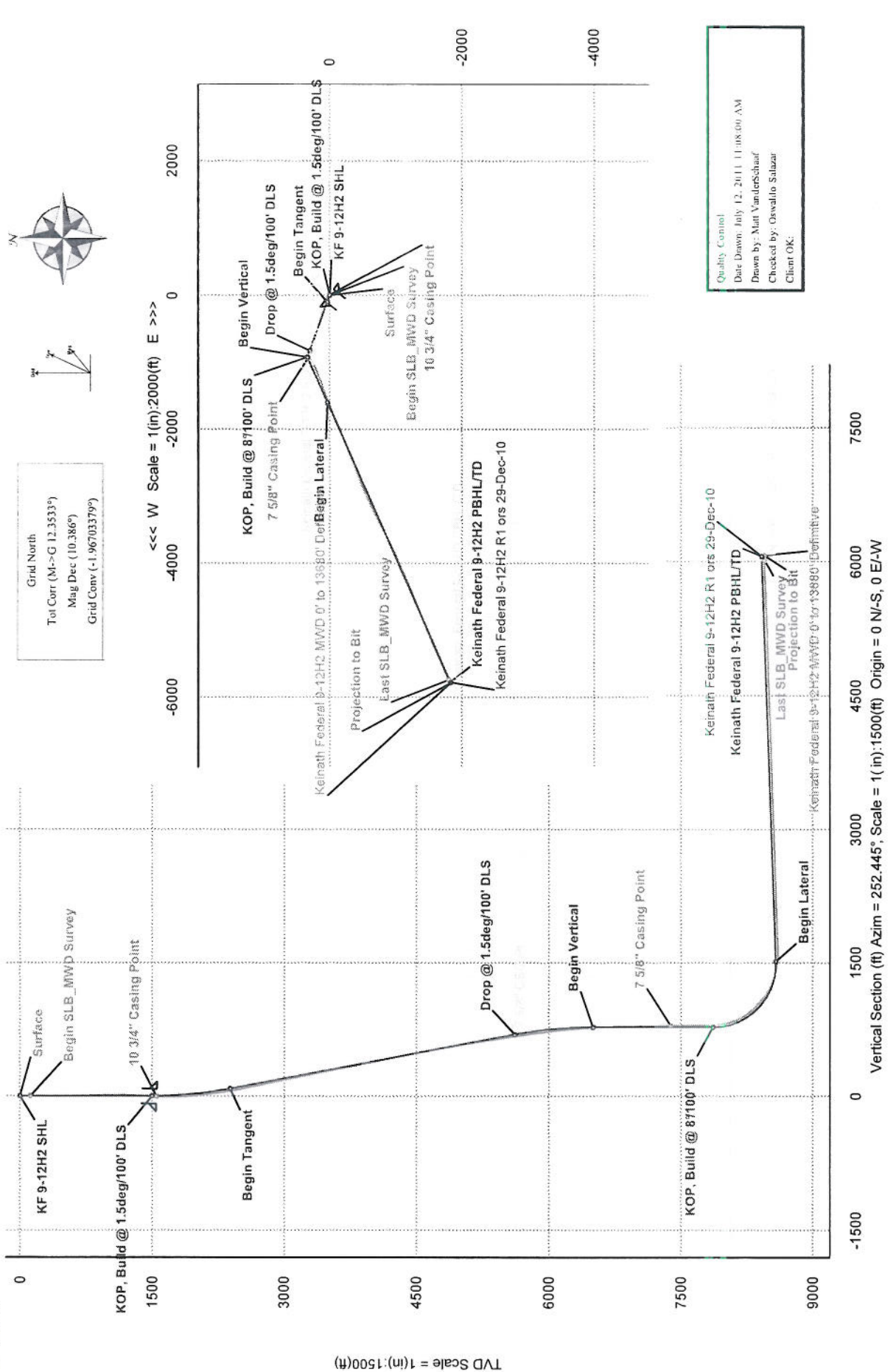


WELL	Keinath Federal 9-12H2	FIELD	CO, Garfield County (NAD 83 UTM 13)	STRUCTURE	Encana 10-08S-96W (C100U Pad)
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Magnetic Parameters Model: BGM 2011 Dip: 85.61° Mag Dec: 10.38°	Date PS: July 12, 2011 5214.451	Surface Location Lat: N 39 22 7.205 Lon: W 108 5 51.271	NAD83 UTM Zone 13N US Feet Northing: 1431884.35 RUS Easting: 76446.49 RUS Grid Conv: -1.96703379° Scale Fact: 1.00047181	Miscellaneous Sht: Keinath Federal 9-12H2 Plan: Keinath Federal 9-12H2 MWD 0' to 13680' Definitive July 12, 2011 T.O. Ref: RHE/SS04 above MSL
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PVA



Quality Control
Date Drawn: July 12, 2011 11:08:00 AM
Drawn by: Matt Vanderschaaf
Checked by: Oswaldo Salazar
Client OK:



Keinath Federal 9-12H2 MWD 0' to 13680' Definitive Survey Report (Def Survey)



Report Date: July 12, 2011 - 11:04 AM
Client: Encana Oil & Gas (USA) Inc.
Field: CO, Garfield County (NAD 83 UTM 13) Encana 2010
Structure / Slot: Encana 10-085-96W (C100U Pad) - Nabors M-11
Well: Keinath Federal 9-12H2
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Keinath Federal 9-12H2 MWD 0' to 13680' Definitive
Survey Date: July 12, 2011
Tort / AHD / DDI / ERD Ratio: 181.956 / 5351.813 ft / 6.254 / 0.738
Coordinate Reference System: NAD83 UTM Zone 13N, US Feet
Location Lat / Long: N 39°22' 7.20500" W 108° 5' 57.27102"
Location Grid N/E Y/X: N 14311888.347 RUS, E 764446.486 RUS
CRS Grid Convergence Angle: -1.96703379°
Grid Scale Factor: 1.00047781

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 252.445° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RWD
TVD Reference Elevation: 5580.000 ft above MSL
Sealed / Ground Elevation: 5588.000 ft above MSL
Magnetic Declination: 10.388°
Total Field Strength: 52134.388 nT
Magnetic Dip Angle: 65.613°
Declination Date: July 12, 2011
Magnetic Declination Model: BIGGM 2011
North Reference: Grid North
Grid Convergence Used: -1.967°
Total Corr Mag North-Grid North: 12.353°
Local Coord Reference 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 ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	14311888.35	764446.49	N 39 22 7.21	W 108 5 57.27
Begin SLB_MWD Survey	117.00	0.09	318.00	117.00	0.04	0.07	-0.05	0.08	14311888.42	764446.42	N 39 22 7.21	W 108 5 57.27
	170.00	0.29	7.00	170.00	0.00	0.23	-0.07	0.45	14311888.58	764446.41	N 39 22 7.21	W 108 5 57.27
	200.00	0.00	12.40	200.00	-0.03	0.31	-0.06	0.97	14311888.65	764446.42	N 39 22 7.21	W 108 5 57.27
	293.00	0.21	305.17	293.00	0.07	0.41	-0.20	0.23	14311888.75	764446.28	N 39 22 7.21	W 108 5 57.27
	385.00	0.18	2.15	385.00	0.12	0.65	-0.34	0.20	14311888.99	764446.15	N 39 22 7.21	W 108 5 57.28
	477.00	0.25	253.35	477.00	0.28	0.73	-0.52	0.38	14311889.08	764445.96	N 39 22 7.21	W 108 5 57.28
	567.00	0.40	268.40	567.00	0.77	0.67	-1.02	0.19	14311889.02	764445.45	N 39 22 7.21	W 108 5 57.28
	659.00	0.95	286.31	658.99	1.72	0.87	-2.08	0.63	14311889.22	764444.41	N 39 22 7.21	W 108 5 57.30
	750.00	1.05	278.05	749.98	3.10	1.20	-3.63	0.19	14311889.55	764442.86	N 39 22 7.22	W 108 5 57.32
	842.00	1.08	254.61	841.96	4.72	1.09	-5.30	0.47	14311889.44	764441.19	N 39 22 7.21	W 108 5 57.34
	934.00	0.99	239.00	933.95	6.36	0.45	-6.81	0.32	14311888.80	764439.67	N 39 22 7.21	W 108 5 57.36
	1025.00	0.76	189.59	1024.94	7.40	-0.55	-7.59	0.84	14311887.80	764438.89	N 39 22 7.20	W 108 5 57.37
	1122.00	0.74	122.72	1121.93	7.29	-1.52	-7.17	0.85	14311886.82	764439.31	N 39 22 7.19	W 108 5 57.36
	1218.00	1.15	76.46	1217.92	5.94	-1.63	-5.71	0.87	14311886.72	764440.77	N 39 22 7.19	W 108 5 57.34
	1313.00	1.73	57.32	1312.89	3.60	-0.63	-3.58	0.79	14311887.71	764442.91	N 39 22 7.20	W 108 5 57.32
	1409.00	2.52	56.89	1408.82	0.17	1.30	-0.59	0.82	14311889.05	764445.90	N 39 22 7.22	W 108 5 57.28
	1504.00	2.83	40.02	1503.72	-3.82	4.24	2.67	0.89	14311892.59	764449.15	N 39 22 7.25	W 108 5 57.24
10 3/4" Casing Point	1549.00	3.03	37.88	1548.66	-5.74	6.03	4.11	0.50	14311894.38	764450.60	N 39 22 7.27	W 108 5 57.22
	1577.00	3.15	36.69	1576.62	-6.97	7.23	5.02	0.50	14311895.58	764451.51	N 39 22 7.28	W 108 5 57.21
	1618.00	3.15	29.91	1617.56	-8.71	9.11	6.26	0.91	14311897.46	764452.75	N 39 22 7.30	W 108 5 57.20
	1714.00	3.86	343.49	1713.40	-10.72	14.49	6.66	2.96	14311902.85	764453.15	N 39 22 7.35	W 108 5 57.19
	1809.00	5.26	318.74	1808.10	-9.03	20.83	2.88	2.51	14311909.19	764449.39	N 39 22 7.41	W 108 5 57.24
	1905.00	6.44	303.41	1903.61	-3.86	27.11	-4.52	2.03	14311915.47	764441.96	N 39 22 7.47	W 108 5 57.34
	2001.00	8.62	294.70	1998.78	4.85	33.08	-15.55	2.56	14311921.44	764430.93	N 39 22 7.53	W 108 5 57.48
	2096.00	9.33	292.50	2092.61	16.02	39.00	-29.14	0.83	14311927.36	764417.34	N 39 22 7.58	W 108 5 57.66
	2192.00	9.48	292.74	2187.32	28.00	45.03	-43.62	0.16	14311933.40	764402.85	N 39 22 7.64	W 108 5 57.85
	2288.00	10.14	287.24	2281.92	40.97	50.59	-58.98	1.19	14311938.96	764387.48	N 39 22 7.68	W 108 5 58.04
	2383.00	10.77	286.11	2375.34	55.23	55.54	-75.49	0.70	14311943.91	764370.96	N 39 22 7.73	W 108 5 58.26
	2479.00	12.25	284.05	2469.41	71.37	60.50	-93.99	1.60	14311948.87	764352.45	N 39 22 7.77	W 108 5 58.49
	2575.00	13.31	282.97	2563.03	89.56	65.45	-114.64	1.13	14311953.83	764331.79	N 39 22 7.81	W 108 5 58.76
	2670.00	14.26	288.15	2655.30	108.48	71.55	-136.42	1.54	14311959.93	764310.00	N 39 22 7.87	W 108 5 59.04
	2765.00	14.25	287.11	2747.37	127.60	78.63	-158.71	0.27	14311967.02	764287.70	N 39 22 7.93	W 108 5 59.33
	2861.00	14.21	285.98	2840.43	147.14	85.35	-181.33	0.29	14311973.74	764265.07	N 39 22 7.99	W 108 5 59.62
	2955.00	13.24	281.30	2931.74	166.19	90.64	-202.98	1.57	14311979.03	764243.41	N 39 22 8.03	W 108 5 59.89
	3050.00	13.03	284.51	3024.26	184.79	95.45	-224.01	0.80	14311983.85	764222.36	N 39 22 8.07	W 108 6 0.16
	3146.00	13.97	286.91	3117.61	203.52	101.54	-245.58	1.14	14311989.63	764200.79	N 39 22 8.12	W 108 6 0.44
	3241.00	14.46	287.50	3209.70	222.68	108.44	-267.86	0.54	14311996.84	764178.50	N 39 22 8.19	W 108 6 0.73
	3336.00	13.99	284.98	3301.79	242.07	114.97	-290.27	0.82	14312003.38	764156.08	N 39 22 8.24	W 108 6 1.02
	3431.00	14.22	289.00	3393.92	261.13	121.74	-312.39	1.06	14312010.15	764133.94	N 39 22 8.30	W 108 6 1.30
	3525.00	14.13	290.79	3485.06	279.40	129.57	-334.04	0.48	14312017.98	764112.29	N 39 22 8.37	W 108 6 1.58
	3621.00	13.19	287.16	3578.35	297.59	136.96	-355.46	1.32	14312025.38	764090.86	N 39 22 8.44	W 108 6 1.85
	3716.00	13.59	287.85	3670.76	315.60	143.58	-376.44	0.45	14312032.00	764069.87	N 39 22 8.50	W 108 6 2.12
	3812.00	13.92	290.42	3764.01	333.89	151.07	-397.99	0.72	14312039.49	764048.30	N 39 22 8.56	W 108 6 2.40
	3908.00	14.09	289.73	3857.16	352.29	159.05	-419.82	0.25	14312047.47	764026.47	N 39 22 8.62	W 108 6 2.69
	4003.00	14.21	286.10	3949.28	371.20	166.18	-441.90	0.94	14312054.61	764004.37	N 39 22 8.70	W 108 6 2.97
	4098.00	13.79	286.51	4041.46	390.28	172.63	-463.96	0.45	14312061.06	763982.30	N 39 22 8.75	W 108 6 3.25
	4194.00	14.45	287.62	4134.55	409.55	179.51	-486.35	0.74	14312067.94	763959.91	N 39 22 8.81	W 108 6 3.54
	4289.00	14.63	288.54	4226.51	428.94	186.91	-509.02	0.31	14312075.35	763937.22	N 39 22 8.86	W 108 6 3.83
	4385.00	14.92	287.93	4319.34	448.80	194.57	-532.27	0.34	14312083.01	763913.95	N 39 22 8.95	W 108 6 4.13
	4480.00	14.38	288.80	4411.25	468.49	201.75	-555.20	0.64	14312090.19	763891.02	N 39 22 9.01	W 108 6 4.42
	4575.00	13.42	289.35	4503.47	487.05	208.81	-576.90	1.20	14312097.26	763869.31	N 39 22 9.07	W 108 6 4.70
	4671.00	13.44	289.34	4596.84	504.88	216.20	-597.94	0.02	14312104.65	763848.27	N 39 22 9.14	W 108 6 4.97
	4767.00	12.98	290.33	4690.30	522.31	223.64	-618.57	0.53	14312112.09	763827.62	N 39 22 9.20	W 108 6 5.24
	4863.00	12.33	294.40	4783.97	538.44	231.62	-638.02	1.15	14312120.08	763808.17	N 39 22 9.28	W 108 6 5.49
	4958.00	11.62	292.90	4876.90	553.27	238.53	-656.07	0.82	14312127.99	763790.11	N 39 22 9.35	W 108 6 5.72
	5054.00	11.56	290.96	4970.95	568.15	245.73	-673.96	0.41	14312135.20	763772.21	N 39 22 9.41	W 108 6 5.96
	5150.00	11.99	289.79	5064.93	583.60	253.55	-692.32	0.51	14312142.02	763753.84	N 39 22 9.47	W 108 6 6.19
	5245.00	12.01	286.22	5157.85	599.66	259.65	-711.10	0.78	14312148.12	763735.05	N 39 22 9.53	W 108 6 6.43
	5341.00	11.38	288.47	5251.86	615.63	265.44	-729.67	0.81	14312153.92	763716.47	N 39 22 9.58	W 108 6 6.67
	5436.00	11.12	287.85	5345.03	630.67	271.22	-747.28	0.30	14312159.70	763698.85	N 39 22 9.63	W 108 6 6.90
	5532.00	10.68	286.82	5439.30	645.56	276.63	-764.61	0.50	14312165.11	763681.51	N 39 22 9.68	W 108 6 7.12
	5628.00	10.62	285.49	5533.65	660.32	281.57	-781.65	0.26	14312170.05	763664.47	N 39 22 9.72	W 108 6 7.34
	5723.00	10.16	286.92	5627.09	674.56	286.35	-798.10	0.56	14312174.83	763648.01	N 39 22 9.76	W 108 6 7.55
	5818.00	9.50	284.59	5720.69	688.11	290.76	-813.70	0.81	14312179.24	763632.40	N 39 22 9.80	W 108 6 7.75
	5914.00	8.94	281.68	5815.45	701.33	294.27	-828.68	0.76	14312182.75	763617.42	N 39 22 9.83	W 108 6 7.95
	6008.00	8.76	281.61	5908.34	713.95	297.18	-842.84	0.19	14312185.67	763603.25	N 39 22 9.85	W 108 6 8.13
	6103.00	8.48	288.72	6002.26	725.91	300.89	-856.56	1.16	14312189.38	763589.52	N 39 22 9.89	W 108 6 8.30
	6198.00	7.99	287.99	6096.28	736.93	305.18	-869.47	0.53	14312193.67	763576.60	N 39 22 9.92	W 108 6 8.47
	6293.00	7.16	290.99	6190.46	746.94	309.34	-881.28	0.97	14312197.83	763564.79	N 39 22 9.96	W 108 6 8.62
	6388.00	6.83	287.85	6284.75	756.17	313.19	-892.19	0.53	14312201.68	763553.88	N 39 22 10.00	W 108 6 8.76
	6483.00	5.81	295.71	6379.17	764.28	317.01						

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 ° ° ' '')
	6865.00	1.13	267.85	6760.50	779.24	325.69	-920.34	0.83	14312214.20	763525.71	N 39 22 10.11	W 108 6 9.13
	6960.00	1.34	262.20	6855.48	781.24	325.51	-922.38	0.26	14312214.01	763523.67	N 39 22 10.11	W 108 6 9.15
	7055.00	0.97	277.76	6950.46	783.06	325.47	-924.28	0.51	14312213.97	763521.77	N 39 22 10.11	W 108 6 9.18
	7151.00	1.00	264.86	7046.45	784.62	325.50	-925.92	0.23	14312214.00	763520.13	N 39 22 10.11	W 108 6 9.20
	7246.00	1.22	260.61	7141.43	786.43	325.26	-927.74	0.25	14312213.76	763518.31	N 39 22 10.10	W 108 6 9.22
	7342.00	1.31	239.60	7237.41	788.51	324.54	-929.69	0.49	14312213.04	763516.35	N 39 22 10.10	W 108 6 9.24
	7436.00	1.41	241.61	7331.38	790.69	323.45	-931.64	0.12	14312211.95	763514.40	N 39 22 10.08	W 108 6 9.27
	7458.00	1.34	227.81	7353.37	791.19	323.14	-932.07	1.53	14312211.64	763513.98	N 39 22 10.08	W 108 6 9.27
7 5/8" Casing Point	7490.00	1.38	216.61	7385.36	791.84	322.58	-932.57	0.84	14312211.08	763513.47	N 39 22 10.07	W 108 6 9.28
	7513.00	1.44	209.14	7408.36	792.28	322.11	-932.88	0.84	14312210.61	763513.16	N 39 22 10.07	W 108 6 9.28
	7611.00	1.65	190.25	7508.32	793.83	319.64	-933.73	0.58	14312208.14	763512.31	N 39 22 10.05	W 108 6 9.29
	7706.00	2.10	186.25	7601.27	795.17	316.57	-934.16	0.49	14312205.07	763511.88	N 39 22 10.01	W 108 6 9.30
	7804.00	2.40	185.66	7699.19	796.71	312.74	-934.56	0.31	14312201.24	763511.48	N 39 22 9.98	W 108 6 9.30
	7899.00	2.66	182.53	7794.10	798.25	308.56	-934.88	0.31	14312197.05	763511.19	N 39 22 9.94	W 108 6 9.30
	7932.00	2.62	187.49	7827.07	798.83	307.05	-934.99	0.70	14312195.54	763511.05	N 39 22 9.92	W 108 6 9.30
	7964.00	2.96	211.65	7859.03	799.77	305.62	-935.52	3.79	14312194.11	763510.52	N 39 22 9.91	W 108 6 9.31
	7996.00	4.25	222.23	7890.97	801.42	304.04	-936.75	4.52	14312192.53	763509.29	N 39 22 9.89	W 108 6 9.32
	8028.00	6.51	227.65	7922.82	804.09	301.94	-938.88	7.23	14312190.43	763507.15	N 39 22 9.87	W 108 6 9.35
	8061.00	9.01	231.13	7955.52	808.19	299.05	-942.28	7.70	14312187.54	763503.76	N 39 22 9.84	W 108 6 9.39
	8093.00	11.39	233.01	7987.01	813.51	295.58	-946.75	7.51	14312184.07	763499.28	N 39 22 9.80	W 108 6 9.45
	8126.00	13.92	234.68	8019.21	820.36	291.32	-952.60	7.75	14312179.81	763493.44	N 39 22 9.76	W 108 6 9.52
	8191.00	16.90	233.52	8081.54	837.78	280.55	-967.46	7.68	14312169.03	763478.56	N 39 22 9.65	W 108 6 9.71
	8242.00	23.27	233.38	8129.11	855.13	269.64	-982.20	8.57	14312158.11	763453.81	N 39 22 9.53	W 108 6 9.89
	8290.00	27.53	233.56	8172.46	874.60	257.39	-998.75	8.88	14312145.86	763447.26	N 39 22 9.41	W 108 6 10.09
	8335.00	30.95	237.38	8211.73	895.62	244.97	-1016.87	8.65	14312133.43	763429.14	N 39 22 9.28	W 108 6 10.32
	8386.00	35.40	240.56	8254.41	922.75	230.63	-1040.79	9.37	14312119.09	763405.20	N 39 22 9.13	W 108 6 10.62
	8426.00	40.01	244.28	8286.05	946.84	219.35	-1062.48	12.85	14312107.80	763383.50	N 39 22 9.01	W 108 6 10.89
	8477.00	43.63	248.61	8324.06	980.64	205.81	-1093.65	9.08	14312094.25	763352.32	N 39 22 8.87	W 108 6 11.28
	8509.00	44.20	249.78	8347.11	1002.80	197.93	-1114.40	3.10	14312086.37	763331.56	N 39 22 8.78	W 108 6 11.54
	8542.00	46.46	250.00	8370.31	1026.24	189.86	-1136.43	6.86	14312078.30	763309.51	N 39 22 8.69	W 108 6 11.82
	8574.00	47.70	249.80	8392.10	1049.65	181.81	-1158.44	3.90	14312070.24	763287.50	N 39 22 8.61	W 108 6 12.09
	8606.00	48.97	248.87	8413.37	1073.52	173.37	-1180.80	4.52	14312061.80	763265.12	N 39 22 8.52	W 108 6 12.37
	8638.00	51.03	247.23	8433.94	1097.96	164.20	-1203.54	7.54	14312052.63	763242.38	N 39 22 8.42	W 108 6 12.66
	8670.00	52.78	246.29	8453.88	1123.02	154.26	-1226.67	5.94	14312042.68	763219.23	N 39 22 8.31	W 108 6 12.95
	8698.00	55.26	246.38	8470.13	1145.54	145.17	-1247.43	8.86	14312033.58	763198.47	N 39 22 8.22	W 108 6 13.21
	8765.00	59.55	250.12	8506.23	1201.81	124.30	-1299.84	7.94	14312012.71	763146.02	N 39 22 7.99	W 108 6 13.87
	8810.00	64.52	250.88	8527.32	1241.52	111.05	-1337.30	11.14	14311999.45	763108.55	N 39 22 7.85	W 108 6 14.34
	8862.00	69.52	250.19	8547.62	1289.36	95.09	-1382.42	9.69	14311983.49	763063.41	N 39 22 7.67	W 108 6 14.90
	8894.00	71.93	250.25	8558.18	1319.54	84.87	-1410.84	7.53	14311973.26	763034.97	N 39 22 7.56	W 108 6 15.26
	8927.00	74.13	250.10	8567.81	1351.07	74.17	-1440.53	6.68	14311962.55	763005.27	N 39 22 7.45	W 108 6 15.64
	8959.00	76.26	249.62	8575.99	1381.98	63.52	-1469.58	6.81	14311951.89	762976.21	N 39 22 7.33	W 108 6 16.00
	8992.00	78.41	249.10	8583.22	1414.13	52.17	-1499.70	6.69	14311940.54	762946.07	N 39 22 7.21	W 108 6 16.38
	9025.00	80.02	248.29	8589.40	1446.47	40.39	-1529.90	5.44	14311928.75	762915.85	N 39 22 7.08	W 108 6 16.76
	9057.00	81.52	248.33	8594.53	1477.97	28.72	-1559.25	4.69	14311917.08	762886.49	N 39 22 6.96	W 108 6 17.13
	9089.00	83.63	247.76	8598.66	1509.61	16.85	-1588.68	6.83	14311905.21	762857.05	N 39 22 6.83	W 108 6 17.50
	9121.00	85.42	247.33	8601.72	1541.35	4.69	-1618.12	5.75	14311893.03	762827.60	N 39 22 6.70	W 108 6 17.86
	9153.00	87.35	247.05	8603.74	1573.15	-7.70	-1647.56	6.09	14311880.65	762798.15	N 39 22 6.57	W 108 6 18.23
	9185.00	89.62	246.98	8604.58	1604.99	-20.19	-1677.00	7.10	14311868.15	762768.68	N 39 22 6.44	W 108 6 18.60
	9217.00	91.89	246.89	8604.16	1636.84	-32.72	-1706.44	7.10	14311855.61	762739.23	N 39 22 6.30	W 108 6 18.97
	9248.00	92.51	247.22	8602.97	1667.68	-44.80	-1734.97	2.27	14311843.53	762710.69	N 39 22 6.17	W 108 6 19.33
	9345.00	93.06	247.17	8598.26	1764.16	-82.35	-1824.28	0.57	14311805.96	762621.34	N 39 22 5.77	W 108 6 20.45
	9392.00	92.27	246.22	8596.07	1810.87	-100.92	-1867.40	2.63	14311787.38	762578.20	N 39 22 5.57	W 108 6 20.99
	9495.00	91.58	247.51	8592.61	1913.32	-141.37	-1962.06	1.42	14311746.91	762483.49	N 39 22 5.14	W 108 6 22.18
	9591.00	91.48	247.70	8590.05	2008.94	-177.93	-2050.79	0.22	14311710.33	762394.72	N 39 22 4.75	W 108 6 23.29
	9687.00	91.51	247.80	8587.54	2104.59	-214.27	-2139.61	0.11	14311673.98	762305.86	N 39 22 4.36	W 108 6 24.40
	9784.00	91.41	248.42	8585.07	2201.28	-250.42	-2229.58	0.65	14311637.81	762215.84	N 39 22 3.97	W 108 6 25.53
	9879.00	92.00	248.80	8582.25	2296.02	-285.05	-2318.00	0.74	14311603.16	762127.38	N 39 22 3.60	W 108 6 26.64
	9975.00	92.06	249.14	8578.84	2391.79	-319.48	-2407.55	0.36	14311568.71	762037.79	N 39 22 3.23	W 108 6 27.77
	10071.00	92.00	248.44	8575.44	2487.53	-354.19	-2496.99	0.73	14311533.99	761948.31	N 39 22 2.86	W 108 6 28.89
	10166.00	92.03	248.53	8572.10	2582.25	-389.01	-2585.32	0.10	14311499.15	761859.94	N 39 22 2.48	W 108 6 30.00
	10262.00	92.00	248.85	8568.73	2677.98	-423.88	-2674.70	0.33	14311464.27	761770.52	N 39 22 2.11	W 108 6 31.12
	10358.00	91.99	248.05	8565.39	2773.69	-459.12	-2763.93	0.83	14311429.01	761681.24	N 39 22 1.73	W 108 6 32.24
	10456.00	92.06	246.75	8561.02	2871.25	-496.75	-2854.35	1.33	14311391.36	761590.78	N 39 22 1.33	W 108 6 33.38
	10553.00	92.03	246.05	8556.46	2967.64	-535.56	-2943.18	0.72	14311352.53	761501.91	N 39 22 0.91	W 108 6 34.49
	10649.00	92.13	245.69	8554.08	3062.95	-574.78	-3030.73	0.39	14311313.29	761414.31	N 39 22 0.50	W 108 6 35.59
	10746.00	91.99	244.78	8551.49	3159.12	-615.39	-3118.75	0.95	14311272.67	761326.25	N 39 22 0.07	W 108 6 36.69
	10844.00	91.89	243.25	8548.17	3256.00	-658.30	-3206.79	1.56	14311229.73	761238.17	N 39 21 59.61	W 108 6 37.79
	10939.00	92.00	242.58	8544.95	3349.64	-701.53	-3291.32	0.71	14311186.48	761153.60	N 39 21 59.16	W 108 6 38.85
	11036.00	91.89	243.05	8541.66	3445.21	-745.82	-3377.56	0.50	14311142.17	761067.32	N 39 21 58.69	W 108 6 39.93
	11132.00	91.96	242.78	8538.43	3539.84	-789.50	-3462.98	0.29	14311098.47	760981.85	N 39 21 58.23	W 108 6 40.99
	11229.00	91.96	242.84	8535.11	3635.41	-833.80	-3549.21	0.06	14311054.15	760895.58	N 39 21 57.76	W 108 6 42.07
	11327.00	92.03	243.15	8531.70	3732.02	-878.27	-3636.48	0.32	14311009.66	760808.28	N 39 21 57.29	W 108 6 43.16
	11424.00	91.96	243.34	8528.33	3827.72	-921.91	-3723.04	0.21	14310965.99	760721.68	N 39 21 56.83	W 108 6 44.24
	11520.00	92.06	244.04	8524.96	3922.54	-964.44	-3809.04	0.74	14310923.45	760635.63	N 39 21 56.38	W 108 6 45.32
	11617.00	91.89	244.60	8521.62	4018.51	-1006.45	-3896.41	0.60	14310881.42	760548.23	N 39 21 55.94	W 108 6 46.41
	11714.00	91.96	245.12	8518.36	4114.61	-1047.63	-3984.17	0.54	14310840.22			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (1100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S, ° ' ")	Longitude (E/W, ° ' ")
Last SLB_MWD	13624.00	91.93	244.87	8451.26	6013.73	-1800.83	-5737.78	0.47	14310086.66	758705.98	N 39 21 47.46	W 108 7 9.49
Survey												
Projection to Bit	13680.00	91.93	244.87	8449.37	6069.21	-1824.60	-5788.45	0.00	14310062.88	758655.28	N 39 21 47.21	W 108 7 10.13

Survey Type: Def Survey

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

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 9-12H2 MWD 0' to 13680' Definitive
	22.000	13680.000	Act Stns	SLB_MWD-STD	Original Hole / Keinath Federal 9-12H2 MWD 0' to 13680' Definitive