

30-025-43060

KAISER-FRANCIS OIL COMPANY

Kaiser - Francis Oil Company

Lea Co, NM (Nad 27 NME)
South Bell Lake Unit 6 2BSS
#1H

OH

Plan: Plan #1

Standard Planning Report

24 November, 2015



www.scientificdrilling.com

FEB 10 2016



Database: Midland District
Company: Kaiser - Francis Oil Company
Project: Lea Co, NM (Nad 27 NME)
Site: South Bell Lake Unit 6 2BSS
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: KB=23' @ 3623.00usft (Cactus 170)
MD Reference: KB=23' @ 3623.00usft (Cactus 170)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea Co, NM (Nad 27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	South Bell Lake Unit 6 2BSS			
Site Position:		Northing:	453,982.70 usft	Latitude: 32° 14' 43.352 N
From: Map		Easting:	757,247.90 usft	Longitude: 103° 30' 4.595 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.44 "

Well	#1H			
Well Position	+N/-S	0.00 usft	Northing: 453,982.70 usft	Latitude: 32° 14' 43.352 N
	+E/-W	0.00 usft	Easting: 757,247.90 usft	Longitude: 103° 30' 4.595 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level: 3,600.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/18/2015	6.98	60.05	48,315

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	350.02

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,999.75	10.00	263.84	1,997.22	-4.66	-43.23	2.00	2.00	0.00	263.84	
9,171.19	10.00	263.84	9,059.82	-138.19	-1,280.75	0.00	0.00	0.00	0.00	
9,670.95	0.00	0.00	9,557.04	-142.85	-1,323.97	2.00	-2.00	0.00	180.00	
9,840.95	0.00	0.00	9,727.04	-142.85	-1,323.97	0.00	0.00	0.00	0.00	KOP (SBL Unit 6 2BS
10,740.94	90.00	359.44	10,300.00	430.08	-1,329.55	10.00	10.00	-0.06	359.44	
18,284.22	90.00	359.44	10,300.00	7,973.00	-1,403.00	0.00	0.00	0.00	0.00	PBHL (SBL Unit 6 2B:

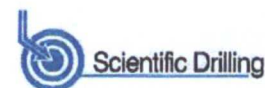
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	2.00	263.84	1,599.98	-0.19	-1.74	0.12	2.00	2.00	0.00
1,700.00	4.00	263.84	1,699.84	-0.75	-6.94	0.47	2.00	2.00	0.00
1,800.00	6.00	263.84	1,799.45	-1.68	-15.60	1.05	2.00	2.00	0.00
1,900.00	8.00	263.84	1,898.70	-2.99	-27.72	1.86	2.00	2.00	0.00
1,999.75	10.00	263.84	1,997.22	-4.66	-43.23	2.90	2.00	2.00	0.00
2,100.00	10.00	263.84	2,095.95	-6.53	-80.53	4.06	0.00	0.00	0.00
2,200.00	10.00	263.84	2,194.43	-8.39	-77.78	5.21	0.00	0.00	0.00
2,300.00	10.00	263.84	2,292.91	-10.25	-95.04	6.37	0.00	0.00	0.00
2,400.00	10.00	263.84	2,391.39	-12.12	-112.30	7.53	0.00	0.00	0.00
2,500.00	10.00	263.84	2,489.88	-13.98	-129.55	8.69	0.00	0.00	0.00
2,600.00	10.00	263.84	2,588.36	-15.84	-146.81	9.84	0.00	0.00	0.00
2,700.00	10.00	263.84	2,686.84	-17.70	-164.06	11.00	0.00	0.00	0.00
2,800.00	10.00	263.84	2,785.32	-19.56	-181.32	12.16	0.00	0.00	0.00
2,900.00	10.00	263.84	2,883.81	-21.43	-198.58	13.31	0.00	0.00	0.00
3,000.00	10.00	263.84	2,982.29	-23.29	-215.83	14.47	0.00	0.00	0.00
3,100.00	10.00	263.84	3,080.77	-25.15	-233.09	15.63	0.00	0.00	0.00
3,200.00	10.00	263.84	3,179.25	-27.01	-250.35	16.78	0.00	0.00	0.00
3,300.00	10.00	263.84	3,277.73	-28.87	-267.60	17.94	0.00	0.00	0.00
3,400.00	10.00	263.84	3,376.22	-30.74	-284.86	19.10	0.00	0.00	0.00
3,500.00	10.00	263.84	3,474.70	-32.60	-302.11	20.25	0.00	0.00	0.00
3,600.00	10.00	263.84	3,573.18	-34.46	-319.37	21.41	0.00	0.00	0.00
3,700.00	10.00	263.84	3,671.66	-36.32	-336.63	22.57	0.00	0.00	0.00
3,800.00	10.00	263.84	3,770.15	-38.18	-353.88	23.73	0.00	0.00	0.00
3,900.00	10.00	263.84	3,868.63	-40.04	-371.14	24.88	0.00	0.00	0.00
4,000.00	10.00	263.84	3,967.11	-41.91	-388.40	26.04	0.00	0.00	0.00
4,100.00	10.00	263.84	4,065.59	-43.77	-405.65	27.20	0.00	0.00	0.00
4,200.00	10.00	263.84	4,164.08	-45.63	-422.91	28.35	0.00	0.00	0.00
4,300.00	10.00	263.84	4,262.56	-47.49	-440.16	29.51	0.00	0.00	0.00
4,400.00	10.00	263.84	4,361.04	-49.35	-457.42	30.67	0.00	0.00	0.00
4,500.00	10.00	263.84	4,459.52	-51.22	-474.68	31.82	0.00	0.00	0.00
4,600.00	10.00	263.84	4,558.00	-53.08	-491.93	32.98	0.00	0.00	0.00
4,700.00	10.00	263.84	4,656.49	-54.94	-509.19	34.14	0.00	0.00	0.00
4,800.00	10.00	263.84	4,754.97	-56.80	-526.44	35.29	0.00	0.00	0.00
4,900.00	10.00	263.84	4,853.45	-58.66	-543.70	36.45	0.00	0.00	0.00
5,000.00	10.00	263.84	4,951.93	-60.53	-560.96	37.61	0.00	0.00	0.00
5,100.00	10.00	263.84	5,050.42	-62.39	-578.21	38.76	0.00	0.00	0.00
5,200.00	10.00	263.84	5,148.90	-64.25	-595.47	39.92	0.00	0.00	0.00
5,300.00	10.00	263.84	5,247.38	-66.11	-612.73	41.08	0.00	0.00	0.00

Planning Report



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Planned Survey

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5,400.00	10.00	263.84	5,345.86	-67.97	-629.98	42.24	0.00	0.00	0.00
5,500.00	10.00	263.84	5,444.34	-69.83	-647.24	43.39	0.00	0.00	0.00
5,600.00	10.00	263.84	5,542.83	-71.70	-664.49	44.55	0.00	0.00	0.00
5,700.00	10.00	263.84	5,641.31	-73.56	-681.75	45.71	0.00	0.00	0.00
5,800.00	10.00	263.84	5,739.79	-75.42	-699.01	46.86	0.00	0.00	0.00
5,900.00	10.00	263.84	5,838.27	-77.28	-716.26	48.02	0.00	0.00	0.00
6,000.00	10.00	263.84	5,936.76	-79.14	-733.52	49.18	0.00	0.00	0.00
6,100.00	10.00	263.84	6,035.24	-81.01	-750.78	50.33	0.00	0.00	0.00
6,200.00	10.00	263.84	6,133.72	-82.87	-768.03	51.49	0.00	0.00	0.00
6,300.00	10.00	263.84	6,232.20	-84.73	-785.29	52.65	0.00	0.00	0.00
6,400.00	10.00	263.84	6,330.69	-86.59	-802.54	53.80	0.00	0.00	0.00
6,500.00	10.00	263.84	6,429.17	-88.45	-819.80	54.96	0.00	0.00	0.00
6,600.00	10.00	263.84	6,527.65	-90.32	-837.06	56.12	0.00	0.00	0.00
6,700.00	10.00	263.84	6,626.13	-92.18	-854.31	57.28	0.00	0.00	0.00
6,800.00	10.00	263.84	6,724.61	-94.04	-871.57	58.43	0.00	0.00	0.00
6,900.00	10.00	263.84	6,823.10	-95.90	-888.82	59.59	0.00	0.00	0.00
7,000.00	10.00	263.84	6,921.58	-97.76	-906.08	60.75	0.00	0.00	0.00
7,100.00	10.00	263.84	7,020.06	-99.62	-923.34	61.90	0.00	0.00	0.00
7,200.00	10.00	263.84	7,118.54	-101.49	-940.59	63.06	0.00	0.00	0.00
7,300.00	10.00	263.84	7,217.03	-103.35	-957.85	64.22	0.00	0.00	0.00
7,400.00	10.00	263.84	7,315.51	-105.21	-975.11	65.37	0.00	0.00	0.00
7,500.00	10.00	263.84	7,413.99	-107.07	-992.36	66.53	0.00	0.00	0.00
7,600.00	10.00	263.84	7,512.47	-108.93	-1,009.62	67.69	0.00	0.00	0.00
7,700.00	10.00	263.84	7,610.95	-110.80	-1,026.87	68.84	0.00	0.00	0.00
7,800.00	10.00	263.84	7,709.44	-112.66	-1,044.13	70.00	0.00	0.00	0.00
7,900.00	10.00	263.84	7,807.92	-114.52	-1,061.39	71.16	0.00	0.00	0.00
8,000.00	10.00	263.84	7,906.40	-116.38	-1,078.64	72.31	0.00	0.00	0.00
8,100.00	10.00	263.84	8,004.88	-118.24	-1,095.90	73.47	0.00	0.00	0.00
8,200.00	10.00	263.84	8,103.37	-120.11	-1,113.15	74.63	0.00	0.00	0.00
8,300.00	10.00	263.84	8,201.85	-121.97	-1,130.41	75.79	0.00	0.00	0.00
8,400.00	10.00	263.84	8,300.33	-123.83	-1,147.67	76.94	0.00	0.00	0.00
8,500.00	10.00	263.84	8,398.81	-125.69	-1,164.92	78.10	0.00	0.00	0.00
8,600.00	10.00	263.84	8,497.30	-127.55	-1,182.18	79.26	0.00	0.00	0.00
8,700.00	10.00	263.84	8,595.78	-129.41	-1,199.44	80.41	0.00	0.00	0.00
8,800.00	10.00	263.84	8,694.26	-131.28	-1,216.69	81.57	0.00	0.00	0.00
8,900.00	10.00	263.84	8,792.74	-133.14	-1,233.95	82.73	0.00	0.00	0.00
9,000.00	10.00	263.84	8,891.22	-135.00	-1,251.20	83.88	0.00	0.00	0.00
9,100.00	10.00	263.84	8,989.71	-136.86	-1,268.46	85.04	0.00	0.00	0.00
9,171.19	10.00	263.84	9,059.82	-138.19	-1,280.75	85.86	0.00	0.00	0.00
9,200.00	9.42	263.84	9,088.21	-138.71	-1,285.57	86.19	2.00	-2.00	0.00
9,300.00	7.42	263.84	9,187.13	-140.28	-1,300.13	87.16	2.00	-2.00	0.00
9,400.00	5.42	263.84	9,286.50	-141.48	-1,311.25	87.91	2.00	-2.00	0.00
9,500.00	3.42	263.84	9,386.20	-142.31	-1,318.91	88.42	2.00	-2.00	0.00
9,600.00	1.42	263.84	9,486.10	-142.76	-1,323.10	88.70	2.00	-2.00	0.00
9,670.95	0.00	0.00	9,557.04	-142.85	-1,323.97	88.76	2.00	-2.00	0.00
9,700.00	0.00	0.00	9,586.10	-142.85	-1,323.97	88.76	0.00	0.00	0.00
9,800.00	0.00	0.00	9,686.10	-142.85	-1,323.97	88.76	0.00	0.00	0.00
9,840.95	0.00	0.00	9,727.04	-142.85	-1,323.97	88.76	0.00	0.00	0.00
9,850.00	0.91	359.44	9,736.09	-142.78	-1,323.98	88.83	10.00	10.00	0.00
9,900.00	5.91	359.44	9,785.99	-139.81	-1,324.00	91.76	10.00	10.00	0.00
9,950.00	10.91	359.44	9,835.44	-132.51	-1,324.08	98.97	10.00	10.00	0.00
10,000.00	15.91	359.44	9,884.09	-120.92	-1,324.19	110.40	10.00	10.00	0.00
10,050.00	20.91	359.44	9,931.46	-105.14	-1,324.34	125.97	10.00	10.00	0.00
10,100.00	25.91	359.44	9,977.36	-85.28	-1,324.54	145.56	10.00	10.00	0.00

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 Grid
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Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,150.00	30.91	359.44	10,021.33	-81.50	-1,324.77	169.02	10.00	10.00	0.00
10,200.00	35.91	359.44	10,063.05	-33.99	-1,325.03	186.16	10.00	10.00	0.00
10,250.00	40.91	359.44	10,102.22	-2.94	-1,325.34	226.80	10.00	10.00	0.00
10,300.00	45.91	359.44	10,138.53	31.41	-1,325.67	260.68	10.00	10.00	0.00
10,350.00	50.91	359.44	10,171.72	68.79	-1,326.04	297.56	10.00	10.00	0.00
10,400.00	55.91	359.44	10,201.51	108.92	-1,326.43	337.15	10.00	10.00	0.00
10,450.00	60.91	359.44	10,227.70	151.49	-1,326.84	379.15	10.00	10.00	0.00
10,500.00	65.91	359.44	10,250.08	196.18	-1,327.28	423.24	10.00	10.00	0.00
10,550.00	70.91	359.44	10,268.47	242.66	-1,327.73	469.09	10.00	10.00	0.00
10,600.00	75.91	359.44	10,282.75	290.56	-1,328.19	516.34	10.00	10.00	0.00
10,650.00	80.91	359.44	10,292.80	339.52	-1,328.67	564.65	10.00	10.00	0.00
10,700.00	85.91	359.44	10,298.54	389.17	-1,329.15	613.63	10.00	10.00	0.00
10,740.94	90.00	359.44	10,300.00	430.08	-1,329.55	653.99	10.00	10.00	0.00
10,800.00	90.00	359.44	10,300.00	489.13	-1,330.13	712.25	0.00	0.00	0.00
10,900.00	90.00	359.44	10,300.00	589.13	-1,331.10	810.90	0.00	0.00	0.00
11,000.00	90.00	359.44	10,300.00	689.12	-1,332.08	909.55	0.00	0.00	0.00
11,100.00	90.00	359.44	10,300.00	789.12	-1,333.05	1,008.20	0.00	0.00	0.00
11,200.00	90.00	359.44	10,300.00	889.11	-1,334.02	1,106.85	0.00	0.00	0.00
11,300.00	90.00	359.44	10,300.00	989.11	-1,335.00	1,205.50	0.00	0.00	0.00
11,400.00	90.00	359.44	10,300.00	1,089.10	-1,335.97	1,304.15	0.00	0.00	0.00
11,500.00	90.00	359.44	10,300.00	1,189.10	-1,336.94	1,402.80	0.00	0.00	0.00
11,600.00	90.00	359.44	10,300.00	1,289.09	-1,337.92	1,501.46	0.00	0.00	0.00
11,700.00	90.00	359.44	10,300.00	1,389.09	-1,338.89	1,600.11	0.00	0.00	0.00
11,800.00	90.00	359.44	10,300.00	1,489.08	-1,339.86	1,698.76	0.00	0.00	0.00
11,900.00	90.00	359.44	10,300.00	1,589.08	-1,340.84	1,797.41	0.00	0.00	0.00
12,000.00	90.00	359.44	10,300.00	1,689.07	-1,341.81	1,896.06	0.00	0.00	0.00
12,100.00	90.00	359.44	10,300.00	1,789.07	-1,342.79	1,994.71	0.00	0.00	0.00
12,200.00	90.00	359.44	10,300.00	1,889.06	-1,343.76	2,093.36	0.00	0.00	0.00
12,300.00	90.00	359.44	10,300.00	1,989.06	-1,344.73	2,192.01	0.00	0.00	0.00
12,400.00	90.00	359.44	10,300.00	2,089.05	-1,345.71	2,290.66	0.00	0.00	0.00
12,500.00	90.00	359.44	10,300.00	2,189.05	-1,346.68	2,389.31	0.00	0.00	0.00
12,600.00	90.00	359.44	10,300.00	2,289.05	-1,347.65	2,487.96	0.00	0.00	0.00
12,700.00	90.00	359.44	10,300.00	2,389.04	-1,348.63	2,586.62	0.00	0.00	0.00
12,800.00	90.00	359.44	10,300.00	2,489.04	-1,349.60	2,685.27	0.00	0.00	0.00
12,900.00	90.00	359.44	10,300.00	2,589.03	-1,350.58	2,783.92	0.00	0.00	0.00
13,000.00	90.00	359.44	10,300.00	2,689.03	-1,351.55	2,882.57	0.00	0.00	0.00
13,100.00	90.00	359.44	10,300.00	2,789.02	-1,352.52	2,981.22	0.00	0.00	0.00
13,200.00	90.00	359.44	10,300.00	2,889.02	-1,353.50	3,079.87	0.00	0.00	0.00
13,300.00	90.00	359.44	10,300.00	2,989.01	-1,354.47	3,178.52	0.00	0.00	0.00
13,400.00	90.00	359.44	10,300.00	3,089.01	-1,355.44	3,277.17	0.00	0.00	0.00
13,500.00	90.00	359.44	10,300.00	3,189.00	-1,356.42	3,375.82	0.00	0.00	0.00
13,600.00	90.00	359.44	10,300.00	3,289.00	-1,357.39	3,474.47	0.00	0.00	0.00
13,700.00	90.00	359.44	10,300.00	3,388.99	-1,358.36	3,573.12	0.00	0.00	0.00
13,800.00	90.00	359.44	10,300.00	3,488.99	-1,359.34	3,671.77	0.00	0.00	0.00
13,900.00	90.00	359.44	10,300.00	3,588.98	-1,360.31	3,770.43	0.00	0.00	0.00
14,000.00	90.00	359.44	10,300.00	3,688.98	-1,361.29	3,869.08	0.00	0.00	0.00
14,100.00	90.00	359.44	10,300.00	3,788.97	-1,362.26	3,967.73	0.00	0.00	0.00
14,200.00	90.00	359.44	10,300.00	3,888.97	-1,363.23	4,066.38	0.00	0.00	0.00
14,300.00	90.00	359.44	10,300.00	3,988.96	-1,364.21	4,165.03	0.00	0.00	0.00
14,400.00	90.00	359.44	10,300.00	4,088.96	-1,365.18	4,263.68	0.00	0.00	0.00
14,500.00	90.00	359.44	10,300.00	4,188.96	-1,366.15	4,362.33	0.00	0.00	0.00
14,600.00	90.00	359.44	10,300.00	4,288.95	-1,367.13	4,460.98	0.00	0.00	0.00
14,700.00	90.00	359.44	10,300.00	4,388.95	-1,368.10	4,559.63	0.00	0.00	0.00
14,800.00	90.00	359.44	10,300.00	4,488.94	-1,369.08	4,658.28	0.00	0.00	0.00

Database: Midland District
Company: Kaiser - Francis Oil Company
Project: Lea Co, NM (Nad 27 NME)
Site: South Bell Lake Unit 6 2BSS
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Well #1H

KB=23' @ 3623.00usft (Cactus 170)

KB=23' @ 3623.00usft (Cactus 170)

Grid

Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,900.00	90.00	359.44	10,300.00	4,588.94	-1,370.05	4,758.93	0.00	0.00	0.00
15,000.00	90.00	359.44	10,300.00	4,688.93	-1,371.02	4,855.59	0.00	0.00	0.00
15,100.00	90.00	359.44	10,300.00	4,788.93	-1,372.00	4,954.24	0.00	0.00	0.00
15,200.00	90.00	359.44	10,300.00	4,888.92	-1,372.97	5,052.89	0.00	0.00	0.00
15,300.00	90.00	359.44	10,300.00	4,988.92	-1,373.94	5,151.54	0.00	0.00	0.00
15,400.00	90.00	359.44	10,300.00	5,088.91	-1,374.92	5,250.19	0.00	0.00	0.00
15,500.00	90.00	359.44	10,300.00	5,188.91	-1,375.89	5,348.84	0.00	0.00	0.00
15,600.00	90.00	359.44	10,300.00	5,288.90	-1,376.86	5,447.49	0.00	0.00	0.00
15,700.00	90.00	359.44	10,300.00	5,388.90	-1,377.84	5,546.14	0.00	0.00	0.00
15,800.00	90.00	359.44	10,300.00	5,488.89	-1,378.81	5,644.79	0.00	0.00	0.00
15,900.00	90.00	359.44	10,300.00	5,588.89	-1,379.79	5,743.44	0.00	0.00	0.00
16,000.00	90.00	359.44	10,300.00	5,688.88	-1,380.76	5,842.09	0.00	0.00	0.00
16,100.00	90.00	359.44	10,300.00	5,788.88	-1,381.73	5,940.75	0.00	0.00	0.00
16,200.00	90.00	359.44	10,300.00	5,888.87	-1,382.71	6,039.40	0.00	0.00	0.00
16,300.00	90.00	359.44	10,300.00	5,988.87	-1,383.68	6,138.05	0.00	0.00	0.00
16,400.00	90.00	359.44	10,300.00	6,088.87	-1,384.65	6,236.70	0.00	0.00	0.00
16,500.00	90.00	359.44	10,300.00	6,188.86	-1,385.63	6,335.35	0.00	0.00	0.00
16,600.00	90.00	359.44	10,300.00	6,288.86	-1,386.60	6,434.00	0.00	0.00	0.00
16,700.00	90.00	359.44	10,300.00	6,388.85	-1,387.57	6,532.65	0.00	0.00	0.00
16,800.00	90.00	359.44	10,300.00	6,488.85	-1,388.55	6,631.30	0.00	0.00	0.00
16,900.00	90.00	359.44	10,300.00	6,588.84	-1,389.52	6,729.95	0.00	0.00	0.00
17,000.00	90.00	359.44	10,300.00	6,688.84	-1,390.50	6,828.60	0.00	0.00	0.00
17,100.00	90.00	359.44	10,300.00	6,788.83	-1,391.47	6,927.25	0.00	0.00	0.00
17,200.00	90.00	359.44	10,300.00	6,888.83	-1,392.44	7,025.90	0.00	0.00	0.00
17,300.00	90.00	359.44	10,300.00	6,988.82	-1,393.42	7,124.56	0.00	0.00	0.00
17,400.00	90.00	359.44	10,300.00	7,088.82	-1,394.39	7,223.21	0.00	0.00	0.00
17,500.00	90.00	359.44	10,300.00	7,188.81	-1,395.36	7,321.86	0.00	0.00	0.00
17,600.00	90.00	359.44	10,300.00	7,288.81	-1,396.34	7,420.51	0.00	0.00	0.00
17,700.00	90.00	359.44	10,300.00	7,388.80	-1,397.31	7,519.16	0.00	0.00	0.00
17,800.00	90.00	359.44	10,300.00	7,488.80	-1,398.29	7,617.81	0.00	0.00	0.00
17,900.00	90.00	359.44	10,300.00	7,588.79	-1,399.26	7,716.46	0.00	0.00	0.00
18,000.00	90.00	359.44	10,300.00	7,688.79	-1,400.23	7,815.11	0.00	0.00	0.00
18,100.00	90.00	359.44	10,300.00	7,788.78	-1,401.21	7,913.76	0.00	0.00	0.00
18,200.00	90.00	359.44	10,300.00	7,888.78	-1,402.18	8,012.41	0.00	0.00	0.00
18,284.22	90.00	359.44	10,300.00	7,973.00	-1,403.00	8,095.50	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP (SBL Unit 6 2BSS - hit/miss target - Shape - Point	0.00	0.00	9,727.04	-142.85	-1,323.97	453,839.85	755,923.92	32° 14' 42.040 N	103° 30' 20.023 W
PBHL (SBL Unit 6 2BSS - plan hits target center - Point	0.00	0.00	10,300.00	7,973.00	-1,403.00	461,955.70	755,844.90	32° 16' 2.355 N	103° 30' 20.214 W
FTP (SBL Unit 6 2BSS 1 - plan misses target center by 0.02usft at 10747.37usft MD (10300.00 TVD, 436.50 N, -1329.62 E) - Point	0.00	0.00	10,300.00	436.50	-1,329.60	454,419.20	755,918.30	32° 14' 47.773 N	103° 30' 20.036 W

Planning Report



Database: Midland District
Company: Kaiser - Francis Oil Company
Project: Lea Co, NM (Nad 27 NME)
Site: South Bell Lake Unit 6 2BSS
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: KB=23' @ 3623.00usft (Cactus 170)
MD Reference: KB=23' @ 3623.00usft (Cactus 170)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Kaiser-Francis Oil Company

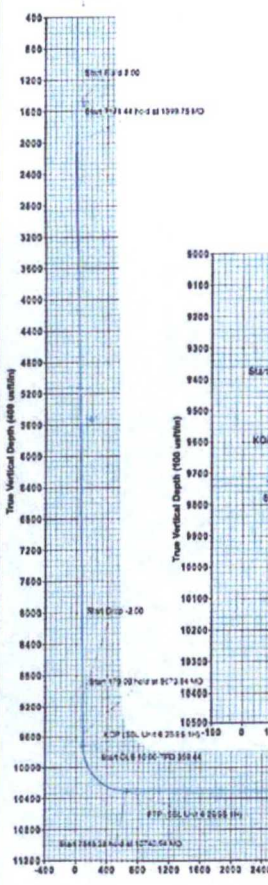
South Ball Lake Unit 6 2BSS #1H
Lea Co, NM (Nad 27 NME)
Northing: (Y) 453982.70
Easting: (X) 757247.90
Plan #1



Adjust to Grid North
True North -0.44°
Magnetic North 8.54°
Magnetic Field
Strength: 0.318 Gauss
Dip Angle: 65.0°
Date: 11/16/2015
Model: HOGM

To convert Magnetic North to Grid, Add 6.54°
To convert True North to Grid, Subtract 0.44°

KB-27 @ 3723.00' (Circle 170)
3600.00



Surface Hole Location:									
N/S	E/W	Northing	Easting	Latitude	Longitude				
0.00	0.00	453982.70	757247.90	32° 14' 43.352 N	103° 32' 4.595 W				

SECTION DETAILS									
MD	Inc	Adj	TVD	N/S	E/W	Orig	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
1509.75	10.00	263.84	1509.72	-4.66	-43.23	200	263.84	2.92	
9174.19	10.00	263.84	9059.82	-139.18	-120.75	0.00	0.00	88.86	
9870.94	0.00	0.00	9870.94	-142.85	-132.97	200	180.00	88.78	
9843.84	0.00	0.00	9727.04	-142.85	-132.97	0.00	0.00	88.78	KOP (SBL Unit 6 2BSS 1H)
10743.84	90.00	359.44	10100.00	-450.16	-132.95	10.00	369.44	653.95	
18224.22	90.00	359.44	18100.00	-7973.00	-1403.00	0.00	0.00	8025.50	FBH (SBL Unit 6 2BSS 1H)

DESIGN TARGET DETAILS									
Name	TVD	N/S	E/W	Northing	Easting				
KOP (SBL Unit 6 2BSS 1H)	9727.04	-142.85	-132.97	455539.85	755929.93				
FBH (SBL Unit 6 2BSS 1H)	18000.00	-7973.00	-1403.00	461985.70	755844.90				
FIP (SBL Unit 6 2BSS 1H)	10100.00	-450.16	-132.95	454419.20	755918.30				

Units in Feet

SITE DETAILS: South Ball Lake Unit 6 2BSS		Map System: US State Plane 1927 (Extinction)	
Site Centre Northing	453982.70	Datum	NAD 1983 (NADCON CONUS)
Easting	757247.90	Epoch	Circle 1918
Positional Uncertainty	0.00	Zone Name	New Mexico East 3001
Convergence	0.44	Local Origin	Well 89H, Grid North
Local North	Grid	Latitude	32° 14' 43.352 N
		Longitude	103° 32' 4.595 W
		Grid East	757247.90
		Grid North	453982.70
		Scale Factor	1.000
		Geographic Model	HOGM
		Sample Date	18 Nov 15
		Magnetic Declination	6.81°
		Dip Angle from Horizontal	63.05°
		Magnetic Field Strength	43315
		To convert Magnetic North to Grid, Add 6.54°	
		To convert True North to Grid, Subtract 0.44°	

