

Borehole: Original Borehole	Well: Cimarex Chief 30 State #6	Field: NM Lea County (NAD 83)	Structuro: Cimarex Chief 30 State #6
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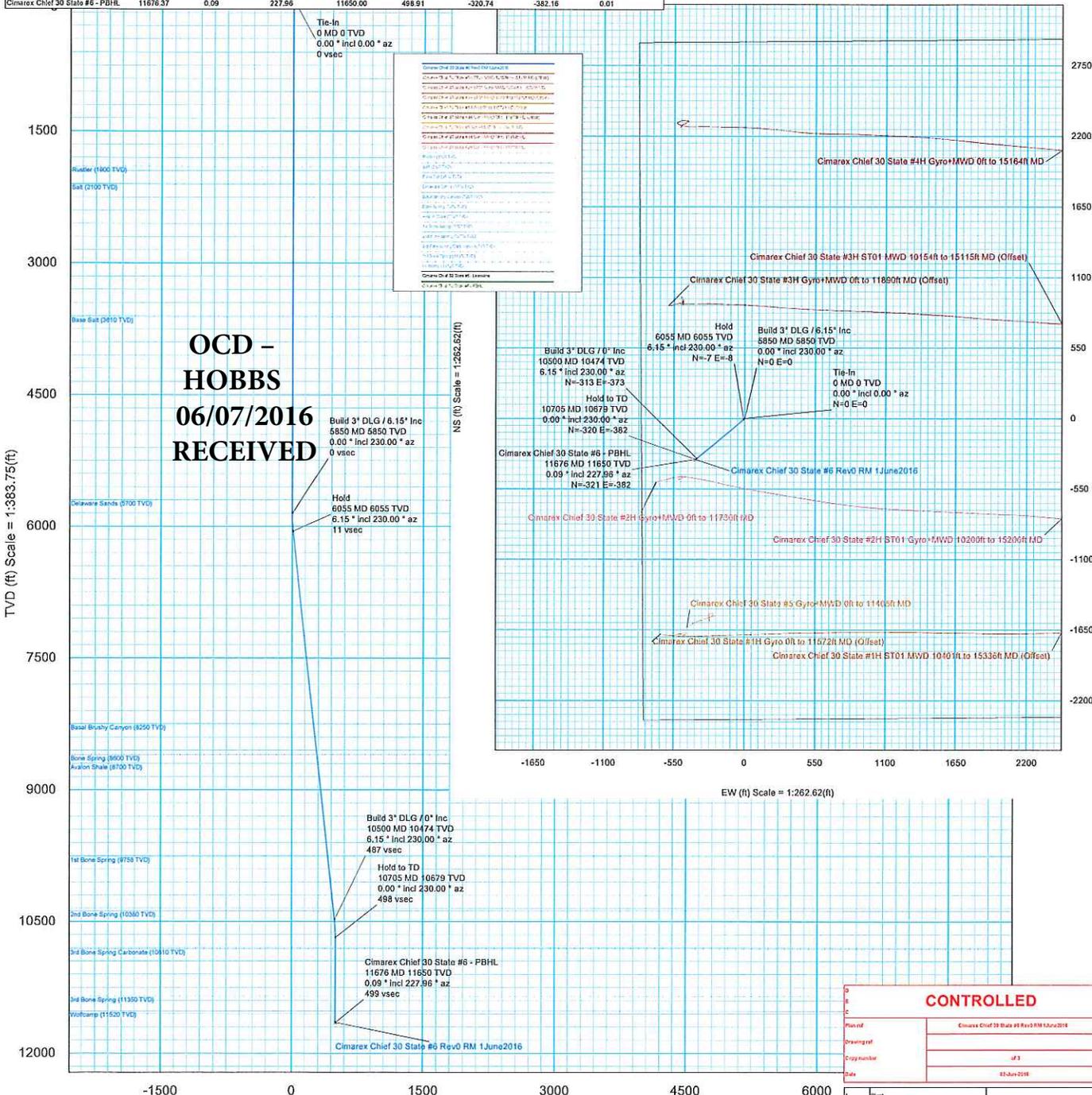
Gravity & Magnetic Parameters Model: HDGM 2016 Dip: 60.552° Date: 01-Jun-2016 MagDec: 6.85° FS: 48112.772nT Gravity FS: 998.496mg (8.0665 Gauss)	Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet Lat: N 32 32 38.90 Lon: W 103 30 9.23 Northing: 662383.658US Easting: 797339.778US Grid Conv: 0.4469° Scale Fact: 0.99999415	Miscellaneous Cimarex Chief 30 State #6 Cimarex Chief 30 State #6 Rev0 RM 1 June 2016 TVD Ref: Unknown(2724ft above MSL)
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Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	1900.00	0.00	230.00	1900.00	0.00	0.00	0.00	0.00
Salt	2100.00	0.00	230.00	2100.00	0.00	0.00	0.00	0.00
Base Salt	3610.00	0.00	230.00	3610.00	0.00	0.00	0.00	0.00
Delaware Sands	5700.00	0.00	230.00	5700.00	0.00	0.00	0.00	0.00
Build 3" DLG / 6.15" Inc	5850.00	0.00	230.00	5850.00	0.00	0.00	0.00	0.00
Hold	6055.00	6.15	230.00	6054.61	10.99	-7.07	-8.42	3.00
Basal Brushy Canyon	8263.10	6.15	230.00	8250.00	247.55	-159.13	-189.63	0.00
Bone Spring	8615.13	6.15	230.00	8600.00	285.28	-183.37	-218.51	0.00
Avalon Shale	8715.71	6.15	230.00	8700.00	296.04	-190.30	-226.77	0.00
1st Bone Spring	9779.83	6.15	230.00	9758.00	410.04	-263.58	-314.09	0.00
2nd Bone Spring	10405.43	6.15	230.00	10380.00	477.06	-309.67	-365.43	0.00
Build 3" DLG / 0" Inc	10500.00	6.15	230.00	10474.02	487.19	-313.18	-373.19	0.00
Hold to TD	10705.00	0.00	230.00	10678.63	498.18	-320.25	-381.61	3.00
3rd Bone Spring Carbonate	10836.37	0.01	227.96	10810.00	498.20	-320.26	-381.62	0.01
3rd Bone Spring	11376.37	0.06	227.96	11350.00	498.53	-320.48	-381.87	0.01
Wolfcamp	11546.37	0.07	227.96	11520.00	498.73	-320.61	-382.02	0.01
Cimarex Chief 30 State #6 - PBHL	11676.37	0.09	227.96	11650.00	498.91	-320.74	-382.16	0.01



Grid  
True  
Mag

Grid North  
Tot Corr (M->G 6.403°)  
Mag Dec (6.850°)  
Grid Conv (0.447°)



<b>CONTROLLED</b>	
Plan ref	Cimarex Chief 30 State #6 Rev0 RM 1 June 2016
Drawing ref	
Copy number	of 1
Date	23-Jun-2016
1	Client
2	Client
3	Other
4	Other
Copy number	of

## Cimarex Chief 30 State #6 Rev0 RM 1June2016 Proposal Geodetic Report

(Non-Def Plan)

<b>Report Date:</b> June 02, 2016 - 03:10 PM <b>Client:</b> Cimarex <b>Field:</b> NM Lea County (NAD 83) <b>Structure / Slot:</b> Cimarex Chief 30 State #6 / Cimarex Chief 30 State #6 <b>Well:</b> Cimarex Chief 30 State #6 <b>Borehole:</b> Original Borehole <b>UWI / API#:</b> Unknown / Unknown <b>Survey Name:</b> Cimarex Chief 30 State #6 Rev0 RM 1June2016 <b>Survey Date:</b> June 01, 2016 <b>Tort / AHD / DDI / ERD Ratio:</b> 12.386 ° / 498.915 ft / 3.792 / 0.043 <b>Coordinate Reference System:</b> NAD83 New Mexico State Plane, Eastern Zone, US Feet <b>Location Lat / Long:</b> N 32° 32' 35.89968", W 103° 30' 9.23014" <b>Location Grid N/E Y/X:</b> N 562383.650 RUS, E 797339.770 RUS <b>CRS Grid Convergence Angle:</b> 0.4469 ° <b>Grid Scale Factor:</b> 0.99998415 <b>Version / Patch:</b> 2.9.370.0	<b>Survey / DLS Computation:</b> Minimum Curvature / Lubinski <b>Vertical Section Azimuth:</b> 229.994 ° (Grid North) <b>Vertical Section Origin:</b> 0.000 ft, 0.000 ft <b>TVD Reference Datum:</b> Unknown <b>TVD Reference Elevation:</b> 3724.800 ft above MSL <b>Seabed / Ground Elevation:</b> 3724.800 ft above MSL <b>Magnetic Declination:</b> 6.850 ° <b>Total Gravity Field Strength:</b> 998.4964mgn (9.80665 Based) <b>Gravity Model:</b> GARM <b>Total Magnetic Field Strength:</b> 48412.772 nT <b>Magnetic Dip Angle:</b> 60.552 ° <b>Declination Date:</b> June 01, 2016 <b>Magnetic Declination Model:</b> HDGM 2016 <b>North Reference:</b> Grid North <b>Grid Convergence Used:</b> 0.4469 ° <b>Total Corr Mag North-&gt;Grid North:</b> 6.4030 ° <b>Local Coord Referenced To:</b> Structure Reference Point	
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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 ° ' ")
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
Build 3° DLG / 6.15° Inc	5850.00	0.00	230.00	5850.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
Hold	6055.00	6.15	230.00	6054.61	10.99	-7.07	-8.42	3.00	562376.58	797331.35	N 32 32 35.83	W 103 30 9.33
Build 3° DLG / 0° Inc	10500.00	6.15	230.00	10474.02	487.19	-313.18	-373.19	0.00	562070.47	796966.58	N 32 32 32.83	W 103 30 13.62
Hold to TD	10705.00	0.00	230.00	10678.63	498.18	-320.25	-381.61	3.00	562063.41	796958.16	N 32 32 32.76	W 103 30 13.72
Cimarex Chief 30 State #6 - PBHL	11676.37	0.09	227.96	11650.00	498.91	-320.74	-382.16	0.01	562062.92	796957.62	N 32 32 32.76	W 103 30 13.72

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	11676.369	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Chief 30 State #6 Rev0 RM 1June2016

## Cimarex Chief 30 State #6 Rev0 RM 1June2016 Proposal Geodetic Report

(Non-Def Plan)

**Report Date:** June 02, 2016 - 03:10 PM  
**Client:** Cimarex  
**Field:** NM Lea County (NAD 83)  
**Structure / Slot:** Cimarex Chief 30 State #6 / Cimarex Chief 30 State #6  
**Well:** Cimarex Chief 30 State #6  
**Borehole:** Original Borehole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex Chief 30 State #6 Rev0 RM 1June2016  
**Survey Date:** June 01, 2016  
**Tort / AHD / DDI / ERD Ratio:** 12.386 ° / 498.915 ft / 3.792 / 0.043  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 32' 35.89968", W 103° 30' 9.23014"  
**Location Grid N/E Y/X:** N 562383.650 ftUS, E 797339.770 ftUS  
**CRS Grid Convergence Angle:** 0.4469 °  
**Grid Scale Factor:** 0.99998415  
**Version / Patch:** 2.9.370.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 229.994 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** Unknown  
**TVD Reference Elevation:** 3724.800 ft above MSL  
**Seabed / Ground Elevation:** 3724.800 ft above MSL  
**Magnetic Declination:** 6.850 °  
**Total Gravity Field Strength:** 998.4964mgm (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 48412.772 nT  
**Magnetic Dip Angle:** 60.552 °  
**Declination Date:** June 01, 2016  
**Magnetic Declination Model:** HDGM 2016  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.4469 °  
**Total Corr Mag North->Grid North:** 6.4030 °  
**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 ° ' ")
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	100.00	0.00	230.00	100.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	200.00	0.00	230.00	200.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	300.00	0.00	230.00	300.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	400.00	0.00	230.00	400.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	500.00	0.00	230.00	500.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	600.00	0.00	230.00	600.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	700.00	0.00	230.00	700.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	800.00	0.00	230.00	800.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	900.00	0.00	230.00	900.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1000.00	0.00	230.00	1000.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1100.00	0.00	230.00	1100.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1200.00	0.00	230.00	1200.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1300.00	0.00	230.00	1300.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1400.00	0.00	230.00	1400.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1500.00	0.00	230.00	1500.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1600.00	0.00	230.00	1600.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1700.00	0.00	230.00	1700.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1800.00	0.00	230.00	1800.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	1900.00	0.00	230.00	1900.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2000.00	0.00	230.00	2000.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2100.00	0.00	230.00	2100.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2200.00	0.00	230.00	2200.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2300.00	0.00	230.00	2300.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2400.00	0.00	230.00	2400.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2500.00	0.00	230.00	2500.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2600.00	0.00	230.00	2600.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2700.00	0.00	230.00	2700.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2800.00	0.00	230.00	2800.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	2900.00	0.00	230.00	2900.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3000.00	0.00	230.00	3000.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3100.00	0.00	230.00	3100.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3200.00	0.00	230.00	3200.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3300.00	0.00	230.00	3300.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3400.00	0.00	230.00	3400.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3500.00	0.00	230.00	3500.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3600.00	0.00	230.00	3600.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3700.00	0.00	230.00	3700.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3800.00	0.00	230.00	3800.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	3900.00	0.00	230.00	3900.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4000.00	0.00	230.00	4000.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4100.00	0.00	230.00	4100.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4200.00	0.00	230.00	4200.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4300.00	0.00	230.00	4300.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4400.00	0.00	230.00	4400.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4500.00	0.00	230.00	4500.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4600.00	0.00	230.00	4600.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4700.00	0.00	230.00	4700.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4800.00	0.00	230.00	4800.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	4900.00	0.00	230.00	4900.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5000.00	0.00	230.00	5000.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5100.00	0.00	230.00	5100.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5200.00	0.00	230.00	5200.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5300.00	0.00	230.00	5300.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5400.00	0.00	230.00	5400.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5500.00	0.00	230.00	5500.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5600.00	0.00	230.00	5600.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5700.00	0.00	230.00	5700.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5800.00	0.00	230.00	5800.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
Build 3" DLG / 6.15" Inc	5850.00	0.00	230.00	5850.00	0.00	0.00	0.00	0.00	562383.65	797339.77	N 32 32 35.90	W 103 30 9.23
	5900.00	1.50	230.00	5899.99	0.65	-0.42	-0.50	3.00	562383.23	797339.27	N 32 32 35.90	W 103 30 9.24
	6000.00	4.50	230.00	5899.85	5.89	-3.78	-4.51	3.00	562379.87	797335.26	N 32 32 35.86	W 103 30 9.28
Hold	6055.00	6.15	230.00	6054.61	10.99	-7.07	-8.42	3.00	562376.58	797331.35	N 32 32 35.83	W 103 30 9.33
	6100.00	6.15	230.00	6099.35	15.81	-10.16	-12.11	0.00	562373.49	797327.66	N 32 32 35.80	W 103 30 9.37
	6200.00	6.15	230.00	6198.77	26.53	-17.05	-20.32	0.00	562366.60	797319.45	N 32 32 35.73	W 103 30 9.47
	6300.00	6.15	230.00	6298.20	37.24	-23.94	-28.53	0.00	562359.71	797311.25	N 32 32 35.67	W 103 30 9.57
	6400.00	6.15	230.00	6397.62	47.95	-30.82	-36.73	0.00	562352.83	797303.04	N 32 32 35.60	W 103 30 9.66
	6500.00	6.15	230.00	6497.05	58.67	-37.71	-44.94	0.00	562345.94	797294.83	N 32 32 35.53	W 103 30 9.76
	6600.00	6.15	230.00	6596.47	69.38	-44.60	-53.14	0.00	562339.05	797286.63	N 32 32 35.46	W 103 30 9.86
	6700.00	6.15	230.00	6695.89	80.09	-51.49	-61.35	0.00	562332.17	797278.42	N 32 32 35.40	W 103 30 9.95
	6800.00	6.15	230.00	6795.32	90.80	-58.37	-69.56	0.00	562325.28	797270.21	N 32 32 35.33	W 103 30 10.05
	6900.00	6.15	230.00	6894.74	101.52	-65.26	-77.76	0.00	562318.39	797262.01	N 32 32 35.26	W 103 30 10.14
	7000.00	6.15	230.00	6994.17	112.23	-72.15	-85.97	0.00	562311.51	797253.80	N 32 32 35.19	W 103 30 10.24

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 ° ' ")
	7500.00	6.15	230.00	7491.29	165.80	-106.58	-127.00	0.00	562277.07	79712.77	N 32 32 34.85	W 103 30 10.72
	7600.00	6.15	230.00	7590.71	176.51	-113.47	-135.21	0.00	562270.19	797204.56	N 32 32 34.79	W 103 30 10.82
	7700.00	6.15	230.00	7690.14	187.22	-120.35	-143.42	0.00	562263.30	797196.36	N 32 32 34.72	W 103 30 10.92
	7800.00	6.15	230.00	7789.56	197.94	-127.24	-151.62	0.00	562256.41	797188.15	N 32 32 34.65	W 103 30 11.01
	7900.00	6.15	230.00	7888.99	208.65	-134.13	-159.83	0.00	562249.53	797179.94	N 32 32 34.58	W 103 30 11.11
	8000.00	6.15	230.00	7988.41	219.36	-141.01	-168.03	0.00	562242.64	797171.74	N 32 32 34.52	W 103 30 11.21
	8100.00	6.15	230.00	8087.84	230.08	-147.90	-176.24	0.00	562235.75	797163.53	N 32 32 34.45	W 103 30 11.30
	8200.00	6.15	230.00	8187.26	240.79	-154.79	-184.45	0.00	562228.87	797155.33	N 32 32 34.38	W 103 30 11.40
	8300.00	6.15	230.00	8286.69	251.50	-161.67	-192.65	0.00	562221.98	797147.12	N 32 32 34.31	W 103 30 11.50
	8400.00	6.15	230.00	8386.11	262.22	-168.56	-200.86	0.00	562215.09	797138.91	N 32 32 34.25	W 103 30 11.59
	8500.00	6.15	230.00	8485.54	272.93	-175.45	-209.07	0.00	562208.21	797130.71	N 32 32 34.18	W 103 30 11.69
	8600.00	6.15	230.00	8584.96	283.64	-182.33	-217.27	0.00	562201.32	797122.50	N 32 32 34.11	W 103 30 11.78
	8700.00	6.15	230.00	8684.38	294.36	-189.22	-225.48	0.00	562194.43	797114.29	N 32 32 34.04	W 103 30 11.88
	8800.00	6.15	230.00	8783.81	305.07	-196.11	-233.69	0.00	562187.55	797106.09	N 32 32 33.98	W 103 30 11.98
	8900.00	6.15	230.00	8883.23	315.78	-202.99	-241.89	0.00	562180.66	797097.88	N 32 32 33.91	W 103 30 12.07
	9000.00	6.15	230.00	8982.66	326.49	-209.88	-250.10	0.00	562173.77	797089.68	N 32 32 33.84	W 103 30 12.17
	9100.00	6.15	230.00	9082.08	337.21	-216.77	-258.30	0.00	562166.89	797081.47	N 32 32 33.77	W 103 30 12.27
	9200.00	6.15	230.00	9181.51	347.92	-223.65	-266.51	0.00	562160.00	797073.26	N 32 32 33.71	W 103 30 12.36
	9300.00	6.15	230.00	9280.93	358.63	-230.54	-274.72	0.00	562153.11	797065.06	N 32 32 33.64	W 103 30 12.46
	9400.00	6.15	230.00	9380.36	369.35	-237.43	-282.92	0.00	562146.23	797056.85	N 32 32 33.57	W 103 30 12.56
	9500.00	6.15	230.00	9479.78	380.06	-244.31	-291.13	0.00	562139.34	797048.64	N 32 32 33.50	W 103 30 12.65
	9600.00	6.15	230.00	9579.20	390.77	-251.20	-299.34	0.00	562132.45	797040.44	N 32 32 33.44	W 103 30 12.75
	9700.00	6.15	230.00	9678.63	401.49	-258.09	-307.54	0.00	562125.57	797032.23	N 32 32 33.37	W 103 30 12.85
	9800.00	6.15	230.00	9778.05	412.20	-264.97	-315.75	0.00	562118.68	797024.03	N 32 32 33.30	W 103 30 12.94
	9900.00	6.15	230.00	9877.48	422.91	-271.86	-323.96	0.00	562111.79	797015.82	N 32 32 33.23	W 103 30 13.04
	10000.00	6.15	230.00	9976.90	433.63	-278.75	-332.16	0.00	562104.91	797007.61	N 32 32 33.17	W 103 30 13.14
	10100.00	6.15	230.00	10076.33	444.34	-285.63	-340.37	0.00	562098.02	796999.41	N 32 32 33.10	W 103 30 13.23
	10200.00	6.15	230.00	10175.75	455.05	-292.52	-348.58	0.00	562091.13	796991.20	N 32 32 33.03	W 103 30 13.33
	10300.00	6.15	230.00	10275.18	465.77	-299.41	-356.78	0.00	562084.25	796982.99	N 32 32 32.96	W 103 30 13.43
	10400.00	6.15	230.00	10374.60	476.48	-306.29	-364.99	0.00	562077.36	796974.79	N 32 32 32.90	W 103 30 13.52
Build 3° DLG / 0° Inc	10500.00	6.15	230.00	10474.02	487.19	-313.18	-373.19	0.00	562070.47	796966.58	N 32 32 32.83	W 103 30 13.62
	10600.00	3.15	230.00	10573.68	495.30	-318.39	-379.40	3.00	562065.28	796960.37	N 32 32 32.78	W 103 30 13.69
	10700.00	0.15	230.00	10673.63	498.18	-320.24	-381.61	3.00	562063.41	796958.17	N 32 32 32.76	W 103 30 13.72
Hold to TD	10705.00	0.00	230.00	10678.63	498.18	-320.25	-381.61	3.00	562063.41	796958.16	N 32 32 32.76	W 103 30 13.72
	10800.00	0.01	227.96	10773.63	498.19	-320.25	-381.62	0.01	562063.40	796958.16	N 32 32 32.76	W 103 30 13.72
	10900.00	0.02	227.96	10873.63	498.21	-320.27	-381.64	0.01	562063.39	796958.14	N 32 32 32.76	W 103 30 13.72
	11000.00	0.03	227.96	10973.63	498.25	-320.29	-381.66	0.01	562063.36	796958.11	N 32 32 32.76	W 103 30 13.72
	11100.00	0.04	227.96	11073.63	498.30	-320.33	-381.70	0.01	562063.33	796958.07	N 32 32 32.76	W 103 30 13.72
	11200.00	0.04	227.96	11173.63	498.37	-320.37	-381.76	0.01	562063.28	796958.02	N 32 32 32.76	W 103 30 13.72
	11300.00	0.05	227.96	11273.63	498.46	-320.43	-381.82	0.01	562063.23	796957.98	N 32 32 32.76	W 103 30 13.72
	11400.00	0.06	227.96	11373.63	498.56	-320.50	-381.89	0.01	562063.16	796957.88	N 32 32 32.76	W 103 30 13.72
	11500.00	0.07	227.96	11473.63	498.67	-320.57	-381.98	0.01	562063.08	796957.80	N 32 32 32.76	W 103 30 13.72
	11600.00	0.08	227.96	11573.63	498.80	-320.66	-382.07	0.01	562062.99	796957.70	N 32 32 32.76	W 103 30 13.72
Cimarex Chief 30 State #6 - PBHL	11676.37	0.09	227.96	11650.00	498.91	-320.74	-382.16	0.01	562062.92	796957.62	N 32 32 32.76	W 103 30 13.72

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	11678.369	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Chief 30 State #6 Rev0 RM 1June2016