

Results of Directional Survey

API number:	30-025-40792		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	DOS EQUIS 12 FEDERAL # 3H

surface	ULSTR:	C	12	T 24S	R 32E
				330 FNL	1980 FWL

BH Loc	ULSTR:	N	12	T 24S	R 32E
15277 MD		11002.6	TVD	325 FSL	1995 FWL
				4955 FNL	

Top Perf/OH	ULSTR:	C	12	T 24S	R 32E
10750 MD		10714.2	TVD	519 FNL	1905 FWL

Bot Perf/OH	ULSTR:	N	12	T 24S	R 32E
15249 MD		11002.6	TVD	353 FSL	1994 FWL
				4927 FNL	

	MD	N/S	E/W	VD
	10722	-171.13	-76.19	10692.72
TOP PERFS/OH	10750	-189.05	-75.24	10714.20
	10754	-191.61	-75.10	10717.27
	15229	-4576.67	13.01	11002.51
BOT PERFS/OH	15249	-4596.66	13.72	11002.56
	15277	-4624.64	14.72	11002.62

NEXT TO LAST	15229	-4576.67	13.01	11002.51
LAST READING	15277	-4624.64	14.72	11002.62
TD	15277	-4624.64	14.72	11002.62

Surface Location	330	FN	1980	FW
Projected BHL	4955	FN	1995	FW
Location of				
Top Perfs/OH	519	FN	1905	FW
Bottom Perfs/OH	4927	FN	1994	FW

SUMMARY of Subsurface Locations

Surface Location	C-12-24S-32E	330	FN	1980	FW	Vert. Depth
Top Perfs/OH	C-12-24S-32E	519	FN	1905	FW	10714.20
Bottom Perfs/OH	N-12-24S-32E	4927	FN	1994	FW	11002.56
Projected TD	N-12-24S-32E	4955	FN	1995	FW	11002.62

OCT 03 2013



Cimarex Dos Equis 12 Federal Com #3H Gyro+MWD 0ft to 15227ft MD

(Def Survey)

Report Date: April 24, 2013 - 04:57 AM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cactus 104 / Cimarex Dos Equis 12 Federal Com #3H
Well: Cimarex Dos Equis 12 Federal Com #3H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12 Federal Com #3H Gyro+MWD 0ft to 15227ft MD
Survey Date: April 02, 2013
Tort / AHD / DDI / ERD Ratio: 180.027 ° / 4741.733 ft / 6.073 / 0.430
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 18.90499", W 103° 37' 49.40830"
Location Grid N/E Y/X: N 451241.900 ftUS, E 758677.400 ftUS
CRS Grid Convergence Angle: 0.3750 °
Grid Scale Factor: 0.99996319

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.800 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3632.000 ft above MSL
Seabed / Ground Elevation: 3612.000 ft above MSL
Magnetic Declination: 7.498 °
Total Gravity Field Strength: 998.4679mgn (9.80665 Based)
Total Magnetic Field Strength: 48413.745 nT
Magnetic Dip Angle: 60.103 °
Declination Date: April 02, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.3750 °
Total Corr Mag North->Grid North: 7.1229 °
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 Dos Equis 12 Fed #3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	95.07M
	100.00	0.76	95.07	100.00	0.06	-0.06	0.66	0.66	95.07	0.76	88.8M
	200.00	0.71	88.80	199.99	0.11	-0.10	1.94	1.94	93.07	0.09	98.05M
	300.00	0.55	98.05	299.98	0.17	-0.16	3.04	3.04	92.99	0.19	175.42M
	400.00	0.14	175.42	399.98	0.36	-0.35	3.52	3.54	95.64	0.54	247.55M
	500.00	0.17	247.55	499.98	0.54	-0.53	3.39	3.43	98.81	0.18	280.59M
	600.00	0.19	280.59	599.98	0.56	-0.55	3.09	3.14	100.12	0.10	301.77M
	624.00	0.22	301.77	623.98	0.53	-0.52	3.01	3.06	99.80	0.34	309.85M
	719.00	0.55	309.85	718.98	0.14	-0.13	2.51	2.51	93.02	0.35	308.59M
	814.00	0.78	308.59	813.97	-0.56	0.56	1.65	1.75	71.20	0.24	310.57M
	909.00	0.95	310.57	908.96	-1.48	1.48	0.55	1.58	20.41	0.18	307.44M
	1004.00	1.36	307.44	1003.94	-2.68	2.68	-0.94	2.84	340.59	0.44	304.06M
	1099.00	1.40	304.06	1098.91	-4.02	4.01	-2.80	4.89	325.09	0.10	304.95M
	1195.00	0.97	304.95	1194.89	-5.15	5.13	-4.44	6.79	319.16	0.45	288.59M
	1290.00	0.45	288.59	1289.89	-5.73	5.71	-5.45	7.90	316.35	0.58	305.92M
	1385.00	0.04	305.92	1384.88	-5.87	5.85	-5.83	8.26	315.11	0.43	62.58M
	1480.00	0.09	62.58	1479.88	-5.93	5.91	-5.79	8.27	315.56	0.12	16.54M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	1575.00	0.17	16.54	1574.88	-6.09	6.08	-5.68	8.32	316.90	0.13	33.01M
	1671.00	0.15	33.01	1670.88	-6.34	6.32	-5.58	8.43	318.57	0.05	26.62M
	1766.00	0.06	26.62	1765.88	-6.48	6.47	-5.49	8.48	319.69	0.10	119.04M
	1861.00	0.11	119.04	1860.88	-6.48	6.47	-5.38	8.41	320.22	0.13	161.44M
	1956.00	0.22	161.44	1955.88	-6.27	6.25	-5.25	8.16	319.99	0.17	161.42M
	2051.00	0.29	161.42	2050.88	-5.87	5.85	-5.11	7.77	318.85	0.07	137.89M
	2146.00	0.19	137.89	2145.88	-5.52	5.50	-4.93	7.39	318.15	0.15	76.38M
	2241.00	0.34	76.38	2240.88	-5.47	5.45	-4.55	7.10	320.16	0.32	41.95M
	2336.00	0.45	41.95	2335.88	-5.81	5.80	-4.03	7.06	325.22	0.27	23.81M
	2431.00	0.26	23.81	2430.88	-6.28	6.27	-3.69	7.28	329.53	0.23	332.91M
	2526.00	0.27	332.91	2525.88	-6.68	6.67	-3.70	7.63	330.94	0.24	317.81M
	2622.00	0.35	317.81	2621.87	-7.10	7.09	-4.00	8.14	330.53	0.12	314.46M
	2717.00	0.47	314.46	2716.87	-7.59	7.57	-4.48	8.80	329.41	0.13	294.09M
	2812.00	0.38	294.09	2811.87	-7.99	7.98	-5.04	9.44	327.69	0.18	273.63M
	2907.00	0.46	273.63	2906.87	-8.15	8.13	-5.71	9.93	324.91	0.18	250.15M
	3003.00	0.43	250.15	3002.86	-8.05	8.03	-6.43	10.29	321.30	0.19	122.04M
	3098.00	0.14	122.04	3097.86	-7.87	7.85	-6.67	10.30	319.63	0.56	137.39M
	3193.00	0.09	137.39	3192.86	-7.75	7.73	-6.52	10.12	319.85	0.06	344.33M
	3289.00	0.06	344.33	3288.86	-7.75	7.72	-6.49	10.09	319.98	0.15	336.41M
	3384.00	0.15	336.41	3383.86	-7.91	7.89	-6.55	10.25	320.30	0.10	250.28M
	3479.00	0.23	250.28	3478.86	-7.96	7.94	-6.78	10.44	319.50	0.28	151.8M
	3574.00	0.56	151.80	3573.86	-7.49	7.46	-6.74	10.05	317.92	0.67	75.03M
	3669.00	0.58	75.03	3668.86	-7.20	7.18	-6.05	9.39	319.85	0.75	320.74M
	3764.00	0.69	320.74	3763.85	-7.77	7.74	-5.95	9.77	322.46	1.12	320.74M
	3859.00	0.88	320.74	3858.84	-8.78	8.75	-6.78	11.07	322.26	0.20	142.01M
	3954.00	0.78	142.01	3953.84	-8.83	8.81	-6.84	11.15	322.17	1.75	79.34M
	4049.00	0.62	79.34	4048.84	-8.41	8.39	-5.94	10.28	324.73	0.78	48.07M
	4144.00	0.63	48.07	4143.83	-8.85	8.84	-5.04	10.17	330.29	0.35	337.19M
	4240.00	0.59	337.19	4239.83	-9.66	9.65	-4.84	10.79	333.35	0.74	249.28M
	4334.00	0.75	249.28	4333.82	-9.89	9.87	-5.60	11.35	330.42	1.00	173.86M
	4429.00	1.06	173.86	4428.81	-8.80	8.78	-6.09	10.69	325.25	1.19	119.88M
	4526.00	1.31	119.88	4525.79	-7.35	7.34	-5.03	8.90	325.54	1.13	82.36M
	4621.00	1.34	82.36	4620.77	-6.95	6.94	-2.99	7.56	336.69	0.90	44.74M
	4716.00	1.05	44.74	4715.75	-7.71	7.71	-1.28	7.81	350.59	0.86	331.98M
Final Gyro	4811.00	0.69	331.98	4810.74	-8.83	8.83	-0.93	8.88	353.96	1.13	226.03M
	4989.00	0.53	226.03	4988.74	-9.21	9.21	-2.03	9.43	347.57	0.55	224.07M
	5152.00	0.70	224.07	5151.73	-7.98	7.97	-3.27	8.61	337.72	0.11	226.93M
	5218.00	0.70	226.93	5217.72	-7.42	7.40	-3.84	8.34	332.58	0.05	219.33M
	5313.00	0.70	219.33	5312.72	-6.57	6.56	-4.63	8.03	324.76	0.10	225.7M
	5408.00	0.79	225.70	5407.71	-5.67	5.65	-5.47	7.86	315.94	0.13	222.93M
	5502.00	0.88	222.93	5501.70	-4.69	4.67	-6.42	7.94	306.02	0.10	221.44M
	5597.00	0.79	221.44	5596.69	-3.67	3.64	-7.35	8.21	296.36	0.10	220.91M
	5691.00	0.79	220.91	5690.68	-2.70	2.67	-8.21	8.63	288.02	0.01	216.64M
	5787.00	0.88	216.64	5786.67	-1.61	1.58	-9.08	9.22	279.86	0.11	214.63M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	5883.00	0.88	214.63	5882.66	-0.41	0.38	-9.94	9.95	272.19	0.03	218.23M
	5977.00	0.88	218.23	5976.65	0.74	-0.78	-10.80	10.82	265.86	0.06	221.13M
	6072.00	0.88	221.13	6071.63	1.86	-1.90	-11.73	11.88	260.78	0.05	216.21M
	6168.00	0.88	216.21	6167.62	3.01	-3.05	-12.65	13.01	256.42	0.08	207.11M
	6262.00	1.01	207.11	6261.61	4.33	-4.37	-13.45	14.15	251.99	0.21	208.91M
	6357.00	0.88	208.91	6356.60	5.71	-5.76	-14.19	15.31	247.91	0.14	217.22M
	6452.00	1.01	217.22	6451.58	7.01	-7.06	-15.05	16.62	244.85	0.20	214.01M
	6548.00	1.01	214.01	6547.57	8.38	-8.44	-16.03	18.12	242.24	0.06	217.53M
	6641.00	1.01	217.53	6640.56	9.71	-9.77	-16.99	19.60	240.10	0.07	209.7M
	6829.00	1.01	209.70	6828.53	12.46	-12.52	-18.82	22.60	236.36	0.07	219M
	6924.00	0.79	219.00	6923.51	13.69	-13.76	-19.65	23.98	235.00	0.28	222.8M
	7113.00	1.01	222.80	7112.49	15.92	-15.99	-21.60	26.87	233.48	0.12	225.22M
	7209.00	1.19	225.22	7208.47	17.24	-17.32	-22.88	28.69	232.88	0.19	225.7M
	7304.00	1.32	225.70	7303.45	18.69	-18.77	-24.36	30.76	232.38	0.14	218.8M
	7392.00	1.41	218.80	7391.43	20.24	-20.33	-25.77	32.82	231.73	0.21	221.92M
	7487.00	1.41	221.92	7486.40	22.01	-22.11	-27.28	35.11	230.98	0.08	221.44M
	7582.00	1.49	221.44	7581.37	23.80	-23.90	-28.88	37.49	230.39	0.09	223.02M
	7677.00	1.49	223.02	7676.33	25.62	-25.73	-30.54	39.93	229.88	0.04	217.83M
	7773.00	1.49	217.83	7772.30	27.52	-27.63	-32.16	42.40	229.33	0.14	220.21M
	7867.00	1.58	220.21	7866.27	29.47	-29.58	-33.74	44.87	228.76	0.12	221.92M
	7963.00	1.58	221.92	7962.23	31.46	-31.58	-35.48	47.50	228.33	0.05	221.22M
	8062.00	1.80	221.22	8061.19	33.63	-33.76	-37.42	50.40	227.94	0.22	217.83M
	8157.00	1.80	217.83	8156.14	35.93	-36.07	-39.32	53.35	227.47	0.11	221.01M
	8252.00	1.80	221.01	8251.09	38.23	-38.37	-41.21	56.31	227.04	0.11	220.6M
	8351.00	1.89	220.60	8350.04	40.63	-40.78	-43.29	59.48	226.71	0.09	218.01M
	8442.00	1.89	218.01	8440.99	42.95	-43.10	-45.19	62.45	226.35	0.09	217.22M
	8538.00	1.80	217.22	8536.94	45.39	-45.55	-47.08	65.51	225.94	0.10	221.13M
	8632.00	2.02	221.13	8630.89	47.80	-47.98	-49.06	68.62	225.64	0.27	222.4M
	8727.00	1.89	222.40	8725.84	50.21	-50.39	-51.22	71.85	225.47	0.14	217M
	8822.00	1.89	217.00	8820.79	52.62	-52.80	-53.22	74.97	225.23	0.19	219.02M
	8917.00	1.80	219.02	8915.74	55.02	-55.21	-55.10	78.00	224.94	0.12	222.62M
	9012.00	1.49	222.62	9010.70	57.08	-57.28	-56.88	80.72	224.80	0.34	234.4M
	9106.00	1.32	234.40	9104.67	58.60	-58.81	-58.58	83.01	224.89	0.36	251.23M
	9202.00	1.10	251.23	9200.65	59.54	-59.75	-60.36	84.93	225.29	0.43	263.01M
	9297.00	1.32	263.01	9295.63	59.96	-60.18	-62.31	86.62	226.00	0.35	301.81M
	9392.00	0.79	301.81	9390.61	59.74	-59.96	-63.95	87.66	226.84	0.91	19.73M
	9488.00	1.32	19.73	9486.60	58.35	-58.57	-64.14	86.86	227.60	1.45	15.73M
	9582.00	1.32	15.73	9580.57	56.29	-56.51	-63.48	84.99	228.32	0.10	7.03M
	9676.00	1.49	7.03	9674.55	54.04	-54.26	-63.04	83.17	229.28	0.29	356.13M
	9772.00	1.71	356.13	9770.51	51.37	-51.59	-62.98	81.41	230.68	0.39	356.7M
	9867.00	1.80	356.70	9865.46	48.47	-48.69	-63.16	79.75	232.37	0.10	338.03M
	9962.00	1.19	338.03	9960.43	46.06	-46.28	-63.62	78.67	233.96	0.81	324.4M
	10057.00	1.10	324.40	10055.41	44.40	-44.63	-64.52	78.45	235.33	0.30	314.82M
Survey 11-Apr-13	10153.00	1.10	314.82	10151.39	43.00	-43.23	-65.71	78.65	236.66	0.19	306.45M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Survey 12-Apr-13	10245.00	1.32	306.45	10243.37	41.74	-41.98	-67.18	79.22	238.00	0.31	275.6M
	10278.00	1.14	275.60	10276.37	41.48	-41.72	-67.82	79.62	238.40	2.05	207.66M
	10309.00	2.46	207.66	10307.35	42.04	-42.28	-68.43	80.44	238.29	7.39	196.24M
	10341.00	4.84	196.24	10339.29	43.94	-44.18	-69.13	82.04	237.42	7.74	192.63M
	10373.00	7.74	192.63	10371.09	47.34	-47.58	-69.98	84.62	235.79	9.14	189.12M
	10405.00	10.38	189.12	10402.69	52.28	-52.53	-70.91	88.25	233.47	8.43	6.91R
	10436.00	13.19	190.61	10433.03	58.51	-58.77	-72.00	92.94	230.78	9.12	15.92L
	10468.00	14.68	188.94	10464.09	66.10	-66.36	-73.30	98.88	227.85	4.82	9.02R
	10499.00	15.74	189.56	10494.00	74.13	-74.39	-74.61	105.36	225.09	3.46	1.31R
	10532.00	16.88	189.65	10525.68	83.26	-83.52	-76.16	113.03	222.36	3.46	21.43L
	10564.00	19.70	186.40	10556.06	93.20	-93.47	-77.54	121.44	219.68	9.37	16.9L
	10596.00	23.83	183.32	10585.77	105.01	-105.29	-78.51	131.34	216.71	13.39	24.63L
	10627.00	27.61	179.63	10613.70	118.45	-118.73	-78.83	142.51	213.58	13.24	16.33L
	10659.00	32.10	177.17	10641.44	134.37	-134.64	-78.36	155.79	210.20	14.54	7.15L
	10691.00	35.79	176.38	10667.98	152.21	-152.48	-77.35	170.98	206.90	11.61	1.12R
	10722.00	38.34	176.46	10692.72	170.86	-171.13	-76.19	187.32	204.00	8.23	11.79R
	10754.00	41.42	177.43	10717.27	191.35	-191.61	-75.10	205.80	201.40	9.82	12.16R
	10786.00	43.97	178.22	10740.79	213.03	-213.29	-74.28	225.86	199.20	8.14	10.69R
	10816.00	45.99	178.75	10762.01	234.23	-234.49	-73.72	245.81	197.45	6.85	18.75R
	10849.00	48.72	179.98	10784.36	258.50	-258.76	-73.46	268.98	195.85	8.71	1.63L
Survey 13-Apr-13	10881.00	51.18	179.89	10804.95	282.99	-283.25	-73.43	292.62	194.53	7.69	11.89L
	10912.00	52.50	179.54	10824.11	307.37	-307.63	-73.31	316.24	193.40	4.35	8.57L
	10944.00	53.46	179.36	10843.37	332.92	-333.17	-73.06	341.09	192.37	3.03	10.45L
	10976.00	54.61	179.10	10862.17	358.82	-359.07	-72.71	366.36	191.45	3.65	9.89R
	11007.00	56.28	179.45	10879.75	384.35	-384.60	-72.39	391.35	190.66	5.47	9.45R
Survey 16-Apr-13	11039.00	57.60	179.71	10897.20	411.16	-411.42	-72.19	417.70	189.95	4.18	4.57R
	11071.00	58.56	179.80	10914.12	438.32	-438.58	-72.08	444.46	189.33	3.01	5.26L
	11103.00	61.03	179.54	10930.22	465.98	-466.23	-71.92	471.75	188.77	7.75	17.13R
	11134.00	64.10	180.59	10944.50	493.49	-493.74	-71.95	498.96	188.29	10.35	16.77L
	11164.00	65.95	179.98	10957.17	520.68	-520.93	-72.09	525.90	187.88	6.44	2.37L
Survey 17-Apr-13	11194.00	67.97	179.89	10968.91	548.28	-548.54	-72.05	553.25	187.48	6.74	2.71L
	11227.00	71.58	179.71	10980.32	579.24	-579.50	-71.95	583.95	187.08	10.95	15.94L
	11258.00	75.45	178.57	10989.11	608.96	-609.22	-71.50	613.40	186.69	12.97	7.05L
	11289.00	79.67	178.04	10995.79	639.22	-639.47	-70.60	643.35	186.30	13.71	1.76R
	11308.00	82.57	178.13	10998.72	657.98	-658.23	-69.97	661.94	186.07	15.27	17.13R
Survey 18-Apr-13	11385.00	87.67	179.70	11005.27	734.66	-734.91	-68.53	738.09	185.33	6.93	47.45L
	11480.00	89.25	177.98	11007.82	829.61	-829.85	-66.60	832.51	184.59	2.46	37.73L
	11575.00	90.31	177.16	11008.19	924.53	-924.76	-62.57	926.87	183.87	1.41	158.88L
	11670.00	89.43	176.82	11008.40	1019.42	-1019.63	-57.59	1021.25	183.23	0.99	46.27L
	11765.00	89.87	176.36	11008.98	1114.27	-1114.46	-51.94	1115.66	182.67	0.67	18.24R
Survey 19-Apr-13	11861.00	90.75	176.65	11008.46	1210.11	-1210.27	-46.08	1211.15	182.18	0.97	132.46R
	11955.00	89.78	177.71	11008.03	1304.00	-1304.16	-41.46	1304.82	181.82	1.53	57.66R
	12050.00	90.66	179.10	11007.66	1398.97	-1399.12	-38.82	1399.65	181.59	1.73	20.37L
	12144.00	91.36	178.84	11006.01	1492.95	-1493.09	-37.13	1493.55	181.42	0.79	157.26R
	12239.00	89.69	179.54	11005.14	1587.93	-1588.07	-35.78	1588.47	181.29	1.91	123.44R

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Survey 20-Apr-13	12334.00	89.34	180.07	11005.94	1682.93	-1683.06	-35.46	1683.44	181.21	0.67	6.52R
	12429.00	90.04	180.15	11006.46	1777.93	-1778.06	-35.64	1778.42	181.15	0.74	123.36L
	12524.00	89.52	179.36	11006.82	1872.92	-1873.06	-35.24	1873.39	181.08	1.00	146.56L
	12619.00	88.99	179.01	11008.06	1967.91	-1968.04	-33.88	1968.33	180.99	0.67	HS
	12714.00	88.99	179.01	11009.73	2062.89	-2063.01	-32.24	2063.26	180.90	0.00	80.69L
Survey 21-Apr-13	12809.00	89.09	178.40	11011.32	2157.86	-2157.97	-30.10	2158.18	180.80	0.65	146.32L
	12905.00	88.55	178.04	11013.30	2253.80	-2253.91	-27.12	2254.07	180.69	0.68	74.55R
	13001.00	88.99	179.63	11015.36	2349.76	-2349.86	-25.16	2350.00	180.61	1.72	16.76L
	13096.00	90.75	179.10	11015.57	2444.75	-2444.85	-24.11	2444.97	180.57	1.93	135L
	13191.00	90.22	178.57	11014.77	2539.73	-2539.83	-22.18	2539.92	180.50	0.79	151.77L
	13286.00	87.93	177.34	11016.30	2634.67	-2634.75	-18.79	2634.81	180.41	2.74	7.28R
	13381.00	89.34	177.52	11018.57	2729.55	-2729.62	-14.53	2729.66	180.31	1.50	52.87R
Survey 22-Apr-13	13476.00	90.40	178.92	11018.78	2824.51	-2824.57	-11.58	2824.60	180.23	1.85	123.69R
	13571.00	90.22	179.19	11018.27	2919.50	-2919.56	-10.02	2919.57	180.20	0.34	151.4R
	13666.00	88.46	180.15	11019.36	3014.49	-3014.54	-9.47	3014.56	180.18	2.11	18.37L
	13761.00	90.84	179.36	11019.94	3109.48	-3109.53	-9.06	3109.55	180.17	2.64	35.79L
	13856.00	91.45	178.92	11018.05	3204.46	-3204.50	-7.64	3204.51	180.14	0.79	161.07R
Survey 22-Apr-13	13951.00	90.40	179.28	11016.51	3299.44	-3299.48	-6.14	3299.48	180.11	1.17	175.44R
	14046.00	87.14	179.54	11018.55	3394.40	-3394.44	-5.17	3394.44	180.09	3.44	4.19L
	14141.00	89.60	179.36	11021.25	3489.35	-3489.39	-4.25	3489.39	180.07	2.60	18L
	14235.00	90.40	179.10	11021.25	3583.35	-3583.38	-2.99	3583.38	180.05	0.89	141.5L
	14330.00	89.96	178.75	11020.95	3678.34	-3678.36	-1.21	3678.36	180.02	0.59	15.15R
Survey 22-Apr-13	14425.00	90.92	179.01	11020.22	3773.32	-3773.34	0.65	3773.34	179.99	1.05	177.9R
	14520.00	88.46	179.10	11020.74	3868.30	-3868.32	2.21	3868.32	179.97	2.59	6.5L
	14616.00	89.25	179.01	11022.66	3964.27	-3964.29	3.80	3964.29	179.95	0.83	3.55R
	14711.00	92.15	179.19	11021.50	4059.25	-4059.26	5.29	4059.26	179.93	3.06	128.5R
	14806.00	91.45	180.07	11018.51	4154.20	-4154.21	5.90	4154.21	179.92	1.18	9.71L
Final Survey	14900.00	95.06	179.45	11013.18	4248.03	-4248.04	6.29	4248.04	179.92	3.90	165.91L
	14995.00	92.95	178.92	11006.54	4342.79	-4342.79	7.64	4342.80	179.90	2.29	177.83R
	15090.00	90.57	179.01	11003.62	4437.73	-4437.72	9.36	4437.73	179.88	2.51	90L
Final Survey Proj to TD	15185.00	90.57	178.31	11002.68	4532.70	-4532.69	11.58	4532.71	179.85	0.74	153.43L
	15229.00	89.87	177.96	11002.51	4576.69	-4576.67	13.01	4576.69	179.84	1.78	HS
	15277.00	89.87	177.96	11002.62	4624.66	-4624.64	14.72	4624.66	179.82	0.00	

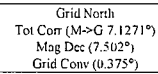
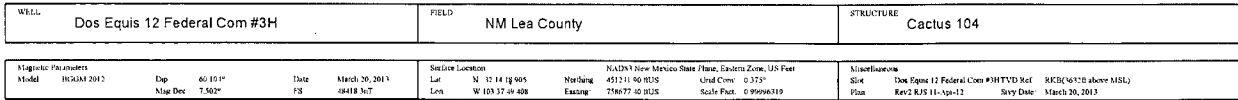
Survey Type: Def Survey

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

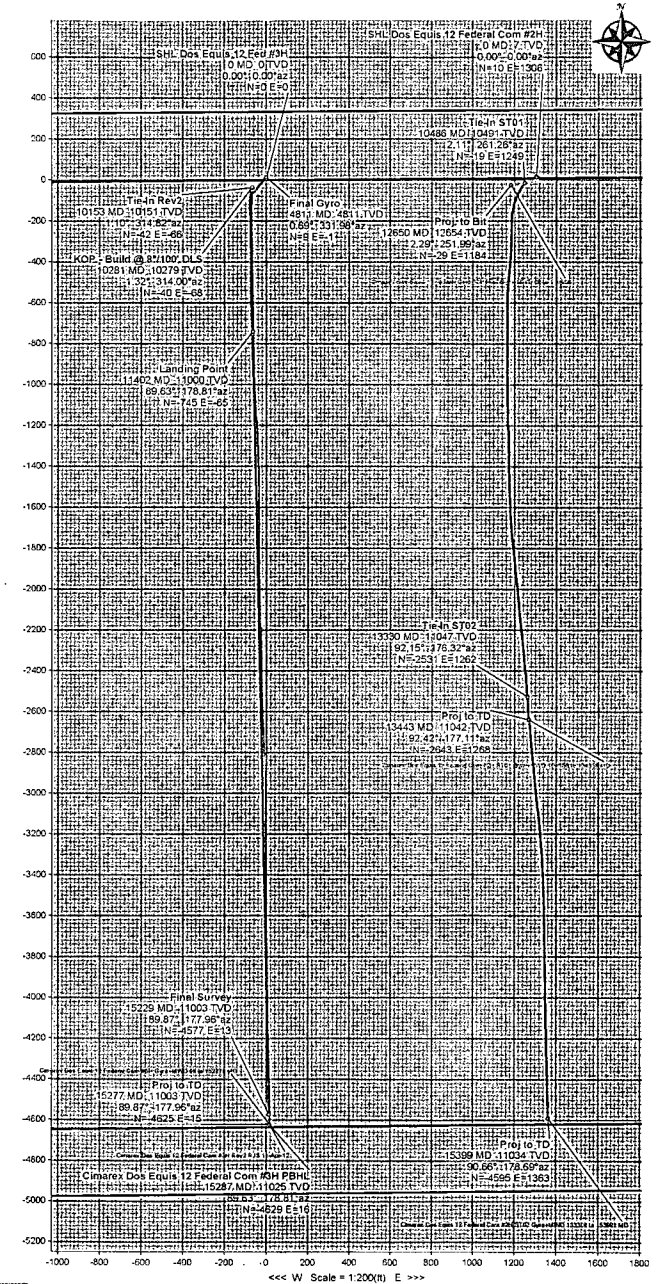
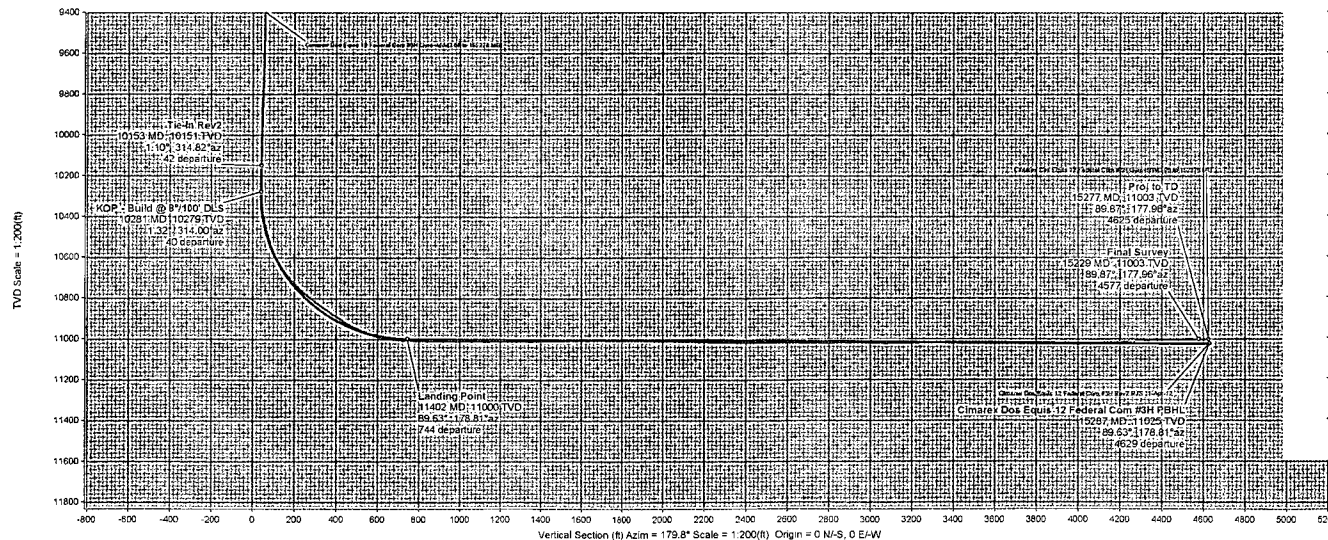
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
-------------	-----------------	---------------	------------------	-------------------	-------------------------	------------------	-------------------

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
		0.000	20.000		Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only		Original Borehole / Cimarex Dos Equis 12 Federal Com #3H Gyro+MWD 0ft to 15227ft MD	
		20.000	4811.000		Act Stns	30.000	30.000	SLB_NSG+MSHOT		Original Borehole / Cimarex Dos Equis 12 Federal Com #3H	
		4811.000	15229.000		Act Stns	30.000	30.000	SLB_MWD-STD		Original Borehole / Cimarex Dos Equis 12 Federal Com #3H	
		15229.000	15277.000		Act Stns	30.000	30.000	SLB_BLIND+TREND		Original Borehole / Cimarex Dos Equis 12 Federal Com #3H	



1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100
 101
 102
 103
 104
 105
 106
 107
 108
 109
 110
 111
 112
 113
 114
 115
 116
 117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500
 501
 502
 503
 504
 505
 506
 507
 508
 509
 510
 511
 512
 513
 514
 515
 516
 517
 518
 519
 520
 521
 522
 523
 524
 525



Drawn By: R. Schneider
Date Created: April 11, 2013 09:49:07 PM
Checked By:
Checked Date:
Approved By:
Approved Date: