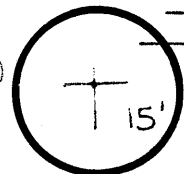


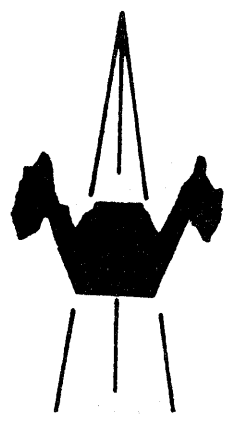
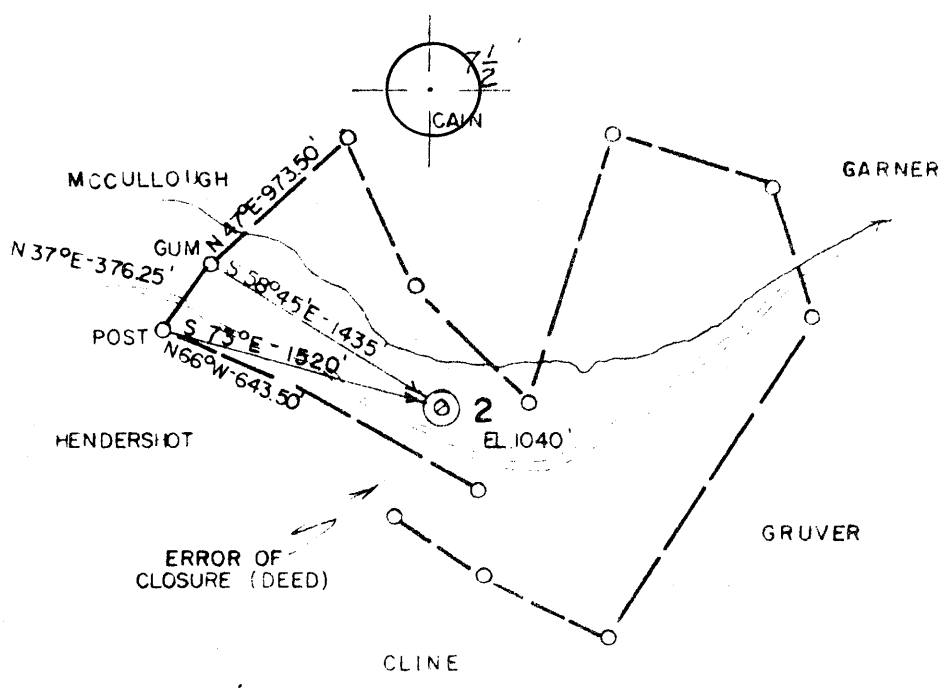
Latitude 39° 20' 00"

5610 SOUTH
8820 WEST



39 19 05
80 51 55

Longitude 80° 50' 00"



ACCURACY: 1" / 200'

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

Formation ~~WEIR~~ GORDON
Est. Depth 2500' 2700'

Oil
Gas
Other

Source of Elevation LONG RUN (766')

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

Company INDUSTRIAL GAS ASSOCIATES
Address PARKERSBURG, WV
Surface Owner C. K. McCULLOUGH
Mineral Owner C.K. McCULLOUGH, L.H. JAMES HRS.

Well No. 2 Acres 103.61
Elevation 1040' SC
Quadrangle WEST UNION Series 7.5'
County TYLER District CENTERVILLE
Date 11/30/79 Scale 1" = 1000'

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

WELL LOCATION MAP
47 - 093 - 0733
STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.
Engineer CHET WATERMAN
Engineer's Registration No. 3788 File No. 79-866

6-6 Stanley (90)

JAN 15 1980

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

Date March 17, 1980

FORM IV-35
(Obverse)

Operator's
Well No. McCullough #2

[08-78]

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 57 - 095 - 07
State County Perm

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

LOCATION: Elevation: 1040 Watershed: Long Run
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 X / Convert ___ / Drill deeper ___ / Redrill ___ / Fracture or stimulate ___
Plug off old formation ___ / Perforate new formation ___
Other physical change in well (specify) _____

MAR 18 1980

PERMIT ISSUED ON December 17, 1979

OIL & GAS INSPECTOR FOR THIS WORK & GAS DIVISION
Name Phillip Tracey DEPT. OF MINES

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

Address Rt. 23
Alma, WV 26320

GEOLOGICAL TARGET FORMATION: Berea Depth _____ feet

Depth of completed well, 2480 feet Rotary X / 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 December 31, 1979, and completed January 5, 1980

CASING AND TUBING PROGRAM

| CASING 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 |
| Gal | | | | | | | | | Sizes |
| Intermediate | | | | | | | | | |
| Production | 4 1/2 | CW | 10.5 | X | | | 2416 | 125 sks | Depths set 2416 |
| Tubing | 1" | SML | | X | | | 2250 | | |
| Spacers | | | | | | | | | Perforations: |
| | | | | | | | | | Top Bottom |

OPEN FLOW DATA

580 Mcf + 3 BOPD

Producing formation Weir Pay zone depth 2238-2358 feet

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

Final open flow, 200 Mcf/d Final open flow, 1 Bbl/d

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

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

[If applicable due to multiple completion--]

Second producing formation Injun & Keener Pay zone depth 1967-2082 feet

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

Final open flow, 380 Mcf/d Final open flow, 2 Bbl/d

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

Static rock pressure, 500 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 328 bbls water, 28,000# sand and 50,000 SCF N²

Perforated Intervals:
2239-46 6 holes
2260-66 5 holes
2296-2300 2 holes
2314-26 10 holes
2338-44 5 holes

Injun & Keener - Fraced with 274 bbls. water 28,000# Sand and 50,000 SCF N²

Perforated Intervals: {
Keener { 1967-72 3 holes
Keener { 1976-80 3 holes
Keener { 2013-15 2 holes
Keener { 2023 1 hole
Keener { 2028 1 hole
Injun { 2033-35 2 holes
Injun { 2036-40 4 holes
Injun { 2044-54 5 holes
Injun { 2060-68 5 holes
Injun { 2070-82 5 holes

WELL LOG

| FORMATION | Color | Hard or Soft | By Top Feet | Bottom Feet | Remarks Including indication of all free gas and salt water, coal, oil and gas |
|-----------------|-------|--------------|-------------|-------------|--|
| Soil | brown | soft | 0 | 15 | |
| Shale & Sand | black | soft | 15 | 950 | |
| Shale | black | soft | 950 | 1175 | |
| Sand | white | hard | 1175 | 1200 | |
| Shale | black | soft | 1200 | 1328 | |
| Sand - 1st salt | white | hard | 1328 | 1364 | |
| Shale | black | soft | 1364 | 1413 | |
| Sand - 2nd salt | white | hard | 1413 | 1451 | |
| Shale | black | soft | 1451 | 1458 | |
| Sand | white | hard | 1458 | 1509 | |
| Shale | black | soft | 1509 | 1777 | |
| Sand - Maxon | white | hard | 1777 | 1853 | |
| Shale | black | soft | 1853 | 1900 | |
| Lime | white | hard | 1900 | 1957 | |
| Sand - Keener | white | hard | 1957 | 2000 | |
| Sand - Injun | white | hard | 2000 | 2088 | |
| Shale | black | soft | 2088 | 2238 | |
| Sand - Weir | black | soft | 2238 | 2358 | |
| Shale | black | soft | 2358 | 2425 | |
| Sand - Berea | white | hard | 2425 | 2429 | |
| Shale | black | soft | 2429 | 2480 | |
| TD | | | | 2480 | |

(Attach separate sheets to complete as necessary)

Industrial Gas Associates

Well Operator

By

John Cushing

Its

Agent

NOTE: Regulation 2.08(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
DEC 17 1979

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

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

DATE December 14, 1979

Surface Owner C. K. McCullough
Address Greenwood, WV
Mineral Owner C. K. McCullough
Address Greenwood, WV
Coal Owner N/A
Address N/A
Coal Operator N/A
Address N/A

Company Industrial Gas Associates
Address Box 1610, Greenwich, CT
Farm C. K. McCullough Acres 103.61
Location (waters) Long Run
Well No. 2 Elevation 1040'
District Centerville County Tyler
Quadrangle West Union 7.5

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 8-18-80.

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

Robert L. [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 February 2 19 79 by C. K. McCullough made to Petroleum Services, Inc and recorded on the 13 day of February 1979, in Doddridge County, Book 218 Page 207

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) [Signature]
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.

47-095-0755

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 COVER

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