

Cimarex Parkway State 17 Com #7H Rev1 RM 2Aug18 Proposal Geodetic Report

(Non-Def Plan)



Report Date: August 02, 2018 - 08:57 AM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Cimarex Parkway State 17 Com #7H / Cimarex Parkway State 17 Com #7H
 Well: Cimarex Parkway State 17 Com #7H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Parkway State 17 Com #7H Rev1 RM 2Aug18
 Survey Date: May 02, 2018
 Tort / AHD / DDI / ERD Ratio: 109.293 * / 5869.339 ft / 5.992 / 0.659
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 39' 22.57978", W 104° 6' 16.11280"
 Location Grid N/E Y/X: N 602558.700 RUS, E 611770.730 RUS
 CRS Grid Convergence Angle: 0.1235 *
 Grid Scale Factor: 0.99991477
 Version / Patch: 2.10.740.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 90.000 * (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3395.100 ft above MSL
 Seabed / Ground Elevation: 3369.100 ft above MSL
 Magnetic Declination: 7.355 *
 Total Gravity Field Strength: 998.5117 mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48065.302 nT
 Magnetic Dip Angle: 60.453 *
 Declination Date: August 02, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.1235 *
 Total Corr Mag North->Grid North: 7.2318 *
 Local Coord Referenced To: Structure Reference Point

30.015-44937
 NM OIL CONSERVATION
 ARTESIA DISTRICT

AUG 03 2018

RECEIVED

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [960' FSL, 342' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
Nudge 2"/100' DLS	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104	6 16.11
	1600.00	2.00	0.00	1599.98	0.00	1.75	0.00	2.00	602560.44	611770.73	N 32 39 22.60 W 104	6 16.11
	1700.00	4.00	0.00	1699.84	0.00	6.98	0.00	2.00	602565.68	611770.73	N 32 39 22.65 W 104	6 16.11
	1800.00	6.00	0.00	1799.45	0.00	15.69	0.00	2.00	602574.39	611770.73	N 32 39 22.74 W 104	6 16.11
	1900.00	8.00	0.00	1898.70	0.00	27.88	0.00	2.00	602586.58	611770.73	N 32 39 22.86 W 104	6 16.11
	1980.68	9.61	0.00	1978.43	0.00	40.23	0.00	2.00	602598.93	611770.73	N 32 39 22.98 W 104	6 16.11
	2000.00	9.61	0.00	1997.48	0.00	43.46	0.00	0.00	602602.15	611770.73	N 32 39 23.01 W 104	6 16.11
	2100.00	9.61	0.00	2096.07	0.00	60.16	0.00	0.00	602618.85	611770.73	N 32 39 23.18 W 104	6 16.11
	2200.00	9.61	0.00	2194.67	0.00	76.86	0.00	0.00	602635.55	611770.73	N 32 39 23.34 W 104	6 16.11
	2300.00	9.61	0.00	2293.26	0.00	93.56	0.00	0.00	602652.25	611770.73	N 32 39 23.51 W 104	6 16.11
	2400.00	9.61	0.00	2391.86	0.00	110.26	0.00	0.00	602668.95	611770.73	N 32 39 23.67 W 104	6 16.11
	2500.00	9.61	0.00	2490.45	0.00	126.96	0.00	0.00	602685.65	611770.73	N 32 39 23.84 W 104	6 16.11
	2600.00	9.61	0.00	2589.05	0.00	143.66	0.00	0.00	602702.35	611770.73	N 32 39 24.00 W 104	6 16.11
	2700.00	9.61	0.00	2687.65	0.00	160.38	0.00	0.00	602719.05	611770.73	N 32 39 24.17 W 104	6 16.11
	2800.00	9.61	0.00	2786.24	0.00	177.06	0.00	0.00	602735.75	611770.73	N 32 39 24.33 W 104	6 16.11
	2900.00	9.61	0.00	2884.84	0.00	193.76	0.00	0.00	602752.44	611770.73	N 32 39 24.50 W 104	6 16.11
	3000.00	9.61	0.00	2983.43	0.00	210.46	0.00	0.00	602769.14	611770.73	N 32 39 24.66 W 104	6 16.11
Delaware Sands	3060.42	9.61	0.00	3043.00	0.00	220.55	0.00	0.00	602779.23	611770.73	N 32 39 24.76 W 104	6 16.11
	3100.00	9.61	0.00	3082.03	0.00	227.16	0.00	0.00	602785.84	611770.73	N 32 39 24.83 W 104	6 16.11
	3200.00	9.61	0.00	3180.62	0.00	243.86	0.00	0.00	602802.54	611770.73	N 32 39 24.99 W 104	6 16.11
	3300.00	9.61	0.00	3279.22	0.00	260.56	0.00	0.00	602819.24	611770.73	N 32 39 25.16 W 104	6 16.11
	3400.00	9.61	0.00	3377.82	0.00	277.26	0.00	0.00	602835.94	611770.73	N 32 39 25.32 W 104	6 16.11
	3500.00	9.61	0.00	3476.41	0.00	293.96	0.00	0.00	602852.64	611770.73	N 32 39 25.49 W 104	6 16.11
	3600.00	9.61	0.00	3575.01	0.00	310.66	0.00	0.00	602869.34	611770.73	N 32 39 25.65 W 104	6 16.10
	3700.00	9.61	0.00	3673.60	0.00	327.36	0.00	0.00	602886.03	611770.73	N 32 39 25.82 W 104	6 16.10
Brushy Canyon	3701.42	9.61	0.00	3675.00	0.00	327.60	0.00	0.00	602886.27	611770.73	N 32 39 25.82 W 104	6 16.10
	3800.00	9.61	0.00	3772.20	0.00	344.06	0.00	0.00	602902.73	611770.73	N 32 39 25.98 W 104	6 16.10
	3900.00	9.61	0.00	3870.79	0.00	360.76	0.00	0.00	602919.43	611770.73	N 32 39 26.15 W 104	6 16.10
	4000.00	9.61	0.00	3969.39	0.00	377.46	0.00	0.00	602936.13	611770.73	N 32 39 26.31 W 104	6 16.10
	4100.00	9.61	0.00	4067.98	0.00	394.16	0.00	0.00	602952.83	611770.73	N 32 39 26.48 W 104	6 16.10
	4200.00	9.61	0.00	4166.58	0.00	410.86	0.00	0.00	602969.53	611770.73	N 32 39 26.65 W 104	6 16.10
Bone Spring	4254.18	9.61	0.00	4220.00	0.00	419.91	0.00	0.00	602978.58	611770.73	N 32 39 26.73 W 104	6 16.10
	4300.00	9.61	0.00	4265.18	0.00	427.56	0.00	0.00	602986.23	611770.73	N 32 39 26.81 W 104	6 16.10
	4400.00	9.61	0.00	4363.77	0.00	444.27	0.00	0.00	603002.93	611770.73	N 32 39 26.98 W 104	6 16.10
	4500.00	9.61	0.00	4462.37	0.00	460.97	0.00	0.00	603019.63	611770.73	N 32 39 27.14 W 104	6 16.10
	4600.00	9.61	0.00	4560.96	0.00	477.67	0.00	0.00	603036.32	611770.73	N 32 39 27.31 W 104	6 16.10
	4700.00	9.61	0.00	4659.56	0.00	494.37	0.00	0.00	603053.02	611770.73	N 32 39 27.47 W 104	6 16.10
	4800.00	9.61	0.00	4758.15	0.00	511.07	0.00	0.00	603069.72	611770.73	N 32 39 27.64 W 104	6 16.10
	4900.00	9.61	0.00	4856.75	0.00	527.77	0.00	0.00	603086.42	611770.73	N 32 39 27.80 W 104	6 16.10
	5000.00	9.61	0.00	4955.35	0.00	544.47	0.00	0.00	603103.12	611770.73	N 32 39 27.97 W 104	6 16.10
	5100.00	9.61	0.00	5053.94	0.00	561.17	0.00	0.00	603119.82	611770.73	N 32 39 28.13 W 104	6 16.10
	5200.00	9.61	0.00	5152.54	0.00	577.87	0.00	0.00	603136.52	611770.73	N 32 39 28.30 W 104	6 16.10
	5300.00	9.61	0.00	5251.13	0.00	594.57	0.00	0.00	603153.22	611770.73	N 32 39 28.46 W 104	6 16.10
	5400.00	9.61	0.00	5349.73	0.00	611.27	0.00	0.00	603169.91	611770.73	N 32 39 28.63 W 104	6 16.10
	5500.00	9.61	0.00	5448.32	0.00	627.97	0.00	0.00	603186.61	611770.73	N 32 39 28.79 W 104	6 16.10
	5600.00	9.61	0.00	5546.92	0.00	644.67	0.00	0.00	603203.31	611770.73	N 32 39 28.96 W 104	6 16.10
	5700.00	9.61	0.00	5645.52	0.00	661.37	0.00	0.00	603220.01	611770.73	N 32 39 29.12 W 104	6 16.10
	5800.00	9.61	0.00	5744.11	0.00	678.07	0.00	0.00	603236.71	611770.73	N 32 39 29.29 W 104	6 16.10
	5900.00	9.61	0.00	5842.71	0.00	694.77	0.00	0.00	603253.41	611770.73	N 32 39 29.45 W 104	6 16.10
	6000.00	9.61	0.00	5941.30	0.00	711.47	0.00	0.00	603270.11	611770.73	N 32 39 29.62 W 104	6 16.09
	6100.00	9.61	0.00	6039.90	0.00	728.17	0.00	0.00	603286.81	611770.73	N 32 39 29.78 W 104	6 16.09
	6200.00	9.61	0.00	6138.49	0.00	744.87	0.00	0.00	603303.51	611770.73	N 32 39 29.95 W 104	6 16.09
	6300.00	9.61	0.00	6237.09	0.00	761.57	0.00	0.00	603320.20	611770.73	N 32 39 30.12 W 104	6 16.09
	6400.00	9.61	0.00	6335.68	0.00	778.27	0.00	0.00	603336.90	611770.73	N 32 39 30.28 W 104	6 16.09
	6500.00	9.61	0.00	6434.28	0.00	794.97	0.00	0.00	603353.60	611770.73	N 32 39 30.45 W 104	6 16.09
	6600.00	9.61	0.00	6532.88	0.00	811.67	0.00	0.00	603370.30	611770.73	N 32 39 30.61 W 104	6 16.09
	6700.00	9.61	0.00	6631.47	0.00	828.37	0.00	0.00	603387.00	611770.73	N 32 39 30.78 W 104	6 16.09
	6800.00	9.61	0.00	6730.07	0.00	845.07	0.00	0.00	603403.70	611770.73	N 32 39 30.94 W 104	6 16.09
	6900.00	9.61	0.00	6828.66	0.00	861.77	0.00	0.00	603420.40	611770.73	N 32 39 31.11 W 104	

Comments	MD	Incl	Azth Grd	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
1st Bone Spring Sand	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(N/S...°)	(E/W...°)
	6935.84	9.61	0.00	6884.00	0.00	887.78	0.00	0.00	603426.38	611770.73	N 32.39 31.17	W 104 6.16 09
	7000.00	9.61	0.00	6927.26	0.00	878.47	0.00	0.00	603437.10	611770.73	N 32.39 31.27	W 104 6.16 09
	7100.00	9.61	0.00	7025.85	0.00	885.17	0.00	0.00	603453.78	611770.73	N 32.39 31.44	W 104 6.16 09
	7200.00	9.61	0.00	7124.45	0.00	891.87	0.00	0.00	603470.46	611770.73	N 32.39 31.60	W 104 6.16 09
	7300.00	9.61	0.00	7222.05	0.00	928.57	0.00	0.00	603487.17	611770.73	N 32.39 31.77	W 104 6.16 09
	7400.00	9.61	0.00	7321.64	0.00	945.27	0.00	0.00	603503.89	611770.73	N 32.39 31.93	W 104 6.16 09
	7500.00	9.61	0.00	7420.24	0.00	961.97	0.00	0.00	603520.59	611770.73	N 32.39 32.10	W 104 6.16 09
Drop to Vertical 27100' DLS	7580.80	9.61	0.00	7500.80	0.00	975.48	0.00	0.00	603534.10	611770.73	N 32.39 32.23	W 104 6.16 09
	7600.00	9.23	0.00	7518.84	0.00	978.61	0.00	2.00	603537.23	611770.73	N 32.39 32.26	W 104 6.16 09
	7700.00	7.23	0.00	7617.81	0.00	892.53	0.00	2.00	603551.84	611770.73	N 32.39 32.40	W 104 6.16 09
2nd Bone Spring Sand	7782.71	5.58	0.00	7700.00	0.00	1002.15	0.00	2.00	603560.77	611770.73	N 32.39 32.60	W 104 6.16 09
	7800.00	5.23	0.00	7711.21	0.00	1003.78	0.00	2.00	603562.39	611770.73	N 32.39 32.51	W 104 6.16 09
	7900.00	3.23	0.00	7816.83	0.00	1011.18	0.00	2.00	603569.77	611770.73	N 32.39 32.58	W 104 6.16 09
	8000.00	1.23	0.00	7918.43	0.00	1015.05	0.00	2.00	603573.67	611770.73	N 32.39 32.58	W 104 6.16 09
Hold Vertical	8061.56	0.00	0.00	7978.43	0.00	1015.72	0.00	2.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
	8100.00	0.00	0.00	8018.85	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
	8200.00	0.00	0.00	8118.85	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
	8300.00	0.00	0.00	8218.85	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
	8400.00	0.00	0.00	8318.85	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
KOP - Build 127100' DLS	8500.00	0.00	0.00	8418.85	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
	8510.69	0.00	0.00	8427.54	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32.39 32.63	W 104 6.16 09
	8600.00	0.00	0.00	8516.33	8.33	1015.72	8.33	12.00	603574.33	611778.06	N 32.39 32.63	W 104 6.15 99
3rd Bone Spring Sand	8623.37	14.24	90.00	8545.00	14.67	1015.72	14.67	12.00	603574.33	611785.40	N 32.39 32.63	W 104 6.15 92
	8700.00	22.72	90.00	8611.93	37.04	1015.72	37.04	12.00	603574.33	611807.77	N 32.39 32.63	W 104 6.15 85
	8800.00	34.72	90.00	8689.47	58.00	1015.72	58.00	12.00	603574.33	611855.73	N 32.39 32.63	W 104 6.15 69
	8900.00	46.72	90.00	8775.12	78.56	1015.72	78.56	12.00	603574.33	611900.25	N 32.39 32.63	W 104 6.15 43
	9000.00	58.72	90.00	8835.49	98.54	1015.72	98.54	12.00	603574.33	612000.50	N 32.39 32.63	W 104 6.15 10
	9100.00	70.72	90.00	8878.22	118.78	1015.71	118.78	12.00	603574.33	612090.60	N 32.39 32.62	W 104 6.12 35
	9200.00	82.72	90.00	8901.15	138.94	1015.71	138.94	12.00	603574.33	612187.63	N 32.39 32.62	W 104 6.11 21
Landing Point	9261.23	90.07	90.00	8904.96	158.78	1015.71	158.78	0.00	603574.33	612248.70	N 32.39 32.62	W 104 6.10 50
	9300.00	90.07	90.00	8904.64	178.78	1015.71	178.78	0.00	603574.33	612287.46	N 32.39 32.62	W 104 6.10 50
	9400.00	90.07	90.00	8904.73	198.78	1015.71	198.78	0.00	603574.32	612347.45	N 32.39 32.61	W 104 6.87
	9500.00	90.07	90.00	8904.61	218.78	1015.71	218.78	0.00	603574.32	612407.44	N 32.39 32.61	W 104 6.87
	9600.00	90.07	90.00	8904.58	238.78	1015.71	238.78	0.00	603574.32	612467.44	N 32.39 32.61	W 104 6.87
	9700.00	90.07	90.00	8904.39	258.78	1015.71	258.78	0.00	603574.32	612527.42	N 32.39 32.61	W 104 6.87
	9800.00	90.07	90.00	8904.28	278.78	1015.71	278.78	0.00	603574.32	612587.41	N 32.39 32.61	W 104 6.87
	9900.00	90.07	90.00	8904.16	298.78	1015.71	298.78	0.00	603574.32	612647.39	N 32.39 32.60	W 104 6.85
	10000.00	90.07	90.00	8904.04	318.78	1015.71	318.78	0.00	603574.32	612707.38	N 32.39 32.60	W 104 6.85
	10100.00	90.07	90.00	8903.93	338.78	1015.71	338.78	0.00	603574.32	612767.37	N 32.39 32.60	W 104 6.85
	10200.00	90.07	90.00	8903.81	358.78	1015.71	358.78	0.00	603574.32	612827.36	N 32.39 32.59	W 104 6.85
	10300.00	90.07	90.00	8903.70	378.78	1015.71	378.78	0.00	603574.32	612887.35	N 32.39 32.59	W 104 6.85
	10400.00	90.07	90.00	8903.58	398.78	1015.71	398.78	0.00	603574.32	612947.34	N 32.39 32.59	W 104 6.85
	10500.00	90.07	90.00	8903.47	418.78	1015.71	418.78	0.00	603574.32	613007.33	N 32.39 32.59	W 104 6.85
	10600.00	90.07	90.00	8903.36	438.78	1015.71	438.78	0.00	603574.32	613067.32	N 32.39 32.59	W 104 6.85
	10700.00	90.07	90.00	8903.24	458.78	1015.71	458.78	0.00	603574.32	613127.31	N 32.39 32.59	W 104 6.85
	10800.00	90.07	90.00	8903.13	478.78	1015.71	478.78	0.00	603574.32	613187.30	N 32.39 32.58	W 104 6.85
	10900.00	90.07	90.00	8903.01	498.78	1015.71	498.78	0.00	603574.32	613247.29	N 32.39 32.58	W 104 6.85
	11000.00	90.07	90.00	8902.90	518.78	1015.71	518.78	0.00	603574.32	613307.28	N 32.39 32.58	W 104 6.85
	11100.00	90.07	90.00	8902.78	538.78	1015.71	538.78	0.00	603574.32	613367.27	N 32.39 32.58	W 104 6.85
	11200.00	90.07	90.00	8902.67	558.78	1015.71	558.78	0.00	603574.32	613427.26	N 32.39 32.58	W 104 6.85
	11300.00	90.07	90.00	8902.56	578.78	1015.71	578.78	0.00	603574.32	613487.25	N 32.39 32.57	W 104 6.85
	11400.00	90.07	90.00	8902.44	598.78	1015.71	598.78	0.00	603574.32	613547.24	N 32.39 32.57	W 104 6.85
	11500.00	90.07	90.00	8902.33	618.78	1015.71	618.78	0.00	603574.32	613607.23	N 32.39 32.57	W 104 6.85
	11600.00	90.07	90.00	8902.21	638.78	1015.71	638.78	0.00	603574.32	613667.22	N 32.39 32.57	W 104 6.85
	11700.00	90.07	90.00	8902.10	658.78	1015.71	658.78	0.00	603574.32	613727.21	N 32.39 32.56	W 104 6.85
	11800.00	90.07	90.00	8901.98	678.78	1015.70	678.78	0.00	603574.32	613787.20	N 32.39 32.56	W 104 6.85
	11900.00	90.07	90.00	8901.87	698.78	1015.70	698.78	0.00	603574.32	613847.19	N 32.39 32.56	W 104 6.85
	12000.00	90.07	90.00	8901.76	718.78	1015.70	718.78	0.00	603574.32	613907.18	N 32.39 32.56	W 104 6.85
	12100.00	90.07	90.00	8901.65	738.78	1015.70	738.78	0.00	603574.32	613967.17	N 32.39 32.56	W 104 6.85
	12200.00	90.07	90.00	8901.54	758.78	1015.70	758.78	0.00	603574.32	614027.16	N 32.39 32.56	W 104 6.85
	12300.00	90.07	90.00	8901.43	778.78	1015.70	778.78	0.00	603574.32	614087.15	N 32.39 32.55	W 104 6.85
	12400.00	90.07	90.00	8901.32	798.78	1015.70	798.78	0.00	603574.31	614147.14	N 32.39 32.55	W 104 6.85
	12500.00	90.07	90.00	8901.21	818.78	1015.70	818.78	0.00	603574.31	614207.13	N 32.39 32.55	W 104 6.85
	12600.00	90.07	90.00	8901.10	838.78	1015.70	838.78	0.00	603574.31	614267.12	N 32.39 32.55	W 104 6.85
	12700.00	90.07	90.00	8901.00	858.78	1015.70	858.78	0.00	603574.31	614327.11	N 32.39 32.55	W 104 6.85
	12800.00	90.07	90.00	8900.89	878.78	1015.70	878.78	0.00	603574.31	614387.10	N 32.39 32.54	W 104 6.85
	12900.00	90.07	90.00	8900.78	898.78	1015.70	898.78	0.00	603574.31	614447.09	N 32.39 32.54	W 104 6.85
	13000.00	90.07	90.00	8900.67	918.78	1015.70	918.78	0.00	603574.31	614507.08	N 32.39 32.54	W 104 6.85
	13100.00	90.07	90.00	8900.56	938.78	1015.70	938.78	0.00	603574.31	614567.07	N 32.39 32.54	W 104 6.85
	13200.00	90.07	90.00	8900.45	958.78	1015.70	958.78	0.00	603574.31	614627.06	N 32.39 32.54	W 104 6.85
	13300.00	90.07	90.00	8900.34	978.78	1015.70	978.78	0.00	603574.31	614687.05	N 32.39 32.54	W 104 6.85
	13400.00	90.07	90.00	8900.23	998.78	1015.70	998.78	0.00	603574.31	614747.04	N 32.39 32.54	W 104 6.85
	13500.00	90.07	90.00	8900.12	1018.78	1015.70	1018.78	0.00	603574.31	614807.03	N 32.39 32.54	W 104 6.85
	13600.00	90.07	90.00	8900.01	1038.78	1015.70	1038.78	0.00	603574.31	614867.02	N 32.39 32.54	W 104 6.85
Cinmarex Parkway State 17 Com #7H - PBH, 11980' FSL, 100 FEU	13636.65	90.07	90.00	8900.00	1058.82	1015.70	1058.82	0.00	603574.31	614927.01	N 32.39 32.54	W 104 6.85
Survey Type: Non-Def Plan												
Survey Error Model: ISCWSA Rev 0 *** 3-D 85.000% Confidence 2.7855 sigma												
Survey Program:												
Description	Part	MD From (ft)	MD To (ft)	EOU Frq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey			
	1	0.0										

Cimarex Parkway State 17 Com #7H Rev1 RM 2Aug18 Proposal Geodetic Report

(Non-Def Plan)



Report Date: August 02, 2018 - 06:58 AM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Cimarex Parkway State 17 Com #7H / Cimarex Parkway State 17 Com #7H
 Well: Cimarex Parkway State 17 Com #7H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Parkway State 17 Com #7H Rev1 RM 2Aug18
 Survey Date: May 02, 2018
 Tort / AHD / DDI / ERD Ratio: 109.293' / 5869.339 ft / 5.992 / 0.659
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 39' 22.57978", W 104° 6' 16.11280"
 Location Grid N/E Y/X: N 602558.700 NUS, E 611770.730 NUS
 CRS Grid Convergence Angle: 0.1235°
 Grid Scale Factor: 0.99991477
 Version / Patch: 2.10.740.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 90.000° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3395.100 ft above MSL
 Seabed / Ground Elevation: 3369.100 ft above MSL
 Magnetic Declination: 7.355°
 Total Gravity Field Strength: 998.5117mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48065.302 nT
 Magnetic Dip Angle: 60.453°
 Declination Date: August 02, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.1235°
 Total Corr Mag North->Grid North: 7.2318°
 Local Coord Referenced To: Structure Reference Point

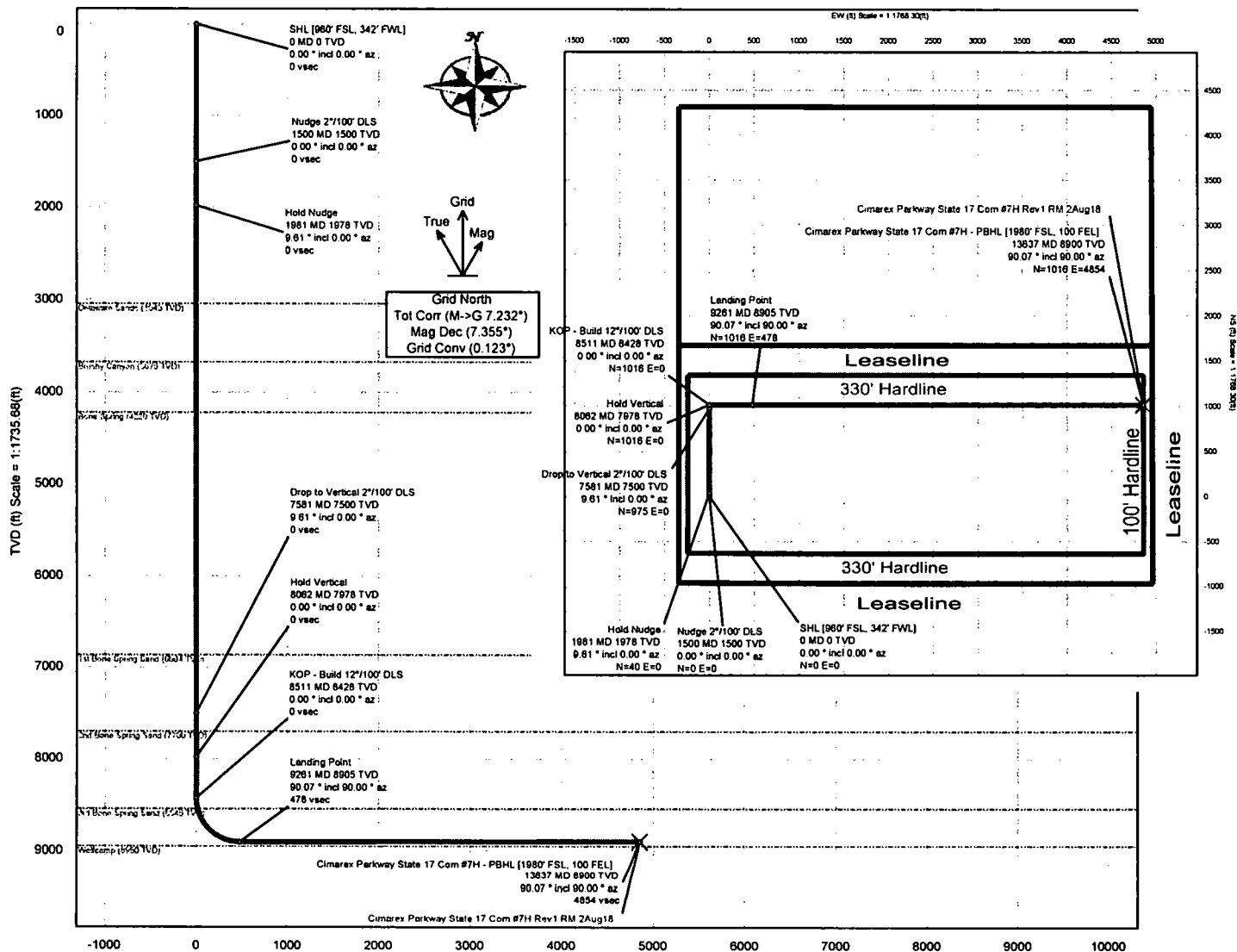
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL (960' FSL, 342' FWL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	602558.70	611770.73	N 32 39 22.58 W 104 6 16.11	
Nudge 2"/100' DLS	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	602558.70	611770.73	N 32 39 22.58 W 104 6 16.11	
Hold Nudge	1980.68	9.61	0.00	1978.43	0.00	40.23	0.00	2.00	602598.93	611770.73	N 32 39 22.98 W 104 6 16.11	
Drop to Vertical 2"/100' DLS	7580.90	9.61	0.00	7500.00	0.00	975.48	0.00	0.00	603534.10	611770.73	N 32 39 32.23 W 104 6 16.09	
Hold Vertical	8061.58	0.00	0.00	7978.43	0.00	1015.72	0.00	2.00	603574.33	611770.73	N 32 39 32.63 W 104 6 16.09	
KOP - Build	8510.69	0.00	0.00	8427.54	0.00	1015.72	0.00	0.00	603574.33	611770.73	N 32 39 32.63 W 104 6 16.09	
12"/100' DLS												
Landing Point	9261.23	90.07	90.00	8905.00	478.01	1015.71	478.01	12.00	603574.33	612248.70	N 32 39 32.62 W 104 6 10.50	
Cimarex Parkway State 17 Com #7H - PBHL (1980' FSL, 100 FEL)	13636.85	90.07	90.00	8900.00	4853.82	1015.70	4853.62	0.00	603574.31	616623.93	N 32 39 32.52 W 104 5 19.32	

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)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	30.000	30.000		NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex Parkway State 17 Com #7H Rev1 RM 2Aug18
	1	26.000	13636.849	1/100.000	30.000	30.000		NAL_MWD_IFR1+MS	Original Borehole / Cimarex Parkway State 17 Com #7H Rev1

Borehole: Original Borehole		Well: Cimarex Parkway State 17 Com #7H	Field: NM Eddy County (NAD 83)	Structure: Cimarex Parkway State 17 Com #7H
Gravity & Magnetic Parameters		Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet		Miscellaneous
Model: HDGM 2018	Dip: 60.453°	Date: 03-Aug-2018	Lat: N 32 39 22.68	Cimarex Parkway State 17 Com #7H
MagDec: 7.355°	FB: 48065 302nT	Gravity FB: 998.812mg (9.80665 Based)	North: 80258.77US	Plan: Cimarex Parkway State 17 Com #7H Rev1 RM 2Aug18
			Grid Conv: 0.1236°	TVD Ref: RKB(1396.1ft above MSL)
			Lon: W 104 8 16.11	
			Easting: 811770.73RUS	
			Scale Fact: 0.99981477	



Vertical Section (ft) Azim = 90.00° Scale = 1:1735.68(ft) Origin = 0N/-S, 0E/-W

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [960' FSL, 342' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nudge 2°/100' DLS	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00
Hold Nudge	1980.68	9.61	0.00	1978.43	0.00	40.23	0.00	2.00
Delaware Sands	3060.42	9.61	0.00	3043.00	0.00	220.55	0.00	0.00
Brushy Canyon	3701.42	9.61	0.00	3675.00	0.00	327.60	0.00	0.00
Bone Spring	4254.18	9.61	0.00	4220.00	0.00	419.91	0.00	0.00
1st Bone Spring Sand	6935.84	9.61	0.00	6864.00	0.00	867.76	0.00	0.00
Drop to Vertical 2°/100' DLS	7580.90	9.61	0.00	7500.00	0.00	975.48	0.00	0.00
2nd Bone Spring Sand	7782.71	5.58	0.00	7700.00	0.00	1002.15	0.00	2.00
Hold Vertical	8061.58	0.00	0.00	7978.43	0.00	1015.72	0.00	2.00
KOP - Build 12°/100' DLS	8510.69	0.00	0.00	8427.54	0.00	1015.72	0.00	0.00
3rd Bone Spring Sand	8629.37	14.24	90.00	8545.00	14.67	1015.72	14.67	12.00
Landing Point	9261.23	90.07	90.00	8905.00	478.01	1015.71	478.01	12.00
Cimarex Parkway State 17 Com #7H - PBHL [1980' FSL, 100 FEL]	13636.85	90.07	90.00	8900.00	4853.62	1015.70	4853.62	0.00
Wolfcamp	NaN			8950.00				