Scientific Drilling

Gyroscopic Survey Report
for
Marathon Oil
7301 Northwest Expressway
Suite 1075
Oklahoma City OK 73101

Well Location	Pad 23A
Well Name	Slot C aka 697-23A-14
Rig Name	
Survey Date	1/18/2010
Latitude	39.52 deg
North Reference	True North
Grid Correction	0.00 deg
Depth Reference	Ground
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 286.06Azim (deg)
Definitive Survey	None
Operator	Arnold/Beyer

Comments

Sensor was zeroed at grond level, stinger tip is 6th below sensor.
Total depth of conductor is 116.3ft.

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Survey Report

Well Name:	Slot C aka 697-23A-14
Survey:	Computed from 136930C.BIN's HighSpeed: OutRun
Survey Date:	1/18/2010

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
5.00	0.64	276.84	5.00	0.03	0.00	-0.03	12.77	0.03	276.84
10.00	0.71	279.54	10.00	0.09	0.01	-0.09	1.65	0.09	277.81
15.00	0.75	281.41	15.00	0.15	0.02	-0.15	0.93	0.15	278.95
20.00	0.89	283.24	20.00	0.22	0.04	-0.22	2.76	0.22	280.06
25.00	0.97	285.19	25.00	0.30	0.06	-0.30	1.74	0.30	281.18
30.00	1.03	287.44	30.00	0.39	0.08	-0.38	1.35	0.39	282.33
35.00	1.05	287.96	35.00	0.48	0.11	-0.47	0.52	0.48	283.34
40.00	1.00	284.83	40.00	0.57	0.14	-0.55	1.47	0.57	283.83
45.00	1.02	284.57	44.99	0.66	0.16	-0.64	0.37	0.66	283.94
50.00	1.06	286.62	49.99	0.75	0.18	-0.73	1.13	0.75	284.15
55.00	1.14	288.84	54.99	0.85	0.21	-0.82	1.81	0.85	284.56
60.00	1.33	289.62	59.99	0.95	0.25	-0.92	3.72	0.95	285.09
65.00	0.87	292.47	64.99	1.05	0.28	-1.01	9.24	1.05	285.61
70.00	1.06	291.31	69.99	1.13	0.31	-1.09	3.85	1.13	286.07
75.00	1.06	289.00	74.99	1.22	0.35	-1.17	0.86	1.22	286.38
80.00	1.06	283.00	79.99	1.32	0.37	-1.26	2.23	1.32	286.35
85.00	1.04	280.55	84.99	1.41	0.39	-1.35	1.01	1.41	286.05
90.00	1.00	282.35	89.99	1.50	0.41	-1.44	0.98	1.50	285.78
95.00	0.99	285.53	94.99	1.58	0.43	-1.53	1.17	1.58	285.68
100.00	0.98	287.71	99.99	1.67	0.45	-1.61	0.76	1.67	285.72
105.00	1.08	288.72	104.98	1.76	0.48	-1.69	2.15	1.76	285.85
110.00	1.07	290.59	109.98	1.85	0.51	-1.78	0.73	1.85	286.05
110.34	0.97	291.46	110.32	1.86	0.51	-1.79	30.22	1.86	286.06