

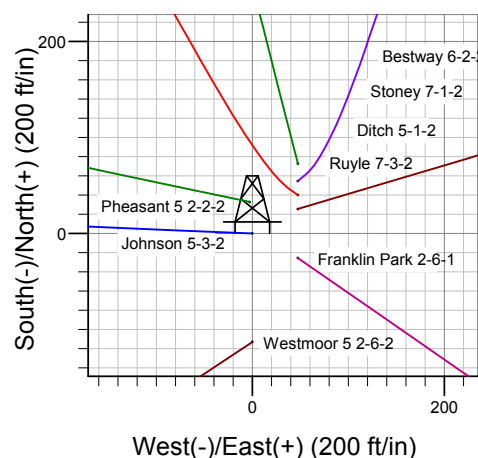
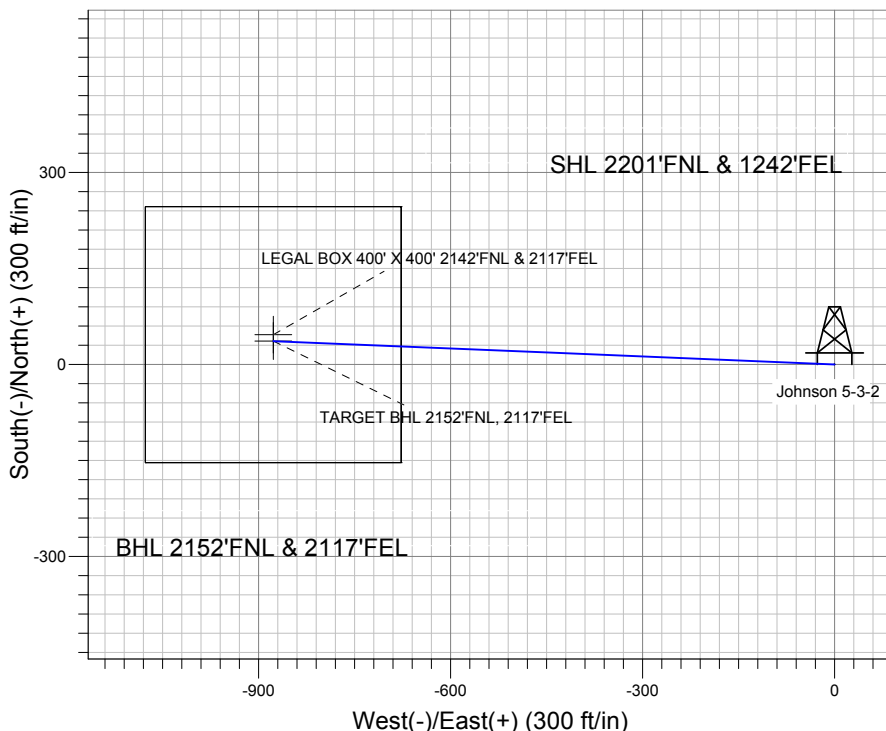
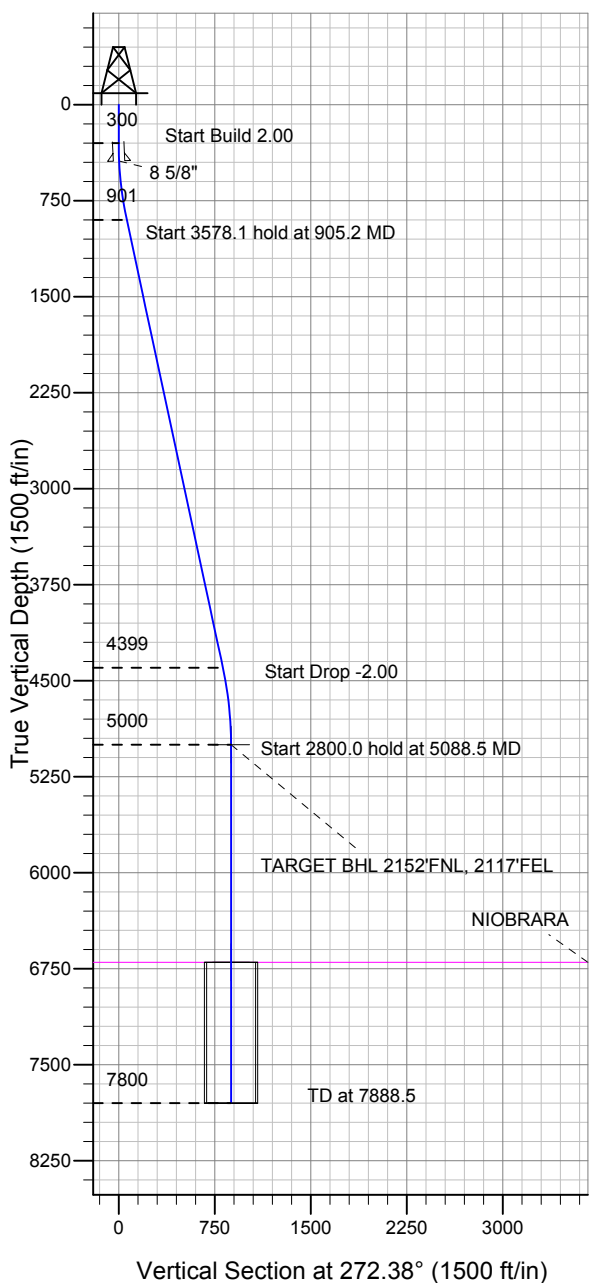
# ENSIGN

## Directional

### Well Name: Johnson 5-3-2

Surface Location: Bestway Pad Sec.2-T5N-R66W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4699.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1400889.08 3211720.50 40.431350 -104.739450  
 Original Well Elev WELL @ 4712.0ft (Original Well Elev)

## Mineral Resources Inc



Bestway Pad Sec.2-T5N-R66W  
 Johnson 5-3-2  
 Plan #1 (8-04-11)  
 15:44, September 26 2011



Azimuths to True North  
 Magnetic North: 8.82°

Magnetic Field  
 Strength: 53121.9snT  
 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 2152'FNL, 2117'FEL	5000.0	36.5	-876.9	40.431450	-104.742600	Point
LEGAL BOX 400' X 400' 2142'FNL & 2117'FEL	6700.0	46.5	-876.9	40.431478	-104.742600	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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	905.2	12.10	272.38	900.7	2.6	-63.6	2.00	272.38	63.7	
4	4483.3	12.10	272.38	4399.3	33.8	-813.3	0.00	0.00	814.0	
5	5088.5	0.00	0.00	5000.0	36.5	-876.9	2.00	180.00	877.7	TARGET BHL 2152'FNL, 2117'FEL
6	7888.5	0.00	0.00	7800.0	36.5	-876.9	0.00	0.00	877.7	



## **Directional**

### **Mineral Resources Inc**

**SEC.2-T5N-R66W**

**Bestway Pad Sec.2-T5N-R66W**

**Johnson 5-3-2**

**Wellbore #1**

**Plan: Plan #1 (8-04-11)**

### **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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
905.2	12.10	272.38	900.7	2.6	-63.6	2.00	2.00	0.00	272.38	
4,483.3	12.10	272.38	4,399.3	33.8	-813.3	0.00	0.00	0.00	0.00	
5,088.5	0.00	0.00	5,000.0	36.5	-876.9	2.00	-2.00	0.00	180.00	TARGET BHL 2152
7,888.5	0.00	0.00	7,800.0	36.5	-876.9	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Project:</b>	SEC.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-04-11)		

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	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.40	272.38	320.0	0.0	-0.1	0.1	2.00	2.00	0.00
360.0	1.20	272.38	360.0	0.0	-0.6	0.6	2.00	2.00	0.00
400.0	2.00	272.38	400.0	0.1	-1.7	1.7	2.00	2.00	0.00
440.0	2.80	272.38	439.9	0.1	-3.4	3.4	2.00	2.00	0.00
440.1	2.80	272.38	440.0	0.1	-3.4	3.4	2.00	2.00	0.00
8 5/8"									
480.0	3.60	272.38	479.9	0.2	-5.6	5.7	2.00	2.00	0.00
520.0	4.40	272.38	519.8	0.4	-8.4	8.4	2.00	2.00	0.00
560.0	5.20	272.38	559.6	0.5	-11.8	11.8	2.00	2.00	0.00
600.0	6.00	272.38	599.5	0.7	-15.7	15.7	2.00	2.00	0.00
640.0	6.80	272.38	639.2	0.8	-20.1	20.2	2.00	2.00	0.00
680.0	7.60	272.38	678.9	1.0	-25.1	25.2	2.00	2.00	0.00
720.0	8.40	272.38	718.5	1.3	-30.7	30.7	2.00	2.00	0.00
760.0	9.20	272.38	758.0	1.5	-36.8	36.9	2.00	2.00	0.00
800.0	10.00	272.38	797.5	1.8	-43.5	43.5	2.00	2.00	0.00
840.0	10.80	272.38	836.8	2.1	-50.7	50.7	2.00	2.00	0.00
880.0	11.60	272.38	876.0	2.4	-58.5	58.5	2.00	2.00	0.00
905.2	12.10	272.38	900.7	2.6	-63.6	63.7	2.00	2.00	0.00
920.0	12.10	272.38	915.2	2.8	-66.7	66.8	0.00	0.00	0.00
960.0	12.10	272.38	954.3	3.1	-75.1	75.2	0.00	0.00	0.00
1,000.0	12.10	272.38	993.4	3.5	-83.5	83.6	0.00	0.00	0.00
1,040.0	12.10	272.38	1,032.5	3.8	-91.9	92.0	0.00	0.00	0.00
1,080.0	12.10	272.38	1,071.6	4.2	-100.3	100.3	0.00	0.00	0.00
1,120.0	12.10	272.38	1,110.7	4.5	-108.6	108.7	0.00	0.00	0.00
1,160.0	12.10	272.38	1,149.8	4.9	-117.0	117.1	0.00	0.00	0.00
1,200.0	12.10	272.38	1,189.0	5.2	-125.4	125.5	0.00	0.00	0.00
1,240.0	12.10	272.38	1,228.1	5.6	-133.8	133.9	0.00	0.00	0.00
1,280.0	12.10	272.38	1,267.2	5.9	-142.2	142.3	0.00	0.00	0.00
1,320.0	12.10	272.38	1,306.3	6.3	-150.5	150.7	0.00	0.00	0.00
1,360.0	12.10	272.38	1,345.4	6.6	-158.9	159.1	0.00	0.00	0.00
1,400.0	12.10	272.38	1,384.5	7.0	-167.3	167.4	0.00	0.00	0.00
1,440.0	12.10	272.38	1,423.6	7.3	-175.7	175.8	0.00	0.00	0.00
1,480.0	12.10	272.38	1,462.7	7.7	-184.1	184.2	0.00	0.00	0.00
1,520.0	12.10	272.38	1,501.8	8.0	-192.4	192.6	0.00	0.00	0.00
1,560.0	12.10	272.38	1,541.0	8.3	-200.8	201.0	0.00	0.00	0.00
1,600.0	12.10	272.38	1,580.1	8.7	-209.2	209.4	0.00	0.00	0.00
1,640.0	12.10	272.38	1,619.2	9.0	-217.6	217.8	0.00	0.00	0.00
1,680.0	12.10	272.38	1,658.3	9.4	-226.0	226.2	0.00	0.00	0.00
1,720.0	12.10	272.38	1,697.4	9.7	-234.3	234.5	0.00	0.00	0.00
1,760.0	12.10	272.38	1,736.5	10.1	-242.7	242.9	0.00	0.00	0.00
1,800.0	12.10	272.38	1,775.6	10.4	-251.1	251.3	0.00	0.00	0.00
1,840.0	12.10	272.38	1,814.7	10.8	-259.5	259.7	0.00	0.00	0.00
1,880.0	12.10	272.38	1,853.8	11.1	-267.9	268.1	0.00	0.00	0.00
1,920.0	12.10	272.38	1,892.9	11.5	-276.2	276.5	0.00	0.00	0.00
1,960.0	12.10	272.38	1,932.1	11.8	-284.6	284.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Project:</b>	SEC.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-04-11)		

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	12.10	272.38	1,971.2	12.2	-293.0	293.3	0.00	0.00	0.00
2,040.0	12.10	272.38	2,010.3	12.5	-301.4	301.6	0.00	0.00	0.00
2,080.0	12.10	272.38	2,049.4	12.9	-309.8	310.0	0.00	0.00	0.00
2,120.0	12.10	272.38	2,088.5	13.2	-318.2	318.4	0.00	0.00	0.00
2,160.0	12.10	272.38	2,127.6	13.6	-326.5	326.8	0.00	0.00	0.00
2,200.0	12.10	272.38	2,166.7	13.9	-334.9	335.2	0.00	0.00	0.00
2,240.0	12.10	272.38	2,205.8	14.3	-343.3	343.6	0.00	0.00	0.00
2,280.0	12.10	272.38	2,244.9	14.6	-351.7	352.0	0.00	0.00	0.00
2,320.0	12.10	272.38	2,284.1	15.0	-360.1	360.4	0.00	0.00	0.00
2,360.0	12.10	272.38	2,323.2	15.3	-368.4	368.8	0.00	0.00	0.00
2,400.0	12.10	272.38	2,362.3	15.7	-376.8	377.1	0.00	0.00	0.00
2,440.0	12.10	272.38	2,401.4	16.0	-385.2	385.5	0.00	0.00	0.00
2,480.0	12.10	272.38	2,440.5	16.4	-393.6	393.9	0.00	0.00	0.00
2,520.0	12.10	272.38	2,479.6	16.7	-402.0	402.3	0.00	0.00	0.00
2,560.0	12.10	272.38	2,518.7	17.1	-410.3	410.7	0.00	0.00	0.00
2,600.0	12.10	272.38	2,557.8	17.4	-418.7	419.1	0.00	0.00	0.00
2,640.0	12.10	272.38	2,596.9	17.8	-427.1	427.5	0.00	0.00	0.00
2,680.0	12.10	272.38	2,636.0	18.1	-435.5	435.9	0.00	0.00	0.00
2,720.0	12.10	272.38	2,675.2	18.5	-443.9	444.2	0.00	0.00	0.00
2,760.0	12.10	272.38	2,714.3	18.8	-452.2	452.6	0.00	0.00	0.00
2,800.0	12.10	272.38	2,753.4	19.2	-460.6	461.0	0.00	0.00	0.00
2,840.0	12.10	272.38	2,792.5	19.5	-469.0	469.4	0.00	0.00	0.00
2,880.0	12.10	272.38	2,831.6	19.8	-477.4	477.8	0.00	0.00	0.00
2,920.0	12.10	272.38	2,870.7	20.2	-485.8	486.2	0.00	0.00	0.00
2,960.0	12.10	272.38	2,909.8	20.5	-494.1	494.6	0.00	0.00	0.00
3,000.0	12.10	272.38	2,948.9	20.9	-502.5	503.0	0.00	0.00	0.00
3,040.0	12.10	272.38	2,988.0	21.2	-510.9	511.3	0.00	0.00	0.00
3,080.0	12.10	272.38	3,027.2	21.6	-519.3	519.7	0.00	0.00	0.00
3,120.0	12.10	272.38	3,066.3	21.9	-527.7	528.1	0.00	0.00	0.00
3,160.0	12.10	272.38	3,105.4	22.3	-536.0	536.5	0.00	0.00	0.00
3,200.0	12.10	272.38	3,144.5	22.6	-544.4	544.9	0.00	0.00	0.00
3,240.0	12.10	272.38	3,183.6	23.0	-552.8	553.3	0.00	0.00	0.00
3,280.0	12.10	272.38	3,222.7	23.3	-561.2	561.7	0.00	0.00	0.00
3,320.0	12.10	272.38	3,261.8	23.7	-569.6	570.1	0.00	0.00	0.00
3,360.0	12.10	272.38	3,300.9	24.0	-577.9	578.4	0.00	0.00	0.00
3,400.0	12.10	272.38	3,340.0	24.4	-586.3	586.8	0.00	0.00	0.00
3,440.0	12.10	272.38	3,379.2	24.7	-594.7	595.2	0.00	0.00	0.00
3,480.0	12.10	272.38	3,418.3	25.1	-603.1	603.6	0.00	0.00	0.00
3,520.0	12.10	272.38	3,457.4	25.4	-611.5	612.0	0.00	0.00	0.00
3,560.0	12.10	272.38	3,496.5	25.8	-619.9	620.4	0.00	0.00	0.00
3,600.0	12.10	272.38	3,535.6	26.1	-628.2	628.8	0.00	0.00	0.00
3,640.0	12.10	272.38	3,574.7	26.5	-636.6	637.2	0.00	0.00	0.00
3,680.0	12.10	272.38	3,613.8	26.8	-645.0	645.5	0.00	0.00	0.00
3,720.0	12.10	272.38	3,652.9	27.2	-653.4	653.9	0.00	0.00	0.00
3,760.0	12.10	272.38	3,692.0	27.5	-661.8	662.3	0.00	0.00	0.00
3,800.0	12.10	272.38	3,731.1	27.9	-670.1	670.7	0.00	0.00	0.00
3,840.0	12.10	272.38	3,770.3	28.2	-678.5	679.1	0.00	0.00	0.00
3,880.0	12.10	272.38	3,809.4	28.6	-686.9	687.5	0.00	0.00	0.00
3,920.0	12.10	272.38	3,848.5	28.9	-695.3	695.9	0.00	0.00	0.00
3,960.0	12.10	272.38	3,887.6	29.3	-703.7	704.3	0.00	0.00	0.00
4,000.0	12.10	272.38	3,926.7	29.6	-712.0	712.7	0.00	0.00	0.00
4,040.0	12.10	272.38	3,965.8	30.0	-720.4	721.0	0.00	0.00	0.00
4,080.0	12.10	272.38	4,004.9	30.3	-728.8	729.4	0.00	0.00	0.00
4,120.0	12.10	272.38	4,044.0	30.6	-737.2	737.8	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Project:</b>	SEC.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-04-11)		

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	12.10	272.38	4,083.1	31.0	-745.6	746.2	0.00	0.00	0.00
4,200.0	12.10	272.38	4,122.3	31.3	-753.9	754.6	0.00	0.00	0.00
4,240.0	12.10	272.38	4,161.4	31.7	-762.3	763.0	0.00	0.00	0.00
4,280.0	12.10	272.38	4,200.5	32.0	-770.7	771.4	0.00	0.00	0.00
4,320.0	12.10	272.38	4,239.6	32.4	-779.1	779.8	0.00	0.00	0.00
4,360.0	12.10	272.38	4,278.7	32.7	-787.5	788.1	0.00	0.00	0.00
4,400.0	12.10	272.38	4,317.8	33.1	-795.8	796.5	0.00	0.00	0.00
4,440.0	12.10	272.38	4,356.9	33.4	-804.2	804.9	0.00	0.00	0.00
4,480.0	12.10	272.38	4,396.0	33.8	-812.6	813.3	0.00	0.00	0.00
4,483.3	12.10	272.38	4,399.3	33.8	-813.3	814.0	0.00	0.00	0.00
4,520.0	11.37	272.38	4,435.2	34.1	-820.8	821.5	2.00	-2.00	0.00
4,560.0	10.57	272.38	4,474.5	34.4	-828.4	829.1	2.00	-2.00	0.00
4,600.0	9.77	272.38	4,513.8	34.7	-835.4	836.1	2.00	-2.00	0.00
4,640.0	8.97	272.38	4,553.3	35.0	-841.9	842.7	2.00	-2.00	0.00
4,680.0	8.17	272.38	4,592.8	35.3	-847.9	848.6	2.00	-2.00	0.00
4,720.0	7.37	272.38	4,632.5	35.5	-853.3	854.0	2.00	-2.00	0.00
4,760.0	6.57	272.38	4,672.2	35.7	-858.1	858.9	2.00	-2.00	0.00
4,800.0	5.77	272.38	4,712.0	35.9	-862.4	863.2	2.00	-2.00	0.00
4,840.0	4.97	272.38	4,751.8	36.0	-866.2	866.9	2.00	-2.00	0.00
4,880.0	4.17	272.38	4,791.6	36.1	-869.4	870.1	2.00	-2.00	0.00
4,920.0	3.37	272.38	4,831.6	36.3	-872.0	872.7	2.00	-2.00	0.00
4,960.0	2.57	272.38	4,871.5	36.3	-874.1	874.8	2.00	-2.00	0.00
5,000.0	1.77	272.38	4,911.5	36.4	-875.6	876.3	2.00	-2.00	0.00
5,040.0	0.97	272.38	4,951.5	36.4	-876.5	877.3	2.00	-2.00	0.00
5,080.0	0.17	272.38	4,991.5	36.5	-876.9	877.7	2.00	-2.00	0.00
5,088.5	0.00	0.00	5,000.0	36.5	-876.9	877.7	2.00	-2.00	0.00
TARGET BHL 2152'FNL, 2117'FEL									
5,120.0	0.00	0.00	5,031.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,160.0	0.00	0.00	5,071.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,200.0	0.00	0.00	5,111.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,240.0	0.00	0.00	5,151.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,280.0	0.00	0.00	5,191.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,320.0	0.00	0.00	5,231.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,360.0	0.00	0.00	5,271.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,400.0	0.00	0.00	5,311.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,440.0	0.00	0.00	5,351.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,480.0	0.00	0.00	5,391.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,520.0	0.00	0.00	5,431.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,560.0	0.00	0.00	5,471.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,600.0	0.00	0.00	5,511.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,640.0	0.00	0.00	5,551.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,680.0	0.00	0.00	5,591.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,720.0	0.00	0.00	5,631.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,760.0	0.00	0.00	5,671.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,711.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,840.0	0.00	0.00	5,751.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,880.0	0.00	0.00	5,791.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,920.0	0.00	0.00	5,831.5	36.5	-876.9	877.7	0.00	0.00	0.00
5,960.0	0.00	0.00	5,871.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,911.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,040.0	0.00	0.00	5,951.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,080.0	0.00	0.00	5,991.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,120.0	0.00	0.00	6,031.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,160.0	0.00	0.00	6,071.5	36.5	-876.9	877.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Project:</b>	SEC.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-04-11)		

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	6,111.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,240.0	0.00	0.00	6,151.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,191.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,231.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,271.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,311.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,351.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,391.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,431.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,471.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,511.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,551.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,591.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,631.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,671.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,788.5	0.00	0.00	6,700.0	36.5	-876.9	877.7	0.00	0.00	0.00
<b>NIORARA - LEGAL BOX 400' X 400' 2142'FNL &amp; 2117'FEL</b>									
6,800.0	0.00	0.00	6,711.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,751.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,791.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,831.5	36.5	-876.9	877.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,871.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,911.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,951.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,991.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,120.0	0.00	0.00	7,031.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,160.0	0.00	0.00	7,071.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,200.0	0.00	0.00	7,111.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,240.0	0.00	0.00	7,151.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,280.0	0.00	0.00	7,191.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,231.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,271.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,311.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,440.0	0.00	0.00	7,351.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,480.0	0.00	0.00	7,391.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,520.0	0.00	0.00	7,431.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,560.0	0.00	0.00	7,471.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,511.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,640.0	0.00	0.00	7,551.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,680.0	0.00	0.00	7,591.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,720.0	0.00	0.00	7,631.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,760.0	0.00	0.00	7,671.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,711.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,840.0	0.00	0.00	7,751.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,880.0	0.00	0.00	7,791.5	36.5	-876.9	877.7	0.00	0.00	0.00
7,888.5	0.00	0.00	7,800.0	36.5	-876.9	877.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Project:</b>	SEC.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-04-11)		

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
TARGET BHL 2152'F	0.00	0.00	5,000.0	36.5	-876.9	1,400,918.01	3,210,843.32	40.431450	-104.742600
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	6,700.0	46.5	-876.9	1,400,928.06	3,210,843.27	40.431478	-104.742600
- plan misses target center by 10.0ft at 6788.5ft MD (6700.0 TVD, 36.5 N, -876.9 E)									
- Rectangle (sides W400.0 H400.0 D1,100.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
440.1	440.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,788.5	6,700.0	NIOBRARA		0.00	



# **Directional**

## **Mineral Resources Inc**

**SEC.2-T5N-R66W**

**Bestway Pad Sec.2-T5N-R66W**

**Johnson 5-3-2**

**Wellbore #1**

**Plan #1 (8-04-11)**

## **Anticollision Report**

**26 September, 2011**

<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Project:</b>	SEC.2-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (8-04-11)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 9/26/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	7,888.5	Plan #1 (8-04-11) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
Bestway Pad Sec.2-T5N-R66W						
Franklin Park 2-6-1 - Wellbore #1 - Plan #1 (8-05-11)	200.0	198.0	53.8	53.1	80.263	CC, ES
Franklin Park 2-6-1 - Wellbore #1 - Plan #1 (8-05-11)	500.0	490.8	75.1	73.1	37.645	SF
Pheasant 5 2-2-2 - Wellbore #1 - Plan #1 (8-05-11)	200.0	200.0	32.9	32.2	48.801	CC, ES
Pheasant 5 2-2-2 - Wellbore #1 - Plan #1 (8-05-11)	1,100.0	1,091.4	67.2	61.2	11.166	SF
Ruyle 7-3-2 - Wellbore #1 - Plan #1 (8-05-11)	300.0	299.0	53.8	52.6	47.933	CC, ES
Ruyle 7-3-2 - Wellbore #1 - Plan #1 (8-05-11)	600.0	593.6	74.4	72.0	30.372	SF

<b>Offset Design</b> Bestway Pad Sec.2-T5N-R66W - Franklin Park 2-6-1 - Wellbore #1 - Plan #1 (8-05-11)													<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b> 0-MWD													<b>Offset Well Error:</b>	0.0 ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>		<b>Distance</b>		<b>Minimum Separation</b>		<b>Separation Factor</b>		<b>Warning</b>				
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>		
0.0	0.0	0.0	0.0	0.0	0.0	118.32	-25.5	47.3	53.8	53.5	0.22	241.595		
100.0	100.0	98.0	98.0	0.1	0.1	118.32	-25.5	47.3	53.8	53.1	0.67	80.263	CC, ES	
200.0	200.0	198.0	198.0	0.3	0.3	118.32	-25.5	47.3	53.8	54.3	1.10	50.420		
300.0	300.0	296.2	296.2	0.6	0.5	118.50	-26.4	48.7	55.4	60.5	1.54	40.300		
400.0	400.0	394.0	393.8	0.8	0.7	-154.02	-29.2	52.7	62.0	73.1	1.99	37.645	SF	
500.0	499.8	490.8	490.3	1.0	1.0	-154.91	-33.9	59.4	75.1					
600.0	599.5	586.1	584.9	1.2	1.3	-156.04	-40.3	68.7	94.6	92.1	2.47	38.364		
700.0	698.7	679.2	677.0	1.5	1.6	-157.07	-48.3	80.2	120.4	117.5	2.95	40.850		
800.0	797.5	769.7	765.9	1.8	1.9	-157.90	-57.7	93.7	152.4	149.0	3.44	44.324		
905.2	900.7	861.5	855.6	2.2	2.3	-158.54	-68.8	109.8	192.5	188.5	3.96	48.576		
1,000.0	993.4	941.5	933.3	2.6	2.7	-159.13	-79.9	125.8	232.6	228.2	4.43	52.497		
1,100.0	1,091.2	1,023.8	1,012.5	3.1	3.1	-159.44	-92.5	144.0	277.5	272.5	4.93	56.256		
1,200.0	1,189.0	1,100.0	1,085.3	3.5	3.6	-159.56	-105.4	162.5	324.8	319.4	5.43	59.838		
1,300.0	1,286.7	1,181.3	1,162.2	4.0	4.1	-159.57	-120.3	184.1	374.4	368.5	5.95	62.925		
1,400.0	1,384.5	1,256.5	1,232.7	4.4	4.6	-159.50	-135.3	205.6	426.3	419.8	6.46	65.991		
1,500.0	1,482.3	1,329.4	1,300.4	4.9	5.2	-159.39	-150.7	227.9	480.3	473.3	6.98	68.786		
1,600.0	1,580.1	1,400.0	1,365.2	5.3	5.8	-159.25	-166.6	250.9	536.4	528.9	7.49	71.582		
1,700.0	1,677.8	1,468.3	1,427.3	5.8	6.4	-159.09	-182.9	274.3	594.4	586.4	8.01	74.198		
1,800.0	1,775.6	1,534.4	1,486.6	6.2	7.0	-158.93	-199.4	298.1	654.2	645.7	8.52	76.759		
1,900.0	1,873.4	1,604.8	1,549.1	6.7	7.6	-158.74	-217.9	324.7	715.9	706.9	9.05	79.083		
2,000.0	1,971.2	1,674.5	1,610.7	7.2	8.3	-158.56	-236.6	351.7	778.5	768.9	9.58	81.248		

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

<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Project:</b>	SEC.2-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												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
2,100.0	2,068.9	1,752.4	1,679.4	7.6	9.1	-158.39	-257.5	381.9	841.2	831.0	10.13	83.003	
2,200.0	2,166.7	1,830.3	1,748.1	8.1	9.9	-158.25	-278.4	412.0	903.8	893.1	10.69	84.577	
2,300.0	2,264.5	1,908.2	1,816.9	8.5	10.7	-158.12	-299.3	442.2	966.5	955.3	11.24	85.975	
2,400.0	2,362.3	1,986.2	1,885.6	9.0	11.5	-158.01	-320.2	472.3	1,029.2	1,017.4	11.80	87.212	
2,500.0	2,460.1	2,064.1	1,954.3	9.5	12.3	-157.91	-341.1	502.5	1,091.8	1,079.5	12.36	88.320	
2,600.0	2,557.8	2,142.0	2,023.1	9.9	13.1	-157.82	-362.0	532.6	1,154.5	1,141.6	12.93	89.320	
2,700.0	2,655.6	2,219.9	2,091.8	10.4	13.9	-157.74	-382.9	562.8	1,217.2	1,203.7	13.49	90.225	
2,800.0	2,753.4	2,297.8	2,160.5	10.9	14.6	-157.67	-403.8	592.9	1,279.8	1,265.8	14.06	91.047	
2,900.0	2,851.2	2,375.7	2,229.3	11.3	15.4	-157.61	-424.8	623.1	1,342.5	1,327.9	14.63	91.792	
3,000.0	2,948.9	2,453.6	2,298.0	11.8	16.2	-157.55	-445.7	653.2	1,405.2	1,390.0	15.20	92.475	
3,100.0	3,046.7	2,531.5	2,366.7	12.3	17.0	-157.50	-466.6	683.4	1,467.9	1,452.1	15.77	93.102	
3,200.0	3,144.5	2,609.5	2,435.5	12.7	17.8	-157.45	-487.5	713.5	1,530.6	1,514.2	16.34	93.680	
3,300.0	3,242.3	2,687.4	2,504.2	13.2	18.6	-157.40	-508.4	743.7	1,593.2	1,576.3	16.91	94.213	
3,400.0	3,340.0	2,765.3	2,572.9	13.7	19.4	-157.36	-529.3	773.8	1,655.9	1,638.4	17.48	94.705	
3,500.0	3,437.8	2,843.2	2,641.7	14.1	20.2	-157.32	-550.2	804.0	1,718.6	1,700.5	18.06	95.162	
3,600.0	3,535.6	2,921.1	2,710.4	14.6	21.0	-157.28	-571.1	834.2	1,781.3	1,762.6	18.63	95.587	
3,700.0	3,633.4	2,999.0	2,779.1	15.1	21.8	-157.25	-592.0	864.3	1,844.0	1,824.7	19.21	95.984	
3,800.0	3,731.1	3,076.9	2,847.8	15.5	22.6	-157.22	-612.9	894.5	1,906.6	1,886.8	19.79	96.354	
3,900.0	3,828.9	3,154.9	2,916.6	16.0	23.4	-157.19	-633.8	924.6	1,969.3	1,948.9	20.37	96.700	
4,000.0	3,926.7	3,232.8	2,985.3	16.5	24.3	-157.16	-654.7	954.8	2,032.0	2,011.1	20.94	97.024	
4,100.0	4,024.5	3,310.7	3,054.0	16.9	25.1	-157.14	-675.7	984.9	2,094.7	2,073.2	21.52	97.329	
4,200.0	4,122.3	3,388.6	3,122.8	17.4	25.9	-157.11	-696.6	1,015.1	2,157.4	2,135.3	22.10	97.616	
4,300.0	4,220.0	3,466.5	3,191.5	17.9	26.7	-157.09	-717.5	1,045.2	2,220.0	2,197.4	22.68	97.886	
4,400.0	4,317.8	3,544.4	3,260.2	18.3	27.5	-157.07	-738.4	1,075.4	2,282.7	2,259.5	23.26	98.140	
4,483.3	4,399.3	3,609.3	3,317.5	18.7	28.1	-157.05	-755.8	1,100.5	2,334.9	2,311.2	23.74	98.342	
4,500.0	4,415.6	3,622.4	3,329.0	18.8	28.3	-157.15	-759.3	1,105.5	2,345.4	2,321.5	23.88	98.228	
4,600.0	4,513.8	3,701.6	3,398.9	19.1	29.1	-157.69	-780.6	1,136.2	2,406.4	2,381.7	24.63	97.686	
4,700.0	4,612.7	3,782.7	3,470.4	19.4	29.9	-158.15	-802.3	1,167.6	2,464.8	2,439.4	25.37	97.139	
4,800.0	4,712.0	3,865.6	3,543.6	19.6	30.8	-158.53	-824.6	1,199.7	2,520.5	2,494.4	26.09	96.604	
4,900.0	4,811.6	3,950.2	3,618.2	19.8	31.6	-158.84	-847.3	1,232.4	2,573.5	2,546.8	26.78	96.091	
5,000.0	4,911.5	4,036.4	3,694.2	20.0	32.5	-159.09	-870.4	1,265.8	2,623.8	2,596.4	27.44	95.606	
5,088.5	5,000.0	4,113.9	3,762.7	20.1	33.3	113.12	-891.2	1,295.8	2,666.0	2,637.9	28.01	95.180	
5,100.0	5,011.5	4,124.1	3,771.6	20.1	33.4	113.14	-893.9	1,299.7	2,671.3	2,643.2	28.07	95.179	
5,200.0	5,111.5	4,212.3	3,849.4	20.2	34.4	113.34	-917.6	1,333.8	2,717.6	2,689.1	28.56	95.161	
5,300.0	5,211.5	4,300.5	3,927.2	20.3	35.3	113.53	-941.3	1,368.0	2,764.0	2,734.9	29.05	95.143	
5,400.0	5,311.5	4,388.7	4,005.0	20.4	36.2	113.72	-965.0	1,402.1	2,810.4	2,780.9	29.54	95.125	
5,500.0	5,411.5	4,476.9	4,082.9	20.5	37.1	113.90	-988.6	1,436.2	2,856.8	2,826.8	30.04	95.107	
5,600.0	5,511.5	4,565.1	4,160.7	20.7	38.0	114.07	-1,012.3	1,470.4	2,903.3	2,872.7	30.53	95.088	
5,700.0	5,611.5	4,653.4	4,238.5	20.8	38.9	114.24	-1,036.0	1,504.5	2,949.7	2,918.7	31.03	95.070	
5,800.0	5,711.5	4,741.6	4,316.3	20.9	39.8	114.41	-1,059.6	1,538.7	2,996.2	2,964.7	31.52	95.051	
5,900.0	5,811.5	4,829.8	4,394.2	21.0	40.7	114.57	-1,083.3	1,572.8	3,042.7	3,010.7	32.02	95.032	
6,000.0	5,911.5	4,918.0	4,472.0	21.2	41.6	114.72	-1,107.0	1,606.9	3,089.3	3,056.7	32.51	95.012	
6,100.0	6,011.5	5,006.2	4,549.8	21.3	42.5	114.87	-1,130.7	1,641.1	3,135.8	3,102.8	33.01	94.992	
6,200.0	6,111.5	5,094.4	4,627.6	21.4	43.5	115.01	-1,154.3	1,675.2	3,182.4	3,148.8	33.51	94.971	
6,300.0	6,211.5	5,182.7	4,705.4	21.6	44.4	115.15	-1,178.0	1,709.4	3,228.9	3,194.9	34.01	94.949	
6,400.0	6,311.5	5,270.9	4,783.3	21.7	45.3	115.29	-1,201.7	1,743.5	3,275.5	3,241.0	34.51	94.927	
6,500.0	6,411.5	5,359.1	4,861.1	21.9	46.2	115.42	-1,225.4	1,777.6	3,322.1	3,287.1	35.01	94.904	
6,600.0	6,511.5	5,447.3	4,938.9	22.0	47.1	115.55	-1,249.0	1,811.8	3,368.7	3,333.2	35.50	94.880	
6,700.0	6,611.5	5,535.5	5,016.7	22.1	48.0	115.68	-1,272.7	1,845.9	3,415.4	3,379.4	36.01	94.856	
6,800.0	6,711.5	5,623.7	5,094.5	22.3	48.9	115.80	-1,296.4	1,880.1	3,462.0	3,425.5	36.51	94.832	
6,900.0	6,811.5	5,712.0	5,172.4	22.4	49.8	115.92	-1,320.1	1,914.2	3,508.7	3,471.6	37.01	94.806	
7,000.0	6,911.5	5,800.2	5,250.2	22.6	50.8	116.04	-1,343.7	1,948.3	3,555.3	3,517.8	37.51	94.780	

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

<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Project:</b>	SEC.2-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Bestway Pad Sec.2-T5N-R66W - Franklin Park 2-6-1 - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
7,100.0	7,011.5	5,888.4	5,328.0	22.7	51.7	116.15	-1,367.4	1,982.5	3,602.0	3,564.0	38.01	94.754		
7,200.0	7,111.5	5,976.6	5,405.8	22.9	52.6	116.26	-1,391.1	2,016.6	3,648.7	3,610.2	38.52	94.727		
7,300.0	7,211.5	6,064.8	5,483.7	23.0	53.5	116.37	-1,414.8	2,050.8	3,695.4	3,656.4	39.02	94.699		
7,400.0	7,311.5	7,325.7	6,666.9	23.2	61.1	117.30	-1,649.2	2,388.8	3,730.9	3,688.2	42.66	87.452		
7,500.0	7,411.5	7,424.2	6,763.9	23.3	61.5	117.34	-1,658.9	2,402.9	3,748.1	3,705.0	43.07	87.024		
7,600.0	7,511.5	7,522.7	6,860.9	23.5	61.9	117.37	-1,668.7	2,416.9	3,765.3	3,721.8	43.48	86.603		
7,700.0	7,611.5	7,621.2	6,957.8	23.6	62.2	117.40	-1,678.4	2,431.0	3,782.5	3,738.6	43.89	86.186		
7,800.0	7,711.5	7,719.6	7,054.8	23.8	62.6	117.44	-1,688.2	2,445.0	3,799.8	3,755.5	44.30	85.774		
7,888.5	7,800.0	7,806.8	7,140.7	23.9	62.9	117.47	-1,696.8	2,457.5	3,815.0	3,770.4	44.66	85.414		

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							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-4.85	32.8	-2.8	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	-4.85	32.8	-2.8	32.9	32.7	0.22	146.402		
200.0	200.0	200.0	200.0	0.3	0.3	-4.85	32.8	-2.8	32.9	32.2	0.67	48.801	CC, ES	
300.0	300.0	299.6	299.6	0.6	0.6	-7.70	33.1	-4.5	33.4	32.3	1.12	29.969		
400.0	400.0	399.1	399.0	0.8	0.8	74.69	34.2	-9.6	35.0	33.5	1.55	22.543		
500.0	499.8	498.5	497.9	1.0	1.0	70.33	36.0	-18.0	37.4	35.4	2.02	18.535		
600.0	599.5	597.7	596.4	1.2	1.3	66.92	38.5	-29.8	40.5	37.9	2.53	15.990		
700.0	698.7	696.8	694.3	1.5	1.6	64.38	41.7	-44.8	44.1	41.0	3.10	14.225		
800.0	797.5	795.8	791.5	1.8	2.0	62.62	45.5	-63.2	48.3	44.6	3.74	12.909		
905.2	900.7	900.0	893.1	2.2	2.5	61.45	50.4	-86.0	53.3	48.8	4.51	11.818		
1,000.0	993.4	993.2	983.1	2.6	3.0	59.64	55.3	-109.5	58.9	53.7	5.25	11.225		
1,100.0	1,091.2	1,091.4	1,077.0	3.1	3.5	55.97	61.2	-137.4	67.2	61.2	6.02	11.166	SF	
1,200.0	1,189.0	1,188.8	1,169.3	3.5	4.2	51.42	67.7	-168.1	78.2	71.4	6.75	11.591		
1,300.0	1,286.7	1,285.4	1,259.6	4.0	4.8	46.74	74.8	-201.6	92.2	84.8	7.42	12.421		
1,400.0	1,384.5	1,380.8	1,347.7	4.4	5.6	42.36	82.3	-237.5	109.4	101.4	8.05	13.588		
1,500.0	1,482.3	1,475.0	1,433.3	4.9	6.4	38.50	90.4	-275.8	130.0	121.3	8.66	15.009		
1,600.0	1,580.1	1,568.2	1,516.7	5.3	7.3	35.18	99.0	-316.4	153.8	144.6	9.25	16.634		
1,700.0	1,677.8	1,663.9	1,601.8	5.8	8.2	32.46	108.1	-359.5	179.5	169.6	9.84	18.234		
1,800.0	1,775.6	1,760.3	1,687.4	6.2	9.2	30.41	117.2	-402.8	205.4	195.0	10.45	19.656		
1,900.0	1,873.4	1,856.6	1,772.9	6.7	10.1	28.82	126.4	-446.1	231.6	220.5	11.07	20.916		
2,000.0	1,971.2	1,953.0	1,858.5	7.2	11.1	27.56	135.5	-489.5	257.9	246.2	11.70	22.037		
2,100.0	2,068.9	2,049.3	1,944.1	7.6	12.0	26.52	144.7	-532.8	284.3	271.9	12.34	23.037		
2,200.0	2,166.7	2,145.7	2,029.6	8.1	13.0	25.66	153.8	-576.1	310.7	297.7	12.98	23.934		
2,300.0	2,264.5	2,242.0	2,115.2	8.5	14.0	24.94	163.0	-619.4	337.2	323.6	13.63	24.741		
2,400.0	2,362.3	2,338.3	2,200.7	9.0	14.9	24.32	172.1	-662.8	363.8	349.5	14.28	25.471		
2,500.0	2,460.1	2,434.7	2,286.3	9.5	15.9	23.79	181.3	-706.1	390.4	375.4	14.94	26.134		
2,600.0	2,557.8	2,531.0	2,371.9	9.9	16.9	23.32	190.4	-749.4	417.0	401.4	15.60	26.738		
2,700.0	2,655.6	2,627.4	2,457.4	10.4	17.9	22.91	199.6	-792.8	443.6	427.4	16.26	27.291		
2,800.0	2,753.4	2,723.7	2,543.0	10.9	18.8	22.55	208.7	-836.1	470.3	453.4	16.92	27.798		
2,900.0	2,851.2	2,820.0	2,628.6	11.3	19.8	22.22	217.9	-879.4	497.0	479.4	17.58	28.264		
3,000.0	2,948.9	2,916.4	2,714.1	11.8	20.8	21.93	227.0	-922.7	523.6	505.4	18.25	28.695		
3,100.0	3,046.7	3,012.7	2,799.7	12.3	21.8	21.67	236.2	-966.1	550.3	531.4	18.92	29.095		
3,200.0	3,144.5	3,109.1	2,885.2	12.7	22.7	21.43	245.3	-1,009.4	577.0	557.5	19.58	29.465		
3,300.0	3,242.3	3,205.4	2,970.8	13.2	23.7	21.21	254.5	-1,052.7	603.8	583.5	20.25	29.810		
3,400.0	3,340.0	3,301.8	3,056.4	13.7	24.7	21.01	263.6	-1,096.0	630.5	609.6	20.92	30.132		
3,500.0	3,437.8	3,398.1	3,141.9	14.1	25.7	20.83	272.7	-1,139.4	657.2	635.6	21.59	30.433		
3,600.0	3,535.6	3,494.4	3,227.5	14.6	26.6	20.66	281.9	-1,182.7	683.9	661.7	22.27	30.715		
3,700.0	3,633.4	3,590.8	3,313.0	15.1	27.6	20.50	291.0	-1,226.0	710.7	687.7	22.94	30.980		
3,800.0	3,731.1	3,687.1	3,398.6	15.5	28.6	20.36	300.2	-1,269.3	737.4	713.8	23.61	31.229		
3,900.0	3,828.9	3,783.5	3,484.2	16.0	29.6	20.22	309.3	-1,312.7	764.2	739.9	24.29	31.464		
4,000.0	3,926.7	3,879.8	3,569.7	16.5	30.5	20.10	318.5	-1,356.0	790.9	766.0	24.96	31.685		
4,100.0	4,024.5	3,976.1	3,655.3	16.9	31.5	19.98	327.6	-1,399.3	817.7	792.0	25.64	31.895		
4,200.0	4,122.3	4,072.5	3,740.9	17.4	32.5	19.87	336.8	-1,442.6	844.4	818.1	26.31	32.093		
4,300.0	4,220.0	4,168.8	3,826.4	17.9	33.5	19.77	345.9	-1,486.0	871.2	844.2	26.99	32.280		
4,400.0	4,317.8	4,265.2	3,912.0	18.3	34.5	19.67	355.1	-1,529.3	898.0	870.3	27.66	32.459		
4,483.3	4,399.3	4,345.4	3,983.3	18.7	35.3	19.59	362.7	-1,565.4	920.3	892.0	28.23	32.600		
4,500.0	4,415.6	4,361.5	3,997.5	18.8	35.4	19.61	364.2	-1,572.6	924.8	896.4	28.33	32.645		
4,600.0	4,513.8	4,457.2	4,082.5	19.1	36.4	19.68	373.3	-1,615.7	953.6	924.8	28.86	33.047		
4,700.0	4,612.7	4,551.9	4,166.6	19.4	37.4	19.71	382.3	-1,658.2	985.6	956.3	29.33	33.611		
4,800.0	4,712.0	4,645.4	4,249.7	19.6	38.3	19.70	391.2	-1,700.3	1,020.8	991.0	29.73	34.330		
4,900.0	4,811.6	4,737.7	4,331.6	19.8	39.3	19.68	399.9	-1,741.8	1,059.0	1,028.9	30.08	35.202		
5,000.0	4,911.5	4,828.6	4,412.4	20.0	40.2	19.63	408.6	-1,782.7	1,100.2	1,069.8	30.37	36.224		

COMPASS 2003.21 Build 46

<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Project:</b>	SEC.2-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		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		
5,088.5	5,000.0	4,907.8	4,482.7	20.1	41.0	-68.04	416.1	-1,818.3	1,139.2	1,108.7	30.59	37.242		
5,100.0	5,011.5	4,918.0	4,491.8	20.1	41.1	-68.08	417.1	-1,822.9	1,144.4	1,113.8	30.63	37.362		
5,200.0	5,111.5	5,006.8	4,570.6	20.2	42.0	-68.47	425.5	-1,862.8	1,189.9	1,158.9	31.00	38.386		
5,300.0	5,211.5	5,095.6	4,649.5	20.3	42.9	-68.82	433.9	-1,902.8	1,235.3	1,204.0	31.38	39.372		
5,400.0	5,311.5	5,184.4	4,728.4	20.4	43.8	-69.15	442.4	-1,942.7	1,280.9	1,249.1	31.77	40.322		
5,500.0	5,411.5	5,273.2	4,807.3	20.5	44.7	-69.46	450.8	-1,982.6	1,326.4	1,294.2	32.16	41.238		
5,600.0	5,511.5	5,362.1	4,886.1	20.7	45.6	-69.75	459.2	-2,022.6	1,372.0	1,339.4	32.57	42.121		
5,700.0	5,611.5	5,450.9	4,965.0	20.8	46.5	-70.01	467.6	-2,062.5	1,417.5	1,384.6	32.99	42.972		
5,800.0	5,711.5	5,539.7	5,043.9	20.9	47.4	-70.27	476.1	-2,102.5	1,463.2	1,429.8	33.41	43.794		
5,900.0	5,811.5	5,628.5	5,122.8	21.0	48.3	-70.50	484.5	-2,142.4	1,508.8	1,475.0	33.84	44.587		
6,000.0	5,911.5	5,717.3	5,201.6	21.2	49.2	-70.73	492.9	-2,182.3	1,554.5	1,520.2	34.27	45.353		
6,100.0	6,011.5	5,806.1	5,280.5	21.3	50.1	-70.94	501.4	-2,222.3	1,600.1	1,565.4	34.72	46.093		
6,200.0	6,111.5	5,894.9	5,359.4	21.4	51.0	-71.13	509.8	-2,262.2	1,645.8	1,610.7	35.16	46.808		
6,300.0	6,211.5	5,983.7	5,438.3	21.6	51.9	-71.32	518.2	-2,302.2	1,691.5	1,655.9	35.61	47.499		
6,400.0	6,311.5	6,072.5	5,517.1	21.7	52.8	-71.50	526.7	-2,342.1	1,737.2	1,701.2	36.07	48.167		
6,500.0	6,411.5	6,161.4	5,596.0	21.9	53.7	-71.67	535.1	-2,382.0	1,783.0	1,746.4	36.53	48.814		
6,600.0	6,511.5	6,250.2	5,674.9	22.0	54.6	-71.83	543.5	-2,422.0	1,828.7	1,791.7	36.99	49.440		
6,700.0	6,611.5	6,492.1	5,894.0	22.1	56.5	-72.20	564.7	-2,522.3	1,871.1	1,833.3	37.84	49.446		
6,800.0	6,711.5	6,765.6	6,151.0	22.3	58.2	-72.50	584.0	-2,613.4	1,905.1	1,866.3	38.71	49.208		
6,900.0	6,811.5	7,056.3	6,432.6	22.4	59.4	-72.71	598.8	-2,683.5	1,929.6	1,890.1	39.54	48.805		
7,000.0	6,911.5	7,200.8	6,574.7	22.6	59.9	-72.78	604.1	-2,708.9	1,947.2	1,907.2	40.02	48.660		
7,100.0	7,011.5	7,299.3	6,671.7	22.7	60.2	-72.83	607.6	-2,725.6	1,964.5	1,924.1	40.42	48.601		
7,200.0	7,111.5	7,397.8	6,768.7	22.9	60.6	-72.88	611.2	-2,742.3	1,981.8	1,941.0	40.83	48.540		
7,300.0	7,211.5	7,496.2	6,865.7	23.0	60.9	-72.92	614.7	-2,759.1	1,999.1	1,957.9	41.24	48.478		
7,400.0	7,311.5	7,594.7	6,962.7	23.2	61.3	-72.97	618.2	-2,775.8	2,016.4	1,974.7	41.65	48.416		
7,500.0	7,411.5	7,693.2	7,059.7	23.3	61.7	-73.01	621.8	-2,792.5	2,033.7	1,991.6	42.06	48.353		
7,600.0	7,511.5	7,791.7	7,156.6	23.5	62.0	-73.05	625.3	-2,809.3	2,051.0	2,008.5	42.47	48.290		
7,700.0	7,611.5	7,890.2	7,253.6	23.6	62.4	-73.09	628.8	-2,826.0	2,068.3	2,025.4	42.89	48.226		
7,800.0	7,711.5	7,988.6	7,350.6	23.8	62.8	-73.14	632.4	-2,842.7	2,085.6	2,042.3	43.30	48.162		
7,888.5	7,800.0	8,075.8	7,436.5	23.9	63.1	-73.17	635.5	-2,857.5	2,100.9	2,057.2	43.67	48.105		

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<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													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		
0.0	0.0	0.0	0.0	0.0	0.0	61.68	25.5	47.3	53.8					
100.0	100.0	99.0	99.0	0.1	0.1	61.68	25.5	47.3	53.8	53.5	0.22	240.383		
200.0	200.0	199.0	199.0	0.3	0.3	61.68	25.5	47.3	53.8	53.1	0.67	79.994		
300.0	300.0	299.0	299.0	0.6	0.6	61.68	25.5	47.3	53.8	52.6	1.12	47.933 CC, ES		
400.0	400.0	399.0	399.0	0.8	0.8	150.21	25.5	47.3	55.3	53.7	1.56	35.355		
500.0	499.8	496.8	496.8	1.0	1.0	152.82	26.0	48.9	61.5	59.5	2.00	30.790		
600.0	599.5	593.6	593.4	1.2	1.2	156.25	27.4	53.6	74.4	72.0	2.45	30.372 SF		
700.0	698.7	688.7	688.2	1.5	1.4	159.42	29.7	61.3	94.0	91.1	2.91	32.279		
800.0	797.5	781.6	780.5	1.8	1.7	161.90	32.8	71.6	120.3	116.9	3.38	35.574		
905.2	900.7	876.4	874.2	2.2	2.0	163.79	36.8	85.2	154.8	150.9	3.87	39.966		
1,000.0	993.4	962.2	958.6	2.6	2.3	165.14	41.1	99.6	190.0	185.7	4.32	44.023		
1,100.0	1,091.2	1,054.8	1,049.8	3.1	2.6	166.12	45.8	115.5	227.4	222.6	4.77	47.702		
1,200.0	1,189.0	1,147.5	1,141.0	3.5	2.9	166.83	50.5	131.3	264.9	259.6	5.23	50.681		
1,300.0	1,286.7	1,240.2	1,232.2	4.0	3.3	167.36	55.3	147.1	302.4	296.7	5.69	53.126		
1,400.0	1,384.5	1,332.9	1,323.4	4.4	3.6	167.78	60.0	163.0	339.9	333.7	6.16	55.179		
1,500.0	1,482.3	1,425.5	1,414.6	4.9	4.0	168.11	64.7	178.8	377.4	370.8	6.64	56.841		
1,600.0	1,580.1	1,518.2	1,505.8	5.3	4.4	168.38	69.4	194.7	414.9	407.8	7.12	58.304		
1,700.0	1,677.8	1,610.9	1,597.0	5.8	4.7	168.61	74.1	210.5	452.5	444.9	7.60	59.554		
1,800.0	1,775.6	1,703.6	1,688.1	6.2	5.1	168.80	78.9	226.3	490.0	481.9	8.08	60.637		
1,900.0	1,873.4	1,796.2	1,779.3	6.7	5.5	168.97	83.6	242.2	527.6	519.0	8.57	61.585		
2,000.0	1,971.2	1,888.9	1,870.5	7.2	5.8	169.11	88.3	258.0	565.1	556.1	9.05	62.419		
2,100.0	2,068.9	1,981.6	1,961.7	7.6	6.2	169.23	93.0	273.9	602.7	593.1	9.54	63.159		
2,200.0	2,166.7	2,074.2	2,052.9	8.1	6.6	169.35	97.8	289.7	640.2	630.2	10.03	63.819		
2,300.0	2,264.5	2,166.9	2,144.1	8.5	6.9	169.44	102.5	305.5	677.8	667.3	10.52	64.412		
2,400.0	2,362.3	2,259.6	2,235.3	9.0	7.3	169.53	107.2	321.4	715.3	704.3	11.01	64.946		
2,500.0	2,460.1	2,352.3	2,326.4	9.5	7.7	169.61	111.9	337.2	752.9	741.4	11.51	65.430		
2,600.0	2,557.8	2,444.9	2,417.6	9.9	8.1	169.68	116.6	353.1	790.5	778.5	12.00	65.871		
2,700.0	2,655.6	2,537.6	2,508.8	10.4	8.4	169.75	121.4	368.9	828.0	815.5	12.49	66.273		
2,800.0	2,753.4	2,630.3	2,600.0	10.9	8.8	169.81	126.1	384.7	865.6	852.6	12.99	66.642		
2,900.0	2,851.2	2,723.0	2,691.2	11.3	9.2	169.86	130.8	400.6	903.2	889.7	13.48	66.981		
3,000.0	2,948.9	2,815.6	2,782.4	11.8	9.6	169.91	135.5	416.4	940.7	926.8	13.98	67.293		
3,100.0	3,046.7	2,908.3	2,873.6	12.3	9.9	169.96	140.3	432.2	978.3	963.8	14.48	67.582		
3,200.0	3,144.5	3,001.0	2,964.8	12.7	10.3	170.00	145.0	448.1	1,015.9	1,000.9	14.97	67.850		
3,300.0	3,242.3	3,093.6	3,055.9	13.2	10.7	170.04	149.7	463.9	1,053.4	1,038.0	15.47	68.099		
3,400.0	3,340.0	3,186.3	3,147.1	13.7	11.1	170.08	154.4	479.8	1,091.0	1,075.0	15.97	68.331		
3,500.0	3,437.8	3,279.0	3,238.3	14.1	11.4	170.11	159.1	495.6	1,128.6	1,112.1	16.46	68.548		
3,600.0	3,535.6	3,399.2	3,356.7	14.6	11.9	170.16	165.0	515.4	1,165.7	1,148.6	17.01	68.529		
3,700.0	3,633.4	3,558.5	3,514.7	15.1	12.3	170.28	170.8	534.8	1,198.5	1,180.9	17.58	68.189		
3,800.0	3,731.1	3,723.4	3,679.2	15.5	12.6	170.47	174.2	546.0	1,225.9	1,207.8	18.13	67.611		
3,900.0	3,828.9	3,872.2	3,827.9	16.0	12.8	170.69	174.9	548.4	1,248.1	1,229.5	18.65	66.923		
4,000.0	3,926.7	3,969.9	3,925.7	16.5	12.9	170.84	174.9	548.4	1,268.8	1,249.7	19.10	66.427		
4,100.0	4,024.5	4,067.7	4,023.5	16.9	13.1	170.99	174.9	548.4	1,289.5	1,270.0	19.56	65.942		
4,200.0	4,122.3	4,165.5	4,121.3	17.4	13.2	171.14	174.9	548.4	1,310.3	1,290.2	20.01	65.475		
4,300.0	4,220.0	4,263.3	4,219.0	17.9	13.4	171.27	174.9	548.4	1,331.0	1,310.5	20.47	65.025		
4,400.0	4,317.8	4,361.1	4,316.8	18.3	13.5	171.41	174.9	548.4	1,351.7	1,330.8	20.93	64.592		
4,483.3	4,399.3	4,442.5	4,398.3	18.7	13.6	171.52	174.9	548.4	1,369.0	1,347.7	21.31	64.244		
4,500.0	4,415.6	4,458.8	4,414.6	18.8	13.7	171.55	174.9	548.4	1,372.4	1,351.0	21.40	64.132		
4,600.0	4,513.8	4,557.1	4,512.8	19.1	13.8	171.72	174.9	548.4	1,390.9	1,369.0	21.90	63.504		
4,700.0	4,612.7	4,655.9	4,611.7	19.4	14.0	171.85	174.9	548.4	1,406.0	1,383.6	22.38	62.838		
4,800.0	4,712.0	4,755.2	4,711.0	19.6	14.1	171.95	174.9	548.4	1,417.7	1,394.9	22.82	62.137		
4,900.0	4,811.6	4,854.8	4,810.6	19.8	14.3	172.02	174.9	548.4	1,425.9	1,402.7	23.22	61.402		
5,000.0	4,911.5	4,954.7	4,910.5	20.0	14.4	172.06	174.9	548.4	1,430.7	1,407.1	23.60	60.635		

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

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<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												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	
5,088.5	5,000.0	5,043.2	4,999.0	20.1	14.6	84.45	174.9	548.4	1,432.1	1,408.2	23.90	59.912	
5,100.0	5,011.5	5,054.7	5,010.5	20.1	14.6	84.45	174.9	548.4	1,432.1	1,408.1	23.95	59.805	
5,200.0	5,111.5	5,154.7	5,110.5	20.2	14.8	84.45	174.9	548.4	1,432.1	1,407.8	24.32	58.881	
5,300.0	5,211.5	5,254.7	5,210.5	20.3	14.9	84.45	174.9	548.4	1,432.1	1,407.4	24.70	57.980	
5,400.0	5,311.5	5,354.7	5,310.5	20.4	15.1	84.45	174.9	548.4	1,432.1	1,407.0	25.08	57.100	
5,500.0	5,411.5	5,454.7	5,410.5	20.5	15.3	84.45	174.9	548.4	1,432.1	1,406.6	25.46	56.242	
5,600.0	5,511.5	5,554.7	5,510.5	20.7	15.4	84.45	174.9	548.4	1,432.1	1,406.2	25.85	55.405	
5,700.0	5,611.5	5,654.7	5,610.5	20.8	15.6	84.45	174.9	548.4	1,432.1	1,405.8	26.23	54.588	
5,800.0	5,711.5	5,754.7	5,710.5	20.9	15.8	84.45	174.9	548.4	1,432.1	1,405.4	26.62	53.791	
5,900.0	5,811.5	5,854.7	5,810.5	21.0	15.9	84.45	174.9	548.4	1,432.1	1,405.1	27.01	53.014	
6,000.0	5,911.5	5,954.7	5,910.5	21.2	16.1	84.45	174.9	548.4	1,432.1	1,404.7	27.41	52.255	
6,100.0	6,011.5	6,054.7	6,010.5	21.3	16.3	84.45	174.9	548.4	1,432.1	1,404.3	27.80	51.514	
6,200.0	6,111.5	6,154.7	6,110.5	21.4	16.5	84.45	174.9	548.4	1,432.1	1,403.9	28.20	50.791	
6,300.0	6,211.5	6,254.7	6,210.5	21.6	16.7	84.45	174.9	548.4	1,432.1	1,403.5	28.59	50.086	
6,400.0	6,311.5	6,354.7	6,310.5	21.7	16.8	84.45	174.9	548.4	1,432.1	1,403.1	28.99	49.397	
6,500.0	6,411.5	6,454.7	6,410.5	21.9	17.0	84.45	174.9	548.4	1,432.1	1,402.7	29.39	48.725	
6,600.0	6,511.5	6,554.7	6,510.5	22.0	17.2	84.45	174.9	548.4	1,432.1	1,402.3	29.79	48.068	
6,700.0	6,611.5	6,654.7	6,610.5	22.1	17.4	84.45	174.9	548.4	1,432.1	1,401.9	30.20	47.427	
6,800.0	6,711.5	6,754.7	6,710.5	22.3	17.6	84.45	174.9	548.4	1,432.1	1,401.5	30.60	46.800	
6,900.0	6,811.5	6,854.7	6,810.5	22.4	17.7	84.45	174.9	548.4	1,432.1	1,401.1	31.00	46.188	
7,000.0	6,911.5	6,954.7	6,910.5	22.6	17.9	84.45	174.9	548.4	1,432.1	1,400.7	31.41	45.591	
7,100.0	7,011.5	7,054.7	7,010.5	22.7	18.1	84.45	174.9	548.4	1,432.1	1,400.3	31.82	45.007	
7,200.0	7,111.5	7,154.7	7,110.5	22.9	18.3	84.45	174.9	548.4	1,432.1	1,399.8	32.23	44.436	
7,300.0	7,211.5	7,254.7	7,210.5	23.0	18.5	84.45	174.9	548.4	1,432.1	1,399.4	32.64	43.878	
7,400.0	7,311.5	7,354.7	7,310.5	23.2	18.7	84.45	174.9	548.4	1,432.1	1,399.0	33.05	43.332	
7,500.0	7,411.5	7,454.7	7,410.5	23.3	18.9	84.45	174.9	548.4	1,432.1	1,398.6	33.46	42.799	
7,600.0	7,511.5	7,554.7	7,510.5	23.5	19.1	84.45	174.9	548.4	1,432.1	1,398.2	33.87	42.278	
7,700.0	7,611.5	7,654.7	7,610.5	23.6	19.3	84.45	174.9	548.4	1,432.1	1,397.8	34.29	41.767	
7,800.0	7,711.5	7,754.7	7,710.5	23.8	19.4	84.45	174.9	548.4	1,432.1	1,397.4	34.70	41.268	
7,888.5	7,800.0	7,843.2	7,799.0	23.9	19.6	84.45	174.9	548.4	1,432.1	1,397.0	35.07	40.836	

<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Project:</b>	SEC.2-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (8-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4712.0ft (Original Well Elev) Coordinates are relative to: Johnson 5-3-2  
 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°



<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Johnson 5-3-2
<b>Project:</b>	SEC.2-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Reference Site:</b>	Bestway Pad Sec.2-T5N-R66W	<b>MD Reference:</b>	WELL @ 4712.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Johnson 5-3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
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