



**Scientific Drilling**

## **Samson Resources Company**

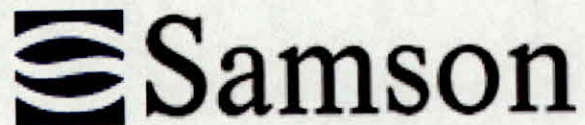
La Plata County, C.O.  
SEC 11-T32N-R7W  
Indian Mesa 32-7-11 #1

Pilot Hole

Design: Pilot Hole

## **Standard Survey Report**

03 October, 2011



<b>Company:</b>	Samson Resources Company	<b>Local Co-ordinate Reference:</b>	Well Indian Mesa 32-7-11 #1
<b>Project:</b>	La Plata County, C.O.	<b>TVD Reference:</b>	AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)
<b>Site:</b>	SEC 11-T32N-R7W	<b>MD Reference:</b>	AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)
<b>Well:</b>	Indian Mesa 32-7-11 #1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Pilot Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Pilot Hole	<b>Database:</b>	Rockies Compass Server

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

Site		SEC 11-T32N-R7W			
Site Position:		Northing:	1,137,161.82 usft	Latitude:	37° 1' 29.496 N
From:	Lat/Long	Easting:	2,393,949.37 usft	Longitude:	107° 34' 33.744 W
Position Uncertainty:	0.00 usft	Slot Radius:	6-1/8 "	Grid Convergence:	-1.27 °

Well	Indian Mesa 32-7-11 #1, FC Slant Well					
Well Position	+N/-S	0.00 usft	Northing:	1,137,161.82 usft	Latitude:	37° 1' 29.496 N
	+E/-W	0.00 usft	Easting:	2,393,949.37 usft	Longitude:	107° 34' 33.744 W
Position Uncertainty		3.50 usft	Wellhead Elevation:	usft	Ground Level:	6,306.39 usft

<b>Wellbore</b>	Pilot Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2011/01/18	9.90	63.75	50,964

Design	Pilot Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	60.31	

<b>Survey Program</b>	<b>Date</b>	2011/10/03			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
393.00	3,615.00	Survey #1 (Pilot Hole)	MWD SDI	MWD - Standard ver 1.0.1	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
393.00	0.17	247.87	393.00	-0.22	-0.54	-0.58	0.04	0.04	0.00
First SDI MWD Survey									
424.00	0.18	240.93	424.00	-0.26	-0.63	-0.67	0.08	0.03	-22.39
454.00	0.93	92.97	454.00	-0.30	-0.42	-0.51	3.62	2.50	-493.20
484.00	2.16	82.58	483.99	-0.24	0.38	0.21	4.19	4.10	-34.63
514.00	3.56	82.51	513.95	-0.04	1.86	1.60	4.67	4.67	-0.23
546.00	4.57	79.09	545.87	0.33	4.10	3.73	3.24	3.16	-10.69
577.00	6.05	75.89	576.73	0.96	6.90	6.47	4.87	4.77	-10.32
606.00	7.09	77.44	605.54	1.72	10.13	9.65	3.64	3.59	5.34
637.00	7.81	78.34	636.28	2.57	14.06	13.48	2.35	2.32	2.90

<b>Company:</b>	Samson Resources Company	<b>Local Co-ordinate Reference:</b>	Well Indian Mesa 32-7-11 #1
<b>Project:</b>	La Plata County, C.O.	<b>TVD Reference:</b>	AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)
<b>Site:</b>	SEC 11-T32N-R7W	<b>MD Reference:</b>	AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)
<b>Well:</b>	Indian Mesa 32-7-11 #1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Pilot Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Pilot Hole	<b>Database:</b>	Rockies Compass Server

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
668.00	8.67	76.85	666.96	3.52	18.40	17.73	2.86	2.77	-4.81
699.00	9.44	72.27	697.57	4.83	23.09	22.45	3.40	2.48	-14.77
729.00	9.93	69.70	727.15	6.47	27.86	27.41	2.18	1.63	-8.57
759.00	10.90	68.98	756.65	8.39	32.94	32.77	3.26	3.23	-2.40
789.00	11.63	67.36	786.07	10.57	38.37	38.57	2.65	2.43	-5.40
819.00	12.34	64.62	815.42	13.11	44.06	44.77	3.03	2.37	-9.13
851.00	13.17	62.11	846.63	16.28	50.37	51.82	3.12	2.59	-7.84
882.00	14.23	61.99	876.75	19.72	56.86	59.16	3.42	3.42	-0.39
945.00	16.18	60.05	937.54	27.74	71.30	75.68	3.20	3.10	-3.08
1,007.00	17.51	60.61	996.88	36.63	86.91	93.65	2.16	2.15	0.90
1,071.00	19.50	58.42	1,057.57	46.95	104.41	113.95	3.29	3.11	-3.42
1,133.00	21.60	57.22	1,115.62	58.55	122.82	135.69	3.45	3.39	-1.94
1,196.00	23.23	59.50	1,173.86	71.14	143.27	159.70	2.93	2.59	3.62
1,259.00	24.44	59.47	1,231.48	84.06	165.21	185.15	1.92	1.92	-0.05
1,322.00	26.21	57.30	1,288.43	98.20	188.14	212.08	3.17	2.81	-3.44
1,385.00	28.49	57.07	1,344.38	113.89	212.46	240.98	3.62	3.62	-0.37
1,447.00	31.42	57.19	1,398.09	130.69	238.46	271.89	4.73	4.73	0.19
1,509.00	31.79	56.94	1,450.90	148.35	265.73	304.33	0.63	0.60	-0.40
1,572.00	30.89	56.54	1,504.71	166.32	293.13	337.03	1.47	-1.43	-0.63
1,634.00	29.63	56.52	1,558.26	183.55	319.19	368.20	2.03	-2.03	-0.03
1,696.00	29.67	57.79	1,612.14	200.18	344.96	398.83	1.02	0.06	2.05
1,759.00	30.26	59.81	1,666.72	216.48	371.88	430.28	1.86	0.94	3.21
1,822.00	31.53	63.89	1,720.79	231.71	400.39	462.60	3.89	2.02	6.48
1,884.00	33.79	63.58	1,772.98	246.52	430.39	495.99	3.66	3.65	-0.50
1,947.00	33.78	61.69	1,825.34	262.62	461.50	530.99	1.67	-0.02	-3.00
2,010.00	32.78	63.00	1,878.01	278.67	492.12	565.54	1.95	-1.59	2.08
2,073.00	31.99	60.87	1,931.21	294.54	521.89	599.27	2.20	-1.25	-3.38
2,136.00	33.14	59.46	1,984.31	311.41	551.30	633.17	2.19	1.83	-2.24
2,199.00	32.55	59.65	2,037.24	328.73	580.76	667.34	0.95	-0.94	0.30
2,261.00	32.54	60.29	2,089.50	345.42	609.64	700.69	0.56	-0.02	1.03
2,324.00	32.26	60.24	2,142.69	362.16	638.95	734.45	0.45	-0.44	-0.08
2,388.00	31.53	58.55	2,197.03	379.37	668.05	768.26	1.80	-1.14	-2.64
2,451.00	31.74	57.41	2,250.67	396.89	696.07	801.27	1.01	0.33	-1.81
2,513.00	33.41	56.78	2,302.92	415.03	724.09	834.60	2.75	2.69	-1.02
2,577.00	32.79	57.50	2,356.53	433.99	753.45	869.49	1.15	-0.97	1.13
2,639.00	32.05	57.53	2,408.87	451.85	781.49	902.69	1.19	-1.19	0.05
2,702.00	31.94	58.01	2,462.30	469.65	809.72	936.04	0.44	-0.17	0.76
2,766.00	33.13	59.56	2,516.25	487.48	839.16	970.45	2.27	1.86	2.42
2,829.00	33.27	61.60	2,568.97	504.42	869.21	1,004.94	1.79	0.22	3.24
2,893.00	31.59	62.35	2,622.99	520.55	899.50	1,039.24	2.70	-2.63	1.17
2,956.00	32.16	61.69	2,676.49	536.16	928.88	1,072.50	1.06	0.90	-1.05
3,018.00	35.07	62.02	2,728.11	552.35	959.14	1,106.80	4.70	4.69	0.53
3,080.00	33.31	61.27	2,779.40	568.89	989.80	1,141.63	2.92	-2.84	-1.21



<b>Company:</b>	Samson Resources Company	<b>Local Co-ordinate Reference:</b>	Well Indian Mesa 32-7-11 #1
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<b>Site:</b>	SEC 11-T32N-R7W	<b>MD Reference:</b>	AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)
<b>Well:</b>	Indian Mesa 32-7-11 #1	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Pilot Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Pilot Hole	<b>Database:</b>	Rockies Compass Server

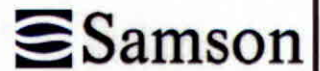
Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,143.00	30.56	59.07	2,832.86	585.44	1,018.72	1,174.95	4.74	-4.37	-3.49
3,205.00	32.80	58.73	2,885.62	602.26	1,046.59	1,207.50	3.62	3.61	-0.55
3,262.00	34.54	61.58	2,933.06	617.96	1,074.00	1,239.09	4.12	3.05	5.00
3,330.00	33.90	61.50	2,989.28	636.19	1,107.62	1,277.32	0.94	-0.94	-0.12
3,393.00	32.49	62.05	3,042.00	652.50	1,138.01	1,311.80	2.29	-2.24	0.87
3,456.00	33.48	61.88	3,094.85	668.62	1,168.29	1,346.08	1.58	1.57	-0.27
3,519.00	33.96	61.81	3,147.25	685.13	1,199.12	1,381.05	0.76	0.76	-0.11
3,560.00	33.70	61.69	3,181.31	695.93	1,219.23	1,403.86	0.65	-0.63	-0.29
<b>Last SDI MWD Survey</b>									
3,615.00	33.70	61.69	3,227.06	710.40	1,246.09	1,434.37	0.00	0.00	0.00
<b>Projection to TD</b>									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
393.00	393.00	-0.22	-0.54	First SDI MWD Survey
3,560.00	3,181.31	695.93	1,219.23	Last SDI MWD Survey
3,615.00	3,227.06	710.40	1,246.09	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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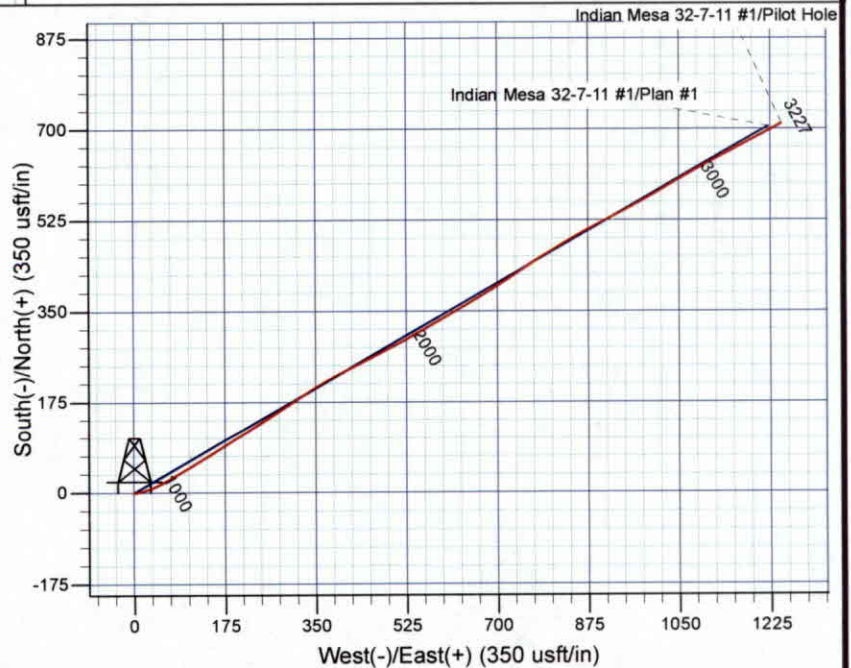
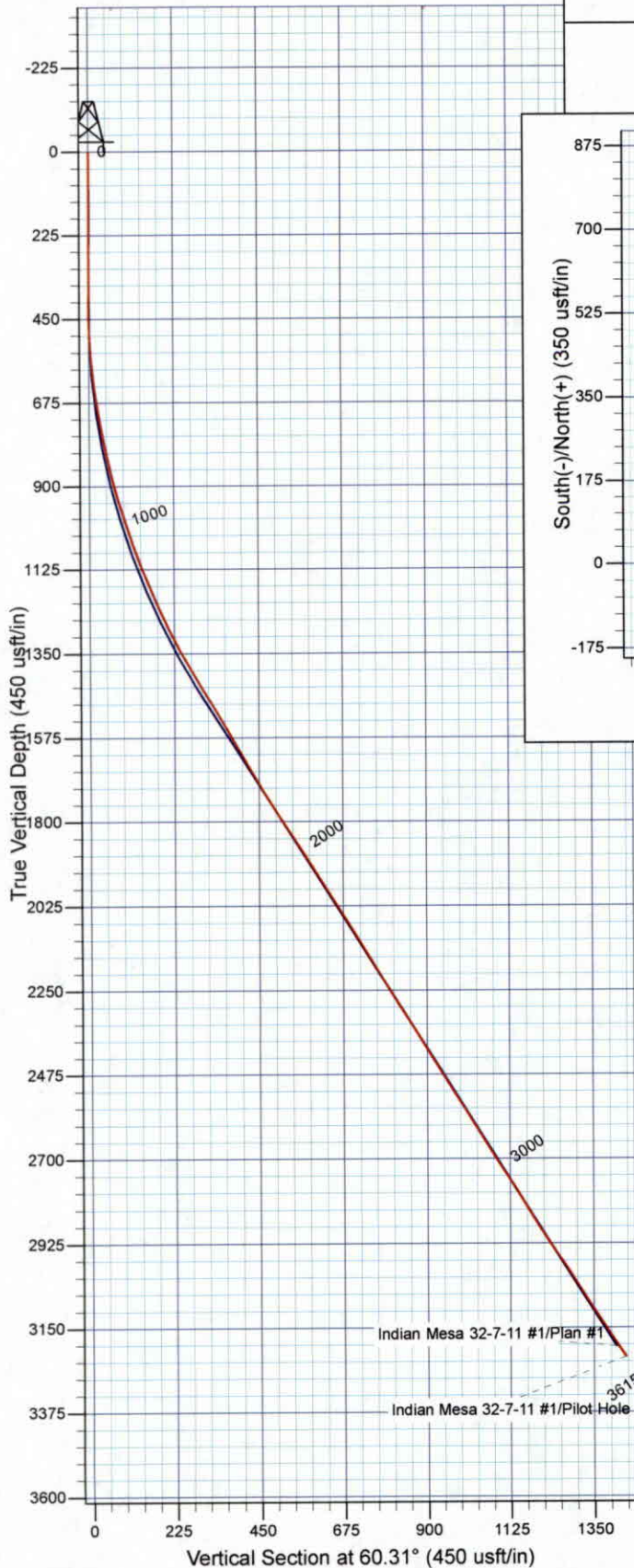


Project: La Plata County, C.O.  
Site: SEC 11-T32N-R7W  
Well: Indian Mesa 32-7-11 #1  
Wellbore: Pilot Hole  
Design: Pilot Hole



WELL DETAILS: Indian Mesa 32-7-11 #1

Ground Level AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)  
Northing Easting Latitude Longitude  
1137161.83 2393949.37 37° 1' 29.496 N 107° 34' 33.744 W



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Indian Mesa 32-7-11 #1, Grid North  
Vertical (TVD) Reference: AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)  
Section (VS) Reference: Slot - (0.00N, 0.00E)  
Measured Depth Reference: AWS 507 @ 6318.39usft (12' DF + 6306.4' GL)  
Calculation Method: Minimum Curvature  
Local North: Grid  
Location:

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

Design: Pilot Hole (Indian Mesa 32-7-11 #1/Pilot Hole)

Created By: Julie Cruse Date: 2011-10-03