



Cimarex Hornsby 35 Federal Com #2H XEM+MWD 0ft to 14525 Survey

Report

(Non-Def Survey)



Report Date: September 04, 2014 - 09:29 AM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Hornsby 35 Federal Com 2H / Cimarex Hornsby 35 Federal Com 2H
Well: Cimarex Hornsby 35 Federal Com 2H
Borehole: Original Borehole
UWI / API#: Cactus 112 / Unknown
Survey Name: Cimarex Hornsby 35 Federal Com #2H XEM+MWD 0ft to 14525
Survey Date: August 12, 2014
Tort / AHD / DDI / ERD Ratio: 212.839 ° / 7310.828 ft / 6.465 / 0.944
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 0' 2.08967", W 104° 9' 54.45270"
Location Grid N/E Y/X: N 363991.246 ftUS, E 593479.548 ftUS
CRS Grid Convergence Angle: 0.0891 °
Grid Scale Factor: 0.9999122
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 355.286 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3300.000 ft above
Seabed / Ground Elevation: 3275.000 ft above
Magnetic Declination: 7.616 °
Total Gravity Field Strength: 998.4244mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48054.702 nT
Magnetic Dip Angle: 59.786 °
Declination Date: August 16, 2014
Magnetic Declination Model: BGGM 2014
North Reference: Grid North
Grid Convergence Used: 0.0891 °
Total Corr Mag North->Grid North: 7.5266 °
Local Coord Referenced To: Structure Reference Point

Provide signature page for Survey
Denied

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
SHL Hornsby 35 Federal Com #2H	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	347.57M
	121.00	0.70	347.57	121.00	0.73	0.72	-0.16	0.74	347.57	0.58	140.99M
	181.00	1.10	140.99	180.99	0.62	0.63	0.12	0.64	11.15	2.92	145.16M
	242.00	1.01	145.16	241.98	-0.33	-0.26	0.80	0.84	108.26	0.19	158.39M
	357.00	1.01	158.39	356.97	-2.18	-2.04	1.75	2.69	139.31	0.20	314.88M
	390.00	1.01	314.88	389.96	-2.23	-2.10	1.65	2.68	141.83	5.99	160.68M
	451.00	0.70	160.68	450.96	-2.18	-2.08	1.40	2.50	146.08	2.73	155.05M
	512.00	0.31	155.05	511.96	-2.70	-2.58	1.59	3.03	148.34	0.64	168.28M
	571.00	0.22	168.28	570.96	-2.96	-2.83	1.68	3.29	149.34	0.18	91.99M
	632.00	0.09	91.99	631.96	-3.08	-2.95	1.75	3.43	149.30	0.36	36.88M
	693.00	0.09	36.88	692.96	-3.05	-2.91	1.83	3.44	147.89	0.14	291.15M
	752.00	0.09	291.15	751.96	-3.00	-2.86	1.81	3.38	147.63	0.24	323.98M
	844.00	0.09	323.98	843.96	-2.90	-2.77	1.70	3.25	148.47	0.06	307.58M
	935.00	0.09	307.58	934.96	-2.80	-2.67	1.60	3.12	149.04	0.03	7.26M
	1032.00	0.09	7.26	1031.96	-2.67	-2.55	1.55	2.99	148.67	0.09	196.18M
	1123.00	0.09	196.18	1122.96	-2.67	-2.55	1.54	2.98	148.82	0.20	150.17M

30-015-4216-5

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	1213.00	0.09	150.17	1212.96	-2.80	-2.68	1.56	3.10	149.82	0.08	25.28M
	1306.00	0.09	25.28	1305.96	-2.80	-2.67	1.62	3.13	148.72	0.17	294.66M
	1398.00	0.09	294.66	1397.96	-2.70	-2.58	1.59	3.03	148.35	0.14	146.79M
	1492.00	0.09	146.79	1491.96	-2.73	-2.61	1.56	3.04	149.08	0.18	133.87M
	1587.00	0.09	133.87	1586.96	-2.85	-2.72	1.66	3.19	148.68	0.02	189.59M
	1682.00	0.22	189.59	1681.96	-3.08	-2.96	1.68	3.40	150.37	0.19	173.46M
	1780.00	0.09	173.46	1779.96	-3.34	-3.22	1.66	3.62	152.73	0.14	134.79M
	1875.00	0.09	134.79	1874.96	-3.47	-3.34	1.72	3.76	152.78	0.06	122.18M
	1970.00	0.09	122.18	1969.96	-3.58	-3.44	1.84	3.90	151.88	0.02	61.75M
	2068.00	0.09	61.75	2067.96	-3.59	-3.44	1.97	3.97	150.22	0.09	252.48M
	2116.00	0.09	252.48	2115.96	-3.58	-3.43	1.97	3.96	150.21	0.37	42.46M
	2170.00	0.09	42.46	2169.96	-3.57	-3.42	1.95	3.94	150.22	0.32	77.18M
	2265.00	0.31	77.18	2264.96	-3.48	-3.30	2.26	4.00	145.68	0.25	46.46M
	2360.00	0.22	46.46	2359.95	-3.33	-3.12	2.64	4.09	139.79	0.17	19.96M
	2455.00	0.31	19.96	2454.95	-2.98	-2.75	2.86	3.97	133.94	0.16	28.75M
	2550.00	0.22	28.75	2549.95	-2.59	-2.35	3.03	3.84	127.80	0.10	16.27M
	2644.00	0.22	16.27	2643.95	-2.28	-2.02	3.17	3.76	122.52	0.05	319.76M
	2739.00	0.09	319.76	2738.95	-2.04	-1.79	3.17	3.64	119.41	0.20	266.67M
	2834.00	0.40	266.67	2833.95	-1.98	-1.75	2.79	3.30	122.08	0.37	292.78M
	2928.00	0.40	292.78	2927.95	-1.82	-1.64	2.16	2.72	127.21	0.19	281.17M
	3023.00	0.40	281.17	3022.95	-1.57	-1.45	1.53	2.11	133.42	0.09	258.85M
	3118.00	0.48	258.85	3117.94	-1.53	-1.46	0.82	1.68	150.80	0.20	257.88M
	3213.00	0.62	257.88	3212.94	-1.64	-1.65	-0.07	1.65	182.60	0.15	264.56M
	3308.00	0.48	264.56	3307.93	-1.71	-1.79	-0.97	2.04	208.48	0.16	272.25M
	3403.00	0.62	272.25	3402.93	-1.65	-1.81	-1.88	2.61	226.11	0.17	266.58M
	3498.00	0.40	266.58	3497.93	-1.58	-1.81	-2.73	3.27	236.41	0.24	280.38M
	3593.00	0.40	280.38	3592.92	-1.49	-1.77	-3.39	3.82	242.37	0.10	269.97M
	3685.00	0.40	269.97	3684.92	-1.38	-1.71	-4.02	4.37	246.92	0.08	257.88M
	3779.00	0.48	257.88	3778.92	-1.40	-1.80	-4.74	5.06	249.22	0.13	249.05M
	3874.00	0.70	249.05	3873.91	-1.62	-2.09	-5.67	6.04	249.77	0.25	241.49M
	3970.00	0.88	241.49	3969.90	-2.08	-2.65	-6.86	7.36	248.89	0.22	22.56M
	4065.00	0.09	22.56	4064.90	-2.30	-2.93	-7.47	8.03	248.60	1.00	48.57M
	4160.00	0.31	48.57	4159.90	-2.08	-2.69	-7.25	7.74	249.65	0.24	47.08M
	4255.00	0.22	47.08	4254.90	-1.82	-2.40	-6.93	7.33	250.92	0.10	87.07M
	4349.00	0.48	87.07	4348.90	-1.72	-2.25	-6.40	6.79	250.61	0.36	67.47M
	4445.00	0.31	67.47	4444.90	-1.65	-2.13	-5.76	6.14	249.68	0.22	51.69M
	4539.00	0.48	51.69	4538.89	-1.36	-1.79	-5.22	5.51	251.05	0.21	50.07M
	4693.00	0.31	50.07	4692.89	-0.76	-1.12	-4.39	4.53	255.64	0.11	305.26M
	4732.00	0.09	305.26	4731.89	-0.68	-1.04	-4.33	4.46	256.53	0.88	277.48M
	4827.00	0.48	277.48	4826.89	-0.55	-0.94	-4.79	4.88	258.86	0.42	70.28M
	4922.00	0.62	70.28	4921.89	-0.33	-0.72	-4.70	4.76	261.31	1.13	80.96M
	5017.00	0.88	80.96	5016.88	-0.14	-0.43	-3.50	3.52	262.99	0.31	74.37M
	5112.00	0.79	74.37	5111.87	0.04	-0.14	-2.15	2.15	266.29	0.14	77.57M
	5207.00	0.70	77.57	5206.86	0.24	0.16	-0.95	0.96	279.73	0.10	90.98M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	5302.00	0.48	90.98	5301.86	0.28	0.28	0.02	0.28	3.45	0.27	116.95M
	5397.00	0.40	116.95	5396.85	0.06	0.12	0.71	0.72	80.14	0.22	150.08M
	5492.00	0.48	150.08	5491.85	-0.47	-0.37	1.20	1.26	107.15	0.28	166.48M
	5587.00	0.48	166.48	5586.85	-1.22	-1.10	1.50	1.86	126.41	0.14	196.89M
	5678.00	0.79	196.89	5677.84	-2.18	-2.07	1.40	2.50	145.93	0.49	211.39M
	5774.00	0.79	211.39	5773.83	-3.33	-3.27	0.87	3.39	165.18	0.21	237.49M
	5868.00	0.88	237.49	5867.82	-4.19	-4.21	-0.08	4.21	181.09	0.41	256.39M
	5964.00	0.88	256.39	5963.81	-4.65	-4.78	-1.42	4.99	196.52	0.30	276.78M
	6058.00	2.02	276.78	6057.78	-4.43	-4.76	-3.77	6.07	218.36	1.31	294.66M
	6153.00	2.02	294.66	6152.72	-3.28	-3.86	-6.95	7.95	240.94	0.66	333.69M
	6251.00	1.01	333.69	6250.69	-1.63	-2.37	-8.90	9.21	255.11	1.42	343.05M
	6346.00	1.89	343.05	6345.66	0.68	-0.12	-9.73	9.73	269.31	0.96	323.89M
	6441.00	2.59	323.89	6440.59	4.05	3.12	-11.45	11.87	285.22	1.07	325.16M
	6536.00	2.50	325.16	6535.49	7.67	6.55	-13.90	15.37	295.23	0.11	312.07M
	6631.00	2.50	312.07	6630.40	10.97	9.64	-16.62	19.21	300.11	0.60	301.48M
Final XEM Survey	6722.00	2.42	301.48	6721.32	13.55	11.97	-19.73	23.08	301.24	0.51	272M
	6783.00	1.25	272.00	6782.29	14.39	12.67	-21.50	24.95	300.51	2.40	230.36M
	6847.00	2.52	230.36	6846.25	13.67	11.79	-23.28	26.10	296.87	2.80	247.76M
	6879.00	5.59	247.76	6878.17	12.80	10.76	-25.26	27.46	293.06	10.23	252.19M
	6910.00	8.97	252.19	6908.92	11.79	9.44	-28.96	30.46	288.06	11.04	9.03L
	6942.00	12.02	249.87	6940.38	10.34	7.53	-34.47	35.28	282.33	9.62	8.43L
	6973.00	14.23	248.54	6970.57	8.39	5.03	-41.05	41.35	276.99	7.19	52.49R
	7005.00	16.00	256.27	7001.46	6.56	2.54	-48.99	49.06	272.97	8.37	79.88R
	7036.00	16.54	264.07	7031.22	5.80	1.07	-57.53	57.54	271.07	7.26	54.13R
	7068.00	17.57	268.56	7061.82	5.98	0.48	-66.89	66.89	270.41	5.22	18.97R
	7100.00	19.69	270.71	7092.14	6.76	0.43	-77.11	77.11	270.32	6.96	3.52L
	7131.00	22.14	270.31	7121.09	7.77	0.52	-88.18	88.18	270.34	7.92	10.12L
	7163.00	24.67	269.23	7150.46	8.76	0.47	-100.89	100.89	270.26	8.02	1.47L
	7194.00	27.36	269.08	7178.32	9.67	0.26	-114.48	114.48	270.13	8.68	5.28R
	7226.00	30.37	269.63	7206.34	10.77	0.09	-129.93	129.93	270.04	9.44	13.95R
	7257.00	33.20	270.91	7232.69	12.20	0.18	-146.25	146.25	270.07	9.38	32.83R
	7289.00	35.86	273.80	7259.05	14.44	0.94	-164.37	164.37	270.33	9.76	42.99R
	7321.00	38.04	277.03	7284.62	17.84	2.77	-183.51	183.53	270.86	9.12	50.74R
	7351.00	39.74	280.20	7307.97	22.19	5.60	-202.12	202.20	271.59	8.72	51.79R
	7383.00	41.92	284.21	7332.19	28.29	10.03	-222.56	222.79	272.58	10.65	32.12R
	7415.00	44.62	286.60	7355.49	35.84	15.87	-243.70	244.21	273.73	9.87	23.21R
	7447.00	48.00	288.54	7377.59	44.63	22.86	-265.75	266.73	274.92	11.44	26.73R
	7478.00	51.34	290.68	7397.65	54.37	30.80	-288.00	289.64	276.10	11.99	39.83R
	7510.00	53.98	293.37	7417.06	65.82	40.35	-311.58	314.18	277.38	10.62	61.14R
	7542.00	55.32	296.25	7435.58	78.69	51.31	-335.26	339.16	278.70	8.45	49.2R
	7572.00	57.03	298.58	7452.28	91.94	62.78	-357.38	362.85	279.96	8.61	68.46R
	7602.00	58.06	301.55	7468.38	106.38	75.47	-379.28	386.72	281.25	9.03	81.29R

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	7634.00	58.28	303.16	7485.26	122.77	90.02	-402.25	412.20	282.61	4.33	82.38R
	7664.00	58.69	306.39	7500.94	139.03	104.60	-423.25	435.98	283.88	9.28	81.55R
Cross Hard Line	7693.00	59.10	309.34	7515.93	155.83	119.84	-442.85	458.78	285.14	8.82	80.03R
	7695.00	59.13	309.54	7516.95	157.03	120.93	-444.17	460.34	285.23	8.82	74.48R
	7726.00	59.72	311.91	7532.72	176.04	138.34	-464.40	484.56	286.59	6.85	81.65R
	7757.00	60.35	316.28	7548.21	196.25	157.03	-483.67	508.53	287.99	12.38	84.14R
	7787.00	60.84	320.87	7562.95	217.19	176.62	-500.96	531.18	289.42	13.43	75.34R
	7817.00	61.42	323.30	7577.44	239.17	197.34	-517.10	553.48	290.89	7.35	50.41R
	7847.00	62.74	325.08	7591.48	261.87	218.84	-532.61	575.81	292.34	6.84	46.79R
	7878.00	64.31	326.92	7605.30	286.07	241.84	-548.12	599.10	293.81	7.34	58.8R
	7909.00	65.34	328.77	7618.49	310.97	265.59	-563.05	622.54	295.25	6.34	54.84R
	7939.00	66.66	330.79	7630.69	335.71	289.28	-576.84	645.31	296.63	7.56	42.83R
	7969.00	68.59	332.70	7642.11	361.14	313.71	-589.97	668.19	298.00	8.72	49.22R
	8000.00	70.35	334.85	7652.99	388.14	339.75	-602.79	691.94	299.41	8.63	47.82R
	8031.00	72.76	337.61	7662.80	415.94	366.66	-614.64	715.69	300.82	11.48	57.99R
	8061.00	74.54	340.53	7671.24	443.58	393.55	-624.92	738.51	302.20	11.06	43.68R
	8092.00	76.70	342.64	7678.94	472.75	422.03	-634.40	761.95	303.63	9.59	52.52R
	8122.00	79.06	345.75	7685.24	501.52	450.25	-642.38	784.46	305.03	12.83	62.5R
	8154.00	80.29	348.13	7690.98	532.67	480.92	-649.49	808.16	306.52	8.27	80.3R
	8185.00	80.64	350.17	7696.11	563.07	510.94	-655.25	830.91	307.95	6.59	92.15R
	8216.00	80.53	353.58	7701.19	593.59	541.21	-659.57	853.19	309.37	10.86	46.96R
	8246.00	82.20	355.38	7705.69	623.24	570.73	-662.42	874.38	310.75	8.13	19.71R
	8277.00	85.01	356.39	7709.14	654.05	601.46	-664.63	896.37	312.14	9.63	13.19R
	8309.00	86.80	356.81	7711.43	685.95	633.32	-666.52	919.43	313.54	5.74	8.23R
	8341.00	87.56	356.92	7713.00	717.90	665.23	-668.27	942.93	314.87	2.40	4.34L
	8372.00	88.35	356.86	7714.11	748.87	696.16	-669.95	966.17	316.10	2.56	49.05R
	8467.00	89.93	358.68	7715.53	843.76	791.07	-673.65	1039.04	319.58	2.54	6.5R
	8562.00	91.86	358.90	7714.05	938.57	886.04	-675.65	1114.26	322.67	2.04	113.38R
	8657.00	91.38	0.01	7711.36	1033.28	980.99	-676.56	1191.67	325.41	1.27	153.44L
	8751.00	90.76	359.70	7709.61	1126.96	1074.98	-676.79	1270.28	327.81	0.74	135.34R
	8847.00	89.93	0.52	7709.03	1222.62	1170.97	-676.61	1352.40	329.98	1.22	99.46R
	8942.00	89.90	0.70	7709.17	1317.21	1265.97	-675.60	1434.96	331.91	0.19	149.24L
	9037.00	88.59	359.92	7710.42	1411.83	1360.95	-675.09	1519.19	333.62	1.60	151.82R
	9133.00	87.49	0.51	7713.71	1507.42	1456.89	-674.73	1605.55	335.15	1.30	1.11R
	9228.00	89.04	0.54	7716.58	1601.98	1551.84	-673.86	1691.83	336.53	1.63	127.25L
	9322.00	87.87	359.00	7719.12	1695.65	1645.81	-674.23	1778.56	337.72	2.06	16.63L
	9418.00	89.31	358.57	7721.48	1791.44	1741.75	-676.27	1868.43	338.78	1.57	165.53R
	9513.00	88.38	358.81	7723.40	1886.25	1836.71	-678.44	1958.00	339.73	1.01	5.71L
	9608.00	89.28	358.72	7725.33	1981.06	1931.66	-680.49	2048.02	340.59	0.95	123.24L
	9703.00	88.35	357.30	7727.30	2075.93	2026.58	-683.78	2138.83	341.36	1.79	78.69L
	9799.00	88.38	357.15	7730.04	2171.83	2122.43	-688.43	2231.29	342.03	0.16	2R
	9894.00	90.10	357.21	7731.30	2266.77	2217.30	-693.10	2323.11	342.64	1.81	83.66L
	9989.00	90.14	356.85	7731.10	2361.72	2312.18	-698.02	2415.24	343.20	0.38	137.73R

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	10085.00	90.03	356.95	7730.96	2457.68	2408.04	-703.22	2508.61	343.72	0.15	159.19R
	10180.00	87.69	357.84	7732.85	2552.59	2502.91	-707.53	2600.99	344.22	2.64	165.98L
	10275.00	87.21	357.72	7737.07	2647.41	2597.75	-711.21	2693.34	344.69	0.52	7.66R
	10369.00	89.07	357.97	7740.12	2741.26	2691.63	-714.74	2784.91	345.13	2.00	1.43L
	10464.00	91.48	357.91	7739.67	2836.15	2786.56	-718.16	2877.61	345.55	2.54	118.99R
	10560.00	91.07	358.65	7737.53	2932.00	2882.49	-721.04	2971.30	345.96	0.88	9.16R
	10655.00	91.69	358.75	7735.24	3026.80	2977.44	-723.19	3064.01	346.35	0.66	145.99L
	10755.00	90.86	358.19	7733.02	3126.62	3077.37	-725.86	3161.82	346.73	1.00	136.13L
	10851.00	89.83	357.20	7732.44	3222.53	3173.29	-729.72	3256.11	347.05	1.49	62.24L
	10946.00	90.03	356.82	7732.56	3317.49	3268.16	-734.68	3349.72	347.33	0.45	52.12R
	11042.00	90.24	357.09	7732.33	3413.45	3364.03	-739.78	3444.41	347.60	0.36	107.16R
	11137.00	90.03	357.77	7732.11	3508.38	3458.93	-744.04	3538.05	347.86	0.75	107.35L
	11232.00	89.93	357.45	7732.14	3603.30	3553.85	-748.00	3631.71	348.11	0.35	86.73R
	11326.00	89.97	358.15	7732.22	3697.21	3647.78	-751.61	3724.40	348.36	0.75	45R
	11421.00	90.07	358.25	7732.19	3792.09	3742.73	-754.59	3818.04	348.60	0.15	68.84R
	11517.00	90.31	358.87	7731.87	3887.93	3838.70	-757.00	3912.63	348.84	0.69	68.43R
	11611.00	90.48	359.30	7731.22	3981.72	3932.68	-758.50	4005.16	349.08	0.49	HS
	11707.00	90.62	359.30	7730.30	4077.48	4028.67	-759.68	4099.67	349.32	0.15	94.08L
	11802.00	90.58	358.74	7729.31	4172.27	4123.65	-761.30	4193.34	349.54	0.59	124.22L
	11897.00	90.41	358.49	7728.49	4267.11	4218.62	-763.60	4287.17	349.74	0.32	77.47L
	11992.00	90.45	358.31	7727.77	4361.97	4313.58	-766.25	4381.11	349.93	0.19	109.29R
	12086.00	90.38	358.51	7727.09	4455.82	4407.54	-768.86	4474.10	350.10	0.23	HS
	12181.00	90.41	358.51	7726.44	4550.67	4502.51	-771.33	4568.10	350.28	0.03	71.96L
	12276.00	90.55	358.08	7725.64	4645.54	4597.46	-774.16	4662.19	350.44	0.48	97.21L
	12371.00	90.45	357.29	7724.81	4740.45	4692.38	-777.99	4756.44	350.59	0.84	56.31L
	12466.00	90.59	357.08	7723.95	4835.39	4787.26	-782.66	4850.82	350.71	0.27	103.45L
	12561.00	90.48	356.62	7723.06	4930.35	4882.11	-787.88	4945.28	350.83	0.50	75.62L
	12654.00	90.58	356.23	7722.20	5023.33	4974.93	-793.68	5037.84	350.94	0.43	85.82R
	12750.00	90.65	357.19	7721.17	5119.29	5070.76	-799.19	5133.36	351.04	1.00	105.46R
	12845.00	90.52	357.66	7720.20	5214.22	5165.66	-803.45	5227.77	351.16	0.51	90R
	12940.00	90.52	358.05	7719.34	5309.12	5260.59	-807.01	5322.13	351.28	0.41	115.77R
	13035.00	90.38	358.34	7718.59	5404.00	5355.54	-810.00	5416.45	351.40	0.34	81.38R
	13226.00	90.48	359.00	7717.16	5594.66	5546.48	-814.43	5605.96	351.65	0.35	90R
	13321.00	90.48	0.10	7716.37	5689.39	5641.48	-815.18	5700.07	351.78	1.16	93.57R
	13416.00	90.45	0.58	7715.59	5784.02	5736.47	-814.62	5794.02	351.92	0.51	90R
	13510.00	90.45	0.62	7714.86	5877.61	5830.46	-813.63	5886.96	352.06	0.04	77.05R
	13605.00	90.65	1.49	7713.94	5972.12	5925.44	-811.88	5980.80	352.20	0.94	41.63R
	13700.00	90.83	1.65	7712.72	6066.54	6020.40	-809.28	6074.55	352.34	0.25	82.03L
	13734.00	90.96	0.72	7712.19	6100.36	6054.39	-808.58	6108.14	352.39	2.76	10.3R
	13890.00	91.07	0.74	7709.42	6255.63	6210.35	-806.59	6262.51	352.60	0.07	115.74L
	13985.00	90.39	359.33	7708.21	6350.29	6305.34	-806.53	6356.71	352.71	1.65	70.66L
	14080.00	90.86	357.99	7707.18	6445.12	6400.31	-808.75	6451.20	352.80	1.49	85.64L
	14175.00	90.93	357.07	7705.69	6540.04	6495.20	-812.85	6545.87	352.87	0.97	91.9L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	14270.00	90.89	355.87	7704.18	6635.00	6590.01	-818.70	6640.67	352.92	1.26	52.12L
	14365.00	91.10	355.60	7702.53	6729.99	6684.73	-825.76	6735.54	352.96	0.36	149.04R
Final Survey 04- Sept-2014	14450.00	91.00	355.66	7700.98	6814.97	6769.47	-832.24	6820.44	352.99	0.14	HS
TD - PTB	14525.00	91.00	355.66	7699.67	6889.96	6844.24	-837.91	6895.35	353.02	0.00	

Survey Type: Non-Def Survey

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	Act Stns	30.000	30.000	SLB_MWD-POOR-Depth Only	Original Borehole / Cimarex Hornsby 35 Federal Com #2H
	1	25.000	6722.000	Act Stns	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hornsby 35 Federal Com #2H
	1	6722.000	14450.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Hornsby 35 Federal Com #2H
	1	14450.000	14525.000	Act Stns	30.000	30.000	SLB_BLIND+TREND	Original Borehole / Cimarex Hornsby 35 Federal Com #2H