



**Scientific
Drilling**

Survey Certification

7327 West Barton Road
Casper, WY 82604
(307)-472-6621 Fax (307) 472-5439

Operator	Quicksilver Resources Inc.
Well Name & No.	Weber 32-4
County & State	Moffat County, CO
SDI Job No.	41SCHEF1106718
Rig	DHS 6
Survey Date	17-Jun-11

I, Julie Cruse, having personal knowledge of all the facts, hereby
certify that the attached directional survey run from a measured depth of 0 feet to a
measured depth of 7695 feet is true and correct as determined from all available records.

Julie Cruse
Signature

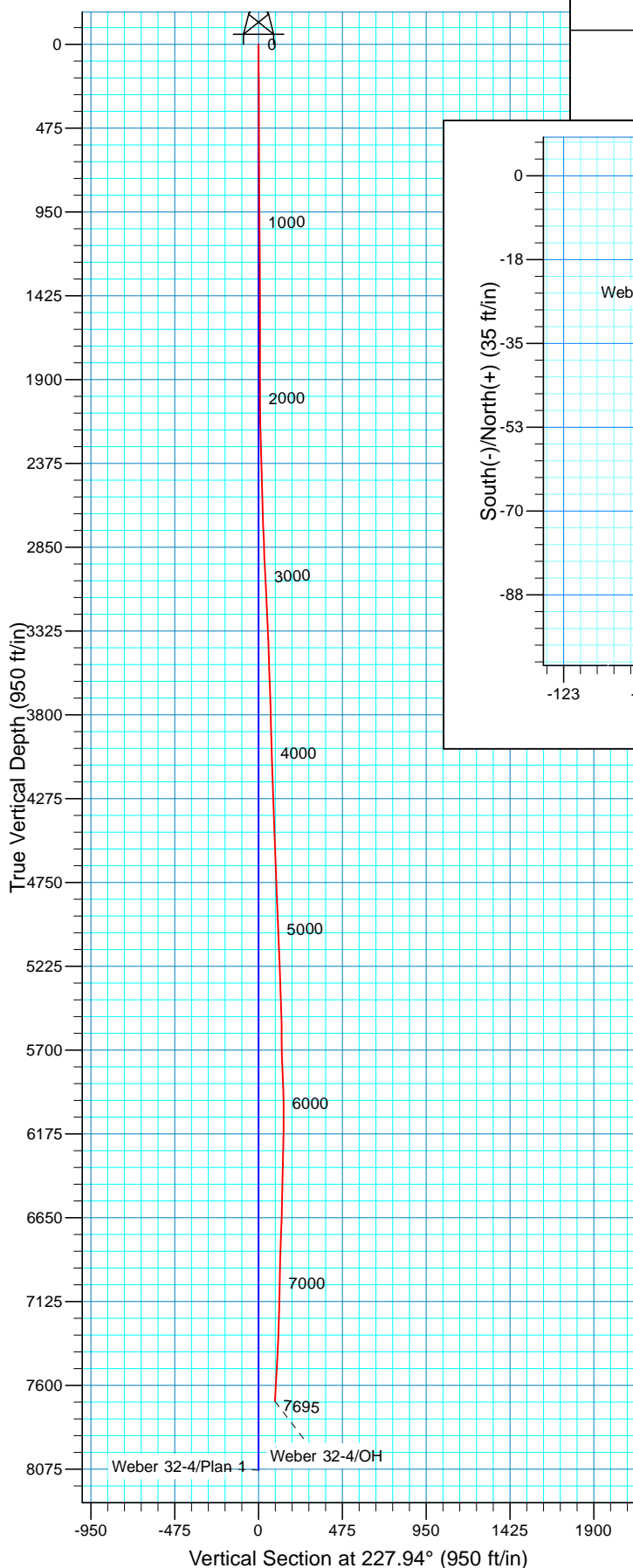
27-Jun-11
Date

Julie Cruse
Rockies Region Engineer
Scientific Drilling - Rocky Mountain District



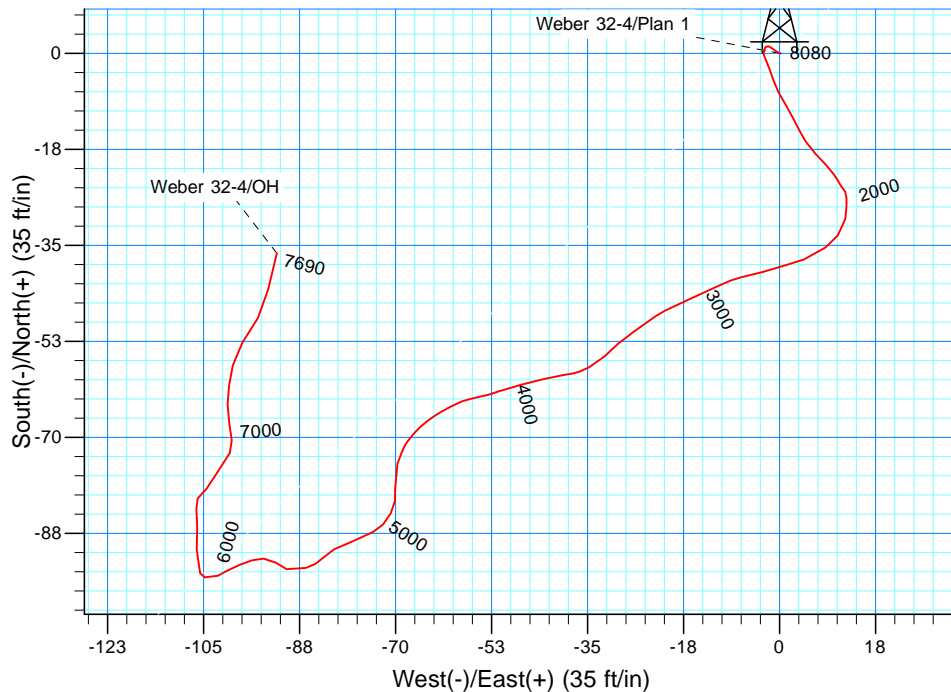
Project: Moffat County, CO NAD83
Site: Weber
Well: Weber 32-4
Wellbore: OH
Design: OH

Quicksilver Resources, Inc.



WELL DETAILS: Weber 32-4

Ground Level: GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Northing 1433166.43 Easting 2381885.72 Latitude 40° 30' 4.230 N Longitude 107° 43' 22.470 W



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Weber 32-4, True North
Vertical (TVD) Reference: GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Calculation Method: Minimum Curvature
Local North: True
Location:

PROJECT DETAILS: Moffat County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

Design: OH (Weber 32-4/OH)

Created By: Julie Cruse Date: 2011-06-27



Scientific Drilling

Quicksilver Resources, Inc.

Moffat County, CO NAD83

Weber

Weber 32-4

OH

Design: OH

Standard Survey Report

27 June, 2011

Company:	Quicksilver Resources, Inc.	Local Co-ordinate Reference:	Well Weber 32-4
Project:	Moffat County, CO NAD83	TVD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Site:	Weber	MD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Well:	Weber 32-4	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

Project	Moffat County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Weber				
Site Position:		Northing:	1,433,166.43 usft	Latitude:	40° 30' 4.230 N
From:	Lat/Long	Easting:	2,381,885.72 usft	Longitude:	107° 43' 22.470 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.44 °

Well	Weber 32-4, 2189' FNL 2094' FEL Sec 4 T6N R92W					
Well Position	+N/-S	0.00 ft	Northing:	1,433,166.43 usft	Latitude:	40° 30' 4.230 N
	+E/-W	0.00 ft	Easting:	2,381,885.72 usft	Longitude:	107° 43' 22.470 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,659.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011-06-07	10.36	66.61	52,823

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	227.94	

Survey Program	Date	2011-06-27			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
163.00	6,023.00	Survey #1- Intermediate (OH)	MWD SDI	MWD - Standard ver 1.0.1	
6,094.00	7,695.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1	

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	
163.00	0.68	301.67	163.00	0.51	-0.82	0.27	0.42	0.42	0.00	
First SDI MWD Survey										
210.00	0.58	312.58	209.99	0.82	-1.24	0.37	0.33	-0.21	23.21	
316.00	0.43	291.58	315.99	1.32	-2.00	0.60	0.22	-0.14	-19.81	
407.00	0.43	223.11	406.99	1.20	-2.55	1.09	0.53	0.00	-75.24	
499.00	0.20	177.06	498.99	0.79	-2.78	1.54	0.35	-0.25	-50.05	
591.00	0.20	169.97	590.99	0.47	-2.74	1.72	0.03	0.00	-7.71	
683.00	0.31	255.25	682.98	0.25	-2.96	2.03	0.39	0.12	92.70	
731.00	1.52	156.93	730.98	-0.37	-2.83	2.35	3.32	2.52	-204.83	

Company:	Quicksilver Resources, Inc.	Local Co-ordinate Reference:	Well Weber 32-4
Project:	Moffat County, CO NAD83	TVD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Site:	Weber	MD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Well:	Weber 32-4	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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)
822.00	1.74	160.34	821.94	-2.78	-1.89	3.27	0.26	0.24	3.75
897.00	1.62	159.84	896.91	-4.85	-1.15	4.10	0.16	-0.16	-0.67
988.00	1.51	153.19	987.88	-7.13	-0.16	4.89	0.23	-0.12	-7.31
1,081.00	1.82	148.86	1,080.84	-9.48	1.15	5.50	0.36	0.33	-4.66
1,172.00	1.35	153.19	1,171.80	-11.68	2.39	6.05	0.53	-0.52	4.76
1,294.00	1.28	152.16	1,293.77	-14.17	3.67	6.77	0.06	-0.06	-0.84
1,377.00	1.61	150.09	1,376.74	-16.00	4.68	7.24	0.40	0.40	-2.49
1,484.00	1.45	130.95	1,483.71	-18.19	6.46	7.39	0.50	-0.15	-17.89
1,579.00	2.00	141.19	1,578.66	-20.27	8.40	7.34	0.66	0.58	10.78
1,673.00	0.74	140.38	1,672.63	-22.01	9.82	7.46	1.34	-1.34	-0.86
1,768.00	0.62	148.59	1,767.63	-22.92	10.48	7.58	0.16	-0.13	8.64
1,863.00	0.90	151.24	1,862.62	-24.02	11.10	7.85	0.30	0.29	2.79
1,959.00	0.87	140.49	1,958.61	-25.24	11.93	8.05	0.18	-0.03	-11.20
2,053.00	0.74	199.19	2,052.60	-26.36	12.19	8.62	0.85	-0.14	62.45
2,147.00	1.12	168.48	2,146.59	-27.84	12.17	9.61	0.65	0.40	-32.67
2,241.00	1.78	195.00	2,240.56	-30.15	11.97	11.31	0.98	0.70	28.21
2,336.00	2.25	212.19	2,335.50	-33.15	10.60	14.34	0.80	0.49	18.09
2,431.00	1.70	242.67	2,430.45	-35.38	8.35	17.50	1.23	-0.58	32.08
2,527.00	1.34	237.57	2,526.41	-36.63	6.14	19.98	0.40	-0.38	-5.31
2,622.00	1.08	246.23	2,621.39	-37.59	4.38	21.93	0.33	-0.27	9.12
2,717.00	2.72	255.15	2,716.33	-38.53	1.39	24.78	1.75	1.73	9.39
2,810.00	2.96	252.80	2,809.22	-39.80	-3.04	28.92	0.29	0.26	-2.53
2,905.00	2.08	259.39	2,904.13	-40.84	-7.08	32.62	0.97	-0.93	6.94
2,999.00	3.31	243.22	2,998.02	-42.38	-11.18	36.69	1.53	1.31	-17.20
3,094.00	3.54	247.53	3,092.85	-44.74	-16.34	42.10	0.36	0.24	4.54
3,188.00	2.64	240.98	3,186.72	-46.90	-20.91	46.94	1.03	-0.96	-6.97
3,283.00	1.67	231.49	3,281.65	-48.82	-23.91	50.46	1.08	-1.02	-9.99
3,379.00	2.28	236.49	3,377.59	-50.75	-26.59	53.74	0.66	0.64	5.21
3,473.00	2.22	229.04	3,471.52	-52.97	-29.53	57.41	0.32	-0.06	-7.93
3,568.00	1.75	224.37	3,566.46	-55.21	-31.93	60.70	0.52	-0.49	-4.92
3,664.00	2.41	241.95	3,662.40	-57.21	-34.74	64.12	0.95	0.69	18.31
3,759.00	1.33	261.28	3,757.35	-58.32	-37.59	66.98	1.30	-1.14	20.35
3,854.00	1.37	259.05	3,852.32	-58.70	-39.80	68.87	0.07	0.04	-2.35
3,949.00	2.51	257.59	3,947.27	-59.36	-42.94	71.65	1.20	1.20	-1.54
4,042.00	1.61	254.83	4,040.20	-60.14	-46.19	74.59	0.97	-0.97	-2.97
4,137.00	2.31	253.41	4,135.15	-61.04	-49.32	77.51	0.74	0.74	-1.49
4,233.00	2.44	252.62	4,231.07	-62.20	-53.12	81.11	0.14	0.14	-0.82
4,328.00	1.53	262.74	4,326.01	-62.97	-56.31	83.99	1.02	-0.96	10.65
4,422.00	3.23	242.09	4,419.92	-64.36	-59.89	87.59	2.00	1.81	-21.97
4,517.00	1.74	236.09	4,514.83	-66.42	-63.46	91.61	1.59	-1.57	-6.32
4,611.00	2.62	224.27	4,608.76	-68.76	-66.14	95.17	1.05	0.94	-12.57
4,705.00	1.49	209.67	4,702.70	-71.36	-68.24	98.47	1.32	-1.20	-15.53
4,799.00	3.02	199.10	4,796.63	-74.76	-69.66	101.80	1.68	1.63	-11.24

Company:	Quicksilver Resources, Inc.	Local Co-ordinate Reference:	Well Weber 32-4
Project:	Moffat County, CO NAD83	TVD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Site:	Weber	MD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Well:	Weber 32-4	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

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)	
4,893.00	2.78	170.84	4,890.51	-79.35	-70.11	105.21	1.53	-0.26	-30.06	
4,987.00	3.14	207.23	4,984.39	-83.89	-70.92	108.86	2.00	0.38	38.71	
5,081.00	2.82	242.50	5,078.28	-87.25	-74.15	113.50	1.95	-0.34	37.52	
5,174.00	2.48	249.15	5,171.18	-89.02	-78.06	117.59	0.49	-0.37	7.15	
5,268.00	1.75	243.33	5,265.11	-90.39	-81.24	120.87	0.81	-0.78	-6.19	
5,362.00	1.71	220.28	5,359.07	-92.10	-83.43	123.65	0.74	-0.04	-24.52	
5,456.00	2.59	253.29	5,453.01	-93.78	-86.37	126.96	1.58	0.94	35.12	
5,550.00	1.85	283.90	5,546.94	-94.03	-89.88	129.72	1.46	-0.79	32.56	
5,645.00	1.10	331.63	5,641.91	-92.86	-91.80	130.37	1.45	-0.79	50.24	
5,739.00	2.26	268.92	5,735.87	-92.10	-94.09	131.55	2.14	1.23	-66.71	
5,834.00	3.29	246.25	5,830.76	-93.23	-98.45	135.55	1.56	1.08	-23.86	
5,929.00	2.07	238.55	5,925.66	-95.23	-102.41	139.83	1.34	-1.28	-8.11	
6,023.00	1.34	302.69	6,019.62	-95.52	-104.79	141.79	2.04	-0.78	68.23	
Last Survey in 8 3/4" Hole										
6,094.00	0.62	331.26	6,090.61	-94.73	-105.67	141.92	1.20	-1.01	40.24	
First Survey in 6 1/8" Hole										
6,265.00	2.32	357.34	6,261.55	-90.46	-106.28	139.51	1.04	0.99	15.25	
6,360.00	2.52	5.24	6,356.47	-86.46	-106.17	136.75	0.41	0.21	8.32	
6,455.00	1.75	345.93	6,451.40	-82.98	-106.34	134.53	1.10	-0.81	-20.33	
6,550.00	0.91	52.56	6,546.38	-81.11	-106.09	133.10	1.71	-0.88	70.14	
6,645.00	2.08	37.49	6,641.35	-79.28	-104.44	130.65	1.29	1.23	-15.86	
6,740.00	2.84	30.53	6,736.26	-75.89	-102.20	126.71	0.86	0.80	-7.33	
6,835.00	1.56	36.03	6,831.19	-72.82	-100.24	123.20	1.36	-1.35	5.79	
6,930.00	1.58	341.74	6,926.16	-70.53	-99.89	121.41	1.51	0.02	-57.15	
7,025.00	2.10	359.68	7,021.11	-67.54	-100.31	119.72	0.81	0.55	18.88	
7,119.00	2.23	350.57	7,115.04	-64.02	-100.62	117.59	0.39	0.14	-9.69	
7,214.00	2.06	18.80	7,209.98	-60.58	-100.37	115.10	1.11	-0.18	29.72	
7,309.00	2.59	3.84	7,304.90	-56.82	-99.68	112.07	0.84	0.56	-15.75	
7,404.00	3.06	39.07	7,399.79	-52.71	-97.94	108.02	1.86	0.49	37.08	
7,499.00	3.32	26.04	7,494.64	-48.27	-95.13	102.96	0.81	0.27	-13.72	
7,593.00	3.58	13.77	7,588.47	-42.97	-93.24	98.01	0.83	0.28	-13.05	
7,657.00	3.85	13.42	7,652.34	-38.94	-92.26	94.58	0.42	0.42	-0.55	
Last SDI MWD Survey										
7,695.00	3.85	13.42	7,690.25	-36.46	-91.67	92.48	0.00	0.00	0.00	
Projection to TD										

Company:	Quicksilver Resources, Inc.	Local Co-ordinate Reference:	Well Weber 32-4
Project:	Moffat County, CO NAD83	TVD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Site:	Weber	MD Reference:	GL 6659' & KB 16' @ 6675.00ft (DHS 6)
Well:	Weber 32-4	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Rockies Compass Server

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
163.00	163.00	0.51	-0.82	First SDI MWD Survey
6,023.00	6,019.62	-95.52	-104.79	Last Survey in 8 3/4" Hole
6,094.00	6,090.61	-94.73	-105.67	First Survey in 6 1/8" Hole
7,657.00	7,652.34	-38.94	-92.26	Last SDI MWD Survey
7,695.00	7,690.25	-36.46	-91.67	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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