

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION HIGH POINT 1285'

I THE UNDERSIGNED, HERESY 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. Massie*  
 R.P.E. \_\_\_\_\_ L.L.S. 551

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8-78)



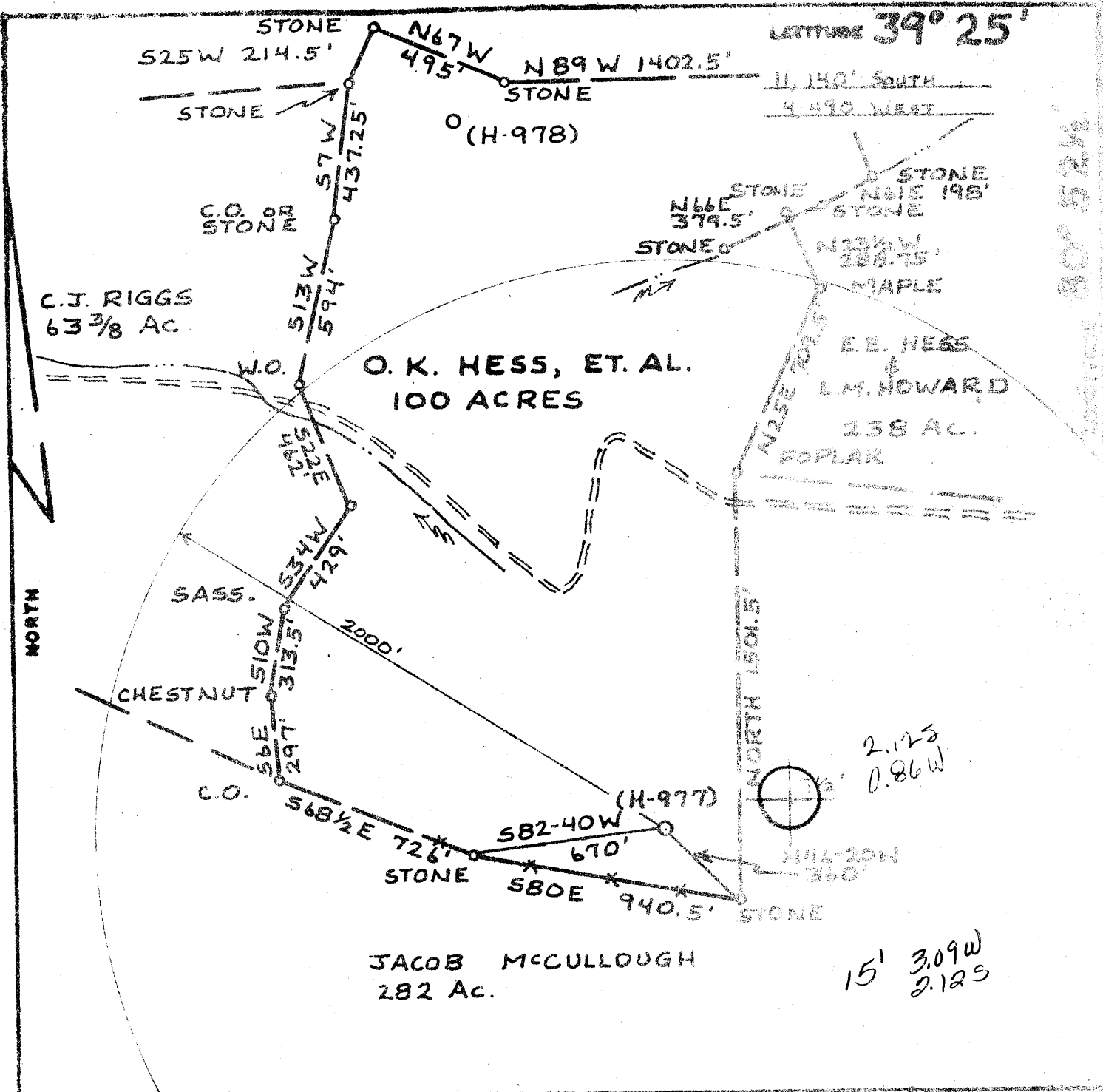
DATE 25 MARCH, 19 80  
 OPERATOR'S WELL NO H-977  
 API WELL NO. 47-095-0893  
 STATE COUNTY PERMIT  
 Formerly -095-794

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 1240' WATER SHE SANCHO CREEK  
 DISTRICT CENTERVILLE COUNTY TYLER  
 QUADRANGLE MIDDLEBORNE, W.VA. 7 1/2 QUAD WEST UNION 15' C  
 SURFACE OWNER O.K. HESS, et al ACREAGE 100  
 OIL & GAS ROYALTY OWNER O.K. HESS, et al LEASE ACREAGE 100  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUS OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGES IN WELL (SPECIFY) \_\_\_\_\_  
 PLUS AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUS \_\_\_\_\_  
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5700'  
 WELL OPERATOR GLENN L. HAUGHT & SONS DESIGNATED AGENT WARREN HAUGHT  
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

6-6 Bearsville (366)

JAN 26 1981



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1"=500'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION HIGH POINT 1285'

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. Mosler  
 R.P.E. \_\_\_\_\_ L.L.S. 5.21

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8-78)



DATE 25 MARCH, 1980  
 OPERATOR'S WELL NO. H-977  
 API WELL NO. 47-095  
 STATE COUNTY FRANKLIN

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

5893

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS", PRODUCTION  STORAGE \_\_\_\_\_ DEEP  SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 1240' WATER SHE SANCHO CREEK  
 DISTRICT CENTERVILLE COUNTY TYLER  
 QUADRANGLE MIDDLEBOURNE, W.VA. 7 1/2' QUAD C West Union to  
 SURFACE OWNER O.K. HESS, et al ACREAGE 100  
 OIL & GAS ROYALTY OWNER O.K. HESS, et al. LEASE ACREAGE 100  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR  
 STIMULATE \_\_\_\_\_ PLUS OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW  
 FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUS AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUS \_\_\_\_\_  
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5700'  
 WELL OPERATOR GLENN L. HAUGHT & SONS DESIGNATED AGENT WARREN HAUGHT  
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

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

WELL OPERATOR'S REPORT  
 OF  
 OPERATIONS, FRACINGS AND/OR STIMULATIONS, OF FEDERAL CRANES

WELL TYPE: Oil  Gas  Liquid Injection  Waste Disposal   
 (for "Gas", Production  Underground storage  Deep  Shallow   
 LOCATION: Elevation: 1240' Watershed: Sancho Creek  
 District: Centerville County: Tyler Quadrangle: Middlebourne, WV 7  
O.K. Hess H-977  
 WELL OPERATOR Glenn L. Haught & Sons DESIGNATED AGENT Warren R. Haught  
 Address Route 3, Box 14 Address Smithville, WV 26178  
Smithville, WV 26178

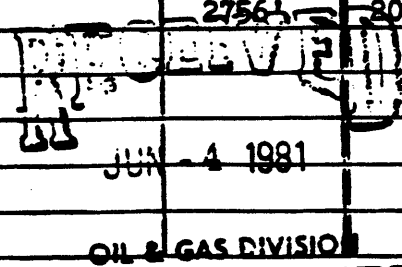
PERMITTED WORK: Drill  Convert  Drill deeper  Redrill  Fracture or stimulate  
 Plug off old formation  Perforate new formation   
 Other physical change in well (specify) \_\_\_\_\_

PERMIT ISSUED ON January 6, 1981, OIL & GAS INSPECTOR FOR THIS WORK:  
 Name Phillip Lee Tracy  
 IF APPLICABLE: PLUGGING OF THE WILE ON CONTINUOUS PRODUCTION FROM OILFIELD OR REWORKING. VERBAL PERMISSION OBTAINED  
 Address P.O. Box 173 Dodd Street  
Middlebourne, WV 26149

GEOLOGICAL TARGET FORMATION: Weir & Berea Depth 2522-2630 feet  
 Depth of completed well, 2800 feet Rotary  Cable Tools 2630-2706  
 Water strata depth: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.  
 Coal seam depths: None Is coal being mined in the area? No  
 Work was commenced March 13, 1981, and completed March 16, 1981

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT PACK-OFF OR SACKS (Cubic Feet)	PACKERS
	Size	Grade	Weight per Ft	New	Used For	Left in well		
Conductor								Rands
Fresh water	8-5/8	K-55	20#	X		609'	130 sacks	
Coal								Sizes
Intermediate								
Production	4 1/2'	J-55	10.5#	X		2756'	200 sacks	Downs set
Tubing								
Liners								Perforations:
								Top



OPEN FLOW DATA

Producing formation: Weir & Berea Pay zone depth: 2630-2706  
 Gas: Initial open flow, \_\_\_\_\_ Mcf/d Oil: Initial open flow, \_\_\_\_\_ Bbl/d  
 Final open flow, 100 Mcf/d Final open flow, \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests, 8 hours  
 Static rock pressure, 700 psig (surface measurement) after 12 hours shut in  
 (If applicable due to multiple completions--)  
 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  
 Static rock pressure, \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in

JUN 23 1981

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

Hydra fraced by Halliburton -- 800 Bbls.  
20/40 Mesh Sand -- 55,000 Lbs.; 80/100 Mesh Sand -- 16,000 Lbs.  
1000 Gal. Acid

Perforations: 3--2651--2672  
5--2698--2704  
WELL LOG 7--2594--2616  
20--2518--2560

FORMATION	Color	Hard, or Soft	Top Feet	Bottom Feet	Remarks Including indication of all and salt water, coal, oil and
Surface Pipe			0	609	
Sand/Slate			609	645	
Red Rock			645	655	
Sand			655	780	
Slate			780	735	
Red Rock			735	750	
Sand			750	765	
Slate			765	782	
Red Rock			782	805	
Slate			850	837	
Sand			837	870	
Red Rock			870	890	
Slate			890	924	
Sand			924	951	
Slate			951	1040	
Red Rock/Slate			1040	1066	
Slate			1066	1135	
REd Rock/Slate			1135	1185	
Sand			1185	1202	
Slate			1202	1247	
REd Rock/Slate			1247	1419	
Sand			1419	1462	
Slate			1462	1518	
Sand			1518	1610	
Slate			1610	1655	
Sand			1655	1690	
Slate			1690	1755	
Sand			1755	1782	
Slate			1782	1791	
Sand			1791	1815	
Sand/Slate			1815	1944	
Sand			1944	1970	
Slate			1970	2003	
Sand			2003	2016	
Shale			2016	2035	
Sand			2035	2124	
Lime			2124	2211	
Sand			2211	2343	
Slate			2343	2522	
Sand (Weir)			2522	2630	
Shale w/Sand Stringers			2630	2706	
Berea Sand			2706	2710	
Shale			2710	2800	T.D.

Glenn L. Haught & Sons  
Well Operator

By *Walter R. Haught*  
Partner

NOTE: Application 1.0213, provides as follows:  
The well log of this well log shall be a complete, detailed and correct record of all operations.

5893

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: 1240' Watershed: Sancho Creek  
District: Centerville County: Tyler Quadrangle: Middlebourne, WV

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

DESIGNATED AGENT Warren R. Haught  
Address Smithville, WV 26178

OIL & GAS ROYALTY OWNER O.K. Hess et al  
Address Pennsboro, WV 26415

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

Acres 100  
SURFACE OWNER Same as above

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

Address \_\_\_\_\_  
Acres 100

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

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

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

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Phillip Lee Tracy  
Address P. O. Box 173 Dodd Street  
Middlebourne, WV 26149

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address \_\_\_\_\_  
**RECEIVED**  
**MAR 28 1980**

OIL & GAS DIVISION  
DEPT. OF MINES

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 October 10, 1979, to the undersigned well operator from O.K. Hess et al

[If said deed, lease, or other contract has been recorded:]  
Recorded on October 12 19 79, in the office of the Clerk of the County Commission of Tyler County, West Virginia, in Lease Book 221 at page 603. 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 lessees 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 lessees on or before the day of the mailing or delivery of this Permit Application to the Department of Mines, 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  
Partner

BLANKET BOND

**PROPOSED WORK ORDER**

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-25 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  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

**CASING AND TUBING PROGRAM**

CASING OR TUBING TYPE	SPECIFICATIONS				FOODAGE INTERVALS		CEMENT FILL-UP OR SACKS ( cubic feet )	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	10 3/4"	J-20		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								Deaths 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 § 22-4-3c 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 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 § 22-4-20, 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  
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: 1240' Watershed: Sancho Creek  
District: Centerville County: Tyler Quadrangle: Middlebourne, WV 7 1/2

WELL OPERATOR Glenn L. Haught & Sons  
Address Route 3, Box 14  
Smithville, WV 26178

DESIGNATED AGENT Warren R. Haught  
Address Smithville, WV 26178

OIL & GAS ROYALTY OWNER O.K. Hess et al  
Address Pennsboro, WV 26415

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

ACREAGE 100

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

SURFACE OWNER Same as above  
Address \_\_\_\_\_

Address \_\_\_\_\_

ACREAGE 100

Name DEC 16 1980  
Address \_\_\_\_\_

FIELD SALE (IF MADE) TO:  
Name Columbia Gas Transmission Corp.  
Address P.O. Box 1273  
Charleston, WV 25325

OIL & GAS DIVISION  
DEPT. OF MINES  
COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address \_\_\_\_\_

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Phillip Lee Tracy  
Address P.O. Box 173 Dodd Street  
Middlebourne, WV 26149

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 November 12, 1980, to the undersigned well operator from O.K. Hess and Wanda L. Hess, his wife  
[If said deed, lease, or other contract has been recorded:]

Recorded on November 21, 1980, in the office of the Clerk of the County Commission of Tyler County, West Virginia, in Deed Book 227 at page 428. 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) 348-3092

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

DRILLING CONTRACTOR (IF KNOWN) Glenn L. Haight & 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 (Cubic Feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	8 5/8	K-55	20#	X		200'	200'	75 sacks <i>to surface</i>
Coal								Sizes
Intermediate								
Production	4 1/2	J-55	10.5#	X			5700'	100 sacks <i>at</i>
Casing								as req'd by
Miners								rule 15.61
								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 § 22-4-3a 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 9-6-81.

J. E. Hursey  
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 \_\_\_\_\_