

Results of Directional Survey

API number:	30-025-40804		
OGRID:		Operator:	CIMAREX ENERGY CO.
		Property:	HANSON 26 FEDERAL COM # 4H

surface	ULSTR:	A	26	T 20S	R 34E
				330 FNL	660 FEL

BH Loc	ULSTR:	P	26	T 20S	R 34E
15457	MD	11184.7	TVD	340 FSL	642 FEL
				4940 FNL	

Top Perf/OH	ULSTR:	A	26	T 20S	R 34E
11075	MD	10977.8	TVD	592 FNL	669 FEL

Bot Perf/OH	ULSTR:	P	26	T 20S	R 34E
15430	MD	11184.7	TVD	367 FSL	642 FEL
				4913 FNL	

	MD	N/S	E/W	VD
	11060	-250.20	-9.31	10968.65
TOP PERFS/OH	11075	-262.08	-9.35	10977.81
	11097	-279.50	-9.40	10991.24
	15403	-4555.65	18.62	11184.72
BOT PERFS/OH	15430	-4582.65	18.39	11184.70
	15457	-4609.65	18.15	11184.68

NEXT TO LAST	15403	-4555.65	18.62	11184.72
LAST READING	15457	-4609.65	18.15	11184.68
TD	15457	-4609.65	18.15	11184.68

Surface Location	330	FN	660	FE
Projected BHL	4940	FN	642	FE
Location of				
Top Perfs/OH	592	FN	669	FE
Bottom Perfs/OH	4913	FN	642	FE

SUMMARY of Subsurface Locations

Surface Location	A-26-20S-34E	330	FN	660	FE	Vert. Depth
Top Perfs/OH	A-26-20S-34E	592	FN	669	FE	10977.81
Bottom Perfs/OH	P-26-20S-34E	4913	FN	642	FE	11184.70
Projected TD	P-26-20S-34E	4940	FN	642	FE	11184.68

AUG 29 2013



Cimarex



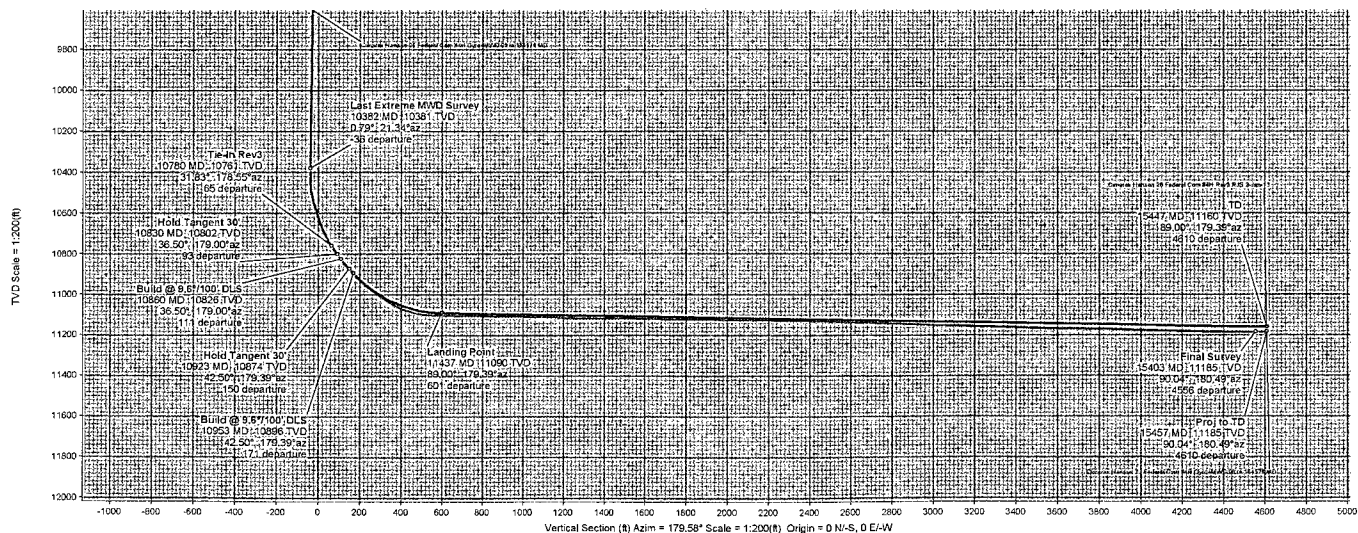
WELL	Hanson 26 Federal Com #4H	FIELD	NM Lea County	STRUCTURE	Cactus 115
Magwob: Penetration	Dip: 60.424°	Date: December 20, 2012	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous
Model: BQCM 3012	Mag Dec: 7.360°	PS: 18651.207	Lat: N 35.33 1.617	Northing: 564950.20 BUS	Grid Curve: 0.435°
			Lon: W 101.31 28.607	Easting: 790565.90 BUS	Scale Feet: 0.99998023
				Stat: Hanson 26 Federal Com #4H	TVD Ref: RK61709H above MSL
				Plan: Rev 3 BUS 3-10-13	Sony Date: November 20, 2012



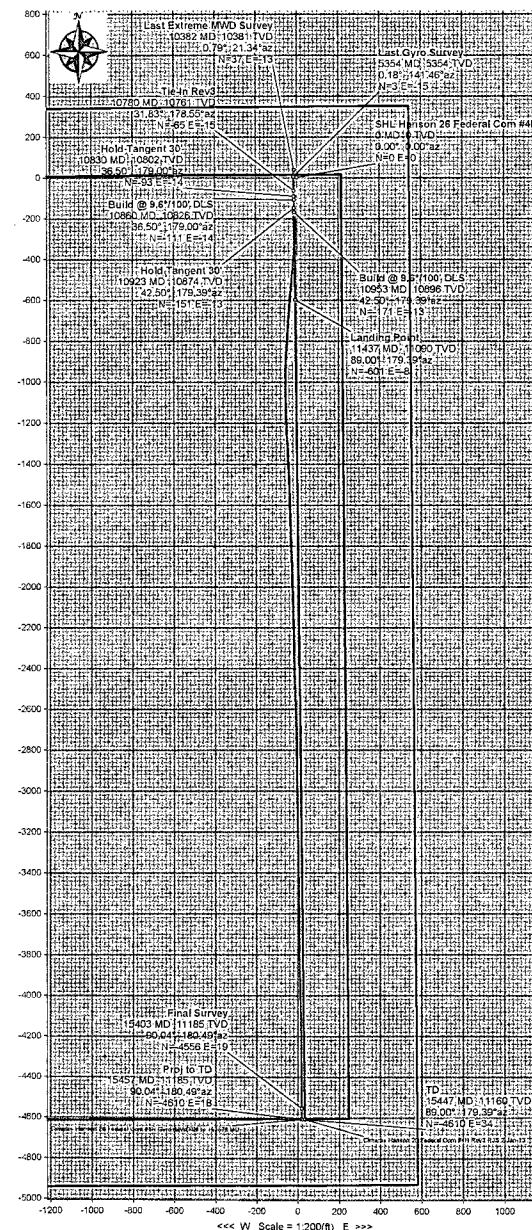
Grid North
Tot Corr (M->G 7.0702°)
Mag Dec (7.505°)
Grid Conv (0.435°)

Legend

- Hanson 26 Federal Com #4H - 330' Hurdle
- Hanson 26 Federal Com #4H - 330' Hurdle
- Hanson 26 Federal Com #4H - 330' Hurdle
- Hanson 26 Federal Com #4H - 330' Hurdle



<<< S Scale = 1:200(ft) N >>>



Drawn by: R. Schneider
Date Created: January 02, 2013 05:31:31 PM
Checked By: _____
Checked Date: _____
Approved By: _____
Approved Date: _____



Cimarex Hanson 26 Federal Com #4H Gyro+MWD 0ft to 15457ft MD

(Def Survey)

Report Date: January 16, 2013 - 01:50 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cactus 115 / Cimarex Hanson 26 Federal Com #4H
Well: Cimarex Hanson 26 Federal Com #4H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Hanson 26 Federal Com #4H Gyro+MWD 0ft to 15457ft MD
Survey Date: December 20, 2012
Tort / AHD / DDI / ERD Ratio: 164.431 ° / 4727.143 ft / 6.031 / 0.423
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 33' 1.61724", W 103° 31' 28.08689"
Location Grid N/E Y/X: N 564930.700 ftUS, E 790569.900 ftUS
CRS Grid Convergence Angle: 0.4352 °
Grid Scale Factor: 0.99998023

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.580 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3709.000 ft above MSL
Seabed / Ground Elevation: 3691.000 ft above MSL
Magnetic Declination: 7.505 °
Total Gravity Field Strength: 998.4864mgn (9.80665 Based)
Total Magnetic Field Strength: 48651.202 nT
Magnetic Dip Angle: 60.424 °
Declination Date: December 20, 2012
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.4352 °
Total Corr Mag North->Grid North: 7.0702 °

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 Hanson 26 Federal Com #4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	309.94M
	100.00	0.47	309.94	100.00	-0.27	0.26	-0.31	0.41	309.94	0.47	335.82M
	200.00	0.45	335.82	200.00	-0.89	0.88	-0.79	1.19	318.25	0.21	321.48M
	300.00	0.64	321.48	299.99	-1.69	1.68	-1.30	2.12	322.30	0.23	313.8M
	400.00	0.62	313.80	399.99	-2.51	2.49	-2.04	3.22	320.73	0.09	319.31M
	500.00	0.53	319.31	499.98	-3.24	3.22	-2.73	4.22	319.69	0.11	309.57M
	600.00	0.87	309.57	599.97	-4.08	4.05	-3.62	5.43	318.25	0.36	305.13M
	700.00	0.85	305.13	699.96	-5.00	4.96	-4.81	6.91	315.90	0.07	292.29M
	800.00	0.82	292.29	799.95	-5.70	5.66	-6.08	8.30	312.97	0.19	288.5M
	827.90	0.88	288.50	827.85	-5.85	5.80	-6.46	8.69	311.92	0.29	282.45M
	923.40	0.77	282.45	923.34	-6.23	6.17	-7.79	9.94	308.41	0.15	280.35M
	1018.70	0.65	280.35	1018.63	-6.47	6.41	-8.94	11.00	305.63	0.13	272.84M
	1114.30	0.77	272.84	1114.22	-6.61	6.54	-10.12	12.05	302.87	0.16	267M
	1209.80	1.00	267.00	1209.71	-6.61	6.53	-11.59	13.30	299.38	0.26	248.06M
	1305.50	1.02	248.06	1305.40	-6.26	6.17	-13.22	14.58	295.01	0.35	242.65M
	1400.40	0.52	242.65	1400.29	-5.76	5.65	-14.38	15.45	291.45	0.53	258.97M
	1496.20	0.38	258.97	1496.09	-5.50	5.39	-15.08	16.01	289.67	0.20	245.07M
	1591.40	0.37	245.07	1591.28	-5.32	5.20	-15.67	16.51	288.36	0.10	259.11M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	1686.60	0.40	259.11	1686.48	-5.13	5.01	-16.27	17.03	287.11	0.10	263.58M
	1781.50	0.32	263.58	1781.38	-5.04	4.92	-16.86	17.56	286.26	0.09	270.68M
	1877.40	0.03	270.68	1877.28	-5.01	4.89	-17.15	17.84	285.90	0.30	30.86M
	1972.40	0.17	30.86	1972.28	-5.13	5.01	-17.11	17.82	286.32	0.20	2.99M
	2067.70	0.27	2.99	2067.58	-5.48	5.35	-17.02	17.84	287.46	0.15	322.25M
	2163.40	0.25	322.25	2163.28	-5.87	5.74	-17.14	18.07	288.53	0.19	262.93M
	2258.40	0.40	262.93	2258.28	-6.00	5.87	-17.59	18.55	288.44	0.37	217.27M
	2353.60	0.45	217.27	2353.47	-5.66	5.53	-18.15	18.97	286.94	0.35	173.83M
	2448.90	0.56	173.83	2448.77	-4.90	4.77	-18.33	18.94	284.58	0.41	125.93M
	2543.80	0.64	125.93	2543.67	-4.13	4.00	-17.85	18.29	282.62	0.52	88.17M
	2639.20	0.67	88.17	2639.06	-3.82	3.70	-16.86	17.26	282.38	0.45	42.99M
	2734.30	0.64	42.99	2734.15	-4.22	4.11	-15.94	16.46	284.45	0.53	13.17M
	2829.40	0.56	13.17	2829.25	-5.06	4.95	-15.47	16.24	287.74	0.33	345.29M
	2924.90	0.47	345.29	2924.75	-5.89	5.78	-15.47	16.51	290.50	0.28	298.03M
	3020.00	0.23	298.03	3019.84	-6.36	6.25	-15.73	16.93	291.66	0.37	163.26M
	3115.30	0.24	163.26	3115.14	-6.26	6.15	-15.84	16.99	291.21	0.46	135.84M
	3210.90	0.20	135.84	3210.74	-5.95	5.84	-15.67	16.72	290.43	0.12	44.64M
	3305.80	0.21	44.64	3305.64	-5.95	5.84	-15.43	16.50	290.73	0.31	283.92M
	3401.50	0.21	283.92	3401.34	-6.12	6.01	-15.48	16.60	291.21	0.38	157.62M
	3496.00	0.44	157.62	3495.84	-5.83	5.71	-15.51	16.53	290.22	0.62	9.07M
	3591.00	0.50	9.07	3590.84	-5.90	5.79	-15.31	16.36	290.71	0.95	254.09M
	3686.20	0.23	254.09	3686.04	-6.26	6.14	-15.42	16.60	291.72	0.66	176.63M
	3781.50	0.58	176.63	3781.34	-5.72	5.61	-15.58	16.56	289.80	0.60	81.8M
	3877.20	0.53	81.80	3877.03	-5.30	5.19	-15.11	15.98	288.95	0.85	308.64M
	3972.30	0.37	308.64	3972.13	-5.55	5.44	-14.92	15.88	290.05	0.87	198.37M
	4068.10	0.83	198.37	4067.93	-5.09	4.98	-15.38	16.16	287.94	1.06	154.08M
	4163.70	0.65	154.08	4163.52	-3.95	3.83	-15.36	15.83	284.01	0.61	80.76M
	4259.00	0.21	80.76	4258.82	-3.48	3.38	-14.95	15.33	282.72	0.65	93.42M
	4354.30	0.15	93.42	4354.12	-3.50	3.40	-14.65	15.04	283.05	0.08	16.63M
	4449.10	0.38	16.63	4448.92	-3.80	3.69	-14.44	14.90	284.33	0.40	286.71M
	4544.60	0.30	286.71	4544.42	-4.17	4.07	-14.59	15.14	285.57	0.51	238.52M
	4640.30	0.21	238.52	4640.12	-4.16	4.05	-14.98	15.51	285.12	0.23	176.5M
	4735.50	0.18	176.50	4735.32	-3.92	3.81	-15.12	15.59	284.13	0.21	111.23M
	4830.90	0.10	111.23	4830.71	-3.74	3.63	-15.03	15.46	283.56	0.17	296.64M
	4925.90	0.14	296.64	4925.71	-3.76	3.65	-15.06	15.49	283.62	0.25	54.04M
	5021.00	0.12	54.04	5020.81	-3.87	3.76	-15.08	15.54	283.99	0.23	218.76M
	5116.10	0.06	218.76	5115.91	-3.89	3.78	-15.03	15.50	284.11	0.19	186.94M
	5211.30	0.29	186.94	5211.11	-3.61	3.50	-15.09	15.49	283.06	0.25	193.67M
	5306.30	0.36	193.67	5306.11	-3.08	2.97	-15.19	15.48	281.07	0.08	141.46M
Last Gyro Survey	5353.80	0.18	141.46	5353.61	-2.88	2.77	-15.18	15.43	280.33	0.61	279.89M
	5383.00	0.09	279.89	5382.81	-2.85	2.74	-15.17	15.42	280.22	0.87	206.35M
	5405.40	0.09	206.35	5405.21	-2.83	2.72	-15.20	15.44	280.16	0.48	125.05M
	5500.02	0.22	125.05	5499.83	-2.66	2.55	-15.08	15.30	279.60	0.24	34.97M
	5592.87	0.09	34.97	5592.68	-2.62	2.51	-14.90	15.11	279.56	0.26	345.75M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	5693.33	0.22	345.75	5693.14	-2.87	2.76	-14.90	15.15	280.50	0.17	329.27M
	5784.53	0.48	329.27	5784.34	-3.37	3.26	-15.14	15.48	282.15	0.30	335.46M
	5876.10	0.40	335.46	5875.91	-3.99	3.88	-15.46	15.94	284.08	0.10	345.44M
	5979.09	0.48	345.44	5978.89	-4.74	4.62	-15.72	16.39	286.39	0.11	4.47M
	6073.90	0.62	4.47	6073.70	-5.64	5.52	-15.78	16.72	289.28	0.24	5.65M
	6167.77	0.48	5.65	6167.57	-6.53	6.42	-15.70	16.96	292.23	0.15	353.17M
	6265.08	0.62	353.17	6264.87	-7.46	7.35	-15.73	17.36	295.04	0.19	5.48M
	6359.60	0.62	5.48	6359.39	-8.48	8.36	-15.74	17.82	297.98	0.14	355.94M
	6453.83	0.31	355.94	6453.61	-9.24	9.12	-15.71	18.17	300.15	0.34	14.27M
	6548.25	0.62	14.27	6548.03	-9.99	9.87	-15.60	18.46	302.33	0.36	348.65M
	6643.07	0.62	348.65	6642.84	-10.99	10.87	-15.57	19.00	304.92	0.29	352.95M
	6736.57	0.31	352.95	6736.34	-11.74	11.62	-15.70	19.54	306.50	0.33	339.07M
	6832.57	0.48	339.07	6832.34	-12.37	12.25	-15.88	20.06	307.66	0.20	348.95M
	6926.50	0.40	348.95	6926.27	-13.06	12.94	-16.08	20.65	308.83	0.12	26.44M
	7023.18	0.40	26.44	7022.94	-13.69	13.58	-16.00	20.98	310.32	0.27	18.75M
	7124.46	0.31	18.75	7124.22	-14.27	14.15	-15.75	21.18	311.94	0.10	12.38M
	7214.23	0.31	12.38	7213.99	-14.73	14.62	-15.62	21.40	313.10	0.04	12.38M
	7311.57	0.48	12.38	7311.33	-15.39	15.28	-15.48	21.75	314.62	0.17	344.16M
	7407.44	0.48	344.16	7407.19	-16.17	16.05	-15.50	22.32	316.00	0.24	340.17M
	7500.84	0.48	340.17	7500.59	-16.91	16.80	-15.74	23.02	316.86	0.04	346.36M
	7597.36	0.22	346.36	7597.11	-17.48	17.36	-15.92	23.56	317.47	0.27	8.25M
	7693.52	0.48	8.25	7693.27	-18.05	17.94	-15.91	23.98	318.43	0.30	41.38M
	7789.42	0.31	41.38	7789.16	-18.64	18.53	-15.68	24.27	319.76	0.29	338.98M
	7884.31	0.31	338.98	7884.05	-19.08	18.96	-15.60	24.56	320.55	0.34	28.07M
	7971.77	0.09	28.07	7971.51	-19.36	19.24	-15.65	24.81	320.87	0.30	57.16M
	8068.29	0.09	57.16	8068.03	-19.47	19.35	-15.55	24.83	321.21	0.05	4.47M
	8161.21	0.31	4.47	8160.95	-19.75	19.64	-15.47	25.00	321.77	0.29	22.57M
	8255.11	0.22	22.57	8254.85	-20.17	20.06	-15.38	25.28	322.52	0.13	18.75M
	8348.18	0.22	18.75	8347.92	-20.51	20.40	-15.26	25.47	323.20	0.02	109.76M
	8444.18	0.22	109.76	8443.92	-20.62	20.51	-15.03	25.42	323.77	0.33	81.85M
	8542.11	0.22	81.85	8541.85	-20.58	20.47	-14.66	25.18	324.39	0.11	214.26M
	8636.96	0.09	214.26	8636.70	-20.54	20.44	-14.52	25.07	324.60	0.30	148.26M
	8733.26	0.31	148.26	8733.00	-20.26	20.15	-14.43	24.79	324.39	0.30	149.97M
	8826.23	0.22	149.97	8825.97	-19.89	19.78	-14.21	24.36	324.31	0.10	335.95M
	8921.64	0.09	335.95	8921.38	-19.80	19.69	-14.15	24.25	324.31	0.32	324.48M
	9014.23	0.48	324.48	9013.97	-20.18	20.07	-14.40	24.71	324.34	0.42	350.45M
	9112.36	0.79	350.45	9112.09	-21.18	21.08	-14.75	25.73	325.01	0.42	352.25M
	9205.01	1.01	352.25	9204.73	-22.62	22.52	-14.97	27.04	326.38	0.24	352.65M
	9297.33	0.79	352.65	9297.04	-24.06	23.95	-15.16	28.35	327.67	0.24	356.78M
	9394.38	0.62	356.78	9394.08	-25.25	25.14	-15.28	29.42	328.72	0.18	1.48M
	9490.44	0.79	1.48	9490.13	-26.43	26.32	-15.29	30.44	329.85	0.19	23.28M
	9587.49	0.79	23.28	9587.17	-27.71	27.60	-15.01	31.42	331.47	0.31	19.67M
	9680.86	0.79	19.67	9680.53	-28.91	28.80	-14.54	32.26	333.22	0.05	359.28M
	9777.25	0.70	359.28	9776.92	-30.12	30.02	-14.32	33.26	334.50	0.29	32.24M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	9874.07	0.48	32.24	9873.73	-31.05	30.95	-14.11	34.02	335.49	0.41	26.18M
	9967.67	0.48	26.18	9967.33	-31.73	31.63	-13.73	34.48	336.54	0.05	358.36M
	10033.16	0.70	358.36	10032.82	-32.38	32.28	-13.62	35.04	337.13	0.54	7.94M
	10158.45	0.88	7.94	10158.09	-34.10	34.00	-13.51	36.58	338.33	0.18	17.96M
Last Extreme MWD Survey	10252.51	0.79	17.96	10252.14	-35.43	35.33	-13.21	37.72	339.50	0.18	5.57M
	10348.84	0.70	5.57	10348.47	-36.64	36.55	-12.95	38.77	340.50	0.19	21.34M
	10381.81	0.79	21.34	10381.43	-37.05	36.96	-12.84	39.13	340.84	0.68	133.95M
	10431.00	0.18	133.95	10430.62	-37.31	37.22	-12.66	39.32	341.21	1.78	171.22M
	10463.00	4.04	171.22	10462.59	-36.16	36.07	-12.46	38.16	340.95	12.18	178.34M
	10494.00	8.62	178.34	10493.40	-32.76	32.67	-12.22	34.88	339.49	14.96	0.63L
	10526.00	12.84	178.13	10524.83	-26.80	26.72	-12.04	29.30	335.75	13.19	5.54R
	10558.00	16.62	179.41	10555.77	-18.67	18.58	-11.87	22.05	327.43	11.86	90R
	10589.00	16.62	184.79	10585.48	-9.82	9.73	-12.20	15.60	308.58	4.96	36.19R
	10621.00	17.06	185.88	10616.11	-0.60	0.50	-13.06	13.07	272.20	1.69	8.45L
Survey 2-Jan-13	10653.00	19.96	184.62	10646.45	9.51	-9.61	-13.98	16.97	235.49	9.15	12.51L
	10685.00	23.04	182.88	10676.22	21.21	-21.31	-14.74	25.91	214.66	9.83	19.92L
	10717.00	25.85	180.56	10705.35	34.44	-34.55	-15.12	37.71	203.64	9.28	18.79L
	10748.00	28.75	178.52	10732.89	48.65	-48.76	-14.99	51.01	197.09	9.83	0.29R
	10780.00	31.83	178.55	10760.52	64.79	-64.89	-14.58	66.51	192.66	9.63	1.39L
	10809.00	34.65	178.43	10784.77	80.68	-80.78	-14.16	82.02	189.94	9.73	8.11R
	10844.00	36.14	178.79	10813.30	100.95	-101.05	-13.67	101.97	187.70	4.30	7.9L
	10876.00	38.95	178.17	10838.67	120.44	-120.54	-13.15	121.26	186.23	8.86	9.42L
	10907.00	41.68	177.49	10862.31	140.49	-140.58	-12.39	141.13	185.04	8.92	26.6L
	10939.00	42.56	176.84	10886.04	161.93	-162.02	-11.32	162.41	184.00	3.07	17.06R
Survey 4-Jan-13	10971.00	44.41	177.65	10909.26	183.93	-184.01	-10.27	184.30	183.19	6.04	17.68R
	11003.00	47.13	178.83	10931.58	206.85	-206.93	-9.57	207.15	182.65	8.90	16.8R
	11038.00	49.95	179.94	10954.75	233.08	-233.15	-9.29	233.34	182.28	8.40	5.13R
Survey 5-Jan-13	11060.00	51.70	180.14	10968.65	250.13	-250.20	-9.31	250.38	182.13	7.99	3.46R
	11097.00	53.02	180.24	10991.24	279.43	-279.50	-9.40	279.66	181.93	3.57	29.5R
Survey 6-Jan-13	11130.00	54.61	181.34	11010.73	306.05	-306.13	-9.77	306.29	181.83	5.52	29.12R
	11162.00	56.72	182.74	11028.78	332.45	-332.54	-10.72	332.71	181.85	7.52	12.56R
	11194.00	60.15	183.62	11045.52	359.66	-359.76	-12.23	359.97	181.95	10.97	32.07R
	11223.00	64.10	186.35	11059.08	385.17	-385.29	-14.47	385.56	182.15	15.96	8.88L
	11257.00	69.38	185.47	11072.51	416.20	-416.35	-17.68	416.72	182.43	15.71	2.35L
Survey 7-Jan-13	11289.00	73.60	185.29	11082.66	446.39	-446.55	-20.53	447.02	182.63	13.20	3.99L
	11321.00	78.52	184.94	11090.37	477.29	-477.47	-23.29	478.04	182.79	15.41	1.26L
	11353.00	82.57	184.85	11095.62	508.71	-508.92	-25.99	509.58	182.92	12.66	2.46L
	11385.00	87.23	184.65	11098.47	540.45	-540.67	-28.62	541.43	183.03	14.58	2.33L
	11414.00	88.46	184.60	11099.56	569.32	-569.56	-30.96	570.40	183.11	4.24	15.52R
	11444.00	88.64	184.65	11100.32	599.19	-599.45	-33.38	600.38	183.19	0.62	17.1R
	11476.00	88.90	184.73	11101.00	631.05	-631.34	-36.00	632.36	183.26	0.85	65.77L
	11539.00	89.08	184.33	11102.12	693.81	-694.13	-40.97	695.34	183.38	0.70	102.69L
	11635.00	88.81	183.13	11103.88	789.54	-789.91	-47.21	791.32	183.42	1.28	33.86L
	11730.00	89.60	182.60	11105.20	884.37	-884.78	-51.96	886.30	183.36	1.00	100.24L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Survey 8-Jan-13	11825.00	89.34	181.16	11106.08	979.29	-979.72	-55.08	981.27	183.22	1.54	105.49L
	11920.00	88.64	178.63	11107.75	1074.27	-1074.70	-54.91	1076.10	182.92	2.76	105.72L
	12014.00	88.46	177.99	11110.13	1168.21	-1168.63	-52.13	1169.79	182.55	0.71	90L
	12109.00	88.46	177.32	11112.69	1263.12	-1263.51	-48.25	1264.43	182.19	0.71	14.45R
	12205.00	89.43	177.57	11114.45	1359.04	-1359.40	-43.97	1360.11	181.85	1.04	20.38R
	12300.00	90.13	177.83	11114.82	1453.99	-1454.32	-40.16	1454.87	181.58	0.79	173.49R
	12395.00	88.29	178.04	11116.13	1548.93	-1549.25	-36.73	1549.68	181.36	1.95	21.57R
	12490.00	88.72	178.21	11118.61	1643.87	-1644.16	-33.63	1644.51	181.17	0.49	35.97R
	12585.00	89.34	178.66	11120.22	1738.84	-1739.11	-31.03	1739.39	181.02	0.81	8.64L
	12680.00	90.13	178.54	11120.65	1833.82	-1834.08	-28.71	1834.31	180.90	0.84	165.8L
Survey 9-Jan-13	12775.00	88.55	178.14	11121.75	1928.79	-1929.03	-25.96	1929.21	180.77	1.72	26.19R
	12870.00	89.16	178.44	11123.65	2023.75	-2023.97	-23.13	2024.10	180.65	0.72	10.62R
	12964.00	89.96	178.59	11124.37	2117.73	-2117.94	-20.69	2118.04	180.56	0.87	173.19L
	13059.00	88.37	178.40	11125.75	2212.70	-2212.89	-18.20	2212.97	180.47	1.69	28.78R
	13154.00	89.08	178.79	11127.87	2307.66	-2307.84	-15.87	2307.89	180.39	0.85	25.43R
Survey 10-Jan-13	13249.00	89.69	179.08	11128.89	2402.65	-2402.81	-14.10	2402.86	180.34	0.71	157.21L
	13345.00	87.93	178.34	11130.88	2498.61	-2498.77	-11.94	2498.79	180.27	1.99	12.8R
	13440.00	88.37	178.44	11133.95	2593.54	-2593.68	-9.27	2593.69	180.20	0.47	148.41R
	13534.00	87.85	178.76	11137.05	2687.48	-2687.60	-6.98	2687.61	180.15	0.65	19.51R
	13629.00	88.64	179.04	11139.96	2782.42	-2782.54	-5.15	2782.54	180.11	0.88	179.64L
Survey 11-Jan-13	13724.00	87.05	179.03	11143.53	2877.35	-2877.45	-3.56	2877.45	180.07	1.67	9.59R
	13819.00	87.76	179.15	11147.83	2972.25	-2972.34	-2.05	2972.34	180.04	0.76	35.17R
	13913.00	88.37	179.58	11151.00	3066.19	-3066.28	-1.01	3066.28	180.02	0.79	127L
	14008.00	87.67	178.65	11154.29	3161.13	-3161.21	0.46	3161.21	179.99	1.22	7.35R
	14104.00	88.29	178.73	11157.67	3257.06	-3257.13	2.65	3257.13	179.95	0.65	22.5R
Survey 12-Jan-13	14199.00	88.99	179.02	11159.93	3352.02	-3352.08	4.52	3352.08	179.92	0.80	174.38L
	14294.00	87.67	178.89	11162.69	3446.98	-3447.02	6.25	3447.03	179.90	1.40	25.23R
	14389.00	88.37	179.22	11165.98	3541.91	-3541.95	7.81	3541.96	179.87	0.81	27.52R
	14484.00	89.08	179.59	11168.09	3636.89	-3636.92	8.80	3636.93	179.86	0.84	24.5R
	14579.00	89.87	179.95	11168.96	3731.88	-3731.92	9.18	3731.93	179.86	0.91	136.83L
Survey 13-Jan-13	14673.00	88.90	179.04	11169.97	3825.88	-3825.91	10.01	3825.92	179.85	1.41	163.36L
	14768.00	87.93	178.75	11172.60	3920.83	-3920.85	11.84	3920.87	179.83	1.07	4.61R
	14863.00	88.55	178.80	11175.51	4015.78	-4015.78	13.87	4015.81	179.80	0.65	37.67R
	14958.00	89.34	179.41	11177.26	4110.76	-4110.76	15.36	4110.78	179.79	1.05	168.44R
	15052.00	88.46	179.59	11179.07	4204.74	-4204.73	16.18	4204.76	179.78	0.96	90L
Final Survey Proj to TD	15147.00	88.46	179.06	11181.62	4299.70	-4299.69	17.29	4299.73	179.77	0.56	31.5R
	15243.00	89.08	179.44	11183.68	4395.68	-4395.66	18.55	4395.70	179.76	0.76	42.44R
	15337.00	89.78	180.08	11184.62	4489.67	-4489.65	18.94	4489.69	179.76	1.01	57.62R
	15403.00	90.04	180.49	11184.72	4555.67	-4555.65	18.62	4555.69	179.77	0.74	HS
	15457.00	90.04	180.49	11184.68	4609.66	-4609.65	18.15	4609.69	179.77	0.00	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
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	18.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Orginal Borehole / Cimarex Hanson 26 Federal Com #4H Gyro+MWD 0ft to 15457ft MD
	18.000	5353.800	Act Stns	30.000	30.000	SLB_NSG+MSHOT	Orginal Borehole / Cimarex Hanson 26 Federal Com #4H
	5353.800	10381.810	Act Stns	30.000	30.000	SLB_MWD-POOR	Orginal Borehole / Cimarex Hanson 26 Federal Com #4H
	10381.810	15403.000	Act Stns	30.000	30.000	SLB_MWD-STD	Orginal Borehole / Cimarex Hanson 26 Federal Com #4H
	15403.000	15457.000	Act Stns	30.000	30.000	SLB_BLIND+TREND	Orginal Borehole / Cimarex Hanson 26 Federal Com #4H