

51-01720



Scientific Drilling
Northeast District

Company: Chevron
Field: Marcellus
Well: Francis 13H
County: Marshall
State: WV
Rig: Nabors X7

Date: 7/15/2015
North Ref: TRUE
Grid corr: 0.76
VS Azi: 145.76
RKB-GL: 32
Surveyor: D. Kilby/A. Langford

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft
0	0	0	0	0	0	0	0
100	0.67	159.71	100	0.57	-0.55	0.2	0.67
125	0.61	143.98	125	0.84	-0.79	0.33	0.74
150	0.63	135.01	149.99	1.11	-1	0.51	0.4
175	0.57	124.09	174.99	1.36	-1.16	0.71	0.52
200	0.6	124.79	199.99	1.6	-1.31	0.92	0.12
225	0.54	129.66	224.99	1.83	-1.46	1.12	0.31
250	0.49	119.58	249.99	2.04	-1.59	1.3	0.41
275	0.64	109.26	274.99	2.25	-1.69	1.52	0.72
300	0.55	114.24	299.99	2.47	-1.78	1.77	0.41
325	0.6	121.62	324.99	2.69	-1.9	1.99	0.36
350	0.65	114.7	349.98	2.93	-2.03	2.23	0.36
375	0.85	115.76	374.98	3.21	-2.17	2.52	0.8
400	0.86	119.69	399.98	3.54	-2.34	2.85	0.24
425	0.82	124.12	424.98	3.87	-2.53	3.16	0.3
450	0.67	117.53	449.97	4.17	-2.7	3.44	0.69
475	0.7	117.27	474.97	4.43	-2.84	3.71	0.12
500	0.68	122.01	499.97	4.7	-2.99	3.97	0.24
525	0.75	118.78	524.97	4.98	-3.15	4.24	0.32
550	0.8	109.36	549.97	5.27	-3.28	4.55	0.55
575	0.81	110.87	574.96	5.56	-3.4	4.88	0.09
600	0.78	115.48	599.96	5.85	-3.54	5.19	0.28
625	0.76	119.64	624.96	6.14	-3.69	5.49	0.24
650	0.78	116.12	649.96	6.44	-3.85	5.79	0.21
675	0.68	119	674.96	6.72	-4	6.07	0.43
700	0.67	124.24	699.95	6.99	-4.15	6.32	0.25
725	0.68	120.07	724.95	7.26	-4.31	6.57	0.2
750	0.67	123.6	749.95	7.53	-4.46	6.82	0.17
775	0.7	116.57	774.95	7.8	-4.61	7.08	0.36
800	0.6	120.72	799.95	8.05	-4.75	7.33	0.44
825	0.43	127.33	824.95	8.26	-4.87	7.52	0.72
850	0.37	113.62	849.95	8.41	-4.96	7.66	0.45
875	0.34	121.24	874.94	8.55	-5.03	7.8	0.22
900	0.35	133.41	899.94	8.69	-5.12	7.92	0.3
925	0.43	103.06	924.94	8.83	-5.2	8.07	0.87
950	0.29	101.55	949.94	8.95	-5.23	8.22	0.56
975	0.25	115.12	974.94	9.04	-5.27	8.33	0.3
1000	0.21	97.23	999.94	9.12	-5.29	8.43	0.33
1025	0.13	83.1	1024.94	9.16	-5.3	8.5	0.36
1050	0.21	190.65	1049.94	9.21	-5.34	8.52	1.11
1075	0.52	204.6	1074.94	9.3	-5.49	8.46	1.28
1100	1.13	208.09	1099.94	9.47	-5.81	8.3	2.45
1125	1.54	213.95	1124.93	9.71	-6.3	8	1.73
1150	1.72	216.18	1149.92	9.96	-6.89	7.59	0.76
1175	1.79	219.41	1174.91	10.2	-7.49	7.12	0.48
1200	1.79	224.4	1199.9	10.38	-8.07	6.6	0.62
1225	2.11	230.47	1224.88	10.5	-8.64	6.12	0.48
1250	2.6	234.63	1249.86	10.56	-9.26	5.15	2.07
1275	3.15	238.68	1274.83	10.53	-9.95	4.1	0.89
1300	3.37	238.15	1299.79	10.47	-10.69	2.89	0.89
1325	3.49	238.67	1324.75	10.4	-11.48	1.62	0.5
1350	3.64	238.38	1349.7	10.32	-12.29	0.29	0.6
1375	3.61	237.94	1374.65	10.26	-13.12	-1.05	0.16
1400	3.66	238.5	1399.6	10.19	-13.96	-2.4	0.25
1425	3.81	238.74	1424.54	10.11	-14.81	-3.79	0.6

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1450	3.85	240.09	1449.49	10	-15.65	-5.23	0.39
1475	3.96	238.64	1474.43	9.89	-16.52	-6.69	0.59
1500	4.17	240.28	1499.37	9.78	-17.42	-8.22	0.96
1525	4.39	240.02	1524.3	9.64	-18.35	-9.83	0.88
1550	4.58	240.85	1549.22	9.48	-19.32	-11.54	0.8
1575	4.59	241.75	1574.14	9.28	-20.28	-13.29	0.29