

LATITUDE 39° 10'

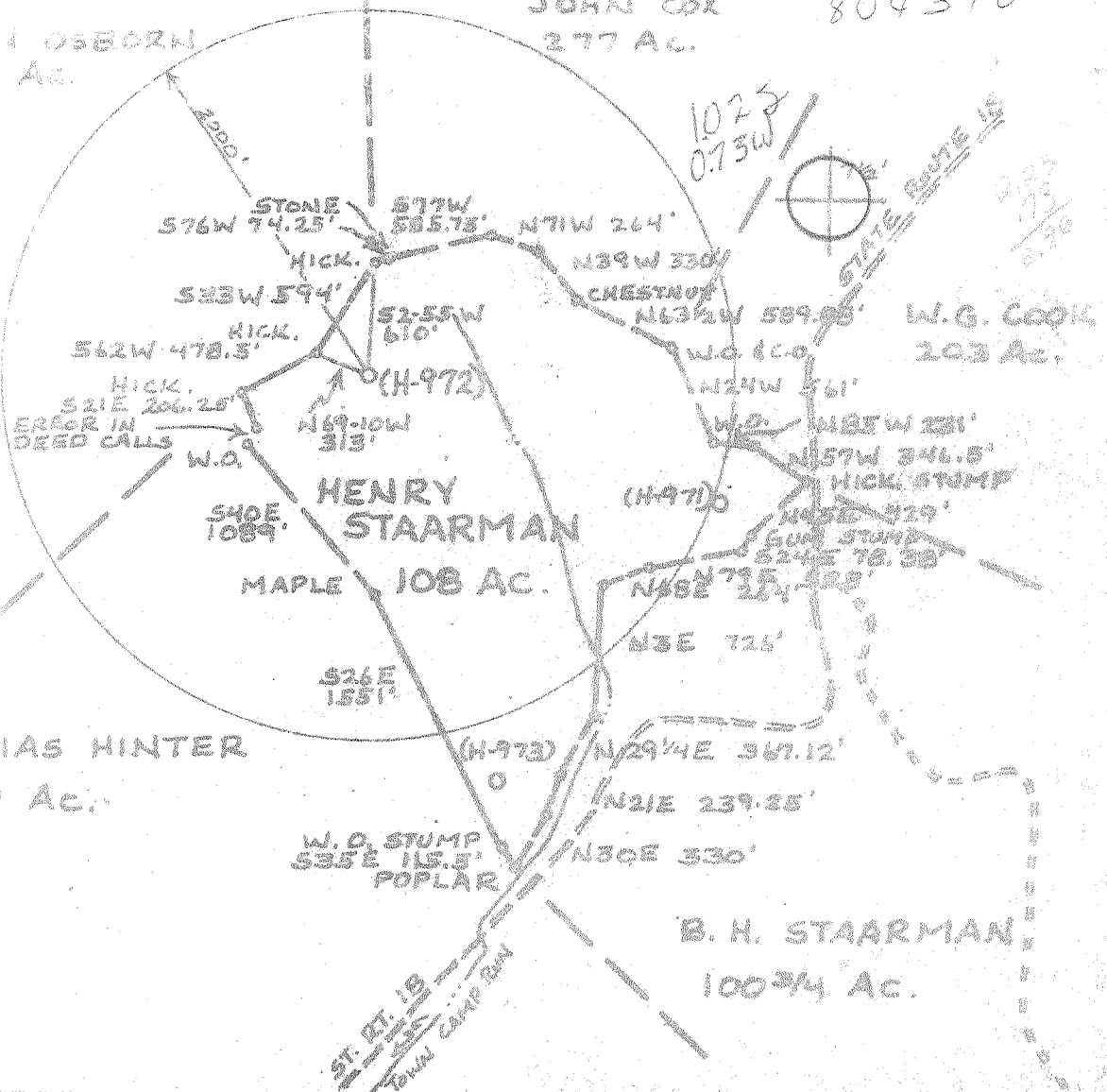
5310' SOUTH

3780' WEST

1.02 J  
 7. Jfw  
 390905  
 804310

JOHN COX  
 277 AC.

WILSON OSBORN  
 1234 AC.



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION ROAD INT. 1094'

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. Marshall  
 R.P.E. \_\_\_\_\_ L.L.S. 55

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS



DATE 24 MARCH, 1980  
 OPERATOR'S WELL NO. H-972  
 API WELL NO. 47-017  
 STATE COUNTY 2641 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 1227' WATER SHED TOWN CAMP RUN  
 DISTRICT COVE VADIC 15 COUNTY DODDRIDGE  
 QUADRANGLE NEW MILTON, W.VA. 7 1/2' QUAD. WC  
 SURFACE OWNER HENRY STAARMAN ACREAGE 108  
 OIL & GAS ROYALTY OWNER HENRY STAARMAN LEASE ACREAGE 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 I. HAUGHT & SONS DESIGNATED AGENT WARREN HAUGHT  
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

MAY 6 1980

66 5-5, 1576-18 ACES

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

**RECEIVED**

WELL OPERATOR'S REPORT  
OF  
DRILLING, REWORKING AND/OR STIMULATING, OR EXHIBITING TRANSAUG 20 1980

WELL TYPE: Oil  Gas  Liquid Injection \_\_\_\_\_ Waste Disposal \_\_\_\_\_  
 (If "Gas", Production  Underground storage \_\_\_\_\_ Deep \_\_\_\_\_ Shallow   
 LOCATION: Elevation: 1227' Watershed: Town Camp Run  
 District: Cove County: Doddridge Quadrangle: New Milton, WV 7#  
 WELL OPERATOR Glenn L. Haught & Sons Designated Agent Henry Sturman H-972  
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 April 2, 1980, OIL & GAS INSPECTOR FOR THIS WORK:  
 (IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PRODUCTION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Paul Garrett  
 Address 321 Beech Street  
Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Devonian Shale Depth 4700 to 5500'  
 Depth of completed well, 5808 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 April 22, 1980, and completed May 4, 1980

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-IN OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight (per ft)	New	Used	For drilling		
Conductor	<u>10 3/4"</u>			<input checked="" type="checkbox"/>		<u>313'</u>	<u>313'</u>	<u>125 sacks</u> Muds
Fresh water	<u>7"</u>			<input checked="" type="checkbox"/>		<u>2302'</u>	<u>2302'</u>	<u>50 sacks</u>
Coal								Sizes
Intermediate								
Production Tubing	<u>4 1/2"</u>	<u>J-55</u>	<u>10.5#</u>	<input checked="" type="checkbox"/>			<u>5702'</u>	<u>120 sacks</u> Casing set
Liners								Perforations: Top Bottom <u>4778</u> <u>5515</u>

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 4700 to 5500'  
 Gas: Initial open flow, \_\_\_\_\_ Mcf/d Oil: Initial open flow, \_\_\_\_\_ Bbl/d  
 Final open flow, 1100 Mcf/d Final open flow, \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests, 8 hours  
 Static rock pressure, 2000 psig (surface measurement) after 12 hours shut in  
 [If applicable for 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

H-972

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
 Hydrafraced by Halliburton 5-9-80-1500 gal. acid-1639 Bols. Water  
 75,000 Lbs. 20/40 Mesh Sand-24,000 Lbs. 80/100 Mesh Sand

Perforations: 14--5452--5515 *fill*  
 10--5220--5358 *fill*  
 11--4778--5128 *fill*

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	REMARKS Including indication and salt water, etc.
Shale					
Sand			1092	1180	
Shale			1180	1199	
Red Rock			1199	1275	
Shale			1275	1290	
Sand			1290	1391	
Shale			1391	1427	
Sand			1427	1550	
Shale			1550	1620	
Sand			1620	1720	
Shale			1720	1780	
Sand			1780	1875	
Shale			1875	1900	
Sand			1900	1965	
Shale			1965	2060	
Sand			2060	2080	
Shale			2080	2139	
Sand			2139	2177	
Sand			2177	2200	
Shale			2200	2220	
L. Lime			2220	2252	
P. Cave			2252	2270	
B. Lime			2270	2310	
Sand (Injun)			2310	2387	
Sand/Shale			2387	2672	2460
Shale			2672	2710	
Sand			2710	2755	
Shale			2755	2770	
Sand			2770	2780	
Shale			2780	2785	
Shale			2785	2835	
Sand			2835	2850	
Shale			2850	2911	
Sand			2911	2966	
Shale			2966	2976	
Sand			2976	3220	
Shale			3220	3240	
Sand/Shale			3240	3310	
Shale			3310	3580	
Sand			3580	3600	
Shale			3600	3615	
Sand/Shale			3615	3635	
Shale			3635	3645	
Sand			3645	3718	
Shale			3718	3870	
Sand			3870	3920	
Shale			3920	4122	
Sandy Shale			4122	4171	
Shale			4171	4331	
Sand			4331	4384	
Shale			4384	4410	
Sand/Shale			4410	4468	
Sand <b>BENSO</b>			4468	4780	
Shale			4780	4825	
Sand <b>AKX</b>			4825	5235	
Shale			5235	5250	
Sand/Shale <b>DEV SH</b>			5250	5500	
			5500	5808	T.D.

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

Glenn L. Haught & Sons  
 Well Operator  
 By *Glenn L. Haught*  
 Partner

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: 1227 ' 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  
SURFACE OWNER Same as above

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

Address \_\_\_\_\_  
Acreage \_\_\_\_\_

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

FIELD SALE (IF MADE) TO:  
Name Paul Garrett  
Address 321 Beech Street  
Clarksburg, WV 26301

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

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

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

OIL & GAS DIVISION  
DEPT. OF MINES

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 Jan. 12, 1980, to the undersigned well operator from Henry Staarman

[If said deed, lease, or other contract has been recorded:]  
Recorded on Feb 20 1980 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 § 22-4-3 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) 548-3092

Glenn L. Haught & Sons  
Well Operator

By Warren R. Haught  
Partner

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) 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, 75 feet; salt, \_\_\_\_\_ feet.  
Approximate coal seam depths: None Is coal being mined in the area? Yes \_\_\_\_\_ No X

CASING AND TUBING PROGRAM

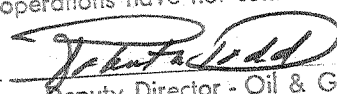
CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Table feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	10 3/4"			X		300'	300'	75 sacks
Coal								Sizes
Intermediate	7"			X		2000'	2000'	50 sacks
Production	4 1/2"	J-55	10.5#	X			5700'	100 sacks
Tubing								Depths set
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 plan 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 § 22-4-3a 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

  
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 § 22-6-20, 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 \_\_\_\_\_