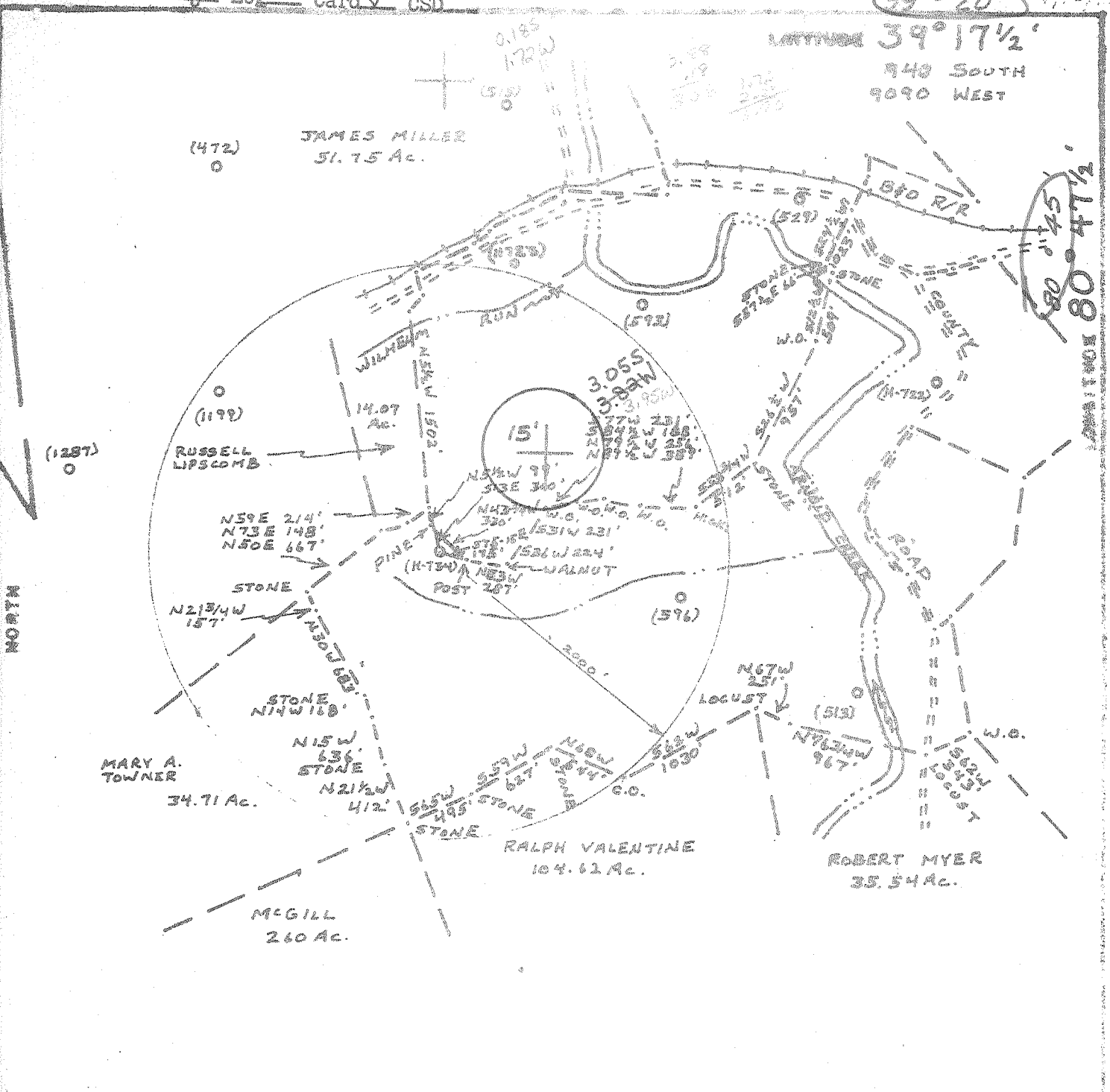


LATITUDE 39° 17 1/2'
 940 SOUTH
 9090 WEST



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD ELEV. 816'

THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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 Massey*
 R.P.E. L.L.S. 551

PLACE SEAL HERE

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



DATE 11 APRIL, 1979
 OPERATOR'S WELL NO. W-734
 API WELL NO. 47-017-2378
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS", PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1081' WATER SHED ARNOLD CREEK
 DISTRICT CENTRAL COUNTY DODDRIDGE
 QUADRANGLE WEST UNION, W.VA. 7 1/2' QUAD, 15 SE
 SURFACE OWNER GEORGE F. BEULAR, NEELEY ACREAGE 84.4
 OIL & GAS ROYALTY OWNER C.P. HUDSON HEIRS LEASE ACREAGE 244 3/5
 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): _____

PLUS AND ABANDON CLEAR OUT AND REPLUG
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 5400' MAY 3 1979
 WELL OPERATOR GLENN L. HAUGHT & SONS DESIGNATED AGENT WARREN HAUGHT
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

JAN 10 1983

REVISED

Date: December 6, 1982

Operator's
well No. H-734

API well No. 017 - 2378
State County Permit

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

WELL OPERATOR'S REPORT
OF
DRILLING, FRACURING AND/OR REWORKING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal
 ("Gas", Production X / Underground storage / Deep / Shallow X)
 LOCATION: Elevation: 1081' Watershed: Arnold Creek
 District: Central County: Doddridge Substrange: West Union 7 1/2'

WELL OPERATOR Glenn L. Haught & Sons DESIGNATED AGENT Warren R. Haught
 Address 4424 Emerson Avenue Address Rt. 3 Box 14
 Parkersburg, WV 26104 Smithville, WV 26178

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

PERMIT ISSUED ON April 16, 1979 OIL & GAS INSPECTOR FOR THIS WORK:
 Name Paul Garrett
 Address Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Devonian Shale Depth 4650-5400 feet
 Depth of completed well, 5576 feet Rotary X / Cable Tools
 Water strata depth: Fresh, 140 feet; salt, feet.
 Coal seam depths: None Is coal being mined in the area? NO
 Work was commenced April 16, 1979, and completed May 3, 1979

CASING AND TUBING PROGRAM

| CASING OR TUBING TYPE | SPECIFICATIONS | | | | FOOTAGE INTERVALS | | PERCENT FILL-UP OR SACKS (Cubic Feet) | REMARKS |
|-----------------------|----------------|-------|---------------|-----|-------------------|--------------|---------------------------------------|---------------|
| | Size | Grade | Weight per ft | New | Used | For Drilling | | |
| Conductor | | | | | | | | Hands |
| Fresh water | 11-3/4" | | | | X | 23' | 23' | 10 sacks |
| Coal | | | | | | | | Slips |
| Intermediate | 8-5/8" | K-55 | 20# | X | | 866' | 866' | 130 sacks |
| Production | 4 1/2" | J-55 | 10.5# | X | | 5470' | 5470' | 155 sacks |
| Tubing | | | | | | | | |
| Liners | | | | | | | | Perforations: |
| | | | | | | | | Top Bottom |
| | | | | | | | | 4649 5374 |

OPEN FLOW DATA
 Producing formation: Devonian Shale *See back* Pay zone depth: 4650-5400 feet
 Gas: Initial open flow, Mcf/d Oil: Initial open flow, Bbl/d
 Final open flow, 1,400 Mcf/d Final open flow, Bbl/d
 Time of open flow between initial and final tests, 8 hours
 Static rock pressure, 1650 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

108-76:

DETAILS OF PERFORATED INTERVALS, FRACTURING OF THE STRATUM, PHYSICAL CHANGE, ETC.

Hydrafraced by Halliburton 5-9-79 -- 1,500 Gal. Acid - 1089 Bbls. Water
43,000 Lbs. 20/40 Mesh Sand -- 17,000 Lbs. 80/100 Mesh Sand

Perforation 18-~~5374~~-5337^{Elk} 4--~~4651~~-4649 ^{Benson}
6-~~5008~~-5003^{Alex}

| FORMATION | Color | Hard of Soft | Top Feet | Bottom Feet | REMARKS Including indication of all casing and salt water, etc., etc. |
|------------|-------|-----------------|----------|-------------|---|
| Dunkard | | | 0 | 953 | |
| Red Rock | | | 953 | 965 | |
| Shale | | | 965 | 984 | |
| Red Rock | | | 984 | 993 | |
| Sand | | | 993 | 1026 | |
| Red Rock | | | 1026 | 1038 | |
| Sand | | | 1038 | 1063 | |
| Red rRock | | | 1063 | 1070 | |
| Shale | | | 1070 | 1088 | |
| Red Rock | | | 1088 | 1096 | |
| Sand | | | 1096 | 1136 | |
| Shale | | | 1136 | 1154 | |
| Red Rock | | | 1154 | 1170 | |
| Sand | | | 1170 | 1190 | |
| Red Rock | | | 1190 | 1205 | |
| Shale | | | 1205 | 1215 | |
| Sand | | | 1215 | 1230 | |
| Shale | | | 1230 | 1248 | |
| Sand | | | 1248 | 1305 | |
| Shale | | | 1305 | 1520 | |
| Sand/Shale | | | 1520 | 2069 | |
| Big Injun | | | 2095 | 2215 | |
| Squaw | | | 2229 | 2255 | |
| Weir | | | 2398 | 2506 | |
| Berea | | | 2596 | 2602 | |
| 50 Ft. | | | 2770 | 2774 | |
| 30 Ft. | | | 2810 | 2819 | |
| Stray | | | 2880 | 2885 | |
| Gordon | | | 2924 | 2930 | |
| 4th | | | 2970 | 2976 | |
| Balltown | | | 3485 | 3525 | |
| Alexander | | | 5015 | 5026 | |
| Elk | | | 5335 | 5395 | |
| Shale | | | 5395 | 5561 | |

5576
2602
2974
4649
2602
2047
5374
2602
2772

T.D. 5576

(Attach separate sheets as complete as necessary)

Glenn L. Haught & Sons
Well Operator
By Glenn L. Haught, Jr.
Well Administrator

Regulation 2.30.1: provides as follows:
The top of the well shall be sealed with a permanent, durable material, except in the case of a well which is to be abandoned in the future.

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, 5400 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 | | | | | 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 3/4 | | 42lb. | X | | 250' | 250' | 100 Sacks | |
| Coal | | | | | | | | | Sizes |
| Intermediate | 8 5/8 | K55 | 20lb | X | | 1800' | 1800' | 50 Sacks | |
| Production | 4 1/2 | J55 | 10.50 | X | | 5400' | 5400' | 150 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 12-16-79

The following information was completed by the coal operator and by any coal owner or 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