

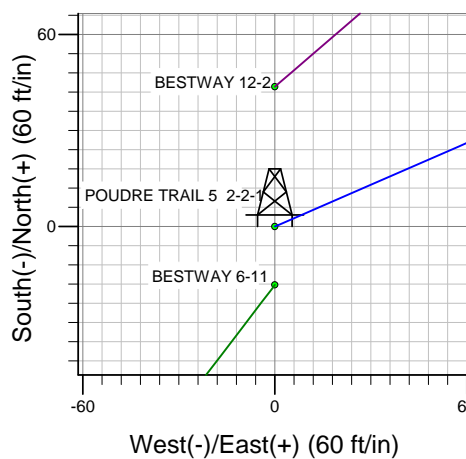
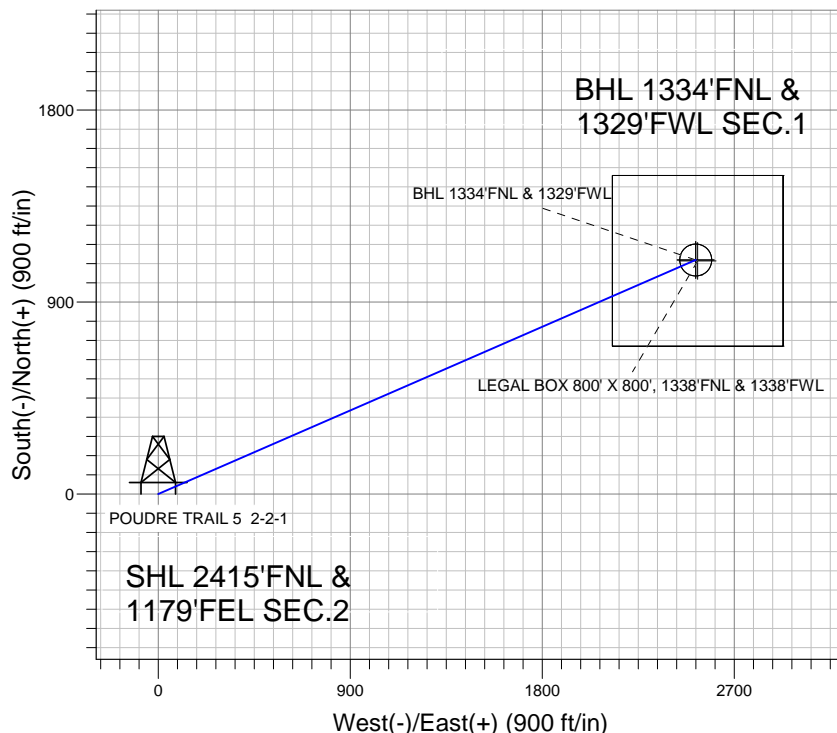
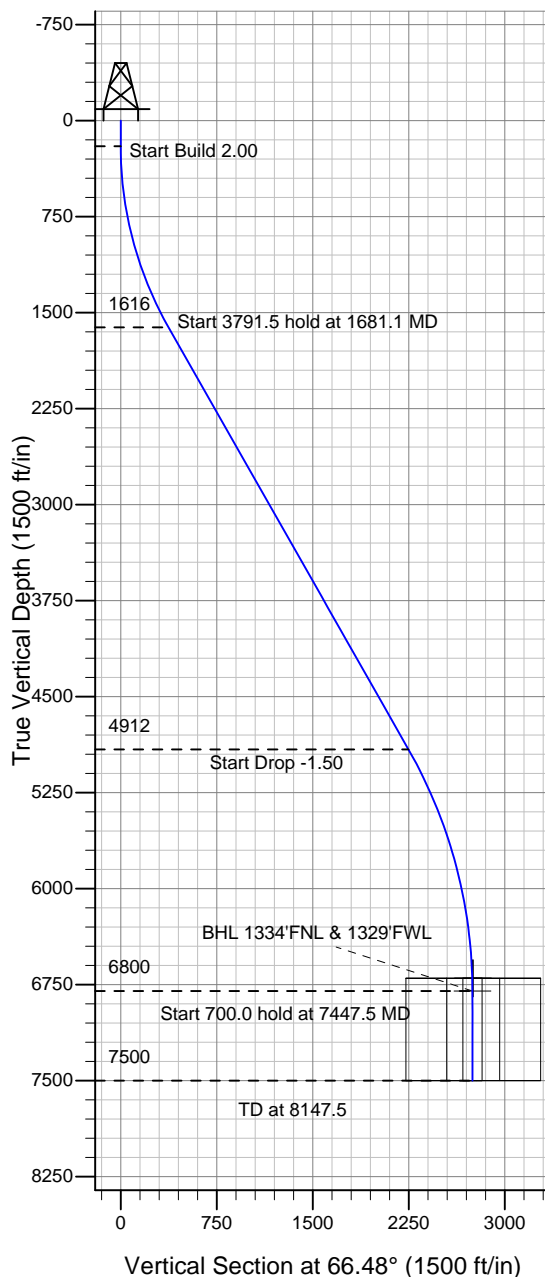
Well Name: POUDRE TRAIL 5 2-2-1

Surface Location: BESTWAY HOR PAD 2-5N-66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4700.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1400674.58	3211772.45	40.430760	-104.739270	
EST RKB RIG 14 RKB @ 4715.0ft (EST RKB RIG 14)						

Mineral Resources Inc



BESTWAY HOR PAD 2-5N-66W
POUDRE TRAIL 5 2-2-1
PLAN 1 (FEB 9 2012)
16:03, February 15 2012



Azimuths to True North
Magnetic North: 8.77°
Magnetic Field
Strength: 53082.3snT
Dip Angle: 67.06°
Date: 2/9/2012
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
LEGAL BOX 800' X 800', 1338'FNL & 1338'FWL	6700.0	1092.7	2528.4	40.433759	-104.730188	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1334'FNL & 1329'FWL	6700.0	1096.7	2519.4	40.433770	-104.730220	Circle (Radius: 75.0)
BHL 1334'FNL & 1329'FWL	6800.0	1096.7	2519.4	40.433770	-104.730220	Point

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	1681.1	29.62	66.48	1616.0	149.4	343.3	2.00	66.48	374.4	
4	5472.6	29.62	66.48	4912.0	897.5	2061.6	0.00	0.00	2248.5	
5	7447.5	0.00	0.00	6800.0	1096.7	2519.4	1.50	180.00	2747.7	BHL 1334'FNL & 1329'FWL
6	8147.5	0.00	0.00	7500.0	1096.7	2519.4	0.00	0.00	2747.7	



Mineral Resources Inc

SEC.2-T5N-R66W

BESTWAY HOR PAD 2-5N-66W

POUDRE TRAIL 5 2-2-1

Wellbore #1

Plan: PLAN 1 (FEB 9 2012)

Standard Planning Report

15 February, 2012

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	
1,681.1	29.62	66.48	1,616.0	149.4	343.3	2.00	2.00	0.00	66.48	
5,472.6	29.62	66.48	4,912.0	897.5	2,061.6	0.00	0.00	0.00	0.00	
7,447.5	0.00	0.00	6,800.0	1,096.7	2,519.4	1.50	-1.50	0.00	180.00	BHL 1334'FNL & 13
8,147.5	0.00	0.00	7,500.0	1,096.7	2,519.4	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Company:	Mineral Resources Inc	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Project:	SEC.2-T5N-R66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site:	BESTWAY HOR PAD 2-5N-66W	North Reference:	True
Well:	POUDRE TRAIL 5 2-2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 9 2012)		

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	66.48	240.0	0.1	0.3	0.3	2.00	2.00	0.00
280.0	1.60	66.48	280.0	0.4	1.0	1.1	2.00	2.00	0.00
320.0	2.40	66.48	320.0	1.0	2.3	2.5	2.00	2.00	0.00
360.0	3.20	66.48	359.9	1.8	4.1	4.5	2.00	2.00	0.00
400.0	4.00	66.48	399.8	2.8	6.4	7.0	2.00	2.00	0.00
440.0	4.80	66.48	439.7	4.0	9.2	10.0	2.00	2.00	0.00
480.0	5.60	66.48	479.6	5.5	12.5	13.7	2.00	2.00	0.00
520.0	6.40	66.48	519.3	7.1	16.4	17.9	2.00	2.00	0.00
560.0	7.20	66.48	559.1	9.0	20.7	22.6	2.00	2.00	0.00
600.0	8.00	66.48	598.7	11.1	25.6	27.9	2.00	2.00	0.00
640.0	8.80	66.48	638.3	13.5	30.9	33.7	2.00	2.00	0.00
680.0	9.60	66.48	677.8	16.0	36.8	40.1	2.00	2.00	0.00
720.0	10.40	66.48	717.1	18.8	43.2	47.1	2.00	2.00	0.00
760.0	11.20	66.48	756.4	21.8	50.0	54.6	2.00	2.00	0.00
800.0	12.00	66.48	795.6	25.0	57.4	62.6	2.00	2.00	0.00
840.0	12.80	66.48	834.7	28.4	65.3	71.2	2.00	2.00	0.00
880.0	13.60	66.48	873.6	32.1	73.6	80.3	2.00	2.00	0.00
920.0	14.40	66.48	912.4	35.9	82.5	90.0	2.00	2.00	0.00
960.0	15.20	66.48	951.1	40.0	91.9	100.2	2.00	2.00	0.00
1,000.0	16.00	66.48	989.6	44.3	101.8	111.0	2.00	2.00	0.00
1,040.0	16.80	66.48	1,028.0	48.8	112.1	122.3	2.00	2.00	0.00
1,080.0	17.60	66.48	1,066.2	53.5	123.0	134.1	2.00	2.00	0.00
1,120.0	18.40	66.48	1,104.3	58.5	134.3	146.5	2.00	2.00	0.00
1,160.0	19.20	66.48	1,142.1	63.6	146.1	159.3	2.00	2.00	0.00
1,200.0	20.00	66.48	1,179.8	69.0	158.4	172.8	2.00	2.00	0.00
1,240.0	20.80	66.48	1,217.3	74.5	171.2	186.7	2.00	2.00	0.00
1,280.0	21.60	66.48	1,254.6	80.3	184.5	201.2	2.00	2.00	0.00
1,320.0	22.40	66.48	1,291.7	86.3	198.2	216.2	2.00	2.00	0.00
1,360.0	23.20	66.48	1,328.6	92.5	212.4	231.7	2.00	2.00	0.00
1,400.0	24.00	66.48	1,365.2	98.9	227.1	247.7	2.00	2.00	0.00
1,440.0	24.80	66.48	1,401.6	105.5	242.2	264.2	2.00	2.00	0.00
1,480.0	25.60	66.48	1,437.8	112.2	257.9	281.2	2.00	2.00	0.00
1,520.0	26.40	66.48	1,473.8	119.2	273.9	298.8	2.00	2.00	0.00
1,560.0	27.20	66.48	1,509.5	126.4	290.5	316.8	2.00	2.00	0.00
1,600.0	28.00	66.48	1,544.9	133.8	307.5	335.3	2.00	2.00	0.00
1,640.0	28.80	66.48	1,580.1	141.4	324.9	354.4	2.00	2.00	0.00
1,680.0	29.60	66.48	1,615.0	149.2	342.8	373.9	2.00	2.00	0.00
1,681.1	29.62	66.48	1,616.0	149.4	343.3	374.4	2.00	2.00	0.00
1,720.0	29.62	66.48	1,649.8	157.1	360.9	393.6	0.00	0.00	0.00
1,760.0	29.62	66.48	1,684.6	165.0	379.1	413.4	0.00	0.00	0.00
1,800.0	29.62	66.48	1,719.4	172.9	397.2	433.2	0.00	0.00	0.00
1,840.0	29.62	66.48	1,754.1	180.8	415.3	453.0	0.00	0.00	0.00
1,880.0	29.62	66.48	1,788.9	188.7	433.4	472.7	0.00	0.00	0.00
1,920.0	29.62	66.48	1,823.7	196.6	451.6	492.5	0.00	0.00	0.00
1,960.0	29.62	66.48	1,858.4	204.5	469.7	512.3	0.00	0.00	0.00
2,000.0	29.62	66.48	1,893.2	212.4	487.8	532.0	0.00	0.00	0.00
2,040.0	29.62	66.48	1,928.0	220.2	505.9	551.8	0.00	0.00	0.00
2,080.0	29.62	66.48	1,962.8	228.1	524.1	571.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Company:	Mineral Resources Inc	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Project:	SEC.2-T5N-R66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site:	BESTWAY HOR PAD 2-5N-66W	North Reference:	True
Well:	POUDRE TRAIL 5 2-2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 9 2012)		

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)
2,120.0	29.62	66.48	1,997.5	236.0	542.2	591.4	0.00	0.00	0.00
2,160.0	29.62	66.48	2,032.3	243.9	560.3	611.1	0.00	0.00	0.00
2,200.0	29.62	66.48	2,067.1	251.8	578.5	630.9	0.00	0.00	0.00
2,240.0	29.62	66.48	2,101.8	259.7	596.6	650.7	0.00	0.00	0.00
2,280.0	29.62	66.48	2,136.6	267.6	614.7	670.4	0.00	0.00	0.00
2,320.0	29.62	66.48	2,171.4	275.5	632.8	690.2	0.00	0.00	0.00
2,360.0	29.62	66.48	2,206.2	283.4	651.0	710.0	0.00	0.00	0.00
2,400.0	29.62	66.48	2,240.9	291.3	669.1	729.8	0.00	0.00	0.00
2,440.0	29.62	66.48	2,275.7	299.2	687.2	749.5	0.00	0.00	0.00
2,480.0	29.62	66.48	2,310.5	307.1	705.4	769.3	0.00	0.00	0.00
2,520.0	29.62	66.48	2,345.3	314.9	723.5	789.1	0.00	0.00	0.00
2,560.0	29.62	66.48	2,380.0	322.8	741.6	808.8	0.00	0.00	0.00
2,600.0	29.62	66.48	2,414.8	330.7	759.7	828.6	0.00	0.00	0.00
2,640.0	29.62	66.48	2,449.6	338.6	777.9	848.4	0.00	0.00	0.00
2,680.0	29.62	66.48	2,484.3	346.5	796.0	868.1	0.00	0.00	0.00
2,720.0	29.62	66.48	2,519.1	354.4	814.1	887.9	0.00	0.00	0.00
2,760.0	29.62	66.48	2,553.9	362.3	832.3	907.7	0.00	0.00	0.00
2,800.0	29.62	66.48	2,588.7	370.2	850.4	927.5	0.00	0.00	0.00
2,840.0	29.62	66.48	2,623.4	378.1	868.5	947.2	0.00	0.00	0.00
2,880.0	29.62	66.48	2,658.2	386.0	886.6	967.0	0.00	0.00	0.00
2,920.0	29.62	66.48	2,693.0	393.9	904.8	986.8	0.00	0.00	0.00
2,960.0	29.62	66.48	2,727.7	401.8	922.9	1,006.5	0.00	0.00	0.00
3,000.0	29.62	66.48	2,762.5	409.6	941.0	1,026.3	0.00	0.00	0.00
3,040.0	29.62	66.48	2,797.3	417.5	959.2	1,046.1	0.00	0.00	0.00
3,080.0	29.62	66.48	2,832.1	425.4	977.3	1,065.9	0.00	0.00	0.00
3,120.0	29.62	66.48	2,866.8	433.3	995.4	1,085.6	0.00	0.00	0.00
3,160.0	29.62	66.48	2,901.6	441.2	1,013.5	1,105.4	0.00	0.00	0.00
3,200.0	29.62	66.48	2,936.4	449.1	1,031.7	1,125.2	0.00	0.00	0.00
3,240.0	29.62	66.48	2,971.2	457.0	1,049.8	1,144.9	0.00	0.00	0.00
3,280.0	29.62	66.48	3,005.9	464.9	1,067.9	1,164.7	0.00	0.00	0.00
3,320.0	29.62	66.48	3,040.7	472.8	1,086.0	1,184.5	0.00	0.00	0.00
3,360.0	29.62	66.48	3,075.5	480.7	1,104.2	1,204.3	0.00	0.00	0.00
3,400.0	29.62	66.48	3,110.2	488.6	1,122.3	1,224.0	0.00	0.00	0.00
3,440.0	29.62	66.48	3,145.0	496.4	1,140.4	1,243.8	0.00	0.00	0.00
3,480.0	29.62	66.48	3,179.8	504.3	1,158.6	1,263.6	0.00	0.00	0.00
3,520.0	29.62	66.48	3,214.6	512.2	1,176.7	1,283.3	0.00	0.00	0.00
3,560.0	29.62	66.48	3,249.3	520.1	1,194.8	1,303.1	0.00	0.00	0.00
3,600.0	29.62	66.48	3,284.1	528.0	1,212.9	1,322.9	0.00	0.00	0.00
3,640.0	29.62	66.48	3,318.9	535.9	1,231.1	1,342.7	0.00	0.00	0.00
3,680.0	29.62	66.48	3,353.6	543.8	1,249.2	1,362.4	0.00	0.00	0.00
3,720.0	29.62	66.48	3,388.4	551.7	1,267.3	1,382.2	0.00	0.00	0.00
3,760.0	29.62	66.48	3,423.2	559.6	1,285.5	1,402.0	0.00	0.00	0.00
3,800.0	29.62	66.48	3,458.0	567.5	1,303.6	1,421.7	0.00	0.00	0.00
3,840.0	29.62	66.48	3,492.7	575.4	1,321.7	1,441.5	0.00	0.00	0.00
3,880.0	29.62	66.48	3,527.5	583.3	1,339.8	1,461.3	0.00	0.00	0.00
3,920.0	29.62	66.48	3,562.3	591.1	1,358.0	1,481.1	0.00	0.00	0.00
3,960.0	29.62	66.48	3,597.0	599.0	1,376.1	1,500.8	0.00	0.00	0.00
4,000.0	29.62	66.48	3,631.8	606.9	1,394.2	1,520.6	0.00	0.00	0.00
4,040.0	29.62	66.48	3,666.6	614.8	1,412.4	1,540.4	0.00	0.00	0.00
4,080.0	29.62	66.48	3,701.4	622.7	1,430.5	1,560.1	0.00	0.00	0.00
4,120.0	29.62	66.48	3,736.1	630.6	1,448.6	1,579.9	0.00	0.00	0.00
4,160.0	29.62	66.48	3,770.9	638.5	1,466.7	1,599.7	0.00	0.00	0.00
4,200.0	29.62	66.48	3,805.7	646.4	1,484.9	1,619.5	0.00	0.00	0.00
4,240.0	29.62	66.48	3,840.5	654.3	1,503.0	1,639.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Company:	Mineral Resources Inc	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Project:	SEC.2-T5N-R66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site:	BESTWAY HOR PAD 2-5N-66W	North Reference:	True
Well:	POUDRE TRAIL 5 2-2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 9 2012)		

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)
4,280.0	29.62	66.48	3,875.2	662.2	1,521.1	1,659.0	0.00	0.00	0.00
4,320.0	29.62	66.48	3,910.0	670.1	1,539.3	1,678.8	0.00	0.00	0.00
4,360.0	29.62	66.48	3,944.8	678.0	1,557.4	1,698.5	0.00	0.00	0.00
4,400.0	29.62	66.48	3,979.5	685.8	1,575.5	1,718.3	0.00	0.00	0.00
4,440.0	29.62	66.48	4,014.3	693.7	1,593.6	1,738.1	0.00	0.00	0.00
4,480.0	29.62	66.48	4,049.1	701.6	1,611.8	1,757.9	0.00	0.00	0.00
4,520.0	29.62	66.48	4,083.9	709.5	1,629.9	1,777.6	0.00	0.00	0.00
4,560.0	29.62	66.48	4,118.6	717.4	1,648.0	1,797.4	0.00	0.00	0.00
4,600.0	29.62	66.48	4,153.4	725.3	1,666.1	1,817.2	0.00	0.00	0.00
4,640.0	29.62	66.48	4,188.2	733.2	1,684.3	1,836.9	0.00	0.00	0.00
4,680.0	29.62	66.48	4,222.9	741.1	1,702.4	1,856.7	0.00	0.00	0.00
4,720.0	29.62	66.48	4,257.7	749.0	1,720.5	1,876.5	0.00	0.00	0.00
4,760.0	29.62	66.48	4,292.5	756.9	1,738.7	1,896.3	0.00	0.00	0.00
4,800.0	29.62	66.48	4,327.3	764.8	1,756.8	1,916.0	0.00	0.00	0.00
4,840.0	29.62	66.48	4,362.0	772.7	1,774.9	1,935.8	0.00	0.00	0.00
4,880.0	29.62	66.48	4,396.8	780.5	1,793.0	1,955.6	0.00	0.00	0.00
4,920.0	29.62	66.48	4,431.6	788.4	1,811.2	1,975.3	0.00	0.00	0.00
4,960.0	29.62	66.48	4,466.3	796.3	1,829.3	1,995.1	0.00	0.00	0.00
5,000.0	29.62	66.48	4,501.1	804.2	1,847.4	2,014.9	0.00	0.00	0.00
5,040.0	29.62	66.48	4,535.9	812.1	1,865.6	2,034.7	0.00	0.00	0.00
5,080.0	29.62	66.48	4,570.7	820.0	1,883.7	2,054.4	0.00	0.00	0.00
5,120.0	29.62	66.48	4,605.4	827.9	1,901.8	2,074.2	0.00	0.00	0.00
5,160.0	29.62	66.48	4,640.2	835.8	1,919.9	2,094.0	0.00	0.00	0.00
5,200.0	29.62	66.48	4,675.0	843.7	1,938.1	2,113.7	0.00	0.00	0.00
5,240.0	29.62	66.48	4,709.8	851.6	1,956.2	2,133.5	0.00	0.00	0.00
5,280.0	29.62	66.48	4,744.5	859.5	1,974.3	2,153.3	0.00	0.00	0.00
5,320.0	29.62	66.48	4,779.3	867.3	1,992.5	2,173.1	0.00	0.00	0.00
5,360.0	29.62	66.48	4,814.1	875.2	2,010.6	2,192.8	0.00	0.00	0.00
5,400.0	29.62	66.48	4,848.8	883.1	2,028.7	2,212.6	0.00	0.00	0.00
5,440.0	29.62	66.48	4,883.6	891.0	2,046.8	2,232.4	0.00	0.00	0.00
5,472.6	29.62	66.48	4,912.0	897.5	2,061.6	2,248.5	0.00	0.00	0.00
5,480.0	29.51	66.48	4,918.4	898.9	2,065.0	2,252.1	1.50	-1.50	0.00
5,520.0	28.91	66.48	4,953.3	906.7	2,082.9	2,271.7	1.50	-1.50	0.00
5,560.0	28.31	66.48	4,988.4	914.3	2,100.4	2,290.8	1.50	-1.50	0.00
5,600.0	27.71	66.48	5,023.7	921.8	2,117.6	2,309.6	1.50	-1.50	0.00
5,640.0	27.11	66.48	5,059.2	929.2	2,134.5	2,328.0	1.50	-1.50	0.00
5,680.0	26.51	66.48	5,094.9	936.4	2,151.1	2,346.1	1.50	-1.50	0.00
5,720.0	25.91	66.48	5,130.8	943.5	2,167.3	2,363.7	1.50	-1.50	0.00
5,760.0	25.31	66.48	5,166.9	950.4	2,183.1	2,381.0	1.50	-1.50	0.00
5,800.0	24.71	66.48	5,203.1	957.1	2,198.6	2,397.9	1.50	-1.50	0.00
5,840.0	24.11	66.48	5,239.6	963.7	2,213.8	2,414.5	1.50	-1.50	0.00
5,880.0	23.51	66.48	5,276.2	970.1	2,228.6	2,430.6	1.50	-1.50	0.00
5,920.0	22.91	66.48	5,312.9	976.4	2,243.1	2,446.4	1.50	-1.50	0.00
5,960.0	22.31	66.48	5,349.9	982.6	2,257.2	2,461.7	1.50	-1.50	0.00
6,000.0	21.71	66.48	5,386.9	988.6	2,270.9	2,476.7	1.50	-1.50	0.00
6,040.0	21.11	66.48	5,424.2	994.4	2,284.3	2,491.3	1.50	-1.50	0.00
6,080.0	20.51	66.48	5,461.6	1,000.1	2,297.3	2,505.6	1.50	-1.50	0.00
6,120.0	19.91	66.48	5,499.1	1,005.6	2,310.0	2,519.4	1.50	-1.50	0.00
6,160.0	19.31	66.48	5,536.8	1,010.9	2,322.3	2,532.8	1.50	-1.50	0.00
6,200.0	18.71	66.48	5,574.6	1,016.1	2,334.2	2,545.8	1.50	-1.50	0.00
6,240.0	18.11	66.48	5,612.6	1,021.2	2,345.8	2,558.5	1.50	-1.50	0.00
6,280.0	17.51	66.48	5,650.6	1,026.1	2,357.1	2,570.7	1.50	-1.50	0.00
6,320.0	16.91	66.48	5,688.8	1,030.8	2,367.9	2,582.5	1.50	-1.50	0.00
6,360.0	16.31	66.48	5,727.2	1,035.4	2,378.4	2,594.0	1.50	-1.50	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Company:	Mineral Resources Inc	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Project:	SEC.2-T5N-R66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site:	BESTWAY HOR PAD 2-5N-66W	North Reference:	True
Well:	POUDRE TRAIL 5 2-2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 9 2012)		

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)	
6,400.0	15.71	66.48	5,765.6	1,039.8	2,388.5	2,605.0	1.50	-1.50	0.00	
6,440.0	15.11	66.48	5,804.2	1,044.0	2,398.3	2,615.6	1.50	-1.50	0.00	
6,480.0	14.51	66.48	5,842.9	1,048.1	2,407.6	2,625.9	1.50	-1.50	0.00	
6,520.0	13.91	66.48	5,881.6	1,052.0	2,416.6	2,635.7	1.50	-1.50	0.00	
6,560.0	13.31	66.48	5,920.5	1,055.8	2,425.3	2,645.1	1.50	-1.50	0.00	
6,600.0	12.71	66.48	5,959.5	1,059.4	2,433.5	2,654.1	1.50	-1.50	0.00	
6,640.0	12.11	66.48	5,998.5	1,062.8	2,441.4	2,662.7	1.50	-1.50	0.00	
6,680.0	11.51	66.48	6,037.7	1,066.1	2,448.9	2,670.9	1.50	-1.50	0.00	
6,720.0	10.91	66.48	6,076.9	1,069.2	2,456.0	2,678.7	1.50	-1.50	0.00	
6,760.0	10.31	66.48	6,116.2	1,072.1	2,462.8	2,686.0	1.50	-1.50	0.00	
6,800.0	9.71	66.48	6,155.6	1,074.9	2,469.2	2,693.0	1.50	-1.50	0.00	
6,840.0	9.11	66.48	6,195.1	1,077.5	2,475.2	2,699.5	1.50	-1.50	0.00	
6,880.0	8.51	66.48	6,234.6	1,079.9	2,480.8	2,705.7	1.50	-1.50	0.00	
6,920.0	7.91	66.48	6,274.2	1,082.2	2,486.0	2,711.4	1.50	-1.50	0.00	
6,960.0	7.31	66.48	6,313.9	1,084.3	2,490.9	2,716.7	1.50	-1.50	0.00	
7,000.0	6.71	66.48	6,353.6	1,086.3	2,495.4	2,721.5	1.50	-1.50	0.00	
7,040.0	6.11	66.48	6,393.3	1,088.1	2,499.5	2,726.0	1.50	-1.50	0.00	
7,080.0	5.51	66.48	6,433.1	1,089.7	2,503.2	2,730.1	1.50	-1.50	0.00	
7,120.0	4.91	66.48	6,472.9	1,091.1	2,506.5	2,733.7	1.50	-1.50	0.00	
7,160.0	4.31	66.48	6,512.8	1,092.4	2,509.5	2,736.9	1.50	-1.50	0.00	
7,200.0	3.71	66.48	6,552.7	1,093.5	2,512.0	2,739.7	1.50	-1.50	0.00	
7,240.0	3.11	66.48	6,592.6	1,094.5	2,514.2	2,742.1	1.50	-1.50	0.00	
7,280.0	2.51	66.48	6,632.6	1,095.3	2,516.0	2,744.1	1.50	-1.50	0.00	
7,320.0	1.91	66.48	6,672.6	1,095.9	2,517.4	2,745.6	1.50	-1.50	0.00	
7,347.5	1.50	66.48	6,700.0	1,096.2	2,518.2	2,746.4	1.50	-1.50	0.00	
TARGET CIRCLE 1334'FNL & 1329'FWL										
7,347.7	1.50	66.48	6,700.2	1,096.2	2,518.2	2,746.4	1.50	-1.50	0.00	
LEGAL BOX 800' X 800', 1338'FNL & 1338'FWL										
7,360.0	1.31	66.48	6,712.5	1,096.3	2,518.4	2,746.7	1.50	-1.50	0.00	
7,400.0	0.71	66.48	6,752.5	1,096.6	2,519.1	2,747.4	1.50	-1.50	0.00	
7,440.0	0.11	66.48	6,792.5	1,096.7	2,519.4	2,747.7	1.50	-1.50	0.00	
7,447.5	0.00	0.00	6,800.0	1,096.7	2,519.4	2,747.7	1.50	-1.50	0.00	
BHL 1334'FNL & 1329'FWL										
7,480.0	0.00	0.00	6,832.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,520.0	0.00	0.00	6,872.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,560.0	0.00	0.00	6,912.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,600.0	0.00	0.00	6,952.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,640.0	0.00	0.00	6,992.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,680.0	0.00	0.00	7,032.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,720.0	0.00	0.00	7,072.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,760.0	0.00	0.00	7,112.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,152.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,840.0	0.00	0.00	7,192.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,880.0	0.00	0.00	7,232.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,920.0	0.00	0.00	7,272.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
7,960.0	0.00	0.00	7,312.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,352.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
8,040.0	0.00	0.00	7,392.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
8,080.0	0.00	0.00	7,432.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
8,120.0	0.00	0.00	7,472.5	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	
8,147.5	0.00	0.00	7,500.0	1,096.7	2,519.4	2,747.7	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Company:	Mineral Resources Inc	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Project:	SEC.2-T5N-R66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site:	BESTWAY HOR PAD 2-5N-66W	North Reference:	True
Well:	POUDRE TRAIL 5 2-2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (FEB 9 2012)		

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)		
BHL 1334'FNL & 1329' (1334' FNL) - plan hits target center - Point	0.00	0.00	6,800.0	1,096.7	2,519.4	1,401,792.83	3,214,282.22	40.433770	-104.730220
LEGAL BOX 800' X 800' (800' X 800') - plan misses target center by 10.8ft at 7347.7ft MD (6700.2 TVD, 1096.2 N, 2518.2 E) - Rectangle (sides W800.0 H800.0 D800.0)	0.00	0.00	6,700.0	1,092.7	2,528.4	1,401,788.88	3,214,291.28	40.433759	-104.730188
TARGET CIRCLE 1334' (1334' FNL) - plan misses target center by 1.3ft at 7347.5ft MD (6700.0 TVD, 1096.2 N, 2518.2 E) - Circle (radius 75.0)	0.00	0.00	6,700.0	1,096.7	2,519.4	1,401,792.83	3,214,282.22	40.433770	-104.730220



Mineral Resources Inc

SEC.2-T5N-R66W

BESTWAY HOR PAD 2-5N-66W

POUDRE TRAIL 5 2-2-1

Wellbore #1

PLAN 1 (FEB 9 2012)

Anticollision Report

15 February, 2012

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Project:	SEC.2-T5N-R66W	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Reference Site:	BESTWAY HOR PAD 2-5N-66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site Error:	0.0ft	North Reference:	True
Reference Well:	POUDRE TRAIL 5 2-2-1	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 (FEB 9 2012)	Offset TVD Reference:	Offset Datum

Reference	PLAN 1 (FEB 9 2012)		
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 2/15/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,147.5	PLAN 1 (FEB 9 2012) (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						
BESTWAY HOR PAD 2-5N-66W						
BESTWAY 12-2 - Wellbore #1 - PLAN 1 (FEB 9 2012)	200.0	199.0	43.7	43.0	65.051	CC
BESTWAY 12-2 - Wellbore #1 - PLAN 1 (FEB 9 2012)	300.0	298.0	44.1	43.0	39.692	ES
BESTWAY 12-2 - Wellbore #1 - PLAN 1 (FEB 9 2012)	1,700.0	1,680.9	146.7	131.1	9.396	SF
BESTWAY 6-11 - Wellbore #1 - PLAN 1 (FEB 9 2012)	200.0	201.0	18.2	17.5	26.913	CC, ES
BESTWAY 6-11 - Wellbore #1 - PLAN 1 (FEB 9 2012)	500.0	500.5	28.4	26.3	13.880	SF

Offset Design BESTWAY HOR PAD 2-5N-66W - BESTWAY 12-2 - Wellbore #1 - PLAN 1 (FEB 9 2012)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	43.7	0.0	43.7					
100.0	100.0	99.0	99.0	0.1	0.1	0.00	43.7	0.0	43.7	43.5	0.22	195.479		
200.0	200.0	199.0	199.0	0.3	0.3	0.00	43.7	0.0	43.7	43.0	0.67	65.051	CC	
300.0	300.0	298.0	298.0	0.6	0.6	-66.88	44.8	1.3	44.1	43.0	1.11	39.692	ES	
400.0	399.8	397.0	396.9	0.8	0.8	-67.96	48.1	5.1	45.4	43.8	1.56	29.023		
500.0	499.5	496.0	495.5	1.0	1.0	-69.62	53.7	11.6	47.6	45.5	2.06	23.145		
600.0	598.7	594.9	593.7	1.3	1.3	-71.67	61.5	20.6	50.7	48.1	2.61	19.456		
700.0	697.5	693.8	691.3	1.7	1.6	-73.95	71.4	32.2	54.8	51.6	3.24	16.936		
800.0	795.6	792.6	788.4	2.0	2.0	-76.28	83.6	46.3	60.0	56.0	3.97	15.114		
900.0	893.1	891.3	884.6	2.5	2.4	-78.55	97.9	62.9	66.1	61.3	4.81	13.747		
1,000.0	989.6	989.9	979.9	3.0	2.9	-80.66	114.3	82.0	73.3	67.5	5.77	12.696		
1,100.0	1,085.3	1,088.4	1,074.3	3.5	3.5	-82.58	132.9	103.6	81.5	74.6	6.86	11.874		
1,200.0	1,179.8	1,186.8	1,167.4	4.2	4.1	-84.28	153.5	127.5	90.8	82.7	8.09	11.220		
1,300.0	1,273.2	1,285.8	1,260.2	4.9	4.7	-86.10	176.0	153.6	100.8	91.4	9.44	10.674		
1,400.0	1,365.2	1,385.1	1,353.2	5.7	5.4	-89.22	198.7	180.0	111.0	100.1	10.92	10.165		
1,500.0	1,455.8	1,484.1	1,445.9	6.5	6.1	-93.40	221.4	206.4	121.6	109.1	12.47	9.752		
1,600.0	1,544.9	1,582.7	1,538.3	7.4	6.8	-98.32	244.0	232.6	133.3	119.3	14.06	9.485		
1,681.1	1,616.0	1,662.4	1,612.9	8.2	7.3	-102.63	262.2	253.8	144.0	128.7	15.32	9.399		
1,700.0	1,632.4	1,680.9	1,630.2	8.4	7.5	-103.68	266.5	258.7	146.7	131.1	15.61	9.396	SF	
1,800.0	1,719.4	1,778.9	1,721.9	9.5	8.1	-108.68	288.9	284.7	161.6	144.5	17.09	9.456		
1,900.0	1,806.3	1,876.8	1,813.7	10.5	8.8	-112.83	311.3	310.8	177.5	159.0	18.49	9.600		
2,000.0	1,893.2	1,974.8	1,905.4	11.5	9.5	-116.29	333.8	336.8	194.2	174.4	19.84	9.791		

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 POUDRE TRAIL 5 2-2-1
Project:	SEC.2-T5N-R66W	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Reference Site:	BESTWAY HOR PAD 2-5N-66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site Error:	0.0ft	North Reference:	True
Reference Well:	POUDRE TRAIL 5 2-2-1	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 (FEB 9 2012)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,100.0	1,980.1	2,072.8	1,997.1	12.6	10.2	-119.20	356.2	362.9	211.5	190.3	21.14	10.004	
2,200.0	2,067.1	2,170.7	2,088.9	13.6	10.9	-121.66	378.6	388.9	229.2	206.8	22.41	10.226	
2,300.0	2,154.0	2,268.7	2,180.6	14.7	11.6	-123.78	401.0	415.0	247.3	223.6	23.66	10.449	
2,400.0	2,240.9	2,366.7	2,272.4	15.7	12.3	-125.60	423.5	441.0	265.6	240.7	24.90	10.668	
2,500.0	2,327.9	2,464.6	2,364.1	16.8	13.0	-127.19	445.9	467.1	284.2	258.1	26.12	10.879	
2,600.0	2,414.8	2,562.6	2,455.9	17.8	13.7	-128.58	468.3	493.1	303.0	275.7	27.34	11.082	
2,700.0	2,501.7	2,660.6	2,547.6	18.9	14.4	-129.82	490.8	519.1	321.9	293.4	28.55	11.276	
2,800.0	2,588.7	2,758.6	2,639.3	19.9	15.1	-130.91	513.2	545.2	341.0	311.2	29.75	11.460	
2,900.0	2,675.6	2,856.5	2,731.1	21.0	15.8	-131.89	535.6	571.2	360.1	329.2	30.96	11.634	
3,000.0	2,762.5	2,954.5	2,822.8	22.1	16.5	-132.77	558.1	597.3	379.4	347.2	32.15	11.799	
3,100.0	2,849.4	3,052.5	2,914.6	23.1	17.2	-133.57	580.5	623.3	398.7	365.4	33.35	11.956	
3,200.0	2,936.4	3,150.4	3,006.3	24.2	17.9	-134.29	602.9	649.4	418.1	383.6	34.54	12.104	
3,300.0	3,023.3	3,248.4	3,098.1	25.2	18.6	-134.94	625.3	675.4	437.6	401.8	35.74	12.244	
3,400.0	3,110.2	3,346.4	3,189.8	26.3	19.3	-135.55	647.8	701.5	457.1	420.2	36.93	12.377	
3,500.0	3,197.2	3,444.3	3,281.5	27.4	20.0	-136.10	670.2	727.5	476.7	438.5	38.12	12.503	
3,600.0	3,284.1	3,542.3	3,373.3	28.4	20.7	-136.61	692.6	753.6	496.2	456.9	39.31	12.623	
3,700.0	3,371.0	3,640.3	3,465.0	29.5	21.4	-137.08	715.1	779.6	515.9	475.4	40.50	12.736	
3,800.0	3,458.0	3,738.3	3,556.8	30.5	22.1	-137.52	737.5	805.7	535.5	493.8	41.69	12.844	
3,900.0	3,544.9	3,836.2	3,648.5	31.6	22.8	-137.92	759.9	831.7	555.2	512.3	42.88	12.947	
4,000.0	3,631.8	3,934.2	3,740.2	32.7	23.5	-138.30	782.3	857.8	574.9	530.9	44.07	13.045	
4,100.0	3,718.8	4,032.2	3,832.0	33.7	24.2	-138.65	804.8	883.8	594.7	549.4	45.26	13.138	
4,200.0	3,805.7	4,130.1	3,923.7	34.8	24.9	-138.98	827.2	909.8	614.4	568.0	46.45	13.226	
4,300.0	3,892.6	4,228.1	4,015.5	35.9	25.6	-139.29	849.6	935.9	634.2	586.6	47.64	13.311	
4,400.0	3,979.5	4,326.1	4,107.2	36.9	26.3	-139.58	872.1	961.9	654.0	605.2	48.83	13.392	
4,500.0	4,066.5	4,424.0	4,199.0	38.0	27.0	-139.85	894.5	988.0	673.8	623.8	50.02	13.469	
4,600.0	4,153.4	4,522.0	4,290.7	39.0	27.7	-140.11	916.9	1,014.0	693.6	642.4	51.22	13.543	
4,700.0	4,240.3	4,620.0	4,382.4	40.1	28.4	-140.36	939.4	1,040.1	713.4	661.0	52.41	13.614	
4,800.0	4,327.3	4,718.0	4,474.2	41.2	29.1	-140.59	961.8	1,066.1	733.3	679.7	53.60	13.682	
4,900.0	4,414.2	4,800.0	4,551.2	42.2	29.7	-140.81	980.2	1,087.5	753.7	699.0	54.65	13.792	
5,000.0	4,501.1	4,890.2	4,636.8	43.3	30.1	-141.20	998.8	1,109.1	775.7	720.1	55.52	13.970	
5,100.0	4,588.1	4,973.5	4,716.6	44.4	30.5	-141.70	1,014.4	1,127.3	799.4	743.1	56.26	14.209	
5,200.0	4,675.0	5,055.8	4,796.1	45.4	30.9	-142.31	1,028.4	1,143.4	824.9	768.0	56.88	14.502	
5,300.0	4,761.9	5,136.9	4,874.9	46.5	31.2	-143.00	1,040.6	1,157.7	852.2	794.8	57.39	14.849	
5,400.0	4,848.8	5,216.7	4,953.1	47.6	31.5	-143.76	1,051.3	1,170.1	881.3	823.5	57.80	15.248	
5,472.6	4,912.0	5,273.8	5,009.2	48.3	31.6	-144.36	1,058.0	1,177.9	903.5	845.5	58.03	15.571	
5,500.0	4,935.8	5,300.0	5,035.0	48.6	31.7	-144.71	1,060.9	1,181.2	912.1	854.1	58.05	15.714	
5,600.0	5,023.7	5,372.7	5,106.9	49.4	31.9	-145.75	1,068.0	1,189.5	943.4	885.2	58.13	16.229	
5,700.0	5,112.9	5,449.6	5,183.3	50.2	32.1	-146.80	1,074.2	1,196.7	974.5	916.3	58.13	16.762	
5,800.0	5,203.1	5,525.9	5,259.1	51.0	32.3	-147.81	1,079.1	1,202.3	1,005.4	947.3	58.09	17.307	
5,900.0	5,294.5	5,600.0	5,333.1	51.7	32.4	-148.78	1,082.5	1,206.3	1,036.1	978.1	58.01	17.860	
6,000.0	5,386.9	5,676.4	5,409.4	52.4	32.5	-149.74	1,084.7	1,208.9	1,066.6	1,008.7	57.85	18.436	
6,100.0	5,480.3	5,750.8	5,483.7	53.0	32.6	-150.66	1,085.6	1,210.0	1,096.9	1,039.2	57.67	19.021	
6,200.0	5,574.6	5,840.6	5,573.6	53.6	32.6	-151.66	1,085.7	1,210.0	1,126.4	1,069.0	57.36	19.636	
6,300.0	5,669.7	5,935.8	5,668.7	54.1	32.7	-152.57	1,085.7	1,210.0	1,153.9	1,096.9	57.08	20.216	
6,400.0	5,765.6	6,031.7	5,764.6	54.6	32.8	-153.38	1,085.7	1,210.0	1,179.4	1,122.6	56.85	20.747	
6,500.0	5,862.2	6,128.3	5,861.2	55.1	32.9	-154.09	1,085.7	1,210.0	1,202.7	1,146.1	56.65	21.230	
6,600.0	5,959.5	6,225.5	5,958.5	55.5	32.9	-154.70	1,085.7	1,210.0	1,223.8	1,167.3	56.49	21.664	
6,700.0	6,057.3	6,323.3	6,056.3	55.8	33.0	-155.23	1,085.7	1,210.0	1,242.7	1,186.3	56.35	22.051	
6,800.0	6,155.6	6,421.7	6,154.6	56.1	33.1	-155.68	1,085.7	1,210.0	1,259.2	1,203.0	56.24	22.389	
6,900.0	6,254.4	6,520.4	6,253.4	56.4	33.2	-156.05	1,085.7	1,210.0	1,273.5	1,217.3	56.15	22.678	
7,000.0	6,353.6	6,600.0	6,333.0	56.7	33.3	-156.32	1,085.7	1,210.0	1,285.5	1,229.4	56.09	22.918	
7,100.0	6,453.0	6,631.4	6,364.3	56.9	33.3	-156.46	1,085.7	1,208.8	1,299.0	1,243.0	56.03	23.184	

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 POUDRE TRAIL 5 2-2-1
Project:	SEC.2-T5N-R66W	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Reference Site:	BESTWAY HOR PAD 2-5N-66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site Error:	0.0ft	North Reference:	True
Reference Well:	POUDRE TRAIL 5 2-2-1	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 (FEB 9 2012)	Offset TVD Reference:	Offset Datum

Offset Design BESTWAY HOR PAD 2-5N-66W - BESTWAY 12-2 - Wellbore #1 - PLAN 1 (FEB 9 2012)												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	6,552.7	6,650.0	6,382.9	57.0	33.3	-156.59	1,085.6	1,207.2	1,315.7	1,259.8	55.93	23.522	
7,300.0	6,652.6	6,700.0	6,432.3	57.1	33.3	-156.75	1,085.6	1,199.7	1,335.2	1,279.5	55.79	23.935	
7,400.0	6,752.5	6,700.0	6,432.3	57.2	33.3	-156.89	1,085.6	1,199.7	1,357.5	1,301.9	55.59	24.421	
7,447.5	6,800.0	6,727.1	6,458.6	57.2	33.2	-90.49	1,085.5	1,193.6	1,368.8	1,313.3	55.49	24.669	
7,500.0	6,852.5	6,750.0	6,480.7	57.3	33.2	-90.49	1,085.4	1,187.4	1,382.6	1,327.1	55.54	24.892	
7,600.0	6,952.5	6,750.0	6,480.7	57.3	33.2	-90.49	1,085.4	1,187.4	1,412.7	1,357.1	55.64	25.392	
7,700.0	7,052.5	6,800.0	6,527.8	57.4	33.1	-90.49	1,085.2	1,170.6	1,446.9	1,391.2	55.74	25.957	
7,800.0	7,152.5	6,800.0	6,527.8	57.4	33.1	-90.49	1,085.2	1,170.6	1,486.0	1,430.2	55.84	26.613	
7,900.0	7,252.5	6,850.0	6,573.0	57.5	32.9	-90.49	1,085.0	1,149.4	1,528.9	1,472.9	55.94	27.331	
8,000.0	7,352.5	6,850.0	6,573.0	57.6	32.9	-90.49	1,085.0	1,149.4	1,575.8	1,519.7	56.04	28.121	
8,100.0	7,452.5	6,900.0	6,616.0	57.6	32.8	-90.49	1,084.7	1,123.9	1,626.5	1,570.4	56.13	28.979	
8,147.5	7,500.0	6,900.0	6,616.0	57.7	32.8	-90.49	1,084.7	1,123.9	1,651.4	1,595.2	56.18	29.397	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Project:	SEC.2-T5N-R66W	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Reference Site:	BESTWAY HOR PAD 2-5N-66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site Error:	0.0ft	North Reference:	True
Reference Well:	POUDRE TRAIL 5 2-2-1	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 (FEB 9 2012)	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
0.0	0.0	1.0	1.0	0.0	0.0	-180.00	-18.2	0.0	18.2	18.2	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-180.00	-18.2	0.0	18.2	18.0	0.23	80.205	
200.0	200.0	201.0	201.0	0.3	0.3	-180.00	-18.2	0.0	18.2	17.5	0.68	26.913 CC, ES	
300.0	300.0	301.0	301.0	0.6	0.6	118.35	-18.2	0.0	19.0	17.8	1.12	16.906	
400.0	399.8	400.8	400.8	0.8	0.8	130.41	-18.2	0.0	21.9	20.4	1.58	13.914	
500.0	499.5	500.5	500.5	1.0	1.0	143.83	-18.2	0.0	28.4	26.3	2.05	13.880 SF	
600.0	598.7	599.7	599.7	1.3	1.2	154.38	-18.2	0.0	38.9	36.4	2.51	15.473	
700.0	697.5	698.5	698.5	1.7	1.5	161.54	-18.2	0.0	53.5	50.5	2.98	17.932	
800.0	795.6	796.6	796.6	2.0	1.7	166.27	-18.2	0.0	71.8	68.4	3.45	20.842	
900.0	893.1	894.1	894.1	2.5	1.9	169.45	-18.2	0.0	93.9	89.9	3.91	23.989	
1,000.0	989.6	990.6	990.6	3.0	2.1	171.64	-18.2	0.0	119.4	115.0	4.38	27.264	
1,100.0	1,085.3	1,086.3	1,086.3	3.5	2.3	173.21	-18.2	0.0	148.4	143.6	4.85	30.606	
1,200.0	1,179.8	1,180.8	1,180.8	4.2	2.5	174.36	-18.2	0.0	180.8	175.5	5.32	33.978	
1,300.0	1,273.2	1,274.2	1,274.2	4.9	2.8	175.23	-18.2	0.0	216.5	210.7	5.80	37.360	
1,400.0	1,365.2	1,366.2	1,366.2	5.7	3.0	175.90	-18.2	0.0	255.5	249.2	6.27	40.737	
1,500.0	1,455.8	1,456.8	1,456.8	6.5	3.2	176.42	-18.2	0.0	297.7	290.9	6.75	44.101	
1,600.0	1,544.9	1,541.5	1,541.5	7.4	3.3	176.79	-18.4	-0.2	343.3	336.1	7.21	47.588	
1,681.1	1,616.0	1,600.0	1,600.0	8.2	3.5	176.91	-19.6	-1.1	384.0	376.4	7.58	50.667	
1,700.0	1,632.4	1,618.9	1,618.8	8.4	3.5	176.94	-20.2	-1.5	393.9	386.2	7.68	51.269	
1,800.0	1,719.4	1,693.5	1,693.4	9.5	3.6	176.96	-23.4	-4.0	447.4	439.2	8.20	54.588	
1,900.0	1,806.3	1,766.0	1,765.6	10.5	3.8	176.86	-28.0	-7.5	502.9	494.2	8.71	57.708	
2,000.0	1,893.2	1,836.2	1,835.4	11.5	3.9	176.69	-33.9	-11.9	560.2	551.0	9.24	60.655	
2,100.0	1,980.1	1,905.0	1,903.7	12.6	4.0	176.46	-41.0	-17.3	619.3	609.5	9.76	63.447	
2,200.0	2,067.1	1,985.1	1,983.0	13.6	4.2	176.20	-49.8	-24.1	679.2	668.9	10.31	65.900	
2,300.0	2,154.0	2,065.2	2,062.3	14.7	4.4	175.98	-58.7	-30.8	739.0	728.2	10.85	68.113	
2,400.0	2,240.9	2,145.2	2,141.6	15.7	4.6	175.79	-67.6	-37.6	798.9	787.5	11.40	70.094	
2,500.0	2,327.9	2,225.3	2,220.8	16.8	4.8	175.63	-76.5	-44.3	858.8	846.8	11.95	71.864	
2,600.0	2,414.8	2,305.4	2,300.1	17.8	5.1	175.49	-85.3	-51.1	918.7	906.1	12.51	73.439	
2,700.0	2,501.7	2,385.5	2,379.4	18.9	5.3	175.37	-94.2	-57.8	978.5	965.5	13.07	74.858	
2,800.0	2,588.7	2,465.5	2,458.7	19.9	5.5	175.26	-103.1	-64.6	1,038.4	1,024.8	13.64	76.148	
2,900.0	2,675.6	2,545.6	2,538.0	21.0	5.7	175.16	-112.0	-71.3	1,098.3	1,084.1	14.21	77.316	
3,000.0	2,762.5	2,625.7	2,617.3	22.1	6.0	175.07	-120.9	-78.1	1,158.2	1,143.4	14.78	78.380	
3,100.0	2,849.4	2,705.7	2,696.6	23.1	6.2	175.00	-129.7	-84.9	1,218.1	1,202.7	15.35	79.351	
3,200.0	2,936.4	2,785.8	2,775.9	24.2	6.5	174.92	-138.6	-91.6	1,278.0	1,262.1	15.93	80.237	
3,300.0	3,023.3	2,865.9	2,855.2	25.2	6.7	174.86	-147.5	-98.4	1,337.9	1,321.4	16.51	81.050	
3,400.0	3,110.2	2,946.0	2,934.5	26.3	7.0	174.80	-156.4	-105.1	1,397.8	1,380.7	17.09	81.799	
3,500.0	3,197.2	3,026.0	3,013.7	27.4	7.2	174.75	-165.3	-111.9	1,457.7	1,440.0	17.67	82.490	
3,600.0	3,284.1	3,106.1	3,093.0	28.4	7.5	174.70	-174.1	-118.6	1,517.6	1,499.3	18.26	83.129	
3,700.0	3,371.0	3,186.2	3,172.3	29.5	7.7	174.65	-183.0	-125.4	1,577.5	1,558.6	18.84	83.721	
3,800.0	3,458.0	3,266.2	3,251.6	30.5	8.0	174.61	-191.9	-132.1	1,637.4	1,617.9	19.43	84.269	
3,900.0	3,544.9	3,346.3	3,330.9	31.6	8.2	174.57	-200.8	-138.9	1,697.2	1,677.2	20.02	84.780	
4,000.0	3,631.8	3,426.4	3,410.2	32.7	8.5	174.53	-209.6	-145.6	1,757.1	1,736.5	20.61	85.257	
4,100.0	3,718.8	3,506.5	3,489.5	33.7	8.8	174.50	-218.5	-152.4	1,817.0	1,795.8	21.20	85.702	
4,200.0	3,805.7	3,586.5	3,568.8	34.8	9.0	174.46	-227.4	-159.2	1,876.9	1,855.1	21.80	86.118	
4,300.0	3,892.6	3,666.6	3,648.1	35.9	9.3	174.43	-236.3	-165.9	1,936.8	1,914.5	22.39	86.507	
4,400.0	3,979.5	3,746.7	3,727.4	36.9	9.6	174.41	-245.2	-172.7	1,996.7	1,973.8	22.98	86.872	
4,500.0	4,066.5	3,826.7	3,806.7	38.0	9.8	174.38	-254.0	-179.4	2,056.6	2,033.1	23.58	87.216	
4,600.0	4,153.4	3,906.8	3,885.9	39.0	10.1	174.35	-262.9	-186.2	2,116.5	2,092.4	24.18	87.539	
4,700.0	4,240.3	3,986.9	3,965.2	40.1	10.4	174.33	-271.8	-192.9	2,176.4	2,151.7	24.78	87.843	
4,800.0	4,327.3	4,067.0	4,044.5	41.2	10.6	174.31	-280.7	-199.7	2,236.3	2,211.0	25.38	88.129	
4,900.0	4,414.2	4,147.0	4,123.8	42.2	10.9	174.29	-289.6	-206.4	2,296.2	2,270.3	25.98	88.400	
5,000.0	4,501.1	4,227.1	4,203.1	43.3	11.2	174.26	-298.4	-213.2	2,356.1	2,329.6	26.58	88.656	

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 POUDRE TRAIL 5 2-2-1
Project:	SEC.2-T5N-R66W	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Reference Site:	BESTWAY HOR PAD 2-5N-66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site Error:	0.0ft	North Reference:	True
Reference Well:	POUDRE TRAIL 5 2-2-1	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 (FEB 9 2012)	Offset TVD Reference:	Offset Datum

Offset Design BESTWAY HOR PAD 2-5N-66W - BESTWAY 6-11 - Wellbore #1 - PLAN 1 (FEB 9 2012)												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
5,100.0	4,588.1	4,307.2	4,282.4	44.4	11.4	174.25	-307.3	-220.0	2,416.0	2,388.9	27.18	88.898	
5,200.0	4,675.0	4,387.2	4,361.7	45.4	11.7	174.23	-316.2	-226.7	2,475.9	2,448.2	27.78	89.127	
5,300.0	4,761.9	4,467.3	4,441.0	46.5	12.0	174.21	-325.1	-233.5	2,535.8	2,507.5	28.38	89.344	
5,400.0	4,848.8	4,547.4	4,520.3	47.6	12.3	174.19	-333.9	-240.2	2,595.7	2,566.8	28.99	89.550	
5,472.6	4,912.0	4,605.5	4,577.9	48.3	12.5	174.18	-340.4	-245.1	2,639.3	2,609.8	29.43	89.693	
5,500.0	4,935.8	4,627.5	4,599.6	48.6	12.5	174.21	-342.8	-247.0	2,655.6	2,626.0	29.62	89.653	
5,600.0	5,023.7	5,053.9	5,024.7	49.4	13.4	174.51	-365.2	-264.0	2,707.2	2,676.3	30.85	87.753	
5,700.0	5,112.9	5,143.1	5,113.9	50.2	13.6	174.67	-365.2	-264.0	2,752.3	2,720.9	31.48	87.430	
5,800.0	5,203.1	5,233.4	5,204.1	51.0	13.7	174.82	-365.2	-264.0	2,795.2	2,763.1	32.09	87.117	
5,900.0	5,294.5	5,324.7	5,295.5	51.7	13.9	174.95	-365.2	-264.0	2,835.7	2,803.0	32.67	86.809	
6,000.0	5,386.9	5,417.2	5,387.9	52.4	14.0	175.07	-365.2	-264.0	2,873.7	2,840.5	33.22	86.508	
6,100.0	5,480.3	5,510.5	5,481.3	53.0	14.2	175.18	-365.2	-264.0	2,909.4	2,875.7	33.75	86.214	
6,200.0	5,574.6	5,604.8	5,575.6	53.6	14.3	175.28	-365.2	-264.0	2,942.6	2,908.4	34.25	85.928	
6,300.0	5,669.7	5,699.9	5,670.7	54.1	14.5	175.37	-365.2	-264.0	2,973.4	2,938.6	34.72	85.650	
6,400.0	5,765.6	5,795.8	5,766.6	54.6	14.7	175.45	-365.2	-264.0	3,001.6	2,966.5	35.16	85.380	
6,500.0	5,862.2	5,892.4	5,863.2	55.1	14.8	175.52	-365.2	-264.0	3,027.4	2,991.8	35.57	85.119	
6,600.0	5,959.5	5,989.7	5,960.5	55.5	15.0	175.58	-365.2	-264.0	3,050.6	3,014.6	35.95	84.866	
6,700.0	6,057.3	6,087.5	6,058.3	55.8	15.2	175.63	-365.2	-264.0	3,071.2	3,034.9	36.29	84.622	
6,800.0	6,155.6	6,185.9	6,156.6	56.1	15.3	175.68	-365.2	-264.0	3,089.3	3,052.7	36.61	84.387	
6,900.0	6,254.4	6,284.6	6,255.4	56.4	15.5	175.72	-365.2	-264.0	3,104.9	3,068.0	36.89	84.159	
7,000.0	6,353.6	6,383.8	6,329.1	56.7	15.6	175.75	-365.2	-264.0	3,117.9	3,080.8	37.09	84.055	
7,100.0	6,453.0	6,483.2	6,428.5	56.9	15.7	175.74	-366.9	-264.0	3,130.1	3,092.9	37.21	84.122	
7,200.0	6,552.7	6,582.9	6,528.2	57.0	15.7	175.75	-366.9	-264.0	3,142.1	3,104.9	37.20	84.474	
7,300.0	6,652.6	6,682.8	6,628.1	57.1	15.9	175.67	-373.3	-264.1	3,153.6	3,116.3	37.29	84.571	
7,400.0	6,752.5	6,782.7	6,727.9	57.2	15.9	175.68	-373.3	-264.1	3,165.1	3,127.9	37.21	85.069	
7,447.5	6,800.0	6,830.2	6,775.5	57.2	16.0	-117.93	-378.9	-264.2	3,170.2	3,133.0	37.25	85.102	
7,500.0	6,852.5	6,882.7	6,827.9	57.3	16.0	-118.02	-384.3	-264.2	3,176.4	3,139.1	37.39	84.950	
7,600.0	6,952.5	6,982.7	6,927.9	57.3	16.0	-118.02	-384.3	-264.2	3,190.1	3,152.6	37.52	85.035	
7,700.0	7,052.5	7,082.7	7,027.9	57.4	16.2	-118.27	-400.1	-264.4	3,206.0	3,168.1	37.85	84.706	
7,800.0	7,152.5	7,182.7	7,127.9	57.4	16.2	-118.27	-400.1	-264.4	3,224.2	3,186.3	37.97	84.906	
7,900.0	7,252.5	7,282.7	7,227.9	57.5	16.5	-118.59	-420.3	-264.7	3,245.0	3,206.7	38.34	84.627	
8,000.0	7,352.5	7,382.7	7,327.9	57.6	16.5	-118.59	-420.3	-264.7	3,267.8	3,229.3	38.47	84.936	
8,100.0	7,452.5	7,482.7	7,427.9	57.6	16.6	-118.76	-431.1	-264.8	3,293.0	3,254.3	38.73	85.021	
8,147.5	7,500.0	7,530.2	7,475.5	57.7	16.8	-118.97	-444.7	-265.0	3,306.1	3,267.1	38.94	84.891	

Company: Mineral Resources Inc
Project: SEC.2-T5N-R66W
Reference Site: BESTWAY HOR PAD 2-5N-66W
Site Error: 0.0ft
Reference Well: POUDRE TRAIL 5 2-2-1
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: PLAN 1 (FEB 9 2012)

Local Co-ordinate Reference: Well POUDRE TRAIL 5 2-2-1
TVD Reference: RKB @ 4715.0ft (EST RKB RIG 14)
MD Reference: RKB @ 4715.0ft (EST RKB RIG 14)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference Depths are relative to RKB @ 4715.0ft (EST RKB RIG 14) Coordinates are relative to: POUDRE TRAIL 5 2-2-1
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.49°



Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well POUDRE TRAIL 5 2-2-1
Project:	SEC.2-T5N-R66W	TVD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Reference Site:	BESTWAY HOR PAD 2-5N-66W	MD Reference:	RKB @ 4715.0ft (EST RKB RIG 14)
Site Error:	0.0ft	North Reference:	True
Reference Well:	POUDRE TRAIL 5 2-2-1	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 (FEB 9 2012)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 4715.0ft (EST RKB RIG 14) Coordinates are relative to: POUDRE TRAIL 5 2-2-1
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