

2.72 S
3.45 W

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 500

Signed Charles N. Thurmon 975

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY APPALACHIAN EXPLORATION & DEV. INC.
 ADDRESS BOX 1473, CHARLESTON, W. VA.
 FARM H.F. WILLIAMS UNIT
 MAP _____ ACRES 281 Acs. LEASE NO. WV-107
 WELL (FARM) NO. UNIT No. 1 SERIAL NO. _____
 ELEVATION (SPIRIT LEVEL) 759.9
 QUADRANGLE CHARLESTON - NW
 COUNTY KANAWHA DISTRICT UNION
 POINT OF PROVEN ELEVATION U.S.G.S. BM 587' ROCKY FORK
 FILE NO. _____ DRAWING NO. _____
 DATE APRIL 14, 1967 SCALE 1" = 600'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
WELL LOCATION MAP
 FILE NO. KAN-2111

+ 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.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION / 2

Rotary
Spudder
Cable Tools
Storage

Quadrangle Charleston

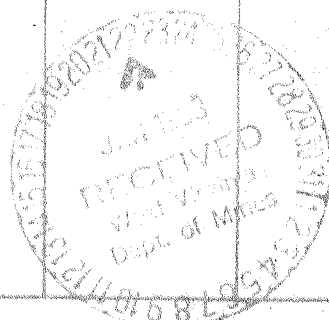
Permit No. Kan-2111

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company <u>Appalachian Exploration & Development, Inc</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>Box 628, Charleston, W. Va. 25322</u>				
Farm <u>H. F. Williams Unit</u> Acres <u>281 (Unit)</u> Size				
Location (waters) <u>Pocatalico River</u>	16			Kind of Packer Mod.
Well No. <u>1</u> Elev. <u>759.9 Gr.</u>	13-3/8	100'	100'	D, Prod, Packer
District <u>Union</u> County <u>Kanawha</u>	9-5/8	1,863'	1,863'	Size of 7"
The surface of tract is owned in fee by <u>H. F. Williams</u>	8 1/4			
Address <u>Rt. 4, Charleston, W Va</u>	6 1/2	5,415	5,415	Depth set 4850-54
Mineral rights are owned by <u>Same</u>	5 3/16			
Address	4 1/2	5,534	640	
Drilling commenced <u>May 7, 1967</u>	3			Perf. top
Drilling completed <u>May 30, 1967</u>	2		5,495	Perf. bottom
Date Shot <u>Not</u> From To				Perf. top
With				Perf. bottom
Open Flow /10ths Water in Inch		Attach copy of cementing record.		
/10ths Merc. in Inch		CASING CEMENTED (See back of report) Date		
Volume <u>327M (Oriskany); 215M (Newburg)</u> Cu. Ft.		Amount of cement used (bags)		
Rock Pressure <u>Not measured</u> lbs hrs.		Name of Service Co. <u>Dowell</u>		
Oil <u>None</u> bbla. 1st 24 hrs.		COAL WAS ENCOUNTERED AT <u>None</u> FEET INCHES		
WELL ACIDIZED (DETAILS)		FEET	INCHES	FEET INCHES
WELL FRACTURED (DETAILS) <u>6/20/67 Perf. 5505-11'</u> frac with 20,454 gals. water, 10,000 lbs. sand		FEET	INCHES	FEET INCHES
<u>9/21/67 Perf. 4780-87'</u> frac. with 29,820 gals. water, 22,000 lbs. sand.				
RESULT AFTER TREATMENT (Initial open Flow or bbla.) <u>561 mcf per day (Oriskany); 500 mcf per day (Newburg)</u>				
ROCK PRESSURE AFTER TREATMENT <u>1275 psi; 2140 psi</u> HOURS <u>24</u>				
Fresh Water Feet		Salt Water <u>468'</u>		Feet
Producing Sand <u>Oriskany and Newburg</u>				Depth <u>4773-95'; 5500-12'</u>

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Shale & Sand		s		116			
Shale & Sand		s	116	345			
Shale & Sand		s	345	420			
Shale & Sand		s	420	423			
Shale & Sand		s	423	430			
Shale & Sand		s	430	763	Water	468'	
Shale & Sand		s	763	800			
Shale & Sand		s	800	1110			
Shale & Sand		s	1110	1168			
Shale & Sand		s	1168	1573			
Shale & Sand		s	1573	1577			
Shale & Sand		s	1577	1739	Gas		Big Lime storage gas
Shale & Sand	gray	h	1739	1820			
Shale & Sand	gray	s	1820	1880			
Shale & Sand	gray	s	1880	1950			
Shale & Sand	gray	s	1950	2160			
Shale & Sand	black	s	2160	2180			
Shale & Sand	gray	s	2180	2200			
Shale & Sand	black	s	2200	2210			
Shale & Sand	gray	s	2210	2400			Berea pebbles at 2210
Shale & Shaly							
Shale & Shaly	gray	s	2400	2440			
Shale & Siltstone	gray	s	2440	2790			
Shale & Siltstone	gray	s	2790	3390			



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
shale	brown & black	s	3390	3600			
shale	gray	s	3600	3670			
shale & Silt-stone	light gray	s	3670	3860			
shale	black	s	3860	4000			
shale	light gray	s	4000	4450			
shale	black	s	4450	4570			
shale	gray	s	4570	4610			
shale	black	s	4610	4662			
lime & Chert	light gray	h	4662	4752			
sandstone - <i>Oriskany</i>	white	h	4752	4780	gas	4758	327 mcf per da
sand & Lime - <i>Oriskany</i>	white	h	4780	4810			
lime & Chert	gray	h	4810	4880			
sandy lime & Chert	gray	h	4880	4950			
lime	gray	h	4950	4990			
dolomite	dark	h	4990	5020	gas	5010	sulphur odor
dolomite & Anhydrite	brown	h	5020	5130			
anhydrite	brown	h	5130	5210			
dolomite & Anhydrite	brown	h	5210	5260			
dolomite	brown	h	5260	5320			
anhydritic Dolomite	brown	h	5320	5430			Corrected dept 5430 = 5440
dolomite	brown	h	5430	5500			
sand - <i>Newburg</i>	white	h	5500	5512	gas	5500	215 mcf per da (NEWBURG)
dolomite	brown	h	5512	5555			Total Depth

CEMENTING RECORD:

13-3/8"	Cemented with 120 sacks	5/9/67
9-5/8"	Cemented with 625 sacks	5/16/67
7"	Cemented with 130 sacks	5/27/67
4-1/2"	Cemented with 33 sacks	6/2/67

Date 1-19-68

APPROVED [Signature]

By [Signature]
(Title)