



VIIV	1 3 93		te of West				
WAI		DIAISIOU O	f Environme tion of Oil	ntal Proto	ection		
	Permitting	560	CAUM OF OTT	and Gas			
<b>offic</b>	permitting of Oil & Com	. Well Opera	tor's Repor	t of Well	. Work		
Farm name:	GADDY ENGIN	EERING CO.	*	Operator N	Well No.:	B 13 14145	1
LOCATION:	Elevation:	1892.00		Quadrangl	e: GILBERT		
	District: Latitude: Longitude:	STAFFORD 10000 Feet So 8000 Feet We	uth of 37 D	County: eg. 35 Min	n. O Sec.		
				9. 50			
Company:		LORATION, INC.		~			
	P. O. BOX 3	41114-0391		Casing &	Used in	\$ 1.00	Cement
	ribilizate , ita	47774-0327		Tubing	Drilling	in Well	Fill Up Cu. Ft.
Agent:	B. E. WIDEN	ER		Size			
Inspector:	OFIE HELMIC	K		160	40.	40.	
Permit Issu	ed: 08/03/9	2		16"	40'	40'	11.8
	Commenced: Completed:	09-07-92 04-26-93	minimatus.	113"	220'	220	206
Verbal Plug							
Rotary X	granted on: Cable	Ria		8%"	2315 '	2315	770
Total Depth	(feet)	6360'		0,0	2020	2020	770
Fresh water	depths (ft)	Damp 82'	**************************************	51/2"	6320'	6320'	570
Salt water	depths (ft)	None Noted			ļ		
Is coal bei	ng mined in	area (Y/N)? N			6142'KB w/3	R-4 pkr. @	4376'
Coal Depths	(ft): ope	n mine 160-169		1.9 6	4323 80		
552-559, 5	74-582, 587-	592, 822-825	-				
OPEN FLOW D							
		on <u>Devonian</u>		Pay	zone depth	(ft) <u>455</u>	8'-6252'
Gas:	Initial ope	n flow 0	MCF/d	Oil	: Initial		
Time	of open flow	flow <u>843</u> between initial	MCr/d al and fina	1 tests	Final op	en flow	Bbl/ 3 Hour
Stati	c rock press	ure <u>480</u>	psig (su	rface pre	ssure) afte	r 7:	Hour
Gas:	Initial ope	rormation <u>Ber</u>	ea MCF/d	Pay	zone depth	(ft) <u>429</u>	91-4314'
5 - 79.	Final open	flow 621	MCF/d	<b>011</b>	Final ope	open flow _ en flow	Bb1/
Time	of open flow	between initia	al and fina	l tests			3 Hour
	.c rock Press	formation Bergan flow 0 flow 621 between initiative 520	psig (su	rface pre	ssure) afte	r	72 Hour
NOTE: ON	DACK OF MILL						
FRACTURING	OF STIMULAT:	IS FORM PUT TH ING, PHYSICAL ( ORD OF ALL FOR	CHANGE, ETC	. 2.) THE	WELL LOG	WHICH IS A	SYSTEMATT
	_						
	Fo	r: ASHLAND EX	/ 1				
		Ву:	Domes of	Stephe	⊃ James L	. Stephens	Eng. Tech.
		Date:	/	0		5/10/93	
- 94		- Marine					
<u> </u>	TM6	, i				0.224.4	

Reviewed \_\_\_\_\_ Recorded\_\_\_\_\_

124 1983

Formation or Rock Type	goT	Base
Sand and Shale (base Lee Sand) Pennington	0 2221	2221 3256
U. Maxton	2564	2705
M. Maxton L. Maxton	2883 3163	3036 3210
Little Lime Big Lime	3256 3371	3371 3707
Borden Sunbury Shale	3707 4261	4261 4290
Berea	4290	4319
Devonian Shale Onondaga lime	4319 6345	6345 T.D.

Drillers TD 6360 Loggers TD 6364 85/8 and 113/4 cmt't to surface on primary job.

perf Rhinestreet Shale w/ 3% HCG SF 1SPF @ 6105, 6082, 6075, 6068, 6061, 6058, 6046, 6034, 6025, 6022, 6008, 6004, 5996, 5982, 5960, 5949, 5926. Pumped 200 gals 7.9% HCl-Fe acid.  $N_2$  frac Rhinestreet Shale using 818,000 scf  $N_2$ . BD 3861, MTP 4077, ATP 4003 @ 99,400 scf/min, ISIP 2707.

Perf L. Huron using 3%" ST 1SPF @ 5551, 5536, 5529, 5492, 5487, 5462, 5459, 5422, 5417, 5390, 5342, 5291, 5280, 5212, 5208, 5193, 5186, 5171, 5167, 5144. Pumped 1 bbl wtr and 500 gals 8% HCl-Fe acid. N<sub>2</sub> frac L. Huron using 821,000 scf N<sub>2</sub>. BD 3988, MTP 4131, ATP 3493 @ 101,000 scf/min, ISIP 1894.

perf U. Dev. Shale w/ 3%" HCG SF 1SPF @ 4869, 4851, 4846, 4833, 4768, 4758, 4727, 4688, 4630, 4606, 4565, 4499, 4447, 4436, 4421, 4413, 4407. Pump 1 bbl wtr and 500 gal 8% HCl-Fe acid. N<sub>2</sub> frac U. Dev. Shale w/ 812,000 scf N<sub>2</sub>. BD 3955, MTP 3955, ATP 3422 @ 103,000 scf/min, ISIP 1860.

perf Berea using 4" HCG 2SPF 4137-4156. Dump 500 gal 16% HCl-Fe acid. 75Q ramp frac Berea 4-20 ppg using 60800# 20/40 sand; 294,300 scf  $N_2$  @ 9300 scf/min. BD 1011, MTP 1263, ATP 1050 @ 20 BPM foam, ISIP 915, TF 174 bbls.

perf Big Lime using 4" HCG 2SPF @ 3500-3505, 3520-3525. Acidized Big Lime using estimated 75Q foamed acid, 2000 gals 28% HCl-Fe acid and 500 gal 15% HCl-Fe acid, 258,000 scf  $N_2$  @ 10,600 scf/min. Acid rate 4-5 BPM. Dropped perf balls: 4 @ 11½ bbls, 4 @ 36 bbls and 4 @ 50 bbls -- some action. BD 2180, MTP 2630, ATP 1950, ISIP 1600, 15 min 1020, TF 90 bbl.

DF -461 DET 830

12651

FORM WW-2B

## Page 1 of 1 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS WELL WORK PERMIT APPLICATION

Mingo Wyoming Coal Land Co.  Operator's Well Number: B-13, Serial #141451 3) Elevation: 1892'  Well type: (a) Oil/ or Gas_X/  (b) If Gas: Production_X/ Underground Storage/ Shallow_X/  Proposed Target Formation(s): Devonian Shale  Proposed Total Depth: 6285'KB feet  Approximate fresh water strata depths: 113', 170'  Approximate salt water depths: (None Noted on Adjacent Wells)  Approximate fresh water depths: (None Noted on Adjacent Wells)  Ningo Wyoming Coal Land Co.  B-13									
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8) Approximate salt water depths: (None Noted on Adjacent Wells) WV Division									
9) Approximate coal seam depths: <u>Pond Creek, 142'KB, Mined Out;</u>									
10) Does land contain coal seams tributary to active mine? Yes/ No_X /									
11) Proposed Well Work: Drill and Stimulate New Well									
12)									
CASING AND TUBING PROGRAM									
TYPE SPECIFICATIONS FOOTAGE INTERVALS CEMENT									
Size Grade Weight For Left in Fill-up per ft. drilling well (cu.ft.)									
Conductor         16         LS         36.91         30         30         CTS									
Fresh Water 11 3/4 H40 42.0 220 220 CTS									
Coal 3805/14/1/5									
Intermediate 8 5/8 J55 24.0 2290 2290 2290 CTS									
Production 5 1/2 J55 15.5 6285 6285 ★ AS NEEDED									
Tubing 1.9 J55 2.76 - 6200 SIPHON									
Liners - 380818-11									

<u>PACKERS</u>		Kind Sizes Depths	set_							
506647			For	Divisio	on of Oil	and Gas	Use Onl	У .	····	
Fee(	s)	paid:	A	Z Well W	ork Perm:	it A	Reclamat	tion Fund	H	WPCP
Plat		$\Delta p$	1 <b>-</b> 9 4	WW-		Bond	linket	Duré.	1/N	Agent
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	of <u>2</u>		
Form W		2)	
(09/87	)	•	Mingo Wyoming Land Co. #B-13, Serial #1414
		3)	API Well No: 47 - 059 - 1174
			State - County - Permit
			Fracti
		STATE OF WEST	· ·
		DEPARTMENT OF ENERGY, DI	
			TOR A WELL WORK PERMIT
		NOTICE AND APPLICATION F	OR A WELL WORK PERMIT
			WV Divis:
		wner(s) to be served:	5) (a) Coal Operator:   Equironmental
(	a) Name	Gaddy Engineering Co., Agent	Name N/A
2		945 4th Ave., Suite 300	Address
		Huntington, WV 25701	
			(b) Coal Owner(s) with Declaration
A	ddress _		Name Same as No. 4(a)
			Address
(	c) Name		
A	ddress _		Name
			Address
6) I	nspector	Ofie Helmick	(c) Coal Lessee with Declaration
A	ddress	P.O. Box 218	Name National Mines, Inc.
		Fanrock, WV 24834	Address P.O. Box 12022
Ī	elephone	(304) - 732-9135	Lexington, KY 40579
	_		
I I have	certify served anying d Pers	copies of this notice and	Chapter 22B of the West Virginia Code application, a location plat, and 2 on the above named parties, by:
_		ication (Notice of Public	
to the I famili attach	terms a certify ar with ments, a	nd conditions of any perm under penalty of law that the information submitted nd that based on my inqui	22B and 38 CSR 11-18, and I agree nit issued under this application. It I have personally examined and am on this application form and all ary of those individuals immediately
			ion, I believe that the information
		ate, and complete.	
			cant penalties for submitting false
inrora	ation, i		of fine and imprisonment.
			Ashland Exploration, Inc.
			Parks W. Martha
			ons Manager
		Address P.O.	
			nd, KY 41114
s ,	• , • -	Telephone 606	
Subscr	ibed and	sworn before me this 15	th day of July , 1992
	4/		
	//	B. 11/ 1/2-	
	<u> Uu</u>	expires November 23, 1994	Notary Public