



CARRIZO

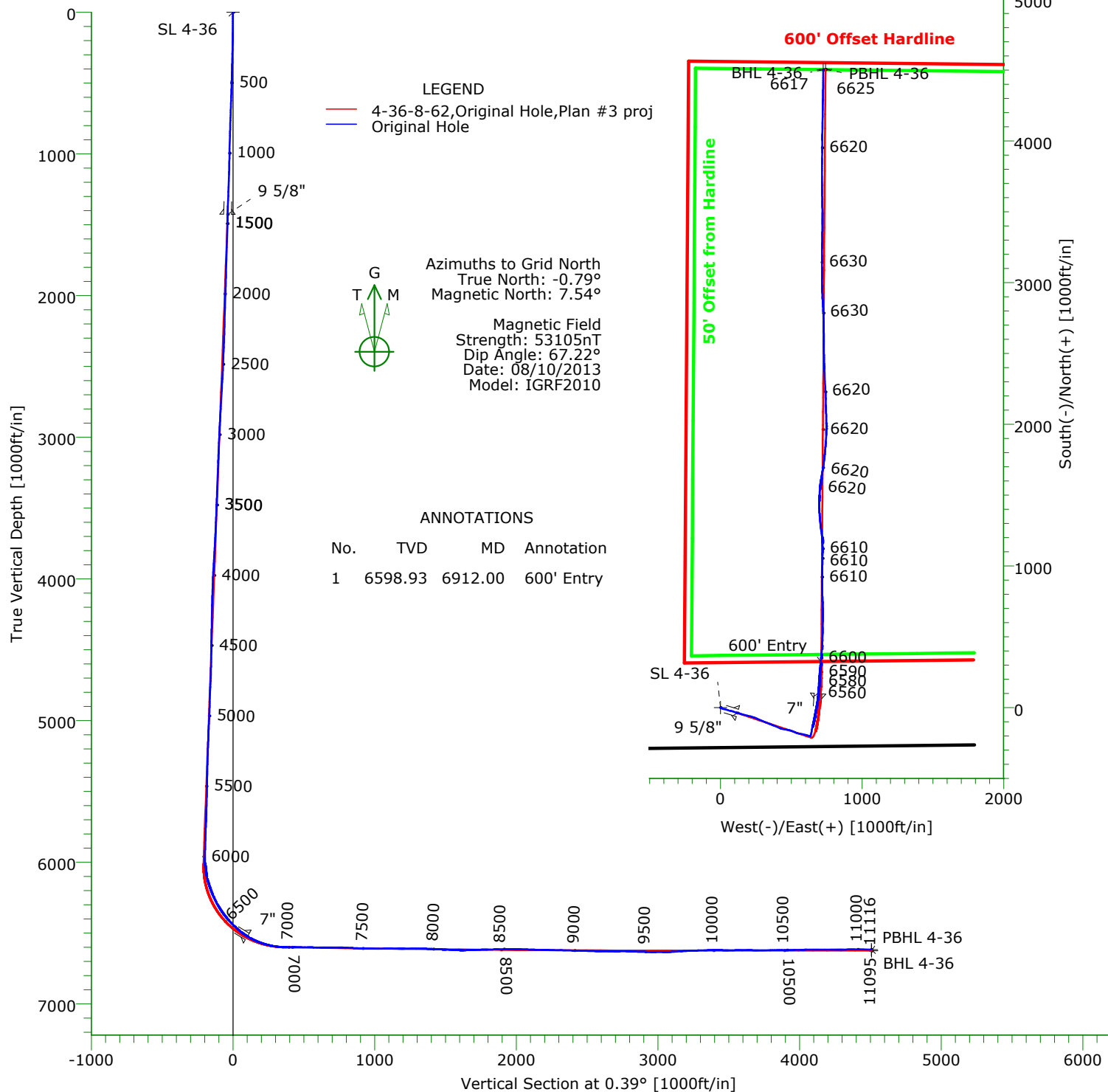
CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bob White 2-36-8-62 Pad
Well: 4-36-8-62
Wellpath: Original Hole



Precision
Directional Services

CASING DETAILS

No.	TVD	MD	Name	Size
1	1427.44	1434.00	9 5/8"	9.625
2	6525.05	6670.00	7"	7.000



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 4-36	0.00	0.00	0.00	1467812.35	3340100.43	40°36'39.910N	104°16'30.107W	Point
BHL 4-36	6616.87	4502.05	725.26	1472314.40	3340825.69	40°37'24.293N	104°16'19.896W	Point
PBHL 4-36	6625.00	4504.66	741.05	1472317.01	3340841.48	40°37'24.317N	104°16'19.691W	Point

Wellpath: (4-36-8-62/Original Hole)

Created By: Tony LoRicca

Date: 08/23/2013

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bob White 2-36-8-62 Pad Well: 4-36-8-62 Wellpath: Original Hole	Date: 08/23/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:	Time: 11:28:26 Well: 4-36-8-62, Grid North 4939'GL+17'KB 4956.0 Well (0.00N,0.00E,0.39Azi) Minimum Curvature	Page: 1 Db: Adapti
---	---	--	-------------------------------------

Field: Niobrara CONZ'83			
Map System: US State Plane Coordinate System 1983 Geo Datum: GRS 1980 Sys Datum: Mean Sea Level	Map Zone: Colorado, Northern Zone Coordinate System: Well Centre Geomagnetic Model: IGRF2010		

Site: Bob White 2-36-8-62 Pad			
Weld County			
Site Position:	Northing: 1467812.21 ft	Latitude: 40 36 39.912 N	
From: Map	Easting: 3340071.27 ft	Longitude: 104 16 30.485 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 4939.00 ft		Grid Convergence: 0.79 deg	

Well: 4-36-8-62 offset from site 8/8/13 Well Position: +N/-S 0.14 ft +E/-W 29.16 ft Position Uncertainty: 0.00 ft	Slot Name: 4-36 Latitude: 40 36 39.910 N Longitude: 104 16 30.107 W
--	--

Wellpath: Original Hole Current Datum: 4939'GL+17'KB Magnetic Data: 08/10/2013 Field Strength: 53105 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.33 deg Mag Dip Angle: 67.22 deg +E/-W ft Direction deg
0.00	0.00

Survey Program for Definitive Wellpath			
Date: 08/23/2013	Validated: No	Version: 3	
Actual From ft	To ft	Survey	Toolcode Tool Name
111.00	11038.00	Survey #1 (111.00-11038.00)	MWD Std MWD
11095.00	11095.00	Survey #2 (11095.00-11095.00)	Project Projection

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
111.00	0.70	132.20	111.00	-0.46	0.50	-0.45	0.63	0.63	0.00	MWD
142.00	0.90	131.30	141.99	-0.74	0.83	-0.74	0.65	0.65	-2.90	MWD
235.00	2.60	118.50	234.95	-2.23	3.23	-2.21	1.86	1.83	-13.76	MWD
325.00	2.80	117.60	324.85	-4.22	6.97	-4.18	0.23	0.22	-1.00	MWD
419.00	4.30	111.40	418.67	-6.57	12.29	-6.49	1.64	1.60	-6.60	MWD
510.00	6.70	106.70	509.24	-9.34	20.55	-9.20	2.68	2.64	-5.16	MWD
602.00	7.40	105.50	600.54	-12.47	31.40	-12.26	0.78	0.76	-1.30	MWD
694.00	7.10	106.20	691.81	-15.64	42.57	-15.35	0.34	-0.33	0.76	MWD
785.00	6.70	106.70	782.15	-18.73	53.05	-18.37	0.44	-0.44	0.55	MWD
876.00	6.20	104.60	872.57	-21.50	62.89	-21.07	0.61	-0.55	-2.31	MWD
968.00	6.20	102.60	964.03	-23.83	72.55	-23.34	0.23	0.00	-2.17	MWD
1059.00	6.00	100.00	1054.52	-25.73	82.03	-25.17	0.37	-0.22	-2.86	MWD
1150.00	6.20	108.80	1145.01	-28.14	91.36	-27.52	1.05	0.22	9.67	MWD
1242.00	6.10	109.10	1236.48	-31.34	100.69	-30.66	0.11	-0.11	0.33	MWD
1334.00	5.90	108.40	1327.97	-34.43	109.79	-33.69	0.23	-0.22	-0.76	MWD
1377.00	5.90	107.60	1370.75	-35.80	114.00	-35.02	0.19	0.00	-1.86	MWD
1434.00	5.90	106.85	1427.44	-37.54	119.59	-36.72	0.13	0.00	-1.31	9 5/8"
1499.00	5.90	106.00	1492.10	-39.42	126.00	-38.57	0.13	0.00	-1.31	MWD
1584.00	5.90	107.40	1576.65	-41.94	134.37	-41.02	0.17	0.00	1.65	MWD
1669.00	6.00	106.50	1661.19	-44.50	142.80	-43.53	0.16	0.12	-1.06	MWD
1754.00	6.00	105.80	1745.73	-46.97	151.33	-45.94	0.09	0.00	-0.82	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.	Date: 08/23/2013	Time: 11:28:26	Page: 2
Field: Niobrara CONZ'83	Co-ordinate(NE) Reference: Well: 4-36-8-62, Grid North		
Site: Bob White 2-36-8-62 Pad	Vertical (TVD) Reference: 4939'GL+17"KB 4956.0		
Well: 4-36-8-62	Section (VS) Reference: Well (0.00N,0.00E,0.39Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature		Db: Adapti

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1839.00	6.00	106.70	1830.26	-49.46	159.86	-48.37	0.11	0.00	1.06	MWD
1925.00	7.00	105.50	1915.71	-52.15	169.21	-51.00	1.17	1.16	-1.40	MWD
2010.00	7.30	103.30	2000.04	-54.78	179.46	-53.56	0.48	0.35	-2.59	MWD
2095.00	7.30	103.70	2084.36	-57.30	189.96	-56.01	0.06	0.00	0.47	MWD
2180.00	7.40	103.50	2168.66	-59.86	200.53	-58.49	0.12	0.12	-0.24	MWD
2265.00	7.00	102.80	2252.99	-62.28	210.91	-60.85	0.48	-0.47	-0.82	MWD
2350.00	7.80	107.40	2337.28	-65.16	221.46	-63.65	1.17	0.94	5.41	MWD
2435.00	8.00	108.60	2421.47	-68.77	232.57	-67.18	0.30	0.24	1.41	MWD
2520.00	7.80	106.20	2505.67	-72.26	243.72	-70.60	0.45	-0.24	-2.82	MWD
2605.00	7.90	113.20	2589.87	-76.17	254.62	-74.44	1.13	0.12	8.24	MWD
2691.00	8.20	114.10	2675.02	-81.01	265.65	-79.20	0.38	0.35	1.05	MWD
2776.00	8.20	114.80	2759.15	-86.02	276.69	-84.14	0.12	0.00	0.82	MWD
2861.00	7.90	114.40	2843.32	-90.98	287.51	-89.02	0.36	-0.35	-0.47	MWD
2946.00	7.50	111.60	2927.55	-95.43	297.99	-93.40	0.65	-0.47	-3.29	MWD
3031.00	6.90	110.50	3011.88	-99.26	307.93	-97.17	0.72	-0.71	-1.29	MWD
3116.00	7.10	109.80	3096.25	-102.83	317.66	-100.67	0.26	0.24	-0.82	MWD
3202.00	5.80	113.40	3181.70	-106.36	326.64	-104.13	1.58	-1.51	4.19	MWD
3287.00	5.50	114.10	3266.29	-109.73	334.30	-107.45	0.36	-0.35	0.82	MWD
3372.00	5.50	112.00	3350.90	-112.92	341.80	-110.59	0.24	0.00	-2.47	MWD
3457.00	5.10	111.60	3435.53	-115.83	349.09	-113.45	0.47	-0.47	-0.47	MWD
3541.00	6.20	112.10	3519.12	-118.91	356.76	-116.48	1.31	1.31	0.60	MWD
3625.00	6.90	112.30	3602.57	-122.54	365.64	-120.04	0.83	0.83	0.24	MWD
3710.00	7.20	111.80	3686.93	-126.45	375.30	-123.89	0.36	0.35	-0.59	MWD
3796.00	7.80	112.80	3772.20	-130.71	385.69	-128.09	0.71	0.70	1.16	MWD
3881.00	8.60	114.80	3856.33	-135.62	396.78	-132.91	1.00	0.94	2.35	MWD
3966.00	8.00	113.50	3940.44	-140.64	407.97	-137.86	0.74	-0.71	-1.53	MWD
4050.00	6.20	109.80	4023.79	-144.51	417.60	-141.66	2.21	-2.14	-4.40	MWD
4135.00	5.50	111.60	4108.35	-147.56	425.70	-144.66	0.85	-0.82	2.12	MWD
4221.00	6.30	100.50	4193.89	-149.94	434.18	-146.98	1.62	0.93	-12.91	MWD
4306.00	6.20	100.50	4278.39	-151.63	443.27	-148.60	0.12	-0.12	0.00	MWD
4391.00	5.20	102.10	4362.97	-153.27	451.55	-150.19	1.19	-1.18	1.88	MWD
4476.00	6.90	100.90	4447.49	-155.04	460.34	-151.91	2.01	2.00	-1.41	MWD
4561.00	7.00	98.20	4531.86	-156.75	470.48	-153.54	0.40	0.12	-3.18	MWD
4646.00	6.80	97.70	4616.25	-158.16	480.59	-154.88	0.25	-0.24	-0.59	MWD
4731.00	6.70	109.30	4700.66	-160.47	490.26	-157.13	1.61	-0.12	13.65	MWD
4816.00	6.40	110.70	4785.11	-163.79	499.37	-160.38	0.40	-0.35	1.65	MWD
4901.00	6.40	109.80	4869.58	-167.07	508.26	-163.60	0.12	0.00	-1.06	MWD
4986.00	5.90	113.20	4954.09	-170.39	516.73	-166.87	0.73	-0.59	4.00	MWD
5072.00	6.40	113.00	5039.59	-174.01	525.20	-170.43	0.58	0.58	-0.23	MWD
5157.00	7.70	108.80	5123.95	-177.69	534.96	-174.05	1.64	1.53	-4.94	MWD
5242.00	6.20	107.20	5208.32	-180.88	544.73	-177.17	1.78	-1.76	-1.88	MWD
5327.00	6.40	101.10	5292.81	-183.15	553.77	-179.38	0.82	0.24	-7.18	MWD
5412.00	6.90	101.20	5377.24	-185.06	563.42	-181.22	0.59	0.59	0.12	MWD
5497.00	6.70	100.70	5461.64	-186.97	573.30	-183.06	0.25	-0.24	-0.59	MWD
5583.00	7.80	101.60	5546.95	-189.07	583.95	-185.10	1.29	1.28	1.05	MWD
5667.00	7.30	100.40	5630.22	-191.18	594.78	-187.13	0.62	-0.60	-1.43	MWD
5752.00	7.50	109.70	5714.52	-194.03	605.32	-189.90	1.43	0.24	10.94	MWD
5837.00	6.50	108.60	5798.88	-197.43	615.10	-193.24	1.19	-1.18	-1.29	MWD
5922.00	5.40	106.70	5883.43	-200.12	623.49	-195.87	1.31	-1.29	-2.24	MWD
5966.00	4.90	103.20	5927.25	-201.14	627.30	-196.87	1.34	-1.14	-7.95	MWD
6003.00	4.70	102.10	5964.12	-201.82	630.32	-197.53	0.60	-0.54	-2.97	MWD
6046.00	5.30	76.80	6006.96	-201.74	633.98	-197.42	5.27	1.40	-58.84	MWD
6088.00	7.40	23.40	6048.73	-198.81	636.95	-194.47	14.28	5.00	-127.14	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.	Date: 08/23/2013	Time: 11:28:26	Page: 3
Field: Niobrara CONZ'83	Co-ordinate(NE) Reference: Well: 4-36-8-62, Grid North		
Site: Bob White 2-36-8-62 Pad	Vertical (TVD) Reference: 4939'GL+17"KB 4956.0		
Well: 4-36-8-62	Section (VS) Reference: Well (0.00N,0.00E,0.39Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature		Db: Adapti

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6131.00	12.10	10.50	6091.10	-191.83	638.87	-187.48	11.99	10.93	-30.00	MWD
6174.00	14.90	9.10	6132.91	-181.94	640.56	-177.57	6.56	6.51	-3.26	MWD
6216.00	18.70	10.00	6173.11	-169.97	642.59	-165.59	9.07	9.05	2.14	MWD
6259.00	22.60	10.90	6213.34	-155.06	645.35	-150.67	9.10	9.07	2.09	MWD
6301.00	25.90	11.90	6251.63	-138.16	648.77	-133.74	7.92	7.86	2.38	MWD
6344.00	28.50	13.20	6289.87	-118.98	653.05	-114.53	6.20	6.05	3.02	MWD
6386.00	31.90	12.10	6326.17	-98.37	657.66	-93.89	8.20	8.10	-2.62	MWD
6429.00	36.60	10.90	6361.70	-74.66	662.47	-70.14	11.04	10.93	-2.79	MWD
6472.00	41.00	10.50	6395.21	-48.19	667.47	-43.64	10.25	10.23	-0.93	MWD
6514.00	44.40	10.40	6426.07	-20.18	672.63	-15.60	8.10	8.10	-0.24	MWD
6557.00	47.00	11.20	6456.10	10.05	678.40	14.66	6.19	6.05	1.86	MWD
6600.00	50.30	8.90	6484.50	41.82	684.02	46.48	8.66	7.67	-5.35	MWD
6612.00	51.80	8.20	6492.05	51.05	685.41	55.72	13.30	12.50	-5.83	MWD
6670.00	58.81	4.81	6525.05	98.40	690.75	103.10	13.01	12.09	-5.84	7"
6674.00	59.30	4.60	6527.10	101.82	691.03	106.52	13.01	12.17	-5.35	MWD
6689.00	60.40	4.40	6534.64	114.75	692.05	119.46	7.42	7.33	-1.33	MWD
6720.00	64.30	3.50	6549.02	142.14	693.93	146.86	12.84	12.58	-2.90	MWD
6750.00	67.80	2.60	6561.20	169.51	695.39	174.24	11.98	11.67	-3.00	MWD
6781.00	71.60	3.70	6571.95	198.54	696.99	203.28	12.70	12.26	3.55	MWD
6811.00	75.10	5.10	6580.54	227.19	699.20	231.94	12.49	11.67	4.67	MWD
6842.00	77.80	5.30	6587.81	257.20	701.93	261.97	8.73	8.71	0.65	MWD
6873.00	80.20	5.10	6593.72	287.50	704.69	292.29	7.77	7.74	-0.65	MWD
6903.00	83.40	5.40	6598.00	317.07	707.40	321.87	10.71	10.67	1.00	MWD
6912.00	84.68	5.40	6598.93	325.98	708.25	330.79	14.19	14.19	0.00	600' Entry
6934.00	87.80	5.40	6600.38	347.83	710.31	352.66	14.19	14.19	0.00	MWD
6964.00	90.80	5.10	6600.74	377.70	713.06	382.54	10.05	10.00	-1.00	MWD
6995.00	90.90	4.90	6600.28	408.58	715.76	413.44	0.72	0.32	-0.65	MWD
7025.00	89.90	3.10	6600.07	438.50	717.85	443.38	6.86	-3.33	-6.00	MWD
7067.00	89.30	1.90	6600.37	480.46	719.68	485.35	3.19	-1.43	-2.86	MWD
7110.00	89.10	1.90	6600.97	523.43	721.11	528.33	0.47	-0.47	0.00	MWD
7153.00	88.70	0.90	6601.79	566.41	722.16	571.31	2.50	-0.93	-2.33	MWD
7196.00	88.70	1.00	6602.77	609.39	722.87	614.30	0.23	0.00	0.23	MWD
7238.00	90.30	0.20	6603.14	651.39	723.31	656.30	4.26	3.81	-1.90	MWD
7281.00	90.50	358.40	6602.84	694.38	722.78	699.29	4.21	0.47	-4.19	MWD
7323.00	90.00	357.50	6602.65	736.35	721.28	741.25	2.45	-1.19	-2.14	MWD
7366.00	87.60	357.90	6603.55	779.31	719.56	784.19	5.66	-5.58	0.93	MWD
7408.00	87.10	357.50	6605.49	821.23	717.87	826.10	1.52	-1.19	-0.95	MWD
7450.00	87.40	359.10	6607.51	863.16	716.63	868.02	3.87	0.71	3.81	MWD
7493.00	87.50	0.70	6609.42	906.12	716.55	910.97	3.72	0.23	3.72	MWD
7535.00	89.20	1.90	6610.63	948.09	717.51	952.95	4.95	4.05	2.86	MWD
7578.00	90.70	1.60	6610.67	991.06	718.82	995.93	3.56	3.49	-0.70	MWD
7621.00	90.60	1.00	6610.18	1034.05	719.79	1038.93	1.41	-0.23	-1.40	MWD
7662.00	90.50	1.20	6609.79	1075.04	720.58	1079.92	0.55	-0.24	0.49	MWD
7705.00	89.10	359.80	6609.94	1118.04	720.96	1122.92	4.60	-3.26	-3.26	MWD
7747.00	88.90	358.90	6610.67	1160.03	720.48	1164.90	2.19	-0.48	-2.14	MWD
7790.00	90.40	352.70	6610.93	1202.89	717.33	1207.74	14.83	3.49	-14.42	MWD
7832.00	90.50	352.20	6610.60	1244.52	711.81	1249.34	1.21	0.24	-1.19	MWD
7875.00	89.90	353.80	6610.45	1287.20	706.57	1291.98	3.97	-1.40	3.72	MWD
7917.00	89.20	355.00	6610.78	1329.00	702.48	1333.75	3.31	-1.67	2.86	MWD
7960.00	87.80	356.30	6611.91	1371.86	699.22	1376.59	4.44	-3.26	3.02	MWD
8003.00	87.20	358.50	6613.79	1414.77	697.27	1419.48	5.30	-1.40	5.12	MWD
8045.00	87.10	0.80	6615.87	1456.71	697.01	1461.42	5.47	-0.24	5.48	MWD
8088.00	88.00	4.20	6617.71	1499.63	698.88	1504.35	8.17	2.09	7.91	MWD
8130.00	87.80	3.50	6619.25	1541.50	701.70	1546.24	1.73	-0.48	-1.67	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.	Date: 08/23/2013	Time: 11:28:26	Page: 4
Field: Niobrara CONZ'83	Co-ordinate(NE) Reference: Well: 4-36-8-62, Grid North		
Site: Bob White 2-36-8-62 Pad	Vertical (TVD) Reference: 4939'GL+17"KB 4956.0		
Well: 4-36-8-62	Section (VS) Reference: Well (0.00N,0.00E,0.39Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature	Db: Adapti	

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
8173.00	87.10	8.40	6621.17	1584.22	706.15	1588.99	11.50	-1.63	11.40	MWD
8215.00	90.70	9.30	6621.97	1625.70	712.61	1630.51	8.84	8.57	2.14	MWD
8258.00	92.20	10.00	6620.88	1668.08	719.82	1672.94	3.85	3.49	1.63	MWD
8300.00	91.80	8.10	6619.42	1709.53	726.42	1714.43	4.62	-0.95	-4.52	MWD
8343.00	91.70	7.20	6618.11	1752.12	732.14	1757.07	2.10	-0.23	-2.09	MWD
8386.00	90.70	5.30	6617.20	1794.86	736.82	1799.83	4.99	-2.33	-4.42	MWD
8428.00	91.10	5.10	6616.54	1836.68	740.63	1841.68	1.06	0.95	-0.48	MWD
8471.00	91.40	3.10	6615.61	1879.56	743.70	1884.58	4.70	0.70	-4.65	MWD
8514.00	91.40	3.10	6614.56	1922.48	746.03	1927.51	0.00	0.00	0.00	MWD
8556.00	90.40	0.90	6613.90	1964.45	747.49	1969.49	5.75	-2.38	-5.24	MWD
8599.00	88.50	358.90	6614.31	2007.44	747.42	2012.48	6.42	-4.42	-4.65	MWD
8641.00	88.00	358.60	6615.59	2049.41	746.50	2054.44	1.39	-1.19	-0.71	MWD
8684.00	87.60	358.00	6617.24	2092.36	745.23	2097.38	1.68	-0.93	-1.40	MWD
8726.00	89.00	358.40	6618.49	2134.32	743.91	2139.33	3.47	3.33	0.95	MWD
8769.00	89.50	358.40	6619.05	2177.30	742.71	2182.30	1.16	1.16	0.00	MWD
8811.00	88.50	357.50	6619.78	2219.27	741.21	2224.26	3.20	-2.38	-2.14	MWD
8854.00	89.10	357.30	6620.68	2262.21	739.26	2267.19	1.47	1.40	-0.47	MWD
8896.00	89.10	357.30	6621.34	2304.16	737.28	2309.12	0.00	0.00	0.00	MWD
8939.00	88.50	357.30	6622.25	2347.10	735.25	2352.05	1.40	-1.40	0.00	MWD
8982.00	88.40	357.50	6623.41	2390.04	733.30	2394.98	0.52	-0.23	0.47	MWD
9024.00	88.00	359.10	6624.73	2432.00	732.06	2436.93	3.92	-0.95	3.81	MWD
9066.00	88.10	358.90	6626.16	2473.97	731.32	2478.89	0.53	0.24	-0.48	MWD
9108.00	88.30	359.10	6627.48	2515.94	730.59	2520.86	0.67	0.48	0.48	MWD
9151.00	88.70	359.50	6628.60	2558.93	730.07	2563.84	1.32	0.93	0.93	MWD
9192.00	89.70	359.60	6629.17	2599.92	729.74	2604.83	2.45	2.44	0.24	MWD
9235.00	89.90	358.90	6629.32	2642.92	729.18	2647.82	1.69	0.47	-1.63	MWD
9278.00	90.50	360.00	6629.17	2685.91	728.77	2690.81	2.91	1.40	2.56	MWD
9320.00	89.30	358.00	6629.25	2727.90	728.04	2732.80	5.55	-2.86	-4.76	MWD
9363.00	89.30	358.20	6629.77	2770.88	726.61	2775.76	0.47	0.00	0.47	MWD
9405.00	88.30	357.00	6630.65	2812.83	724.85	2817.70	3.72	-2.38	-2.86	MWD
9448.00	88.10	356.30	6632.00	2855.73	722.34	2860.58	1.69	-0.47	-1.63	MWD
9491.00	89.10	358.00	6633.05	2898.67	720.20	2903.50	4.59	2.33	3.95	MWD
9533.00	88.60	357.00	6633.90	2940.62	718.37	2945.44	2.66	-1.19	-2.38	MWD
9576.00	89.90	359.30	6634.46	2983.59	716.98	2988.40	6.14	3.02	5.35	MWD
9618.00	89.50	359.10	6634.68	3025.58	716.40	3030.39	1.06	-0.95	-0.48	MWD
9661.00	92.00	359.80	6634.12	3068.57	715.98	3073.38	6.04	5.81	1.63	MWD
9703.00	93.50	0.20	6632.10	3110.52	715.98	3115.32	3.70	3.57	0.95	MWD
9746.00	93.70	0.20	6629.40	3153.44	716.13	3158.24	0.47	0.47	0.00	MWD
9789.00	92.90	0.90	6626.93	3196.36	716.55	3201.17	2.47	-1.86	1.63	MWD
9831.00	92.80	0.70	6624.84	3238.31	717.13	3243.11	0.53	-0.24	-0.48	MWD
9874.00	91.50	0.50	6623.22	3281.27	717.58	3286.08	3.06	-3.02	-0.47	MWD
9916.00	91.50	1.20	6622.13	3323.25	718.21	3328.07	1.67	0.00	1.67	MWD
9959.00	90.70	1.90	6621.30	3366.23	719.37	3371.05	2.47	-1.86	1.63	MWD
10002.00	89.90	0.90	6621.07	3409.22	720.42	3414.04	2.98	-1.86	-2.33	MWD
10044.00	88.60	359.10	6621.62	3451.21	720.42	3456.03	5.29	-3.10	-4.29	MWD
10087.00	90.30	358.90	6622.04	3494.20	719.67	3499.02	3.98	3.95	-0.47	MWD
10129.00	90.60	359.30	6621.71	3536.19	719.01	3541.01	1.19	0.71	0.95	MWD
10172.00	90.10	358.60	6621.44	3579.19	718.22	3583.99	2.00	-1.16	-1.63	MWD
10214.00	89.80	358.20	6621.48	3621.17	717.05	3625.97	1.19	-0.71	-0.95	MWD
10257.00	89.70	359.30	6621.67	3664.16	716.11	3668.95	2.57	-0.23	2.56	MWD
10299.00	90.00	360.00	6621.78	3706.16	715.85	3710.94	1.81	0.71	1.67	MWD
10342.00	90.10	0.30	6621.74	3749.16	715.97	3753.94	0.74	0.23	0.70	MWD
10384.00	90.20	0.30	6621.63	3791.15	716.19	3795.94	0.24	0.24	0.00	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bob White 2-36-8-62 Pad Well: 4-36-8-62 Wellpath: Original Hole	Date: 08/23/2013 Time: 11:28:26 Page: 5 Co-ordinate(NE) Reference: Well: 4-36-8-62, Grid North Vertical (TVD) Reference: 4939'GL+17'KB 4956.0 Section (VS) Reference: Well (0.00N,0.00E,0.39Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
---	--

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
10427.00	90.00	0.50	6621.56	3834.15	716.49	3838.94	0.66	-0.47	0.47	MWD
10469.00	90.70	1.20	6621.30	3876.15	717.11	3880.94	2.36	1.67	1.67	MWD
10511.00	91.00	1.20	6620.68	3918.13	717.99	3922.93	0.71	0.71	0.00	MWD
10554.00	91.30	0.30	6619.81	3961.12	718.55	3965.92	2.21	0.70	-2.09	MWD
10596.00	91.40	0.30	6618.82	4003.11	718.77	4007.91	0.24	0.24	0.00	MWD
10639.00	90.30	0.70	6618.19	4046.10	719.15	4050.90	2.72	-2.56	0.93	MWD
10681.00	90.10	0.70	6618.04	4088.10	719.66	4092.90	0.48	-0.48	0.00	MWD
10723.00	90.40	0.90	6617.86	4130.09	720.25	4134.90	0.86	0.71	0.48	MWD
10766.00	90.30	0.90	6617.59	4173.09	720.92	4177.90	0.23	-0.23	0.00	MWD
10809.00	90.30	1.00	6617.37	4216.08	721.63	4220.90	0.23	0.00	0.23	MWD
10851.00	90.00	0.50	6617.26	4258.08	722.18	4262.89	1.39	-0.71	-1.19	MWD
10893.00	90.70	1.40	6617.00	4300.07	722.88	4304.89	2.71	1.67	2.14	MWD
10935.00	90.60	1.00	6616.53	4342.06	723.76	4346.88	0.98	-0.24	-0.95	MWD
10978.00	90.00	0.90	6616.30	4385.05	724.47	4389.88	1.41	-1.40	-0.23	MWD
11021.00	90.00	0.20	6616.30	4428.05	724.89	4432.88	1.63	0.00	-1.63	MWD
11038.00	89.50	0.30	6616.37	4445.05	724.96	4449.88	3.00	-2.94	0.59	MWD
11095.00	89.50	0.30	6616.87	4502.05	725.26	4506.88	0.00	0.00	0.00	PROJECTED to TD

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1434.00	1427.44	9.625	12.250	9 5/8"
6670.00	6525.05	7.000	8.500	7"

Annotation

MD ft	TVD ft	
6912.00	6598.93	600' Entry