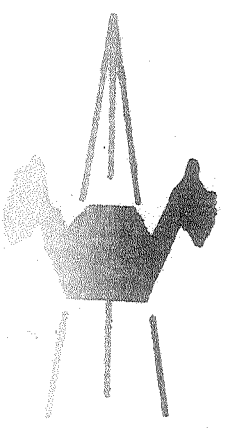
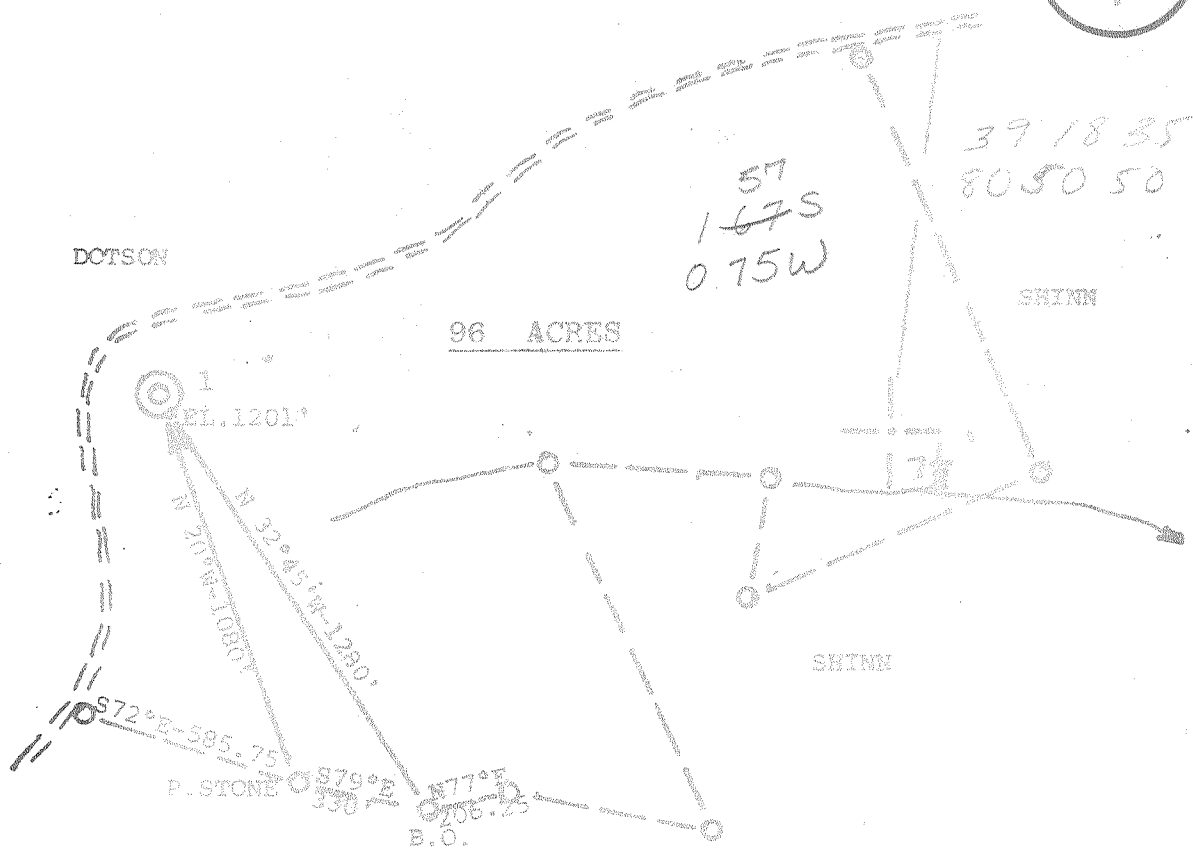


8300' SOUTH
3800' WEST



ACCURACY: 1' / 200'

- New Location
- Drill Deeper
- Abandonment
- Fracture
- Refill
- Other

Formation GORDON
Est. Depth 2700'

Source of Elevation ARNOLD CK. ROAD & LONG RUN RD (755)
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 4 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Company	INDUSTRIAL GAS ASSOCIATES	
Address	GREENWICH, CT	
Surface Owner	CAROL SHEPHERD	
Mineral Owner	MARY WELCH	
Well No.	1	Acres 96 SC
Elevation	1201'	15'
Quadrangle	WEST UNION	Section 7.5'
County	DODD/RIDGE	District CENTRAL
Date	9/12/79	Scale 1" = 500'

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

WELL LOCATION MAP
47 - 017 - 2491
STATE COUNTY PERMIT

* Denotes location of well on United States Topographic Maps.
Engineer CHET WATERMAN OCT 9 1979
Engineer's Registration No. 3122 File No. 72-628

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

Date October 19, 1979

FORM IV-35
(Obverse)

Operator's
Well No. 1
API Well No. 47 - 017 - 2491
State County

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

[08-78]

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___
(If "Gas", Production X / Underground storage ___ / Deep ___ / Shallow X /)
LOCATION: Elevation: 1201 Watershed: Lick Run
District: Central County: Doddridge Quadrangle: West Union 7½

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

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

OCT 29 1979

PERMIT ISSUED ON October 21, 19 79

OIL & GAS INSPECTOR FOR THIS WORK
Name Paul Garrett
Address 320 Beech Street
Clarksburg, WV

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

GEOLOGICAL TARGET FORMATION: Injun and Weir Depth 2170-2248 feet
Depth of completed well, 2567 feet Rotary X / Cable Tools 2402-2522
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 October 9, 19 79, and completed October 13, 19 79

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	REMARKS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	85/8	CW	22	X		266	266	80 sks Class A Neat
Coal								Sizes
Intermediate								
Production	4½	CW	10.5	X			2563	155 sks Depth set 2563
Tubing	1"	sml		X			2450	
Liners								Perforations
								Top Bottom

OPEN FLOW DATA

Producing formation Keener Pay zone depth 2146-2170 feet
Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Final open flow, 300 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 Weir Pay zone depth 2402-2522 feet
Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Final open flow, 450 Mcf/d Final open flow, 3 Bbl/d
Time of open flow between initial and final tests, ___ hours
Static rock pressure, 1150 psig (surface measurement) after 24 hours shut in

NOV 6 1979

[08-78]

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

Weir - Perforated Intervals 2407-2413 5 holes
 Fraced with 349 bbls water 2425-2430 4 holes
 and 28,000# sand and 2480-2486 4 holes
 50,000 SCF N² 2496-2506 8 holes

Injun - Perforated Intervals 2146-2156 10 holes
 Fraced with 333 bbl water and 28,000# sand and 50,000 SCF N²

WELL LOG

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	10	
Sand & Shale	Black	Soft	10	950	
Shale	Black	Soft	950	1048	
Shale	Black	Soft	1048	1160	
Sand	White	Hard	1160	1250	
Shale	Black	Soft	1250	1300	
Sand	White	Hard	1300	1385	
Shale	Black	Soft	1385	1500	
Sand	White	Hard	1500	1520	
Shale	Black	Soft	1520	1565	
Sand	White	Hard	1565	1625	
Shale	Black	Soft	1625	1800	
Sand	White	Hard	1800	1848	
Shale	Black	Soft	1848	1872	
Sand	White	Hard	1872	1904	
Shale	Black	Soft	1904	1955	
Sand	White	Hard	1955	1980	
Shale	Black	Soft	1980	1995	
Sand	White	Hard	1995	2050	
Shale	Black	Soft	2050	2086	
Lime	White	Hard	2086	2146	
Sand Keener	Brown	Hard	2146	2170	
Sand Big Injun	White	Hard	2170	2248	
Shale	Black	Soft	2248	2402	
Weir	Black	Soft	2402	2522	
Shale	Black	Soft	2522	2567	
TD				2567	

(Attach separate sheets to complete as necessary.)

Industrial Gas Associates

Well Operator

By

John Cushing

Its

Agent

NOTE: Regulation 2.02(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

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

17011 Permit 10
Petroleum Services
Box 4081
Parkersburg, WV.

SEP 21 1979
OIL & GAS DIVISION
DEPT. OF MINES

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

DATE September 20, 1979

Surface Owner Carol Sheperd
Address Pennsboro, WV

Company Industrial Gas Associates
Address Box 1610, Greenwich, CT

Mineral Owner Mary Welch
Address 3 Edgewood PK. Dr. Parkersburg, WV

Farm D. Smith Acres 96
Location (waters) Lick Run

Coal Owner N/A
Address N/A

Well No. 1 Elevation 1201
District Central County Doddridge

Coal Operator N/A
Address N/A

Quadrangle West Union 7 1/2

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 5-24-80

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

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 October 2 19 79 by Mary M. Welch made to Justin J. Henderson and recorded on the 5 day of March 19 79 in Doddridge County, Book 107 Page 641

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, John Cushing
(Sign Name) Industrial Gas Associates
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.

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 Letter Gap, WV ADDRESS Nobe, WV
 TELEPHONE 462-7092 TELEPHONE 354-7484
 ESTIMATED DEPTH OF COMPLETED WELL: 2700 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Gordon
 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	240	240	Circ.
7			
5 1/2			
4 1/2		2700	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