ENSECO Directional Drilling

Job Number: 11055-159
Company: Wexpro Company
Lease/Well: Musser #72
Location: Sec 5, T11N, R97W, 6 PM
Rig Name: SST-88
RKB: 6767.9 Ft (Actual)
G.L. or M.S.L.: 6739.9 Ft

State/Country: Moffat County, Colorado
Declination:
Grid:
File name: P:\QUESTA~1\130F8~1.SVY
Date/Time: 09-Mar-11 / 15:40
Curve Name: Wexpro Musser #72: Final Surveys

"Wexpro Musser #72: Final Surveys"

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 290.95
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Tie-In Pt									
205.00	1.40	208.30	204.98	-2.21	-1.19	.32	2.50	208.30	.68
296.00	1.20	251.00	295.96	-3.49	-2.62	1.19	4.36	216.81	1.06
387.00	1.10	252.60	386.94	-4.07	-4.35	2.61	5.95	226.93	.12
478.00	.80	261.00	477.93	-4.43	-5.81	3.84	7.30	232.70	.36
569.00	.90	322.20	568.92	-3.96	-6.88	5.01	7.94	240.06	.96
660.00	1.10	329.70	659.91	-2.64	-7.76	6.30	8.19	251.19	.26
751.00	1.70	334.00	750.88	-.67	-8.79	7.97	8.81	265.61	.67
842.00	.80	325.90	841.86	1.06	-9.74	9.47	9.79	276.24	1.01
933.00	1.00	309.20	932.84	2.09	-10.71	10.75	10.91	281.06	.36
1025.00	1.10	304.80	1024.83	3.10	-12.05	12.37	12.45	284.44	.14
1117.00	1.10	303.20	1116.81	4.09	-13.52	14.09	14.12	286.84	.03
1211.00	1.50	302.70	1210.79	5.25	-15.31	16.17	16.18	288.93	.43
1403.00	1.60	268.20	1402.72	6.52	-20.10	21.11	21.13	287.98	.48
1458.00	1.60	294.10	1457.70	6.81	-21.57	22.58	22.62	287.53	1.30
Int Surface Csg									
1535.00	1.38	301.39	1534.67	7.74	-23.34	24.57	24.59	288.33	.38
1566.00	1.30	305.00	1565.67	8.13	-23.95	25.27	25.29	288.75	.38
1662.00	1.20	295.10	1661.64	9.18	-25.75	27.33	27.34	289.62	.25
1757.00	3.30	310.60	1756.57	11.38	-28.73	30.90	30.90	291.62	2.28
1852.00	4.00	301.40	1851.37	14.89	-33.63	36.74	36.78	293.88	.96
1948.00	5.90	296.50	1947.01	18.84	-40.91	44.94	45.04	294.72	2.03
2043.00	6.90	291.20	2041.42	23.08	-50.60	55.51	55.61	294.52	1.22
--Projection to Bit--									
2139.00	7.90	286.00	2136.62	26.98	-62.32	67.85	67.91	293.41	1.25

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	Direction Deg	Dogleg Severity Deg/100
2234.00	9.20	289.30	2230.56	31.29	-75.76	81.94	81.97	292.44	1.46
2329.00	10.40	294.80	2324.18	37.40	-90.71	98.09	98.12	292.41	1.60
2425.00	11.70	293.90	2418.39	44.98	-107.48	116.46	116.51	292.71	1.37
2520.00	12.90	293.40	2511.21	53.09	-126.02	136.67	136.75	292.85	1.27
2616.00	12.60	296.30	2604.85	61.99	-145.24	157.80	157.92	293.11	.74
2712.00	12.70	292.10	2698.52	70.60	-164.41	178.78	178.92	293.24	.96
2807.00	12.70	292.50	2791.19	78.52	-183.73	199.66	199.81	293.14	.09
2903.00	12.50	288.10	2884.88	85.79	-203.35	220.58	220.71	292.87	1.02
2998.00	12.30	289.10	2977.67	92.29	-222.69	240.97	241.06	292.51	.31
3094.00	11.60	287.70	3071.59	98.57	-241.55	260.82	260.89	292.20	.79
3190.00	12.40	288.30	3165.49	104.75	-260.53	280.76	280.79	291.90	.84
3285.00	12.40	290.40	3258.27	111.50	-279.77	301.14	301.17	291.73	.47
3380.00	11.90	288.80	3351.14	118.22	-298.60	321.13	321.15	291.60	.63
3475.00	12.20	288.80	3444.05	124.61	-317.38	340.95	340.96	291.44	.32
3571.00	11.80	289.00	3537.95	131.07	-336.26	360.90	360.90	291.30	.42
3666.00	12.50	287.00	3630.82	137.24	-355.28	380.86	380.86	291.12	.86
3762.00	12.10	287.40	3724.62	143.29	-374.81	401.27	401.27	290.92	.43
3857.00	12.20	286.10	3817.49	149.05	-393.96	421.21	421.21	290.72	.31
3953.00	12.40	290.40	3911.29	155.45	-413.37	441.62	441.63	290.61	.98
Last Survey on end of 311mm Reamer Run									
4048.00	12.10	290.70	4004.13	162.53	-432.24	461.78	461.79	290.61	.32
4144.00	12.00	290.00	4098.01	169.50	-451.03	481.82	481.83	290.60	.18
4239.00	12.00	289.70	4190.94	176.20	-469.61	501.57	501.58	290.57	.07
4335.00	11.50	291.10	4284.92	183.01	-487.93	521.11	521.13	290.56	.60
4430.00	11.90	290.70	4377.95	189.89	-505.93	540.38	540.39	290.57	.43
4526.00	11.60	290.50	4471.94	196.76	-524.23	559.93	559.94	290.57	.32
4621.00	12.30	289.30	4564.88	203.45	-542.73	579.59	579.61	290.55	.78
4717.00	12.50	290.00	4658.64	210.39	-562.14	600.20	600.22	290.52	.26
4812.00	12.50	290.70	4751.39	217.54	-581.42	620.76	620.78	290.51	.16
4907.00	11.50	287.20	4844.31	223.97	-600.08	640.50	640.52	290.47	1.30
5003.00	10.30	284.20	4938.58	228.91	-617.55	658.57	658.61	290.34	1.38
5098.00	8.80	283.90	5032.26	232.74	-632.83	674.22	674.27	290.19	1.58
5193.00	8.40	286.00	5126.19	236.39	-646.56	688.34	688.42	290.08	.54
5289.00	7.80	282.80	5221.23	239.77	-659.65	701.77	701.88	289.98	.78
5384.00	7.40	280.50	5315.40	242.31	-671.95	714.17	714.31	289.83	.53
5480.00	6.30	288.10	5410.72	245.08	-683.04	725.51	725.68	289.74	1.48
5575.00	5.10	282.30	5505.24	247.60	-692.12	734.89	735.07	289.68	1.40
5670.00	3.90	274.70	5599.95	248.76	-699.47	742.17	742.38	289.58	1.41
5766.00	3.40	282.50	5695.76	249.64	-705.50	748.12	748.36	289.49	.73
5861.00	3.10	267.50	5790.61	250.14	-710.82	753.26	753.54	289.39	.95
5957.00	2.60	271.70	5886.49	250.09	-715.58	757.70	758.03	289.26	.56
6052.00	2.20	291.80	5981.40	250.83	-719.43	761.56	761.91	289.22	.97
6147.00	2.50	272.40	6076.33	251.60	-723.20	765.35	765.71	289.18	.89
6243.00	2.00	275.60	6172.25	251.85	-726.95	768.95	769.34	289.11	.54
6338.00	2.00	258.00	6267.19	251.67	-730.23	771.94	772.38	289.02	.64

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	Direction Deg	Dogleg Severity Deg/100
6433.00	1.70	276.80	6362.15	251.49	-733.25	774.69	775.18	288.93	.71
6529.00	1.50	262.80	6458.11	251.50	-735.91	777.18	777.70	288.87	.46
6624.00	1.40	271.20	6553.08	251.37	-738.30	779.37	779.92	288.80	.25
6720.00	1.40	257.80	6649.05	251.14	-740.62	781.46	782.04	288.73	.34
6815.00	1.00	272.80	6744.03	250.94	-742.58	783.22	783.84	288.67	.53
6911.00	1.00	253.50	6840.01	250.74	-744.22	784.68	785.33	288.62	.35
7006.00	.80	245.70	6935.00	250.23	-745.62	785.80	786.49	288.55	.25
7101.00	.60	272.10	7030.00	249.98	-746.72	786.74	787.45	288.51	.39
7197.00	.70	278.40	7125.99	250.08	-747.80	787.79	788.51	288.49	.13
7292.00	.30	277.20	7220.99	250.20	-748.63	788.60	789.33	288.48	.42
7387.00	.30	193.90	7315.99	249.99	-748.93	788.81	789.55	288.46	.42
7483.00	.30	187.90	7411.98	249.50	-749.03	788.72	789.49	288.42	.03
7578.00	.10	166.60	7506.98	249.17	-749.04	788.62	789.40	288.40	.22
7673.00	.60	98.20	7601.98	249.02	-748.53	788.08	788.87	288.40	.60
7769.00	.80	82.60	7697.97	249.03	-747.37	787.00	787.77	288.43	.29
7960.00	1.60	69.40	7888.93	250.14	-743.55	783.84	784.50	288.59	.44
Last MWD Survey									
8065.00	1.70	67.10	7993.89	251.26	-740.74	781.62	782.20	288.74	.11
TD Extrapolation									
8120.00	1.70	67.10	8048.86	251.90	-739.24	780.44	780.98	288.82	.00