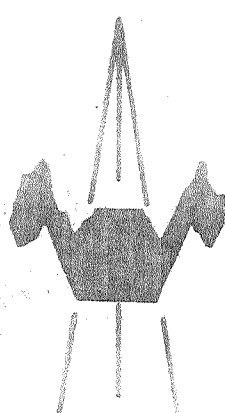


Latitude 38° 40'
 3.80 MI. S.
 2.72 MI. W.
 Longitude 81° 45'



ACCURACY: 1P/200P

Source of Elevation MOUTH OF STUMPY (661')

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.

Chet Waterman

- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

Company APPALACHIAN EXPL. & DEV., INC.
 Address CHARLESTON, WV
 Farm HARDY HEIRS
 Tract _____ Acres 56-5/8 Lease No. _____
 Well (Farm) No. B-1 Serial No. _____
 Elevation (Spirit Level) 965'
 Quadrangle WINFIELD EC
 County PUTNAM District UNION
 Engineer CHET WATERMAN
 Engineer's Registration No. 3788
 File No. 76003-199 Drawing No. _____
 Date 4/29/76 Scale 1" = 20P

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

WELL LOCATION MAP
 FILE NO. PUT - 822

+ 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.

47-079



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

WELL RECORD 8

Quadrangle Winfield

Permit No. Put-822

Rotary Oil _____
Cable _____ Gas
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Company <u>Appalachian Exploration & Dev., Inc.</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P.O. Box 628, Charleston, WV 25322</u>				
Farm <u>Hardy Heirs</u> Acres <u>56-5/8</u>	Size			
Location (waters) <u>Stumpy Run</u>	20-16			
Well No. <u>B-1</u> Elev. <u>965'</u>	Cond.			
District <u>Union</u> County <u>Putnam</u>	13-10"			
The surface of tract is owned in fee by _____	9 5/8	310'	310'	
Address <u>Paradise, West Virginia</u>	8 5/8			
Mineral rights are owned by <u>Hardy Heirs; c/o George Brooks, Agent Kanawha Valley Bank, Address Charleston, W. Va. 25301</u>	7"	2695'	2695'	
Drilling Commenced <u>8/30/76</u>	5 1/2			
Drilling Completed <u>9/8/76</u>	4 1/2			
Initial open flow _____ cu. ft. _____ bbls.	3			
Final production <u>386 M</u> cu. ft. per day _____ bbls.	2			
Well open <u>4</u> hrs. before test <u>890#</u> RP.	Liners Used			

Well treatment details: Attach copy of cementing record.
Plug back to 4850', loaded hole with 10,000# of 80% Hercules gelatin.
Top of shot 3891', tamped with 6,000# of pea gravel.

Coal was encountered at None logged. Feet _____ Inches _____
Fresh water 25 Feet _____ Salt Water 890 Feet _____
Producing Sand Brown Shale Depth 3891-4850'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand-shale			0	350		
Shale			350	450		
Sand			450	1150		
Shale			1150	1300		
Sand			1300	1500		
Shale-Red Rock			1500	1780		
Salt Sand			1780	1970		
Shale			1970	2010		
Big Lime			2010	2150		
Shale			2150	2187		
Injun Sand			2187	2300		
Shale			2300	2660		
Berea			2660	2675		
Brown Shale			2675	4970' T.D.		

From gamma ray - bulk density log.
Top of Onondaga 4963
Joseph Schweitzerlog.

* Indicates Electric Log tops in the remarks section.

(over)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

JUL 29 1976

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

Surface Owner Orville Thornton
Address Paradise, W.Va.
Mineral Owner Hardy Heirs, c/o Geo. E. Brooks, Agent
Kanawha Valley Bank
Address Charleston, W.Va. 25301
Coal Owner Union Carbide
Attn: Mr. Wm. Barker
Address Rt. 2, Box 224-B, Clendenin, W.Va. 25045
Coal Operator Same as Coal Owner.
Address Same as above.

DATE July 28, 1976
Company Appalachian Exploration & Development, Inc.
Address Box 628, Charleston, W.Va. 25322
Farm Hardy Heirs Acres 56-5/8
Location (waters) Stumpy Run
Well No. B-1 Elevation 965'
District Union County Putnam
Quadrangle Winfield

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 11-30-76.

[Signature]
Deputy Director - Oil & Gas Division

INSPECTOR TO BE NOTIFIED Martin Nichols
PH: 548-6993 ADDRESS Clendenin, W. Va.

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated January 20 19 67 by Frank A. Hardy, et al made to Cabot Corporation and recorded on the 17th day of April 1967, in Putnam County, Book 53 Page 550.

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

West Virginia Geological and Economic Survey
P. O. Box 879
Morgantown, W. Va. 26505

Very truly yours,
Appalachian Exploration & Development, Inc.
(Sign Name) [Signature]
Well Operator

Address
of
Well Operator

Box 628 Street
Charleston, City or Town
West Virginia 25322 State

*SECTION 3 . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements.
By [Signature]

PUT-822 PERMIT NUMBER

47-079

BLANKET BOND

