

Results of Directional Survey

API number:	30-025-40700		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	DOS EQUIS 12 FEDERAL COM # 1H

surface	ULSTR:	A	12	T 24S	R 32E
				330 FNL	810 FEL

BH Loc	ULSTR:	P	12	T 24S	R 32E
15399	MD	11085.0	TVD	333 FSL	649 FEL
				4947 FNL	

Top Perf/OH	ULSTR:	A	12	T 24S	R 32E
10936	MD	10894.0	TVD	535 FNL	769 FEL

Bot Perf/OH	ULSTR:	P	12	T 24S	R 32E
15399	MD	11085.1	TVD	333 FSL	649 FEL
				4947 FNL	

	MD	N/S	E/W	VD
	10906	-186.22	39.59	10870.95
TOP PERFS/OH	10936	-205.39	41.49	10893.95
	10938	-206.67	41.62	10895.48
	15349	-4567.35	162.52	11085.00
BOT PERFS/OH	15399	-4617.33	161.24	11085.06
	15399	-4617.33	161.24	11085.06

NEXT TO LAST	15349	-4567.35	162.52	11085.00
LAST READING	15399	-4617.33	161.24	11085.06
TD	15399	-4617.33	161.24	11085.06

Surface Location	330	FN	810	FE
Projected BHL	4947	FN	649	FE
Location of				
Top Perfs/OH	535	FN	769	FE
Bottom Perfs/OH	4947	FN	649	FE

SUMMARY of Subsurface Locations

Surface Location	A-12-24S-32E	330	FN	810	FE	Vert. Depth
Top Perfs/OH	A-12-24S-32E	535	FN	769	FE	10893.95
Bottom Perfs/OH	P-12-24S-32E	4947	FN	649	FE	11085.06
Projected TD	P-12-24S-32E	4947	FN	649	FE	11085.06



Dos Equis 12 Federal Com #1H

NM Lea County

Cactus 101

[illegible]

SUR: A-12-24s-32e, 330/N & 810/E
BHL: P-12-24s-32e, 4947/N & 649/E
API # 30-025-40700



Grid North
Tot Corr (M→G 7.1802°)
Mag Dec (7.559°)
Grid Conv (0.379°)

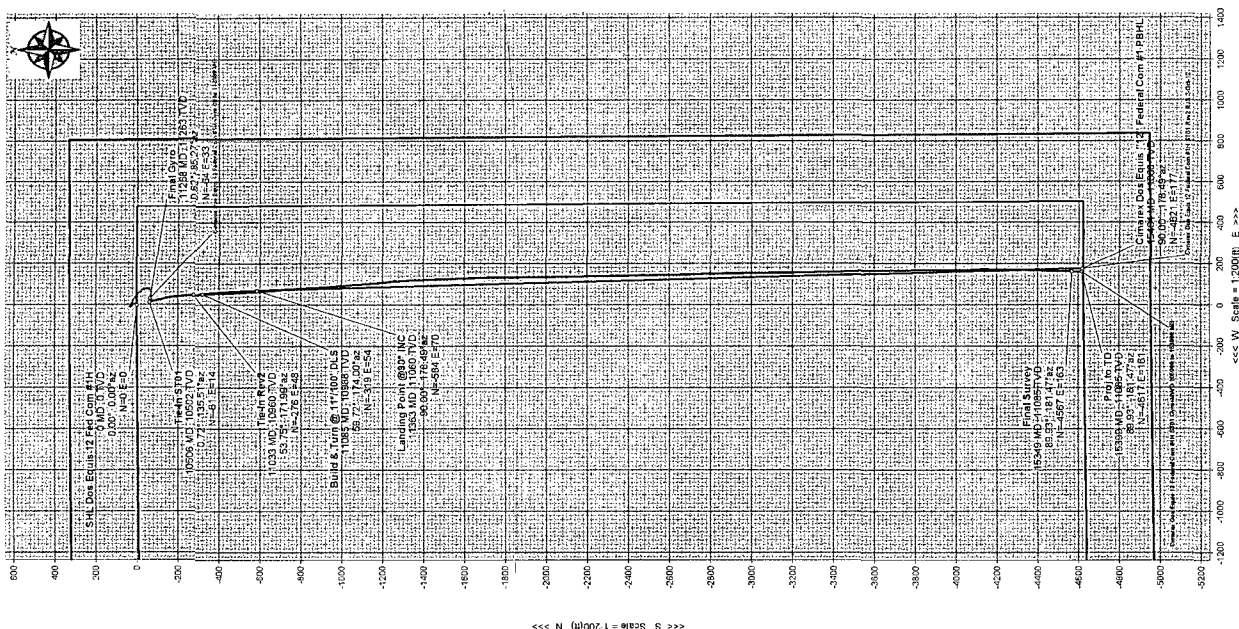
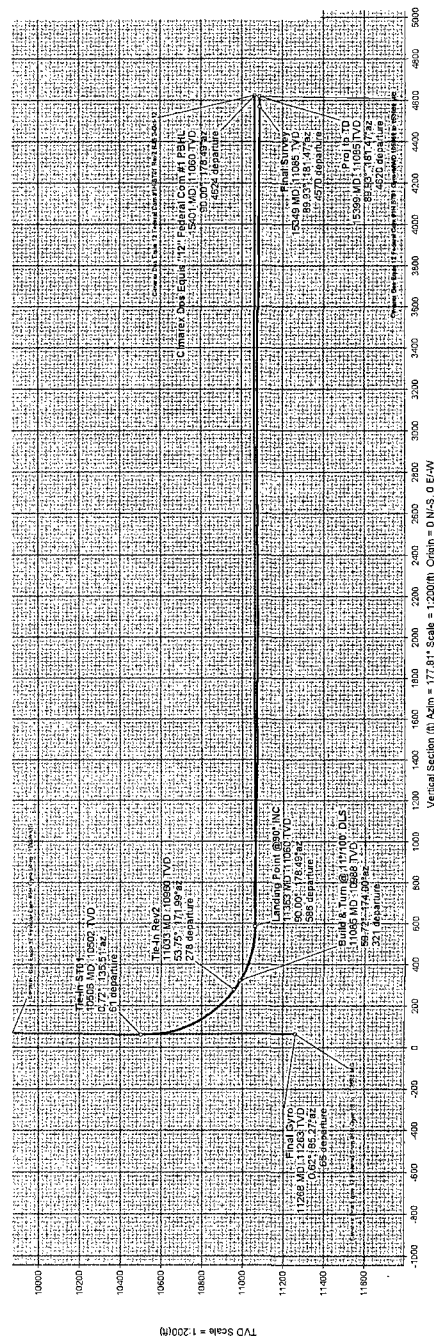
and

Source: Doc Type: "10" Federal Com #1 - 11

Source: Doc Type: "10" Federal Com #1 - 14 - 1307

Source: Doc Type: "10" Federal Com #1 - 14 - 2014-12

Source: Doc Type: "10" Federal Com #1 - 14 - 2014-12



Quemada, D. O. Quemada, D. O.

Drawn By: _____
Data Created: _____
Checked By: _____
Checked Date: _____
Approved By: _____
Approved Date: _____



Cimarex Dos Equis 12 Federal Com #1H ST01 Gyro+MWD 10506ft to 15399ft MD

(Def Survey)



Report Date: October 15, 2012 - 09:04 AM
 Client: Cimarex
 Field: NM Lea County (NAD 83)
 Structure / Slot: Cactus 101 / Cimarex Dos Equis 12 Federal Com #1H
 Well: Cimarex Dos Equis 12 Federal Com #1H
 Borehole: ST01
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Dos Equis 12 Federal Com #1H ST01 Gyro+MWD 10506ft to 15399ft MD
 Survey Date: September 28, 2012
 Tort / AHD / DDI / ERD Ratio: 173.832 ° / 4817.354 ft / 6.066 / 0.435
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 14' 18.90899", W 103° 37' 20.58316"
 Location Grid N/E Y/X: N 451258.600 ftUS, E 761153.100 ftUS
 CRS Grid Convergence Angle: 0.3793 °
 Grid Scale Factor: 0.99996443

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 177.810 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3623.000 ft above MSL
 Seabed / Ground Elevation: 3606.000 ft above MSL
 Magnetic Declination: 7.553 °
 Total Gravity Field Strength: 999.1461 mgn (9.8 based)
 Total Magnetic Field Strength: 48479.355 nT
 Magnetic Dip Angle: 60.121 °
 Declination Date: September 28, 2012
 Magnetic Declination Model: BGGM 2012
 North Reference: Grid North
 Grid Convergence Used: 0.3793 °
 Total Corr Mag North->Grid North: 7.1737 °
 Local Coord Referenced To: Well Head

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 Com #1H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	116.99M
	100.00	0.41	116.99	100.00	0.17	-0.16	0.32	0.36	116.99	0.41	107.3M
	200.00	0.43	107.30	200.00	0.47	-0.44	1.00	1.09	113.66	0.07	110.96M
	300.00	0.68	110.96	299.99	0.83	-0.76	1.91	2.05	111.72	0.25	106.68M
	400.00	0.56	106.68	399.99	1.22	-1.11	2.93	3.13	110.79	0.13	102.23M
	500.00	0.39	102.23	499.98	1.47	-1.33	3.73	3.96	109.55	0.17	115.75M
	602.30	0.42	115.75	602.28	1.73	-1.56	4.41	4.68	109.50	0.10	104.12M
	697.60	0.37	104.12	697.58	1.98	-1.79	5.02	5.33	109.60	0.10	93.06M
	792.80	0.36	93.06	792.78	2.09	-1.88	5.62	5.93	108.49	0.07	78.48M
	888.00	0.30	78.48	887.97	2.08	-1.85	6.16	6.43	106.67	0.11	20.67M
	983.30	0.12	20.67	983.27	1.95	-1.70	6.44	6.66	104.80	0.27	356.83M
	1078.50	0.13	356.83	1078.47	1.75	-1.50	6.47	6.64	103.06	0.06	338.64M
	1173.70	0.12	338.64	1173.67	1.55	-1.30	6.43	6.56	101.44	0.04	341.53M
	1269.00	0.23	341.53	1268.97	1.27	-1.03	6.33	6.41	99.21	0.12	334.72M
	1364.20	0.48	334.72	1364.17	0.72	-0.48	6.10	6.12	94.54	0.27	337.04M
	1459.40	0.50	337.04	1459.37	-0.04	0.26	5.77	5.77	87.43	0.03	336.7M
	1554.60	0.38	336.70	1554.56	-0.72	0.93	5.48	5.56	80.36	0.13	341.27M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	1649.90	0.25	341.27	1649.86	-1.21	1.42	5.29	5.48	74.99	0.14	349.12M
	1745.10	0.28	349.12	1745.06	-1.64	1.84	5.18	5.50	70.41	0.05	4.38M
	1840.30	0.36	4.38	1840.26	-2.17	2.37	5.16	5.68	65.32	0.12	15.66M
	1935.60	0.45	15.66	1935.56	-2.82	3.03	5.28	6.09	60.17	0.13	10.36M
	2030.80	0.47	10.36	2030.75	-3.56	3.77	5.45	6.63	55.32	0.05	9.33M
	2126.00	0.57	9.33	2125.95	-4.41	4.62	5.60	7.26	50.45	0.11	10.53M
	2221.30	0.68	10.53	2221.25	-5.42	5.65	5.78	8.08	45.66	0.12	16.3M
	2316.50	0.61	16.30	2316.44	-6.45	6.69	6.03	9.00	42.01	0.10	15.34M
	2411.70	0.72	15.34	2411.63	-7.51	7.75	6.33	10.01	39.21	0.12	7.05M
	2506.90	0.74	7.05	2506.83	-8.68	8.94	6.56	11.09	36.27	0.11	5.26M
	2602.20	0.73	5.26	2602.12	-9.89	10.16	6.69	12.16	33.38	0.03	355.11M
	2697.40	0.71	355.11	2697.31	-11.08	11.35	6.70	13.18	30.55	0.14	336.8M
	2792.60	0.62	336.80	2792.50	-12.15	12.41	6.44	13.98	27.44	0.24	330.36M
	2887.90	0.83	330.36	2887.80	-13.25	13.48	5.90	14.72	23.63	0.24	331.17M
	2983.10	0.94	331.17	2982.98	-14.56	14.77	5.18	15.65	19.34	0.12	333.02M
	3078.30	1.04	333.02	3078.17	-16.04	16.22	4.41	16.81	15.22	0.11	331.34M
	3173.60	1.15	331.34	3173.45	-17.68	17.83	3.56	18.18	11.30	0.12	324.84M
	3268.80	1.22	324.84	3268.63	-19.39	19.50	2.52	19.66	7.36	0.16	325.31M
	3364.00	1.46	325.31	3363.81	-21.26	21.32	1.25	21.36	3.34	0.25	325.17M
	3459.20	1.66	325.17	3458.97	-23.44	23.45	-0.23	23.45	359.43	0.21	322.22M
	3554.50	1.55	322.22	3554.23	-25.65	25.60	-1.81	25.67	355.96	0.14	316.6M
	3649.70	1.33	316.60	3649.40	-27.53	27.42	-3.36	27.63	353.02	0.27	291.75M
	3744.90	1.05	291.75	3744.58	-28.72	28.55	-4.93	28.97	350.21	0.61	296.26M
	3840.20	0.83	296.26	3839.87	-29.40	29.18	-6.36	29.86	347.71	0.24	309.07M
	3935.40	0.89	309.07	3935.06	-30.22	29.95	-7.55	30.89	345.85	0.21	312.91M
	4030.60	1.16	312.91	4030.24	-31.39	31.07	-8.83	32.30	344.14	0.29	329.27M
	4125.90	0.80	329.27	4125.53	-32.65	32.30	-9.88	33.78	343.00	0.47	84.95M
	4221.10	0.74	84.95	4220.73	-33.27	32.93	-9.60	34.30	343.74	1.37	99.54M
	4316.30	1.42	99.54	4315.91	-33.06	32.78	-7.83	33.71	346.57	0.76	99.21M
	4411.50	1.48	99.21	4411.08	-32.58	32.39	-5.45	32.85	350.45	0.06	106.4M
	4506.80	2.48	106.40	4506.32	-31.68	31.61	-2.26	31.69	355.92	1.08	116.72M
	4602.00	3.79	116.72	4601.38	-29.50	29.62	2.53	29.72	4.88	1.49	119.25M
	4697.20	4.25	119.25	4696.34	-26.14	26.48	8.42	27.78	17.64	0.52	117.61M
	4792.50	3.71	117.61	4791.41	-22.76	23.32	14.23	27.32	31.39	0.58	120.59M
	4887.70	3.12	120.59	4886.44	-19.83	20.58	19.19	28.14	43.00	0.65	123.34M
	4982.90	2.76	123.34	4981.52	-17.09	18.00	23.33	29.47	52.36	0.41	126.79M
	5078.10	2.78	126.79	5076.61	-14.31	15.36	27.10	31.15	60.46	0.18	127.61M
	5173.40	2.92	127.61	5171.79	-11.30	12.49	30.87	33.30	67.97	0.15	125.01M
	5268.60	3.61	125.01	5266.83	-7.94	9.29	35.25	36.45	75.23	0.74	119.22M
	5363.80	4.34	119.22	5361.80	-4.25	5.81	40.85	41.26	81.90	0.87	123.22M
	5459.10	2.27	123.22	5456.94	-1.28	3.02	45.57	45.67	86.21	2.18	135.69M
	5554.30	1.28	135.69	5552.09	0.61	1.23	47.89	47.91	88.53	1.11	136.6M
	5649.50	1.29	136.60	5647.27	2.20	-0.31	49.37	49.37	90.36	0.02	132.57M
	5744.80	1.21	132.57	5742.55	3.72	-1.77	50.85	50.88	92.00	0.12	133.6M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	5840.00	1.32	133.60	5837.72	5.21	-3.21	52.38	52.48	93.51	0.12	134.54M
	5935.20	1.21	134.54	5932.90	6.73	-4.67	53.90	54.10	94.95	0.12	136.67M
	6030.40	1.13	136.67	6028.08	8.17	-6.06	55.26	55.59	96.26	0.10	133.01M
	6125.70	1.03	133.01	6123.36	9.48	-7.33	56.53	57.00	97.39	0.13	131.56M
	6220.90	1.04	131.56	6218.55	10.69	-8.48	57.80	58.42	98.35	0.03	130.17M
	6316.10	1.00	130.17	6313.73	11.84	-9.59	59.08	59.85	99.22	0.05	130.48M
	6411.40	1.01	130.48	6409.02	12.97	-10.67	60.35	61.29	100.03	0.01	129.13M
	6506.60	1.01	129.13	6504.20	14.10	-11.75	61.64	62.75	100.79	0.02	127.6M
	6601.80	0.95	127.60	6599.39	15.15	-12.76	62.92	64.20	101.46	0.07	126.67M
	6697.10	0.85	126.67	6694.68	16.10	-13.66	64.11	65.55	102.03	0.11	129.57M
	6792.30	0.77	129.57	6789.87	16.97	-14.49	65.17	66.76	102.54	0.09	135.16M
	6887.50	0.84	135.16	6885.06	17.91	-15.40	66.16	67.93	103.10	0.11	142.79M
	6982.80	0.95	142.79	6980.35	19.07	-16.52	67.13	69.13	103.83	0.17	146.68M
	7078.00	0.99	146.68	7075.53	20.42	-17.84	68.06	70.36	104.69	0.08	154.87M
	7173.20	1.04	154.87	7170.72	21.92	-19.31	68.88	71.53	105.66	0.16	153.16M
	7268.40	1.07	153.16	7265.90	23.53	-20.88	69.64	72.71	106.69	0.05	149.28M
	7363.70	1.10	149.28	7361.19	25.14	-22.46	70.51	74.00	107.67	0.08	153.91M
	7458.90	1.19	153.91	7456.37	26.85	-24.13	71.41	75.38	108.67	0.14	153.94M
	7554.10	1.20	153.94	7551.55	28.66	-25.92	72.29	76.79	109.72	0.01	160.52M
	7649.40	1.17	160.52	7646.83	30.50	-27.73	73.05	78.14	110.79	0.15	161.65M
	7744.60	1.28	161.65	7742.00	32.45	-29.66	73.71	79.45	111.92	0.12	164.57M
	7839.80	1.39	164.57	7837.18	34.60	-31.78	74.35	80.86	113.14	0.14	164.62M
	7935.10	1.54	164.62	7932.45	36.97	-34.13	75.00	82.40	114.47	0.16	162.85M
	8030.30	1.58	162.85	8027.61	39.48	-36.62	75.72	84.11	115.81	0.07	166.68M
	8125.50	1.52	166.68	8122.78	41.99	-39.10	76.40	85.83	117.10	0.13	168.62M
	8220.70	1.56	168.62	8217.94	44.51	-41.60	76.95	87.47	118.40	0.07	171.18M
	8316.00	1.55	171.18	8313.21	47.07	-44.14	77.40	89.10	119.70	0.07	175.27M
	8411.20	1.60	175.27	8408.37	49.68	-46.74	77.71	90.68	121.03	0.13	180.14M
	8506.40	1.56	180.14	8503.54	52.30	-49.36	77.82	92.15	122.39	0.15	182.42M
	8601.70	1.56	182.42	8598.80	54.89	-51.95	77.76	93.52	123.75	0.07	187.27M
	8696.90	1.53	187.27	8693.97	57.43	-54.51	77.54	94.78	125.11	0.14	192.73M
	8792.10	1.48	192.73	8789.13	59.87	-56.97	77.11	95.87	126.46	0.16	196.84M
	8887.40	1.40	196.84	8884.40	62.16	-59.28	76.50	96.78	127.77	0.14	210.07M
	8982.60	1.44	210.07	8979.57	64.27	-61.43	75.57	97.39	129.11	0.35	230.05M
	9077.80	1.59	230.05	9074.74	66.09	-63.32	73.95	97.35	130.57	0.57	242.36M
	9173.00	1.60	242.36	9169.90	67.47	-64.78	71.76	96.68	132.07	0.36	251.26M
	9268.30	2.02	251.26	9265.16	68.52	-65.94	68.99	95.44	133.70	0.53	256.39M
	9363.50	2.47	256.39	9360.28	69.41	-66.96	65.41	93.61	135.67	0.52	258.48M
	9458.70	2.87	258.48	9455.38	70.20	-67.92	61.08	91.34	138.03	0.43	279.75M
	9554.00	3.02	279.75	9550.56	70.07	-67.97	56.27	88.24	140.38	1.15	274.82M
	9649.20	3.25	274.82	9645.62	69.22	-67.32	51.11	84.52	142.79	0.37	264.3M
	9744.40	2.82	264.30	9740.68	69.03	-67.32	46.09	81.59	145.60	0.74	271.89M
	9839.60	2.69	271.89	9835.77	69.02	-67.48	41.53	79.24	148.39	0.41	275.89M
	9934.90	4.00	275.89	9930.91	68.39	-67.07	35.99	76.11	151.78	1.40	276.49M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	10030.10	5.35	276.49	10025.79	67.26	-66.22	28.27	72.01	156.88	1.42	279.57M
	10125.30	3.99	279.57	10120.67	65.91	-65.17	20.60	68.35	162.46	1.45	319.87M
	10220.60	1.33	319.87	10215.87	64.36	-63.77	16.61	65.90	165.40	3.25	328.5M
	10315.80	1.55	328.50	10311.04	62.37	-61.83	15.23	63.68	166.16	0.32	302.8M
	10411.00	0.54	302.80	10406.22	60.99	-60.49	14.18	62.13	166.81	1.14	135.51M
Tie-In ST01	10506.30	0.72	135.51	10501.52	61.17	-60.68	14.22	62.32	166.81	1.31	165.04M
	10622.00	8.49	165.04	10616.76	70.06	-69.46	16.94	71.49	166.29	6.80	5.77R
	10655.00	12.73	166.98	10649.19	76.01	-75.36	18.39	77.57	166.29	12.89	1.43R
	10686.00	16.95	167.34	10679.15	83.81	-83.10	20.15	85.51	166.37	13.62	2.15L
	10718.00	20.84	166.93	10709.42	93.99	-93.20	22.46	95.87	166.45	12.16	3.07R
	10750.00	24.39	167.39	10738.95	106.08	-105.19	25.19	108.17	166.53	11.11	0.08R
	10782.00	27.58	167.40	10767.71	119.87	-118.87	28.25	122.18	166.63	9.97	11.58R
	10814.00	30.87	168.71	10795.64	135.26	-134.16	31.47	137.80	166.80	10.47	12.97R
Survey 1-Oct-12	10845.00	33.80	169.92	10821.83	151.66	-150.45	34.54	154.36	167.07	9.68	25.9R
	10877.00	36.53	172.13	10847.99	169.96	-168.65	37.40	172.75	167.50	9.41	23.62R
Survey 2-Oct-12	10906.00	38.73	173.66	10870.95	187.60	-186.22	39.59	190.38	168.00	8.24	19.39R
	10938.00	41.19	174.97	10895.48	208.11	-206.67	41.62	210.82	168.61	8.12	0.52R
	10970.00	45.06	175.02	10918.83	229.95	-228.46	43.52	232.57	169.21	12.09	1.05R
	11002.00	49.66	175.13	10940.50	253.46	-251.90	45.54	255.99	169.75	14.38	23.61L
	11033.00	54.02	172.79	10959.65	277.77	-276.13	48.12	280.30	170.11	15.26	24.62R
	11066.00	58.10	174.98	10978.07	305.08	-303.35	51.03	307.61	170.45	13.53	33.88R
	11098.00	61.04	177.22	10994.28	332.65	-330.87	52.89	335.07	170.92	10.99	2.33L
	11128.00	64.37	177.07	11008.04	359.31	-357.49	54.22	361.58	171.38	11.11	24.76R
	11161.00	67.94	178.84	11021.38	389.48	-387.65	55.29	391.58	171.88	11.88	3.12R
	11193.00	71.60	179.05	11032.44	419.50	-417.67	55.84	421.38	172.38	11.45	25.79L
	11225.00	74.58	177.56	11041.75	450.11	-448.27	56.75	451.84	172.78	10.32	1.6L
	11257.00	78.08	177.46	11049.31	481.20	-479.33	58.10	482.83	173.09	10.94	22L
	11289.00	82.73	175.57	11054.64	512.73	-510.81	60.02	514.32	173.30	15.65	18.93R
Survey 3-Oct-12	11321.00	86.87	176.99	11057.54	544.58	-542.60	62.09	546.14	173.47	13.67	10.33L
	11353.00	88.90	176.62	11058.72	576.55	-574.53	63.87	578.07	173.66	6.45	36.67L
	11416.00	91.17	174.93	11058.68	639.50	-637.35	68.51	641.02	173.86	4.49	92.56R
	11512.00	91.13	175.82	11056.76	735.40	-733.02	76.25	736.97	174.06	0.93	162.47R
	11607.00	88.66	176.60	11056.93	830.35	-827.80	82.53	831.91	174.31	2.73	78.02L
Survey 5-Oct-12	11702.00	88.73	176.27	11059.09	925.30	-922.59	88.44	926.82	174.52	0.36	74.93L
	11797.00	88.80	176.01	11061.14	1020.24	-1017.36	94.83	1021.77	174.67	0.28	52.31L
	11893.00	89.31	175.35	11062.72	1116.16	-1113.07	102.06	1117.74	174.76	0.87	159.81L
	11988.00	87.87	174.82	11065.06	1211.02	-1207.69	110.20	1212.71	174.79	1.62	80.95R
	12084.00	88.14	176.51	11068.40	1306.89	-1303.35	117.45	1308.63	174.85	1.78	48.74R
	12179.00	89.07	177.57	11070.72	1401.85	-1398.20	122.35	1403.54	175.00	1.48	44.24R
	12275.00	89.83	178.31	11071.64	1497.84	-1494.13	125.80	1499.42	175.19	1.10	34.82L
Survey 8-Oct-12	12370.00	90.52	177.83	11071.35	1592.84	-1589.07	129.00	1594.30	175.36	0.88	120.55R
	12466.00	90.03	178.66	11070.89	1688.84	-1685.03	131.94	1690.18	175.52	1.00	130.02R
	12562.00	89.14	179.72	11071.58	1784.80	-1781.01	133.30	1785.99	175.72	1.44	22.75L
	12658.00	90.07	179.33	11072.24	1880.76	-1877.00	134.10	1881.79	175.91	1.05	178R
	12753.00	89.21	179.36	11072.84	1975.72	-1972.00	135.18	1976.62	176.08	0.91	48.95L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Survey 10-Oct-12	12846.00	89.48	179.05	11073.90	2068.69	-2064.98	136.47	2069.49	176.22	0.44	7.01L
	12941.00	91.27	178.83	11073.28	2163.66	-2159.96	138.23	2164.38	176.34	1.90	165.96R
	13036.00	89.79	179.20	11072.40	2258.64	-2254.94	139.86	2259.27	176.45	1.61	96.12L
	13131.00	89.76	178.92	11072.78	2353.61	-2349.92	141.42	2354.18	176.56	0.30	14.6L
	13227.00	90.72	178.67	11072.37	2449.60	-2445.90	143.44	2450.10	176.64	1.03	156.86R
	13322.00	89.62	179.14	11072.09	2544.58	-2540.88	145.26	2545.03	176.73	1.26	18.71L
	13417.00	90.24	178.93	11072.21	2639.55	-2635.87	146.86	2639.95	176.81	0.69	38.66L
	13512.00	90.89	178.41	11071.27	2734.54	-2730.84	149.06	2734.90	176.88	0.88	151.39R
	13608.00	89.90	178.95	11070.61	2830.52	-2826.81	151.27	2830.85	176.94	1.17	155.99R
	13704.00	88.80	179.44	11071.70	2926.49	-2922.79	152.62	2926.77	177.01	1.25	53.88L
	13799.00	89.07	179.07	11073.47	3021.44	-3017.76	153.86	3021.68	177.08	0.48	16.84R
	13895.00	89.83	179.30	11074.39	3117.41	-3113.75	155.22	3117.62	177.15	0.83	6.93R
	13990.00	91.31	179.48	11073.44	3212.36	-3208.74	156.23	3212.54	177.21	1.57	156.49L
	14086.00	89.31	178.61	11072.92	3308.33	-3304.72	157.83	3308.48	177.27	2.27	50.04L
	14181.00	89.62	178.24	11073.81	3403.32	-3399.68	160.44	3403.46	177.30	0.51	163.5R
Survey 11-Oct-12	14277.00	89.35	178.32	11074.67	3499.32	-3495.63	163.32	3499.44	177.32	0.29	118.91R
	14372.00	88.66	179.57	11076.32	3594.28	-3590.60	165.07	3594.39	177.37	1.50	126.48L
	14467.00	88.49	179.34	11078.68	3689.21	-3685.56	165.98	3689.30	177.42	0.30	1.01R
	14561.00	89.62	179.36	11080.23	3783.16	-3779.54	167.04	3783.23	177.47	1.20	17.15R
	14657.00	91.24	179.86	11079.51	3879.11	-3875.53	167.70	3879.16	177.52	1.77	153.94L
Survey 14-Oct-12	14752.00	89.42	178.97	11078.97	3974.07	-3970.52	168.67	3974.10	177.57	2.13	129.96L
	14848.00	89.11	178.60	11080.20	4070.04	-4066.49	170.70	4070.07	177.60	0.50	89.07R
	14943.00	89.14	180.42	11081.65	4164.99	-4161.47	171.51	4165.01	177.64	1.92	53.31R
	15038.00	89.52	180.93	11082.76	4259.86	-4256.46	170.40	4259.87	177.71	0.67	129.61R
	15134.00	89.28	181.22	11083.77	4355.70	-4352.44	168.59	4355.70	177.78	0.39	44.4R
Final Survey	15229.00	89.76	181.69	11084.56	4450.51	-4447.40	166.18	4450.51	177.86	0.71	79.38R
	15324.00	89.79	181.85	11084.93	4545.28	-4542.36	163.25	4545.29	177.94	0.17	69.78L
Proj to TD	15349.00	89.93	181.47	11085.00	4570.22	-4567.35	162.52	4570.24	177.96	1.62	HS
	15399.00	89.93	181.47	11085.06	4620.12	-4617.33	161.24	4620.14	178.00	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	17.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Dos Equis 12 Federal Com #1H Gyro 0ft to 11268ft MD
	17.000	10506.300	Act Stns	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Dos Equis 12 Federal Com #1H Gyro

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
		10506.300	15349.000		Act Stns	30.000	30.000	SLB_MWD-STD		ST01 / Cimarex Dos Equis 12 Federal Com #1H ST01	
		15349.000	15399.000		Act Stns	30.000	30.000	SLB_BLIND+TREND		ST01 / Cimarex Dos Equis 12 Federal Com #1H ST01	