

Deviation / Directional Survey Report

Directional Drilling Company: Schlumberger Anadrill
Directional Drillers: Dwight McClellan, Francois Coquerie
Measured While Drilling (MWD) Hands: Ian Simpson, Claude Tarditi
Survey Type: magnetic
Survey Mode: MWD
Survey Date: Feb 27, 2015
Survey Calculation Method: minimum curvature
Target Azimuth: 340.00 °
Dog Leg Severity Characteristic: 30.00

Survey Tie-In Information

Tie-In Co-Ordinates

Latitude: 0.12148
Longitude: 10.0577
N / S: 245.45 meters North of the South boundary of Sec. 25-45-12 W4M
E / W: 25.45 meters East of the West boundary of Sec. 25-45-12 W4M

Measured Depth	T.V.D.	Drift Angle (°)	Azimuth (°)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
10.00	10.00	0.000	0.00	0.00	0.00	0.00	0.00

Kick-Off (Whipstock) Information

Kick-Off Co-Ordinates

Latitude: 0.12148
Longitude: 10.0577
N / S: 245.28 meters North of the South boundary of Sec. 25-45-12 W4M
E / W: 26.08 meters East of the West boundary of Sec. 25-45-12 W4M

Measured Depth	T.V.D.	Drift Angle (°)	Azimuth (°)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
159.00	159.00	0.060	255.00	-0.17	-0.63	0.65	0.04

Remarks: Hole was drilled to perfection with respect to the original well plans. Casing point was within 5 cm. The horizontal portion (drain) of the well reached 525m and was terminated due to hole conditions. We could have gone further but the hole was tight.

Survey Points

Storage Units:

Metric

Measured Depth	T.V.D.	S.S.	Drift Angle (°)	Azimuth (°)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
10.00	10.00	14.90	0.000	0.00	0.00	0.00	0.00	0.00
145.50	145.50	-120.60	0.060	255.10	-0.02	-0.07	0.01	0.01
164.00	164.00	-139.10	1.800	324.90	0.22	-0.25	0.29	2.89
182.50	182.44	-157.54	6.780	341.80	1.49	-0.75	1.66	8.25
201.50	201.18	-176.28	12.080	341.90	4.45	-1.72	4.77	8.37
218.70	217.83	-192.93	16.650	344.40	8.54	-2.94	9.03	8.04
238.40	236.49	-211.59	20.820	342.10	14.59	-4.78	15.34	6.45
257.40	253.97	-229.07	25.240	339.50	21.60	-7.24	22.77	7.16
279.10	273.25	-248.35	29.340	339.60	30.92	-10.71	32.72	5.67
294.90	286.69	-261.79	34.080	339.90	38.71	-13.59	41.02	9.00
314.30	302.32	-277.42	38.460	339.90	49.49	-17.53	52.50	6.77
333.40	316.82	-291.92	42.760	338.50	61.10	-21.95	64.92	6.90
353.60	331.16	-306.26	46.790	339.00	74.36	-27.10	79.14	6.01
372.10	343.30	-318.40	51.180	340.10	87.44	-31.97	93.10	7.24
390.70	354.28	-329.38	56.380	341.20	101.59	-36.94	108.10	8.51
409.60	363.84	-338.94	62.800	340.80	116.99	-42.24	124.39	10.21
428.50	371.95	-347.05	66.410	340.70	133.11	-47.87	141.46	5.73
447.70	379.14	-354.24	69.600	340.60	149.91	-53.77	159.26	4.99
463.90	384.10	-359.20	74.700	341.60	164.49	-58.76	174.67	9.61
482.60	388.16	-363.26	80.200	341.80	181.81	-64.49	192.91	8.83
501.60	390.54	-365.64	85.450	339.60	199.60	-70.72	211.75	8.98
515.70	391.24	-366.34	88.800	339.70	212.80	-75.62	225.83	7.13
534.60	391.69	-366.79	88.500	338.60	230.46	-82.34	244.72	1.81
543.40	391.90	-367.00	88.800	338.20	238.64	-85.58	253.51	1.70
561.90	392.24	-367.34	89.100	338.10	255.80	-92.47	272.00	0.51
580.40	392.27	-367.37	90.700	337.90	272.96	-99.40	290.49	2.61
599.40	391.85	-366.95	91.800	339.20	290.64	-106.34	309.48	2.69
618.30	391.41	-366.51	90.900	338.60	308.26	-113.14	328.37	1.72
637.00	391.10	-366.20	91.000	338.60	325.67	-119.97	347.06	0.16
655.40	390.66	-365.76	91.700	339.20	342.83	-126.59	365.45	1.50
674.10	390.42	-365.52	89.800	339.50	360.33	-133.18	384.15	3.09
692.80	390.48	-365.58	89.800	339.00	377.82	-139.81	402.85	0.80

712.20	390.74	-365.84	88.700	341.00	396.04	-146.44	422.24	3.53
730.40	391.15	-366.25	88.700	341.20	413.26	-152.33	440.44	0.33
748.90	391.36	-366.46	90.000	339.20	430.66	-158.60	458.93	3.87
767.50	391.43	-366.53	89.600	339.90	448.09	-165.10	477.53	1.30
786.00	391.48	-366.58	90.100	341.65	465.56	-171.19	496.03	2.95
806.80	391.55	-366.65	89.500	339.00	485.14	-178.19	516.83	3.92
824.90	391.66	-366.76	89.800	338.50	502.01	-184.75	534.92	0.97
843.50	391.84	-366.94	89.100	338.80	519.33	-191.52	553.52	1.23
862.00	392.08	-367.18	89.400	339.70	536.63	-198.08	572.01	1.54
889.90	392.20	-367.30	90.100	339.90	562.81	-207.71	599.91	0.78
909.10	392.59	-367.69	87.600	339.10	580.79	-214.43	619.11	4.10
927.60	393.22	-368.32	88.500	339.80	598.10	-220.92	637.60	1.85
947.50	393.58	-368.68	89.400	339.50	616.76	-227.84	657.49	1.43
966.00	393.73	-368.83	89.700	340.50	634.14	-234.17	675.99	1.69
984.70	393.90	-369.00	89.200	340.60	651.78	-240.40	694.69	0.82
1,003.80	394.37	-369.47	88.000	341.00	669.81	-246.68	713.78	1.99
1,022.30	395.02	-370.12	88.000	340.70	687.27	-252.74	732.27	0.49
1,031.70	395.36	-370.46	87.800	341.70	696.16	-255.77	741.66	3.25
1,047.00	396.72	-371.82	82.000	341.00	710.60	-260.64	756.89	11.45