

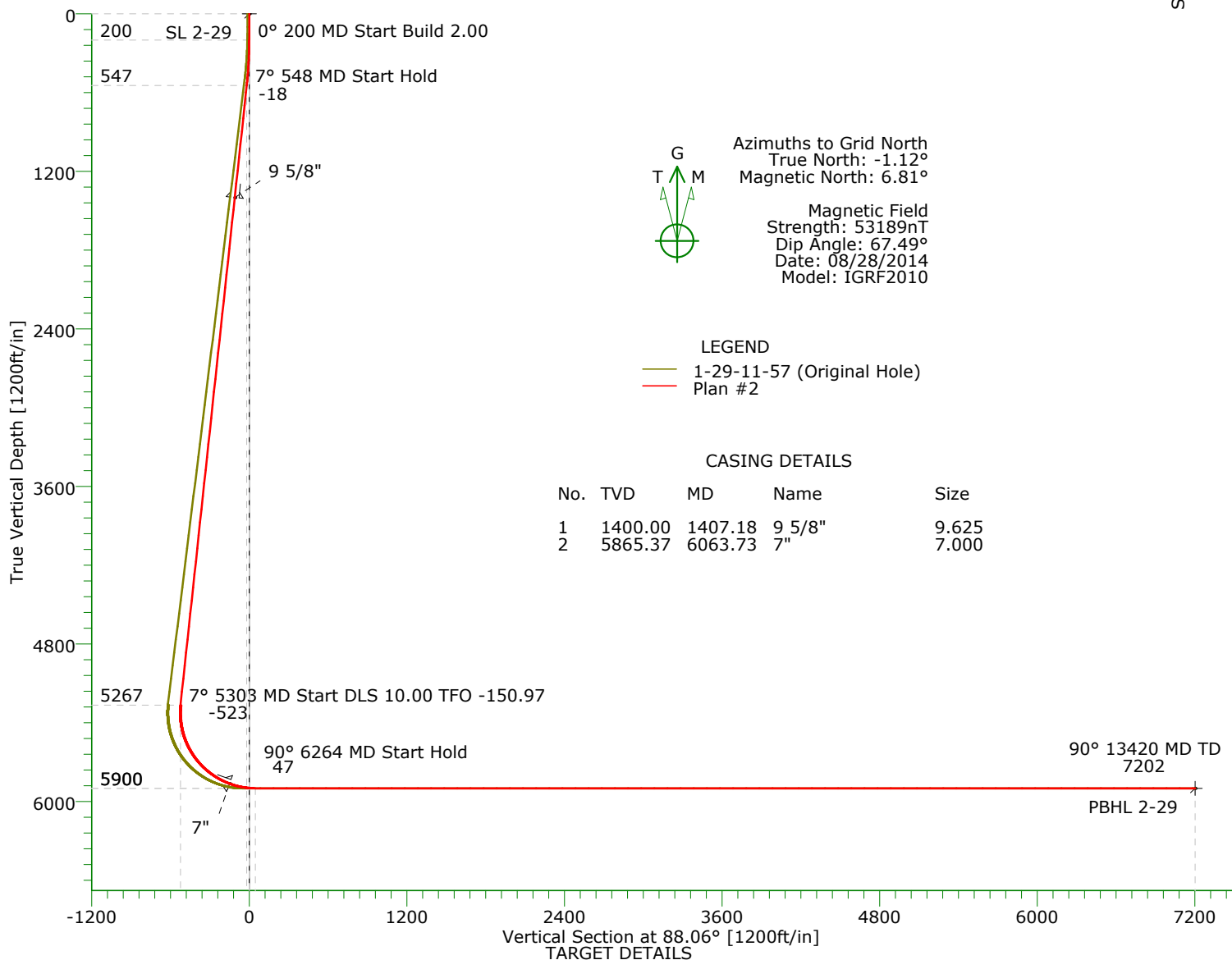
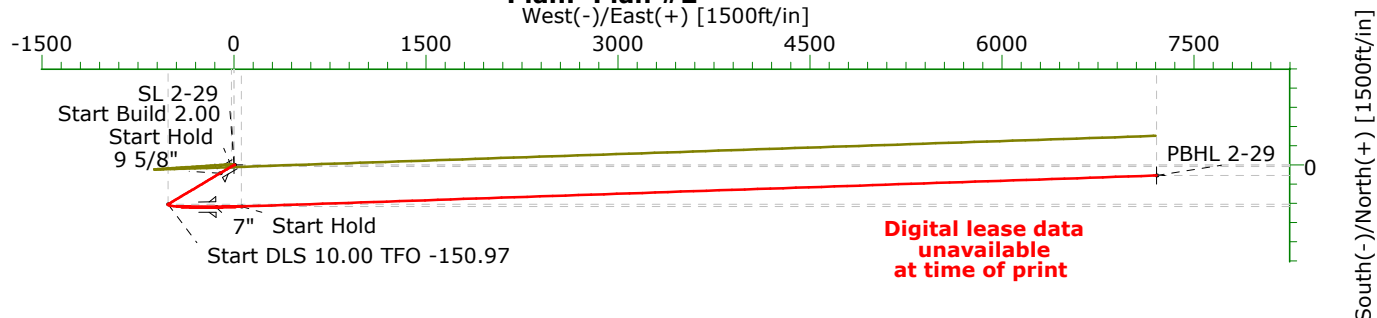


CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
Site: Ohare 1-29-11-57 Pad
Well: 2-29-11-57
Wellpath: Original Hole
Plan: Plan #2



Precision
Directional Services



Azimuths to Grid North
True North: -1.12°
Magnetic North: 6.81°

Magnetic Field
Strength: 53189nT
Dip Angle: 67.49°
Date: 08/28/2014
Model: IGRF2010

LEGEND

1-29-11-57 (Original Hole)
Plan #2

CASING DETAILS

No.	TVD	MD	Name	Size
1	1400.00	1407.18	9 5/8"	9.625
2	5865.37	6063.73	7"	7.000

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 2-29	0.00	0.00	0.00	1572389.14	3477205.94	40°53'30.560N	103°46'26.297W	Point
PBHL 2-29	5900.00	-81.69	7209.09	1572307.45	3484415.04	40°53'28.356N	103°44'52.472W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	547.84	6.96	239.21	546.99	-10.80	-18.12	2.00	0.00	-18.47	
4	5303.22	6.96	239.21	5267.36	-305.64	-512.91	0.00	0.00	-522.96	
5	6264.12	90.00	88.06	5900.00	-323.61	57.75	10.00	-150.97	46.76	
6	13419.55	90.00	88.06	5900.00	-81.69	7209.09	0.00	0.00	7202.19	PBHL 2-29

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Ohare 1-29-11-57 Pad Well: 2-29-11-57 Wellpath: Original Hole	Date: 07/28/2014 Co-ordinate(NE) Reference: Well: 2-29-11-57, Grid North Vertical (TVD) Reference: 4927'GL+17'KB 4944.0 Section (VS) Reference: Well (0.00N,0.00E,88.06Azi) Plan: Plan #2	Time: 08:12:12 Page: 1
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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
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Site: Ohare 1-29-11-57 Pad Weld County, Colorado Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 4927.00 ft	Northing: 1572399.02 ft Easting: 3477200.69 ft Latitude: 40 53 30.659 N Longitude: 103 46 26.363 W North Reference: Grid Grid Convergence: 1.12 deg
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Well: 2-29-11-57 Well Position: +N/-S -9.88 ft +E/-W 5.25 ft Position Uncertainty: 0.00 ft	Slot Name: Well Position: +N/-S -9.88 ft +E/-W 5.25 ft Position Uncertainty: 0.00 ft Latitude: 40 53 30.560 N Longitude: 103 46 26.297 W
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Wellpath: Original Hole Current Datum: 4927'GL+17'KB Magnetic Data: 08/28/2014 Field Strength: 53189 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 7.93 deg Mag Dip Angle: 67.49 deg +N/-S ft +E/-W ft Direction bearing
0.00	0.00

Plan: Plan #2 Adj plan using X&Y coordinates. Principal: No	Date Composed: 07/28/2014 Version: 1 Tied-to: From Surface
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Plan Section Information										
MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
547.84	6.96	239.21	546.99	-10.80	-18.12	2.00	2.00	0.00	0.00	
5303.22	6.96	239.21	5267.36	-305.64	-512.91	0.00	0.00	0.00	0.00	
6264.12	90.00	88.06	5900.00	-323.61	57.75	10.00	8.64	-15.73	-150.97	
13419.55	90.00	88.06	5900.00	-81.69	7209.09	0.00	0.00	0.00	0.00	PBHL 2-29

Survey										
MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	2.00	239.21	299.98	-0.89	-1.50	-1.53	2.00	2.00	0.00	
400.00	4.00	239.21	399.84	-3.57	-5.99	-6.11	2.00	2.00	0.00	
500.00	6.00	239.21	499.45	-8.03	-13.48	-13.75	2.00	2.00	0.00	
547.84	6.96	239.21	546.99	-10.80	-18.12	-18.47	2.00	2.00	0.00	
600.00	6.96	239.21	598.76	-14.03	-23.55	-24.01	0.00	0.00	0.00	
700.00	6.96	239.21	698.03	-20.23	-33.95	-34.62	0.00	0.00	0.00	
800.00	6.96	239.21	797.29	-26.43	-44.36	-45.22	0.00	0.00	0.00	
900.00	6.96	239.21	896.55	-32.63	-54.76	-55.83	0.00	0.00	0.00	
1000.00	6.96	239.21	995.82	-38.83	-65.16	-66.44	0.00	0.00	0.00	
1100.00	6.96	239.21	1095.08	-45.03	-75.57	-77.05	0.00	0.00	0.00	
1200.00	6.96	239.21	1194.34	-51.23	-85.97	-87.66	0.00	0.00	0.00	
1300.00	6.96	239.21	1293.61	-57.43	-96.38	-98.27	0.00	0.00	0.00	
1400.00	6.96	239.21	1392.87	-63.63	-106.78	-108.88	0.00	0.00	0.00	
1407.18	6.96	239.21	1400.00	-64.08	-107.53	-109.64	0.00	0.00	0.00	9 5/8"

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Ohare 1-29-11-57 Pad
Well: 2-29-11-57
Wellpath: Original Hole

Date: 07/28/2014
Co-ordinate(NE) Reference: Well: 2-29-11-57, Grid North
Vertical (TVD) Reference: 4927'GL+17'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.06Azi)
Plan: Plan #2

Page: 2

Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1500.00	6.96	239.21	1492.14	-69.83	-117.19	-119.49	0.00	0.00	0.00	
1600.00	6.96	239.21	1591.40	-76.03	-127.59	-130.09	0.00	0.00	0.00	
1700.00	6.96	239.21	1690.66	-82.23	-138.00	-140.70	0.00	0.00	0.00	
1800.00	6.96	239.21	1789.93	-88.43	-148.40	-151.31	0.00	0.00	0.00	
1900.00	6.96	239.21	1889.19	-94.63	-158.81	-161.92	0.00	0.00	0.00	
2000.00	6.96	239.21	1988.45	-100.83	-169.21	-172.53	0.00	0.00	0.00	
2100.00	6.96	239.21	2087.72	-107.03	-179.62	-183.14	0.00	0.00	0.00	
2200.00	6.96	239.21	2186.98	-113.23	-190.02	-193.75	0.00	0.00	0.00	
2300.00	6.96	239.21	2286.25	-119.43	-200.43	-204.36	0.00	0.00	0.00	
2400.00	6.96	239.21	2385.51	-125.63	-210.83	-214.96	0.00	0.00	0.00	
2500.00	6.96	239.21	2484.77	-131.84	-221.24	-225.57	0.00	0.00	0.00	
2600.00	6.96	239.21	2584.04	-138.04	-231.64	-236.18	0.00	0.00	0.00	
2700.00	6.96	239.21	2683.30	-144.24	-242.05	-246.79	0.00	0.00	0.00	
2800.00	6.96	239.21	2782.56	-150.44	-252.45	-257.40	0.00	0.00	0.00	
2900.00	6.96	239.21	2881.83	-156.64	-262.86	-268.01	0.00	0.00	0.00	
3000.00	6.96	239.21	2981.09	-162.84	-273.26	-278.62	0.00	0.00	0.00	
3100.00	6.96	239.21	3080.36	-169.04	-283.67	-289.23	0.00	0.00	0.00	
3200.00	6.96	239.21	3179.62	-175.24	-294.07	-299.84	0.00	0.00	0.00	
3300.00	6.96	239.21	3278.88	-181.44	-304.48	-310.44	0.00	0.00	0.00	
3400.00	6.96	239.21	3378.15	-187.64	-314.88	-321.05	0.00	0.00	0.00	
3500.00	6.96	239.21	3477.41	-193.84	-325.29	-331.66	0.00	0.00	0.00	
3600.00	6.96	239.21	3576.68	-200.04	-335.69	-342.27	0.00	0.00	0.00	
3700.00	6.96	239.21	3675.94	-206.24	-346.10	-352.88	0.00	0.00	0.00	
3800.00	6.96	239.21	3775.20	-212.44	-356.50	-363.49	0.00	0.00	0.00	
3900.00	6.96	239.21	3874.47	-218.64	-366.91	-374.10	0.00	0.00	0.00	
4000.00	6.96	239.21	3973.73	-224.84	-377.31	-384.71	0.00	0.00	0.00	
4100.00	6.96	239.21	4072.99	-231.04	-387.72	-395.31	0.00	0.00	0.00	
4200.00	6.96	239.21	4172.26	-237.24	-398.12	-405.92	0.00	0.00	0.00	
4300.00	6.96	239.21	4271.52	-243.44	-408.52	-416.53	0.00	0.00	0.00	
4400.00	6.96	239.21	4370.79	-249.64	-418.93	-427.14	0.00	0.00	0.00	
4500.00	6.96	239.21	4470.05	-255.84	-429.33	-437.75	0.00	0.00	0.00	
4600.00	6.96	239.21	4569.31	-262.04	-439.74	-448.36	0.00	0.00	0.00	
4700.00	6.96	239.21	4668.58	-268.24	-450.14	-458.97	0.00	0.00	0.00	
4800.00	6.96	239.21	4767.84	-274.44	-460.55	-469.58	0.00	0.00	0.00	
4900.00	6.96	239.21	4867.10	-280.64	-470.95	-480.18	0.00	0.00	0.00	
5000.00	6.96	239.21	4966.37	-286.84	-481.36	-490.79	0.00	0.00	0.00	
5100.00	6.96	239.21	5065.63	-293.04	-491.76	-501.40	0.00	0.00	0.00	
5200.00	6.96	239.21	5164.90	-299.24	-502.17	-512.01	0.00	0.00	0.00	
5303.22	6.96	239.21	5267.36	-305.64	-512.91	-522.96	0.00	0.00	0.00	
5350.00	3.65	200.81	5313.94	-308.49	-515.87	-526.02	10.00	-7.06	-82.09	
5400.00	4.92	131.21	5363.83	-311.39	-514.83	-525.07	10.00	2.54	-139.20	
5450.00	9.22	109.33	5413.45	-314.13	-509.43	-519.77	10.00	8.60	-43.76	
5500.00	13.99	101.73	5462.41	-316.69	-499.72	-510.16	10.00	9.54	-15.20	
5550.00	18.88	97.98	5510.36	-319.04	-485.78	-496.31	10.00	9.78	-7.51	
5600.00	23.81	95.73	5556.91	-321.17	-467.72	-478.32	10.00	9.87	-4.49	
5650.00	28.77	94.22	5601.73	-323.07	-445.66	-456.34	10.00	9.91	-3.02	
5700.00	33.74	93.12	5644.46	-324.71	-419.78	-430.53	10.00	9.94	-2.20	
5750.00	38.71	92.28	5684.78	-326.09	-390.27	-401.09	10.00	9.95	-1.69	
5800.00	43.69	91.60	5722.39	-327.19	-357.37	-368.24	10.00	9.96	-1.36	
5850.00	48.68	91.03	5756.99	-328.01	-321.31	-332.23	10.00	9.97	-1.13	
5900.00	53.66	90.55	5788.34	-328.54	-282.38	-293.34	10.00	9.97	-0.97	
5950.00	58.65	90.12	5816.17	-328.77	-240.86	-251.85	10.00	9.97	-0.85	
6000.00	63.64	89.73	5840.30	-328.71	-197.09	-208.10	10.00	9.98	-0.77	
6050.00	68.63	89.38	5860.52	-328.36	-151.38	-162.41	10.00	9.98	-0.70	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Ohare 1-29-11-57 Pad
Well: 2-29-11-57
Wellpath: Original Hole

Date: 07/28/2014
Co-ordinate(NE) Reference: Well: 2-29-11-57, Grid North
Vertical (TVD) Reference: 4927'GL+17'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.06Azi)
Plan: Plan #2

Page: 3

Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6063.73	70.00	89.29	5865.37	-328.21	-138.53	-149.56	10.00	9.98	-0.67	7"
6100.00	73.62	89.05	5876.70	-327.71	-104.09	-115.12	10.00	9.98	-0.65	
6150.00	78.61	88.74	5888.69	-326.78	-55.57	-66.60	10.00	9.98	-0.62	
6200.00	83.60	88.44	5896.42	-325.56	-6.20	-17.22	10.00	9.98	-0.60	
6250.00	88.59	88.15	5899.83	-324.08	43.64	32.65	10.00	9.98	-0.59	
6264.12	90.00	88.06	5900.00	-323.61	57.75	46.76	10.00	9.98	-0.59	
6300.00	90.00	88.06	5900.00	-322.40	93.61	82.64	0.00	0.00	0.00	
6400.00	90.00	88.06	5900.00	-319.02	193.56	182.64	0.00	0.00	0.00	
6500.00	90.00	88.06	5900.00	-315.64	293.50	282.64	0.00	0.00	0.00	
6600.00	90.00	88.06	5900.00	-312.25	393.44	382.64	0.00	0.00	0.00	
6700.00	90.00	88.06	5900.00	-308.87	493.38	482.64	0.00	0.00	0.00	
6800.00	90.00	88.06	5900.00	-305.49	593.33	582.64	0.00	0.00	0.00	
6900.00	90.00	88.06	5900.00	-302.11	693.27	682.64	0.00	0.00	0.00	
7000.00	90.00	88.06	5900.00	-298.73	793.21	782.64	0.00	0.00	0.00	
7100.00	90.00	88.06	5900.00	-295.35	893.16	882.64	0.00	0.00	0.00	
7200.00	90.00	88.06	5900.00	-291.97	993.10	982.64	0.00	0.00	0.00	
7300.00	90.00	88.06	5900.00	-288.59	1093.04	1082.64	0.00	0.00	0.00	
7400.00	90.00	88.06	5900.00	-285.21	1192.98	1182.64	0.00	0.00	0.00	
7500.00	90.00	88.06	5900.00	-281.83	1292.93	1282.64	0.00	0.00	0.00	
7600.00	90.00	88.06	5900.00	-278.45	1392.87	1382.64	0.00	0.00	0.00	
7700.00	90.00	88.06	5900.00	-275.06	1492.81	1482.64	0.00	0.00	0.00	
7800.00	90.00	88.06	5900.00	-271.68	1592.75	1582.64	0.00	0.00	0.00	
7900.00	90.00	88.06	5900.00	-268.30	1692.70	1682.64	0.00	0.00	0.00	
8000.00	90.00	88.06	5900.00	-264.92	1792.64	1782.64	0.00	0.00	0.00	
8100.00	90.00	88.06	5900.00	-261.54	1892.58	1882.64	0.00	0.00	0.00	
8200.00	90.00	88.06	5900.00	-258.16	1992.53	1982.64	0.00	0.00	0.00	
8300.00	90.00	88.06	5900.00	-254.78	2092.47	2082.64	0.00	0.00	0.00	
8400.00	90.00	88.06	5900.00	-251.40	2192.41	2182.64	0.00	0.00	0.00	
8500.00	90.00	88.06	5900.00	-248.02	2292.35	2282.64	0.00	0.00	0.00	
8600.00	90.00	88.06	5900.00	-244.64	2392.30	2382.64	0.00	0.00	0.00	
8700.00	90.00	88.06	5900.00	-241.26	2492.24	2482.64	0.00	0.00	0.00	
8800.00	90.00	88.06	5900.00	-237.88	2592.18	2582.64	0.00	0.00	0.00	
8900.00	90.00	88.06	5900.00	-234.49	2692.13	2682.64	0.00	0.00	0.00	
9000.00	90.00	88.06	5900.00	-231.11	2792.07	2782.64	0.00	0.00	0.00	
9100.00	90.00	88.06	5900.00	-227.73	2892.01	2882.64	0.00	0.00	0.00	
9200.00	90.00	88.06	5900.00	-224.35	2991.95	2982.64	0.00	0.00	0.00	
9300.00	90.00	88.06	5900.00	-220.97	3091.90	3082.64	0.00	0.00	0.00	
9400.00	90.00	88.06	5900.00	-217.59	3191.84	3182.64	0.00	0.00	0.00	
9500.00	90.00	88.06	5900.00	-214.21	3291.78	3282.64	0.00	0.00	0.00	
9600.00	90.00	88.06	5900.00	-210.83	3391.73	3382.64	0.00	0.00	0.00	
9700.00	90.00	88.06	5900.00	-207.45	3491.67	3482.64	0.00	0.00	0.00	
9800.00	90.00	88.06	5900.00	-204.07	3591.61	3582.64	0.00	0.00	0.00	
9900.00	90.00	88.06	5900.00	-200.69	3691.55	3682.64	0.00	0.00	0.00	
10000.00	90.00	88.06	5900.00	-197.30	3791.50	3782.64	0.00	0.00	0.00	
10100.00	90.00	88.06	5900.00	-193.92	3891.44	3882.64	0.00	0.00	0.00	
10200.00	90.00	88.06	5900.00	-190.54	3991.38	3982.64	0.00	0.00	0.00	
10300.00	90.00	88.06	5900.00	-187.16	4091.33	4082.64	0.00	0.00	0.00	
10400.00	90.00	88.06	5900.00	-183.78	4191.27	4182.64	0.00	0.00	0.00	
10500.00	90.00	88.06	5900.00	-180.40	4291.21	4282.64	0.00	0.00	0.00	
10600.00	90.00	88.06	5900.00	-177.02	4391.15	4382.64	0.00	0.00	0.00	
10700.00	90.00	88.06	5900.00	-173.64	4491.10	4482.64	0.00	0.00	0.00	
10800.00	90.00	88.06	5900.00	-170.26	4591.04	4582.64	0.00	0.00	0.00	
10900.00	90.00	88.06	5900.00	-166.88	4690.98	4682.64	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Ohare 1-29-11-57 Pad
Well: 2-29-11-57
Wellpath: Original Hole

Date: 07/28/2014 **Time:** 08:12:12 **Page:** 4
Co-ordinate(NE) Reference: Well: 2-29-11-57, Grid North
Vertical (TVD) Reference: 4927'GL+17'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.06Azi)
Plan: Plan #2

Survey

MD ft	Incl deg	Azim bearing	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
11000.00	90.00	88.06	5900.00	-163.50	4790.93	4782.64	0.00	0.00	0.00	
11100.00	90.00	88.06	5900.00	-160.12	4890.87	4882.64	0.00	0.00	0.00	
11200.00	90.00	88.06	5900.00	-156.73	4990.81	4982.64	0.00	0.00	0.00	
11300.00	90.00	88.06	5900.00	-153.35	5090.75	5082.64	0.00	0.00	0.00	
11400.00	90.00	88.06	5900.00	-149.97	5190.70	5182.64	0.00	0.00	0.00	
11500.00	90.00	88.06	5900.00	-146.59	5290.64	5282.64	0.00	0.00	0.00	
11600.00	90.00	88.06	5900.00	-143.21	5390.58	5382.64	0.00	0.00	0.00	
11700.00	90.00	88.06	5900.00	-139.83	5490.53	5482.64	0.00	0.00	0.00	
11800.00	90.00	88.06	5900.00	-136.45	5590.47	5582.64	0.00	0.00	0.00	
11900.00	90.00	88.06	5900.00	-133.07	5690.41	5682.64	0.00	0.00	0.00	
12000.00	90.00	88.06	5900.00	-129.69	5790.35	5782.64	0.00	0.00	0.00	
12100.00	90.00	88.06	5900.00	-126.31	5890.30	5882.64	0.00	0.00	0.00	
12200.00	90.00	88.06	5900.00	-122.93	5990.24	5982.64	0.00	0.00	0.00	
12300.00	90.00	88.06	5900.00	-119.55	6090.18	6082.64	0.00	0.00	0.00	
12400.00	90.00	88.06	5900.00	-116.16	6190.13	6182.64	0.00	0.00	0.00	
12500.00	90.00	88.06	5900.00	-112.78	6290.07	6282.64	0.00	0.00	0.00	
12600.00	90.00	88.06	5900.00	-109.40	6390.01	6382.64	0.00	0.00	0.00	
12700.00	90.00	88.06	5900.00	-106.02	6489.95	6482.64	0.00	0.00	0.00	
12800.00	90.00	88.06	5900.00	-102.64	6589.90	6582.64	0.00	0.00	0.00	
12900.00	90.00	88.06	5900.00	-99.26	6689.84	6682.64	0.00	0.00	0.00	
13000.00	90.00	88.06	5900.00	-95.88	6789.78	6782.64	0.00	0.00	0.00	
13100.00	90.00	88.06	5900.00	-92.50	6889.72	6882.64	0.00	0.00	0.00	
13200.00	90.00	88.06	5900.00	-89.12	6989.67	6982.64	0.00	0.00	0.00	
13300.00	90.00	88.06	5900.00	-85.74	7089.61	7082.64	0.00	0.00	0.00	
13400.00	90.00	88.06	5900.00	-82.36	7189.55	7182.64	0.00	0.00	0.00	
13419.55	90.00	88.06	5900.00	-81.69	7209.09	7202.19	0.00	0.00	0.00	PBHL 2-29

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
SL 2-29			0.00	0.00	0.00	1572389.14	3477205.94	40	53	30.560 N	103	46	26.297 W
PBHL 2-29			5900.00	-81.69	7209.09	1572307.45	3484415.04	40	53	28.356 N	103	44	52.472 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1407.18	1400.00	9.625	12.250	9 5/8"
6063.73	5865.37	7.000	8.750	7"