



Cimarex Robinson 36 State #1H Rev1 PCG 20-Jan-15 Proposal Geodetic Report - 100ft Interpolated (Non-Def Plan)

Report Date: January 20, 2015 - 03:00 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Robinson 36 State 1H / Cimarex Robinson 36 State 1H
Well: Cimarex Robinson 36 State 1H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Robinson 36 State #1H Rev1 PCG 20-Jan-15
Survey Date: January 20, 2015
Tort / AHD / DDI / ERD Ratio: 90.003 ° / 4798.943 ft / 5.840 / 0.639
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 0' 5.15536", W 104° 15' 14.18292"
Location Grid N/E Y/X: N 364269.500 ftUS, E 565948.200 ftUS
CRS Grid Convergence Angle: 0.0421 °
Grid Scale Factor: 0.99990978
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 89.996 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Elevation
TVD Reference Elevation: 3324.000 ft above MSL
Seabed / Ground Elevation: 3324.000 ft above MSL
Magnetic Declination: 7.668 °
Total Gravity Field Strength: 998.4238mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48157.875 nT
Magnetic Dip Angle: 59.702 °
Declination Date: January 20, 2015
Magnetic Declination Model: HDGM 2014
North Reference: Grid North
Grid Convergence Used: 0.0421 °
Total Corr Mag North->Grid North: 7.6261 °
Local Coord Referenced To: Structure Reference Point

Provide signature page for survey

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL - Cimarex Robinson 36 State #1H - 500' FSL 210' FWL	0.00	0.00	90.00	0.00	0.00	0.00	0.00	N/A	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	100.00	0.00	90.00	100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	200.00	0.00	90.00	200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	300.00	0.00	90.00	300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	400.00	0.00	90.00	400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	500.00	0.00	90.00	500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	600.00	0.00	90.00	600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	700.00	0.00	90.00	700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	800.00	0.00	90.00	800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	900.00	0.00	90.00	900.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1000.00	0.00	90.00	1000.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1100.00	0.00	90.00	1100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1200.00	0.00	90.00	1200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1300.00	0.00	90.00	1300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1400.00	0.00	90.00	1400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1500.00	0.00	90.00	1500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1600.00	0.00	90.00	1600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1700.00	0.00	90.00	1700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1800.00	0.00	90.00	1800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	1900.00	0.00	90.00	1900.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2000.00	0.00	90.00	2000.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2100.00	0.00	90.00	2100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2200.00	0.00	90.00	2200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2300.00	0.00	90.00	2300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2400.00	0.00	90.00	2400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2500.00	0.00	90.00	2500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2600.00	0.00	90.00	2600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2700.00	0.00	90.00	2700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2800.00	0.00	90.00	2800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	2900.00	0.00	90.00	2900.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3000.00	0.00	90.00	3000.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3100.00	0.00	90.00	3100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3200.00	0.00	90.00	3200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3300.00	0.00	90.00	3300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3400.00	0.00	90.00	3400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3500.00	0.00	90.00	3500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3600.00	0.00	90.00	3600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3700.00	0.00	90.00	3700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3800.00	0.00	90.00	3800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	3900.00	0.00	90.00	3900.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4000.00	0.00	90.00	4000.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4100.00	0.00	90.00	4100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4200.00	0.00	90.00	4200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4300.00	0.00	90.00	4300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4400.00	0.00	90.00	4400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4500.00	0.00	90.00	4500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4600.00	0.00	90.00	4600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4700.00	0.00	90.00	4700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4800.00	0.00	90.00	4800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	4900.00	0.00	90.00	4900.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5000.00	0.00	90.00	5000.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5100.00	0.00	90.00	5100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5200.00	0.00	90.00	5200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5300.00	0.00	90.00	5300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5400.00	0.00	90.00	5400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5500.00	0.00	90.00	5500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5600.00	0.00	90.00	5600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5700.00	0.00	90.00	5700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	5800.00	0.00	90.00	5800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	5900.00	0.00	90.00	5900.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6000.00	0.00	90.00	6000.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6100.00	0.00	90.00	6100.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6200.00	0.00	90.00	6200.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6300.00	0.00	90.00	6300.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6400.00	0.00	90.00	6400.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6500.00	0.00	90.00	6500.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6600.00	0.00	90.00	6600.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6700.00	0.00	90.00	6700.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6800.00	0.00	90.00	6800.00	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
KOP - Build 9"/100ft	6868.38	0.00	90.00	6868.38	0.00	0.00	0.00	0.00	364269.50	565948.20	N 32 0 5.16 W 104 15 14.18	
	6900.00	2.85	90.00	6899.99	0.79	0.00	0.79	9.00	364269.50	565948.99	N 32 0 5.16 W 104 15 14.17	
	7000.00	11.85	90.00	6999.06	13.56	0.00	13.56	9.00	364269.50	565961.76	N 32 0 5.16 W 104 15 14.03	
	7100.00	20.85	90.00	7094.92	41.67	0.00	41.67	9.00	364269.50	565989.87	N 32 0 5.16 W 104 15 13.70	
	7200.00	29.85	90.00	7185.20	84.44	0.01	84.44	9.00	364269.51	566032.63	N 32 0 5.16 W 104 15 13.20	
	7300.00	38.85	90.00	7267.68	140.80	0.01	140.80	9.00	364269.51	566088.98	N 32 0 5.15 W 104 15 12.55	
	7400.00	47.85	90.00	7340.33	209.37	0.02	209.37	9.00	364269.52	566157.55	N 32 0 5.15 W 104 15 11.75	
	7500.00	56.85	90.00	7401.36	288.46	0.03	288.46	9.00	364269.53	566236.63	N 32 0 5.15 W 104 15 10.83	
	7600.00	65.85	90.00	7449.26	376.12	0.03	376.12	9.00	364269.53	566324.28	N 32 0 5.15 W 104 15 9.82	
	7700.00	74.85	90.00	7482.86	470.20	0.04	470.20	9.00	364269.54	566418.35	N 32 0 5.15 W 104 15 8.72	
	7800.00	83.85	90.00	7501.33	568.37	0.05	568.37	9.00	364269.55	566516.52	N 32 0 5.15 W 104 15 7.58	
Landing Point - 500' FSL	7868.38	90.00	90.00	7505.00	636.62	0.06	636.62	9.00	364269.56	566584.76	N 32 0 5.15 W 104 15 6.79	
	7900.00	90.00	90.00	7505.00	668.24	0.06	668.24	0.00	364269.56	566616.38	N 32 0 5.15 W 104 15 6.42	
	8000.00	90.00	90.00	7505.00	768.24	0.07	768.24	0.00	364269.57	566716.37	N 32 0 5.15 W 104 15 5.26	
	8100.00	90.00	90.00	7505.00	868.24	0.08	868.24	0.00	364269.58	566816.36	N 32 0 5.15 W 104 15 4.10	
	8200.00	90.00	90.00	7505.00	968.24	0.08	968.24	0.00	364269.58	566916.35	N 32 0 5.15 W 104 15 2.94	
	8300.00	90.00	90.00	7505.00	1068.24	0.09	1068.24	0.00	364269.59	567016.34	N 32 0 5.15 W 104 15 1.78	
	8400.00	90.00	90.00	7505.00	1168.24	0.10	1168.24	0.00	364269.60	567116.33	N 32 0 5.15 W 104 15 0.62	
	8500.00	90.00	90.00	7505.00	1268.24	0.11	1268.24	0.00	364269.61	567216.32	N 32 0 5.15 W 104 14 59.46	
	8600.00	90.00	90.00	7505.00	1368.24	0.12	1368.24	0.00	364269.62	567316.31	N 32 0 5.15 W 104 14 58.29	
	8700.00	90.00	90.00	7505.00	1468.24	0.12	1468.24	0.00	364269.62	567416.30	N 32 0 5.15 W 104 14 57.13	
	8800.00	90.00	90.00	7505.00	1568.24	0.13	1568.24	0.00	364269.63	567516.30	N 32 0 5.14 W 104 14 55.97	
	8900.00	90.00	90.00	7505.00	1668.24	0.14	1668.24	0.00	364269.64	567616.29	N 32 0 5.14 W 104 14 54.81	
	9000.00	90.00	90.00	7505.00	1768.24	0.15	1768.24	0.00	364269.65	567716.28	N 32 0 5.14 W 104 14 53.65	
	9100.00	90.00	90.00	7505.00	1868.24	0.15	1868.24	0.00	364269.65	567816.27	N 32 0 5.14 W 104 14 52.49	
	9200.00	90.00	90.00	7505.00	1968.24	0.16	1968.24	0.00	364269.66	567916.26	N 32 0 5.14 W 104 14 51.33	
	9300.00	90.00	90.00	7505.00	2068.24	0.17	2068.24	0.00	364269.67	568016.25	N 32 0 5.14 W 104 14 50.17	
	9400.00	90.00	90.00	7505.00	2168.24	0.17	2168.24	0.00	364269.67	568116.24	N 32 0 5.14 W 104 14 49.00	
	9500.00	90.00	90.00	7505.00	2268.24	0.18	2268.24	0.00	364269.68	568216.23	N 32 0 5.14 W 104 14 47.84	
	9600.00	90.00	90.00	7505.00	2368.24	0.19	2368.24	0.00	364269.69	568316.22	N 32 0 5.14 W 104 14 46.68	
	9700.00	90.00	90.00	7505.00	2468.24	0.19	2468.24	0.00	364269.69	568416.21	N 32 0 5.14 W 104 14 45.52	
	9800.00	90.00	90.00	7505.00	2568.24	0.20	2568.24	0.00	364269.70	568516.20	N 32 0 5.14 W 104 14 44.36	
	9900.00	90.00	90.00	7505.00	2668.24	0.20	2668.24	0.00	364269.70	568616.19	N 32 0 5.14 W 104 14 43.20	
	10000.00	90.00	90.00	7505.00	2768.24	0.21	2768.24	0.00	364269.71	568716.18	N 32 0 5.14 W 104 14 42.04	
	10100.00	90.00	90.00	7505.00	2868.24	0.22	2868.24	0.00	364269.72	568816.18	N 32 0 5.14 W 104 14 40.88	
	10200.00	90.00	90.00	7505.00	2968.24	0.22	2968.24	0.00	364269.72	568916.17	N 32 0 5.13 W 104 14 39.71	
	10300.00	90.00	90.00	7505.00	3068.24	0.23	3068.24	0.00	364269.73	569016.16	N 32 0 5.13 W 104 14 38.55	
	10400.00	90.00	90.00	7505.00	3168.24	0.23	3168.24	0.00	364269.73	569116.15	N 32 0 5.13 W 104 14 37.39	
	10500.00	90.00	90.00	7505.00	3268.24	0.24	3268.24	0.00	364269.74	569216.14	N 32 0 5.13 W 104 14 36.23	
	10600.00	90.00	90.00	7505.00	3368.24	0.24	3368.24	0.00	364269.74	569316.13	N 32 0 5.13 W 104 14 35.07	
	10700.00	90.00	90.00	7505.00	3468.24	0.25	3468.24	0.00	364269.75	569416.12	N 32 0 5.13 W 104 14 33.91	
	10800.00	90.00	90.00	7505.00	3568.24	0.25	3568.24	0.00	364269.75	569516.11	N 32 0 5.13 W 104 14 32.75	
	10900.00	90.00	90.00	7505.00	3668.24	0.26	3668.24	0.00	364269.76	569616.10	N 32 0 5.13 W 104 14 31.59	
	11000.00	90.00	90.00	7505.00	3768.24	0.26	3768.24	0.00	364269.76	569716.09	N 32 0 5.13 W 104 14 30.42	
	11100.00	90.00	90.00	7505.00	3868.24	0.27	3868.24	0.00	364269.77	569816.08	N 32 0 5.13 W 104 14 29.26	
	11200.00	90.00	90.00	7505.00	3968.24	0.27	3968.24	0.00	364269.77	569916.07	N 32 0 5.13 W 104 14 28.10	
	11300.00	90.00	90.00	7505.00	4068.24	0.27	4068.24	0.00	364269.77	570016.06	N 32 0 5.13 W 104 14 26.94	
	11400.00	90.00	90.00	7505.00	4168.24	0.28	4168.24	0.00	364269.78	570116.06	N 32 0 5.13 W 104 14 25.78	
	11500.00	90.00	90.00	7505.00	4268.24	0.28	4268.24	0.00	364269.78	570216.05	N 32 0 5.12 W 104 14 24.62	
	11600.00	90.00	90.00	7505.00	4368.24	0.29	4368.24	0.00	364269.79	570316.04	N 32 0 5.12 W 104 14 23.46	
	11700.00	90.00	90.00	7505.00	4468.24	0.29	4468.24	0.00	364269.79	570416.03	N 32 0 5.12 W 104 14 22.30	
	11800.00	90.00	90.00	7505.00	4568.24	0.29	4568.24	0.00	364269.79	570516.02	N 32 0 5.12 W 104 14 21.13	
	11900.00	90.00	90.00	7505.00	4668.24	0.30	4668.24	0.00	364269.80	570616.01	N 32 0 5.12 W 104 14 19.97	
	12000.00	90.00	90.00	7505.00	4768.24	0.30	4768.24	0.00	364269.80	570716.00	N 32 0 5.12 W 104 14 18.81	
Cimarex Robinson 36 State #1H PBHL - 500' FSL, 330' FEL	12030.70	90.00	90.00	7505.00	4798.94	0.30	4798.94	0.00	364269.80	570746.70	N 32 0 5.12 W 104 14 18.46	

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	12030.703	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Robinson 36 State #1H Rev1 PCG