

30-015-42614



**Cimarex Jake 36 State #7H Rev0 PCG 31-July-2014 Proposal Geodetic
Report 100ft Interpolated
(Non-Def Plan)**



Report Date: July 31, 2014 - 03:56 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Jake 36 State #7H / Cimarex Jake 36 State #7H
Well: Cimarex Jake 36 State #7H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Jake 36 State #7H Rev0 PCG 31-July-2014
Survey Date: July 31, 2014
Tort / AHD / DDI / ERD Ratio: 89.751 ° / 4631.126 ft / 5.823 / 0.639
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 10' 2.06810", W 104° 14' 36.90949"
Location Grid N/E Y/X: N 424588.900 ftUS, E 569107.500 ftUS
CRS Grid Convergence Angle: 0.0478 °
Grid Scale Factor: 0.99990997
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 0.000 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Level
TVD Reference Elevation: 3385.000 ft above
Seabed / Ground Elevation: 3385.000 ft above
Magnetic Declination: 7.670 °
Total Gravity Field Strength: 998.4329mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48150.672 nT
Magnetic Dip Angle: 59.929 °
Declination Date: July 31, 2014
Magnetic Declination Model: BGGM 2014
North Reference: Grid North
Grid Convergence Used: 0.0478 °
Total Corr Mag North->Grid North: 7.6225 °
Local Coord Referenced To: Structure Reference Point

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 Jake 36 State #7H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91
	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07	W 104 14 36.91

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 ° ' ")
	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6400.00	0.00	0.00	6400.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6500.00	0.00	0.00	6500.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6600.00	0.00	0.00	6600.00	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
Build 10"/100ft	6660.01	0.00	0.00	6660.01	0.00	0.00	0.00	0.00	424588.90	569107.50	N 32 10 2.07 W 104 14 36.91	
	6700.00	4.00	0.00	6699.97	1.39	1.39	0.00	10.00	424590.29	569107.50	N 32 10 2.08 W 104 14 36.91	
	6800.00	14.00	0.00	6798.61	17.02	17.02	0.00	10.00	424605.91	569107.50	N 32 10 2.24 W 104 14 36.91	
	6900.00	24.00	0.00	6893.04	49.53	49.53	0.00	10.00	424638.42	569107.50	N 32 10 2.56 W 104 14 36.91	

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 ° ' ")
Landing Point	7000.00	34.00	0.00	6980.40	97.94	97.94	0.00	10.00	424686.83	569107.50	N 32 10 3.04	W 104 14 36.91
	7100.00	44.00	0.00	7058.02	160.79	160.79	0.00	10.00	424749.67	569107.50	N 32 10 3.66	W 104 14 36.91
	7200.00	54.00	0.00	7123.55	236.16	236.16	0.00	10.00	424825.04	569107.50	N 32 10 4.40	W 104 14 36.91
	7300.00	63.99	0.00	7174.99	321.76	321.76	0.00	10.00	424910.63	569107.50	N 32 10 5.25	W 104 14 36.91
	7400.00	73.99	0.00	7210.80	415.00	415.00	0.00	10.00	425003.86	569107.50	N 32 10 6.17	W 104 14 36.91
	7500.00	83.99	0.00	7229.86	513.03	513.03	0.00	10.00	425101.89	569107.50	N 32 10 7.14	W 104 14 36.90
	7557.28	89.72	0.00	7233.00	570.20	570.20	0.00	10.00	425159.05	569107.50	N 32 10 7.71	W 104 14 36.90
	7600.00	89.72	0.00	7233.21	612.92	612.92	0.00	0.00	425201.77	569107.50	N 32 10 8.13	W 104 14 36.90
	7700.00	89.72	0.00	7233.70	712.92	712.92	0.00	0.00	425301.76	569107.50	N 32 10 9.12	W 104 14 36.90
	7800.00	89.72	0.00	7234.19	812.92	812.92	0.00	0.00	425401.75	569107.50	N 32 10 10.11	W 104 14 36.90
	7900.00	89.72	0.00	7234.68	912.92	912.92	0.01	0.00	425501.74	569107.51	N 32 10 11.10	W 104 14 36.90
	8000.00	89.72	0.00	7235.17	1012.92	1012.92	0.01	0.00	425601.73	569107.51	N 32 10 12.09	W 104 14 36.90
	8100.00	89.72	0.00	7235.66	1112.92	1112.92	0.02	0.00	425701.71	569107.52	N 32 10 13.08	W 104 14 36.90
	8200.00	89.72	0.00	7236.15	1212.92	1212.92	0.03	0.00	425801.70	569107.53	N 32 10 14.07	W 104 14 36.90
	8300.00	89.72	0.01	7236.64	1312.91	1312.91	0.04	0.00	425901.69	569107.54	N 32 10 15.06	W 104 14 36.90
	8400.00	89.72	0.01	7237.13	1412.91	1412.91	0.05	0.00	426001.68	569107.55	N 32 10 16.05	W 104 14 36.90
	8500.00	89.72	0.01	7237.62	1512.91	1512.91	0.06	0.00	426101.67	569107.56	N 32 10 17.04	W 104 14 36.89
	8600.00	89.72	0.01	7238.11	1612.91	1612.91	0.07	0.00	426201.66	569107.57	N 32 10 18.03	W 104 14 36.89
	8700.00	89.72	0.01	7238.60	1712.91	1712.91	0.09	0.00	426301.65	569107.59	N 32 10 19.02	W 104 14 36.89
	8800.00	89.72	0.01	7239.09	1812.91	1812.91	0.10	0.00	426401.64	569107.60	N 32 10 20.01	W 104 14 36.89
	8900.00	89.72	0.01	7239.58	1912.91	1912.91	0.12	0.00	426501.63	569107.62	N 32 10 21.00	W 104 14 36.89
	9000.00	89.72	0.01	7240.07	2012.91	2012.91	0.14	0.00	426601.62	569107.64	N 32 10 21.99	W 104 14 36.89
	9100.00	89.72	0.01	7240.56	2112.91	2112.91	0.16	0.00	426701.61	569107.66	N 32 10 22.98	W 104 14 36.89
	9200.00	89.72	0.01	7241.06	2212.90	2212.90	0.18	0.00	426801.60	569107.68	N 32 10 23.97	W 104 14 36.89
	9300.00	89.72	0.01	7241.55	2312.90	2312.90	0.20	0.00	426901.59	569107.70	N 32 10 24.95	W 104 14 36.88
	9400.00	89.72	0.01	7242.04	2412.90	2412.90	0.23	0.00	427001.58	569107.73	N 32 10 25.94	W 104 14 36.88
	9500.00	89.72	0.01	7242.53	2512.90	2512.90	0.25	0.00	427101.57	569107.75	N 32 10 26.93	W 104 14 36.88
	9600.00	89.72	0.02	7243.02	2612.90	2612.90	0.28	0.00	427201.56	569107.78	N 32 10 27.92	W 104 14 36.88
	9700.00	89.72	0.02	7243.52	2712.90	2712.90	0.31	0.00	427301.55	569107.81	N 32 10 28.91	W 104 14 36.88
	9800.00	89.72	0.02	7244.01	2812.90	2812.90	0.34	0.00	427401.54	569107.84	N 32 10 29.90	W 104 14 36.88
	9900.00	89.72	0.02	7244.50	2912.90	2912.90	0.37	0.00	427501.53	569107.87	N 32 10 30.89	W 104 14 36.88
	10000.00	89.72	0.02	7245.00	3012.89	3012.89	0.40	0.00	427601.52	569107.90	N 32 10 31.88	W 104 14 36.88
	10100.00	89.72	0.02	7245.49	3112.89	3112.89	0.43	0.00	427701.51	569107.93	N 32 10 32.87	W 104 14 36.87
	10200.00	89.72	0.02	7245.98	3212.89	3212.89	0.47	0.00	427801.50	569107.97	N 32 10 33.86	W 104 14 36.87
	10300.00	89.72	0.02	7246.48	3312.89	3312.89	0.50	0.00	427901.49	569108.00	N 32 10 34.85	W 104 14 36.87
	10400.00	89.72	0.02	7246.97	3412.89	3412.89	0.54	0.00	428001.48	569108.04	N 32 10 35.84	W 104 14 36.87
	10500.00	89.72	0.02	7247.46	3512.89	3512.89	0.58	0.00	428101.46	569108.08	N 32 10 36.83	W 104 14 36.87
	10600.00	89.72	0.02	7247.96	3612.89	3612.89	0.62	0.00	428201.45	569108.12	N 32 10 37.82	W 104 14 36.87
	10700.00	89.72	0.02	7248.45	3712.89	3712.89	0.66	0.00	428301.44	569108.16	N 32 10 38.81	W 104 14 36.87
	10800.00	89.72	0.02	7248.95	3812.88	3812.88	0.70	0.00	428401.43	569108.20	N 32 10 39.80	W 104 14 36.86
	10900.00	89.72	0.03	7249.44	3912.88	3912.88	0.75	0.00	428501.42	569108.25	N 32 10 40.79	W 104 14 36.86
	11000.00	89.72	0.03	7249.94	4012.88	4012.88	0.79	0.00	428601.41	569108.29	N 32 10 41.78	W 104 14 36.86
	11100.00	89.72	0.03	7250.43	4112.88	4112.88	0.84	0.00	428701.40	569108.34	N 32 10 42.77	W 104 14 36.86
	11200.00	89.72	0.03	7250.93	4212.88	4212.88	0.89	0.00	428801.39	569108.39	N 32 10 43.76	W 104 14 36.86
	11300.00	89.72	0.03	7251.42	4312.88	4312.88	0.93	0.00	428901.38	569108.43	N 32 10 44.74	W 104 14 36.86
	11400.00	89.72	0.03	7251.92	4412.88	4412.88	0.99	0.00	429001.37	569108.48	N 32 10 45.73	W 104 14 36.86
	11500.00	89.72	0.03	7252.41	4512.88	4512.88	1.04	0.00	429101.36	569108.54	N 32 10 46.72	W 104 14 36.85
	11600.00	89.72	0.03	7252.91	4612.87	4612.87	1.09	0.00	429201.35	569108.59	N 32 10 47.71	W 104 14 36.85

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 ° ' ")
Cimarex Jake 36 State #7H PBHL	11618.25	89.72	0.03	7253.00	4631.13	4631.13	1.10	0.00	429219.60	569108.60	N 32 10 47.89 W 104 14 36.85	

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	6660.000	1/100.000	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Jake 36 State #7H Rev0 PCG 31-July-
	1	6660.000	11618.252	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Jake 36 State #7H Rev0 PCG 31-July-



TBD

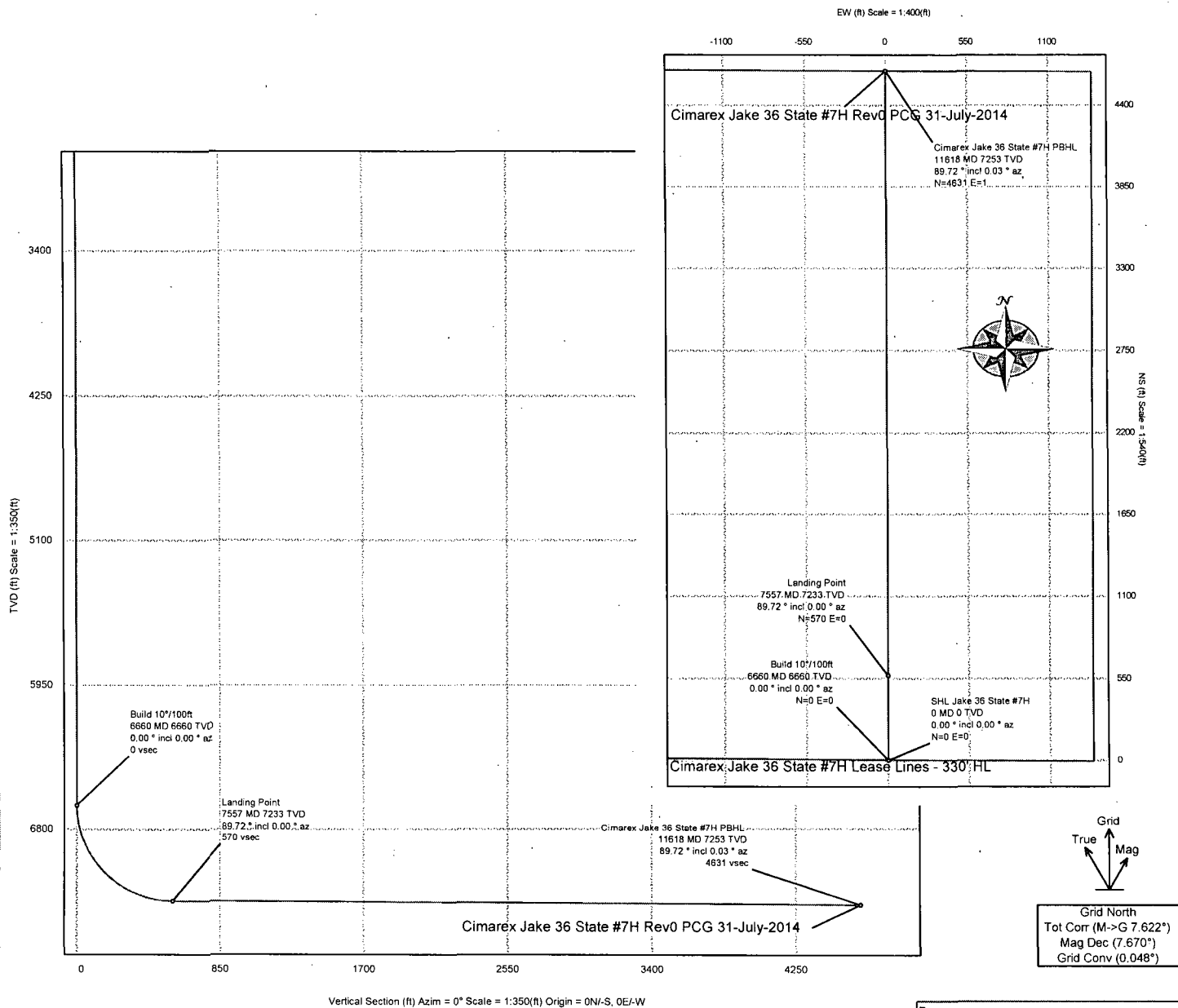
Cimarex

Rev0



Borehole:	Well:	Field:	Structure:
Original Borehole	Jake 36 State #7H	NM Eddy County	TBD

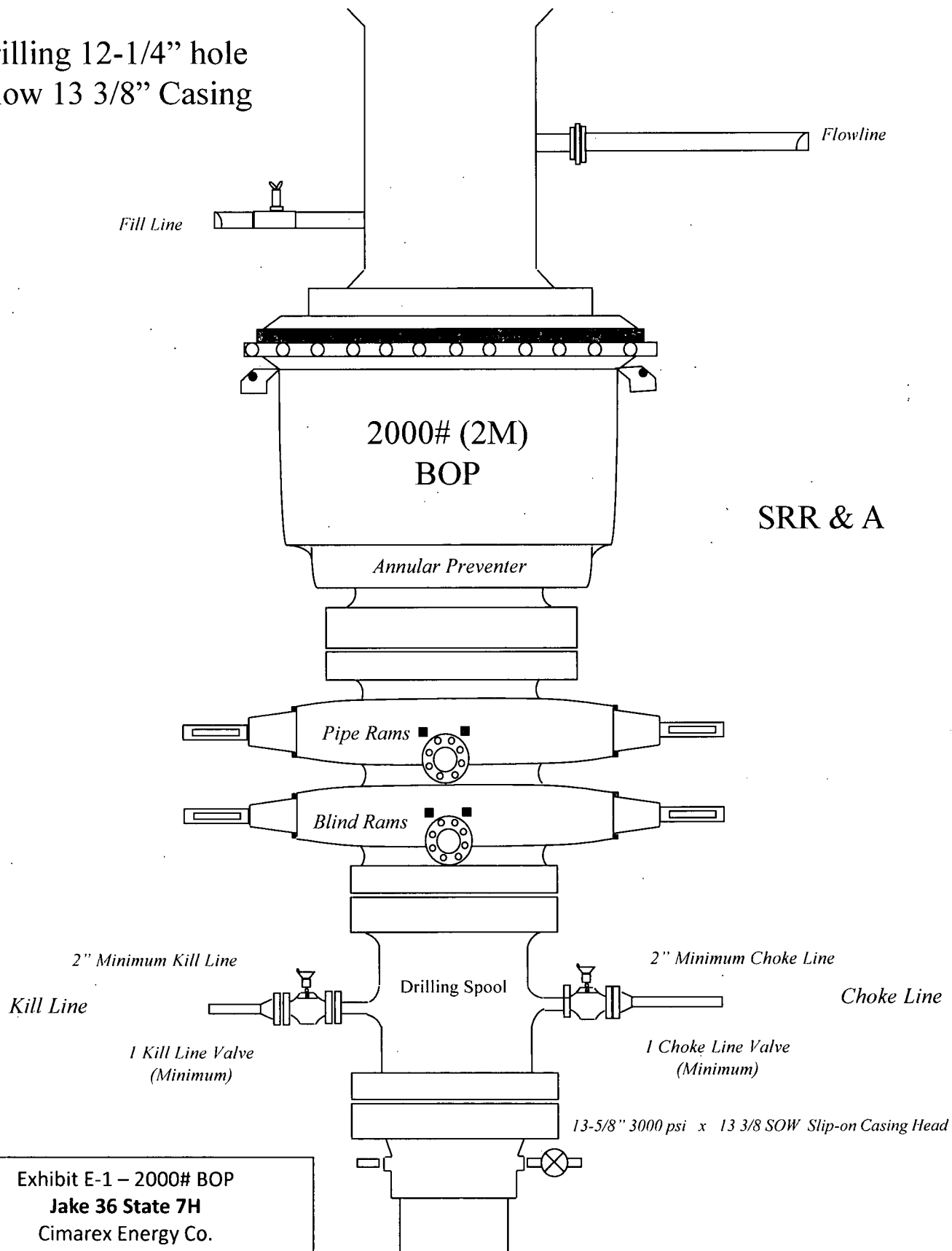
Gravity & Magnetic Parameters		Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet		Miscellaneous
Model: BGGM 2014	Dip: 59.929°	Date: 31-Jul-2014	Lat: N 32 10 2.07	Northing: 424588.97US	Grid Conv: 0.0478°
MagDec: 7.67°	FS: 48150.672nT	Gravity FS: 998.433mgm (9.80665 Based)	Lon: W 104 14 36.91	Easting: 589107.51US	Scale Fact: 0.99990997
				Slot: Jake 36 State #7H	TVD Ref: Ground Level(3385ft above)
				Plan: Rev0 PCG 31-July-2014	



Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Marker MudLine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL Jake 36 State #7H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 10°/100ft	6660.01	0.00	0.00	6660.01	0.00	0.00	0.00	0.00
Landing Point	7557.28	89.72	0.00	7233.00	570.20	570.20	0.00	10.00
Cimarex Jake 36 State #7H PBHL	11618.25	89.72	0.03	7253.00	4631.13	4631.13	1.10	0.00

D E C		CONTROLLED	
Plan ref	Cimarex Jake 36 State #7H Rev0 PCG 31-July-2014		
Drawing ref			
Copy number	of 3		
Date	31-Jul-2014		
1	Originator		
2	DE Sign Off Authority		
3	D&M Line Manager		
4	Client		
Copy number		for	

Drilling 12-1/4" hole
below 13 3/8" Casing



SRR & A

Exhibit E-1 – 2000# BOP
Jake 36 State 7H
Cimarex Energy Co.
36-24S-26E
SHL 330 FSL & 1725 FEL
BHL 330 FNL & 1725 FEL
Eddy County, NM

Drilling 8-3/4" hole
below 9 5/8" Casing

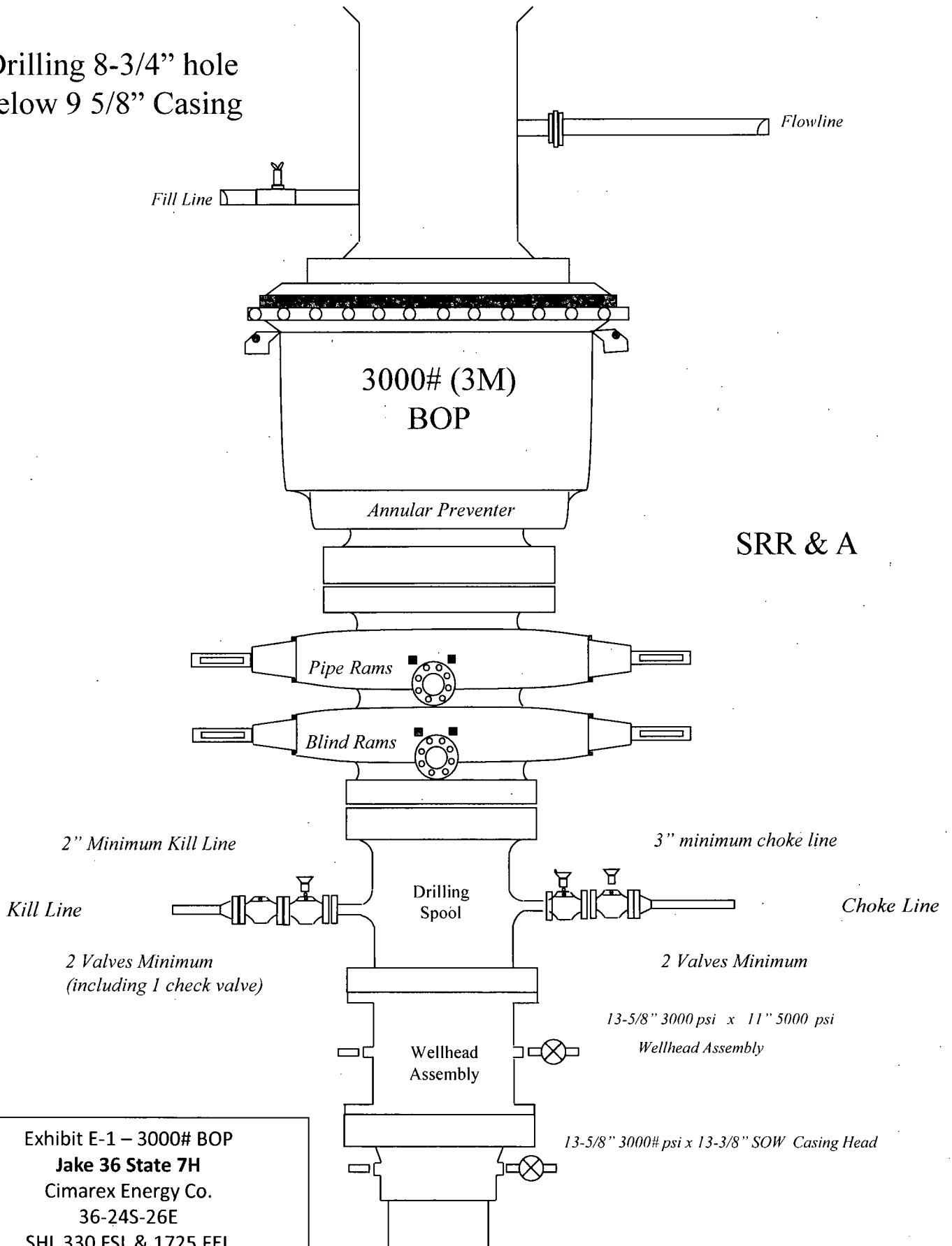


Exhibit E-1 – 3000# BOP
Jake 36 State 7H
Cimarex Energy Co.
36-24S-26E
SHL 330 FSL & 1725 FEL
BHL 330 FNL & 1725 FEL
Eddy County, NM

