

**CERTIFICATE**

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Minimum degree of accuracy is one part in 200

Signed *J.S. Journey* R.P.E. No. 269

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY APPALACHIAN EXPLORATION & DEVELOPMENT Co.  
 ADDRESS P.O. BOX 628 CHARLESTON, W. VA.  
 FARM L.M. LA FOLLETTE  
 MAP \_\_\_\_\_ ACRES 270 (UNIT) LEASE NO. \_\_\_\_\_  
 WELL (FARM) NO. 4 SERIAL NO. \_\_\_\_\_  
 ELEVATION (SPIRIT LEVEL) 775.68 GROUND  
 QUADRANGLE CHARLESTON N.W.  
 COUNTY KANAWHA DISTRICT UNION  
 POINT OF PROVEN ELEVATION U.S.G.S. DATUM - WELL No. 965  
 FILE NO. \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 DATE FEB. 26, 1968 SCALE 1" = 1320'

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION  
 CHARLESTON  
**WELL LOCATION MAP**  
 FILE NO. KAN-2228

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS SCALE 1 TO 62 500. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING

*See well (number)*

MAR 14 1968



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 4

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle Charleston  
Permit No. Kanawha-2228

WELL RECORD

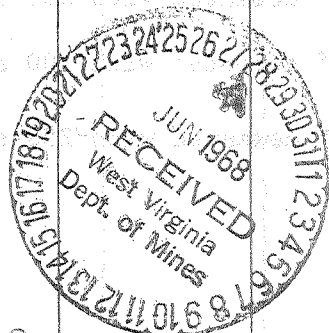
Oil or Gas Well Gas  
(KIND)

Company	<u>Appalachian Exploration &amp; Development, Inc.</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address	<u>Box 628, Charleston, W.Va. 25322</u>	Size			
Farm	<u>LaFollette Unit</u> Acres <u>270</u>	<u>xxx 13-3/8</u>		<u>216'</u>	Kind of Packer <u>None</u>
Location (waters)	<u>Martins Branch</u>	13			Size of
Well No.	<u>4</u> Elev. <u>775.68</u>	10			Depth set
District	<u>Union</u> County <u>Kanawha</u>	<u>8-5/8</u>		<u>1909.09'</u>	
The surface of tract is owned in fee by	<u>D. K. Cooke</u>	6%			Perf. top
Address	<u>Charleston, W.Va.</u>	<u>5 3/16</u>			Perf. bottom
Mineral rights are owned by	<u>United Fuel Gas</u>	<u>5-1/2</u>		<u>5539'</u>	Perf. top
Box	<u>1273</u> Address <u>Charleston, W.Va.</u>	3			Perf. bottom
Drilling commenced	<u>March 3, 1968</u>	2			
Drilling completed	<u>March 17, 1968</u>	Liners Used			
Date Shot	<u>None</u> From To				
With					

Open Flow /10ths Water in \_\_\_\_\_ Inch  
 /10ths Merc. in \_\_\_\_\_ Inch  
 Volume 10 Million Cu. Ft.  
 Rock Pressure 1523 lbs. 48 hrs.  
 Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
 WELL ACIDIZED (DETAILS) \_\_\_\_\_  
 WELL FRACTURED (DETAILS) T.D. 5578' 3-30-68. 38,500 gallons water with 24,000 lbs. sand.

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 26 Million cu. ft. per day  
 ROCK PRESSURE AFTER TREATMENT 1523 HOURS 48  
 Fresh Water \_\_\_\_\_ Feet Salt Water \_\_\_\_\_ Feet  
 Producing Sand Newburg Depth 5578'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand & shale		Soft	0	1110	Water @ 350 + 1133		
Sand		Soft	1110	1615			
(Big Lime) Lime		Hard	1615	1760			
✓ Sand - Injun?		Soft	1760	1845			
Sand & shale		Soft	1845	2255			
✓ Sand - Coraco?		Soft	2255	2310	5570		
Shale		Soft	2310	4732	776		
✓ Lime - Onondaga		Hard	4732	4827	794		
✓ Sand - Oniskany		Hard	4827	4855	Gas	Conn @ 4889	Slight show of gas.
✓ Lime - Helderberg		Hard	4855	5040			
✓ Dolomite & anhydrite	<u>Carpegan</u>	Hard	5040	5570			
Sandstone		Hard	5570	5578	Gas		Newburg - est 10 Mmcf - Nat. T.D.



Formation	Color	Hard or Soft	Top $\pm$	Bottom	Oil, Gas or Water	Depth Found	Remarks
<u>CASING RECORD</u>							
							13-3/8" cemented with 200 sacks Neat-by-hand.
							8-5/8" cemented with 100 sacks 50-50 Posmix with 2% CaCl <sub>2</sub> + 100 Sacks Neat with 2% CaCl <sub>2</sub> .
							5-1/2" cemented with 256 sacks.

Date June 27, 19 68  
 APPROVED John W. Hester, Owner  
 By District Production Superintendent  
 (Title)