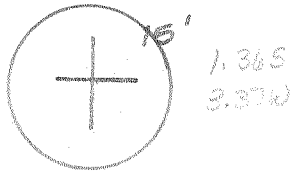


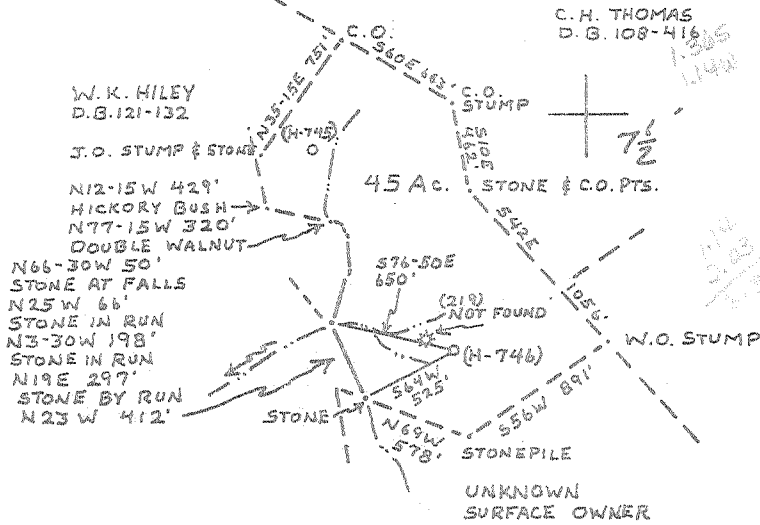
LATITUDE 39° 20'

7080 SOUTH  
6040 WEST



1.425  
3.28W

(15') 80° 45'  
LONGITUDE 80° 47 1/2'



29 13 43  
80 48 43

FILE NO.  
DRAWING NO.  
SCALE 1" = 1000'  
MINIMUM DEGREE OF  
ACCURACY 1:200  
PROVEN BOUND OF  
ELEVATION HIGH KNOB  
ELEV. 1268'

THE UNDERSIGNED HEREBY CERTIFY  
THAT THIS PLAN IS CORRECT TO THE  
BEST OF MY KNOWLEDGE AND BELIEF AND  
KNOWS ALL THE REGULATIONS RELATIVE  
TO THE SURVEYING AND REGULATION OF  
SURFACE OWNERS OF THE DEPARTMENT OF  
MINES.  
(SIGNED) *William L. Massey*  
R.F.E. 551



DATE 17 MAY 1979  
OPERATOR'S WELL NO. H-746  
WELL NO. 47-017 2438  
STATE COUNTY

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 1052' WATER SHED ARNOLD CREEK  
DISTRICT CENTRAL COUNTY DODDRIDGE  
QUADRANGLE WEST UNION, W.VA. 7 1/2' QUAD. 15' SE  
SURFACE OWNER L.D. J. CORP. ACREAGE 45  
OIL & GAS ROYALTY OWNER WARREN R. & LENNA G. HAUGHT. ACREAGE 47.66  
LEASE NO.  
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REFRAC  OR  
STIMULATE  PLUS OFF OLD FORMATION  PERFORATE NEW  
FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON  OR SHUT IN AND REPLUG   
TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPT. 5500 JUN 14 1979  
WELL OPERATOR GLENN L. HAUGHT & SONS SUPERVISOR WARREN HAUGHT  
ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

FORM IV-35  
(Obverse)

Operator's  
Well No. H-746

[08-78,

WELL OPERATOR'S REPORT / 3  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 17-017-2438  
State County Permit

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

LOCATION: Elevation: 1052 Watershed: Arnold Creek  
District: Central County: Doddridge Quadrangle: West Union, WV 7 1/2'

OPERATOR Glenn L. Haught & Sons W.R. & L.G. Haught #H-746  
DESIGNATED AGENT Warren R. Haught  
Address Smithville, WV 26178 Address 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 May 22, 19 79 OIL & GAS INSPECTOR FOR THIS WORK:

APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED  
Name Paul Garrett  
Address 321 Beech Street  
Clarksburg, WV 26301

LOGICAL TARGET FORMATION: Gordon & Weir Sands Depth 2283 to 3378 feet

Depth of completed well, 3615 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 June 14, 19 79, and completed June 20, 19 79

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		
Conductor								Rinds
Production water	8 5/8	K-55	20#	X		821'	821'	200 sacks
Intermediate								Sizes
Production	4 1/2	J-55	10.5#	X		3577'	175 sacks	Depth set
LINE								Perforations:
								2283 3378

PRODUCTION FLOW DATA

Producing formation Gordon & Weir Sands Pay zone depth 2283 to 3378 feet

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

Final open flow, 475 Mcf/d Final open flow, \_\_\_\_\_ Bbl/d

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

Static rock pressure, 550 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 18 1979

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

Hydrafraced by Halliburton 7-5&7-79 -- 3000 Gal. Acid -- 2384 Bbls. Water  
150,000 Lbs. 20/40 Mesh Sand -- 21,000 80/100 Mesh Sand.

Perforations 13--3524--3378  
16--3192--3054  
10--2697--2691  
19--2313--2283

L LOG

FORMATION	Color	Hard or Soft	13 Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Clay	Red	Soft	0	10	
Sand	Grey	Hard	10	20	
Red Rock	REd	Soft	20	70	
Sand	Grey	Hard	70	100	
Red Rock	Red	Soft	100	125	
Sand	Grey	Hard	125	160	
Shale	Grey	Soft	160	185	
Sand	White	Hard	185	205	
Shale	Grey	Soft	205	243	
Sand	Grey	Hard	243	280	
Shale	Brown	Soft	280	315	
Sand	White	Hard	315	334	
Red Rock	Red	Soft	334	342	
Sand	Grey	Soft	342	366	
Red Rock	Red	Soft	366	375	
Sand	White	Hard	375	391	
Red Rock	Red	Soft	391	421	
Shale	Grey	Soft	421	445	
Sand	Grey	Hard	445	463	
Coal	Black	Soft	463	475	
Shale	Brown	Soft	475	491	
Sand	Grey	Hard	491	536	
Red Rock	Red	Soft	536	543	
Sand	Grey	Hard	543	570	
Shale	Grey	Hard	570	584	
Red Rock	Red	Soft	584	596	
Sand		Hard	596	611	
Shale		Hard	611	627	
Sand		Hard	627	656	
Shale		Hard	656	701	
Sand		Hard	701	760	
Shale		Hard	760	820	
Sand		Hard	820	860	
Sand & Shale	Grey	Med.	860	1530	
Sand	Grey	Hard	1530	1560	
Shale			1560	1710	
Sand			1710	1725	
Shale			1725	1810	
Sand	Brown	Hard	1810	1870	
Shale	Grey	Soft	1870	1910	
Sand	Grey	Hard	1910	1925	
L. Lime		Hard	1925	1990	
B. Lime		Hard	1990	2080	Gas @ 2070 (small amount)
Injun Sand		Hard	2080	2144	
Shale	Grey	Med.	2144	2230	
Sand	Grey	Med.	2230	2262	
Sand	White	Hard	2262	2322	Gas @ 2300 (small amount)
Shale	Grey	Soft	2322	2380	
Sand	Grey	Med.	2380	2475	
Shale	Grey	Soft	2475	2490	
Sand & Shale	Grey	Med.	2490	2625	
Shale	Grey	Soft	2625	2960	Gas @ 2650 (small amount)
Sand	Grey	Hard	2960	3015	
Sand & Shale	Grey	Med.	3015	3380	
Sand			3380	3415	
Shale			3415	3528	
Sand			3528	3532	
Shale			3532	3615	T.D.

RECEIVED

SEP - 4 1979

CO. DIVISION  
DEPT. OF MINES.

Gas @ 2070 (small amount)

Gas @ 2300 (small amount)

Gas @ 2650 (small amount)

Glenn L. Haught & Sons

Well Operator

By Glenn R. Haught  
Partner

NOTE: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed official record of all formations.

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. H-746  
API Well No. 47 - 017 - 2438  
State County Permit

WELL TYPE: Oil X / Gas X /  
(If "Gas", Production X / Underground storage      / Deep      / Shallow X /)  
LOCATION: Elevation: 1052' Watershed: Arnold Creek  
District: Central County: Doddridge Quadrangle: West Union, 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 Warren R. & Lenna G. Haught  
Address Smithville, WV 26178

COAL OPERATOR None  
Address     

ACREAGE 47.66

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER L.D.J. Corp.  
Address West Union, WV

Name       
Address     

ACREAGE 45

Name       
Address     

FIELD SALE (IF MADE) TO:  
Name       
Address     

COAL LESSEE WITH DECLARATION ON RECORD:  
Name       
Address     

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Paul Garrett  
Address 321 Beech St.  
Clarksburg, WV 26301

OIL & GAS DIVISION  
DEPT. OF MINES

RECEIVED  
MAY 21 1979

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     , 19    , to the undersigned well operator from Warren R. & Lenna G. Haught

[If said deed, lease, or other contract has been recorded:]  
Recorded on     , 19    , in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in      Book      at page     . 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 PHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
5 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

BLANKET BOND

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

[08-78]

PROPOSED WORK ORDER

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

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

GEOLOGICAL TARGET FORMATION, Devonian Shale

Estimated depth of completed well, 5500 feet Rotary X / 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 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									Kinds
Fresh water	11			X		<del>200</del> 760'	<del>200</del> 760'	<del>90</del> Sacks	<i>Cement to surface</i>
Coal									Sizes
Intermediate	8 5/8	K-55	20	X		2000	2000	100 Sacks	
Production	4 1/2	J-55	10.5	X			5500	175 Sacks	Depths set
Tubing									
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-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 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 1-22-80

*[Signature]*

Deputy Director - Oil & Gas Division

The permit shall be issued and regulated 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