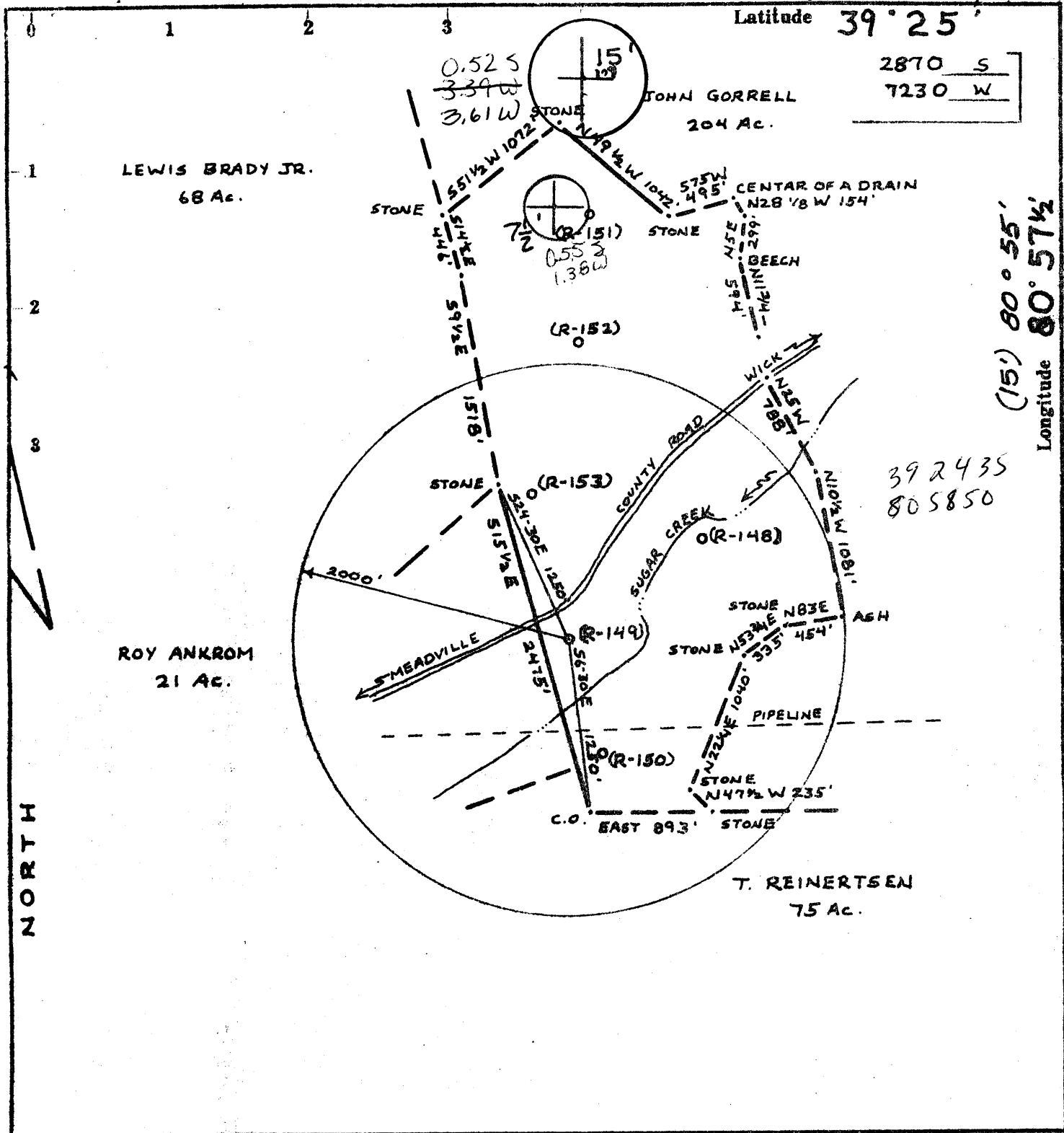


7/10/79



(15') 80° 55'
Longitude 80° 57 1/2'

39 24 35
80 58 50

WELL TYPE: GAS X OIL & LIQUID INJECTION WASTE DISPOSAL
 PRODUCTION X STORAGE DEEP SHALLOW X

TARGET FORMATION UPPER DEVONIAN

ESTIMATED DEPTH 2850'

Fracture... Source of Elevation B.M. ELEV. 769'

Redrill...

New Location I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Drill Deeper

Abandonment *William R. Mossor* Minimum accuracy, one part in 200

WELL OPERATOR C.W. RIGGS, INC.
 ADDRESS BOX 358, ST. MARYS, W. VA. 26170

DESIGNATED AGENT C.W. RIGGS
 ADDRESS BOX 358, ST. MARYS, W. VA. 26170

SURFACE OWNER JOHN WALCH
 O. (G. ROYALTY OWNER) JOHN WALCH

Tract 182 Ac. 120P. Acres 182 Lease No. _____

Well (Farm) No. R-149 Serial No. _____

Elevation (Spirit Level) 754'

WATER SHED SUGAR CREEK WEST UNION
 Quadrangle MIDDLEBOURNE, W. VA. 7 1/2' QUAD.

County TYLER District MEADE

Surveyor or Engineer WILLIAM R. MOSSOR, L.L.S.

Surveyor's or Engineer's Registration No. 551

File No. _____ Drawing No. _____

Date 12 JUNE 1979 Scale. 1"=1000'

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

WELL LOCATION MAP
 FILE NO. 47-095-0706

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

JUL 24 1979

2850' Elevation 5-5 Shiloh-Wick (86)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD 85

RECEIVED

FEB 22 1980

OIL & GAS DIVISION
DEPT. OF MINES

Rotary Oil
Cable Gas
Recycling Comb.
Water Flood Storage
Disposal (Kind)

Quadrangle Middle bowers
Permit No. 47-095-0706

Company C.W. Rags, Inc.
Address St. Marys, W. Va.
Farm John Welch Acres 182'
Location (waters) Sugar Creek
Well No. R-149 Elev. 754'
District Meade County Tyler
The surface of tract is owned in fee by John Welch
Address Wick, W. Va.
Mineral rights are owned by John Welch
Address SAME
Drilling Commenced 8-26-79
Drilling Completed 8-29-79
Initial open flow _____ cu. ft. _____ bbls.
Final production 34,000 cu. ft. per day 1 bbls.
Well open _____ hrs. before test _____ RP.

| Casing and Tubing | Used in Drilling | Left in Well | Cement fill up Cu. ft. (Sks.) |
|-------------------|------------------|--------------|-------------------------------|
| Size 20-16 | | | |
| Cond. 13-10" | | | |
| 9 5/8 | 250 | 250 | |
| 8 5/8 | 764' | 764' | |
| 7 | | | |
| 5 1/2 | | | |
| 4 1/2 | | 2700' | 455 SKS |
| 3 | | | |
| 2 | | | |
| Liners Used | | | |

Well treatment details:

Attach copy of cementing record.

Iterations 2426' - 2623' 25 shots

TRUCK TREATMENT

1500 Bbl of H₂O, 100,000⁺⁺ SAND, 115,000 SCF N₂

Coal was encountered at N/A Feet _____ Inches _____
Fresh water N/A Feet _____ Salt Water N/A Feet _____
Producing Sand 30' + 4' - 6' - 11' N Depth 2421-2453, 2606-2650

| Formation | Color | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | * Remarks |
|-------------------|------------------|--------------|--------------|------------------------------|-------------------|------------------|
| <u>LOW RUN</u> | | | | | | |
| <u>1st</u> | <u>SALT SAND</u> | | <u>1200'</u> | <u>1123'</u> <u>1270'</u> | | <u>* 700 400</u> |
| <u>2nd</u> | <u>SALT SAND</u> | | <u>1315'</u> | <u>1355'</u> | | |
| <u>3rd</u> | <u>SALT SAND</u> | | <u>1395'</u> | <u>1436'</u> | | |
| <u>MAION</u> | | | <u>1481'</u> | <u>1537'</u> | | |
| <u>Big Line</u> | | | <u>1580'</u> | <u>1625'</u> | | |
| <u>Keese-</u> | | | <u>1626'</u> | <u>1657'</u> | | |
| <u>INJON</u> | | | <u>1660'</u> | <u>1782'</u> | | |
| <u>Syuan</u> | | | <u>1810'</u> | <u>1829'</u> | | |
| <u>Welch Gray</u> | | | <u>2065'</u> | <u>2091'</u> | | |
| <u>BORCA</u> | | | <u>2155'</u> | <u>2194'</u> | | |
| <u>50 FEET</u> | | | <u>2310'</u> | <u>2361'</u> | | |
| <u>30 FEET</u> | | | <u>2421'</u> | <u>2453'</u> | | <u>GAS</u> |

(over)

* Indicates Electric Log tone in the remarks section

| Formation | Color | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | Remarks |
|-----------|-------|--------------|----------|-------------|-------------------|---|
| | | | 2527' | 2567' | | |
| | | | 2600' | 2650' | | Oil & Gas |
| | | | 2692' | 2692' | | |
| | | | | | | dr/r TD on log 2982. btm 4 1/2" csg 2700 |

Date Feb 13, 19 80

APPROVED C.W. Riggs, INC Owner

By John Schneider



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

JUL 10 1979

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE 6-19-79

Surface Owner John Welch
Address Wick, W. Va.
Mineral Owner John Welch
Address Wick, W. Va.
Coal Owner John Welch
Address Wick, W. Va.
Coal Operator None
Address _____

Company C.W. Riggs; Inc.
Address Box 358, St. Marys, W. Va.
Farm John Welch Acres 182Ac. 130P.
Location (waters) Sugar Creek
Well No. R-149 Elevation 754'
District Mead County Tyler
Quadrangle Middlebourne, W. Va.

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 3-10-80.

INSPECTOR
TO BE NOTIFIED Phillip Tracy
ADDRESS Middlebourne, W. Va.
PHONE 758-4573

[Signature]
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated May 24 1979 by John Welch made to Loren Bagley and recorded on the 22nd day of June 1979, in Tyler County, Book 219 Page 435

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days.*

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours,

(Sign Name) *[Signature]*

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address of Well Operator Box 358 Street St. Marys City or Town W. Va. State _____

*SECTION 3 . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

**THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION**

PROPOSED WORK ORDER TO DRILL DEEPEN FRACTURE STIMULATE
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT
 NAME Little Swiss Drilling NAME C.W. Riggs; Inc.
 ADDRESS Buchannon, W.Va. ADDRESS St. Marys, W.Va.
 TELEPHONE 472-6396 TELEPHONE 684-3974
 ESTIMATED DEPTH OF COMPLETED WELL 2850' ROTARY CABLE TOOLS
 PROPOSED GEOLOGICAL FORMATION Sandstone
 TYPE OF WELL: OIL GAS COMB STORAGE DISPOSAL
 RECYCLING WATER FLOOD OTHER

TENTATIVE CASING PROGRAM

| CASING AND TUBING SIZE | USED FOR DRILLING | FEET IN WELL | CEMENT FEET UP OR SACKS CUBIC FT |
|------------------------|-------------------|--------------|----------------------------------|
| 20 - 16 | | | |
| 13 - 10 | | | |
| 9 - 5.8 | | | |
| 8 - 5.8 250' | | 250' | Cement Top-Bottom |
| 7 | | | |
| 5 1/2 | | | |
| 4 1/2 | | 2850' | 200 sks. |
| 3 | | | Perf. Top |
| 2 | | | Perf. Bottom |
| Links | | | Perf. Top |
| | | | Perf. Bottom |

APPROXIMATE FRESH WATER DEPTHS 120 FEET SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED

TO FRACTURE - STIMULATE

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title