



Samson Resources Company

La Plata County, C.O.

SEC 19-T34N-R6W

Melson 34-7-24 #1

Original Hole

Plan: Plan #2

Standard Planning Report

01 September, 2011





Project: La Plata County, C.O.
Site: SEC 19-T34N-R6W
Well: Melson 34-7-24 #1
Wellbore: Original Hole
Design: Plan #2



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Melson 34-7-24 #1, Grid North
Vertical (TVD) Reference: AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Calculation Method: Minimum Curvature

PROJECT DETAILS: La Plata County, C.O.

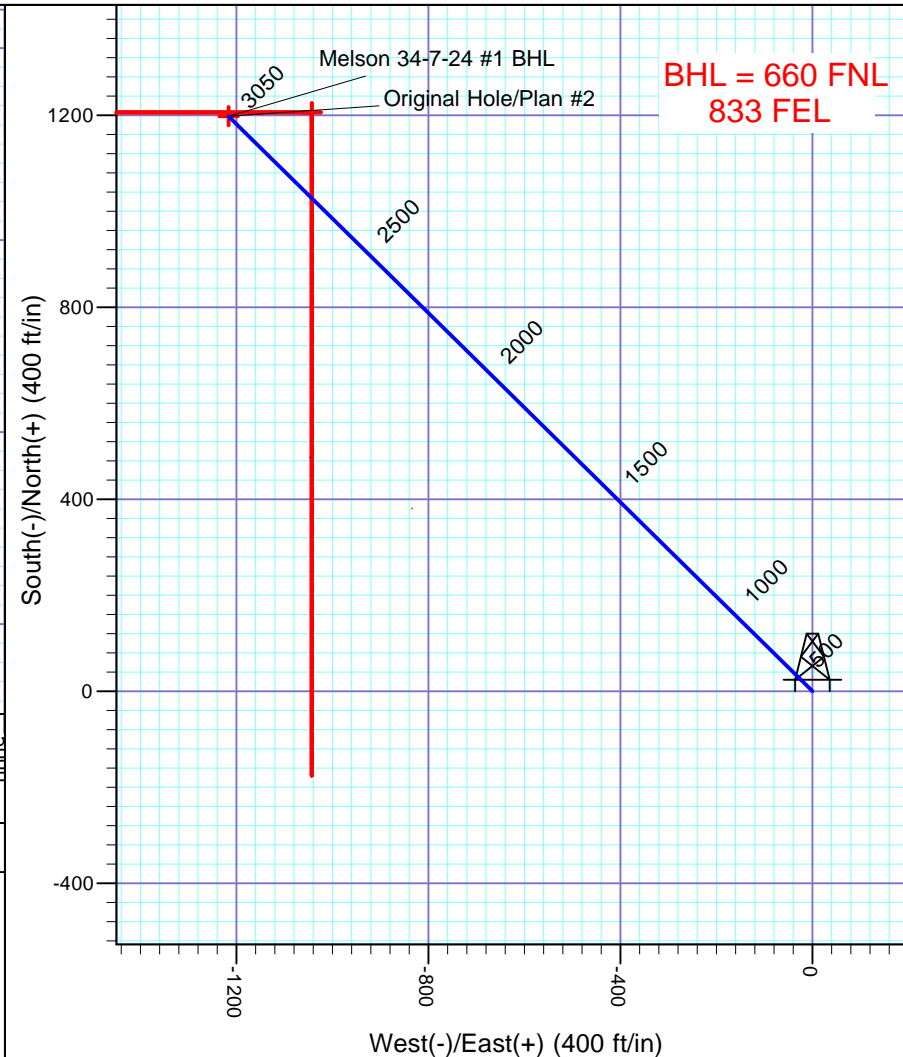
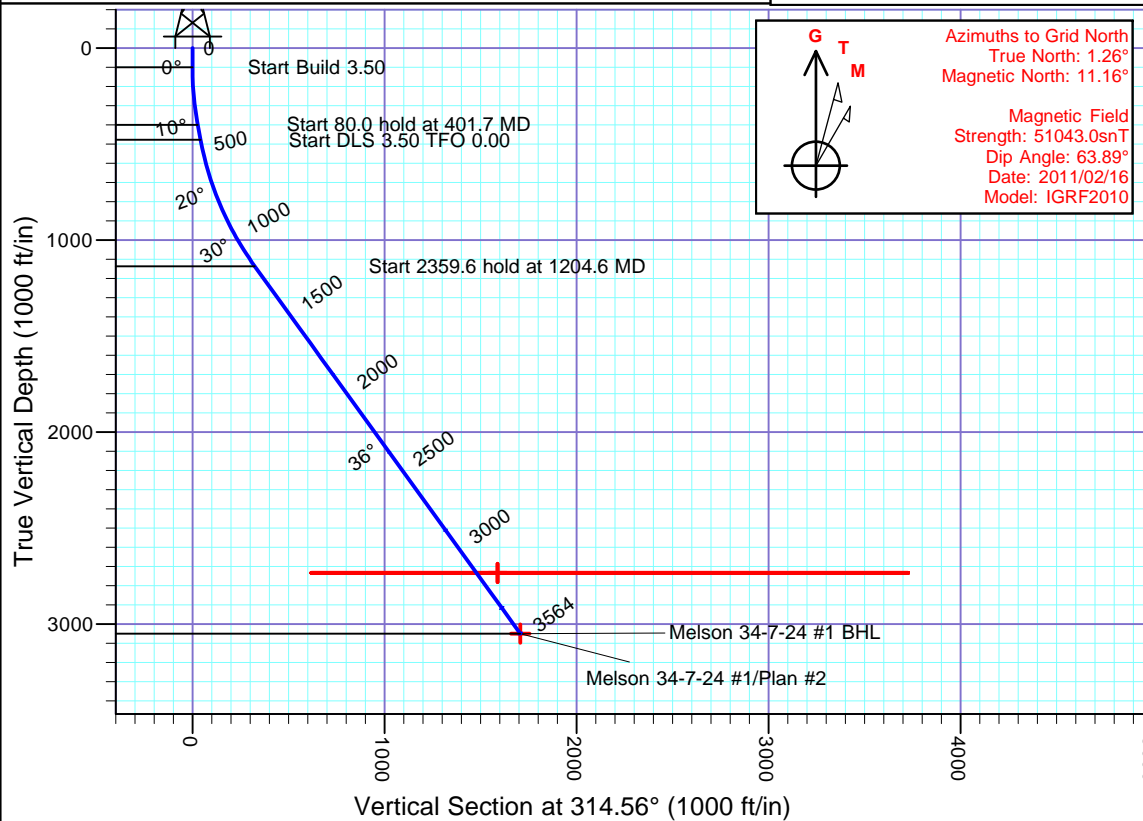
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone
System Datum: Mean Sea Level

WELL DETAILS: Melson 34-7-24 #1

Ground Level: 6840.0						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1193014.56	2403038.37	37° 10' 43.560 N	107° 32' 56.803 W	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Melson 34-7-24 #1 East HL	2734.0	1206.0	-1043.0	37° 10' 55.255 N	107° 33' 10.015 W	Polygon
Melson 34-7-24 #1 North HL	2734.0	1206.0	-1043.0	37° 10' 55.255 N	107° 33' 10.015 W	Polygon
Melson 34-7-24 #1 BHL	3050.0	1197.9	-1216.4	37° 10' 55.137 N	107° 33' 12.155 W	Point



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	100.0	0.00	0.00	100.0	0.0	0.0	0.00	0.00	0.0	
3	401.7	10.56	314.56	400.0	19.5	-19.8	3.50	314.56	27.7	
4	481.7	10.56	314.56	478.6	29.7	-30.2	0.00	0.00	42.4	
5	1204.6	35.86	314.56	1137.6	228.0	-231.5	3.50	0.00	324.9	
6	3564.2	35.86	314.56	3050.0	1197.9	-1216.4	0.00	0.00	1707.2	Melson 34-7-24 #1 BHL

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Melson 34-7-24 #1
Company:	Samson Resources Company	TVD Reference:	AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Project:	La Plata County, C.O.	MD Reference:	AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Site:	SEC 19-T34N-R6W	North Reference:	Grid
Well:	Melson 34-7-24 #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #2		

Project	La Plata County, C.O.		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		Using geodetic scale factor

Site	SEC 19-T34N-R6W		
Site Position:		Northing:	1,193,022.55 usft
From:	Lat/Long	Easting:	2,402,893.37 usft
Position Uncertainty:	3.5 ft	Slot Radius:	6-1/8 "
		Latitude:	37° 10' 43.608 N
		Longitude:	107° 32' 58.596 W
		Grid Convergence:	-1.26 °

Well	Melson 34-7-24 #1, FC HZ Well		
Well Position	+N/-S	-8.0 ft	Northing: 1,193,014.55 usft
	+E/-W	145.0 ft	Easting: 2,403,038.37 usft
Position Uncertainty	3.5 ft	Wellhead Elevation:	Latitude: 37° 10' 43.560 N
			Longitude: 107° 32' 56.803 W
			Ground Level: 6,840.0 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/16/11	9.90	63.89	51,043

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	314.56

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.00	0.00	0.00	0.00	
401.7	10.56	314.56	400.0	19.5	-19.8	3.50	3.50	0.00	314.56	
481.7	10.56	314.56	478.6	29.7	-30.2	0.00	0.00	0.00	0.00	
1,204.6	35.86	314.56	1,137.6	228.0	-231.5	3.50	3.50	0.00	0.00	
3,564.2	35.86	314.56	3,050.0	1,197.9	-1,216.4	0.00	0.00	0.00	0.00	Melson 34-7-24 #1

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Melson 34-7-24 #1
Company:	Samson Resources Company	TVD Reference:	AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Project:	La Plata County, C.O.	MD Reference:	AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Site:	SEC 19-T34N-R6W	North Reference:	Grid
Well:	Melson 34-7-24 #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	3.50	314.56	199.9	2.1	-2.2	3.1	3.50	3.50	0.00
300.0	7.00	314.56	299.5	8.6	-8.7	12.2	3.50	3.50	0.00
401.7	10.56	314.56	400.0	19.5	-19.8	27.7	3.50	3.50	0.00
481.7	10.56	314.56	478.6	29.7	-30.2	42.4	0.00	0.00	0.00
500.0	11.20	314.56	496.6	32.2	-32.7	45.8	3.50	3.50	0.00
600.0	14.70	314.56	594.1	47.9	-48.6	68.2	3.50	3.50	0.00
700.0	18.20	314.56	689.9	67.8	-68.8	96.6	3.50	3.50	0.00
800.0	21.70	314.56	783.9	91.7	-93.1	130.7	3.50	3.50	0.00
900.0	25.20	314.56	875.7	119.6	-121.5	170.5	3.50	3.50	0.00
1,000.0	28.70	314.56	964.8	151.4	-153.7	215.8	3.50	3.50	0.00
1,100.0	32.20	314.56	1,051.0	187.0	-189.8	266.4	3.50	3.50	0.00
1,204.6	35.86	314.56	1,137.6	228.0	-231.5	324.9	3.50	3.50	0.00
1,300.0	35.86	314.56	1,215.0	267.2	-271.4	380.9	0.00	0.00	0.00
1,400.0	35.86	314.56	1,296.0	308.3	-313.1	439.4	0.00	0.00	0.00
1,500.0	35.86	314.56	1,377.1	349.4	-354.8	498.0	0.00	0.00	0.00
1,600.0	35.86	314.56	1,458.1	390.5	-396.6	556.6	0.00	0.00	0.00
1,650.5	35.86	314.56	1,499.0	411.3	-417.6	586.2	0.00	0.00	0.00
Animas									
1,700.0	35.86	314.56	1,539.1	431.6	-438.3	615.2	0.00	0.00	0.00
1,800.0	35.86	314.56	1,620.2	472.8	-480.1	673.8	0.00	0.00	0.00
1,900.0	35.86	314.56	1,701.2	513.9	-521.8	732.3	0.00	0.00	0.00
2,000.0	35.86	314.56	1,782.3	555.0	-563.5	790.9	0.00	0.00	0.00
2,100.0	35.86	314.56	1,863.3	596.1	-605.3	849.5	0.00	0.00	0.00
2,100.8	35.86	314.56	1,864.0	596.4	-605.6	850.0	0.00	0.00	0.00
Kirtland Shale									
2,200.0	35.86	314.56	1,944.4	637.2	-647.0	908.1	0.00	0.00	0.00
2,300.0	35.86	314.56	2,025.4	678.3	-688.7	966.7	0.00	0.00	0.00
2,400.0	35.86	314.56	2,106.5	719.4	-730.5	1,025.2	0.00	0.00	0.00
2,440.1	35.86	314.56	2,139.0	735.9	-747.2	1,048.7	0.00	0.00	0.00
Farmington SS									
2,500.0	35.86	314.56	2,187.5	760.5	-772.2	1,083.8	0.00	0.00	0.00
2,600.0	35.86	314.56	2,268.6	801.6	-814.0	1,142.4	0.00	0.00	0.00
2,700.0	35.86	314.56	2,349.6	842.7	-855.7	1,201.0	0.00	0.00	0.00
2,800.0	35.86	314.56	2,430.7	883.8	-897.4	1,259.6	0.00	0.00	0.00
2,835.0	35.86	314.56	2,459.0	898.2	-912.0	1,280.0	0.00	0.00	0.00
Lower KS									
2,900.0	35.86	314.56	2,511.7	924.9	-939.2	1,318.1	0.00	0.00	0.00
3,000.0	35.86	314.56	2,592.7	966.0	-980.9	1,376.7	0.00	0.00	0.00
3,100.0	35.86	314.56	2,673.8	1,007.1	-1,022.7	1,435.3	0.00	0.00	0.00
3,174.3	35.86	314.56	2,734.0	1,037.6	-1,053.7	1,478.8	0.00	0.00	0.00
Upper FC									
3,200.0	35.86	314.56	2,754.8	1,048.2	-1,064.4	1,493.9	0.00	0.00	0.00
3,239.0	35.86	314.56	2,786.5	1,064.3	-1,080.7	1,516.7	0.00	0.00	0.00
Melson 34-7-24 #1 East HL - Melson 34-7-24 #1 North HL									
3,297.7	35.86	314.56	2,834.0	1,088.4	-1,105.2	1,551.1	0.00	0.00	0.00
Ignacio Coal									
3,300.0	35.86	314.56	2,835.9	1,089.3	-1,106.1	1,552.5	0.00	0.00	0.00
3,377.9	35.86	314.56	2,899.0	1,121.3	-1,138.6	1,598.1	0.00	0.00	0.00
PC									
3,400.0	35.86	314.56	2,916.9	1,130.4	-1,147.9	1,611.0	0.00	0.00	0.00
3,500.0	35.86	314.56	2,998.0	1,171.5	-1,189.6	1,669.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Melson 34-7-24 #1
Company:	Samson Resources Company	TVD Reference:	AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Project:	La Plata County, C.O.	MD Reference:	AWS 507 @ 6852.0ft (12' DF + 6840' GL)
Site:	SEC 19-T34N-R6W	North Reference:	Grid
Well:	Melson 34-7-24 #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,564.2	35.86	314.56	3,050.0	1,197.9	-1,216.4	1,707.2	0.00	0.00	0.00
Melson 34-7-24 #1 BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Melson 34-7-24 #1 Ea	0.00	0.00	2,734.0	1,206.0	-1,043.0	1,194,220.56	2,401,995.36	37° 10' 55.255 N	107° 33' 10.015 W
- plan misses target center by 155.8ft at 3239.0ft MD (2786.5 TVD, 1064.3 N, -1080.7 E)									
- Polygon									
Point 1			2,734.0	-1,381.8	0.0	1,192,838.75	2,401,995.36		
Point 2			2,734.0	0.0	0.0	1,194,220.56	2,401,995.36		
Melson 34-7-24 #1 Nc	0.00	0.00	2,734.0	1,206.0	-1,043.0	1,194,220.56	2,401,995.36	37° 10' 55.255 N	107° 33' 10.015 W
- plan misses target center by 155.8ft at 3239.0ft MD (2786.5 TVD, 1064.3 N, -1080.7 E)									
- Polygon									
Point 1			2,734.0	0.0	-3,001.2	1,194,220.56	2,398,994.14		
Point 2			2,734.0	0.0	0.0	1,194,220.56	2,401,995.36		
Melson 34-7-24 #1 Bt	0.00	360.00	3,050.0	1,197.9	-1,216.4	1,194,212.46	2,401,821.96	37° 10' 55.137 N	107° 33' 12.155 W
- plan hits target center									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,650.5	1,499.0	Animas		0.00		
2,100.8	1,864.0	Kirtland Shale		0.00		
2,440.1	2,139.0	Farmington SS		0.00		
2,835.0	2,459.0	Lower KS		0.00		
3,174.3	2,734.0	Upper FC		0.00		
3,297.7	2,834.0	Ignacio Coal		0.00		
3,377.9	2,899.0	PC		0.00		