.09	0.77	0.64	
159	14,221	85.90	178.10	10983.26	-3490.56	972.04	3496.43	3623.38	164.44	1.32	0.63	
160	14,315	86.90	179.50	10989.16	-3584.35	974.01	3590.23	3714.33	164.80	1.83	1.06	
161	14,409	86.90	178.90	10994.25	-3678.20	975.32	3684.09	3805.32	165.15	0.64	0.00	
162	14,503	86.90	180.70	10999.33	-3772.06	975.65	3777.95	3896.19	165.50	1.91	0.00	
163	14,598	86.60	181.20	11004.72	-3866.90	974.07	3872.77	3987.69	165.86	0.61	-0.32	
164	14,692	86.20	180.40	11010.62	-3960.70	972.76	3966.57	4078.41	166.20	0.95	-0.43	
165	14,786	85.60	179.60	11017.34	-4054.46	972.76	4060.32	4169.52	166.51	1.06	-0.64	
166	14,880	85.40	179.40	11024.72	-4148.16	973.58	4154.03	4260.88	166.79	0.30	-0.21	
167	14,975	85.00	178.30	11032.67	-4242.81	975.48	4248.69	4353.50	167.05	1.23	-0.42	
168	15,070	85.40	178.50	11040.61	-4337.44	978.12	4343.33	4446.36	167.29	0.47	0.42	
169	15,165	87.50	179.40	11046.50	-4432.24	979.86	4438.14	4539.26	167.53	2.40	2.21	

Company:	Kaiser-Francis Oil Company
Well Name:	Bell Lake Unit North #202H
Location:	Lea County, NM
Rig:	Cactus #171
Job Number:	MSMO-57186
API #:	30-025-45153

Magnetic Declination: 6.43 REFERENCED TO GRID NORTH

Vertical Section Azimuth:	179.65	Proposed Direction:	179.65
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Survey Calculation Method: Minimum Curvature

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	19,115	87.7	177	11077.28	-8380.12	1000.23	8386.07				
#	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	15,260	87.40	178.70	11050.72	-4527.13	981.43	4533.04	4632.29	167.77	0.74	-0.11
171	15,354	87.20	179.90	11055.15	-4621.01	982.58	4626.93	4724.32	168.00	1.29	-0.21
172	15,449	87.40	179.70	11059.63	-4715.91	982.91	4721.83	4817.25	168.23	0.30	0.21
173	15,543	88.70	180.80	11062.83	-4809.85	982.50	4815.76	4909.17	168.46	1.81	1.38
174	15,637	88.50	180.90	11065.12	-4903.81	981.11	4909.71	5000.99	168.69	0.24	-0.21
175	15,732	88.20	180.40	11067.86	-4998.77	980.03	5004.66	5093.93	168.91	0.61	-0.32
176	15,826	88.70	180.00	11070.40	-5092.73	979.70	5098.62	5186.11	169.11	0.68	0.53
177	15,920	89.30	179.70	11072.04	-5186.71	979.95	5192.60	5278.48	169.30	0.71	0.64
178	16,014	88.50	179.90	11073.85	-5280.70	980.28	5286.59	5370.91	169.48	0.88	-0.85
179	16,109	88.90	179.20	11076.00	-5375.67	981.02	5381.56	5464.45	169.66	0.85	0.42
180	16,204	88.60	178.60	11078.07	-5470.63	982.85	5476.53	5558.21	169.81	0.71	-0.32
181	16,298	88.40	179.80	11080.53	-5564.58	984.16	5570.49	5650.94	169.97	1.29	-0.21
182	16,392	88.60	179.80	11082.99	-5658.55	984.49	5664.46	5743.55	170.13	0.21	0.21
183	16,487	88.30	179.60	11085.56	-5753.52	984.98	5759.42	5837.22	170.29	0.38	-0.32
184	16,581	88.10	178.90	11088.52	-5847.46	986.21	5853.38	5930.04	170.43	0.77	-0.21
185	16,676	88.60	179.40	11091.25	-5942.41	987.62	5948.33	6023.92	170.56	0.74	0.53
186	16,772	87.70	179.90	11094.35	-6038.36	988.21	6044.28	6118.68	170.71	1.07	-0.94
187	16,866	87.90	179.50	11097.96	-6132.29	988.70	6138.21	6211.48	170.84	0.48	0.21
188	16,960	89.70	179.20	11099.93	-6226.26	989.77	6232.19	6304.43	170.97	1.94	1.91
189	17,054	89.80	180.00	11100.34	-6320.25	990.42	6326.18	6397.38	171.09	0.86	0.11
190	17,148	90.00	180.30	11100.50	-6414.25	990.18	6420.18	6490.23	171.22	0.38	0.21
191	17,243	91.70	180.60	11099.09	-6509.23	989.43	6515.16	6584.00	171.36	1.82	1.79
192	17,337	92.10	180.20	11095.98	-6603.18	988.77	6609.10	6676.80	171.48	0.60	0.43
193	17,431	92.00	180.50	11092.61	-6697.12	988.20	6703.03	6769.63	171.61	0.34	-0.11
194	17,526	91.80	180.00	11089.46	-6792.06	987.79	6797.97	6863.52	171.73	0.57	-0.21
195	17,621	92.00	179.40	11086.31	-6887.01	988.28	6892.92	6957.56	171.83	0.67	0.21
196	17,715	92.00	178.80	11083.03	-6980.94	989.76	6986.86	7050.76	171.93	0.64	0.00
197	17,810	92.20	178.70	11079.55	-7075.85	991.83	7081.78	7145.03	172.02	0.24	0.21
198	17,904	92.40	179.00	11075.78	-7169.76	993.71	7175.70	7238.30	172.11	0.38	0.21
199	17,999	92.00	180.00	11072.13	-7264.68	994.54	7270.62	7332.45	172.20	1.13	-0.42
200	18,093	91.10	180.80	11069.59	-7358.65	993.89	7364.58	7425.46	172.31	1.28	-0.96
201	18,188	89.60	181.80	11069.01	-7453.62	991.73	7459.53	7519.30	172.42	1.90	-1.58
202	18,282	90.00	181.70	11069.34	-7547.57	988.86	7553.47	7612.07	172.54	0.44	0.43
203	18,376	89.90	181.00	11069.42	-7641.54	986.65	7647.43	7704.98	172.64	0.75	-0.11

Company:	Kaiser-Francis Oil Company
Well Name:	Bell Lake Unit North #202H
Location:	Lea County, NM
Rlg:	Cactus #171
Job Number:	MSMO-57186
API #:	30-025-45153

Magnetic Declination: 6.43 REFERENCED TO GRID NORTH

Vertical Section Azimuth: 179.65 Proposed Direction: 179.65

Survey Calculation Method: Minimum Curvature

PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	19,115		87.7		177		11077.28		-8380.12		1000.23		8386.07	
#	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	18,471	90.00	180.70	11069.50	-7736.53	985.24	7742.41	7799.02	172.74	0.33	0.11			
205	18,565	90.00	179.90	11069.50	-7830.53	984.74	7836.40	7892.21	172.83	0.85	0.00			
206	18,660	90.00	179.60	11069.50	-7925.53	985.16	7931.40	7986.52	172.91	0.32	0.00			
207	18,754	90.00	179.00	11069.50	-8019.52	986.31	8025.40	8079.95	172.99	0.64	0.00			
208	18,849	89.40	178.00	11070.00	-8114.49	988.79	8120.38	8174.51	173.05	1.23	-0.63			
209	18,944	88.90	178.00	11071.41	-8209.42	992.11	8215.33	8269.15	173.11	0.53	-0.53			
210	19,039	87.70	177.00	11074.23	-8304.28	996.25	8310.21	8363.83	173.16	1.64	-1.26			
211	19,049	87.70	177.00	11074.63	-8314.26	996.77	8320.20	8373.80	173.16	0.00	0.00			
PTB:	19,115	87.70	177.00	11077.28	-8380.12	1000.23	8386.07	8439.60	173.19	0.00	0.00			