

State of West Virginia
Division of Environmental Protection

DATE:	March	3Ò,	2001
API#:	47-950	170	3

5000	Section of Oil and Gas							

Well Operator	3 Report of We		u oʻ			
Farm name: Hartley	Opera	ator Well No.:_	#3			
LOCATION: Elevation: 916' Quadrangle: Pennsboro						
District: Meade Latitude: 5430 Feet South of 3 Longitude 8050 Feet West of 8	Coun	ty: <u>Tyle</u>	r			
Latitude: 5430 Feet South of 3	9 Deg: 2	1 Min. 36	48 Sec	•	A.	
Longitude 8050 Feet West of 8	0 Deg. <u>5</u>	9 Min. 12	06 Sec.	•		
					*	
Company:			1			
Ohio L&M Co., Inc.	Casing &	Used in	Left in	weii	Cement fil up Cu. Ft.	
	Tubing	drilling 40 '	0		N/A	
Address: 4150 Belden Village Ave.		40	0		N/A	
W Suite 410 Canton, OH 47718	11-3/4		1 -	72!	129 Sk	
Agent: Jeff Sayger	11-3/4			12.	129 38	<u>.s.</u>
Inspector: Mike Underwood Date Permit Issued: 12-26-2000	8-5/8"		1104	1.65	297 Sk	
Date Well Work Commenced: 1-9-2001			 			
Date Well Work Completed: 1-15-2001	4-1/2/"		4917	7.0	286 Sk	ss.
Verbal Plugging:	-		 			
Date Permission granted on:						•
Rotary X Cable Rig				F	ECEIVED	
Total Depth (feet): 4945				Offic	e of Oll & Ga Permitting	is
Fresh Water Depth (ft.): 76'						
70				AU	6 2 7 200	1
Salt Water Depth (ft.): 1648						
				W	epartment c	of
Is coal being mined in area (N/Y)? N				Environ	mental Protec	ction
Coal Depths (ft.): N/A		*				
OPEN FLOW DATA	·				ŗ	s , *
Producing formation Benson	Pay 2	zone depth (ft	4815	5-482	3	
Gas: Initial open flow Show MCF/d Oil						
Final open flow 30.0 MCF/d I	Final open flo	w 0.0	Bbl/d <i>I</i>	After	Frac	
Time of open flow between initial and	final tests	N/A Hou	ırs			
Static rock Pressure 1250 psig (surface pressure) after 48 Hours						
	1					
Second producing formation	Pay zo	one depth (ft)_		_		
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d						
Final open flowMCF/d Final open flowBbl/d						
Time of open flow between initial and	final tests	Hot	ırs			
Static rock Pressurepsig (surfa	ice pressure) a	fterH	ours			
	FOLLOUMIC	. D. DETAIL	C OE DED	EOD 47	ren	
NOTE: ON BACK OF THIS FORM PUT THE	FOLLOWING	I). DETAIL.	FTC 2)	THF W	ÆLL.	
INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS,						
INCLUDING COAL ENCOUNTERED BY THE	WELLBORT.				•	
MIST	11.00	<i>1</i>		A 1:	^ ^ ^	MA1
Signed:	, we	<u> </u>		ΑU	6312	W
By: Martin L. Mi	iller				1.	. ~ ^
Date: March 30,	2001	`				

Completion:

Perforated Benson Sand With 32 Holes From 4815-4823

Frac Well With 500 Gals. 15% HCL Break - 1400PSI Treat Well With 760 Bbl. Slick Water - 60,000# 20/40 Sand N2 Assist - 32 BPM Rate - Aveg. Treat PSI - 2725 ISIP 1218 5 Min - 1102

YL 1703

WELL: Ohio L & M Co., Inc.#3 Hartley.

LOCATION: Meade District, Tyler County, West Virginia.

PERMIT NUMBER: Tyler-1703.

ELEVATION: 916' Ground 926' KB.

STATUS: Preparing to complete as a gas producer.

CASING: 11 3/4" @ 172' 8 5/8" @ 1104'.

TOTAL DEPTH: 4945' Driller 4942' Logger.

CONTRACTOR: Nexus Drilling Co..

TOOLS: Rotary.

SPUD DATE: 1/9/2001.

COMPLETED DRILLING: 1/15/2001.

FORMATION AT TOTAL DEPTH: Devonian shale.

RECEIVED
Office of Oil & Gas
Permitting

AUG 27 2001

WV Department of Environmental Protection

ELECTRICAL SURVEYS: Gamma Ray- Neutron- Compensated Density-Caliper- Induction- Temperature- Noise by Allegheny Wireline Services, Inc..

SHOWS: A very good show of gas was encountered in the Benson Sandstone. Small shows of gas were noted in the 3rd Salt, Big Injun and Weir. Good hydrocarbon fluorescence was recorded in the Weir. Fair hydrocarbon fluorescence was noted in the 3rd Salt and Benson Sandstone. A more detailed description of the above mentioned fluorescence can be found on the attached Formation Evaluation Log.

FORMATION TOPS: 2 nd Cow Run Sandstone Gas Sand 1st Salt Sand 2nd Salt Sand 3rd Salt Sand Maxon Sandstone Little Lime Big Lime (Greenbrie Big Injun Sandstone Squaw Sandstone Weir Sandstone	1325' 1410' 1532' 1620' 1730' 1759' er) 1784'	- 237 - 399 - 484 - 606 - 694 - 804 - 833 - 858 - 948 - 1064 - 1324
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AUG 3 1 2001:

MARILET #3		*	i ugo z
•	Berea Sandstone	2510'	- 1584
160	Gantz Sandstone	2601'	- 1675
	30' Sandstone	2681'	- 1755
	Gordon Sandstone	2798'	- 1872
	4 th Sandstone	2865'	- 1939
	5 th Sandstone	2952'	- 2026
	Warren Sandstone	3374'	- 2448
	Speechley Sandstone	3738'	- 2812
	Balltown Sandstone	3906'	- 2980
	Riley Sandstone	4625'	- 3699
	Benson Sandstone	4810'	- 3884

STRUCTURAL COMPARISON:

Benson Sandstone	Ohio L&M Co., Inc. Hartley #3 - 3884	Ohio L&M Co. Hartley #1 - 3880	Inc. RECEIVED Office of Oil & Gas Permitting
Bondon Ganacione			AUG 27 2001
GEOLOGY:			W Department of Environmental Protection

Sample analysis indicated very good sandstone development in the Benson, with fair development in the Weir and Gordon. A very good show of gas was encountered in the Benson. Small shows of gas were noted in the 3rd Salt, Big Injun and Weir. Good hydrocarbon fluorescence was recorded in the Weir, while fair hydrocarbon fluorescence was noted in the 3rd Salt and Benson Sandstone.

Based upon the open hole logs, the Benson Sandstone at 4813 to 4822' appears to be well developed with good gas saturations. The Weir and Gordon showed fair development.

The Benson Sandstone should be very good producer figas in this well. A completion attempt on the Weir and Gordon would also be warranted prior to abandonment.

Respectfully submitted,

NATIONAL MINERALS CORPORATION

las L. Core

By: Douglas L. Core, President

January 16, 2001