WV Department of Endronmental Protection

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

API <u>47</u> <u>039</u> <u>06359</u>	County Kanaw	<i>r</i> ha _I	District North	Charleston	
Quad Charleston East	Pad Name n/a		Field/Pool Nam		
Farm name Kanawha County Boar	d of Education		Well Number		 #1
Operator (as registered with the OOG)	Reserve Oil and	Gas, Inc.			
Address 929 Charleston Road	City St		_ State WV	Zip	25276
Landing Point of Curve N Bottom Hole N	Attach an as-dril Northing 499,258 (1246) Northing Northing	led plat, profile view, and 166)38.3676205 Easti Easti	ng <u>1,801,964 (64</u> ng	ey 149 256)-81.51	30 <i>88</i> 74
Elevation (ft) 701 GL	Type of Well	■New □ Existing	Type of Re	port Interim	a Final
Permit Type Deviated Ho	rizontal 🗆 Horizo	ental 6A	Depth Typ		■ Shallow
	eepen 🖪 Drill	□ Plug Back □ Redrill	ing □ Rewo	ork 🗂 Stimul	ate
Well Type □ Brine Disposal □ CBM	B Gas □ Oil □ Se	condary Recovery Sol	ution Mining	□ Storage □ (Other
Type of Completion □ Single □ Mult	iple Fluids Prod	uced □ Brine ■Gas		il 🗆 Other	
Drilled with □ Cable ■ Rotary		•		_	
Drilling Media Surface hole Air Production hole Air Mud Mud Type(s) and Additive(s) n/a	□ Mud □Fresh Water □ Brin		ele 🖪 Air 🗆 l	Mud B Fresh	Water □ Brine
Date permit issued06/26/2013	Date drilling com	menced 07/25/2013	Date drilli	ing ceased	08/5/2013
Date completion activities began	08/08/2013	Date completion activi			3ECEIVED
Verbal plugging (Y/N)n/a	ate permission grante	- 	Granted by		of Chiland Cas
Please note: Operator is required to sub	mit a plugging applic	ation within 5 days of ver	bal permission	to plug	10V 2 5 2613
Freshwater depth(s) ft	70	Open mine(s) (Y/N) dep	ths		erenda de la la Bodisi Foralio
	0, 1015	Void(s) encountered (Y/	N) depths	NC)
Coal depth(s) ft Non	е	Cavern(s) encountered (Y/N) denths =		
Is coal being mined in area (Y/N)	NO	Cavern(s) encountered (,	ffice of Oil	and Gas
				nr Revie	

									€.
WR-35 Rev. 8/23/13								Pag	e of
	06359	_	Kanaw	ha County	Board of Educ	ation well	L number Cap	ital High #1	
API 47- 039		Farm nai	ne			WC1	i namoci		
CASING STRINGS	Hole Size	Casing Size	Depth	New Use			Basket Depth(s)	Did cement cire * Provide deta	ails below*
Conductor	17 1/2	13 3/8	33.00	Ne	w 4	8.0	None		hand to surface
Surface	12 1/4	9 5/8	421.00	N€	ew 2	6.0	1 at 126'	yes, 5 t	obls to pit
Coal									
Intermediate 1	8 7/8	7	1646.00	Ne	ew 1	7.0	1 at 295'	yes, 5 t	obls to pit
Intermediate 2									
Intermediate 3									
Production	6 1/2	4 1/2	4351.65	Ne	ew 1	1.6	5 at joints: 10,20,30,40,50		
Tubing								<u></u>	
Packer type and de	pth set								
Comment Details									
	Class/There	Number	•	Slurry	Yield	Volume	: Ceme	ent	woc
CEMENT DATA	Class/Type of Cement	of Sack		vt (ppg)	(ft ³ /sks)	(ft. ²)	Top (N		(hrs)
Conductor	Portland	11					GL		10
Surface	Type 1	160		14.8	1.4	224	GL		7
Coal									
Intermediate 1	Class A	275		15.6	1.18	324.5	GL	·	16
Intermediate 2									
Intermediate 3									
Production	Tufflite	140		12.0	2.49	348.6	435	01	12
Tubing						L			
Drillers TD (f Deepest forma Plug back pro	ation penetrated	Devonian Shale	*	Plu	gers TD (ft) 43 g back to (ft) _				
Kick off depti	n (ft)					• • -	. tu du atam		
Check all win	eline logs run	■ caliper□ neutron	■ densi		deviated/direct gamma ray		induction temperature	E sonic	_
	□ Yes ■ No	□ Conventi		Sidewall			gs collected		
DESCRIBE 7		IZER PLACEM	ENT USE	D FOR EA	CH CASING S	STRING .			
9 5/8": no centralize									
7": 3 centralizers w 4 1/2": 6 centralizer	s used at joints 10, 20, 3	0, 40, 50, 60					·		
		AS SHOT HOL	E AYe	s 🗆 No	DETAILS				
WAS WELL	COMPLETED	OPEN HOLE?	□ Yes		DETAILS _				

WERE TRACERS USED □ Yes ■ No TYPE OF TRACER(S) USED _____

WR-	35
Rev.	8/23/13

Page	of
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API	47- 039	06359	Farm name Kanawha County Board of Education Well number Capital High #1	
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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	08/08/2013	<u>3656</u>	4304	40	Huron, Devonian Shale
2	08/08/2013	2970	3575	40	Shale, Huron
			l		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Date 08/08/13 08/08/13	Ave Pump Rate (BPM) n/a n/a	Ave Treatment Pressure (PSI) n/a	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units) N/a
	00/00/13	n/a	n/a	n/a	n/a	none	n/a	n/a
							OS	Andeveo
							177	MOV 9 5 2013

Please insert additional pages as applicable.

API 47- 039	-35 v. 8/23/13												,
Shale 2970 - 2991 TVD MD MD	47- 039 -	06359		Farm	name <u>K</u>	anawha C	ounty Boa	rd of	Education	Well nur	nber		
Please insert additional pages as applicable.	ODUCING F	ORMATIC	ON(S)		DEPTI	<u>HS</u>							
Devonian Shale 3838 - 4304	ale				2970 -	2991	TVD			MD			
Please insert additional pages as applicable. GAS TEST D Build up Drawdown Dopen Flow OIL TEST DOPEN DURATION OF TEST DOPEN FLOW Gas OIL 19 mefpd Dopen Dop					2991 -	3838							
Please insert additional pages as applicable. GAS TEST					3838 -	4304	_						
GAS TEST	Vollian Ondio						_						
SHUT-IN PRESSURE Surface O psi Bottom Hole 225 psi DURATION OF TEST 30 hrs DPEN FLOW Gas Oil NGL Water GAS MEASURED BY 119 mcfpd bpd bpd bpd Depth Depth IN FT DE	ase insert add	ditional pa	ges as a	— applicable.									
DPEN FLOW 119	S TEST	🗆 Build up) o I	Orawdown	В Оре	en Flow							20 .
DPEN FLOW 119 mcfpd bpd	UT-IN PRES	SSURE	Surfac	e <u>0</u>	psi	Bottor	n Hole_22	<u></u>	psi				
Please insert additional pages as applicable. DIETH IN FT NAME TVD TVD MD TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, III) See Attachment for Formations Please insert additional pages as applicable. Drilling Contractor Kanawha Valley Drilling Address 929 Charleston Road City Spencer State W Zip 25276 Logging Company Nabors Completion & Production Services Co.	'EN FLOW	Gas 119	mcfpe		bpd				ter bpd	GAS MI	EASUF ated	ED BY	? ce □ Pilot
NAME 17D O O O O See Attachment for Formations Please insert additional pages as applicable. Drilling Contractor Kanawha Valley Drilling Address 929 Charleston Road City Spencer State WV Zip 25276 Legging Company Nabors Completion & Production Services Co.							DEPTH I		DESCRIBE	ROCK TYPE	E AND R	ECORD	QUANTITYAND
Please insert additional pages as applicable. Drilling Contractor Kanawha Valley Drilling Address 929 Charleston Road City Spencer State WV Zip 25276 Legging Company Nabors Completion & Production Services Co.		NAME T	VD_	TVD			MD		TYPE OF F	LUID (FRES	HWAIE	K, BKIIN	E, OIL, GAS, 1125, 214
Please insert additional pages as applicable. Drilling Contractor Kanawha Valley Drilling Address 929 Charleston Road City Spencer State WV Zip 25276 Logging Company Nabors Completion & Production Services Co.		0											
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Drilling Contractor Kanawha Valley Drilling Address 929 Charleston Road City Spencer State WV Zip 25276 Logging Company Nabors Completion & Production Services Co.		Adid and a		c applicable			<u> </u>		.1				
Address 929 Charleston Road City Species. State													
Address 929 Charleston Road City Species. State	rilling Contr	actor Kana	awha V	alley Drilling		C''	Spance	,		State	wv	Zip	25276
Logging Company Nabors Completion & Production Services Co. Address 515 West Greens Road, Suite 100 City Houston State TX Zip 77067	Address 929 C	Charleston Re	oad							State			
Address 515 West Greens Road, Suite 100 City Houston State TX Zip 77067	and Com	nany Nabo	ors Con	npletion & P	roductio	n Services	Co.						77007
Addicss	Adress 515 V	Vest Greens	Road, S	Suite 100		City	Houston	3		State	TX	Zip	77007
Cementing Company Baker Hughes City Houston State TX Zip 77073	Cementing Co	ompany Ba	aker Hu	ighes		Cita	. Houston	_		State	TX	Zip	77073
Address 17015 Aldine Westfield Road City Houston State 17 Zip 71015	\ddress	5 Aldine Wes	stfield Ro	080		City	Tioubte	<u> </u>				_ '	
Stimulating Company Baker Hughes City Houston State TX Zip 77073	Stimulating C	Company	Baker	Hughes						. .	TY	7:	77073
Address 17015 Aldine Westheld Road City Hoston	Address 1701	5 Aldine We	strield R	080		City	Housto	n		State	-1/	Z ıp	
Please insert additional pages as applicable.	Please insert a	additional	pages a	as applicabl	le.								
Talankana 304-927-5033				_					Telepho	ne 304-92	7-5033		
Completed by Place Policy Control Date 10/11/2013	Completed b	by ryray Pi	ioius (Lald	<u></u>	Title	clerk				Date	10/	11/2013
Signature Kyfus feels 1111e det Attach copy of FRACFOCUS Registry Signature Attach copy of FRACFOCUS Registry	Signature	KIJA	<u>us -</u>	Ture								•	•

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Formation	TOP (TVD)	BOTTOM (TVD)	TOP (MD)	BOTTOM (MD)	Remarks
KB to GL			Ö	7	70', hole damp
Sand & Clay	0	13	7	20	start soaping
Sand & Gravel	13	18	20	25	
White Rock	18	33	25	40	679', hole wet
Sand & Rock	33	48	40	55	1/4" stream,
Sand & Shale	48	193	55	200	start soaping
Grey Sand	193	375	200	382	
Shale	375	408	382	415	760', 2" stream
Sand & Shale	408	597	415	604	
Salt Sand	597	999	604	1006	1015', big water
Shale	999	1067	1006	1074	7 0
Salt Sand	1067	1161	1074	1168	
Grey Sand	1161	1193	1168	1200	
Salt Sand	1193	1268	1200	1275	
Maxton	1268	1310	1275	1317	
Little Lime	1310	1358	1317	1365	
Pencil Cave Shale	1358	1361	1365	1368	
Big Lime	1361	1529	1368	1536	
Injun	1529	1549	1536	1556	
Squaw	1549	1578	1556	1585	
Sand & Shale	1578	1643	1585	1650	
Shale	1643	1973	1650	1980	
Weir	1973	2003	1980	2010	
Coffee Shale	2003	2014	2010	2021	
Shale	2014	2991	2021	2998	
Huron	2991	3838	2998	3845	
Devonian Shale	3838	4398	3845	4405	
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