WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: January 30, 2014
API #: 47-103-02774

Farm name: Denoon Trust, Janie Operator Well No.: Bowyers #4H

LOCATION: Elevation: 1,156' Quadrangle: New Martinsville

District: Magnolia County: Wetzel
Latitude: 13,440 Feet South of 39 Deg. 42 Min. 30 Sec.
Longitude 3,050 Feet West of 80 Deg. 50 Min. 00 Sec.

Company: Stone Energy Corporation

Address: 6000 Hampton Center, Suite B	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Morgantown, WV 26505	20"	54'	54'	GTS
Agent: Tim McGregor	13.375"	1,154'	1,154'	1,041 - CTS
Inspector: Derek Haught	9.625"	2,251'	2,251'	116 Lead - 694 Tail - CTS
Date Permit Issued: 7/9/2012	5.5"		12,310'	945 Lead - 2,124 Tail
Date Well Work Commenced: 9/23/2012	2.375"		6,768	
Date Well Work Completed: 9/1/2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary ☑ Cable ☐ Rig ☐				
Total Vertical Depth (ft): 6,435				
Total Measured Depth (ft): 12,325				
Fresh Water Depth (ft.): 72				
Salt Water Depth (ft.): 1,156				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 830				
Void(s) encountered (N/Y) Depth(s) N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)
Producing formation Marcellus Pay zone depth (ft) 6,857' to 12,179'
Gas: Initial open flow 220 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 3,990 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 246 Hours
Static rock Pressure 1,785 psig (surface pressure) after 1 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature 1/30/2014 Date

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Were core samples taken? Yes_____ No X Were cuttings caught during drilling? Yes X No_____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MWD Gamma Ray, Mud Log, and CBL

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforated 20 intervals from 12,179' to 6,857'. Performed 20 individual stages of slick water stimulation using 7,055,214 gals fresh water, Sand - 801,213 lbs 100 Mesh and 7,333,029 lbs 40/70. AvBDP = 6,040 psi, AvTP = 6,817 psi, AvMTP = 8,973 psi, AvInjRate = 82.2 bpm, and AvISIP = 4,243 psi.

See Attachment for FracFocus information.

Plug Back Details Including Plug Type and Depth(s): N/A

Formations Encountered: Top Depth / Bottom Depth
Surface:

See attached sheet for formations encountered and their depths.

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BOWYERS #4H
API 47-103-02774
Stone Energy Corporation

	Top (ft TVD)	Horizontal Top (ft MD)		Bottom (ft TVD)	Bottom (ft MD)	
Sandstone & Shale	Surface		*	828		FW @ 78'
Pittsburgh Coal	828		*	832		
Sandstone & Shale	832		*	1733		SW @ 1156'
Little Lime	1733		*	1768		
Big Lime	1768		*	1868		
Big Injun	1868		*	2062		
Sandstone & Shale	2062		*	2435		
Berea Sandstone	2435		*	2475		
Shale	2475		*	2665		
Gordon	2665		*	2725		
Undiff Devonian Shale	2275		*	5702	5750	
Rhinestreet	5702	5750	~	6062	6159	
Cashaqua	6062	6159	~	6191	6345	
Middlesex	6191	6345	~	6219	6391	
West River	6219	6391	~	6280	6500	
Geneseo	6280	6500	~	6303	6550	
Tully Limestone	6303	6550	~	6341	6642	
Marcellus	6341	6642	~	6435	12325	
TD						

* From Pilot Hole Log and Driller's Log
~ From MWD Gamma Log

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Hydraulic Fracturing Fluid Product Component Information Disclosure

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Fracture Date:	7/12/2013
State:	West Virginia
County/Parish	Wetzel County
API Number:	
Operator Name:	Stone
Well Name and Number:	Bowyers 4H
Longitude:	
Latitude:	
Long/Lat Projection:	
Production Type:	
True Vertical Depth (TVD):	0
Total Water Volume (gal)*:	7055214

Hydraulic Fracturing Fluid Composition

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
15% HCl, Slickwater, WF115	Schlumberger	Corrosion Inhibitor, Bactericide (Myacide GA25), Scale Inhibitor, AntiFoam Agent, Surfactant , Acid, Breaker, Gelling Agent, Friction Reducer, Iron Control Agent, Clay Control Agent, Buffer, Propping Agent, Fluid	Water (Including Mix Water Supplied by Client)*	NA		87.68417%	
			Crystalline silica	14808-60-7	98.40770%	12.11972%	
			Hydrogen chloride	7647-01-0	0.69638%	0.08577%	
			Guar gum	9000-30-0	0.42718%	0.05261%	
			Acrylamide, 2-acrylamido-2-methylpropanesulfonic acid, sodium salt polymer	38193-60-1	0.08421%	0.01037%	
			Ammonium sulfate	7783-20-2	0.07959%	0.00980%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.06536%	0.00805%	
			Glutaraldehyde	111-30-8	0.05582%	0.00688%	
			Sodium chloride	7647-14-5	0.03978%	0.00490%	
			Magnesium chloride	7786-30-3	0.03729%	0.00459%	
			Sodium sulfate	7757-82-6	0.03440%	0.00424%	
			Diammonium peroxidisulphate	7727-54-0	0.01875%	0.00231%	
			Polymer of 2-acrylamido-2-methylpropanesulfonic acid sodium salt and methyl acrylate	136793-29-8	0.00902%	0.00111%	
			Urea	57-13-6	0.00554%	0.00068%	
			Calcium chloride	10043-52-4	0.00522%	0.00064%	
			Polypropylene glycol	25322-69-4	0.00464%	0.00057%	
			Trisodium ortho phosphate	7601-54-9	0.00321%	0.00040%	
			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00287%	0.00035%	
			Sodium erythorbate	6381-77-7	0.00254%	0.00031%	
			Methanol	67-56-1	0.00201%	0.00025%	
			Non-crystalline silica	7631-86-9	0.00197%	0.00024%	
			Fatty acids, tall-oil	61790-12-3	0.00148%	0.00018%	
			Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	0.00122%	0.00015%	
			Potassium chloride	7447-40-7	0.00099%	0.00012%	
			Ethane-1,2-diol	107-21-1	0.00091%	0.00011%	
			Sodium carbonate	497-19-8	0.00060%	0.00007%	
			Propan-2-ol	67-63-0	0.00057%	0.00007%	
			Alcohols, C14-15, ethoxylated (7EO)	68951-67-7	0.00057%	0.00007%	
			Prop-2-yn-1-ol	107-19-7	0.00038%	0.00005%	
			Alkenes, C>10 a-	64743-02-8	0.00025%	0.00003%	
			Tetrasodium ethylenediaminetetraacetate	64-02-8	0.00017%	0.00002%	
			Potassium hydroxide	1310-58-3	0.00013%	0.00002%	
			Dimethyl siloxanes and silicones	63148-62-9	0.00008%	0.00001%	
			Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	0.00001%	< 0.00001%	
			Octamethylcyclotetrasiloxane	556-67-2	0.00001%	< 0.00001%	
			Sodium hydroxide	1310-73-2	0.00001%	< 0.00001%	
			Decamethyl cyclopentasiloxane	541-02-6	0.00001%	< 0.00001%	
			Dodecamethylcyclohexasiloxane	540-97-6	< 0.00001%	< 0.00001%	

† Proprietary Technology

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Report ID: RPT-16781 (Generated on 7/18/2013 3:24 PM)

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and

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Job Number: 23D0113031	**State/Country: West Virginia**
Company: Stone Energy	**Declination: -8.45**
Lease/Well: Bowyers 4H	**Grid: North**
Location: New Martinsville	**File name: D:\WINSERVE\STONEJ~1\BOW4H.SVY**
Rig Name: Saxon 141	**Date/Time: 11-Feb-13 / 16:24**
RKB: 18	**Curve Name: Bowyers 4H As Drilled**
G.L. or M.S.L.: 1156	

Scientific Drilling

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 171.27
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18.00	.00	.00	18.00	.00	.00	.00	.00	.00	.00
103.00	.77	194.79	103.00	-.55	-.15	.52	.57	194.79	.91
203.00	.31	190.39	202.99	-1.47	-.37	1.40	1.51	194.00	.46
303.00	.26	215.54	302.99	-1.92	-.55	1.81	2.00	195.91	.13
403.00	.19	235.67	402.99	-2.20	-.82	2.05	2.34	200.37	.10
503.00	.19	235.86	502.99	-2.38	-1.09	2.19	2.62	204.57	.00
603.00	.13	228.62	602.99	-2.55	-1.31	2.32	2.87	207.22	.06
703.00	.20	220.41	702.99	-2.76	-1.51	2.50	3.15	208.69	.07
803.00	.12	255.04	802.99	-2.92	-1.72	2.62	3.39	210.57	.12
903.00	.12	261.41	902.99	-2.96	-1.93	2.63	3.53	213.08	.01
1003.00	.24	357.04	1002.99	-2.77	-2.04	2.43	3.44	216.44	.28
1103.00	.10	283.13	1102.99	-2.54	-2.14	2.19	3.32	220.12	.23
1203.00	.17	330.48	1202.99	-2.39	-2.30	2.01	3.32	223.87	.13
1303.00	.23	333.58	1302.99	-2.08	-2.46	1.68	3.22	229.76	.06
1403.00	.35	337.28	1402.99	-1.62	-2.67	1.20	3.12	238.72	.12
1503.00	.39	345.55	1502.98	-1.01	-2.87	.56	3.04	250.63	.07
1603.00	.47	349.39	1602.98	-.28	-3.03	-.19	3.04	264.79	.08
1703.00	.45	342.77	1702.98	.50	-3.22	-.99	3.26	278.86	.06
1803.00	.45	339.63	1802.97	1.25	-3.48	-1.76	3.69	289.71	.02
1903.00	.51	2.42	1902.97	2.06	-3.59	-2.58	4.14	299.80	.20
2003.00	.62	12.67	2002.97	3.03	-3.46	-3.52	4.60	311.25	.15
2103.00	.56	26.68	2102.96	4.00	-3.12	-4.42	5.07	322.03	.16
2203.00	.59	35.30	2202.96	4.85	-2.60	-5.19	5.51	331.81	.09
2303.00	.55	50.03	2302.95	5.58	-1.94	-5.81	5.91	340.87	.15
2403.00	.38	165.98	2402.95	5.57	-1.49	-5.73	5.76	345.04	.79
2503.00	.84	187.11	2502.94	4.52	-1.50	-4.69	4.76	341.66	.50
2603.00	1.96	204.24	2602.91	2.23	-2.29	-2.55	3.20	314.25	1.18
2703.00	3.43	208.17	2702.80	-1.97	-4.41	1.27	4.82	245.95	1.48
2803.00	5.26	213.90	2802.51	-8.41	-8.37	7.04	11.87	224.89	1.88

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
2903.00	6.44	216.19	2901.99	-16.74	-14.24	14.38	21.98	220.39	1.20
3003.00	7.43	216.17	3001.25	-26.48	-21.37	22.93	34.03	218.90	.99
3103.00	7.80	216.78	3100.37	-37.14	-29.25	32.27	47.27	218.22	.38
3203.00	8.40	216.40	3199.37	-48.45	-37.65	42.18	61.36	217.85	.60
3303.00	9.26	217.36	3298.19	-60.73	-46.86	52.91	76.71	217.66	.87
3403.00	9.38	216.19	3396.87	-73.70	-56.56	64.26	92.90	217.50	.22
3503.00	9.04	220.04	3495.58	-86.29	-66.42	75.21	108.90	217.59	.70
3603.00	8.91	217.17	3594.35	-98.48	-76.16	85.78	124.49	217.72	.47
3703.00	8.12	213.63	3693.25	-110.53	-84.75	96.39	139.28	217.48	.95
3803.00	7.93	214.63	3792.27	-122.09	-92.58	106.62	153.22	217.17	.24
3903.00	7.77	213.98	3891.34	-133.37	-100.28	116.60	166.86	216.94	.18
4003.00	7.47	209.56	3990.45	-144.63	-107.26	126.67	180.06	216.56	.66
4103.00	5.97	216.75	4089.77	-154.45	-113.58	135.42	191.72	216.33	1.72
4203.00	4.56	225.54	4189.34	-161.40	-119.53	141.39	200.84	216.52	1.62
4303.00	4.12	222.76	4289.06	-166.82	-124.81	145.95	208.34	216.80	.49
4403.00	2.17	213.55	4388.90	-171.04	-128.29	149.58	213.80	216.87	2.01
4503.00	1.62	206.29	4488.85	-173.88	-129.96	152.14	217.08	216.78	.60
4603.00	1.19	198.85	4588.82	-176.13	-130.92	154.22	219.46	216.62	.47
4703.00	.84	190.41	4688.80	-177.84	-131.39	155.83	221.11	216.46	.38
4803.00	.06	121.35	4788.80	-178.58	-131.48	156.56	221.76	216.36	.82
4903.00	.56	343.21	4888.79	-178.14	-131.58	156.11	221.47	216.45	.61
4963.75	.65	353.07	4949.54	-177.52	-131.70	155.47	221.04	216.57	.23
4997.00	.29	327.37	4982.79	-177.26	-131.77	155.21	220.87	216.63	1.23
5060.00	.33	332.34	5045.79	-176.96	-131.94	154.89	220.74	216.71	.08
5124.00	.42	312.46	5109.79	-176.64	-132.20	154.53	220.64	216.81	.25
5155.00	.42	324.45	5140.79	-176.47	-132.35	154.34	220.59	216.87	.28
5187.00	.50	315.98	5172.79	-176.28	-132.52	154.12	220.53	216.93	.33
5218.00	.94	188.00	5203.78	-176.43	-132.65	154.26	220.73	216.94	4.22
5250.00	3.32	182.93	5235.76	-177.62	-132.73	155.41	221.73	216.77	7.45
5281.00	5.28	185.81	5266.67	-179.93	-132.92	157.67	223.70	216.45	6.36
5313.00	7.02	185.13	5298.49	-183.35	-133.24	161.00	226.65	216.01	5.44
5344.00	8.53	186.12	5329.20	-187.52	-133.66	165.06	230.28	215.48	4.89
5376.00	9.72	187.99	5360.79	-192.55	-134.29	169.94	234.76	214.89	3.83
5408.00	10.79	189.24	5392.28	-198.19	-135.14	175.38	239.88	214.29	3.42
5440.00	11.88	189.28	5423.66	-204.39	-136.16	181.36	245.59	213.67	3.41
5471.00	12.52	190.71	5453.96	-210.84	-137.29	187.56	251.61	213.07	2.28
5502.00	13.83	194.90	5484.14	-217.73	-138.87	194.13	258.24	212.53	5.23
5534.00	15.21	200.16	5515.12	-225.36	-141.30	201.31	266.00	212.09	5.96
5565.00	16.68	207.35	5544.93	-233.13	-144.75	208.46	274.42	211.84	7.93
5597.00	17.30	210.22	5575.53	-241.32	-149.25	215.88	283.75	211.74	3.26
5629.00	16.84	210.98	5606.12	-249.41	-154.03	223.14	293.14	211.70	1.60
5660.00	17.03	212.25	5635.78	-257.10	-158.77	230.02	302.17	211.70	1.34
5692.00	18.76	212.65	5666.23	-265.40	-164.04	237.42	312.00	211.72	5.42
5724.00	20.89	213.91	5696.33	-274.46	-170.00	245.48	322.85	211.77	6.79
5755.00	22.20	215.25	5725.17	-283.83	-176.47	253.76	334.22	211.87	4.51
5787.00	23.05	216.17	5754.70	-293.83	-183.65	262.55	346.50	212.01	2.88
5819.00	24.95	216.43	5783.94	-304.32	-191.36	271.75	359.48	212.16	5.95
5851.00	26.77	216.34	5812.73	-315.55	-199.64	281.60	373.40	212.32	5.69
5883.00	28.73	215.48	5841.05	-327.62	-208.37	292.20	388.27	212.46	6.25
5914.00	30.56	213.60	5867.99	-340.25	-217.06	303.37	403.60	212.54	6.62

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
5946.00	32.75	213.04	5895.23	-354.29	-226.28	315.84	420.39	212.57	6.91
5977.00	33.84	213.08	5921.14	-368.55	-235.57	328.53	437.40	212.59	3.52
6009.00	34.96	213.36	5947.54	-383.67	-245.47	341.97	455.48	212.61	3.53
6041.00	36.27	213.91	5973.56	-399.19	-255.79	355.74	474.11	212.65	4.21
6072.00	39.41	214.53	5998.03	-414.91	-266.49	369.65	493.12	212.71	10.20
6104.00	42.26	214.54	6022.24	-432.14	-278.35	384.89	514.03	212.79	8.91
6136.00	43.32	214.54	6045.73	-450.05	-290.68	400.72	535.76	212.86	3.31
6167.00	43.21	214.23	6068.30	-467.58	-302.68	416.23	557.00	212.92	.77
6199.00	43.80	212.76	6091.51	-485.95	-314.83	432.54	579.03	212.94	3.66
6230.00	45.62	208.75	6113.54	-504.69	-325.97	449.37	600.81	212.86	10.83
6261.00	47.40	205.35	6134.88	-524.72	-336.18	467.62	623.18	212.65	9.81
6293.00	48.41	202.24	6156.34	-546.45	-345.76	487.64	646.65	212.32	7.87
6324.00	49.44	200.74	6176.71	-568.19	-354.32	507.83	669.61	211.95	4.93
6356.00	50.76	199.19	6197.23	-591.26	-362.69	529.36	693.64	211.53	5.55
6388.00	52.40	196.32	6217.12	-615.14	-370.33	551.80	718.01	211.05	8.70
6420.00	54.13	194.89	6236.26	-639.84	-377.23	575.17	742.76	210.52	6.48
6452.00	56.57	192.42	6254.45	-665.41	-383.43	599.51	767.98	209.95	9.92
6484.00	59.07	190.26	6271.50	-691.97	-388.75	624.94	793.69	209.33	9.68
6515.00	61.23	188.56	6286.93	-718.49	-393.14	650.49	819.01	208.69	8.44
6547.00	62.88	186.30	6301.92	-746.52	-396.79	677.64	845.42	207.99	8.09
6579.00	64.70	184.29	6316.06	-775.10	-399.44	705.50	871.97	207.26	8.01
6611.00	66.50	181.70	6329.28	-804.20	-400.95	734.03	898.61	206.50	9.27
6642.00	69.75	180.05	6340.83	-832.96	-401.39	762.39	924.63	205.73	11.59
6674.00	72.30	179.03	6351.23	-863.22	-401.14	792.33	951.87	204.92	8.52
6706.00	73.71	178.08	6360.58	-893.81	-400.37	822.68	979.38	204.13	5.24
6738.00	74.99	176.84	6369.22	-924.59	-399.00	853.32	1007.01	203.34	5.47
6769.00	77.14	176.11	6376.68	-954.62	-397.15	883.28	1033.94	202.59	7.30
6801.00	80.93	175.23	6382.77	-985.94	-394.78	914.60	1062.04	201.82	12.15
6832.00	85.26	174.30	6386.49	-1016.58	-391.97	945.31	1089.53	201.09	14.28
6864.00	88.35	173.23	6388.28	-1048.33	-388.50	977.22	1118.01	200.33	10.22
6896.00	89.40	173.03	6388.90	-1080.10	-384.67	1009.20	1146.55	199.60	3.34
6959.00	90.10	173.71	6389.18	-1142.67	-377.40	1072.16	1203.39	198.28	1.55
7020.00	90.07	172.00	6389.09	-1203.20	-369.81	1133.13	1258.75	197.09	2.80
7082.00	89.60	170.21	6389.27	-1264.45	-360.23	1195.13	1314.76	195.90	2.98
7142.00	89.40	168.09	6389.79	-1323.37	-348.93	1255.08	1368.60	194.77	3.55
Check Bottom Line									
7203.00	89.09	165.82	6390.60	-1382.79	-335.17	1315.90	1422.83	193.62	3.76
7264.00	89.93	166.47	6391.12	-1442.01	-320.56	1376.65	1477.21	192.53	1.74
7325.00	89.83	165.00	6391.24	-1501.13	-305.53	1437.36	1531.91	191.50	2.42
7386.00	89.53	164.43	6391.59	-1559.97	-289.45	1497.96	1586.60	190.51	1.06
7447.00	90.03	164.37	6391.82	-1618.72	-273.05	1558.53	1641.59	189.57	.83
7509.00	90.74	164.22	6391.40	-1678.41	-256.26	1620.06	1697.86	188.68	1.17
7570.00	90.87	164.85	6390.55	-1737.19	-240.00	1680.64	1753.69	187.87	1.05
7630.00	90.47	164.86	6389.84	-1795.10	-224.33	1740.26	1809.06	187.12	.67
7691.00	90.40	164.87	6389.38	-1853.99	-208.40	1800.88	1865.66	186.41	.12
7752.00	89.60	164.85	6389.38	-1912.87	-192.47	1861.49	1922.53	185.75	1.31
7815.00	89.90	165.02	6389.66	-1973.70	-176.09	1924.11	1981.54	185.10	.55
7879.00	89.77	165.41	6389.84	-2035.58	-159.76	1987.75	2041.84	184.49	.64
7942.00	90.10	164.81	6389.91	-2096.47	-143.57	2050.39	2101.38	183.92	1.09
8006.00	90.87	164.68	6389.37	-2158.21	-126.73	2113.97	2161.93	183.36	1.22

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
8069.00	90.97	164.89	6388.36	-2218.99	-110.20	2176.56	2221.73	182.84	.37
8133.00	90.64	164.64	6387.46	-2280.74	-93.39	2240.14	2282.65	182.34	.65
8197.00	90.13	165.61	6387.03	-2342.59	-76.96	2303.77	2343.85	181.88	1.71
8260.00	89.77	166.48	6387.08	-2403.73	-61.76	2366.51	2404.52	181.47	1.49
8323.00	89.16	165.75	6387.67	-2464.89	-46.65	2429.25	2465.33	181.08	1.51
8386.00	88.63	165.77	6388.89	-2525.94	-31.15	2491.95	2526.13	180.71	.84
8450.00	88.76	165.52	6390.35	-2587.92	-15.29	2555.62	2587.97	180.34	.44
8513.00	89.16	164.97	6391.49	-2648.84	.75	2618.26	2648.84	179.98	1.08
8577.00	89.90	164.56	6392.01	-2710.58	17.57	2681.85	2710.64	179.63	1.32
8640.00	89.90	163.90	6392.12	-2771.21	34.69	2744.37	2771.43	179.28	1.05
8704.00	88.82	164.53	6392.84	-2832.79	52.10	2807.88	2833.27	178.95	1.95
8768.00	88.69	164.87	6394.23	-2894.51	68.98	2871.45	2895.33	178.63	.57
8831.00	88.42	166.52	6395.82	-2955.54	84.54	2934.13	2956.74	178.36	2.65
8895.00	88.35	167.29	6397.62	-3017.85	99.04	2997.91	3019.47	178.12	1.21
8959.00	88.89	167.94	6399.16	-3080.34	112.76	3061.77	3082.40	177.90	1.32
9023.00	89.09	167.00	6400.29	-3142.80	126.64	3125.61	3145.35	177.69	1.50
Bottom line Check									
9085.00	88.76	166.67	6401.45	-3203.16	140.76	3187.42	3206.25	177.48	.75
9149.00	88.22	166.53	6403.14	-3265.40	155.59	3251.18	3269.10	177.27	.87
9212.00	88.93	166.73	6404.71	-3326.67	170.15	3313.96	3331.02	177.07	1.17
9276.00	89.83	167.26	6405.40	-3389.03	184.55	3377.77	3394.05	176.88	1.63
9340.00	89.77	167.69	6405.62	-3451.50	198.43	3441.63	3457.20	176.71	.68
9404.00	89.73	166.87	6405.90	-3513.93	212.52	3505.48	3520.35	176.54	1.28
9467.00	90.03	167.43	6406.03	-3575.35	226.54	3568.31	3582.52	176.37	1.01
9531.00	89.43	167.72	6406.34	-3637.85	240.31	3632.18	3645.78	176.22	1.04
9595.00	89.43	167.20	6406.97	-3700.32	254.20	3696.03	3709.04	176.07	.81
9658.00	89.06	167.08	6407.80	-3761.74	268.22	3758.87	3771.29	175.92	.62
9722.00	89.46	166.62	6408.63	-3824.05	282.78	3822.67	3834.49	175.77	.95
9786.00	88.93	166.33	6409.53	-3886.27	297.75	3886.44	3897.66	175.62	.94
9850.00	88.46	166.89	6410.99	-3948.52	312.56	3950.21	3960.87	175.47	1.14
9914.00	88.83	166.39	6412.50	-4010.77	327.35	4013.98	4024.10	175.33	.97
9977.00	89.53	166.22	6413.40	-4071.97	342.26	4076.74	4086.33	175.20	1.14
10041.00	90.07	166.73	6413.62	-4134.19	357.23	4140.52	4149.60	175.06	1.16
10104.00	90.34	166.90	6413.40	-4195.53	371.60	4203.32	4211.95	174.94	.51
10168.00	90.37	166.90	6413.00	-4257.86	386.10	4267.14	4275.33	174.82	.05
10232.00	90.20	167.14	6412.68	-4320.23	400.48	4330.96	4338.75	174.70	.46
10295.00	90.17	167.81	6412.48	-4381.73	414.14	4393.82	4401.26	174.60	1.06
10359.00	89.46	167.29	6412.69	-4444.22	427.94	4457.69	4464.78	174.50	1.38
10423.00	89.19	166.52	6413.44	-4506.55	442.44	4521.49	4528.22	174.39	1.27
10487.00	88.72	165.69	6414.61	-4568.67	457.80	4585.22	4591.55	174.28	1.49
10550.00	89.40	165.94	6415.64	-4629.74	473.24	4647.93	4653.86	174.16	1.15
10614.00	89.23	165.21	6416.41	-4691.72	489.18	4711.61	4717.15	174.05	1.17
10677.00	89.03	165.51	6417.36	-4752.66	505.10	4774.27	4779.43	173.93	.57
10741.00	89.19	166.04	6418.36	-4814.69	520.83	4837.96	4842.78	173.83	.86
10804.00	89.03	166.63	6419.34	-4875.90	535.71	4900.72	4905.24	173.73	.97
10868.00	89.73	167.54	6420.03	-4938.28	550.01	4964.55	4968.81	173.64	1.79
10931.00	90.03	167.94	6420.16	-4999.84	563.39	5027.43	5031.48	173.57	.79
10995.00	89.60	168.01	6420.37	-5062.44	576.73	5091.32	5095.18	173.50	.68
11058.00	89.70	168.00	6420.75	-5124.06	589.82	5154.22	5157.90	173.43	.16
11122.00	88.99	167.81	6421.48	-5186.64	603.23	5218.10	5221.60	173.37	1.15

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
11186.00	89.09	167.75	6422.56	-5249.18	616.77	5281.98	5285.29	173.30	.18
11249.00	88.73	167.70	6423.76	-5310.73	630.16	5344.84	5347.98	173.23	.58
11313.00	89.70	167.90	6424.63	-5373.27	643.69	5408.72	5411.69	173.17	1.55
11376.00	89.73	168.27	6424.95	-5434.91	656.69	5471.62	5474.44	173.11	.59
11440.00	89.23	168.38	6425.53	-5497.59	669.64	5535.53	5538.22	173.06	.80
11504.00	90.10	168.31	6425.90	-5560.27	682.57	5599.45	5602.01	173.00	1.36
11568.00	89.43	168.57	6426.16	-5622.97	695.40	5663.37	5665.80	172.95	1.12
11631.00	90.00	168.76	6426.48	-5684.74	707.78	5726.30	5728.63	172.90	.95
11695.00	88.76	168.59	6427.17	-5747.49	720.35	5790.23	5792.45	172.86	1.96
11759.00	89.63	169.23	6428.07	-5810.28	732.66	5854.17	5856.30	172.81	1.69
11822.00	90.44	170.39	6428.03	-5872.29	743.80	5917.15	5919.21	172.78	2.25
11886.00	90.20	171.25	6427.67	-5935.47	754.01	5981.15	5983.17	172.76	1.40
11949.00	89.46	172.49	6427.86	-5997.83	762.92	6044.14	6046.16	172.75	2.29
12013.00	90.17	173.40	6428.07	-6061.35	770.78	6108.11	6110.16	172.75	1.80
12076.00	88.69	172.37	6428.69	-6123.86	778.58	6171.08	6173.15	172.75	2.86
12140.00	87.92	171.29	6430.59	-6187.18	787.67	6235.05	6237.11	172.74	2.07
12204.00	88.46	170.90	6432.61	-6250.37	797.58	6299.02	6301.06	172.73	1.04
12267.00	89.33	171.41	6433.82	-6312.61	807.26	6362.00	6364.02	172.71	1.60
Proj to Bit									
12325.00	89.33	171.41	6434.50	-6369.96	815.92	6420.00	6422.00	172.70	.00

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