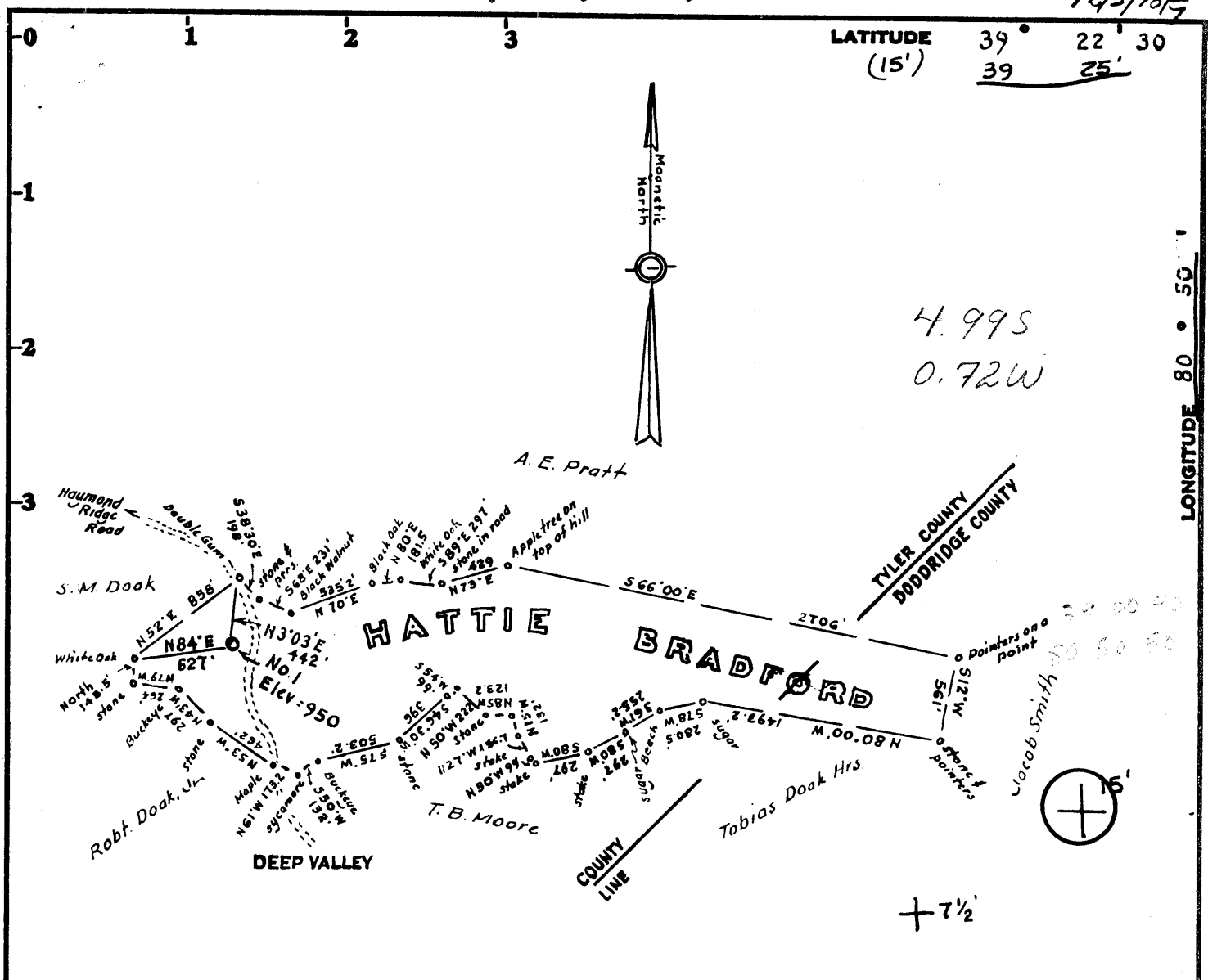


12/3/78



**LEGEND**

- Road
- County Line
- Surveyed Line
- Line plotted from deed
- Well Location

**OWNERSHIP**

No coal mined in this vicinity  
 Surface: W. Paul McCutchan.  
 West Union, W. Va.  
 Minerals: 1/2 W. Paul McCutchan  
 1/2 Hattie Bradford

Note: - Description taken from deed from Hattie Bradford to W. Paul McCutchan, dated May 20, 1943. Recorded in Deed Book No. 14, page 9

Minimum Error of Closure 1 in 200  
 Source of Elevation USGS elev. at Deep Valley = 750'

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

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.

Signed: Wilbur  
 Squares: N S E W

Map No.

Company INDUSTRIAL GAS ASSOCIATES  
 Address P.O. Box 1610, Greenwich, Conn.  
 Farm Hattie Bradford  
 Tract \_\_\_\_\_ Acres 110 Lease No. \_\_\_\_\_  
 Well (Farm) No. One Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 950  
 Quadrangle West Union 7 1/2, 15' C  
 County Tyler District Centerville  
 Engineer Wilbur  
 Engineer's Registration No. 1227 LLS 200  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date Dec. 3, 1978 Scale 1" = 1000'

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

**WELL LOCATION MAP**  
 FILE NO. 47-095-0676

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000, 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

*Handwritten:* 100-100-100  
APR 26 1979

Oil and Gas Division  
WELL RECORD

OIL & GAS DIVISION  
DEPT. OF MINES

Rotary X Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. X  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Quadrangle West Union 7 1/2

Permit No. 47-095-0676

Company Industrial Gas Associates  
Address Box 1610 Greenwich, Conn. 06830  
Farm Hattie Bradford Acres 110  
Location (waters) Arnolds Creek  
Well No. 1 Elev. 950  
District Centerville County Tyler  
The surface of tract is owned in fee by \_\_\_\_\_  
Paul McCutchan  
Address Box 8, West Union, W.V.  
Mineral rights are owned by Paul McCutchan  
Address Box 8, West Union, W.V.  
Drilling Commenced 12/20/78  
Drilling Completed 1/11/79  
Initial open flow Show cu. ft. \_\_\_\_\_ bbls.  
Final production 600,000 cu. ft. per day 5 bbls.  
Well open 5 hrs. before test 800 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8	228'	228'	125 Sks
7			
5 1/2			
4 1/2	2466	2466	225 Sks
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

Weir - Fraced with 347 BBLs water - 17,000# sand

Injun - Fraced with 314 BBLs water - 27,000# sand

Coal was encountered at None Feet \_\_\_\_\_ Inches  
Fresh water 40 Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Weir & Injun Depth 1666 - 2060

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Soil	Brown	Soft	0	10		
Sand & Shale	Brown	Medium	10	834		
1st Cow Run	White	Hard	834	862		
Shale	Black	Soft	862	882		
2nd Cow Run	White	Hard	882	928		
Shale	Black	Soft	928	1200		
Sand	White	Hard	1200	1248		
Shale	Black	Soft	1248	1350		
Sand	Brown	Soft	1350	1402		
Shale	Black	Soft	1402	1594		
Big Lime	White	Hard	1594	1666		
Big Injun	White	Hard	1666	1792		
Shale	Black	Soft	1792	1944		
Weir	Black	Hard	1944	2060		
Shale	Black	Soft	2060	2135		
50' sand			2135	2145		
Shale			2145	2466		
T.D.				2466		

*Handwritten:*  
2466  
2060  
-----  
406 Exp. Ft.

MAY 8 1979



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

NOV 28 1978

OIL & GAS DIVISION  
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE November 26, 1978

Surface Owner Paul McCutchan

Company Industrial Gas Associates

Address P.O. Box 8, West Union, WV

Address Box 1610, Greenwich, Conn.

Mineral Owner Paul McCutchan

Farm Hattie Bradford Acres 110

Address Same

Location (waters) Arnolds Creek

Coal Owner N/A

Well No. 1 Elevation 950

Address N/A

District Centerville County Tyler

Coal Operator N/A

Quadrangle West Union 7 1/2

Address N/A

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 4-6-79.

INSPECTOR

TO BE NOTIFIED Phillip Tracy

ADDRESS Box 173, Dodd St., Middlebourne

PHONE 758-4573

Robert L. Bell  
Deputy Director - Oil & Gas Division

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 November 10 1978 by Paul McCutchan made to Petroleum Services and recorded on the 27 day of Nov. 1978 in Tyler County, Book 211 Page 97

XX 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, WEST VIRGINIA 26505  
AC-304 - 292-6331

Very truly yours, Industrial Gas Associates

(Sign Name) John C. Cuskey  
Well Operator

Address  
of  
Well Operator

Box 1610 Street  
Greenwich City or Town  
Conn. 06830 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.

BLANKET BOND

47-095-0676 PERMIT NUMBER

"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."

Signed by

THIS IS AN ESTIMATE ONLY  
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO XX DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:  
 NAME Gene Stalnaker, Inc. NAME Dallas Frederick  
 ADDRESS Letter Gap, WV ADDRESS Box 13, Nobe, WV  
 TELEPHONE 462-7092 TELEPHONE 354-7484  
 ESTIMATED DEPTH OF COMPLETED WELL: 2500 ROTARY XX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Berea  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS \_\_\_\_\_ COMB. XX STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8			
8 - 5/8	230	230	Cir
7			
5 1/2			
4 1/2	2500	2500	125 Sks
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 100 FEET SALT WATER \_\_\_\_\_ FEET  
 APPROXIMATE COAL DEPTHS N/A  
 IS COAL BEING MINED IN THE AREA? No BY WHOM? \_\_\_\_\_

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for \_\_\_\_\_ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the \_\_\_\_\_ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

\_\_\_\_\_  
For Coal Company

\_\_\_\_\_  
Official Title