



CARRIZO

CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83

Site: Ohare 1-29-11-57 Pad

Well: 1-29-11-57

Wellpath: Original Hole

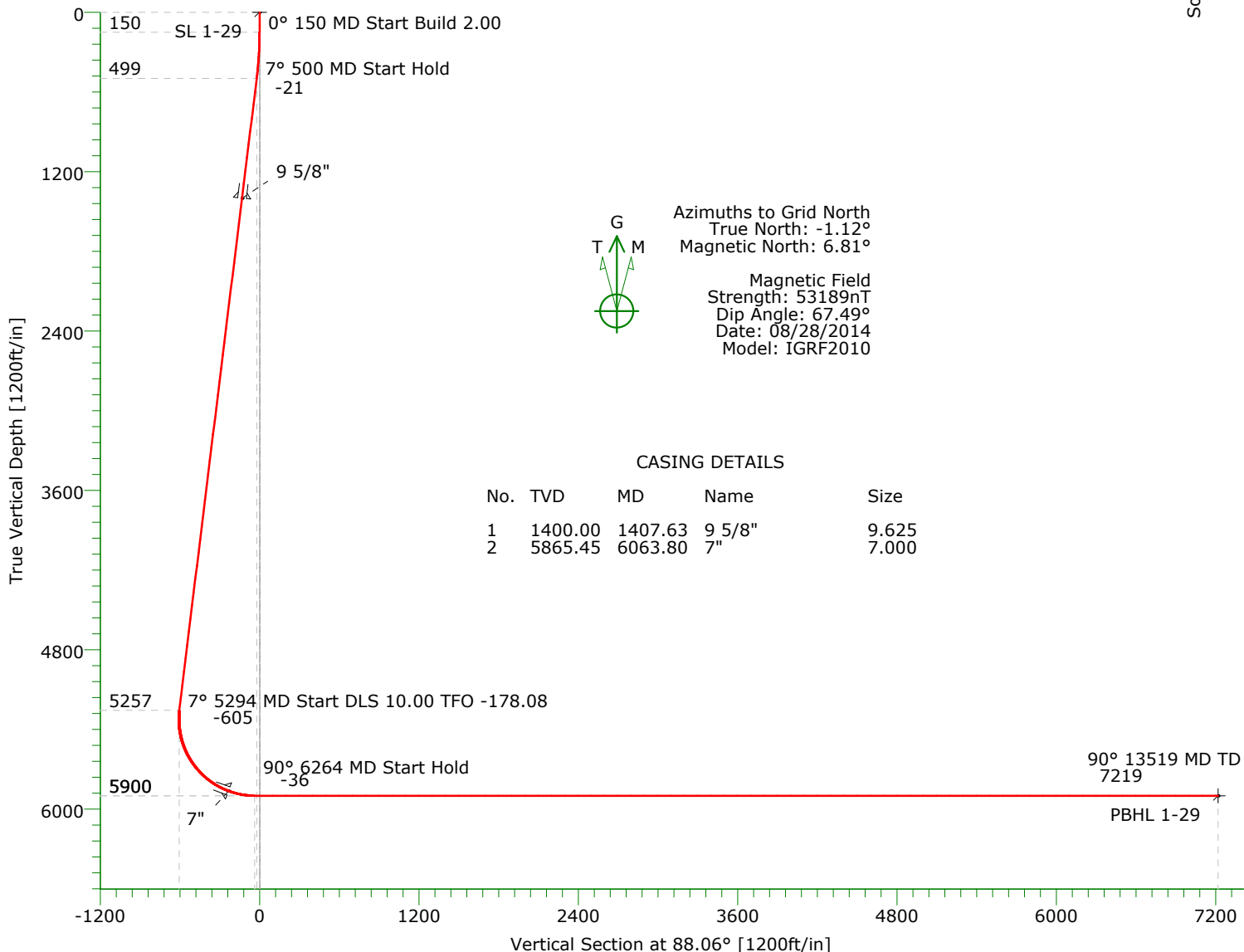
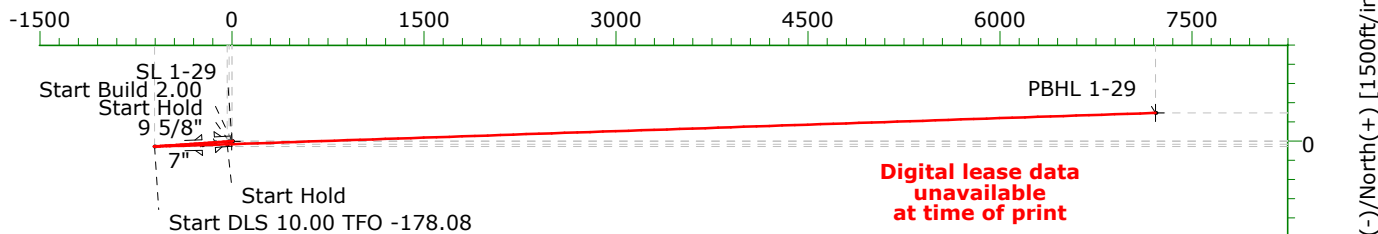
Plan: Plan #2

West(-)/East(+) [1500ft/in]



Precision

Directional Services



CASING DETAILS

No.	TVD	MD	Name	Size
1	1400.00	1407.63	9 5/8"	9.625
2	5865.45	6063.80	7"	7.000

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1-29	0.00	0.00	0.00	1572395.95	3477192.57	40°53'30.630N	103°46'26.469W	Point
PBHL 1-29	5900.00	221.41	7215.37	1572617.36	3484407.95	40°53'31.419N	103°44'52.484W	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	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	499.87	7.00	266.16	499.00	-1.43	-21.29	2.00	0.00	-21.33	
4	5293.86	7.00	266.16	5257.29	-40.59	-604.00	0.00	0.00	-605.03	
5	6263.80	90.00	88.06	5900.00	-23.98	-35.54	10.00	-178.08	-36.33	
6	13518.86	90.00	88.06	5900.00	221.41	7215.37	0.00	0.00	7218.73	PBHL 1-29

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Ohare 1-29-11-57 Pad Well: 1-29-11-57 Wellpath: Original Hole	Date: 07/28/2014 Co-ordinate(NE) Reference: Well: 1-29-11-57, 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: 07:51:34 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: 1-29-11-57 Well Position: +N/-S -3.07 ft +E/-W -8.12 ft Position Uncertainty: 0.00 ft	Slot Name: Well Position: +N/-S -3.07 ft +E/-W -8.12 ft Position Uncertainty: 0.00 ft Northing: 1572395.95 ft Easting : 3477192.57 ft Latitude: 40 53 30.630 N Longitude: 103 46 26.469 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	Height 4944.00 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 +E/-W ft Direction bearing
0.00	0.00	0.00 88.06

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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
499.87	7.00	266.16	499.00	-1.43	-21.29	2.00	2.00	0.00	0.00	
5293.86	7.00	266.16	5257.29	-40.59	-604.00	0.00	0.00	0.00	0.00	
6263.80	90.00	88.06	5900.00	-23.98	-35.54	10.00	8.56	-18.36	-178.08	
13518.86	90.00	88.06	5900.00	221.41	7215.37	0.00	0.00	0.00	0.00	PBHL 1-29

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
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.00	266.16	200.00	-0.03	-0.44	-0.44	2.00	2.00	0.00	
300.00	3.00	266.16	299.93	-0.26	-3.92	-3.92	2.00	2.00	0.00	
400.00	5.00	266.16	399.68	-0.73	-10.88	-10.90	2.00	2.00	0.00	
499.87	7.00	266.16	499.00	-1.43	-21.29	-21.33	2.00	2.00	0.00	
600.00	7.00	266.16	598.39	-2.25	-33.46	-33.52	0.00	0.00	0.00	
700.00	7.00	266.16	697.64	-3.07	-45.62	-45.69	0.00	0.00	0.00	
800.00	7.00	266.16	796.90	-3.88	-57.77	-57.87	0.00	0.00	0.00	
900.00	7.00	266.16	896.15	-4.70	-69.93	-70.04	0.00	0.00	0.00	
1000.00	7.00	266.16	995.41	-5.52	-82.08	-82.22	0.00	0.00	0.00	
1100.00	7.00	266.16	1094.66	-6.33	-94.24	-94.40	0.00	0.00	0.00	
1200.00	7.00	266.16	1193.92	-7.15	-106.39	-106.57	0.00	0.00	0.00	
1300.00	7.00	266.16	1293.17	-7.97	-118.55	-118.75	0.00	0.00	0.00	
1400.00	7.00	266.16	1392.43	-8.78	-130.70	-130.92	0.00	0.00	0.00	
1407.63	7.00	266.16	1400.00	-8.85	-131.63	-131.85	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: 1-29-11-57
Wellpath: Original Hole

Date: 07/28/2014
Co-ordinate(NE) Reference: Well: 1-29-11-57, Grid North
Vertical (TVD) Reference: 4927'GL+17'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.06Azi)
Plan: Plan #2

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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	7.00	266.16	1491.68	-9.60	-142.86	-143.10	0.00	0.00	0.00	
1600.00	7.00	266.16	1590.94	-10.42	-155.01	-155.27	0.00	0.00	0.00	
1700.00	7.00	266.16	1690.19	-11.23	-167.17	-167.45	0.00	0.00	0.00	
1800.00	7.00	266.16	1789.45	-12.05	-179.32	-179.63	0.00	0.00	0.00	
1900.00	7.00	266.16	1888.70	-12.87	-191.48	-191.80	0.00	0.00	0.00	
2000.00	7.00	266.16	1987.96	-13.69	-203.63	-203.98	0.00	0.00	0.00	
2100.00	7.00	266.16	2087.21	-14.50	-215.79	-216.15	0.00	0.00	0.00	
2200.00	7.00	266.16	2186.47	-15.32	-227.94	-228.33	0.00	0.00	0.00	
2300.00	7.00	266.16	2285.72	-16.14	-240.10	-240.50	0.00	0.00	0.00	
2400.00	7.00	266.16	2384.98	-16.95	-252.25	-252.68	0.00	0.00	0.00	
2500.00	7.00	266.16	2484.23	-17.77	-264.41	-264.86	0.00	0.00	0.00	
2600.00	7.00	266.16	2583.49	-18.59	-276.56	-277.03	0.00	0.00	0.00	
2700.00	7.00	266.16	2682.74	-19.40	-288.72	-289.21	0.00	0.00	0.00	
2800.00	7.00	266.16	2782.00	-20.22	-300.87	-301.38	0.00	0.00	0.00	
2900.00	7.00	266.16	2881.25	-21.04	-313.03	-313.56	0.00	0.00	0.00	
3000.00	7.00	266.16	2980.51	-21.85	-325.18	-325.73	0.00	0.00	0.00	
3100.00	7.00	266.16	3079.76	-22.67	-337.33	-337.91	0.00	0.00	0.00	
3200.00	7.00	266.16	3179.02	-23.49	-349.49	-350.08	0.00	0.00	0.00	
3300.00	7.00	266.16	3278.27	-24.30	-361.64	-362.26	0.00	0.00	0.00	
3400.00	7.00	266.16	3377.53	-25.12	-373.80	-374.44	0.00	0.00	0.00	
3500.00	7.00	266.16	3476.79	-25.94	-385.95	-386.61	0.00	0.00	0.00	
3600.00	7.00	266.16	3576.04	-26.76	-398.11	-398.79	0.00	0.00	0.00	
3700.00	7.00	266.16	3675.30	-27.57	-410.26	-410.96	0.00	0.00	0.00	
3800.00	7.00	266.16	3774.55	-28.39	-422.42	-423.14	0.00	0.00	0.00	
3900.00	7.00	266.16	3873.81	-29.21	-434.57	-435.31	0.00	0.00	0.00	
4000.00	7.00	266.16	3973.06	-30.02	-446.73	-447.49	0.00	0.00	0.00	
4100.00	7.00	266.16	4072.32	-30.84	-458.88	-459.67	0.00	0.00	0.00	
4200.00	7.00	266.16	4171.57	-31.66	-471.04	-471.84	0.00	0.00	0.00	
4300.00	7.00	266.16	4270.83	-32.47	-483.19	-484.02	0.00	0.00	0.00	
4400.00	7.00	266.16	4370.08	-33.29	-495.35	-496.19	0.00	0.00	0.00	
4500.00	7.00	266.16	4469.34	-34.11	-507.50	-508.37	0.00	0.00	0.00	
4600.00	7.00	266.16	4568.59	-34.92	-519.66	-520.54	0.00	0.00	0.00	
4700.00	7.00	266.16	4667.85	-35.74	-531.81	-532.72	0.00	0.00	0.00	
4800.00	7.00	266.16	4767.10	-36.56	-543.97	-544.90	0.00	0.00	0.00	
4900.00	7.00	266.16	4866.36	-37.37	-556.12	-557.07	0.00	0.00	0.00	
5000.00	7.00	266.16	4965.61	-38.19	-568.28	-569.25	0.00	0.00	0.00	
5100.00	7.00	266.16	5064.87	-39.01	-580.43	-581.42	0.00	0.00	0.00	
5200.00	7.00	266.16	5164.12	-39.83	-592.59	-593.60	0.00	0.00	0.00	
5293.86	7.00	266.16	5257.29	-40.59	-604.00	-605.03	0.00	0.00	0.00	
5300.00	6.38	265.97	5263.38	-40.64	-604.71	-605.74	10.00	-9.99	-3.01	
5350.00	1.40	258.44	5313.25	-40.96	-608.08	-609.12	10.00	-9.97	-15.06	
5400.00	3.63	91.75	5363.23	-41.13	-607.10	-608.15	10.00	4.46	-333.37	
5450.00	8.62	89.60	5412.92	-41.15	-601.77	-602.82	10.00	9.99	-4.30	
5500.00	13.62	89.03	5461.97	-41.03	-592.13	-593.18	10.00	10.00	-1.15	
5550.00	18.62	88.76	5509.99	-40.75	-578.25	-579.30	10.00	10.00	-0.54	
5600.00	23.62	88.60	5556.61	-40.33	-560.24	-561.29	10.00	10.00	-0.32	
5650.00	28.62	88.49	5601.49	-39.77	-538.24	-539.28	10.00	10.00	-0.21	
5700.00	33.62	88.41	5644.28	-39.07	-512.42	-513.45	10.00	10.00	-0.15	
5750.00	38.62	88.35	5684.66	-38.24	-482.97	-483.98	10.00	10.00	-0.12	
5800.00	43.62	88.31	5722.31	-37.28	-450.11	-451.11	10.00	10.00	-0.09	
5850.00	48.62	88.27	5756.96	-36.21	-414.09	-415.08	10.00	10.00	-0.08	
5900.00	53.62	88.23	5788.33	-35.02	-375.20	-376.17	10.00	10.00	-0.07	
5950.00	58.62	88.20	5816.20	-33.73	-333.72	-334.67	10.00	10.00	-0.06	
6000.00	63.62	88.18	5840.34	-32.35	-289.98	-290.91	10.00	10.00	-0.05	

Precision Directional Services, Inc.

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Field: Niobrara CONZ'83
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Well: 1-29-11-57
Wellpath: Original Hole

Date: 07/28/2014
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Vertical (TVD) Reference: 4927'GL+17'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.06Azi)
Plan: Plan #2

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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
6050.00	68.62	88.15	5860.57	-30.88	-244.30	-245.20	10.00	10.00	-0.05	
6063.80	70.00	88.15	5865.45	-30.47	-231.39	-232.29	10.00	10.00	-0.05	7"
6100.00	73.62	88.13	5876.75	-29.35	-197.03	-197.91	10.00	10.00	-0.05	
6150.00	78.62	88.11	5888.74	-27.76	-148.53	-149.38	10.00	10.00	-0.04	
6200.00	83.62	88.09	5896.45	-26.12	-99.17	-100.00	10.00	10.00	-0.04	
6250.00	88.62	88.07	5899.83	-24.45	-49.33	-50.13	10.00	10.00	-0.04	
6263.80	90.00	88.06	5900.00	-23.98	-35.54	-36.33	10.00	10.00	-0.04	
6300.00	90.00	88.06	5900.00	-22.76	0.64	-0.13	0.00	0.00	0.00	
6400.00	90.00	88.06	5900.00	-19.37	100.58	99.87	0.00	0.00	0.00	
6500.00	90.00	88.06	5900.00	-15.99	200.53	199.87	0.00	0.00	0.00	
6600.00	90.00	88.06	5900.00	-12.61	300.47	299.87	0.00	0.00	0.00	
6700.00	90.00	88.06	5900.00	-9.23	400.41	399.87	0.00	0.00	0.00	
6800.00	90.00	88.06	5900.00	-5.84	500.36	499.87	0.00	0.00	0.00	
6900.00	90.00	88.06	5900.00	-2.46	600.30	599.87	0.00	0.00	0.00	
7000.00	90.00	88.06	5900.00	0.92	700.24	699.87	0.00	0.00	0.00	
7100.00	90.00	88.06	5900.00	4.30	800.18	799.87	0.00	0.00	0.00	
7200.00	90.00	88.06	5900.00	7.68	900.13	899.87	0.00	0.00	0.00	
7300.00	90.00	88.06	5900.00	11.07	1000.07	999.87	0.00	0.00	0.00	
7400.00	90.00	88.06	5900.00	14.45	1100.01	1099.87	0.00	0.00	0.00	
7500.00	90.00	88.06	5900.00	17.83	1199.96	1199.87	0.00	0.00	0.00	
7600.00	90.00	88.06	5900.00	21.21	1299.90	1299.87	0.00	0.00	0.00	
7700.00	90.00	88.06	5900.00	24.60	1399.84	1399.87	0.00	0.00	0.00	
7800.00	90.00	88.06	5900.00	27.98	1499.78	1499.87	0.00	0.00	0.00	
7900.00	90.00	88.06	5900.00	31.36	1599.73	1599.87	0.00	0.00	0.00	
8000.00	90.00	88.06	5900.00	34.74	1699.67	1699.87	0.00	0.00	0.00	
8100.00	90.00	88.06	5900.00	38.13	1799.61	1799.87	0.00	0.00	0.00	
8200.00	90.00	88.06	5900.00	41.51	1899.56	1899.87	0.00	0.00	0.00	
8300.00	90.00	88.06	5900.00	44.89	1999.50	1999.87	0.00	0.00	0.00	
8400.00	90.00	88.06	5900.00	48.27	2099.44	2099.87	0.00	0.00	0.00	
8500.00	90.00	88.06	5900.00	51.65	2199.38	2199.87	0.00	0.00	0.00	
8600.00	90.00	88.06	5900.00	55.04	2299.33	2299.87	0.00	0.00	0.00	
8700.00	90.00	88.06	5900.00	58.42	2399.27	2399.87	0.00	0.00	0.00	
8800.00	90.00	88.06	5900.00	61.80	2499.21	2499.87	0.00	0.00	0.00	
8900.00	90.00	88.06	5900.00	65.18	2599.15	2599.87	0.00	0.00	0.00	
9000.00	90.00	88.06	5900.00	68.57	2699.10	2699.87	0.00	0.00	0.00	
9100.00	90.00	88.06	5900.00	71.95	2799.04	2799.87	0.00	0.00	0.00	
9200.00	90.00	88.06	5900.00	75.33	2898.98	2899.87	0.00	0.00	0.00	
9300.00	90.00	88.06	5900.00	78.71	2998.93	2999.87	0.00	0.00	0.00	
9400.00	90.00	88.06	5900.00	82.09	3098.87	3099.87	0.00	0.00	0.00	
9500.00	90.00	88.06	5900.00	85.48	3198.81	3199.87	0.00	0.00	0.00	
9600.00	90.00	88.06	5900.00	88.86	3298.75	3299.87	0.00	0.00	0.00	
9700.00	90.00	88.06	5900.00	92.24	3398.70	3399.87	0.00	0.00	0.00	
9800.00	90.00	88.06	5900.00	95.62	3498.64	3499.87	0.00	0.00	0.00	
9900.00	90.00	88.06	5900.00	99.01	3598.58	3599.87	0.00	0.00	0.00	
10000.00	90.00	88.06	5900.00	102.39	3698.53	3699.87	0.00	0.00	0.00	
10100.00	90.00	88.06	5900.00	105.77	3798.47	3799.87	0.00	0.00	0.00	
10200.00	90.00	88.06	5900.00	109.15	3898.41	3899.87	0.00	0.00	0.00	
10300.00	90.00	88.06	5900.00	112.53	3998.35	3999.87	0.00	0.00	0.00	
10400.00	90.00	88.06	5900.00	115.92	4098.30	4099.87	0.00	0.00	0.00	
10500.00	90.00	88.06	5900.00	119.30	4198.24	4199.87	0.00	0.00	0.00	
10600.00	90.00	88.06	5900.00	122.68	4298.18	4299.87	0.00	0.00	0.00	
10700.00	90.00	88.06	5900.00	126.06	4398.12	4399.87	0.00	0.00	0.00	
10800.00	90.00	88.06	5900.00	129.45	4498.07	4499.87	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: 1-29-11-57
Wellpath: Original Hole

Date: 07/28/2014
Co-ordinate(NE) Reference: Well: 1-29-11-57, Grid North
Vertical (TVD) Reference: 4927'GL+17'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.06Azi)
Plan: Plan #2

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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
10900.00	90.00	88.06	5900.00	132.83	4598.01	4599.87	0.00	0.00	0.00	
11000.00	90.00	88.06	5900.00	136.21	4697.95	4699.87	0.00	0.00	0.00	
11100.00	90.00	88.06	5900.00	139.59	4797.90	4799.87	0.00	0.00	0.00	
11200.00	90.00	88.06	5900.00	142.98	4897.84	4899.87	0.00	0.00	0.00	
11300.00	90.00	88.06	5900.00	146.36	4997.78	4999.87	0.00	0.00	0.00	
11400.00	90.00	88.06	5900.00	149.74	5097.72	5099.87	0.00	0.00	0.00	
11500.00	90.00	88.06	5900.00	153.12	5197.67	5199.87	0.00	0.00	0.00	
11600.00	90.00	88.06	5900.00	156.50	5297.61	5299.87	0.00	0.00	0.00	
11700.00	90.00	88.06	5900.00	159.89	5397.55	5399.87	0.00	0.00	0.00	
11800.00	90.00	88.06	5900.00	163.27	5497.50	5499.87	0.00	0.00	0.00	
11900.00	90.00	88.06	5900.00	166.65	5597.44	5599.87	0.00	0.00	0.00	
12000.00	90.00	88.06	5900.00	170.03	5697.38	5699.87	0.00	0.00	0.00	
12100.00	90.00	88.06	5900.00	173.42	5797.32	5799.87	0.00	0.00	0.00	
12200.00	90.00	88.06	5900.00	176.80	5897.27	5899.87	0.00	0.00	0.00	
12300.00	90.00	88.06	5900.00	180.18	5997.21	5999.87	0.00	0.00	0.00	
12400.00	90.00	88.06	5900.00	183.56	6097.15	6099.87	0.00	0.00	0.00	
12500.00	90.00	88.06	5900.00	186.94	6197.09	6199.87	0.00	0.00	0.00	
12600.00	90.00	88.06	5900.00	190.33	6297.04	6299.87	0.00	0.00	0.00	
12700.00	90.00	88.06	5900.00	193.71	6396.98	6399.87	0.00	0.00	0.00	
12800.00	90.00	88.06	5900.00	197.09	6496.92	6499.87	0.00	0.00	0.00	
12900.00	90.00	88.06	5900.00	200.47	6596.87	6599.87	0.00	0.00	0.00	
13000.00	90.00	88.06	5900.00	203.86	6696.81	6699.87	0.00	0.00	0.00	
13100.00	90.00	88.06	5900.00	207.24	6796.75	6799.87	0.00	0.00	0.00	
13200.00	90.00	88.06	5900.00	210.62	6896.69	6899.87	0.00	0.00	0.00	
13300.00	90.00	88.06	5900.00	214.00	6996.64	6999.87	0.00	0.00	0.00	
13400.00	90.00	88.06	5900.00	217.39	7096.58	7099.87	0.00	0.00	0.00	
13500.00	90.00	88.06	5900.00	220.77	7196.52	7199.87	0.00	0.00	0.00	
13518.86	90.00	88.06	5900.00	221.41	7215.37	7218.73	0.00	0.00	0.00	PBHL 1-29

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
SL 1-29			0.00	0.00	0.00	1572395.95	3477192.57	40	53	30.630 N	103	46	26.469 W
PBHL 1-29			5900.00	221.41	7215.37	1572617.36	3484407.95	40	53	31.419 N	103	44	52.484 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1407.63	1400.00	9.625	12.250	9 5/8"
6063.80	5865.45	7.000	8.750	7"