

IV-35 (Rev 8-81)



DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

State of Mest	Virginia
Hammelman of	AT.

Bepartment of Mines Gil und Gas Phision

Date December 23, 1987
Operator's
Well No. 3173
Farm Staarman
API No. 47 - 017 - 3611

WELL OPERATOR'S REPORT

OF

### DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

DESIGNATED AGENT Gary A. Nicholas  ADDRESS Rt; 2 Box 698 SURFACE CAMER Henry Staarman  ADDRESS Rt. 1 Box 78 New Milton, WV 26411  MINERAL RIGHTS CAMER Henry Staarman  ADDRESS New Milton, WV 26411  OIL AND GAS INSPECTOR FOR THIS WORK  Mike Underwood ADDRESS Salem, WV 26426  PERMIT ISSUED  DRILLING COMPLETED 12-04-87  IF APPLICABLE: PLUGSING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED  CEDIOCICAL TARGETS ROWAGENERY  ADDRESS Not 114  Size 20-16  Cond.  13-10"  9 5/8  8 5/8  1308  1308  TO SHE  Tubing Drilling in Well Cu. for Tubing in Well Cu. for Cond.  Size 20-16  Cond.  13-10"  9 5/8  5 1/2  5 1/2  5 1/2  5 1/2  5 1/2  Liners Used  CEDIOCICAL TARGETS ROWAGENERY  Used	(If "Gas," Production X / U	njection/Waste Disposa nderground Storage/Dee	l/ p/ Shallow_x_/)
District: Cove County Doddridge Quadrangle New Milton  COMPANY ONG Development Commany.  ADDRESS P.10. Box 15746  DESIGNATED AGENT GARY A. Nicholas  ADDRESS Bt.2 Box 698  SUFFACE OWNER Henry Staarman  ADDRESS R. 1 Box 780  ADDRESS R. 1 Box 780  MINERAL RIGHTS OWNER Henry Staarman  ADDRESS R. 1 Box 780  CONL AND GAS INSPECTOR FOR THIS WORK  Mike Underwood ADDRESS Salem, NV 26411  BY 180  BY 180	LOCATION: Elevation: 979.02 Water	shed Buck Run of Hughes Ri	ver
ADDRESS	·		
ADDRESS FITTS DEV. 1574 15244  DESIGNATED AGENT GATY A. Micholas  ADDRESS RIJ 2 Box 698 26330  SURFACE CONNER Henry Staarman  ADDRESS RIJ 8 DEV. 78 26411  OIL AND GAS INSPECTOR FOR THIS WORK  MINERAL RIGHTS CWNER Henry Staarman  ADDRESS RIJ 8 DEV. 26411  OIL AND GAS INSPECTOR FOR THIS WORK  MIKE Underwood ADDRESS Salem, MV 26426  FERMIT ISSUED  DEVILLING COMMENCED 11-23-87  DEVILLING COMMENCED 11-23-87  DEVILLING COMMENCED 12-04-87  IF APPLICABLE: PLOSSING OF DEV HOLE ON CONTINUOUS PROGRESSION FROM DEVILLING OR READRAING. VERBAL FERMISSION OBTAINED  Depth of completed well 5682 feet Rotary X / Cable Tools  Water strata depth: Fresh 148 feet; Salt feet  Coal seam depths: Is coal being mined in the area? Malexander  Producing formation Renson Pay zone depth 4926-4936 feet  Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl  Final open flow 231 Mcf/d Final open flow Bbl  Time of open flow between initial and final tests 4 hours  Static rock pressure 250 psig(surface measurement) after 1 hours shut  (If applicable due to multiple completion-)  Second producing formation Pay zone depth 560  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Initial open flow Bbl  Final open flow Mcf/d Oil: Final open flow Bbl  Final open flow Mcf/d Oil: Final open flow Bbl			
DESIGNATED ACENT GARY A. Nicholas  ADDRESS Bidgasoft By 26330  SURFACE CONNER Henry Staarman COORD.  ADDRESS Nich 1 Box 78 COORD.  Nich Militon 78 COORD.  ADDRESS Nich 1 Box 78 COORD.  Nich Militon 78 COORD.  ADDRESS Nich 1 Box 78 COORD.  Nich Militon 78 COORD.  ADDRESS Nich 1 Box 78 COORD.  Nich Militon 78 COORD.  ADDRESS Nich 1 Box 78 COORD.  NICH Underwood ADDRESS Salem, WW 26426  PERMIT ISSUED  DRILLING COMPENCED 11-23-87  BRITTED 12-04-87  BRITTED 13-10*  DRILLING 13-10*  BRITTED 13-10*  DRILLING 13-10*  BRITTED 13-10*  DRILLING 13-10*  BRITTED 13-10*  DRILLING 13-10*  BRITTED 13-			
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SIZE SURFACE OWNER Henry Stearman Cond.  ADDRESS No. 1 1 80x 78 Cond.  MINERAL RIGHTS OWNER Henry Stearman 25411		£ 3	fill up
SURFACE CANNER	ADDRESS Rt 2 Box 698 Bridgeport WV 26330		In well Cu. It.
### ### ##############################		20–16	
MINERAL RIGHS OWNER Henry Staarman	ADDRESS Rt. 1 Box 78 New Milton, WV 26411		
ADDRESS New Million 78 v 26411  OIL AND GAS INSPECTOR FOR THIS WORK  Mike Underwood ADDRESS Salem, WV 26426  FERMIT ISSUED  DRILLING COMMENCED 11-23-87  DRILLING COMPLETED 12-04-87  IF APPLICABLE: FLUGGING OF DRY HOLE ON COMPLICABLE: FORWATION Renson Depth 5585 fee Coal seam depth: Fresh 148 feet; Salt feet  Coal seam depths: Is coal being mined in the area? Producing formation Benson Pay zone depth 4926-4936 fee Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl Time of open flow between initial and final tests 4 hours Static rock pressure 250 psig(surface measurement) after 1 hours shut (If applicable due to multiple completion-)  Second producing formation Pay zone depth fee Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Initial open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Final open flow Mcf/d Oil: Final open flow Bbl Time of open flow Mcf/d Oil: Final open flow Bbl Time of open flow between initial and final tests hours	MINERAL RIGHTS OWNER Henry Staarman	17-10	
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DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated Alexander 5063-5284, 20 holes, .39"; Benson 4926-4936, 18 holes, .39" Frac - 35# Gel Water - Breakdown 950, Ave HHP 2136, Ave Rate 35 BPM, Ave Pr 2490, Max Tr Pr 3100, 500 gal 15% Acid, 49,000# Sand, Max Conc. 5, Total Fluid 645 bbl,

SL Fluid 441 bbl, ISIP 1465, 5 min 1330.

2nd stage - Breakdown, 2800, Ave HHP 2160, Ave Rate 35 BPM, Ave Pr 2520, Max Tr. Pr 3100, 500 gal 15% Acid, 66,600# Sand, Max Conc. 5, Total Fluid 850, SL Fluid 579, ISIP 2060, 5 min 1330.

#### WELL LOG

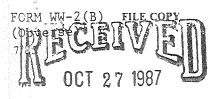
	₩	ELL LOG	
FORMATION COLOR HARD OR SOFT	TOP FEET	BOITOM FEET	REMARKS Including indication of all free and salt water, coal, oil and c
Sand, Shale & RR Little Lime Sand & Shale B. Lime Injun Sand Sand & Shale Benson Sand & Shale	0 2012 2024 2058 2147 2201 4935 4950	2012 2024 2058 2147 2201 4935 4950 5682	1/4" Water @ 40' 1/4" Water @ 110' Damp @ 1450'
LOG TOPS			
Big Lime Big Injun Weir Berea Gordon Grp. Warren U. Speechley Benson Leopold Alexander	2052 2158 2260 2472 2682 3312 3370 4922 5040 5178	2158 2202 2360 2490 2850 3348 3430 4976 5070 5300	DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

DEVELOPMENT COMPANY Well Operator

Date: December 1987

Regulation 2.02(i) provides as follows: Note: "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including work, encountered in the drilling of a well."





) Date: <u>October 8, , 19</u>	87_
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2) Operator's CNGD 3173

3) API Well No. 47 C)/7 - 36// State County Permit

## DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

# STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

#### APPLICATION FOR A WELL WORK PERMIT

4)	WELL TYI	PE: A C	)il	/ G	ıs	X				4 01 11 17 0
							Underground storage/ Deep/ ShallowX_/) Watershed:Buck_Run_of_Hughes_River			
									Of Hughes Kiv O/ZQuadrangle: _	
		Di:	strict:	<u>Love</u>	ont (	CODE.	County:		Quadrangie:	New Milton
6)	WELL OP	ERATORY	one De	с п°-	the l	TO CODE:	157/6		AGENT Gary N	
	Address					P.O. Box				Corporate Park
	•					5244		•		lgeport, WV 26330
	OIL & GAS							9) DRILLING CO		
	Name									illing Co.
	Address							Address		
		Sa	alem, J				····			WV 26201
10)	PROPOSE	D WELL	WORK:	Drill	X	_/ Drill	deeper	/ Redrill	/ Stimulate	_X/
				Plug of	f old	formation	/ Perfor	ate new formation.	/	
				Other p	hysical	change in w	ell (specify)			
11)	GEOLOGI	CAL TAR	GET FOR	MATION	,	Benson	45 m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
,	12) Estima	ted depth	of complet	ed well,		5585	feet			
1	13) Appro	ximate tra	ta depths:	Fresh			feet; salt	, 1174	feet.	
	(4) Annro	ximate coa	al seam den	oths:		_	Is co	al being mined in the	area? Yes	/ No/
	CASING A							· ·		
	ING OR	H		CIFICATION		н	FOOTAGE I	NTERVALS	1 CEMENT FILLUP	PACKERS
	ING TYPE		1	Weight	1				OR SACKS	
		Size	Grade	per ft.	New	Used	For drilling	Left in well	(Cubic feet)	Kinds 38 CSR 18-11, 3
Condu	uctor		1	1	<u> </u>	<del>  </del>	1 = 0	1.50	<b> </b>	<del></del>
Fresh	water	11-3/4	4H-40	42	X	-	150	150	To surface	By rule 15.15
Coal			ļ	<u> </u>		ļ			1	Sizes 38 CSR 18-11,22
Interm	nediate	8-5/8		23	X	<del>  </del>	1300	1300	To surface	By rule 15.05
Produ	ction	4-1/2	J-55	10.5	X		5585	5585	200 - 400	Gamber 38 CSR 18-11,
Tubin	8	1-1/2	CN-55	2.75	X					By rule
Liners										Perforations:
										Top Bottom
			J							
						O	FFICE USE	ONLY		
							RILLING PE	<del> </del>		
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Perm	it number_		<u>) ~ ()</u>	1)-	ـکــ	611			///>	19 8/
								•	/ Da	ite
This	permit cove	ring the w	vell operat	or and we	ll locati	on shown be	low is evidence	of permission grant	ed to drill in accorda	nce with the pertinent legal re-
quire	ments subje	ect to the c	conditions	contained	herein	and on the re	everse hereof No	tification must be gi	ven to the District Oil	l and Gas Inspector, (Refer to ntractor shall notify the proper
Vo. 8)	Prior to th	e construc	tion of ros	ads, locati	ons and	pits for any	permitted work.	In addition, the w	ell operator or his co	ntractor shall notify the proper
							k has commence		•	
		ork is as d	lescribed i	n the Notic	e and	Application,	plat, and reclam	ation plan, subject t	to any modifications	and conditions specified on the
rever	se hereof.		11/	12	00	3				
Perm	it expires _			12/	87	7	unless wel	l work is commenced	I prior to that date and	d prosecuted with due diligence.
							V			
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B	ond:	Agent	-: //	The state of	YAS	rig Fe	2 / Y / Y	( <b>%</b>	Other	
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							/ / <sup>D</sup>	irector,/Div	TOTON OF OTT	File File