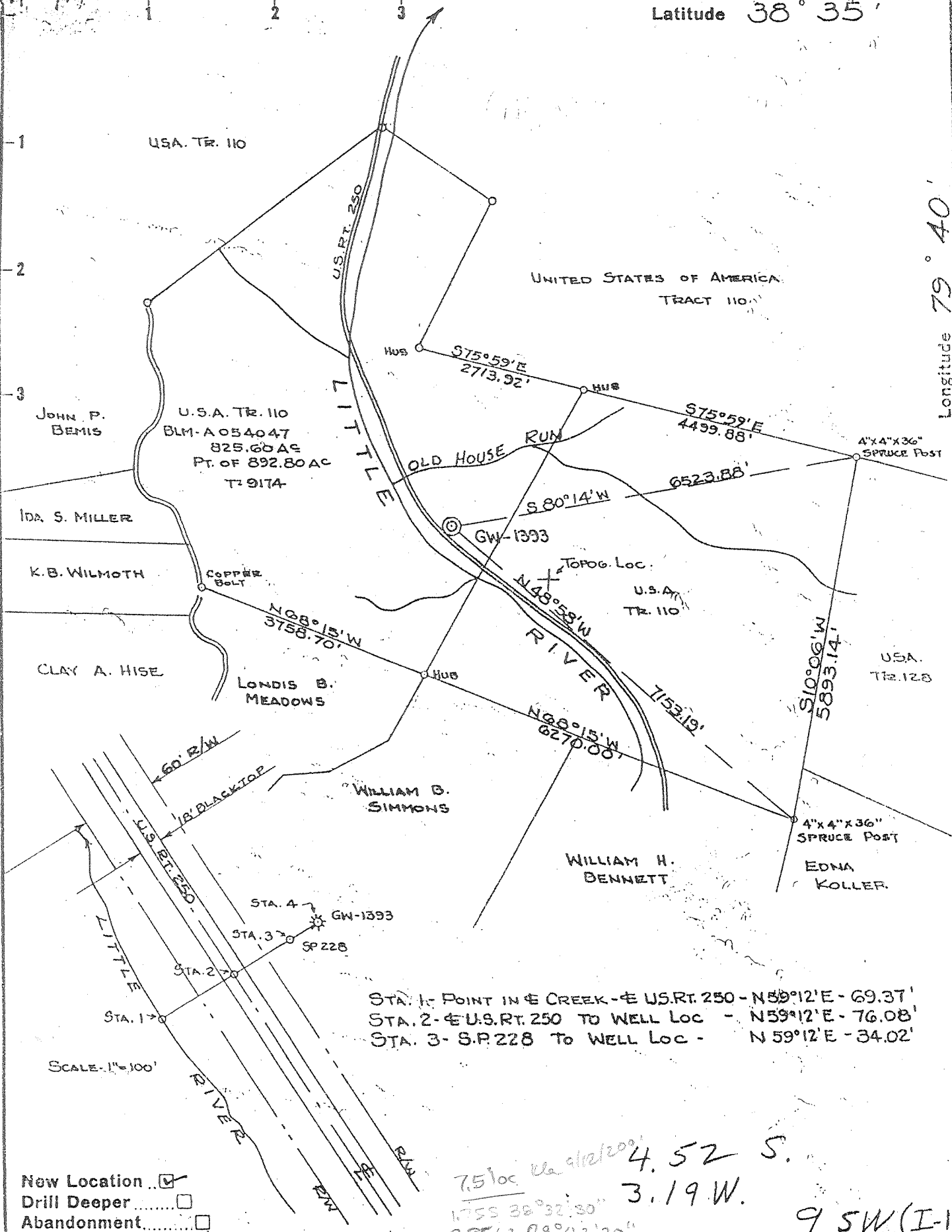


Latitude 38° 35'

Longitude 79° 40'



STA. 1- POINT IN E CREEK - E US. RT. 250 - N 59° 12' E - 69.37'
 STA. 2- E US. RT. 250 TO WELL LOC - N 59° 12' E - 76.08'
 STA. 3- S.P. 228 TO WELL LOC - N 59° 12' E - 34.02'

New Location
 Drill Deeper
 Abandonment

7.51 loc via 9/12/2000
 4.52 S.
 3.19 W.
 9 SW (I-13)
 1755 38° 32' 30"
 0.85 W 79° 42' 30"

Company COLUMBIAN CARBON Co.
 Address Box 873 CHARLESTON, W.VA.
 Farm UNITED STATES OF AMERICA
 Tract 110 Acres 825.80 Lease No. T-9174
 BLM-A054047
 PART OF 892.80 AC
 Well (Farm) No. P-1 Serial No. GW-1393
 Elevation (Spirit Level) 3099.80' *Thornwood 7.5'*
S.W. 7.5'
good
 Quadrangle SPRUCE KNOB S-468-W-321
 County POCAHONTAS District GREENBANK
 Engineer Wanda S. Moore
 Engineer's Registration No. 2113
 File No. _____ Drawing No. W-34-62
 Date 10-19-62 Scale 1" = 2000'

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

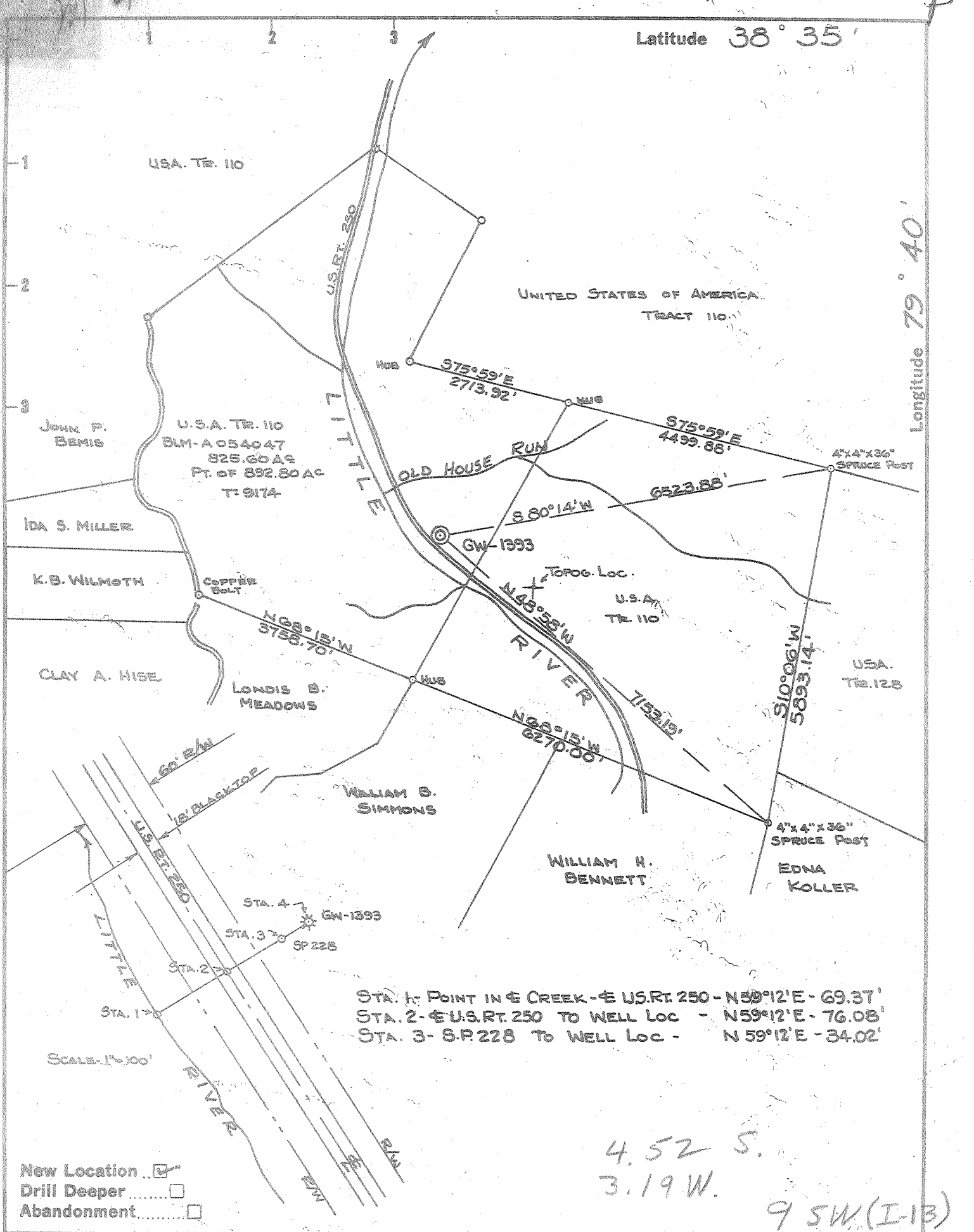
WELL LOCATION MAP
 FILE NO. POCA-22

+ Denotes location of well on United States Topographic Maps, scale 1 to 62500 latitude and longitude lines being represented by border lines as shown.

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

Samples

6-6 322 Deep Well



STA. 1- POINT IN CREEK - E US.RT. 250 - N59°12'E - 69.37'
 STA. 2- E US.RT. 250 TO WELL LOC - N59°12'E - 76.08'
 STA. 3- S.P.228 TO WELL LOC - N59°12'E - 34.02'

4.52 S.
 3.19 W.
 9 SW (I-13)

New Location
 Drill Deeper
 Abandonment

| | |
|-----------------------------|---------------------------|
| Company | COLUMBIAN CARBON CO. |
| Address | Box 873 CHARLESTON, W.VA. |
| Farm | UNITED STATES OF AMERICA |
| Tract | 110 |
| Acres | 825.80 |
| Lease No. | T-9174 |
| Well (Farm) No. | P-1 |
| Serial No. | GW-1393 |
| Elevation (Spirit Level) | 3099.80' |
| Quadrangle | SPRUCE KNOB S-468-W-321 |
| County | POCAHONTAS |
| District | GREENBANK |
| Engineer | Wanda M. Moore |
| Engineer's Registration No. | 2113 |
| File No. | |
| Drawing No. | W-34-62 |
| Date | 10-19-62 |
| Scale | 1" = 2000' |

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

WELL LOCATION MAP
 FILE NO. POCA-22

+ Denotes location of well on United States Topographic Maps, scale 1 to 62500 latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

Samples 6-6 322 Deep Well



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL AND GAS DIVISION 9 WELL RECORD CORRECTED

Quadrangle Spruce Knob SW

WELL RECORD

Permit No. Poca-22

Oil or Gas Well gas
(KIND)

Company Columbian Fuel Corp., Oper.
Address P. O. Box 873, Charleston 23, W. Va.
Farm United States of America Acres 892.80
Location (waters) Little River
Well No. P-1, GW-1393 Elev. 3099.80'
District Greenbank County Pocahontas
The surface of tract is owned in fee by Bureau of Land Management
Interior Bldg. Address Wash, 25, D. C.
Mineral rights are owned by same
Address _____
Drilling commenced 1-12-63
Drilling completed 2-16-63
Date Shot not shot From _____ To _____
With _____
Open Flow _____ /10ths Water in _____ Inch
6 /10ths Merc. in 2 Inch
Volume 381,000 Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED not acidized
WELL FRACTURED see reverse side

| Casing and Tubing | Used in Drilling | Left in Well | Packers |
|-------------------|------------------|--------------|-------------------------------|
| Size | | | |
| 16" 20" 94# | 16'7" | 16'7" | Kind of Packer <u>none</u> |
| 18 3/8" 48# | 97' | 97' | Size of _____ |
| 10 | | | Depth set _____ |
| 8 1/4" 24# | 1974' | 1974' | Perf. top _____ |
| 6 1/2" | | | Perf. bottom _____ |
| 5 3/16" 17# | 4990' | 4990' | Perf. top _____ |
| 3 | | | Perf. bottom _____ |
| 2 3/8" 4.7# | 4900'7" | 4900'7" | |
| Liners Used | w/ 2" cage | | |

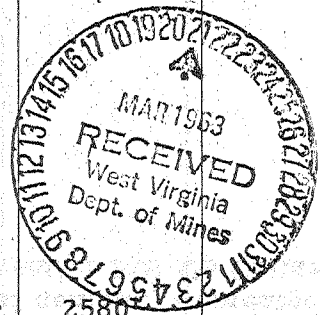
CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
see reverse side
COAL WAS ENCOUNTERED AT none FEET _____ INCHES
_____ FEET _____ INCHES FEET _____ INCHES
_____ FEET _____ INCHES FEET _____ INCHES

RESULT AFTER TREATMENT 9# spring gauge 3' = 4,712 MCF

ROCK PRESSURE AFTER TREATMENT 4 days 1620#

Fresh Water 190' 2,580' Feet Salt Water _____ Feet

| Formation | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth | Remarks |
|---|-------|--------------|------|-------------|----------------------------|-------|---------|
| Top Soil and Slate | | | 0 | 25 | | | |
| Sand and Shale | | | 25 | 65 | | | |
| Sand, Hard White | | | 65 | 95 | | | |
| Grey Sandy Shale | | | 95 | 340 | F. water | 190' | foaming |
| Lime and Shale | | | 340 | 425 | | | |
| Shale | | | 425 | 450 | | | |
| Hardy Grey Sand | | | 450 | 510 | | | |
| Shale and Sand streaks | | | 510 | 715 | | | |
| Grey Shale | | | 715 | 825 | | | |
| Sandy Shale | | | 825 | 925 | | | |
| Lime and Shale | | | 925 | 1580 | | | |
| Grey Shale | | | 1580 | 1900 | | | |
| Sandy Shale | | | 1900 | 1952 | | | |
| Shale | | | 1952 | 2020 | | | |
| Shale and Lime streaks | | | 2020 | 3420 | F. water | 2580' | |
| Lime and Shale | | | 3420 | 3824 | | | |
| Sandy Shale | | | 3824 | 3915 | | | |
| Black Shale | | | 3915 | 4440 | | | |
| Lime and Shale | | | 4440 | 4533 | | | |
| (the following depths are from Schlumberger Measurements) | | | | | | | |
| Onondaga Lime | | | 4533 | 4603 | Gas Pays (Temperature Log) | | |
| Huntersville Chert | | | 4603 | 4627 | | | |
| Needmore Shale | | | 4627 | 4697 | 4724-4730' | | |
| Oriskany Sand | | | 4697 | 4850 | 4778-4782' | | |
| Helderberg Lime Group | | | 4850 | 5530 | 4792-4794' | | |
| Silurian | | | 5530 | -5580-5880' | 4866-4870' | | |
| TOTAL DEPTH | | | | -5580' | 5880' | | |



| Formation | Color | Hard or Soft | Top <u>9</u> | Bottom | Oil, Gas or Water | Depth Found | Remarks |
|---|------------|--------------------|--------------|--------|-------------------|-------------|---|
| CASING RECORD | | | | | | | |
| 1-21-63 | | | | | | | Ran 8-5/8" casing at 1,950' Rotary Measurement. Cemented with 50 sacks Hi Early Cement and 1 sack CA CL ₂ . |
| 2-18-63 | | | | | | | Set cement plug 5,000' to 4,950' - hole from 5880' to 5000' filled with 9.5# mud. |
| 2-19-63 | | | | | | | Ran 5-1/2" casing - bottom pipe 4949' with guide shoe on bottom, Baker Differential Fill Up Collar 32' off bottom - 6 centralizers. Circulated hole. Ran 2 sacks Baraflos mixed with 20 bbls. water ahead of cement. Cemented with 225 sacks (4% Flos). Pumped plug at 700# to Differential Fill Up Collar. Pressured to 1200#. |
| Perforated: | 4728-4732' |) | | | | | |
| | 4778-4800- | (4 shots per foot | | | | | |
| | 4815-4820' |) | | | | | |
| | 4865-4876' |) | | | | | |
| FRACTURED THE ORISKANY 2-25-63 | | | | | | | |
| <p>Before fracturing gas gauged 6/10 M. 2" = 381 MCF. Pumped in at 2300#. Fraced with 500 gallons mud acid, 1500 gallons regular acid, 425 bbls. sand laden fluid, 20,000# sand, 10 gallons detergent and 100 perf balls plus 110,000 standard cubic feet of Nitrogen Gas. Average injection rate 28-1/2 bbls. per minute. Average treating pressure 2,350#. Average flush pressure 2,500#. Total fluid 628 bbls. Final open flow on 3-11-63 9# spring gauge in 3" = 4,712 MCF.</p> | | | | | | | |

Date March 19, 19 63

APPROVED Columbian Fuel Corp., Oper., Owner

By W. S. Moore, Division Sup't
(Title)