

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

RECEIVED

FEB 12 2015

WV Department of
Environmental Protection

API 47 - 103 - 02860 County Wetzel District Green
Quad Porters Falls Pad Name Howell Field/Pool Name Mary
Farm name Howell, Charles and Ruth Well Number #6H
Operator (as registered with the OOG) Stone Energy Corporation
Address 1300 Fort Pierpont Dr. - Suite 201 City Morgantown State WV Zip 26508

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,382,914 Easting 517,669
Landing Point of Curve Northing 4,382,610 Easting 517,859
Bottom Hole Northing 4,381,085 Easting 518,900

Elevation (ft) 1,302 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)
Saturated salt mud which includes Caustic Soda, Barite, Lime, New-Drill, Perma-Lose HT, Xan-Plex D, X-Cide 102, Soda Ash, and Sodium Chloride

Date permit issued 2/27/2013 Date drilling commenced 4/5/2013 Date drilling ceased 10/28/2013
Date completion activities began 2/1/2014 Date completion activities ceased 8/4/2014
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 90 Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N
Coal depth(s) ft 955 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
AL 5/27/15
JK
W.S. 4/10/15
06/12/2015

API 47-103 - 02860

Farm name Howell, Charles and Ruth

Well number #6H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	86'	New	LS		Y - GTS
Surface	17.5"	13.375"	1,301' KB 1,286' GL	New	J55	117' & 195'	Y - CTS
Coal	17.5"	13.375"	1,301' KB 1,286' GL	New	J55	117' & 195'	Y - CTS
Intermediate 1	12.25"	9.625"	2,435'	New	J55		Y - CTS
Intermediate 2							
Intermediate 3							
Production	8.75"	5.5"	13,548'	New	P110		N - TOC @ 520'
Tubing	N/A	2.375"	7,303'	New	N80		N/A
Packer type and depth set							

Comment Details Circulated 35 bbls cement to surface on the 13-3/8". Circulated 47 bbls cement to surface on the 9.625". Cement top on the 5.5" production casing is at 520'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24.0
Surface	Class "A"	1,010	15.6	1.19	1,202	Surface	8.0
Coal	Class "A"	1,010	15.6	1.19	1,202	Surface	8.0
Intermediate 1	Lead-FlexSeal Tail-Class "A"	Lead-430 Tail-420	Lead-15.0 Tail-15.6	Lead-1.26 Tail-1.19	Lead-542 Tail-500	Surface	12.0
Intermediate 2							
Intermediate 3							
Production	Lead-GasStop Tail-Class "A"	Lead-910 Tail-1,850	Lead-15.0 Tail-15.6	Lead-1.26 Tail-1.2	Lead-1,147 Tail-2,220	520'	8.0
Tubing							

Drillers TD (ft) 13,545 MD / 6,991 TVD

Loggers TD (ft) N/A

Deepest formation penetrated Marcellus Shale

Plug back to (ft) _____

Plug back procedure _____

Kick off depth (ft) 6,111 MD / 6,088 TVD

Check all wireline logs run
 caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface/Coal casing had bow spring centralizers placed on joints #'s 2, 5, 8, 11, 14, 17, 20, 23, 26, 29 and 32. Intermediate casing had bow spring centralizers placed on joints #'s 1, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51 and 54. One straight blade rigid centralizer was placed on joint #57. Production casing had left/right rigid spiral centralizers were placed beginning on joint #1 and then every fourth joint up to the top of curve at joint #240. From there bow spring centralizers were placed beginning on joint #248 and then every eight joint up to joint #311. A total of 61 rigid left/right centralizers were used and 9 bow spring centralizers were used. The joint numbers begin at TD of each individual casing string and increase as you increase as you come up the hole.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS RECEIVED
Office of Oil and Gas

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS FEB 12 2015

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED WV Department of
Environment and Protection

06/12/2015

API 47- 103 - 02860 Farm name Howell, Charles and Ruth Well number #6H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	2/14/14	13,247	13,444	72	Marcellus Shale
2	3/27/14	12,981	13,170	72	Marcellus Shale
3	3/28/14	12,721	12,914	72	Marcellus Shale
4	3/29/14	12,462	12,653	72	Marcellus Shale
5	3/30/14	12,197	12,389	72	Marcellus Shale
6	3/31/14	11,942	12,127	72	Marcellus Shale
7	4/1/14	11,685	11,872	72	Marcellus Shale
8	4/2/14	11,426	11,618	72	Marcellus Shale
9	4/4/14	11,148	11,343	72	Marcellus Shale
10	4/6/14	10,880	11,078	72	Marcellus Shale
11	4/7/14	10,621	10,813	72	Marcellus Shale
12	4/9/14	10,359	10,553	72	Marcellus Shale
13	4/11/14	10,108	10,293	72	Marcellus Shale
14	4/12/14	9,842	10,029	72	Marcellus Shale
15	4/13/14	9,561	9,763	72	Marcellus Shale
16	4/14/14	9,301	9,493	72	Marcellus Shale

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	3/27/14	85.4	7,713	6,550	4,831	359,221	348,095	
2	3/28/14	85.3	7,548	6,054	5,090	403,836	353,056	
3	3/29/14	85.1	7,558	6,122	4,688	406,759	349,407	
4	3/30/14	85.0	7,425	5,384	4,976	405,795	367,944	
5	3/31/14	85.1	7,442	5,623	4,989	411,030	352,511	
6	4/1/14	85.7	7,296	5,846	4,690	415,334	351,400	
7	4/2/14	84.7	7,132	5,149	4,115	408,080	356,563	
8	4/4/14	85.3	7,487	5,932	5,091	407,740	350,304	
9	4/6/14	80.6	6,975	5,790	4,517	406,760	350,695	
10	4/7/14	80.1	7,060	6,068	4,776	411,300	352,498	
11	4/9/14	80.0	6,912	5,990	4,718	411,060	351,914	
12	4/11/14	80.6	6,756	5,803	3,971	406,126	345,277	
13	4/12/14	80.4	6,899	6,203	4,142	409,682	346,545	
14	4/13/14	80.6	6,205	5,877	5,233	405,377	343,174	
15	4/14/14	80.2	6,407	6,100	4,574	414,099	345,790	
16	4/17/14	80.3	6,650	5,976	5,061	409,737	350,820	

Please insert additional pages as applicable.

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Well number #6H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	4/17/14	9,040	9,233	72	Marcellus Shale
18	4/18/14	8,788	8,971	72	Marcellus Shale
19	4/19/14	8,521	8,713	72	Marcellus Shale
20	4/23/14	8,264	8,453	72	Marcellus Shale
21	4/24/14	8,001	8,193	72	Marcellus Shale
22	4/25/14	7,742	7,933	72	Marcellus Shale
23	4/26/14	7,537	7,673	72	Marcellus Shale
24	4/28/14	7,350	7,478	72	Marcellus Shale

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbbls)	Amount of Nitrogen/other (units)
17	4/18/14	80.4	6,675	6,010	5,005	415,859	351,854	
18	4/19/14	80.5	6,334	6,133	5,112	371,120	333,158	
19	4/23/14	80.4	6,498	6,102	5,090	404,420	345,243	
20	4/24/14	79.2	6,343	5,931	4,463	407,640	344,030	
21	4/25/14	79.2	6,354	6,242	4,604	413,000	347,098	
22	4/26/14	80.3	6,716	6,225	5,259	407,420	343,000	
23	4/28/14	80.0	6,412	6,625	5,320	370,423	320,717	
24	4/29/14	80.1	6,425	6,251	5,700	370,180	320,805	

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PRODUCING FORMATION(S)	DEPTHS	
Marcellus Shale	7,007' to 6,991' TVD	7,350' to 13,444' MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,160 psi Bottom Hole 4,446 calculated psi DURATION OF TEST 96 hrs

OPEN FLOW Gas 4,248 mcfpd Oil _____ bpd NGL 326 bpd Water 480 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
See Attached Sheet	Page 6 of 16				

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Please insert additional pages as applicable.

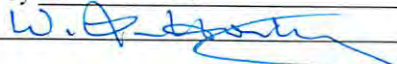
Drilling Contractor Nomac Drilling (top-hole) & Saxon Drilling (horizontal)
Address 171 Locust Ave. Ext. / 9303 New Trails Drive City Mount Morris / The Woodlands State PA / TX Zip 15349 / 77381

Logging Company Scientific Drilling and Schlumberger
Address 116 Vista Dr. / 1178 US HWY 33 East City Charleroi / Weston State PA / WV Zip 15022 / 26452

Cementing Company Schlumberger / Halliburton
Address 1178 US HWY 33 East City Weston / Jane Lew State WV Zip 26452

Stimulating Company Schlumberger
Address 1178 US HWY 33 East City Weston State WV Zip 26452

Please insert additional pages as applicable.

Completed by W. Lee Hornsby Telephone 304-225-1600
Signature  Title Drilling Engineer Date 2/3/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

06/12/2015

HOWELL #6H
API 47-103-02860
Stone Energy Corporation

	Horizontal			Bottom (ft TVD)	Bottom (ft MD)
	Top (ft TVD)	Top (ft MD)			
Sandstone & Shale	Surface		*	955	FW @ 90
Coal	955		*	959	
Sandstone & Shale	959		*	2,146	No SW Reported
Little Lime	2,146		*	2,200	
Big Lime	2,200		*	2,253	
Big Injun	2,253		*	2,296	
Sandstone & Shale	2,296		*	2,851	
Berea Sandstone	2,851		*	2,881	
Shale	2,881		*	3,045	
Gordon	3,045		*	3,095	
Undiff Devonian Shale	3,095		*	6,193	6,217
Rhinestreet	6,193	6,217	~	6,618	6,656
Cashaqua	6,618	6,656	~	6,808	6,896
Middlesex	6,808	6,896	~	6,831	6,933
West River	6,831	6,933	~	6,891	7,033
Geneseo	6,891	7,033	~	7,000	7,071
Tully Limestone	7,000	7,071	~	6,941	7,139
Hamilton Shale	6,941	7,139	~	6,988	7,274
Marcellus	6,988	7,274	~	6,991	13,545
TD				6,991	13,545

* From Pilot Hole Log and Driller's Log

~ From MWD Gamma Log

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	4/29/2014
State:	West Virginia
County/Parish:	Wetzel County
API Number:	
Operator Name:	Stone Energy
Well Name and Number:	Howell 6H
Longitude:	
Latitude:	
Long/Lat Projection:	
Production Type:	
True Vertical Depth (TVD):	0
Total Water Volume (gal)*:	8321899

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
H015, Slickwater, WF115	Schlumberger	Corrosion Inhibitor, Bactericide (Myacide GA25), Friction Reducer, Scale Inhibitor, AntiFoam Agent, Surfactant, Acid Breaker, Gelling Agent, Iron Control Agent, Clay Control Agent, Propping Agent, Fluid Loss Additive	Water (Including Mix Water Supplied by Client)*	NA		87.64022%	
			Crystalline silica	14808-60-7	98.55040%	12.18061%	
			Hydrochloric acid	7647-01-0	0.83972%	0.10379%	
			Carbohydrate polymer	Proprietary	0.46888%	0.05795%	
			Ammonium sulfate	Proprietary	0.10869%	0.01343%	
			Glutaraldehyde	111-30-8	0.05068%	0.00626%	
			Distillates (petroleum), hydrotreated light	64742-47-8	0.03345%	0.00413%	
			Diammonium peroxodisulfate	7727-54-0	0.02195%	0.00271%	
			Urea	57-13-6	0.01626%	0.00201%	
			Calcium chloride	10043-52-4	0.01165%	0.00144%	
			Ammonium chloride	12125-02-9	0.01087%	0.00134%	
			Ethane-1,2-diol	107-21-1	0.00386%	0.00048%	
			Trisodium orthophosphate	7601-54-9	0.00386%	0.00048%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.00382%	0.00047%	
			Methanol	67-56-1	0.00317%	0.00039%	
			Sodium erythorbate	6381-77-7	0.00296%	0.00037%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00238%	0.00029%	
			Aliphatic acids	Proprietary	0.00238%	0.00029%	
			Prop-2-yn-1-ol	107-19-7	0.00079%	0.00010%	
			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00029%	0.00004%	
			Polypropylene glycol	25322-69-4	0.00015%	0.00002%	

* 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-27085 (Generated on 5/13/2014 3:46 PM)

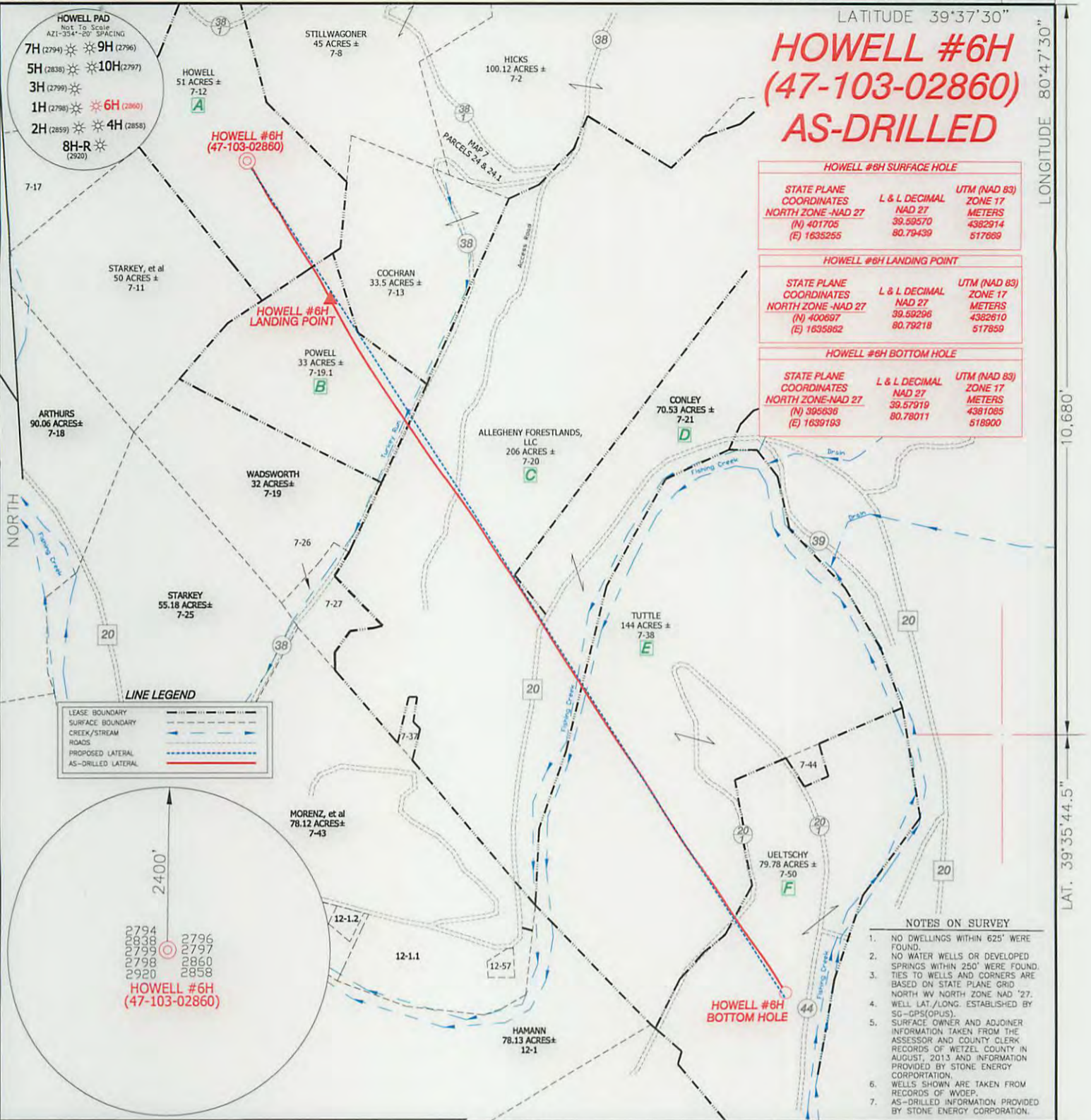
All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational 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 Appendix D.

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HOWELL #6H (47-103-02860) AS-DRILLED

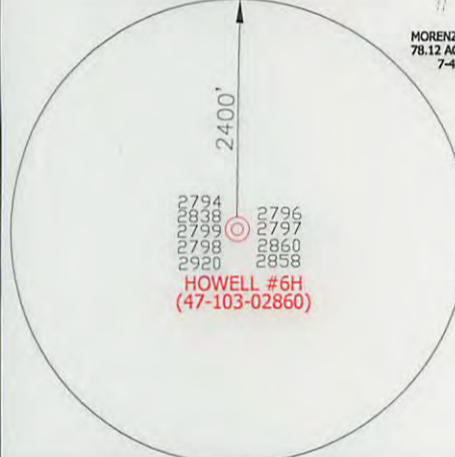
HOWELL #6H SURFACE HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
NORTH ZONE -NAD 27	NAD 27	ZONE 17
(N) 401705	39.59570	4382914
(E) 1635255	80.79439	517689

HOWELL #6H LANDING POINT		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
NORTH ZONE -NAD 27	NAD 27	ZONE 17
(N) 400697	39.59296	4382610
(E) 1635862	80.79218	517859

HOWELL #6H BOTTOM HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83)
NORTH ZONE -NAD 27	NAD 27	ZONE 17
(N) 395636	39.57919	4381065
(E) 1639193	80.78011	518900

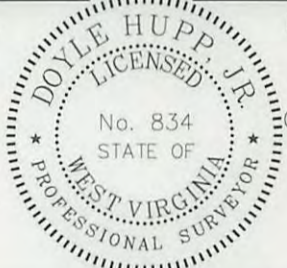
LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	---
CREEK/STREAM	---
ROADS	---
PROPOSED LATERAL	---
AS-DRILLED LATERAL	---



- NOTES ON SURVEY**
- NO DWELLINGS WITHIN 625' WERE FOUND.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
 - TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE NORTH WV NORTH ZONE NAD '27.
 - WELL LAT./LONG. ESTABLISHED BY SG-GPS(OPUS).
 - SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF WETZEL COUNTY IN AUGUST, 2013 AND INFORMATION PROVIDED BY STONE ENERGY CORPORATION.
 - WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP.
 - AS-DRILLED INFORMATION PROVIDED BY STONE ENERGY CORPORATION.

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE OCTOBER 15, 2014
 OPERATORS WELL NO. HOWELL #6H
 API WELL NO. 47-103-02860
 STATE COUNTY PERMIT

P.S. 834

HUPP Surveying & Mapping
 P.O. Box 647 Grantsville, WV 26147
 (304) 354-7035 EMAIL: hupp@frontiernet.net

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2208 (BK 64-54)
 PROVEN SOURCE OF ELEVATION SG-GPS(OPUS) SCALE 1" = 1000'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

WELL TYPE : OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION : ELEVATION 1304' WATERSHED FISHING CREEK
 DISTRICT GREEN COUNTY WETZEL QUADRANGLE PORTERS FALLS 7.5'
 SURFACE OWNER CHARLES & RUTH HOWELL ACREAGE 51±
 ROYALTY OWNER CHARLES & RUTH HOWELL, et al LEASE ACREAGE 584.31± **06/12/2015**
 PROPOSED WORK : LEASE NO. _____
 DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TVD 6,991' MD 13,545'

WELL OPERATOR STONE ENERGY CORPORATION DESIGNATED AGENT TIM MCGREGOR
 ADDRESS P.O. BOX 52807 LAFAYETTE, LA 70508 ADDRESS 1300 FORT PIERPONT DR., SUITE 201 MORGANTOWN, WV 26508