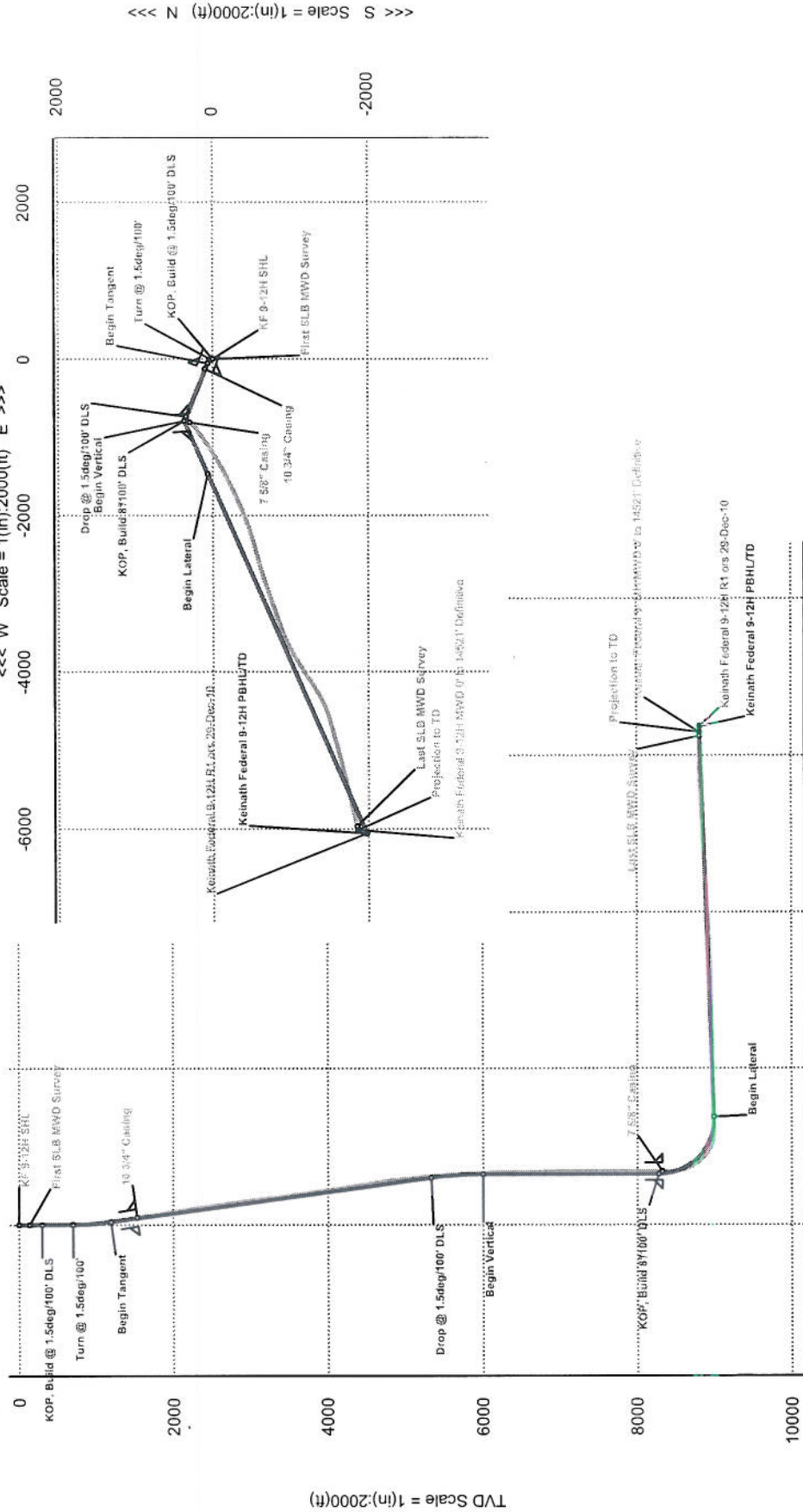


WELL	FIELD	STRUCTURE
Keinath Federal 9-12H	CO, Garfield County (NAD 83 UTM 13)	Encana 10-08S-96W (C100U Pad)
Magnetic Parameters BGCAM 2011 Model:	Date July 26, 2011 FS:	Surface Location Lat: N 38 22 7.558 Lon: W 108 53 27.271 Northing: 1431154.21 FUS Easting: 754448.75 FUS Grid Conv: -1.96704135° Scale Fact: 1.00001781 Magnetic Declination Keinath Federal 9-12H Keinath Federal 9-12H MWD Drilling 14521-04 TVD Ref: HKBUS52H Above MSL July 26, 2011

Quality Control
 Date Drawn: August 19, 2011 09:57:18 PM
 Drawn by: Oswaldo Salazar
 Checked by: Tom Cole
 Client OK:

PVA

Grid North
 Tot Corr (M->G 12.3485°)
 Mag Dec (10.381°)
 Grid Conv (-1.96704135°)



Vertical Section (ft) Azim = 252.49° Scale = 1(in):2000(ft) Origin = 0 N/-S, 0 E/-W

Keinath Federal 9-12H MWD 0' to 14521' Definitive Survey Report (Def Survey)

Report Date: July 26, 2011 - 04:06 PM
 Client: EnCana Oil & Gas (USA) Inc.
 Field: CO, Garfield County (NAD 83 UTM 13) EnCana 2010
 Structure / Slot: Encana 10-08S-96W (C100U Pad) - Nabors M-11 / Keinath Federal 9-12H
 Well: Keinath Federal 9-12H
 Borehole: Original Hole
 UWI / API#: Unknown / Unknown
 Survey Name: Keinath Federal 9-12H MWD 0' to 14521' Definitive
 Survey Date: July 26, 2011
 Tort / AHD / DDI / ERD Ratio: 223.486' / 6550.640 ft / 6.380 / 0.739
 Coordinate Reference System: NAD83 UTM Zone 13N, US Feet
 Location Lat / Long: N 39° 22' 7.85600", W 108° 5' 57.27102"
 Location Grid N/E Y/X: N 14311954.207 ftUS, E 764448.748 ftUS
 CRS Grid Convergence Angle: -1.36704135 °
 Grid Scale Factor: 1.00047781

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 0.000 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 5590.000 ft above MSL
 Seabed / Ground Elevation: 5568.000 ft above MSL
 Magnetic Declination: 10.381 °
 Total Field Strength: 52129.872 nT
 Magnetic Dip Angle: 65.612 °
 Declination Date: July 26, 2011
 Magnetic Declination Model: BGGM 2011
 North Reference: Grid North
 Grid Convergence Used: -1.967 °
 Total Corr Mag North->Grid North: 12.348 °
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° ' '')	Longitude (E/W ° ° ' '')
KF 9-12H SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	14311954.21	764448.75	N 39 22 7.86	W 108 5 57.27
Marker MudLine	22.00	0.08	242.30	22.00	-0.01	-0.01	-0.01	0.36	14311954.20	764448.73	N 39 22 7.86	W 108 5 57.27
First SLB MWD Survey	137.00	0.49	242.30	137.00	-0.27	-0.27	-0.52	0.36	14311953.93	764448.23	N 39 22 7.85	W 108 5 57.28
	200.00	0.48	259.97	200.00	-0.44	-0.44	-1.02	0.24	14311953.76	764447.73	N 39 22 7.85	W 108 5 57.28
	229.00	0.64	266.97	229.99	-0.47	-0.47	-1.30	0.60	14311953.73	764447.45	N 39 22 7.85	W 108 5 57.29
	262.00	0.50	287.92	261.99	-0.44	-0.44	-1.62	0.75	14311953.77	764447.13	N 39 22 7.85	W 108 5 57.29
	293.00	0.75	325.51	292.99	-0.23	-0.23	-1.86	1.51	14311953.98	764446.88	N 39 22 7.85	W 108 5 57.29
	323.00	1.14	341.95	322.99	0.22	0.22	-2.07	1.57	14311954.42	764446.68	N 39 22 7.86	W 108 5 57.30
	354.00	1.48	346.16	353.98	0.90	0.90	-2.26	1.14	14311955.11	764446.49	N 39 22 7.86	W 108 5 57.30
	385.00	2.13	348.91	384.96	1.85	1.85	-2.46	2.11	14311956.06	764446.28	N 39 22 7.87	W 108 5 57.30
	415.00	2.71	348.83	414.94	3.09	3.09	-2.71	1.93	14311957.30	764446.04	N 39 22 7.89	W 108 5 57.31
	446.00	3.19	344.71	445.90	4.65	4.65	-3.08	1.69	14311958.86	764445.67	N 39 22 7.90	W 108 5 57.31
	477.00	3.80	347.80	476.84	6.48	6.48	-3.52	2.06	14311960.69	764445.22	N 39 22 7.92	W 108 5 57.32
	507.00	4.38	345.26	506.76	8.56	8.56	-4.02	2.02	14311962.77	764444.72	N 39 22 7.94	W 108 5 57.33
	537.00	4.74	347.33	536.67	10.88	10.88	-4.59	1.32	14311965.09	764444.16	N 39 22 7.96	W 108 5 57.33
	567.00	5.20	346.17	566.55	13.41	13.41	-5.18	1.57	14311967.62	764443.56	N 39 22 7.99	W 108 5 57.34
	598.00	5.67	344.14	597.41	16.25	16.25	-5.94	1.64	14311970.46	764442.81	N 39 22 8.01	W 108 5 57.35
	628.00	6.35	341.33	627.25	19.24	19.24	-6.88	2.47	14311973.46	764441.87	N 39 22 8.04	W 108 5 57.37
	659.00	7.00	338.41	658.04	22.62	22.62	-8.12	2.36	14311976.84	764440.62	N 39 22 8.08	W 108 5 57.38
	689.00	7.63	336.31	687.79	26.15	26.15	-9.59	2.28	14311980.37	764439.15	N 39 22 8.11	W 108 5 57.40
	719.00	8.24	334.95	717.51	29.92	29.92	-11.30	2.13	14311984.14	764437.44	N 39 22 8.15	W 108 5 57.43
	750.00	8.55	331.84	748.18	33.96	33.96	-13.33	1.77	14311988.19	764435.41	N 39 22 8.19	W 108 5 57.46
	780.00	8.44	327.74	777.85	37.79	37.79	-15.56	2.05	14311992.02	764433.18	N 39 22 8.22	W 108 5 57.49
	811.00	8.36	323.37	808.51	41.52	41.52	-18.12	2.07	14311995.75	764430.62	N 39 22 8.26	W 108 5 57.52
	842.00	8.41	320.52	839.18	45.06	45.06	-20.90	1.35	14311999.31	764427.83	N 39 22 8.29	W 108 5 57.56
	872.00	8.54	316.59	868.86	48.39	48.39	-23.83	1.98	14312002.62	764424.91	N 39 22 8.33	W 108 5 57.60
	903.00	8.73	314.63	899.50	51.72	51.72	-27.08	1.13	14312005.95	764421.65	N 39 22 8.36	W 108 5 57.64
	934.00	8.97	312.05	930.14	54.99	54.99	-30.55	1.50	14312009.22	764418.18	N 39 22 8.39	W 108 5 57.68
	964.00	9.07	309.47	959.76	58.06	58.06	-34.12	1.39	14312012.29	764414.62	N 39 22 8.42	W 108 5 57.73
	995.00	9.14	307.01	990.37	61.09	61.09	-37.97	1.28	14312015.33	764410.76	N 39 22 8.45	W 108 5 57.78
	1025.00	9.08	303.89	1020.00	63.85	63.85	-41.84	1.66	14312018.09	764406.89	N 39 22 8.47	W 108 5 57.83
	1057.00	9.36	300.25	1051.58	66.57	66.57	-46.18	2.02	14312020.81	764402.55	N 39 22 8.50	W 108 5 57.89
	1089.00	9.32	296.55	1083.16	69.04	69.04	-50.75	1.88	14312023.28	764397.98	N 39 22 8.52	W 108 5 57.95
	1121.00	9.43	293.98	1114.73	71.26	71.26	-55.46	1.35	14312025.50	764393.26	N 39 22 8.54	W 108 5 58.01
	1153.00	9.71	292.29	1146.29	73.35	73.35	-60.35	1.24	14312027.59	764388.37	N 39 22 8.56	W 108 5 58.07
	1185.00	9.74	292.31	1177.83	75.40	75.40	-65.35	0.09	14312029.64	764383.36	N 39 22 8.53	W 108 5 58.14
	1216.00	9.87	290.63	1208.37	77.33	77.33	-70.26	1.01	14312031.58	764378.45	N 39 22 8.50	W 108 5 58.20
	1280.00	10.25	289.07	1271.39	81.12	81.12	-80.78	0.73	14312035.37	764367.93	N 39 22 8.63	W 108 5 58.33
	1312.00	10.60	288.61	1302.86	83.00	83.00	-86.26	1.10	14312037.25	764362.45	N 39 22 8.65	W 108 5 58.40
	1343.00	10.60	290.95	1333.33	84.94	84.94	-91.62	1.27	14312039.19	764357.09	N 39 22 8.66	W 108 5 58.47
	1375.00	10.60	291.20	1364.79	87.06	87.06	-97.11	0.14	14312041.31	764351.59	N 39 22 8.63	W 108 5 58.54
	1471.00	10.86	291.64	1459.11	93.59	93.59	-113.75	0.28	14312047.84	764334.94	N 39 22 8.74	W 108 5 58.76
	1500.00	10.85	291.01	1487.59	95.57	95.57	-118.84	0.41	14312049.83	764329.85	N 39 22 8.76	W 108 5 58.83
	1544.00	10.78	290.91	1530.81	98.53	98.53	-126.55	0.15	14312052.78	764322.14	N 39 22 8.79	W 108 5 58.92
	1621.00	10.67	290.74	1606.46	103.62	103.62	-139.94	0.15	14312057.88	764308.74	N 39 22 8.83	W 108 5 59.10
	1717.00	10.59	288.93	1700.81	109.63	109.63	-156.80	0.36	14312063.89	764292.07	N 39 22 8.89	W 108 5 59.31
	1812.00	10.71	287.65	1794.18	115.14	115.14	-173.27	0.28	14312069.40	764275.40	N 39 22 8.93	W 108 5 59.53
	1908.00	10.57	288.16	1888.53	120.59	120.59	-190.14	0.18	14312074.85	764258.52	N 39 22 8.98	W 108 5 59.74
	2003.00	10.58	286.00	1981.91	125.71	125.71	-206.80	0.42	14312079.98	764241.85	N 39 22 9.03	W 108 5 59.96
	2099.00	10.22	290.99	2076.34	131.19	131.19	-223.22	1.01	14312085.46	764225.42	N 39 22 9.08	W 108 6 0.17
	2195.00	10.09	289.46	2170.83	137.04	137.04	-239.10	0.31	14312091.31	764209.53	N 39 22 9.13	W 108 6 0.37
	2291.00	9.98	288.13	2265.37	142.43	142.43	-254.94	0.27	14312096.71	764193.69	N 39 22 9.13	W 108 6 0.58
	2386.00	10.16	287.33	2356.90	147.49	147.49	-270.76	0.24	14312101.77	764177.86	N 39 22 9.22	W 108 6 0.78
	2482.00	10.54	288.80	2453.34	152.84	152.84	-287.15	0.48	14312107.12	764161.46	N 39 22 9.27	W 108 6 0.99
	2578.00	10.17	287.34	2547.78	158.20	158.20	-303.56	0.47	14312112.48	764145.05	N 39 22 9.32	W 108 6 1.20
	2673.00	10.17	292.81	2641.29	163.95	163.95	-319.29	1.02	14312118.23	764129.30	N 39 22 9.37	W 108 6 1.41
	2768.00	9.95	290.95	2734.83	170.13	170.13	-334.69	0.41	14312124.42	764113.90	N 39 22 9.42	W 108 6 1.60
	2864.00	9.95	290.36	2829.38	175.98	175.98	-350.21	0.11	14312130.28	764098.37	N 39 22 9.48	W 108 6 1.80
	2958.00	10.08	295.51	2921.95	182.35	182.35	-365.25	0.96	14312136.65	764083.33	N 39 22 9.53	W 108 6 2.00
	3053.00	9.79	292.51	3015.53	189.03	189.03	-380.21	0.62	14312143.32	764068.35	N 39 22 9.59	W 108 6 2.19
	3149.00	8.58	288.66	3110.30	194.44	194.44	-394.54	1.41	14312148.74	764054.02	N 39 22 9.64	W 108 6 2.38
	3244.00	10.34	300.29	3204.01	201.01	201.01	-408.62	2.73	14312155.31	764039.94	N 39 22 9.70	W 108 6 2.56
	3339.00	9.69	299.42	3297.56	209.24	209.24	-422.94	0.70	14312163.54	764025.60	N 39 22 9.78	W 108 6 2.74
	3434.00	9.30	298.78	3391.26	216.86	216.86	-436.64	0.43	14312171.17	764011.91	N 39 22 9.85	W 108 6 2.92
	3528.00	9.46	288.52	3484.01	222.97	222.97	-450.82	1.78	14312177.29	763997.92	N 39 22 9.91	W 108 6 3.10

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
	3624.00	9.69	289.27	3578.67	228.14	228.14	-465.73	0.27	14312182.46	763982.80	N 39 22 9.69	W 108 6 3.30
	3719.00	9.45	285.74	3672.35	232.90	232.90	-480.78	0.67	14312197.22	763967.74	N 39 22 9.69	W 108 6 3.49
	3815.00	10.80	268.22	3766.85	237.85	237.85	-496.91	1.48	14312192.17	763951.60	N 39 22 10.04	W 108 6 3.70
	3911.00	10.34	288.20	3861.22	243.35	243.35	-513.64	0.48	14312197.67	763934.87	N 39 22 10.09	W 108 6 3.91
	4006.00	10.47	289.60	3954.66	248.91	248.91	-529.87	0.30	14312203.24	763918.63	N 39 22 10.13	W 108 6 4.12
	4101.00	10.44	288.19	4048.09	254.49	254.49	-546.18	0.27	14312208.82	763902.31	N 39 22 10.18	W 108 6 4.33
	4197.00	9.92	286.76	4142.57	259.59	259.59	-562.36	0.60	14312213.92	763886.12	N 39 22 10.23	W 108 6 4.54
	4292.00	11.25	293.32	4235.96	265.62	265.62	-578.70	1.89	14312219.95	763869.77	N 39 22 10.28	W 108 6 4.75
	4388.00	11.12	291.12	4330.14	272.66	272.66	-595.94	0.46	14312227.00	763852.53	N 39 22 10.35	W 108 6 4.97
	4483.00	10.98	289.39	4423.37	278.97	278.97	-613.02	0.38	14312233.31	763835.44	N 39 22 10.40	W 108 6 5.19
	4578.00	10.44	287.43	4516.72	284.55	284.55	-629.76	0.69	14312238.89	763818.68	N 39 22 10.45	W 108 6 5.41
	4674.00	10.60	291.79	4611.11	290.43	290.43	-646.26	0.85	14312244.78	763802.18	N 39 22 10.51	W 108 6 5.62
	4770.00	10.24	289.09	4705.52	296.50	296.50	-662.53	0.63	14312250.85	763785.91	N 39 22 10.56	W 108 6 5.83
	4866.00	10.02	297.09	4800.03	303.10	303.10	-678.03	1.48	14312257.45	763770.40	N 39 22 10.62	W 108 6 6.03
	4961.00	9.47	298.61	4893.66	310.60	310.60	-692.24	0.64	14312264.96	763756.17	N 39 22 10.69	W 108 6 6.22
	5057.00	9.06	297.68	4988.41	317.89	317.89	-705.87	0.45	14312272.25	763742.54	N 39 22 10.76	W 108 6 6.39
	5152.00	8.82	295.77	5082.26	324.54	324.54	-719.05	0.40	14312278.90	763729.35	N 39 22 10.82	W 108 6 6.56
	5248.00	8.29	296.20	5177.19	330.79	330.79	-731.89	0.56	14312285.16	763716.51	N 39 22 10.88	W 108 6 6.73
	5344.00	7.20	291.18	5272.31	336.02	336.02	-743.71	1.34	14312290.39	763704.68	N 39 22 10.92	W 108 6 6.88
	5439.00	6.49	290.12	5366.63	340.02	340.02	-754.30	0.76	14312294.39	763694.09	N 39 22 10.96	W 108 6 7.02
	5535.00	5.90	296.17	5462.07	344.06	344.06	-763.83	0.92	14312298.43	763684.56	N 39 22 11.00	W 108 6 7.14
	5631.00	5.24	292.52	5557.62	347.92	347.92	-772.30	0.78	14312302.29	763676.08	N 39 22 11.03	W 108 6 7.25
	5726.00	4.97	289.91	5652.24	350.98	350.98	-780.18	0.37	14312305.35	763668.20	N 39 22 11.06	W 108 6 7.35
	5821.00	3.88	289.56	5746.96	353.46	353.46	-787.08	1.15	14312307.83	763661.29	N 39 22 11.08	W 108 6 7.44
	5916.00	3.52	286.90	5841.76	355.38	355.38	-792.90	0.42	14312309.76	763655.47	N 39 22 11.10	W 108 6 7.52
	6011.00	1.76	305.99	5936.66	357.09	357.09	-796.87	2.05	14312311.46	763651.50	N 39 22 11.11	W 108 6 7.57
	6107.00	1.73	285.74	6032.61	358.35	358.35	-799.46	0.64	14312312.72	763648.91	N 39 22 11.12	W 108 6 7.60
	6202.00	1.03	234.01	6127.59	358.23	358.23	-801.53	1.43	14312312.61	763646.84	N 39 22 11.12	W 108 6 7.63
	6297.00	1.30	236.05	6222.57	357.13	357.13	-803.11	0.29	14312311.51	763645.25	N 39 22 11.11	W 108 6 7.65
	6411.00	1.31	215.17	6336.54	355.34	355.34	-804.94	0.41	14312309.72	763643.43	N 39 22 11.09	W 108 6 7.67
	6487.00	1.72	203.23	6412.51	353.58	353.58	-805.89	0.68	14312307.96	763642.48	N 39 22 11.08	W 108 6 7.68
	6582.00	1.66	199.51	6507.47	350.98	350.98	-806.91	0.13	14312305.35	763641.46	N 39 22 11.05	W 108 6 7.69
	6677.00	2.33	192.40	6602.41	347.79	347.79	-807.78	0.75	14312302.17	763640.58	N 39 22 11.02	W 108 6 7.70
	6772.00	2.09	192.98	6697.34	344.22	344.22	-808.59	0.25	14312298.59	763639.78	N 39 22 10.98	W 108 6 7.71
	6868.00	2.01	199.18	6793.28	340.92	340.92	-809.53	0.25	14312295.29	763638.83	N 39 22 10.95	W 108 6 7.72
	6963.00	2.44	199.43	6888.21	337.44	337.44	-810.75	0.45	14312291.81	763637.61	N 39 22 10.91	W 108 6 7.74
	7059.00	1.53	166.74	6984.15	334.27	334.27	-811.14	1.48	14312288.63	763637.22	N 39 22 10.88	W 108 6 7.74
	7154.00	1.93	174.45	7079.11	331.44	331.44	-810.69	0.49	14312285.81	763637.67	N 39 22 10.85	W 108 6 7.73
	7249.00	1.43	160.49	7174.07	328.73	328.73	-810.14	0.68	14312283.09	763638.22	N 39 22 10.83	W 108 6 7.72
	7346.00	1.68	172.12	7271.03	326.18	326.18	-809.54	0.41	14312280.54	763638.82	N 39 22 10.80	W 108 6 7.72
	7439.00	1.15	163.24	7364.01	323.94	323.94	-809.09	0.62	14312278.30	763639.28	N 39 22 10.78	W 108 6 7.71
	7535.00	1.12	179.73	7459.99	322.08	322.08	-808.80	0.34	14312276.44	763639.56	N 39 22 10.76	W 108 6 7.70
	7630.00	1.20	174.87	7554.97	320.16	320.16	-808.71	0.13	14312274.52	763639.65	N 39 22 10.74	W 108 6 7.70
	7726.00	1.47	161.23	7650.94	317.99	317.99	-808.23	0.43	14312272.35	763640.14	N 39 22 10.72	W 108 6 7.70
	7821.00	1.76	161.90	7745.90	315.45	315.45	-807.38	0.31	14312269.81	763640.98	N 39 22 10.70	W 108 6 7.68
	7916.00	1.25	194.35	7840.87	313.06	313.06	-807.18	1.02	14312267.42	763641.18	N 39 22 10.67	W 108 6 7.68
	8011.00	1.16	190.87	7935.85	311.11	311.11	-807.62	0.12	14312265.47	763640.74	N 39 22 10.65	W 108 6 7.68
	8107.00	1.48	179.41	8031.83	308.92	308.92	-807.79	0.43	14312263.27	763640.57	N 39 22 10.63	W 108 6 7.69
	8202.00	1.63	174.93	8126.79	306.34	306.34	-807.66	0.20	14312260.70	763640.70	N 39 22 10.61	W 108 6 7.68
	8298.00	1.93	172.68	8222.75	303.38	303.38	-807.33	0.32	14312257.73	763641.03	N 39 22 10.58	W 108 6 7.68
	8324.00	1.95	174.09	8248.73	302.51	302.51	-807.23	0.20	14312256.86	763641.13	N 39 22 10.57	W 108 6 7.68
	8400.00	2.30	174.68	8324.68	299.70	299.70	-806.96	0.46	14312254.05	763641.41	N 39 22 10.54	W 108 6 7.67
	8433.00	2.45	174.89	8357.65	298.34	298.34	-806.83	0.46	14312252.69	763641.53	N 39 22 10.53	W 108 6 7.67
	8466.00	2.56	175.41	8390.62	296.90	296.90	-806.71	0.34	14312251.25	763641.65	N 39 22 10.51	W 108 6 7.67
	8498.00	3.26	195.53	8422.58	295.32	295.32	-806.90	3.84	14312249.66	763641.47	N 39 22 10.50	W 108 6 7.67
	8530.00	4.92	215.23	8454.50	293.32	293.32	-807.93	6.72	14312247.66	763640.43	N 39 22 10.48	W 108 6 7.68
	8562.00	7.18	222.32	8486.32	290.72	290.72	-810.07	7.43	14312245.06	763638.29	N 39 22 10.45	W 108 6 7.71
	8595.00	9.71	221.65	8518.96	287.11	287.11	-813.31	7.67	14312241.46	763635.05	N 39 22 10.42	W 108 6 7.75
	8627.00	12.32	220.04	8550.36	282.48	282.48	-817.30	8.21	14312236.82	763631.06	N 39 22 10.37	W 108 6 7.80
	8659.00	15.38	222.49	8581.43	276.74	276.74	-822.36	9.73	14312231.08	763625.99	N 39 22 10.31	W 108 6 7.86
	8692.00	18.82	224.81	8612.97	269.73	269.73	-829.07	10.63	14312224.07	763619.28	N 39 22 10.24	W 108 6 7.94
	8724.00	22.08	225.63	8642.95	261.86	261.86	-837.01	10.23	14312216.19	763611.34	N 39 22 10.16	W 108 6 8.04
	8757.00	24.84	226.70	8673.22	252.77	252.77	-846.49	8.46	14312207.10	763601.85	N 39 22 10.07	W 108 6 8.15
	8789.00	28.40	228.18	8701.82	243.08	243.08	-857.06	11.32	14312197.41	763591.28	N 39 22 9.97	W 108 6 8.28
	8821.00	31.23	230.38	8729.58	232.72	232.72	-869.12	9.48	14312187.03	763579.21	N 39 22 9.86	W 108 6 8.43
	8853.00	34.58	231.26	8756.44	221.74	221.74	-882.60	10.57	14312176.05	763565.73	N 39 22 9.75	W 108 6 8.60
	8886.00	38.17	232.21	8783.01	209.63	209.63	-897.97	11.01	14312163.93	763550.35	N 39 22 9.62	W 108 6 8.79
	8919.00	41.52	232.72	8808.34	196.75	196.75	-914.73	10.20	14312151.05	763533.58	N 39 22 9.49	W 108 6 9.00
	8951.00	43.70	233.29	8831.89	183.72	183.72	-932.04	6.92	14312138.01	763516.27	N 39 22 9.35	W 108 6 9.21
	8984.00	47.10	233.66	8855.06	169.74	169.74	-950.92	10.33	14312124.02	763497.38	N 39 22 9.21	W 108 6 9.45
	9016.00	50.41	234.92	8876.16	155.70	155.70	-970.46	10.76	14312109.98	763477.83	N 39 22 9.06	W 108 6 9.69
	9049.00	53.27	235.28	8896.54	140.86	140.86	-991.74	8.71	14312095.13	763456.54	N 39 22 8.91	W 108 6 9.95
	9081.00	56.88	234.48	8914.86	125.76	125.76	-1013.19	11.47	14312080.03	763435.08	N 39 22 8.75	W 108 6 10.22
	9113.00	60.52	234.19	8931.48	109.82	109.82	-1035.40	11.40	14312064.08	763412.86	N 39 22 8.59	W 108 6 10.50
	9145.00	63.97	234.58	8946.38	93.34	93.34	-1058.42	10.84	14312047.59	763389.83	N 39 22 8.42	W 108 6 10.78
	9177.00	67.93	233.56	8959.42	76.19	76.19	-1082.07	12.71	14312030.43	763366.16	N 39 22 8.24	W 108 6 11.07
	9210.00	71.58	234.41	8970.84	57.99	57.99	-1107.11	11.32				

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° ' '')	Longitude (E/W ° ° ' '')
	10064.00	90.74	246.31	8977.53	-343.79	-343.79	-1859.07	1.12	14311610.25	762591.80	N 39 22 3.83	W 108 6 20.74
	10160.00	90.74	247.66	8976.27	-381.32	-381.32	-1944.42	1.41	14311572.70	762503.41	N 39 22 3.43	W 108 6 21.85
	10258.00	90.71	248.92	8974.98	-417.57	-417.57	-2035.46	1.29	14311536.44	762412.32	N 39 22 3.04	W 108 6 22.99
	10355.00	90.96	250.54	8973.60	-451.17	-451.17	-2125.44	1.68	14311502.82	762321.30	N 39 22 2.68	W 108 6 24.13
	10453.00	90.96	251.73	8972.06	-482.85	-482.85	-2219.16	1.21	14311471.12	762228.53	N 39 22 2.13	W 108 6 25.30
	10551.00	90.96	253.24	8970.47	-512.34	-512.34	-2312.60	1.54	14311441.62	762135.05	N 39 22 2.51	W 108 6 26.48
	10647.00	90.95	254.44	8968.88	-539.06	-539.06	-2404.79	1.25	14311414.89	762042.81	N 39 22 1.71	W 108 6 27.64
	10743.00	91.14	254.42	8967.10	-564.82	-564.82	-2497.25	0.24	14311389.12	761950.30	N 39 22 1.13	W 108 6 28.80
	10840.00	91.14	253.94	8965.10	-591.26	-591.26	-2590.56	0.49	14311362.67	761856.95	N 39 22 1.14	W 108 6 29.98
	10937.00	91.23	253.07	8963.06	-618.79	-618.79	-2683.55	0.90	14311335.12	761763.92	N 39 22 0.83	W 108 6 31.15
	11034.00	91.11	252.51	8961.07	-647.49	-647.49	-2776.18	0.59	14311306.41	761671.24	N 39 22 0.12	W 108 6 32.32
	11130.00	91.11	251.58	8959.19	-677.07	-677.07	-2867.49	0.97	14311276.81	761579.89	N 39 22 0.19	W 108 6 33.46
	11228.00	91.18	250.80	8957.23	-708.67	-708.67	-2960.24	0.80	14311245.20	761487.10	N 39 21 59.85	W 108 6 34.63
	11325.00	91.06	250.42	8955.33	-740.86	-740.86	-3051.72	0.41	14311212.99	761395.58	N 39 21 59.50	W 108 6 35.78
	11423.00	91.96	250.36	8952.75	-773.74	-773.74	-3144.00	0.92	14311180.10	761303.25	N 39 21 59.14	W 108 6 36.94
	11520.00	92.07	250.83	8949.34	-805.95	-805.95	-3235.43	0.50	14311147.87	761211.77	N 39 21 58.80	W 108 6 38.09
	11617.00	91.91	251.09	8945.97	-837.57	-837.57	-3327.07	0.31	14311116.23	761120.09	N 39 21 58.45	W 108 6 39.24
	11713.00	92.11	250.21	8942.59	-869.36	-869.36	-3417.59	0.94	14311084.43	761029.53	N 39 21 58.11	W 108 6 40.38
	11811.00	92.97	249.07	8938.23	-903.42	-903.42	-3509.38	1.44	14311050.35	760937.70	N 39 21 57.14	W 108 6 41.53
	11908.00	93.14	244.90	8933.05	-941.29	-941.29	-3598.51	4.30	14311012.47	760848.53	N 39 21 56.34	W 108 6 42.65
	12005.00	93.19	241.47	8927.70	-984.97	-984.97	-3684.93	3.53	14310968.77	760762.06	N 39 21 56.87	W 108 6 43.73
	12051.00	93.14	240.35	8925.16	-1007.30	-1007.30	-3725.07	2.43	14310946.43	760721.91	N 39 21 56.44	W 108 6 44.23
	12158.00	93.13	239.59	8919.31	-1060.77	-1060.77	-3817.57	0.71	14310892.93	760629.93	N 39 21 56.06	W 108 6 45.39
	12254.00	93.13	238.09	8914.06	-1110.37	-1110.37	-3899.59	1.56	14310843.31	760547.30	N 39 21 55.56	W 108 6 46.41
	12352.00	93.51	237.70	8908.39	-1162.36	-1162.36	-3982.46	0.56	14310791.29	760464.39	N 39 21 55.02	W 108 6 47.44
	12449.00	93.33	235.69	8902.60	-1215.53	-1215.53	-4063.38	2.08	14310738.10	760383.43	N 39 21 54.47	W 108 6 48.45
	12547.00	93.44	234.96	8896.81	-1271.18	-1271.18	-4143.84	0.75	14310682.42	760302.94	N 39 21 53.89	W 108 6 49.45
	12643.00	93.51	238.23	8890.99	-1323.93	-1323.93	-4223.82	3.40	14310629.64	760222.92	N 39 21 53.34	W 108 6 50.44
	12741.00	92.71	241.23	8885.68	-1373.25	-1373.25	-4308.32	3.16	14310580.30	760138.37	N 39 21 52.83	W 108 6 51.49
	12838.00	92.92	244.60	8880.91	-1417.36	-1417.36	-4394.57	3.48	14310536.17	760052.09	N 39 21 52.36	W 108 6 52.57
	12934.00	93.19	247.79	8875.79	-1456.05	-1456.05	-4482.27	3.33	14310497.47	759964.35	N 39 21 51.95	W 108 6 53.67
	13030.00	93.23	252.41	8870.42	-1488.66	-1488.66	-4572.37	4.81	14310464.84	759874.21	N 39 21 51.60	W 108 6 54.80
	13126.00	93.67	253.88	8864.64	-1516.45	-1516.45	-4664.07	1.60	14310437.04	759782.46	N 39 21 51.29	W 108 6 55.96
	13221.00	93.81	254.10	8858.44	-1542.59	-1542.59	-4755.19	0.27	14310410.88	759691.29	N 39 21 51.00	W 108 6 57.11
	13317.00	93.44	253.96	8852.37	-1568.95	-1568.95	-4847.30	0.41	14310384.51	759599.14	N 39 21 50.71	W 108 6 58.27
	13412.00	93.32	254.23	8846.77	-1594.94	-1594.94	-4938.51	0.31	14310358.51	759507.89	N 39 21 50.42	W 108 6 59.42
	13507.00	93.17	255.19	8841.39	-1619.95	-1619.95	-5030.00	1.02	14310333.48	759416.36	N 39 21 50.14	W 108 7 0.57
	13603.00	93.27	255.86	8836.00	-1643.91	-1643.91	-5122.80	0.70	14310309.51	759323.51	N 39 21 49.88	W 108 7 1.74
	13700.00	92.82	254.99	8830.85	-1668.29	-1668.29	-5216.55	1.01	14310285.13	759229.72	N 39 21 49.60	W 108 7 2.92
	13795.00	92.88	255.41	8826.12	-1692.52	-1692.52	-5308.28	0.45	14310260.88	759137.94	N 39 21 49.33	W 108 7 4.08
	13891.00	92.51	256.80	8821.61	-1715.55	-1715.55	-5401.37	1.50	14310237.84	759044.81	N 39 21 49.07	W 108 7 5.25
	13986.00	91.99	256.38	8817.88	-1737.57	-1737.57	-5493.71	0.70	14310215.81	758952.43	N 39 21 48.82	W 108 7 6.42
	14083.00	91.27	256.54	8815.12	-1760.27	-1760.27	-5587.97	0.76	14310193.10	758868.12	N 39 21 48.57	W 108 7 7.61
	14181.00	90.79	256.34	8813.36	-1783.24	-1783.24	-5683.22	0.53	14310170.12	758782.82	N 39 21 48.31	W 108 7 8.81
	14278.00	90.00	256.55	8812.69	-1805.97	-1805.97	-5777.52	0.84	14310147.37	758698.48	N 39 21 48.06	W 108 7 10.00
	14375.00	89.90	256.38	8812.78	-1828.68	-1828.68	-5871.82	0.20	14310124.66	758614.13	N 39 21 47.79	W 108 7 11.19
	14471.00	89.49	256.35	8813.29	-1851.31	-1851.31	-5965.12	0.43	14310102.02	758530.79	N 39 21 47.54	W 108 7 12.37
	14521.00	89.49	256.35	8813.73	-1863.11	-1863.11	-6013.70	0.00	14310090.22	758443.18	N 39 21 47.31	W 108 7 12.98

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)	Survey Tool Type	Borehole / Survey
	0.000	22.000	Act Stns	SLB_MWD-STD-Depth Only	Original Hole / Keinath Federal 9-12H MWD 0' to 14521' Definitive
	22.000	14471.000	Act Stns	SLB_MWD-STD	Original Hole / Keinath Federal 9-12H MWD 0' to 14521' Definitive
	14471.000	14521.000	Act Stns	SLB_BLIND+TREND	Original Hole / Keinath Federal 9-12H MWD 0' to 14521' Definitive