



Scientific Drilling

Samson Resources Company

La Plata County, C.O.

SEC 09-T32N-R7W

Colorado 32-7-9 #14

Original Hole

Design: Original Hole

Standard Survey Report

14 November, 2011



Scientific Drilling

Company:	Samson Resources Company	Local Co-ordinate Reference:	Well Colorado 32-7-9 #14
Project:	La Plata County, C.O.	TVD Reference:	DFE @ 6229.99usft (12' DF + 6218' GL)
Site:	SEC 09-T32N-R7W	MD Reference:	DFE @ 6229.99usft (12' DF + 6218' GL)
Well:	Colorado 32-7-9 #14	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Rockies Compass Server

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 09-T32N-R7W				
Site Position:		Northing:	1,141,126.89 usft	Latitude:	37° 2' 6.108 N
From:	Lat/Long	Easting:	2,382,317.32 usft	Longitude:	107° 36' 58.248 W
Position Uncertainty:	0.00 usft	Slot Radius:	6-1/8 "	Grid Convergence:	-1.30 °

Well	Colorado 32-7-9 #14, FC Slant Well					
Well Position	+N/-S	0.00 usft	Northing:	1,141,246.32 usft	Latitude:	37° 2' 7.728 N
	+E/-W	0.00 usft	Easting:	2,384,282.16 usft	Longitude:	107° 36' 34.056 W
Position Uncertainty		3.50 usft	Wellhead Elevation:	usft	Ground Level:	6,217.99 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2010/12/08	9.91	63.77	51,011

Design	Original 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		139.97

Survey Program	Date	2011/11/14			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
84.00	291.00	Survey #1 - Surface (Original Hole)	MWD SDI	MWD - Standard ver 1.0.1	
385.00	3,405.00	Survey #2 - Production (Original 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	
84.00	0.47	91.97	84.00	-0.01	0.34	0.23	0.56	0.56	0.00	
First SDI MWD Survey										
115.00	0.53	109.07	115.00	-0.06	0.61	0.44	0.52	0.19	55.16	
146.00	1.15	139.73	145.99	-0.35	0.94	0.87	2.40	2.00	98.90	
174.00	1.51	155.04	173.99	-0.90	1.28	1.51	1.80	1.29	54.68	
202.00	2.00	146.18	201.97	-1.64	1.71	2.35	2.00	1.75	-31.64	
231.00	2.66	150.91	230.95	-2.64	2.32	3.52	2.37	2.28	16.31	
262.00	3.13	148.81	261.91	-4.00	3.11	5.06	1.55	1.52	-6.77	
291.00	4.00	150.00	290.85	-5.55	4.02	6.84	3.01	3.00	4.10	

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Well:	Colorado 32-7-9 #14	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	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)
Last Survey in 12 1/4" Hole									
385.00	5.45	143.46	384.53	-11.98	8.32	14.52	1.64	1.54	-6.96
First Survey in 7 7/8" Hole									
419.00	5.28	142.87	418.38	-14.52	10.22	17.70	0.53	-0.50	-1.74
449.00	5.80	140.67	448.24	-16.79	12.02	20.59	1.87	1.73	-7.33
480.00	7.91	141.05	479.02	-19.67	14.35	24.29	6.81	6.81	1.23
510.00	9.88	143.88	508.66	-23.35	17.17	28.92	6.72	6.57	9.43
541.00	11.14	147.26	539.14	-28.02	20.35	34.55	4.52	4.06	10.90
570.00	12.24	145.94	567.54	-32.92	23.59	40.38	3.90	3.79	-4.55
601.00	13.09	146.36	597.78	-38.57	27.38	47.14	2.76	2.74	1.35
631.00	14.36	143.40	626.92	-44.38	31.48	54.23	4.84	4.23	-9.87
662.00	15.76	142.03	656.86	-50.79	36.36	62.27	4.66	4.52	-4.42
692.00	17.00	139.45	685.64	-57.33	41.72	70.73	4.79	4.13	-8.60
723.00	18.00	139.31	715.21	-64.41	47.79	80.05	3.23	3.23	-0.45
754.00	19.43	138.27	744.57	-71.89	54.34	90.00	4.74	4.61	-3.35
784.00	20.57	140.59	772.76	-79.68	61.01	100.25	4.63	3.80	7.73
815.00	21.82	139.76	801.66	-88.29	68.19	111.46	4.15	4.03	-2.68
846.00	22.62	140.53	830.36	-97.29	75.70	123.18	2.75	2.58	2.48
877.00	23.58	139.75	858.87	-106.62	83.50	135.35	3.25	3.10	-2.52
908.00	24.89	140.59	887.14	-116.40	91.64	148.07	4.37	4.23	2.71
970.00	27.70	141.09	942.72	-137.69	108.98	175.53	4.55	4.53	0.81
1,001.00	28.82	140.92	970.02	-149.10	118.22	190.20	3.62	3.61	-0.55
1,032.00	29.47	141.57	997.10	-160.88	127.67	205.30	2.33	2.10	2.10
1,062.00	30.12	140.51	1,023.13	-172.47	137.04	220.20	2.79	2.17	-3.53
1,093.00	31.10	138.67	1,049.81	-184.48	147.28	235.98	4.37	3.16	-5.94
1,124.00	32.04	138.76	1,076.22	-196.68	157.98	252.21	3.04	3.03	0.29
1,155.00	32.57	138.03	1,102.43	-209.06	168.99	268.77	2.12	1.71	-2.35
1,186.00	33.27	138.40	1,128.45	-221.63	180.21	285.61	2.35	2.26	1.19
1,218.00	33.68	139.68	1,155.14	-234.96	191.78	303.26	2.55	1.28	4.00
1,249.00	33.90	139.95	1,180.90	-248.13	202.90	320.50	0.86	0.71	0.87
1,280.00	33.73	138.73	1,206.66	-261.21	214.14	337.75	2.26	-0.55	-3.94
1,311.00	33.45	138.37	1,232.48	-274.07	225.50	354.89	1.11	-0.90	-1.16
1,342.00	33.01	138.81	1,258.41	-286.81	236.73	371.88	1.62	-1.42	1.42
1,373.00	32.91	139.17	1,284.42	-299.54	247.80	388.74	0.71	-0.32	1.16
1,404.00	33.20	139.29	1,310.41	-312.34	258.84	405.65	0.96	0.94	0.39
1,435.00	33.02	139.61	1,336.37	-325.21	269.85	422.58	0.81	-0.58	1.03
1,466.00	33.46	140.14	1,362.30	-338.20	280.80	439.57	1.70	1.42	1.71
1,497.00	34.04	139.46	1,388.08	-351.36	291.92	456.79	2.23	1.87	-2.19
1,528.00	33.94	140.13	1,413.78	-364.59	303.11	474.12	1.25	-0.32	2.16
1,559.00	33.88	139.86	1,439.51	-377.84	314.22	491.42	0.52	-0.19	-0.87
1,590.00	34.05	138.23	1,465.22	-390.92	325.58	508.73	2.99	0.55	-5.26
1,621.00	33.88	138.87	1,490.93	-403.90	337.04	526.05	1.28	-0.55	2.06
1,652.00	33.86	138.60	1,516.67	-416.88	348.44	543.32	0.49	-0.06	-0.87

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Well:	Colorado 32-7-9 #14	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	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)
1,683.00	33.37	139.43	1,542.49	-429.84	359.69	560.48	2.17	-1.58	2.68
1,714.00	33.79	139.23	1,568.31	-442.84	370.87	577.63	1.40	1.35	-0.65
1,745.00	34.52	139.67	1,593.97	-456.07	382.18	595.03	2.49	2.35	1.42
1,776.00	35.28	141.01	1,619.39	-469.72	393.50	612.76	3.48	2.45	4.32
1,807.00	35.75	139.38	1,644.62	-483.56	405.03	630.77	3.41	1.52	-5.26
1,838.00	35.71	141.62	1,669.79	-497.52	416.54	648.87	4.22	-0.13	7.23
1,869.00	34.86	140.80	1,695.09	-511.48	427.76	666.77	3.14	-2.74	-2.65
1,931.00	31.24	141.96	1,747.05	-537.88	448.87	700.57	5.93	-5.84	1.87
1,993.00	28.93	143.55	1,800.70	-562.61	467.69	731.61	3.94	-3.73	2.56
2,055.00	27.64	140.86	1,855.30	-585.83	485.68	760.96	2.92	-2.08	-4.34
2,117.00	26.71	140.66	1,910.45	-607.76	503.59	789.27	1.51	-1.50	-0.32
2,179.00	23.17	140.01	1,966.66	-627.89	520.27	815.41	5.73	-5.71	-1.05
2,241.00	20.29	140.81	2,024.25	-645.57	534.90	838.36	4.67	-4.65	1.29
2,303.00	19.47	139.68	2,082.56	-661.78	548.38	859.44	1.46	-1.32	-1.82
2,365.00	17.85	138.51	2,141.30	-676.78	561.36	879.27	2.68	-2.61	-1.89
2,427.00	17.19	134.63	2,200.42	-690.33	574.18	897.90	2.16	-1.06	-6.26
2,489.00	15.15	135.40	2,259.96	-702.54	586.39	915.10	3.31	-3.29	1.24
2,552.00	12.73	134.66	2,321.11	-713.28	597.11	930.22	3.85	-3.84	-1.17
2,614.00	11.09	139.11	2,381.77	-722.59	605.87	942.98	3.03	-2.65	7.18
2,645.00	10.21	139.63	2,412.24	-726.94	609.60	948.71	2.86	-2.84	1.68
2,676.00	8.59	140.27	2,442.82	-730.81	612.86	953.77	5.24	-5.23	2.06
2,707.00	7.03	139.97	2,473.53	-734.04	615.56	957.98	5.03	-5.03	-0.97
2,738.00	5.24	141.03	2,504.35	-736.60	617.67	961.30	5.79	-5.77	3.42
2,769.00	3.34	137.44	2,535.26	-738.36	619.17	963.61	6.19	-6.13	-11.58
2,800.00	1.63	165.79	2,566.23	-739.46	619.89	964.91	6.63	-5.52	91.45
2,831.00	0.86	211.07	2,597.23	-740.08	619.88	965.39	3.85	-2.48	146.06
2,862.00	1.21	241.03	2,628.22	-740.44	619.47	965.40	2.04	1.13	96.65
2,893.00	1.27	240.60	2,659.21	-740.77	618.89	965.27	0.20	0.19	-1.39
2,924.00	1.40	246.55	2,690.21	-741.09	618.24	965.10	0.61	0.42	19.19
2,955.00	1.69	243.78	2,721.19	-741.44	617.48	964.88	0.97	0.94	-8.94
2,986.00	0.32	217.45	2,752.19	-741.71	617.02	964.79	4.55	-4.42	-84.94
3,017.00	0.65	50.65	2,783.19	-741.67	617.10	964.81	3.11	1.06	-538.06
3,079.00	0.86	29.88	2,845.18	-741.04	617.61	964.66	0.55	0.34	-33.50
3,110.00	0.84	36.27	2,876.18	-740.66	617.86	964.53	0.31	-0.06	20.61
3,141.00	0.81	21.14	2,907.18	-740.27	618.07	964.37	0.71	-0.10	-48.81
3,172.00	0.75	20.23	2,938.17	-739.87	618.22	964.16	0.20	-0.19	-2.94
3,203.00	0.89	15.60	2,969.17	-739.45	618.36	963.92	0.50	0.45	-14.94
3,234.00	0.67	11.39	3,000.17	-739.04	618.46	963.67	0.73	-0.71	-13.58
3,265.00	0.55	28.80	3,031.17	-738.73	618.56	963.51	0.71	-0.39	56.16
3,296.00	0.63	15.73	3,062.16	-738.44	618.68	963.36	0.50	0.26	-42.16
3,327.00	0.47	29.70	3,093.16	-738.17	618.79	963.22	0.67	-0.52	45.06
3,347.00	0.78	40.90	3,113.16	-737.99	618.92	963.17	1.66	1.55	56.00
Last SDI MWD Survey									
3,405.00	0.78	40.90	3,171.16	-737.39	619.44	963.04	0.00	0.00	0.00

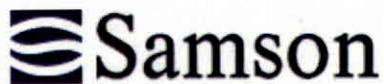
Company:	Samson Resources Company	Local Co-ordinate Reference:	Well Colorado 32-7-9 #14
Project:	La Plata County, C.O.	TVD Reference:	DFE @ 6229.99usft (12' DF + 6218' GL)
Site:	SEC 09-T32N-R7W	MD Reference:	DFE @ 6229.99usft (12' DF + 6218' GL)
Well:	Colorado 32-7-9 #14	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Rockies Compass Server

Survey

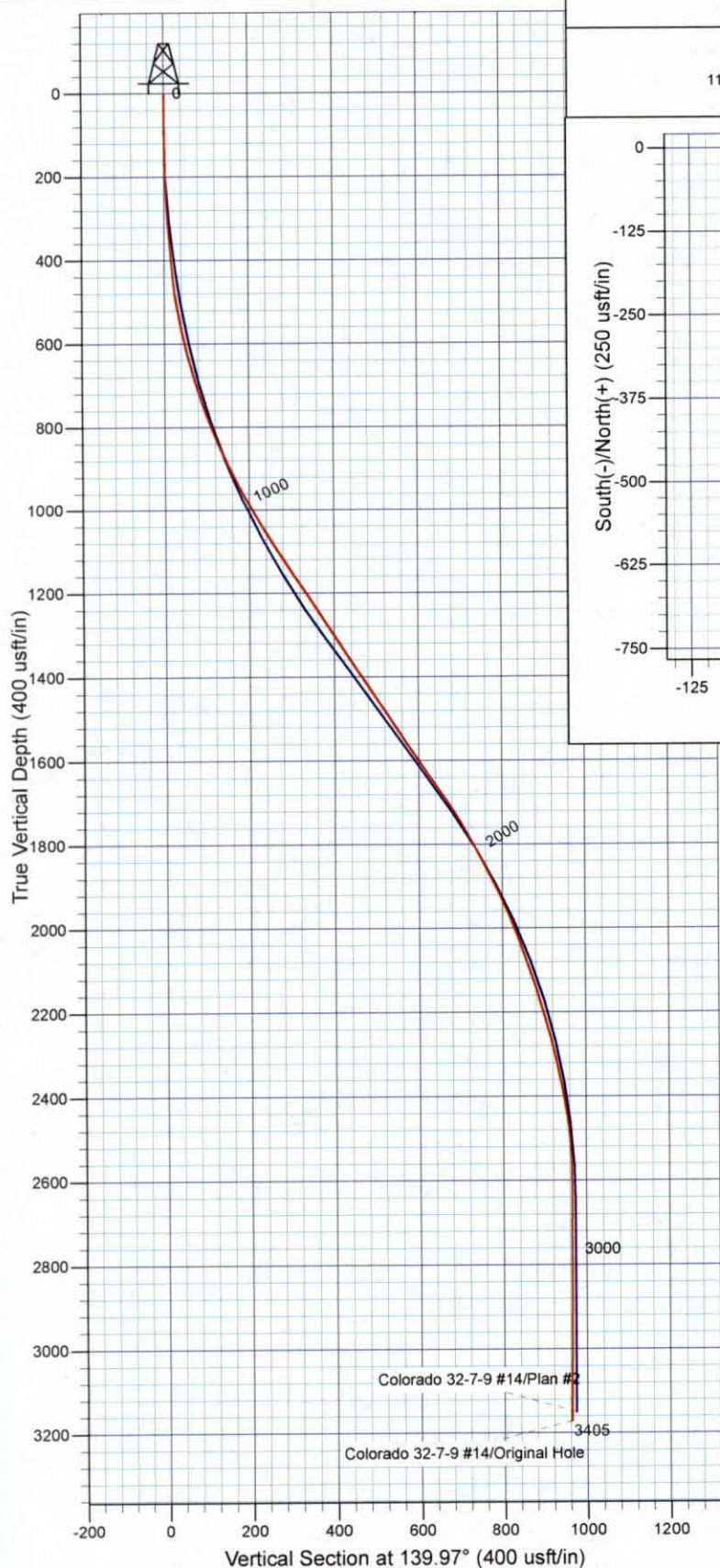
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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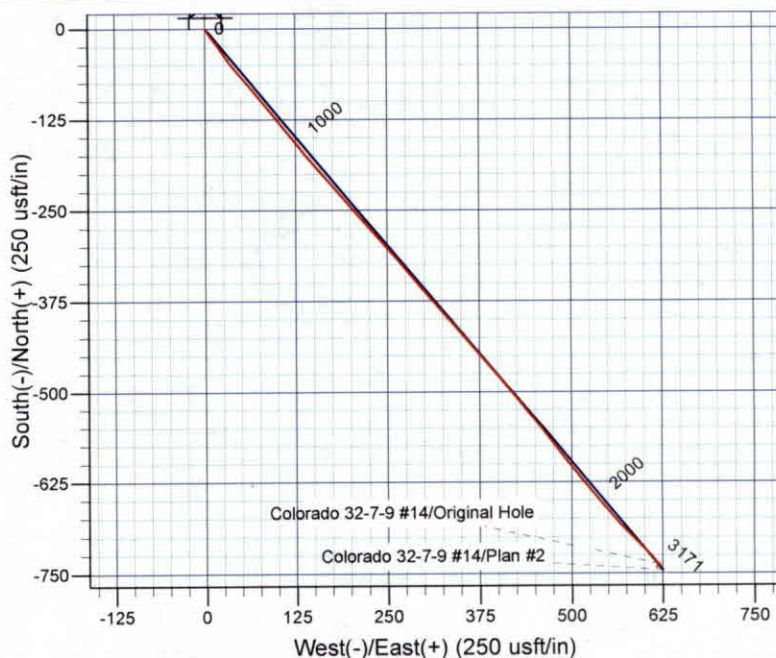


Project: La Plata County, C.O.
Site: SEC 09-T32N-R7W
Well: Colorado 32-7-9 #14
Wellbore: Original Hole
Design: Original Hole



WELL DETAILS: Colorado 32-7-9 #14

Ground Level: DFE @ 6229.99usft (12' DF + 6218' GL)
Northing: 1141246.33 Easting: 2384282.16 Latitude: 37° 2' 7.728 N Longitude: 107° 36' 34.056 W



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Colorado 32-7-9 #14, Grid North
Vertical (TVD) Reference: DFE @ 6229.99usft (12' DF + 6218' GL)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: DFE @ 6229.99usft (12' DF + 6218' 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: Original Hole (Colorado 32-7-9 #14/Original Hole)

Created By: Julie Cruse Date: 2011-11-14