

Cimarex Energy Co.

Eddy County, NM (NAD83)

Sec. 3-T17S-R30E

Poseidon #3 FED #6

Wellbore #1

Survey: Survey #1

Standard Survey Report

16 January, 2009

Quantum Survey Report

Company:	Cimarex Energy Co.	Local Co-ordinate Reference:	Well Poseidon #3 FED #6
Project:	Eddy County, NM (NAD83)	TVD Reference:	WELL @ 3749.0ft (Original Well Elev)
Site:	Sec: 3-T17S-R30E	MD Reference:	WELL @ 3749.0ft (Original Well Elev)
Well:	Poseidon #3 FED #6	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003.16 Single User Db

Project:	Eddy County, NM (NAD83)		
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. 3-T17S-R30E			
Site Position:		Northing:	677,603.70ft	Latitude:	32° 51' 43.898 N
From:	Map	Easting:	656,373.10ft	Longitude:	103° 57' 31.282 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.20 °

Well:	Poseidon #3 FED #6					
Well Position	+N/-S	0.0 ft	Northing:	677,603.70 ft	Latitude:	32° 51' 43.898 N
	+E/-W	0.0 ft	Easting:	656,373.10 ft	Longitude:	103° 57' 31.282 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	3,731.0ft	

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2008/10/06	8.12	60.79	49,251

Design:	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	179.80

Survey Program:		Date 2009/01/16		
From:	To:	Survey (Wellbore):	Tool Name	Description
(ft)	(ft)			
100.0	1,460.0	Scientific Gyro (Wellbore #1)	MWD	MWD - Standard
1,527.0	6,050.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Survey:										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
1,460.0	0.31	125.34	1,459.9	-1.2	5.9	1.3	0.00	0.00	0.00	
Tie on to Gyros										
1,527.0	2.10	181.90	1,526.9	-2.6	6.0	2.6	2.91	2.67	84.42	
1,559.0	3.40	181.00	1,558.9	-4.1	5.9	4.1	4.06	4.06	-2.81	
1,591.0	3.60	179.30	1,590.8	-6.1	5.9	6.1	0.70	0.62	-5.31	
1,655.0	5.90	181.20	1,654.6	-11.4	5.9	11.4	3.60	3.59	2.97	
1,718.0	6.70	184.90	1,717.2	-18.3	5.5	18.3	1.42	1.27	5.87	
1,781.0	6.50	173.20	1,779.8	-25.5	5.6	25.5	2.15	-0.32	-18.57	
1,845.0	6.20	173.30	1,843.4	-32.5	6.4	32.5	0.47	-0.47	0.16	
1,909.0	6.90	179.50	1,907.0	-39.8	6.9	39.8	1.55	1.09	9.69	
1,972.0	6.50	180.40	1,969.6	-47.1	6.9	47.1	0.66	-0.63	1.43	
2,035.0	6.20	172.60	2,032.2	-54.0	7.3	54.1	1.45	-0.48	-12.38	

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Site:	Sec. 3-T17S-R30E	MD Reference:	WELL @ 3749.0ft (Original Well Elev)
Well:	Poseidon #3 FED #6	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 2003:16 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
2,098.0	5.80	170.80	2,094.8	-60.6	8.3	60.6	0.70	-0.63	-2.86	
2,162.0	6.60	178.40	2,158.5	-67.4	8.9	67.5	1.79	1.25	11.87	
2,226.0	6.40	179.70	2,222.0	-74.7	9.0	74.7	0.39	-0.31	2.03	
2,289.0	6.20	182.20	2,284.7	-81.6	8.9	81.6	0.54	-0.32	3.97	
2,352.0	6.10	182.50	2,347.3	-88.3	8.6	88.4	0.17	-0.16	0.48	
2,416.0	5.80	183.00	2,411.0	-95.0	8.3	95.0	0.48	-0.47	0.78	
2,479.0	6.50	179.30	2,473.6	-101.7	8.2	101.7	1.28	1.11	-5.87	
2,542.0	6.10	178.90	2,536.2	-108.6	8.3	108.6	0.64	-0.63	-0.63	
2,605.0	7.30	178.80	2,598.8	-116.0	8.4	116.0	1.90	1.90	-0.16	
2,701.0	7.60	183.30	2,694.0	-128.4	8.2	128.4	0.68	0.31	4.69	
2,764.0	7.40	183.30	2,756.4	-136.6	7.7	136.6	0.32	-0.32	0.00	
2,828.0	7.00	184.30	2,819.9	-144.6	7.2	144.6	0.65	-0.62	1.56	
2,891.0	6.70	181.40	2,882.5	-152.1	6.8	152.1	0.73	-0.48	-4.60	
2,955.0	6.50	179.70	2,946.1	-159.5	6.7	159.5	0.44	-0.31	-2.66	
3,018.0	6.40	179.00	3,008.7	-166.5	6.8	166.6	0.20	-0.16	-1.11	
3,082.0	6.00	182.20	3,072.3	-173.5	6.7	173.5	0.83	-0.62	5.00	
3,145.0	6.30	183.30	3,134.9	-180.2	6.4	180.2	0.51	0.48	1.75	
3,209.0	6.50	182.30	3,198.5	-187.3	6.1	187.3	0.36	0.31	-1.56	
3,272.0	6.50	183.40	3,261.1	-194.4	5.7	194.5	0.20	0.00	1.75	
3,336.0	6.40	181.20	3,324.7	-201.6	5.4	201.6	0.42	-0.16	-3.44	
3,399.0	6.10	181.80	3,387.3	-208.5	5.2	208.5	0.49	-0.48	0.95	
3,463.0	6.00	181.80	3,451.0	-215.2	5.0	215.2	0.16	-0.16	0.00	
3,526.0	5.90	182.30	3,513.6	-221.8	4.8	221.8	0.18	-0.16	0.79	
3,590.0	5.80	181.00	3,577.3	-228.3	4.6	228.3	0.26	-0.16	-2.03	
3,653.0	6.80	185.80	3,639.9	-235.2	4.2	235.2	1.79	1.59	7.62	
3,717.0	6.90	184.20	3,703.5	-242.8	3.5	242.8	0.34	0.16	-2.50	
3,780.0	6.70	180.50	3,766.0	-250.2	3.2	250.2	0.76	-0.32	-5.87	
3,875.0	6.40	179.30	3,860.4	-261.1	3.2	261.1	0.35	-0.32	-1.26	
3,939.0	6.70	181.20	3,924.0	-268.4	3.2	268.4	0.58	0.47	2.97	
4,003.0	6.80	180.20	3,987.5	-275.9	3.1	275.9	0.24	0.16	-1.56	
4,066.0	6.60	180.30	4,050.1	-283.2	3.1	283.2	0.32	-0.32	0.16	
4,129.0	6.60	183.30	4,112.7	-290.5	2.8	290.5	0.55	0.00	4.76	
4,190.0	6.90	177.00	4,173.3	-297.6	2.8	297.6	1.31	0.49	-10.33	
4,254.0	6.60	175.40	4,236.8	-305.1	3.3	305.1	0.55	-0.47	-2.50	
4,317.0	6.90	180.70	4,299.4	-312.5	3.6	312.5	1.10	0.48	8.41	
4,381.0	7.20	182.10	4,362.9	-320.4	3.4	320.4	0.54	0.47	2.19	
4,444.0	6.40	181.20	4,425.5	-327.8	3.2	327.8	1.28	-1.27	-1.43	
4,507.0	8.00	186.60	4,488.0	-335.7	2.6	335.7	2.75	2.54	8.57	
4,570.0	6.70	188.20	4,550.5	-343.7	1.6	343.7	2.09	-2.06	2.54	
4,634.0	6.50	184.80	4,614.0	-351.0	0.7	351.0	0.69	-0.31	-5.31	
4,698.0	6.40	173.80	4,677.6	-358.1	0.8	358.1	1.93	-0.16	-17.19	
4,761.0	6.30	176.10	4,740.2	-365.1	1.4	365.1	0.43	-0.16	3.65	
4,824.0	5.70	177.50	4,802.9	-371.7	1.8	371.7	0.98	-0.95	2.22	
4,888.0	5.50	177.80	4,866.6	-377.9	2.0	377.9	0.32	-0.31	0.47	
4,951.0	5.50	175.40	4,929.3	-383.9	2.4	383.9	0.37	0.00	-3.81	
5,015.0	5.90	179.00	4,993.0	-390.3	2.7	390.3	0.84	0.62	5.62	
5,078.0	5.80	184.20	5,055.7	-396.7	2.5	396.7	0.86	-0.16	8.25	
5,142.0	6.20	178.30	5,119.3	-403.4	2.4	403.4	1.15	0.62	-9.22	
5,205.0	6.10	178.40	5,181.9	-410.1	2.6	410.1	0.16	-0.16	0.16	
5,269.0	5.90	178.60	5,245.6	-416.8	2.8	416.8	0.31	-0.31	0.31	
5,332.0	7.10	179.30	5,308.2	-423.9	2.9	423.9	1.91	1.90	1.11	
5,395.0	7.30	183.30	5,370.7	-431.8	2.7	431.8	0.86	0.32	6.35	
5,459.0	6.60	179.40	5,434.2	-439.6	2.5	439.6	1.32	-1.09	-6.09	
5,522.0	6.40	182.60	5,496.8	-446.7	2.4	446.7	0.66	-0.32	5.08	

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Well:	Poseidon #3 FED #6	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM-2003.16 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,585.0	6.20	183.20	5,559.4	-453.6	2.0	453.6	0.33	-0.32	0.95	
5,649.0	6.50	180.30	5,623.0	-460.7	1.8	460.7	0.69	0.47	-4.53	
5,712.0	6.30	181.60	5,685.6	-467.7	1.7	467.7	0.39	-0.32	2.06	
5,776.0	6.90	182.20	5,749.2	-475.0	1.5	475.0	0.94	0.94	0.94	
5,840.0	6.70	183.70	5,812.8	-482.6	1.1	482.6	0.42	-0.31	2.34	
5,903.0	6.40	181.80	5,875.4	-489.8	0.7	489.8	0.59	-0.48	-3.02	
5,967.0	6.70	179.90	5,938.9	-497.1	0.6	497.1	0.58	0.47	-2.97	
6,009.0	6.50	180.20	5,980.7	-501.9	0.6	501.9	0.48	-0.48	0.71	
Last MWD Survey - BHL #3 Fed #6										
6,050.0	6.50	180.20	6,021.4	-506.5	0.6	506.5	0.00	0.00	0.00	
Project to TD; 6050' MD/ 6021.4' TVD; 6.5° Inc 180.2° Azi; -506' S 0.6' E										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
BHL #3 Fed #6	0.00	0.00	6,000.0	-505.1	1.8	677,098.65	656,374.90	32° 51' 38.901 N	103° 57' 31.282 W	
- survey misses by 19.6ft at 6009.0ft MD (5980.7 TVD, -501.9 N, 0.6 E)										
- Point										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,460.0	1,459.9	-1.2	5.9	Tie on to Gyros	
6,009.0	5,980.7	-501.9	0.6	Last MWD Survey	
6,050.0	6,021.4	-506.5	0.6	Project to TD; 6050' MD/ 6021.4' TVD; 6.5° Inc 180.2° Azi; -506' S 0.6	

Checked By: _____ Approved By: _____ Date: _____