

30-015-41259



A Schlumberger Company

June 07, 2013

Cimarex

Re: Client Cimarex
Well Da Vinci 7 Federal Com #2H
Rig Cactus 104
County Eddy County, NM

Job# 13MLD0231

Please find enclosed, a copy of the End of Well Report (EOW) provided by our Directional Drilling Services from 05/05/2013 through 05/18/2013. This report consists of color planned vs. actual well drawings, proposed and actual surveys, morning reports, BHAs, and a Pathfinder office support personnel sheet for the above referenced well.

Should your office require further information, please feel free to contact your sales representative, Ryan Hempton or me.

Sincerely,

A handwritten signature in black ink, appearing to read "Ryan J. Schneider". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Ryan J. Schneider
Well Planner



Cimarex Da Vinci 7 Federal Com #2H Gyro+MWD 0ft to 11690ft MD (Def Survey)

Report Date: June 07, 2013 - 09:53 AM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cactus 104 / Cimarex Da Vinci 7 Federal Com #2H
Well: Cimarex Da Vinci 7 Federal Com #2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Da Vinci 7 Federal Com #2H Gyro+MWD 0ft to 11690ft MD
Survey Date: May 05, 2013
Tort / AHD / DDI / ERD Ratio: 149.977 ° / 4703.567 ft / 6.054 / 0.645
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 8' 17.59831", W 104° 13' 22.02559"
Location Grid N/E Y/X: N 414038.300 ftUS, E 575554.700 ftUS
CRS Grid Convergence Angle: 0.0588 °
Grid Scale Factor: 0.99991043

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 1.990 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3249.000 ft above
Seabed / Ground Elevation: 3229.000 ft above
Magnetic Declination: 7.751 °
Total Gravity Field Strength: 998.4963mgn (9.80665 Based)
Total Magnetic Field Strength: 48271.043 nT
Magnetic Dip Angle: 59.899 °
Declination Date: May 05, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.0588 °
Total Corr Mag North->Grid North: 7.6921 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (%/100ft)	TF (°)
SHL Davinci 7 Fed Com #2H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	238.81M
	85.65	0.37	238.81	85.65	-0.15	-0.14	-0.24	0.28	238.81	0.43	246.73M
	151.44	0.89	246.73	151.44	-0.49	-0.46	-0.89	1.00	242.86	0.80	247.15M
	246.36	1.29	247.15	246.34	-1.25	-1.16	-2.55	2.80	245.51	0.42	243.36M
	341.28	1.66	243.36	341.23	-2.36	-2.19	-4.76	5.24	245.28	0.40	240.11M
	436.20	1.85	240.11	436.10	-3.82	-3.57	-7.32	8.15	243.99	0.23	226.2M
	531.12	1.16	226.20	530.99	-5.32	-5.00	-9.34	10.60	241.84	0.82	204.76M
	626.04	0.60	204.76	625.90	-6.47	-6.12	-10.24	11.93	239.15	0.67	185.27M
	720.96	0.25	185.27	720.81	-7.13	-6.77	-10.47	12.47	237.10	0.39	81.72M
	815.88	0.05	81.72	815.73	-7.33	-6.98	-10.45	12.56	236.27	0.28	9.31M
	910.80	0.14	9.31	910.65	-7.21	-6.85	-10.39	12.45	236.58	0.14	257.09M
	1005.72	0.25	257.09	1005.57	-7.15	-6.79	-10.57	12.56	237.30	0.35	344.83M
	1100.64	0.27	344.83	1100.49	-6.99	-6.62	-10.83	12.69	238.58	0.38	341.43M
	1195.56	0.20	341.43	1195.41	-6.62	-6.24	-10.94	12.60	240.29	0.08	29.58M
	1290.48	0.24	29.58	1290.33	-6.29	-5.91	-10.90	12.40	241.51	0.19	37.82M
	1385.40	0.37	37.82	1385.25	-5.86	-5.50	-10.61	11.95	242.61	0.14	4.53M
	1480.32	0.36	4.53	1480.17	-5.32	-4.96	-10.40	11.52	244.51	0.22	15.76M
	1575.24	0.40	15.76	1575.09	-4.70	-4.34	-10.29	11.17	247.11	0.09	32.61M
	1670.16	0.53	32.61	1670.00	-4.00	-3.66	-9.96	10.61	249.85	0.20	51.34M
	1765.08	0.81	51.34	1764.92	-3.18	-2.87	-9.20	9.64	252.70	0.37	50.77M
Final Gyro Survey	1860.00	0.97	50.77	1859.83	-2.22	-1.94	-8.05	8.28	256.46	0.17	36.12M
	1923.00	0.68	36.12	1922.82	-1.56	-1.30	-7.42	7.53	260.07	0.57	334.82M
	2077.00	0.31	334.82	2076.81	-0.43	-0.18	-7.06	7.06	268.50	0.39	326.34M
	2172.62	0.31	326.34	2172.43	0.01	0.26	-7.31	7.32	272.08	0.05	330.82M
	2267.67	0.40	330.82	2267.48	0.50	0.77	-7.62	7.66	275.76	0.10	331.3M
	2362.60	0.48	331.30	2362.41	1.13	1.41	-7.97	8.09	280.01	0.08	6.82M
	2457.65	0.40	6.82	2457.46	1.80	2.09	-8.12	8.38	284.40	0.29	342.33M
	2552.62	0.40	342.33	2552.42	2.44	2.73	-8.18	8.63	288.45	0.18	311.83M
	2645.37	0.31	311.83	2645.17	2.91	3.21	-8.47	9.05	290.74	0.22	10.02M
	2740.59	0.31	10.02	2740.39	3.33	3.63	-8.61	9.35	292.86	0.32	301.12M
	2836.00	0.31	301.12	2835.80	3.71	4.02	-8.79	9.67	294.57	0.37	303.13M
	2930.20	0.31	303.13	2930.00	3.97	4.29	-9.22	10.17	294.95	0.01	315.4M
	3120.00	0.31	315.40	3119.79	4.59	4.94	-10.01	11.16	296.24	0.03	325.02M
	3216.89	0.31	325.02	3216.68	4.98	5.34	-10.35	11.64	297.29	0.05	316.4M
	3312.72	0.31	316.40	3312.51	5.36	5.74	-10.67	12.12	298.26	0.05	335.61M
	3407.69	0.09	335.61	3407.48	5.61	5.99	-10.88	12.42	298.84	0.24	310.12M
	3500.74	0.22	310.12	3500.53	5.79	6.17	-11.05	12.66	299.19	0.15	289.51M
	3595.64	0.22	289.51	3595.43	5.95	6.35	-11.36	13.02	299.21	0.08	282.3M
	3690.83	1.49	282.30	3690.61	6.23	6.68	-12.74	14.39	297.65	1.34	119M
	3786.93	0.40	119.00	3786.70	6.30	6.78	-13.67	15.26	296.38	1.95	158.42M
	3882.44	0.40	158.42	3882.21	5.84	6.31	-13.26	14.68	295.45	0.28	356.22M
	3976.82	0.31	356.22	3976.59	5.80	6.26	-13.15	14.56	295.44	0.74	307.53M
	4072.97	0.31	307.53	4072.73	6.21	6.67	-13.37	14.95	296.52	0.27	344M
	4165.80	0.62	344.00	4165.56	6.83	7.31	-13.71	15.54	298.07	0.45	327.3M
	4261.04	0.22	327.30	4260.80	7.47	7.96	-13.95	16.06	299.70	0.43	304.41M
	4355.91	0.70	304.41	4355.67	7.93	8.44	-14.53	16.80	300.15	0.53	285.33M
	4451.03	0.09	285.33	4450.78	8.26	8.79	-15.08	17.45	300.23	0.65	291.53M
	4546.24	0.22	291.53	4545.99	8.34	8.88	-15.32	17.71	300.08	0.14	297.82M
	4641.39	0.22	297.82	4641.14	8.48	9.03	-15.65	18.07	299.97	0.03	319.3M
	4736.75	0.22	319.30	4736.50	8.69	9.25	-15.94	18.43	300.14	0.09	323.83M
	4831.72	0.31	323.83	4831.47	9.03	9.60	-16.21	18.84	300.64	0.10	310.74M
	4926.91	0.31	310.74	4926.66	9.39	9.97	-16.55	19.33	301.07	0.07	290.76M
	5114.53	0.34	290.76	5114.28	9.89	10.50	-17.46	20.37	301.03	0.06	266.13M
	5210.93	0.40	266.13	5210.67	9.95	10.58	-18.06	20.93	300.36	0.17	248.64M
	5306.07	0.22	248.64	5305.81	9.84	10.49	-18.56	21.32	299.48	0.21	222.62M
	5400.50	0.22	222.62	5400.24	9.63	10.29	-18.85	21.48	298.63	0.10	227.33M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (%/100ft)	TF (°)
Final Extreme Survey	5496.18	0.31	227.33	5495.92	9.31	9.98	-19.17	21.61	297.51	0.10	239.63M
	5591.43	0.48	239.63	5591.17	8.92	9.61	-19.70	21.92	295.99	0.20	260.9M
	5686.47	0.62	260.90	5686.20	8.60	9.32	-20.55	22.57	294.40	0.26	255.72M
	5782.05	0.79	255.72	5781.78	8.32	9.08	-21.70	23.53	292.70	0.19	268.02M
	5877.54	0.88	268.02	5877.26	8.08	8.89	-23.07	24.73	291.07	0.21	276.63M
	5973.23	1.01	276.63	5972.93	8.10	8.96	-24.65	26.23	289.98	0.20	197.53M
	6164.00	1.01	197.53	6163.68	6.62	7.55	-26.82	27.87	285.73	0.67	188.13M
	6258.70	1.01	188.13	6258.37	4.98	5.93	-27.19	27.83	282.31	0.17	180.31M
	6351.59	0.70	180.31	6351.25	3.60	4.55	-27.31	27.69	279.47	0.36	132.01M
	6447.08	0.88	132.01	6446.73	2.55	3.48	-26.77	26.99	277.41	0.70	171.74M
	6542.51	1.19	171.74	6542.14	1.10	2.01	-26.08	26.16	274.40	0.80	157.72M
	6717.16	0.88	157.72	6716.77	-1.91	-1.03	-25.31	25.33	267.68	0.23	145.3M
	6759.00	0.62	145.30	6758.60	-2.38	-1.51	-25.06	25.11	266.55	0.73	20.5M
	6791.00	2.46	20.50	6790.59	-1.87	-1.01	-24.72	24.74	267.66	8.94	14.7M
	6822.00	6.95	14.70	6821.48	0.59	1.43	-24.01	24.06	273.41	14.55	12.85M
	6854.00	11.43	12.85	6853.06	5.60	6.40	-22.82	23.70	285.66	14.03	9.73L
	6886.00	15.21	10.39	6884.20	12.87	13.62	-21.35	25.33	302.53	11.94	1.95L
	6919.00	18.47	10.04	6915.78	22.33	23.03	-19.66	30.28	319.51	9.88	8.84L
	6951.00	22.34	8.46	6945.76	33.40	34.04	-17.88	38.45	332.28	12.21	6.35L
	6983.00	27.00	7.32	6974.84	46.68	47.26	-16.06	49.92	341.23	14.64	12.55L
	7015.00	30.86	5.65	7002.84	62.11	62.64	-14.33	64.26	347.12	12.32	41.05L
	7047.00	34.47	0.28	7029.78	79.36	79.87	-13.47	81.00	350.42	14.46	17.61L
	7079.00	39.22	357.91	7055.38	98.51	99.05	-13.80	100.01	352.07	15.49	9.56R
	7111.00	43.97	359.06	7079.30	119.71	120.28	-14.35	121.13	353.20	15.03	31.55R
	7142.00	47.22	1.75	7101.00	141.84	142.42	-14.18	143.13	354.31	12.18	12.97R
	7174.00	49.95	2.57	7122.16	165.84	166.40	-13.27	166.93	355.44	8.74	18.62R
	7205.00	52.23	3.54	7141.63	189.95	190.48	-11.98	190.86	356.40	7.75	58.37R
	7237.00	53.11	5.30	7161.04	215.37	215.85	-10.02	216.08	357.34	5.17	1.31R
	7268.00	56.01	5.38	7179.01	240.58	241.00	-7.67	241.12	358.18	9.36	HS
	7300.00	59.27	5.38	7196.14	267.56	267.90	-5.14	267.95	358.90	10.19	HS
	7331.00	62.17	5.38	7211.30	294.55	294.82	-2.60	294.83	359.49	9.35	8.08L
	7364.00	64.46	5.02	7226.11	323.99	324.18	0.07	324.18	0.01	7.01	9.69L
	7395.00	66.83	4.58	7238.90	352.20	352.32	2.43	352.33	0.40	7.75	21.15L
	7427.00	69.82	3.35	7250.72	381.91	381.99	4.48	382.01	0.67	10.00	14.46L
Survey 13-May-13	7459.00	72.90	2.52	7260.94	412.22	412.26	6.04	412.31	0.84	9.93	0.61R
	7490.00	75.62	2.55	7269.35	442.06	442.07	7.35	442.13	0.95	8.77	2.27R
	7521.00	79.84	2.72	7275.94	472.34	472.32	8.75	472.40	1.06	13.62	5.8R
	7553.00	83.36	3.08	7280.61	503.99	503.93	10.35	504.04	1.18	11.06	4.59R
	7585.00	85.47	3.25	7283.73	535.83	535.73	12.11	535.87	1.29	6.61	10.15L
	7617.00	88.99	2.62	7285.27	567.78	567.65	13.74	567.81	1.39	11.17	39.45L
	7681.00	90.40	1.46	7285.61	631.78	631.60	16.02	631.81	1.45	2.85	131.99L
	7777.00	90.13	1.16	7285.17	727.77	727.58	18.22	727.80	1.43	0.42	41.63R
	7872.00	90.40	1.40	7284.73	822.76	822.55	20.34	822.80	1.42	0.38	173.66R
	7967.00	90.31	1.41	7284.14	917.75	917.52	22.67	917.80	1.42	0.10	159.62L
	8062.00	89.96	1.28	7283.92	1012.75	1012.49	24.90	1012.80	1.41	0.39	165.47L
	8157.00	89.69	1.21	7284.21	1107.74	1107.47	26.96	1107.80	1.39	0.29	168.44R
	8252.00	89.25	1.30	7285.09	1202.73	1202.44	29.04	1202.79	1.38	0.47	115.35L
	8347.00	89.16	1.11	7286.40	1297.71	1297.41	31.04	1297.78	1.37	0.22	29.11R
	8442.00	90.04	1.60	7287.07	1392.70	1392.38	33.29	1392.78	1.37	1.06	37.87R
	8537.00	90.22	1.74	7288.85	1487.70	1487.34	36.06	1487.78	1.39	0.24	17.65R
	8632.00	90.66	1.88	7288.12	1582.69	1582.29	39.06	1582.77	1.41	0.49	34.43L
	8727.00	91.01	1.64	7284.74	1677.68	1677.24	41.97	1677.76	1.43	0.45	39.17L
	8821.00	91.28	1.42	7282.86	1771.66	1771.18	44.48	1771.74	1.44	0.37	152.92R
	8916.00	90.40	1.87	7281.47	1866.65	1866.13	47.21	1866.73	1.45	1.04	58.84L
	9011.00	90.66	1.44	7280.59	1961.64	1961.09	49.95	1961.73	1.46	0.53	90L
	9106.00	90.66	0.90	7279.49	2056.63	2056.06	51.89	2056.72	1.45	0.57	159.41R
	9202.00	87.76	1.99	7280.82	2152.60	2152.01	54.31	2152.70	1.45	3.23	46.58R
	9297.00	88.64	2.92	7283.80	2247.55	2246.88	58.38	2247.63	1.49	1.35	30.57R
	9392.00	90.13	3.80	7284.82	2342.51	2341.70	63.95	2342.58	1.56	1.82	166.09L
	9487.00	89.08	3.54	7285.48	2437.47	2436.51	70.03	2437.51	1.65	1.14	HS
	9582.00	90.92	3.54	7285.48	2532.43	2531.32	75.89	2532.46	1.72	1.94	58.46R
	9677.00	91.19	3.98	7283.73	2627.37	2626.10	82.12	2627.38	1.79	0.54	118.32L
	9772.00	90.57	2.83	7282.27	2722.33	2720.92	87.70	2722.33	1.85	1.38	90R
	9867.00	90.57	2.92	7281.32	2817.31	2815.79	92.53	2817.31	1.88	0.09	135R
	9962.00	90.48	3.01	7280.45	2912.29	2910.66	97.44	2912.29	1.92	0.13	75.58R
	10057.00	90.57	3.36	7279.58	3007.27	3005.51	102.72	3007.27	1.96	0.38	HS
	10152.00	91.19	3.36	7278.12	3102.23	3100.34	108.29	3102.23	2.00	0.65	175.52R
	10246.00	90.04	3.45	7277.11	3196.19	3194.16	113.87	3196.19	2.04	1.23	44.59L
	10342.00	90.75	2.75	7276.45	3292.17	3290.02	119.06	3292.17	2.07	1.04	87.45L
Survey 17-May-13	10437.00	90.84	0.72	7275.13	3387.16	3384.96	121.94	3387.16	2.06	2.14	LS
	10532.00	90.40	0.72	7274.11	3482.13	3479.95	123.13	3482.13	2.03	0.46	163.54L
	10627.00	89.52	0.46	7274.17	3577.10	3574.94	124.11	3577.10	1.99	0.97	18.22R
	10722.00	90.31	0.72	7274.31	3672.07	3669.94	125.09	3672.07	1.95	0.88	169.49R
	10818.00	89.34	0.90	7274.61	3768.05	3765.93	126.44	3768.05	1.92	1.03	168.44L
	10913.00	88.90	0.81	7276.06	3863.02	3860.90	127.86	3863.02	1.90	0.47	18.55R
	11008.00	90.48	1.34	7276.58	3958.00	3955.88	129.64	3958.01	1.88	1.75	7.22L
	11102.00	91.19	1.25	7275.21	4051.98	4049.85	131.77	4051.99	1.86	0.76	107.06R
	11198.00	90.84	2.39	7273.51	4147.96	4145.78	134.82	4147.97	1.86	1.24	161.56R
	11293.00	89.25	2.92	7273.43	4242.95	4240.68	139.22	4242.96	1.88	1.76	170.36L
	11388.00	88.72	2.83	7275.12	4337.93	4335.54	143.98	4337.93	1.90	0.57	134.47R
	11483.00	88.20	3.36	7277.67	4432.87	4430.37	149.11	4432.88	1.93	0.78	44.99L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (%/100ft)	TF (°)
Final Survey	11578.00	88.46	3.10	7280.44	4527.81	4525.18	154.46	4527.81	1.95	0.39	123.19R
Proj to TD	11642.00	88.29	3.36	7282.25	4591.77	4589.05	158.06	4591.77	1.97	0.49	HS
	11690.00	88.29	3.36	7283.69	4639.74	4636.95	160.88	4639.74	1.99	0.00	

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	20.000	Act Sns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Da Vinci 7 Federal Com #2H
	20.000	1923.000	Act Sns	30.000	30.000	SLB_NSG+MSHOT	Gyro+MWD 0ft to 11690ft MD Original Borehole / Cimarex Da
	1923.000	6717.160	Act Sns	30.000	30.000	SLB_MWD-POOR	Vinci 7 Federal Com #2H Original Borehole / Cimarex Da
	6717.160	11642.000	Act Sns	30.000	30.000	SLB_MWD-STD	Vinci 7 Federal Com #2H Original Borehole / Cimarex Da
	11642.000	11690.000	Act Sns	30.000	30.000	SLB_BLIND+TREND	Vinci 7 Federal Com #2H Original Borehole / Cimarex Da



Cimarex



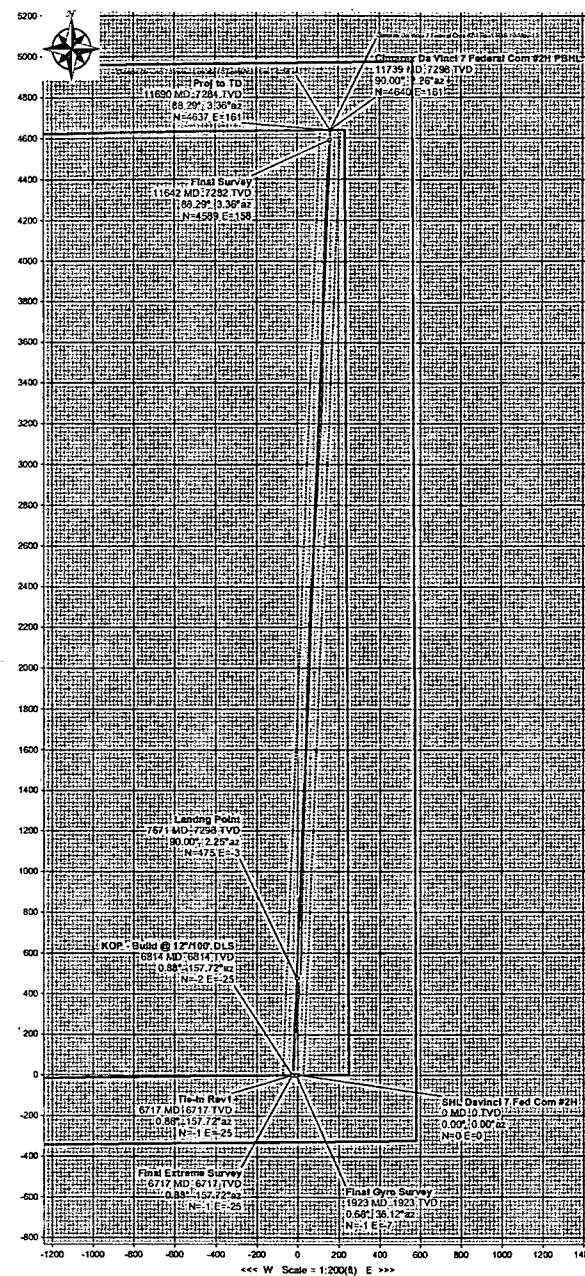
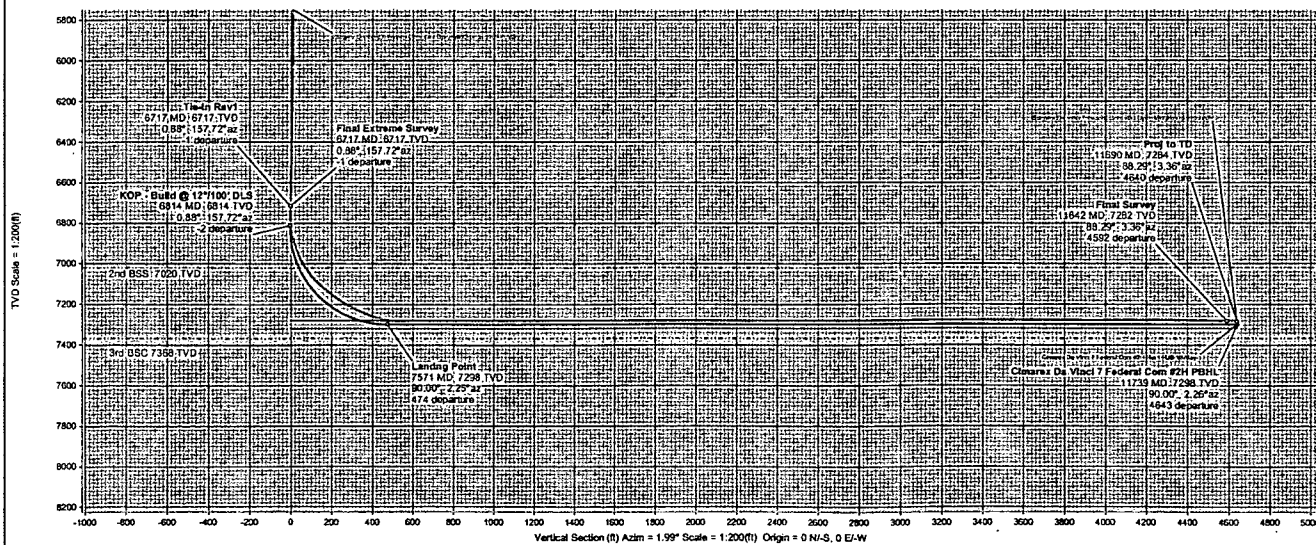
WELL	Da Vinci 7 Federal Com #2H	FIELD	NM Eddy County	STRUCTURE	Cactus 104
Map Date	04/29/2011	Map Date	04/29/2011	Map Date	04/29/2011
Map Date	04/29/2011	Map Date	04/29/2011	Map Date	04/29/2011
Map Date	04/29/2011	Map Date	04/29/2011	Map Date	04/29/2011
Map Date	04/29/2011	Map Date	04/29/2011	Map Date	04/29/2011
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Map Date	04/29/2011	Map Date	04/29/2011	Map Date	04/29/2011
Map Date	04/29/2011	Map Date	04/29/2011	Map Date	04/29/2011



Grid North
Tot Corr (M->G 7.6940°)
Mag Dec (7.753°)
Grid Conv (0.059°)

Legend

- Da Vinci 7 Federal Com #2H
- Da Vinci 7 Federal Com #2H
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- Da Vinci 7 Federal Com #2H
- Da Vinci 7 Federal Com #2H



Drawn By: R. Schneider
Date Created: May 10, 2013 08:43:59 PM
Checked By:
Approved By:
Approved Date: