

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

CONOCOPHILLIPS

Lease: Reserve Well: 3-65 34-35 1H, 4-1/2" Drill Pipe
Location: H & P #280, Arapahoe County, Colorado

Job Number: RM0714GDM394

Run Date: 05 Jul 2014

Report Generated: 17 Jul 2014 03:02

Surveyor: Nathan Henderson

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Company Man

Survey Latitude: 39.752492 deg. N Longitude: 104.623217 deg. W

Azimuth Correction:

Gyro: Bearings are Relative to True North

Depth Reference: Rotary Table

Air Gap (RKB to Ground / RKB to MSL): 24.00

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0 0.0	0.00 N 0.00 E

0 – 1981 FT. RATE GYROSCOPIC MULTISHOT RUN INSIDE 4-1/2" DRILL PIPE						
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO H & P #280, R.K.B. OF 24 FT.						

75.00	0.27	162.47	0.36	75.00	0.2 162.5	0.17 S 0.05 E
105.00	0.50	144.31	0.86	105.00	0.4 156.2	0.34 S 0.15 E
201.00	0.53	148.76	0.05	201.00	1.2 149.5	1.06 S 0.63 E
293.00	0.58	147.95	0.06	292.99	2.1 149.0	1.82 S 1.09 E
386.00	0.49	157.49	0.14	385.99	3.0 150.0	2.59 S 1.50 E
479.00	0.20	122.96	0.37	478.99	3.5 149.6	3.04 S 1.78 E
574.00	0.05	48.55	0.20	573.98	3.7 147.8	3.11 S 1.95 E
666.00	0.10	334.16	0.11	665.98	3.6 147.0	3.01 S 1.95 E
758.00	0.21	287.44	0.17	757.98	3.4 148.7	2.88 S 1.75 E
849.00	0.24	287.92	0.03	848.98	3.1 153.0	2.78 S 1.41 E
944.00	0.28	291.92	0.05	943.98	2.8 159.0	2.63 S 1.01 E
1039.00	0.23	290.79	0.05	1038.98	2.5 166.0	2.47 S 0.61 E
1133.00	0.24	295.03	0.02	1132.98	2.3 173.6	2.32 S 0.26 E
1228.00	0.26	276.83	0.09	1227.98	2.2 183.5	2.21 S 0.13 W
1322.00	0.25	271.62	0.03	1321.98	2.3 194.2	2.18 S 0.55 W
1417.00	0.22	265.65	0.04	1416.98	2.4 203.2	2.19 S 0.94 W
1511.00	0.22	301.95	0.15	1510.98	2.5 211.1	2.11 S 1.27 W

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1606.00	0.13	293.29	0.10	1605.98	2.5	217.8	1.97 S 1.53 W
1700.00	0.11	277.57	0.04	1699.98	2.6	221.8	1.91 S 1.71 W
1795.00	0.11	286.73	0.02	1794.98	2.7	225.2	1.88 S 1.89 W
1889.00	0.09	285.04	0.02	1888.98	2.7	228.2	1.83 S 2.05 W
1981.00	0.15	272.94	0.07	1980.98	2.9	231.1	1.81 S 2.24 W

Final Station Closure: Distance: 2.88 ft Az: 231.12 deg.

