



FILE NO. _____
 DRAWING NO. _____
 SCALE 1"=1000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD ELEV. 952'

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) Willie R. Mosser
 R.P.E. _____ L.L.S. 521

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 18-78



DATE 24 MARCH 1980
 OPERATOR'S WELL NO. #917
 API WELL NO. 47-017
 STATE W.VA. COUNTY DODDRIDGE PERMIT 2642

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 982' WATER SHED TOWN CAMP RUN
 DISTRICT COVE 15' COUNTY DODDRIDGE
 QUADRANGLE NEW MILTON, W.VA. 7 1/2' QUAD. WC
 SURFACE OWNER HENRY STAARMAN ACRES 108
 OIL & GAS ROYALTY OWNER HENRY STAARMAN LEASE ACRES 108
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5700'
 WELL OPERATOR GLENN J. HAUGHT & SONS DESIGNATED AGENT WARREN HAUGHT
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

Date: June 23, 1980

Operator's Well No. H-973
API Well No. 017-2642
State County Farm

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

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

WELL TYPE: Oil X Gas X Liquid Injection _____ Waste Disposal _____
(If "Gas", Production X Underground storage _____ Deep _____ Shallow X)
LOCATION: Elevation: 982' Watershed: Town Camp Run
District: Cove County: Doddridge Quadrangle: New Milton, WV 7#
WELL OPERATOR Glenn L. Haught & Sons Henry Stearman H-973
Address Smithville, WV 26178 DESIGNATED AGENT Warren R. Haught
Address Smithville, WV 26178

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

RECEIVED

AUG 20 1980

PERMIT ISSUED ON April 2, 1980, OIL & GAS INSPECTOR FOR THIS WORK: **OIL & GAS DIVISION**
DEPARTMENT OF MINES
Name Paul Garrett
Address 321 Beech Street
Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Devonian Shale Depth 3748 to 5270'
Depth of completed well, 5531 feet Rotary X / Cable Tools _____
Water strata depth: Fresh, _____ feet; salt, _____ feet.
Coal seam depths: None Is coal being mined in the area? No
Work was commenced May 24, 1980, and completed June 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		
Conductor								Stands
Fresh water	<u>3 5/8</u>	<u>K-55</u>	<u>20#</u>	<u>X</u>		<u>1313'</u>	<u>1313'</u>	<u>200sacks</u>
Coal								Sizes
Intermediate								
Production	<u>4 1/2</u>	<u>J-55</u>	<u>10.5#</u>	<u>X</u>			<u>5373'</u>	<u>350sacks</u>
Tubing								
Liners								Perforations:
								Top Bottom
								<u>4054 5248</u>

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3748 to 5270'
Gas: Initial open flow, 1640 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, 8 hours
Static rock pressure, 2050 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

SEP 9 1980

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
Hydrafraced by Halliburton 6-5-80 750,000 lbs 20/40 Mesh
Sand 245,000 Lbs 80/100 Mesh Sand 1,500 gal. acid
1752 Bbls. Water

Perforations: 15--5186--5248 *Edh*
13--4938--5074 *Edh*
11--4054--4578 *Edh*

WELL LOG

FORMATION	Color	Hard or Soft	7 Top Feet	Bottom Feet	Remarks Including indication of all fossils and salt water, coal, oil and gas.
Sand			981	1013	
Red Rock			1013	1033	
Sand			1033	1050	
Shale			1050	1103	
Sand			1103	1140	
Red Rock			1140	1155	
Shale			1155	1160	
Red Rock			1160	1180	
Sand			1180	1240	
Shale			1240	1304	
Sand			1304	1368	
Shale			1368	1404	
Sand			1404	1434	
Shale			1434	1445	
Sand			1445	1530	
Shale			1530	1650	
Sand			1650	1670	
Shale			1670	1720	
Sand			1720	1860	
Shale			1860	1970	
L. Lime			1970	2007	
P. Cave			2007	2030	
B. Lime			2030	2082	
Injun			2082	2168	
Shale			2168	2265	
Sand			2265	2400	
Shale			2400	2540	
Sand			2540	2690	
Shale			2690	2830	
Sand			2830	2930	
Shale			2930	3059	
Sandy Shale			3059	3091	
Sand			3091	3110	
Shale			3110	3334	
Sand			3334	3350	
Shale			3350	3372	
Sand			3372	3388	
Shale			3388	3398	
Sand			3398	3435	
Shale			3435	3520	
Sand			3520	3530	
Shale			3530	3615	
Sand			3615	3748	
Shale			3748	4075	
Sand			4075	4130	
Shale			4130	4250	
Sand/Shale			4250	4315	
Sand			4315	4345	
Shale			4345	4430	
Sand			4430	4466	
Shale			4466	4590	
Sand/Shale			4590	4780	
Sand			4780	4800	
Shale			4800	5055	
Sand <i>BENSON</i>			5055	5085	
Shale			5085	5190	
Sand <i>ALEX</i>			5190	5270	
Shale <i>DEUSA</i>			5270	5531	T.D.

NOTE: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed

Glenn L. Haught & Sons
Well Operator

By *Walter R. Haught*

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: 982' Watershed: Town Camp Run
District: Cove County: Doddridge Quadrangle: New Milton, WV 7 1/2

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

DESIGNATED AGENT Warren R. Haught
Address Smithville, WV 26178

OIL & GAS ROYALTY OWNER Henry Staarman
Address Route 1, Box 78
New Milton, WV

COAL OPERATOR None
Address _____

Acreage 108

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER Same as above

Name _____

Address _____

Address _____

Acreage 108

Name _____

FIELD SALE (IF MADE) TO:

Address _____

Name _____

Address _____

COAL LESSEE WITH DECLARATION ON RECORD:

Name None

Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED

Name Paul Garrett

Address 321 Beech Street
Clarksburg, WV 26301

OIL & GAS DIVISION
DEPT. OF MINES

RECORDED
MAR 28 1980

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 January 12, 19 80, to the undersigned well operator from Henry Staarman

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

Recorded on February 20, 19 80, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Lease Book 113 at page 523. 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 § 22-2-3 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) 342-3092

Glenn L. Haught & Sons

Well Operator

By

Warren R. Haught

Is

Partner

BLANKET BOND

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-2 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Glenn L. Haught & Sons
Address Smithville, WV 26178

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5700 feet Rotary X 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 X

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									Stands
Fresh water	10 3/4			X		300'	300'	75 sacks	
Coal									Stands
Intermediate	7"			X		2000'	2000'	50 sacks	
Production	4 1/2	J-55	10.5#	X			5700'	100 sacks	Deaths set
Tuning									
Liners									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 drilling 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 12-2-80.

[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 § 22-6-22, 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 _____