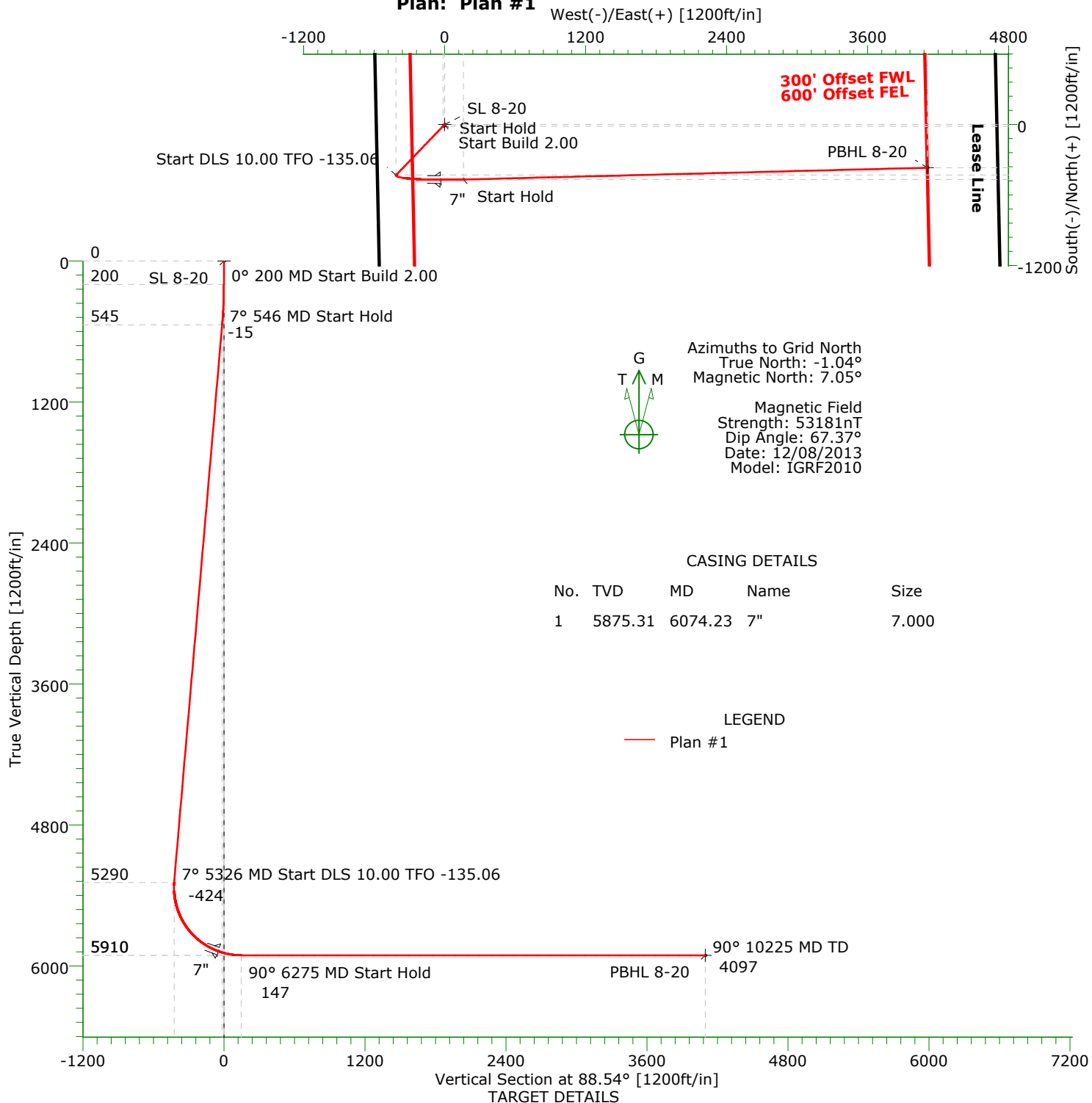




CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringleson Ranch 8-20-9-58
Well: 8-20-9-58
Wellpath: Original Hole
Plan: Plan #1



CASING DETAILS				
No.	TVD	MD	Name	Size
1	5875.31	6074.23	7"	7.000

LEGEND
— Plan #1

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 8-20	0.00	0.00	0.00	1514506.88	3444629.82	40°44'04.778N	103°53'44.016W	Point
PBHL 8-20	5910.00	-368.40	4107.29	1514138.48	3448737.11	40°44'00.401N	103°52'50.758W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	223.82	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	223.82	200.00	0.00	0.00	0.00	223.82	0.00	
3	545.86	6.92	223.82	545.02	-15.05	-14.44	2.00	0.00	-14.82	
4	5325.90	6.92	223.82	5290.27	-430.44	-413.02	0.00	0.00	-423.85	
5	6274.99	90.00	88.54	5910.00	-468.82	159.00	10.00	-135.06	147.00	
6	10224.56	90.00	88.54	5910.00	-368.40	4107.29	0.00	0.00	4096.57	PBHL 8-20

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.		Date: 11/08/2013		Time: 14:13:45		Page: 1	
Field: Niobrara CONZ'83		Co-ordinate(NE) Reference: Well: 8-20-9-58, Grid North					
Site: Bringleson Ranch 8-20-9-58		Vertical (TVD) Reference: 4919'GL+25'KB 4944.0					
Well: 8-20-9-58		Section (VS) Reference: Well (0.00N,0.00E,88.54Azi)					
Wellpath: Original Hole		Plan: Plan #1					

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: Bringleson Ranch 8-20-9-58					
Site Position:		Northing: 1514506.88 ft		Latitude: 40 44 4.778 N	
From: Map		Easting: 3444629.82 ft		Longitude: 103 53 44.016 W	
Position Uncertainty: 0.00 ft				North Reference: Grid	
Ground Level: 4919.00 ft				Grid Convergence: 1.04 deg	

Well: 8-20-9-58		Slot Name: 8-20	
Well Position: +N/-S 0.00 ft		Latitude: 40 44 4.778 N	
+E/-W 0.00 ft		Longitude: 103 53 44.016 W	
Position Uncertainty: 0.00 ft			

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: 4919'GL+25'KB		Tie-on Depth: 0.00 ft	
Magnetic Data: 12/08/2013		Above System Datum: Mean Sea Level	
Field Strength: 53181 nT		Declination: 8.09 deg	
Vertical Section: Depth From (TVD)		Mag Dip Angle: 67.37 deg	
ft	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	88.54

Plan: Plan #1		Date Composed: 11/08/2013	
Principal: No		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	223.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	223.82	200.00	0.00	0.00	0.00	0.00	0.00	223.82	
545.86	6.92	223.82	545.02	-15.05	-14.44	2.00	2.00	0.00	0.00	
5325.90	6.92	223.82	5290.27	-430.44	-413.02	0.00	0.00	0.00	0.00	
6274.99	90.00	88.54	5910.00	-468.82	159.00	10.00	8.75	-14.25	-135.06	
10224.56	90.00	88.54	5910.00	-368.40	4107.29	0.00	0.00	0.00	0.00	PBHL 8-20

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	223.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	223.82	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	223.82	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	2.00	223.82	299.98	-1.26	-1.21	-1.24	2.00	2.00	0.00	
400.00	4.00	223.82	399.84	-5.04	-4.83	-4.96	2.00	2.00	0.00	
500.00	6.00	223.82	499.45	-11.32	-10.87	-11.15	2.00	2.00	0.00	
545.86	6.92	223.82	545.02	-15.05	-14.44	-14.82	2.00	2.00	0.00	
600.00	6.92	223.82	598.77	-19.75	-18.95	-19.45	0.00	0.00	0.00	
700.00	6.92	223.82	698.04	-28.44	-27.29	-28.01	0.00	0.00	0.00	
800.00	6.92	223.82	797.31	-37.13	-35.63	-36.56	0.00	0.00	0.00	
900.00	6.92	223.82	896.58	-45.82	-43.97	-45.12	0.00	0.00	0.00	
1000.00	6.92	223.82	995.85	-54.51	-52.31	-53.68	0.00	0.00	0.00	
1100.00	6.92	223.82	1095.13	-63.20	-60.64	-62.23	0.00	0.00	0.00	
1200.00	6.92	223.82	1194.40	-71.89	-68.98	-70.79	0.00	0.00	0.00	
1300.00	6.92	223.82	1293.67	-80.58	-77.32	-79.35	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringleson Ranch 8-20-9-58
Well: 8-20-9-58
Wellpath: Original Hole

Date: 11/08/2013
Co-ordinate(NE) Reference: Well: 8-20-9-58, Grid North
Vertical (TVD) Reference: 4919'GL+25'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.54Azi)
Plan: Plan #1

Page: 2

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
1400.00	6.92	223.82	1392.94	-89.27	-85.66	-87.91	0.00	0.00	0.00	
1500.00	6.92	223.82	1492.22	-97.96	-94.00	-96.46	0.00	0.00	0.00	
1600.00	6.92	223.82	1591.49	-106.65	-102.34	-105.02	0.00	0.00	0.00	
1700.00	6.92	223.82	1690.76	-115.34	-110.67	-113.58	0.00	0.00	0.00	
1800.00	6.92	223.82	1790.03	-124.03	-119.01	-122.13	0.00	0.00	0.00	
1900.00	6.92	223.82	1889.30	-132.72	-127.35	-130.69	0.00	0.00	0.00	
2000.00	6.92	223.82	1988.58	-141.41	-135.69	-139.25	0.00	0.00	0.00	
2100.00	6.92	223.82	2087.85	-150.10	-144.03	-147.81	0.00	0.00	0.00	
2200.00	6.92	223.82	2187.12	-158.79	-152.37	-156.36	0.00	0.00	0.00	
2300.00	6.92	223.82	2286.39	-167.48	-160.70	-164.92	0.00	0.00	0.00	
2400.00	6.92	223.82	2385.66	-176.17	-169.04	-173.48	0.00	0.00	0.00	
2500.00	6.92	223.82	2484.94	-184.87	-177.38	-182.03	0.00	0.00	0.00	
2600.00	6.92	223.82	2584.21	-193.56	-185.72	-190.59	0.00	0.00	0.00	
2700.00	6.92	223.82	2683.48	-202.25	-194.06	-199.15	0.00	0.00	0.00	
2800.00	6.92	223.82	2782.75	-210.94	-202.40	-207.71	0.00	0.00	0.00	
2900.00	6.92	223.82	2882.02	-219.63	-210.74	-216.26	0.00	0.00	0.00	
3000.00	6.92	223.82	2981.30	-228.32	-219.07	-224.82	0.00	0.00	0.00	
3100.00	6.92	223.82	3080.57	-237.01	-227.41	-233.38	0.00	0.00	0.00	
3200.00	6.92	223.82	3179.84	-245.70	-235.75	-241.93	0.00	0.00	0.00	
3300.00	6.92	223.82	3279.11	-254.39	-244.09	-250.49	0.00	0.00	0.00	
3400.00	6.92	223.82	3378.39	-263.08	-252.43	-259.05	0.00	0.00	0.00	
3500.00	6.92	223.82	3477.66	-271.77	-260.77	-267.61	0.00	0.00	0.00	
3600.00	6.92	223.82	3576.93	-280.46	-269.10	-276.16	0.00	0.00	0.00	
3700.00	6.92	223.82	3676.20	-289.15	-277.44	-284.72	0.00	0.00	0.00	
3800.00	6.92	223.82	3775.47	-297.84	-285.78	-293.28	0.00	0.00	0.00	
3900.00	6.92	223.82	3874.75	-306.53	-294.12	-301.83	0.00	0.00	0.00	
4000.00	6.92	223.82	3974.02	-315.22	-302.46	-310.39	0.00	0.00	0.00	
4100.00	6.92	223.82	4073.29	-323.91	-310.80	-318.95	0.00	0.00	0.00	
4200.00	6.92	223.82	4172.56	-332.60	-319.13	-327.51	0.00	0.00	0.00	
4300.00	6.92	223.82	4271.83	-341.29	-327.47	-336.06	0.00	0.00	0.00	
4400.00	6.92	223.82	4371.11	-349.98	-335.81	-344.62	0.00	0.00	0.00	
4500.00	6.92	223.82	4470.38	-358.67	-344.15	-353.18	0.00	0.00	0.00	
4600.00	6.92	223.82	4569.65	-367.36	-352.49	-361.73	0.00	0.00	0.00	
4700.00	6.92	223.82	4668.92	-376.05	-360.83	-370.29	0.00	0.00	0.00	
4800.00	6.92	223.82	4768.19	-384.74	-369.17	-378.85	0.00	0.00	0.00	
4900.00	6.92	223.82	4867.47	-393.43	-377.50	-387.41	0.00	0.00	0.00	
5000.00	6.92	223.82	4966.74	-402.12	-385.84	-395.96	0.00	0.00	0.00	
5100.00	6.92	223.82	5066.01	-410.81	-394.18	-404.52	0.00	0.00	0.00	
5200.00	6.92	223.82	5165.28	-419.50	-402.52	-413.08	0.00	0.00	0.00	
5300.00	6.92	223.82	5264.56	-428.19	-410.86	-421.63	0.00	0.00	0.00	
5325.90	6.92	223.82	5290.27	-430.44	-413.02	-423.85	0.00	0.00	0.00	
5350.00	5.48	205.70	5314.23	-432.53	-414.52	-425.41	10.00	-5.96	-75.17	
5400.00	5.48	151.36	5364.03	-436.78	-414.41	-425.41	10.00	0.00	-108.68	
5450.00	8.94	121.41	5413.64	-440.90	-409.95	-421.05	10.00	6.92	-59.91	
5500.00	13.41	109.53	5462.69	-444.87	-401.16	-412.37	10.00	8.93	-23.75	
5550.00	18.15	103.64	5510.80	-448.64	-388.13	-399.43	10.00	9.49	-11.79	
5600.00	23.00	100.15	5557.59	-452.20	-370.93	-382.34	10.00	9.70	-6.99	
5650.00	27.90	97.82	5602.73	-455.52	-349.72	-361.21	10.00	9.80	-4.65	
5700.00	32.83	96.15	5645.86	-458.56	-324.64	-336.22	10.00	9.86	-3.35	
5750.00	37.77	94.87	5686.66	-461.32	-295.89	-307.55	10.00	9.89	-2.56	
5800.00	42.73	93.85	5724.81	-463.75	-263.69	-275.42	10.00	9.91	-2.04	
5850.00	47.69	93.00	5760.02	-465.86	-228.28	-240.07	10.00	9.93	-1.69	
5900.00	52.66	92.28	5792.04	-467.62	-189.93	-201.78	10.00	9.94	-1.44	
5950.00	57.63	91.64	5820.60	-469.02	-148.94	-160.84	10.00	9.95	-1.27	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringleson Ranch 8-20-9-58
Well: 8-20-9-58
Wellpath: Original Hole

Date: 11/08/2013
Co-ordinate(NE) Reference: Well: 8-20-9-58, Grid North
Vertical (TVD) Reference: 4919'GL+25'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.54Azi)
Plan: Plan #1

Page: 3

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
6000.00	62.61	91.08	5845.50	-470.04	-105.61	-117.55	10.00	9.95	-1.13	
6050.00	67.59	90.56	5866.55	-470.69	-60.28	-72.25	10.00	9.96	-1.04	7"
6074.23	70.00	90.32	5875.31	-470.86	-37.69	-49.67	10.00	9.96	-0.98	
6100.00	72.57	90.08	5883.58	-470.95	-13.28	-25.28	10.00	9.96	-0.95	
6150.00	77.55	89.62	5896.47	-470.82	35.01	23.00	10.00	9.96	-0.91	
6200.00	82.53	89.18	5905.12	-470.30	84.24	72.23	10.00	9.96	-0.88	
6250.00	87.51	88.76	5909.46	-469.41	134.02	122.02	10.00	9.96	-0.86	
6274.99	90.00	88.54	5910.00	-468.82	159.00	147.00	10.00	9.96	-0.85	
6300.00	90.00	88.54	5910.00	-468.18	184.00	172.01	0.00	0.00	0.00	
6400.00	90.00	88.54	5910.00	-465.64	283.97	272.01	0.00	0.00	0.00	
6500.00	90.00	88.54	5910.00	-463.10	383.94	372.01	0.00	0.00	0.00	
6600.00	90.00	88.54	5910.00	-460.56	483.90	472.01	0.00	0.00	0.00	
6700.00	90.00	88.54	5910.00	-458.01	583.87	572.01	0.00	0.00	0.00	
6800.00	90.00	88.54	5910.00	-455.47	683.84	672.01	0.00	0.00	0.00	
6900.00	90.00	88.54	5910.00	-452.93	783.81	772.01	0.00	0.00	0.00	
7000.00	90.00	88.54	5910.00	-450.39	883.78	872.01	0.00	0.00	0.00	
7100.00	90.00	88.54	5910.00	-447.84	983.74	972.01	0.00	0.00	0.00	
7200.00	90.00	88.54	5910.00	-445.30	1083.71	1072.01	0.00	0.00	0.00	
7300.00	90.00	88.54	5910.00	-442.76	1183.68	1172.01	0.00	0.00	0.00	
7400.00	90.00	88.54	5910.00	-440.22	1283.65	1272.01	0.00	0.00	0.00	
7500.00	90.00	88.54	5910.00	-437.67	1383.61	1372.01	0.00	0.00	0.00	
7600.00	90.00	88.54	5910.00	-435.13	1483.58	1472.01	0.00	0.00	0.00	
7700.00	90.00	88.54	5910.00	-432.59	1583.55	1572.01	0.00	0.00	0.00	
7800.00	90.00	88.54	5910.00	-430.04	1683.52	1672.01	0.00	0.00	0.00	
7900.00	90.00	88.54	5910.00	-427.50	1783.48	1772.01	0.00	0.00	0.00	
8000.00	90.00	88.54	5910.00	-424.96	1883.45	1872.01	0.00	0.00	0.00	
8100.00	90.00	88.54	5910.00	-422.42	1983.42	1972.01	0.00	0.00	0.00	
8200.00	90.00	88.54	5910.00	-419.87	2083.39	2072.01	0.00	0.00	0.00	
8300.00	90.00	88.54	5910.00	-417.33	2183.36	2172.01	0.00	0.00	0.00	
8400.00	90.00	88.54	5910.00	-414.79	2283.32	2272.01	0.00	0.00	0.00	
8500.00	90.00	88.54	5910.00	-412.25	2383.29	2372.01	0.00	0.00	0.00	
8600.00	90.00	88.54	5910.00	-409.70	2483.26	2472.01	0.00	0.00	0.00	
8700.00	90.00	88.54	5910.00	-407.16	2583.23	2572.01	0.00	0.00	0.00	
8800.00	90.00	88.54	5910.00	-404.62	2683.19	2672.01	0.00	0.00	0.00	
8900.00	90.00	88.54	5910.00	-402.08	2783.16	2772.01	0.00	0.00	0.00	
9000.00	90.00	88.54	5910.00	-399.53	2883.13	2872.01	0.00	0.00	0.00	
9100.00	90.00	88.54	5910.00	-396.99	2983.10	2972.01	0.00	0.00	0.00	
9200.00	90.00	88.54	5910.00	-394.45	3083.06	3072.01	0.00	0.00	0.00	
9300.00	90.00	88.54	5910.00	-391.91	3183.03	3172.01	0.00	0.00	0.00	
9400.00	90.00	88.54	5910.00	-389.36	3283.00	3272.01	0.00	0.00	0.00	
9500.00	90.00	88.54	5910.00	-386.82	3382.97	3372.01	0.00	0.00	0.00	
9600.00	90.00	88.54	5910.00	-384.28	3482.94	3472.01	0.00	0.00	0.00	
9700.00	90.00	88.54	5910.00	-381.73	3582.90	3572.01	0.00	0.00	0.00	
9800.00	90.00	88.54	5910.00	-379.19	3682.87	3672.01	0.00	0.00	0.00	
9900.00	90.00	88.54	5910.00	-376.65	3782.84	3772.01	0.00	0.00	0.00	
10000.00	90.00	88.54	5910.00	-374.11	3882.81	3872.01	0.00	0.00	0.00	
10100.00	90.00	88.54	5910.00	-371.56	3982.77	3972.01	0.00	0.00	0.00	
10200.00	90.00	88.54	5910.00	-369.02	4082.74	4072.01	0.00	0.00	0.00	
10224.56	90.00	88.54	5910.00	-368.40	4107.29	4096.57	0.00	0.00	0.00	PBHL 8-20

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringleson Ranch 8-20-9-58
Well: 8-20-9-58
Wellpath: Original Hole

Date: 11/08/2013
Co-ordinate(NE) Reference: Well: 8-20-9-58, Grid North
Vertical (TVD) Reference: 4919'GL+25'KB 4944.0
Section (VS) Reference: Well (0.00N,0.00E,88.54Azi)
Plan: Plan #1

Page: 4

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->		
								Deg	Min	Sec	Deg	Min	Sec
SL 8-20			0.00	0.00	0.00	1514506.883444	629.82	40	44	4.778 N	103	53	44.016 W
PBHL 8-20			5910.00	-368.40	4107.29	1514138.483448	737.11	40	44	0.401 N	103	52	50.758 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6074.23	5875.31	7.000	8.500	7"