

Helmer Directional Drilling Inc.

S.G. Interests
ECK 12-90-1 #3
Gunnison County, CO



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Minimum of Curvature
Slot Location: 1448003.27', 2463136.16'
Plane of Vertical Section: 135.00°

Measured Depth Feet	BORE Inc Degrees	HOLE Direction Degrees	True Vertical Depth Feet	RECTANGULAR COORDINATES		LAMBERT COORDINATES		Vertical Section Feet	CLOSURES		Dogleg Severity Deg/100'
				North(-South) Feet	East(-West) Feet	Y Feet	X Feet		Distance Feet	Direction Deg	
800.00	0.00	135.00	800.00	0.00	0.00	1448003.27	2463136.16	0.00	0.00	0.00	0.00
KOP - Start Build											
900.00	2.00	135.00	899.98	-1.23	1.23	1448002.04	2463137.39	1.75	1.75	135.00	2.00
1000.00	4.00	135.00	999.84	-4.93	4.93	1447998.34	2463141.09	6.98	6.98	135.00	2.00
1100.00	6.00	135.00	1099.45	-11.10	11.10	1447992.17	2463147.26	15.69	15.69	135.00	2.00
1200.00	8.00	135.00	1198.70	-19.71	19.71	1447983.56	2463155.87	27.88	27.88	135.00	2.00
1300.00	10.00	135.00	1297.47	-30.78	30.78	1447972.49	2463166.93	43.52	43.52	135.00	2.00
1350.00	11.00	135.00	1346.63	-37.22	37.22	1447966.05	2463173.38	52.63	52.63	135.00	2.00
End Build/Start Drop											
1450.00	10.00	135.00	1444.95	-50.10	50.10	1447953.17	2463186.26	70.86	70.86	135.00	1.00
1550.00	9.00	135.00	1543.58	-61.77	61.77	1447941.50	2463197.93	87.36	87.36	135.00	1.00
1650.00	8.00	135.00	1642.48	-72.23	72.23	1447931.04	2463208.38	102.14	102.14	135.00	1.00
1750.00	7.00	135.00	1741.62	-81.46	81.46	1447921.81	2463217.61	115.20	115.20	135.00	1.00
1850.00	6.00	135.00	1840.98	-89.46	89.46	1447913.81	2463225.62	126.52	126.52	135.00	1.00
1950.00	5.00	135.00	1940.52	-96.24	96.24	1447907.03	2463232.40	136.10	136.10	135.00	1.00
2050.00	4.00	135.00	2040.21	-101.79	101.79	1447901.48	2463237.94	143.95	143.95	135.00	1.00
2150.00	3.00	135.00	2140.02	-106.10	106.10	1447897.17	2463242.26	150.05	150.05	135.00	1.00
2250.00	2.00	135.00	2239.92	-109.19	109.19	1447894.08	2463245.34	154.41	154.41	135.00	1.00
2350.00	1.00	135.00	2339.89	-111.04	111.04	1447892.23	2463247.20	157.03	157.03	135.00	1.00
2450.00	0.00	135.00	2439.88	-111.65	111.65	1447891.62	2463247.81	157.90	157.90	135.00	1.00
Vertical											
2950.00	0.00	135.00	2939.88	-111.65	111.65	1447891.62	2463247.81	157.90	157.90	135.00	0.00
3450.00	0.00	135.00	3439.88	-111.65	111.65	1447891.62	2463247.81	157.90	157.90	135.00	0.00
3660.12	0.00	135.00	3650.00	-111.65	111.65	1447891.62	2463247.81	157.90	157.90	135.00	0.00
TD											
Final Station Closure Distance: 157.90' Direction: 135.00°											