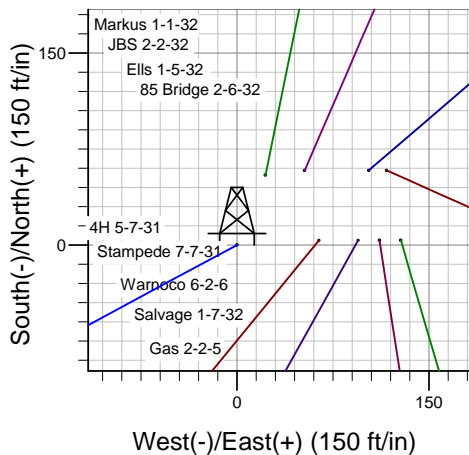
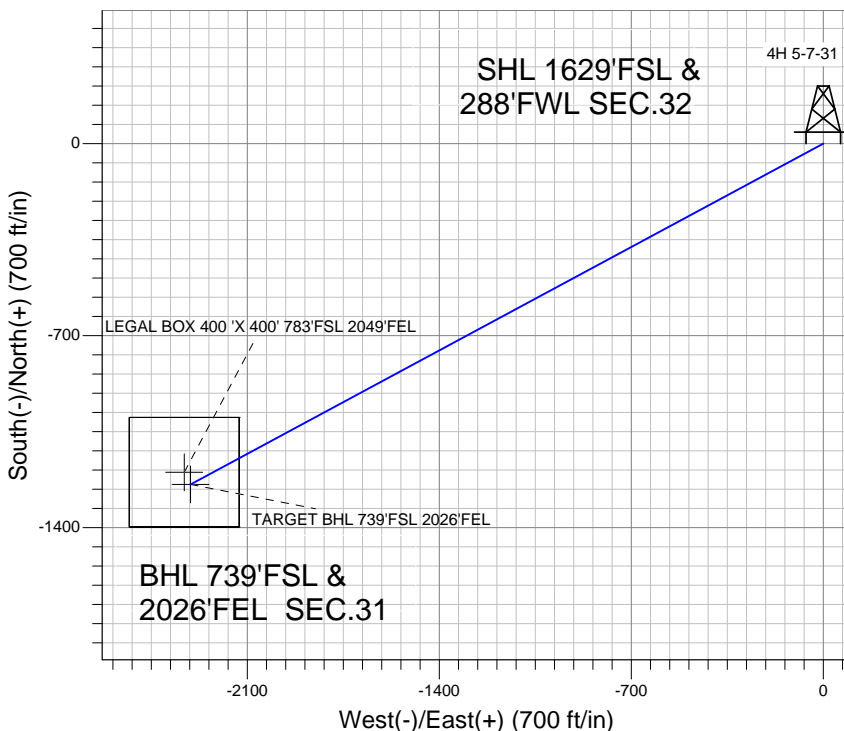
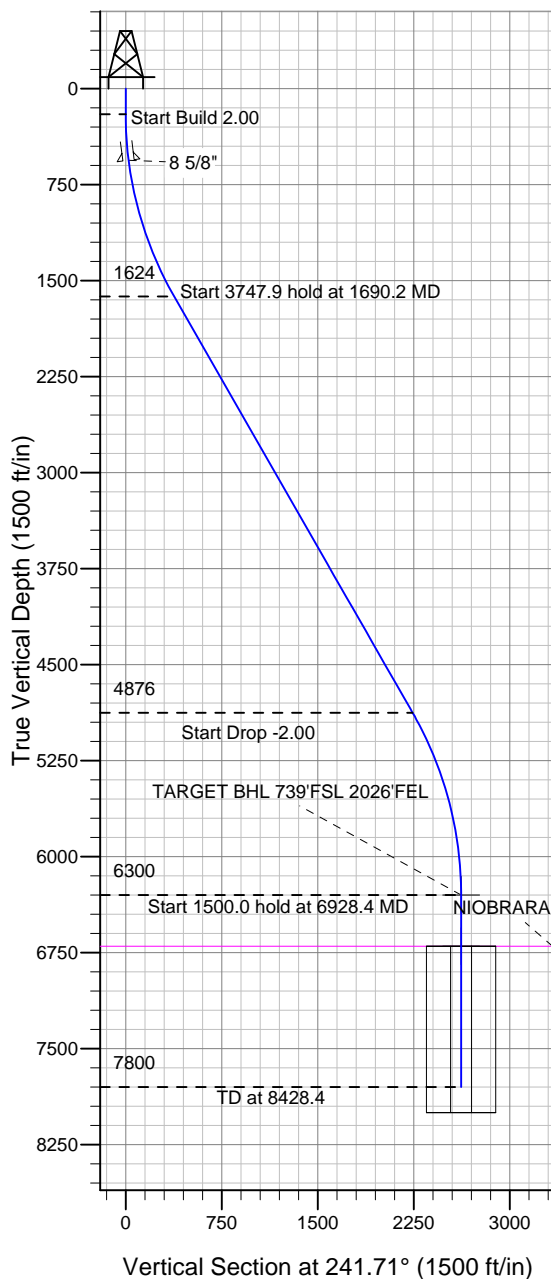


Well Name: 4H 5-7-31

Surface Location: Island Grove Pad Sec. 32-T6N-R65W
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4647.0
 +N/-S 0.0 +E/-W 0.0 Northing 1404756.21 Easting 3223892.95 Latitude 40.441670 Longitude -104.695600 Slot
 Original Well Elev @ 4660.0ft (Original Well Elev)

Mineral Resources Inc



Island Grove Pad Sec. 32-T6N-R65W
 4H 5-7-31
 Plan #1 (8-4-11)
 15:31, September 26 2011



Azimuths to True North
 Magnetic North: 8.75°
 Magnetic Field
 Strength: 53156.5nT
 Dip Angle: 67.10°
 Date: 9/21/2011
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 739'FSL 2026'FEL	6300.0	-1242.2	-2307.6	40.438260	-104.703890	Point
LEGAL BOX 400' X 400' 783'FSL 2049'FEL	6700.0	-1198.2	-2330.6	40.438381	-104.703972	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	1690.2	29.80	241.71	1623.9	-179.6	-333.7	2.00	241.71	378.9	
4	5438.1	29.80	241.71	4876.1	-1062.6	-1974.0	0.00	0.00	2241.8	
5	6928.4	0.00	0.00	6300.0	-1242.2	-2307.6	2.00	180.00	2620.7	TARGET BHL 739'FSL 2026'FEL
6	8428.4	0.00	0.00	7800.0	-1242.2	-2307.6	0.00	0.00	2620.7	



Mineral Resources Inc

SEC.32-T6N-R65W

Island Grove Pad Sec. 32-T6N-R65W

4H 5-7-31

Wellbore #1

Plan: Plan #1 (8-4-11)

Standard Planning Report

26 September, 2011

Database:	Landmark	Local Co-ordinate Reference:	Well 4H 5-7-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Project:	SEC.32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site:	Island Grove Pad Sec. 32-T6N-R65W	North Reference:	True
Well:	4H 5-7-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-4-11)		

Project	SEC.32-T6N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Island Grove Pad Sec. 32-T6N-R65W											
Site Position:						Northing:			1,404,760.73 ft			Latitude:			40.441680		
From:			Lat/Long			Easting:			3,223,987.55 ft			Longitude:			-104.695260		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.52 °		

Well	4H 5-7-31					
Well Position	+N/-S	-3.7 ft	Northing:	1,404,756.21 ft	Latitude:	40.441670
	+E/-W	-94.6 ft	Easting:	3,223,892.95 ft	Longitude:	-104.695600
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,647.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/21/2011	8.75	67.10	53,156

Design	Plan #1 (8-4-11)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	241.71

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	
1,690.2	29.80	241.71	1,623.9	-179.6	-333.7	2.00	2.00	0.00	241.71	
5,438.1	29.80	241.71	4,876.1	-1,062.6	-1,974.0	0.00	0.00	0.00	0.00	
6,928.4	0.00	0.00	6,300.0	-1,242.2	-2,307.6	2.00	-2.00	0.00	180.00	TARGET BHL 739'I
8,428.4	0.00	0.00	7,800.0	-1,242.2	-2,307.6	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well 4H 5-7-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Project:	SEC.32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site:	Island Grove Pad Sec. 32-T6N-R65W	North Reference:	True
Well:	4H 5-7-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-4-11)		

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	241.71	240.0	-0.1	-0.2	0.3	2.00	2.00	0.00
280.0	1.60	241.71	280.0	-0.5	-1.0	1.1	2.00	2.00	0.00
320.0	2.40	241.71	320.0	-1.2	-2.2	2.5	2.00	2.00	0.00
360.0	3.20	241.71	359.9	-2.1	-3.9	4.5	2.00	2.00	0.00
400.0	4.00	241.71	399.8	-3.3	-6.1	7.0	2.00	2.00	0.00
440.0	4.80	241.71	439.7	-4.8	-8.8	10.0	2.00	2.00	0.00
480.0	5.60	241.71	479.6	-6.5	-12.0	13.7	2.00	2.00	0.00
520.0	6.40	241.71	519.3	-8.5	-15.7	17.9	2.00	2.00	0.00
560.0	7.20	241.71	559.1	-10.7	-19.9	22.6	2.00	2.00	0.00
561.0	7.22	241.71	560.0	-10.8	-20.0	22.7	2.00	2.00	0.00
8 5/8"									
600.0	8.00	241.71	598.7	-13.2	-24.5	27.9	2.00	2.00	0.00
640.0	8.80	241.71	638.3	-16.0	-29.7	33.7	2.00	2.00	0.00
680.0	9.60	241.71	677.8	-19.0	-35.3	40.1	2.00	2.00	0.00
720.0	10.40	241.71	717.1	-22.3	-41.4	47.1	2.00	2.00	0.00
760.0	11.20	241.71	756.4	-25.9	-48.0	54.6	2.00	2.00	0.00
800.0	12.00	241.71	795.6	-29.7	-55.1	62.6	2.00	2.00	0.00
840.0	12.80	241.71	834.7	-33.7	-62.7	71.2	2.00	2.00	0.00
880.0	13.60	241.71	873.6	-38.1	-70.7	80.3	2.00	2.00	0.00
920.0	14.40	241.71	912.4	-42.7	-79.3	90.0	2.00	2.00	0.00
960.0	15.20	241.71	951.1	-47.5	-88.2	100.2	2.00	2.00	0.00
1,000.0	16.00	241.71	989.6	-52.6	-97.7	111.0	2.00	2.00	0.00
1,040.0	16.80	241.71	1,028.0	-58.0	-107.7	122.3	2.00	2.00	0.00
1,080.0	17.60	241.71	1,066.2	-63.6	-118.1	134.1	2.00	2.00	0.00
1,120.0	18.40	241.71	1,104.3	-69.4	-129.0	146.5	2.00	2.00	0.00
1,160.0	19.20	241.71	1,142.1	-75.5	-140.3	159.3	2.00	2.00	0.00
1,200.0	20.00	241.71	1,179.8	-81.9	-152.1	172.8	2.00	2.00	0.00
1,240.0	20.80	241.71	1,217.3	-88.5	-164.4	186.7	2.00	2.00	0.00
1,280.0	21.60	241.71	1,254.6	-95.4	-177.1	201.2	2.00	2.00	0.00
1,320.0	22.40	241.71	1,291.7	-102.5	-190.3	216.2	2.00	2.00	0.00
1,360.0	23.20	241.71	1,328.6	-109.8	-204.0	231.7	2.00	2.00	0.00
1,400.0	24.00	241.71	1,365.2	-117.4	-218.1	247.7	2.00	2.00	0.00
1,440.0	24.80	241.71	1,401.6	-125.2	-232.6	264.2	2.00	2.00	0.00
1,480.0	25.60	241.71	1,437.8	-133.3	-247.6	281.2	2.00	2.00	0.00
1,520.0	26.40	241.71	1,473.8	-141.6	-263.1	298.8	2.00	2.00	0.00
1,560.0	27.20	241.71	1,509.5	-150.2	-279.0	316.8	2.00	2.00	0.00
1,600.0	28.00	241.71	1,544.9	-158.9	-295.3	335.3	2.00	2.00	0.00
1,640.0	28.80	241.71	1,580.1	-168.0	-312.0	354.4	2.00	2.00	0.00
1,680.0	29.60	241.71	1,615.0	-177.2	-329.2	373.9	2.00	2.00	0.00
1,690.2	29.80	241.71	1,623.9	-179.6	-333.7	378.9	2.00	2.00	0.00
1,720.0	29.80	241.71	1,649.8	-186.6	-346.7	393.7	0.00	0.00	0.00
1,760.0	29.80	241.71	1,684.5	-196.0	-364.2	413.6	0.00	0.00	0.00
1,800.0	29.80	241.71	1,719.2	-205.5	-381.7	433.5	0.00	0.00	0.00
1,840.0	29.80	241.71	1,753.9	-214.9	-399.2	453.4	0.00	0.00	0.00
1,880.0	29.80	241.71	1,788.6	-224.3	-416.7	473.3	0.00	0.00	0.00
1,920.0	29.80	241.71	1,823.3	-233.7	-434.2	493.1	0.00	0.00	0.00
1,960.0	29.80	241.71	1,858.0	-243.2	-451.7	513.0	0.00	0.00	0.00
2,000.0	29.80	241.71	1,892.7	-252.6	-469.2	532.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well 4H 5-7-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Project:	SEC.32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site:	Island Grove Pad Sec. 32-T6N-R65W	North Reference:	True
Well:	4H 5-7-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-4-11)		

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)
2,040.0	29.80	241.71	1,927.4	-262.0	-486.7	552.8	0.00	0.00	0.00
2,080.0	29.80	241.71	1,962.1	-271.4	-504.3	572.7	0.00	0.00	0.00
2,120.0	29.80	241.71	1,996.8	-280.9	-521.8	592.6	0.00	0.00	0.00
2,160.0	29.80	241.71	2,031.6	-290.3	-539.3	612.4	0.00	0.00	0.00
2,200.0	29.80	241.71	2,066.3	-299.7	-556.8	632.3	0.00	0.00	0.00
2,240.0	29.80	241.71	2,101.0	-309.1	-574.3	652.2	0.00	0.00	0.00
2,280.0	29.80	241.71	2,135.7	-318.6	-591.8	672.1	0.00	0.00	0.00
2,320.0	29.80	241.71	2,170.4	-328.0	-609.3	692.0	0.00	0.00	0.00
2,360.0	29.80	241.71	2,205.1	-337.4	-626.8	711.8	0.00	0.00	0.00
2,400.0	29.80	241.71	2,239.8	-346.8	-644.3	731.7	0.00	0.00	0.00
2,440.0	29.80	241.71	2,274.5	-356.3	-661.8	751.6	0.00	0.00	0.00
2,480.0	29.80	241.71	2,309.2	-365.7	-679.3	771.5	0.00	0.00	0.00
2,520.0	29.80	241.71	2,343.9	-375.1	-696.8	791.4	0.00	0.00	0.00
2,560.0	29.80	241.71	2,378.6	-384.5	-714.3	811.2	0.00	0.00	0.00
2,600.0	29.80	241.71	2,413.4	-393.9	-731.8	831.1	0.00	0.00	0.00
2,640.0	29.80	241.71	2,448.1	-403.4	-749.3	851.0	0.00	0.00	0.00
2,680.0	29.80	241.71	2,482.8	-412.8	-766.9	870.9	0.00	0.00	0.00
2,720.0	29.80	241.71	2,517.5	-422.2	-784.4	890.8	0.00	0.00	0.00
2,760.0	29.80	241.71	2,552.2	-431.6	-801.9	910.7	0.00	0.00	0.00
2,800.0	29.80	241.71	2,586.9	-441.1	-819.4	930.5	0.00	0.00	0.00
2,840.0	29.80	241.71	2,621.6	-450.5	-836.9	950.4	0.00	0.00	0.00
2,880.0	29.80	241.71	2,656.3	-459.9	-854.4	970.3	0.00	0.00	0.00
2,920.0	29.80	241.71	2,691.0	-469.3	-871.9	990.2	0.00	0.00	0.00
2,960.0	29.80	241.71	2,725.7	-478.8	-889.4	1,010.1	0.00	0.00	0.00
3,000.0	29.80	241.71	2,760.4	-488.2	-906.9	1,029.9	0.00	0.00	0.00
3,040.0	29.80	241.71	2,795.2	-497.6	-924.4	1,049.8	0.00	0.00	0.00
3,080.0	29.80	241.71	2,829.9	-507.0	-941.9	1,069.7	0.00	0.00	0.00
3,120.0	29.80	241.71	2,864.6	-516.5	-959.4	1,089.6	0.00	0.00	0.00
3,160.0	29.80	241.71	2,899.3	-525.9	-976.9	1,109.5	0.00	0.00	0.00
3,200.0	29.80	241.71	2,934.0	-535.3	-994.4	1,129.4	0.00	0.00	0.00
3,240.0	29.80	241.71	2,968.7	-544.7	-1,011.9	1,149.2	0.00	0.00	0.00
3,280.0	29.80	241.71	3,003.4	-554.1	-1,029.4	1,169.1	0.00	0.00	0.00
3,320.0	29.80	241.71	3,038.1	-563.6	-1,047.0	1,189.0	0.00	0.00	0.00
3,360.0	29.80	241.71	3,072.8	-573.0	-1,064.5	1,208.9	0.00	0.00	0.00
3,400.0	29.80	241.71	3,107.5	-582.4	-1,082.0	1,228.8	0.00	0.00	0.00
3,440.0	29.80	241.71	3,142.2	-591.8	-1,099.5	1,248.6	0.00	0.00	0.00
3,480.0	29.80	241.71	3,177.0	-601.3	-1,117.0	1,268.5	0.00	0.00	0.00
3,520.0	29.80	241.71	3,211.7	-610.7	-1,134.5	1,288.4	0.00	0.00	0.00
3,560.0	29.80	241.71	3,246.4	-620.1	-1,152.0	1,308.3	0.00	0.00	0.00
3,600.0	29.80	241.71	3,281.1	-629.5	-1,169.5	1,328.2	0.00	0.00	0.00
3,640.0	29.80	241.71	3,315.8	-639.0	-1,187.0	1,348.1	0.00	0.00	0.00
3,680.0	29.80	241.71	3,350.5	-648.4	-1,204.5	1,367.9	0.00	0.00	0.00
3,720.0	29.80	241.71	3,385.2	-657.8	-1,222.0	1,387.8	0.00	0.00	0.00
3,760.0	29.80	241.71	3,419.9	-667.2	-1,239.5	1,407.7	0.00	0.00	0.00
3,800.0	29.80	241.71	3,454.6	-676.7	-1,257.0	1,427.6	0.00	0.00	0.00
3,840.0	29.80	241.71	3,489.3	-686.1	-1,274.5	1,447.5	0.00	0.00	0.00
3,880.0	29.80	241.71	3,524.0	-695.5	-1,292.0	1,467.3	0.00	0.00	0.00
3,920.0	29.80	241.71	3,558.8	-704.9	-1,309.5	1,487.2	0.00	0.00	0.00
3,960.0	29.80	241.71	3,593.5	-714.3	-1,327.1	1,507.1	0.00	0.00	0.00
4,000.0	29.80	241.71	3,628.2	-723.8	-1,344.6	1,527.0	0.00	0.00	0.00
4,040.0	29.80	241.71	3,662.9	-733.2	-1,362.1	1,546.9	0.00	0.00	0.00
4,080.0	29.80	241.71	3,697.6	-742.6	-1,379.6	1,566.8	0.00	0.00	0.00
4,120.0	29.80	241.71	3,732.3	-752.0	-1,397.1	1,586.6	0.00	0.00	0.00
4,160.0	29.80	241.71	3,767.0	-761.5	-1,414.6	1,606.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well 4H 5-7-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Project:	SEC.32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site:	Island Grove Pad Sec. 32-T6N-R65W	North Reference:	True
Well:	4H 5-7-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-4-11)		

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)
4,200.0	29.80	241.71	3,801.7	-770.9	-1,432.1	1,626.4	0.00	0.00	0.00
4,240.0	29.80	241.71	3,836.4	-780.3	-1,449.6	1,646.3	0.00	0.00	0.00
4,280.0	29.80	241.71	3,871.1	-789.7	-1,467.1	1,666.2	0.00	0.00	0.00
4,320.0	29.80	241.71	3,905.8	-799.2	-1,484.6	1,686.0	0.00	0.00	0.00
4,360.0	29.80	241.71	3,940.6	-808.6	-1,502.1	1,705.9	0.00	0.00	0.00
4,400.0	29.80	241.71	3,975.3	-818.0	-1,519.6	1,725.8	0.00	0.00	0.00
4,440.0	29.80	241.71	4,010.0	-827.4	-1,537.1	1,745.7	0.00	0.00	0.00
4,480.0	29.80	241.71	4,044.7	-836.9	-1,554.6	1,765.6	0.00	0.00	0.00
4,520.0	29.80	241.71	4,079.4	-846.3	-1,572.1	1,785.4	0.00	0.00	0.00
4,560.0	29.80	241.71	4,114.1	-855.7	-1,589.7	1,805.3	0.00	0.00	0.00
4,600.0	29.80	241.71	4,148.8	-865.1	-1,607.2	1,825.2	0.00	0.00	0.00
4,640.0	29.80	241.71	4,183.5	-874.6	-1,624.7	1,845.1	0.00	0.00	0.00
4,680.0	29.80	241.71	4,218.2	-884.0	-1,642.2	1,865.0	0.00	0.00	0.00
4,720.0	29.80	241.71	4,252.9	-893.4	-1,659.7	1,884.9	0.00	0.00	0.00
4,760.0	29.80	241.71	4,287.6	-902.8	-1,677.2	1,904.7	0.00	0.00	0.00
4,800.0	29.80	241.71	4,322.4	-912.2	-1,694.7	1,924.6	0.00	0.00	0.00
4,840.0	29.80	241.71	4,357.1	-921.7	-1,712.2	1,944.5	0.00	0.00	0.00
4,880.0	29.80	241.71	4,391.8	-931.1	-1,729.7	1,964.4	0.00	0.00	0.00
4,920.0	29.80	241.71	4,426.5	-940.5	-1,747.2	1,984.3	0.00	0.00	0.00
4,960.0	29.80	241.71	4,461.2	-949.9	-1,764.7	2,004.1	0.00	0.00	0.00
5,000.0	29.80	241.71	4,495.9	-959.4	-1,782.2	2,024.0	0.00	0.00	0.00
5,040.0	29.80	241.71	4,530.6	-968.8	-1,799.7	2,043.9	0.00	0.00	0.00
5,080.0	29.80	241.71	4,565.3	-978.2	-1,817.2	2,063.8	0.00	0.00	0.00
5,120.0	29.80	241.71	4,600.0	-987.6	-1,834.7	2,083.7	0.00	0.00	0.00
5,160.0	29.80	241.71	4,634.7	-997.1	-1,852.2	2,103.6	0.00	0.00	0.00
5,200.0	29.80	241.71	4,669.4	-1,006.5	-1,869.8	2,123.4	0.00	0.00	0.00
5,240.0	29.80	241.71	4,704.2	-1,015.9	-1,887.3	2,143.3	0.00	0.00	0.00
5,280.0	29.80	241.71	4,738.9	-1,025.3	-1,904.8	2,163.2	0.00	0.00	0.00
5,320.0	29.80	241.71	4,773.6	-1,034.8	-1,922.3	2,183.1	0.00	0.00	0.00
5,360.0	29.80	241.71	4,808.3	-1,044.2	-1,939.8	2,203.0	0.00	0.00	0.00
5,400.0	29.80	241.71	4,843.0	-1,053.6	-1,957.3	2,222.8	0.00	0.00	0.00
5,438.1	29.80	241.71	4,876.1	-1,062.6	-1,974.0	2,241.8	0.00	0.00	0.00
5,440.0	29.77	241.71	4,877.7	-1,063.0	-1,974.8	2,242.7	2.00	-2.00	0.00
5,480.0	28.97	241.71	4,912.6	-1,072.3	-1,992.1	2,262.3	2.00	-2.00	0.00
5,520.0	28.17	241.71	4,947.7	-1,081.4	-2,008.9	2,281.5	2.00	-2.00	0.00
5,560.0	27.37	241.71	4,983.1	-1,090.2	-2,025.3	2,300.1	2.00	-2.00	0.00
5,600.0	26.57	241.71	5,018.7	-1,098.8	-2,041.3	2,318.2	2.00	-2.00	0.00
5,640.0	25.77	241.71	5,054.6	-1,107.2	-2,056.8	2,335.9	2.00	-2.00	0.00
5,680.0	24.97	241.71	5,090.8	-1,115.3	-2,071.9	2,353.0	2.00	-2.00	0.00
5,720.0	24.17	241.71	5,127.2	-1,123.2	-2,086.6	2,369.7	2.00	-2.00	0.00
5,760.0	23.37	241.71	5,163.8	-1,130.8	-2,100.7	2,385.8	2.00	-2.00	0.00
5,800.0	22.57	241.71	5,200.6	-1,138.2	-2,114.5	2,401.4	2.00	-2.00	0.00
5,840.0	21.77	241.71	5,237.6	-1,145.4	-2,127.8	2,416.5	2.00	-2.00	0.00
5,880.0	20.97	241.71	5,274.9	-1,152.3	-2,140.6	2,431.0	2.00	-2.00	0.00
5,920.0	20.17	241.71	5,312.3	-1,158.9	-2,153.0	2,445.1	2.00	-2.00	0.00
5,960.0	19.37	241.71	5,350.0	-1,165.4	-2,164.9	2,458.6	2.00	-2.00	0.00
6,000.0	18.57	241.71	5,387.8	-1,171.5	-2,176.3	2,471.6	2.00	-2.00	0.00
6,040.0	17.77	241.71	5,425.8	-1,177.4	-2,187.3	2,484.1	2.00	-2.00	0.00
6,080.0	16.97	241.71	5,464.0	-1,183.1	-2,197.8	2,496.0	2.00	-2.00	0.00
6,120.0	16.17	241.71	5,502.3	-1,188.5	-2,207.9	2,507.4	2.00	-2.00	0.00
6,160.0	15.37	241.71	5,540.8	-1,193.6	-2,217.5	2,518.3	2.00	-2.00	0.00
6,200.0	14.57	241.71	5,579.5	-1,198.5	-2,226.5	2,528.6	2.00	-2.00	0.00
6,240.0	13.77	241.71	5,618.3	-1,203.2	-2,235.2	2,538.4	2.00	-2.00	0.00
6,280.0	12.97	241.71	5,657.2	-1,207.6	-2,243.3	2,547.7	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well 4H 5-7-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Project:	SEC.32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site:	Island Grove Pad Sec. 32-T6N-R65W	North Reference:	True
Well:	4H 5-7-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-4-11)		

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)
6,320.0	12.17	241.71	5,696.2	-1,211.7	-2,251.0	2,556.4	2.00	-2.00	0.00
6,360.0	11.37	241.71	5,735.4	-1,215.6	-2,258.2	2,564.5	2.00	-2.00	0.00
6,400.0	10.57	241.71	5,774.6	-1,219.2	-2,264.9	2,572.1	2.00	-2.00	0.00
6,440.0	9.77	241.71	5,814.0	-1,222.5	-2,271.1	2,579.2	2.00	-2.00	0.00
6,480.0	8.97	241.71	5,853.5	-1,225.6	-2,276.8	2,585.7	2.00	-2.00	0.00
6,520.0	8.17	241.71	5,893.0	-1,228.4	-2,282.1	2,591.7	2.00	-2.00	0.00
6,560.0	7.37	241.71	5,932.7	-1,231.0	-2,286.8	2,597.1	2.00	-2.00	0.00
6,600.0	6.57	241.71	5,972.4	-1,233.3	-2,291.1	2,601.9	2.00	-2.00	0.00
6,640.0	5.77	241.71	6,012.1	-1,235.3	-2,294.9	2,606.2	2.00	-2.00	0.00
6,680.0	4.97	241.71	6,052.0	-1,237.1	-2,298.2	2,610.0	2.00	-2.00	0.00
6,720.0	4.17	241.71	6,091.8	-1,238.6	-2,301.0	2,613.2	2.00	-2.00	0.00
6,760.0	3.37	241.71	6,131.7	-1,239.8	-2,303.3	2,615.8	2.00	-2.00	0.00
6,800.0	2.57	241.71	6,171.7	-1,240.8	-2,305.1	2,617.9	2.00	-2.00	0.00
6,840.0	1.77	241.71	6,211.7	-1,241.5	-2,306.4	2,619.4	2.00	-2.00	0.00
6,880.0	0.97	241.71	6,251.6	-1,242.0	-2,307.3	2,620.3	2.00	-2.00	0.00
6,920.0	0.17	241.71	6,291.6	-1,242.2	-2,307.6	2,620.7	2.00	-2.00	0.00
6,928.4	0.00	0.00	6,300.0	-1,242.2	-2,307.6	2,620.7	2.00	-2.00	0.00
TARGET BHL 739'FSL 2026'FEL									
6,960.0	0.00	0.00	6,331.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,371.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,411.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,451.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,120.0	0.00	0.00	6,491.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,160.0	0.00	0.00	6,531.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,200.0	0.00	0.00	6,571.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,240.0	0.00	0.00	6,611.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,280.0	0.00	0.00	6,651.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,320.0	0.00	0.00	6,691.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,328.4	0.00	0.00	6,700.0	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
NIOBRARA - LEGAL BOX 400 'X 400' 783'FSL 2049'FEL									
7,360.0	0.00	0.00	6,731.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,400.0	0.00	0.00	6,771.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,440.0	0.00	0.00	6,811.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,480.0	0.00	0.00	6,851.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,520.0	0.00	0.00	6,891.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,560.0	0.00	0.00	6,931.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,600.0	0.00	0.00	6,971.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,640.0	0.00	0.00	7,011.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,680.0	0.00	0.00	7,051.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,720.0	0.00	0.00	7,091.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,760.0	0.00	0.00	7,131.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,171.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,840.0	0.00	0.00	7,211.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,880.0	0.00	0.00	7,251.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,920.0	0.00	0.00	7,291.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
7,960.0	0.00	0.00	7,331.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,000.0	0.00	0.00	7,371.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,040.0	0.00	0.00	7,411.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,080.0	0.00	0.00	7,451.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,120.0	0.00	0.00	7,491.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,160.0	0.00	0.00	7,531.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,200.0	0.00	0.00	7,571.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,240.0	0.00	0.00	7,611.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00
8,280.0	0.00	0.00	7,651.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well 4H 5-7-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Project:	SEC.32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site:	Island Grove Pad Sec. 32-T6N-R65W	North Reference:	True
Well:	4H 5-7-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-4-11)		

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)	
8,320.0	0.00	0.00	7,691.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00	
8,360.0	0.00	0.00	7,731.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00	
8,400.0	0.00	0.00	7,771.6	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00	
8,428.4	0.00	0.00	7,800.0	-1,242.2	-2,307.6	2,620.7	0.00	0.00	0.00	

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 739'FS	- plan hits target center	0.00	0.00	6,300.0	-1,242.2	-2,307.6	1,403,493.19	3,221,596.77	40.438260	-104.703890
	- Point									
LEGAL BOX 400 'X 400	- plan misses target center by 49.6ft at 7328.4ft MD (6700.0 TVD, -1242.2 N, -2307.6 E)	0.00	0.00	6,700.0	-1,198.2	-2,330.6	1,403,536.97	3,221,573.41	40.438381	-104.703972
	- Rectangle (sides W400.0 H400.0 D1,300.0)									

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name					Casing Diameter (")	Hole Diameter (")		
561.0	560.0	8 5/8"					8-5/8	12-1/4		

Formations										
Measured Depth (ft)	Vertical Depth (ft)	Name				Lithology	Dip (°)	Dip Direction (°)		
7,328.4	6,700.0	NIOBRARA					0.00			



Directional

Mineral Resources Inc

SEC.32-T6N-R65W

Island Grove Pad Sec. 32-T6N-R65W

4H 5-7-31

Wellbore #1

Plan #1 (8-4-11)

Anticollision Report

26 September, 2011

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (8-4-11)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 9/26/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,428.4	Plan #1 (8-4-11) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Island Grove Pad Sec. 32-T6N-R65W						
Markus 1-1-32 - Wellbore #1 - Plan #1 (8-4-11)	200.0	200.0	59.0	58.3	87.513	CC, ES
Markus 1-1-32 - Wellbore #1 - Plan #1 (8-4-11)	600.0	590.0	96.5	94.0	38.346	SF
Stampede 7-7-31 - Wellbore #1 - Plan #1 (8-4-11)	200.0	200.0	64.1	63.4	95.098	CC, ES
Stampede 7-7-31 - Wellbore #1 - Plan #1 (8-4-11)	1,400.0	1,410.9	159.6	150.5	17.493	SF

Offset Design												Island Grove Pad Sec. 32-T6N-R65W - Markus 1-1-32 - Wellbore #1 - Plan #1 (8-4-11)		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			
0.0	0.0	0.0	0.0	0.0	0.0	22.17	54.6	22.3	59.0						
100.0	100.0	100.0	100.0	0.1	0.1	22.17	54.6	22.3	59.0	58.8	0.22	262.540			
200.0	200.0	200.0	200.0	0.3	0.3	22.17	54.6	22.3	59.0	58.3	0.67	87.513	CC, ES		
300.0	300.0	300.0	300.0	0.5	0.6	141.50	54.6	22.3	60.4	59.3	1.11	54.287			
400.0	399.8	397.7	397.7	0.8	0.8	143.90	56.3	22.6	66.2	64.6	1.56	42.535			
500.0	499.5	494.5	494.4	1.0	1.0	146.55	61.1	23.6	78.3	76.2	2.03	38.558			
600.0	598.7	590.0	589.5	1.3	1.2	148.82	69.0	25.2	96.5	94.0	2.52	38.346	SF		
700.0	697.5	683.6	682.4	1.6	1.5	150.50	79.8	27.4	120.9	117.9	3.02	40.057			
800.0	795.6	774.8	772.7	2.0	1.8	151.65	93.1	30.1	151.2	147.7	3.53	42.794			
900.0	893.1	863.3	859.7	2.5	2.1	152.39	108.7	33.3	187.2	183.1	4.06	46.066			
1,000.0	989.6	948.6	943.1	3.0	2.4	152.82	126.3	36.8	228.6	224.0	4.61	49.592			
1,100.0	1,085.3	1,030.5	1,022.6	3.6	2.8	153.03	145.4	40.7	275.3	270.1	5.17	53.202			
1,200.0	1,179.8	1,108.7	1,098.0	4.2	3.1	153.06	165.8	44.9	326.8	321.1	5.76	56.787			
1,300.0	1,273.2	1,183.1	1,169.2	5.0	3.5	152.95	187.0	49.2	383.1	376.7	6.36	60.260			
1,400.0	1,365.2	1,253.5	1,236.0	5.7	3.9	152.73	208.7	53.6	443.7	436.7	6.98	63.591			
1,500.0	1,455.8	1,321.9	1,300.4	6.6	4.3	152.41	231.3	58.2	508.4	500.7	7.62	66.744			
1,600.0	1,544.9	1,395.5	1,369.5	7.5	4.8	152.15	256.2	63.3	575.9	567.6	8.30	69.355			
1,690.2	1,623.9	1,460.1	1,430.1	8.5	5.2	151.91	278.0	67.7	638.8	629.8	8.93	71.516			
1,700.0	1,632.4	1,467.0	1,436.6	8.6	5.3	151.98	280.3	68.2	645.7	636.7	9.00	71.736			
1,800.0	1,719.2	1,537.5	1,502.8	9.6	5.7	152.58	304.1	73.0	716.4	706.7	9.71	73.757			
1,900.0	1,805.9	1,608.0	1,569.0	10.6	6.2	153.08	327.9	77.8	787.2	776.7	10.44	75.433			
2,000.0	1,892.7	1,678.5	1,635.1	11.7	6.6	153.49	351.7	82.7	858.0	846.8	11.17	76.830			
2,100.0	1,979.5	1,749.0	1,701.3	12.8	7.1	153.84	375.5	87.5	928.8	916.9	11.90	78.021			

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 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	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						
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
2,200.0	2,066.3	1,819.5	1,767.5	13.8	7.6	154.14	399.3	92.4	999.6	986.9	12.65	79.048	
2,300.0	2,153.0	1,890.0	1,833.7	14.9	8.0	154.40	423.1	97.2	1,070.4	1,057.0	13.39	79.934	
2,400.0	2,239.8	1,960.5	1,899.9	15.9	8.5	154.63	446.9	102.0	1,141.3	1,127.1	14.14	80.704	
2,500.0	2,326.6	2,031.0	1,966.1	17.0	9.0	154.83	470.7	106.9	1,212.1	1,197.2	14.89	81.381	
2,600.0	2,413.4	2,101.5	2,032.3	18.1	9.5	155.01	494.4	111.7	1,283.0	1,267.3	15.65	81.981	
2,700.0	2,500.1	2,172.1	2,098.5	19.2	9.9	155.17	518.2	116.6	1,353.8	1,337.4	16.41	82.509	
2,800.0	2,586.9	2,242.6	2,164.7	20.2	10.4	155.32	542.0	121.4	1,424.7	1,407.5	17.17	82.983	
2,900.0	2,673.7	2,313.1	2,230.9	21.3	10.9	155.45	565.8	126.2	1,495.6	1,477.6	17.93	83.408	
3,000.0	2,760.4	2,383.6	2,297.1	22.4	11.3	155.57	589.6	131.1	1,566.5	1,547.8	18.70	83.790	
3,100.0	2,847.2	2,454.1	2,363.3	23.4	11.8	155.68	613.4	135.9	1,637.3	1,617.9	19.46	84.135	
3,200.0	2,934.0	2,524.6	2,429.5	24.5	12.3	155.78	637.2	140.8	1,708.2	1,688.0	20.23	84.449	
3,300.0	3,020.8	2,595.1	2,495.7	25.6	12.8	155.87	661.0	145.6	1,779.1	1,758.1	21.00	84.735	
3,400.0	3,107.5	2,665.6	2,561.9	26.7	13.2	155.95	684.8	150.4	1,850.0	1,828.2	21.77	84.995	
3,500.0	3,194.3	2,736.1	2,628.1	27.7	13.7	156.03	708.6	155.3	1,920.9	1,898.3	22.54	85.234	
3,600.0	3,281.1	2,806.6	2,694.3	28.8	14.2	156.11	732.4	160.1	1,991.8	1,968.5	23.31	85.455	
3,700.0	3,367.9	2,877.1	2,760.5	29.9	14.7	156.17	756.2	165.0	2,062.6	2,038.6	24.08	85.657	
3,800.0	3,454.6	2,947.7	2,826.7	31.0	15.1	156.24	780.0	169.8	2,133.5	2,108.7	24.85	85.844	
3,900.0	3,541.4	3,018.2	2,892.9	32.0	15.6	156.30	803.8	174.6	2,204.4	2,178.8	25.63	86.017	
4,000.0	3,628.2	3,088.7	2,959.1	33.1	16.1	156.35	827.6	179.5	2,275.3	2,248.9	26.40	86.178	
4,100.0	3,714.9	3,159.2	3,025.3	34.2	16.6	156.41	851.4	184.3	2,346.2	2,319.0	27.18	86.327	
4,200.0	3,801.7	3,229.7	3,091.5	35.2	17.0	156.45	875.2	189.2	2,417.1	2,389.2	27.95	86.467	
4,300.0	3,888.5	3,300.2	3,157.7	36.3	17.5	156.50	899.0	194.0	2,488.0	2,459.3	28.73	86.597	
4,400.0	3,975.3	3,370.7	3,223.9	37.4	18.0	156.55	922.8	198.8	2,558.9	2,529.4	29.51	86.718	
4,500.0	4,062.0	3,441.2	3,290.0	38.5	18.5	156.59	946.6	203.7	2,629.8	2,599.5	30.29	86.832	
4,600.0	4,148.8	3,511.7	3,356.2	39.6	19.0	156.63	970.4	208.5	2,700.7	2,669.7	31.06	86.938	
4,700.0	4,235.6	3,582.2	3,422.4	40.6	19.4	156.66	994.2	213.4	2,771.6	2,739.8	31.84	87.038	
4,800.0	4,322.4	3,652.7	3,488.6	41.7	19.9	156.70	1,018.0	218.2	2,842.5	2,809.9	32.62	87.132	
4,900.0	4,409.1	3,723.3	3,554.8	42.8	20.4	156.73	1,041.7	223.0	2,913.4	2,880.0	33.40	87.221	
5,000.0	4,495.9	3,793.8	3,621.0	43.9	20.9	156.77	1,065.5	227.9	2,984.3	2,950.1	34.18	87.304	
5,100.0	4,582.7	3,864.3	3,687.2	44.9	21.3	156.80	1,089.3	232.7	3,055.2	3,020.3	34.96	87.382	
5,200.0	4,669.4	3,934.8	3,753.4	46.0	21.8	156.83	1,113.1	237.6	3,126.1	3,090.4	35.74	87.456	
5,300.0	4,756.2	4,005.3	3,819.6	47.1	22.3	156.85	1,136.9	242.4	3,197.0	3,160.5	36.53	87.527	
5,400.0	4,843.0	4,075.8	3,885.8	48.2	22.8	156.88	1,160.7	247.2	3,267.9	3,230.6	37.31	87.593	
5,438.1	4,876.1	4,102.7	3,911.1	48.6	23.0	156.89	1,169.8	249.1	3,295.0	3,257.4	37.61	87.617	
5,500.0	4,930.1	4,146.7	3,952.4	49.2	23.2	157.37	1,184.7	252.1	3,338.4	3,300.3	38.14	87.530	
5,600.0	5,018.7	4,219.8	4,021.0	49.9	23.7	158.07	1,209.3	257.1	3,406.7	3,367.7	38.97	87.414	
5,700.0	5,108.9	4,294.9	4,091.5	50.7	24.3	158.68	1,234.7	262.3	3,472.6	3,432.8	39.80	87.251	
5,800.0	5,200.6	4,372.2	4,164.1	51.4	24.8	159.20	1,260.7	267.6	3,536.1	3,495.4	40.62	87.055	
5,900.0	5,293.6	4,451.4	4,238.4	52.0	25.3	159.66	1,287.5	273.0	3,597.0	3,555.5	41.42	86.841	
6,000.0	5,387.8	4,532.5	4,314.5	52.6	25.9	160.04	1,314.8	278.6	3,655.2	3,613.0	42.20	86.619	
6,100.0	5,483.1	4,615.3	4,392.3	53.1	26.4	160.37	1,342.8	284.3	3,710.8	3,667.8	42.95	86.396	
6,200.0	5,579.5	4,699.8	4,471.7	53.5	27.0	160.64	1,371.3	290.1	3,763.6	3,720.0	43.67	86.180	
6,300.0	5,676.7	4,785.9	4,552.5	53.9	27.6	160.86	1,400.4	296.0	3,813.6	3,769.3	44.36	85.975	
6,400.0	5,774.6	4,873.5	4,634.7	54.2	28.2	161.03	1,429.9	302.0	3,860.8	3,815.8	45.01	85.786	
6,500.0	5,873.2	4,962.4	4,718.1	54.5	28.8	161.16	1,459.9	308.1	3,905.1	3,859.5	45.61	85.616	
6,600.0	5,972.4	5,052.5	4,802.8	54.8	29.4	161.25	1,490.4	314.3	3,946.4	3,900.2	46.18	85.466	
6,700.0	6,071.9	5,143.8	4,888.5	54.9	30.0	161.30	1,521.2	320.6	3,984.7	3,938.0	46.69	85.339	
6,800.0	6,171.7	5,235.8	4,971.7	55.1	30.6	161.34	1,552.0	326.9	4,023.0	3,975.2	47.20	85.211	
6,900.0	6,271.6	5,327.9	5,054.8	55.1	31.2	161.38	1,582.8	333.2	4,058.3	4,009.5	47.71	85.083	
6,928.4	6,300.0	5,354.1	5,081.1	55.2	31.3	161.39	1,588.0	334.4	4,063.5	4,014.7	47.82	85.055	
7,000.0	6,371.6	5,425.7	5,152.7	55.2	31.4	161.40	1,593.2	335.6	4,068.7	4,019.9	47.93	85.027	
7,100.0	6,471.6	5,525.7	5,252.7	55.2	31.4	161.41	1,598.4	336.8	4,073.9	4,025.1	48.04	85.000	

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 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	Offset TVD Reference:	Offset Datum

Offset Design Island Grove Pad Sec. 32-T6N-R65W - Markus 1-1-32 - Wellbore #1 - Plan #1 (8-4-11)												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
7,200.0	6,571.6	6,855.7	6,571.6	55.3	34.5	41.88	1,737.8	364.6	4,002.7	3,951.7	50.94	78.571	
7,300.0	6,671.6	6,955.7	6,671.6	55.4	34.6	41.88	1,737.8	364.6	4,002.7	3,951.5	51.17	78.224	
7,400.0	6,771.6	7,055.7	6,771.6	55.4	34.6	41.88	1,737.8	364.6	4,002.7	3,951.3	51.40	77.875	
7,500.0	6,871.6	7,155.7	6,871.6	55.5	34.7	41.88	1,737.8	364.6	4,002.7	3,951.0	51.63	77.525	
7,600.0	6,971.6	7,255.7	6,971.6	55.5	34.8	41.88	1,737.8	364.6	4,002.7	3,950.8	51.87	77.174	
7,700.0	7,071.6	7,355.7	7,071.6	55.6	34.9	41.88	1,737.8	364.6	4,002.7	3,950.6	52.10	76.822	
7,800.0	7,171.6	7,455.7	7,171.6	55.6	35.0	41.88	1,737.8	364.6	4,002.7	3,950.3	52.34	76.469	
7,900.0	7,271.6	7,555.7	7,271.6	55.7	35.1	41.88	1,737.8	364.6	4,002.7	3,950.1	52.59	76.115	
8,000.0	7,371.6	7,655.7	7,371.6	55.7	35.2	41.88	1,737.8	364.6	4,002.7	3,949.8	52.83	75.761	
8,100.0	7,471.6	7,755.7	7,471.6	55.8	35.3	41.88	1,737.8	364.6	4,002.7	3,949.6	53.08	75.406	
8,200.0	7,571.6	7,855.7	7,571.6	55.9	35.4	41.88	1,737.8	364.6	4,002.7	3,949.3	53.33	75.051	
8,300.0	7,671.6	7,955.7	7,671.6	55.9	35.5	41.88	1,737.8	364.6	4,002.7	3,949.1	53.59	74.696	
8,400.0	7,771.6	8,055.7	7,771.6	56.0	35.6	41.88	1,737.8	364.6	4,002.7	3,948.8	53.84	74.341	
8,428.4	7,800.0	8,084.1	7,800.0	56.0	35.6	41.88	1,737.8	364.6	4,002.7	3,948.7	53.92	74.240	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	Offset TVD Reference:	Offset Datum

Offset Design		Island Grove Pad Sec. 32-T6N-R65W - Stampede 7-7-31 - Wellbore #1 - Plan #1 (8-4-11)											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			
0.0	0.0	0.0	0.0	0.0	0.0	86.74	3.6	64.0	64.1						
100.0	100.0	100.0	100.0	0.1	0.1	86.74	3.6	64.0	64.1	63.9	0.22	285.293			
200.0	200.0	200.0	200.0	0.3	0.3	86.74	3.6	64.0	64.1	63.4	0.67	95.098	CC, ES		
300.0	300.0	300.0	300.0	0.5	0.6	-155.59	3.6	64.0	65.7	64.6	1.11	59.048			
400.0	399.8	401.6	401.5	0.8	0.8	-156.30	2.3	62.9	69.3	67.7	1.53	45.246			
500.0	499.5	503.2	503.1	1.0	1.0	-156.01	-1.9	59.5	73.6	71.6	1.96	37.599			
600.0	598.7	604.9	604.4	1.3	1.2	-154.89	-8.9	53.8	78.6	76.2	2.42	32.460			
700.0	697.5	706.7	705.3	1.6	1.5	-153.12	-18.7	45.8	84.5	81.5	2.94	28.748			
800.0	795.6	808.4	805.7	2.0	1.8	-150.87	-31.2	35.5	91.2	87.7	3.52	25.880			
900.0	893.1	910.1	905.4	2.5	2.2	-148.30	-46.4	23.0	98.9	94.7	4.20	23.544			
1,000.0	989.6	1,011.7	1,004.4	3.0	2.7	-145.55	-64.4	8.3	107.7	102.7	4.99	21.577			
1,100.0	1,085.3	1,113.2	1,102.3	3.6	3.2	-142.72	-85.1	-8.6	117.6	111.7	5.91	19.901			
1,200.0	1,179.8	1,213.3	1,198.1	4.2	3.7	-140.16	-107.7	-27.1	129.0	122.0	6.95	18.563			
1,300.0	1,273.2	1,312.3	1,292.7	5.0	4.3	-138.79	-130.2	-45.5	143.0	135.0	8.03	17.805			
1,400.0	1,365.2	1,410.9	1,386.9	5.7	4.9	-138.45	-152.7	-63.9	159.6	150.5	9.13	17.493	SF		
1,500.0	1,455.8	1,509.0	1,480.6	6.6	5.5	-138.85	-175.1	-82.2	178.8	168.6	10.22	17.506			
1,600.0	1,544.9	1,606.5	1,573.8	7.5	6.1	-139.75	-197.3	-100.4	200.7	189.4	11.29	17.774			
1,690.2	1,623.9	1,693.9	1,657.3	8.5	6.6	-140.83	-217.2	-116.7	222.7	210.5	12.24	18.194			
1,700.0	1,632.4	1,703.3	1,666.3	8.6	6.7	-140.99	-219.4	-118.5	225.2	212.9	12.34	18.245			
1,800.0	1,719.2	1,799.7	1,758.5	9.6	7.2	-142.42	-241.4	-136.5	250.9	237.5	13.40	18.732			
1,900.0	1,805.9	1,896.2	1,850.7	10.6	7.8	-143.59	-263.4	-154.5	276.8	262.4	14.45	19.156			
2,000.0	1,892.7	1,992.7	1,942.8	11.7	8.4	-144.56	-285.4	-172.5	302.8	287.2	15.50	19.528			
2,100.0	1,979.5	2,089.1	2,035.0	12.8	9.0	-145.38	-307.3	-190.5	328.8	312.2	16.56	19.855			
2,200.0	2,066.3	2,185.6	2,127.2	13.8	9.6	-146.07	-329.3	-208.5	354.8	337.2	17.61	20.146			
2,300.0	2,153.0	2,282.0	2,219.4	14.9	10.2	-146.67	-351.3	-226.5	381.0	362.3	18.67	20.406			
2,400.0	2,239.8	2,378.5	2,311.6	15.9	10.8	-147.20	-373.3	-244.5	407.1	387.4	19.73	20.639			
2,500.0	2,326.6	2,475.0	2,403.7	17.0	11.4	-147.66	-395.3	-262.5	433.3	412.5	20.78	20.849			
2,600.0	2,413.4	2,571.4	2,495.9	18.1	12.0	-148.07	-417.3	-280.4	459.5	437.6	21.84	21.039			
2,700.0	2,500.1	2,667.9	2,588.1	19.2	12.5	-148.43	-439.3	-298.4	485.7	462.8	22.90	21.213			
2,800.0	2,586.9	2,764.3	2,680.3	20.2	13.1	-148.76	-461.3	-316.4	511.9	488.0	23.95	21.371			
2,900.0	2,673.7	2,860.8	2,772.4	21.3	13.7	-149.05	-483.3	-334.4	538.2	513.2	25.01	21.517			
3,000.0	2,760.4	2,957.2	2,864.6	22.4	14.3	-149.32	-505.3	-352.4	564.4	538.4	26.07	21.650			
3,100.0	2,847.2	3,053.7	2,956.8	23.4	14.9	-149.57	-527.3	-370.4	590.7	563.6	27.13	21.774			
3,200.0	2,934.0	3,150.2	3,049.0	24.5	15.5	-149.79	-549.3	-388.4	617.0	588.8	28.19	21.888			
3,300.0	3,020.8	3,246.6	3,141.2	25.6	16.1	-149.99	-571.3	-406.4	643.3	614.0	29.25	21.994			
3,400.0	3,107.5	3,343.1	3,233.3	26.7	16.7	-150.18	-593.2	-424.4	669.6	639.2	30.31	22.093			
3,500.0	3,194.3	3,439.5	3,325.5	27.7	17.3	-150.36	-615.2	-442.4	695.9	664.5	31.37	22.185			
3,600.0	3,281.1	3,536.0	3,417.7	28.8	17.9	-150.52	-637.2	-460.4	722.2	689.7	32.43	22.272			
3,700.0	3,367.9	3,632.5	3,509.9	29.9	18.5	-150.67	-659.2	-478.4	748.5	715.0	33.49	22.352			
3,800.0	3,454.6	3,728.9	3,602.0	31.0	19.1	-150.81	-681.2	-496.4	774.8	740.2	34.55	22.428			
3,900.0	3,541.4	3,825.4	3,694.2	32.0	19.7	-150.94	-703.2	-514.4	801.1	765.5	35.61	22.500			
4,000.0	3,628.2	3,921.8	3,786.4	33.1	20.3	-151.06	-725.2	-532.4	827.4	790.8	36.67	22.567			
4,100.0	3,714.9	4,018.3	3,878.6	34.2	20.9	-151.18	-747.2	-550.4	853.8	816.0	37.73	22.630			
4,200.0	3,801.7	4,114.8	3,970.8	35.2	21.5	-151.29	-769.2	-568.4	880.1	841.3	38.79	22.690			
4,300.0	3,888.5	4,211.2	4,062.9	36.3	22.0	-151.39	-791.2	-586.4	906.4	866.6	39.85	22.747			
4,400.0	3,975.3	4,307.7	4,155.1	37.4	22.6	-151.49	-813.2	-604.4	932.7	891.8	40.91	22.801			
4,500.0	4,062.0	4,404.1	4,247.3	38.5	23.2	-151.58	-835.2	-622.4	959.1	917.1	41.97	22.852			
4,600.0	4,148.8	4,500.6	4,339.5	39.6	23.8	-151.66	-857.2	-640.4	985.4	942.4	43.03	22.901			
4,700.0	4,235.6	4,597.0	4,431.6	40.6	24.4	-151.74	-879.2	-658.4	1,011.8	967.7	44.09	22.947			
4,800.0	4,322.4	4,693.5	4,523.8	41.7	25.0	-151.82	-901.1	-676.4	1,038.1	993.0	45.15	22.991			
4,900.0	4,409.1	4,790.0	4,616.0	42.8	25.6	-151.90	-923.1	-694.4	1,064.5	1,018.2	46.21	23.033			
5,000.0	4,495.9	4,886.4	4,708.2	43.9	26.2	-151.97	-945.1	-712.4	1,090.8	1,043.5	47.28	23.073			

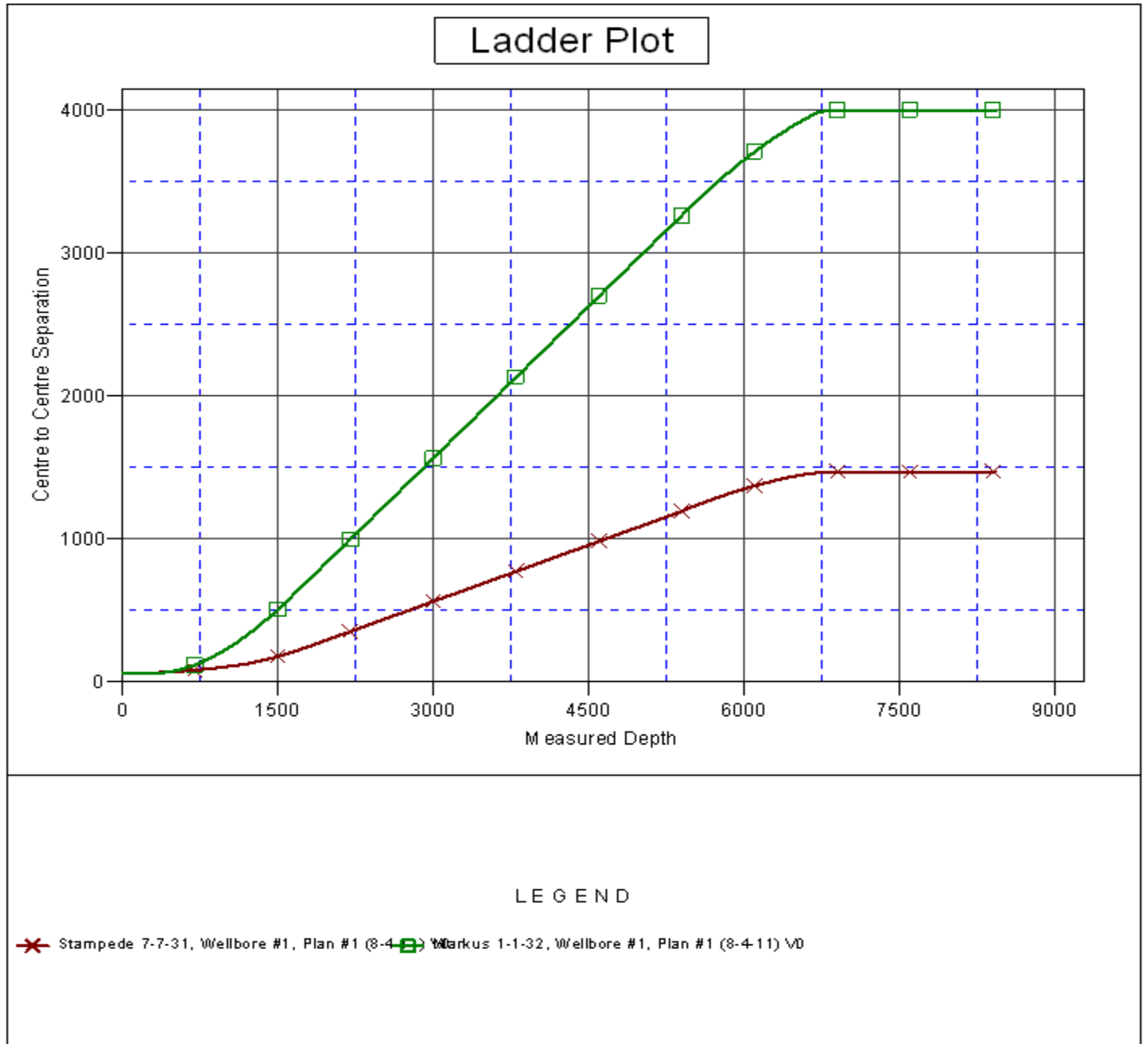
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	Offset TVD Reference:	Offset Datum

Offset Design Island Grove Pad Sec. 32-T6N-R65W - Stampede 7-7-31 - Wellbore #1 - Plan #1 (8-4-11)												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
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
5,100.0	4,582.7	4,982.9	4,800.4	44.9	26.8	-152.03	-967.1	-730.4	1,117.1	1,068.8	48.34	23.111	
5,200.0	4,669.4	5,079.3	4,892.5	46.0	27.4	-152.10	-989.1	-748.4	1,143.5	1,094.1	49.40	23.148	
5,300.0	4,756.2	5,169.4	4,978.6	47.1	27.9	-152.16	-1,009.6	-765.1	1,169.9	1,119.5	50.41	23.207	
5,400.0	4,843.0	5,244.8	5,051.1	48.2	28.3	-152.26	-1,025.6	-778.2	1,197.6	1,146.4	51.24	23.374	
5,438.1	4,876.1	5,273.3	5,078.7	48.6	28.4	-152.32	-1,031.2	-782.8	1,208.7	1,157.1	51.53	23.456	
5,500.0	4,930.1	5,319.4	5,123.4	49.2	28.6	-152.60	-1,039.9	-790.0	1,226.5	1,174.5	51.94	23.612	
5,600.0	5,018.7	5,400.0	5,202.0	49.9	28.8	-153.04	-1,053.8	-801.3	1,254.3	1,201.7	52.52	23.884	
5,700.0	5,108.9	5,468.1	5,268.7	50.7	29.1	-153.44	-1,064.2	-809.8	1,280.7	1,227.7	53.00	24.164	
5,800.0	5,200.6	5,542.2	5,341.7	51.4	29.3	-153.85	-1,074.1	-817.9	1,305.8	1,252.4	53.42	24.443	
5,900.0	5,293.6	5,616.2	5,414.9	52.0	29.5	-154.24	-1,082.5	-824.8	1,329.6	1,275.8	53.78	24.725	
6,000.0	5,387.8	5,700.0	5,498.1	52.6	29.6	-154.64	-1,090.3	-831.2	1,352.1	1,298.1	54.06	25.013	
6,100.0	5,483.1	5,763.6	5,561.4	53.1	29.8	-154.99	-1,095.0	-835.0	1,373.2	1,318.9	54.26	25.309	
6,200.0	5,579.5	5,837.1	5,634.7	53.5	29.9	-155.35	-1,099.0	-838.3	1,393.0	1,338.6	54.39	25.613	
6,300.0	5,676.7	5,900.0	5,697.6	53.9	30.0	-155.67	-1,101.2	-840.1	1,411.4	1,357.0	54.45	25.921	
6,400.0	5,774.6	5,983.6	5,781.2	54.2	30.1	-156.05	-1,102.6	-841.2	1,428.4	1,374.0	54.43	26.245	
6,500.0	5,873.2	6,075.7	5,873.2	54.5	30.1	-156.41	-1,102.7	-841.3	1,443.6	1,389.2	54.34	26.566	
6,600.0	5,972.4	6,174.8	5,972.4	54.8	30.2	-156.72	-1,102.7	-841.3	1,455.7	1,401.4	54.24	26.839	
6,700.0	6,071.9	6,274.4	6,071.9	54.9	30.3	-156.94	-1,102.7	-841.3	1,464.6	1,410.5	54.14	27.054	
6,800.0	6,171.7	6,374.2	6,171.7	55.1	30.4	-157.08	-1,102.7	-841.3	1,470.3	1,416.3	54.04	27.208	
6,900.0	6,271.6	6,474.1	6,271.6	55.1	30.5	-157.14	-1,102.7	-841.3	1,472.9	1,418.9	53.95	27.301	
6,928.4	6,300.0	6,502.5	6,300.0	55.2	30.5	84.56	-1,102.7	-841.3	1,473.0	1,419.1	53.93	27.314	
7,000.0	6,371.6	6,574.1	6,371.6	55.2	30.5	84.56	-1,102.7	-841.3	1,473.0	1,418.9	54.06	27.247	
7,100.0	6,471.6	6,674.1	6,471.6	55.2	30.6	84.56	-1,102.7	-841.3	1,473.0	1,418.7	54.24	27.155	
7,200.0	6,571.6	6,774.1	6,571.6	55.3	30.7	84.56	-1,102.7	-841.3	1,473.0	1,418.6	54.43	27.062	
7,300.0	6,671.6	6,874.1	6,671.6	55.4	30.8	84.56	-1,102.7	-841.3	1,473.0	1,418.4	54.62	26.969	
7,400.0	6,771.6	6,974.1	6,771.6	55.4	30.9	84.56	-1,102.7	-841.3	1,473.0	1,418.2	54.81	26.874	
7,500.0	6,871.6	7,074.1	6,871.6	55.5	31.0	84.56	-1,102.7	-841.3	1,473.0	1,418.0	55.01	26.779	
7,600.0	6,971.6	7,174.1	6,971.6	55.5	31.1	84.56	-1,102.7	-841.3	1,473.0	1,417.8	55.20	26.683	
7,700.0	7,071.6	7,274.1	7,071.6	55.6	31.2	84.56	-1,102.7	-841.3	1,473.0	1,417.6	55.40	26.586	
7,800.0	7,171.6	7,374.1	7,171.6	55.6	31.3	84.56	-1,102.7	-841.3	1,473.0	1,417.4	55.61	26.488	
7,900.0	7,271.6	7,474.1	7,271.6	55.7	31.3	84.56	-1,102.7	-841.3	1,473.0	1,417.2	55.82	26.390	
8,000.0	7,371.6	7,574.1	7,371.6	55.7	31.4	84.56	-1,102.7	-841.3	1,473.0	1,417.0	56.03	26.291	
8,100.0	7,471.6	7,674.1	7,471.6	55.8	31.5	84.56	-1,102.7	-841.3	1,473.0	1,416.7	56.24	26.192	
8,200.0	7,571.6	7,774.1	7,571.6	55.9	31.6	84.56	-1,102.7	-841.3	1,473.0	1,416.5	56.45	26.092	
8,300.0	7,671.6	7,874.1	7,671.6	55.9	31.7	84.56	-1,102.7	-841.3	1,473.0	1,416.3	56.67	25.992	
8,400.0	7,771.6	7,974.1	7,771.6	56.0	31.8	84.56	-1,102.7	-841.3	1,473.0	1,416.1	56.89	25.891	
8,428.4	7,800.0	8,002.5	7,800.0	56.0	31.9	84.56	-1,102.7	-841.3	1,473.0	1,416.0	56.95	25.862	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	Offset TVD Reference:	Offset Datum

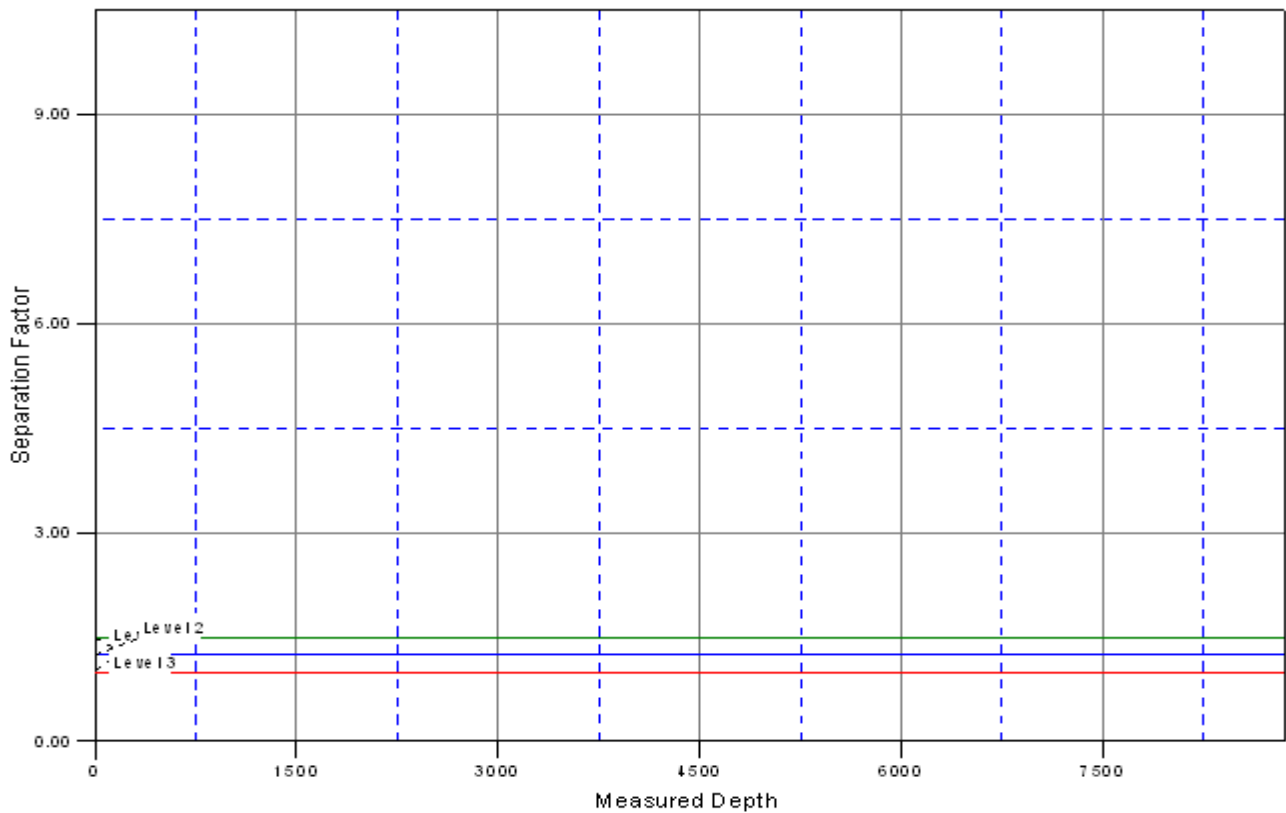
Reference Depths are relative to WELL @ 4660.0ft (Original Well Elev) Coordinates are relative to: 4H 5-7-31
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.52°



Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well 4H 5-7-31
Project:	SEC.32-T6N-R65W	TVD Reference:	WELL @ 4660.0ft (Original Well Elev)
Reference Site:	Island Grove Pad Sec. 32-T6N-R65W	MD Reference:	WELL @ 4660.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	4H 5-7-31	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 (8-4-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4660.0ft (Original Well Elev) Coordinates are relative to: 4H 5-7-31
 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: 0.52°

Separation Factor Plot



LEGEND

 Stampede 7-7-31, Wellbore #1, Plan #1 (8-4-11)  Markus 1-1-32, Wellbore #1, Plan #1 (8-4-11) \V0