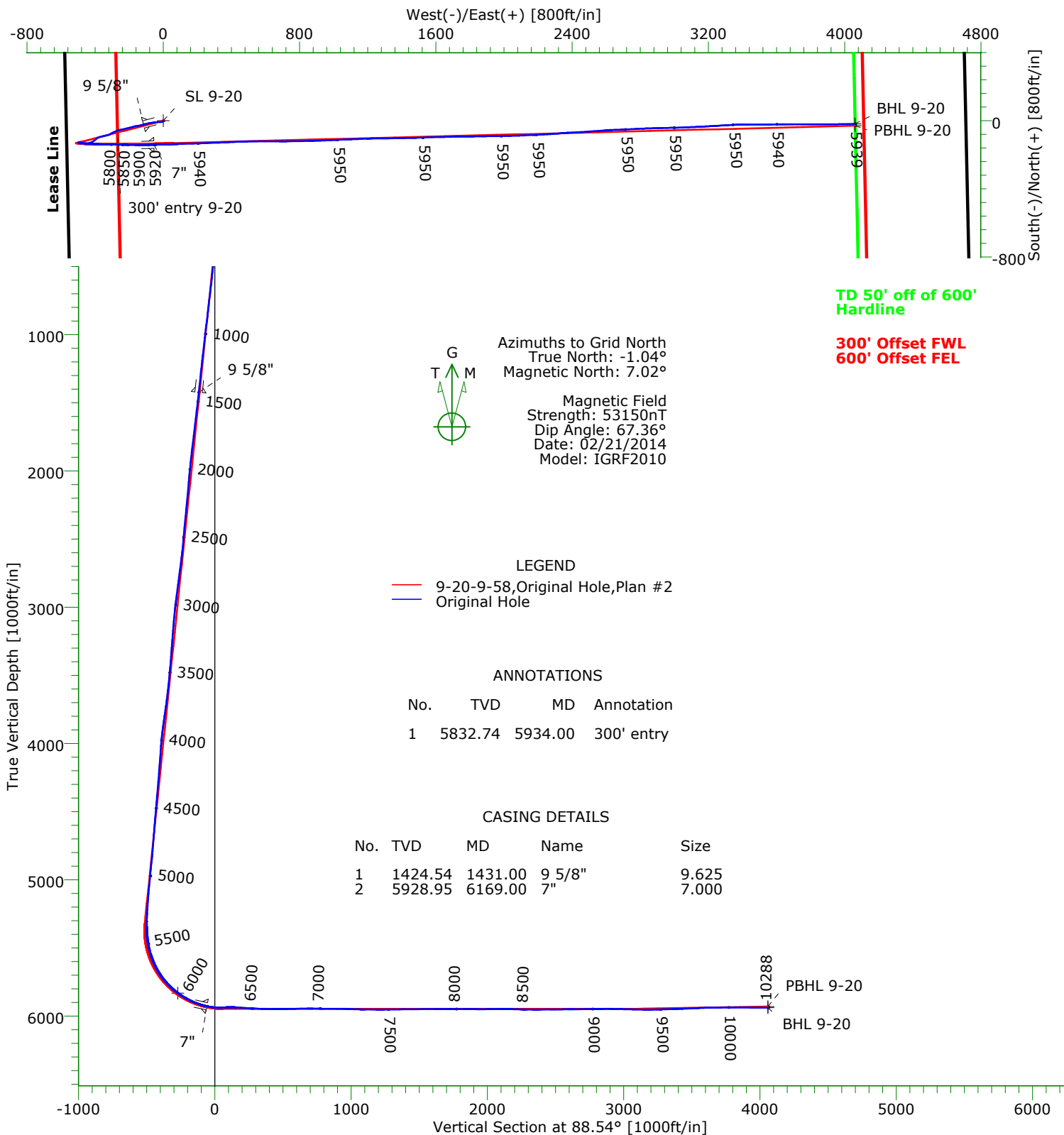




CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringleson Ranch 8-20-9-58
Well: 9-20-9-58
Wellpath: Original Hole



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 9-20	0.00	0.00	0.00	1514515.99	3444617.91	40°44'04.870N	103°53'44.168W	Point
300' entry 9-20	5832.74	-139.92	-266.60	1514376.07	3444351.31	40°44'03.535N	103°53'47.664W	Point
PBHL 9-20	5930.00	-28.86	4061.66	1514487.13	3448679.57	40°44'03.856N	103°52'51.423W	Point
BHL 9-20	5938.85	-17.98	4060.43	1514498.01	3448678.34	40°44'03.963N	103°52'51.436W	Point

Wellpath: (9-20-9-58/Original Hole)

Created By: Shane Nelson

Date: 03/03/2014

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.		Date: 03/03/2014	Time: 11:10:11	Page: 1
Field: Niobrara CONZ'83		Co-ordinate(NE) Reference: Well: 9-20-9-58, Grid North		
Site: Bringleson Ranch 8-20-9-58		Vertical (TVD) Reference: 4919'GL+17"KB 4936.0		
Well: 9-20-9-58		Section (VS) Reference: Well (0.00N,0.00E,88.54Azi)		
Wellpath: Original Hole		Survey Calculation Method: Minimum Curvature	Db: Adapti	

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: 9-20-9-58		Slot Name: 9-20		
Well Position:	+N/-S 9.11 ft	Northing: 1514515.99 ft	Latitude: 40 44 4.870 N	
	+E/-W -11.91 ft	Easting : 3444617.91 ft	Longitude: 103 53 44.168 W	
Position Uncertainty:	0.00 ft			

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: 4919'GL+17"KB	Height 4936.00 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 02/21/2014		Above System Datum: Mean Sea Level	
Field Strength: 53150 nT		Declination: 8.05 deg	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	ft	ft	ft
	0.00	0.00	0.00
			88.54

Survey Program for Definitive Wellpath				
Date: 03/03/2014		Validated: No	Version: 1	
Actual From	To	Survey	Toolcode	Tool Name
ft	ft			
139.00	10217.00	Survey #1 (139.00-10217.00)	MWD	Std MWD
10288.00	10288.00	Survey #2 (10288.00-10288.00)	Project	Projection

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
139.00	1.10	158.20	138.99	-1.24	0.50	0.46	0.79	0.79	0.00	MWD
232.00	1.80	227.60	231.97	-3.05	-0.25	-0.33	1.88	0.75	74.62	MWD
324.00	1.90	234.80	323.92	-4.91	-2.56	-2.69	0.27	0.11	7.83	MWD
415.00	3.20	256.50	414.83	-6.37	-6.27	-6.43	1.76	1.43	23.85	MWD
507.00	5.30	267.20	506.57	-7.18	-13.01	-13.19	2.43	2.28	11.63	MWD
598.00	6.40	268.10	597.10	-7.55	-22.28	-22.46	1.21	1.21	0.99	MWD
690.00	6.80	269.10	688.49	-7.80	-32.85	-33.04	0.45	0.43	1.09	MWD
781.00	6.60	267.70	778.87	-8.10	-43.46	-43.65	0.28	-0.22	-1.54	MWD
873.00	7.00	261.00	870.22	-9.19	-54.28	-54.50	0.96	0.43	-7.28	MWD
964.00	6.90	259.10	960.55	-11.09	-65.12	-65.39	0.28	-0.11	-2.09	MWD
1056.00	6.70	260.80	1051.90	-12.99	-75.85	-76.15	0.31	-0.22	1.85	MWD
1147.00	6.20	262.10	1142.33	-14.52	-85.96	-86.30	0.57	-0.55	1.43	MWD
1239.00	6.60	255.60	1233.76	-16.51	-96.00	-96.39	0.90	0.43	-7.07	MWD
1330.00	6.40	251.70	1324.17	-19.41	-105.88	-106.34	0.53	-0.22	-4.29	MWD
1391.00	6.40	253.50	1384.79	-21.44	-112.37	-112.88	0.33	0.00	2.95	MWD
1496.00	6.40	257.20	1489.14	-24.40	-123.68	-124.27	0.39	0.00	3.52	MWD
1581.00	6.80	258.90	1573.57	-26.42	-133.24	-133.87	0.52	0.47	2.00	MWD
1666.00	6.90	261.70	1657.97	-28.12	-143.23	-143.90	0.41	0.12	3.29	MWD
1752.00	6.90	262.60	1743.34	-29.53	-153.47	-154.17	0.13	0.00	1.05	MWD
1837.00	6.90	256.30	1827.73	-31.40	-163.49	-164.24	0.89	0.00	-7.41	MWD
1922.00	6.30	254.70	1912.17	-33.84	-172.95	-173.76	0.74	-0.71	-1.88	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringleson Ranch 8-20-9-58 Well: 9-20-9-58 Wellpath: Original Hole	Date: 03/03/2014 Time: 11:10:11 Page: 2 Co-ordinate(NE) Reference: Well: 9-20-9-58, Grid North Vertical (TVD) Reference: 4919'GL+17"KB 4936.0 Section (VS) Reference: Well (0.00N,0.00E,88.54Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
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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
2007.00	6.10	255.20	1996.67	-36.23	-181.81	-182.68	0.24	-0.24	0.59	MWD
2092.00	5.20	254.70	2081.26	-38.40	-189.90	-190.81	1.06	-1.06	-0.59	MWD
2177.00	5.20	256.60	2165.91	-40.30	-197.36	-198.32	0.20	0.00	2.24	MWD
2262.00	5.60	253.80	2250.53	-42.35	-205.09	-206.10	0.56	0.47	-3.29	MWD
2347.00	5.50	256.10	2335.13	-44.49	-213.03	-214.09	0.29	-0.12	2.71	MWD
2433.00	5.50	255.90	2420.73	-46.48	-221.02	-222.14	0.02	0.00	-0.23	MWD
2518.00	5.40	257.70	2505.35	-48.33	-228.88	-230.04	0.23	-0.12	2.12	MWD
2603.00	5.80	259.40	2589.94	-49.97	-237.01	-238.21	0.51	0.47	2.00	MWD
2688.00	7.10	257.30	2674.40	-51.92	-246.36	-247.60	1.55	1.53	-2.47	MWD
2773.00	7.70	258.20	2758.70	-54.24	-257.06	-258.35	0.72	0.71	1.06	MWD
2858.00	7.90	251.20	2842.91	-57.28	-268.16	-269.53	1.14	0.24	-8.24	MWD
2943.00	8.00	248.20	2927.09	-61.36	-279.18	-280.66	0.50	0.12	-3.53	MWD
3029.00	6.70	243.60	3012.39	-65.81	-289.23	-290.82	1.66	-1.51	-5.35	MWD
3114.00	5.90	242.70	3096.87	-70.02	-297.56	-299.24	0.95	-0.94	-1.06	MWD
3199.00	5.30	237.80	3181.47	-74.12	-304.76	-306.55	0.90	-0.71	-5.76	MWD
3284.00	4.80	236.60	3266.14	-78.17	-311.05	-312.94	0.60	-0.59	-1.41	MWD
3368.00	4.70	248.70	3349.85	-81.35	-317.19	-319.16	1.20	-0.12	14.40	MWD
3454.00	4.90	255.00	3435.55	-83.58	-324.02	-326.05	0.66	0.23	7.33	MWD
3539.00	5.70	255.90	3520.19	-85.55	-331.62	-333.70	0.95	0.94	1.06	MWD
3624.00	6.50	257.70	3604.70	-87.61	-340.42	-342.54	0.97	0.94	2.12	MWD
3709.00	7.50	258.60	3689.07	-89.73	-350.56	-352.73	1.18	1.18	1.06	MWD
3794.00	8.40	258.20	3773.25	-92.09	-362.07	-364.30	1.06	1.06	-0.47	MWD
3879.00	8.20	252.40	3857.36	-95.20	-373.93	-376.23	1.01	-0.24	-6.82	MWD
3964.00	6.90	243.60	3941.63	-99.30	-384.28	-386.69	2.04	-1.53	-10.35	MWD
4048.00	5.60	229.60	4025.13	-104.20	-391.92	-394.45	2.37	-1.55	-16.67	MWD
4133.00	5.40	225.20	4109.74	-109.71	-397.92	-400.58	0.55	-0.24	-5.18	MWD
4218.00	5.50	232.70	4194.36	-114.99	-404.00	-406.79	0.85	0.12	8.82	MWD
4303.00	5.70	234.10	4278.95	-119.94	-410.66	-413.58	0.28	0.24	1.65	MWD
4390.00	5.70	246.30	4365.52	-124.21	-418.11	-421.14	1.39	0.00	14.02	MWD
4475.00	5.10	246.30	4450.15	-127.42	-425.44	-428.54	0.71	-0.71	0.00	MWD
4562.00	4.80	249.90	4536.82	-130.23	-432.40	-435.57	0.50	-0.34	4.14	MWD
4647.00	4.70	264.20	4621.53	-131.80	-439.20	-442.42	1.39	-0.12	16.82	MWD
4732.00	4.60	270.90	4706.25	-132.10	-446.07	-449.29	0.65	-0.12	7.88	MWD
4817.00	4.80	270.90	4790.97	-131.99	-453.04	-456.25	0.24	0.24	0.00	MWD
4902.00	6.20	276.50	4875.58	-131.41	-461.15	-464.35	1.76	1.65	6.59	MWD
4988.00	5.60	277.50	4961.12	-130.34	-469.93	-473.10	0.71	-0.70	1.16	MWD
5073.00	5.50	277.50	5045.72	-129.27	-478.08	-481.22	0.12	-0.12	0.00	MWD
5158.00	4.60	280.00	5130.39	-128.14	-485.47	-488.58	1.09	-1.06	2.94	MWD
5243.00	3.40	280.70	5215.18	-127.08	-491.31	-494.39	1.41	-1.41	0.82	MWD
5284.00	3.10	280.70	5256.12	-126.65	-493.59	-496.66	0.73	-0.73	0.00	MWD
5327.00	3.20	280.20	5299.05	-126.22	-495.91	-498.97	0.24	0.23	-1.16	MWD
5370.00	1.90	220.90	5342.01	-126.55	-497.56	-500.63	6.43	-3.02	-137.91	MWD
5412.00	4.00	143.60	5383.97	-128.26	-497.15	-500.26	9.60	5.00	-184.05	MWD
5455.00	8.10	113.90	5426.73	-130.69	-493.49	-496.66	11.70	9.53	-69.07	MWD
5498.00	11.10	98.60	5469.13	-132.54	-486.62	-489.84	9.10	6.98	-35.58	MWD
5540.00	13.80	91.60	5510.14	-133.28	-477.62	-480.86	7.35	6.43	-16.67	MWD
5583.00	16.70	91.90	5551.62	-133.63	-466.31	-469.57	6.75	6.74	0.70	MWD
5625.00	21.10	91.40	5591.35	-134.02	-452.72	-455.98	10.48	10.48	-1.19	MWD
5668.00	25.60	92.60	5630.82	-134.63	-435.69	-438.98	10.52	10.47	2.79	MWD
5710.00	30.40	93.50	5667.89	-135.69	-416.01	-419.33	11.47	11.43	2.14	MWD
5753.00	35.40	92.30	5703.98	-136.85	-392.69	-396.05	11.73	11.63	-2.79	MWD
5796.00	39.70	91.40	5738.06	-137.69	-366.50	-369.89	10.08	10.00	-2.09	MWD
5838.00	43.70	90.50	5769.42	-138.14	-338.57	-341.98	9.63	9.52	-2.14	MWD

Precision Directional Services, Inc.

Survey Report

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

Date: 03/03/2014 **Time:** 11:10:11 **Page:** 3

Co-ordinate(NE) Reference: Well: 9-20-9-58, Grid North

Vertical (TVD) Reference: 4919'GL+17'KB 4936.0

Section (VS) Reference: Well (0.00N, 0.00E, 88.54Azi)

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
5881.00	48.20	91.70	5799.31	-138.75	-307.68	-311.12	10.66	10.47	2.79	MWD
5923.00	52.40	91.60	5826.13	-139.68	-275.39	-278.86	10.00	10.00	-0.24	MWD
5934.00	53.68	91.60	5832.74	-139.92	-266.60	-270.08	11.63	11.63	0.00	300' entry
5966.00	57.40	91.60	5850.85	-140.66	-240.23	-243.74	11.63	11.63	0.00	MWD
6009.00	61.10	90.90	5872.83	-141.46	-203.29	-206.83	8.72	8.60	-1.63	MWD
6051.00	65.30	90.90	5891.76	-142.05	-165.82	-169.38	10.00	10.00	0.00	MWD
6094.00	69.70	89.30	5908.21	-142.11	-126.10	-129.68	10.79	10.23	-3.72	MWD
6123.00	73.20	88.60	5917.44	-141.61	-98.62	-102.19	12.28	12.07	-2.41	MWD
6203.00	81.20	88.40	5935.15	-139.56	-20.70	-24.24	10.00	10.00	-0.25	MWD
6248.00	89.50	88.20	5938.79	-138.23	24.10	20.57	18.45	18.44	-0.44	MWD
6294.00	93.70	87.90	5937.51	-136.67	70.04	66.54	9.15	9.13	-0.65	MWD
6340.00	90.30	88.40	5935.90	-135.19	115.98	112.50	7.47	-7.39	1.09	MWD
6386.00	86.40	88.40	5937.23	-133.90	161.94	158.47	8.48	-8.48	0.00	MWD
6431.00	85.90	88.20	5940.25	-132.57	206.82	203.37	1.20	-1.11	-0.44	MWD
6477.00	85.50	87.90	5943.70	-131.01	252.66	249.24	1.09	-0.87	-0.65	MWD
6523.00	88.40	87.90	5946.15	-129.33	298.56	295.17	6.30	6.30	0.00	MWD
6565.00	88.60	88.10	5947.24	-127.86	340.52	337.15	0.67	0.48	0.48	MWD
6608.00	88.90	86.60	5948.18	-125.87	383.46	380.13	3.56	0.70	-3.49	MWD
6651.00	88.60	86.80	5949.12	-123.40	426.38	423.10	0.84	-0.70	0.47	MWD
6693.00	90.30	88.80	5949.52	-121.79	468.34	465.09	6.25	4.05	4.76	MWD
6736.00	91.10	89.50	5949.00	-121.15	511.34	508.08	2.47	1.86	1.63	MWD
6779.00	91.70	90.00	5947.95	-120.96	554.32	551.06	1.82	1.40	1.16	MWD
6821.00	90.80	90.00	5947.03	-120.96	596.31	593.04	2.14	-2.14	0.00	MWD
6864.00	90.70	90.00	5946.47	-120.96	639.31	636.02	0.23	-0.23	0.00	MWD
6906.00	90.70	90.20	5945.96	-121.03	681.30	678.00	0.48	0.00	0.48	MWD
6949.00	89.40	88.90	5945.92	-120.70	724.30	720.99	4.28	-3.02	-3.02	MWD
6991.00	89.30	88.90	5946.40	-119.89	766.29	762.99	0.24	-0.24	0.00	MWD
7034.00	89.60	88.90	5946.81	-119.07	809.28	805.98	0.70	0.70	0.00	MWD
7077.00	89.60	88.80	5947.11	-118.20	852.27	848.98	0.23	0.00	-0.23	MWD
7119.00	89.60	88.10	5947.40	-117.07	894.25	890.98	1.67	0.00	-1.67	MWD
7162.00	89.20	87.70	5947.85	-115.49	937.22	933.98	1.32	-0.93	-0.93	MWD
7204.00	88.50	87.40	5948.69	-113.70	979.18	975.96	1.81	-1.67	-0.71	MWD
7247.00	88.00	87.20	5950.01	-111.67	1022.11	1018.93	1.25	-1.16	-0.47	MWD
7289.00	87.90	87.40	5951.51	-109.69	1064.03	1060.89	0.53	-0.24	0.48	MWD
7332.00	89.30	88.20	5952.56	-108.04	1106.99	1103.88	3.75	3.26	1.86	MWD
7374.00	89.30	87.50	5953.07	-106.47	1148.96	1145.87	1.67	0.00	-1.67	MWD
7416.00	89.30	87.90	5953.59	-104.78	1190.92	1187.86	0.95	0.00	0.95	MWD
7459.00	90.90	89.30	5953.51	-103.73	1233.90	1230.86	4.94	3.72	3.26	MWD
7502.00	90.80	89.60	5952.87	-103.32	1276.90	1273.85	0.74	-0.23	0.70	MWD
7544.00	90.80	89.10	5952.29	-102.84	1318.89	1315.84	1.19	0.00	-1.19	MWD
7587.00	90.70	89.10	5951.72	-102.17	1361.88	1358.84	0.23	-0.23	0.00	MWD
7630.00	90.60	89.30	5951.24	-101.57	1404.87	1401.83	0.52	-0.23	0.47	MWD
7672.00	90.60	88.90	5950.80	-100.91	1446.87	1443.83	0.95	0.00	-0.95	MWD
7715.00	90.60	88.20	5950.35	-99.82	1489.85	1486.82	1.63	0.00	-1.63	MWD
7757.00	90.60	88.20	5949.91	-98.50	1531.83	1528.82	0.00	0.00	0.00	MWD
7800.00	90.40	88.20	5949.53	-97.15	1574.80	1571.82	0.47	-0.47	0.00	MWD
7842.00	90.40	88.20	5949.24	-95.83	1616.78	1613.82	0.00	0.00	0.00	MWD
7884.00	90.00	88.10	5949.09	-94.47	1658.76	1655.81	0.98	-0.95	-0.24	MWD
7927.00	90.20	88.40	5949.02	-93.16	1701.74	1698.81	0.84	0.47	0.70	MWD
7969.00	90.00	89.50	5948.94	-92.39	1743.73	1740.81	2.66	-0.48	2.62	MWD
8012.00	89.80	90.00	5949.02	-92.20	1786.73	1783.80	1.25	-0.47	1.16	MWD
8054.00	89.80	89.10	5949.17	-91.87	1828.73	1825.79	2.14	0.00	-2.14	MWD
8097.00	89.30	89.10	5949.50	-91.20	1871.72	1868.79	1.16	-1.16	0.00	MWD
8139.00	89.50	88.80	5949.94	-90.43	1913.71	1910.79	0.86	0.48	-0.71	MWD

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringleson Ranch 8-20-9-58 Well: 9-20-9-58 Wellpath: Original Hole	Date: 03/03/2014 Time: 11:10:11 Page: 4 Co-ordinate(NE) Reference: Well: 9-20-9-58, Grid North Vertical (TVD) Reference: 4919'GL+17'KB 4936.0 Section (VS) Reference: Well (0.00N,0.00E,88.54Azi) Survey Calculation Method: Minimum Curvature Db: Adapti
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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
8182.00	90.10	89.30	5950.09	-89.72	1956.71	1953.79	1.82	1.40	1.16	MWD
8225.00	90.30	89.10	5949.94	-89.12	1999.70	1996.78	0.66	0.47	-0.47	MWD
8267.00	90.40	88.40	5949.69	-88.20	2041.69	2038.78	1.68	0.24	-1.67	MWD
8310.00	90.70	88.20	5949.27	-86.92	2084.67	2081.78	0.84	0.70	-0.47	MWD
8352.00	90.10	87.40	5948.98	-85.31	2126.64	2123.77	2.38	-1.43	-1.90	MWD
8395.00	88.50	87.40	5949.51	-83.36	2169.59	2166.76	3.72	-3.72	0.00	MWD
8437.00	88.20	86.80	5950.71	-81.24	2211.52	2208.73	1.60	-0.71	-1.43	MWD
8480.00	87.90	86.60	5952.18	-78.76	2254.42	2251.68	0.84	-0.70	-0.47	MWD
8522.00	89.50	86.10	5953.13	-76.09	2296.32	2293.64	3.99	3.81	-1.19	MWD
8565.00	89.50	85.20	5953.51	-72.83	2339.20	2336.58	2.09	0.00	-2.09	MWD
8607.00	90.50	87.00	5953.51	-69.97	2381.10	2378.54	4.90	2.38	4.29	MWD
8650.00	90.70	87.20	5953.06	-67.80	2424.04	2421.53	0.66	0.47	0.47	MWD
8693.00	90.70	86.30	5952.53	-65.36	2466.97	2464.50	2.09	0.00	-2.09	MWD
8735.00	90.50	85.90	5952.09	-62.50	2508.87	2506.46	1.06	-0.48	-0.95	MWD
8778.00	90.60	85.80	5951.68	-59.39	2551.75	2549.41	0.33	0.23	-0.23	MWD
8820.00	90.50	85.40	5951.27	-56.17	2593.63	2591.35	0.98	-0.24	-0.95	MWD
8863.00	90.60	87.90	5950.86	-53.66	2636.55	2634.33	5.82	0.23	5.81	MWD
8905.00	90.70	88.10	5950.39	-52.19	2678.52	2676.32	0.53	0.24	0.48	MWD
8948.00	90.70	87.20	5949.86	-50.43	2721.48	2719.31	2.09	0.00	-2.09	MWD
8990.00	90.60	87.00	5949.38	-48.30	2763.42	2761.30	0.53	-0.24	-0.48	MWD
9033.00	90.80	87.40	5948.86	-46.20	2806.37	2804.28	1.04	0.47	0.93	MWD
9075.00	90.60	88.40	5948.35	-44.66	2848.34	2846.27	2.43	-0.48	2.38	MWD
9118.00	90.00	88.10	5948.12	-43.35	2891.32	2889.27	1.56	-1.40	-0.70	MWD
9160.00	88.70	88.80	5948.60	-42.22	2933.30	2931.27	3.52	-3.10	1.67	MWD
9203.00	88.80	88.60	5949.53	-41.24	2976.28	2974.26	0.52	0.23	-0.47	MWD
9246.00	88.60	88.20	5950.51	-40.04	3019.25	3017.25	1.04	-0.47	-0.93	MWD
9288.00	88.40	87.90	5951.61	-38.61	3061.21	3059.23	0.86	-0.48	-0.71	MWD
9331.00	88.90	87.70	5952.62	-36.96	3104.17	3102.22	1.25	1.16	-0.47	MWD
9373.00	88.90	87.00	5953.43	-35.02	3146.11	3144.20	1.67	0.00	-1.67	MWD
9416.00	90.50	87.20	5953.65	-32.84	3189.06	3187.18	3.75	3.72	0.47	MWD
9458.00	91.20	86.80	5953.03	-30.65	3230.99	3229.16	1.92	1.67	-0.95	MWD
9501.00	91.80	86.10	5951.91	-27.99	3273.90	3272.12	2.14	1.40	-1.63	MWD
9543.00	91.50	86.80	5950.70	-25.39	3315.80	3314.07	1.81	-0.71	1.67	MWD
9586.00	91.50	86.80	5949.57	-22.99	3358.72	3357.04	0.00	0.00	0.00	MWD
9629.00	92.10	89.60	5948.22	-21.64	3401.67	3400.01	6.66	1.40	6.51	MWD
9671.00	92.50	90.50	5946.53	-21.67	3443.63	3441.96	2.34	0.95	2.14	MWD
9714.00	92.40	90.20	5944.70	-21.94	3486.59	3484.90	0.73	-0.23	-0.70	MWD
9756.00	92.50	89.80	5942.90	-21.94	3528.56	3526.85	0.98	0.24	-0.95	MWD
9799.00	92.40	89.10	5941.06	-21.52	3571.51	3569.81	1.64	-0.23	-1.63	MWD
9841.00	91.80	89.10	5939.52	-20.86	3613.48	3611.78	1.43	-1.43	0.00	MWD
9884.00	90.30	89.60	5938.74	-20.38	3656.47	3654.76	3.68	-3.49	1.16	MWD
9926.00	90.30	90.50	5938.52	-20.41	3698.47	3696.75	2.14	0.00	2.14	MWD
9969.00	90.50	90.30	5938.22	-20.71	3741.47	3739.72	0.66	0.47	-0.47	MWD
10011.00	90.20	90.50	5937.96	-21.01	3783.46	3781.70	0.86	-0.71	0.48	MWD
10053.00	90.00	90.00	5937.89	-21.19	3825.46	3823.68	1.28	-0.48	-1.19	MWD
10096.00	89.60	89.80	5938.04	-21.11	3868.46	3866.67	1.04	-0.93	-0.47	MWD
10138.00	89.80	89.30	5938.26	-20.78	3910.46	3908.66	1.28	0.48	-1.19	MWD
10180.00	89.70	88.80	5938.44	-20.09	3952.45	3950.66	1.21	-0.24	-1.19	MWD
10217.00	89.80	88.90	5938.60	-19.35	3989.45	3987.66	0.38	0.27	0.27	MWD
10288.00	89.80	88.90	5938.85	-17.98	4060.43	4058.66	0.00	0.00	0.00	Project

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Survey Report

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

Date: 03/03/2014
Co-ordinate(NE) Reference: Well: 9-20-9-58, Grid North
Vertical (TVD) Reference: 4919'GL+17'KB 4936.0
Section (VS) Reference: Well (0.00N,0.00E,88.54Azi)
Survey Calculation Method: Minimum Curvature
Time: 11:10:11
Page: 5
Db: Adapti

Annotation

MD ft	TVD ft	
5934.00	5832.74	300' entry