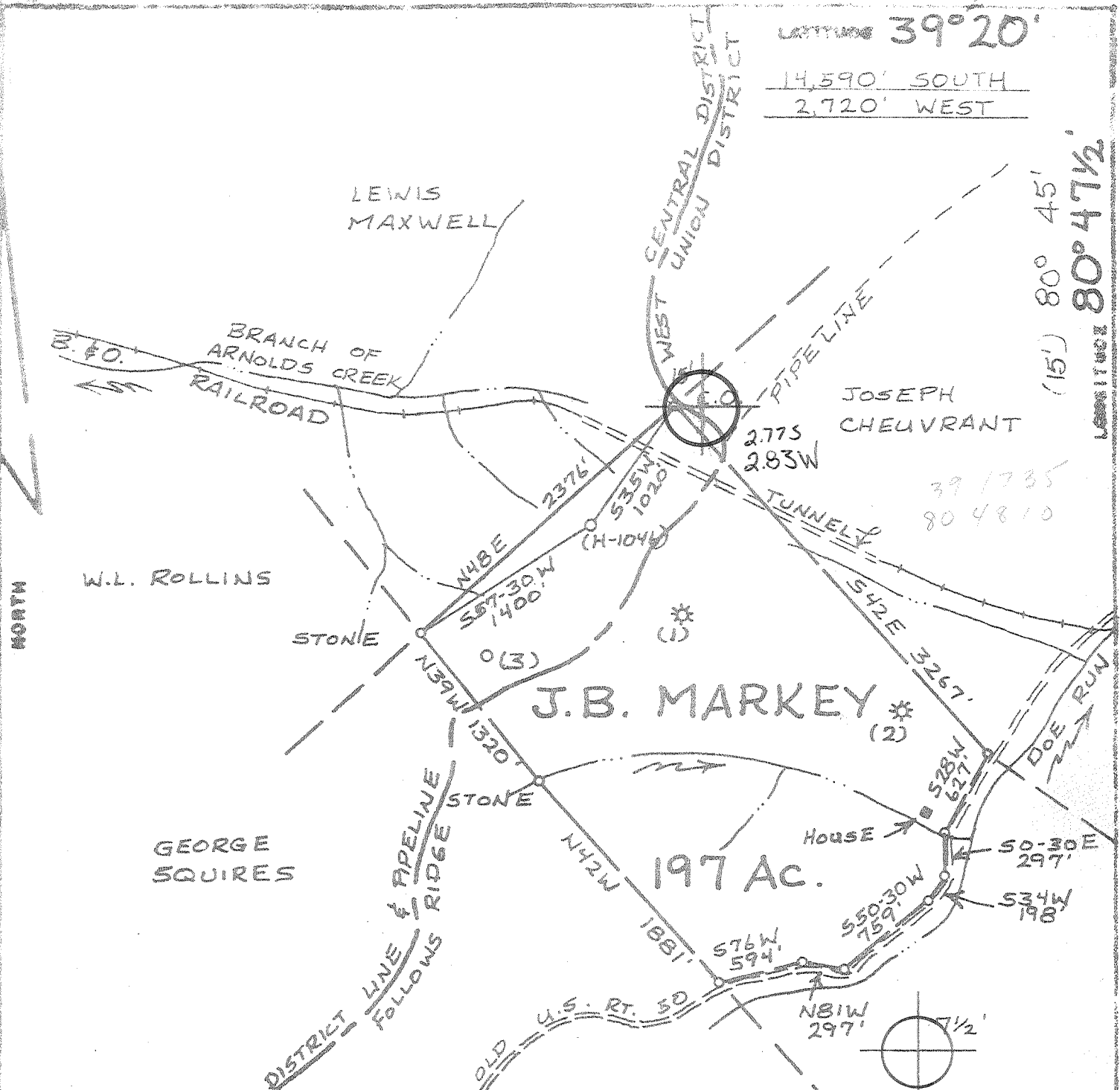


Latitude **39° 20'**  
 14,590' SOUTH  
 2,720' WEST



(15') 80° 45'  
 DISTRICT 80° 47 1/2'

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION B.M. 878'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.  
 (SIGNED) William R. Moore  
 R.P.E. \_\_\_\_\_ L.L.S. 551

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-B  
 (8-78)



DATE 12 AUGUST, 1980  
 OPERATOR'S WELL NO H-1046  
 API WELL NO 47-017-2819  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS", PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW   
 LOCATION: ELEVATION 1137' WATER SHED ARNOLDS CREEK  
 DISTRICT CENTRAL COUNTY DODDRIDGE  
 QUADRANGLE WEST UNION, W.VA. 7 1/2' QUAD. & 15' SE  
 SURFACE OWNER KENNETH POWELL ACREAGE 197  
 OIL & GAS ROYALTY OWNER J.N. MARKEY LEASE ACREAGE 197  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE \_\_\_\_\_  
 STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION WEIR ESTIMATED DEPTH 2500'  
 WELL OPERATOR HAUGHT INC. DESIGNATED AGENT WARREN HAUGHT  
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

SEP 16 1980

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

OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil X / Gas X /  
(If "Gas", Production X / Underground storage \_\_\_\_\_ Deep \_\_\_\_\_ Shallow X )  
LOCATION: Elevation: 1137' Watershed: Arnolds Creek  
District: Central County: Doddridge Quadrangle: West Union, W.V. 71'

WELL OPERATOR Haught, Inc. DESIGNATED AGENT Warren R. Haught  
Address Route 3, Box 14 Address Smithville, WV 26178  
Smithville, WV 26178

OIL & GAS ROYALTY OWNER J.N. Markey COAL OPERATOR None  
Address Lexington, Ky. Address \_\_\_\_\_

Acres 197 COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_

SURFACE OWNER Kenneth Powell Address \_\_\_\_\_  
Address West Union, W.V. 26456

Acres 197 Name \_\_\_\_\_

FIELD SALE (IF MADE) TO: Address \_\_\_\_\_  
Name \_\_\_\_\_

Address \_\_\_\_\_ COAL LESSEE WITH DECLARATION ON RECORD:  
Name None

OIL & GAS INSPECTOR TO BE NOTIFIED Address \_\_\_\_\_  
Name Paul Garrett

Address 321 Beeth Street  
Clarksburg, W.V. 26301

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed \_\_\_\_\_ / lease X / other contract \_\_\_\_\_ / dated August, 1980, to the undersigned well operator from J. N. Markey & Kenneth Powell

[If said deed, lease, or other contract has been recorded:]  
Recorded on August 9, 1980, in the office of the Clerk of the County Commission of \_\_\_\_\_ County, West Virginia, in Lease Book 116 at page 413. A permit is requested as follows:

PROPOSED WORK: Drill X / 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.

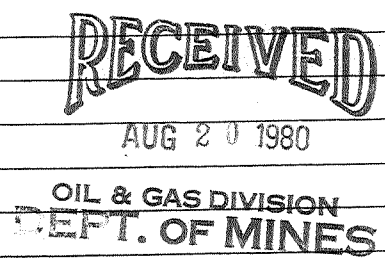
The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

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  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 343-3092

Haught, Inc.  
Well Operator  
By Warren R. Haught  
Its President

BLANKET BOND



PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) Haught, Inc.  
Address Smithville, WV 26178

GEOLOGICAL TARGET FORMATION, Weir  
Estimated depth of completed well, 2500 feet Rotary  Cable tools \_\_\_\_\_  
Approximate water strata depths: Fresh, 50 feet; salt, \_\_\_\_\_ feet.  
Approximate coal seam depths: None Is coal being mined in the area? Yes \_\_\_\_\_ No

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	K-55	20#	X		200'	200'	75 sacks	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	10.5#	X			2500'	100 sacks	Deaths set
Logging									
Packers									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-3, "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 § 22-4-3c 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 is noted as such on the Form IV-2 filed in connection therewith.

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 4-28-81.

*Thomas E. Huggins*  
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 \_\_\_\_\_

STATE OF WEST VIRGINIA

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

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

WELL TYPE: Oil  Gas  Liquid Injection  Waste Disposal   
(If "Gas", Production  Underground storage  Deep  Shallow )  
LOCATION: Elevation: 1137' Watershed: Arnolds Creek  
District: Central County: Doddridge Quadrangle: West Union W.V. 7 1/2  
WELL OPERATOR Haught, Inc. J.N. Markey 1046  
Address Rt. 3 Box 14 Warren R. Haught  
Smithville, WV 26178 Smithville, WV 26178

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

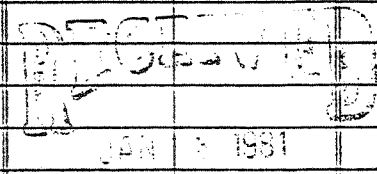
PERMIT ISSUED ON August 28, 1980, OIL & GAS INSPECTOR FOR THIS WORK:  
(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR RERWORKING. VERBAL PERMISSION OBTAINED) Name Paul Garrett  
Address 321 Beeth Street

Clarksburg, W.V. 26301  
GEOLOGICAL TARGET FORMATION: Big Injun & Weir Depth 2165 to 2230  
2400 to 2440 feet

Depth of completed well, 2470 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 September 23, 1980, and completed September 30, 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		
Conductor								Rinds
Fresh water	8-5/8	K-55	20#	X		561'	561'	80 sacks
Coal								Sizes
Intermediate								
Production	4 1/2	J-55	10.5#	X			2459'	130 sacks
Tubing								
Liners								Perforations:
								Top Bottom
								2170 2432



OPEN FLOW DATA  
Producing formation Big Injun & Weir Pay zone depth 2165 to 2230  
2400 to 2440 feet

Gas: Initial open flow, \_\_\_\_\_ Mcf/d Oil: Initial open flow, \_\_\_\_\_ Bbl/d  
" Final open flow, 345 Mcf/d Final open flow, 1/2 Bbl/d  
Time of open flow between initial and final tests, 8 hours  
Static rock pressure, 670 psig (surface measurement) after 12 hours shut in

[If applicable due to multiple completion--]

Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet  
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  
Static rock pressure, \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in

Continued on reverse side.

[08-78]

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

Hydra fraced by Halliburton 10-23-80 784 Bbls. Water 350,000 Lbs.  
20/40 Mesh Sand--120,000lb 80/100 Mesh Sand-- 1000  
Gal. Acid.

Perforations: 20--2170--2180  
WELL LOG 16--2408--2432

FORMATION	Color	Hard or Soft	% Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Red Rock			580	600	
Slate/Red Rock			600	654	
Slate			654	742	
Red Rock			472	779	
Slate			779	813	
Sand			813	831	
Red Rock			831	842	
Slate			842	896	
Red Rock			896	942	
Slate			942	960	
Red Rock			960	1016	
Slate			1016	1022	
Red Rock			1022	1070	
Shale			1070	1175	
Sand			1175	1220	
Shale			1220	1325	
Sand			1325	1338	
Slate			1338	1355	
Sand/Slate			1355	1445	
Sand			1445	1514	
Slate			1514	1525	
Sand/Slate			1525	1590	
Sand			1590	1610	
Sand/Slate			1610	1645	
Sand			1645	1730	
Slate			1730	1748	
Sand			1748	1782	
slate			1782	1838	
Sand			1838	1890	
Slate			1890	1978	
Sand			1978	1994	
Slate			1994	2055	
L. Lime			2055	2080	
B. Lime			2080	2165	
Injun			2165	2230	
Slate			2230	2400	
Weir Sand			2400	2440	
Slate			2440	2470	T.D.

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."

Haught, Inc.  
Well Operator  
By Wanda R. Haught  
Its President