

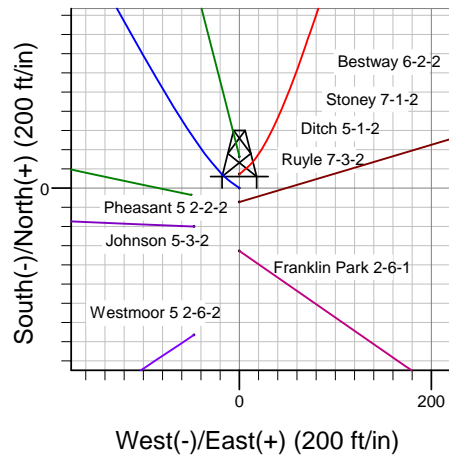
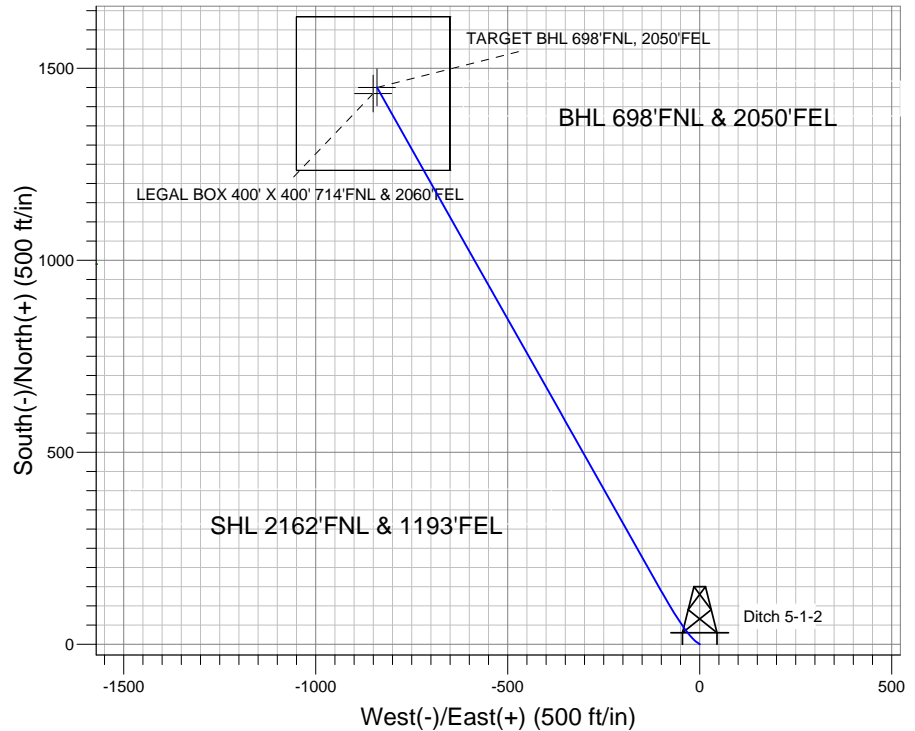
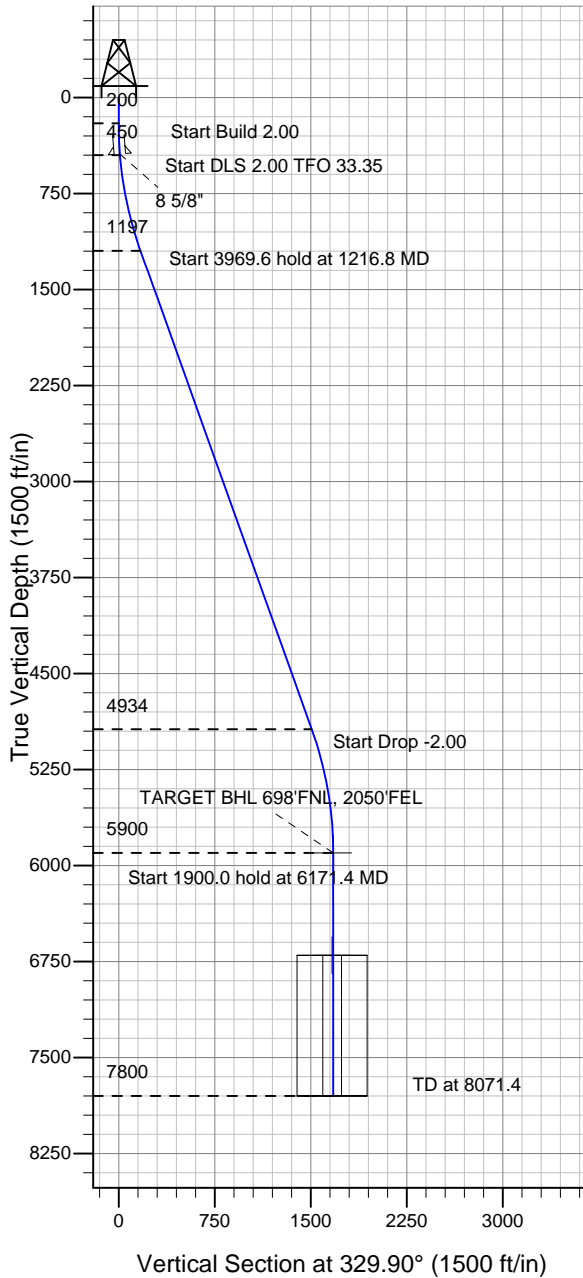
ENSIGN

Directional

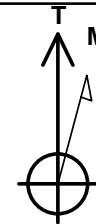
Well Name: Ditch 5-1-2

Surface Location: Bestway Pad Sec.2-T5N-R66W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4698.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1400929.55 3211767.48 40.431460 -104.739280
 Original Well Elev WELL @ 4711.0ft (Original Well Elev)

Mineral Resources Inc



Bestway Pad Sec.2-T5N-R66W
 Ditch 5-1-2
 Plan #1 (8-05-11)
 14:54, September 26 2011



Azimuths to True North
 Magnetic North: 8.82°
 Magnetic Field
 Strength: 53122.0snT
 Dip Angle: 67.07°
 Date: 9/26/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 698'FNL, 2050'FEL	5900.0	1450.0	-840.7	40.435440	-104.742300	Point
LEGAL BOX 400' X 400' 714'FNL & 2060'FEL	6700.0	1434.0	-850.7	40.435396	-104.742336	Rectangle (Sides: L400.0 W400.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	450.0	5.00	305.00	449.7	6.3	-8.9	2.00	305.00	9.9	
4	1216.8	19.70	330.55	1197.0	138.7	-100.4	2.00	33.35	170.4	
5	5186.4	19.70	330.55	4934.3	1304.0	-758.3	0.00	0.00	1508.4	
6	6171.4	0.00	0.00	5900.0	1450.0	-840.7	2.00	180.00	1676.1	TARGET BHL 698'FNL, 2050'FEL
7	8071.4	0.00	0.00	7800.0	1450.0	-840.7	0.00	0.00	1676.1	



Directional

Mineral Resources Inc

SEC.2-T5N-R66W

Bestway Pad Sec.2-T5N-R66W

Ditch 5-1-2

Wellbore #1

Plan: Plan #1 (8-05-11)

Standard Planning Report

26 September, 2011

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
450.0	5.00	305.00	449.7	6.3	-8.9	2.00	2.00	0.00	305.00	
1,216.8	19.70	330.55	1,197.0	138.7	-100.4	2.00	1.92	3.33	33.35	
5,186.4	19.70	330.55	4,934.3	1,304.0	-758.3	0.00	0.00	0.00	0.00	
6,171.4	0.00	0.00	5,900.0	1,450.0	-840.7	2.00	-2.00	0.00	180.00	TARGET BHL 698'
8,071.4	0.00	0.00	7,800.0	1,450.0	-840.7	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Ditch 5-1-2
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Bestway Pad Sec.2-T5N-R66W	North Reference:	True
Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-05-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.80	305.00	240.0	0.2	-0.2	0.3	2.00	2.00	0.00
280.0	1.60	305.00	280.0	0.6	-0.9	1.0	2.00	2.00	0.00
320.0	2.40	305.00	320.0	1.4	-2.1	2.3	2.00	2.00	0.00
360.0	3.20	305.00	359.9	2.6	-3.7	4.1	2.00	2.00	0.00
400.0	4.00	305.00	399.8	4.0	-5.7	6.3	2.00	2.00	0.00
440.0	4.80	305.00	439.7	5.8	-8.2	9.1	2.00	2.00	0.00
440.3	4.81	305.00	440.0	5.8	-8.2	9.1	2.00	2.00	0.00
8 5/8"									
450.0	5.00	305.00	449.7	6.3	-8.9	9.9	2.00	2.00	0.00
480.0	5.51	308.44	479.6	7.9	-11.1	12.4	2.00	1.70	11.46
520.0	6.22	312.12	519.3	10.5	-14.2	16.3	2.00	1.77	9.22
560.0	6.94	315.05	559.1	13.7	-17.6	20.7	2.00	1.82	7.32
600.0	7.68	317.43	598.8	17.4	-21.1	25.6	2.00	1.85	5.93
640.0	8.44	319.38	638.4	21.6	-24.8	31.1	2.00	1.88	4.89
680.0	9.20	321.02	677.9	26.3	-28.7	37.2	2.00	1.90	4.09
720.0	9.96	322.40	717.3	31.5	-32.8	43.7	2.00	1.92	3.47
760.0	10.73	323.59	756.7	37.3	-37.2	50.9	2.00	1.93	2.97
800.0	11.51	324.62	795.9	43.5	-41.7	58.5	2.00	1.94	2.58
840.0	12.29	325.53	835.1	50.3	-46.4	66.8	2.00	1.95	2.26
880.0	13.07	326.32	874.1	57.5	-51.3	75.5	2.00	1.95	1.99
920.0	13.85	327.03	913.0	65.3	-56.4	84.8	2.00	1.96	1.77
960.0	14.63	327.67	951.8	73.6	-61.7	94.6	2.00	1.96	1.58
1,000.0	15.42	328.24	990.4	82.4	-67.2	105.0	2.00	1.97	1.43
1,040.0	16.21	328.75	1,028.9	91.7	-72.9	115.9	2.00	1.97	1.29
1,080.0	17.00	329.22	1,067.2	101.5	-78.8	127.3	2.00	1.97	1.17
1,120.0	17.79	329.65	1,105.4	111.8	-84.9	139.3	2.00	1.97	1.07
1,160.0	18.58	330.05	1,143.4	122.6	-91.2	151.8	2.00	1.98	0.98
1,200.0	19.37	330.41	1,181.2	133.9	-97.6	164.8	2.00	1.98	0.91
1,216.8	19.70	330.55	1,197.0	138.7	-100.4	170.4	2.00	1.98	0.86
1,240.0	19.70	330.55	1,218.9	145.6	-104.2	178.2	0.00	0.00	0.00
1,280.0	19.70	330.55	1,256.6	157.3	-110.9	191.7	0.00	0.00	0.00
1,320.0	19.70	330.55	1,294.2	169.1	-117.5	205.2	0.00	0.00	0.00
1,360.0	19.70	330.55	1,331.9	180.8	-124.1	218.7	0.00	0.00	0.00
1,400.0	19.70	330.55	1,369.5	192.5	-130.8	232.1	0.00	0.00	0.00
1,440.0	19.70	330.55	1,407.2	204.3	-137.4	245.6	0.00	0.00	0.00
1,480.0	19.70	330.55	1,444.8	216.0	-144.0	259.1	0.00	0.00	0.00
1,520.0	19.70	330.55	1,482.5	227.8	-150.6	272.6	0.00	0.00	0.00
1,560.0	19.70	330.55	1,520.2	239.5	-157.3	286.1	0.00	0.00	0.00
1,600.0	19.70	330.55	1,557.8	251.2	-163.9	299.6	0.00	0.00	0.00
1,640.0	19.70	330.55	1,595.5	263.0	-170.5	313.0	0.00	0.00	0.00
1,680.0	19.70	330.55	1,633.1	274.7	-177.2	326.5	0.00	0.00	0.00
1,720.0	19.70	330.55	1,670.8	286.5	-183.8	340.0	0.00	0.00	0.00
1,760.0	19.70	330.55	1,708.5	298.2	-190.4	353.5	0.00	0.00	0.00
1,800.0	19.70	330.55	1,746.1	310.0	-197.0	367.0	0.00	0.00	0.00
1,840.0	19.70	330.55	1,783.8	321.7	-203.7	380.5	0.00	0.00	0.00
1,880.0	19.70	330.55	1,821.4	333.4	-210.3	393.9	0.00	0.00	0.00
1,920.0	19.70	330.55	1,859.1	345.2	-216.9	407.4	0.00	0.00	0.00
1,960.0	19.70	330.55	1,896.8	356.9	-223.6	420.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ditch 5-1-2
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Bestway Pad Sec.2-T5N-R66W	North Reference:	True
Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-05-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,000.0	19.70	330.55	1,934.4	368.7	-230.2	434.4	0.00	0.00	0.00
2,040.0	19.70	330.55	1,972.1	380.4	-236.8	447.9	0.00	0.00	0.00
2,080.0	19.70	330.55	2,009.7	392.1	-243.4	461.4	0.00	0.00	0.00
2,120.0	19.70	330.55	2,047.4	403.9	-250.1	474.8	0.00	0.00	0.00
2,160.0	19.70	330.55	2,085.0	415.6	-256.7	488.3	0.00	0.00	0.00
2,200.0	19.70	330.55	2,122.7	427.4	-263.3	501.8	0.00	0.00	0.00
2,240.0	19.70	330.55	2,160.4	439.1	-270.0	515.3	0.00	0.00	0.00
2,280.0	19.70	330.55	2,198.0	450.9	-276.6	528.8	0.00	0.00	0.00
2,320.0	19.70	330.55	2,235.7	462.6	-283.2	542.3	0.00	0.00	0.00
2,360.0	19.70	330.55	2,273.3	474.3	-289.9	555.7	0.00	0.00	0.00
2,400.0	19.70	330.55	2,311.0	486.1	-296.5	569.2	0.00	0.00	0.00
2,440.0	19.70	330.55	2,348.7	497.8	-303.1	582.7	0.00	0.00	0.00
2,480.0	19.70	330.55	2,386.3	509.6	-309.7	596.2	0.00	0.00	0.00
2,520.0	19.70	330.55	2,424.0	521.3	-316.4	609.7	0.00	0.00	0.00
2,560.0	19.70	330.55	2,461.6	533.0	-323.0	623.1	0.00	0.00	0.00
2,600.0	19.70	330.55	2,499.3	544.8	-329.6	636.6	0.00	0.00	0.00
2,640.0	19.70	330.55	2,537.0	556.5	-336.3	650.1	0.00	0.00	0.00
2,680.0	19.70	330.55	2,574.6	568.3	-342.9	663.6	0.00	0.00	0.00
2,720.0	19.70	330.55	2,612.3	580.0	-349.5	677.1	0.00	0.00	0.00
2,760.0	19.70	330.55	2,649.9	591.8	-356.1	690.6	0.00	0.00	0.00
2,800.0	19.70	330.55	2,687.6	603.5	-362.8	704.0	0.00	0.00	0.00
2,840.0	19.70	330.55	2,725.2	615.2	-369.4	717.5	0.00	0.00	0.00
2,880.0	19.70	330.55	2,762.9	627.0	-376.0	731.0	0.00	0.00	0.00
2,920.0	19.70	330.55	2,800.6	638.7	-382.7	744.5	0.00	0.00	0.00
2,960.0	19.70	330.55	2,838.2	650.5	-389.3	758.0	0.00	0.00	0.00
3,000.0	19.70	330.55	2,875.9	662.2	-395.9	771.5	0.00	0.00	0.00
3,040.0	19.70	330.55	2,913.5	673.9	-402.5	784.9	0.00	0.00	0.00
3,080.0	19.70	330.55	2,951.2	685.7	-409.2	798.4	0.00	0.00	0.00
3,120.0	19.70	330.55	2,988.9	697.4	-415.8	811.9	0.00	0.00	0.00
3,160.0	19.70	330.55	3,026.5	709.2	-422.4	825.4	0.00	0.00	0.00
3,200.0	19.70	330.55	3,064.2	720.9	-429.1	838.9	0.00	0.00	0.00
3,240.0	19.70	330.55	3,101.8	732.6	-435.7	852.4	0.00	0.00	0.00
3,280.0	19.70	330.55	3,139.5	744.4	-442.3	865.8	0.00	0.00	0.00
3,320.0	19.70	330.55	3,177.2	756.1	-448.9	879.3	0.00	0.00	0.00
3,360.0	19.70	330.55	3,214.8	767.9	-455.6	892.8	0.00	0.00	0.00
3,400.0	19.70	330.55	3,252.5	779.6	-462.2	906.3	0.00	0.00	0.00
3,440.0	19.70	330.55	3,290.1	791.4	-468.8	919.8	0.00	0.00	0.00
3,480.0	19.70	330.55	3,327.8	803.1	-475.5	933.3	0.00	0.00	0.00
3,520.0	19.70	330.55	3,365.4	814.8	-482.1	946.7	0.00	0.00	0.00
3,560.0	19.70	330.55	3,403.1	826.6	-488.7	960.2	0.00	0.00	0.00
3,600.0	19.70	330.55	3,440.8	838.3	-495.4	973.7	0.00	0.00	0.00
3,640.0	19.70	330.55	3,478.4	850.1	-502.0	987.2	0.00	0.00	0.00
3,680.0	19.70	330.55	3,516.1	861.8	-508.6	1,000.7	0.00	0.00	0.00
3,720.0	19.70	330.55	3,553.7	873.5	-515.2	1,014.2	0.00	0.00	0.00
3,760.0	19.70	330.55	3,591.4	885.3	-521.9	1,027.6	0.00	0.00	0.00
3,800.0	19.70	330.55	3,629.1	897.0	-528.5	1,041.1	0.00	0.00	0.00
3,840.0	19.70	330.55	3,666.7	908.8	-535.1	1,054.6	0.00	0.00	0.00
3,880.0	19.70	330.55	3,704.4	920.5	-541.8	1,068.1	0.00	0.00	0.00
3,920.0	19.70	330.55	3,742.0	932.3	-548.4	1,081.6	0.00	0.00	0.00
3,960.0	19.70	330.55	3,779.7	944.0	-555.0	1,095.0	0.00	0.00	0.00
4,000.0	19.70	330.55	3,817.4	955.7	-561.6	1,108.5	0.00	0.00	0.00
4,040.0	19.70	330.55	3,855.0	967.5	-568.3	1,122.0	0.00	0.00	0.00
4,080.0	19.70	330.55	3,892.7	979.2	-574.9	1,135.5	0.00	0.00	0.00
4,120.0	19.70	330.55	3,930.3	991.0	-581.5	1,149.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ditch 5-1-2
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Bestway Pad Sec.2-T5N-R66W	North Reference:	True
Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-05-11)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,160.0	19.70	330.55	3,968.0	1,002.7	-588.2	1,162.5	0.00	0.00	0.00	
4,200.0	19.70	330.55	4,005.6	1,014.4	-594.8	1,175.9	0.00	0.00	0.00	
4,240.0	19.70	330.55	4,043.3	1,026.2	-601.4	1,189.4	0.00	0.00	0.00	
4,280.0	19.70	330.55	4,081.0	1,037.9	-608.0	1,202.9	0.00	0.00	0.00	
4,320.0	19.70	330.55	4,118.6	1,049.7	-614.7	1,216.4	0.00	0.00	0.00	
4,360.0	19.70	330.55	4,156.3	1,061.4	-621.3	1,229.9	0.00	0.00	0.00	
4,400.0	19.70	330.55	4,193.9	1,073.2	-627.9	1,243.4	0.00	0.00	0.00	
4,440.0	19.70	330.55	4,231.6	1,084.9	-634.6	1,256.8	0.00	0.00	0.00	
4,480.0	19.70	330.55	4,269.3	1,096.6	-641.2	1,270.3	0.00	0.00	0.00	
4,520.0	19.70	330.55	4,306.9	1,108.4	-647.8	1,283.8	0.00	0.00	0.00	
4,560.0	19.70	330.55	4,344.6	1,120.1	-654.5	1,297.3	0.00	0.00	0.00	
4,600.0	19.70	330.55	4,382.2	1,131.9	-661.1	1,310.8	0.00	0.00	0.00	
4,640.0	19.70	330.55	4,419.9	1,143.6	-667.7	1,324.3	0.00	0.00	0.00	
4,680.0	19.70	330.55	4,457.6	1,155.3	-674.3	1,337.7	0.00	0.00	0.00	
4,720.0	19.70	330.55	4,495.2	1,167.1	-681.0	1,351.2	0.00	0.00	0.00	
4,760.0	19.70	330.55	4,532.9	1,178.8	-687.6	1,364.7	0.00	0.00	0.00	
4,800.0	19.70	330.55	4,570.5	1,190.6	-694.2	1,378.2	0.00	0.00	0.00	
4,840.0	19.70	330.55	4,608.2	1,202.3	-700.9	1,391.7	0.00	0.00	0.00	
4,880.0	19.70	330.55	4,645.8	1,214.1	-707.5	1,405.2	0.00	0.00	0.00	
4,920.0	19.70	330.55	4,683.5	1,225.8	-714.1	1,418.6	0.00	0.00	0.00	
4,960.0	19.70	330.55	4,721.2	1,237.5	-720.7	1,432.1	0.00	0.00	0.00	
5,000.0	19.70	330.55	4,758.8	1,249.3	-727.4	1,445.6	0.00	0.00	0.00	
5,040.0	19.70	330.55	4,796.5	1,261.0	-734.0	1,459.1	0.00	0.00	0.00	
5,080.0	19.70	330.55	4,834.1	1,272.8	-740.6	1,472.6	0.00	0.00	0.00	
5,120.0	19.70	330.55	4,871.8	1,284.5	-747.3	1,486.1	0.00	0.00	0.00	
5,160.0	19.70	330.55	4,909.5	1,296.2	-753.9	1,499.5	0.00	0.00	0.00	
5,186.4	19.70	330.55	4,934.3	1,304.0	-758.3	1,508.4	0.00	0.00	0.00	
5,200.0	19.43	330.55	4,947.1	1,308.0	-760.5	1,513.0	2.00	-2.00	0.00	
5,240.0	18.63	330.55	4,984.9	1,319.3	-766.9	1,526.0	2.00	-2.00	0.00	
5,280.0	17.83	330.55	5,022.9	1,330.2	-773.1	1,538.5	2.00	-2.00	0.00	
5,320.0	17.03	330.55	5,061.1	1,340.6	-779.0	1,550.5	2.00	-2.00	0.00	
5,360.0	16.23	330.55	5,099.4	1,350.6	-784.6	1,562.0	2.00	-2.00	0.00	
5,400.0	15.43	330.55	5,137.9	1,360.1	-789.9	1,572.9	2.00	-2.00	0.00	
5,440.0	14.63	330.55	5,176.5	1,369.1	-795.0	1,583.2	2.00	-2.00	0.00	
5,480.0	13.83	330.55	5,215.3	1,377.7	-799.9	1,593.1	2.00	-2.00	0.00	
5,520.0	13.03	330.55	5,254.2	1,385.8	-804.4	1,602.4	2.00	-2.00	0.00	
5,560.0	12.23	330.55	5,293.3	1,393.4	-808.7	1,611.1	2.00	-2.00	0.00	
5,600.0	11.43	330.55	5,332.4	1,400.5	-812.8	1,619.3	2.00	-2.00	0.00	
5,640.0	10.63	330.55	5,371.7	1,407.2	-816.5	1,627.0	2.00	-2.00	0.00	
5,680.0	9.83	330.55	5,411.0	1,413.4	-820.0	1,634.1	2.00	-2.00	0.00	
5,720.0	9.03	330.55	5,450.5	1,419.1	-823.2	1,640.6	2.00	-2.00	0.00	
5,760.0	8.23	330.55	5,490.0	1,424.3	-826.2	1,646.6	2.00	-2.00	0.00	
5,800.0	7.43	330.55	5,529.7	1,429.1	-828.9	1,652.1	2.00	-2.00	0.00	
5,840.0	6.63	330.55	5,569.4	1,433.3	-831.3	1,656.9	2.00	-2.00	0.00	
5,880.0	5.83	330.55	5,609.1	1,437.1	-833.4	1,661.3	2.00	-2.00	0.00	
5,920.0	5.03	330.55	5,648.9	1,440.4	-835.3	1,665.1	2.00	-2.00	0.00	
5,960.0	4.23	330.55	5,688.8	1,443.2	-836.9	1,668.3	2.00	-2.00	0.00	
6,000.0	3.43	330.55	5,728.7	1,445.5	-838.2	1,671.0	2.00	-2.00	0.00	
6,040.0	2.63	330.55	5,768.7	1,447.4	-839.2	1,673.1	2.00	-2.00	0.00	
6,080.0	1.83	330.55	5,808.6	1,448.7	-840.0	1,674.6	2.00	-2.00	0.00	
6,120.0	1.03	330.55	5,848.6	1,449.6	-840.5	1,675.6	2.00	-2.00	0.00	
6,160.0	0.23	330.55	5,888.6	1,450.0	-840.7	1,676.1	2.00	-2.00	0.00	
6,171.4	0.00	0.00	5,900.0	1,450.0	-840.7	1,676.1	2.00	-2.00	0.00	
TARGET BHL 698°FNL, 2050°FEL										

Database:	Landmark	Local Co-ordinate Reference:	Well Ditch 5-1-2
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Bestway Pad Sec.2-T5N-R66W	North Reference:	True
Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-05-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,200.0	0.00	0.00	5,928.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,240.0	0.00	0.00	5,968.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,280.0	0.00	0.00	6,008.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,320.0	0.00	0.00	6,048.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,360.0	0.00	0.00	6,088.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,128.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,440.0	0.00	0.00	6,168.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,480.0	0.00	0.00	6,208.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,520.0	0.00	0.00	6,248.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,560.0	0.00	0.00	6,288.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,328.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,640.0	0.00	0.00	6,368.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,680.0	0.00	0.00	6,408.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,720.0	0.00	0.00	6,448.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,760.0	0.00	0.00	6,488.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,528.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,840.0	0.00	0.00	6,568.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,880.0	0.00	0.00	6,608.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,920.0	0.00	0.00	6,648.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,960.0	0.00	0.00	6,688.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
6,971.4	0.00	0.00	6,700.0	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
LEGAL BOX 400' X 400' 714'FNL & 2060'FEL									
7,000.0	0.00	0.00	6,728.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,040.0	0.00	0.00	6,768.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,080.0	0.00	0.00	6,808.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,120.0	0.00	0.00	6,848.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,160.0	0.00	0.00	6,888.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,200.0	0.00	0.00	6,928.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,240.0	0.00	0.00	6,968.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,280.0	0.00	0.00	7,008.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,320.0	0.00	0.00	7,048.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,360.0	0.00	0.00	7,088.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,128.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,440.0	0.00	0.00	7,168.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,480.0	0.00	0.00	7,208.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,520.0	0.00	0.00	7,248.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,560.0	0.00	0.00	7,288.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,328.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,640.0	0.00	0.00	7,368.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,680.0	0.00	0.00	7,408.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,720.0	0.00	0.00	7,448.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,760.0	0.00	0.00	7,488.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,528.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,840.0	0.00	0.00	7,568.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,880.0	0.00	0.00	7,608.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,920.0	0.00	0.00	7,648.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
7,960.0	0.00	0.00	7,688.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,728.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
8,040.0	0.00	0.00	7,768.6	1,450.0	-840.7	1,676.1	0.00	0.00	0.00
8,071.4	0.00	0.00	7,800.0	1,450.0	-840.7	1,676.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ditch 5-1-2
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Project:	SEC.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site:	Bestway Pad Sec.2-T5N-R66W	North Reference:	True
Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-05-11)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET BHL 698'FN	0.00	0.00	5,900.0	1,450.0	-840.7	1,402,372.23	3,210,914.41	40.435440	-104.742300
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	6,700.0	1,434.0	-850.7	1,402,356.15	3,210,904.55	40.435396	-104.742336
- plan misses target center by 18.9ft at 6971.4ft MD (6700.0 TVD, 1450.0 N, -840.7 E)									
- Rectangle (sides W400.0 H400.0 D1,100.0)									

Casing Points					
Measured Depth	Vertical Depth		Name	Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
440.3	440.0	8 5/8"		8-5/8	12-1/4



Directional

Mineral Resources Inc

SEC.2-T5N-R66W

Bestway Pad Sec.2-T5N-R66W

Ditch 5-1-2

Wellbore #1

Plan #1 (8-05-11)

Anticollision Report

26 September, 2011

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well Ditch 5-1-2
Project:	SEC.2-T5N-R66W	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Reference Site:	Bestway Pad Sec.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (8-05-11)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,600.0	1,557.8	1,582.7	1,566.3	6.7	5.0	131.36	226.0	-49.5	117.6	107.4	10.18	11.544	
1,700.0	1,652.0	1,681.1	1,663.2	7.3	5.4	135.58	242.9	-53.8	132.7	122.0	10.77	12.325	
1,800.0	1,746.1	1,779.6	1,760.0	8.0	5.8	138.93	259.7	-58.1	148.5	137.1	11.36	13.076	
1,900.0	1,840.3	1,878.0	1,856.9	8.7	6.2	141.63	276.6	-62.4	164.7	152.7	11.95	13.784	
2,000.0	1,934.4	1,976.4	1,953.8	9.4	6.6	143.85	293.4	-66.7	181.1	168.6	12.54	14.443	
2,100.0	2,028.6	2,074.8	2,050.6	10.0	7.0	145.69	310.3	-71.0	197.8	184.6	13.14	15.054	
2,200.0	2,122.7	2,173.2	2,147.5	10.7	7.3	147.25	327.1	-75.3	214.6	200.9	13.74	15.617	
2,300.0	2,216.9	2,271.6	2,244.4	11.4	7.7	148.59	344.0	-79.7	231.6	217.2	14.35	16.138	
2,400.0	2,311.0	2,370.1	2,341.2	12.1	8.1	149.74	360.8	-84.0	248.7	233.7	14.96	16.619	
2,500.0	2,405.1	2,468.5	2,438.1	12.8	8.5	150.74	377.7	-88.3	265.8	250.2	15.58	17.064	
2,600.0	2,499.3	2,566.9	2,535.0	13.4	8.9	151.62	394.5	-92.6	283.0	266.9	16.20	17.476	
2,700.0	2,593.4	2,665.3	2,631.8	14.1	9.3	152.40	411.3	-96.9	300.3	283.5	16.82	17.858	
2,800.0	2,687.6	2,763.7	2,728.7	14.8	9.7	153.09	428.2	-101.2	317.7	300.2	17.44	18.213	
2,900.0	2,781.7	2,862.1	2,825.6	15.5	10.1	153.72	445.0	-105.5	335.1	317.0	18.07	18.544	
3,000.0	2,875.9	2,960.6	2,922.5	16.2	10.5	154.28	461.9	-109.8	352.5	333.8	18.70	18.852	
3,100.0	2,970.0	3,059.0	3,019.3	16.9	10.8	154.79	478.7	-114.2	369.9	350.6	19.33	19.141	
3,200.0	3,064.2	3,157.4	3,116.2	17.6	11.2	155.25	495.6	-118.5	387.4	367.4	19.96	19.411	
3,300.0	3,158.3	3,255.8	3,213.1	18.2	11.6	155.67	512.4	-122.8	404.9	384.3	20.59	19.664	
3,400.0	3,252.5	3,354.2	3,309.9	18.9	12.0	156.06	529.3	-127.1	422.4	401.1	21.22	19.902	
3,500.0	3,346.6	3,452.6	3,406.8	19.6	12.4	156.42	546.1	-131.4	439.9	418.0	21.86	20.126	
3,600.0	3,440.8	3,551.1	3,503.7	20.3	12.8	156.75	563.0	-135.7	457.4	434.9	22.49	20.338	
3,700.0	3,534.9	3,649.5	3,600.5	21.0	13.2	157.05	579.8	-140.0	475.0	451.9	23.13	20.537	
3,800.0	3,629.1	3,747.9	3,697.4	21.7	13.6	157.33	596.7	-144.3	492.6	468.8	23.77	20.726	
3,900.0	3,723.2	3,846.3	3,794.3	22.4	14.0	157.60	613.5	-148.6	510.1	485.7	24.40	20.904	
4,000.0	3,817.4	3,944.7	3,891.1	23.0	14.3	157.85	630.3	-153.0	527.7	502.7	25.04	21.074	
4,100.0	3,911.5	4,043.1	3,988.0	23.7	14.7	158.08	647.2	-157.3	545.3	519.6	25.68	21.234	
4,200.0	4,005.6	4,141.6	4,084.9	24.4	15.1	158.29	664.0	-161.6	562.9	536.6	26.32	21.387	
4,300.0	4,099.8	4,240.0	4,181.7	25.1	15.5	158.50	680.9	-165.9	580.5	553.6	26.96	21.533	
4,400.0	4,193.9	4,338.4	4,278.6	25.8	15.9	158.69	697.7	-170.2	598.2	570.6	27.60	21.671	
4,500.0	4,288.1	4,436.8	4,375.5	26.5	16.3	158.87	714.6	-174.5	615.8	587.5	28.24	21.804	
4,600.0	4,382.2	4,523.0	4,460.5	27.2	16.6	159.06	728.6	-178.1	634.2	605.4	28.81	22.014	
4,700.0	4,476.4	4,600.0	4,536.7	27.8	16.8	159.33	739.0	-180.8	654.9	625.6	29.29	22.357	
4,800.0	4,570.5	4,687.2	4,623.4	28.5	17.0	159.75	748.5	-183.2	677.9	648.1	29.74	22.796	
4,900.0	4,664.7	4,767.7	4,703.6	29.2	17.2	160.23	754.9	-184.8	703.2	673.1	30.13	23.337	
5,000.0	4,758.8	4,847.0	4,782.8	29.9	17.3	160.77	759.1	-185.9	730.8	700.3	30.49	23.970	
5,100.0	4,853.0	4,925.0	4,860.7	30.6	17.4	161.37	761.2	-186.5	760.7	729.9	30.81	24.687	
5,186.4	4,934.3	4,997.6	4,933.3	31.2	17.5	161.95	761.4	-186.5	788.2	757.1	31.07	25.367	
5,200.0	4,947.1	5,010.4	4,946.1	31.3	17.5	162.08	761.4	-186.5	792.6	761.4	31.11	25.474	
5,300.0	5,042.0	5,105.3	5,041.0	31.8	17.7	162.95	761.4	-186.5	822.8	791.4	31.40	26.204	
5,400.0	5,137.9	5,201.2	5,136.9	32.2	17.8	163.66	761.4	-186.5	850.0	818.3	31.69	26.819	
5,500.0	5,234.8	5,298.0	5,233.8	32.7	17.9	164.26	761.4	-186.5	874.0	842.0	31.98	27.328	
5,600.0	5,332.4	5,395.7	5,331.4	33.0	18.1	164.74	761.4	-186.5	894.8	862.5	32.26	27.737	
5,700.0	5,430.7	5,494.0	5,429.7	33.3	18.2	165.13	761.4	-186.5	912.3	879.8	32.52	28.055	
5,800.0	5,529.7	5,593.0	5,528.7	33.6	18.3	165.44	761.4	-186.5	926.5	893.7	32.76	28.285	
5,900.0	5,629.0	5,692.3	5,628.0	33.8	18.5	165.66	761.4	-186.5	937.3	904.4	32.97	28.432	
6,000.0	5,728.7	5,792.0	5,727.7	34.0	18.6	165.82	761.4	-186.5	944.8	911.7	33.15	28.499	
6,100.0	5,828.6	5,891.9	5,827.6	34.1	18.8	165.90	761.4	-186.5	948.9	915.6	33.31	28.488	
6,171.4	5,900.0	5,963.3	5,899.0	34.2	18.9	136.47	761.4	-186.5	949.8	916.4	33.40	28.433	
6,200.0	5,928.6	5,991.9	5,927.6	34.2	18.9	136.47	761.4	-186.5	949.8	916.3	33.50	28.355	
6,300.0	6,028.6	6,091.9	6,027.6	34.3	19.1	136.47	761.4	-186.5	949.8	915.9	33.83	28.077	
6,400.0	6,128.6	6,191.9	6,127.6	34.4	19.2	136.47	761.4	-186.5	949.8	915.6	34.16	27.803	
6,500.0	6,228.6	6,291.9	6,227.6	34.5	19.4	136.47	761.4	-186.5	949.8	915.3	34.50	27.531	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well Ditch 5-1-2
Project:	SEC.2-T5N-R66W	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Reference Site:	Bestway Pad Sec.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (8-05-11)	Offset TVD Reference:	Offset Datum

Offset Design Bestway Pad Sec.2-T5N-R66W - Bestway 6-2-2 - Wellbore #1 - Plan #1 (8-05-11)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,600.0	6,328.6	6,391.9	6,327.6	34.6	19.5	136.47	761.4	-186.5	949.8	914.9	34.84	27.263	
6,700.0	6,428.6	6,491.9	6,427.6	34.6	19.7	136.47	761.4	-186.5	949.8	914.6	35.18	26.998	
6,800.0	6,528.6	6,591.9	6,527.6	34.7	19.8	136.47	761.4	-186.5	949.8	914.3	35.52	26.737	
6,900.0	6,628.6	6,691.9	6,627.6	34.8	20.0	136.47	761.4	-186.5	949.8	913.9	35.87	26.479	
7,000.0	6,728.6	6,791.9	6,727.6	34.9	20.1	136.47	761.4	-186.5	949.8	913.6	36.22	26.225	
7,100.0	6,828.6	6,891.9	6,827.6	35.0	20.3	136.47	761.4	-186.5	949.8	913.2	36.57	25.973	
7,200.0	6,928.6	6,991.9	6,927.6	35.1	20.5	136.47	761.4	-186.5	949.8	912.9	36.92	25.725	
7,300.0	7,028.6	7,091.9	7,027.6	35.2	20.6	136.47	761.4	-186.5	949.8	912.5	37.27	25.481	
7,400.0	7,128.6	7,191.9	7,127.6	35.3	20.8	136.47	761.4	-186.5	949.8	912.1	37.63	25.239	
7,500.0	7,228.6	7,291.9	7,227.6	35.4	21.0	136.47	761.4	-186.5	949.8	911.8	37.99	25.001	
7,600.0	7,328.6	7,391.9	7,327.6	35.5	21.1	136.47	761.4	-186.5	949.8	911.4	38.35	24.766	
7,700.0	7,428.6	7,491.9	7,427.6	35.6	21.3	136.47	761.4	-186.5	949.8	911.1	38.71	24.535	
7,800.0	7,528.6	7,591.9	7,527.6	35.7	21.5	136.47	761.4	-186.5	949.8	910.7	39.08	24.306	
7,900.0	7,628.6	7,691.9	7,627.6	35.8	21.6	136.47	761.4	-186.5	949.8	910.3	39.44	24.081	
8,000.0	7,728.6	7,791.9	7,727.6	35.9	21.8	136.47	761.4	-186.5	949.8	910.0	39.81	23.859	
8,071.4	7,800.0	7,863.3	7,799.0	35.9	21.9	136.47	761.4	-186.5	949.8	909.7	40.07	23.702	
8,072.0	7,800.6	7,863.9	7,799.6	35.9	21.9	136.47	761.4	-186.5	949.8	909.7	40.07	23.701	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well Ditch 5-1-2
Project:	SEC.2-T5N-R66W	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Reference Site:	Bestway Pad Sec.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (8-05-11)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-98.27	-7.3	-50.1	50.6	50.6	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-98.27	-7.3	-50.1	50.6	50.4	0.23	223.057		
166.3	166.3	167.3	167.3	0.3	0.3	-98.27	-7.3	-50.1	50.6	50.1	0.53	96.417 CC		
200.0	200.0	201.0	201.0	0.3	0.3	-98.27	-7.3	-50.1	50.6	50.0	0.68	74.858		
300.0	300.0	300.0	300.0	0.6	0.6	-43.93	-6.9	-51.8	51.0	49.9	1.11	45.862 ES		
304.7	304.6	303.9	303.9	0.6	0.6	-43.98	-6.9	-52.0	51.0	49.9	1.13	45.107		
400.0	399.8	397.7	397.5	0.8	0.8	-45.83	-5.9	-56.8	52.1	50.6	1.55	33.626		
450.0	449.7	446.8	446.5	0.9	0.9	-47.22	-5.1	-60.5	53.0	51.2	1.78	29.781		
500.0	499.5	496.0	495.4	1.0	1.0	-54.32	-4.1	-65.1	54.3	52.3	2.01	26.959		
600.0	598.8	594.0	592.8	1.3	1.3	-65.76	-1.7	-76.6	59.1	56.6	2.53	23.388		
700.0	697.6	691.7	689.3	1.6	1.6	-75.01	1.4	-91.3	67.1	64.0	3.12	21.532		
800.0	795.9	789.0	784.8	2.0	2.0	-82.58	5.2	-109.1	78.5	74.7	3.80	20.652		
900.0	893.6	885.5	879.0	2.4	2.4	-88.64	9.6	-130.0	93.4	88.8	4.59	20.340 SF		
1,000.0	990.4	981.3	971.7	2.9	2.9	-93.38	14.6	-153.7	111.7	106.2	5.48	20.358		
1,100.0	1,086.3	1,076.2	1,062.6	3.4	3.4	-97.04	20.2	-180.2	133.2	126.8	6.48	20.561		
1,200.0	1,181.2	1,170.0	1,151.6	4.0	4.0	-99.84	26.3	-209.3	158.0	150.4	7.57	20.862		
1,216.8	1,197.0	1,185.6	1,166.3	4.1	4.1	-100.24	27.4	-214.4	162.5	154.7	7.77	20.924		
1,300.0	1,275.4	1,262.9	1,238.6	4.7	4.7	-101.48	33.0	-240.8	185.5	176.8	8.76	21.179		
1,400.0	1,369.5	1,354.9	1,323.8	5.3	5.4	-101.98	40.2	-274.8	214.8	204.8	9.99	21.506		
1,500.0	1,463.7	1,445.9	1,407.0	6.0	6.2	-101.76	47.8	-311.0	245.8	234.6	11.25	21.854		
1,600.0	1,557.8	1,535.7	1,487.8	6.7	7.0	-101.08	55.9	-349.3	278.5	266.0	12.54	22.220		
1,700.0	1,652.0	1,627.8	1,569.7	7.3	7.9	-100.15	64.6	-390.5	312.6	298.7	13.86	22.548		
1,800.0	1,746.1	1,721.6	1,653.0	8.0	8.8	-99.37	73.5	-432.8	346.9	331.7	15.21	22.801		
1,900.0	1,840.3	1,815.5	1,736.4	8.7	9.7	-98.72	82.4	-475.0	381.2	364.6	16.57	23.007		
2,000.0	1,934.4	1,909.3	1,819.7	9.4	10.6	-98.18	91.3	-517.2	415.5	397.6	17.93	23.179		
2,100.0	2,028.6	2,003.2	1,903.1	10.0	11.6	-97.73	100.2	-559.4	449.9	430.6	19.29	23.325		
2,200.0	2,122.7	2,097.0	1,986.4	10.7	12.5	-97.34	109.1	-601.6	484.3	463.6	20.65	23.449		
2,300.0	2,216.9	2,190.9	2,069.8	11.4	13.5	-97.00	118.1	-643.8	518.7	496.7	22.02	23.556		
2,400.0	2,311.0	2,284.7	2,153.1	12.1	14.4	-96.70	127.0	-686.0	553.1	529.7	23.39	23.649		
2,500.0	2,405.1	2,378.6	2,236.5	12.8	15.3	-96.44	135.9	-728.2	587.5	562.8	24.76	23.732		
2,600.0	2,499.3	2,472.5	2,319.9	13.4	16.3	-96.20	144.8	-770.4	622.0	595.8	26.13	23.805		
2,700.0	2,593.4	2,566.3	2,403.2	14.1	17.2	-95.99	153.7	-812.6	656.4	628.9	27.50	23.870		
2,800.0	2,687.6	2,660.2	2,486.6	14.8	18.2	-95.80	162.6	-854.8	690.9	662.0	28.87	23.928		
2,900.0	2,781.7	2,754.0	2,569.9	15.5	19.1	-95.63	171.5	-897.0	725.3	695.1	30.25	23.981		
3,000.0	2,875.9	2,847.9	2,653.3	16.2	20.1	-95.48	180.4	-939.2	759.8	728.2	31.62	24.029		
3,100.0	2,970.0	2,941.7	2,736.6	16.9	21.0	-95.34	189.3	-981.4	794.3	761.3	33.00	24.073		
3,200.0	3,064.2	3,035.6	2,820.0	17.6	22.0	-95.21	198.3	-1,023.7	828.8	794.4	34.37	24.112		
3,300.0	3,158.3	3,129.4	2,903.3	18.2	22.9	-95.09	207.2	-1,065.9	863.2	827.5	35.75	24.149		
3,400.0	3,252.5	3,223.3	2,986.7	18.9	23.9	-94.98	216.1	-1,108.1	897.7	860.6	37.12	24.183		
3,500.0	3,346.6	3,317.1	3,070.0	19.6	24.8	-94.88	225.0	-1,150.3	932.2	893.7	38.50	24.214		
3,600.0	3,440.8	3,411.0	3,153.4	20.3	25.8	-94.78	233.9	-1,192.5	966.7	926.8	39.88	24.243		
3,700.0	3,534.9	3,504.8	3,236.7	21.0	26.7	-94.69	242.8	-1,234.7	1,001.2	959.9	41.25	24.270		
3,800.0	3,629.1	3,598.7	3,320.1	21.7	27.7	-94.61	251.7	-1,276.9	1,035.7	993.0	42.63	24.295		
3,900.0	3,723.2	3,692.5	3,403.4	22.4	28.6	-94.53	260.6	-1,319.1	1,070.2	1,026.2	44.01	24.318		
4,000.0	3,817.4	3,786.4	3,486.8	23.0	29.6	-94.46	269.5	-1,361.3	1,104.7	1,059.3	45.38	24.340		
4,100.0	3,911.5	3,880.2	3,570.1	23.7	30.5	-94.39	278.5	-1,403.5	1,139.2	1,092.4	46.76	24.360		
4,200.0	4,005.6	3,974.1	3,653.5	24.4	31.5	-94.33	287.4	-1,445.7	1,173.7	1,125.5	48.14	24.379		
4,300.0	4,099.8	4,068.0	3,736.8	25.1	32.5	-94.27	296.3	-1,487.9	1,208.2	1,158.6	49.52	24.398		
4,400.0	4,193.9	4,161.8	3,820.2	25.8	33.4	-94.21	305.2	-1,530.1	1,242.7	1,191.8	50.90	24.415		
4,500.0	4,288.1	4,255.7	3,903.5	26.5	34.4	-94.16	314.1	-1,572.3	1,277.2	1,224.9	52.28	24.431		
4,600.0	4,382.2	4,349.5	3,986.9	27.2	35.3	-94.11	323.0	-1,614.6	1,311.7	1,258.0	53.66	24.446		
4,700.0	4,476.4	4,443.4	4,070.2	27.8	36.3	-94.06	331.9	-1,656.8	1,346.2	1,291.1	55.03	24.460		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Bestway Pad Sec.2-T5N-R66W - Pheasant 5 2-2-2 - Wellbore #1 - Plan #1 (8-05-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,570.5	4,537.2	4,153.6	28.5	37.2	-94.01	340.8	-1,699.0	1,380.7	1,324.3	56.41	24.474		
4,900.0	4,664.7	4,631.1	4,236.9	29.2	38.2	-93.97	349.7	-1,741.2	1,415.2	1,357.4	57.79	24.487		
5,000.0	4,758.8	4,724.9	4,320.3	29.9	39.1	-93.93	358.7	-1,783.4	1,449.7	1,390.5	59.17	24.499		
5,100.0	4,853.0	4,818.8	4,403.7	30.6	40.1	-93.89	367.6	-1,825.6	1,484.2	1,423.6	60.55	24.511		
5,186.4	4,934.3	4,899.9	4,475.7	31.2	40.9	-93.86	375.3	-1,862.1	1,514.0	1,452.2	61.74	24.521		
5,200.0	4,947.1	4,912.6	4,487.0	31.3	41.0	-93.95	376.5	-1,867.8	1,518.7	1,456.7	61.96	24.511		
5,300.0	5,042.0	5,006.5	4,570.4	31.8	42.0	-94.56	385.4	-1,910.0	1,553.0	1,489.6	63.42	24.489		
5,400.0	5,137.9	5,100.3	4,653.6	32.2	42.9	-95.03	394.3	-1,952.2	1,587.2	1,522.4	64.80	24.495		
5,500.0	5,234.8	5,193.8	4,736.7	32.7	43.9	-95.38	403.2	-1,994.3	1,621.0	1,554.9	66.09	24.529		
5,600.0	5,332.4	5,287.1	4,819.6	33.0	44.8	-95.61	412.0	-2,036.2	1,654.7	1,587.4	67.29	24.590		
5,700.0	5,430.7	5,379.9	4,902.0	33.3	45.8	-95.74	420.8	-2,078.0	1,688.1	1,619.7	68.40	24.679		
5,800.0	5,529.7	5,472.2	4,984.0	33.6	46.7	-95.77	429.6	-2,119.5	1,721.4	1,652.0	69.42	24.796		
5,900.0	5,629.0	5,563.9	5,065.9	33.8	47.7	-95.71	438.3	-2,160.7	1,754.7	1,684.3	70.35	24.940		
6,000.0	5,728.7	5,654.8	5,146.1	34.0	48.6	-95.58	446.9	-2,201.6	1,787.9	1,716.7	71.19	25.113		
6,100.0	5,828.6	5,744.8	5,226.0	34.1	49.5	-95.38	455.5	-2,242.0	1,821.2	1,749.3	71.94	25.315		
6,171.4	5,900.0	5,808.4	5,282.6	34.2	50.1	-124.65	461.5	-2,270.7	1,845.1	1,772.7	72.42	25.477		
6,200.0	5,928.6	5,833.9	5,305.2	34.2	50.4	-124.38	463.9	-2,282.1	1,854.7	1,782.2	72.51	25.579		
6,300.0	6,028.6	5,922.7	5,384.0	34.3	51.3	-123.42	472.4	-2,322.0	1,888.6	1,815.8	72.81	25.939		
6,400.0	6,128.6	6,011.5	5,462.9	34.4	52.2	-122.50	480.8	-2,362.0	1,923.1	1,850.0	73.10	26.308		
6,500.0	6,228.6	6,100.3	5,541.8	34.5	53.1	-121.61	489.2	-2,401.9	1,958.0	1,884.6	73.37	26.685		
6,600.0	6,328.6	6,189.1	5,620.7	34.6	54.0	-120.74	497.7	-2,441.8	1,993.3	1,919.7	73.64	27.070		
6,700.0	6,428.6	6,304.3	5,723.1	34.6	55.1	-119.67	508.5	-2,493.3	2,028.9	1,955.0	73.91	27.452		
6,800.0	6,528.6	6,512.1	5,912.5	34.7	56.7	-118.01	526.2	-2,577.1	2,061.4	1,987.3	74.13	27.808		
6,900.0	6,628.6	6,733.1	6,120.0	34.8	58.0	-116.64	541.9	-2,651.2	2,088.6	2,014.3	74.32	28.101		
7,000.0	6,728.6	6,965.6	6,344.0	34.9	59.1	-115.57	554.7	-2,712.0	2,110.0	2,035.5	74.51	28.317		
7,100.0	6,828.6	7,158.1	6,532.7	35.0	59.7	-114.94	562.5	-2,749.0	2,125.4	2,050.7	74.70	28.453		
7,200.0	6,928.6	7,256.6	6,629.7	35.1	60.1	-114.66	566.0	-2,765.7	2,139.4	2,064.5	74.86	28.578		
7,300.0	7,028.6	7,355.1	6,726.7	35.2	60.4	-114.39	569.6	-2,782.4	2,153.4	2,078.4	75.03	28.699		
7,400.0	7,128.6	7,453.6	6,823.7	35.3	60.8	-114.12	573.1	-2,799.2	2,167.5	2,092.3	75.21	28.820		
7,500.0	7,228.6	7,552.1	6,920.7	35.4	61.2	-113.85	576.6	-2,815.9	2,181.6	2,106.3	75.38	28.940		
7,600.0	7,328.6	7,650.5	7,017.7	35.5	61.5	-113.59	580.2	-2,832.6	2,195.8	2,120.3	75.56	29.059		
7,700.0	7,428.6	7,749.0	7,114.6	35.6	61.9	-113.33	583.7	-2,849.3	2,210.1	2,134.3	75.74	29.178		
7,800.0	7,528.6	7,847.5	7,211.6	35.7	62.2	-113.07	587.2	-2,866.1	2,224.3	2,148.4	75.93	29.295		
7,900.0	7,628.6	7,946.0	7,308.6	35.8	62.6	-112.82	590.8	-2,882.8	2,238.7	2,162.5	76.11	29.412		
8,000.0	7,728.6	8,044.5	7,405.6	35.9	63.0	-112.57	594.3	-2,899.5	2,253.0	2,176.7	76.30	29.528		
8,071.4	7,800.0	8,114.8	7,474.8	35.9	63.2	-112.39	596.8	-2,911.5	2,263.3	2,186.9	76.44	29.610		
8,072.0	7,800.6	8,115.4	7,475.4	35.9	63.2	-112.39	596.8	-2,911.6	2,263.4	2,186.9	76.44	29.611		

Bestway Pad Sec.2-T5N-R66W - Ruyle 7-3-2 - Wellbore #1 - Plan #1 (8-05-11)													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-14.6	0.0	14.6	14.6	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-14.6	0.0	14.6	14.3	0.22	64.816		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-14.6	0.0	14.6	13.9	0.67	21.605 CC, ES		
300.0	300.0	300.0	300.0	0.6	0.6	-130.23	-14.6	0.0	15.6	14.5	1.12	13.918		
400.0	399.8	399.8	399.8	0.8	0.8	-142.04	-14.6	0.0	19.4	17.8	1.58	12.287 SF		
450.0	449.7	449.6	449.6	0.9	0.9	-149.19	-14.4	0.4	22.7	20.9	1.81	12.548		
500.0	499.5	499.2	499.2	1.0	1.0	-161.91	-14.1	1.6	27.3	25.2	2.04	13.381		
600.0	598.8	597.7	597.5	1.3	1.2	179.96	-12.6	6.5	40.8	38.3	2.50	16.335		
700.0	697.6	694.8	694.3	1.6	1.4	168.81	-10.2	14.5	59.9	56.9	2.97	20.174		
800.0	795.9	790.3	789.1	2.0	1.7	161.70	-7.0	25.4	84.3	80.8	3.46	24.332		
900.0	893.6	883.8	881.5	2.4	2.0	156.87	-2.9	39.1	113.6	109.6	3.99	28.479		
1,000.0	990.4	977.1	973.4	2.9	2.3	153.58	1.8	54.9	147.3	142.7	4.55	32.363		
1,100.0	1,086.3	1,070.3	1,065.0	3.4	2.6	151.75	6.5	70.8	183.7	178.6	5.13	35.806		
1,200.0	1,181.2	1,162.3	1,155.6	4.0	3.0	150.77	11.2	86.5	222.7	217.0	5.74	38.828		
1,216.8	1,197.0	1,177.6	1,170.7	4.1	3.0	150.66	12.0	89.1	229.5	223.7	5.84	39.301		
1,300.0	1,275.4	1,253.6	1,245.4	4.7	3.3	151.19	15.9	102.1	263.4	257.0	6.37	41.353		
1,400.0	1,369.5	1,344.9	1,335.3	5.3	3.7	151.67	20.5	117.7	304.1	297.1	7.01	43.362		
1,500.0	1,463.7	1,436.2	1,425.1	6.0	4.0	152.04	25.2	133.3	344.9	337.2	7.68	44.897		
1,600.0	1,557.8	1,527.5	1,514.9	6.7	4.4	152.33	29.8	148.9	385.6	377.3	8.35	46.187		
1,700.0	1,652.0	1,618.8	1,604.8	7.3	4.8	152.56	34.5	164.5	426.4	417.4	9.03	47.246		
1,800.0	1,746.1	1,710.1	1,694.6	8.0	5.1	152.75	39.1	180.1	467.2	457.5	9.71	48.131		
1,900.0	1,840.3	1,801.4	1,784.5	8.7	5.5	152.91	43.8	195.7	508.0	497.6	10.39	48.881		
2,000.0	1,934.4	1,892.7	1,874.3	9.4	5.8	153.05	48.4	211.3	548.7	537.7	11.08	49.521		
2,100.0	2,028.6	1,984.0	1,964.1	10.0	6.2	153.17	53.1	227.0	589.5	577.7	11.77	50.075		
2,200.0	2,122.7	2,075.3	2,054.0	10.7	6.6	153.27	57.7	242.6	630.3	617.8	12.47	50.558		
2,300.0	2,216.9	2,166.6	2,143.8	11.4	6.9	153.37	62.4	258.2	671.1	657.9	13.16	50.982		
2,400.0	2,311.0	2,257.9	2,233.6	12.1	7.3	153.45	67.0	273.8	711.9	698.0	13.86	51.357		
2,500.0	2,405.1	2,349.2	2,323.5	12.8	7.7	153.52	71.7	289.4	752.6	738.1	14.56	51.691		
2,600.0	2,499.3	2,440.5	2,413.3	13.4	8.0	153.58	76.3	305.0	793.4	778.2	15.26	51.990		
2,700.0	2,593.4	2,531.8	2,503.2	14.1	8.4	153.64	81.0	320.6	834.2	818.3	15.96	52.259		
2,800.0	2,687.6	2,623.2	2,593.0	14.8	8.8	153.69	85.7	336.2	875.0	858.3	16.67	52.503		
2,900.0	2,781.7	2,714.5	2,682.8	15.5	9.1	153.74	90.3	351.8	915.8	898.4	17.37	52.723		
3,000.0	2,875.9	2,805.8	2,772.7	16.2	9.5	153.79	95.0	367.4	956.6	938.5	18.07	52.925		
3,100.0	2,970.0	2,897.1	2,862.5	16.9	9.9	153.83	99.6	383.0	997.4	978.6	18.78	53.109		
3,200.0	3,064.2	2,988.4	2,952.3	17.6	10.3	153.86	104.3	398.6	1,038.2	1,018.7	19.49	53.278		
3,300.0	3,158.3	3,079.7	3,042.2	18.2	10.6	153.90	108.9	414.2	1,079.0	1,058.8	20.19	53.434		
3,400.0	3,252.5	3,171.0	3,132.0	18.9	11.0	153.93	113.6	429.8	1,119.7	1,098.8	20.90	53.577		
3,500.0	3,346.6	3,262.3	3,221.9	19.6	11.4	153.96	118.2	445.4	1,160.5	1,138.9	21.61	53.711		
3,600.0	3,440.8	3,361.3	3,319.4	20.3	11.7	154.00	123.2	462.2	1,201.3	1,178.9	22.33	53.804		
3,700.0	3,534.9	3,485.1	3,441.8	21.0	12.1	154.19	128.4	479.6	1,240.3	1,217.2	23.03	53.865		
3,800.0	3,629.1	3,611.1	3,567.1	21.7	12.4	154.58	132.1	492.0	1,276.9	1,253.2	23.65	53.981		
3,900.0	3,723.2	3,738.9	3,694.7	22.4	12.6	155.16	134.3	499.2	1,311.1	1,286.8	24.22	54.137		
4,000.0	3,817.4	3,861.6	3,817.4	23.0	12.8	155.87	134.8	501.1	1,342.9	1,318.2	24.72	54.330		
4,100.0	3,911.5	3,955.7	3,911.5	23.7	12.9	156.44	134.8	501.1	1,374.0	1,348.8	25.19	54.548		
4,200.0	4,005.6	4,049.9	4,005.6	24.4	13.1	156.98	134.8	501.1	1,405.3	1,379.6	25.66	54.759		
4,300.0	4,099.8	4,144.0	4,099.8	25.1	13.2	157.50	134.8	501.1	1,436.6	1,410.5	26.14	54.967		
4,400.0	4,193.9	4,238.2	4,193.9	25.8	13.3	158.00	134.8	501.1	1,468.1	1,441.5	26.61	55.172		
4,500.0	4,288.1	4,332.3	4,288.1	26.5	13.5	158.48	134.8	501.1	1,499.6	1,472.5	27.08	55.374		
4,600.0	4,382.2	4,426.5	4,382.2	27.2	13.6	158.94	134.8	501.1	1,531.3	1,503.7	27.55	55.573		
4,700.0	4,476.4	4,520.6	4,476.4	27.8	13.8	159.38	134.8	501.1	1,563.0	1,535.0	28.03	55.768		
4,800.0	4,570.5	4,614.8	4,570.5	28.5	13.9	159.81	134.8	501.1	1,594.8	1,566.3	28.50	55.958		
4,900.0	4,664.7	4,708.9	4,664.7	29.2	14.0	160.21	134.8	501.1	1,626.7	1,597.7	28.97	56.145		

Bestway Pad Sec.2-T5N-R66W - Ruyle 7-3-2 - Wellbore #1 - Plan #1 (8-05-11)													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,758.8	4,803.1	4,758.8	29.9	14.2	160.61	134.8	501.1	1,658.7	1,629.2	29.45	56.327		
5,100.0	4,853.0	4,897.2	4,853.0	30.6	14.3	160.98	134.8	501.1	1,690.7	1,660.8	29.92	56.505		
5,186.4	4,934.3	4,978.5	4,934.3	31.2	14.5	161.30	134.8	501.1	1,718.4	1,688.1	30.33	56.654		
5,200.0	4,947.1	4,991.4	4,947.1	31.3	14.5	161.37	134.8	501.1	1,722.8	1,692.4	30.41	56.652		
5,300.0	5,042.0	5,086.2	5,042.0	31.8	14.6	161.90	134.8	501.1	1,752.9	1,722.0	30.94	56.651		
5,400.0	5,137.9	5,182.2	5,137.9	32.2	14.8	162.35	134.8	501.1	1,779.9	1,748.5	31.44	56.608		
5,500.0	5,234.8	5,279.0	5,234.8	32.7	15.0	162.74	134.8	501.1	1,803.8	1,771.9	31.91	56.528		
5,600.0	5,332.4	5,376.6	5,332.4	33.0	15.1	163.06	134.8	501.1	1,824.4	1,792.0	32.34	56.415		
5,700.0	5,430.7	5,475.0	5,430.7	33.3	15.3	163.33	134.8	501.1	1,841.7	1,809.0	32.73	56.271		
5,800.0	5,529.7	5,573.9	5,529.7	33.6	15.5	163.54	134.8	501.1	1,855.8	1,822.7	33.08	56.098		
5,900.0	5,629.0	5,673.3	5,629.0	33.8	15.6	163.70	134.8	501.1	1,866.5	1,833.1	33.39	55.898		
6,000.0	5,728.7	5,773.0	5,728.7	34.0	15.8	163.80	134.8	501.1	1,873.9	1,840.3	33.66	55.670		
6,100.0	5,828.6	5,872.9	5,828.6	34.1	16.0	163.86	134.8	501.1	1,878.0	1,844.1	33.89	55.414		
6,171.4	5,900.0	5,944.2	5,900.0	34.2	16.1	134.43	134.8	501.1	1,878.9	1,844.8	34.03	55.213		
6,200.0	5,928.6	5,972.9	5,928.6	34.2	16.2	134.43	134.8	501.1	1,878.9	1,844.7	34.12	55.068		
6,300.0	6,028.6	6,072.9	6,028.6	34.3	16.3	134.43	134.8	501.1	1,878.9	1,844.4	34.44	54.550		
6,400.0	6,128.6	6,172.9	6,128.6	34.4	16.5	134.43	134.8	501.1	1,878.9	1,844.1	34.77	54.037		
6,500.0	6,228.6	6,272.9	6,228.6	34.5	16.7	134.43	134.8	501.1	1,878.9	1,843.8	35.10	53.529		
6,600.0	6,328.6	6,372.9	6,328.6	34.6	16.9	134.43	134.8	501.1	1,878.9	1,843.4	35.43	53.028		
6,700.0	6,428.6	6,472.9	6,428.6	34.6	17.0	134.43	134.8	501.1	1,878.9	1,843.1	35.77	52.532		
6,800.0	6,528.6	6,572.9	6,528.6	34.7	17.2	134.43	134.8	501.1	1,878.9	1,842.8	36.10	52.041		
6,900.0	6,628.6	6,672.9	6,628.6	34.8	17.4	134.43	134.8	501.1	1,878.9	1,842.4	36.44	51.557		
7,000.0	6,728.6	6,772.9	6,728.6	34.9	17.6	134.43	134.8	501.1	1,878.9	1,842.1	36.78	51.078		
7,100.0	6,828.6	6,872.9	6,828.6	35.0	17.8	134.43	134.8	501.1	1,878.9	1,841.7	37.13	50.605		
7,200.0	6,928.6	6,972.9	6,928.6	35.1	18.0	134.43	134.8	501.1	1,878.9	1,841.4	37.47	50.138		
7,300.0	7,028.6	7,072.9	7,028.6	35.2	18.2	134.43	134.8	501.1	1,878.9	1,841.0	37.82	49.676		
7,400.0	7,128.6	7,172.9	7,128.6	35.3	18.3	134.43	134.8	501.1	1,878.9	1,840.7	38.17	49.221		
7,500.0	7,228.6	7,272.9	7,228.6	35.4	18.5	134.43	134.8	501.1	1,878.9	1,840.3	38.52	48.771		
7,600.0	7,328.6	7,372.9	7,328.6	35.5	18.7	134.43	134.8	501.1	1,878.9	1,840.0	38.88	48.326		
7,700.0	7,428.6	7,472.9	7,428.6	35.6	18.9	134.43	134.8	501.1	1,878.9	1,839.6	39.23	47.888		
7,800.0	7,528.6	7,572.9	7,528.6	35.7	19.1	134.43	134.8	501.1	1,878.9	1,839.3	39.59	47.455		
7,900.0	7,628.6	7,672.9	7,628.6	35.8	19.3	134.43	134.8	501.1	1,878.9	1,838.9	39.95	47.028		
8,000.0	7,728.6	7,772.9	7,728.6	35.9	19.5	134.43	134.8	501.1	1,878.9	1,838.6	40.31	46.606		
8,071.4	7,800.0	7,844.2	7,800.0	35.9	19.6	134.43	134.8	501.1	1,878.9	1,838.3	40.57	46.309		
8,072.0	7,800.6	7,844.2	7,800.0	35.9	19.6	134.43	134.8	501.1	1,878.9	1,838.3	40.57	46.308		

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well Ditch 5-1-2
Project:	SEC.2-T5N-R66W	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Reference Site:	Bestway Pad Sec.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (8-05-11)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	14.6	0.0	14.6	14.6	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	0.00	14.6	0.0	14.6	14.4	0.22	64.871		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	14.6	0.0	14.6	13.9	0.67	21.624		
300.0	300.0	300.0	300.0	0.6	0.6	61.02	14.6	0.0	13.7	12.5	1.12	12.169		
356.4	356.3	356.1	356.1	0.7	0.7	72.38	14.9	0.4	13.1	11.7	1.37	9.519 CC, ES		
400.0	399.8	399.4	399.4	0.8	0.8	85.93	15.7	1.3	13.6	12.1	1.57	8.694 SF		
450.0	449.7	448.9	448.8	0.9	0.9	102.42	17.1	3.0	16.1	14.3	1.81	8.905		
500.0	499.5	498.2	498.1	1.0	1.0	110.38	19.0	5.3	20.5	18.4	2.05	9.994		
600.0	598.8	596.5	596.0	1.3	1.2	119.37	24.6	11.5	33.5	30.9	2.55	13.140		
700.0	697.6	694.6	693.5	1.6	1.5	122.07	33.3	18.6	49.7	46.6	3.07	16.191		
800.0	795.9	792.4	790.2	2.0	1.8	122.55	45.3	26.1	68.0	64.4	3.65	18.651		
900.0	893.6	889.9	886.2	2.4	2.1	122.23	60.4	34.1	88.2	83.9	4.30	20.513		
1,000.0	990.4	987.0	981.1	2.9	2.5	121.59	78.8	42.5	110.2	105.1	5.04	21.846		
1,100.0	1,086.3	1,083.7	1,075.0	3.4	2.9	120.82	100.2	51.3	133.8	127.9	5.88	22.741		
1,200.0	1,181.2	1,179.9	1,167.6	4.0	3.4	120.00	124.6	60.6	159.0	152.2	6.83	23.294		
1,216.8	1,197.0	1,196.0	1,183.0	4.1	3.5	119.86	129.0	62.1	163.4	156.4	6.99	23.370		
1,300.0	1,275.4	1,275.7	1,259.0	4.7	3.9	119.85	152.0	70.2	185.4	177.6	7.87	23.565		
1,400.0	1,369.5	1,372.0	1,350.0	5.3	4.5	119.32	181.5	80.1	212.1	203.1	8.98	23.631		
1,500.0	1,463.7	1,468.4	1,441.2	6.0	5.1	118.89	211.1	90.1	238.8	228.7	10.11	23.627		
1,600.0	1,557.8	1,564.7	1,532.3	6.7	5.7	118.54	240.7	100.1	265.4	254.2	11.25	23.593		
1,700.0	1,652.0	1,661.1	1,623.5	7.3	6.2	118.26	270.3	110.1	292.1	279.7	12.41	23.544		
1,800.0	1,746.1	1,757.5	1,714.7	8.0	6.8	118.03	299.9	120.1	318.8	305.2	13.57	23.489		
1,900.0	1,840.3	1,853.8	1,805.8	8.7	7.4	117.83	329.6	130.0	345.5	330.8	14.75	23.432		
2,000.0	1,934.4	1,950.2	1,897.0	9.4	8.1	117.66	359.2	140.0	372.2	356.3	15.92	23.377		
2,100.0	2,028.6	2,046.5	1,988.1	10.0	8.7	117.51	388.8	150.0	398.9	381.8	17.10	23.325		
2,200.0	2,122.7	2,142.9	2,079.3	10.7	9.3	117.39	418.4	160.0	425.6	407.3	18.29	23.275		
2,300.0	2,216.9	2,239.3	2,170.4	11.4	9.9	117.27	448.0	170.0	452.3	432.9	19.47	23.228		
2,400.0	2,311.0	2,335.6	2,261.6	12.1	10.5	117.17	477.6	179.9	479.0	458.4	20.66	23.185		
2,500.0	2,405.1	2,432.0	2,352.8	12.8	11.1	117.08	507.2	189.9	505.7	483.9	21.85	23.144		
2,600.0	2,499.3	2,528.4	2,443.9	13.4	11.7	117.00	536.8	199.9	532.5	509.4	23.04	23.106		
2,700.0	2,593.4	2,624.7	2,535.1	14.1	12.3	116.93	566.4	209.9	559.2	534.9	24.24	23.070		
2,800.0	2,687.6	2,721.1	2,626.2	14.8	13.0	116.86	596.0	219.8	585.9	560.5	25.43	23.037		
2,900.0	2,781.7	2,817.5	2,717.4	15.5	13.6	116.80	625.6	229.8	612.6	586.0	26.63	23.006		
3,000.0	2,875.9	2,913.8	2,808.6	16.2	14.2	116.75	655.2	239.8	639.3	611.5	27.82	22.977		
3,100.0	2,970.0	3,010.2	2,899.7	16.9	14.8	116.69	684.9	249.8	666.0	637.0	29.02	22.950		
3,200.0	3,064.2	3,106.6	2,990.9	17.6	15.4	116.65	714.5	259.8	692.7	662.5	30.22	22.924		
3,300.0	3,158.3	3,202.9	3,082.0	18.2	16.0	116.60	744.1	269.7	719.5	688.0	31.42	22.900		
3,400.0	3,252.5	3,299.3	3,173.2	18.9	16.7	116.56	773.7	279.7	746.2	713.6	32.62	22.878		
3,500.0	3,346.6	3,395.6	3,264.3	19.6	17.3	116.53	803.3	289.7	772.9	739.1	33.82	22.856		
3,600.0	3,440.8	3,492.0	3,355.5	20.3	17.9	116.49	832.9	299.7	799.6	764.6	35.01	22.836		
3,700.0	3,534.9	3,588.4	3,446.7	21.0	18.5	116.46	862.5	309.6	826.3	790.1	36.21	22.817		
3,800.0	3,629.1	3,684.7	3,537.8	21.7	19.1	116.43	892.1	319.6	853.0	815.6	37.42	22.799		
3,900.0	3,723.2	3,781.1	3,629.0	22.4	19.7	116.40	921.7	329.6	879.7	841.1	38.62	22.782		
4,000.0	3,817.4	3,877.5	3,720.1	23.0	20.4	116.37	951.3	339.6	906.5	866.6	39.82	22.766		
4,100.0	3,911.5	3,973.8	3,811.3	23.7	21.0	116.34	980.9	349.6	933.2	892.2	41.02	22.750		
4,200.0	4,005.6	4,070.2	3,902.5	24.4	21.6	116.32	1,010.6	359.5	959.9	917.7	42.22	22.736		
4,300.0	4,099.8	4,166.6	3,993.6	25.1	22.2	116.30	1,040.2	369.5	986.6	943.2	43.42	22.722		
4,400.0	4,193.9	4,262.9	4,084.8	25.8	22.8	116.27	1,069.8	379.5	1,013.3	968.7	44.62	22.709		
4,500.0	4,288.1	4,359.3	4,175.9	26.5	23.5	116.25	1,099.4	389.5	1,040.1	994.2	45.83	22.696		
4,600.0	4,382.2	4,455.6	4,267.1	27.2	24.1	116.23	1,129.0	399.5	1,066.8	1,019.7	47.03	22.684		
4,700.0	4,476.4	4,552.0	4,358.2	27.8	24.7	116.22	1,158.6	409.4	1,093.5	1,045.3	48.23	22.672		
4,800.0	4,570.5	4,648.4	4,449.4	28.5	25.3	116.20	1,188.2	419.4	1,120.2	1,070.8	49.43	22.661		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well Ditch 5-1-2
Project:	SEC.2-T5N-R66W	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Reference Site:	Bestway Pad Sec.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (8-05-11)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0ft
Bestway Pad Sec.2-T5N-R66W - Stony 7-1-2 - Wellbore #1 - Plan #1 (8-05-11)												Offset Well Error:	0.0ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.0	4,664.7	4,744.7	4,540.6	29.2	25.9	116.18	1,217.8	429.4	1,146.9	1,096.3	50.64	22.650	
5,000.0	4,758.8	4,841.1	4,631.7	29.9	26.6	116.17	1,247.4	439.4	1,173.6	1,121.8	51.84	22.640	
5,100.0	4,853.0	4,937.5	4,722.9	30.6	27.2	116.15	1,277.0	449.3	1,200.4	1,147.3	53.04	22.630	
5,186.4	4,934.3	5,020.7	4,801.6	31.2	27.7	116.14	1,302.6	458.0	1,223.4	1,169.4	54.08	22.622	
5,200.0	4,947.1	5,033.8	4,814.0	31.3	27.8	116.20	1,306.6	459.3	1,227.1	1,172.8	54.25	22.620	
5,300.0	5,042.0	5,136.7	4,911.4	31.8	28.4	116.57	1,338.0	469.9	1,252.7	1,197.4	55.35	22.632	
5,400.0	5,137.9	5,250.9	5,020.7	32.2	28.9	116.88	1,369.5	480.5	1,275.9	1,219.5	56.35	22.642	
5,500.0	5,234.8	5,366.4	5,132.4	32.7	29.4	117.16	1,397.1	489.8	1,296.1	1,238.9	57.26	22.638	
5,600.0	5,332.4	5,482.8	5,246.2	33.0	29.8	117.42	1,420.6	497.7	1,313.5	1,255.4	58.06	22.623	
5,700.0	5,430.7	5,600.2	5,361.7	33.3	30.2	117.67	1,439.9	504.2	1,327.9	1,269.1	58.76	22.598	
5,800.0	5,529.7	5,718.2	5,478.7	33.6	30.5	117.90	1,454.7	509.2	1,339.3	1,280.0	59.34	22.569	
5,900.0	5,629.0	5,836.6	5,596.6	33.8	30.7	118.11	1,465.0	512.7	1,347.7	1,287.9	59.81	22.532	
6,000.0	5,728.7	5,955.4	5,715.2	34.0	30.9	118.31	1,470.7	514.6	1,353.1	1,292.9	60.17	22.488	
6,100.0	5,828.6	6,068.8	5,828.6	34.1	31.0	118.48	1,471.9	515.0	1,355.4	1,295.0	60.41	22.437	
6,171.4	5,900.0	6,140.2	5,900.0	34.2	31.1	89.08	1,471.9	515.0	1,355.9	1,295.3	60.54	22.398	
6,200.0	5,928.6	6,168.8	5,928.6	34.2	31.1	89.08	1,471.9	515.0	1,355.9	1,295.3	60.59	22.379	
6,300.0	6,028.6	6,268.8	6,028.6	34.3	31.2	89.08	1,471.9	515.0	1,355.9	1,295.1	60.76	22.315	
6,400.0	6,128.6	6,368.8	6,128.6	34.4	31.3	89.08	1,471.9	515.0	1,355.9	1,294.9	60.94	22.250	
6,500.0	6,228.6	6,468.8	6,228.6	34.5	31.3	89.08	1,471.9	515.0	1,355.9	1,294.7	61.12	22.184	
6,600.0	6,328.6	6,568.8	6,328.6	34.6	31.4	89.08	1,471.9	515.0	1,355.9	1,294.6	61.30	22.117	
6,700.0	6,428.6	6,668.8	6,428.6	34.6	31.5	89.08	1,471.9	515.0	1,355.9	1,294.4	61.49	22.050	
6,800.0	6,528.6	6,768.8	6,528.6	34.7	31.6	89.08	1,471.9	515.0	1,355.9	1,294.2	61.68	21.982	
6,900.0	6,628.6	6,868.8	6,628.6	34.8	31.7	89.08	1,471.9	515.0	1,355.9	1,294.0	61.87	21.914	
7,000.0	6,728.6	6,968.8	6,728.6	34.9	31.8	89.08	1,471.9	515.0	1,355.9	1,293.8	62.07	21.845	
7,100.0	6,828.6	7,068.8	6,828.6	35.0	31.9	89.08	1,471.9	515.0	1,355.9	1,293.6	62.26	21.776	
7,200.0	6,928.6	7,168.8	6,928.6	35.1	32.0	89.08	1,471.9	515.0	1,355.9	1,293.4	62.46	21.706	
7,300.0	7,028.6	7,268.8	7,028.6	35.2	32.1	89.08	1,471.9	515.0	1,355.9	1,293.2	62.67	21.636	
7,400.0	7,128.6	7,368.8	7,128.6	35.3	32.2	89.08	1,471.9	515.0	1,355.9	1,293.0	62.87	21.566	
7,500.0	7,228.6	7,468.8	7,228.6	35.4	32.3	89.08	1,471.9	515.0	1,355.9	1,292.8	63.08	21.495	
7,600.0	7,328.6	7,568.8	7,328.6	35.5	32.4	89.08	1,471.9	515.0	1,355.9	1,292.6	63.29	21.423	
7,700.0	7,428.6	7,668.8	7,428.6	35.6	32.5	89.08	1,471.9	515.0	1,355.9	1,292.4	63.50	21.352	
7,800.0	7,528.6	7,768.8	7,528.6	35.7	32.6	89.08	1,471.9	515.0	1,355.9	1,292.1	63.72	21.280	
7,900.0	7,628.6	7,868.8	7,628.6	35.8	32.7	89.08	1,471.9	515.0	1,355.9	1,291.9	63.93	21.207	
8,000.0	7,728.6	7,968.8	7,728.6	35.9	32.8	89.08	1,471.9	515.0	1,355.9	1,291.7	64.15	21.135	
8,071.4	7,800.0	8,040.2	7,800.0	35.9	32.9	89.08	1,471.9	515.0	1,355.9	1,291.6	64.31	21.083	
8,072.0	7,800.6	8,040.2	7,800.0	35.9	32.9	89.08	1,471.9	515.0	1,355.9	1,291.6	64.31	21.082	

Reference Depths are relative to WELL @ 4711.0ft (Original Well Elev) Coordinates are relative to: Ditch 5-1-2
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.49°



Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well Ditch 5-1-2
Project:	SEC.2-T5N-R66W	TVD Reference:	WELL @ 4711.0ft (Original Well Elev)
Reference Site:	Bestway Pad Sec.2-T5N-R66W	MD Reference:	WELL @ 4711.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ditch 5-1-2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (8-05-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4711.0ft (Original Well Elev) Coordinates are relative to: Ditch 5-1-2
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.49°

