



Samson Resources Company

La Plata County, C.O.

SEC 12U-T34N-R7W

SE Bayfield 34-7 #12U-3A

Pilot Hole

Plan: Plan #1

Standard Planning Report

12 September, 2011



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
SEB 34-7 #12U-3A Drilling Window	2324.0	0.0	0.0	1203070.44	2398120.75	Polygon
SEB 34-7 #12U-3A BHL (1980 FNL,660 FEL)	2470.0	494.0	4153.8	1203564.44	2402274.56	Point
SEB 34-7 #12U-3A TGT 1	2521.0	530.0	2180.0	1203600.44	2400300.76	Point

REFERENCE INFORMATION

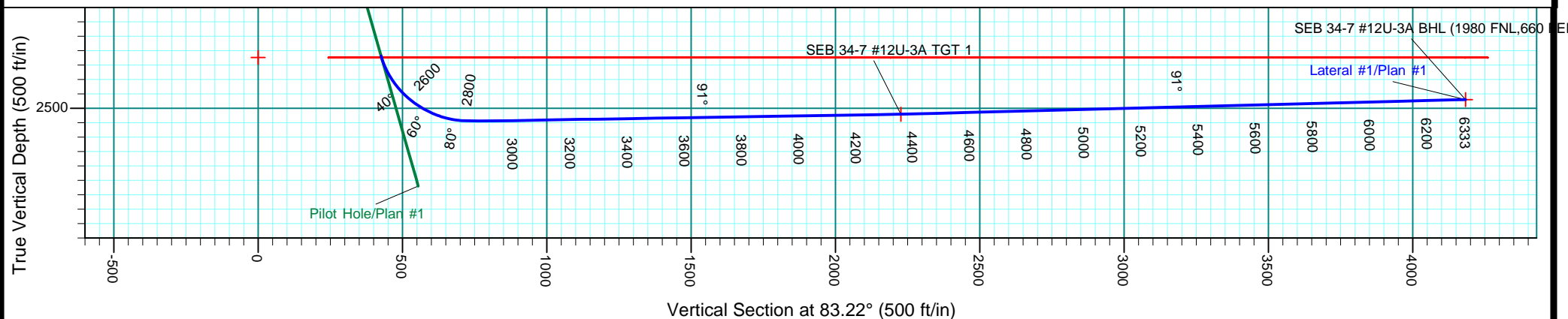
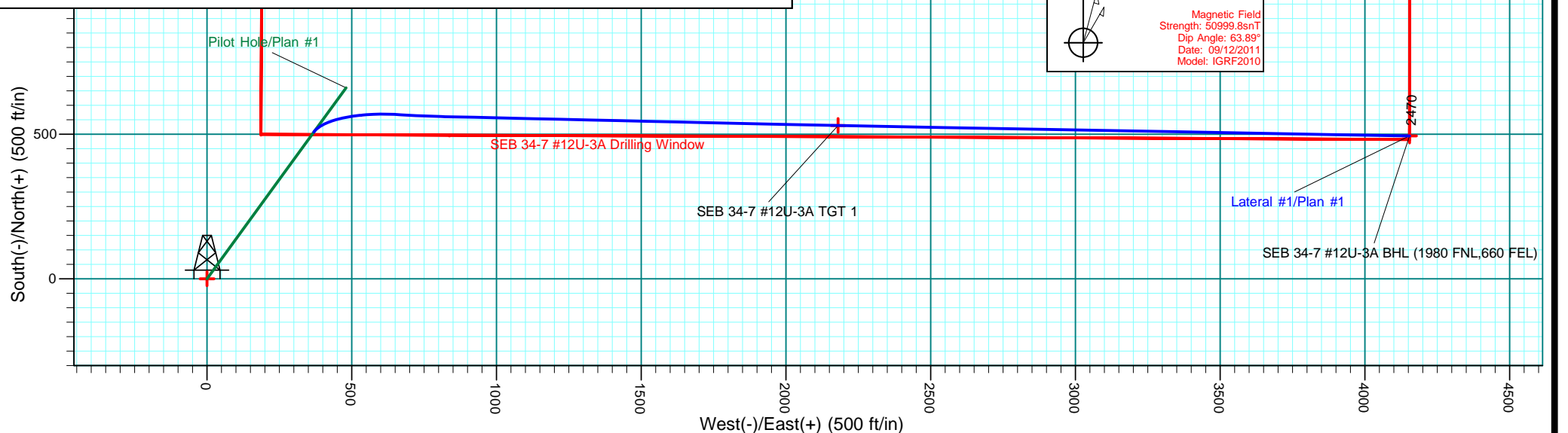
Co-ordinate (N/E) Reference: Well SE Bayfield 34-7 #12U-3A, Grid North
Vertical (TVD) Reference: AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Calculation Method: Minimum Curvature

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	2435.0	22.78	36.00	2318.7	507.6	368.8	0.00	0.00	426.2	
2	2846.3	90.00	93.94	2544.4	567.5	668.8	19.00	60.00	731.1	
3	2986.5	90.93	91.30	2543.3	561.1	808.9	2.00	-70.60	869.5	
4	4358.2	90.93	91.30	2521.0	530.0	2180.0	0.00	0.00	2227.3	SEB 34-7 #12U-3A TGT 1
5	4388.6	91.48	91.04	2520.4	529.4	2210.4	2.00	-24.83	2257.5	
6	6333.0	91.48	91.04	2470.0	494.0	4153.8	0.00	0.00	4183.1	SEB 34-7 #12U-3A BHL (1980 FNL,660 FEL)

WELL DETAILS: SE Bayfield 34-7 #12U-3A

		Ground Level: 6789.0		
+N/-S	+E/-W	Northing	Easting	Latitude
0.0	0.0	1203070.44	2398120.75	37° 12' 21.888 N
				Longitude
				107° 34' 0.300 W



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SE Bayfield 34-7 #12U-3A
Company:	Samson Resources Company	TVD Reference:	AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Project:	La Plata County, C.O.	MD Reference:	AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Site:	SEC 12U-T34N-R7W	North Reference:	Grid
Well:	SE Bayfield 34-7 #12U-3A	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #1		

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 12U-T34N-R7W		
Site Position:		Northing:	1,201,887.40 usft
From:	Lat/Long	Easting:	2,400,401.89 usft
Position Uncertainty:	15.0 ft	Slot Radius:	12-1/4 "
		Latitude:	37° 12' 10.692 N
		Longitude:	107° 33' 31.788 W
		Grid Convergence:	-1.26 °

Well	SE Bayfield 34-7 #12U-3A, FC Horizontal		
Well Position	+N/-S	1,183.0 ft	Northing: 1,203,070.44 usft
	+E/-W	-2,281.1 ft	Easting: 2,398,120.76 usft
Position Uncertainty		3.5 ft	Wellhead Elevation:
			Ground Level: 6,789.0 ft

Wellbore	Pilot Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/12/11	9.84	63.89	51,000

Design	Plan #1			
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	36.00

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	
440.0	0.00	0.00	440.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,199.4	22.78	36.00	1,179.6	120.6	87.6	3.00	3.00	0.00	36.00	
2,924.4	22.78	36.00	2,770.0	661.0	480.2	0.00	0.00	0.00	0.00	PH BHL (1820 FNL)

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SE Bayfield 34-7 #12U-3A
Company:	Samson Resources Company	TVD Reference:	AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Project:	La Plata County, C.O.	MD Reference:	AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Site:	SEC 12U-T34N-R7W	North Reference:	Grid
Well:	SE Bayfield 34-7 #12U-3A	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #1		

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	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
San Jose									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	1.80	36.00	500.0	0.8	0.6	0.9	3.00	3.00	0.00
600.0	4.80	36.00	599.8	5.4	3.9	6.7	3.00	3.00	0.00
700.0	7.80	36.00	699.2	14.3	10.4	17.7	3.00	3.00	0.00
800.0	10.80	36.00	797.9	27.4	19.9	33.8	3.00	3.00	0.00
900.0	13.80	36.00	895.6	44.6	32.4	55.1	3.00	3.00	0.00
1,000.0	16.80	36.00	992.0	65.9	47.9	81.5	3.00	3.00	0.00
1,100.0	19.80	36.00	1,086.9	91.3	66.4	112.9	3.00	3.00	0.00
1,102.2	19.87	36.00	1,089.0	91.9	66.8	113.7	3.00	3.00	0.00
Animas									
1,199.4	22.78	36.00	1,179.6	120.6	87.6	149.0	3.00	3.00	0.00
1,300.0	22.78	36.00	1,272.3	152.1	110.5	188.0	0.00	0.00	0.00
1,400.0	22.78	36.00	1,364.5	183.4	133.2	226.7	0.00	0.00	0.00
1,497.1	22.78	36.00	1,454.0	213.8	155.3	264.3	0.00	0.00	0.00
KS									
1,500.0	22.78	36.00	1,456.7	214.7	156.0	265.4	0.00	0.00	0.00
1,600.0	22.78	36.00	1,548.9	246.0	178.8	304.1	0.00	0.00	0.00
1,700.0	22.78	36.00	1,641.1	277.4	201.5	342.9	0.00	0.00	0.00
1,795.4	22.78	36.00	1,729.0	307.2	223.2	379.8	0.00	0.00	0.00
Farmington SS									
1,800.0	22.78	36.00	1,733.3	308.7	224.3	381.6	0.00	0.00	0.00
1,900.0	22.78	36.00	1,825.5	340.0	247.0	420.3	0.00	0.00	0.00
2,000.0	22.78	36.00	1,917.7	371.4	269.8	459.0	0.00	0.00	0.00
2,100.0	22.78	36.00	2,009.9	402.7	292.6	497.8	0.00	0.00	0.00
2,142.4	22.78	36.00	2,049.0	416.0	302.2	514.2	0.00	0.00	0.00
Lower KS									
2,196.9	22.78	36.00	2,099.2	433.0	314.6	535.3	0.00	0.00	0.00
SEB 34-7 #12U-3A Drilling Window									
2,200.0	22.78	36.00	2,102.1	434.0	315.3	536.5	0.00	0.00	0.00
2,300.0	22.78	36.00	2,194.3	465.4	338.1	575.2	0.00	0.00	0.00
2,400.0	22.78	36.00	2,286.5	496.7	360.9	613.9	0.00	0.00	0.00
2,440.7	22.78	36.00	2,324.0	509.4	370.1	629.7	0.00	0.00	0.00
FC Top (10' North of HL) - Upper FC									
2,500.0	22.78	36.00	2,378.7	528.0	383.6	652.7	0.00	0.00	0.00
2,591.5	22.78	36.00	2,463.0	556.7	404.4	688.1	0.00	0.00	0.00
Bayfield Coal									
2,600.0	22.78	36.00	2,470.9	559.3	406.4	691.4	0.00	0.00	0.00
2,672.8	22.78	36.00	2,538.0	582.2	423.0	719.6	0.00	0.00	0.00
Ignacio Coal									
2,700.0	22.78	36.00	2,563.1	590.7	429.1	730.1	0.00	0.00	0.00
2,736.8	22.78	36.00	2,597.0	602.2	437.5	744.4	0.00	0.00	0.00
PC SS									
2,800.0	22.78	36.00	2,655.3	622.0	451.9	768.8	0.00	0.00	0.00
2,900.0	22.78	36.00	2,747.5	653.3	474.7	807.6	0.00	0.00	0.00
2,924.4	22.78	36.00	2,770.0	661.0	480.2	817.0	0.00	0.00	0.00
PH BHL (1820 FNL, 954 FWL)									

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Project:	La Plata County, C.O.	MD Reference:	AWS 507 @ 6801.0ft (12' DF + 6789' GL)
Site:	SEC 12U-T34N-R7W	North Reference:	Grid
Well:	SE Bayfield 34-7 #12U-3A	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #1		

Design Targets
Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
SEB 34-7 #12U-3A Dr	0.00	360.00	2,324.0	0.0	0.0	1,203,070.44	2,398,120.76	37° 12' 21.888 N	107° 34' 0.300 W
- plan misses target center by 580.6ft at 2196.9ft MD (2099.2 TVD, 433.0 N, 314.6 E)									
- Polygon									
Point 1			2,324.0	1,160.7	189.2	1,204,231.14	2,398,309.94		
Point 2			2,324.0	499.7	185.7	1,203,570.17	2,398,306.47		
Point 3			2,324.0	496.9	837.2	1,203,567.37	2,398,957.92		
Point 4			2,324.0	491.9	2,148.2	1,203,562.31	2,400,269.01		
Point 5			2,324.0	481.9	4,153.8	1,203,552.33	2,402,274.56		
Point 6			2,324.0	1,146.3	4,154.3	1,204,216.74	2,402,275.04		
PH BHL (1820 FNL, 9	0.00	360.00	2,770.0	661.0	480.2	1,203,731.42	2,398,600.99	37° 12' 28.526 N	107° 33' 54.546 W
- plan hits target center									
- Point									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
200.0	200.0	San Jose		0.00	
1,102.2	1,089.0	Animas		0.00	
1,497.1	1,454.0	KS		0.00	
1,795.4	1,729.0	Farmington SS		0.00	
2,142.4	2,049.0	Lower KS		0.00	
2,440.7	2,324.0	Upper FC		0.00	
2,591.5	2,463.0	Bayfield Coal		0.00	
2,672.8	2,538.0	Ignacio Coal		0.00	
2,736.8	2,597.0	PC SS		0.00	

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
2,440.7	2,324.0	509.4	370.1	FC Top (10' North of HL)