

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.		Date: 02/13/2013	Time: 13:37:07	Page: 1
Field: Niobrara CONZ'83		Co-ordinate(NE) Reference: Well: 4-25-9-60, Grid North		
Site: Shull 1-25-9-60 Pad		Vertical (TVD) Reference: 4943'GL+17'KB 4960.0		
Well: 4-25-9-60		Section (VS) Reference: Well (0.00N,0.00E,359.09Azi)		
Wellpath: Original Hole		Plan: Plan #2		

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

Site: Shull 1-25-9-60 Pad	
Weld County, CO	
Site Position:	Northing: 1511404.05 ft
From: Map	Easting: 3406027.06 ft
Position Uncertainty: 0.00 ft	Latitude: 40 43 40.724 N
Ground Level: 4943.00 ft	Longitude: 104 2 6.064 W
	North Reference: Grid
	Grid Convergence: 0.95 deg

Well: 4-25-9-60	Slot Name: 4-25
265FSL 1354FEL	
Well Position: +N/-S -4845.19 ft	Latitude: 40 42 52.852 N
+E/-W 17.37 ft	Longitude: 104 2 6.878 W
Position Uncertainty: 0.00 ft	

Wellpath: Original Hole	Drilled From: Surface
Current Datum: 4943'GL+17'KB	Tie-on Depth: 0.00 ft
Magnetic Data: 03/30/2013	Above System Datum: Mean Sea Level
Field Strength: 53228 nT	Declination: 8.25 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 67.37 deg
ft	+E/-W
	Direction
	deg
0.00	0.00
0.00	0.00
0.00	359.09

Plan: Plan #2	Date Composed: 02/13/2013
Principal: Yes	Version: 1
	Tied-to: From Surface

Plan Section Information										
MD ft	Incl deg	Azim deg	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	
500.00	7.00	250.00	499.13	-7.30	-20.07	2.00	2.00	0.00	250.00	
5604.92	7.00	250.00	5566.00	-220.09	-604.68	0.00	0.00	0.00	0.00	
5896.14	35.00	280.00	5835.63	-211.47	-705.79	10.00	9.61	10.30	36.11	
6603.86	90.00	336.32	6170.00	203.01	-1100.30	10.10	7.77	7.96	61.37	
7362.82	90.00	359.09	6170.00	939.69	-1260.86	3.00	0.00	3.00	90.00	
10828.97	90.00	359.09	6170.00	4405.40	-1315.98	0.00	0.00	0.00	0.00	PBHL 4-25

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	
100.00	0.00	0.00	100.00	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	
200.00	1.00	250.00	200.00	-0.15	-0.41	-0.14	2.00	2.00	0.00	
300.00	3.00	250.00	299.93	-1.34	-3.69	-1.28	2.00	2.00	0.00	
400.00	5.00	250.00	399.68	-3.73	-10.24	-3.57	2.00	2.00	0.00	
500.00	7.00	250.00	499.13	-7.30	-20.07	-6.98	2.00	2.00	0.00	
600.00	7.00	250.00	598.38	-11.47	-31.52	-10.97	0.00	0.00	0.00	
700.00	7.00	250.00	697.64	-15.64	-42.97	-14.96	0.00	0.00	0.00	
800.00	7.00	250.00	796.89	-19.81	-54.42	-18.94	0.00	0.00	0.00	
900.00	7.00	250.00	896.15	-23.98	-65.87	-22.93	0.00	0.00	0.00	
1000.00	7.00	250.00	995.40	-28.14	-77.33	-26.91	0.00	0.00	0.00	
1100.00	7.00	250.00	1094.66	-32.31	-88.78	-30.90	0.00	0.00	0.00	
1200.00	7.00	250.00	1193.91	-36.48	-100.23	-34.88	0.00	0.00	0.00	

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Field: Niobrara CONZ'83
Site: Shull 1-25-9-60 Pad
Well: 4-25-9-60
Wellpath: Original Hole

Date: 02/13/2013
Co-ordinate(NE) Reference: Well: 4-25-9-60, Grid North
Vertical (TVD) Reference: 4943'GL+17'KB 4960.0
Section (VS) Reference: Well (0.00N,0.00E,359.09Azi)
Plan: Plan #2

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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
1300.00	7.00	250.00	1293.17	-40.65	-111.68	-38.87	0.00	0.00	0.00	
1400.00	7.00	250.00	1392.42	-44.82	-123.13	-42.86	0.00	0.00	0.00	
1500.00	7.00	250.00	1491.68	-48.99	-134.59	-46.84	0.00	0.00	0.00	
1600.00	7.00	250.00	1590.93	-53.15	-146.04	-50.83	0.00	0.00	0.00	
1700.00	7.00	250.00	1690.19	-57.32	-157.49	-54.81	0.00	0.00	0.00	
1800.00	7.00	250.00	1789.44	-61.49	-168.94	-58.80	0.00	0.00	0.00	
1900.00	7.00	250.00	1888.69	-65.66	-180.39	-62.78	0.00	0.00	0.00	
2000.00	7.00	250.00	1987.95	-69.83	-191.85	-66.77	0.00	0.00	0.00	
2100.00	7.00	250.00	2087.20	-73.99	-203.30	-70.76	0.00	0.00	0.00	
2200.00	7.00	250.00	2186.46	-78.16	-214.75	-74.74	0.00	0.00	0.00	
2300.00	7.00	250.00	2285.71	-82.33	-226.20	-78.73	0.00	0.00	0.00	
2400.00	7.00	250.00	2384.97	-86.50	-237.65	-82.71	0.00	0.00	0.00	
2500.00	7.00	250.00	2484.22	-90.67	-249.11	-86.70	0.00	0.00	0.00	
2600.00	7.00	250.00	2583.48	-94.84	-260.56	-90.69	0.00	0.00	0.00	
2700.00	7.00	250.00	2682.73	-99.00	-272.01	-94.67	0.00	0.00	0.00	
2800.00	7.00	250.00	2781.99	-103.17	-283.46	-98.66	0.00	0.00	0.00	
2900.00	7.00	250.00	2881.24	-107.34	-294.91	-102.64	0.00	0.00	0.00	
3000.00	7.00	250.00	2980.50	-111.51	-306.37	-106.63	0.00	0.00	0.00	
3100.00	7.00	250.00	3079.75	-115.68	-317.82	-110.61	0.00	0.00	0.00	
3200.00	7.00	250.00	3179.00	-119.84	-329.27	-114.60	0.00	0.00	0.00	
3300.00	7.00	250.00	3278.26	-124.01	-340.72	-118.59	0.00	0.00	0.00	
3400.00	7.00	250.00	3377.51	-128.18	-352.17	-122.57	0.00	0.00	0.00	
3500.00	7.00	250.00	3476.77	-132.35	-363.63	-126.56	0.00	0.00	0.00	
3600.00	7.00	250.00	3576.02	-136.52	-375.08	-130.54	0.00	0.00	0.00	
3700.00	7.00	250.00	3675.28	-140.69	-386.53	-134.53	0.00	0.00	0.00	
3800.00	7.00	250.00	3774.53	-144.85	-397.98	-138.51	0.00	0.00	0.00	
3900.00	7.00	250.00	3873.79	-149.02	-409.43	-142.50	0.00	0.00	0.00	
4000.00	7.00	250.00	3973.04	-153.19	-420.88	-146.49	0.00	0.00	0.00	
4100.00	7.00	250.00	4072.30	-157.36	-432.34	-150.47	0.00	0.00	0.00	
4200.00	7.00	250.00	4171.55	-161.53	-443.79	-154.46	0.00	0.00	0.00	
4300.00	7.00	250.00	4270.81	-165.69	-455.24	-158.44	0.00	0.00	0.00	
4400.00	7.00	250.00	4370.06	-169.86	-466.69	-162.43	0.00	0.00	0.00	
4500.00	7.00	250.00	4469.31	-174.03	-478.14	-166.41	0.00	0.00	0.00	
4600.00	7.00	250.00	4568.57	-178.20	-489.60	-170.40	0.00	0.00	0.00	
4700.00	7.00	250.00	4667.82	-182.37	-501.05	-174.39	0.00	0.00	0.00	
4800.00	7.00	250.00	4767.08	-186.54	-512.50	-178.37	0.00	0.00	0.00	
4900.00	7.00	250.00	4866.33	-190.70	-523.95	-182.36	0.00	0.00	0.00	
5000.00	7.00	250.00	4965.59	-194.87	-535.40	-186.34	0.00	0.00	0.00	
5100.00	7.00	250.00	5064.84	-199.04	-546.86	-190.33	0.00	0.00	0.00	
5200.00	7.00	250.00	5164.10	-203.21	-558.31	-194.32	0.00	0.00	0.00	
5300.00	7.00	250.00	5263.35	-207.38	-569.76	-198.30	0.00	0.00	0.00	
5400.00	7.00	250.00	5362.61	-211.54	-581.21	-202.29	0.00	0.00	0.00	
5500.00	7.00	250.00	5461.86	-215.71	-592.66	-206.27	0.00	0.00	0.00	
5600.00	7.00	250.00	5561.12	-219.88	-604.12	-210.26	0.00	0.00	0.00	
5604.92	7.00	250.00	5566.00	-220.09	-604.68	-210.45	0.00	0.00	0.00	
5700.00	15.71	271.07	5659.16	-221.83	-623.04	-211.91	10.00	9.16	22.16	
5800.00	25.49	277.21	5752.67	-218.87	-658.00	-208.39	10.00	9.78	6.14	
5896.14	35.00	280.00	5835.63	-211.47	-705.79	-200.23	10.00	9.90	2.90	
5900.00	35.19	280.59	5838.79	-211.07	-707.97	-199.80	10.10	4.88	15.38	
6000.00	40.93	294.11	5917.63	-192.34	-766.35	-180.15	10.10	5.75	13.52	
6100.00	47.91	304.57	5989.10	-157.82	-826.96	-144.66	10.10	6.98	10.46	
6200.00	55.65	312.85	6050.99	-108.56	-887.94	-94.45	10.10	7.73	8.28	
6300.00	63.84	319.69	6101.37	-46.10	-947.39	-31.05	10.10	8.19	6.84	

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Plan: Plan #2

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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
6372.83	69.99	324.07	6129.93	6.60	-988.67	22.30	10.10	8.45	6.02	7"
6400.00	72.32	325.61	6138.70	27.62	-1003.47	43.56	10.10	8.55	5.68	
6500.00	80.95	331.00	6161.81	110.34	-1054.45	127.07	10.10	8.64	5.38	
6600.00	89.66	336.12	6169.99	199.47	-1098.74	216.90	10.10	8.71	5.13	
6603.86	90.00	336.32	6170.00	203.01	-1100.30	220.46	10.10	8.72	5.08	
6700.00	90.00	339.20	6170.00	291.98	-1136.68	310.00	3.00	0.00	3.00	
6800.00	90.00	342.20	6170.00	386.36	-1169.72	404.89	3.00	0.00	3.00	
6900.00	90.00	345.20	6170.00	482.33	-1197.78	501.29	3.00	0.00	3.00	
7000.00	90.00	348.20	6170.00	579.64	-1220.77	598.95	3.00	0.00	3.00	
7100.00	90.00	351.20	6170.00	678.02	-1238.64	697.60	3.00	0.00	3.00	
7200.00	90.00	354.20	6170.00	777.19	-1251.34	796.97	3.00	0.00	3.00	
7300.00	90.00	357.20	6170.00	876.90	-1258.83	896.78	3.00	0.00	3.00	
7362.82	90.00	359.09	6170.00	939.69	-1260.86	959.60	3.00	0.00	3.00	
7400.00	90.00	359.09	6170.00	976.86	-1261.45	996.77	0.00	0.00	0.00	
7500.00	90.00	359.09	6170.00	1076.85	-1263.04	1096.77	0.00	0.00	0.00	
7600.00	90.00	359.09	6170.00	1176.84	-1264.63	1196.77	0.00	0.00	0.00	
7700.00	90.00	359.09	6170.00	1276.82	-1266.22	1296.77	0.00	0.00	0.00	
7800.00	90.00	359.09	6170.00	1376.81	-1267.81	1396.77	0.00	0.00	0.00	
7900.00	90.00	359.09	6170.00	1476.80	-1269.40	1496.77	0.00	0.00	0.00	
8000.00	90.00	359.09	6170.00	1576.79	-1270.99	1596.77	0.00	0.00	0.00	
8100.00	90.00	359.09	6170.00	1676.77	-1272.58	1696.77	0.00	0.00	0.00	
8200.00	90.00	359.09	6170.00	1776.76	-1274.17	1796.77	0.00	0.00	0.00	
8300.00	90.00	359.09	6170.00	1876.75	-1275.77	1896.77	0.00	0.00	0.00	
8400.00	90.00	359.09	6170.00	1976.73	-1277.36	1996.77	0.00	0.00	0.00	
8500.00	90.00	359.09	6170.00	2076.72	-1278.95	2096.77	0.00	0.00	0.00	
8600.00	90.00	359.09	6170.00	2176.71	-1280.54	2196.77	0.00	0.00	0.00	
8700.00	90.00	359.09	6170.00	2276.70	-1282.13	2296.77	0.00	0.00	0.00	
8800.00	90.00	359.09	6170.00	2376.68	-1283.72	2396.77	0.00	0.00	0.00	
8900.00	90.00	359.09	6170.00	2476.67	-1285.31	2496.77	0.00	0.00	0.00	
9000.00	90.00	359.09	6170.00	2576.66	-1286.90	2596.77	0.00	0.00	0.00	
9100.00	90.00	359.09	6170.00	2676.65	-1288.49	2696.77	0.00	0.00	0.00	
9200.00	90.00	359.09	6170.00	2776.63	-1290.08	2796.77	0.00	0.00	0.00	
9300.00	90.00	359.09	6170.00	2876.62	-1291.67	2896.77	0.00	0.00	0.00	
9400.00	90.00	359.09	6170.00	2976.61	-1293.26	2996.77	0.00	0.00	0.00	
9500.00	90.00	359.09	6170.00	3076.60	-1294.85	3096.77	0.00	0.00	0.00	
9600.00	90.00	359.09	6170.00	3176.58	-1296.44	3196.77	0.00	0.00	0.00	
9700.00	90.00	359.09	6170.00	3276.57	-1298.03	3296.77	0.00	0.00	0.00	
9800.00	90.00	359.09	6170.00	3376.56	-1299.62	3396.77	0.00	0.00	0.00	
9900.00	90.00	359.09	6170.00	3476.55	-1301.21	3496.77	0.00	0.00	0.00	
10000.00	90.00	359.09	6170.00	3576.53	-1302.80	3596.77	0.00	0.00	0.00	
10100.00	90.00	359.09	6170.00	3676.52	-1304.39	3696.77	0.00	0.00	0.00	
10200.00	90.00	359.09	6170.00	3776.51	-1305.98	3796.77	0.00	0.00	0.00	
10300.00	90.00	359.09	6170.00	3876.49	-1307.57	3896.77	0.00	0.00	0.00	
10400.00	90.00	359.09	6170.00	3976.48	-1309.16	3996.77	0.00	0.00	0.00	
10500.00	90.00	359.09	6170.00	4076.47	-1310.75	4096.77	0.00	0.00	0.00	
10600.00	90.00	359.09	6170.00	4176.46	-1312.34	4196.77	0.00	0.00	0.00	
10700.00	90.00	359.09	6170.00	4276.44	-1313.93	4296.77	0.00	0.00	0.00	
10800.00	90.00	359.09	6170.00	4376.43	-1315.52	4396.77	0.00	0.00	0.00	
10828.97	90.00	359.09	6170.00	4405.40	-1315.98	4425.74	0.00	0.00	0.00	PBHL 4-25

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Shull 1-25-9-60 Pad
Well: 4-25-9-60
Wellpath: Original Hole

Date: 02/13/2013
Co-ordinate(NE) Reference: Well: 4-25-9-60, Grid North
Vertical (TVD) Reference: 4943'GL+17'KB 4960.0
Section (VS) Reference: Well (0.00N,0.00E,359.09Azi)
Plan: Plan #2

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Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->				
								Deg	Min	Sec	Deg	Min	Sec		
SL 4-25			0.00	0.00	0.00	1506558.86	3406044.43	40	42	52.852	N	104	2	6.878	W
PBHL 4-25			6170.00	4405.40	-1315.98	1510964.26	3404728.45	40	43	36.591	N	104	2	23.023	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6372.83	6129.93	7.000	8.500	7"