

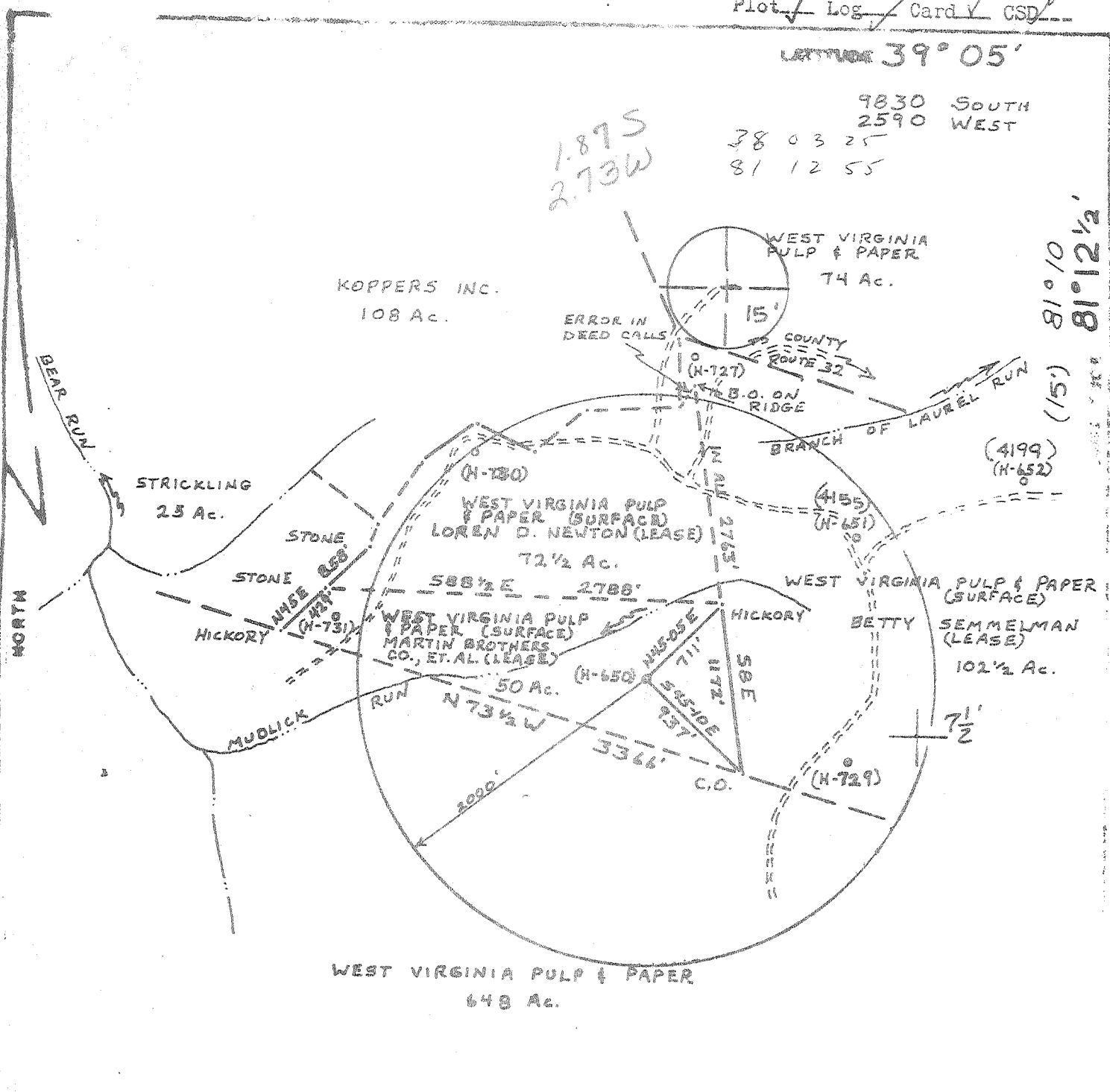
LATITUDE 39° 05'

9830 SOUTH  
2590 WEST

38 03 25  
81 12 55

1.875  
2.73W

81° 10'  
81° 12 1/2'



WEST VIRGINIA PULP & PAPER  
648 Ac.

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION HIGH KNOB, E.L. 1092'

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. Mander  
 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 26 MARCH, 1979  
 OPERATOR'S WELL NO. K-650  
 API WELL NO. 47 085 4252

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 1004' WATER SHED MUDLICK RUN  
 DISTRICT MURPHY COUNTY RITCHIE  
 QUADRANGLE MACFARLAN, W.V.A. 7 1/2' QUAD. HARRISVILLE 15' SW  
 SURFACE OWNER WEST VIRGINIA PULP & PAPER ACREAGE 50  
 OIL & GAS ROYALTY OWNER MARTIN BROTHERS CO. ET AL LEASE ACREAGE 50  
 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 — ESTIMATED DEPTH 2100'  
 TARGET FORMATION BIG INTJUN  
 WELL OPERATOR GLENN L. HAUGHT & SONS DESIGNATED AGENT WARREN HAUGHT  
 ADDRESS SMITHVILLE, W. VA. 26178 ADDRESS SMITHVILLE, W. VA. 26178

6-6 MACFARLAN 119

APR 27 1979

Operator's Well No. H-650

[08-78]

WELL OPERATOR'S REPORT (7 OF

API Well No. 47 - 085-4252  
State County Permit

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1004' Watershed: Mudlick Run  
District: Murphy County: Ritchie Quadrangle: Macfarlan, WV 7 1/2'  
Martin Brothers H-650

WELL OPERATOR Glenn L. Haught & Sons DESIGNATED AGENT Warren R. Haught  
Address Smithville, WV 26178 Address Smithville, WV 26178

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

*Handwritten signature*  
JUL - 6 1979

PERMIT ISSUED ON April 9, 19 79

OIL & GAS DIVISION  
OIL & GAS INSPECTOR FOR THE DEPT. OF MINES

(IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED

Name Kenneth Paul Goodnight  
Address Smithville, WV 26178

\_\_\_\_\_, 19 \_\_\_\_\_, 477-3230

GEOLOGICAL TARGET FORMATION: Big Injun Depth 1985-2045 feet

Depth of completed well, 2125 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 May 17, 1979, and completed May 22, 1979

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	8 5/8	K-55	20#	X		203'	203'	75 Sacks	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X			2107'	110 Sacks	Depth set
Tubing									
Liners									Perforations:
									Top Bottom
									2003 - 2070

OPEN FLOW DATA

Producing formation Big Injun Pay zone depth 1985-2045 feet

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

Final open flow, 290 Mcf/d Final open flow, \_\_\_\_\_ Bbl/d

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

Static rock pressure, 685 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.

JUL 24 1979

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

Hydrafraced by Halliburton -- 6-4-79 -- 1,500 Gal. Acid -- 978 Bbls.  
 Water -- 24,000 Lbs. 20/40 Mesh Sand -- 8,000 Lbs. 80/100 Mesh Sand.

Perforations 8--2066-71  
 9--2020-42  
 8--2003-08

WELL LOG

FORMATION	Color	Hard or Soft	17 Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Surface Pipe			0	205	
Sand			205	252	
Red Rock & Slate			252	270	
Red Rock			270	315	
Slate			315	374	
Red Rock			374	386	
Slate			386	416	
Red Rock			416	424	
Slate			424	450	
Red Rock			450	480	
Sand			480	486	
Slate			486	518	
Red Rock			518	533	
Slate			533	562	
Red Rock			562	575	
Slate			575	602	
Red Rock			602	627	
Red Rock & Slate			627	685	
Slate			685	722	
Sand			722	750	
Slate			750	799	
Red Rock			799	836	
Red Rock & Slate			836	856	
Slate			856	877	
Sand			877	911	
Slate			911	936	
Red Rock			936	958	
Sand			958	1042	
Slate			1042	1055	
Sand			1055	1062	
Slate			1062	1082	
Sand			1082	1091	
Slate			1091	1127	
Sand			1127	1153	
Sand & Slate			1153	1295	
Slate			1295	1327	
Sand			1327	1335	
Slate			1335	1345	
Sand			1345	1350	
Slate & Sand			1350	1385	
Sand			1385	1420	
Slate & Sand			1420	1460	
Slate			1460	1485	
Sand			1485	1532	
Slate			1532	1546	
Sand			1546	1552	
Slate			1552	1567	
Sand			1567	1712	
Slate			1712	1787	
Sand			1787	1885	
Lime			1885	1985	
Injun			1985	2045	
Slate			2045	2054	
Sand			2054	2068	
Slate			2068	2125	T.D.

NOTE: Regulation 1.02(i) provides as follows:  
 "The term 'log' or 'well log' shall mean a systematic, detailed record of all formations.

Glenn L. Haught & Sons  
 Well Operator

By Walter R. Haught  
 Partner

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. H-650

API Well No. 47-085 - 4252  
State County Permit

WELL TYPE: Oil \_\_\_ / Gas X /  
(If "Gas", Production X / Underground storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 1004' Watershed: Mudlick Run  
District: Murphy County: Ritchie Quadrangle: Macfarlan, 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 Martin Bros. Co., et al  
Address c/o Lyle Jones, 5th Floor  
Union Nat'l Center, Clarksburg, WV

COAL OPERATOR None

Address Union Nat'l Center, Clarksburg, WV  
Acreage 50  
SURFACE OWNER W.Va. Pulp & Paper  
Address Parkersburg, WV 26101  
Acreage 50

COAL OWNER(S) WITH DECLARATION ON RECORD:

Name  
Address

*[Handwritten signature]*

APR - 9 1979

Name  
Address

OIL & GAS DIVISION  
DEPT. OF MINES

FIELD SALE (IF MADE) TO:  
Name  
Address

COAL LESSEE WITH DECLARATION ON RECORD:

Name  
Address

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Kenneth Paul Goodnight  
Address Smithville, WV 26178

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 Aug. 22nd, 1978, to the undersigned well operator from W.Lyle Jones, Trustee of Martin Bros. Co.

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

Recorded on Sept. 21st, 1978, in the office of the Clerk of the County Commission of Ritchie County, West Virginia, in Lease Book 126 at page 49. 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

BLANKET BOND

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. Haught & Sons  
Address Smithville, WV 26178

GEOLOGICAL TARGET FORMATION, Big Injun

Estimated depth of completed well, 2100' feet Rotary X / Cable tools      /  
Approximate water strata depths: Fresh,      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	8 5/8	K-55	20		X	200'	200'	75 Sacks	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	10.5		X		2100'	100 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 12-09-79.



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