

30-015-42541



Scandrill Eagle

Cimarex

Rev5



Borehole:	Original Borehole	Well:	Hasta La Vista 1 Federal Com 2DI	Field:	Eddy County, NM	Structure:	Scandrill Eagle
Gravity & Magnetic Parameters	Model: 800M 2013	Dip: 80.406°	Date: 07-Feb-2014	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous	Slot: Hasta La Vista 1 Federal Com 2DI
	MagDec: 7.564°	FS: 48624.053mT	Gravity FS: 986.728mg (9.80665 Based)	Lat: N 32 36 30.67	North: 586369.72NUS	Grid Conv: 0.2284'	Plan: Rev5 RJS 31-Jul-2014
				Lon: W 103 54 34.49	East: 671821.42NUS	Scale Fact: 0.9992959	TVD Ref: RKB(3464ft above)

EW (ft) Scale = 1:100(ft)

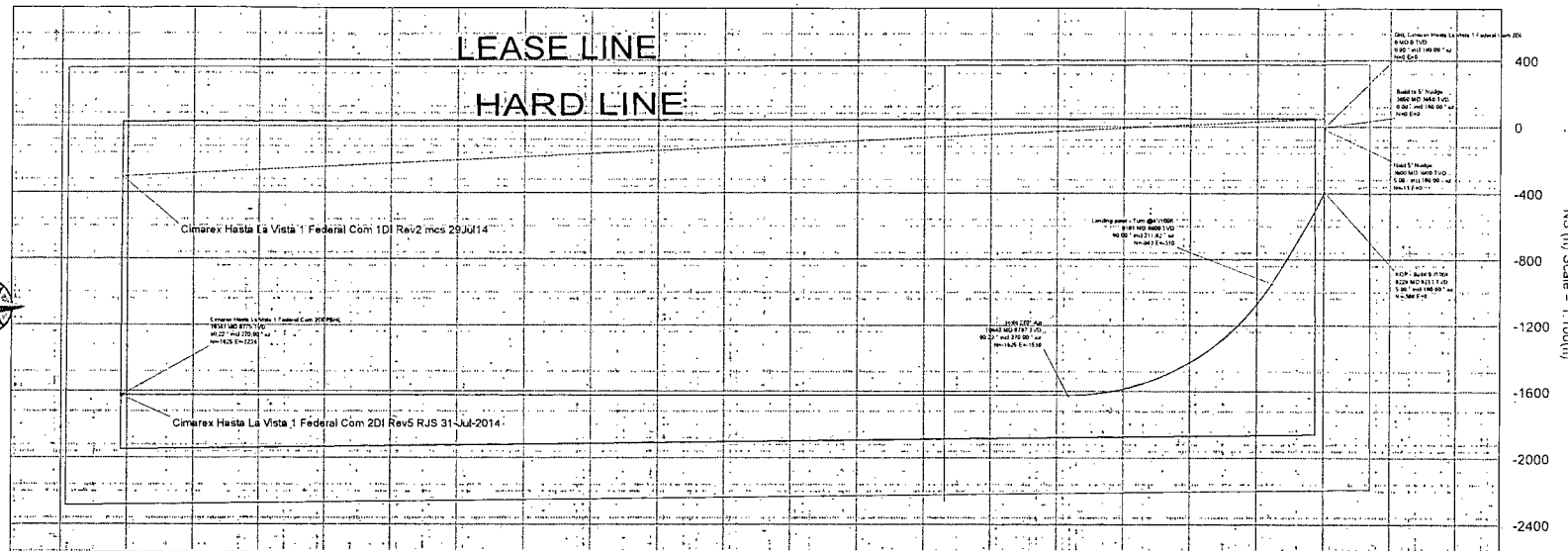
-7600 -7200 -6800 -6400 -6000 -5600 -5200 -4800 -4400 -4000 -3600 -3200 -2800 -2400 -2000 -1600 -1200 -800 -400 0 400 800

Cimarex Hasta La Vista 1 Federal Com 2DI Rev5 RJS 31-Jul-2014
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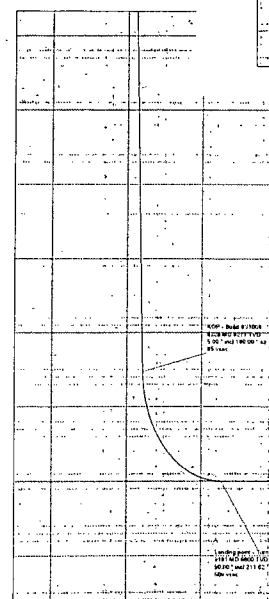


Grid
True
Mag

Grid North
Tot Corr (M->G 7.336°)
Mag Dec (7.564°)
Grid Conv (0.228°)



TVD (ft) Scale = 1:90(ft)



Critical Points													
Comments	Survey MD	Inc	Azim	TVD	SSTVD	VS	NS	EW	Longitude	Latitude	Easting	Northing	DLS Tool Face
SHL	0.00	0.00	180.00	0.00	-3464.00	0.00	0.00	0.00	W 103 54 34.489	N 32 36 30.666	671821.42	585369.72	180.00
Build to 5° Nudge	3650.00	0.00	180.00	3650.00	186.00	0.00	0.00	0.00	W 103 54 34.489	N 32 36 30.666	671821.42	585369.72	0.00 180.00
Hold 5° Nudge	3900.00	5.00	180.00	3899.68	435.68	2.39	-10.90	0.00	W 103 54 34.490	N 32 36 30.558	671821.42	585358.82	2.00 180.00
KOP - Build 9°/100ft	8227.79	5.00	180.00	8211.00	4747.00	85.03	-388.09	0.00	W 103 54 34.507	N 32 36 26.826	671821.42	584981.66	0.00 211.62
Landing point - Turn @4°/100ft	9180.89	90.00	211.62	8800.00	5336.00	509.07	-943.10	-309.98	W 103 54 38.157	N 32 36 21.346	671511.46	584426.69	9.00 89.74
Hold 270° Azi	10640.28	90.22	270.00	8796.93	5332.93	1848.35	-1624.52	-1529.60	W 103 54 52.445	N 32 36 14.652	670291.93	583745.32	4.00 86.11
PBHL	16346.69	90.22	270.00	8775.00	5311.00	7416.15	-1624.77	-7235.98	W 103 55 59.150	N 32 36 14.867	664585.97	583745.07	0.00

Vertical Section (ft) Azim = 257.345° Scale = 1:90(ft) Origin = ON/-S, 0E/-W



Cimarex Hasta La Vista 1 Federal Com 2DI Rev5 RJS 31-Jul-2014 Proposal Geodetic Report (Non-Def Plan)



Report Date: August 05, 2014 - 01:46 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Hasta La Vista 1 Federal Com 2DI / Cimarex Hasta La Vista 1 Federal Com 2DI
Well: Cimarex Hasta La Vista 1 Federal Com 2DI
Borehole: Original Borehole
UWI / AP#: ScanDrill Eagle / Unknown
Survey Name: Cimarex Hasta La Vista 1 Federal Com 2DI Rev5 RJS 31-Jul-2014
Survey Date: February 07, 2014
Tort / AHD / DDI / ERD Ratio: 149.124 ° / 8190.484 ft / 6.356 / 0.931
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 36' 30.66553", W 103° 54' 34.48920"
Location Grid N/E Y/X: N 585369.720 ftUS, E 671821.420 ftUS
CRS Grid Convergence Angle: 0.2284 °
Grid Scale Factor: 0.99992859
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 257.345 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3464.000 ft above
Seabed / Ground Elevation: 3439.000 ft above
Magnetic Declination: 7.564 °
Total Gravity Field Strength: 998.7282mgn (9.80665 Based)
Gravity Model: DOX
Total Magnetic Field Strength: 48524.053 nT
Magnetic Dip Angle: 60.406 °
Declination Date: February 07, 2014
Magnetic Declination Model: BCGM 2013
North Reference: Grid North
Grid Convergence Used: 0.2284 °
Total Corr Mag North->Grid North: 7.3358 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure Azimuth (°)	Closure (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Cimarex Hasta La Vista 1 Federal Com 2DI	0.00	0.00	-180.00	0.00	-3464.00	0.00	0.00	0.00	N/A	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
Build to 5" Nudge	3650.00	0.00	180.00	3650.00	186.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
Hold 5" Nudge	3900.00	5.00	180.00	3899.68	435.68	2.39	-10.90	0.00	2.00	180.00	10.80	585358.82	671821.42	N 32 36 30.56	W 103 54 34.49
KOP - Build 9"/100ft	8227.79	5.00	180.00	8211.00	4747.00	85.03	-388.09	0.00	0.00	180.00	388.09	584981.66	671821.42	N 32 36 26.83	W 103 54 34.51
Landing point - Turn @4"/100ft	9180.89	90.00	211.62	8800.00	5336.00	509.07	-943.10	-309.98	9.00	198.19	992.74	584426.69	671511.46	N 32 36 21.35	W 103 54 38.16
Hold 270° Azi	10640.28	90.22	270.00	8796.93	5332.93	1848.35	-1624.52	-1529.60	4.00	223.28	2231.31	583745.32	670291.93	N 32 36 14.65	W 103 54 52.45
Cimarex Hasta La Vista 1 Federal Com 2DI PBHL	16346.69	90.22	270.00	8775.00	5311.00	7416.15	-1624.77	-7235.98	0.00	257.34	7416.15	583745.07	664585.97	N 32 36 14.87	W 103 55 59.15

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	25.000	1/100.000	30.000	30.000	SLB_MWD-POOR-Depth Only	Original Borehole / Cimarex Hasta La Vista 1 Federal Com 2DI Rev5
	1	25.000	8155.000	1/100.000	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hasta La Vista 1 Federal Com 2DI Rev5
	1	8155.000	16346.694	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Hasta La Vista 1 Federal Com 2DI Rev5



Cimarex Hasta La Vista 1 Federal Com 2DI Rev5 RJS 31-Jul-2014 Proposal
Geodetic Report
(Non-Def Plan)



Report Date: August 05, 2014 - 01:46 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Hasta La Vista 1 Federal Com 2DI / Cimarex Hasta La Vista 1 Federal Com 2DI
Well: Cimarex Hasta La Vista 1 Federal Com 2DI
Borehole: Original Borehole
UWI / APW: ScanDrill Eagle / Unknown
Survey Name: Cimarex Hasta La Vista 1 Federal Com 2DI Rev5 RJS 31-Jul-2014
Survey Date: February 07, 2014
Tort / AHD / DDI / ERD Ratio: 149.124' / 8190.484 ft / 6.356 / 0.931
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
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Location Grid N/E Y/X: N 585369.720 RJS, E 671821.420 RJS
CRS Grid Convergence Angle: 0.2284°
Grid Scale Factor: 0.99992859
Version / Patch: 2.7.1043.0

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Vertical Section Azimuth: 257.345° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3464.000 ft above
Seabed / Ground Elevation: 3439.000 ft above
Magnetic Declination: 7.564°
Total Gravity Field Strength: 998.7282mgm (9.80665 Based)
Gravity Model: DOX
Total Magnetic Field Strength: 48524.053 nT
Magnetic Dip Angle: 60.408°
Declination Date: February 07, 2014
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.2284°
Total Corr Mag North->Grid North: 7.3358°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure Azimuth (°)	Closure (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Cimarex Hasta La Vista 1 Federal Com 2DI	0.00	0.00	180.00	0.00	-3464.00	0.00	0.00	0.00	N/A	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	100.00	0.00	180.00	100.00	-3364.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	200.00	0.00	180.00	200.00	-3264.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	300.00	0.00	180.00	300.00	-3164.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	400.00	0.00	180.00	400.00	-3064.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	500.00	0.00	180.00	500.00	-2964.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	600.00	0.00	180.00	600.00	-2864.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	700.00	0.00	180.00	700.00	-2764.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	800.00	0.00	180.00	800.00	-2664.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	900.00	0.00	180.00	900.00	-2564.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1000.00	0.00	180.00	1000.00	-2464.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1100.00	0.00	180.00	1100.00	-2364.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1200.00	0.00	180.00	1200.00	-2264.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1300.00	0.00	180.00	1300.00	-2164.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1400.00	0.00	180.00	1400.00	-2064.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1500.00	0.00	180.00	1500.00	-1964.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1600.00	0.00	180.00	1600.00	-1864.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1700.00	0.00	180.00	1700.00	-1764.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1800.00	0.00	180.00	1800.00	-1664.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	1900.00	0.00	180.00	1900.00	-1564.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2000.00	0.00	180.00	2000.00	-1464.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2100.00	0.00	180.00	2100.00	-1364.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2200.00	0.00	180.00	2200.00	-1264.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2300.00	0.00	180.00	2300.00	-1164.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2400.00	0.00	180.00	2400.00	-1064.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2500.00	0.00	180.00	2500.00	-964.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2600.00	0.00	180.00	2600.00	-864.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2700.00	0.00	180.00	2700.00	-764.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2800.00	0.00	180.00	2800.00	-664.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	2900.00	0.00	180.00	2900.00	-564.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3000.00	0.00	180.00	3000.00	-464.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3100.00	0.00	180.00	3100.00	-364.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3200.00	0.00	180.00	3200.00	-264.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3300.00	0.00	180.00	3300.00	-164.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3400.00	0.00	180.00	3400.00	-64.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3500.00	0.00	180.00	3500.00	36.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3600.00	0.00	180.00	3600.00	136.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
Build to 5" Nudge	3650.00	0.00	180.00	3650.00	186.00	0.00	0.00	0.00	0.00	0.00	0.00	585369.72	671821.42	N 32 36 30.67	W 103 54 34.49
	3700.00	1.00	180.00	3700.00	236.00	0.10	-0.44	0.00	2.00	180.00	0.44	585369.28	671821.42	N 32 36 30.66	W 103 54 34.49
	3800.00	3.00	180.00	3799.93	335.93	0.86	-3.93	0.00	2.00	180.00	3.93	585365.79	671821.42	N 32 36 30.63	W 103 54 34.49
Hold 5" Nudge	3900.00	5.00	180.00	3899.68	435.68	2.39	-10.90	0.00	2.00	180.00	10.90	585358.82	671821.42	N 32 36 30.56	W 103 54 34.49

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure Azimuth (°)	Closure (ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	4000.00	5.00	180.00	3999.30	535.30	4.30	-19.62	0.00	0.00	180.00	19.62	585350.10	671821.42	N 32 36 30.47	W 103 54 34.49
	4100.00	5.00	180.00	4098.92	634.92	6.21	-28.33	0.00	0.00	180.00	28.33	585341.39	671821.42	N 32 36 30.39	W 103 54 34.49
	4200.00	5.00	180.00	4198.54	734.54	8.12	-37.05	0.00	0.00	180.00	37.05	585332.67	671821.42	N 32 36 30.30	W 103 54 34.49
	4300.00	5.00	180.00	4298.16	834.16	10.03	-45.76	0.00	0.00	180.00	45.76	585323.96	671821.42	N 32 36 30.21	W 103 54 34.49
	4400.00	5.00	180.00	4397.78	933.78	11.94	-54.48	0.00	0.00	180.00	54.48	585315.24	671821.42	N 32 36 30.13	W 103 54 34.49
	4500.00	5.00	180.00	4497.40	1033.40	13.85	-63.19	0.00	0.00	180.00	63.19	585306.53	671821.42	N 32 36 30.04	W 103 54 34.49
	4600.00	5.00	180.00	4597.02	1133.02	15.75	-71.91	0.00	0.00	180.00	71.91	585297.81	671821.42	N 32 36 29.95	W 103 54 34.49
	4700.00	5.00	180.00	4696.64	1232.64	17.66	-80.63	0.00	0.00	180.00	80.63	585289.10	671821.42	N 32 36 29.87	W 103 54 34.49
	4800.00	5.00	180.00	4796.26	1332.26	19.57	-89.34	0.00	0.00	180.00	89.34	585280.39	671821.42	N 32 36 29.78	W 103 54 34.49
	4900.00	5.00	180.00	4895.88	1431.88	21.48	-98.06	0.00	0.00	180.00	98.06	585271.67	671821.42	N 32 36 29.70	W 103 54 34.49
	5000.00	5.00	180.00	4995.50	1531.50	23.39	-106.77	0.00	0.00	180.00	106.77	585262.96	671821.42	N 32 36 29.61	W 103 54 34.49
	5100.00	5.00	180.00	5095.12	1631.12	25.30	-115.49	0.00	0.00	180.00	115.49	585254.24	671821.42	N 32 36 29.52	W 103 54 34.49
	5200.00	5.00	180.00	5194.74	1730.74	27.21	-124.20	0.00	0.00	180.00	124.20	585245.53	671821.42	N 32 36 29.44	W 103 54 34.49
	5300.00	5.00	180.00	5294.36	1830.36	29.12	-132.92	0.00	0.00	180.00	132.92	585236.81	671821.42	N 32 36 29.35	W 103 54 34.50
	5400.00	5.00	180.00	5393.97	1929.97	31.03	-141.64	0.00	0.00	180.00	141.64	585228.10	671821.42	N 32 36 29.26	W 103 54 34.50
	5500.00	5.00	180.00	5493.59	2029.59	32.94	-150.35	0.00	0.00	180.00	150.35	585219.38	671821.42	N 32 36 29.18	W 103 54 34.50
	5600.00	5.00	180.00	5593.21	2129.21	34.85	-159.07	0.00	0.00	180.00	159.07	585210.67	671821.42	N 32 36 29.09	W 103 54 34.50
	5700.00	5.00	180.00	5692.83	2228.83	36.76	-167.78	0.00	0.00	180.00	167.78	585201.95	671821.42	N 32 36 29.01	W 103 54 34.50
	5800.00	5.00	180.00	5792.45	2328.45	38.67	-176.50	0.00	0.00	180.00	176.50	585193.24	671821.42	N 32 36 28.92	W 103 54 34.50
	5900.00	5.00	180.00	5892.07	2428.07	40.58	-185.21	0.00	0.00	180.00	185.21	585184.52	671821.42	N 32 36 28.83	W 103 54 34.50
	6000.00	5.00	180.00	5991.69	2527.69	42.49	-193.93	0.00	0.00	180.00	193.93	585175.81	671821.42	N 32 36 28.75	W 103 54 34.50
	6100.00	5.00	180.00	6091.31	2627.31	44.40	-202.64	0.00	0.00	180.00	202.64	585167.09	671821.42	N 32 36 28.66	W 103 54 34.50
	6200.00	5.00	180.00	6190.93	2726.93	46.31	-211.36	0.00	0.00	180.00	211.36	585158.38	671821.42	N 32 36 28.57	W 103 54 34.50
	6300.00	5.00	180.00	6290.55	2826.55	48.22	-220.08	0.00	0.00	180.00	220.08	585149.66	671821.42	N 32 36 28.49	W 103 54 34.50
	6400.00	5.00	180.00	6390.17	2926.17	50.12	-228.79	0.00	0.00	180.00	228.79	585140.95	671821.42	N 32 36 28.40	W 103 54 34.50
	6500.00	5.00	180.00	6489.79	3025.79	52.03	-237.51	0.00	0.00	180.00	237.51	585132.23	671821.42	N 32 36 28.32	W 103 54 34.50
	6600.00	5.00	180.00	6589.41	3125.41	53.94	-246.22	0.00	0.00	180.00	246.22	585123.52	671821.42	N 32 36 28.23	W 103 54 34.50
	6700.00	5.00	180.00	6689.03	3225.03	55.85	-254.94	0.00	0.00	180.00	254.94	585114.80	671821.42	N 32 36 28.14	W 103 54 34.50
	6800.00	5.00	180.00	6788.65	3324.65	57.76	-263.65	0.00	0.00	180.00	263.65	585106.09	671821.42	N 32 36 28.06	W 103 54 34.50
	6900.00	5.00	180.00	6888.27	3424.27	59.67	-272.37	0.00	0.00	180.00	272.37	585097.37	671821.42	N 32 36 27.97	W 103 54 34.50
	7000.00	5.00	180.00	6987.89	3523.89	61.58	-281.08	0.00	0.00	180.00	281.08	585088.66	671821.42	N 32 36 27.88	W 103 54 34.50
	7100.00	5.00	180.00	7087.51	3623.51	63.49	-289.80	0.00	0.00	180.00	289.80	585079.94	671821.42	N 32 36 27.80	W 103 54 34.50
	7200.00	5.00	180.00	7187.13	3723.13	65.40	-298.52	0.00	0.00	180.00	298.52	585071.23	671821.42	N 32 36 27.71	W 103 54 34.50
	7300.00	5.00	180.00	7286.74	3822.74	67.31	-307.23	0.00	0.00	180.00	307.23	585062.51	671821.42	N 32 36 27.63	W 103 54 34.50
	7400.00	5.00	180.00	7386.36	3922.36	69.22	-315.95	0.00	0.00	180.00	315.95	585053.80	671821.42	N 32 36 27.54	W 103 54 34.50
	7500.00	5.00	180.00	7485.98	4021.98	71.13	-324.66	0.00	0.00	180.00	324.66	585045.08	671821.42	N 32 36 27.45	W 103 54 34.50
	7600.00	5.00	180.00	7585.60	4121.60	73.04	-333.38	0.00	0.00	180.00	333.38	585036.37	671821.42	N 32 36 27.37	W 103 54 34.50
	7700.00	5.00	180.00	7685.22	4221.22	74.95	-342.09	0.00	0.00	180.00	342.09	585027.65	671821.42	N 32 36 27.28	W 103 54 34.51
	7800.00	5.00	180.00	7784.84	4320.84	76.86	-350.81	0.00	0.00	180.00	350.81	585018.94	671821.42	N 32 36 27.19	W 103 54 34.51
	7900.00	5.00	180.00	7884.46	4420.46	78.77	-359.52	0.00	0.00	180.00	359.52	585010.22	671821.42	N 32 36 27.11	W 103 54 34.51
	8000.00	5.00	180.00	7984.08	4520.08	80.68	-368.24	0.00	0.00	180.00	368.24	585001.51	671821.42	N 32 36 27.02	W 103 54 34.51
	8100.00	5.00	180.00	8083.70	4619.70	82.59	-376.96	0.00	0.00	180.00	376.96	584992.79	671821.42	N 32 36 26.94	W 103 54 34.51
	8200.00	5.00	180.00	8183.32	4719.32	84.49	-385.67	0.00	0.00	180.00	385.67	584984.08	671821.42	N 32 36 26.85	W 103 54 34.51
KOP - Buikd 9*/100ft	8227.79	5.00	180.00	8211.00	4747.00	85.03	-388.09	0.00	0.00	180.00	388.09	584981.66	671821.42	N 32 36 26.83	W 103 54 34.51
	8300.00	11.07	198.05	8282.48	4818.48	89.26	-397.84	-2.15	9.00	180.31	397.84	584971.91	671819.27	N 32 36 26.73	W 103 54 34.53
	8400.00	19.92	204.35	8378.76	4914.76	104.44	-422.53	-12.17	9.00	181.65	422.71	584947.22	671808.25	N 32 36 26.49	W 103 54 34.65
	8500.00	28.85	206.84	8469.75	5005.75	130.09	-459.65	-30.12	9.00	183.75	460.64	584910.10	671791.30	N 32 36 26.12	W 103 54 34.86
	8600.00	37.82	208.23	8553.21	5089.21	165.58	-508.29	-55.57	9.00	186.24	511.32	584861.46	671765.85	N 32 36 25.64	W 103 54 35.16
	8700.00	46.79	209.15	8627.09	5163.09	210.04	-567.26	-87.89	9.00	188.81	574.02	584802.51	671733.53	N 32 36 25.06	W 103 54 35.54
	8800.00	55.77	209.83	8689.57	5225.57	262.36	-635.09	-126.29	9.00	191.25	647.52	584734.68	671695.14	N 32 36 24.39	W 103 54 36.00
	8900.00	64.76	210.38	8739.12	5275.12	321.27	-710.12	-169.82	9.00	193.45	730.14	584659.65	671651.61	N 32 36 23.65	W 103 54 36.51
	9000.00	73.74	210.85	8774.51	5310.51	385.32	-790.51	-217.41	9.00	195.38	819.86	584579.27	671604.03	N 32 36 22.85	W 103 54 37.07
	9100.00	82.73	211.28	8794.87	5330.87	452.92	-874.28	-267.88	9.00	197.04	914.40	584495.51	671553.55	N 32 36 22.03	W 103 54 37.66
Landing point - Turn @4*/100ft	9180.89	90.00	211.62	8800.00	5336.00	509.07	-943.10	-308.98	9.00	198.19	992.74	584426.69	671511.46	N 32 36 21.35	W 103 54 38.16
	9200.00	90.00	212.38	8800.00	5336.00	522.50	-959.30	-320.11	4.00	198.45	1011.30	584410.49	671501.34	N 32 36 21.19	W 103 54 38.28
	9300.00	90.02	216.38	8799.98	5335.98	595.67	-1041.81	-376.57	4.00	199.87	1107.78	584327.99	671444.88	N 32 36 20.37	W 103 54 38.94
	9400.00	90.04	220.38	8799.92	5335.92	673.41	-1120.18	-438.65	4.00	201.38	1203.01	584249.62	671382.80	N 32 36 19.60	W 103 54 39.67
	9500.00	90.06	224.38	8799.84	5335.84	755.35	-1194.03	-506.05	4.00	202.97	1296.84	584175.78	671315.41	N 32 36 18.87	W 103 54 40.46
	9600.00	90.07	228.38	8799.73	5335.73	841.08	-1263.00	-578.43	4.00	204.61	1389.15	584106.81	671243.03	N 32 36 18.19	W 103 54 41.31
	9700.00	90.09	232.38	8799.58	5335.58	930.20	-1326.75	-655.45	4.00	206.29	1479.82	584043.07	671166.02	N 32 36 17.56	W 103 54 42.21
	9800.00	90.11	236.38	8799.41	5335.41	1022.25	-1384.97	-736.72	4.00	208.01	1568.73	583984.85	671084.75	N 32 36 16.99	W 103 54 43.17
	9900.00	90.12	240.38	8799.20	5335.20	1116.81	-1437.38	-821.87	4.00	209.76	1655.76	583932.44	670999.62	N 32 36 16.48	W 103 54 44.16
	10000.00	90.14	244.38	8798.97	5334.97	1213.40	-1483.73	-910.45	4.00	211.53	1740.80	583866.10	670911.03	N 32 36 16.02	W 103 54 45.20
	10100.00	90.15	248.38	8798.72	5334.72	1311.55	-1523.78	-1002.06	4.00	213.					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Closure Azimuth (°)	Closure (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Hold 270° Azi	10500.00	90.21	264.38	8797.45	5333.45	1710.20	-1617.64	-1389.55	4.00	220.66	2132.52	583752.20	670431.97	N 32 36 14.71	W 103 54 50.81
	10600.00	90.22	268.38	8797.08	5333.08	1808.94	-1623.95	-1489.33	4.00	222.52	2203.48	583745.89	670332.19	N 32 36 14.66	W 103 54 51.97
	10640.28	90.22	270.00	8796.93	5332.93	1848.35	-1624.52	-1529.60	4.00	223.28	2231.31	583745.32	670291.93	N 32 36 14.65	W 103 54 52.45
	10700.00	90.22	270.00	8796.70	5332.70	1906.63	-1624.52	-1589.33	0.00	224.37	2272.67	583745.32	670232.21	N 32 36 14.65	W 103 54 53.14
	10800.00	90.22	270.00	8796.31	5332.31	2004.20	-1624.53	-1689.33	0.00	226.12	2343.70	583745.31	670132.22	N 32 36 14.66	W 103 54 54.31
	10900.00	90.22	270.00	8795.93	5331.93	2101.77	-1624.54	-1789.33	0.00	227.76	2416.78	583745.30	670032.22	N 32 36 14.66	W 103 54 55.48
	11000.00	90.22	270.00	8795.55	5331.55	2199.34	-1624.55	-1889.33	0.00	229.31	2491.73	583745.29	669932.23	N 32 36 14.67	W 103 54 56.65
	11100.00	90.22	270.00	8795.16	5331.16	2296.91	-1624.56	-1989.33	0.00	230.76	2568.38	583745.28	669832.24	N 32 36 14.67	W 103 54 57.82
	11200.00	90.22	270.00	8794.78	5330.78	2394.48	-1624.56	-2089.32	0.00	232.13	2646.60	583745.28	669732.25	N 32 36 14.67	W 103 54 58.99
	11300.00	90.22	270.00	8794.39	5330.39	2492.06	-1624.57	-2189.32	0.00	233.42	2726.24	583745.27	669632.26	N 32 36 14.68	W 103 55 0.16
11400.00	90.22	270.00	8794.01	5330.01	2589.63	-1624.58	-2289.32	0.00	234.64	2807.18	583745.26	669532.26	N 32 36 14.68	W 103 55 1.33	
11500.00	90.22	270.00	8793.63	5329.63	2687.20	-1624.59	-2389.32	0.00	235.79	2889.32	583745.25	669432.27	N 32 36 14.68	W 103 55 2.49	
	11600.00	90.22	270.00	8793.24	5329.24	2784.77	-1624.59	-2489.32	0.00	236.87	2972.55	583745.25	669332.28	N 32 36 14.69	W 103 55 3.66
	11700.00	90.22	270.00	8792.86	5328.86	2882.34	-1624.60	-2589.32	0.00	237.89	3056.78	583745.24	669232.29	N 32 36 14.69	W 103 55 4.83
	11800.00	90.22	270.00	8792.47	5328.47	2979.91	-1624.61	-2689.32	0.00	238.86	3141.94	583745.23	669132.30	N 32 36 14.70	W 103 55 6.00
	11900.00	90.22	270.00	8792.09	5328.09	3077.48	-1624.61	-2789.32	0.00	239.78	3227.95	583745.22	669032.31	N 32 36 14.70	W 103 55 7.17
	12000.00	90.22	270.00	8791.71	5327.71	3175.06	-1624.62	-2889.32	0.00	240.65	3314.75	583745.22	668932.31	N 32 36 14.70	W 103 55 8.34
	12100.00	90.22	270.00	8791.32	5327.32	3272.63	-1624.63	-2989.32	0.00	241.48	3402.27	583745.21	668832.32	N 32 36 14.71	W 103 55 9.51
	12200.00	90.22	270.00	8790.94	5326.94	3370.20	-1624.63	-3089.32	0.00	242.26	3490.46	583745.20	668732.33	N 32 36 14.71	W 103 55 10.68
	12300.00	90.22	270.00	8790.55	5326.55	3467.77	-1624.64	-3189.32	0.00	243.01	3579.27	583745.20	668632.34	N 32 36 14.71	W 103 55 11.85
	12400.00	90.22	270.00	8790.17	5326.17	3565.34	-1624.65	-3289.32	0.00	243.71	3668.66	583745.19	668532.35	N 32 36 14.72	W 103 55 13.02
	12500.00	90.22	270.00	8789.79	5325.79	3662.91	-1624.65	-3389.32	0.00	244.39	3758.58	583745.19	668432.35	N 32 36 14.72	W 103 55 14.18
	12600.00	90.22	270.00	8789.40	5325.40	3760.48	-1624.66	-3489.31	0.00	245.03	3849.00	583745.18	668332.36	N 32 36 14.73	W 103 55 15.35
	12700.00	90.22	270.00	8789.02	5325.02	3858.05	-1624.66	-3589.31	0.00	245.65	3939.89	583745.17	668232.37	N 32 36 14.73	W 103 55 16.52
	12800.00	90.22	270.00	8788.63	5324.63	3955.63	-1624.67	-3689.31	0.00	246.23	4031.20	583745.17	668132.38	N 32 36 14.73	W 103 55 17.69
	12900.00	90.22	270.00	8788.25	5324.25	4053.20	-1624.68	-3789.31	0.00	246.79	4122.92	583745.16	668032.39	N 32 36 14.74	W 103 55 18.86
	13000.00	90.22	270.00	8787.86	5323.86	4150.77	-1624.68	-3889.31	0.00	247.33	4215.01	583745.16	667932.39	N 32 36 14.74	W 103 55 20.03
	13100.00	90.22	270.00	8787.48	5323.48	4248.34	-1624.69	-3989.31	0.00	247.84	4307.46	583745.15	667832.40	N 32 36 14.75	W 103 55 21.20
	13200.00	90.22	270.00	8787.10	5323.10	4345.91	-1624.69	-4089.31	0.00	248.33	4400.24	583745.15	667732.41	N 32 36 14.75	W 103 55 22.37
	13300.00	90.22	270.00	8786.71	5322.71	4443.48	-1624.70	-4189.31	0.00	248.80	4493.32	583745.14	667632.42	N 32 36 14.75	W 103 55 23.54
	13400.00	90.22	270.00	8786.33	5322.33	4541.05	-1624.70	-4289.31	0.00	249.25	4586.70	583745.14	667532.43	N 32 36 14.76	W 103 55 24.70
	13500.00	90.22	270.00	8785.94	5321.94	4638.62	-1624.70	-4389.31	0.00	249.69	4680.35	583745.13	667432.43	N 32 36 14.76	W 103 55 25.87
	13600.00	90.22	270.00	8785.56	5321.56	4736.19	-1624.71	-4489.31	0.00	250.10	4774.26	583745.13	667332.44	N 32 36 14.76	W 103 55 27.04
	13700.00	90.22	270.00	8785.17	5321.17	4833.76	-1624.71	-4589.31	0.00	250.50	4868.41	583745.13	667232.45	N 32 36 14.77	W 103 55 28.21
	13800.00	90.22	270.00	8784.79	5320.79	4931.33	-1624.72	-4689.31	0.00	250.89	4962.79	583745.12	667132.46	N 32 36 14.77	W 103 55 29.38
	13900.00	90.22	270.00	8784.41	5320.41	5028.90	-1624.72	-4789.30	0.00	251.26	5057.39	583745.12	667032.47	N 32 36 14.78	W 103 55 30.55
	14000.00	90.22	270.00	8784.02	5320.02	5126.48	-1624.72	-4889.30	0.00	251.62	5152.19	583745.11	666932.47	N 32 36 14.78	W 103 55 31.72
	14100.00	90.22	270.00	8783.64	5319.64	5224.05	-1624.73	-4989.30	0.00	251.96	5247.18	583745.11	666832.48	N 32 36 14.78	W 103 55 32.89
	14200.00	90.22	270.00	8783.25	5319.25	5321.62	-1624.73	-5089.30	0.00	252.29	5342.35	583745.11	666732.49	N 32 36 14.79	W 103 55 34.06
	14300.00	90.22	270.00	8782.87	5318.87	5419.19	-1624.74	-5189.30	0.00	252.62	5437.70	583745.10	666632.50	N 32 36 14.79	W 103 55 35.23
	14400.00	90.22	270.00	8782.48	5318.48	5516.76	-1624.74	-5289.30	0.00	252.92	5533.22	583745.10	666532.51	N 32 36 14.79	W 103 55 36.39
	14500.00	90.22	270.00	8782.10	5318.10	5614.33	-1624.74	-5389.30	0.00	253.22	5628.88	583745.10	666432.52	N 32 36 14.80	W 103 55 37.56
	14600.00	90.22	270.00	8781.72	5317.72	5711.90	-1624.74	-5489.30	0.00	253.51	5724.70	583745.10	666332.52	N 32 36 14.80	W 103 55 38.73
	14700.00	90.22	270.00	8781.33	5317.33	5809.47	-1624.75	-5589.30	0.00	253.79	5820.66	583745.09	666232.53	N 32 36 14.81	W 103 55 39.90
	14800.00	90.22	270.00	8780.95	5316.95	5907.04	-1624.75	-5689.30	0.00	254.06	5916.75	583745.09	666132.54	N 32 36 14.81	W 103 55 41.07
	14900.00	90.22	270.00	8780.56	5316.56	6004.61	-1624.75	-5789.30	0.00	254.32	6012.97	583745.09	666032.55	N 32 36 14.81	W 103 55 42.24
	15000.00	90.22	270.00	8780.18	5316.18	6102.18	-1624.75	-5889.30	0.00	254.58	6109.31	583745.09	665932.56	N 32 36 14.82	W 103 55 43.41
	15100.00	90.22	270.00	8779.79	5315.79	6199.75	-1624.76	-5989.30	0.00	254.82	6205.76	583745.08	665832.56	N 32 36 14.82	W 103 55 44.58
	15200.00	90.22	270.00	8779.41	5315.41	6297.32	-1624.76	-6089.30	0.00	255.06	6302.33	583745.08	665732.57	N 32 36 14.82	W 103 55 45.75
	15300.00	90.22	270.00	8779.02	5315.02	6394.89	-1624.76	-6189.29	0.00	255.29	6399.00	583745.08	665632.58	N 32 36 14.83	W 103 55 46.91
	15400.00	90.22	270.00	8778.64	5314.64	6492.46	-1624.76	-6289.29	0.00	255.52	6495.77	583745.08	665532.59	N 32 36 14.83	W 103 55 48.08
	15500.00	90.22	270.00	8778.26	5314.26										

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure Azimuth (°)	Closure (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
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	25.000	1/100.000	30.000	30.000	SLB_MWD-POOR-Depth Only		Original Borehole / Cimarex Hasta La Vista 1 Federal Com 2DI Rev5						
	1	25.000	8155.000	1/100.000	30.000	30.000	SLB_MWD-POOR		Original Borehole / Cimarex Hasta La Vista 1 Federal Com 2DI Rev5						
	1	8155.000	16346.694	1/100.000	30.000	30.000	SLB_MWD-STD		Original Borehole / Cimarex Hasta La Vista 1 Federal Com 2DI Rev5						

**Hasta La Vista DI Fed Com 2H
30-015-42541
Cimarex Energy Company
August 29, 2014
Conditions of Approval**

- 1. Additional cement will be required on the 7" casing as the calculated excess is 8% and it is critical that the cement top be at least 50' above the top of the Capitan Reef. TOC shall be at 2250' or shallower and operator shall provide method as to how this was verified.**
- 2. Additional cement will be required on the 4.5" liner as the calculated excess to the previous shoe is a negative 11%. Operator shall provide method as to how this was verified.**

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