



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 3-36	0.00	0.00	0.00	1505002.34	3374386.19	40°42'42.439N	104°08'58.257W	Point
600' entry 3-36	6401.29	-330.07	-35.50	1504672.27	3374350.69	40°42'39.183N	104°08'58.783W	Point
BHL 3-36	6403.03	-4201.57	315.27	1500800.77	3374701.46	40°42'00.880N	104°08'54.995W	Point
PBHL 3-36	6407.50	-4202.63	306.24	1500799.71	3374692.43	40°42'00.871N	104°08'55.113W	Point

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: State 2-36-9-61 Pad Well: 3-36-9-61 Wellpath: Original Hole	Date: 10/22/2013 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:	Time: 08:21:05 Well: 3-36-9-61, Grid North 4932'GL+17'KB 4949.0 Well (0.00N,0.00E,174.89Azi) 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: State 2-36-9-61 Pad Weld County, CO Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 4932.00 ft	Northing: 1504982.85 ft Easting: 3374728.13 ft Latitude: 40 42 42.195 N Longitude: 104 8 53.821 W North Reference: Grid Grid Convergence: 0.87 deg
---	---

Well: 3-36-9-61 272'FNL, 1039'FEL adj 8-26 Well Position: +N/-S 19.49 ft +E/-W -341.94 ft Position Uncertainty: 0.00 ft	Slot Name: 3-36 Latitude: 40 42 42.439 N Longitude: 104 8 58.257 W
--	---

Wellpath: Original Hole Current Datum: 4932'GL+17'KB Magnetic Data: 10/14/2013 Field Strength: 53151 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.24 deg Mag Dip Angle: 67.32 deg +E/-W ft Direction deg
0.00	0.00

Survey Program for Definitive Wellpath			
Date: 10/21/2013	Validated: No	Version: 4	
Actual From ft	To ft	Survey	Toolcode Tool Name
145.00	10525.00	Survey #1 (145.00-10525.00)	MWD
10587.00	10587.00	Survey #2 (10587.00-10587.00)	Project

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
145.00	0.30	250.60	145.00	-0.13	-0.36	0.09	0.21	0.21	0.00	MWD
241.00	1.40	341.70	240.99	0.90	-0.96	-0.99	1.50	1.15	94.90	MWD
334.00	2.40	354.50	333.94	3.92	-1.51	-4.04	1.16	1.08	13.76	MWD
428.00	2.60	355.40	427.85	8.01	-1.87	-8.14	0.22	0.21	0.96	MWD
521.00	2.70	353.10	520.75	12.28	-2.30	-12.44	0.16	0.11	-2.47	MWD
615.00	2.90	353.10	614.64	16.84	-2.85	-17.03	0.21	0.21	0.00	MWD
709.00	3.00	353.50	708.51	21.65	-3.41	-21.86	0.11	0.11	0.43	MWD
802.00	3.00	352.10	801.38	26.47	-4.02	-26.73	0.08	0.00	-1.51	MWD
896.00	2.90	350.80	895.26	31.26	-4.74	-31.56	0.13	-0.11	-1.38	MWD
989.00	2.80	350.50	988.14	35.82	-5.49	-36.17	0.11	-0.11	-0.32	MWD
1083.00	2.60	350.30	1082.04	40.19	-6.23	-40.58	0.21	-0.21	-0.21	MWD
1176.00	2.50	354.90	1174.95	44.29	-6.77	-44.71	0.24	-0.11	4.95	MWD
1270.00	2.60	356.30	1268.86	48.46	-7.09	-48.89	0.13	0.11	1.49	MWD
1364.00	2.60	355.80	1362.76	52.71	-7.38	-53.16	0.02	0.00	-0.53	MWD
1445.00	2.60	351.90	1443.68	56.36	-7.77	-56.83	0.22	0.00	-4.81	MWD
1534.00	2.60	352.40	1532.58	60.36	-8.33	-60.86	0.03	0.00	0.56	MWD
1619.00	2.50	352.10	1617.50	64.11	-8.84	-64.64	0.12	-0.12	-0.35	MWD
1704.00	2.20	357.00	1702.43	67.57	-9.18	-68.12	0.42	-0.35	5.76	MWD
1789.00	2.30	355.80	1787.36	70.90	-9.39	-71.46	0.13	0.12	-1.41	MWD
1875.00	2.00	354.90	1873.30	74.12	-9.65	-74.68	0.35	-0.35	-1.05	MWD
1960.00	1.90	355.20	1958.25	77.00	-9.90	-77.58	0.12	-0.12	0.35	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: State 2-36-9-61 Pad Well: 3-36-9-61 Wellpath: Original Hole	Date: 10/22/2013 Co-ordinate(NE) Reference: Well: 3-36-9-61, Grid North Vertical (TVD) Reference: 4932'GL+17"KB 4949.0 Section (VS) Reference: Well (0.00N,0.00E,174.89Azi) Survey Calculation Method: Minimum Curvature	Time: 08:21:05 Page: 2 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
2045.00	1.90	352.90	2043.21	79.80	-10.19	-80.39	0.09	0.00	-2.71	MWD
2131.00	1.80	348.60	2129.16	82.54	-10.63	-83.16	0.20	-0.12	-5.00	MWD
2216.00	1.80	344.20	2214.12	85.13	-11.26	-85.80	0.16	0.00	-5.18	MWD
2301.00	1.80	343.80	2299.08	87.70	-11.99	-88.42	0.01	0.00	-0.47	MWD
2387.00	1.80	349.40	2385.03	90.33	-12.62	-91.09	0.20	0.00	6.51	MWD
2472.00	2.90	347.30	2469.96	93.74	-13.34	-94.55	1.30	1.29	-2.47	MWD
2557.00	3.30	350.10	2554.84	98.24	-14.23	-99.12	0.50	0.47	3.29	MWD
2642.00	3.30	351.00	2639.70	103.07	-15.03	-104.00	0.06	0.00	1.06	MWD
2728.00	3.40	351.20	2725.55	108.03	-15.81	-109.01	0.12	0.12	0.23	MWD
2813.00	3.30	351.70	2810.40	112.95	-16.55	-113.97	0.12	-0.12	0.59	MWD
2899.00	3.30	351.70	2896.26	117.85	-17.27	-118.91	0.00	0.00	0.00	MWD
2984.00	3.30	351.50	2981.12	122.69	-17.98	-123.80	0.01	0.00	-0.24	MWD
3069.00	2.60	354.40	3066.01	127.02	-18.53	-128.17	0.84	-0.82	3.41	MWD
3154.00	2.60	357.20	3150.92	130.87	-18.81	-132.02	0.15	0.00	3.29	MWD
3240.00	2.60	355.80	3236.83	134.76	-19.05	-135.92	0.07	0.00	-1.63	MWD
3325.00	1.80	3.50	3321.77	138.02	-19.11	-139.17	1.00	-0.94	9.06	MWD
3410.00	1.90	14.20	3406.72	140.72	-18.68	-141.82	0.42	0.12	12.59	MWD
3495.00	2.50	8.20	3491.66	143.92	-18.07	-144.95	0.76	0.71	-7.06	MWD
3580.00	2.60	12.50	3576.58	147.63	-17.39	-148.60	0.25	0.12	5.06	MWD
3666.00	2.50	354.00	3662.49	151.40	-17.17	-152.33	0.96	-0.12	-21.51	MWD
3751.00	2.70	355.40	3747.41	155.24	-17.52	-156.19	0.25	0.24	1.65	MWD
3836.00	3.00	355.20	3832.30	159.45	-17.87	-160.41	0.35	0.35	-0.24	MWD
3922.00	2.90	356.10	3918.19	163.87	-18.20	-164.84	0.13	-0.12	1.05	MWD
4007.00	3.20	0.30	4003.07	168.39	-18.34	-169.35	0.44	0.35	4.94	MWD
4092.00	2.50	336.60	4087.96	172.46	-19.06	-173.47	1.60	-0.82	-27.88	MWD
4177.00	2.20	332.90	4172.89	175.61	-20.54	-176.74	0.40	-0.35	-4.35	MWD
4263.00	1.80	322.20	4258.84	178.15	-22.12	-179.41	0.63	-0.47	-12.44	MWD
4348.00	2.30	344.90	4343.79	180.85	-23.38	-182.22	1.11	0.59	26.71	MWD
4433.00	2.30	345.90	4428.72	184.15	-24.24	-185.58	0.05	0.00	1.18	MWD
4519.00	2.10	351.50	4514.65	187.38	-24.89	-188.86	0.34	-0.23	6.51	MWD
4604.00	2.40	4.20	4599.59	190.70	-24.99	-192.17	0.68	0.35	14.94	MWD
4689.00	2.60	356.80	4684.51	194.40	-24.97	-195.85	0.45	0.24	-8.71	MWD
4775.00	2.80	343.30	4770.41	198.36	-25.68	-199.86	0.77	0.23	-15.70	MWD
4860.00	2.70	358.00	4855.32	202.35	-26.35	-203.89	0.84	-0.12	17.29	MWD
4945.00	1.90	23.70	4940.25	205.64	-25.85	-207.13	1.51	-0.94	30.24	MWD
5030.00	2.20	19.10	5025.20	208.47	-24.75	-209.85	0.40	0.35	-5.41	MWD
5116.00	2.50	350.00	5111.13	211.88	-24.54	-213.22	1.41	0.35	-33.84	MWD
5201.00	2.40	348.70	5196.05	215.45	-25.21	-216.84	0.13	-0.12	-1.53	MWD
5286.00	1.80	352.20	5280.99	218.52	-25.74	-219.94	0.72	-0.71	4.12	MWD
5372.00	1.30	355.80	5366.96	220.83	-26.00	-222.27	0.59	-0.58	4.19	MWD
5457.00	1.00	349.60	5451.94	222.52	-26.20	-223.97	0.38	-0.35	-7.29	MWD
5542.00	1.90	333.40	5536.91	224.51	-26.96	-226.02	1.15	1.06	-19.06	MWD
5627.00	1.60	331.90	5621.88	226.82	-28.15	-228.42	0.36	-0.35	-1.76	MWD
5712.00	1.50	336.60	5706.84	228.88	-29.16	-230.57	0.19	-0.12	5.53	MWD
5733.00	1.50	336.90	5727.84	229.39	-29.37	-231.09	0.04	0.00	1.43	MWD
5751.00	1.50	337.10	5745.83	229.82	-29.56	-231.54	0.03	0.00	1.11	MWD
5794.00	1.10	219.20	5788.82	230.02	-30.04	-231.78	5.20	-0.93	-274.19	MWD
5836.00	5.20	209.20	5830.75	228.05	-31.22	-229.92	9.81	9.76	-23.81	MWD
5879.00	9.60	210.90	5873.38	223.27	-34.01	-225.41	10.24	10.23	3.95	MWD
5922.00	13.80	209.00	5915.48	215.70	-38.34	-218.26	9.81	9.77	-4.42	MWD
5964.00	18.30	201.90	5955.84	205.20	-43.23	-208.23	11.67	10.71	-16.90	MWD
6007.00	22.80	196.00	5996.10	190.91	-48.05	-194.44	11.51	10.47	-13.72	MWD
6050.00	27.50	193.50	6035.01	173.24	-52.67	-177.24	11.20	10.93	-5.81	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: State 2-36-9-61 Pad
Well: 3-36-9-61
Wellpath: Original Hole

Date: 10/22/2013 **Time:** 08:21:05 **Page:** 3
Co-ordinate(NE) Reference: Well: 3-36-9-61, Grid North
Vertical (TVD) Reference: 4932'GL+17"KB 4949.0
Section (VS) Reference: Well (0.00N,0.00E,174.89Azi)
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
6092.00	31.30	187.90	6071.60	153.00	-56.43	-157.41	11.16	9.05	-13.33	MWD
6135.00	34.60	183.50	6107.68	129.74	-58.71	-134.45	9.48	7.67	-10.23	MWD
6178.00	37.90	179.40	6142.36	104.33	-59.32	-109.20	9.52	7.67	-9.53	MWD
6220.00	40.40	177.30	6174.93	77.83	-58.55	-82.74	6.74	5.95	-5.00	MWD
6263.00	43.60	176.60	6206.88	49.11	-57.01	-53.99	7.52	7.44	-1.63	MWD
6305.00	47.00	176.60	6236.42	19.31	-55.24	-24.15	8.10	8.10	0.00	MWD
6348.00	51.60	176.10	6264.45	-13.22	-53.16	8.43	10.73	10.70	-1.16	MWD
6391.00	55.10	175.20	6290.12	-47.61	-50.54	42.92	8.31	8.14	-2.09	MWD
6433.00	58.40	175.80	6313.14	-82.62	-47.79	78.04	7.95	7.86	1.43	MWD
6476.00	62.50	176.10	6334.35	-119.93	-45.15	115.43	9.55	9.53	0.70	MWD
6518.00	66.40	176.60	6352.46	-157.73	-42.74	153.30	9.35	9.29	1.19	MWD
6540.00	67.70	177.00	6361.03	-177.96	-41.61	173.55	6.14	5.91	1.82	MWD
6602.00	73.00	178.00	6381.88	-236.27	-39.07	231.85	8.68	8.55	1.61	MWD
6645.00	77.60	178.00	6392.79	-277.83	-37.62	273.37	10.70	10.70	0.00	MWD
6688.00	82.80	177.50	6400.10	-320.15	-35.95	315.68	12.15	12.09	-1.16	MWD
6698.00	83.51	177.28	6401.29	-330.07	-35.50	325.60	7.45	7.14	-2.15	600' entry 3-36
6730.00	85.80	176.60	6404.27	-361.89	-33.80	357.44	7.45	7.14	-2.14	MWD
6773.00	88.60	175.90	6406.37	-404.74	-30.99	400.37	6.71	6.51	-1.63	MWD
6816.00	91.20	175.20	6406.45	-447.60	-27.66	443.36	6.26	6.05	-1.63	MWD
6858.00	91.20	174.20	6405.57	-489.41	-23.78	485.35	2.38	0.00	-2.38	MWD
6901.00	90.00	173.80	6405.12	-532.18	-19.28	528.34	2.94	-2.79	-0.93	MWD
6944.00	89.80	173.10	6405.19	-574.90	-14.38	571.33	1.69	-0.47	-1.63	MWD
6986.00	89.40	172.80	6405.49	-616.58	-9.22	613.30	1.19	-0.95	-0.71	MWD
7029.00	89.30	172.90	6405.97	-659.24	-3.87	656.27	0.33	-0.23	0.23	MWD
7072.00	90.50	175.80	6406.05	-702.03	0.36	699.27	7.30	2.79	6.74	MWD
7114.00	91.40	176.60	6405.35	-743.93	3.14	741.25	2.87	2.14	1.90	MWD
7157.00	90.60	174.70	6404.60	-786.79	6.40	784.24	4.79	-1.86	-4.42	MWD
7200.00	90.30	174.00	6404.26	-829.58	10.64	827.23	1.77	-0.70	-1.63	MWD
7242.00	90.00	173.30	6404.15	-871.32	15.28	869.22	1.81	-0.71	-1.67	MWD
7285.00	89.10	173.80	6404.49	-914.05	20.11	912.21	2.39	-2.09	1.16	MWD
7327.00	89.10	175.20	6405.15	-955.85	24.14	954.20	3.33	0.00	3.33	MWD
7370.00	89.10	174.90	6405.83	-998.69	27.85	997.20	0.70	0.00	-0.70	MWD
7413.00	88.80	174.20	6406.62	-1041.48	31.93	1040.19	1.77	-0.70	-1.63	MWD
7455.00	88.90	173.80	6407.46	-1083.24	36.32	1082.17	0.98	0.24	-0.95	MWD
7498.00	89.10	175.40	6408.21	-1126.05	40.37	1125.17	3.75	0.47	3.72	MWD
7541.00	89.30	175.20	6408.81	-1168.90	43.89	1168.16	0.66	0.47	-0.47	MWD
7583.00	91.10	177.20	6408.66	-1210.80	46.67	1210.15	6.41	4.29	4.76	MWD
7626.00	92.10	177.20	6407.46	-1253.73	48.77	1253.09	2.33	2.33	0.00	MWD
7669.00	91.10	176.30	6406.26	-1296.65	51.21	1296.05	3.13	-2.33	-2.09	MWD
7711.00	89.60	175.80	6406.01	-1338.54	54.10	1338.04	3.76	-3.57	-1.19	MWD
7754.00	90.40	176.50	6406.01	-1381.45	56.99	1381.03	2.47	1.86	1.63	MWD
7797.00	90.30	175.90	6405.74	-1424.35	59.84	1424.02	1.41	-0.23	-1.40	MWD
7839.00	90.60	175.40	6405.41	-1466.23	63.03	1466.01	1.39	0.71	-1.19	MWD
7882.00	89.30	174.40	6405.45	-1509.06	66.85	1509.01	3.81	-3.02	-2.33	MWD
7925.00	89.40	174.00	6405.94	-1551.83	71.19	1552.01	0.96	0.23	-0.93	MWD
7967.00	89.70	173.30	6406.27	-1593.57	75.84	1594.00	1.81	0.71	-1.67	MWD
8010.00	89.90	172.60	6406.42	-1636.25	81.12	1636.97	1.69	0.47	-1.63	MWD
8053.00	89.30	174.50	6406.72	-1678.97	85.95	1679.95	4.63	-1.40	4.42	MWD
8095.00	89.70	174.00	6407.08	-1720.76	90.15	1721.95	1.52	0.95	-1.19	MWD
8138.00	89.50	172.90	6407.38	-1763.48	95.06	1764.94	2.60	-0.47	-2.56	MWD
8180.00	88.80	174.40	6408.01	-1805.21	99.70	1806.92	3.94	-1.67	3.57	MWD
8223.00	88.70	173.50	6408.95	-1847.96	104.23	1849.90	2.11	-0.23	-2.09	MWD
8266.00	90.00	175.60	6409.43	-1890.76	108.32	1892.90	5.74	3.02	4.88	MWD
8308.00	90.00	175.90	6409.43	-1932.65	111.43	1934.89	0.71	0.00	0.71	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: State 2-36-9-61 Pad Well: 3-36-9-61 Wellpath: Original Hole	Date: 10/22/2013 Co-ordinate(NE) Reference: Well: 3-36-9-61, Grid North Vertical (TVD) Reference: 4932'GL+17"KB 4949.0 Section (VS) Reference: Well (0.00N,0.00E,174.89Azi) Survey Calculation Method: Minimum Curvature	Time: 08:21:05 Page: 4 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
8351.00	90.00	176.30	6409.43	-1975.55	114.35	1977.88	0.93	0.00	0.93	MWD
8393.00	90.60	175.40	6409.21	-2017.44	117.39	2019.87	2.58	1.43	-2.14	MWD
8436.00	90.50	175.60	6408.80	-2060.30	120.77	2062.87	0.52	-0.23	0.47	MWD
8479.00	90.10	176.10	6408.58	-2103.19	123.88	2105.86	1.49	-0.93	1.16	MWD
8521.00	90.40	175.40	6408.39	-2145.07	126.99	2147.86	1.81	0.71	-1.67	MWD
8564.00	90.20	174.50	6408.17	-2187.90	130.78	2190.86	2.14	-0.47	-2.09	MWD
8607.00	90.50	173.50	6407.91	-2230.67	135.27	2233.85	2.43	0.70	-2.33	MWD
8649.00	90.40	172.20	6407.58	-2272.34	140.50	2275.82	3.10	-0.24	-3.10	MWD
8692.00	90.40	171.50	6407.27	-2314.90	146.59	2318.76	1.63	0.00	-1.63	MWD
8734.00	90.50	172.40	6406.95	-2356.49	152.48	2360.70	2.16	0.24	2.14	MWD
8777.00	90.20	173.80	6406.68	-2399.17	157.64	2403.68	3.33	-0.70	3.26	MWD
8820.00	89.30	175.80	6406.87	-2441.99	161.54	2446.68	5.10	-2.09	4.65	MWD
8862.00	89.20	175.10	6407.42	-2483.86	164.87	2488.67	1.68	-0.24	-1.67	MWD
8905.00	89.70	175.60	6407.83	-2526.71	168.35	2531.67	1.64	1.16	1.16	MWD
8948.00	91.00	177.50	6407.57	-2569.63	170.94	2574.65	5.35	3.02	4.42	MWD
8990.00	90.70	176.60	6406.95	-2611.57	173.10	2616.61	2.26	-0.71	-2.14	MWD
9033.00	91.00	176.30	6406.31	-2654.48	175.77	2659.59	0.99	0.70	-0.70	MWD
9075.00	89.70	176.60	6406.05	-2696.40	178.37	2701.57	3.18	-3.10	0.71	MWD
9118.00	89.10	175.40	6406.50	-2739.29	181.37	2744.56	3.12	-1.40	-2.79	MWD
9161.00	89.20	174.70	6407.14	-2782.13	185.08	2787.56	1.64	0.23	-1.63	MWD
9203.00	89.40	174.20	6407.65	-2823.93	189.14	2829.55	1.28	0.48	-1.19	MWD
9246.00	89.30	173.80	6408.14	-2866.69	193.63	2872.54	0.96	-0.23	-0.93	MWD
9289.00	89.70	173.50	6408.52	-2909.42	198.39	2915.53	1.16	0.93	-0.70	MWD
9331.00	90.30	175.20	6408.52	-2951.22	202.52	2957.53	4.29	1.43	4.05	MWD
9374.00	90.40	174.70	6408.25	-2994.05	206.31	3000.53	1.19	0.23	-1.16	MWD
9417.00	89.80	173.80	6408.18	-3036.83	210.62	3043.52	2.52	-1.40	-2.09	MWD
9460.00	89.20	172.90	6408.55	-3079.54	215.59	3086.51	2.52	-1.40	-2.09	MWD
9502.00	89.40	174.70	6409.07	-3121.29	220.13	3128.49	4.31	0.48	4.29	MWD
9545.00	90.20	177.00	6409.22	-3164.18	223.24	3171.48	5.66	1.86	5.35	MWD
9587.00	90.70	176.50	6408.89	-3206.11	225.62	3213.46	1.68	1.19	-1.19	MWD
9630.00	91.80	175.90	6407.95	-3249.00	228.47	3256.44	2.91	2.56	-1.40	MWD
9673.00	91.80	175.40	6406.60	-3291.86	231.73	3299.41	1.16	0.00	-1.16	MWD
9715.00	92.20	175.20	6405.13	-3333.69	235.17	3341.39	1.06	0.95	-0.48	MWD
9758.00	92.90	175.20	6403.22	-3376.50	238.77	3384.34	1.63	1.63	0.00	MWD
9801.00	91.30	175.40	6401.64	-3419.32	242.29	3427.31	3.75	-3.72	0.47	MWD
9843.00	90.10	176.10	6401.13	-3461.20	245.40	3469.30	3.31	-2.86	1.67	MWD
9886.00	90.40	175.80	6400.94	-3504.09	248.44	3512.29	0.99	0.70	-0.70	MWD
9928.00	90.70	175.40	6400.54	-3545.97	251.66	3554.29	1.19	0.71	-0.95	MWD
9971.00	90.70	175.40	6400.02	-3588.83	255.11	3597.28	0.00	0.00	0.00	MWD
10014.00	88.40	175.90	6400.35	-3631.70	258.37	3640.28	5.47	-5.35	1.16	MWD
10056.00	88.10	175.80	6401.64	-3673.57	261.40	3682.25	0.75	-0.71	-0.24	MWD
10099.00	87.90	175.90	6403.14	-3716.43	264.51	3725.22	0.52	-0.47	0.23	MWD
10142.00	89.60	176.30	6404.07	-3759.32	267.44	3768.20	4.06	3.95	0.93	MWD
10184.00	90.00	175.80	6404.22	-3801.22	270.33	3810.19	1.52	0.95	-1.19	MWD
10227.00	90.00	175.20	6404.22	-3844.08	273.71	3853.18	1.40	0.00	-1.40	MWD
10270.00	90.00	174.50	6404.22	-3886.91	277.57	3896.18	1.63	0.00	-1.63	MWD
10312.00	90.00	174.20	6404.22	-3928.71	281.70	3938.18	0.71	0.00	-0.71	MWD
10355.00	90.00	174.20	6404.22	-3971.49	286.05	3981.18	0.00	0.00	0.00	MWD
10397.00	89.80	173.30	6404.29	-4013.24	290.62	4023.17	2.20	-0.48	-2.14	MWD
10440.00	90.90	174.40	6404.03	-4055.99	295.22	4066.16	3.62	2.56	2.56	MWD
10483.00	90.70	173.30	6403.43	-4098.73	299.83	4109.15	2.60	-0.47	-2.56	MWD
10525.00	90.10	171.00	6403.14	-4140.34	305.57	4151.10	5.66	-1.43	-5.48	MWD
10587.00	90.10	171.00	6403.03	-4201.57	315.27	4212.95	0.00	0.00	0.00	Project

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83

Site: State 2-36-9-61 Pad

Well: 3-36-9-61

Wellpath: Original Hole

Date: 10/22/2013

Time: 08:21:05

Page: 5

Co-ordinate(NE) Reference: Well: 3-36-9-61, Grid North

Vertical (TVD) Reference: 4932'GL+17'KB 4949.0

Section (VS) Reference: Well (0.00N,0.00E,174.89Azi)

Survey Calculation Method: Minimum Curvature **Db:** Adapti

Annotation

MD ft	TVD ft	
6698.00	6401.29	600' entry 3-36