

30-015-42739

Schlumberger

Final Survey - Cimarex Laguna Grande Unit 7H MWD Final (Surcon
Corrected)
(Def Survey)

CIMAREX

Report Date: June 27, 2018 - 05:25 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Laguna Grande Unit 7H / Cimarex Laguna Grande Unit 7H
Well: Cimarex Laguna Grande Unit 7H
Borehole: Original Borehole
UW / API#: Unknown / Unknown
Survey Name: Cimarex Laguna Grande Unit 7H MWD Final (Surcon Corrected)
Survey Date: January 10, 2018
Tort / AHD / DDI / ERD Ratio: 188.550' / 5107.276 ft / 6.142 / 0.510
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 16' 57.76892", W 104° 0' 13.75523"
Location Grid N/E Y/X: N 466740.400 RUS, E 643168.000 RUS
CRS Grid Convergence Angle: 0.1760°
Grid Scale Factor: 0.99992097
Version / Patch: 2.10.720.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 180.000° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3031.000 ft above MSL
Seabed / Ground Elevation: 3007.000 ft above MSL
Magnetic Declination: 7.191°
Total Gravity Field Strength: 998.4704mgm (8.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48067.443 nT
Magnetic Dip Angle: 60.088°
Declination Date: January 10, 2018
Magnetic Declination Model: HDGM 2017
North Reference: Grid North
Grid Convergence Used: 0.1760°
Total Corr Mag North→Grid: 7.0149°
North: 7.0149°
Local Coord Referenced To: Well Head

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 18 2018

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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 ° ' ")
SL [180' FNL, 1650' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	466740.40	643168.00	N 32 16 57.77	W 104 0 13.76
	246.00	0.68	297.08	245.99	-0.66	0.66	-1.30	0.28	466741.06	643168.70	N 32 16 57.78	W 104 0 13.77
	276.00	0.89	300.36	275.99	-0.88	0.88	-1.66	0.72	466741.26	643168.34	N 32 16 57.78	W 104 0 13.77
	397.00	0.87	296.97	396.98	-1.75	1.75	-3.29	0.05	466742.15	643164.71	N 32 16 57.79	W 104 0 13.79
	578.00	0.96	303.25	577.95	-3.21	3.21	-5.78	0.07	466743.61	643162.22	N 32 16 57.80	W 104 0 13.82
	760.00	1.25	297.40	759.92	-4.96	4.96	-8.82	0.17	466745.36	643159.18	N 32 16 57.82	W 104 0 13.86
	941.00	1.52	287.05	940.87	-6.57	6.57	-12.87	0.20	466746.97	643155.13	N 32 16 57.83	W 104 0 13.90
	1035.00	1.74	279.65	1034.83	-7.18	7.18	-15.47	0.32	466747.58	643152.54	N 32 16 57.84	W 104 0 13.94
	1129.00	2.05	282.02	1128.78	-7.77	7.77	-18.52	0.34	466748.16	643149.48	N 32 16 57.85	W 104 0 13.97
	1223.00	2.08	287.57	1222.72	-8.63	8.63	-21.79	0.22	466749.03	643146.21	N 32 16 57.85	W 104 0 14.01
	1412.00	0.53	336.20	1411.67	-10.47	10.47	-25.41	0.94	466750.87	643142.59	N 32 16 57.87	W 104 0 14.05
	1506.00	0.92	325.92	1505.66	-11.49	11.49	-26.01	0.44	466751.89	643141.99	N 32 16 57.88	W 104 0 14.06
	1601.00	1.02	330.86	1600.64	-12.86	12.88	-26.85	0.14	466753.26	643141.15	N 32 16 57.90	W 104 0 14.07
	1695.00	1.00	326.98	1694.63	-14.28	14.28	-27.70	0.08	466754.68	643140.30	N 32 16 57.91	W 104 0 14.08
	1790.00	1.08	323.91	1789.81	-15.70	15.70	-28.68	0.10	466756.09	643139.32	N 32 16 57.93	W 104 0 14.09
	1884.00	1.07	316.55	1883.60	-17.05	17.05	-29.81	0.15	466757.45	643138.20	N 32 16 57.94	W 104 0 14.10
	1978.00	1.14	314.07	1977.58	-18.34	18.34	-31.08	0.09	466758.74	643136.92	N 32 16 57.95	W 104 0 14.12
	2073.00	0.73	12.36	2072.57	-19.59	19.59	-31.63	1.03	466759.98	643136.37	N 32 16 57.96	W 104 0 14.12
	2167.00	1.29	62.76	2166.56	-20.65	20.65	-30.56	1.06	466761.05	643137.44	N 32 16 57.97	W 104 0 14.11
	2261.00	1.47	61.68	2260.53	-21.71	21.71	-28.56	0.19	466762.11	643139.44	N 32 16 57.98	W 104 0 14.09
	2356.00	2.11	70.02	2355.48	-22.89	22.89	-25.84	0.73	466763.28	643142.16	N 32 16 58.00	W 104 0 14.06
	2450.00	1.79	98.77	2449.43	-23.25	23.25	-22.77	1.08	466763.65	643145.23	N 32 16 58.00	W 104 0 14.02
	2545.00	2.01	134.18	2544.38	-21.87	21.87	-20.11	1.24	466762.26	643147.90	N 32 16 57.99	W 104 0 13.99
	2639.00	2.35	135.12	2638.31	-19.35	19.35	-17.56	0.36	466759.75	643150.44	N 32 16 57.96	W 104 0 13.96
	2733.00	1.40	146.79	2732.26	-17.03	17.03	-15.58	1.08	466757.42	643152.43	N 32 16 57.94	W 104 0 13.94
	2775.00	0.42	185.38	2774.26	-16.44	16.44	-15.31	2.63	466756.84	643152.69	N 32 16 57.93	W 104 0 13.93
	2812.00	0.34	356.59	2811.26	-18.42	16.42	-15.33	2.05	466756.82	643152.67	N 32 16 57.93	W 104 0 13.93
	2907.00	0.30	241.10	2906.25	-18.58	16.58	-15.56	0.57	466756.98	643152.44	N 32 16 57.93	W 104 0 13.94
	3001.00	0.56	252.13	3000.25	-18.32	16.32	-18.21	0.29	466756.72	643151.79	N 32 16 57.93	W 104 0 13.94
	3095.00	1.18	257.95	3094.24	-15.98	15.98	-17.60	0.67	466756.37	643150.40	N 32 16 57.93	W 104 0 13.96
	3189.00	2.96	265.38	3188.18	-15.58	15.58	-20.96	1.91	466755.98	643147.04	N 32 16 57.92	W 104 0 14.00
	3284.00	3.70	263.32	3283.01	-15.02	15.02	-26.45	0.79	466755.42	643141.55	N 32 16 57.92	W 104 0 14.06
	3378.00	4.05	263.74	3376.80	-14.31	14.31	-32.77	0.37	466754.71	643135.24	N 32 16 57.91	W 104 0 14.14
	3567.00	3.79	261.33	3565.36	-12.64	12.64	-45.58	0.16	466753.04	643122.43	N 32 16 57.90	W 104 0 14.29
	3661.00	3.80	258.54	3659.15	-11.55	11.55	-51.70	0.20	466751.95	643116.30	N 32 16 57.88	W 104 0 14.36
	3755.00	3.63	259.23	3752.95	-10.38	10.38	-57.68	0.19	466750.78	643110.33	N 32 16 57.87	W 104 0 14.43
	3850.00	3.61	261.43	3847.76	-9.37	9.37	-63.59	0.15	466749.77	643104.42	N 32 16 57.86	W 104 0 14.50
	3944.00	3.64	258.37	3941.58	-8.33	8.33	-69.44	0.21	466748.73	643098.57	N 32 16 57.85	W 104 0 14.56
	4133.00	3.66	256.86	4130.19	-7.75	5.75	-81.19	0.05	466746.15	643086.82	N 32 16 57.83	W 104 0 14.70
	4227.00	4.17	266.97	4223.97	-6.88	4.88	-87.52	0.91	466745.28	643080.48	N 32 16 57.82	W 104 0 14.77
	4322.00	4.32	270.06	4318.71	-4.71	4.71	-94.55	0.29	466745.11	643073.48	N 32 16 57.82	W 104 0 14.86
	4416.00	4.24	267.69	4412.45	-4.57	4.57	-101.56	0.21	466744.97	643066.45	N 32 16 57.82	W 104 0 14.94
	4510.00	4.17	266.48	4506.20	-4.22	4.22	-108.45	0.12	466744.62	643059.58	N 32 16 57.81	W 104 0 15.02
	4605.00	4.28	266.83	4600.94	-3.81	3.81	-115.43	0.12	466744.21	643052.58	N 32 16 57.81	W 104 0 15.10
	4699.00	4.79	274.27	4694.85	-3.91	3.91	-122.85	0.83	466744.31	643045.16	N 32 16 57.81	W 104 0 15.19
	4794.00	4.88	274.11	4789.31	-4.49	4.49	-130.83	0.10	466744.89	643037.18	N 32 16 57.82	W 104 0 15.28
	4888.00	5.08	274.48	4882.95	-5.11	5.11	-138.97	0.22	466745.51	643029.04	N 32 16 57.82	W 104 0 15.37
	4982.00	4.70	277.22	4976.61	-5.92	5.92	-146.94	0.47	466746.31	643021.07	N 32 16 57.83	W 104 0 15.47
	5076.00	4.47	275.53	5070.31	-6.75	6.75	-154.41	0.28	466747.15	643013.61	N 32 16 57.84	W 104 0 15.55
	5171.00	4.55	274.78	5165.02	-7.42	7.42	-161.85	0.10	466747.82	643006.17	N 32 16 57.85	W 104 0 15.64
	5265.00	3.55	264.68	5258.78	-7.46	7.46	-168.46	1.30	466747.86	642999.55	N 32 16 57.85	W 104 0 15.72
	5359.00	3.39	260.03	5352.61	-6.71	6.71	-174.10	0.34	466747.11	642993.92	N 32 16 57.84	W 104 0 15.78
	5453.00	3.42	258.46	5446.44	-5.67	5.67	-179.58	0.10	466746.07	642988.43	N 32 16 57.83	W 104 0 15.85
	5548.00	2.57	259.22	5541.31	-4.71	4.71	-184.45	0.90	466745.10	642983.57	N 32 16 57.82	W 104 0 15.90
	5642.00	2.49	259.06	5635.22	-3.92	3.92	-188.52	0.09	466744.32	642979.49	N 32 16 57.81	W 104 0 15.95
	5736.00	2.46	266.55	5729.13	-3.41	3.41	-192.54	0.35	466743.81	642975.47	N 32 16 57.81	W 104 0 16.00
	5830.00	2.61	269.12	5823.04	-3.26	3.26	-196.70	0.20	466743.66	642971.32	N 32 16 57.81	W 104 0 16.05
	5925.00	0.46	265.50	5918.00	-3.20	3.20	-199.24	2.26	466743.60	642968.78	N 32 16 57.81	W 104 0 16.08
	6019.00	0.36	250.16	6012.00	-3.07	3.07	-199.89	0.16	466743.47	642968.12	N 32 16 57.81	W 104 0 16.08
	6208.00	0.30	223.74	6201.00	-2.51	2.51	-200.79	0.09	466742.91	642967.22	N 32 16 57.80	W 104 0 16.09
	6397.00	0.91	232.38	6389.99	-1.23	1.23	-202.32	0.33	466741.63	642965.69	N 32 16 57.79	W 104 0 16.11
	6585.00	0.99	230.00	6577.96	-0.72	0.72	-204.75	0.05	466739.68	642963.27	N 32 16 57.77	W 104 0 16.14
	6774.00	0.42	199.52	6766.95	2.42	2.42	-206.23	0.35	466737.98	642961.78	N 32 16 57.75	W 104 0 16.16
	6962.00	1.42	307.03	6954.93	1.67	1.67	-208.32	0.85	466736.73	642959.69	N 32 16 57.76	W 104 0 16.18
	7151.00	0.63	304.63	7143.89	-0.33	0.33	-211.05	0.42	466740.73	642956.97	N 32 16 57.78	W 104 0 16.21
	7339.00	0.74	201.02	7331.89	0.21	0.21	-212.33	0.57	466740.19	642955.68	N 32 16 57.77	W 104 0 16.23
	7528.00	1.95	235.11	7520.83	3.19	3.19	-215.41	0.74	466737.21	642952.61	N 32 16 57.74	W 104 0 16.26
	7623.00	0.82	209.33	7615.80	4.71	4.71	-217.07	1.33	466735.69	642950.95	N 32 16 57.73	W 104 0 16.28
	7717.00	0.96	63.76	7709.80	4.95	4.95	-216.69	1.81	466735.45	642951.33	N 32 16 57.73	W 104 0 16.28
	7811.00	1.12	57.41	7803.78	4.11	4.11	-215.21	0.21	466736.29	642952.81	N 32 16 57.73	W 104 0 16.26
	7906.00	1.20	84.06	7898.77	3.50	3.50	-213.44	0.57	466736.90	642954.58	N 32 16 57.74	W 104 0 16.24
	8000.00	1.03	139.74	7992.75	4.05	4.05	-211.91	1.12	466736.35	642956.10	N 32 16 57.74	W 104 0 16.22
	8094.00	0.49	184.91	8086.74	5.09	5.09	-211.40	0.82	466735.31	642956.61	N 32 16 57.72	W 104 0 16.22
	8188.00	1.09	196.71	8180.73	6.35	6.35	-211.69	0.68	466734.05	642956.32	N 32 16 57.71	W 104 0 16.22
	8282.00	0.49	23.20	8274.73	6.83							

Comments	MD (m)	Incl (°)	Asm Grd	TVD (m)	VSEC (m)	NS (m)	EW (m)	DLS (m)	Northing (m)	Eastng (m)	Latitude (N/S+°)	Longitude (E/W+°)
First Take Point	8471.00	1.33	4.80	8463.11	4.09	-4.09	-212.43	0.93	466736.31	642955.58	N 32 16 57.73 W 104	0 16 23
	8563.00	1.62	16.62	8551.67	-0.42	-1.71	-211.96	0.43	466738.69	642956.06	N 32 16 57.78 W 104	0 16 22
	8659.00	1.27	34.71	8651.84	1.71	0.42	-210.99	0.61	466740.82	642957.03	N 32 16 57.78 W 104	0 16 21
	8753.00	1.06	59.78	8743.63	-1.69	1.69	-209.68	0.59	466742.10	642958.33	N 32 16 57.78 W 104	0 16 20
	8848.00	0.96	129.30	8840.61	-1.70	1.70	-208.28	1.04	466742.09	642958.74	N 32 16 57.78 W 104	0 16 19
	8942.00	1.25	155.32	8933.60	-0.37	0.37	-207.18	0.78	466740.77	642960.63	N 32 16 57.78 W 104	0 16 17
	9037.00	1.38	181.33	9023.37	1.89	-1.89	-206.79	0.74	466738.51	642960.23	N 32 16 57.75 W 104	0 16 16
	9131.00	1.03	192.08	9123.53	4.69	-4.69	-207.61	0.32	466735.91	642960.92	N 32 16 57.73 W 104	0 16 15
	9225.00	1.43	201.26	9217.55	5.89	-5.89	-207.61	0.34	466735.91	642960.92	N 32 16 57.73 W 104	0 16 14
	9318.00	1.58	208.03	9311.47	1.13	-1.13	-208.04	0.25	466731.27	642957.15	N 32 16 57.68 W 104	0 16 13
	9412.00	1.59	216.31	9406.43	1.38	-1.38	-210.50	0.26	466729.01	642957.15	N 32 16 57.68 W 104	0 16 12
	9507.00	1.52	219.80	9493.16	12.35	-12.35	-211.96	0.80	466728.05	642957.03	N 32 16 57.78 W 104	0 16 11
	9602.00	2.66	179.82	9583.38	15.76	-15.76	-211.96	1.42	466727.54	642956.32	N 32 16 57.65 W 104	0 16 10
	9696.00	3.86	165.83	9657.14	18.07	-18.07	-211.96	8.27	466726.78	642956.32	N 32 16 57.65 W 104	0 16 09
	9791.00	11.34	164.94	9597.70	24.18	-24.18	-209.65	10.09	466716.33	642956.79	N 32 16 57.54 W 104	0 16 20
	9886.00	13.76	165.71	9653.93	30.91	-30.91	-208.19	7.58	466709.50	642956.83	N 32 16 57.47 W 104	0 16 18
	9981.00	16.42	166.60	9659.28	39.00	-39.00	-206.20	8.34	466701.41	642956.83	N 32 16 57.39 W 104	0 16 16
	10076.00	19.83	168.52	9669.38	48.41	-48.41	-204.14	11.17	466680.99	642956.83	N 32 16 57.30 W 104	0 16 13
	10171.00	23.27	170.53	9718.11	58.61	-58.61	-202.08	11.35	466660.79	642956.83	N 32 16 57.19 W 104	0 16 11
	10266.00	27.55	172.19	9747.01	73.18	-73.18	-200.04	11.56	466646.22	642956.83	N 32 16 57.10 W 104	0 16 09
	10361.00	32.00	172.55	9773.91	88.44	-88.44	-198.00	14.37	466631.97	642956.83	N 32 16 56.90 W 104	0 16 06
	10456.00	36.12	173.01	9799.59	105.66	-105.66	-195.82	13.32	466634.75	642957.20	N 32 16 56.70 W 104	0 16 04
	10551.00	40.58	174.99	9824.68	125.40	-125.40	-193.76	14.46	466615.01	642957.26	N 32 16 56.53 W 104	0 16 02
	10646.00	44.60	177.45	9847.50	146.33	-146.33	-192.39	14.03	466594.09	642957.62	N 32 16 56.33 W 104	0 16 00
	10741.00	48.37	180.82	9869.53	169.52	-169.52	-192.07	14.04	466570.89	642957.95	N 32 16 56.55 W 104	0 16 00
10836.00	52.68	181.42	9869.87	194.21	-194.21	-192.55	13.55	466546.21	642957.46	N 32 16 55.65 W 104	0 16 01	
10931.00	57.21	180.52	9907.67	219.58	-219.58	-192.76	15.40	466520.84	642957.95	N 32 16 55.50 W 104	0 16 01	
11026.00	60.99	179.58	9923.59	246.17	-246.17	-192.57	12.19	466494.25	642957.58	N 32 16 55.24 W 104	0 16 01	
11121.00	65.99	179.90	9937.97	274.80	-274.80	-192.56	15.65	466456.62	642957.45	N 32 16 54.77 W 104	0 16 01	
11216.00	69.11	180.58	9947.50	303.44	-303.44	-194.28	10.27	466436.99	642957.74	N 32 16 54.59 W 104	0 16 01	
11311.00	78.89	181.06	9983.84	422.48	-422.48	-196.08	8.19	466417.95	642957.19	N 32 16 54.04 W 104	0 16 01	
11406.00	86.59	181.15	9995.31	515.64	-515.64	-196.08	0.50	466394.50	642956.67	N 32 16 53.67 W 104	0 16 00	
11501.00	88.87	181.21	10001.30	609.45	-609.45	-196.08	0.53	466370.36	642956.41	N 32 16 53.42 W 104	0 16 13	
11596.00	88.14	179.96	10006.66	703.27	-703.27	-200.66	0.53	466344.30	642956.18	N 32 16 53.02 W 104	0 16 12	
11691.00	88.35	178.49	10014.49	890.08	-890.08	-201.61	1.92	466320.19	642956.68	N 32 16 52.87 W 104	0 16 12	
11786.00	87.25	178.07	10018.10	983.97	-983.97	-197.52	1.25	466296.59	642956.68	N 32 16 52.87 W 104	0 16 12	
11881.00	88.35	180.52	10019.32	1077.94	-1077.94	-196.36	3.25	466272.55	642957.65	N 32 16 52.67 W 104	0 16 08	
11976.00	90.17	180.52	10019.32	1172.93	-1172.93	-197.66	0.60	466256.55	642957.65	N 32 16 52.47 W 104	0 16 10	
12071.00	90.45	181.06	10018.86	1265.90	-1265.90	-197.66	0.99	466234.60	642956.81	N 32 16 52.25 W 104	0 16 13	
12166.00	90.83	180.74	10019.06	1359.87	-1359.87	-200.13	1.69	466210.64	642956.09	N 32 16 52.04 W 104	0 16 16	
12261.00	91.20	181.61	10016.10	1454.85	-1454.85	-204.07	2.19	466186.57	642956.94	N 32 16 52.45 W 104	0 16 18	
12356.00	91.89	180.24	10016.10	1548.80	-1548.80	-205.59	1.63	466161.73	642956.43	N 32 16 52.45 W 104	0 16 18	
12451.00	91.10	179.43	10013.55	1642.77	-1642.77	-205.32	1.20	466136.77	642956.70	N 32 16 52.12 W 104	0 16 21	
12546.00	91.51	178.52	10011.48	1737.72	-1737.72	-203.62	1.05	466111.81	642956.39	N 32 16 52.08 W 104	0 16 19	
12641.00	90.86	178.00	10009.34	1831.68	-1831.68	-201.59	0.86	466087.87	642956.68	N 32 16 52.05 W 104	0 16 17	
12736.00	90.38	178.28	10008.51	1926.65	-1926.65	-199.33	0.91	466103.91	642956.43	N 32 16 52.05 W 104	0 16 15	
12831.00	89.97	178.37	10008.22	2020.61	-2020.61	-196.59	0.45	466119.90	642957.13	N 32 16 52.78 W 104	0 16 12	
12926.00	89.86	178.21	10008.36	2115.56	-2115.56	-193.75	0.20	466135.91	642957.26	N 32 16 52.64 W 104	0 16 09	
13021.00	92.34	181.06	10006.56	2209.53	-2209.53	-193.15	4.02	466151.05	642957.86	N 32 16 53.91 W 104	0 16 08	
13116.00	90.89	180.23	10003.88	2304.48	-2304.48	-194.22	1.76	466126.11	642957.80	N 32 16 53.54 W 104	0 16 14	
13211.00	90.79	181.27	10001.92	2398.46	-2398.46	-197.36	0.95	466102.16	642957.66	N 32 16 53.12 W 104	0 16 17	
13306.00	89.93	181.08	10001.92	2491.44	-2491.44	-197.36	0.40	466078.21	642956.87	N 32 16 53.26 W 104	0 16 19	
13401.00	90.07	181.10	10001.75	2585.42	-2585.42	-199.15	0.15	466054.21	642956.87	N 32 16 53.26 W 104	0 16 17	
13496.00	90.14	180.73	10001.75	2679.41	-2679.41	-200.65	0.40	466030.21	642956.37	N 32 16 53.26 W 104	0 16 17	
13591.00	90.79	181.20	10000.98	2773.39	-2773.39	-202.23	0.85	466006.23	642956.79	N 32 16 53.30 W 104	0 16 21	
13686.00	90.69	181.25	9999.76	2868.36	-2868.36	-204.26	0.12	465982.27	642956.76	N 32 16 52.93 W 104	0 16 21	
13781.00	90.34	181.13	9998.91	2963.34	-2963.34	-206.17	0.39	465958.32	642956.30	N 32 16 52.85 W 104	0 16 25	
13876.00	90.24	178.82	9998.44	3058.33	-3058.33	-208.11	2.46	465934.35	642956.85	N 32 16 52.53 W 104	0 16 27	
13971.00	90.86	178.50	9998.07	3150.30	-3150.30	-202.97	0.34	465910.35	642956.04	N 32 16 52.58 W 104	0 16 24	
14066.00	90.66	178.20	9997.20	3244.28	-3244.28	-202.11	1.03	465886.38	642956.04	N 32 16 52.58 W 104	0 16 23	
14161.00	89.90	178.79	9996.57	3338.26	-3338.26	-200.44	1.10	465862.41	642956.58	N 32 16 52.62 W 104	0 16 21	
14256.00	89.28	178.36	9997.42	3431.23	-3431.23	-198.13	0.81	465838.45	642956.58	N 32 16 52.62 W 104	0 16 19	
14351.00	89.59	178.30	9998.15	3524.19	-3524.19	-195.42	0.34	465814.50	642957.60	N 32 16 52.89 W 104	0 16 16	
14446.00	90.46	178.70	9998.99	3616.18	-3616.18	-194.60	2.72	465790.52	642957.82	N 32 16 52.97 W 104	0 16 15	
14541.00	90.21	180.87	9997.53	3712.16	-3712.16	-195.89	0.34	465766.56	642957.13	N 32 16 52.81 W 104	0 16 13	
14636.00	89.83	180.87	9997.53	3808.15	-3808.15	-197.32	0.47	465742.58	642957.13	N 32 16 52.81 W 104	0 16 13	
14731.00	91.07	180.72	9996.75	3902.13	-3902.13	-199.03	0.27	465718.61	642956.29	N 32 16 52.81 W 104	0 16 19	
14826.00	91.41	180.48	9994.12	4000.11	-4000.11	-201.58	0.72	465694.64	642956.29	N 32 16 52.81 W 104	0 16 22	
14921.00	90.63	180.50	9992.36	4104.08	-4104.08	-201.58	1.65	465670.66	642956.43	N 32 16 52.81 W 104	0 16 25	
15016.00	90.41	179.14	9989.62	4207.07	-4207.07	-202.00	1.65	465646.68	642956.01	N 32 16 52		

Schlumberger

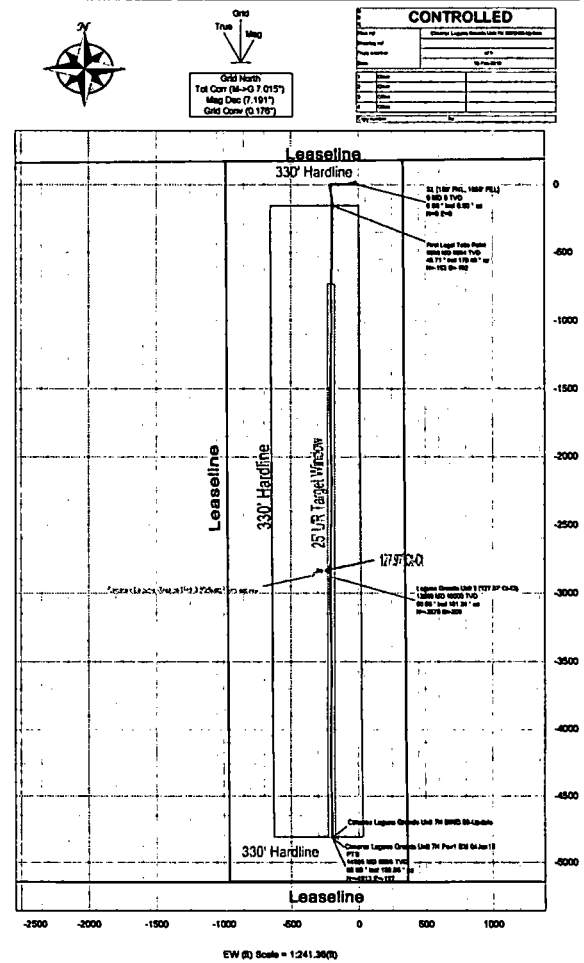
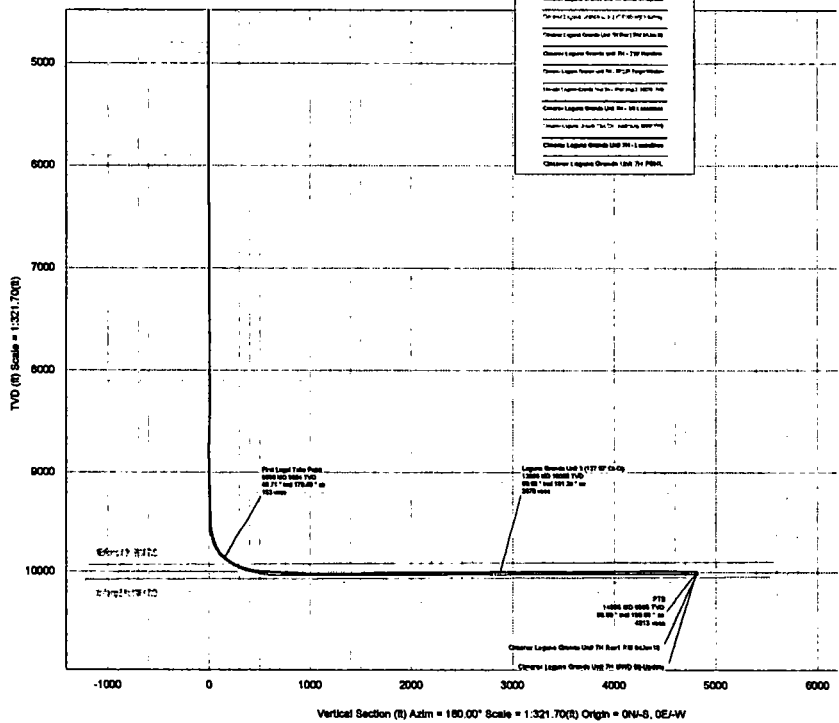
Cimarex

Final PVA

CIMAREX

Borehole:	Original Borehole	Well:	Cimarex Laguna Grande Unit 7H	Field:	NM Eddy County (NAD 83)	Structure:	Cimarex Laguna Grande Unit 7H
Survey & Depth Parameters	WGS84 2017	WGS84 2017	WGS84 2017	WGS84 2017	WGS84 2017	WGS84 2017	WGS84 2017
Depth	7.017"	7.017"	7.017"	7.017"	7.017"	7.017"	7.017"

Critical Points								
Critical Point	ID	DECL	AZIM	TVD	VSIC	IN-PSI-1	OUT-PSI-1	DLB
SL (157 FTL, 1539 FSL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First Legal Table Point	9886.47	45.71	178.49	9854.15	183.04	-183.04	-183.16	14.04
Laguna Grande Unit 3 (127.87 CH-C2)	12890.00	90.00	181.24	9889.64	2578.31	-2578.31	-257.78	0.38
PTB	14393.00	48.00	180.00	9894.77	4812.79	-4812.79	-187.39	0.00



Schlumberger

Cimarex

Rev 3

CIMAREX

Borehole:	Original Borehole	Well:	Cimarex Laguna Grande Unit 7H	Field:	NM Eddy County (NAD 83)	Structure:	Cimarex Laguna Grande Unit 7H
Property & Magnitude Parameters	MD 10000 TVD	Depth	10,000	MD 10000 TVD	Depth	10,000	MD 10000 TVD
MD 10000 TVD	10,000	Depth	10,000	MD 10000 TVD	Depth	10,000	MD 10000 TVD
MD 10000 TVD	10,000	Depth	10,000	MD 10000 TVD	Depth	10,000	MD 10000 TVD

Critical Point	MD	DCCL	ASDR	TVD	VSBC	NE+SW+4	SE+SW+4	DLB
DL (150' FHL, 100' FEL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Survey	14352.00	88.80	188.88	8883.57	4769.45	-4769.45	-193.45	2.23
PTB	14356.00	88.80	188.88	8884.77	4812.64	-4812.64	-194.88	0.00

