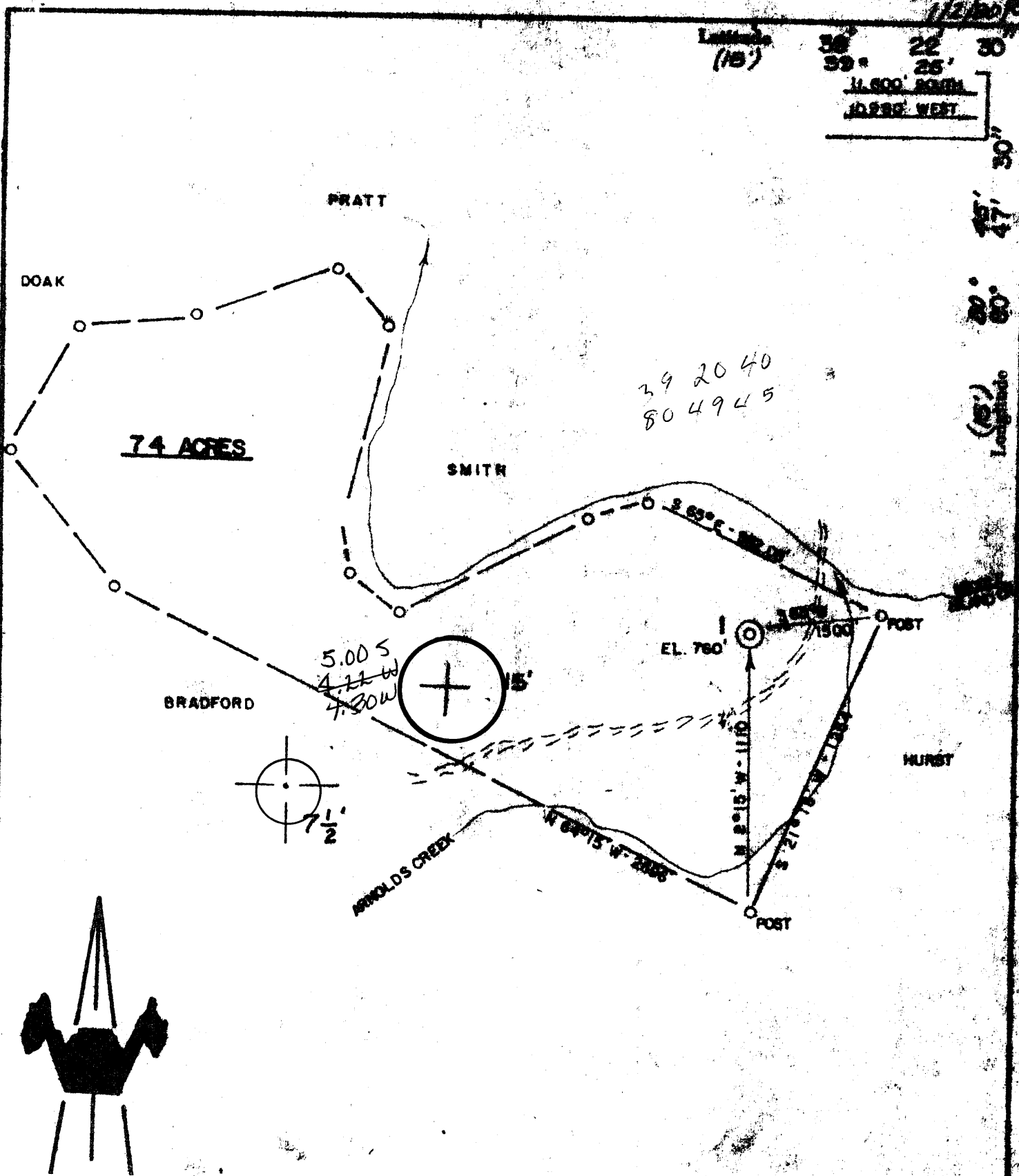


Latitude **39° 22' 30"**
 (15') **39° 25' 30"**
 11,600' NORTH
 10,995' WEST



ACCURACY: **1" / 200'**

New Location

Drill Deeper

Abandonment

Fracture

Redrill

Other

Formation **GORDON**

Est. Depth **2700'**

Oil

Gas

Other

Source of Elevation **ROUTE 74 (825')**

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

Company **INDUSTRIAL GAS ASSOCIATES**

Address **PARKERSBURG, WV**

Surface Owner **DELMER MULVAY**

Mineral Owner " "

Well No. **1** Acres **74**

Elevation **760'**

Quadrangle **WEST UNION EC Series 7.5, 15'**

County **TYLER** District **CENTERVILLE**

Date **10/18/79** Scale **1" = 500'**

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINING AND REFORMATION
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
47 - 095 - 0757
 STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.
 Engineer **CHET WATERMAN**
 Engineer's Registration No. **3788** File No. **79-748**

6-6 Wilbur (92)

FEB 6 1980

FORM IV-35
(Obverse)

Operator's
Well No. A.E. Pratt #1

WELL OPERATOR'S REPORT
OF

API Well No. 47 - 095 - 075
State County Permi

[08-78]

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas / Liquid Injection / Waste Disposal
(If "Gas", Production / Underground storage / Deep / Shallow)

LOCATION: Elevation: 760 Watershed: Middle Island Creek
District: Centerville County: Tyler Quadrangle: West Union 7 1/2

WELL OPERATOR Industrial Gas Associates DESIGNATED AGENT Dallas Frederick
Address Box 1610 Address Box 13
Greenwich, CT 06830 Nobe, WV 26158

PERMITTED WORK: Drill / Convert / Drill deeper / Redrill / Fracture or stimulate
Plug off old formation / Perforate new formation /
Other physical change in well (specify) _____

APR 10 1980

PERMIT ISSUED ON January 3, 1980

OIL & GAS DIVISION
OIL & GAS INSPECTOR FOR THE STATE OF WEST VIRGINIA

IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED

Name Phillip Tracey
Address Rt. 23
Alam, WV 26320

GEOLOGICAL TARGET FORMATION: Berea Depth _____ feet

Depth of completed well, 2209 feet Rotary / Cable Tools _____

Water strata depth: Fresh, 80 feet; salt, N/A feet.

Coal seam depths: N/A Is coal being mined in the area? No

Work was commenced January 14, 1980, and completed January 18, 1980

LOGGING AND TUBING PROGRAM

LOGGING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft	New	Used	For drilling			Left in well
Conductor								Kinds	
Fresh water	8 5/8	CW	22	X		241	241	80 sks	Class A Neat
Intermediate									Sizes
Production	4 1/2	CW	10.5	X			2152	125 sks	Depth set 2152
Casing	2"	SML	4.0	X			2025		
Packers									Perforations:
									Top Bottom

OPEN FLOW DATA

610MCF + 400 PD

Producing formation Weir Pay zone depth 1981-2074 feet

Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Bbl/d
Final open flow, 210 Mcf/d Final open flow, 2 Bbl/d

Time of open flow between initial and final tests, _____ hours

Static rock pressure, _____ psig (surface measurement) after _____ hours shut in

[If applicable due to multiple completion--]

Second producing formation Keener & Injun Pay zone depth 1718-1828 feet

Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Bbl/d
Final open flow, 400 Mcf/d Final open flow, 2 Bbl/d

Time of open flow between initial and final tests, 4 hours

Static rock pressure, 450 psig (surface measurement) after 24 hours shut in

APR 9 1980

[08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Weir - Fraced with 355 bbls water, 28,000# sand and 55,000 SCF N₂

Perforated Intervals:
1981-86 5 holes
2001-06 4 holes
2042-44 2 holes
2049-51 2 holes
2054-60 6 holes
2062-66 4 holes
2070-74 4 holes

Keener & Injun - Fraced with 278 bbls water 28,000# sand and 55,000 SCF N₂

Perforated Intervals: 1726-34 9 holes 1792-97 5 holes
1762 1 hole 1802-06 4 holes
WELL LOG 1768 1 hole 1813- 1 hole
1779-88 7 holes 1819-24 5 holes

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all free and salt water, coal, oil and gas
Soil	brown	soft	0	15	
Sand & Shale	brown	soft	15	852	
Sand - 1st Cow Run	white	soft	852	870	
Shale	black	soft	870	902	
Sand - 2nd Cow Run	white	soft	902	935	
Shale	black	soft	935	1170	
Sand - 1st salt	white	hard	1170	1266	
Shale	black	soft	1266	1292	
Sand - 2nd salt	white	hard	1292	1345	
Shale	black	soft	1345	1365	
Sand - 3rd salt	white	hard	1365	1430	
Shale	black	soft	1430	1644	
Lime-Big	white	hard	1644	1718	
Sand - Keener	white	soft	1718	1750 ✓	
Sand - Injun	white	hard	1750	1828	
Shale	black	soft	1828	1976	
Sand - Weir	black	hard	1976	2086	
Shale	black	soft	2086	2173	
Sand - Berea	white	hard	2173	2182	
Shale	black	soft	2182	2209	
TD				2209	

(Attach separate sheets to complete as necessary)

Industrial Gas Associates

Well Operator

By

John C. ...

Its

Agent

NOTE: Regulation 3.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed geological record of all formations, including coal, encountered in the drilling of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

JAN - 2 1980

Oil and Gas Division
OIL AND GAS WELL PERMIT APPLICATION
OIL & GAS DIVISION
DEPT. OF MINES

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

DATE December 28, 1979
Company Industrial Gas Associates
Address Greenwich, CT
Farm A. E. Pratt Acres 74
Location (waters) Middle Island Creek
Well No. 1 Elevation 760
District Centerville County Tyler
Quadrangle West Union 7 1/2

Surface Owner Edwin Mulvay
Address Star Route, West Union, WV
Mineral Owner Edwin Mulvay
Address Star Route, West Union, WV
Coal Owner N/A
Address N/A
Coal Operator N/A
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 9-3-80

INSPECTOR
TO BE NOTIFIED Phillip Tracey
ADDRESS Box 173, Dodd St., Middlebourne,
PHONE 758-4573

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 August 18 19 79 by Edwin and Patricia Mulvay made to Petroleum Services and recorded on the 12 day of October 19 79 in Tyler County, Book 221 Page 609

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

Address
of
Well Operator

Very truly yours, Industrial Gas Associates
(Sign Name) By: John Crisberg
Well Operator
Box 1610 Street
Greenwich City or Town
Connecticut State

47-095-0757

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 _____

BLANKET BOND

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

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Gene Stalnaker, Inc. NAME Dallas Frederick
 ADDRESS Box 9, Letter Gap, WV ADDRESS Box 13, Nobe, WV
 TELEPHONE 462-7092 TELEPHONE 354-7484
 ESTIMATED DEPTH OF COMPLETED WELL: 2600 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Berea
 TYPE OF WELL: OIL _____ GAS _____ COMB. X 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	240	240	Circ.
7			
5 1/2			
4 1/2		2600	124 sks.
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 80 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