



ACCURACY: 1' / 200'

Source of Elevation LONG RUN ROAD (802')

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.

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

WEIR - 2250'

Chet Waterman

Company	INDUSTRIAL GAS ASSOCIATES
Address	P.O. BOX 1610, GREENWICH, CONN.
Farm	L.L. & T.B. JAMES
Tract	Acres 215 Lease No.
Well (Farm) No.	2 Serial No.
Elevation (Spirit Level)	900' SC
Quadrangle	WEST UNION (7.5' SERIES), 15'
County	DODDRIDGE District CENTRAL 1
Engineer	CHET WATERMAN
Engineer's Registration No.	3788
File No.	79-62 Drawing No.
Date	1/30/79 Scale 1" = 2000'

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

WELL LOCATION MAP
FILE NO. 47-017-2347

+ 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.

FEB 20 1979

2500' Berea b-b Greenwood (89) 442



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

James #2

Oil and Gas Division

WELL RECORD

Quadrangle West Union 7 1/2

Permit No. 47-017-2347

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

Company Industrial Gas Associates
Address Box 1610, Greenwich, Connecticut
Firm James Acres 215
Location (waters) Long Run
Well No. 2 Elev. 900
District Central County Doddridge
The surface of tract is owned in fee by _____
Lawrence James
Address Greenwood, West Virginia
Mineral rights are owned by Lawrence James
Address Greenwood, West Virginia
Drilling Commenced 3-1-79
Drilling Completed 3-6-79
Initial open flow show cu. ft. _____ bbls.
Final production 850,000 cu. ft. per day 2 bbls.
Well open 4 hrs. before test 900 RP.
Well treatment details:

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	240	240	115 sks
7			
5 1/2			
4 1/2		2259	125 sks
3			
2			
Liners Used			

Attach copy of cementing record.

Weir - Fraced with 359 bbls. water - 28,000# sand - 50,000 SCF N²

Injun - Fraced with 375 bbls. water - 28,000# sand - 50,000 SCF N²

Coal was encountered at none Feet _____ Inches
Fresh water 80 Feet _____ Salt Water _____ Feet _____
Producing Sand Weir and Injun Depth W-2060-2178 I-1800-1904

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Soil	Brown	soft	0	10		
Sand & Shale		soft	10	955		
1st Cow Run	White	soft	955	968		
Shale	Black	soft	968	1005		
2nd Cow Run	White	soft	1005	1039		
Shale	Black	hard	1039	1220		
Sand	White	soft	1220	1265		
Shale	Black	soft	1265	1275		
Sand	White	soft	1275	1350		
Shale	Black	soft	1350	1515		
Sand	White	soft	1515	1575		
Shale	Brown	hard	1575	1746		
Big lime	White	soft	1746	1800		
Big Injun	White	soft	1800	1904		
Shale	Black	soft	1904	2060		
Weir	Black	soft	2060	2178		
Shale	Black	soft	2178	2251		
Berea	White	hard	2251	2254		
Shale	Black	soft	2254	2378		
TD				2378		

(over)

* Indicates Electric Log tops in the remarks section.



RECEIVED

FEB 28 1979

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE SEE 2/5/79
Company Industrial Gas Associates
Address P.O. Box 1610, Greenwich, Conn.
Farm James Acres 215
Location (waters) Long Run
Well No. 2 Elevation 900
District EE Central County Doddridge
Quadrangle West Union 7 1/2

Surface Owner Lawrence James
Address Greenwood, W.V.
Mineral Owner Lawrence James
Address Greenwood, W.V.
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 10-7-79.

INSPECTOR
TO BE NOTIFIED Paul Garrett
ADDRESS 320 Beach St. Clarksburg, W.V.
PHONE 622-3871

[Signature]
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 11-21 19 78 by Lawrence James made to Petroleum Services, Inc. and recorded on the 29th day of Nov. 19 78, in Doddridge County, Book 105 Page 605

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.

Very truly yours, [Signature]
(Sign Name) Industrial Gas Associates
Well Operator

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

P.O. Box 1610,
Street
Greenwich
City or Town
Connecticut 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

47-017-2347 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 E DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Gene Stalnaker, Inc. NAME Dallas Frederick
 ADDRESS Letter Gap, W.V. ADDRESS Jobs, W.V.
 TELEPHONE 462-7092 TELEPHONE 354-7484
 ESTIMATED DEPTH OF COMPLETED WELL: 2500 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION Berea
 TYPE OF WELL: OIL X GAS _____ COMB. _____ 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	160	250'	CLRC
7			
5 1/2			
4 1/2		2500	125 Sks
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 80 FEET SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS None
 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