

15-4/2205



Cimarex Hasta La Vista 1 DI Federal Com 2Y Gyro+XEM+MWD Surveys 0ft - 16358ft MD Survey Geodetic Report (Def Survey)



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Report Date:	November 17, 2014 - 10:37 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex	Vertical Section Azimuth:	257.571 ° (Grid North)
Field:	NM Eddy County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Hasta La Vista 1 DI Federal Com 2Y / Cimarex Hasta La Vista 1 DI Federal Com 2Y	TVD Reference Datum:	RKB
Well:	Cimarex Hasta La Vista 1 DI Federal Com 2Y	TVD Reference Elevation:	3465.000 ft above
Borehole:	Original Borehole	Seabed / Ground Elevation:	3440.000 ft above
UWI / API#:	Scandril Eagle / Unknown	Magnetic Declination:	7.681 °
Survey Name:	Cimarex Hasta La Vista 1 DI Federal Com 2Y Gyro+XEM+MWD Surveys 0ft - 16358ft MD	Total Gravity Field Strength:	998.4981mgn (9.80665 Based)
Survey Date:	October 29, 2014	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	212.812 ° / 8252.054 ft / 6.514 / 0.937	Total Magnetic Field Strength:	48576.629 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.554 °
Location Lat / Long:	N 32° 36' 30.36896", W 103° 54' 34.48873"	Declination Date:	November 12, 2014
Location Grid N/E Y/D:	N 585339.750 RUS, E 671821.580 RUS	Magnetic Declination Model:	HDGM 2014
CRS Grid Convergence Angle:	0.2284 °	North Reference:	Grid North
Grid Scale Factor:	0.99992859	Grid Convergence Used:	0.2284 °
Version / Patch:	2.7.1043.0	Total Corr Mag North->Grid North:	7.4530 °
		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 (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	TF (ft)
SHL: 410FNL & 273FEL	0.00	0.00	0.00	0.00	-3465.00	0.00	0.00	0.00	N/A	0.00	0.00	585339.75	671821.58	N 32 36 30.37	W 103 54 34.49	259.6M
	100.00	0.58	259.60	100.00	-3365.00	0.51	-0.09	-0.50	0.58	259.60	0.51	585339.66	671821.08	N 32 36 30.37	W 103 54 34.49	268.74M
	179.00	0.75	268.74	178.99	-3286.01	1.41	-0.17	-1.41	0.25	262.92	1.42	585339.58	671820.17	N 32 36 30.37	W 103 54 34.51	268.38M
	271.40	0.99	268.38	271.38	-3193.62	2.79	-0.21	-2.81	0.26	265.71	2.82	585339.54	671818.77	N 32 36 30.37	W 103 54 34.52	267.38M
	362.86	-0.97	267.38	362.83	-3102.17	4.33	-0.27	-4.37	0.03	266.49	4.38	585339.48	671817.21	N 32 36 30.37	W 103 54 34.54	269.37M
	453.95	0.89	269.37	453.91	-3011.09	5.78	-0.31	-5.85	0.09	266.95	5.86	585339.44	671815.73	N 32 36 30.37	W 103 54 34.56	270.75M
	544.78	0.80	270.75	544.73	-2920.27	7.09	-0.31	-7.19	0.10	267.52	7.20	585339.44	671814.39	N 32 36 30.37	W 103 54 34.57	275.7M
	635.92	0.86	275.70	635.86	-2829.14	8.36	-0.23	-8.51	0.10	268.42	8.51	585339.52	671813.07	N 32 36 30.37	W 103 54 34.59	293.53M
	727.09	1.03	293.53	727.02	-2737.98	9.67	0.16	-9.94	0.37	270.92	9.94	585339.91	671811.64	N 32 36 30.37	W 103 54 34.60	302.38M
	822.16	1.31	302.38	822.07	-2642.93	11.13	1.08	-11.64	0.35	275.32	11.69	585340.83	671809.94	N 32 36 30.38	W 103 54 34.62	305.69M
	917.23	1.42	305.69	917.11	-2547.89	12.69	2.35	-13.52	0.14	279.87	13.72	585342.10	671808.07	N 32 36 30.39	W 103 54 34.65	306.16M
	1012.30	1.26	306.16	1012.15	-2452.85	14.17	3.66	-15.32	0.17	283.43	15.75	585343.41	671806.27	N 32 36 30.41	W 103 54 34.67	305.61M
	1107.37	1.13	305.61	1107.20	-2357.80	15.49	4.82	-16.92	0.14	285.90	17.59	585344.57	671804.66	N 32 36 30.42	W 103 54 34.69	306.16M
	1202.44	0.97	306.16	1202.26	-2262.74	16.65	5.84	-18.33	0.17	287.67	19.24	585345.59	671803.25	N 32 36 30.43	W 103 54 34.70	327.56M
	1297.51	0.83	327.56	1297.31	-2167.69	17.42	6.90	-19.35	0.38	289.61	20.54	585346.65	671802.23	N 32 36 30.44	W 103 54 34.71	351.62M
	1392.58	0.77	351.62	1392.38	-2072.62	17.61	8.11	-19.82	0.36	292.26	21.41	585347.86	671801.77	N 32 36 30.45	W 103 54 34.72	14.26M
	1487.65	0.98	14.26	1487.43	-1977.57	17.20	9.53	-19.71	0.42	295.80	21.89	585349.28	671801.87	N 32 36 30.46	W 103 54 34.72	24.12M
	1582.72	1.10	24.12	1582.49	-1882.51	16.29	11.15	-19.14	0.23	300.23	22.15	585350.90	671802.45	N 32 36 30.48	W 103 54 34.71	30.6M
	1677.79	1.29	30.60	1677.54	-1787.46	15.01	12.90	-18.22	0.24	305.31	22.32	585352.65	671803.36	N 32 36 30.50	W 103 54 34.70	39.24M
	1772.86	1.40	39.24	1772.58	-1692.42	13.37	14.72	-16.94	0.24	311.00	22.44	585354.47	671804.64	N 32 36 30.52	W 103 54 34.69	37.46M
	1867.93	1.27	37.46	1867.63	-1597.37	11.66	16.46	-15.56	0.14	316.61	22.65	585356.21	671806.02	N 32 36 30.53	W 103 54 34.67	38.05M
	1963.00	1.11	38.05	1962.68	-1502.32	10.14	18.02	-14.35	0.17	321.46	23.04	585357.77	671807.23	N 32 36 30.55	W 103 54 34.65	27.08M
	2058.07	0.97	27.08	2057.73	-1407.27	8.92	19.46	-13.42	0.26	325.41	23.64	585359.21	671808.16	N 32 36 30.56	W 103 54 34.64	26.76M
	2153.14	0.96	26.76	2152.79	-1312.21	7.90	20.89	-12.70	0.01	328.71	24.45	585360.64	671808.89	N 32 36 30.58	W 103 54 34.64	22.67M
	2248.21	-0.92	22.67	2247.84	-1217.16	6.95	22.31	-12.04	0.08	331.64	25.35	585362.05	671809.54	N 32 36 30.59	W 103 54 34.63	26.34M
	2343.28	0.86	26.34	2342.90	-1122.10	6.07	23.65	-11.43	0.09	334.20	26.27	585363.40	671810.15	N 32 36 30.60	W 103 54 34.62	16.4M
	2438.35	0.72	16.40	2437.96	-1027.04	5.34	24.86	-10.95	0.21	336.24	27.17	585364.61	671810.63	N 32 36 30.62	W 103 54 34.62	19.51M
	2533.42	0.52	19.51	2533.03	-931.97	4.82	25.84	-10.63	0.21	337.63	27.94	585365.59	671810.95	N 32 36 30.63	W 103 54 34.61	22.93M
	2628.49	0.10	22.93	2628.10	-836.90	4.55	26.33	-10.46	0.44	338.33	28.35	585366.07	671811.12	N 32 36 30.63	W 103 54 34.61	353.38M
	2723.56	0.30	353.38	2723.17	-741.83	4.47	26.65	-10.45	0.23	338.58	28.63	585366.40	671811.13	N 32 36 30.63	W 103 54 34.61	354.78M
	2818.63	0.37	354.78	2818.23	-646.77	4.41	27.20	-10.51	0.07	338.87	29.16	585366.95	671811.07	N 32 36 30.64	W 103 54 34.61	350.69M
	2913.70	0.43	350.69	2913.30	-551.70	4.35	27.86	-10.60	0.07	339.18	29.81	585367.61	671810.98	N 32 36 30.65	W 103 54 34.61	350.3M
	3008.77	0.47	350.30	3008.37	-456.63	4.31	28.60	-10.72	0.04	339.45	30.54	585368.34	671810.86	N 32 36 30.65	W 103 54 34.61	356.29M
	3103.84	0.44	356.28	3103.44	-361.55	4.24	29.34	-10.81	0.06	339.78	31.27	585369.09	671810.77	N 32 36 30.66	W 103 54 34.61	356.35M
	3198.91	0.43	356.35	3198.50	-266.50	4.13	30.06	-10.86	0.01	340.15	31.96	585369.81	671810.73	N 32 36 30.67	W 103 54 34.61	356.91M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Closure Azimuth (°)	Closure (ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	TF (°)
	3293.98	0.48	356.91	3293.57	-171.43	4.01	30.82	-10.90	0.05	340.52	32.69	585370.57	671810.68	N 32 36 30.67	W 103 54 34.61	353.35M
	3389.05	0.53	353.35	3388.64	-76.36	3.90	31.65	-10.97	0.06	340.88	33.50	585371.40	671810.61	N 32 36 30.68	W 103 54 34.62	349.77M
	3484.12	0.55	349.77	3483.70	-18.70	3.84	32.54	-11.10	0.04	341.16	34.38	585372.29	671810.48	N 32 36 30.69	W 103 54 34.62	348.16M
	3579.19	0.57	348.16	3578.77	-113.77	3.82	33.45	-11.28	0.03	341.36	35.30	585373.20	671810.30	N 32 36 30.70	W 103 54 34.62	345.96M
	3674.26	0.60	345.96	3673.83	-208.83	3.83	34.40	-11.50	0.04	341.51	36.27	585374.14	671810.08	N 32 36 30.71	W 103 54 34.62	347.76M
	3769.33	0.65	347.76	3768.90	-303.90	3.84	35.41	-11.73	0.06	341.66	37.30	585375.15	671809.85	N 32 36 30.72	W 103 54 34.62	342.92M
	3864.40	0.69	342.92	3863.96	-398.96	3.88	36.48	-12.02	0.07	341.77	38.41	585376.23	671809.56	N 32 36 30.73	W 103 54 34.63	334.77M
	3959.47	0.83	334.77	3959.02	-494.02	4.08	37.65	-12.48	0.19	341.66	39.65	585377.40	671809.10	N 32 36 30.74	W 103 54 34.63	336.88M
	3990.47	1.05	336.88	3990.02	-525.02	4.19	38.11	-12.69	0.72	341.59	40.17	585377.86	671808.89	N 32 36 30.75	W 103 54 34.64	306.28M
	4080.00	0.88	306.28	4079.54	-614.54	4.79	39.28	-13.56	0.60	340.95	41.55	585379.02	671808.02	N 32 36 30.76	W 103 54 34.65	276.48M
	4174.00	0.48	276.48	4173.53	-708.53	5.64	39.75	-14.54	0.55	339.91	42.32	585379.49	671807.05	N 32 36 30.76	W 103 54 34.66	202.82M
	4270.00	2.29	202.82	4269.50	-804.50	7.13	38.02	-15.68	2.30	337.59	41.13	585377.77	671805.90	N 32 36 30.75	W 103 54 34.67	197.56M
	4365.00	3.30	197.56	4364.39	-899.39	9.59	33.67	-17.24	1.10	332.88	37.83	585373.42	671804.34	N 32 36 30.70	W 103 54 34.69	198.57M
	4460.00	4.09	198.57	4459.19	-994.19	12.70	27.85	-19.14	0.83	325.50	33.80	585367.60	671802.44	N 32 36 30.65	W 103 54 34.71	196.76M
	4555.00	4.48	196.76	4553.92	-1088.92	16.26	21.09	-21.29	0.43	314.72	29.97	585360.83	671800.29	N 32 36 30.58	W 103 54 34.74	188.94M
	4650.00	4.79	188.94	4648.61	-1183.61	19.51	13.61	-22.98	0.74	300.65	26.71	585353.36	671798.60	N 32 36 30.50	W 103 54 34.76	186.77M
	4745.00	4.70	186.77	4743.29	-1278.29	22.24	5.83	-24.05	0.21	283.63	24.75	585345.58	671797.53	N 32 36 30.43	W 103 54 34.77	191.05M
	4840.00	4.31	191.05	4837.99	-1372.99	24.94	-1.54	-25.20	0.54	266.51	25.24	585338.21	671796.38	N 32 36 30.35	W 103 54 34.78	186.26M
	4935.00	5.41	186.26	4932.65	-1467.65	27.80	-9.49	-26.37	1.23	250.20	28.03	585330.26	671795.21	N 32 36 30.28	W 103 54 34.80	185.56M
	5030.00	5.89	185.56	5027.19	-1562.19	30.74	-18.80	-27.33	0.51	235.48	33.17	585320.96	671794.25	N 32 36 30.18	W 103 54 34.81	183.45M
	5126.00	5.58	183.45	5122.71	-1657.71	33.53	-28.36	-28.09	0.39	224.73	39.91	585311.39	671793.49	N 32 36 30.09	W 103 54 34.82	182.44M
	5221.00	5.32	182.44	5217.28	-1752.28	35.93	-37.37	-28.55	0.29	217.39	47.03	585302.39	671793.03	N 32 36 30.00	W 103 54 34.82	180.15M
	5316.00	5.01	180.15	5311.89	-1846.89	37.96	-45.92	-28.75	0.39	212.05	54.18	585293.84	671792.83	N 32 36 29.92	W 103 54 34.83	178.26M
	5411.00	4.70	178.26	5406.55	-1941.55	39.59	-53.95	-28.65	0.37	207.96	61.09	585285.80	671792.94	N 32 36 29.84	W 103 54 34.83	178.26M
	5506.00	4.70	178.26	5501.23	-2036.23	41.03	-61.73	-28.41	0.00	204.71	67.96	585278.02	671793.17	N 32 36 29.76	W 103 54 34.82	176.37M
	5601.00	4.31	176.37	5595.94	-2130.94	42.30	-69.19	-28.06	0.44	202.08	74.66	585270.57	671793.52	N 32 36 29.69	W 103 54 34.82	179.05M
	5696.00	5.80	179.05	5690.57	-2225.57	43.80	-77.55	-27.76	1.59	199.69	82.37	585262.21	671793.82	N 32 36 29.60	W 103 54 34.82	179.27M
	5791.00	5.80	179.27	5785.08	-2320.08	45.73	-87.15	-27.62	0.02	197.58	91.42	585252.61	671793.96	N 32 36 29.51	W 103 54 34.82	178.26M
	5886.00	5.71	178.26	5879.60	-2414.60	47.58	-96.67	-27.41	0.14	195.83	100.49	585243.08	671794.17	N 32 36 29.41	W 103 54 34.81	179.36M
	5981.00	5.49	179.36	5974.15	-2509.15	49.38	-105.94	-27.22	0.26	194.41	109.38	585233.82	671794.36	N 32 36 29.32	W 103 54 34.81	177.96M
	6171.00	5.80	177.96	6163.23	-2698.23	52.97	-124.62	-26.78	0.18	192.13	127.47	585215.14	671794.81	N 32 36 29.14	W 103 54 34.81	180.24M
	6266.00	4.92	180.24	6257.81	-2792.81	54.73	-133.49	-26.62	0.95	191.28	136.12	585206.26	671794.96	N 32 36 29.05	W 103 54 34.81	175.45M
	6361.00	4.92	175.45	6352.46	-2887.46	56.18	-141.63	-26.32	0.43	190.53	144.05	585198.13	671795.27	N 32 36 28.97	W 103 54 34.80	176.46M
	6456.00	4.31	176.46	6447.15	-2982.15	57.29	-149.25	-25.77	0.65	189.80	151.46	585190.51	671795.81	N 32 36 28.89	W 103 54 34.80	185.26M
	6551.00	6.20	185.26	6541.75	-3076.75	59.49	-157.92	-26.11	2.20	189.39	160.06	585181.84	671795.47	N 32 36 28.81	W 103 54 34.80	185.56M
	6646.00	6.50	185.56	6636.17	-3171.17	62.79	-168.37	-27.19	0.33	189.17	170.55	585171.39	671794.39	N 32 36 28.70	W 103 54 34.81	184.86M
	6742.00	6.11	184.86	6731.59	-3266.59	65.99	-178.87	-28.15	0.41	188.94	181.07	585160.90	671793.43	N 32 36 28.60	W 103 54 34.83	185.87M
	6836.00	5.32	185.87	6825.12	-3360.12	68.84	-188.19	-29.02	0.85	188.77	190.41	585151.58	671792.56	N 32 36 28.51	W 103 54 34.84	189.16M
	6931.00	4.79	189.16	6919.75	-3454.75	71.69	-196.48	-30.10	0.64	188.71	198.78	585143.28	671791.48	N 32 36 28.43	W 103 54 34.85	189.47M
	7027.00	3.91	189.47	7015.47	-3550.47	74.38	-203.67	-31.28	0.92	188.73	206.06	585136.10	671790.30	N 32 36 28.35	W 103 54 34.86	181.16M
	7122.00	5.10	181.16	7110.18	-3645.18	76.58	-211.09	-31.90	1.43	188.59	213.48	585128.68	671789.68	N 32 36 28.28	W 103 54 34.87	184.37M
	7217.00	5.10	184.37	7204.80	-3739.80	78.79	-219.52	-32.30	0.30	188.37	221.88	585120.25	671789.28	N 32 36 28.20	W 103 54 34.88	178.35M
	7312.00	4.92	178.35	7299.44	-3834.44	80.78	-227.80	-32.51	0.58	188.12	230.11	585111.97	671789.07	N 32 36 28.12	W 103 54 34.88	181.87M
	7407.00	4.61	181.87	7394.11	-3929.11	82.48	-235.69	-32.52	0.45	187.86	237.92	585104.08	671789.07	N 32 36 28.04	W 103 54 34.88	181.95M
	7503.00	6.50	181.95	7489.66	-4024.66	84.78	-244.98	-32.83	1.97	187.63	247.17	585094.79	671788.75	N 32 36 27.95	W 103 54 34.88	184.68M
	7597.00	6.59	184.68	7583.04	-4118.04	87.69	-255.67	-33.45	0.34	187.45	257.85	585084.10	671788.13	N 32 36 27.84	W 103 54 34.89	188.68M
	7693.00	6.02	188.68	7678.46	-4213.46	91.13	-266.14	-34.66	0.75	187.42	268.38	585073.63	671786.92	N 32 36 27.74	W 103 54 34.91	187.76M
	7788.00	6.28	187.76	7772.92	-4307.92	94.71	-276.21	-36.11	0.29	187.45	278.56	585063.56	671785.47	N 32 36 27.64	W 103 54 34.92	183.67M
	7883.00	5.80	183.67	7867.39	-4402.39	97.84	-286.15	-37.12	0.68	187.39	288.55	585053.62	671784.46	N 32 36 27.54	W 103 54 34.94	186.57M
	7979.00	6.50	186.57	7962.84	-4497.84	100.95	-296.39	-38.05	0.80	187.32	298.82	585043.39	671783.53	N 32 36 27.44	W 103 54 34.95	189.38M
	8074.00	6.42	189.38	8057.23	-4592.23	104.68	-306.97	-39.53	0.34	187.34	309.50	585032.80	671782.05	N 32 36 27.33	W 103 54 34.97	191.45M
	8169.00	5.89	191.45	8151.69	-4686.69	108.62	-316.99	-41.37	0.60	187.44	319.67	585022.79	671780.22	N 32 36 27.23	W 103 54 34.99	190.8M
	8195.00	6.13	190.80	8177.54	-4712.54	109.71	-318.66	-41.89	0.96	187.47	322.39	585020.12	671779.69	N 32 36 27.21	W 103 54 34.99	197.19M
	8226.00	7.17	197.19	8208.33	-4743.33	111.32	-323.13	-42.77	4.11	187.54	325.95	585016.64	671778.81	N 32 36 27.17	W 103 54 35.00	205.68M
	8258.00	10.01	205.68	8239.97	-4774.97	114.02	-327.55	-44.57	9.70	187.75	330.57	585012.23	671777.01	N 32 36 27.13	W 103 54 35.02	30.76R
	8289.00	12.09	211.43	8270.40	-4805.40	117.94	-332.75	-47.43	7.59	188.11	336.11	585007.03	671774.15	N 32 36 27.08	W 103 54 35.06	19.44R
	8321.00	14.47	214.76	8301.54	-4836.54	123.19	-338.89	-51.46	7.81	188.63	342.78	585000.88	671770.13	N 32 36 27.02	W 103 54 35.11	39.18L
Crossing Hard Line	8349.77	16.41	209.37	8329.27	-4864.27	128.54	-345.39	-55.50	8.37	189.13	349.82	584994.39	671766.08	N 32 36 26.95	W 103 54 35.15	33.99L
	8353.00	16.63	208.84	8332.37	-4867.37	129.15	-346.19	-55.95	8.37	189.18	350.68	584993.59	671765.64	N 32 36 26.95	W 103 54 35.16	10.34R
	8385.00	19.84	210.56	8362.76	-4897.76	135.87	-354.88	-60.92	10.17	189.74	360.07	584984.90	671760.67	N 32 36 26.86	W 103 54 35.22	20L
	8416.00	22.84	207.77	8391.63	-4926											

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	OLS (ft/100ft)	Closure Azimuth (ft)	Closure (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	TF (°)
	8480.00	30.43	209.14	8448.69	4983.69	182.19	-390.17	-80.09	10.62	181.60	389.30	584949.61	671741.49	N 32 36 26.51	W 103 54 35.44	5.16R
	8512.00	33.06	209.66	8475.90	5010.90	173.42	-404.83	-88.36	8.26	182.31	414.36	584934.95	671733.23	N 32 36 26.37	W 103 54 35.54	8.04L
	8544.00	34.84	209.22	8502.44	5037.44	185.35	-420.40	-97.14	5.62	193.01	431.47	584919.39	671724.45	N 32 36 26.21	W 103 54 35.64	3.67L
	8576.00	37.50	208.94	8528.27	5063.27	197.86	-436.90	-106.32	8.33	193.68	449.65	584902.88	671715.27	N 32 36 26.05	W 103 54 35.75	0.21L
	8607.00	41.18	208.92	8552.24	5087.24	210.84	-454.10	-115.82	11.87	194.31	468.63	584885.69	671705.77	N 32 36 25.88	W 103 54 35.86	0.69L
	8639.00	44.71	208.86	8575.66	5110.66	225.23	-473.18	-126.35	11.03	194.95	489.76	584866.60	671695.24	N 32 36 25.69	W 103 54 35.99	11.72R
	8671.00	46.64	209.41	8598.02	5133.02	240.42	-493.18	-137.50	6.16	195.58	511.98	584846.61	671684.09	N 32 36 25.49	W 103 54 36.12	22.38R
	8702.00	47.72	210.01	8619.09	5154.09	255.68	-512.92	-148.77	3.76	196.17	534.06	584826.86	671672.82	N 32 36 25.30	W 103 54 36.25	4.84R
	8734.00	49.61	210.22	8640.23	5175.23	271.93	-533.71	-160.83	5.93	196.77	557.41	584806.08	671660.77	N 32 36 25.09	W 103 54 36.39	7.64L
	8765.00	52.08	209.80	8659.80	5194.80	288.14	-554.52	-172.85	8.04	197.31	580.84	584785.27	671648.75	N 32 36 24.89	W 103 54 36.54	8.38L
	8797.00	56.44	209.03	8678.49	5213.49	305.46	-577.14	-185.59	13.76	197.83	606.25	584762.65	671636.00	N 32 36 24.67	W 103 54 36.69	1.58L
	8828.00	59.57	208.93	8694.91	5229.91	322.85	-600.14	-198.33	10.10	198.29	632.06	584739.65	671623.26	N 32 36 24.44	W 103 54 36.84	27.91R
	8860.00	61.79	210.26	8710.58	5245.58	341.53	-624.40	-212.11	7.83	198.76	659.44	584715.40	671609.48	N 32 36 24.20	W 103 54 37.00	14.83R
	8891.00	63.07	210.64	8724.93	5259.93	360.23	-648.09	-226.04	4.27	199.23	686.37	584691.71	671595.56	N 32 36 23.97	W 103 54 37.16	0.62L
	8923.00	65.61	210.81	8738.78	5273.78	379.92	-672.90	-240.73	7.94	199.68	714.67	584666.89	671580.87	N 32 36 23.72	W 103 54 37.33	24.44L
	8955.00	68.61	209.15	8751.23	5286.23	399.76	-698.46	-255.41	10.27	200.09	743.70	584641.34	671566.19	N 32 36 23.47	W 103 54 37.51	3.54L
	8986.00	71.84	208.94	8761.72	5296.72	419.07	-723.96	-269.57	10.44	200.42	772.52	584615.84	671552.03	N 32 36 23.22	W 103 54 37.67	18.4L
	9018.00	73.60	208.33	8771.22	5306.22	439.14	-750.78	-284.21	5.79	200.73	802.78	584589.02	671537.39	N 32 36 22.95	W 103 54 37.85	0.3R
	9049.00	75.42	208.34	8779.50	5314.50	458.65	-777.08	-298.39	5.87	201.01	832.40	584562.73	671523.21	N 32 36 22.69	W 103 54 38.01	27.42L
	9081.00	77.97	206.99	8786.86	5321.86	478.70	-804.65	-312.85	8.96	201.25	863.33	584535.15	671508.76	N 32 36 22.42	W 103 54 38.18	3.63L
	9112.00	81.09	206.79	8792.50	5327.50	498.01	-831.84	-326.63	10.08	201.44	893.87	584507.97	671494.97	N 32 36 22.15	W 103 54 38.35	5.42L
	9144.00	84.45	206.47	8796.52	5331.52	518.01	-860.21	-340.86	10.55	201.62	925.28	584479.60	671480.75	N 32 36 21.87	W 103 54 38.51	14.41R
	9175.00	87.25	207.19	8798.77	5333.77	537.58	-887.80	-354.81	9.32	201.78	956.08	584452.02	671466.79	N 32 36 21.60	W 103 54 38.68	30.56R
	9205.00	87.69	207.45	8800.09	5335.09	556.74	-914.43	-368.57	1.70	201.95	985.91	584425.39	671453.04	N 32 36 21.34	W 103 54 38.84	23.18R
	9236.00	87.76	207.48	8804.89	5339.89	576.29	-942.71	-424.33	0.06	202.55	1016.32	584398.12	671397.28	N 32 36 20.28	W 103 54 39.50	41.6R
	9269.00	90.24	209.68	8805.99	5340.99	595.62	-1077.01	-454.46	5.26	202.88	1168.97	584362.82	671367.15	N 32 36 19.73	W 103 54 39.85	71.15R
	9298.00	91.96	214.73	8804.17	5339.17	742.32	-1157.35	-505.06	5.61	203.58	1282.76	584318.48	671316.55	N 32 36 18.94	W 103 54 40.45	88.04R
	9328.00	92.13	219.95	8800.81	5335.81	814.02	-1232.01	-562.02	5.55	204.52	1354.15	584107.83	671259.60	N 32 36 18.20	W 103 54 41.12	97.17R
	9358.00	91.41	225.60	8797.91	5332.91	891.14	-1300.95	-625.80	6.06	205.69	1443.64	584038.89	671195.82	N 32 36 17.52	W 103 54 41.86	93.64R
	9388.00	91.03	231.47	8795.90	5330.90	973.27	-1363.15	-696.20	6.26	207.05	1530.64	583976.70	671125.44	N 32 36 16.91	W 103 54 42.69	105.41R
	9418.00	89.55	236.83	8795.42	5330.42	1060.41	-1418.77	-773.17	5.85	208.59	1615.76	583921.09	671048.47	N 32 36 16.36	W 103 54 43.59	85.73R
	9448.00	89.89	241.37	8795.88	5330.88	1149.54	-1487.03	-853.80	4.84	210.20	1697.40	583872.83	670967.84	N 32 36 15.89	W 103 54 44.54	79.69R
	9478.00	90.69	245.77	8795.41	5330.41	1240.72	-1508.86	-937.96	4.76	211.87	1776.63	583831.00	670883.69	N 32 36 15.48	W 103 54 45.52	79.16R
	9508.00	91.55	250.28	8793.55	5328.55	1334.37	-1544.39	-1026.01	4.83	213.60	1854.14	583795.47	670795.64	N 32 36 15.13	W 103 54 46.55	102.7R
	9538.00	90.55	254.70	8791.82	5326.82	1427.96	-1572.65	-1115.62	4.82	215.35	1928.18	583767.21	670706.04	N 32 36 14.85	W 103 54 47.60	101.59R
	9568.00	89.55	259.57	8791.74	5326.74	1521.92	-1593.58	-1207.23	5.29	217.15	1999.23	583746.29	670614.44	N 32 36 14.65	W 103 54 48.67	87.62R
	9598.00	89.72	263.64	8792.34	5327.34	1615.67	-1607.30	-1300.20	4.33	218.97	2067.35	583732.57	670521.47	N 32 36 14.52	W 103 54 49.76	88.23R
	9628.00	89.89	269.10	8792.66	5327.66	1709.52	-1613.31	-1394.98	5.75	220.85	2132.78	583726.55	670426.71	N 32 36 14.46	W 103 54 50.87	62.32R
	9658.00	90.75	270.74	8792.14	5327.14	1801.33	-1613.45	-1488.97	1.97	222.70	2195.50	583726.42	670332.72	N 32 36 14.46	W 103 54 51.97	7.16L
	9688.00	92.34	270.54	8789.61	5324.61	1892.66	-1612.40	-1582.93	1.70	224.47	2259.53	583727.47	670238.77	N 32 36 14.48	W 103 54 53.07	178.15R
	9718.00	90.48	270.60	8787.29	5322.29	1984.42	-1611.46	-1676.89	1.98	226.14	2325.68	583728.41	670144.81	N 32 36 14.49	W 103 54 54.17	170.48R
	9748.00	88.93	270.86	8787.78	5322.78	2076.92	-1610.25	-1771.88	1.65	227.74	2394.26	583729.62	670049.83	N 32 36 14.51	W 103 54 55.28	61.26L
	9778.00	89.10	270.55	8789.40	5324.40	2168.45	-1609.09	-1865.86	0.38	229.23	2463.86	583730.77	669955.86	N 32 36 14.52	W 103 54 56.37	83.48L
	9808.00	89.14	270.20	8790.84	5325.84	2260.10	-1608.48	-1959.84	0.37	230.62	2535.39	583731.39	669861.88	N 32 36 14.53	W 103 54 57.47	23.53R
	9838.00	89.76	270.47	8791.74	5326.74	2351.78	-1607.93	-2053.84	0.72	231.94	2608.39	583731.94	669767.89	N 32 36 14.54	W 103 54 58.57	54.21R
	9868.00	90.07	270.90	8791.88	5326.88	2444.30	-1606.79	-2148.83	0.56	233.21	2683.14	583733.07	669672.91	N 32 36 14.55	W 103 54 59.68	114.23L
	9898.00	89.89	270.50	8791.92	5326.92	2535.84	-1605.65	-2242.82	0.47	234.40	2758.32	583734.22	669578.92	N 32 36 14.57	W 103 54 60.78	118.74L
	9928.00	89.72	270.19	8792.24	5327.24	2627.51	-1605.08	-2336.82	0.38	235.52	2834.96	583734.79	669484.93	N 32 36 14.58	W 103 54 61.88	51.34L
	9958.00	89.92	269.94	8792.54	5327.54	2720.26	-1604.97	-2431.82	0.34	236.58	2913.71	583734.90	669389.94	N 32 36 14.58	W 103 54 62.99	15.62R
	9988.00	90.85	270.20	8791.90	5326.90	2812.03	-1604.86	-2525.82	1.03	237.57	2992.54	583735.01	669295.95	N 32 36 14.59	W 103 54 64.09	4.09R
	10018.00	90.99	270.21	8790.39	5325.39	2903.74	-1604.52	-2619.80	0.15	238.51	3072.11	583735.35	669201.97	N 32 36 14.60	W 103 54 65.19	78.36R
	10048.00	91.06	270.55	8788.69	5323.69	2996.37	-1603.89	-2714.79	0.37	239.43	3153.18	583735.98	669106.99	N 32 36 14.61	W 103 54 66.30	142.43R
	10078.00	90.93	270.65	8787.06	5322.06	3087.93	-1602.91	-2808.77	0.17	240.29	3233.96	583736.96	669013.02	N 32 36 14.62	W 103 54 67.40	62.24R
	10108.00	91.03	270.84	8785.45	5320.45	3179.44	-1601.89	-2902.74	0.23	241.11	3315.32	583738.18	668919.05	N 32 36 14.63	W 103 54 68.49	157.62L
	10138.00	90.86	270.77	8783.89	5318.89	3271.91	-1600.35	-2997.72	0.19	241.90	3398.16	583739.52	668824.08	N 32 36 14.65	W 103 54 69.51	59.03L
	10168.00	90.89	270.72	8782.45	5317.45	3363.42	-1599.13	-3091.70	0.06	242.65	3480.78	583740.74	668730.10	N 32 36 14.67	W 103 54 70.51	166.36R
	10198.00	89.86	270.97	8781.84	5316.84	3454.91	-1597.74	-3185.69	1.13	243.36	3563.90	583742.13	668636.12	N 32 36 14.68	W 103 54 71.51	106.93R
	10228.00	89.79	271.20	8782.12	5317.12	3546.31	-1596.96	-3279.67	0.26	244.05	3647.38	583743.90	668542.15	N 32 36 14.71	W 103 54 72.50	100.71L
	10258.00	89.72	270.83	8782.53	5317.53	3638.70	-1594.28</									

Comments	MD (ft)	Incl (°)	Azlm 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 ° ' ")	TF (°)
	12972.00	89.75	271.11	8784.51	5319.51	4096.84	-1586.16	-3645.58	0.08	247.59	4159.85	583753.71	667976.28	N 32 36 14.82	W 103 55 19.52	72.35L
	13066.00	89.82	270.89	8784.86	5319.86	4188.27	-1584.52	-3639.57	0.25	248.09	4246.28	583755.35	667882.30	N 32 36 14.84	W 103 55 20.61	101.83R
	13160.00	89.75	271.23	8785.22	5320.22	4279.68	-1582.78	-4033.55	0.37	248.57	4332.98	583757.09	667788.33	N 32 36 14.86	W 103 55 21.71	75.97L
	13254.00	90.17	269.55	8785.28	5320.28	4371.33	-1582.14	-4127.54	1.84	249.03	4420.38	583757.73	667694.34	N 32 36 14.87	W 103 55 22.81	103.24L
	13348.00	90.13	269.38	8785.04	5320.04	4463.31	-1583.01	-4221.54	0.19	249.44	4508.58	583756.85	667600.35	N 32 36 14.87	W 103 55 23.91	33.59L
	13443.00	90.37	269.22	8784.62	5319.62	4556.33	-1584.17	-4316.53	0.30	249.85	4598.05	583755.69	667505.37	N 32 36 14.86	W 103 55 25.02	142.59L
	13537.00	90.03	268.95	8784.29	5319.29	4648.43	-1585.67	-4410.52	0.46	250.23	4686.90	583754.20	667411.39	N 32 36 14.85	W 103 55 26.12	60.95R
	13631.00	90.23	269.32	8784.08	5319.08	4740.52	-1587.08	-4504.51	0.44	250.59	4775.92	583752.79	667317.40	N 32 36 14.84	W 103 55 27.22	95.88R
	13725.00	90.16	270.00	8783.76	5318.76	4832.44	-1587.64	-4598.50	0.73	250.95	4864.86	583752.23	667223.41	N 32 36 14.84	W 103 55 28.32	90L
	13819.00	90.16	269.20	8783.50	5318.50	4924.37	-1588.29	-4692.50	0.85	251.30	4954.01	583751.57	667129.42	N 32 36 14.84	W 103 55 29.42	69.23R
	13913.00	90.27	269.49	8783.15	5318.15	5016.39	-1589.37	-4786.49	0.33	251.63	5043.47	583750.50	667035.44	N 32 36 14.83	W 103 55 30.51	171.87L
	14008.00	90.20	269.48	8782.76	5317.76	5109.35	-1590.22	-4881.49	0.07	251.96	5133.98	583749.55	666940.45	N 32 36 14.82	W 103 55 31.62	26.56L
	14102.00	90.30	269.43	8782.35	5317.35	5201.33	-1591.12	-4975.48	0.12	252.27	5223.70	583748.75	666846.46	N 32 36 14.82	W 103 55 32.72	112.52L
	14196.00	90.13	269.02	8781.99	5316.99	5293.39	-1592.39	-5069.47	0.47	252.56	5313.69	583747.48	666752.48	N 32 36 14.81	W 103 55 33.82	22.38R
	14290.00	90.47	269.16	8781.50	5316.50	5385.50	-1593.88	-5163.46	0.39	252.85	5403.87	583745.99	666658.50	N 32 36 14.81	W 103 55 34.92	138.94R
	14385.00	90.16	269.43	8780.98	5315.98	5478.51	-1595.05	-5258.45	0.43	253.13	5495.04	583744.82	666563.51	N 32 36 14.79	W 103 55 36.03	32R
	14479.00	90.48	269.63	8780.45	5315.45	5570.47	-1595.82	-5352.45	0.40	253.40	5585.28	583744.05	666469.53	N 32 36 14.79	W 103 55 37.13	148.5L
	14573.00	90.17	269.44	8779.92	5314.92	5662.43	-1596.58	-5446.44	0.39	253.66	5675.63	583743.29	666375.54	N 32 36 14.78	W 103 55 38.23	100.18L
	14668.00	90.10	269.05	8779.70	5314.70	5755.46	-1597.83	-5541.43	0.42	253.92	5767.20	583742.03	666280.55	N 32 36 14.77	W 103 55 39.34	121.33L
	14762.00	89.96	268.82	8779.65	5314.65	5847.62	-1599.58	-5635.42	0.29	254.15	5858.04	583740.29	666186.58	N 32 36 14.76	W 103 55 40.44	72.53R
	14856.00	90.13	269.36	8779.57	5314.57	5939.73	-1601.07	-5729.40	0.60	254.39	5948.91	583738.79	666092.60	N 32 36 14.75	W 103 55 41.54	90L
	14951.00	90.13	269.24	8779.36	5314.36	6032.74	-1602.23	-5824.40	0.13	254.62	6040.76	583737.63	665997.61	N 32 36 14.74	W 103 55 42.65	157.62L
	15045.00	89.96	268.17	8779.28	5314.28	6124.81	-1603.54	-5918.39	0.20	254.84	6131.77	583736.33	665903.63	N 32 36 14.73	W 103 55 43.75	57.8L
	15139.00	90.13	268.90	8779.21	5314.21	6216.94	-1605.12	-6012.38	0.34	255.05	6222.95	583734.75	665809.65	N 32 36 14.72	W 103 55 44.85	147.99R
	15233.00	89.89	268.06	8779.19	5314.19	6309.08	-1606.80	-6106.36	0.30	255.26	6314.23	583733.06	665715.67	N 32 36 14.71	W 103 55 45.94	75.51R
	15328.00	90.27	270.52	8779.06	5314.06	6401.93	-1607.16	-6201.36	1.60	255.47	6406.23	583732.71	665620.68	N 32 36 14.71	W 103 55 47.05	121.81R
	15422.00	90.03	270.91	8778.81	5313.81	6493.46	-1605.99	-6295.35	0.49	255.69	6496.97	583731.88	665526.69	N 32 36 14.72	W 103 55 48.15	119.74L
	15517.00	89.99	270.84	8778.80	5313.80	6585.91	-1604.54	-6390.34	0.08	255.91	6588.70	583735.33	665431.71	N 32 36 14.74	W 103 55 49.26	116.57L
	15611.00	89.96	270.78	8778.84	5313.84	6677.42	-1603.21	-6484.33	0.07	256.11	6679.58	583736.66	665337.73	N 32 36 14.76	W 103 55 50.36	45L
	15705.00	90.17	270.57	8778.73	5313.73	6768.97	-1602.10	-6578.32	0.32	256.31	6770.60	583737.77	665243.74	N 32 36 14.77	W 103 55 51.46	172.65R
	15800.00	89.86	270.51	8778.71	5313.71	6861.53	-1601.12	-6673.32	0.33	256.51	6862.71	583738.75	665148.75	N 32 36 14.78	W 103 55 52.57	45R
	15894.00	90.03	270.78	8778.80	5313.80	6953.07	-1599.98	-6767.31	0.26	256.70	6953.88	583739.89	665054.77	N 32 36 14.80	W 103 55 53.67	95.79L
	15988.00	89.96	270.09	8778.81	5313.81	7044.71	-1599.27	-6861.31	0.74	256.88	7045.22	583740.60	664960.78	N 32 36 14.81	W 103 55 54.77	76.43R
	16083.00	90.10	270.67	8778.76	5313.76	7137.35	-1598.64	-6956.30	0.63	257.06	7137.63	583741.23	664865.79	N 32 36 14.82	W 103 55 55.88	160.56L
	16177.00	89.93	270.51	8778.73	5313.73	7228.91	-1597.59	-7050.30	0.19	257.23	7229.04	583742.28	664771.80	N 32 36 14.83	W 103 55 56.98	59.04L
	16272.00	89.96	270.56	8778.82	5313.82	7321.47	-1596.62	-7145.29	0.06	257.40	7321.50	583743.25	664676.81	N 32 36 14.85	W 103 55 58.09	90L
Final Survey	16316.00	89.96	270.33	8778.85	5313.85	7364.36	-1598.28	-7189.29	0.52	257.48	7364.37	583743.59	664632.82	N 32 36 14.85	W 103 55 58.60	HS
Proi to TD	16358.00	89.96	270.33	8778.88	5313.88	7405.33	-1596.03	-7231.29	0.00	257.55	7405.33	583743.83	664590.82	N 32 36 14.85	W 103 55 59.09	

Survey Type: 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_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Hasta La Vista 1 DI Federal Com 2Y Gyro+XEM+MWD Surveys Off -
	1	25.000	3990.470	Act Stns	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Hasta La Vista 1 DI Federal Com 2Y
	1	3990.470	8169.000	Act Stns	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hasta La Vista 1 DI Federal Com 2Y
	1	8169.000	16316.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Hasta La Vista 1 DI Federal Com 2Y
	1	16316.000	16358.000	Act Stns	30.000	30.000	SLB_BLIND+TREND	Original Borehole / Cimarex Hasta La Vista 1 DI Federal Com 2Y



Scandril Eagle

Cimarex

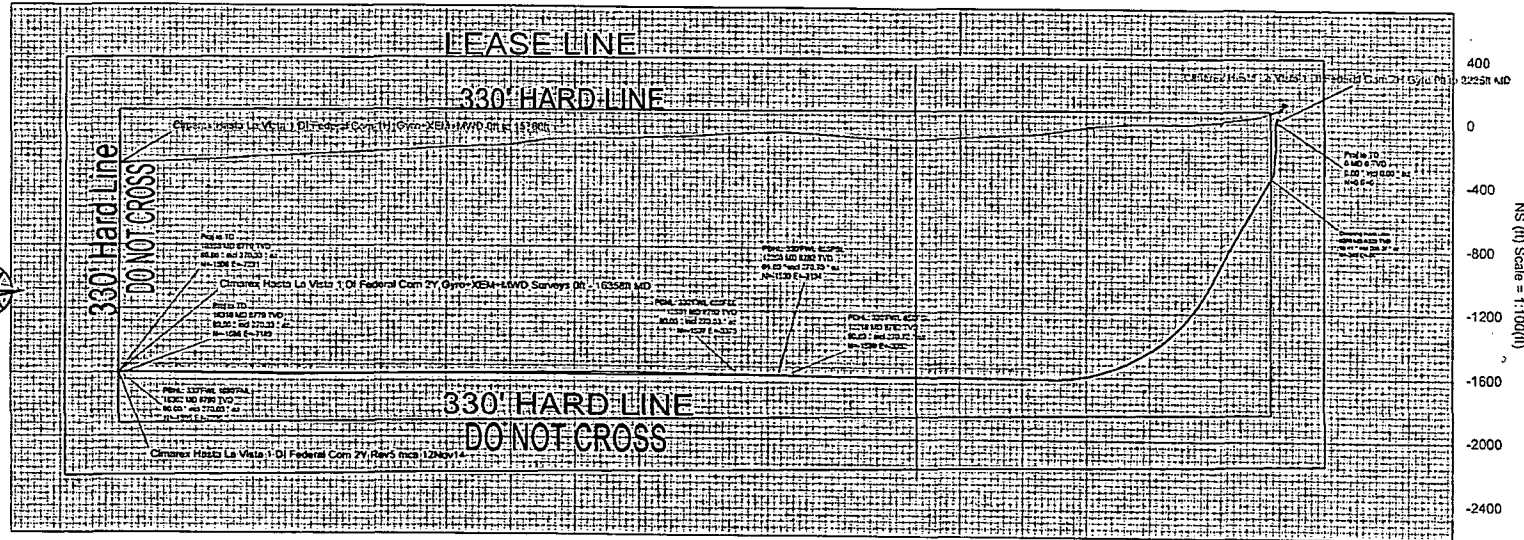
FINAL PVA



Borehole:	Original Borehole	Well:	Hasta La Vista 1 DI Federal Com 2Y	Field:	Eddy County, NM	Structure:	Scandril Eagle
Gravity & Magnetic Parameters		Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet		Miscellaneous		
Model:	HDM 2014	Date:	12-Nov-2014	Grid Conv:	0.2284"	Site:	Hasta La Vista 1 DI
MagDec:	7.681°	PS:	45376.025mT	Scale Fact:	0.00993833	Plan:	Cymex XEM-MWD Surveys 01 - 163581 MD
		Gravity FS:	008.458mgn (0.80655 Based)			TVD Ref:	RKB(3465ft above)
			Lat: N 39 38 30.37	Northings:	685239.751US		
			Lon: W 103 24 34.49	Eastings:	071821.581US		

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



Grid North
Tot Cor (MAG 7.453°)
Mag Dec (7.681°)
Grid Conv (0.228°)

