



Company: Piceance Energy, LLC
Project: Mesa County, CO
Site: N Vega 28-11
Well: Piceance 28-12W
Wellbore: Wellbore #1
Design: Wellbore #1
Site: N Vega 28-11

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Piceance 28-12W
WELL @ 7802.00usft (Original Well Elev)
WELL @ 7802.00usft (Original Well Elev)
True
Minimum Curvature
EDMOBBW

Site Position: From: Lat/Long Northing: 1,523,092.764 usft Latitude: 39° 14' 50.676 N
Eastng: 2,354,890.736 usft Longitude: 107° 46' 41.484 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: -1.44

Well Piceance 28-12W
Well Position +N/-S 0.00 usft Northing: 1,523,220.212 usft Latitude: 39° 14' 51.942 N
+E/-W 0.00 usft Easting: 2,354,916.720 usft Longitude: 107° 46' 41.194 W
Position Uncertainty 0.00 usft Wellhead Elevation: usft Ground Level: 7,580.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/5/2014	9.79	65.48	51,788

Design Wellbore #1

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	261.12

Survey Program Date 3/10/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
232.00	7,942.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
232.00	2.55	252.53	231.92	-1.55	-4.92	5.10	232.00
293.00	2.81	249.46	292.86	-2.48	-7.62	7.91	61.00
366.00	2.72	246.91	385.75	-4.15	-11.78	12.28	93.00
478.00	3.52	268.71	477.61	-5.07	-16.61	17.20	92.00
571.00	3.82	269.06	570.42	-5.18	-22.57	23.10	93.00
663.00	5.49	269.06	662.12	-5.30	-30.03	30.49	92.00
755.00	7.43	270.02	753.53	-5.37	-40.38	40.73	92.00
847.00	8.09	265.89	844.69	-5.84	-52.79	53.05	92.00
942.00	9.27	261.94	938.60	-7.39	-67.03	67.37	95.00
1,037.00	9.93	261.50	1,032.27	-9.67	-82.71	83.21	95.00
1,132.00	10.46	260.44	1,125.77	-12.31	-99.31	100.02	95.00
1,227.00	11.16	260.71	1,219.08	-15.23	-116.89	117.84	95.00
1,322.00	11.51	258.42	1,312.23	-18.62	-135.25	136.50	95.00
1,417.00	12.17	258.16	1,405.21	-22.58	-154.33	155.97	95.00
1,520.00	12.61	258.60	1,505.81	-27.03	-175.88	178.04	103.00
1,606.00	13.23	258.77	1,589.63	-30.80	-194.84	197.26	86.00
1,701.00	11.82	257.98	1,682.37	-34.94	-215.02	217.83	95.00
1,796.00	11.43	257.90	1,775.42	-38.94	-233.74	236.95	95.00
1,891.00	11.03	262.03	1,868.60	-42.17	-251.94	255.43	95.00
1,986.00	11.16	259.04	1,961.82	-45.18	-269.97	273.71	95.00
2,081.00	9.40	262.20	2,055.30	-47.98	-286.68	290.65	95.00
2,176.00	9.14	263.52	2,149.06	-49.89	-301.87	305.95	95.00
2,270.00	8.92	265.01	2,241.89	-51.36	-316.54	320.68	94.00
2,365.00	8.53	263.61	2,335.79	-52.79	-330.88	335.07	95.00
2,460.00	7.82	262.55	2,429.83	-54.41	-344.29	348.57	95.00
2,555.00	7.95	265.19	2,523.93	-55.80	-357.25	361.58	95.00
2,650.00	7.69	262.03	2,618.04	-57.23	-370.09	374.49	95.00
2,745.00	7.12	261.67	2,712.25	-58.97	-382.21	386.73	95.00
2,840.00	7.08	257.10	2,806.52	-61.13	-393.74	398.46	95.00
2,935.00	7.03	256.93	2,900.80	-63.75	-405.11	410.10	95.00
3,030.00	6.94	260.09	2,995.10	-66.05	-416.43	421.63	95.00
3,125.00	6.90	261.59	3,089.41	-67.87	-427.73	433.08	95.00
3,220.00	8.13	263.70	3,183.59	-69.44	-440.05	445.49	95.00
3,315.00	8.48	262.73	3,277.59	-71.07	-453.67	459.21	95.00
3,410.00	8.22	265.37	3,371.59	-72.50	-467.39	472.98	95.00
3,505.00	8.26	262.03	3,465.61	-74.00	-480.92	486.58	95.00

3,600.00	7.65	259.83	3,559.69	-76.06	-493.90	499.72	95.00
3,694.00	8.70	265.01	3,652.74	-77.78	-507.14	513.07	94.00
3,789.00	10.24	266.24	3,746.44	-78.96	-522.73	528.65	95.00
3,884.00	9.71	267.04	3,840.00	-79.93	-539.15	545.03	95.00
3,979.00	9.84	267.04	3,933.62	-80.76	-555.26	561.07	95.00
4,074.00	9.27	263.87	4,027.31	-82.00	-570.98	576.79	95.00
4,169.00	8.75	262.99	4,121.13	-83.70	-585.76	591.66	95.00
4,264.00	8.61	263.87	4,215.05	-85.34	-600.00	605.98	95.00
4,359.00	8.35	264.14	4,309.01	-86.80	-613.93	619.97	95.00
4,454.00	8.66	261.85	4,402.96	-88.52	-627.87	634.01	95.00
4,549.00	6.68	260.88	4,497.11	-90.41	-640.41	646.69	95.00
4,644.00	6.42	259.83	4,591.49	-92.22	-651.09	657.52	95.00
4,739.00	6.37	255.79	4,685.90	-94.45	-661.43	668.08	95.00
4,834.00	6.11	258.77	4,780.34	-96.73	-671.50	678.38	95.00
4,929.00	4.57	263.26	4,874.92	-98.16	-680.22	687.21	95.00
5,024.00	2.94	273.45	4,969.71	-98.46	-686.41	693.38	95.00
5,119.00	1.93	246.91	5,064.63	-98.94	-690.31	697.31	95.00
5,214.00	2.11	235.22	5,159.57	-100.57	-693.22	700.43	95.00
5,309.00	2.24	244.89	5,254.50	-102.35	-696.34	703.79	95.00
5,404.00	1.67	234.60	5,349.45	-103.94	-699.15	706.81	95.00
5,499.00	0.53	75.08	5,444.44	-104.63	-699.85	707.61	95.00
5,594.00	0.18	51.70	5,539.44	-104.42	-699.31	707.04	95.00
5,688.00	2.29	45.11	5,633.41	-103.01	-697.86	705.40	94.00
5,783.00	1.89	34.92	5,728.34	-100.38	-695.62	702.78	95.00
5,879.00	1.01	47.84	5,824.31	-98.52	-694.09	700.97	96.00
5,973.00	1.05	21.55	5,918.30	-97.16	-693.16	699.84	94.00
6,069.00	1.05	357.83	6,014.28	-95.46	-692.87	699.30	96.00
6,164.00	0.13	299.56	6,109.28	-94.54	-692.99	699.28	95.00
6,258.00	0.62	273.72	6,203.28	-94.45	-693.59	699.86	94.00
6,353.00	1.27	246.21	6,298.26	-94.85	-695.07	701.38	95.00
6,448.00	2.11	229.24	6,393.22	-96.41	-697.36	703.88	95.00
6,543.00	1.14	202.35	6,488.18	-98.43	-699.04	705.86	95.00
6,638.00	1.63	221.86	6,583.15	-100.31	-700.30	707.39	95.00
6,733.00	1.80	211.31	6,678.11	-102.59	-701.98	709.40	95.00
6,828.00	2.42	214.30	6,773.05	-105.52	-703.89	711.74	95.00
6,923.00	2.20	199.71	6,867.97	-108.89	-705.63	713.98	95.00
7,018.00	2.15	196.99	6,962.90	-112.31	-706.77	715.63	95.00
7,112.00	2.64	204.63	7,056.82	-115.97	-708.18	717.60	94.00
7,207.00	2.99	199.36	7,151.71	-120.30	-709.92	719.98	95.00
7,302.00	2.86	203.75	7,246.58	-124.80	-711.69	722.43	95.00
7,396.00	3.69	208.94	7,340.43	-129.60	-714.10	725.55	94.00
7,492.00	1.10	206.92	7,436.34	-133.12	-716.01	727.98	96.00
7,587.00	1.01	230.39	7,531.32	-134.47	-717.07	729.24	95.00
7,682.00	2.02	215.62	7,626.29	-136.36	-718.69	731.13	95.00
7,776.00	1.85	203.49	7,720.23	-139.10	-720.26	733.10	94.00
7,871.00	2.46	208.76	7,815.17	-142.30	-721.85	735.17	95.00
7,892.00	2.46	206.48	7,836.15	-143.09	-722.27	735.70	21.00
7,921.69	2.46	206.48	7,865.81	-144.23	-722.84	736.44	29.69
7,942.00	2.46	206.48	7,886.10	-145.01	-723.23	736.95	20.31

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
232.00	231.92	-1.55	-4.92	First Archer Survey
7,892.00	7,836.15	-143.09	-722.27	Last Archer Survey
7,942.00	7,886.10	-145.01	-723.23	PTB

Checked By:

Approved By:

Date: