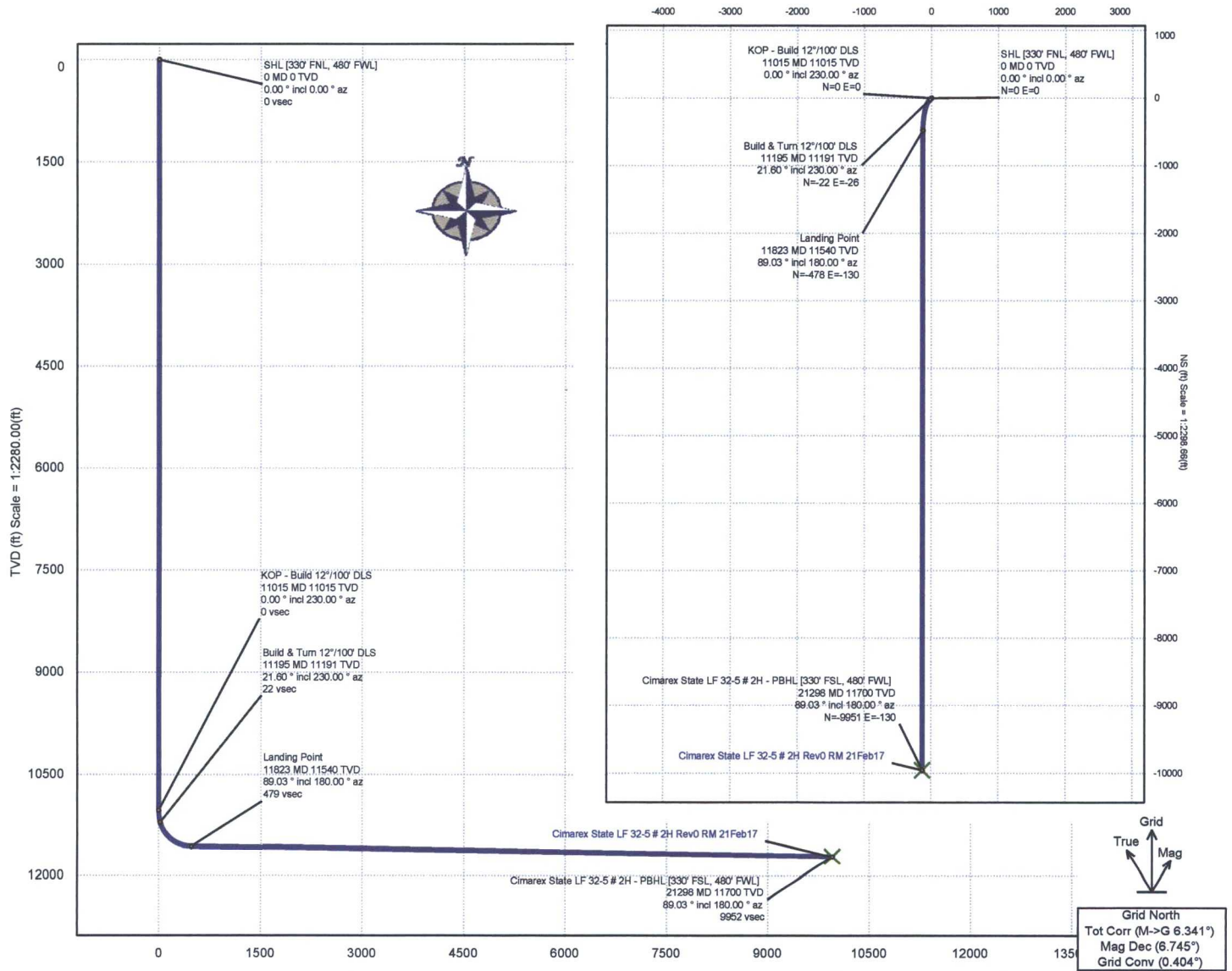


Borehole:	Well:	Field:	Structure:
Original Borehole	Cimarex State LF 32-5 # 2H	NM Lea County (NAD 83)	Cimarex State LF 32-5 # 2H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	HDGM 2016	Dip:	60.887°	Date:	21-Feb-2017	Lat:	N 32 53 5.24	Northing:	696425.5705	Grid Conv:	0.404°
MagDec:	6.745°	FS:	48387.547nT	Gravity FS:	995.515mgN (9.80665 Based)	Lon:	W 103 35 21.44	Easting:	769742.4808	Scale Fact:	0.99996893
								Slot: Cimarex State LF 32-5 # 2H			
								Plan: Cimarex State LF 32-5 # 2H Rev0 RM 21Feb17			
								EW (ft) Scale = 1:2298.66(ft)			



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [330' FNL, 480' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP - Build 12°/100' DLS	11014.98	0.00	230.00	11014.98	0.00	0.00	0.00	0.00
Build & Turn 12°/100' DLS	11194.98	21.60	230.00	11190.75	21.89	-21.55	-25.68	12.00
Landing Point	11823.19	89.03	180.00	11540.00	479.39	-477.73	-129.75	12.00
Cimarex State LF 32-5 # 2H - PBHL [330' FSL, 480' FWL]	21297.85	89.03	180.00	11700.00	9951.88	-9951.03	-130.30	0.00



Cimarex State LF 32-5 # 2H Rev0 RM 21Feb17 Proposal Geodetic Report

(Non-Def Plan)

Report Date: February 21, 2017 - 11:37 AM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex State LF 32-5 # 2H / Cimarex State LF 32-5 # 2H
Well: Cimarex State LF 32-5 # 2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex State LF 32-5 # 2H Rev0 RM 21Feb17
Survey Date: February 21, 2017
Tort / AHD / DDI / ERD Ratio: 96.986 ° / 9983.776 ft / 6.246 / 0.853
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 53' 5.24195", W 103° 35' 21.44393"
Location Grid N/E Y/X: N 686425.500 ftUS, E 769742.400 ftUS
CRS Grid Convergence Angle: 0.4040 °
Grid Scale Factor: 0.99996883
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 180.750 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 4127.000 ft above MSL
Seabed / Ground Elevation: 4127.000 ft above MSL
Magnetic Declination: 6.745 °
Total Gravity Field Strength: 998.5147 mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48387.547 nT
Magnetic Dip Angle: 60.887 °
Declination Date: February 21, 2017
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.4040 °
Total Corr Mag North->Grid North: 6.3408 °
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 [330' FNL, 480' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	100.00	0.00	230.00	100.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	200.00	0.00	230.00	200.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	300.00	0.00	230.00	300.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	400.00	0.00	230.00	400.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	500.00	0.00	230.00	500.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	600.00	0.00	230.00	600.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	700.00	0.00	230.00	700.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	800.00	0.00	230.00	800.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	900.00	0.00	230.00	900.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1000.00	0.00	230.00	1000.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1100.00	0.00	230.00	1100.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1200.00	0.00	230.00	1200.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1300.00	0.00	230.00	1300.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1400.00	0.00	230.00	1400.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1500.00	0.00	230.00	1500.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1600.00	0.00	230.00	1600.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1700.00	0.00	230.00	1700.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1800.00	0.00	230.00	1800.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	1900.00	0.00	230.00	1900.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2000.00	0.00	230.00	2000.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2100.00	0.00	230.00	2100.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2200.00	0.00	230.00	2200.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2300.00	0.00	230.00	2300.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2400.00	0.00	230.00	2400.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2500.00	0.00	230.00	2500.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2600.00	0.00	230.00	2600.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	2700.00	0.00	230.00	2700.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northng (ftUS)	Eastng (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8700.00	0.00	230.00	8700.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	8800.00	0.00	230.00	8800.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	8900.00	0.00	230.00	8900.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9000.00	0.00	230.00	9000.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9100.00	0.00	230.00	9100.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9200.00	0.00	230.00	9200.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9300.00	0.00	230.00	9300.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9400.00	0.00	230.00	9400.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9500.00	0.00	230.00	9500.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9600.00	0.00	230.00	9600.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9700.00	0.00	230.00	9700.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9800.00	0.00	230.00	9800.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	9900.00	0.00	230.00	9900.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10000.00	0.00	230.00	10000.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10100.00	0.00	230.00	10100.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10200.00	0.00	230.00	10200.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10300.00	0.00	230.00	10300.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10400.00	0.00	230.00	10400.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10500.00	0.00	230.00	10500.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10600.00	0.00	230.00	10600.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10700.00	0.00	230.00	10700.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10800.00	0.00	230.00	10800.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	10900.00	0.00	230.00	10900.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
	11000.00	0.00	230.00	11000.00	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
KOP - Build	11014.98	0.00	230.00	11014.98	0.00	0.00	0.00	0.00	686425.50	769742.40	N 32 53 5.24 W 103 35 21.44	
127100' DLS	11100.00	10.20	230.00	11098.55	4.93	-4.85	-5.78	12.00	686420.65	769736.62	N 32 53 5.19 W 103 35 21.51	
Build & Turn	11194.98	21.60	230.00	11190.75	21.89	-21.55	-25.88	12.00	686403.95	769716.72	N 32 53 5.03 W 103 35 21.75	
	11200.00	21.97	228.73	11195.41	23.12	-22.77	-27.10	12.00	686402.74	769715.30	N 32 53 5.02 W 103 35 21.76	
	11300.00	30.88	210.33	11285.02	58.08	-57.38	-54.22	12.00	686398.12	769688.18	N 32 53 4.68 W 103 35 22.08	
	11400.00	41.26	200.02	11365.81	111.72	-110.70	-78.56	12.00	686314.80	769663.85	N 32 53 4.15 W 103 35 22.37	
	11500.00	52.25	193.35	11434.26	181.68	-180.40	-99.05	12.00	686245.10	769643.35	N 32 53 3.46 W 103 35 22.62	
	11600.00	63.51	188.44	11487.37	264.92	-263.44	-114.81	12.00	686162.07	769627.80	N 32 53 2.64 W 103 35 22.81	
	11700.00	74.91	184.42	11522.83	357.78	-356.17	-125.13	12.00	686080.34	769617.27	N 32 53 1.73 W 103 35 23.04	
	11800.00	86.37	180.82	11539.07	456.21	-454.56	-129.58	12.00	685970.86	769612.82	N 32 53 0.75 W 103 35 23.00	
Landing Point	11823.19	89.03	180.00	11541.30	479.39	-477.73	-129.75	12.00	685847.79	769612.66	N 32 53 0.52 W 103 35 23.01	
	11900.00	89.03	180.00	11540.00	556.18	-554.52	-129.75	0.00	685870.89	769612.65	N 32 52 58.76 W 103 35 23.00	
	12000.00	89.03	180.00	11542.99	656.15	-654.51	-129.76	0.00	685871.01	769612.64	N 32 52 58.79 W 103 35 23.02	
	12100.00	89.03	180.00	11544.68	756.13	-754.50	-129.76	0.00	685871.03	769612.64	N 32 52 57.79 W 103 35 23.03	
	12200.00	89.03	180.00	11546.36	856.11	-854.48	-129.77	0.00	685871.05	769612.64	N 32 52 56.81 W 103 35 23.04	
	12300.00	89.03	180.00	11548.05	956.09	-954.47	-129.77	0.00	685871.06	769612.63	N 32 52 55.81 W 103 35 23.04	
	12400.00	89.03	180.00	11549.74	1056.06	-1054.45	-129.78	0.00	685871.08	769612.62	N 32 52 54.82 W 103 35 23.05	
	12500.00	89.03	180.00	11551.43	1156.04	-1154.44	-129.78	0.00	685871.10	769612.62	N 32 52 53.83 W 103 35 23.06	
	12600.00	89.03	180.00	11553.12	1256.02	-1254.42	-129.79	0.00	685871.12	769612.61	N 32 52 52.84 W 103 35 23.07	
	12700.00	89.03	180.00	11554.81	1355.99	-1354.41	-129.80	0.00	685871.13	769612.61	N 32 52 51.85 W 103 35 23.08	
	12800.00	89.03	180.00	11556.50	1455.97	-1454.40	-129.81	0.00	684871.15	769612.60	N 32 52 50.86 W 103 35 23.09	
	12900.00	89.03	180.00	11558.19	1555.95	-1554.39	-129.81	0.00	684871.17	769612.60	N 32 52 49.87 W 103 35 23.09	
	13000.00	89.03	180.00	11559.87	1655.93	-1654.37	-129.82	0.00	684771.19	769612.59	N 32 52 48.88 W 103 35 23.10	
	13100.00	89.03	180.00	11561.56	1755.90	-1754.35	-129.82	0.00	684671.20	769612.58	N 32 52 47.89 W 103 35 23.11	
	13200.00	89.03	180.00	11563.25	1855.88	-1854.34	-129.83	0.00	684571.22	769612.57	N 32 52 46.90 W 103 35 23.12	
	13300.00	89.03	180.00	11564.94	1955.86	-1954.33	-129.83	0.00	684471.24	769612.56	N 32 52 45.92 W 103 35 23.13	
	13400.00	89.03	180.00	11566.63	2055.83	-2054.31	-129.84	0.00	684371.26	769612.55	N 32 52 44.93 W 103 35 23.14	
	13500.00	89.03	180.00	11568.32	2155.81	-2154.30	-129.84	0.00	684271.27	769612.54	N 32 52 43.94 W 103 35 23.15	
	13600.00	89.03	180.00	11570.01	2255.79	-2254.28	-129.85	0.00	684171.29	769612.53	N 32 52 42.95 W 103 35 23.16	
	13700.00	89.03	180.00	11571.69	2355.77	-2354.27	-129.86	0.00	684071.31	769612.52	N 32 52 41.96 W 103 35 23.17	
	13800.00	89.03	180.00	11573.38	2455.74	-2454.25	-129.86	0.00	683971.33	769612.54	N 32 52 40.97 W 103 35 23.18	
	13900.00	89.03	180.00	11575.07	2555.72	-2554.24	-129.87	0.00	683871.35	769612.54	N 32 52 39.98 W 103 35 23.18	
	14000.00	89.03	180.00	11576.76	2655.70	-2654.23	-129.87	0.00	683771.36	769612.53	N 32 52 38.99 W 103 35 23.19	

Drilling Office 2.10.254.0

...Cimarex State L.F. 32-5 # 2HOriginal BoreholeCimarex State L.F. 32-5 # 2H Rev0 RM 21Feb17

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northng (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	14100.00	89.03	180.00	11572.45	2755.68	-2754.21	-129.89	0.00	683671.38	768612.52	N 32 52 38.00 W 103 35 23.19	
	14200.00	89.03	180.00	11580.14	2855.65	-2854.20	-129.89	0.00	683571.40	768612.52	N 32 52 37.01 W 103 35 23.20	
	14300.00	89.03	180.00	11581.83	2855.63	-2854.18	-129.89	0.00	683471.42	768612.51	N 32 52 36.02 W 103 35 23.21	
	14400.00	89.03	180.00	11583.52	3055.61	-3054.17	-129.89	0.00	683371.43	768612.50	N 32 52 35.03 W 103 35 23.22	
	14500.00	89.03	180.00	11585.20	3155.58	-3154.15	-129.89	0.00	683271.45	768612.50	N 32 52 34.04 W 103 35 23.23	
	14600.00	89.03	180.00	11586.89	3255.56	-3254.14	-129.89	0.00	683171.47	768612.50	N 32 52 33.05 W 103 35 23.24	
	14700.00	89.03	180.00	11588.58	3355.54	-3354.13	-129.82	0.00	683071.49	768612.49	N 32 52 32.07 W 103 35 23.24	
	14800.00	89.03	180.00	11590.27	3455.52	-3454.11	-129.82	0.00	682971.50	768612.48	N 32 52 31.08 W 103 35 23.25	
	14900.00	89.03	180.00	11591.96	3555.49	-3554.10	-129.83	0.00	682871.52	768612.48	N 32 52 30.09 W 103 35 23.26	
	15000.00	89.03	180.00	11593.65	3655.47	-3654.08	-129.83	0.00	682771.54	768612.47	N 32 52 29.10 W 103 35 23.27	
	15100.00	89.03	180.00	11595.34	3755.45	-3754.07	-129.84	0.00	682671.56	768612.47	N 32 52 28.11 W 103 35 23.28	
	15200.00	89.03	180.00	11597.03	3855.43	-3854.05	-129.84	0.00	682571.57	768612.46	N 32 52 27.12 W 103 35 23.29	
	15300.00	89.03	180.00	11598.71	3955.40	-3954.04	-129.85	0.00	682471.59	768612.45	N 32 52 26.13 W 103 35 23.29	
	15400.00	89.03	180.00	11600.40	4055.38	-4054.03	-129.86	0.00	682371.61	768612.45	N 32 52 25.14 W 103 35 23.30	
	15500.00	89.03	180.00	11602.09	4155.36	-4154.01	-129.86	0.00	682271.63	768612.44	N 32 52 24.15 W 103 35 23.31	
	15600.00	89.03	180.00	11603.78	4255.33	-4254.00	-129.87	0.00	682171.64	768612.44	N 32 52 23.16 W 103 35 23.32	
	15700.00	89.03	180.00	11605.47	4355.31	-4353.98	-129.87	0.00	682071.66	768612.43	N 32 52 22.17 W 103 35 23.32	
	15800.00	89.03	180.00	11607.16	4455.29	-4453.97	-129.88	0.00	681971.68	768612.42	N 32 52 21.18 W 103 35 23.34	
	15900.00	89.03	180.00	11608.85	4555.27	-4553.95	-129.89	0.00	681871.70	768612.41	N 32 52 20.19 W 103 35 23.35	
	16000.00	89.03	180.00	11610.53	4655.24	-4653.94	-129.89	0.00	681771.71	768612.41	N 32 52 19.21 W 103 35 23.36	
	16100.00	89.03	180.00	11612.22	4755.22	-4753.93	-130.00	0.00	681671.73	768612.40	N 32 52 18.22 W 103 35 23.37	
	16200.00	89.03	180.00	11613.91	4855.20	-4853.91	-130.00	0.00	681571.75	768612.39	N 32 52 17.23 W 103 35 23.37	
	16300.00	89.03	180.00	11615.60	4955.17	-4953.90	-130.02	0.00	681471.77	768612.39	N 32 52 16.24 W 103 35 23.38	
	16400.00	89.03	180.00	11617.29	5055.15	-5053.88	-130.02	0.00	681371.78	768612.39	N 32 52 15.25 W 103 35 23.39	
	16500.00	89.03	180.00	11618.98	5155.13	-5153.87	-130.03	0.00	681271.80	768612.38	N 32 52 14.26 W 103 35 23.39	
	16600.00	89.03	180.00	11620.67	5255.11	-5253.85	-130.03	0.00	681171.82	768612.38	N 32 52 13.27 W 103 35 23.40	
	16700.00	89.03	180.00	11622.36	5355.08	-5353.84	-130.04	0.00	681071.84	768612.37	N 32 52 12.28 W 103 35 23.41	
	16800.00	89.03	180.00	11624.04	5455.06	-5453.83	-130.04	0.00	680971.85	768612.37	N 32 52 11.29 W 103 35 23.42	
	16900.00	89.03	180.00	11625.73	5555.04	-5553.81	-130.05	0.00	680871.87	768612.36	N 32 52 10.30 W 103 35 23.44	
	17000.00	89.03	180.00	11627.42	5655.02	-5653.80	-130.06	0.00	680771.89	768612.35	N 32 52 9.31 W 103 35 23.45	
	17100.00	89.03	180.00	11629.11	5754.99	-5753.78	-130.06	0.00	680671.91	768612.34	N 32 52 8.32 W 103 35 23.46	
	17200.00	89.03	180.00	11630.80	5854.97	-5853.77	-130.07	0.00	680571.93	768612.34	N 32 52 7.33 W 103 35 23.46	
	17300.00	89.03	180.00	11632.49	5954.95	-5953.75	-130.07	0.00	680471.94	768612.33	N 32 52 6.35 W 103 35 23.46	
	17400.00	89.03	180.00	11634.18	6054.92	-6053.74	-130.08	0.00	680371.96	768612.32	N 32 52 5.36 W 103 35 23.47	
	17500.00	89.03	180.00	11635.87	6154.90	-6153.73	-130.09	0.00	680271.98	768612.32	N 32 52 4.37 W 103 35 23.48	
	17600.00	89.03	180.00	11637.55	6254.88	-6253.71	-130.09	0.00	680172.00	768612.31	N 32 52 3.38 W 103 35 23.49	
	17700.00	89.03	180.00	11639.24	6354.86	-6353.70	-130.10	0.00	680072.01	768612.31	N 32 52 2.39 W 103 35 23.50	
	17800.00	89.03	180.00	11640.93	6454.83	-6453.68	-130.11	0.00	679972.03	768612.30	N 32 52 1.40 W 103 35 23.51	
	17900.00	89.03	180.00	11642.62	6554.81	-6553.67	-130.11	0.00	679872.05	768612.29	N 32 52 0.41 W 103 35 23.52	
	18000.00	89.03	180.00	11644.31	6654.79	-6653.65	-130.12	0.00	679772.07	768612.28	N 32 51 59.42 W 103 35 23.53	
	18100.00	89.03	180.00	11646.00	6754.77	-6753.64	-130.12	0.00	679672.08	768612.28	N 32 51 58.43 W 103 35 23.54	
	18200.00	89.03	180.00	11647.69	6854.74	-6853.63	-130.13	0.00	679572.10	768612.27	N 32 51 57.44 W 103 35 23.54	
	18300.00	89.03	180.00	11649.38	6954.72	-6953.61	-130.13	0.00	679472.12	768612.27	N 32 51 56.45 W 103 35 23.55	
	18400.00	89.03	180.00	11651.06	7054.70	-7053.60	-130.13	0.00	679372.14	768612.27	N 32 51 55.46 W 103 35 23.55	
	18500.00	89.03	180.00	11652.75	7154.67	-7153.59	-130.14	0.00	679272.15	768612.27	N 32 51 54.47 W 103 35 23.56	
	18600.00	89.03	180.00	11654.44	7254.65	-7253.57	-130.15	0.00	679172.17	768612.26	N 32 51 53.48 W 103 35 23.57	
	18700.00	89.03	180.00	11656.13	7354.63	-7353.56	-130.16	0.00	679072.19	768612.25	N 32 51 52.49 W 103 35 23.58	
	18800.00	89.03	180.00	11657.82	7454.61	-7453.54	-130.16	0.00	678972.21	768612.25	N 32 51 51.51 W 103 35 23.59	
	18900.00	89.03	180.00	11659.51	7554.59	-7553.53	-130.17	0.00	678872.22	768612.24	N 32 51 50.52 W 103 35 23.60	
	19000.00	89.03	180.00	11661.20	7654.56	-7653.51	-130.17	0.00	678772.24	768612.24	N 32 51 49.53 W 103 35 23.61	
	19100.00	89.03	180.00	11662.88	7754.54	-7753.50	-130.17	0.00	678672.26	768612.23	N 32 51 48.54 W 103 35 23.62	
	19200.00	89.03	180.00	11664.57	7854.52	-7853.48	-130.18	0.00	678572.28	768612.22	N 32 51 47.55 W 103 35 23.62	
	19300.00	89.03	180.00	11666.26	7954.49	-7953.47	-130.19	0.00	678472.29	768612.21	N 32 51 46.56 W 103 35 23.63	
	19400.00	89.03	180.00	11667.95	8054.47	-8053.45	-130.19	0.00	678372.31	768612.21	N 32 51 45.57 W 103 35 23.64	
	19500.00	89.03	180.00	11669.64	8154.45	-8153.44	-130.20	0.00	678272.33	768612.20	N 32 51 44.58 W 103 35 23.65	
	19600.00	89.03	180.00	11671.33	8254.42	-8253.42	-130.21	0.00	678172.35	768612.20	N 32 51 43.59 W 103 35 23.66	
	19700.00	89.03	180.00	11673.02	8354.40	-8353.41	-130.22	0.00	678072.36	768612.19	N 32 51 42.60 W 103 35 23.67	
	19800.00	89.03	180.00	11674.71	8454.38	-8453.40	-130.22	0.00	677972.38	768612.19	N 32 51 41.61 W 103 35 23.67	
	19900.00	89.03	180.00	11676.39	8554.36	-8553.38	-130.22	0.00	677872.40	768612.18	N 32 51 40.62 W 103 35 23.68	

Comments	MD (ft)	Incl (°)	Actm Grd (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S, °, ')	Longitude (E/W, °, ')
	20000.00	89.03	180.00	11678.08	8654.33	-8653.97	-130.23	0.00	677772.42	768612.16	N 32 51 38.64	W 103 35 23.69
	20100.00	89.03	180.00	11678.77	8754.31	-8653.96	-130.23	0.00	677672.43	768612.17	N 32 51 38.65	W 103 35 23.69
	20200.00	89.03	180.00	11683.46	8854.28	-8653.94	-130.23	0.00	677572.45	768612.18	N 32 51 38.66	W 103 35 23.70
	20300.00	89.03	180.00	11683.45	8954.26	-8653.93	-130.23	0.00	677472.47	768612.19	N 32 51 38.67	W 103 35 23.71
	20400.00	89.03	180.00	11684.84	9054.24	-8653.91	-130.23	0.00	677372.48	768612.19	N 32 51 38.68	W 103 35 23.72
	20500.00	89.03	180.00	11686.53	9154.22	-8653.90	-130.26	0.00	677272.51	768612.19	N 32 51 38.69	W 103 35 23.72
	20600.00	89.03	180.00	11688.22	9254.20	-8653.88	-130.28	0.00	677172.52	768612.14	N 32 51 38.70	W 103 35 23.74
	20700.00	89.03	180.00	11689.80	9354.19	-8653.86	-130.27	0.00	677072.54	768612.14	N 32 51 38.71	W 103 35 23.74
	20800.00	89.03	180.00	11691.58	9454.15	-8653.85	-130.27	0.00	676972.56	768612.13	N 32 51 38.72	W 103 35 23.75
	20900.00	89.03	180.00	11693.26	9554.11	-8653.84	-130.28	0.00	676872.58	768612.12	N 32 51 38.73	W 103 35 23.77
	21000.00	89.03	180.00	11694.87	9654.08	-8653.82	-130.28	0.00	676772.59	768612.12	N 32 51 38.74	W 103 35 23.78
	21100.00	89.03	180.00	11696.66	9754.05	-8653.81	-130.30	0.00	676672.61	768612.11	N 32 51 38.75	W 103 35 23.78
	21200.00	89.03	180.00	11698.35	9854.05	-8653.80	-130.30	0.00	676572.63	768612.11	N 32 51 38.76	W 103 35 23.79
Cimarex State LF 32-5 # 2H - PBHL 1330' FSL 480' FWL	21297.85	89.03	180.00	11700.00	9951.88	-8951.03	-130.30	0.00	676474.80	768612.10	N 32 51 28.80	W 103 35 23.79

Survey Type:

Non-Def Plan

Survey Error Model:
Survey Program:

ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

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	21297.845	1/100.000	30.000	30.000		NAL_MMWD_PLUS_0.5_DEG	Original Borehole / Cimarex State LF 32-5 # 2H Rev0 RM 21Feb17