



Maralex Resources

La Plata County, CO

Jennie Rose

Jennie Rose 33-7-3 #3B Top Coal

OH

Plan: Plan #1

Standard Planning Report

21 May, 2013

* Drilling Plan subject to
modification depending
on rig and directional
drilling equipment
availability.



Database:	Farmington District	Local Co-ordinate Reference:	Well Jennie Rose 33-7-3 #3B Top Coal
Company:	Maralex Resources	TVD Reference:	GL 6726' & RKB 12' @ 6738.01ft
Project:	La Plata County, CO	MD Reference:	GL 6726' & RKB 12' @ 6738.01ft
Site:	Jennie Rose	North Reference:	True
Well:	Jennie Rose 33-7-3 #3B Top Coal	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	La Plata County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		

Site	Jennie Rose				
Site Position:		Northing:	1,178,086.22 ft	Latitude:	37° 8' 12.660 N
From:	Lat/Long	Easting:	2,387,935.71 ft	Longitude:	107° 35' 59.280 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.29

Well	Jennie Rose 33-7-3 #3B Top Coal					
Well Position	+N/-S	0.00 ft	Northing:	1,178,086.22 ft	Latitude:	37° 8' 12.660 N
	+E/-W	0.00 ft	Easting:	2,387,935.71 ft	Longitude:	107° 35' 59.280 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	6,726.01 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/17/2013	9.64	63.79	50,790

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	80.27

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,534.01	0.00	0.00	2,534.01	0.00	0.00	0.00	0.00	0.00	0.00	
3,032.81	89.78	80.27	2,852.31	53.59	312.55	18.00	18.00	16.09	80.27	
5,881.25	89.78	80.27	2,863.01	535.00	3,120.00	0.00	0.00	0.00	0.00	JR 33-7-3 #3B Top Cc

Database: Farmington District
Company: Maralex Resources
Project: La Plata County, CO
Site: Jennie Rose
Well: Jennie Rose 33-7-3 #3B Top Coal
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Jennie Rose 33-7-3 #3B Top Coal
TVD Reference: GL 6726' & RKB 12' @ 6738.01ft
MD Reference: GL 6726' & RKB 12' @ 6738.01ft
North Reference: True
Survey Calculation Method: Minimum Curvature

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Casing									
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,484.01	0.00	0.00	2,484.01	0.00	0.00	0.00	0.00	0.00	0.00
Intermediate Casing									
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,534.01	0.00	0.00	2,534.01	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	11.88	80.27	2,599.53	1.15	6.72	6.82	18.00	18.00	0.00
2,700.00	29.88	80.27	2,692.58	7.15	41.70	42.31	18.00	18.00	0.00
2,800.00	47.88	80.27	2,770.11	17.72	103.31	104.82	18.00	18.00	0.00
2,900.00	65.88	80.27	2,824.52	31.81	185.52	188.23	18.00	18.00	0.00
2,970.52	78.57	80.27	2,846.01	43.14	251.57	255.25	18.00	18.00	0.00
Fruitland Coal									
3,000.00	83.88	80.27	2,850.50	48.06	280.28	284.37	18.00	18.00	0.00
3,032.81	89.78	80.27	2,852.31	53.59	312.55	317.12	18.00	18.00	0.00
3,100.00	89.78	80.27	2,852.57	64.95	378.78	384.30	0.00	0.00	0.00
3,200.00	89.78	80.27	2,852.94	81.85	477.34	484.30	0.00	0.00	0.00
3,300.00	89.78	80.27	2,853.32	98.75	575.90	584.30	0.00	0.00	0.00
3,400.00	89.78	80.27	2,853.69	115.65	674.46	684.30	0.00	0.00	0.00
3,500.00	89.78	80.27	2,854.07	132.55	773.02	784.30	0.00	0.00	0.00
3,600.00	89.78	80.27	2,854.44	149.45	871.58	884.30	0.00	0.00	0.00
3,700.00	89.78	80.27	2,854.82	166.35	970.14	984.30	0.00	0.00	0.00
3,800.00	89.78	80.27	2,855.19	183.25	1,068.70	1,084.30	0.00	0.00	0.00
3,900.00	89.78	80.27	2,855.57	200.16	1,167.26	1,184.30	0.00	0.00	0.00
4,000.00	89.78	80.27	2,855.94	217.06	1,265.82	1,284.30	0.00	0.00	0.00
4,100.00	89.78	80.27	2,856.32	233.96	1,364.38	1,384.30	0.00	0.00	0.00
4,200.00	89.78	80.27	2,856.69	250.86	1,462.94	1,484.30	0.00	0.00	0.00
4,300.00	89.78	80.27	2,857.07	267.76	1,561.51	1,584.30	0.00	0.00	0.00
4,400.00	89.78	80.27	2,857.45	284.66	1,660.07	1,684.29	0.00	0.00	0.00
4,500.00	89.78	80.27	2,857.82	301.56	1,758.63	1,784.29	0.00	0.00	0.00

Database:	Farmington District	Local Co-ordinate Reference:	Well Jennie Rose 33-7-3 #3B Top Coal
Company:	Maralex Resources	TVD Reference:	GL 6726' & RKB 12' @ 6738.01ft
Project:	La Plata County, CO	MD Reference:	GL 6726' & RKB 12' @ 6738.01ft
Site:	Jennie Rose	North Reference:	True
Well:	Jennie Rose 33-7-3 #3B Top Coal	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
4,600.00	89.78	80.27	2,858.20	318.46	1,857.19	1,884.29	0.00	0.00	0.00
4,700.00	89.78	80.27	2,858.57	335.36	1,955.75	1,984.29	0.00	0.00	0.00
4,800.00	89.78	80.27	2,858.95	352.26	2,054.31	2,084.29	0.00	0.00	0.00
4,900.00	89.78	80.27	2,859.32	369.16	2,152.87	2,184.29	0.00	0.00	0.00
5,000.00	89.78	80.27	2,859.70	386.06	2,251.43	2,284.29	0.00	0.00	0.00
5,100.00	89.78	80.27	2,860.07	402.96	2,349.99	2,384.29	0.00	0.00	0.00
5,200.00	89.78	80.27	2,860.45	419.86	2,448.55	2,484.29	0.00	0.00	0.00
5,300.00	89.78	80.27	2,860.82	436.76	2,547.11	2,584.29	0.00	0.00	0.00
5,400.00	89.78	80.27	2,861.20	453.67	2,645.67	2,684.29	0.00	0.00	0.00
5,500.00	89.78	80.27	2,861.57	470.57	2,744.23	2,784.29	0.00	0.00	0.00
5,600.00	89.78	80.27	2,861.95	487.47	2,842.80	2,884.29	0.00	0.00	0.00
5,700.00	89.78	80.27	2,862.33	504.37	2,941.36	2,984.29	0.00	0.00	0.00
5,800.00	89.78	80.27	2,862.70	521.27	3,039.92	3,084.29	0.00	0.00	0.00
5,881.25	89.78	80.27	2,863.01	535.00	3,120.00	3,165.54	0.00	0.00	0.00
JR 33-7-3 #3B Top Coal Target PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
JR 33-7-3 #3B Top Coal	0.00	0.00	2,863.01	535.00	3,120.00	1,178,550.95	2,391,066.95	37° 8' 17.948 N	107° 35' 20.749 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
500.00	500.00	Surface Casing	9.625	12.250	
2,484.01	2,484.01	Intermediate Casing	7.000	8.750	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,970.52	2,846.01	Fruitland Coal		0.00		



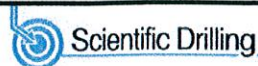
Project: La Plata County, CO
 Site: Jennie Rose
 Well: Jennie Rose 33-7-3 #3B Top Coal
 Wellbore: OH
 Design: Plan #1

PROJECT DETAILS: La Plata County, CO

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Southern Zone
 System Datum: Mean Sea Level
 Local North: True

Plan: Plan #1 (Jennie Rose 33-7-3 #3B Top Coal/OH)

Created By: Janie Collins Date: 16:05, May 21 2013



Azimuths to True North
 Magnetic North: 9.64
 Magnetic Field
 Strength: 50789.9 nT
 Dip Angle: 63.79
 Date: 5/17/2013
 Model: IGRF2010

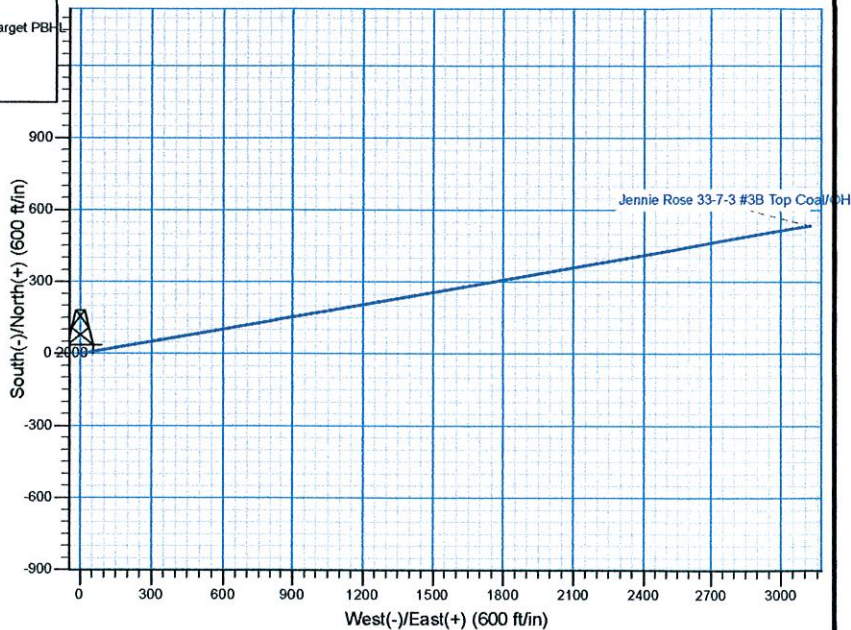
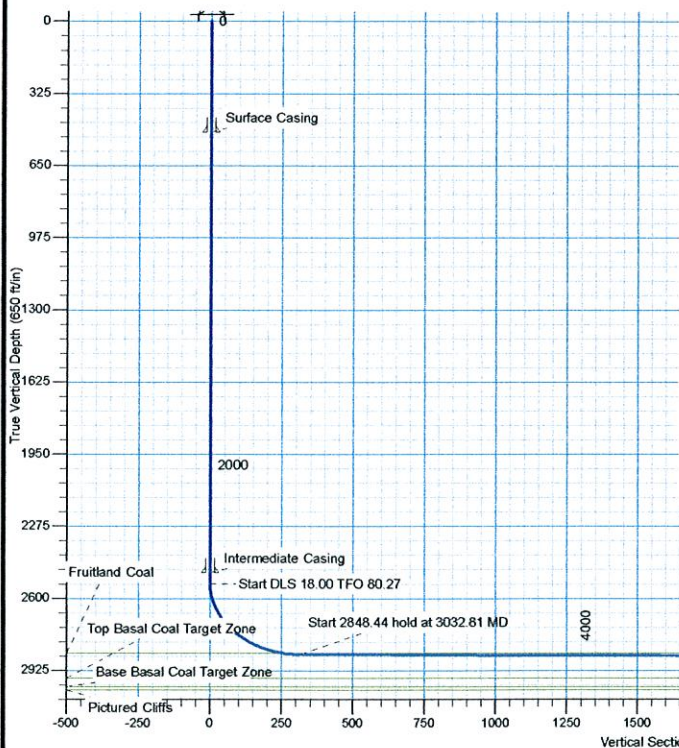
WELL DETAILS: Jennie Rose 33-7-3 #3B Top Coal

GL 6726' & RKB 12' @ 6738.01ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1178086.22	2387935.71	37° 8' 12.660 N	107° 35' 59.280 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2534.01	0.00	0.00	2534.01	0.00	0.00	0.00	0.00	0.00	
3	3032.81	89.78	80.27	2852.31	53.59	312.55	18.00	80.27	317.12	
4	5881.25	89.78	80.27	2863.01	535.00	3120.00	0.00	0.00	3165.54	JR 33-7-3 #3B Top Coal Target PBHL



Vertical Section at 80.27° (500 ft/in)

Jennie Rose 33-7-3 #3B Top Coal/OH/Plan #1
 TD at 5881.25
 JR 33-7-3 #3B Top Coal Target PBHL