

Cactus 104

Cimarex Energy

Rev2.1

PATHFINDER
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~~HOBSOON~~

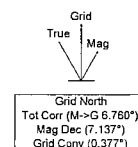
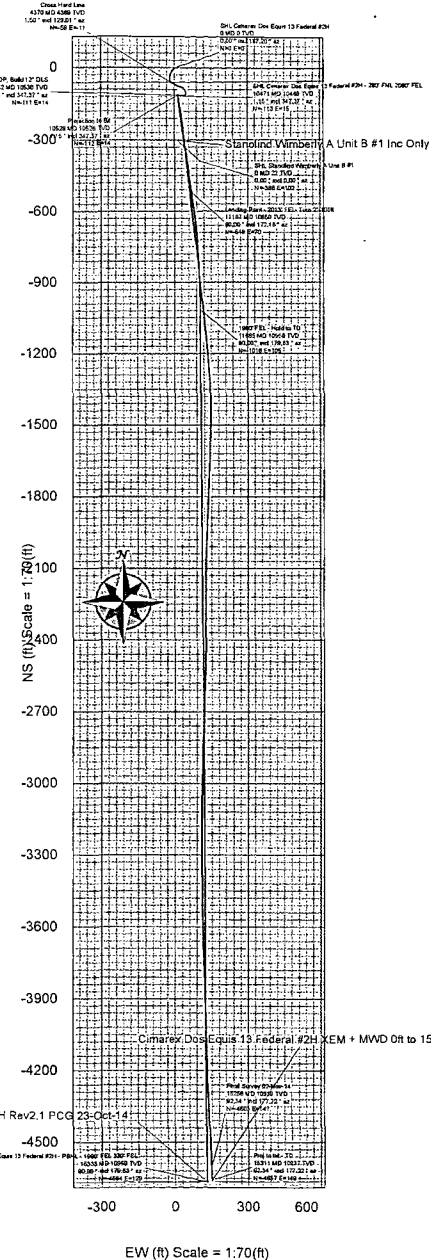
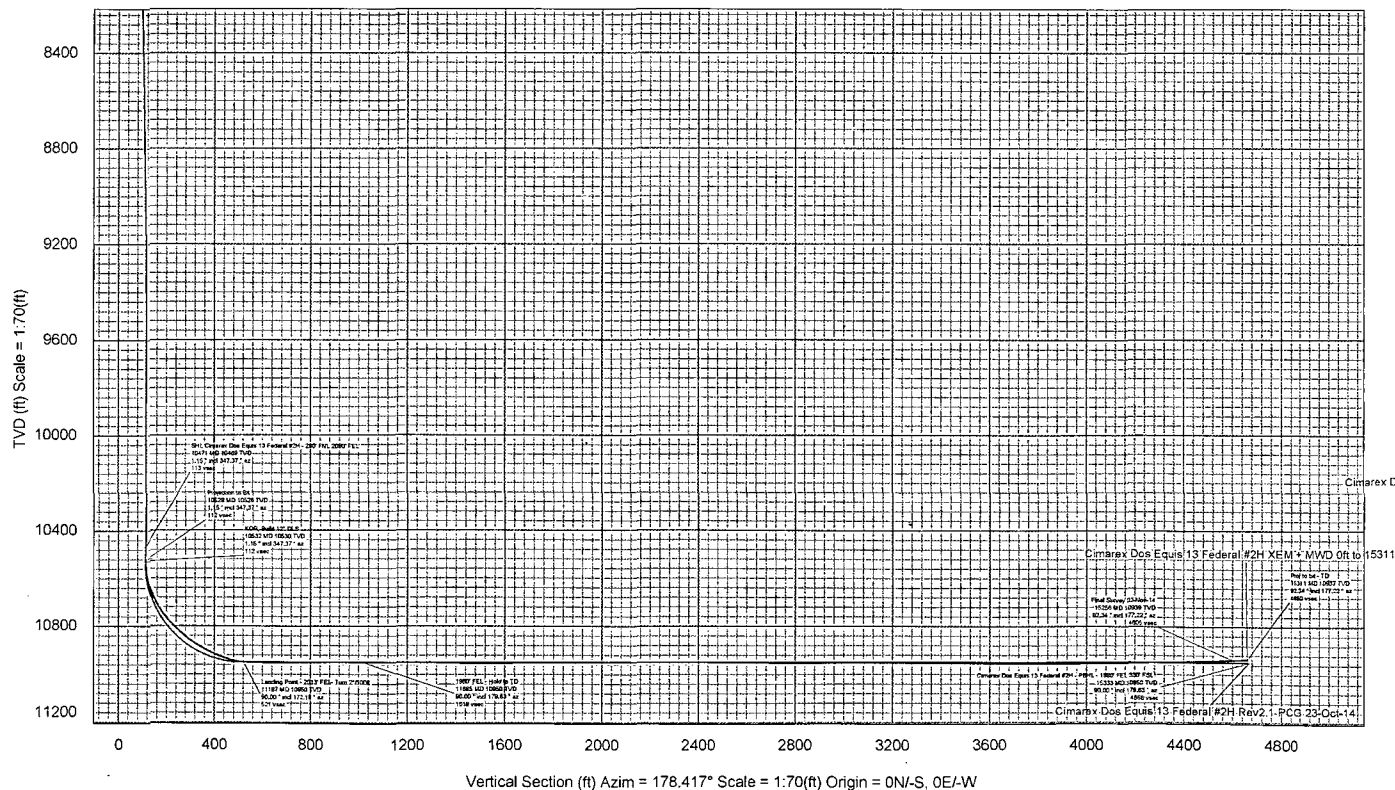
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Borehole:	Well:	Field:	Structure:
Original Borehole	Dos Equis 13 Federal #2H	NM Lea County	Cactus 104
Gravity & Magnetic Parameters Model: HDGM 2014 Dip: 60.034° Date: 10-Oct-2014 MagDec: 7.137° FS: 48381.68mT Gravity FS: 988.436mgm (8.06656 Based)		Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet Lat: N 32 13 27.13 Nothing: 446017.9MUS Grid Conv: 0.3769° Lon: W 103 37 35.41 Easting: 759914MUS Scale Fact: 0.86966381	Miscellaneous Slot: Dos Equis 13 Federal #2H TYD Ref: RKB(3617H above MSL) Plan: Rev2.1 PCG 23-Oct-14

Comments	Critical Points													
	Survey MD(ft)	Inclination(deg)	Azimuth(deg)	TVD(ft)	Sub-Sea TVD	VS(ft)	NS(ft)	EW(ft)	Latitude(deg)	Longitude(deg)	Easting(US)	Northing(US)	DL SP(100ft)	Tool Face(deg)
SHL Cimarex Dos Equis 13 Federal #2H - 280' FNL 2080' FEL	0.00	0.00	-167.20	-0.00	-3617.00	-0.00	0.00	0.00	N 32 13 27.132	W 103 37 35.411	759914.00	446017.90		-214.73
Tie In - Rav2.1	10471.00	1.15	347.37	10459.02	6852.02	113.42	-113.06	14.60	N 32 13 26.012	W 103 37 35.250	759928.59	445904.65	3.69	347.37
Projection to Bit	10528.00	1.15	347.37	10526.01	6909.01	112.29	-111.94	14.34	N 32 13 26.023	W 103 37 35.253	759928.34	445906.96	0.00	347.37
KOP, Build 12' DLS	10531.99	1.15	347.37	10530.00	6913.00	112.22	-111.86	14.33	N 32 13 26.024	W 103 37 35.253	759928.33	445906.04	0.00	-0.26
2nd BSS	10695.66	21.63	-172.40	10690.00	7073.00	140.98	-140.53	18.00	N 32 13 25.740	W 103 37 35.212	759932.00	445877.37	-13.91	172.16
Landing Point - 2013 FEL - Turn 2"/100ft	11187.03	90.00	-172.16	10950.00	7333.00	521.52	-519.79	69.79	N 32 13 21.984	W 103 37 34.639	759983.78	445498.13	-13.91	90.00
1980' FEL - Hold to TD	11685.03	90.00	-179.63	10950.00	7333.00	1018.69	-1016.16	105.41	N 32 13 17.070	W 103 37 34.262	760019.41	445001.77	-1.50	90.00
Cimarex Dos Equis 13 Federal #2H - PBHL - 1980' FEL 330' FSL	15333.42	90.00	-179.63	10950.00	7333.00	4666.26	-4664.48	128.90	N 32 12 40.969	W 103 37 34.268	760042.90	441363.60	0.00	

[illegible]



Cimarex Dos Equis 13 Federal #2H XEM + MWD 0ft to 15311 Survey Report

(Non-Def Survey)

Report Date: November 04, 2014 - 09:45 AM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 13 Federal #2H / Dos Equis 13 Federal #2H
Well: Dos Equis 13 Federal #2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 13 Federal #2H XEM + MWD 0ft to 15311
Survey Date: October 01, 2014
Tort / AHD / DDI / ERD Ratio: 143.548 ° / 4739.426 ft / 5.978 / 0.433
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 27.13163", W 103° 37' 35.41112"
Location Grid N/E Y/X: N 446017.900 ftUS, E 759914.000 ftUS
CRS Grid Convergence Angle: 0.3769 °
Grid Scale Factor: 0.99996381
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 178.417 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3617.000 ft above MSL
Seabed / Ground Elevation: 3597.000 ft above MSL
Magnetic Declination: 7.137 °
Total Gravity Field Strength: 998.4364mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48381.681 nT
Magnetic Dip Angle: 60.034 °
Declination Date: October 10, 2014
Magnetic Declination Model: HDGM 2014
North Reference: Grid North
Grid Convergence Used: 0.3769 °
Total Corr Mag North->Grid North: 6.7602 °
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 Cimarex Dos Equis 13 Federal #2H	0.00	0.00	167.20	0.00	0.00	0.00	0.00	0.00	0.00	N/A	214.73M
	1300.00	0.62	214.73	1299.97	5.67	-5.78	-4.01	7.03	214.73	0.05	221.78M
	1395.00	0.62	221.78	1394.97	6.46	-6.59	-4.64	8.06	215.18	0.08	211.86M
	1491.00	0.71	211.86	1490.96	7.33	-7.48	-5.30	9.17	215.34	0.15	213.67M
	1586.00	0.49	213.67	1585.96	8.15	-8.32	-5.84	10.16	215.07	0.23	216.36M
	1774.00	0.62	216.36	1773.95	9.61	-9.80	-6.89	11.98	215.08	0.07	201.51M
	2057.00	0.88	201.51	2056.92	12.82	-13.06	-8.59	15.63	213.34	0.11	204.11M
	2151.00	1.02	204.11	2150.91	14.24	-14.50	-9.20	17.17	212.40	0.16	200.54M
	2246.00	0.88	200.54	2245.90	15.67	-15.95	-9.80	18.72	211.57	0.16	204.63M
	2436.00	1.10	204.63	2435.87	18.66	-18.97	-11.07	21.97	210.26	0.12	201.9M
	2531.00	1.19	201.90	2530.85	20.38	-20.72	-11.82	23.85	209.70	0.11	201.02M
	2626.00	1.33	201.02	2625.83	22.31	-22.66	-12.58	25.92	209.04	0.15	196.53M
	2721.00	1.19	196.53	2720.80	24.26	-24.64	-13.26	27.98	208.29	0.18	198.51M
	2816.00	1.41	198.51	2815.78	26.30	-26.69	-13.91	30.10	207.53	0.24	197.63M
	2911.00	1.41	197.63	2910.75	28.50	-28.91	-14.64	32.41	206.85	0.02	196M
	3007.00	1.41	196.00	3006.72	30.74	-31.17	-15.32	34.74	206.17	0.04	198.2M
	3102.00	1.50	198.20	3101.69	33.02	-33.48	-16.03	37.12	205.58	0.11	191.68M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	3198.00	1.59	191.68	3197.66	35.50	-35.98	-16.69	39.66	204.89	0.21	191.5M
	3291.00	1.50	191.50	3290.62	37.94	-38.43	-17.20	42.11	204.10	0.10	192.21M
	3386.00	1.81	192.21	3385.58	40.61	-41.12	-17.76	44.79	203.36	0.33	175.64M
	3480.00	1.10	175.64	3479.55	42.96	-43.47	-18.01	47.05	202.50	0.87	175.64M
	3576.00	0.62	175.64	3575.54	44.39	-44.91	-17.90	48.34	201.73	0.50	154M
	3670.00	0.80	154.00	3669.53	45.50	-46.00	-17.57	49.24	200.90	0.34	167.31M
	3764.00	0.80	167.31	3763.53	46.74	-47.23	-17.14	50.25	199.94	0.20	168.81M
	3859.00	1.33	168.81	3858.51	48.48	-48.96	-16.78	51.76	198.92	0.56	173.04M
	3954.00	1.02	173.04	3953.49	50.41	-50.88	-16.46	53.48	197.93	0.34	166.21M
	4049.00	1.10	166.21	4048.47	52.14	-52.61	-16.14	55.03	197.06	0.16	149.86M
	4144.00	1.41	149.86	4143.45	54.06	-54.50	-15.34	56.62	195.72	0.50	138.84M
	4240.00	1.81	138.84	4239.41	56.27	-56.67	-13.75	58.31	193.64	0.53	130.34M
	4335.00	1.50	130.34	4334.37	58.25	-58.60	-11.81	59.78	191.40	0.42	129.01M
Cross Hard Line	4370.00	1.50	129.01	4369.36	58.86	-59.19	-11.11	60.22	190.63	0.10	126.72M
	4430.00	1.50	126.72	4429.34	59.85	-60.15	-9.87	60.95	189.32	0.10	129.1M
	4525.00	2.03	129.10	4524.29	61.72	-61.95	-7.57	62.41	186.96	0.56	115.4M
	4620.00	1.50	115.40	4619.25	63.38	-63.55	-5.14	63.76	184.62	0.71	116.37M
	4715.00	1.81	116.37	4714.21	64.65	-64.75	-2.67	64.80	182.36	0.33	124.12M
	4811.00	1.72	124.12	4810.16	66.20	-66.23	-0.12	66.23	180.10	0.27	123.25M
	4902.00	1.72	123.25	4901.12	67.78	-67.74	2.15	67.78	178.18	0.03	121.53M
	5001.00	1.72	121.53	5000.08	69.44	-69.34	4.66	69.49	176.15	0.05	118.75M
	5096.00	1.81	118.75	5095.03	70.98	-70.80	7.19	71.17	174.20	0.13	119.24M
	5192.00	1.72	119.24	5190.99	72.48	-72.24	9.78	72.90	172.29	0.10	114.13M
	5287.00	1.02	114.13	5285.96	73.58	-73.28	11.80	74.22	170.85	0.75	109.9M
	5382.00	1.02	109.90	5380.95	74.25	-73.91	13.36	75.11	169.75	0.08	114.43M
	5478.00	1.02	114.43	5476.93	74.94	-74.56	14.94	76.04	168.67	0.08	119.15M
	5572.00	0.80	119.15	5570.92	75.64	-75.22	16.28	76.96	167.79	0.25	117.52M
	5667.00	0.88	117.52	5665.91	76.34	-75.88	17.51	77.88	167.01	0.09	110.6M
	5761.00	0.80	110.60	5759.90	76.94	-76.45	18.76	78.71	166.21	0.14	112.63M
	5856.00	0.88	112.63	5854.89	77.49	-76.96	20.05	79.53	165.39	0.09	104.7M
	6006.00	0.88	104.70	6004.87	78.28	-77.70	22.23	80.81	164.03	0.08	107.79M
	6101.00	0.88	107.79	6099.86	78.73	-78.10	23.63	81.60	163.17	0.05	107.48M
	6291.00	0.88	107.48	6289.84	79.69	-78.99	26.41	83.29	161.51	0.00	105.1M
	6384.00	0.80	105.10	6382.83	80.11	-79.37	27.72	84.07	160.75	0.09	109.32M
	6426.00	0.80	109.32	6424.82	80.30	-79.55	28.28	84.42	160.43	0.14	110.82M
	6616.00	0.80	110.82	6614.80	81.27	-80.46	30.77	86.14	159.07	0.01	109.72M
	6711.00	0.80	109.72	6709.79	81.77	-80.91	32.02	87.02	158.41	0.02	113.82M
	6806.00	0.88	113.82	6804.78	82.32	-81.43	33.31	87.98	157.75	0.11	115.93M
	6901.00	0.80	115.93	6899.77	82.94	-82.02	34.57	89.01	157.14	0.09	120.82M
	6996.00	0.88	120.82	6994.76	83.64	-82.68	35.79	90.10	156.59	0.11	131.18M
	7093.00	1.02	131.18	7091.75	84.62	-83.63	37.08	91.49	156.09	0.23	151.63M
	7188.00	0.80	151.63	7186.74	85.79	-84.77	38.04	92.91	155.84	0.41	145.81M
	7284.00	0.88	145.81	7282.73	87.01	-85.97	38.77	94.31	155.73	0.12	147.44M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	7376.00	0.80	147.44	7374.72	88.16	-87.10	39.51	95.64	155.60	0.09	148.32M
	7471.00	0.71	148.32	7469.71	89.23	-88.16	40.18	96.88	155.50	0.10	128.58M
	7567.00	0.71	128.58	7565.70	90.13	-89.03	40.95	98.00	155.30	0.25	137M
	7661.00	0.62	137.00	7659.70	90.89	-89.77	41.76	99.01	155.05	0.14	124.26M
	7757.00	0.71	124.26	7755.69	91.63	-90.48	42.60	100.01	154.79	0.18	145.1M
	7852.00	0.80	145.10	7850.68	92.53	-91.36	43.47	101.17	154.56	0.30	148.01M
	7948.00	0.88	148.01	7946.67	93.72	-92.53	44.24	102.57	154.45	0.09	157.27M
	8040.00	1.10	157.27	8038.66	95.15	-93.95	44.96	104.15	154.43	0.29	166.57M
	8135.00	1.10	166.57	8133.64	96.90	-95.68	45.52	105.95	154.56	0.19	159.74M
	8229.00	1.19	159.74	8227.62	98.70	-97.47	46.07	107.81	154.70	0.17	165.68M
	8324.00	1.19	165.68	8322.60	100.60	-99.35	46.66	109.76	154.85	0.13	170.58M
	8419.00	1.50	170.58	8417.58	102.80	-101.53	47.10	111.93	155.11	0.35	178.11M
	8515.00	0.62	178.11	8513.56	104.56	-103.29	47.33	113.62	155.38	0.93	187.63M
	8609.00	0.80	187.63	8607.55	105.72	-104.45	47.26	114.64	155.66	0.23	189.44M
	8704.00	0.71	189.44	8702.54	106.95	-105.69	47.07	115.70	155.99	0.10	193.14M
	8800.00	0.88	193.14	8798.53	108.25	-106.99	46.81	116.78	156.37	0.18	187.41M
	8895.00	1.02	187.41	8893.52	109.79	-108.54	46.53	118.10	156.80	0.18	200.15M
	8991.00	1.02	200.15	8989.51	111.42	-110.19	46.13	119.46	157.29	0.24	209.88M
	9086.00	1.02	209.88	9084.49	112.93	-111.72	45.41	120.60	157.88	0.18	221.91M
	9181.00	1.02	221.91	9179.48	114.27	-113.08	44.43	121.50	158.55	0.23	261.75M
	9276.00	1.02	261.75	9274.46	114.98	-113.83	43.03	121.69	159.29	0.73	251.92M
	9370.00	1.19	251.92	9368.44	115.35	-114.25	41.27	121.48	160.14	0.27	250.6M
	9465.00	1.02	250.60	9463.43	115.89	-114.84	39.53	121.46	161.00	0.18	259.64M
	9561.00	1.33	259.64	9559.41	116.32	-115.33	37.63	121.31	161.93	0.38	272.86M
	9656.00	2.03	272.86	9654.37	116.36	-115.44	34.87	120.59	163.19	0.84	273.96M
	9750.00	1.59	273.96	9748.32	116.10	-115.27	31.90	119.60	164.53	0.47	286.12M
	9846.00	1.59	286.12	9844.28	115.57	-114.81	29.30	118.48	165.68	0.35	271.27M
	9942.00	2.21	271.27	9940.23	115.07	-114.39	26.17	117.35	167.12	0.82	259.94M
	10037.00	2.52	259.94	10035.15	115.29	-114.72	22.28	116.86	169.01	0.59	254.92M
	10132.00	2.12	254.92	10130.07	116.01	-115.54	18.52	117.02	170.89	0.47	304.36M
	10226.00	0.62	304.36	10224.04	116.12	-115.71	16.43	116.87	171.92	1.89	320.98M
	10321.00	0.80	320.98	10319.04	115.29	-114.90	15.58	115.95	172.28	0.29	347.37M
	10471.00	1.15	347.37	10469.01	112.98	-112.62	14.60	113.56	172.62	0.37	162.65M
	10528.00	0.89	162.65	10526.01	112.84	-112.48	14.60	113.43	172.60	3.58	161.69M
	10540.00	2.04	161.69	10538.01	113.14	-112.77	14.70	113.73	172.57	9.59	163.55M
	10571.00	6.65	163.55	10568.91	115.40	-115.02	15.38	116.04	172.38	14.88	164.14M
	10603.00	11.98	164.14	10600.48	120.41	-120.00	16.81	121.17	172.02	16.66	14.42R
	10635.00	16.87	168.43	10631.46	128.21	-127.74	18.65	129.10	171.69	15.63	19.95R
	10667.00	21.60	173.03	10661.67	138.65	-138.15	20.30	139.63	171.64	15.51	6.63L
	10698.00	26.12	171.84	10690.01	151.12	-150.57	21.96	152.16	171.70	14.66	7.04L
	10730.00	31.16	170.64	10718.09	166.33	-165.72	24.31	167.50	171.65	15.85	2.48R
	10761.00	36.52	171.03	10743.82	183.44	-182.76	27.05	184.75	171.58	17.30	10.87R
	10793.00	41.01	172.34	10768.77	203.33	-202.58	29.94	204.78	171.59	14.26	13.65R

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	10824.00	43.90	173.35	10791.64	224.15	-223.34	32.54	225.70	171.71	9.58	12.06R
	10857.00	47.02	174.26	10814.78	247.60	-246.72	35.07	249.20	171.91	9.66	8.72R
	10889.00	50.55	174.96	10835.86	271.61	-270.68	37.33	273.25	172.15	11.15	8.2R
	10920.00	53.80	175.54	10854.87	296.06	-295.08	39.36	297.70	172.40	10.59	8.97R
	10952.00	57.10	176.16	10873.02	322.38	-321.37	41.26	324.00	172.68	10.44	6.99L
	10983.00	60.73	175.65	10889.02	348.90	-347.84	43.16	350.51	172.93	11.79	19.32L
	11015.00	64.02	174.37	10903.86	377.20	-376.08	45.63	378.84	173.08	10.87	19.69L
	11047.00	66.51	173.40	10917.25	406.17	-404.98	48.73	407.90	173.14	8.25	10.12L
	11079.00	69.61	172.81	10929.20	435.72	-434.44	52.29	437.58	173.14	9.84	5.48L
	11110.00	74.54	172.32	10938.74	465.05	-463.68	56.11	467.06	173.10	15.97	0.77R
	11142.00	80.39	172.40	10945.68	496.10	-494.63	60.26	498.28	173.05	18.28	10.33R
	11173.00	86.04	173.43	10949.34	526.73	-525.16	64.05	529.05	173.05	18.52	19.35R
	11205.00	88.66	174.35	10950.82	558.59	-556.94	67.45	561.01	173.09	8.68	18.43R
	11237.00	89.35	174.58	10951.38	590.51	-588.79	70.54	593.00	173.17	2.27	90L
	11256.00	89.35	173.95	10951.59	609.46	-607.69	72.44	611.99	173.20	3.32	36.97L
	11350.00	90.28	173.25	10951.90	703.13	-701.10	82.92	705.99	173.26	1.24	54.46R
	11445.00	90.58	173.67	10951.18	797.77	-795.48	93.74	800.99	173.28	0.54	58.57R
	11540.00	90.69	173.85	10950.13	892.45	-889.91	104.06	895.98	173.33	0.22	173.25L
	11635.00	89.93	173.76	10949.62	987.14	-984.36	114.31	990.97	173.38	0.81	90R
	11730.00	89.93	174.35	10949.73	1081.86	-1078.85	124.15	1085.97	173.44	0.62	111.04R
	11825.00	89.83	174.61	10949.93	1176.64	-1173.40	133.29	1180.95	173.52	0.29	105.65R
	11919.00	89.48	175.86	10950.50	1270.49	-1267.08	141.10	1274.91	173.65	1.38	102.96R
	12014.00	88.80	178.82	10951.92	1365.45	-1361.95	145.51	1369.70	173.90	3.20	64.43R
	12108.00	89.59	180.47	10953.24	1459.42	-1455.94	146.09	1463.25	174.27	1.95	45R
	12203.00	90.31	181.19	10953.33	1554.33	-1550.93	144.71	1557.66	174.67	1.07	103.57R
	12298.00	90.17	181.77	10952.93	1649.19	-1645.89	142.26	1652.03	175.06	0.63	82.75R
	12393.00	90.24	182.32	10952.59	1744.00	-1740.83	138.87	1746.36	175.44	0.58	90L
	12488.00	90.24	182.30	10952.19	1838.78	-1835.75	135.04	1840.71	175.79	0.02	2.62R
	12582.00	91.55	182.36	10950.72	1932.55	-1929.66	131.22	1934.12	176.11	1.40	146.18L
	12677.00	90.52	181.67	10949.01	2027.35	-2024.59	127.88	2028.62	176.39	1.30	115.44L
	12772.00	89.83	180.22	10948.72	2122.25	-2119.57	126.31	2123.33	176.59	1.69	144.78L
	12866.00	89.66	180.10	10949.14	2216.21	-2213.57	126.05	2217.15	176.74	0.22	80.54R
	12961.00	89.69	180.28	10949.67	2311.16	-2308.57	125.74	2311.99	176.88	0.19	85.37R
	13056.00	89.72	180.65	10950.16	2406.10	-2403.56	124.96	2406.81	177.02	0.39	76.2R
	13152.00	89.86	181.22	10950.52	2502.00	-2499.55	123.40	2502.59	177.17	0.61	109.03R
	13248.00	89.76	181.51	10950.83	2597.87	-2595.52	121.11	2598.34	177.33	0.32	108.44R
	13343.00	89.62	181.93	10951.35	2692.72	-2690.47	118.26	2693.07	177.48	0.47	53.13L
	13438.00	89.83	181.65	10951.80	2787.55	-2785.43	115.29	2787.81	177.63	0.37	75.26L
	13534.00	89.93	181.27	10952.01	2883.41	-2881.40	112.85	2883.60	177.76	0.41	121.26L
	13629.00	89.76	180.99	10952.26	2978.31	-2976.38	110.97	2978.44	177.86	0.34	71.57L
	13724.00	89.83	180.78	10952.60	3073.22	-3071.36	109.51	3073.32	177.96	0.23	83.56L
	13818.00	89.90	180.16	10952.82	3167.16	-3165.36	108.73	3167.23	178.03	0.66	85.1L
	13914.00	89.93	179.81	10952.97	3263.12	-3261.36	108.76	3263.17	178.09	0.37	104.04L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	14009.00	89.86	179.53	10953.14	3358.10	-3356.36	109.31	3358.14	178.13	0.30	45R
	14105.00	89.97	179.64	10953.28	3454.08	-3452.36	110.00	3454.11	178.18	0.16	102.16L
	14200.00	89.72	178.48	10953.54	3549.07	-3547.34	111.56	3549.10	178.20	1.25	27.65R
	14295.00	89.93	178.59	10953.83	3644.07	-3642.31	113.99	3644.09	178.21	0.25	93.9L
	14391.00	89.90	178.15	10953.97	3740.07	-3738.27	116.72	3740.09	178.21	0.46	99.87L
	14486.00	89.86	177.92	10954.17	3835.07	-3833.21	119.98	3835.09	178.21	0.25	31.76R
	14582.00	90.07	178.05	10954.23	3931.06	-3929.16	123.35	3931.09	178.20	0.26	62.02R
	14668.00	90.24	178.37	10954.00	4017.06	-4015.11	126.04	4017.09	178.20	0.42	19.5R
	14763.00	90.72	178.54	10953.20	4112.06	-4110.07	128.60	4112.09	178.21	0.54	26.56L
	14858.00	91.20	178.30	10951.61	4207.04	-4205.02	131.22	4207.07	178.21	0.56	65.21L
	14953.00	91.44	177.78	10949.42	4302.02	-4299.94	134.47	4302.05	178.21	0.60	8.13L
	15048.00	91.65	177.75	10946.86	4396.98	-4394.84	138.17	4397.01	178.20	0.22	26.55R
	15143.00	92.03	177.94	10943.81	4491.92	-4489.72	141.74	4491.96	178.19	0.45	66.01L
	15238.00	92.35	177.22	10940.18	4586.84	-4584.57	145.75	4586.88	178.18	0.83	LS
Final Survey 02- Nov-14	15256.00	92.34	177.22	10939.44	4604.82	-4602.53	146.62	4604.86	178.18	0.06	HS
Proj to bit - TD	15311.00	92.34	177.22	10937.20	4659.77	-4657.42	149.29	4659.81	178.16	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	20.000	Act Stns	30.000	30.000	SLB_MWD-STD-Depth Only	Original Borehole / Cimarex Dos Equis 13 Federal #2H XEM +
	1	20.000	1300.000	1/98.425	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Dos Equis 13 Federal #2H XEM +
	1	1300.000	15256.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Dos Equis 13 Federal #2H XEM +
	1	15256.000	15311.000	Act Stns	30.000	30.000	SLB_BLIND+TREND	Original Borehole / Cimarex Dos Equis 13 Federal #2H XEM +