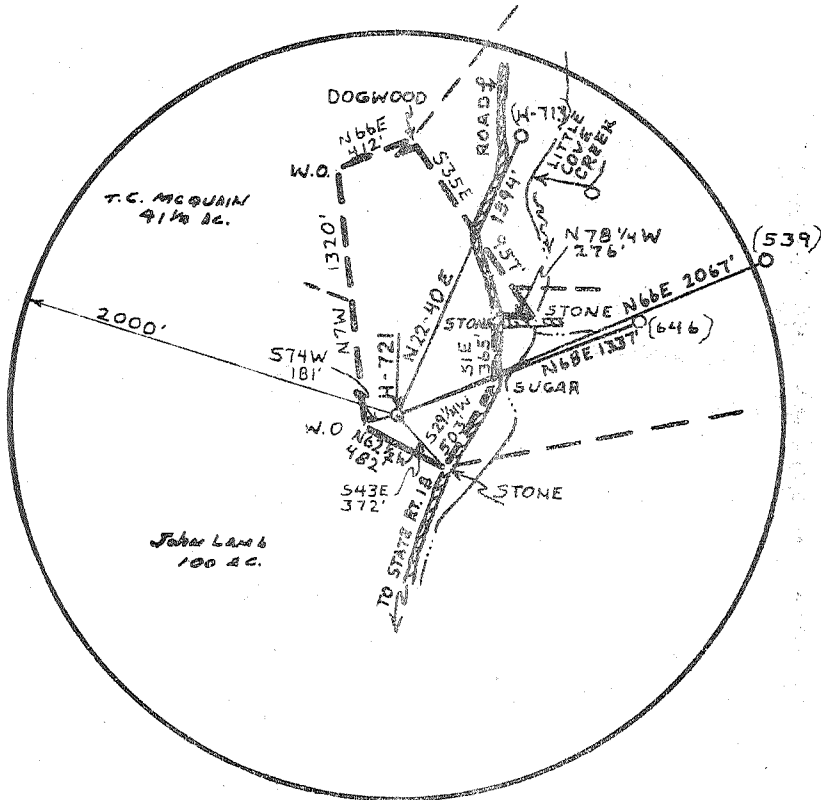
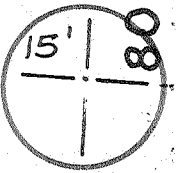


Latitude 39° 05'

12960 S  
2450 W

2465  
0.46W

45



7 1/2'

NORTH

TARGET FORMATION BIG INJUN  
ESTIMATED DEPTH 2000'

API WELL NO. 47 - 021 - 3428  
STATE COUNTY PERMIT

PROPOSED WORK:  
DRILL

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
(IF "GAS," PRODUCTION  STORAGE  DEEP  SHALLOW

Source of Location: ROAD INTERSECTION ELEV. 784'

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 8 of article 2 of the constitution of the State of West Virginia and by section 10 of the oil and gas section of the mining laws of West Virginia.

*William R. Mossor*

Vertical accuracy, one part in 200

WELL OPERATOR: GLENN L. HAUGHT & SONS  
SMITHVILLE, W.VA. 26178  
DESIGNATED AGENT: WARREN HAUGHT  
SMITHVILLE, W.VA. 26178  
SURFACE OWNER - ETHEL A. & OKEY WHITE-D.B.148-465  
OIL & GAS ROYALTY OWNER - C. EDWARD TALBOTT

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

WELL LOCATION MAP  
FILE NO 47-021-3428

Denotes location of well on United States Topographic Maps, scale 1 to 62,500 feet and larger, and shows all the information required by paragraph 8 of article 2 of the constitution of the State of West Virginia and by section 10 of the oil and gas section of the mining laws of West Virginia.

Denotes one inch squares on border of original tracing.

Lease No. 28  
Farm No. VH-721  
Section No. 918'  
Twp. Holbrook  
Range AUBURN, W.VA. 7E QUAD. SE  
WATER SHED LITTLE COVE  
GILMER District TROY  
Surveyor WILLIAM R. MOSSOR, L.L.S.  
Drawing No. 551  
Date 6 JAN. 1979  
Scale 1" = 1000'

FEB 6 1979

6-6 Corings (14) 142

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

Date: February 20, 1979

FORM IV-35  
(Obverse)

Operator's  
Well No. VH-721

[08-78]

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

API Well No. 43 - 021 - 342  
State County Per

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

LOCATION: Elevation: 918' Watershed: Little Cove  
District: Troy County: Gilmer Quadrangle: Auburn, WV  
Talbott

WELL OPERATOR Glenn L. Haught & Sons DESIGNATED AGENT Warren R. Haught  
Address Smithville, W.Va. 26178 Address Smithville, W. Va. 26178

PERMITTED WORK: Drill  / Convert  / Drill deeper  / Redrill   
Plug off old formation  / Perforate new formation   
Other physical change in well (specify) \_\_\_\_\_

**RECEIVED**  
MAR - 8 1979

PERMIT ISSUED ON January 12, 1979

OIL & GAS DIVISION  
DEPT. OF MINES  
Name Kenneth Paul Goodnight  
Address Smithville, W. Va.  
477-3660

(IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
\_\_\_\_\_, 19\_\_\_\_)

GEOLOGICAL TARGET FORMATION: Big Injun Depth 1800-1890 feet

Depth of completed well, 2010 feet Rotary  / Cable Tools

Water strata depth: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.

Coal seam depths: NONE Is coal being mined in the area? No

Work was commenced Jan. 19, 1979, and completed Jan. 23, 1979

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-IN OR SACKS (Cubic feet)	REMARKS
	Size	Grade	Weight per ft	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	8 5/8	K-55	20 lb	X		201'	201'	75 Sacks	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		1946'	1946'	140 Sacks	Depth set
Tubing									
Liners									Perforations:
									1877 - 1883
									1804 - 1832
									1727 - 1837

OPEN FLOW DATA

Producing formation Big Injun Pay zone depth 1800-1890

Gas: Initial open flow, \_\_\_\_\_ Mcf/d Oil: Initial open flow, None bbl/d

Final open flow, 780,000 Mcf/d Final open flow, \_\_\_\_\_ bbl/d

Time of open flow between initial and final tests, 8 hours

Static rock pressure, 605 psig (surface measurement) after 12 hours shut in

[If applicable due to multiple completion--]

Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_

Gas: Initial open flow, \_\_\_\_\_ Mcf/d Oil: Initial open flow, \_\_\_\_\_ bbl/d

Final open flow, \_\_\_\_\_ Mcf/d Final open flow, \_\_\_\_\_ bbl/d

Time of open flow between initial and final tests, \_\_\_\_\_ hours

MAR 20 1979

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

Hydrafraced by Halliburton 1-30-79 -- 1,300 Gal. Acid -- 777 Bbls. Water  
 33,500 Lbs. 20/40 Mesh Frac Sand -- 8,500 Lbs. 80/100 Mesh Frac Sand.  
 Perforations 12--1877-1883  
                   8--1804-1832  
                   14--1727-1737

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Slate	Gray	Soft	00	20	Dusting
Red Rock	Red	Soft	20	30	
Slate	Gray	Soft	30	45	
Red Rock	Red	Soft	45	65	
Sand	White	Hard	65	90	
Slate	Gray	Soft	90	105	
Sand	White	Hard	105	120	
Slate	Gray	Soft	120	145	
Red Rock	Red	Soft	145	150	
Sand	White	Hard	150	185	
Shale	Gray	Soft	185	200	
Sand	White	Hard	200	240	
Slate	Gray	Soft	240	300	
Sand	Gray	Med.	300	335	
Slate	Gray	Soft	335	390	
Sand	White	Soft	390	424	
Slate	White	Soft	424	448	
Red Rock	Red	Soft	448	468	
Slate	Gray	Soft	468	580	
Red Rock	Red	Soft	580	595	
Slate	Gray	Soft	595	692	
Sand	White	Med.	692	720	
Slate	Gray	Soft	720	825	
Slate	Black	Soft	825	870	
Slate	Gray	Soft	870	940	
Sand	White	Med.	940	960	
Shale	Gray	Soft	960	1000	
Sand	White	Med.	1000	1030	
Slate	Black	Soft	1030	1040	
Slate	Gray	Soft	1040	1090	
Sand	White	Hard	1090	1140	
Slate	Black	Soft	1140	1168	
Shale	Gray	Soft	1168	1206	
Slate	Black	Soft	1206	1216	

(Attach separate sheets to complete as necessary)

GLENN L. HAUGHT & SONS  
 Well Operator  
 By Warren R. Haught  
 Its Partner

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."

FORMATION	COLOR	HARD OR SOFT	TOP FT.	BOTTOM FT.	REMARKS
Slate	Gray	Soft	1216	1240	Dusting
Sand	White	Med.	1240	1277	
Slate	Black	Soft	1277	1315	
Sand	White	Med.	1315	1441	
Slate	Black	Soft	1441	1451	
Sand	White	Med.	1451	1560	
Red Rock	Red	Soft	1560	1568	
Slate	Gray	Med.	1568	1582	
Red Rock	Red	Soft	1582	1585	
Slate	Gray	Med.	1585	1588	
Red Rock	Red	Soft	1588	1597	
Slate	Gray	Med.	1597	1614	
Red Rock	Red	Soft	1614	1620	
Slate	Gray	Med.	1620	1625	
Red Rock	Red	Soft	1625	1628	
Sand	White	Med.	1628	1644	
Red Rock	Red	Soft	1644	1651	
Sand	White	Med.	1651	1680	
L. Lime	White	Hard	1680	1695	
B. Monday	Dark	Med.	1695	1700	
B. Lime	White	Hard	1700	1792	Little Gas at 1700
K. Sand	White	Soft	1792	1800	
B. Injun	White	Hard	1800	1890	80 Ft. Pocket
Shale	Gray	Med.	1890	2010	T.D.

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MAR - 8 1979

OIL & GAS DIVISION  
DEPT. OF MINES

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's  
Well No. VH-721  
API Well No. 47-021-3428  
State County Permi

WELL TYPE: Oil \_\_\_ / Gas XX /  
(If "Gas", Production XX / Underground storage \_\_\_ / Deep \_\_\_ / Shallow XX /)

LOCATION: Elevation: 918' Watershed: Little Cove  
District: Troy County: Ritchie Quadrangle: Auburn, WV

WELL OPERATOR Glenn L. Haught & Sons  
Address Smithville, WV 26178

DESIGNATED AGENT Warren R. Haught  
Address Smithville, WV 26178

OIL & GAS  
ROYALTY OWNER C. Edward Talbott  
Address Morgantown, WV 26505

COAL OPERATOR None  
Address \_\_\_\_\_

Acreage 28

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER Ethel A. & Okey White  
Address Troy, WV 26443

Name None

Acreage 28

Address \_\_\_\_\_

FIELD SALE (IF MADE) TO:

Name \_\_\_\_\_

Name \_\_\_\_\_  
Address \_\_\_\_\_

Address \_\_\_\_\_

OIL & GAS INSPECTOR TO BE NOTIFIED

COAL LESSEE WITH DECLARATION ON RECORD:

Name Kenneth P. Goodnight  
Address Smithville, WV 26178  
477-3660

Name None

Address \_\_\_\_\_

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed \_\_\_ / lease \_\_\_ / other contract XX / dated 12/4, 1978, to the undersigned well operator from KEY OIL COMPANY

[If said deed, lease, or other contract has been recorded:]

Recorded on 12/7, 1978, in the office of the Clerk of the County Commission of Gilmer County, West Virginia, in Deed Book 301 at page 664. A permit is requested as follows:

PROPOSED WORK: Drill XX / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate \_\_\_ /  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_ /  
Other physical change in well (specify) \_\_\_\_\_

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS  
CONSERVATION COMMISSION  
1611 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

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JAN 13 1979  
OIL & GAS DIVISION  
DEPT. OF MINES  
BLANKET BOARD

GLENN L. HAUGHT & SONS  
Well Operator

By Warren R. Haught  
Its \_\_\_\_\_ Partner

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRIILLING CONTRACTOR (IF KNOWN) Glenn L. Haught & Sons  
Address Rt. # 3 Box 14  
Smithville, WV 26178

GEOLOGICAL TARGET FORMATION, Big Injun

Estimated depth of completed well, 2100 ' feet Rotary XX/ Cable tools     /  
Approximate water strata depths: Fresh, 75 feet; salt,      feet.  
Approximate coal seam depths: none Is coal being mined in the area? Yes     / No XX /

DRILLING AND TUBING PROGRAM

DRILLING 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	K-55	20lb	x		200'	200'	75 sacks	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	10.50	x		2100	2100	100 sacks	Depths set
Tubing									
Runners									Perforations:
									Top Bottom

**NOTE:** Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and **THIS PERMIT MUST BE POSTED AT THE WELL SITE** filed in connection therewith.

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~~ 9-12-79.

*[Signature]*  
**Deputy Director - Oil & Gas Division**

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator     / owner     / lessee     / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date:     , 19    

By       
Its