

# ENSIGN

## Directional

### Well Name: Pond 3-3-22

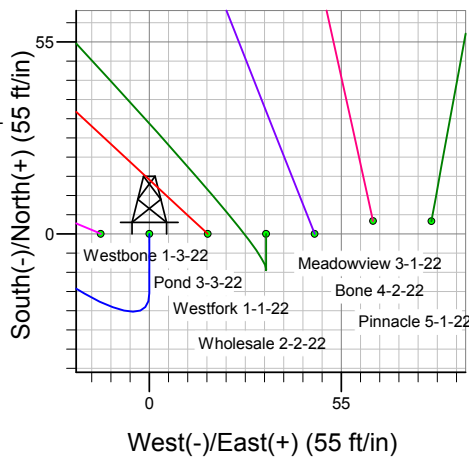
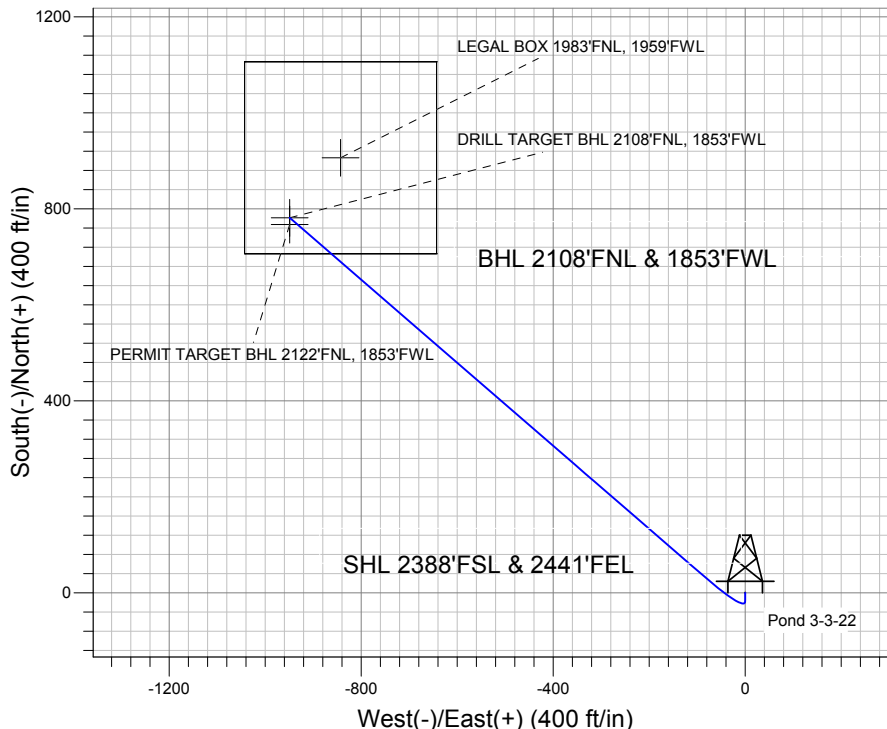
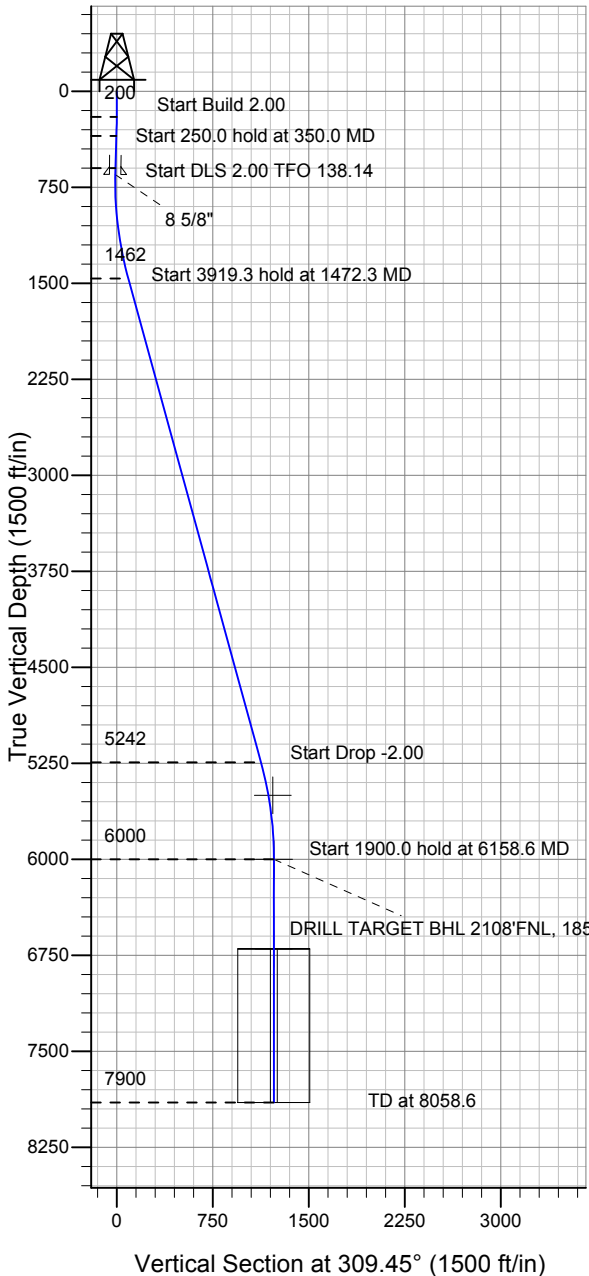
Surface Location: T-Bone 5-3-22 Pad Sec.22-T5N-R66W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4805.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383707.74	3204755.60	40.384350	-104.764980	

Original Well Elev WELL @ 4818.0ft (Original Well Elev)

## Mineral Resources Inc



T-Bone 5-3-22 Pad Sec.22-T5N-R66W  
Pond 3-3-22  
Plan #1 (5-16-11)  
13:20, June 02 2011



Azimuths to True North  
Magnetic North: 8.87°

Magnetic Field  
Strength: 53132.1snT  
Dip Angle: 67.04°  
Date: 5/16/2011  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PERMIT TARGET BHL 2122'FNL, 1853'FWL	5500.0	767.2	-949.2	40.386456	-104.768387	Point
DRILL TARGET BHL 2108'FNL, 1853'FWL	6000.0	781.2	-949.2	40.386494	-104.768387	Point
LEGAL BOX 1983'FNL, 1959'FWL	6700.0	906.2	-843.2	40.386837	-104.768007	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	350.0	3.00	180.00	349.9	-3.9	0.0	2.00	180.00	-2.5	
4	600.0	3.00	180.00	599.6	-17.0	0.0	0.00	0.00	-10.8	
5	1472.3	15.34	310.87	1462.5	36.1	-87.9	2.00	138.14	90.8	
6	5391.6	15.34	310.87	5242.2	714.4	-872.0	0.00	0.00	1127.3	
7	6158.6	0.00	0.00	6000.0	781.2	-949.2	2.00	180.00	1229.3	DRILL TARGET BHL 2108'FNL, 1853'FWL
8	8058.6	0.00	0.00	7900.0	781.2	-949.2	0.00	0.00	1229.3	



## **Directional**

### **Mineral Resources Inc**

**SEC.22-T5N-R66W**

**T-Bone 5-3-22 Pad Sec.22-T5N-R66W**

**Pond 3-3-22**

**Wellbore #1**

**Plan: Plan #1 (5-16-11)**

### **Standard Planning Report**

**02 June, 2011**

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
350.0	3.00	180.00	349.9	-3.9	0.0	2.00	2.00	0.00	180.00	
600.0	3.00	180.00	599.6	-17.0	0.0	0.00	0.00	0.00	0.00	
1,472.3	15.34	310.87	1,462.5	36.1	-87.9	2.00	1.41	15.00	138.14	
5,391.6	15.34	310.87	5,242.2	714.4	-872.0	0.00	0.00	0.00	0.00	
6,158.6	0.00	0.00	6,000.0	781.2	-949.2	2.00	-2.00	0.00	180.00	DRILL TARGET BHT
8,058.6	0.00	0.00	7,900.0	781.2	-949.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Pond 3-3-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-16-11)		

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	180.00	240.0	-0.3	0.0	-0.2	2.00	2.00	0.00
280.0	1.60	180.00	280.0	-1.1	0.0	-0.7	2.00	2.00	0.00
320.0	2.40	180.00	320.0	-2.5	0.0	-1.6	2.00	2.00	0.00
350.0	3.00	180.00	349.9	-3.9	0.0	-2.5	2.00	2.00	0.00
360.0	3.00	180.00	359.9	-4.4	0.0	-2.8	0.00	0.00	0.00
400.0	3.00	180.00	399.9	-6.5	0.0	-4.2	0.00	0.00	0.00
440.0	3.00	180.00	439.8	-8.6	0.0	-5.5	0.00	0.00	0.00
480.0	3.00	180.00	479.8	-10.7	0.0	-6.8	0.00	0.00	0.00
520.0	3.00	180.00	519.7	-12.8	0.0	-8.1	0.00	0.00	0.00
560.0	3.00	180.00	559.6	-14.9	0.0	-9.5	0.00	0.00	0.00
600.0	3.00	180.00	599.6	-17.0	0.0	-10.8	0.00	0.00	0.00
640.0	2.46	192.52	639.5	-18.9	-0.2	-11.9	2.00	-1.34	31.31
650.5	2.35	196.68	650.0	-19.3	-0.3	-12.0	2.00	-1.11	39.73
8 5/8"									
680.0	2.10	210.56	679.5	-20.4	-0.7	-12.4	2.00	-0.84	47.01
720.0	2.01	232.89	719.5	-21.4	-1.7	-12.3	2.00	-0.23	55.80
760.0	2.22	253.92	759.5	-22.1	-3.0	-11.7	2.00	0.53	52.59
800.0	2.67	269.60	799.4	-22.3	-4.7	-10.6	2.00	1.12	39.20
840.0	3.25	280.24	839.4	-22.1	-6.7	-8.9	2.00	1.46	26.60
880.0	3.91	287.47	879.3	-21.5	-9.1	-6.6	2.00	1.65	18.08
920.0	4.62	292.56	919.2	-20.4	-11.9	-3.8	2.00	1.76	12.72
960.0	5.35	296.28	959.0	-19.0	-15.1	-0.4	2.00	1.83	9.30
1,000.0	6.10	299.10	998.8	-17.1	-18.6	3.5	2.00	1.87	7.05
1,040.0	6.86	301.30	1,038.6	-14.9	-22.5	7.9	2.00	1.90	5.50
1,080.0	7.63	303.06	1,078.3	-12.2	-26.8	12.9	2.00	1.92	4.40
1,120.0	8.40	304.50	1,117.9	-9.1	-31.4	18.5	2.00	1.94	3.60
1,160.0	9.18	305.70	1,157.4	-5.6	-36.4	24.6	2.00	1.95	2.99
1,200.0	9.97	306.71	1,196.8	-1.6	-41.8	31.2	2.00	1.96	2.53
1,240.0	10.75	307.58	1,236.2	2.7	-47.5	38.4	2.00	1.96	2.16
1,280.0	11.54	308.33	1,275.4	7.5	-53.6	46.1	2.00	1.97	1.87
1,320.0	12.33	308.98	1,314.6	12.6	-60.1	54.4	2.00	1.97	1.64
1,360.0	13.12	309.56	1,353.6	18.2	-66.9	63.2	2.00	1.97	1.44
1,400.0	13.91	310.07	1,392.5	24.2	-74.0	72.6	2.00	1.98	1.28
1,440.0	14.70	310.53	1,431.2	30.6	-81.6	82.4	2.00	1.98	1.15
1,472.3	15.34	310.87	1,462.5	36.1	-87.9	90.8	2.00	1.98	1.04
1,480.0	15.34	310.87	1,469.9	37.4	-89.5	92.8	0.00	0.00	0.00
1,520.0	15.34	310.87	1,508.4	44.3	-97.5	103.4	0.00	0.00	0.00
1,560.0	15.34	310.87	1,547.0	51.2	-105.5	114.0	0.00	0.00	0.00
1,600.0	15.34	310.87	1,585.6	58.2	-113.5	124.6	0.00	0.00	0.00
1,640.0	15.34	310.87	1,624.2	65.1	-121.5	135.2	0.00	0.00	0.00
1,680.0	15.34	310.87	1,662.7	72.0	-129.5	145.7	0.00	0.00	0.00
1,720.0	15.34	310.87	1,701.3	78.9	-137.5	156.3	0.00	0.00	0.00
1,760.0	15.34	310.87	1,739.9	85.9	-145.5	166.9	0.00	0.00	0.00
1,800.0	15.34	310.87	1,778.5	92.8	-153.5	177.5	0.00	0.00	0.00
1,840.0	15.34	310.87	1,817.0	99.7	-161.5	188.0	0.00	0.00	0.00
1,880.0	15.34	310.87	1,855.6	106.6	-169.5	198.6	0.00	0.00	0.00
1,920.0	15.34	310.87	1,894.2	113.5	-177.5	209.2	0.00	0.00	0.00
1,960.0	15.34	310.87	1,932.8	120.5	-185.5	219.8	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Pond 3-3-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-16-11)		

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	15.34	310.87	1,971.3	127.4	-193.5	230.4	0.00	0.00	0.00
2,040.0	15.34	310.87	2,009.9	134.3	-201.5	240.9	0.00	0.00	0.00
2,080.0	15.34	310.87	2,048.5	141.2	-209.5	251.5	0.00	0.00	0.00
2,120.0	15.34	310.87	2,087.1	148.2	-217.5	262.1	0.00	0.00	0.00
2,160.0	15.34	310.87	2,125.6	155.1	-225.5	272.7	0.00	0.00	0.00
2,200.0	15.34	310.87	2,164.2	162.0	-233.5	283.3	0.00	0.00	0.00
2,240.0	15.34	310.87	2,202.8	168.9	-241.5	293.8	0.00	0.00	0.00
2,280.0	15.34	310.87	2,241.4	175.9	-249.5	304.4	0.00	0.00	0.00
2,320.0	15.34	310.87	2,279.9	182.8	-257.5	315.0	0.00	0.00	0.00
2,360.0	15.34	310.87	2,318.5	189.7	-265.5	325.6	0.00	0.00	0.00
2,400.0	15.34	310.87	2,357.1	196.6	-273.5	336.1	0.00	0.00	0.00
2,440.0	15.34	310.87	2,395.7	203.6	-281.5	346.7	0.00	0.00	0.00
2,480.0	15.34	310.87	2,434.2	210.5	-289.5	357.3	0.00	0.00	0.00
2,520.0	15.34	310.87	2,472.8	217.4	-297.5	367.9	0.00	0.00	0.00
2,560.0	15.34	310.87	2,511.4	224.3	-305.5	378.5	0.00	0.00	0.00
2,600.0	15.34	310.87	2,550.0	231.2	-313.5	389.0	0.00	0.00	0.00
2,640.0	15.34	310.87	2,588.5	238.2	-321.5	399.6	0.00	0.00	0.00
2,680.0	15.34	310.87	2,627.1	245.1	-329.5	410.2	0.00	0.00	0.00
2,720.0	15.34	310.87	2,665.7	252.0	-337.5	420.8	0.00	0.00	0.00
2,760.0	15.34	310.87	2,704.3	258.9	-345.5	431.3	0.00	0.00	0.00
2,800.0	15.34	310.87	2,742.8	265.9	-353.5	441.9	0.00	0.00	0.00
2,840.0	15.34	310.87	2,781.4	272.8	-361.5	452.5	0.00	0.00	0.00
2,880.0	15.34	310.87	2,820.0	279.7	-369.5	463.1	0.00	0.00	0.00
2,920.0	15.34	310.87	2,858.6	286.6	-377.6	473.7	0.00	0.00	0.00
2,960.0	15.34	310.87	2,897.1	293.6	-385.6	484.2	0.00	0.00	0.00
3,000.0	15.34	310.87	2,935.7	300.5	-393.6	494.8	0.00	0.00	0.00
3,040.0	15.34	310.87	2,974.3	307.4	-401.6	505.4	0.00	0.00	0.00
3,080.0	15.34	310.87	3,012.9	314.3	-409.6	516.0	0.00	0.00	0.00
3,120.0	15.34	310.87	3,051.4	321.2	-417.6	526.6	0.00	0.00	0.00
3,160.0	15.34	310.87	3,090.0	328.2	-425.6	537.1	0.00	0.00	0.00
3,200.0	15.34	310.87	3,128.6	335.1	-433.6	547.7	0.00	0.00	0.00
3,240.0	15.34	310.87	3,167.2	342.0	-441.6	558.3	0.00	0.00	0.00
3,280.0	15.34	310.87	3,205.7	348.9	-449.6	568.9	0.00	0.00	0.00
3,320.0	15.34	310.87	3,244.3	355.9	-457.6	579.4	0.00	0.00	0.00
3,360.0	15.34	310.87	3,282.9	362.8	-465.6	590.0	0.00	0.00	0.00
3,400.0	15.34	310.87	3,321.5	369.7	-473.6	600.6	0.00	0.00	0.00
3,440.0	15.34	310.87	3,360.0	376.6	-481.6	611.2	0.00	0.00	0.00
3,480.0	15.34	310.87	3,398.6	383.6	-489.6	621.8	0.00	0.00	0.00
3,520.0	15.34	310.87	3,437.2	390.5	-497.6	632.3	0.00	0.00	0.00
3,560.0	15.34	310.87	3,475.8	397.4	-505.6	642.9	0.00	0.00	0.00
3,600.0	15.34	310.87	3,514.3	404.3	-513.6	653.5	0.00	0.00	0.00
3,640.0	15.34	310.87	3,552.9	411.2	-521.6	664.1	0.00	0.00	0.00
3,680.0	15.34	310.87	3,591.5	418.2	-529.6	674.6	0.00	0.00	0.00
3,720.0	15.34	310.87	3,630.1	425.1	-537.6	685.2	0.00	0.00	0.00
3,760.0	15.34	310.87	3,668.6	432.0	-545.6	695.8	0.00	0.00	0.00
3,800.0	15.34	310.87	3,707.2	438.9	-553.6	706.4	0.00	0.00	0.00
3,840.0	15.34	310.87	3,745.8	445.9	-561.6	717.0	0.00	0.00	0.00
3,880.0	15.34	310.87	3,784.4	452.8	-569.6	727.5	0.00	0.00	0.00
3,920.0	15.34	310.87	3,822.9	459.7	-577.6	738.1	0.00	0.00	0.00
3,960.0	15.34	310.87	3,861.5	466.6	-585.6	748.7	0.00	0.00	0.00
4,000.0	15.34	310.87	3,900.1	473.6	-593.6	759.3	0.00	0.00	0.00
4,040.0	15.34	310.87	3,938.7	480.5	-601.6	769.9	0.00	0.00	0.00
4,080.0	15.34	310.87	3,977.2	487.4	-609.6	780.4	0.00	0.00	0.00
4,120.0	15.34	310.87	4,015.8	494.3	-617.6	791.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Pond 3-3-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-16-11)		

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	15.34	310.87	4,054.4	501.3	-625.6	801.6	0.00	0.00	0.00
4,200.0	15.34	310.87	4,093.0	508.2	-633.6	812.2	0.00	0.00	0.00
4,240.0	15.34	310.87	4,131.5	515.1	-641.6	822.7	0.00	0.00	0.00
4,280.0	15.34	310.87	4,170.1	522.0	-649.6	833.3	0.00	0.00	0.00
4,320.0	15.34	310.87	4,208.7	528.9	-657.6	843.9	0.00	0.00	0.00
4,360.0	15.34	310.87	4,247.3	535.9	-665.6	854.5	0.00	0.00	0.00
4,400.0	15.34	310.87	4,285.8	542.8	-673.6	865.1	0.00	0.00	0.00
4,440.0	15.34	310.87	4,324.4	549.7	-681.6	875.6	0.00	0.00	0.00
4,480.0	15.34	310.87	4,363.0	556.6	-689.6	886.2	0.00	0.00	0.00
4,520.0	15.34	310.87	4,401.6	563.6	-697.6	896.8	0.00	0.00	0.00
4,560.0	15.34	310.87	4,440.1	570.5	-705.6	907.4	0.00	0.00	0.00
4,600.0	15.34	310.87	4,478.7	577.4	-713.6	917.9	0.00	0.00	0.00
4,640.0	15.34	310.87	4,517.3	584.3	-721.6	928.5	0.00	0.00	0.00
4,680.0	15.34	310.87	4,555.9	591.3	-729.7	939.1	0.00	0.00	0.00
4,720.0	15.34	310.87	4,594.4	598.2	-737.7	949.7	0.00	0.00	0.00
4,760.0	15.34	310.87	4,633.0	605.1	-745.7	960.3	0.00	0.00	0.00
4,800.0	15.34	310.87	4,671.6	612.0	-753.7	970.8	0.00	0.00	0.00
4,840.0	15.34	310.87	4,710.2	618.9	-761.7	981.4	0.00	0.00	0.00
4,880.0	15.34	310.87	4,748.7	625.9	-769.7	992.0	0.00	0.00	0.00
4,920.0	15.34	310.87	4,787.3	632.8	-777.7	1,002.6	0.00	0.00	0.00
4,960.0	15.34	310.87	4,825.9	639.7	-785.7	1,013.2	0.00	0.00	0.00
5,000.0	15.34	310.87	4,864.5	646.6	-793.7	1,023.7	0.00	0.00	0.00
5,040.0	15.34	310.87	4,903.0	653.6	-801.7	1,034.3	0.00	0.00	0.00
5,080.0	15.34	310.87	4,941.6	660.5	-809.7	1,044.9	0.00	0.00	0.00
5,120.0	15.34	310.87	4,980.2	667.4	-817.7	1,055.5	0.00	0.00	0.00
5,160.0	15.34	310.87	5,018.8	674.3	-825.7	1,066.0	0.00	0.00	0.00
5,200.0	15.34	310.87	5,057.3	681.3	-833.7	1,076.6	0.00	0.00	0.00
5,240.0	15.34	310.87	5,095.9	688.2	-841.7	1,087.2	0.00	0.00	0.00
5,280.0	15.34	310.87	5,134.5	695.1	-849.7	1,097.8	0.00	0.00	0.00
5,320.0	15.34	310.87	5,173.1	702.0	-857.7	1,108.4	0.00	0.00	0.00
5,360.0	15.34	310.87	5,211.6	708.9	-865.7	1,118.9	0.00	0.00	0.00
5,391.6	15.34	310.87	5,242.2	714.4	-872.0	1,127.3	0.00	0.00	0.00
5,400.0	15.17	310.87	5,250.2	715.9	-873.7	1,129.5	2.00	-2.00	0.00
5,440.0	14.37	310.87	5,288.9	722.5	-881.4	1,139.7	2.00	-2.00	0.00
5,480.0	13.57	310.87	5,327.7	728.9	-888.7	1,149.4	2.00	-2.00	0.00
5,520.0	12.77	310.87	5,366.7	734.8	-895.6	1,158.5	2.00	-2.00	0.00
5,560.0	11.97	310.87	5,405.7	740.4	-902.1	1,167.0	2.00	-2.00	0.00
5,600.0	11.17	310.87	5,444.9	745.7	-908.1	1,175.1	2.00	-2.00	0.00
5,640.0	10.37	310.87	5,484.2	750.6	-913.8	1,182.5	2.00	-2.00	0.00
5,662.1	9.93	310.87	5,505.9	753.1	-916.7	1,186.4	2.00	-2.00	0.00
PERMIT TARGET BHL 2122'FNL, 1853'FWL									
5,680.0	9.57	310.87	5,523.6	755.1	-919.0	1,189.5	2.00	-2.00	0.00
5,720.0	8.77	310.87	5,563.1	759.3	-923.9	1,195.8	2.00	-2.00	0.00
5,760.0	7.97	310.87	5,602.7	763.1	-928.3	1,201.7	2.00	-2.00	0.00
5,800.0	7.17	310.87	5,642.3	766.5	-932.2	1,206.9	2.00	-2.00	0.00
5,840.0	6.37	310.87	5,682.0	769.6	-935.8	1,211.6	2.00	-2.00	0.00
5,880.0	5.57	310.87	5,721.8	772.3	-939.0	1,215.8	2.00	-2.00	0.00
5,920.0	4.77	310.87	5,761.7	774.7	-941.7	1,219.4	2.00	-2.00	0.00
5,960.0	3.97	310.87	5,801.5	776.7	-944.0	1,222.5	2.00	-2.00	0.00
6,000.0	3.17	310.87	5,841.5	778.3	-945.9	1,224.9	2.00	-2.00	0.00
6,040.0	2.37	310.87	5,881.4	779.6	-947.3	1,226.9	2.00	-2.00	0.00
6,080.0	1.57	310.87	5,921.4	780.5	-948.4	1,228.3	2.00	-2.00	0.00
6,120.0	0.77	310.87	5,961.4	781.0	-949.0	1,229.1	2.00	-2.00	0.00
6,158.6	0.00	0.00	6,000.0	781.2	-949.2	1,229.3	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Pond 3-3-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-16-11)		

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)
<b>DRILL TARGET BHL 2108'FNL, 1853'FWL</b>									
6,160.0	0.00	0.00	6,001.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,041.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,081.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,121.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,161.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,201.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,241.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,281.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,321.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,361.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,401.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,441.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,481.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,521.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,561.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,601.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,641.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,681.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,858.6	0.00	0.00	6,700.0	781.2	-949.2	1,229.3	0.00	0.00	0.00
<b>LEGAL BOX 1983'FNL, 1959'FWL</b>									
6,880.0	0.00	0.00	6,721.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,761.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,801.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,841.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,881.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,921.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,120.0	0.00	0.00	6,961.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,160.0	0.00	0.00	7,001.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,200.0	0.00	0.00	7,041.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,240.0	0.00	0.00	7,081.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,280.0	0.00	0.00	7,121.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,320.0	0.00	0.00	7,161.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,360.0	0.00	0.00	7,201.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,241.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,440.0	0.00	0.00	7,281.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,480.0	0.00	0.00	7,321.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,520.0	0.00	0.00	7,361.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,560.0	0.00	0.00	7,401.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,441.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,640.0	0.00	0.00	7,481.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,680.0	0.00	0.00	7,521.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,720.0	0.00	0.00	7,561.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,760.0	0.00	0.00	7,601.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,641.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,840.0	0.00	0.00	7,681.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,880.0	0.00	0.00	7,721.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,920.0	0.00	0.00	7,761.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
7,960.0	0.00	0.00	7,801.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
8,000.0	0.00	0.00	7,841.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
8,040.0	0.00	0.00	7,881.4	781.2	-949.2	1,229.3	0.00	0.00	0.00
8,058.6	0.00	0.00	7,900.0	781.2	-949.2	1,229.3	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Company:</b>	Mineral Resources Inc	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Pond 3-3-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-16-11)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
DRILL TARGET BHL	0.00	0.00	6,000.0	781.2	-949.2	1,384,481.01	3,203,799.99	40.386494	-104.768387
- plan hits target center									
- Point									
LEGAL BOX 1983'FN	0.00	0.00	6,700.0	906.2	-843.2	1,384,606.89	3,203,904.95	40.386837	-104.768007
- plan misses target center by 163.9ft at 6858.6ft MD (6700.0 TVD, 781.2 N, -949.2 E)									
- Rectangle (sides W400.0 H400.0 D1,200.0)									
PERMIT TARGET BH	0.00	0.00	5,500.0	767.2	-949.2	1,384,467.02	3,203,800.11	40.386456	-104.768387
- plan misses target center by 35.9ft at 5662.1ft MD (5505.9 TVD, 753.1 N, -916.7 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)		Name	(")	(")
650.5	650.0	8 5/8"		8-5/8	12-1/4





# **Directional**

## **Mineral Resources Inc**

**SEC.22-T5N-R66W**

**T-Bone 5-3-22 Pad Sec.22-T5N-R66W**

**Pond 3-3-22**

**Wellbore #1**

**Plan #1 (5-16-11)**

## **Anticollision Report**

**08 June, 2011**



<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Project:</b>	SEC.22-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Reference Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pond 3-3-22	<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 (5-16-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,800.0	1,778.5	1,729.7	1,660.7	5.1	8.8	-23.41	153.2	-376.7	259.1	250.4	8.63	30.007	
1,900.0	1,874.9	1,827.1	1,747.5	5.6	9.7	-24.56	170.4	-417.4	281.3	271.9	9.34	30.129	
2,000.0	1,971.3	1,924.4	1,834.2	6.1	10.7	-25.55	187.6	-458.1	303.6	293.5	10.06	30.173	
2,100.0	2,067.8	2,021.8	1,921.0	6.7	11.6	-26.40	204.8	-498.8	326.0	315.2	10.81	30.163	
2,200.0	2,164.2	2,119.1	2,007.7	7.2	12.6	-27.14	222.0	-539.5	348.5	336.9	11.57	30.115	
2,300.0	2,260.6	2,216.5	2,094.5	7.7	13.5	-27.79	239.2	-580.2	371.0	358.6	12.35	30.043	
2,400.0	2,357.1	2,313.8	2,181.2	8.3	14.5	-28.37	256.4	-620.9	393.5	380.4	13.14	29.955	
2,500.0	2,453.5	2,411.2	2,268.0	8.8	15.4	-28.88	273.6	-661.6	416.1	402.1	13.94	29.857	
2,600.0	2,550.0	2,508.6	2,354.7	9.3	16.4	-29.34	290.8	-702.3	438.7	423.9	14.74	29.754	
2,700.0	2,646.4	2,605.9	2,441.5	9.9	17.3	-29.76	307.9	-743.1	461.3	445.8	15.56	29.648	
2,800.0	2,742.8	2,703.3	2,528.2	10.4	18.3	-30.14	325.1	-783.8	484.0	467.6	16.38	29.542	
2,900.0	2,839.3	2,800.6	2,615.0	11.0	19.3	-30.48	342.3	-824.5	506.6	489.4	17.21	29.438	
3,000.0	2,935.7	2,898.0	2,701.7	11.5	20.2	-30.79	359.5	-865.2	529.3	511.3	18.04	29.336	
3,100.0	3,032.1	2,995.3	2,788.5	12.1	21.2	-31.08	376.7	-905.9	552.0	533.1	18.88	29.236	
3,200.0	3,128.6	3,092.7	2,875.2	12.6	22.2	-31.35	393.9	-946.6	574.7	555.0	19.72	29.140	
3,300.0	3,225.0	3,190.0	2,962.0	13.2	23.1	-31.59	411.1	-987.3	597.5	576.9	20.57	29.048	
3,400.0	3,321.5	3,287.4	3,048.7	13.7	24.1	-31.82	428.3	-1,028.0	620.2	598.8	21.42	28.959	
3,500.0	3,417.9	3,384.7	3,135.5	14.3	25.0	-32.03	445.5	-1,068.7	642.9	620.7	22.27	28.873	
3,600.0	3,514.3	3,482.1	3,222.2	14.8	26.0	-32.23	462.7	-1,109.4	665.7	642.6	23.12	28.791	
3,700.0	3,610.8	3,579.4	3,309.0	15.4	27.0	-32.41	479.9	-1,150.1	688.4	664.5	23.98	28.712	
3,800.0	3,707.2	3,676.8	3,395.7	16.0	27.9	-32.59	497.0	-1,190.8	711.2	686.4	24.83	28.637	
3,900.0	3,803.6	3,774.1	3,482.5	16.5	28.9	-32.75	514.2	-1,231.5	734.0	708.3	25.69	28.565	
4,000.0	3,900.1	3,871.5	3,569.2	17.1	29.9	-32.90	531.4	-1,272.2	756.7	730.2	26.56	28.496	
4,100.0	3,996.5	3,968.9	3,656.0	17.6	30.8	-33.04	548.6	-1,312.9	779.5	752.1	27.42	28.430	
4,200.0	4,093.0	4,066.2	3,742.7	18.2	31.8	-33.18	565.8	-1,353.6	802.3	774.0	28.28	28.367	
4,300.0	4,189.4	4,163.6	3,829.5	18.7	32.8	-33.30	583.0	-1,394.3	825.1	795.9	29.15	28.306	
4,400.0	4,285.8	4,260.9	3,916.2	19.3	33.7	-33.43	600.2	-1,435.0	847.9	817.9	30.02	28.248	
4,500.0	4,382.3	4,358.3	4,003.0	19.8	34.7	-33.54	617.4	-1,475.7	870.7	839.8	30.88	28.192	
4,600.0	4,478.7	4,455.6	4,089.7	20.4	35.7	-33.65	634.6	-1,516.4	893.5	861.7	31.75	28.139	
4,700.0	4,575.1	4,553.0	4,176.4	21.0	36.6	-33.75	651.8	-1,557.1	916.3	883.6	32.62	28.087	
4,800.0	4,671.6	4,650.3	4,263.2	21.5	37.6	-33.85	669.0	-1,597.8	939.1	905.6	33.49	28.038	
4,900.0	4,768.0	4,747.7	4,349.9	22.1	38.6	-33.94	686.1	-1,638.5	961.9	927.5	34.36	27.990	
5,000.0	4,864.5	4,845.0	4,436.7	22.6	39.5	-34.03	703.3	-1,679.2	984.7	949.4	35.24	27.945	
5,100.0	4,960.9	4,942.4	4,523.4	23.2	40.5	-34.12	720.5	-1,720.0	1,007.5	971.4	36.11	27.901	
5,200.0	5,057.3	5,039.7	4,610.2	23.7	41.5	-34.20	737.7	-1,760.7	1,030.3	993.3	36.98	27.858	
5,300.0	5,153.8	5,137.1	4,696.9	24.3	42.4	-34.28	754.9	-1,801.4	1,053.1	1,015.3	37.86	27.818	
5,391.6	5,242.2	5,226.3	4,776.4	24.8	43.3	-34.34	770.7	-1,838.7	1,074.0	1,035.4	38.66	27.782	
5,400.0	5,250.2	5,234.4	4,783.7	24.8	43.4	-34.37	772.1	-1,842.1	1,075.9	1,037.2	38.73	27.779	
5,500.0	5,347.2	5,376.9	4,911.8	25.3	44.6	-34.69	796.3	-1,899.4	1,098.8	1,059.1	39.68	27.689	
5,600.0	5,444.9	5,532.0	5,054.6	25.6	45.6	-34.95	819.8	-1,955.1	1,119.5	1,078.9	40.55	27.608	
5,700.0	5,543.3	5,689.4	5,202.6	25.9	46.6	-35.16	840.6	-2,004.3	1,137.9	1,096.6	41.30	27.554	
5,800.0	5,642.3	5,848.9	5,355.5	26.2	47.4	-35.30	858.4	-2,046.4	1,153.9	1,112.0	41.92	27.529	
5,900.0	5,741.7	6,010.3	5,512.4	26.4	48.0	-35.40	873.0	-2,081.0	1,167.5	1,125.1	42.41	27.529	
6,000.0	5,841.5	6,173.4	5,672.9	26.6	48.5	-35.43	884.2	-2,107.6	1,178.5	1,135.7	42.77	27.556	
6,100.0	5,941.4	6,337.8	5,836.0	26.8	48.9	-35.42	892.0	-2,125.9	1,186.9	1,144.0	42.99	27.609	
6,158.6	6,000.0	6,434.6	5,932.6	26.8	49.0	-84.52	894.8	-2,132.6	1,190.7	1,147.6	43.06	27.650	
6,200.0	6,041.4	6,503.2	6,001.1	26.9	49.1	-84.47	896.0	-2,135.5	1,192.5	1,149.3	43.18	27.618	
6,300.0	6,141.4	6,642.5	6,140.4	27.0	49.2	-84.45	896.7	-2,137.1	1,193.5	1,150.0	43.45	27.465	
6,400.0	6,241.4	6,742.5	6,240.4	27.1	49.3	-84.45	896.7	-2,137.1	1,193.5	1,149.8	43.70	27.310	
6,500.0	6,341.4	6,842.5	6,340.4	27.2	49.3	-84.45	896.7	-2,137.1	1,193.5	1,149.5	43.95	27.155	
6,600.0	6,441.4	6,942.5	6,440.4	27.3	49.4	-84.45	896.7	-2,137.1	1,193.5	1,149.3	44.21	26.999	
6,700.0	6,541.4	7,042.5	6,540.4	27.4	49.5	-84.45	896.7	-2,137.1	1,193.5	1,149.0	44.46	26.842	

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 Pond 3-3-22
<b>Project:</b>	SEC.22-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Reference Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pond 3-3-22	<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 (5-16-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> T-Bone 5-3-22 Pad Sec.22-T5N-R66W - Westbone 1-3-22 - Wellbore #1 - Plan #1 (5-16-11)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	
6,800.0	6,641.4	7,142.5	6,640.4	27.5	49.5	-84.45	896.7	-2,137.1	1,193.5	1,148.8	44.72	26.686	
6,900.0	6,741.4	7,242.5	6,740.4	27.6	49.6	-84.45	896.7	-2,137.1	1,193.5	1,148.5	44.99	26.530	
7,000.0	6,841.4	7,342.5	6,840.4	27.7	49.6	-84.45	896.7	-2,137.1	1,193.5	1,148.2	45.25	26.374	
7,100.0	6,941.4	7,442.5	6,940.4	27.9	49.7	-84.45	896.7	-2,137.1	1,193.5	1,148.0	45.52	26.219	
7,200.0	7,041.4	7,542.5	7,040.4	28.0	49.8	-84.45	896.7	-2,137.1	1,193.5	1,147.7	45.79	26.063	
7,300.0	7,141.4	7,642.5	7,140.4	28.1	49.9	-84.45	896.7	-2,137.1	1,193.5	1,147.4	46.07	25.908	
7,400.0	7,241.4	7,742.5	7,240.4	28.2	49.9	-84.45	896.7	-2,137.1	1,193.5	1,147.1	46.34	25.753	
7,500.0	7,341.4	7,842.5	7,340.4	28.3	50.0	-84.45	896.7	-2,137.1	1,193.5	1,146.9	46.62	25.598	
7,600.0	7,441.4	7,942.5	7,440.4	28.5	50.1	-84.45	896.7	-2,137.1	1,193.5	1,146.6	46.91	25.444	
7,700.0	7,541.4	8,042.5	7,540.4	28.6	50.1	-84.45	896.7	-2,137.1	1,193.5	1,146.3	47.19	25.291	
7,800.0	7,641.4	8,142.5	7,640.4	28.7	50.2	-84.45	896.7	-2,137.1	1,193.5	1,146.0	47.48	25.137	
7,900.0	7,741.4	8,242.5	7,740.4	28.8	50.3	-84.45	896.7	-2,137.1	1,193.5	1,145.7	47.77	24.985	
8,000.0	7,841.4	8,342.5	7,840.4	29.0	50.4	-84.45	896.7	-2,137.1	1,193.5	1,145.4	48.06	24.833	
8,058.6	7,900.0	8,401.1	7,899.0	29.1	50.4	-84.45	896.7	-2,137.1	1,193.5	1,145.3	48.23	24.744	

<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Project:</b>	SEC.22-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Reference Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pond 3-3-22	<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 (5-16-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	16.7	16.7	16.7	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	90.00	0.0	16.7	16.7	16.5	0.22	74.367		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	16.7	16.7	16.0	0.67	24.789		
300.0	300.0	300.3	300.3	0.5	0.6	-100.79	1.2	15.4	15.7	14.6	1.10	14.302		
345.3	345.2	345.6	345.5	0.6	0.7	-113.86	2.5	14.0	15.3	14.0	1.29	11.845 CC		
350.0	349.9	350.3	350.2	0.6	0.7	-115.52	2.7	13.8	15.3	14.0	1.31	11.668 ES		
400.0	399.9	400.1	399.9	0.7	0.8	-134.20	4.7	11.6	16.1	14.6	1.53	10.520 SF		
500.0	499.7	499.1	498.6	1.0	1.0	-166.83	10.5	5.2	22.9	20.9	2.01	11.425		
600.0	599.6	597.1	595.9	1.2	1.3	174.20	18.5	-3.6	35.9	33.4	2.49	14.446		
700.0	699.5	694.4	691.9	1.4	1.6	122.99	28.7	-14.7	52.0	49.1	2.95	17.634		
800.0	799.4	791.1	786.9	1.6	2.0	69.56	41.0	-28.2	68.6	65.2	3.42	20.087		
900.0	899.2	887.2	880.6	1.8	2.4	45.53	55.3	-43.9	85.3	81.5	3.90	21.893		
1,000.0	998.8	982.8	973.1	2.1	2.9	34.21	71.7	-61.8	102.0	97.6	4.40	23.212		
1,100.0	1,098.1	1,077.9	1,064.3	2.3	3.4	27.61	90.0	-81.9	118.6	113.7	4.91	24.163		
1,200.0	1,196.8	1,172.5	1,154.0	2.6	4.0	23.18	110.2	-104.1	135.0	129.6	5.44	24.834		
1,300.0	1,295.0	1,266.7	1,242.2	2.9	4.6	19.91	132.3	-128.3	151.2	145.2	5.98	25.283		
1,400.0	1,392.5	1,360.3	1,328.8	3.2	5.3	17.36	156.2	-154.5	167.2	160.7	6.53	25.603		
1,472.3	1,462.5	1,427.8	1,390.5	3.5	5.9	15.81	174.7	-174.7	178.6	171.7	6.94	25.720		
1,500.0	1,489.1	1,453.5	1,413.9	3.7	6.1	15.53	181.9	-182.6	183.1	176.0	7.11	25.739		
1,600.0	1,585.6	1,545.7	1,496.8	4.1	6.9	14.51	209.2	-212.5	201.2	193.5	7.72	26.054		
1,700.0	1,682.0	1,636.8	1,577.3	4.6	7.8	13.49	237.8	-243.9	222.5	214.2	8.34	26.693		
1,800.0	1,778.5	1,732.2	1,660.6	5.1	8.7	12.51	269.1	-278.2	246.0	237.1	8.97	27.434		
1,900.0	1,874.9	1,829.3	1,745.4	5.6	9.7	11.68	301.0	-313.2	269.7	260.1	9.61	28.078		
2,000.0	1,971.3	1,926.3	1,830.1	6.1	10.7	10.98	333.0	-348.1	293.4	283.2	10.25	28.633		
2,100.0	2,067.8	2,023.4	1,914.9	6.7	11.7	10.39	364.9	-383.1	317.2	306.3	10.89	29.115		
2,200.0	2,164.2	2,120.5	1,999.7	7.2	12.7	9.88	396.8	-418.1	341.0	329.4	11.54	29.536		
2,300.0	2,260.6	2,217.6	2,084.4	7.7	13.7	9.43	428.7	-453.0	364.8	352.6	12.20	29.907		
2,400.0	2,357.1	2,314.7	2,169.2	8.3	14.7	9.04	460.6	-488.0	388.6	375.7	12.85	30.234		
2,500.0	2,453.5	2,411.8	2,254.0	8.8	15.7	8.70	492.5	-523.0	412.4	398.9	13.51	30.525		
2,600.0	2,550.0	2,508.9	2,338.7	9.3	16.7	8.39	524.4	-557.9	436.3	422.1	14.17	30.786		
2,700.0	2,646.4	2,606.0	2,423.5	9.9	17.7	8.11	556.4	-592.9	460.1	445.3	14.83	31.019		
2,800.0	2,742.8	2,703.1	2,508.3	10.4	18.7	7.87	588.3	-627.9	484.0	468.5	15.50	31.230		
2,900.0	2,839.3	2,800.2	2,593.0	11.0	19.7	7.64	620.2	-662.9	507.9	491.7	16.16	31.420		
3,000.0	2,935.7	2,897.2	2,677.8	11.5	20.7	7.44	652.1	-697.8	531.7	514.9	16.83	31.594		
3,100.0	3,032.1	2,994.3	2,762.6	12.1	21.7	7.25	684.0	-732.8	555.6	538.1	17.50	31.752		
3,200.0	3,128.6	3,091.4	2,847.3	12.6	22.7	7.08	715.9	-767.8	579.5	561.3	18.17	31.896		
3,300.0	3,225.0	3,188.5	2,932.1	13.2	23.8	6.92	747.8	-802.7	603.4	584.6	18.84	32.029		
3,400.0	3,321.5	3,285.6	3,016.8	13.7	24.8	6.77	779.8	-837.7	627.3	607.8	19.51	32.152		
3,500.0	3,417.9	3,382.7	3,101.6	14.3	25.8	6.64	811.7	-872.7	651.2	631.0	20.18	32.265		
3,600.0	3,514.3	3,479.8	3,186.4	14.8	26.8	6.51	843.6	-907.7	675.1	654.3	20.86	32.369		
3,700.0	3,610.8	3,576.9	3,271.1	15.4	27.8	6.40	875.5	-942.6	699.0	677.5	21.53	32.466		
3,800.0	3,707.2	3,674.0	3,355.9	16.0	28.8	6.29	907.4	-977.6	723.0	700.7	22.21	32.556		
3,900.0	3,803.6	3,771.0	3,440.7	16.5	29.8	6.18	939.3	-1,012.6	746.9	724.0	22.88	32.641		
4,000.0	3,900.1	3,868.1	3,525.4	17.1	30.8	6.09	971.2	-1,047.5	770.8	747.2	23.56	32.719		
4,100.0	3,996.5	3,965.2	3,610.2	17.6	31.8	6.00	1,003.2	-1,082.5	794.7	770.5	24.23	32.793		
4,200.0	4,093.0	4,062.3	3,695.0	18.2	32.9	5.91	1,035.1	-1,117.5	818.6	793.7	24.91	32.862		
4,300.0	4,189.4	4,159.4	3,779.7	18.7	33.9	5.83	1,067.0	-1,152.4	842.5	817.0	25.59	32.926		
4,400.0	4,285.8	4,255.6	3,864.5	19.3	34.9	5.76	1,098.9	-1,187.4	866.5	840.2	26.27	32.987		
4,500.0	4,382.3	4,353.6	3,949.2	19.8	35.9	5.69	1,130.8	-1,222.4	890.4	863.5	26.95	33.045		
4,600.0	4,478.7	4,450.7	4,034.0	20.4	36.9	5.62	1,162.7	-1,257.4	914.3	886.7	27.62	33.099		
4,700.0	4,575.1	4,547.8	4,118.8	21.0	37.9	5.55	1,194.6	-1,292.3	938.3	909.9	28.30	33.150		
4,800.0	4,671.6	4,644.9	4,203.5	21.5	38.9	5.49	1,226.6	-1,327.3	962.2	933.2	28.98	33.199		

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

T-Bone 5-3-22 Pad Sec.22-T5N-R66W - Westfork 1-1-22 - Wellbore #1 - Plan #1 (5-16-11)													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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,768.0	4,741.9	4,288.3	22.1	39.9	5.43	1,258.5	-1,362.3	986.1	956.4	29.66	33.245		
5,000.0	4,864.5	4,839.0	4,373.1	22.6	41.0	5.38	1,290.4	-1,397.2	1,010.0	979.7	30.34	33.288		
5,100.0	4,960.9	4,936.1	4,457.8	23.2	42.0	5.33	1,322.3	-1,432.2	1,034.0	1,003.0	31.02	33.330		
5,200.0	5,057.3	5,033.2	4,542.6	23.7	43.0	5.28	1,354.2	-1,467.2	1,057.9	1,026.2	31.70	33.369		
5,300.0	5,153.8	5,130.3	4,627.4	24.3	44.0	5.23	1,386.1	-1,502.2	1,081.8	1,049.5	32.38	33.407		
5,391.6	5,242.2	5,219.3	4,705.0	24.8	44.9	5.18	1,415.4	-1,534.2	1,103.8	1,070.8	33.01	33.439		
5,400.0	5,250.2	5,227.4	4,712.1	24.8	45.0	5.18	1,418.0	-1,537.1	1,105.8	1,072.7	33.06	33.453		
5,500.0	5,347.2	5,324.0	4,796.4	25.3	46.0	5.18	1,448.8	-1,571.9	1,131.7	1,098.1	33.57	33.716		
5,600.0	5,444.9	5,419.6	4,879.9	25.6	47.0	5.17	1,481.2	-1,606.4	1,160.9	1,126.9	34.01	34.131		
5,700.0	5,543.3	5,514.1	4,962.5	25.9	48.0	5.15	1,512.3	-1,640.4	1,193.5	1,159.1	34.40	34.693		
5,800.0	5,642.3	5,607.5	5,043.9	26.2	49.0	5.13	1,543.0	-1,674.0	1,229.3	1,194.6	34.72	35.403		
5,900.0	5,741.7	5,699.5	5,124.3	26.4	49.9	5.10	1,573.2	-1,707.2	1,268.3	1,233.4	34.98	36.259		
6,000.0	5,841.5	5,790.1	5,203.4	26.6	50.9	5.07	1,603.0	-1,739.8	1,310.6	1,275.4	35.17	37.262		
6,100.0	5,941.4	5,879.2	5,281.2	26.8	51.8	5.05	1,632.3	-1,771.9	1,355.9	1,320.6	35.30	38.414		
6,158.6	6,000.0	5,930.7	5,326.1	26.8	52.4	-44.10	1,649.2	-1,790.4	1,383.9	1,348.6	35.34	39.159		
6,200.0	6,041.4	5,966.8	5,357.7	26.9	52.7	-44.15	1,661.1	-1,803.5	1,404.1	1,368.5	35.53	39.516		
6,300.0	6,141.4	6,054.1	5,433.9	27.0	53.6	-44.27	1,689.8	-1,834.9	1,452.8	1,416.8	36.01	40.349		
6,400.0	6,241.4	6,141.4	5,510.1	27.1	54.6	-44.38	1,718.5	-1,866.3	1,501.5	1,465.0	36.48	41.157		
6,500.0	6,341.4	6,228.7	5,586.3	27.2	55.5	-44.48	1,747.2	-1,897.8	1,550.2	1,513.2	36.96	41.941		
6,600.0	6,441.4	6,316.0	5,662.5	27.3	56.4	-44.57	1,775.9	-1,929.2	1,598.9	1,561.4	37.44	42.702		
6,700.0	6,541.4	6,462.5	5,791.3	27.4	57.7	-44.72	1,822.9	-1,980.8	1,646.8	1,608.7	38.10	43.219		
6,800.0	6,641.4	6,679.2	5,987.8	27.5	59.3	-44.89	1,884.6	-2,048.3	1,689.0	1,650.1	38.94	43.374		
6,900.0	6,741.4	6,910.7	6,204.5	27.6	60.7	-45.02	1,939.1	-2,108.1	1,724.0	1,684.2	39.77	43.352		
7,000.0	6,841.4	7,155.0	6,439.7	27.7	61.8	-45.12	1,983.7	-2,157.0	1,751.1	1,710.5	40.55	43.184		
7,100.0	6,941.4	7,353.5	6,634.2	27.9	62.5	-45.18	2,010.1	-2,185.8	1,770.2	1,729.1	41.16	43.012		
7,200.0	7,041.4	7,452.0	6,731.2	28.0	62.8	-45.20	2,021.6	-2,198.5	1,787.6	1,746.0	41.56	43.015		
7,300.0	7,141.4	7,550.5	6,828.2	28.1	63.2	-45.23	2,033.1	-2,211.1	1,804.9	1,763.0	41.97	43.010		
7,400.0	7,241.4	7,649.0	6,925.2	28.2	63.5	-45.25	2,044.7	-2,223.7	1,822.3	1,779.9	42.37	43.004		
7,500.0	7,341.4	7,747.5	7,022.2	28.3	63.9	-45.27	2,056.2	-2,236.4	1,839.6	1,796.9	42.79	42.997		
7,600.0	7,441.4	7,845.9	7,119.2	28.5	64.3	-45.29	2,067.7	-2,249.0	1,857.0	1,813.8	43.20	42.988		
7,700.0	7,541.4	7,944.4	7,216.2	28.6	64.6	-45.32	2,079.2	-2,261.6	1,874.3	1,830.7	43.61	42.978		
7,800.0	7,641.4	8,042.9	7,313.1	28.7	65.0	-45.34	2,090.8	-2,274.3	1,891.7	1,847.7	44.03	42.966		
7,900.0	7,741.4	8,141.4	7,410.1	28.8	65.3	-45.36	2,102.3	-2,286.9	1,909.0	1,864.6	44.44	42.954		
8,000.0	7,841.4	8,239.9	7,507.1	29.0	65.7	-45.38	2,113.8	-2,299.5	1,926.4	1,881.5	44.86	42.941		
8,058.6	7,900.0	8,297.6	7,564.0	29.1	65.9	-45.39	2,120.6	-2,306.9	1,936.6	1,891.5	45.11	42.933		

T-Bone 5-3-22 Pad Sec.22-T5N-R66W - Wholesale 2-2-22 - Wellbore #1 - Plan #1 (5-16-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	1.0	1.0	0.0	0.0	90.01	0.0	33.4	33.4	33.4	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	90.01	0.0	33.4	33.4	33.2	0.23	147.262		
166.3	166.3	167.3	167.3	0.3	0.3	90.01	0.0	33.4	33.4	32.9	0.53	63.652 CC		
200.0	200.0	201.0	201.0	0.3	0.3	90.01	0.0	33.4	33.4	32.8	0.68	49.431		
300.0	300.0	301.0	301.0	0.5	0.5	-89.93	-1.8	33.4	33.4	32.4	1.08	31.017		
350.0	349.9	351.0	350.9	0.6	0.6	-89.90	-4.0	33.4	33.4	32.2	1.28	26.204		
400.0	399.9	401.0	400.9	0.7	0.8	-89.90	-6.6	33.4	33.4	31.9	1.49	22.446		
429.4	429.2	430.4	430.2	0.8	0.8	-90.17	-8.0	33.4	33.4	31.8	1.62	20.643		
500.0	499.7	501.0	500.8	1.0	1.0	-92.94	-10.1	33.4	33.5	31.5	1.93	17.326 ES		
600.0	599.6	600.7	600.5	1.2	1.2	-101.77	-10.0	33.4	34.2	31.8	2.38	14.375		
700.0	699.5	701.0	700.8	1.4	1.4	-154.12	-7.0	32.2	36.1	33.3	2.80	12.900		
800.0	799.4	801.2	800.7	1.6	1.6	148.33	-1.6	28.4	39.0	35.8	3.21	12.155		
900.0	899.2	901.2	900.2	1.8	1.8	119.78	6.3	22.1	42.5	38.9	3.63	11.692		
1,000.0	998.8	1,001.1	999.2	2.1	2.1	104.27	16.5	13.4	46.4	42.3	4.11	11.307		
1,100.0	1,098.1	1,100.8	1,097.4	2.3	2.4	93.99	29.1	2.2	50.6	46.0	4.65	10.900		
1,200.0	1,196.8	1,200.3	1,194.9	2.6	2.7	86.37	44.1	-11.4	55.0	49.7	5.27	10.440		
1,300.0	1,295.0	1,299.7	1,291.4	2.9	3.2	80.36	61.4	-27.4	59.4	53.4	5.98	9.933		
1,400.0	1,392.5	1,398.9	1,386.9	3.2	3.6	75.41	81.0	-45.7	63.8	57.0	6.79	9.402		
1,472.3	1,462.5	1,470.6	1,455.3	3.5	4.0	72.30	96.6	-60.5	67.0	59.5	7.44	9.009		
1,500.0	1,489.1	1,497.9	1,481.3	3.7	4.2	71.38	102.9	-66.4	68.2	60.6	7.69	8.877		
1,600.0	1,585.6	1,596.6	1,574.2	4.1	4.8	66.80	126.9	-89.4	73.9	65.3	8.62	8.570 SF		
1,700.0	1,682.0	1,694.7	1,665.3	4.6	5.4	60.86	152.9	-114.4	81.7	72.2	9.51	8.593		
1,800.0	1,778.5	1,791.9	1,754.4	5.1	6.2	54.38	180.9	-141.4	92.4	82.1	10.31	8.964		
1,900.0	1,874.9	1,888.0	1,841.2	5.6	7.0	48.04	210.6	-170.3	106.4	95.4	10.99	9.675		
2,000.0	1,971.3	1,983.7	1,926.1	6.1	7.8	42.27	242.0	-201.0	123.8	112.2	11.59	10.683		
2,100.0	2,067.8	2,081.2	2,012.3	6.7	8.7	37.63	274.7	-232.9	143.0	130.9	12.16	11.758		
2,200.0	2,164.2	2,178.8	2,098.6	7.2	9.7	34.10	307.4	-264.8	162.9	150.2	12.74	12.789		
2,300.0	2,260.6	2,276.3	2,184.8	7.7	10.6	31.34	340.0	-296.7	183.3	170.0	13.33	13.755		
2,400.0	2,357.1	2,373.9	2,271.0	8.3	11.5	29.13	372.7	-328.6	204.0	190.1	13.92	14.652		
2,500.0	2,453.5	2,471.5	2,357.2	8.8	12.5	27.32	405.4	-360.5	225.0	210.4	14.53	15.481		
2,600.0	2,550.0	2,569.0	2,443.4	9.3	13.4	25.83	438.0	-392.4	246.1	230.9	15.15	16.244		
2,700.0	2,646.4	2,666.6	2,529.6	9.9	14.3	24.57	470.7	-424.3	267.3	251.5	15.77	16.946		
2,800.0	2,742.8	2,764.1	2,615.8	10.4	15.3	23.50	503.4	-456.2	288.7	272.3	16.41	17.594		
2,900.0	2,839.3	2,861.7	2,702.1	11.0	16.2	22.57	536.0	-488.1	310.1	293.1	17.05	18.191		
3,000.0	2,935.7	2,959.3	2,788.3	11.5	17.2	21.77	568.7	-520.0	331.6	313.9	17.69	18.743		
3,100.0	3,032.1	3,056.8	2,874.5	12.1	18.1	21.06	601.4	-551.9	353.2	334.8	18.34	19.254		
3,200.0	3,128.6	3,154.4	2,960.7	12.6	19.1	20.43	634.0	-583.9	374.8	355.8	19.00	19.727		
3,300.0	3,225.0	3,251.9	3,046.9	13.2	20.1	19.87	666.7	-615.8	396.5	376.8	19.66	20.167		
3,400.0	3,321.5	3,349.5	3,133.1	13.7	21.0	19.37	699.4	-647.7	418.1	397.8	20.32	20.577		
3,500.0	3,417.9	3,447.1	3,219.3	14.3	22.0	18.92	732.0	-679.6	439.8	418.9	20.99	20.959		
3,600.0	3,514.3	3,544.6	3,305.5	14.8	22.9	18.51	764.7	-711.5	461.6	439.9	21.65	21.315		
3,700.0	3,610.8	3,642.2	3,391.8	15.4	23.9	18.14	797.4	-743.4	483.3	461.0	22.32	21.650		
3,800.0	3,707.2	3,739.7	3,478.0	16.0	24.9	17.80	830.0	-775.3	505.1	482.1	23.00	21.963		
3,900.0	3,803.6	3,837.3	3,564.2	16.5	25.8	17.49	862.7	-807.2	526.9	503.2	23.67	22.257		
4,000.0	3,900.1	3,934.9	3,650.4	17.1	26.8	17.20	895.4	-839.1	548.7	524.3	24.35	22.534		
4,100.0	3,996.5	4,032.4	3,736.6	17.6	27.7	16.94	928.0	-871.0	570.5	545.5	25.03	22.795		
4,200.0	4,093.0	4,130.0	3,822.8	18.2	28.7	16.69	960.7	-902.9	592.3	566.6	25.71	23.042		
4,300.0	4,189.4	4,227.5	3,909.0	18.7	29.7	16.46	993.4	-934.8	614.1	587.7	26.39	23.274		
4,400.0	4,285.8	4,325.1	3,995.3	19.3	30.6	16.25	1,026.0	-966.7	636.0	608.9	27.07	23.495		
4,500.0	4,382.3	4,422.7	4,081.5	19.8	31.6	16.05	1,058.7	-998.6	657.8	630.1	27.75	23.704		
4,600.0	4,478.7	4,520.2	4,167.7	20.4	32.5	15.87	1,091.4	-1,030.6	679.7	651.2	28.44	23.902		
4,700.0	4,575.1	4,617.8	4,253.9	21.0	33.5	15.69	1,124.0	-1,062.5	701.5	672.4	29.12	24.090		

COMPASS 2003.21 Build 46

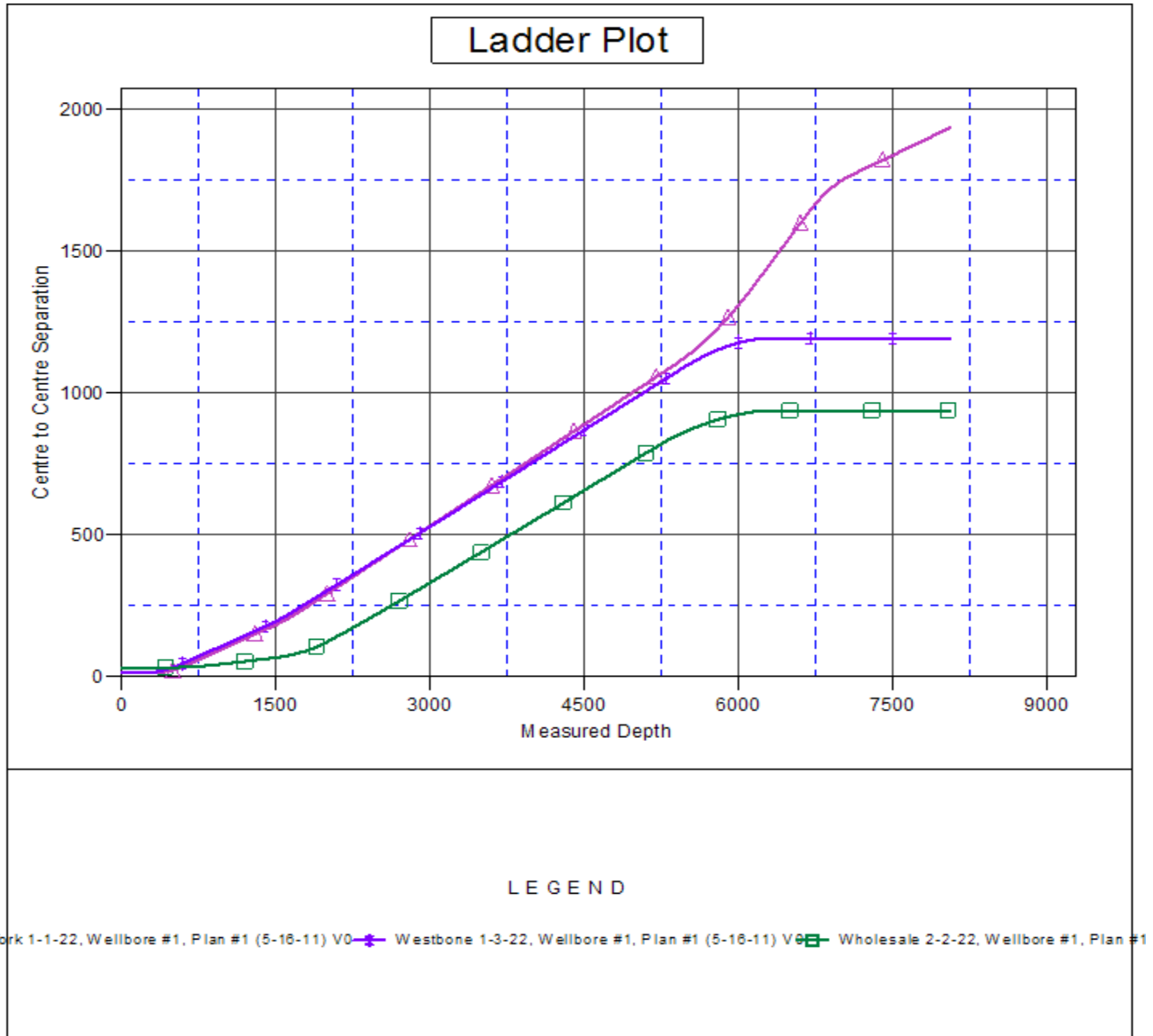


T-Bone 5-3-22 Pad Sec.22-T5N-R66W - Wholesale 2-2-22 - Wellbore #1 - Plan #1 (5-16-11)													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
4,800.0	4,671.6	4,715.3	4,340.1	21.5	34.5	15.53	1,156.7	-1,094.4	723.4	693.6	29.81	24.269			
4,900.0	4,768.0	4,812.9	4,426.3	22.1	35.4	15.38	1,189.4	-1,126.3	745.3	714.8	30.49	24.440			
5,000.0	4,864.5	4,910.5	4,512.5	22.6	36.4	15.23	1,222.0	-1,158.2	767.1	736.0	31.18	24.602			
5,100.0	4,960.9	5,008.0	4,598.7	23.2	37.4	15.09	1,254.7	-1,190.1	789.0	757.2	31.87	24.758			
5,200.0	5,057.3	5,105.6	4,685.0	23.7	38.3	14.96	1,287.4	-1,222.0	810.9	778.4	32.56	24.906			
5,300.0	5,153.8	5,208.6	4,776.0	24.3	39.3	14.83	1,321.8	-1,255.7	832.8	799.5	33.26	25.036			
5,391.6	5,242.2	5,335.2	4,889.5	24.8	40.3	14.73	1,361.9	-1,294.8	850.3	816.3	33.98	25.025			
5,400.0	5,250.2	5,346.8	4,900.1	24.8	40.4	14.73	1,365.4	-1,298.2	851.7	817.7	34.04	25.024			
5,500.0	5,347.2	5,486.9	5,028.6	25.3	41.3	14.74	1,405.1	-1,337.0	867.9	833.2	34.67	25.031			
5,600.0	5,444.9	5,628.3	5,161.1	25.6	42.2	14.73	1,440.6	-1,371.7	882.6	847.4	35.22	25.057			
5,700.0	5,543.3	5,771.1	5,297.1	25.9	42.9	14.72	1,471.7	-1,402.0	895.8	860.1	35.69	25.101			
5,800.0	5,642.3	5,915.0	5,436.2	26.2	43.5	14.71	1,498.0	-1,427.8	907.5	871.4	36.07	25.161			
5,900.0	5,741.7	6,060.0	5,578.0	26.4	44.1	14.68	1,519.5	-1,448.7	917.6	881.2	36.35	25.241			
6,000.0	5,841.5	6,205.9	5,722.1	26.6	44.5	14.64	1,535.9	-1,464.8	926.1	889.5	36.55	25.336			
6,100.0	5,941.4	6,352.5	5,867.9	26.8	44.8	14.60	1,547.1	-1,475.7	932.9	896.3	36.66	25.451			
6,158.6	6,000.0	6,438.8	5,954.0	26.8	44.9	-34.56	1,551.2	-1,479.6	936.2	899.5	36.68	25.525			
6,200.0	6,041.4	6,499.8	6,014.9	26.9	45.0	-34.59	1,552.9	-1,481.4	937.8	901.0	36.81	25.474			
6,300.0	6,141.4	6,627.3	6,142.4	27.0	45.1	-34.60	1,553.8	-1,482.2	938.7	901.5	37.13	25.278			
6,400.0	6,241.4	6,727.3	6,242.4	27.1	45.1	-34.60	1,553.8	-1,482.2	938.7	901.2	37.43	25.076			
6,500.0	6,341.4	6,827.3	6,342.4	27.2	45.2	-34.60	1,553.8	-1,482.2	938.7	900.9	37.73	24.876			
6,600.0	6,441.4	6,927.3	6,442.4	27.3	45.3	-34.60	1,553.8	-1,482.2	938.7	900.6	38.04	24.677			
6,700.0	6,541.4	7,027.3	6,542.4	27.4	45.3	-34.60	1,553.8	-1,482.2	938.7	900.3	38.35	24.479			
6,800.0	6,641.4	7,127.3	6,642.4	27.5	45.4	-34.60	1,553.8	-1,482.2	938.7	900.0	38.66	24.282			
6,900.0	6,741.4	7,227.3	6,742.4	27.6	45.5	-34.60	1,553.8	-1,482.2	938.7	899.7	38.97	24.087			
7,000.0	6,841.4	7,327.3	6,842.4	27.7	45.5	-34.60	1,553.8	-1,482.2	938.7	899.4	39.28	23.894			
7,100.0	6,941.4	7,427.3	6,942.4	27.9	45.6	-34.60	1,553.8	-1,482.2	938.7	899.1	39.60	23.702			
7,200.0	7,041.4	7,527.3	7,042.4	28.0	45.7	-34.60	1,553.8	-1,482.2	938.7	898.7	39.92	23.512			
7,300.0	7,141.4	7,627.3	7,142.4	28.1	45.8	-34.60	1,553.8	-1,482.2	938.7	898.4	40.25	23.323			
7,400.0	7,241.4	7,727.3	7,242.4	28.2	45.8	-34.60	1,553.8	-1,482.2	938.7	898.1	40.57	23.136			
7,500.0	7,341.4	7,827.3	7,342.4	28.3	45.9	-34.60	1,553.8	-1,482.2	938.7	897.8	40.90	22.951			
7,600.0	7,441.4	7,927.3	7,442.4	28.5	46.0	-34.60	1,553.8	-1,482.2	938.7	897.4	41.23	22.767			
7,700.0	7,541.4	8,027.3	7,542.4	28.6	46.1	-34.60	1,553.8	-1,482.2	938.7	897.1	41.56	22.586			
7,800.0	7,641.4	8,127.3	7,642.4	28.7	46.1	-34.60	1,553.8	-1,482.2	938.7	896.8	41.89	22.405			
7,900.0	7,741.4	8,227.3	7,742.4	28.8	46.2	-34.60	1,553.8	-1,482.2	938.7	896.4	42.23	22.227			
8,000.0	7,841.4	8,327.3	7,842.4	29.0	46.3	-34.60	1,553.8	-1,482.2	938.7	896.1	42.57	22.050			
8,038.7	7,880.1	8,366.0	7,881.1	29.0	46.3	-34.60	1,553.8	-1,482.2	938.7	896.0	42.70	21.983			
8,058.6	7,900.0	8,384.9	7,900.0	29.1	46.3	-34.60	1,553.8	-1,482.2	938.7	895.9	42.77	21.949			



<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Project:</b>	SEC.22-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Reference Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pond 3-3-22	<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 (5-16-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4818.0ft (Original Well Elev) Coordinates are relative to: Pond 3-3-22  
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: 0.47°



<b>Company:</b>	Mineral Resources Inc	<b>Local Co-ordinate Reference:</b>	Well Pond 3-3-22
<b>Project:</b>	SEC.22-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Reference Site:</b>	T-Bone 5-3-22 Pad Sec.22-T5N-R66W	<b>MD Reference:</b>	WELL @ 4818.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pond 3-3-22	<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 (5-16-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4818.0ft (Original Well Elev) Coordinates are relative to: Pond 3-3-22  
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: 0.47°

