OPEN FILE REPORT 85–1

SUMMARY REPORTS FOR GAS WELLS DRILLED IN BUCHANAN COUNTY, VIRGINIA

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SEE PUB. NO. 50 FOR WELLS
DRILLED IN Buchanan County

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF MINES, MINERALS AND ENERGY
DIVISION OF MINERAL RESOURCES
Robert C. Milici, Commissioner of Mineral Resources and State Geologist

CHARLOTTESVILLE, VIRGINIA
1985

DEPARTMENT OF MINES,
MINERALS AND ENERGY

Richmond, Virginia

O. GENE DISHNER, Director

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF PURCHASES AND SUPPLY
RICHMOND
1985

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The summary reports of Buchanan County, Virginia contain data concerning each well drilled for gas from 1936 to the beginning of 1983. They represent information obtained on each well at the time of its completion or abandonment. The reports are arranged alphabetically by the quadrangle in which the well is located; then numerically by the map grid shown below.

The following abbreviations are used in the forms:

UTM - Universal Transverse Mercator Grid

Fw - Fresh Water

Sw - Salt Water

X - Indicates material that is present in Division of Mineral Resources' files in Charlottesville and available for further distribution

TD - Total depth

API - American Petroleum Institute

DMQ - Division of Mines and Quarries

Res - Resistivity

SP - Spontaneous Potential

The data for these reports are drawn primarily from available completion reports and files in the Division of Mineral Resources, Charlottesville.

3	2	1
4	5	6
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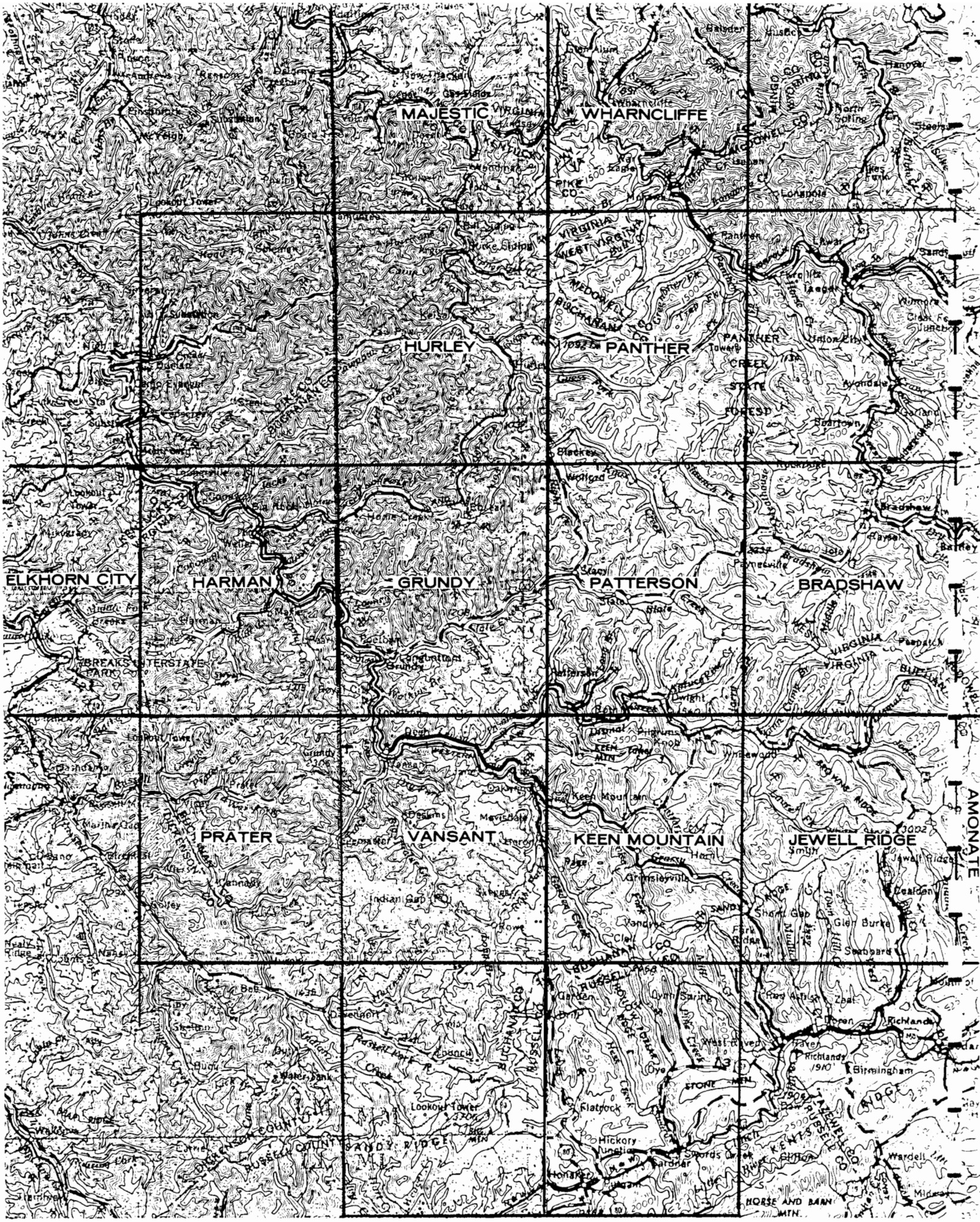
Division of 7.5-minute quadrangles used in this report.



Index of 7.5-minute quadrangle maps for report area.

AMONATE-9-1

API No. 45-027-19884-00-03 VDMR Well Rep. No. W-32

DMQ File No. A-13-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm POCOHONTAS MINING CORPORATION

Co. Well No. I-1784

County BUCHANAN Quadrangle AMONATE - 7-1/2'

Location (UTM) N 4,122,640; E 433,540 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2519.4' GR. TD 5735' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 15,000 CU. FT. Age DEVONIAN

Date compl. or abandoned NOVEMBER 30, 1951

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1500'; 4895'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON 11-9-51 FROM 5633' to 5657' WITH 120 QUARTS OF NITROGLYCERINE. WELL PERFORATED FROM 4942' to 4972' (BIG LIME). WELL ACIDIZED ON 11-30-51 WITH 1,000 GALLONS OF ACID.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 100' at 940' at

SW at at at

Coal 126'; 323'; 1320' to 1322'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2226' to 5728'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY J. M. WILSON AND R. C. MILICI, VDMR, SEPTEMBER 1963.

Formation	Top	Datum (Subsea)	Thickness
BLUESTONE	0'	+2519.4'	460'
PRINCETON SANDSTONE	2686'	+2059.4'	239'
HINTON	2925'	+1820.4'	860'
STONY GAP SANDSTONE	3412'	+960.4'	373'
BLUEFIELD	3785'	+587.4'	354'
GREENBRIER LIMESTONE	4139'	+233.4'	832'
MACCRADY - PRICE	4971'	-598.6'	351'
BIG STONE GAP SHALE	5322'	-949.6'	273'
DEVONIAN UNDIVIDED	5595'	-1222.6'	133'

Remarks

References

Released to Open File: Completion FEBRUARY 28, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-4-1

API No. 45-027-19950-00-03 VDMR Well Rep. No.

DMQ File No. BU-35

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 3-2201

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,127,720; E 423,570 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1986.1' GR. TD 4813' Form. at TD BEREA

INITIAL FLOW - 153,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MARCH 14, 1955

Result GAS WELL

Gas Shows 4802'; 4806'; 4809'; 4813'; 920'; 1490'; 4042' to 4046'; 4798' to 4799'

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL GIVEN STRATA FRAC TREATMENT ON 2-3-55. (DEPTHS NOT GIVEN).

Initial Production

FINAL FLOW - 235,000 CU. FT.

Oil shows

Water FW X at 50' at 757' at 1134'; 1360'

SW at at at

Coal 1490' to 1493'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 12, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-4-2

API No. 45-027-19968-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-54

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 12-2531

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,127,330; E 422,770 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2023.3' GR. TD 4856' Form. at TD BEREA

INITIAL FLOW - 170,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MAY 9.1957

Result GAS WELL

Gas Shows 1330'; 4107'; 4838'; 4842'; 4845'; 4856'

Gas Pays _____

Main Production 4849' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL SAND FRACTURED ON 4-26-57 (DEPTHS NOT GIVEN).

Initial Production _____

FINAL FLOW - 445,000 CU. FT.

Oil shows _____

Water FW X at 143' ____ at 295' ____ at 582'; 1330'

SW ____ at ____ ____ at ____ ____ at ____

Coal 110' to 113'; 252' to 253'; 292' to 293'; 1156' to 1158'; 1332' to 1334'; 1430' to 1432'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion AUGUST 7, 1957

Samples NONE

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-4-3

API No. 45-027-19986-00-03

VDMR Well Rep. No. W-568

DMQ File No. BU-72

Operator CABOT CORPORATION

Farm RANDAL JEWEL

Co. Well No. 1-1514V

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,130,390; E 423,000 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2421.07' GR. TD 5220' Form. at TD BEREA

INITIAL FLOW - 163,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MARCH 15, 1961

Result GAS WELL

Gas Shows 4440'

Gas Pays 5180' to 5190';

Main Production 5180' to 5190' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED ON 3-15-61 FROM 5170' to 5190'

Initial Production

FINAL FLOW - 3,834,000 CU. FT.

Oil shows

Water FW X at 212' at at

SW at at at

Coal 112' (BLOSSOM); 148' (BLOSSOM); 2130' to 2133'; 2191' to 2192'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 100' to 5220'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 13, 1961

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-4-4

API No. 45-027-19987-00-03 VDMR Well Rep. No. W-567

DMQ File No. BU-73

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 17-3201

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,129,000; E 423,250 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2414.2' GR. TD 5270' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned APRIL 6, 1961

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL FRACTURED ON 2-17-61 WITH 250 GALLONS OF MUD ACID, 20,000 POUNDS OF SAND AND 600 BARRELS OF TREATED WATER. WELL PERFORATED FROM 5160' to 5177' WITH 2 SHOTS PER FOOT AND FROM 5184' to 5210' WITH 3 SHOTS PER FOOT.

Initial Production

FINAL FLOW - 750,000 CU. FT.

Oil shows

Water FW X at 47' at at

SW at at at

Coal 702' to 705'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2000' to 5260'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density Sonic Other TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JULY 5, 1961

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-4-5

API No. 45-027-20450-00-03 VDMR Well Rep. No.

DMQ File No. BU-211

Operator BOW VALLEY PETROLEUM/PANTHER CREEK LTD, PTR.

Farm A. B. JEWEL

Co. Well No. A. B. JEWEL #1

County BUCHANAN Quadrangle BRADSHAW-7½'

Location (UTM) N4,129,770; E423,070 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2120' GR. TD 4976' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 36,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 11, 1982

Result GAS WELL

Gas Shows

Gas Pays 4840' TO 4854'

Main Production 4840' TO 4854' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: PERFORATIONS 4840'; 30,000 POUNDS 80/100 SAND, 60,000 POUNDS OF 20/40 SAND

Initial Production

FINAL FLOW - 2,500,000 CU. FT.

Oil shows

Water FW X at 52' at at

SW at at at

Coal 370' TO 373'; 1601' TO 1604'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 11, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-7-1

API No. 45-027-19999-00-03 VDMR Well Rep. No. W-805

DMQ File No. BU-85

Operator UNITED FUEL GAS COMPANY

Farm POCAHONTAS MINING CORPORATION #2

Co. Well No. 9139-T

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,124,330; E 432,280 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2147.47' GR. TD 5194' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned AUGUST 3, 1962

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW X at 30' at 80' at 100'

SW at at at at

Coal 75' to 77'; 422' to 426'; 495' to 498'; 550' to 554'; 635' to 639'; 686' to 687'; 691' to 693'; 746' to 750'; 1001' to 1003'; 1138' to 1140'; 1326' to 1329'; 1402' to 1405'; 1687' to 1693'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 20' to 5203.55'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER, INDUCTION, CONDUCTIVITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 1, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-8-1

API No. 45-027-19997-00-03 VDMR Well Rep. No. W-717

DMQ File No. BU-83

Operator UNITED FUEL GAS COMPANY

Farm POCAHONTAS MINING CORPORATION #3

Co. Well No. 9140-T

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,123,080; E 428,440 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1962.28' GR. TD 5030' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 21, 1962

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1690' to 1700'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL FRACTURED ON 7-20-62 WITH 550 BARRELS OF SAND LADEN FLUID, 31,000 POUNDS OF 20/40 SAND. WELL PERFORATED FROM 4960' to 4968' AND 4978' to 4982' WITH 2 JET SHOTS PER FOOT.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 25' at 38' at 83'; 115'; 207'

SW at at at

Coal 182' to 184'; 212' to 214'; 440' to 443'; 623' to 626'; 687' to 690'; 747' to 750'; 913' to 915'; 963' to 965'; 1042' to 1045'; 1239' to 1241'; 1266' to 1268'; 1425' to 1431'; 1541' to 1543'; 1608' to 1614'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 100' to 5030'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density Sonic Other CONDUCTIVITY, TEMPERATURE, DENSITY, CALIPER, INDUCTION

Stratigraphic Data Source CORRELATIONS BY MARSHALL MILLER, VDMR, 1970-1974

Formation	Top	Datum (Subsea)	Thickness
NEW RIVER	0'	+1962.28	1280'
POCAHONTAS	1280'	+682.28'	520'
BLUESTONE	1800'	+162.28'	360'
PRIDE SHALE	1930'	+32.28'	230'
PRINCETON	2160'	-197.72	240'
LITTLE STONE GAP	2400'	-437.72'	40'
STONY GAP SANDSTONE	3062'	-1099.72'	71'
GREENBRIER	3463'	-1500.72'	836'
MACCRADY	4299'	-2336.72'	

Remarks

References

Released to Open File: Completion SEPTEMBER 19, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-9-1

API No. 45-027-19962-00-03 VDMR Well Rep. No. W-126

DMQ File No. BU-48

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm POCOHONTAS MINING CORPORATION

Co. Well No. 2-2415

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,124,960; E 423,400 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2202.2' GR. TD 5008' Form. at TD BEREA

INITIAL FLOW - 42,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 18, 1956

Result GAS WELL

Gas Shows 4997'

Gas Pays 5003'; 5008'

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: PETROGEL TREATMENT OF WELL ON 7-27-56.

Initial Production

FINAL FLOW - 268,000 CU. FT.

Oil shows

Water FW X at 47' at 180' at 1664'

SW at at at

Coal 332' to 334'; 810' to 812'; 940' to 942'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2021' to 5008'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+2202.2'	2021'
BLUESTONE	2021'	+181.2'	365'
PRINCETON	2386'	-183.8'	203'
HINTON	2589'	-386.8'	685'
STONY GAP SANDSTONE	2938'	-735.8'	336'
BLUEFIELD	3274'	-1071.8'	321'
GREENBRIER	3595'	-1392.8'	762'
MACCRADY - PRICE	4357'	-2154.8'	329'
BIG STONE GAP SHALE	4686'	-2483.8'	291'
DEVONIAN UNDIVIDED	4977'	-2774.8'	31'

Remarks

References

Released to Open File: **Completion** NOVEMBER 16, 1956

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-9-2

API No. 45-027-20111-00-03 VDMR Well Rep. No. W-3710

DMQ File No. BU-123

Operator ASHLAND OIL, INC.

Farm LON B. ROGERS ET AL

Co. Well No. 20

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N4,125,340 E424,640 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2007.7' GR. TD 4923' Form. at TD

INITIAL FLOW - SHOW Age

Date compl. or abandoned 2-16-73

Result -GAS-

Gas Shows 4839' to 4852'

Gas Pays 4803' to 4869'

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED FROM 4839' to 4852' WITH 8,000 GALLONS OF METHENOL AND 30,000 # SAND

Initial Production

FINAL FLOW - 1,700,000 CU. FT.

Oil shows

Water FW at at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4220'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: **Completion** MAY 17, 1973

Samples YES

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-9-3

API No. 45-027-19958-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-45

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 9-2380

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,126,640; E 423,580 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2301.7' GR. TD 5100' Form. at TD BEREA

INITIAL FLOW - 232,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned APRIL 9, 1956

Result GAS WELL

Gas Shows 5088'

Gas Pays 5095'; 5100'

Main Production 4354' Prod. Form. BIG LIME AND BEREA

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 4280' to 4384' WITH 2,000 GALLONS OF ACID ON 3-5-56. (DEPTHS NOT GIVEN); SWABBED AFTER ACID. NO RESULTS.

Initial Production

FINAL FLOW - 827,000 CU. FT.

Oil shows _____

Water FW X at 104' _____ at 1474' _____ at 1780'

SW _____ at _____ _____ at _____ _____ at _____

Coal 305' to 307'; 446' to 448'; 1357' to 1359'; 1780' to 1784'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 8, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-9-4

API No. 45-027-19967-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-53

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm POCAHONTAS MINING CORPORATION

Co. Well No. 3-2503

County BUCHANAN Quadrangle BRADSHAW - 7-1/2'

Location (UTM) N 4,125,880; E 423,920 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2246.5' GR. TD 5020' Form. at TD BEREA

INITIAL FLOW - 84,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 17, 1957

Result GAS WELL

Gas Shows 1125'; 3785' to 3787'; 4020'; 4340' to 4345'

Gas Pays _____

Main Production 5003' to 5011' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL WAS SAND FRACTURED ON 1-10-57 WITH 248 BARRELS OF OIL AND 7,500 POUNDS OF SAND.

Initial Production

FINAL FLOW - 1,161,000 CU. FT.

Oil shows _____

Water FW X at 60' _____ at 224' to 226' at 1187'

SW _____ at _____ _____ at _____ _____ at _____

Coal 148' to 150'; 224' to 226'; 1351' to 1356'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion APRIL 17, 1957

Samples NONE

(Note: UTM measurements in meters, all others in feet)

BRADSHAW-9-5

API No. 45-027-20445-00-03 VDMR Well Rep. No. _____

DMQ File No. BU -209

Operator ASHLAND EXPLORATION INCORPORATED

Farm LON B. ROGERS

Co. Well No. 24

County BUCHANAN Quadrangle BRADSHAW - 7½'

Location (UTM) N4,126,450; E424,520 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2506.5' GR. TD 5336' Form. at TD DEVONIAN

INITIAL FLOW _ Age DEVONIAN

Date compl. or abandoned JANUARY 5, 1982

Result GAS WELL

Gas Shows _____

Gas Pays 4620' to 4624'; 5294' to 5319'

Main Production 5294' to 5319' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: PERFORATED BEREA WITH 24 HOLES FROM 5294' TO 5318'. FRACTURED BEREA WITH 30 POUNDS 1000 CROSSLINK GEL SYSTEM USING 100 SACKS OF 80/100 250 SACKS OF 20/40. PERFORATED GREENBRIER WITH 8 HOLES FROM 4620' to 4624' ACIDIZED WITH 1000 GALLONS OF 15% HCL.

Initial Production _____

FINAL FLOW - 219,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 439' to 442'; 544' to 547'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion APRIL 5, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-1

API No. 45-027-20039-00-03 Form Well Rep. No. W-3089

DMQ File No. BU-89

Operator UNITED FUEL GAS COMPANY

Farm THE PITTSTON COMPANY

Co. Well No. 9581

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,131,470; E 387,780 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1325.07' GR. TD 3906' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned NOVEMBER 2, 1970

Result GAS WELL

Gas Shows 2900'; 3075'; 3175'

Gas Pays

Main Production 3812' to 3840' Prod. Form. BEREA AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA ON 10-22-70 FROM 3812' to 3840' WITH 500 GALLONS OF MCA, 878 BARRELS OF WATER AND 23,000 POUNDS OF SAND. PERFORATED BEREA FROM 3786' to 3796'.

Initial Production
FINAL FLOW - 701,000 CU. FT.

Oil shows

Water FW X at 30' 1GPM at 98' 1GPM at
SW at at at

Coal 18' to 20'; 97' to 98'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 90' to 1850'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other DUAL INDUCTION, PERFORATING DEPTH CONTROL, CALIPER, CEMENT BOND

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 31, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-2

API No. 45-027-20053-00-03 VDMR Well Rep. No. W-3113

DMQ File No. BU-91

Operator UNITED FUEL GAS COMPANY

Farm THE PITTSTON COMPANY

Co. Well No. 9584

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,131,030; E 388,590 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1410.83' GR. TD 2935' Form. at TD BIG LIME

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 14, 1970

Result ABANDONED; UNABLE TO COMPLETE DRILLING

Gas Shows 2435' to 2436'

Gas Pays

Main Production Prod. Form.

Age

Treatment: 7-INCH CASING PARTED AT 1612'. REMEDIAL MEASURES TAKEN WERE UNSUCCESSFUL IN REGAINING ENTRY AFTER MILLING TO 1648'. FURTHER ATTEMPTS TO CORRECT HOLE CONDITION WERE NOT JUST IFIABLE.

Initial Production FINAL FLOW - NONE

Oil shows

Water FW X at 55' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 40' to 1880'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 12, 1970

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-3

API No. 45-027-20053-00-03 VDMR Well Rep. No. W-3280

DMQ File No. BU-99

Operator UNITED FUEL GAS COMPANY

Farm THE PITTSTON COMPANY

Co. Well No. 9584-A

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,130,000; E 388,530 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1408.67' GR. TD 4025' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JANUARY 25, 1971

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 2525' to 2532'

Gas Pays

Main Production Prod. Form.

Age

Treatment: FRACTURED BEREA FROM 3906' to 3940' ON 1-26-71 WITH 500 GALLONS OF MCA, 967 BARRELS OF WATER, AND 18,000 POUNDS OF SAND.

Initial Production

FINAL FLOW - SHOW

Oil shows

Water FW X at 235' at at

SW X at 2525' to 2532' at at

Coal 175' to 177'; 1131' to 1134'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 170' to 4030'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other CALIPER, PERFORATING DEPTH CONTROL, TEMPERATURE, DUAL INDUCTION, CEMENT BOND

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, 1971

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1408.67	205'
LEE	205'	+1203.67'	1237'
POCAHONTAS	A B S E N T		
BLUESTONE	1442'	-33.33'	411'
PRIDE SHALE MEMBER	1668'	-259.33'	185'
PRINCETON	1853'	-444.33'	147'
HINTON	2000'	-591.33'	595'
STONY GAP SANDSTONE MEMBER	2455'	-1046.33'	140'
BLUEFIELD	2595'	-1186.33'	134'
GREENBRIER	2729'	-1320.33'	492'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROACKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 84, P 151.

Released to Open File: Completion APRIL 25, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-4

API No. 45-027-20267-00-03 VDMR Well Rep. No.

DMQ File No. BU-153

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #51

Co. Well No. 20469

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,132,060; E 388,300 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1521.29' GR. TD 4081' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age OEVONIAN

Date compl. or abandoned AUGUST 31, 1977

Result GAS WELL

Gas Shows

Gas Pays 3969' to 4037'

Main Production 3969' to 4037' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 8-10-77 WITH 15,000 # 80/100 SAND AND 27,000 # 20/40 SAND AND 948 BARRELS OF FOAM AND 410,000 SCF NITROGEN FROM 3969' to 4037' THROUGH 18 HOLES.

Initial Production
FINAL FLOW - 215,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____
SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log ____ Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____
Density X Sonic ____ Other CALIPER, TEMPERATURE, INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 29, 1977
Samples NO

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-5

API No. 45-027-20336 -00-03 VDMR Well Rep. No. W-5927

DMQ File No. BU-181

Operator W. E. ELLIOTT, TRUSTEE ACCOUNT 507

Farm N. D. HOWARD ET AL

Co. Well No. 507-NO. 2

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,129,430; E 385,410 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1119' GR. TD 3611' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NONE Age DEVONIAN

Date compl. or abandoned JUNUARY 9, 1980

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 3498' to 3500'; 3506' to 3508'; 3516' to 3518'; 3522' to 3548'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL STIMULATED (DEPTHS NOT GIVEN) WITH 500 GALLONS OF MUD ACID, 32,000 GALLONS OF SAND LADEN FLUID, AND 60,000 POUNDS OF 20/40 MESH SAND.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 90' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1900' to 3600'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 9, 1980

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-6

API No. 45-027-20074-00-03 VDMR Well Rep. No. W-3663

DMQ File No. BU-115

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #21

Co. Well No. 9680-T

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,128,840; E 389,200 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1628.57' GR. TD 5760' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 23, 1972

Result GAS WELL

Gas Shows 2828'; 3028'

Gas Pays

Main Production 4172' to 4217' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 6-8-72 WITH 500 GALLONS MCA, 29,500 # 10/20 SAND AND 1,026 BARRELS OF SAND LADEN FLUID FROM 4172' to 4217'; 19 PERFORATIONS.

Initial Production

FINAL FLOW - 327,000 CU. FT.

Oil shows

Water FW X at 130' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 197' to 200'; 410' to 412'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 5600'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CALIPER, DUAL INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 21, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-7

API No. 45-027-20149-00-03 VDMR Well Rep. No. W-4078

DMQ File No. BU-134

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm FRED CLEVINGER

Co. Well No. 9826-T

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,128,680; E 387,920 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1479.09' GR. TD 3441' Form. at TD BIG INJUN

INITIAL FLOW - 6,400,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 18, 1973

Result GAS WELL

Gas Shows

Gas Pays 2930' to 2940'; 3127'; 3140' to 3144'

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: NO STIMULATION - THIS IS A NATURAL WELL.

Initial Production

FINAL FLOW - 6,400,000 CU. FT.

Oil shows

Water FW X at 75' 125' at 172' at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 270' to 3440'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other DUAL INDUCTION, SONIC, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 18, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-6-8

API No. 45-027-20537-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-215

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm PITTSTON RESOURCES, INCORPORATED

Co. Well No. 20990

County BUCHANAN Quadrangle ELKHORN CITY-7½'

Location (UTM) N4,130,900; E386,870 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1179.10' GR. TD 5056' Form. at TD ONONDAGA

INITIAL FLOW - 249,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 20, 1982

Result GAS WELL

Gas Shows _____

Gas Pays 4459' TO 4992'

Main Production _____ Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: FRACTURED SHALE ON 11-30-82 FROM 3684' TO 5044' WITH 500 GALLONS OF MUD ACID AND 55,000 POUNDS OF 20/50 SAND. FRACTURED SHALE ON 12-7-82 FROM 3684' TO 5044' WITH 500 GALLONS OF MUD ACID AND 55,000 POUNDS OF 20/50 SAND.

Initial Production _____

FINAL FLOW -

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat _____ Plotted _____ Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 20, 1983

Samples NO

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-7-1

API No. 45-027-20040-00-03 VDMR Well Rep. No. W-3262

DMQ File No. BU-90

Operator UNITED FUEL GAS COMPANY

Farm THE PITTSTON COMPANY #2

Co. Well No. 9583

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,126,930; E 387,900 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1579.77' GR. TD 4241' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned NOVEMBER 16, 1970

Result GAS WELL

Gas Shows

Gas Pays 3264' to 3274'; 3995' to 4032'

Main Production 3995' to 4032' Prod. Form. BEREA AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FROM 3995' to 4032' ON 11-5-70 WITH 888 BARRELS OF WATER, 20,000 POUNDS OF 10/20 SAND AND 500 GALLONS OF MCA.

Initial Production

FINAL FLOW - 791,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 43' to 45'; 398' to 400'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2390' to 4190'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other DUAL INDUCTION, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion FEBRUARY 14, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-7-2

API No. 45-027-20055-00-03 VDMR Well Rep. No. W-3380

DMQ File No. BU-100

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #11

Co. Well No. 9634

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,126,520; E 389,060 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1960.40' GR. TD 4615' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 146,000 CU. FT. Age DEVONIAN

Date compl. or abandoned OCTOBER 19, 1971

Result GAS WELL

Gas Shows 4377'

Gas Pays 4463' to 4490'

Main Production 4463' to 4490' Prod. Form. COFFEE SHALE AND BEREA

Age MISSISSIPPIAN

Treatment: PERFORATED FROM 4463' to 4490'; 13 HOLES. FRACTURED BEREA FORMATION ON 10-13-71 WITH 500 GALLONS MCA, AND 989 BARRELS OF WATER AND 18000 # 10/20 SAND.

Initial Production

FINAL FLOW - 933,000 CU. FT.

Oil shows

Water FW X at 140' at at

SW at at at

Coal 1840' to 1843'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 10' to 4620'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER

Stratigraphic Data Source FORMATIONAL BOUNDARIES DETERMINED FROM ELECTRICAL LOGS

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1960.14'	902'
LEE	902'	+1058.14'	1241'
BLUESTONE	2143'	-182.86'	478'
PRIDE SHALE	2437'	-476.86'	184'
PRINCETON	2621'	-660.86'	169'
LITTLE STONE GAP MEMBER	2790'	-829.86'	?
MAXTON	2914'	-956.86'	42'
UNKNOWN	2956'	-995.86'	298'
MAXTON	3254'	-1293.86'	45'
UNKNOWN	3299'	-1338.86'	81'
GREENBRIER	3380'	-1419.86'	484'
MACCRADY	3864'	-1903.86'	?

Remarks

References

Released to Open File: **Completion** JANUARY 18, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

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ELKHORN CITY-7-3

API No. 45-027-20113-00-03 VDMR Well Rep. No. W-3804

DMQ File No. BU-125

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #18

Co. Well No. 9690

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,127,520, E 388,590 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2004.82' GR. TD 4545' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 60,000 CU. FT. Age DEVONIAN

Date compl. or abandoned SEPTEMBER 17, 1973

Result GAS WELL

Gas Shows 3472'; 3699'

Gas Pays 3470' to 3478'

Main Production 3470' to 3478' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION WITH 500 GALLONS MCA, 23,000 # 10/20 SAND AND 1079 BARRELS OF FLUID FROM 4434' to 4461' THROUGH 21 PERFORATIONS. NO TEST WAS RECEIVED ON BEREA FORMATION DUE TO CASING SEPARATING AT 3556'. BIG LIME ACIDIZED BETWEEN 3470' AND 3478' WITH 2,000 GALLONS OF 28% HCL.

Initial Production FINAL FLOW - 103,000 CU. FT.

Oil shows

Water FW X at 105' at 145' at

SW at at at

Coal 65' to 70'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4530'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER, TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 16, 1973

Samples YES

(Note: UTM measurements in meters, all others in feet)

ELKHORN CITY-7-4

API No. 45-027-20326-00-03 VDMR Well Rep. No.

DMQ File No. BU-179

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY

Co. Well No. 20687

County BUCHANAN Quadrangle ELKHORN CITY - 7-1/2'

Location (UTM) N 4,127,310; E 388,860 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1989.87' GR. TD 4555' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned SEPTEMBER 27, 1979

Result GAS WELL

Gas Shows 3636'; 4466'

Gas Pays

Main Production 3625' to 3660'; 4441' to 4468' Prod. Form. BIG LIME AND BEREA Age MISSISSIPPIAN

Treatment: FOAM FRACTURED BEREA WITH 500 GALLONS OF M.A., 44,894 TOTAL GALLONS,19,000 # 80/100; 30,000 # 20/40 SAND; 362,000 SCF N2. DUD-FRACTURED BIG LIME WITH 500 GALLONS OF M.A.; 21,836 TOTAL GALLONS; 10,000 # 80/100 AND 14,000 # 20/40 SAND.

Initial Production

FINAL FLOW - 539,000 CU. FT.

Oil shows

Water FW X at 108' at at

SW at at at

Coal 100' to 102'; 165' to 170'

Plat X Plotted X Completion Report X

Drillers Log Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 26, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-1-1

API No. 45-027-19909-00-03 VDMR Well Rep. No. W-5

DMQ File No. A38BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm FLORENCE HARRIS CURTIS

Co. Well No. 2A

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,132,520; E 400,940 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2009.80' GR. TD 6453' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned SEPTEMBER 7, 1950

Result GAS WELL

Gas Shows 1035' to 1040'; 2719' to 2721'; 2125' to 2130'; 1904' to 1908'

Gas Pays

Main Production Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: NOT TREATED

Initial Production

FINAL FLOW - 231,000 CU. FT.

Oil shows 1090' to 1095'

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 20' to 24'; 301' to 302'; 449' to 451'; 2050' to 2053'; 2125' to 2130'
3072' to 3073'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 187' to 6453'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, 1970-1974

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+2009.8'	1345'
LEE	1345'	+664.8'	688'
POCAHONTAS	2033'	-23.2'	241'
BLUESTONE	2274'	-264.2'	320'
PRIDE SHALE MEMBER	2463'	-453.2'	131'
PRINCETON	2594'	-584.2'	286'
HINTON	2880'	-870.2'	412'
LITTLE STONE GAP MEMBER	2880'	-870.2'	25'
STONY GAP SANDSTONE MEMBER	3230'	-1220.2'	62'
BLUEFIELD	3292'	-1282.2'	248'
GREENBRIER	3540'	-1530.2'	467'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES. BULLETIN 84, P. 142-143.

Released to Open File: **Completion** DECEMBER 6, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-1-2

API No. 45-027-19910-00-03 VDMR Well Rep. No. W-3

DMQ File No. A-39-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm F. H. CURTIS ET AL

Co. Well No. 1A

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,132,530; E 408,390 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1987.44' GR. TD 3461' Form. at TD LOWER MAXON

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JUNE 1, 1949

Result GAS WELL

Gas Shows 1485'; 2750'; 2760'; 3386'

Gas Pays 3397' to 3431'

Main Production 3397' to 3431' Prod. Form. LOWER MAXON

Age MISSISSIPPIAN

Treatment: FRACTURED FORMATION FROM 3397' to 3401' WITH 300 POUNDS OF DETIONITE.

Initial Production

FINAL FLOW - 6,005,300 CU. FT.

Oil shows 1022'; 2250'

Water FW X at 238' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1742' to 1747'; 2128' to 2131'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 351' to 3461'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
NORTON	0'	+1987.44'	659'
LEE	1010'	+977.44'	1219'
BLUESTONE	2229'	+241.56'	371'
PRINCETON	2600'	-612.56'	200'
HINTON-AVIS LIMESTONE	2800'	-812.56'	50'
HINTON UNDIVIDED	2850'	-862.56	367'
HINTON-STONY GAP SANDSTONE	3217'	-1229.56'	58'
BLUEFIELD	3275'	-1287.56'	186'

Remarks

References

Released to Open File: Completion AUGUST 30, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-2-1

API No. 45-027-19888-00-03 VDMR Well Rep. No. _____

DMQ File No. A-17-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm GEORGE H. BELCHER, HEIRS

Co. Well No. 1-B

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,132,760; E 407,450 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1983.32' GR. TD 2990' Form. at TD _____

Age _____

Date compl. or abandoned OCTOBER 14, 1953

Result PLUGGED AND ABANDONED

Gas Shows 1030'; 2774' to 2787'

Gas Pays _____

Main Production NON-PRODUCER Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 491'to 51'; 451' to 454'; 1618' to 1620'; 1756' to 1758'; 2143' to 2145'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JANUARY 12, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-4-1

API No. 45-027-20072-00-03 VDMR Well Rep. No. W-3943

DMQ File No. BU-112

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm H. CLAUDE POBST ET AL

Co. Well No. 9638

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,129,630; E 401,860 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1163.16' GR. TD 3197' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 127,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MARCH 30, 1972

Result GAS WELL

Gas Shows 3130'

Gas Pays 3124' to 3134'

Main Production 3124' to 3134' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ACIDIZED BIG LIME FORMATION ON 3-29-72 WITH 500 GALLONS OF REG. ACID AND 3,000 GALLONS OF 28% ACID FROM 3124' to 3134'; 21 PERFORATIONS.

Initial Production

FINAL FLOW - 353,000 CU. FT.

Oil shows

Water FW X at 115' at at

SW at at at

Coal 44' to 48'; 110' to 115'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 50' to 4040'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
LEE	0'	+1163.16'	1244'
POCAHONTAS	1244'	-80.84'	204'
BLUESTONE	1448'	-284.84'	390'
PRIDE SHALE MEMBER	1600'	-436.84'	238'
PRINCETON	1838'	-674.84'	194'
HINTON	2032'	-868.84'	396'
STONY GAP SANDSTONE MEMBER	2392'	-1228.84'	36'
BLUEFIELD	2428'	-1264.84'	276'
GREENBRIER	2704'	-1540.84'	500'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA. VIRGINIA DIVISION OF MINERAL RESOURCES, P. 155, BULLETIN 84.

Released to Open File: **Completion** JUNE 28, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-6-1

API No. 45-027-19922-00-03 VDMR Well Rep. No. W-52

DMQ File No. BU-7

Operator SLATE CREEK DEVELOPMENT PROGRAM

Farm JANIE MCCLANAHAN

Co. Well No. 1

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,128,810; E 410,710 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1527' GR. TD 3661' Form. at TD INJUN

INTIAL FLOW - 57,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MARCH 30, 1952

Result GAS WELL

Gas Shows 1040'

Gas Pays 3566' to 3572'

Main Production 3566' to 3572' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED ON 4-8-52 FROM 3552' to 3602' WITH 1,000 GALLONS OF 15% ACID AND WITH 2,000 GALLONS OF 15% ACID ON 4-17-52.

Initial Production

FINAL FLOW - 3,130,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1485' to 1495'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 3314' to 3661'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source CORRELATIONS BY JOHN M. WILSON; VDMR, 1963.

Formation	Top	Datum (Subsea)	Thickness
GREENBRIER	0'	+1527'	3591'
MACCRADY	3591'	-2064'	70'

Remarks

References

Released to Open File: Completion JUNE 28, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-6-2

API No. 45-027-19932-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-17

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm S. B. AVIS HEIRS, ET ALS

Co. Well No. I-2004

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,128,200; E 409,980 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1474' GR. TD 3614' Form. at TD INJUN SAND

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned MAY 27, 1953

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows 3083'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW X at 60' to 68' at 817' _____ at 1011'

SW _____ at _____ _____ at _____ _____ at _____

Coal 36' to 38'; 817' to 819'; 1011' to 1014'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion AUGUST 25, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-6-3

API No. 45-027-19933-00-03 VDMR Well Rep. No.

DMQ File No. BU-18

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm G. L. RITTER LUMBER COMPANY

Co. Well No. 2-2005

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,130,170; E 411,180 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1393.' GR. TD 3508' Form. at TD BIG LIME

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JULY 18, 1953

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 840'; 1820' to 1827'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL TREATED ON 8-21-53 WITH 1,000 GALLONS OF ACID. RE-ACIDIZED ON 8-28-53. BLEW PACKER.SWABBED TO BOTTOM. TREATED WITH 1,000 GALLONS OF ACID ON 10-7-53. WELL PERFORATED FROM 3449' to 3472'.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 65' at at

SW at at at

Coal 1364' to 1367'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: **Completion** OCTOBER 16, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-6-4

API No. 45-027-19938-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-23

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm S. B. AVIS HEIRS, ET ALS

Co. Well No. 2-2051

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,129,470; E 410,530 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1408.1' GR. TD 3515' Form. at TD BIG LIME

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned APRIL 21, 1954

Result GAS WELL

Gas Shows 1845' to 1850'; 760'; 1058'; 3135' to 3142'; 3147'; 3479' to 3489'

Gas Pays _____

Main Production 3500' to 3513' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 3399' to 3513' WITH 1,000 GALLONS OF ACID ON 3-19-54 AND 1,000 GALLONS OF ACID ON 4-6-54. PERFORATED BIG LIME FROM 3490' to 3513'.

Initial Production _____

FINAL FLOW - 1,138,000 CU. FT.

Oil shows _____

Water FW X at 115' _____ at 181' _____ at 974' to 1158'

SW _____ at _____ _____ at _____ _____ at _____

Coal 1374' to 1378'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 20, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-7-1

API No. 45-027-19887-00-03 VDMR Well Rep. No. W-46

DMQ File No. A-16-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm J. G. BUSTON ET AL

Co. Well No. 1

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,124,500; E 410,950 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1909.5' GR. TD 4088' Form. at TD INJUN

INITIAL FLOW - 232,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MAY 15, 1953

Result GAS WELL

Gas Shows

Gas Pays 3725' to 3728'; 4028' to 4037'; 3820' to 3824'; 4001' to 4005'

Main Production 3989' to 4088' Prod. Form. INJUN SAND

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 3989' to 4088' WITH 2500 GALLONS OF 15% ACID.

Initial Production

FINAL FLOW - 232,000 CU. FT.

Oil shows

Water FW X at 1523' at at

SW at at at

Coal 665' to 667'; 671' to 674'; 1047' to 1051'; 1226' to 1230'; 1340' to 1344'; 1436' to 1439'; 1523' to 1529'; 1670' to 1672'; 1798' to 1803'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet 2040' to 4085'; 3774' to 4085' (OVERLAP)

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1909.5'	2040'
BLUESTONE	2040'	-130.5'	364'
PRINCETON	2404'	-494.5'	168'
HINTON	2572'	-662.5'	?
STONY GAP SANDSTONE	?	?	?
BLUEFIELD	?	?	?
GREENBRIER	3491'	-1581.5'	587' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion AUGUST 13, 1953

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-7-2

API No. 45-027-19925-00-03 VDMR Well Rep. No. W-40

DMQ File No. BU-10

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 15-1930

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,124,050; E 408,050 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1673.4' GR. TD 3858' Form. at TD INJUN

INITIAL FLOW - 127,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 18, 1952

Result GAS WELL

Gas Shows 1033' to 1035'; 1238' to 1241'; 1351' to 1358'; 1371' to 1374'

Gas Pays

Main Production 3783' to 3792' Prod. Form. BIG LIME AND INJUN

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED ON 7-24-52 WITH 1,000 GALLONS OF ACID AND ON 7-31-52 WITH 3,000 GALLONS OF ACID. (DEPTHS NOT GIVEN). WELL PERFDRATED FROM 3811' to 3844'.

Initial Production

FINAL FLOW - 2,130,000 CU. FT.

Oil shows

Water FW X at 142' at at

SW X at 1033' to 1035' at 1238' to 1241' at

Coal 469' to 471'; 753' to 755'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1760' to 3858'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Oensity Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 16, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-7-3

API No. 45-027-19940-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-25

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. H. MATNEY

Co. Well No. 3-2069

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,124,140; E 408,040 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1919.4' GR. TD 3939' Form. at TD INJUN

INITIAL FLOW - 95,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 11, 1964

Result GAS WELL

Gas Shows 1120'; 1386'; 1700'; 3857'; 3900'

Gas Pays _____

Main Production _____ Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 3764' to 3924' WITH 1,000 GALLONS ON 12-31-53. WELL ACIDIZED FROM 3764' to 3924' WITH 1,000 GALLONS OF ETCHING ACID AND 1,000 GALLONS OF REGULAR ACID ON 1-8-54. WELL PERFORATED FROM 3901' to 3924'

Initial Production FINAL FLOW - 1,980,000 CU. FT.

Oil shows _____

Water FW X at 106' _____ at 665' _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 390' to 393'; 460' to 463'; 569' to 571'; 1290' to 1292'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion APRIL 11, 1964

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-7-4

API No. 45-027-19946-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-31

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LOUISA B. YATES, ET AL

Co. Well No. I-2156

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,126,000; E 408,220 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1541.5' GR. TD 3534' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 18, 1954

Result DRY HOLE

Gas Shows 800'; 1020'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL ACIDIZED FROM 3337' to 3520' WITH 1,000 GALLONS OF REGULAR ACIDON 9-9-54; ALSO 2,000 GALLONS OF REGULAR ACID ON 9-17-54; 1,000 GALLONS OF REGULAR ACID ON 11-12-54; 2,000 GALLONS OF REGULAR ACID ON 12-1-54. PERFORATED WELL FROM 3496' to 3520'. NO RESULTS AFTER ACID.

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 17, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-7-5

API No. 45-027-20280-00-03 VDMR Well Rep. No. W-5166

DMQ File No. BU-163

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm GEORGIA PACIFIC

Co. Well No. ISLAND CREEK #14

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N4,123,040; E408,790 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1865' GR. TD 5040' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MARCH 7, 1978

Result GAS WELL

Gas Shows

Gas Pays 3942' to 3950'

Main Production 3942' to 3950' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: PERFORATED BIG LIME FROM 3942' to 3950'; 2 SPF, 17 SHOTS. LOADED HOLE WITH 15% CRA. ACIDIZED BIG LIME WITH 5,000 GALLONS OF 15% CRA.

Initial Production

FINAL FLOW - 189,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1661' to 1663'; 1774' to 1784'; 1824' to 1830'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 20' to 5040'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CASING COLLAR, CALIPER, INDUCTION, CEMENT BOND

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 5, 1978

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-7-6

API No. 45-027-20285-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-166

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm GEORGIA PACIFIC CORPORATION

Co. Well No. 1C-13

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,124,410; E 410,200 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1696.26' GR. TD 4067' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned OCTOBER 15, 1980

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows _____

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

FINAL FLOW - _____

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JANUARY 13, 1981

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-1

API No. 45-027-19877-00-03 VDMR Well Rep. No. _____

DMQ File No. A-6-BU

Operator SLATE CREEK DEVELOPMENT PROGRAM

Farm ALMARINE YATES

Co. Well No. 1

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,126,790; E 406,960 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1718.' GR. TD 3850' Form. at TD INJUN

INITIAL FLOW - NONE Age MISSISSIPPIAN

Date compl. or abandoned APRIL 12, 1951

Result DRY HOLE PLUGGED AND ABANDONED

Gas Shows 2845' to 2850'; 3700' to 3702'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL WAS ACIDIZED ON MAY 15, 1951 WITH 1,000 GALLONS OF ACID. AFTER ACID WAS SWABBED, THE WELL SHOWED AN OPEN FLOW ON 18,000 CU. FT. WELL WAS ACIDIZED AGAIN ON MAY 21, 1951 WITH 2,000 GALLONS OF ACID AND DID NOT INCREASE THE OPEN FLOW. PRODUCTION IN WELL DROPPED BACK, WHEN DECIDE TO ABANDON.

Initial Production FINAL FLOW - SHOW

Oil shows _____

Water FW X at 100' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 335' to 337'; 1186' to 1188'

Plat _____ Plotted _____ Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 11, 1951

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-2

API No. 45-027-19883-00-03 VDMR Well Rep. No. W-17

DMQ File No. A-12-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. H. MATNEY

Co. Well No. I-1601

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,125,810; E 406,760 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1769.86' GR. TD 4637' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 25, 1951

Result GAS WELL

Gas Shows 1624'; 3734'; 3990'; 4440'

Gas Pays

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED ON 7-6-51 WITH 1,000 GALLONS OF ACID. WELL ACIDIZED ON 7-18-51 WITH 2,000 GALLONS OF ACID AND ON 8-3-51 WITH 3,000 GALLONS OF ACID. (DEPTHS NOT GIVEN). WELL PERFORATED FROM 3743' to 3774'.

Initial Production
FINAL FLOW - 520,000 CU. FT.

Oil shows

Water FW X at 217' at 270' at
SW at at at at

Coal 198' to 200'; 382' to 384'; 588' to 590'; 703' to 705'; 808' to 810'; 877' to 880'; 981' to 983'; 1044' to 1047'; 1173' to 1177'; 1624' to 1627'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 10' to 4611'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 23, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-3

API No. 45-027-19885-00-03 VDMR Well Rep. No. _____

DMQ File No. A-14-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm GEORGE H. BELCHER HEIRS ET AL

Co. Well No. 2A

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,125,300; E 406,850 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2000.' GR. TD 4027' Form. at TD RED INJUN

INITIAL FLOW - 14,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 10, 1951

Result GAS WELL

Gas Shows 1518'

Gas Pays 3655' to 3658'

Main Production 3655' to 3658' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: _____

Initial Production _____

FINAL FLOW - 14,000 CU. FT.

Oil shows _____

Water FW X at 1323' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 9, 1951

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-4

API No. 45-027-19913-00-03 VDMR Well Rep. No. W-2

DMQ File No. A-42-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm AMY L. POWERS

Co. Well No. 1

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,126,170; E 406,570 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1509.' GR. TD 3725' Form. at TD BIG LIME

INITIAL FLOW - 1,460,000 CU. FT. (?) Age MISSISSIPPIAN

Date compl. or abandoned APRIL 10, 1949

Result GAS WELL

Gas Shows 315'; 893'; 2609' to 2619'

Gas Pays 3332' to 3334'; 3472' to 3474'; 3500' to 3508'

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 3615' to 3725' (BIG LIME).

Initial Production

FINAL FLOW - 3,004,520 CU. FT.

Oil shows

Water FW X at 85' at 165' at

SW X at 1375' to 1380' at at

Coal 40' to 42'; 486' to 491'; 891' to 893'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 121' to 3725'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, 1970-1974.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1509.25'	562'
LEE	562'	+947.25'	798'
POCAHONTAS	1360'	+149.25'	230'
BLUESTONE	1590'	-80.75'	470'
PRIDE SHALE MEMBER	1770'	-260.75'	290'
PRINCETON	2060'	-550.75'	58'
HINTON	2118'	-608.75'	503'
LITTLE STONE GAP MEMBER	2118'	-608.75'	67'
STONY GAP SANDSTONE MEMBER	2537'	-1027.75'	84'
BLUEFIELD	2621'	-1111.75'	439'
GREENBRIER	3060'	-1550.75'	450'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANINA ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 157.

Released to Open File: **Completion** JULY 9, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-5

API No. 45-027-19914-00-03 VDMR Well Rep. No. W-47

DMQ File No. A438U

Operator PIPE LINE CONSTRUCTION AND DRILLING

Farm GEORGE H. BELCHER, ET AL

Co. Well No. 1-A

County BUCHANAN Quadrangle GRUNDY-7½'

Location (UTM) N 4,125,580; E 406,380 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1574.9' GR. TD 3812' Form. at TD GREENBRIER

Age MISSISSIPPIAN

INITIAL FLOW-146,000 CUBIC FEET

Date compl. or abandoned AUGUST 17, 1950

Result GAS WELL

Gas Shows 1142'; 1495'; 3517' to 3519'

Gas Pays

Main Production Prod. Form. GREENBRIER

Age MISSISSIPPIAN

Treatment:

Initial Production

FINAL FLOW-

Oil shows

Water FW X at 85' at 1420' at

SW at at at

Coal 524' to 527'; 957' to 960'; 1415' to 1420'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1596' to 2418'; 2940' to 3807'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 15, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-6

API No. 45-027-19915-00-03 VDMR Well Rep. No. W-45

DMQ File No. A-44-BU

Operator SLATE CREEK DEVELOPMENT PROGRAM

Farm MOUNTAIN MISSION SCHOOL

Co. Well No. 1

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,126,780; E 404,900 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1181,' GR, TD 3600' Form. at TD BEREA

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 27, 1950

Result DRY HOLE

Gas Shows 3175' to 3182'; 3215' to 3219'; 3249' to 3257'; 3274' to 3280'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL WAS ACIDIZED WITH 1,000 GALLONS OF ACID AT A PRESSURE OF APPROXIMATELY 1,800 POUNDS ON FORMATION. ABOUT 700 GALLONS OF ACID WERE FORCED INTO FORMATION WITHOUT ANY INCREASE IN OPEN FLOW.

Initial Production

FINAL FLOW - GAS WOULD NOT GAUGE.

Oil shows

Water FW X at 190' at at

SW at at at at

Coal 336' to 339'; 628' to 630'; 694' to 696'; 780' to 783'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 431' to 469'; 1366' to 3593'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
0' to 431' - NO SAMPLES		+1181'	431'
LEE	431'	+750'	1026'
BLUESTONE	1457'	-276'	363'
PRINCETON	1820'	-639'	120'
HINTON	1940'	-759'	637'
STONY GAP SANDSTONE	2351'	-1170'	226'
BLUEFIELD	2577'	-1396'	783'
GREENBRIER	2755'	-1574'	605'
MACCRADY	3360'	-2179'	233' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion NOVEMBER 25, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

GRUNDY-8-7

API No. 45-027-19931-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-16

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 20-1987

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N 4,124,510; E 408,530 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1792.1' GR. TD 3865' Form. at TD INJUN

INITIAL FLOW - 59,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned APRIL 20, 1953

Result GAS WELL

Gas Shows 950'; 1105'; 3430' to 3436'; 3743' to 3746'; 3790' to 3795'

Gas Pays _____

Main Production _____ Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 3667' to 3830' WITH 1,000 GALLONS OF ACID ON 4-14-53. WELL ACIDIZED FROM 3667' to 3830' WITH 3,000 GALLONS OF ACID ON 4-17-53. WELL PERFORATED FROM 3808' to 3830'.

Initial Production _____

FINAL FLOW - 1,400,000 CU. FT.

Oil shows _____

Water FW X at 60' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 19, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

GRUNDY-9-1

API No. 45-027-19911-00-03 VDMR Well Rep. No. W-4

DMQ File No. A-40-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm F. H. CURTIS, ET AL

Co. Well No. 1-B

County BUCHANAN Quadrangle GRUNDY - 7-1/2'

Location (UTM) N4,123,000; E400,690 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) DERRICK FLOOR 1208.5' TD 5751' Form. at TD CORNIFEROUS

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned 1949

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW at at at

SW at at at

Coal

Plat X Plotted X Completion Report

Drillers Log Geologic Log X

Samples X Interval Sheet X

Sample Interval 80' to 5751'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, AUGUST 1970

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1208.5'	465'
LEE	465'	+743.5'	811'
POCAHONTAS	1276'	-67.5'	228'
BLUESTONE	1504'	-295.5'	430'
PRIDE SHALE MEMBER	1700'	-491.5'	234'
PRINCETON	1934'	-725.5'	116'
HINTON	2050'	-841.5'	395'
LITTLE STONE GAP MEMBER	2050'	-841.5'	59'
STONY GAP SANDSTONE MEMBER	2360'	-1151.5'	144'
BLUEFIELD	2504'	-1295.5'	556'
GREENBRIER	3060'	-1851.5'	344'

Remarks

References

Released to Open File: Completion 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-1-1

API No. 45-027-20277-00-03 VDMR Well Rep. No. W-5926

DMQ File No. BU-161

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BIG SANDY COAL CORPORATION

Co. Well No. 20439-T

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,135,470; E 399,440 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1484.31' GR. TD 3452' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned FEBRUARY 17, 1978

Result GAS WELL

Gas Shows

Gas Pays 3349' to 3352'; 3315' to 3318'

Main Production Prod. Form. UPPER MAXON AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BIG LIME FORMATION ON 9-28-77 WITH 30,780 GALLONS OF WATER, 31,605 POUNDS OF 20/40 SAND, AND 15,120 POUNDS OF 80/100 MESH SAND. FRACTURED UPPER MAXON FORMATION ON 10-7-77 WITH 43,380 GALLONS OF WATER, 45,000 POUNDS OF 20/40 MESH SAND AND 15,000 POUNDS OF 80/100 MESH SAND.

Initial Production

FINAL FLOW - 477,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3450'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other CALIPER; ACOUSTIC; PERFORATION DEPTH CONTROL; CEMENT; INDUCTION; TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 18, 1978

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-2-1

API No. 45-027-20072-00-03 VDMR Well Rep. No. W-3690

DMQ File No. BU-113

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm J. L. ELSWICK ET AL

Co. Well No. 9686

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,133,030; E 393,290 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1005.11' GR. TD 5156' Form. at TD CORNIFEROUS

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned AUGUST 7, 1974

Result PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WHEN FRACTURE WAS ATTEMPTED ON BEREA FORMATION THE 4-1/2" CASING SEPARATED AT THE R/L NIPPLE AND CAME UP THE HOLE. AFTER ALL ATTEMPTS WERE EXHAUSTED IN GETTING CASING BACK TOGETHER IT WAS DECIDED TO ABANDON THE WELL ON NOVEMBER 27, 1972.

Initial Production

FINAL FLOW -

Oil shows

Water FW X at 135' at at

SW at at at

Coal 240' to 244'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 100' to 4120'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 5, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-2-2

API No. 45-027-20271-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-156

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE KENTLAND COMPANY #250

Co. Well No. 20468

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,135,750; E 393,220 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1311.11' GR. TD 3850' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned SEPTEMBER 23, 1977

Result GAS WELL

Gas Shows _____

Gas Pays _____

Main Production 3758' to 3786' Prod. Form. BEREA AND UPPER MAXON

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA SAND ON 7-9-77 WITH 750 GALLONS M.A., 44,000 # 20/40 SAND AND 870 BARRELS SAND LADEN FLUID.

Initial Production FINAL FLOW - 1,100,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 684' to 687'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density X Sonic _____ Other DUAL INDUCTION, TEMPERATURE, CALIPER, CEMENT BOND

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 22, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-2-3

API No. 45-027-20309-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-175

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm J. L. ELSWICK

Co. Well No. 20552

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,133,230; E 393,720 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1695.69' GR. TD 4336' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned APRIL 24, 1979

Result GAS WELL

Gas Shows 4229' to 4235'; 4246'

Gas Pays _____

Main Production _____ Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: CO2 FRACTURED BEREA ON 4-17-79 WITH 750 GALLONS OF MUD ACID; 39,800 # 80/100 AND 14,500 # 20/40 SAND

Initial Production _____

FINAL FLOW - 823,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CALIPER

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 23, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-2-6

API No. 45-027-20477-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-213

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BIG SANDY FUEL CORPORATION

Co. Well No. 21020

County BUCHANAN Quadrangle HARMAN-7½'

Location (UTM) N4,133,970; E394,130 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1188.43'GR. TD 3809' Form. at TD BEREA

INITIAL FLOW - 84,000 CU.FT. Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 31, 1982

Result GASWELL

Gas Shows _____

Gas Pays 3690' to 3710'

Main Production _____ Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA ON 12-30-82 FROM 3677' to 3740' WITH 500 GALLONS OF MUD ACID AND 55,000 POUNDS OF 20/50 SAND.

Initial Production _____

FINAL FLOW - 839,000 CU.FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 491' to 494'

Plat x Plotted x Completion Report x

Drillers Log x Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 31, 1983

Samples NO

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-1

API No. 45-027-20050-00-03 VDMR Well Rep. No. W-3139

DMQ File No. BU-96

Operator UNITED FUEL GAS COMPANY

Farm CLELL RAMEY, ET AL

Co. Well No. 9516

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,132,820; E 390,100 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1327.41' GR. TD 3940' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned NOVEMBER 23, 1970

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL FRACTURED ON 11-17-70 FROM 3828' to 3862' WITH 500 GALLONS OF MCA AND 16,000 POUNDS OF 10/20 SAND AND 34,398 GALLONS OF WATER. 20 SHOTS.

Initial Production FINAL FLOW - 1,299,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 50' to 52'; 390' to 394'; 1300' to 1304'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 130' to 3900'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density ____ Sonic ____ Other DUAL INDUCTION, CALIPER, FORMATION DENSITY

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1327.41'	410'
LEE	410'	+917.4'	1215'
POCAHONTAS	A B S E N T		
BLUESTONE	1625'	-297.59'	413'
PRIOE SHALE MEMBER	1873'	-545.59'	165'
PRINCETON	2038'	-710.59'	99'
HINTON	2137'	-809.59'	396'
STONY GAP SANDSTONE MEMBER	2449'	-1121.59'	84'
BLUEFIELD	2533'	-1205.59'	142'
GREENBRIER	2675'	-1347.59'	476'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN. 84, P. 145-146.

Released to Open File: Completion FEBRUARY 21, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-2

API No. 45-027-20107-00-03 VDMR Well Rep. No. W-3803

DMQ File No. BU-119

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm G. P. BELCHER ET AL

Co. Well No. 9685

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,133,870; E 390,730 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1377.5' GR. TD 3965' Form. at TD BEREA SANDSTONE

INITIAL FLOW - 103,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 30, 1973

Result GAS WELL

Gas Shows 3080'; 3859'

Gas Pays 3892'; 3859'

Main Production 3824' to 3860' Prod. Form. BEREA SANDSTONE

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION FROM 3824' to 3860' WITH 25,000 # 10/20 SAND AND 937 BARRELS OF SAND LADEN FLUID THROUGH 21 HOLES. WELL ACIDIZED FROM 2889' to 2896' WITH 3000 GALLONS OF 28% ACID. PERFORATED FROM 2889' to 2896' (15 HOLES) AND 3824' to 3860' (21 HOLES).

Initial Production

FINAL FLOW - 499,000CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 108' to 111'; 1349' to 1351'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3965'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 30, 1973

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-3

API No. 45-027-20109-00-03 VDMR Well Rep. No. W-3730

DMQ File No. BU-121

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm H. CLAUDE POBST ET AL

Co. Well No. 9679

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,133,770; E 391,470 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1553.02' GR. TD 4031' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 400,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 5, 1973

Result GAS WELL

Gas Shows

Gas Pays 3184' to 3190'; 3922'

Main Production 3184' to 3190'; 3922' Prod. Form. BIG LIME AND BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 12-20-72 WITH 500 GALLONS OF MCA, 30,000 # 10/20 SAND AND 250 BARRELS OF METHANOL AND 940 BARRELS OF WATER FROM 3893' to 3923'; 20 PERFORATIONS. TEST AFTER FRACTURE IS 2705 MCF. TEST AFTER ACIDIZING-4,071 MCF.

Initial Production

FINAL FLOW - 4,071,000 CU. FT.

Oil shows

Water FW X at 107' at at

SW at at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3940'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 5, 1973

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-4

API No. 45-027-20137-00-03 VDMR Well Rep. No. W-4445

DMQ File No. BU-130

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm H. CLAUDE POBST ET AL

Co. Well No. 9677

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,133,920; E 391,790 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1468.83' GR. TD 3984' Form. at TD BEREA

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 5, 1974

Result GAS WELL

Gas Shows 3140' to 3148'

Gas Pays 3973' to 3984'; 3188' to 2198'

Main Production 3973' to 3984' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: TEST BEFORE FRACTURE - SHOW. FRACTURED BEREA FORMATION ON 11-13-74 WITH 500 GALLONS MCA, 25,000 # 10/20 SAND AND 1089 BARRELS. FLUID FROM 3973' to 3988'; OPEN HOLE. BIG LIME FORMATION WOULD NOT GAUGE AFTER BLOWING OPEN 6 HOURS.

Initial Production

FINAL FLOW - 2,208,000 CU. FT.

Oil shows

Water FW X at 240' at at

SW at at at

Coal 7' to 9'; 176' to 179'; 1425' to 1426'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1600' to 4000'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density X Sonic Other TEMPERATURE, CALIPER, CEMENT QUALITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 5, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-5

API No. 45-027-20148-00-03 VDMR Well Rep. No. W-4230

DMQ File No. BU-133

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm J. L. ELSWICK ET AL

Co. Well No. 9752

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,133,110; E 392,630 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1101.47' GR. TD 5119' Form. at TD CORNIFEROUS

INITIAL FLOW - 84,000 CU. FT Age DEVONIAN

Date compl. or abandoned NOVEMBER 20, 1973

Result GAS WELL

Gas Shows

Gas Pays

Main Production 3632' to 3660' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 11-6-73 WITH 500 GALLONS MCA, 28,000 # 10/20 SAND AND 1002 BARRELS SAND LADEN FLUID FROM 3632' to 3660' THROUGH 20 PERFORATIONS.

Initial Production

FINAL FLOW - 3,160,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1133' to 1137'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 5100'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CALIPER, WELLBORE SIBILATION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks WELL WAS DRILLED TO 5119'. THE BROWN SHALE FORMATION WAS SHOT ON 10-15-73 FROM 5119' to 4044' WITH 11,500 # 80% GELATIN WITHOUT ANY RESULTS - WELL WAS PLUGGED BACK TO 3740' AND 4-1/2" CASING WAS RUN TO TREAT BEREA FORMATION.

References

Released to Open File: Completion FEBRUARY 18, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-6

API No. NOT LISTED

VDMR Well Rep. No. W-4381

DMQ File No. BU-139

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THOMPSON KINDER ET. UX.

Co. Well No. 20010

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,134,120; E 392,940 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 910.07' GR. TD 3546' Form. at TD

initial flow - 169,000 CU. FT. Age

Date compl. or abandoned SEPTEMBER 14, 1974

Result GAS WELL

Gas Shows 1880'; 3030' to 3036'; 3442' to 3458'

Gas Pays 3424' to 3456'

Main Production 3424' to 3456' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION WITH 500 GALLONS MCA, 20,500 # 10/20 SAND AND 1031 BARRELS FLUID FROM 3424' to 3456' THROUGH 20 HOLES.

Initial Production FINAL FLOW - 1,975,000 CU. FT.

Oil shows

Water FW X at 112' at 145' at 188'

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3545'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER, CEMENT QUALITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 13, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-3-7

API No. 45-027-20223-00-03 VDMR Well Rep. No. W-4751

DMQ File No. BU-144

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm FREE LIN ELSWICK ET AL

Co. Well No. 20,001

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,134,830; E 392,350 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 993.44' GR. TD 3582' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned OCTOBER 13, 1975

Result GAS WELL

Gas Shows

Gas Pays 3475' to 3504'

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 9-29-75 WITH 500 GALLONS MA, 26,000 # 20/40 SAND, 17000 # 10/20 SAND, 1100 # J-140, AND 1,088 BARRELS SAND LADEN FLUID FROM 3475' to 3504'; 20 SHOTS.

Initial Production

FINAL FLOW - 1,555,000 CU. FT.

Oil shows

Water FW X at 302' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3250'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CEMENT BOND, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 11, 1976

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-1

API No. 45-027-20045-00-03 VDMR Well Rep. No. W-3135

DMQ File No. BU-93

Operator UNITED FUEL GAS COMPANY

Farm ROBERT C. AND DAVID H. BELL

Co. Well No. 9518

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,130,370; E 390,710 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1277.20' GR. TD 3947' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 360,000 CU. FT. Age DEVONIAN

Date compl. or abandoned AUGUST 27, 1970

Result GAS WELL

Gas Shows

Gas Pays 2775'

Main Production Prod. Form. BEREA AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTRUED BEREA FROM 3829' to 3892' ON 8-22-70, 25 SHOTS WITH 500 GALLONS OF MCA, AND 20,000 GALLONS OF MY-T-FRAC GELATIN AND 35,000 POUNDS OF 10/20 SAND.

Initial Production FINAL FLOW - 2,903,000 CU. FT.

Oil shows

Water FW 72' at 1/2 GPM at 90' to 1 GPM at 114'; 1 GPM

SW at at at

Coal 72' to 73'; 108' to 109'; 114' to 115'; 214' to 216'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 130' to 3800'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other DUAL INDUCTION, CEMENT BOND, PERFORATING DEPTH CONTROL

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 25, 1970

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-2

API No. 45-027-20048-00-03 VDMR Well Rep. No. W-3134

DMQ File No. BU-95

Operator UNITED FUEL GAS COMPANY

Farm J. G. BELCHER ET AL

Co. Well No. 9580

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,131,950; E 392,250 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1036.33' GR. TD 3687' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 48,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 4, 1971

Result GAS WELL

Gas Shows

Gas Pays 3605'

Main Production 3553' to 3579' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 12-18-70 FROM 3553' to 3579' WITH 500 GALLONS OF MCA, AND 20,000 POUNDS OF 10/20 SAND AND 973 BARRELS OF WATER

Initial Production

FINAL FLOW - 1,087,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 196' to 198'; 978' to 980'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 100' to 3670'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron X

Density X Sonic ____ Other CEMENT BOND, DUAL INDUCTION, PERFORATING DEPTH CONTROL, CALIPER, POROSITY LOG.

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 4, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-3

API No. 45-027-20051-00-03 VDMR Well Rep. No. W-3114

DMQ File No. BU-97

Operator UNITED FUEL GAS COMPANY

Farm LYOIA BELCHER ET AL

Co. Well No. 9517

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,132,090; E 389,630 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1360.47' GR. TD 4055' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 67,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 14, 1970

Result GAS WELL

Gas Shows

Gas Pays 3907' to 3948'

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURE BEREA ON 12-5-70 WITH 500 GALLONS OF MCA, AND 20,000 POUNDS # 10/20 SAND, AND 956 BARRELS OF WATER FROM 3907' to 3948' 20 SHOTS.

Initial Production

FINAL FLOW - 539,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 350' to 352'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 70' to 4020'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other DUAL INDUCTION; CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 14, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-4

API No. 45-027-20052-00-03 VDMR Well Rep. No. W-3133

DMQ File No. BU-98

Operator UNITED FUEL GAS COMPANY

Farm GEORGE C. CHARLES, ET AL

Co. Well No. 9591

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,128,400; E 391,910 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1587.12' GR. TD 4243' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 84,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 28, 1971

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. BIG LIME AND BEREA

Age MISSISSIPPIAN

Treatment: BEREA FRACTURED FROM 4132' to 4167' WITH 500 GALLONS OF MCA, 20,000 POUNDS OF 10/20 SAND AND 1068 GALLONS OF WATER. ACIDIZED FROM 3410' to 3426' WITH 1,000 GALLONS OF 15% ACID AND 1,500 GALLONS OF 28% ACID. PERFORATED FROM 4250' to 3790' AND 3550' to 3064'

Initial Production

FINAL FLOW - 2,443,000 CU. FT.

Oil shows

Water FW X at 80' to 1 GPM at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 138' to 140'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 50' to 4250'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other DUAL INDUCTION, CEMENT QUALITY, CALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1587.12'	618'
LEE	618'	+969.12'	1114'
POCAHONTAS	A B S E N T		
BLUESTONE	1732'	-144.88'	548'
PRIDE SHALE MEMBER	2110'	-522.88'	170'
PRINCETON	2280'	-692.88'	110'
HINTON	2390'	-802.88'	422'
LITTLE STONE GAP MEMBER	2390'	-802.88'	20'
STONY GAP SANDSTONE MEMBER	2705'	-1117.88'	107'
BLUEFIELD	2812'	-1224.88'	183'
GREENBRIER	2995'	-1407.88'	454'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P 150-151.

Released to Open File: Completion APRIL 28, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-5

API No. 45-027-20057-00-03 VDMR Well Rep. No. W-3320

DMQ File No. BU-102

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm ROBERT C. AND DAVID H. BELL ET AL

Co. Well No. 9636

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,129,440; E 391,000 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1562.08' GR. TD 4184' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 152,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 9, 1972

Result GAS WELL

Gas Shows

Gas Pays 2906' to 2916'; 4063' to 4111' LOWER MAXON SANDSTONE AND

Main Production 2906' to 2916'; 4063' to 4111' Prod. Form. BEREA SANDSTONE

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 2-3-72, WITH 500 GALLONS OF MCA, 25,000 # 10/20 SAND AND 1075 BARRELS OF WATER FROM 4063' to 4111'; 22 SHOTS. FRACTURED LOWER MAXON ON 2-3-72 WITH 500 GALLONS MCA, 16,000 # 20/40 SAND AND 700 BARRELS OF WATER FROM 2906' to 2916'; 18 SHOTS.

Initial Production

FINAL FLOW - 3,185,000 CU. FT.

Oil shows

Water FW X at 70' at at

SW at at at

Coal 242' to 245'; 1396' to 1400'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 160' to 4190'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other DUAL INDUCTION, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 10, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-6

API No. 45-027-20059-00-03 VDMR Well Rep. No. W-3318

DMQ File No. BU-104

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #13

Co. Well No. 9637

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,128,700; E 390,300 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1702.39' GR. TD 4340' Form. at TD DEVONIAN

INITIAL FLOW - 880,00 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 18, 1972

Result GAS WELL

Gas Shows 3580'; 4170'

Gas Pays 3005' to 3017'; 4209' to 4259'

Main Production Prod. Form. LOWER MAXON AND BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 1-5-72 WITH 500 GALLONS OF MCA, 24,000 POUNDS OF 10/20 SAND AND 1,017 BARRELS OF WATER FROM 4209' to 4259' WITH 21 PERFORATIONS. FRACTURED LOWER MAXON FORMATION ON 1-5-72 WITH 500 GALLONS OF MCA, 8,000 POUNDS OF 20/40 SAND, AND 460 BARRELS OF SAND LADEN

Initial Production FLUID FROM 3005' to 3017' THROUGH 19 PERFORATION.

FINAL FLOW - NONE RECORDED

Oil shows

Water FW X at 60' at at

SW at at at

Coal 185' to 187'; 297' to 300'; 568' to 570'; 1538' to 1540';

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 0' to 4340'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density Sonic Other DUAL INDUCTION; CALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1702.39'	660'
LEE	660'	+1042.39'	1164'
POCAHONTAS	1824'	-121.61'	41'
BLUESTONE	1865'	-162.61'	446'
PRIDE SHALE MEMBER	2118'	-415.61'	193'
PRINCETON	2311'	-608.61'	130'
HINTON	2441'	-738.61'	355'
STONY GAP SANDSTONE MEMBER	2777'	-1074.61'	19'
BLUEFIELD	2796'	-1093.61'	268'
GREENBRIER LIMESTONE	3064'	-1361.61'	477'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANISN ROCKS IN SOUTHWESTERN VIRGINIA, VDMR BULLETIN 84.

Released to Open File: Completion DECEMBER 21, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-7

API No. 45-027-20061-00-03 VDMR Well Rep. No. W-3600

DMQ File No. BU-106

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BULL CREEK COAL COMPANY

Co. Well No. 9641

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,131,040; E392,030 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1373.29' GR. TD 3995' Form. at TD DEVONIAN SHALE

INITIAL FLOW - ? Age DEVONIAN

Date compl. or abandoned JANUARY 25, 1972

Result GAS WELL

Gas Shows

Gas Pays 3881' to 3894'

Main Production 3861' to 3898' Prod. Form. BEREA SANDSTONE

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 1-19-72 WITH 500 GALLONS 15% ACID, 1000 GALLONS 31.45% ACID, 22,500 # 10/20 SAND AND 890 BARRELS OF SAND LADEN FLUID FROM 3861' to 3898'; 18 PERFORATIONS.

Initial Production

FINAL FLOW - 1,374,000 CU. FT.

Oil shows

Water FW X at 125' at at

SW at at at

Coal 334' to 338'; 1233' to 1235'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 75' to 3970'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 25, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-8

API No. 45-027-20063-00-03 VDMR Well Rep. No. W-3378

DMQ File No. BU-107

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm G. T. RAMEY HRS.

Co. Well No. 9515

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,131,800; E 391,000 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1089.07' GR. TD 3848' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 1,961,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 25, 1972

Result GAS WELL

Gas Shows 1923'; 2220'; 2239'; 2833'; 2850'; 3772' to 3780'

Gas Pays 3738' to 3778'; 2833' to 2841'; 2216' to 2224'

Main Production Prod. Form. BEREA, BIG LIME, M. MAXON

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 2-23-72 WITH 500 GALLONS MCA, 28,000 # 10/20 SAND AND 1008 BARRELS OF WATER FROM 3738' to 3778'; 21 HOLES. FRACTURED MAXON FORMATION ON 2-23-72 WITH 500 GALLONS MCA, 17,500 # 20/40 SAND AND 780 BARRELS OF WATER FROM 2216' to 2224'; 17 HOLES COMBINED GAS FROM THREE FORMATIONS TREATED.

Initial Production FINAL FLOW - 5,818,000 CU. FT.

Oil shows

Water FW at at at

SW X at 125' at 210' at

Coal 94' to 96'; 106' to 109'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 50' to 3840'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER, DUAL INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 26, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-9

API No. 45-027-20064-00-03 VDMR Well Rep. No.

DMQ File No. BU-108

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm ROBERT C. AND DAVID H. BELL ET AL

Co. Well No. 9633

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,129,750; E 390,060 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1960.27' GR. TD 4564' Form. at TD UPPER MAXON

INITIAL FLOW - 1,075,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 16, 1971

Result GAS WELL

Gas Shows

Gas Pays 2764' to 2780'; 4470' to 4500'

Main Production 2764' to 2780' Prod. Form. UPPER MAXON

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 12-4-71 WITH 1000 GALLONS OF 25% ACID, 16,000 # 10/20 SAND AND 850 BARRELS OF WATER FROM 4470' to 4500' THROUGH 17 HOLES. FRACTURED THE UPPER MAXON ON 12-5-71 WITH 1000 GALLONS OF 28% ACID, 7100 # 20/40 SAND AND 440 BARRELS OF WATER FROM 2764' to 2780' THROUGH 15 HOLES.

Initial Production FINAL FLOW - 1,141,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 95' to 97'; 220' to 222'; 423' to 426'; 1762' to 1765'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks SAMPLES LOST

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 16, 1972

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-10

API No. 45-027-20114-00-03 VDMR Well Rep. No.

DMQ File No. BU-126

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm SIDNEY LOONEY ET AL

Co. Well No. 9701

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,127,980; E 390,830 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1633.49' GR. TD 4302' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned FEBRUARY 20, 1973

Result GAS WELL

Gas Shows 2997', 3234', 4200'

Gas Pays

Main Production 2986' to 3001'; 4184' to 4228' Prod. Form. BEREA AND LOWER MAXON

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 2-1-73 WITH 2000 GALLONS OF 28% ACID AND 20,000 # 10/20 SAND AND 985 BARRELS WATER FROM 4184' to 4228'; 21 PERFORATIONS. FRACTURED LOWER MAXON ON 2-1-73 WITH 2000 GALLONS 28% ACID, 22,000 # 20/40 SAND AND 789 BARRELS WATER FROM 2986' to 3001'; 17 PERFORATIONS.

Initial Production FINAL FLOW - 594,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1545' to 1550'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 21, 1973

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-11

API No. 45-027-20115-00-03 VDMR Well Rep. No. W-3802

DMQ File No. BU-127

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm ROBERT C. AND DAVID H. BELL ET AL

Co. Well No. 9688

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,129,860; E 391,760 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1704.65' GR. TD 4345' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JULY 3, 1973

Result GAS WELL

Gas Shows 2610'

Gas Pays

Main Production 4207' to 4246' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 6-18-73 WITH 500 GALLONS OF MCA, AND 29,000 POUNDS OF 10/20 SAND AND 89 BARRELS OF SAND LADEN FLUID FROM 4207' to 4246'; 22 PERFORATIONS.

Initial Production

FINAL FLOW - 852,000 CU. FT.

Oil shows

Water FW X at 80' at at

SW at at at

Coal 373' to 377'; 775' to 778'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4320'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 1, 1973

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-12

API No. 45-027-20209-00-03 VDMR Well Rep. No. W-4769

DMQ File No. BU-142

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BULL CREEK COAL COMPANY

Co. Well No. 20,214

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,131,130; E 390,200 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1343.65' GR. TD 4052' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned SEPTEMBER 11, 1975

Result GAS WELL

Gas Shows

Gas Pays 3210' to 3220'; 3939' to 3986'

Main Production Prod. Form. BEREA SANDSTONE AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 7-15-75 WITH 1000 GALLONS MA 21,000 # 20/40 SAND 25,000 # 80/100 SAND AND 1416 BARRELS OF FLUID FROM 3939' to 3986'; 18 PERFORATIONS. ALSO PERFORATED FROM 3210' to 3220'; 11 HOLES. ALSO ACIDIZED FROM 3210' to 3220' WITH 6300 GALLONS OF 15% ACID.

Initial Production FINAL FLOW - 223,000 CU. FT.

Oil shows

Water FW X at 31' 75' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density X Sonic Other CALIPER, TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 10, 1975

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-4-13

API No. 45-027-20412-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-197

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm DENISE B. JORDAN, ET AL

Co. Well No. 20291-T

County BUCHANAN Quadrangle HARMAN-7½'

Location (UTM) N4,132,170; E390,000 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1327.24' GR. TD 5323' Form. at TD CORNIFEROUS

Age DEVONIAN

Date compl. or abandoned APRIL 29, 1982

Result GASWELL

Gas Shows _____

Gas Pays 4696' to 5244'

Main Production 4696' to 5244' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: FRACTURED BROWN SHALE ON 4-13-82 FROM 4696' to 5244' WITH 1,000 GALLONS OF MUD ACID, 901 BARRELS OF 72 QUALITY FOAM, 554,000 SCF NITROGEN AND 45,000 POUNDS OF 20/40 SAND.

Initial Production _____
FINAL FLOW- 189,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____
SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic X Other TEMPERATURE

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 28,1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-1

API No. 45-027-20038-00-03 VDMR Well Rep. No. W-3138

DMQ File No. BU-88

Operator UNITED FUEL GAS COMPANY

Farm LYNN CAMP COAL CORPORATION

Co. Well No. 9590

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,132,900; E 395,470 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1094.22' GR. TD 3815' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 152,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JULY 2, 1970

Result GAS WELL

Gas Shows

Gas Pays 2485'; 3698' to 3706'

Main Production 3698' to 3706' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA (3698' to 3706') ON JUNE 29, 1970 WITH 20,000 POUNDS OF 10/20 SAND AND 949 BARRELS OF WATER.

Initial Production

FINAL FLOW - 2,144,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 93' to 94'; 1280' to 1281'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 50' to 1350'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other CEMENT BOND, PERFORATING DEPTH CONTROL; DUAL INDUCTION, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 30, 1970

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-2

API No. 45-027-20067-00-03 VDMR Well Rep. No. W-3602

DMQ File No. BU-109

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm LYNN CAMP COAL CORPORATION

Co. Well No. 9640

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,130,940, E 395,480 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1328.99' GR. TD 4213' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 146,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 16, 1972

Result GAS WELL

Gas Shows

Gas Pays 3173' to 3180'

Main Production 3173' to 3180' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: BEREA FORMATION FRACTURE FAILED TO BE PRODUCTIVE. ACIDIZED BIG LIME FORMATION ON 2-15-72; TEST 4 HOURS AFTER ACIDIZING WAS 1,186,000 CU. FT.

Initial Production
FINAL FLOW - 1,186,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____
SW ____ at ____ ____ at ____ ____ at ____

Coal 304' to 307'; 658' to 661'; 1268' to 1271'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 60' to 4195'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CALIPER, TEMPERATURE

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1328.98'	380'
LEE	380'	+948.98'	1162'
POCAHONTAS	NOT	DETERMINED	
BLUESTONE	1542'	-213.02'	?
PRIDE SHALE MEMBER	1770'	-441.02'	263'
PRINCETON	2033'	-704.02'	135'
HINTON	2168'	-839.02'	338'
STONY GAP SANDSTONE MEMBER	2472'	-1143.02'	34'
BLUEFIELD	2506'	-1177.02'	273'
GREENBRIER	2779'	-1450.02'	396'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P.148.

Released to Open File: Completion MAY 17, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-3

API No. 45-027-20068-00-03 VDMR Well Rep. No. W-3601

DMQ File No. BU-110

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm LYNN CAMP COAL CORPORATION

Co. Well No. 9639

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,131,640; E 394,720 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1613.26' GR. TD 4328' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 298,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 7, 1972

Result GAS WELL

Gas Shows

Gas Pays

Main Production 4205' to 4212' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA ON 12-18-71 WITH 695 BARRELS OF SAND LADEN FLUID, 160 BARRELS OF 15% ACID AND 27,500 # 20/50 SAND FROM 4205' to 4212'; 15 PERFORATIONS.

Initial Production

FINAL FLOW - 400,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 382' to 387'; 1591' to 1594'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 300' to 4100'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, MAY 1972

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1613.26'	1133'
LEE	1133'	+480.26'	746'
POCAHONTAS	1879'	-265.74'	70'
BLUESTONE	1949'	-335.74'	397'
PRIDE SHALE MEMBER	2199'	-585.74'	147'
PRINCETON	2346'	-732.74'	181'
HINTON	2527'	-913.74'	287'
STONY GAP SANDSTONE MEMBER	2784'	-1170.74'	30'
BLUEFIELD	2814'	-1200.74'	267'
GREENBRIER	3081'	-1467.74'	432'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 147.

Released to Open File: Completion APRIL 7, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-4

API No. 45-027-20070-00-03 VDMR Well Rep. No. W-3603

DMQ File No. BU-111

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm JOSEPH L. ELSWICK

Co. Well No. 9646

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,131,790; E 393,630 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1165.82' GR. TD 3860' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 119,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MARCH 7, 1972

Result GAS WELL

Gas Shows

Gas Pays 3757' to 3777'

Main Production 3757' to 3777' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 3-6-72 WITH 500 GALLONS MCA 24,000 # 10/20 SAND AND 934 BARRELS SAND LADEN FLUID FROM 3757' to 3777'; 17 HOLES.

Initial Production FINAL FLOW - 3,187,000 CU. FT.

Oil shows

Water FW X at 250' at 800' at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log Geologic Log X

Samples X Interval Sheet X

Sample Interval 280' to 3860'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER, CEMENT QUALITY

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, MAY 1972

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1165.82'	320'+
LEE	320'	+845.82'	1155'
POCAHONTAS	1475'	-309.18'	15'
BLUESTONE	1490'	-324.18'	424'
PRIDE SHALE MEMBER	1700'	-534.18'	214'
PRINCETON	1914'	-748.18'	110'
HINTON	2024'	-858.18'	331'
STONY GAP SANDSTONE MEMBER	2317'	-1151.18'	38'
BLUEFIELD	2355'	-1189.18'	257'
GREENBRIER	2612'	-1446.18'	440'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 146-147.

Released to Open File: Completion JUNE 5, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-5

API No. 45-027-20073-00-03 VDMR Well Rep. No. W-3691

DMQ File No. BU-114

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm J. L. ELSWICK

Co. Well No. 9687

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,130,750; E 393,220 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1481.09' GR. TD 4230' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 329,000 CU. FT. Age DEVONIAN

Date compl. or abandoned AUGUST 18, 1972

Result GAS WELL

Gas Shows

Gas Pays

Main Production 4042' to 4072 Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 8-1-72 WITH 500 GALLONS MCA, 28,000 # 10/20 SAND AND 1,151 BARRELS, SAND LADEN FLUID FROM 4042' to 4072'; 19 PERFORATIONS.

Initial Production

FINAL FLOW - 1,704,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 183' to 188'; 1400' to 1404'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval D' to 4130'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 16, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-6

API No. 45-027-20102-00-03 VDMR Well Rep. No. W-3981

DMQ File No. BU-117

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BULL CREEK COAL COMPANY ET AL

Co. Well No. 9678

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,127,810; E 394,440 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1307.82' GR. TD 2440' Form. at TD RAVENCLIFF

INITIAL FLOW - 2,744,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 11, 1972

Result GAS WELL

Gas Shows

Gas Pays 2047' to 2062'; 2065' to 2075'; 2180' to 2192'; 2206' to 2225'

Main Production Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: FRACTURED RAVENCLIFF FORMATION ON 9-7-72 WITH 1000 GALLONS, MCA, 2850 GALLONS OF 28% HCL, 30,000 # 20/40 SAND AND 1020 BARRELS OF SAND LADEN FLUID FROM 2047' to 2225' THROUGH 66 PERFORATIONS.

Initial Production

FINAL FLOW - 4,795,000 CU. FT.

Oil shows

Water FW X at 240' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 10' to 1890'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density X Sonic Other CEMENT BOND, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 10, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-7

API No. 45-027-2014D-00-03 VDMR Well Rep. No. W-4225

DMQ File No. BU-131

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm A. M. ROWE ET AL

Co. Well No. 9765

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,129,740; E 392,820 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1573.81' GR. TD 4299' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 850,000 CU. FT. Age DEVONIAN

Date compl. or abandoned NOVEMBER 26, 1973

Result GAS WELL

Gas Shows

Gas Pays 3454' to 3460'; 3478' to 3486'; 4184' to 4204'

Main Production 3454' to 3460'; 3478' to 3486'; 4184' to 4204' Prod. Form. BEREA AND BIG LIME Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 11-20-73 WITH 500 GALLONS MCA, 30,000 # 10/20 SAND AND 1050 BARRELS OF FLUID FROM 4184' to 4204' THROUGH 20 PERFORATIONS. COMBINED OPEN FLOW FROM BIG LIME AND BEREA FORMATIONS AFTER TREATMENT.

Initial Production

FINAL FLOW - 4,550,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4300'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron X

Density X Sonic ____ Other TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion FEBRUARY 24, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-8

API No. 45-027-20151-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-135

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm LANDON HACKNEY ET AL

Co. Well No. 9766

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,129,420; E 394,460 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1384.85' GR. TD 4091' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JANUARY 31, 1975

Result GAS WELL

Gas Shows 1516' to 1545'; 3297' to 3305'; 3319' to 3324'

Gas Pays 3315' to 3321'

Main Production 3315' to 3321' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ALL ZONES BENEATH BIG LIME FORMATION PROVED TO BE UNFAVORABLE FOR STIMULATION - WELL WAS PLUGGED BACK TO 3355' AND BIG LIME ACIDIZED.

Initial Production FINAL FLOW - 582,000 CU. FT.

Oil shows _____

Water FW X at 81' to 86' at 508' _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 81' to 86'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res X Gamma X Neutron _____

Density X Sonic _____ Other TEMPERATURE, CALIPER, INDUCTION

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 1, 1975

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-5-9

API No. 45-027-20207-00-03 VDMR Well Rep. No. W-4763

DMQ File No. BU-141

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm J. L. ELSWICK # 5

Co. Well No. 20213

County BUCKANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,130,530; E 394,160 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1606.41' GR. TD 4330' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 2,402,000 CU. FT. Age DEVONIAN

Date compl. or abandoned AUGUST 8, 1975

Result GAS WELL

Gas Shows 3480' to 3490'; 4188' to 4250'

Gas Pays 4233' to 4239'; 3488' to 3521'

Main Production 4233' to 4239'; 3488' to 3521' Prod. Form. BEREA AND BIG LIME Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 7-31-75 WITH 500 GALLONS MA. 19,000 # 10/20 SAND AND 978 BARRELS FLUID FROM 4233' to 4239'; 18 HOLES.

Initial Production FINAL FLOW - 12,438,000 CU. FT.

Oil shows

Water FW X at 75' at at

SW at at at

Coal 227' to 231'; 326' to 331'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 40' to 4328'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron X

Density X Sonic Other CALIPER, TEMPERATURE; DUAL INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 6, 1975

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-8-1

API No. 45-027-20037-00-03 VDMR Well Rep. No. W-3059

DMQ File No. BU-87

Operator UNITED FUEL GAS COMPANY

Farm BULL CREEK COAL COMPANY

Co. Well No. 9582

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,127,210; E 395,940 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1307.71' GR. TD 5600' Form. at TD CORNIFEROUS

INITIAL FLOW - 21,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JUNE 14, 1970

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: PERFORATED FORMATION FROM 4596' to 5600' ON 6-12-70 WITH 11,000 POUNDS OF 80% DUPONT GELATIN. TAMP SET AT 4387' to 4596' WITH PEA GRAVEL AND LIME GRAVEL.

Initial Production

FINAL FLOW - 102,000 CU. FT. (REDUCED TO INSIGNIFICANT AMOUNT)

Oil shows

Water FW X at 85' at at

SW at at at

Coal 794' to 797'; 1460'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 50' to 5600'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other CALIPER, DUAL INDUCTION

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1307.71'	711'
LEE	711'	+596.71'	730'
POCAHONTAS	1441'	-133.29'	145'
BLUESTONE	1586'	-278.29'	400'
PRINCETON	1986'	-678.29'	185'
HINTON-BLUEFIELD (UNDIFF.)	2171'	-863.29'	645'
LITTLE STONE GAP MEMBER	2171'	-863.29'	20'
GREENBRIER	2816'	-1508.29'	460'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 153-154.

Released to Open File: Completion SEPTEMBER 12, 1970

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-8-2

API No. 45-027-20441-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-208

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm PITTSTON COMPANY

Co. Well No. 20292-T

County BUCHANAN Quadrangle HARMAN - 7½'

Location (UTM) N4,124,610; E 393,070 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1916.49' GR. TD 6145' Form. at TD CORNIFEROUS

INITIAL FLOW - 0 Age DEVONIAN

Date compl. or abandoned APRIL 29, 1982

Result GAS WELL

Gas Shows _____

Gas Pays 5568' to 5806'; 4710' to 4718'

Main Production _____ Prod. Form. BEREA: DEVONIAN

Age MISSISSIPPIAN; DEVONIAN

Treatment: FRACTURED LOWER HURON SHALE ON 2-24-82 FROM 5568' to 5806' WITH 24 BARRELS OF 15% HCL, 1155 BARRELS OF 70 QUALITY FOAM, 537,000 SCF NITROGEN AND 60,000 POUNDS OF 20/40 SAND. FRACTURED BEREA ON 3-23-82 FROM 4710' TO 4718' WITH 24 BARRELS OF MUD ACID, 856 BARRELS OF 75 QUALITY FOAM, 327,000 SCF NITROGEN AND 50,000 POUNDS OF 20/40 SAND.

Initial Production

FINAL FLOW:

Oil shows SHALE - 311,000 CU. FT.
~~BEREA - 793,000 CU. FT.~~

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma X Neutron _____

Density X Sonic _____ Other TEMPERATURE, INDUCTION

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 28, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-1

API No. 45-027-19964-00-03 VDMR Well Rep. No.

DMQ File No. BU-50

Operator CLINCHFIELD COAL CORPORATION

Farm BIG SANDY FUEL COMPANY

Co. Well No. 186

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,126,130; E 389,940 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1669.9' GR. TD 3631' Form. at TD BIG INJUN

INITIAL FLOW - 232,000 CU. FT. PER DAY Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 12, 1956

Result GAS WELL

Gas Shows 1060'; 1276'

Gas Pays 3558' to 3561'; 3571'

Main Production 3558' to 3571' Prod. Form. BIG INJUN

Age MISSISSIPPIAN

Treatment: ACIDIZED ON 11-12-56 FROM 3419' to 3631' WITH 4000 GALLONS OF 15% ACID.

Initial Production

FINAL FLOW - 3,499,000 CU. FT. PER DAY

Oil shows

Water FW X at 75' at at

SW X at 1848' at at

Coal 1673' to 1675'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 12, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-2

API No. 45-027-19978-00-03 VDMR Well Rep. No. W-331

DMQ File No. BU-64

Operator CLINCHFIELD COAL COMPANY

Farm BIG SANDY FUEL CORPORATION

Co. Well No. 213

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,127,500; E 389,660 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1620' GR. TD 5640' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MAY 10, 1959

Result GAS WELL

Gas Shows 3175'; 4126'; 4144'; 4146'

Gas Pays

Main Production Prod. Form. BEREA AND DEVONIAN SHALE

Age MISSISSIPPIAN AND DEVONIAN

Treatment: SHOT ON 5-1-59 FROM 4100' to 5640' WITH 13,933 LBS. OF GELATINE.

Initial Production

FINAL FLOW - 603,000 CU. FT.

Oil shows

Water FW X at 60' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 60' to 61'; 120' to 122'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 25' to 5650'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 8, 1959

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-3

API No. 45-027-20056-00-03 VOMR Well Rep. No. W-3319

OMQ File No. BU-101

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #12

Co. Well No. 9635

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4, 126,960; E 390,380 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1888.24' GR. TD 4588' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 267,000 CU. FT. Age DEVONIAN

Date compl. or abandoned OCTOBER 29,1971

Result GAS WELL

Gas Shows

Gas Pays 3752' to 3762'; 4481' to 4515'

Main Production 4481' to 4515' Prod. Form. BEREA AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION 10-25-71 FROM 4467' to 4505', 20 SHOTS, WITH 500 GALLONS, MCA, 1299 BARRELS OF WATER AND 29,500 # OF 10/20 SAND, ACIDIZED BIG LIME FORMATION ON 10-25-71 FROM 3756' to 3775' 18 HOLES, WITH 2,000 GALLONS OF 28% ACID AND 2,000 GALLONS OF 15% ACID.

Initial Production

FINAL FLOW - 2,041,000 CU. FT.

Oil shows

Water FW X at 115' at at

SW at at at

Coal 1870' to 1872'; 1895' to 1897'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 30' to 4570'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER, TEMPERATURE

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1888.24'	931'
LEE	931'	+957.24'	1104'
POCAHONTAS	2035'	-146.76'	50'
BLUESTONE	2085'	-196.76'	525'
PRIDE SHALE MEMBER	2456'	-567.76'	154'
PRINCETON	2610'	-721.76'	118'
HINTON	2728'	-839.76'	365'
STONY GAP SANDSTONE MEMBER	3032'	-1143.76'	61'
BLUEFIELD	3093'	-1204.76'	193'
GREENBRIER	3286'	-1397.76'	531'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 153.

Released to Open File: Completion JANUARY 27, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-4

API No. 45-027-20058-00-03 VDMR Well Rep. No. W-3606
DMQ File No. BU-103

Operator COLUMBIA GAS TRANSMISSION CORPORATION
Farm THE PITTSTON COMPANY #10
Co. Well No. 9645

County BUCHANAN Quadrangle HARMAN - 7-1/2'
Location (UTM) N 4,124,920; E 391,470 UTM Zone 17
(Lat. and Long.)
Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1732.38' GR. TD 4573' Form. at TD DEVONIAN SHALE
INITIAL FLOW - 215,000 CU. FT. Age DEVONIAN
Date compl. or abandoned DECEMBER 10, 1971
Result GAS WELL
Gas Shows 3154'; 3510'; 3654'; 4463' to 4506'
Gas Pays
Main Production 4463' to 4490' Prod. Form. BEREA
Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 11-26-71 WITH 500 GALLONS OF MCA, 1,000 GALLONS OF 28% ACID, 27,000 # 10/20 SAND AND 1079 BARRELS OF WATER FROM 4463' to 4490', 18 PERFORATIONS.

Initial Production
FINAL FLOW - 372,000 CU. FT.
Oil shows
Water FW X at 60' at at
SW at at at
Coal 1720' to 1722'

Plat X Plotted X Completion Report X
Drillers Log X Geologic Log X
Samples X Interval Sheet X
Sample Interval 0' to 4570'
Remarks
Geophysical Logs S.P. Res X Gamma X Neutron
Density X Sonic Other CALIPER, TEMPERATURE, DUAL INDUCTION

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1732.'	1283'
LEE	1283'	+449'	698'
POCAHONTAS	1981'	-249'	53'
BLUESTONE	2034'	-302'	508'
PRIDE SHALE MEMBER	2324'	-592'	208'
PRINCETON	2542'	-810'	168'
HINTON	2710'	-978'	444'
STONY GAP SANDSTONE MEMBER	3008'	-1276'	146'
BLUEFIELD	3154'	-1422'	130'
GREENBRIER	3284'	-1552'	536'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 154.

Released to Open File: Completion MARCH 10, 1972
Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-5

API No. 45-027-20060-00-03 VDMR Well Rep. No. W-3379

DMQ File No. BU-105

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY

Co. Well No. 9643

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,124,520; E 389,660 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1599.33' GR. TD 4472' Form. at TD DEVONIAN

INITIAL FLOW - 119,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 14, 1971

Result GAS WELL

Gas Shows

Gas Pays

Main Production 4344' to 4369' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 12-9-71 WITH 500 GALLONS OF HF ACID, 2,800 GALLONS OF 31.45% ACID, 2,800 POUNDS OF 10/20 SAND AND 970 BARRELS OF WATER FROM 4344' to 4369' THROUGH 20 PERFORATIONS.

Initial Production

FINAL FLOW - 984,000 CU. FT.

Oil shows

Water FW X at 125' at at

SW at at at

Coal 284' to 286'; 366' to 370'; 1597' to 1600'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER;

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1599.33'	665'
LEE	665'	+934.33'	1188'
POCAHONTAS	1853'	-253.67'	30'
BLUESTONE	1883'	-283.67'	675'
PRIDE SHALE MEMBER	2233'	-633.67'	325'
PRINCETON	2558'	-958.67'	36'
HINTON	2594'	-994.67'	364'
STONY GAP SANDSTONE MEMBER	2909'	-1309.67'	49'
BLUEFIELD	2958'	-1358.67'	240'
GREENBRIER LIMESTONE	3198'	-1598.67'	501'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VDMR BULLETIN 84.

Released to Open File: Completion MARCH 14, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-6

API No. 45-027-20075-00-03 VDMR Well Rep. No. W-3720

DMQ File No. BU-116

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm G. C. CHARLES ET AL

Co. Well No. 9692

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,126,630; E 392,530 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1597.17' GR. TD 4412' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 133,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 29, 1972

Result GAS WELL

Gas Shows

Gas Pays

Main Production 4293' to 4312' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 10-20-72 WITH 500 GALLONS, MCA, 23,000 10/20 SAND AND 1082 BARRELS OF SAND LADEN FLUID FROM 4293' to 4312' THROUGH 19 HOLES.

Initial Production

FINAL FLOW - 1,975,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 609' to 612'; 1845' to 1848'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 10' to 4370'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE LOG-, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 29, 1972

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-7

API No. 45-027-20106-00-03 VDMR Well Rep. No. W-3731

DMQ File No. BU-118

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm H. H. DEEL, ET AL

Co. Well No. 9681

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,126,330; E 391,410 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1887.39' GR. TD 4645' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 103,000 CU. FT. Age DEVONIAN

Date compl. or abandoned OCTOBER 3, 1972

Result GAS WELL

Gas Shows

Gas Pays

Main Production 4543' to 4579' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION 9-22-72 WITH 500 GALLONS MCA, 28,000 # 10/20 SAND AND 1168 BARRELS SAND LADEN FLUID FROM 4543' to 4579' THROUGH 20 HOLES.

Initial Production

FINAL FLOW - 1,905,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1825' to 1827'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4400'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 1, 1973

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-8

API No. 45-027-20112-00-03 VDMR Well Rep. No.

DMQ File No. BU-124

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #19

Co. Well No. 9691

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,123,360, E 389,550 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1613.09' GR. TD 4547' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 620,000 CU. FT. Age DEVONIAN

Date compl. or abandoned AUGUST 5, 1973

Result GAS WELL

Gas Shows

Gas Pays 4397' to 4440'; 3058' to 3066'

Main Production 4397' to 4440'; 3058' to 3066' Prod. Form. BEREA AND LOWER MAXON Age MISSISSIPPIAN

Treatment: FRACTUREO BEREA ON 7-6-73 WITH 500 GALLONS MCA, AND 23,000 # 10/20 SAND AND 713 BARRELS OF WATER FROM 4397' to 4440'; 23 PERFORATIONS- FRACTURED LOWER MAXON ON 7-6-73 WITH 500 GALLONS OF MCA, 23,000 # 20/40 SAND AND 831 BARRELS OF WATER FROM 3058' to 3066' 25 PERFORATIONS.

Initial Production

FINAL FLOW - 4,025,000 CU. FT.

Oil shows

Water FW X at 50' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 329' to 332'; 360' to 362'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Oensity X Sonic ____ Other CALIPER TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 3, 1973

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-9

API No. 45-027-20163-00-03 VDMR Well Rep. No. W-4245

DMQ File No. BU-136

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #44

Co. Well No. 20004

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,123,550; E 390,910 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1660.56' GR. TD 4553' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 119,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JULY 31, 1974

Result GAS WELL

Gas Shows 3110' to 3112'; 3482' to 3483'; 3628' to 3630'; 3734' to 3736';

Gas Pays 4448' to 4477' 4465' to 4467'

Main Production 4448' to 4477' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 7-12-74 WITH 500 GALLONS OF MCA, 24,000 # 10/20 SAND AND 918 BARRELS OF FLUID FROM 4448' to 4477' THROUGH 22 PERFORATIONS.

Initial Production

FINAL FLOW - 381,000 CU. FT.

Oil shows

Water FW X at 150' at at

SW at at at

Coal 267' to 270'; 341' to 343'; 933' to 935'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3900'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other CALIPER, TEMPERATURE, DUAL INDUCTION, CEMENT QUALITY.

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 29, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-10

API No. 45-027-20249-00-03 VDMR Well Rep. No.

DMQ File No. BU-145

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm GROVER DEEL

Co. Well No. 20342

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,125,840; E 392,030 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1530.53' GR. TD 4364' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 84,000 CU. FT. Age DEVONIAN

Date compl. or abandoned 4-13-77

Result PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: PERFORATED BEREA FORMATION BETWEEN 4271' AND 4281', 20 HOLES. BOTTOM HOLE BOMB LOST IN HOLE ON 2-9-77, MOVED RIG INTO PULL PIPE ON 2-14-77; CASING AND 2-3/8" TUBING WERE SEPARATED AND REMEDIAL MEASURES WERE BEGUN TO SAVE WELL.

Initial Production

FINAL FLOW - 231,000 CU. FT.

Oil shows

Water FW X at 30' 120' at at

SW at at at

Coal 236' to 241'; 520' to 524'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE, INDUCTION, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JULY 12, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-11

API No. 45-027-20251-00-03 VDMR Well Rep. No.

DMQ File No. BU-147

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BART ELSWICK

Co. Well No. 20340

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,127,490; E 392,340 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1410.46' GR. TD 4123' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned AUGUST 22, 1977

Result GAS WELL

Gas Shows 3362'

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA ON 7-23-77 WITH 46,400 GALLONS M.A. 61,000 # 20/40 SAND. PERFORATED AT 375', 4070' AND 4082' WITH A TOTAL OF 15 SHOTS

Initial Production FINAL FLOW - 5,180,000 CU. FT.

Oil shows

Water FW X at 84' to 98' at at

SW at at at

Coal 86' to 88'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other INDUCTION, TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 20, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-12

API No. 45-027-20265-00-03 VDMR Well Rep. No.

DMQ File No. BU-154

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #52

Co. Well No. 20470

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,125,000; E 392,460 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1896.10' GR. TD 4739' Form. at TD BEREA

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 12, 1977

Result GAS WELL

Gas Shows

Gas Pays 4682' to 4702'

Main Production 4682' to 4702' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA ON 8-25-77 WITH 875 BARRELS OF SAND LADEN FLUID AND 20,000 # 80/100 AND 50,800 # 20/40 SAND.

Initial Production

FINAL FLOW - 1,476,00 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other CALIPER, PERFORATION DEPTH CONTROL, INDUCTION, CEMENT BOND

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 11, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-13

API No. 45-027-20546-00-03 VDMR Well Rep. No.

DMQ File No. BU-167

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm GROVER DEEL

Co. Well No. 20546

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,125,830; E 392,030 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1530' GR. TD 4367' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 119,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MAY 31, 1978

Result GAS WELL

Gas Shows

Gas Pays 4254' to 4285'

Main Production 4254' to 4285' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: 80/100, 40000 # SAND, 20/40 50,000 #, CO2-20T. WELL WAS KIEL FRACTURED.

Initial Production

FINAL FLOW - 1,032,000 CU. FT.

Oil shows

Water FW X at 330' at at

SW at at at at

Coal 143' to 150'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE LOG, CALIPER, CONDUCTIVITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 29, 1978

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-14

API No. 45-027-20290-00-03 VDMR Well Rep. No. _____

DMQ File No. 8U-170

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm ALFRED DEEL

Co. Well No. 20471

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,123,630; E 392,820 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1698.85' GR. TD 4669' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 678,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 28, 1978

Result GAS WELL

Gas Shows 3824' to 3832'; 3849' to 3854'; 4558' to 4568

Gas Pays 3822' to 3828'

Main Production _____ Prod. Form. BIG LIME AND BEREA

Age MISSISSIPPIAN

Treatment: CO2 FRACTURED BEREA WITH 500 GALLONS OF MUD ACID, 34,000 # CO2, 30,000 # 80/100 AND 30,000 # 20/40 SAND. ACIDIZED BIG LIME ON 12-6-68 WITH 1,000 GALLONS OF 28% HCL, 6,000 GALLONS 14% HCL, 10 BARRELS WATER AND 70 BARRELS FLUSH.

Initial Production FINAL FLOW - 2,130,000 CU. FT.

Oil shows _____

Water FW X at 100' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log _____ Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res X Gamma X Neutron _____

Density X Sonic _____ Other INDUCTION, TEMPERATURE

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 28, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-15

API No. 45-027-19956-00-03 VDMR Well Rep. No.

DMQ File No. BU-42

Operator CLINCHFIELD COAL CORPORATION

Farm BIG SANDY FUEL COMPANY

Co. Well No. 172

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,125,070; E389,700 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1554.3' GR. TD 3651' Form. at TD BIG INJUN

INITIAL FLOW - 47,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 30, 1955

Result GAS WELL

Gas Shows

Gas Pays 3541' to 3549'; 3585'

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ACIDIZED ON 9-16-55 FROM 3445' to 3651' WITH 3000 GALS. OF 15% ACID. REACIDIZED WITH 3000 GALS. OF 15% ACID.

Initial Production

FINAL FLOW - 1,3D9,000 CU. FT.

Oil shows

Water FW X at 65' at at

SW at at at

Coal 1142' to 1144'; 1456' to 1457'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 29, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-16

API No. 45-027-20268-8D-03 VDMR Well Rep. No. _____

DMQ File No. BU-36

Operator CLINCHFIELD COAL CORPORATION

Farm BIG SANDY FUEL CORPORATION

Co. Well No. 165

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,125,570; E 390,050 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1575.0' GR. TD 3644' Form. at TD _____

INITIAL FLOW - 129,000 CU. FT. Age _____

Date compl. or abandoned 1-11-55

Result GAS WELL

Gas Shows 2486'; 2488'

Gas Pays 3554' to 3556'; 3579' to 3580'; 3591' to 3593'

Main Production _____ Prod. Form. _____

Age _____

Treatment: ACID TREATMENT FROM 3494' to 3644' WITH 2,000 GALLONS OF 15% ACID.

Initial Production FINAL FLOW - 1,885,000 CU. FT. PER DAY

Oil shows _____

Water FW X at 32' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 156'-157'; 238'-240'; 858'-859'; 1152'-1154'; 1614'-1616'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Date Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks WELL WAS DEEPENED AND COMPLETED ON JAN. 31, 1978 UNDER THE NAME OF COL. GAS TRANS. CORP. - PITTSTON CO. - # 9550.

References _____

Released to Open File: Completion APRIL 11, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-17

API No. 45-027-19963-00-03 VDMR Well Rep. No.

DMQ File No. BU-49

Operator CLINCHFIELD COAL CORPORATION

Farm BIG SANDY FUEL CORPORATION

Co. Well No. 181

County BUCHANAN Quadrangle HARMAN - 7-1/2'

Location (UTM) N 4,125,800; E 390,690 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1614.3' GR. TD 3670' Form. at TD BIG INJUN

INITIAL FLOW - 25,000 CU. FT. PER DAY Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 17, 1956

Result GAS WELL

Gas Shows 1846'; 3588'; 3597' to 3603'; 3636'

Gas Pays

Main Production Prod. Form. BIG INJUN & BIG LIME

Age MISSISSIPPIAN

Treatment: ACID TREATMENT FROM 3414' to 3670' WITH 1700 GALLONS OF 15% ACID ON 7-3-56 AND 3000 GALLONS OF 15% ACID ON 7-26-56.

Initial Production

FINAL FLOW - 158,000 CU. FT. PER DAY

Oil shows

Water FW X at 45' at at

SW at at at

Coal 1550' to 1552'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 15, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HARMAN-9-18

API No. 45-027-20428-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-205

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm PITTSTON COMPANY

Co. Well No. 20227

County BUCHANAN Quadrangle HARMAN-7½'

Location (UTM) N4,124,000; E391,870 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1923.42' GR. TD 4877' Form. at TD DEVONIAN

INITIAL FLOW - 94,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 14, 1981

Result GAS WELL

Gas Shows 4877'

Gas Pays 4758' to 4777'

Main Production 4758' to 4777' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: 75 Q FOAM FRACTURED BEREA WITH 500 GALLONS OF MUD ACID, 796 BARRELS TOTAL TREATING FLUID, 30,000 POUNDS OF 80/100 SAND, 22,000 POUNDS OF 20/40 SAND, AND 341,000 SCF N2.

Initial Production FINAL FLOW - 1,237,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 14, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-1

API No. 45-027-19972-00-03 VDMR Well Rep. No. W-286
DMQ File No. BU-58

Operator UNITED FUEL GAS COMPANY
Farm NATIONAL SHAWMUT BANK OF BOSTON
Co. Well No. 8415-T

County BUCHANAN Quadrangle HURLEY - 7-1/2'
Location (UTM) N 4,148,820; E 410,180 UTM Zone 17
(Lat. and Long.)
Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1353.65' GR. TD 5567' Form. at TD CORNIFEROUS
INITIAL FLOW - 90,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JANUARY 1, 1958
Result GAS WELL
Gas Shows 2183' to 2192'; 2924' to 2939'
Gas Pays 2910' to 2924'
Main Production Prod. Form. BIG LIME
Age MISSISSIPPIAN

Treatment: FRACTURED THE BEREA AND CORNIFEROUS FORMATION (3776' to 5567') WITH 17,600 POUNDS OF GELATIN. ACIDIZED BIG LIME WITH 1,500 GALLONS AND 6,000 GALLONS OF ACID. (2760' to 3100)

Initial Production
FINAL FLOW - 231,000 CU. FT.
Oil shows
Water FW X at 61' at at
SW at at at
Coal 61' to 63'; 1332' to 1339'

Plat X Plotted X Completion Report X
Drillers Log X Geologic Log X
Samples X Interval Sheet X
Sample Interval 63' to 796'; 117' to 5539'
Remarks
Geophysical Logs S.P. Res Gamma Neutron
Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR, 1970-1974.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1353.65'	609'
LEE	609'	+744.65'	1193'
POCAHONTAS	A B S E N T		
BLUESTONE	1802'	-448.35'	287'
PRIDE SHALE MEMBER	1975'	-621.35'	114'
PRINCETON	2089'	-735.35'	134'
HINTON-BLUEFIELD (UNDIFF.)	2223'	-869.35'	624'
LITTLE STONE GAP MEMBER	2223'	-869.35'	13'
GREENBRIER	2847'	-1493.35'	297'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA. VIRGINIA DIVISION OF MINERAL RESOURCES. BULLETIN 84. P-135-136.

Released to Open File: Completion APRIL 1, 1958
Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-2

API No. 45-027-19977-00-03 VDMR Well Rep. No. W-421

DMQ File No. BU-63

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8768

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,148,450; E 409,460 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1234.22' GR. TD 4992' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 39,000 CU. FT. Age DEVONIAN

Date compl. or abandoned NOVEMBER 12, 1959

Result GAS WELL

Gas Shows 2068'; 2080'

Gas Pays 965'; 2240'

Main Production Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: RAVENCLIFF FRACTURED TWICE, ONCE ON 10-9-59 WITH 300 BARRELS OF WATER AND 6,500 POUNDS OF 20/40 SAND, THE SECOND TIME WAS ON 11-6-59 WITH 2,500 GALLONS OF WATER AND 1,500 POUNDS OF 10/30 SAND.

Initial Production

FINAL FLOW - 989,000 CU. FT.

Oil shows

Water FW X at 16' at 56' at

SW at at at

Coal 56' to 58'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2550' to 3041'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, SEPTEMBER 1963.

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1234.22'	2550'
BLUEFIELD	2550'	-1315.78'	30'
GREENBRIER	2580'	-1345.78'	404'
MACCRADY	2984'	-1749.78'	57'

Remarks

References

Released to Open File: Completion FEBURARY 10, 1960

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-3

API No. 45-027-19979-00-03 VDMR Well Rep. No. W-419

DMQ File No. BU-65

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8797

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,148,150; E 408,510 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1191.48' GR. TD 4891' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned FEBRUARY 20, 1960

Result GAS WELL

Gas Shows 980'; 1276'; 1960' to 1962'; 2715' to 2721'

Gas Pays 2908'; 4875'

Main Production Prod. Form. BEREA, BIG LIME AND BIG INJUN

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA (3552' to 4891') ON 1-18-60 WITH 13,200 QUARTS OF AM. GELATIN; FRACTURED BIG LIME AND BIG INJUN (2905' to 2925') WITH 140 QUARTS OF SNG.

Initial Production

FINAL FLOW - 424,000 CU. FT.

Oil shows

Water FW X at 50' to 52' at 149' at

SW at at at

Coal 56' to 58'; 145' to 149'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 30' to 3420'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1191.48'	30'
NORTON	30'	+1161.48'	785'
LEE	815'	+376.48'	?
BLUESTONE	?	?	?
PRINCETON	1878'	-686.52'	137'
HINTON	2015'	-823.52'	275'
STONY GAP SANDSTONE	2175'	-983.52'	115'
BLUEFIELD	2290'	-1098.52'	254'
GREENBRIER	2544'	-1352.52'	382'
MACCRADY-PRICE	2926'	-1734.52'	296'
BIG STONE GAP SHALE	3222'	-2030.52'	198'

Remarks

References

Released to Open File: Completion MAY 21, 1960

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-4

API No. 45-027-19982-00-03 VDMR Well Rep. No. W-444

DMQ File No. BU-68

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8870

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,149,390; E 409,420 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1725.53' GR. TD 5444' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 25, 1960

Result GAS WELL

Gas Shows 1100'; 1360'; 2205'

Gas Pays 2525' to 2530'; 3249'; 3468' to 3472'

Main Production 3463' to 3484' Prod. Form. BIG LIME AND INJUN

Age MISSISSIPPIAN

Treatment: INCOMPLETE FRACTURE OF BIG LIME AND INJUN FORMATION FROM 3463' to 3484' WITH 200 POUNDS OF AM. GELATIN.

Initial Production

FINAL FLOW - 492,000 CU. FT.

Oil shows

Water FW X at 135' at at

SW at at at

Coal 120' to 124'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2420' to 2658'; 2900' to 4174'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1725.53'	2420'
BLUESTONE	2420'	-694.47'	SAMPLES START
PRINCETON	2420'	-694.47'	146'
HINTON	2566'	-840.47'	?
BLUEFIELD	?	?	?
GREENBRIER	3063'	-1337.47'	415'
MACCRADY-PRICE	3478'	-1752.47'	283'
BIG STONE GAP SHALE	3761'	-2009.53'	326'
DEVONIAN UNDIVIDED	4087'	-2361.47'	87'

Remarks

References

Released to Open File: Completion NOVEMBER 23, 1960

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-5

API No. 45-027-19983-00-03 VDMR Well Rep. No. W-563
DMQ File No. BU69

Operator UNITED FUEL GAS COMPANY
Farm ZACH JUSTICE #3
Co. Well No. 8848

County BUCHANAN Quadrangle HURLEY - 7-1/2'
Location (UTM) N 4,747,190; E 408,000 UTM Zone 17
(Lat. and Long.)
Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1099.40' GR. TD 4815' Form. at TD CORNIFEROUS
INITIAL FLOW - SHOW Age DEVONIAN
Date compl. or abandoned JANUARY 26, 1961
Result DRY HOLE, PLUGGED AND ABANDONED
Gas Shows 1002' to 1011'; 1817'; 2633'
Gas Pays
Main Production Prod. Form.
Age
Treatment: PERFORATED FROM 3462' to 4515' WITH 13,000 POUNDS OF GELATIN.

Initial Production
FINAL FLOW - 60,000 CU. FT.
Oil shows
Water FW X at 172' at at
SW at at at at
Coal 28' to 32'

Plat X Plotted X Completion Report X
Drillers Log X Geologic Log X
Samples X Interval Sheet X
Sample Interval 2031' to 3009'
Remarks
Geophysical Logs S.P. Res X Gamma X Neutron
Density Sonic Other TEMPERATURE, INDUCTION

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1099.4'	2031'
HINTON	2031'	-931.6'	196'
STONY GAP SANDSTONE	2065'	-965.6'	162'
BLUEFIELD	2227'	-1127.6'	214'
GREENBRIER	2441'	-1341.6'	385'
MACCRADY	2826'	-1726.6'	183'

Remarks

References

Released to Open File: Completion APRIL 26, 1961
Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-6

API No. 45-027-19985-00-03 VDMR Well Rep. No. W-564

DMQ File No. BU-71

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON #14

Co. Well No. U-8916

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,147,110; E408,960 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1071.06' GR. TD 4900' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned APRIL 13, 1961

Result DRY HOLE

Gas Shows 1844' to 1846'; 2769' to 2771'; 2885' to 2887'

Gas Pays

Main Production Prod. Form.

Age

Treatment: FRACTURED FORMATIONS FROM 3508' to 4900' ON 4-16-61 WITH 13,400 POUNDS OF GELATIN.

Initial Production

FINAL FLOW -

Oil shows

Water FW X at 68' at at

SW at at at

Coal 34' to 37'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1866' to 3350'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density Sonic Other MICROCALIPER

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J.M. WILSON, SEPTEMBER 1963.

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1109.44'	1866'
HINTON	1866'	-756.56'	410'
STONY GAP SANDSTONE	2111'	-1001.56'	165'
BLUEFIELD	2276'	-1166.56'	202'
GREENBRIER	2478'	-1368.56'	397'
MACCRADY-PRICE	2875'	-1765.56'	268'
BIG STONE GAP SHALE	3143'	-2033.56'	207'

Remarks THERE IS A DISCREPANCY IN THE GROUND ELEVATION LISTED ON THE COMPLETION REPORT AND PLAT.

References

Released to Open File: Completion JULY 12, 1961

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-7

API No. 45-027-19989-00-03

VDMR Well Rep. No. W-643

DMQ File No. BU-75

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8909

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,147,730; E 411,330 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1572.64' GR. TD 4043' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned SEPTEMBER 26, 1961

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows 3154' to 3156'

Gas Pays

Main Production NONE Prod. Form.

Age

Treatment: THIS WELL WAS NOT SHOT OR TREATED

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 122' at at

SW at at at

Coal 120' to 122'; 473' to 477'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4037'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density Sonic Other MICROCALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 25, 1961

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-8

API No. 45-027-19990-00-03 VDMR Well Rep. No. W-641

DMQ File No. BU-76

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 9046

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,149,750; E 410,410 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1438.98' GR. TD 3275' Form. at TD RED INJUN

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 7, 1961

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: ACIDIZED BIG LIME (3220' to 3223') ON 8-17-61 WITH 3,000 GALLONS OF DOWELL X AND M- 38. PERFORATED FORMATION FROM 2233' to 2237'; 2254' to 2260'; AND 2270' to 2278'. FRACTURED RAVENCLIFF on 8-22-61 WITH 11,000 POUNDS OF SAND AND 15,750 GALLONS OF SAND LADEN FLUID AND 250 GALLONS OF MCA, PERFORATED AT 2135' to 2139' AND 2142' to 2146'. FRACTURED R AVENCLIFF ON FINAL FLOW - 2,219,000 CU. FT. 9-5-61 WITH 20,000 POUNDS OF SAND AND 16,254

Oil shows GALLONS OF SAND LADEN AND 500 GALLONS OF MCA (2210' to 2309).

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 200' to 202'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 85' to 3275'

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density ____ Sonic ____ Other MICROCALIPER, INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 6, 1961

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-9

API No. 45-027-19991-00-03 VDMR Well Rep. No. W-633
DMQ File No. BU-77

Operator UNITED FUEL GAS COMPANY
Farm NATIONAL SHAWMUT BANK OF BOSTON - i3
Co. Well No. 8910

County BUCHANAN Quadrangle HURLEY - 7-1/2'
Location (UTM) N 4,149,060; E 411,320 UTM Zone 17
(Lat. and Long.)
Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1762.92' GR. TD 5582' Form. at TD CORNIFEROUS
INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 1, 1961
Result DRY HOLE, PLUGGED AND ABANDONED
Gas Shows 3420' to 3430'; 3515'; 5294' to 5302'
Gas Pays 3514'; 5294' to 5302'
Main Production Prod. Form.
Age

Treatment: FRACTURED FORMATIONS FROM 4150' to 5582' WITH 13,800 POUNDS OF 80% GELATIN. GAS BLEW DOWN TO 26,000 CU. FT.

Initial Production
FINAL FLOW - 26,000 CU. FT.
Oil shows
Water FW ____ at ____ ____ at ____ ____ at ____
SW ____ at ____ ____ at ____ ____ at ____
Coal 34' to 37'; 336' to 338'

Plat X Plotted X Completion Report X
Drillers Log X Geologic Log
Samples X Interval Sheet X
Sample Interval 0' to 4501'
Remarks
Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____
Density X Sonic ____ Other MIRCOCALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 30, 1961
Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-10

API No. 45-027-19994-00-03 VDMR Well Rep. No. W-630

DMQ File No. BU-80

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8871

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,147,410; E 410,410 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1222.85' GR. TD 3005' Form. at TD BIG LIME

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 1, 1961

Result GAS WELL

Gas Shows 2900' to 2902'

Gas Pays 2960' to 3005'

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ACIDIZED ON 12-6-61 WITH 1,500 GALLONS OF RETARDED 15% HCL AND 3,000 GALLONS OF 15% HCL FROM 2960' to 3005'. ACIDIZED ON 12-12-61 WITH 500 GALLONS OF MCA FROM 2960' to 3005'. ACIDIZED ON 12-13-61 WITH 3,000 GALLONS OF HCL FROM 2960' to 3005'.

Initial Production

FINAL FLOW - 6,698,000 CU. FT.

Oil shows

Water FW X at 20' to 22' at at

SW at at at at

Coal 106' to 109'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1900' to 2995'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1222.85'	1900'
BLUESTONE	1900'	-677.15'	5'
PRINCETON	1905'	-682.15'	155'
HINTON	2060'	-837.15'	?
STONY GAP SANDSTONE	2215'	-992.15'	?
BLUEFIELD	?	?	?
GREENBRIER	2590'	-1367.15'	405'

Remarks

References

Released to Open File: Completion MARCH 1, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-11

API No. 45-027-19996-00-03 VDMR Well Rep. No. W-654

DMQ File No. BU-82

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON #18

Co. Well No. 8908

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,149,070; E 408,430 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1662.34' GR. TD 3417' Form. at TD BIG INJUN

INITIAL FLOW Age MISSISSIPPIAN

Date compl. or abandoned OCTOBER 11, 1961

Result GAS WELL

Gas Shows 1650'

Gas Pays 3300' to 3370'

Main Production Prod. Form. BIG LIME AND BIG INJUN

Age MISSISSIPPIAN

Treatment: ACIDIZED BIG LIME AND BIG INJUN FROM 3300' to 3370' ON 10-20-61 WITH 2,000 GALLONS OF DOWELLX AND 1,500 GALLONS OF DOWELLXM. ACIDIZED FROM 3300' to 3370' ON 11-3-61 WITH 3,000 GALLONS OF DOWELL X AND 2,000 GALLONS OF RETARDED ACID.

Initial Production FINAL FLOW - 465,000 CU. FT.

Oil shows

Water FW X at 375' at at

SW at at at

Coal 320' to 322'; 630' to 632'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2400' to 3417'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other CALIPER

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1662.34'	2400'
PRINCETON	2400'	-737.66'	104'
HINTON	2504'	-841.66'	197'
STONY GAP SANDSTONE	2650'	-987.66'	51'
BLUEFIELD	2701'	-1038.66'	290'
GREENBRIER	2991'	-1328.66'	389'
MACCRADY	3380'	-1717.66'	37'

Remarks DEEPEST SAMPLE WAS 3417'.

References

Released to Open File: Completion JANUARY 9, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-1-12

API No. 45-027-20436-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-207

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BUCHANAN EMERGY CORPORATION

Co. Well No. 20713

County BUCHANAN Quadrangle HURLEY - 7½'

Location (UTM) N4,150,590; E410,000 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1242.07' GR. TD 5335' Form. at TD RHINESTREET

INITIAL FLOW - 83,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MAY 7, 1982

Result GASWELL

Gas Shows _____

Gas Pays 2110' TO 2120'

Main Production 2110' TO 2120' Prod. Form. RAVENCLIFFE

Age MISSISSIPPIAN

Treatment: SHOT SHALE ON 4-6-82 FROM 3890' TO 5335' WITH 144 -4"X10" SHELLS AND 9,600 POUNDS OF EXPLOSIVES FRACTURED RAVENCLIFFE ON 4-15-82 FROM 2112' to 2118' WITH 500 GALLONS MUDACID, 202 BARRELS VERSA-GEL. FRACTURED RAVENCLIFFE ON 4-21-82 FROM 2110' TO 2120' WITH 24 BARRELS OF 28% HCL

Initial Production 560 BARRELS 30 POUNDS GELLED H_2O, 5200 POUNDS 80/100 SAND AND 12,000 POUNDS 20/40 SAND.

FINAL FLOW: 442,000 CU. FT.

Oil Shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW X at 2185' ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, INDUCTION

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion AUGUST, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-2-1

API No. 45-027-19970-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-56

Operator UNITED FUEL GAS COMPANY

Farm ZACH JUSTICE ET AL

Co. Well No. U-8245

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,147,430; E 406,730 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1045.31' GR. TD 4710' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MARCH 18, 1959

Result GAS WELL

Gas Shows 1760'; 3445'; 4015'; 4250' to 4260'

Gas Pays _____

Main Production _____ Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED FORMATION FROM 3425' to 4710' WITH 12,500 POUNDS OF HERCULES GELATIN.

Initial Production _____

FINAL FLOW - 56,000 CU. FT.

Oil shows _____

Water FW X at 377' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 145' to 148'; 1012' to 1015'; 1045' to 1050'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JUNE 16, 1959

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HURLEY-2-2

API No. 45-027-19980-00-03 VDMR Well Rep. No. W-445

DMQ File No. BU-66

Operator UNITED FUEL GAS COMPANY

Farm ZACH JUSTICE ET AL

Co. Well No. 8835

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,148,380; E 407,660 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1343.51' GR. TD 4915' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 21,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JUNE 5, 1960

Result PLUGGED AND ABANDONED, DRY HOLE

Gas Shows 2145' to 2149'; 4555'

Gas Pays

Main Production Prod. Form.

Age

Treatment: PERFORATED FROM 3714' to 4913' (BEREA INCLUDED) ON JUNE 8, 1960 WITH 12,700 POUNDS OF 80% DUPONT GELATIN. TEST BEFORE SHOT WAS 21,000 CU. FT.; TEST 48 HOURS AFTER SHOT WAS 15,000 CU. FT.

Initial Production

FINAL FLOW 15,000 CU. FT.

Oil shows

Water FW X at 55' at at

SW at at at

Coal 214' to 217'; 322' to 324'; 446' to 448'; 30' to 34'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1975' to 4915'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron X

Density X Sonic Other LATEROLOG, MICROCALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 3, 1960

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-2-3

API No. 45-027-19988-00-03 VDMR Well Rep. No.

DMQ File No. BU-74

Operator UNITED FUEL GAS COMPANY

Farm ZACH JUSTICE ET AL

Co. Well No. 8672

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,146,480; E 407,160 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 906.90' GR. TD 2628' Form. at TD BIG LIME

INITIAL FLOW - 1,050,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned OCTOBER 27, 1961

Result GAS WELL

Gas Shows 454'; 632' to 633'; 1618' to 1620'; 2538' to 2540'

Gas Pays

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ACIDIZED BIG LIME ON 11-1-61 WITH 3,000 GALLONS OF DOWELL X-100 AND 3,000 GALLONS OF DOWELL X-7-1/2% FROM 2594' to 2628'

Initial Production

FINAL FLOW - 6,493,000 CU. FT.

Oil shows

Water FW X at 50' to 55' at at

SW at at at

Coal 925' to 926'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 2628'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other MICROCALIPER, INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 25, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-2-4

API No. 45-027-19992-00-03 VDMR Well Rep. No. W-642

DMQ File No. BU-78

Operator UNITED FUEL GAS COMPANY

Farm ZACH JUSTICE ET AL

Co. Well No. 8606

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,146,830; E 406,070 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1101.64' GR. TD 4780' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned OCTOBER 18, 1961

Result PLUGGED AND ABANDONED

Gas Shows 1252' to 1261'

Gas Pays

Main Production Prod. Form.

Age

Treatment: FRACTURED SALT SAND (1155' to 1570'?) ON 10-10-61 WITH 30,000 POUNDS OF SAND AND 250 GALLONS FO MCA AND 452 BARRELS OF WATER.

Initial Production

FINAL FLOW - 103,000 CU. FT.

Oil shows

Water FW X at 200' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 20' to 3970'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other MICROCALIPER, INDUCTION, CALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1101.64'	304'
LEE	304'	+797.64'	1267'
POCAHONTAS	A B S E N T		
BLUESTONE	1571'	-469.36'	219'
PRIDE SHALE MEMBER	1700'	-598.36'	90'
PRINCETON	1790'	-688.36'	80'
HINTON-BLUEFIELD (UNDIFF.)	1870'	-768.36'	552'
LITTLE STONE GAP MEMBER	1870'	-768.36'	23'
GREENBRIER	2422'	-1320.36'	402'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION FO MINERAL RESOURCES, BULLETIN 84, P. 136-137.

Released to Open File: Completion JANUARY 16, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-4-1

API No. 45-027-19973-00-03 VDMR Well Rep. No. W-285

DMQ File No. BU-59

Operator UNITED FUEL GAS COMPANY

Farm KENTLAND COAL AND COKE COMPANY #74

Co. Well No. 8295-T

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,141,470; E 402,410 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEUS

Elev. (specify) 1242.10' GR. TD 5392' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JANUARY 29, 1958

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. RAVENCLIFF AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA AND CORNIFEROUS ON 12-11-57 WITH 15,400 POUNDS OF GELATIN. PERFORATED MAXON (2480' to 2484') ON 1-3-58. TREATED MAXON WITH 500 GALLONS OF MUD ACID WITH NO RESULTS. FRACTURED RAVENCLIFF ON 1-13-58 WITH 2,000 GALLONS OF KEROSENE AND 500 POUNDS OF SAND.

Initial Production

FINAL FLOW - 215,000 CU. FT. (2027' to 2050')

Oil shows

Water FW at at at

SW at at at

Coal 865' to 870'; 1085' to 1090'; 1285' to 1290'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 350' to 2745'; 2975' to 5390'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density Sonic Other CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 29, 1958

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-5-1

API No. 45-027-20282-00-03 VDMR Well Rep. No.

DMQ File No. BU-164

Operator COLUMBIA GAS TRANMISSION CORPORATION

Farm MOUNTAIN MISSION SCHOOL

Co. Well No. 20441-T

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,144,520; E 406,020 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 952' GR. TD 5123' Form. at TD CORNIFEROUS LIME

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JUNE 15, 1978

Result GAS WELL

Gas Shows

Gas Pays 3365' to 3375'

Main Production 5095' to 5123' Prod. Form. RAVENCLIFF; DEVONIAN

Age MISSISSIPPIAN; DEVONIAN

Treatment: FRACTURED ZONE 1 (SHALE) WITH 750 GALLONS OF MUD ACID, 25 GALLONS OF F-75, 820 BARRELS OF SAND LADEN FLUID, 560 POUNDS OF J-266, 15,000 POUNDS OF 80/100 SAND, 15,000 POUNDS OF 20/40 SAND. FRACTURED ZONE 2 WITH 691 BARRELS OF SAND LADEN FLUID, 1,000 GALLONS OF M.A., 25 GALLONS OF F-75, 500 POUNDS OF J-266, 15,000 POUNDS OF 80/100 SAND, AND 15,000 POUNDS OF 20/40 SAND.

Initial Production FINAL FLOW -1,232,000 CU. FT./FRACTURED RAVENCLIFF ON 4-13-78 WITH 750 GALLONS OF MUD ACID, 732 BARRELS OF SAND LADEN FLUID, 600 POUNDS OF J-266, 25 GALLONS OF F-75, 11 GALLONS OF A-200, 2,000 GALLONS OF 28% HCL, 28,000 POUNDS OF 20/40 SAND AND 30,000 POUNDS OF 80/100 SAND.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE; CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 13, 1978

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HURLEY-5-2

API No. 45-027-20424-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-202

Operator CITIES SERVICE COMPANY

Farm GEORGIA PACIFIC CORPORATION

Co. Well No. A-1 (GW-1814)

County BUCHANAN Quadrangle HURLEY-7½'

Location (UTM) N4,143,110; E407,080 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 975' GR. TD 5202' Form. at TD CORNIFEROUS LIME

INITIAL FLOW-146,000 CU. FT. Age DEVONIAN

Date compl. or abandoned OCTOBER 29, 1981

Result GAS WELL

Gas Shows 2478' TO 2510'; 2542' TO 2546'; 2696' TO 2698'; 2860' TO 2900'; 3176' TO 3184'

Gas Pays 4488' TO 4675'; 3592' TO 3932'

Main Production 3592' TO 4675' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: PERFORATED 4488' TO 4675'; 2000 GALLONS OF 15% HCL, 60,000 POUNDS OF SAND IN NITROGEN FOAM FRAC. PERFORATED 3592' TO 3932', 2000 GALLONS 15% HCL, 80,000 POUNDS OF SAND IN NITROGEN FOAM FRAC.

Initial Production _____

FINAL FLOW -

Oil shows _____

Water FW X at 37' _____ at 60' _____ at 43'; 120GPM; 92' - 160GPM

SW _____ at _____ _____ at _____ _____ at _____

Coal 64' TO 66'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JANUARY 27, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-7-1

API No. 45-027-20313-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-177

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm NEW ERA COAL COMPANY

Co. Well No. 20365-T

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,139,010; E 410,480 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1282.37' GR. TD 5661' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 21, 1979

Result GAS WELL

Gas Shows 4908' to 4910'; 4580' to 4582'; 4400' to 4402'; 5590' to 5600';

Gas Pays 5510' to 5520'

Main Production 3888' to 5654' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: 75 QUALITY FOAM FRACTURED LOWER ZONE OF SHALE ON 5-1-79 W/30,000 80/100 SAND, 30,000 # 20/40; 350,000 SCF N2, 750 GALLONS OF MUD ACID; 75 QUALITY FOAM FRACTURED UPPER ZONE OF SHALE ON 5-10-79 W/26,500 # 80/100 SAND, 30,000 # 20/40; 376,000, SCF N2, 1000 GALLONS MUD ACID.

Initial Production FINAL FLOW - 304,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log _____ Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other CALIPER, TEMPERATURE, NOISE, INDUCTION

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion SEPTEMBER 19, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HURLEY-7-2

API No. 45-027-20385-00-03 VDMR Well Rep. No.

DMQ File No. BU-188

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm NEW ERA COAL CORPORATION

Co. Well No. 20038

County BUCHANAN Quadrangle HURLEY - 7½'

Location (UTM) N4,137,300; E409,470 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1218' GR. TD 5650' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 45,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 31, 1981

Result GAS WELL

Gas Shows 5200'; 5650'

Gas Pays 4721' TO 5603'

Main Production 4721' TO 5603' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: 70 Q FOAM FRACTURED SHALE WITH 1470 BARRELS TOTAL TREATING FLUID; 826,500 SCF N_2; 60,000 POUNDS OF 20/40 SAND, AND 5200 POUNDS OF 10/20 SAND.

Initial Production

FINAL FLOW - 211,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 31, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-7-3

API No. 45-027-20415-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-200

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BUCHANAN ENERGY CORPORATION

Co. Well No. 20723

County BUCHANAN Quadrangle HURLEY - 7½'

Location (UTM) N4,139,740; E411,270 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1408.69' GR. TD 5793' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 94,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 18, 1981

Result GAS WELL

Gas Shows 1280'

Gas Pays 2817'; 3392'; 5056' TO 5292'; 5601' to 5720'

Main Production 5056' TO 5292' 5601' TO 5720' Prod. Form. MAXON & BIG LIME; DEVONIAN SHALE

Age MISSISSIPPIAN; DEVONIAN

Treatment: 75Q FOAM FRACTURED SHALE - ZONE 1 WITH 490,000 SCF N_2; 45,000 POUNDS 20/40 SAND, 2000 GALLONS 28% HCL ACID. 75Q FOAM FRACTURED SHALE-ZONE 2 WITH 2000 GALLONS 28% HCL ACID; 550,000 SCF N_2; 38,582 GALLONS TREATING FLUID; 45,000 20/40 SAND.

Initial Production _____

FINAL FLOW - 305,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma X Neutron _____

Density X Sonic X Other TEMPERATURE; INDUCTION

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 18, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-7-4

API No. 45-027-20433-00-03 VDMR Well Rep. No.

DMQ File No. BU-206

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm NEW ERA COAL CORPORATION

Co. Well No. 20719

County BUCHANAN Quadrangle HURLEY - 7½'

Location (UTM) N4,137,460; E408,590 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1174.76' GR. TD 5557' Form. at TD CORNIFEROUS

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned FEBRUARY 9, 1982

Result GAS WELL

Gas Shows

Gas Pays 3780' to 5540'; 3286' to 3306'; 3092' to 3102

Main Production Prod. Form. BIG LIME & WEIR; DEVONIAN SHALE

Age MISSISSIPPIAN; DEVONIAN

Treatment:

Initial Production

FINAL FLOW - 211,000 CU.FT. - SHALE

84,000 CU.FT. - WEIR AND GREENBRIER

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic X Other TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 10, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-8-1

API No. 45-027-20287-00-03 VDMR Well Rep. No. W-5924

DMQ File No. BU-168

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm HELEN WARFIELD

Co. Well No. 20440-T

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,136,860; E 406,110 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1591.46' GR. TD 3591' Form. at TD BEREA

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 23, 1978

Result GAS WELL

Gas Shows

Gas Pays 3492' to 3520'; 2952' to 3492'

Main Production Prod. Form. INJUN AND BIG LIME

Age MISSISSIPPIAN

Treatment: FOAM FRACTURED INJUN FORMATION (3495' TO 3520') WITH 42,000 GALLONS OF FOAM, 330,000 CU. FT. OF N2, 30,000 POUNDS OF 80/100 SAND, AND 30,000 POUNDS OF 20/40 SAND. FOAM ACID FRACTURED BIG LIME FORMATION (3177' TO 3495') WITH 4,000 GALLONS OF 28% ACID, 28,000 POUNDS OF 80/100 SAND.

Initial Production

FINAL FLOW - 1,457,000 CU. FT.

Oil shows

Water FW X at 42' at at

SW at at at

Coal 166' to 171'; 742' to 747'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 3560'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other CALIPER; INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 21, 1978

Samples YES

(Note: UTM measurements in meters, all others in feet)

HURLEY-8-2

API No. 45-027-20314-00-03 VDMR Well Rep. No.

DMQ File No. BU-178

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BUCHANAN REALITY COMPANY

Co. Well No. 20436-T

County BUCHANAN Quadrangle HURLEY - 7-1/2'

Location (UTM) N 4,139,980; E 405,830 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1163.06' GR. TD 5460' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 603,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MARCH 21, 1979

Result GAS WELL

Gas Shows 4684' to 4704'

Gas Pays 3704' to 5460'

Main Production 4684' to 4704' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: PERFORATED FROM 4684' to 4704'

Initial Production

FINAL FLOW - 730,000 CU. FT.

Oil shows

Water FW X at 74' at at

SW at at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE; INDUCTION; NOISE SURVEY, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 19, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

HURLEY-8-3

API No. 45-027-20413-00-03 VDMR Well Rep. No.

DMQ File No. BU-198

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm W. MILLER RICHARDSON ET AL

Co. Well No. 20646

County BUCHANAN Quadrangle HURLEY - 7½'

Location (UTM) N4,138,970; E404,950 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1372' GR. TD 5617' Form. at TD DEVONIAN

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned DECEMBER 17, 1981

Result GAS WELL

Gas Shows

Gas Pays 3275' TO 3284'; 4805' TO 5183'; 5418' TO 5550'

Main Production 3275' TO 3284' Prod. Form. INJUN

Age MISSISSIPPIAN

Treatment: FOAM FRACTURED SHALE-ZONE 1 WITH 500 GALLONS HCL ACID; 514,000 SCF N_2; 36,000 POUNDS 20/40 SAND. 49,962 TOTAL GALLONS TREATING FLUID. FOAM FRACTURED SHALE-ZONE 2 WITH 649,000 SCF N_2; 500 GALLONS HCL ACID; 44,000 TOTAL GALLONS TREATING FLUID; 76,800 POUNDS 20/40 SAND; FOAM FRACTURED INJUN SAND W/1250 GAL. MUD ACID; 497,000 SCF N_2; 30,000 POUNDS 20/40 SAND, 15,000 POUNDS 10/20 SAND; 43,000 TOTAL GAL. TREATING FLUID.

Initial Production

FINAL FLOW - 1,476,000 CU. FT. (INJUN)

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 332' TO 335'; 491' TO 493'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic X Other TEMPERATURE, DUAL INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks SHALE GAS PLUGGED OFF. TESTED 33,000 CU. FT. AFTER FRACTURE.

References

Released to Open File: Completion MARCH 17, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-8-4

API No. 45-027-20414-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-199

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm W. MILLER RICHARDSON, ET AL

Co. Well No. 20658

County BUCHANAN Quadrangle HURLEY-7½'

Location (UTM) N4,138,720; E405,960 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1317.47' GR. TD 5614' Form. at TD DEVONIAN

INITIAL FLOW - 158,000 CU. FT. Age DEVONIAN

Date compl. or abandoned SEPTEMBER 15, 1981

Result GAS WELL

Gas Shows 3860' TO 5611'

Gas Pays 3860' TO 5611'

Main Production 3860' TO 5611' Prod. Form. DEVONIAN

Age DEVONIAN

Treatment: NONE

Initial Production _____

FINAL FLOW - 179,000 CU. FT.

Oil shows _____

Water FW X at 30' at 40' at 83'

SW _____ at _____ at _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma X Neutron _____

Density X Sonic _____ Other TEMPERATURE

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 14, 1981

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-8-5

API No. 45-027-20410-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-196

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm W. MILLER RICHARDSON ET AL

Co. Well No. 20040

County BUCHANAN Quadrangle HURLEY-7½'

Location (UTM) N4,137,880; E404,680 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1510' GR. TD 5765' Form. at TD MARCELLUS SHALE

Age DEVONIAN

Date compl. or abandoned SEPTEMBER 15, 1981

Result GAS WELL

Gas Shows 3084' TO 3089'; 3115' TO 3120'; 4585'; 5320'

Gas Pays 3084' TO 3089'; 3115' TO 3120'; 5278' TO 5284'; 5316' TO 5326'; 5358' TO 5364'

Main Production 3084' TO 3089' 3115' TO 3120'; ~~5278' TO 5284'; 5316' TO~~ 5326'; 5358' TO 5364' Prod. Form. BIG LIME; DEVONIAN SHALE

Age MISSISSIPPIAN; DEVONIAN

Treatment: FOAM FRACTURED BEREA WITH 18,077 TOTAL GALLONS TREATING FLUID, 210,000 SCF N_2; 22,500 POUNDS 20/40 SAND. FOAM FRACTURED BEREA WITH 196 TOTAL BARRELS OF TREATING FLUID, 335,000 SCF N_2; 15,000 POUNDS 80/100 SAND AND 15,000 POUNDS OF 20/40 SAND.

Initial Production _____

FINAL FLOW - 274,000 CU. FT.

Oil shows _____

Water FW X at 90' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 173' TO 176'; 251' TO 253'; 1111' TO 1114'.

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma X Neutron _____

Density X Sonic _____ Other DUAL INDUCTION, TEMPERATURE

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 14, 1981

Samples NO

(Note: UTM measurements in meters, all others in feet)

HURLEY-8-6

API No. 45-027-20427-00-03 VDMR Well Rep. No.

DMQ File No. BU-204

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm W. MILLER AND G. CHARLES

Co. Well No. 20637

County BUCHANAN Quadrangle HURLEY-7½'

Location (UTM) N4,137,900; E405,830 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1424.17' GR. TD 5709' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned DECEMBER 31, 1981

Result GAS WELL

Gas Shows

Gas Pays 5531' TO 5625'; 4468' TO 5233'

Main Production 5531' TO 5625' 4468' TO 5233' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: FOAM FRACTURED SHALE WITH 500 GALLONS OF MUD ACID; 927 TOTAL BARRELS TREATING FLUID; 540,000 SCF N_2; 30,000 POUNDS 80/100 SAND AND 30,000 POUNDS 20/40 SAND (ZONE 2). FOAM FRACTURED SHALE-ZONE 1 WITH 500 GALLONS MUD ACID; 480 BARRELS TOTAL TREATING FLUID; 340,000 SCF N_2; 10,500 POUNDS 80/100 SAND.

Initial Production

FINAL FLOW - 223,000 CU. FT.

Oil shows

Water FW X at 51' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks SHALE - ZONE 1 - FRACTURING OPERATIONS TERMINATED AFTER PUMPING 480 BARRELS DUE TO PERFORATIONS SCREENING OUT AND EXCESSIVE FRAC PRESSURES.

References

Released to Open File: Completion MARCH 31, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

JEWELL RIDGE-1-1

API No. 45-027-19918-00-03 VDMR Well Rep. No. W-127

DMQ File No. 8U-3

Operator UNITED FUEL GAS COMPANY

Farm NEW RIVER AND POCAHONTAS CONSOLIDATED COAL COMPANY

Co. Well No. U-6705

County BUCHANAN Quadrangle JEWELL RIDGE - 7-1/2'

Location (UTM) N 4,119,220; E 432,770 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2893.51' GR. TD 6082' Form. at TD BEREA

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned MARCH 21, 1952

Result DRY HOLE, PULLED, PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW X at 113' at 1063 to 1069' at 1260' to 1268'

SW at at at at

Coal 110' to 115'; 1440' to 1444'; 1535' to 1540'; 1652' to 1654'; 1896' to 1898'; 2022' to 2026'; 2125' to 2130'; 2307' to 2312'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 426' to 5288'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. J. VOITSBERGER, VDMR DECEMBER 1956

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+2893.51'	426'
PENNSYLVANIAN	426'	+2467.51'	2093'
BLUESTONE	2519'	+3274.51'	496'
PRINCETON	3015'	-121.49'	247'
AVIS	3262'	-368.49'	66'
HINTON	3327'	-433.49'	546'
STONY GAP SANDSTONE MEMBER	3873'	-979.49'	228'
BLUEFIELD	4101'	-1207.49'	579'
GREENBRIER	4680'	-1786.49'	608' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion JUNE 19, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

JEWELL RIDGE-2-1

API No. 45-027-19998-00-03 VDMR Well Rep. No. W-711

DMQ File No. BU-84

Operator UNITED FUEL GAS COMPANY

Farm POCAHONTAS MINING CORPORATION #1

Co. Well No. 9138-T

County BUCHANAN Quadrangle JEWELL RIDGE - 7-1/2'

Location (UTM) N 4,119,210; E 427,800 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1958.01' GR. TD 5170' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned JULY 14, 1962

Result DRY HOLE

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW

Oil shows

Water FW X at 20' at at

SW at at at at

Coal 174' to 175'; 378' to 380'; 734' to 739'; 909' to 912'; 1053' to 1056'; 1512' to 1418'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 70' to 5170'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER, CONDUCTIVITY

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
NEW RIVER	0'	+1958.01'	1250'
POCAHONTAS	1250'	+708.01'	570'
BLUESTONE	1820'	+138.01'	420'
PRIDE SHALE MEMBER	2018'	-59.99'	222'
PRINCETON	2240'	-281.99'	210'
HINTON	2450'	-491.99'	718'
LITTLE STONE GAP MEMBER	2450'	-491.99'	70'
STONY GAP SANDSTONE MEMBER	3120'	-1161.99'	48'
BLUEFIELD	3168'	-1209.99'	408'
GREENBRIER	3576'	-1617.99'	879'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 170-171.

Released to Open File: Completion OCTOBER 12, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

JEWELL RIDGE-3-1

API No. 45-027-19874-00-03 VDMR Well Rep. No. W-28

DMQ File No. A-3-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm MARY R. MCNEIL, ET AL

Co. Well No. I-1724

County BUCHANAN Quadrangle JEWELL RIDGE - 7-1/2'

Location (UTM) N 4,121,000; E 424,060 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1832.6' GR. TD 4898' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 39,000 CU. FT. Age DEVONIAN

Date compl. or abandoned NOVEMBER 18, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 798'; 1044'; 1115'; 4849' to 4852'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON DECEMBER 8, 1950 FROM 4827' to 4863' WITH 180 QUARTS OF GLYCERINE.

Initial Production FINAL FLOW - NONE

Oil shows

Water FW X at 90' at 1050' at 1356'

SW at at at

Coal 445' to 447'; 745' to 752'; 1116' to 1169'; 1249' to 1255'; 1320' to 1323'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1280' to 4902'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY J. M. WILSON AND R. C. MILICI, VDMR, SEPTEMBER, 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1832.6'	1280'
LEE	1280'	552.6'	217'
BLUESTONE	1497'	+335.6'	591'
PRINCETON	2088'	-255.4'	216'
HINTON	2304'	-471.4'	689'
STONY GAP SANDSTONE	2690'	-857.4'	303'
BLUEFIELD	2993'	-1160.4'	353'
GREENBRIER	3346'	-1513.4'	811'
MACCRAOY-PRICE	4157'	-2324.4'	305'
BIG STONE GAP SHALE	4462'	-2629.4'	320'
DEVONIAN UNDIVIDED	4782'	-2949.4'	120'

Remarks

References

Released to Open File: Completion FEBRUARY 16, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-1-1

API No. 45-027-20288-00-03 VDMR Well Rep. No.

DMQ File No. BU-169

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN

Co. Well No. ISLAND CREEK - 12

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,121,660; E 421,580 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1770.' GR. TD 4820' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MARCH 7, 1978

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 4720' AND 4736'

Gas Pays

Main Production Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 185' at at

SW at at at

Coal 895' to 900'; 1204' to 1207'; 1330' to 1335'; 1444' to 1445'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma Neutron

Density Sonic Other INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 5, 1978

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-1

API No. 45-027-19872-00-03 VDMR Well Rep. No. W-43

DMQ File No. A-1-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm JAMES MCGUIRE

Co. Well No. L. MAUDE FUGATE #1

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,119,950; E 418,790 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2288.25' GR, TD 6658' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JULY 9, 1951

Result GAS WELL

Gas Shows 891' to 893'; 2118' to 2190'; 2585' to 2621'

Gas Pays 1132' to 1138'

Main Production 1132' to 1138' Prod. Form.

Age

Treatment: FRACTURED ON JULY 6, 1951 FROM 1100' to 1175' WITH 2,000 POUNDS OF DETONITE. VOLUME THE FIRST 24 HOURS WAS 119,000 CU. FT. FISHING 3-8-51 TO 4-28-51. STARTED PLUGGING ON JUNE 5, 1951 AND FILLED HOLE TO 1175' AT WHICH DEPTH THE WELL HAD A LEAD PLUG PUT IN.

Initial Production FINAL FLOW - 60,000 CU. FT. (SETTLED PRODUCTION)

Oil shows

Water FW at at at

SW X at 1375' to 1380' at at

Coal 150' to 153'; 265' to 267'; 520' to 524'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2055' to 6653'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Date Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
BLUESTONE	0'	+2288.25'	625'
PRIDE SHALE MEMBER	2464'	-175.75'	216'
PRINCETON	2680'	-391.75'	136'
HINTON	2816'	-527.75'	561'
LITTLE STONE GAP MEMBER	2816'	-527.75'	64'
STONY GAP SANDSTONE MEMBER	3307'	-1018.75'	70'
BLUEFIELD	3377'	-1088.75'	414'
GREENBRIER	3791'	-1502.75'	779'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS, OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 168.

Released to Open File: Completion OCTOBER 7, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-2

API No. 45-027-19896-00-03 VDMR Well Rep. No. W-11

DMQ File No. A-25-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm C. L. RITTER LUMBER COMPANY

Co. Well No. I-1527

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,121,970; E 415,890 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2262'-DERRICK FLOOR TD 8013' Form. at TD CLINTON

INITIAL FLOW - 41,000 CU. FT. Age SILURIAN

Date compl. or abandoned MAY 4, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1670'; 4000'; 4639' to 4649'; 7326'; 7660'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON JUNE 28, 1950 FROM 6076' to 7070' WITH 6,600 POUNDS OF DUPONT GELATIN. WELL ACIDIZED AT 4695' WITH 1,000 GALLONS OF ACID ON 7-13-50.

Initial Production

FINAL FLOW - 14,000 CU. FT.

Oil shows

Water FW X at 1836' at at

SW at at at at

Coal 64' to 66'; 93' to 96'; 430' to 436'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2113' to 8016'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
LEE	0'	+2262'	287'
BLUESTONE	2400'	-138'	461'
PRINCETON	2861'	-599'	133'
HINTON: AVIS LIMESTONE	2994'	-732'	52'
HINTON-UNDIVIDED	3046'	-784'	502'
STONY GAP SANDSTONE MEMBER	3548'	-1286'	174'
BLUEFIELD	3722'	-1460'	411'
GREENBRIER	4133'	-1871'	517'
MACCRADY SHALE	4650'	-2388'	104'
PRICE SANDSTONE	4754'	-2492'	246'
BIG STONE GAP SHALE	5000'	-2738'	274'
CHEMUNG-BRAILLER	5274'	-3012'	1215'
MILLBORO	6489'	-4227'	636'
HUNTERSVILLE CHERT	7135'	-4873'	55'
NO SAMPLE	7190'	-4928'	48'
NEW SCOTLAND LIMESTONE	7238'	-4976'	120'
CAYUGA DOLOMITE	7358'	-5096'	228'
CLINTON	7586'	-5324'	56'

Remarks

References HUDDLE, J. W., JACOBSEN, ELOISE T., WILLIAMSON, A. D., OIL AND GAS WELLS DRILLED IN SOUTHWESTERN VIRGINIA BEFORE 1950; USGS BULLETIN 1027-L, P. 557.

Released to Open File: Completion AUGUST 2, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-3

API No. 45-027-19900-00-03 VDMR Well Rep. No. W-14

DMQ File No. A-29-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm SLOCUM LAND CORPORATION

Co. Well No. 2-1539

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,122,830; E 415,280 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1933.7' GR. TD 4611' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned SEPTEMBER 9, 1949

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1253'; 4119'; 4412';

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON 10-20-49 FROM 2619' to 2649' WITH 90 QUARTS OF NITROGLYCERINE, NO RESULTS.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 331' at 430' at 539'

SW at at at

Coal 417' to 420'; 985' to 988'; 1247' to 1250'; 1680' to 1684'; 1835' to 1838'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 421' to 4611'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
NORTON	0'	+1933.7'	314'
LEE	735'	+803.7'	1130'

Remarks

References HUDDLE, J. W., JACOBSEN, ELOISE T., WILLIAMSON, A. D., OIL AND GAS WELLS DRILLED IN SOUTHWESTERN VIRGINIA BEFORE 1950: USGS BULLETIN 1027-L, P. 556.

Released to Open File: Completion DECEMBER 8, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-4

API No. 45-027-19904-00-03 VDMR Well Rep. No. W-18

DMQ File No. A-33-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS

Co. Well No. 4-1646

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,590; E 415,080 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1752.6' GR, TD 2404' Form. at TD RAVENCLIFF

INITIAL FLOW - 20,134,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 26, 1949

Result NATURAL GAS WELL

Gas Shows 1030'; 1461' to 1465'; 1598' to 1601'

Gas Pays 2391'; 2392'; 2400'

Main Production 2404' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL NOT SHOT OR ACIDIZED

Initial Production

FINAL FLOW - 20,134,000 CU. FT.

Oil shows

Water FW X at 64' at 80' at 780'

SW at at at

Coal 62' to 64'; 183' to 186'; 795' to 798'; 1462' to 1465'; 1595' to 1601'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 140' to 2391'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
NORTON	0'	+1752.6'	583'
LEE	723'	+1029.6'	1175'
BLUESTONE	1698'	-145.4'	485'
PRINCETON	2383'	-630.4'	8'

Remarks

References HUDDLE, J. W., JACOBSEN, ELOISE T., WILLIAMSON, A. D., 1956, OIL AND GAS WELLS DRILLED IN SOUTHWESTERN VIRGINIA BEFORE 1950: USGS BULLETIN 1027-L, P. 559.

Released to Open File: Completion DECEMBER 25, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-6

API No. 45-027-19907-00-03 VDMR Well Rep. No. W-22

DMQ File No. A-36-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 7-1672

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,070; E 415,390 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2228.21' GR. TD 5360' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 5, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1120'; 4244'; 4653'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED FROM 4644' to 4675' WITH 1,000 GALLONS OF ACID ON 6-30-50.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 9' at at

SW at at at

Coal 150' to 153';743' to 747'; 1480' to 1485'; 1993' to 1997'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 23' to 5360'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source FORMATION BOUNDARIES FROM THESIS OF DAVID BOWEN, VPI

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	2228.21'	945'
LEE	945'	+1283.21'	1430'
BLUESTONE	2375'	-146.79'	429'
PRINCETON	2804'	-575.79'	--

Remarks

References BOWEN, DAVID, SUBSURFACE STUDY OF THE LEE FORMATION IN BUCHANAN COUNTY, VIRGINIA: MASTERS THESIS, VIRGINIA POLYTECHNIC INSTITUTE.

Released to Open File: Completion NOVEMBER 3, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-5

API No. 45-027-19906-00-03 VDMR Well Rep. No. W-21

DMQ File No. A-35-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 6-1671

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,850; E 415,580 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1784' DERRICK FLOOR TD 4536' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned APRIL 13, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 347'; 2456' to 2458'; 3143' to 3149'; 3155' to 3158'; 4273' to 3400' to 3415'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON 3-15-50 FROM 2418' to 2448' WITH 60 QUARTS OF NITROGLYCERINE. NO RESULTS.

Initial Production

FINAL FLOW - SHOW

Oil shows 347'; 2456' to 2458'; 3143' to 3149'; 3155' to 3158'; 4273'; 3400' to 3415'

Water FW X at 50' at at

SW at at at

Coal 186' to 190'; 791' to 794'; 934' to 936'; 1468' to 1473'; 1611' to 1616'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 102' to 4532'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JULY 12, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-7

API No. 45-027-20259-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-150

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm C. L. RITTER LUMBER COMPANY

Co. Well No. ISLAND CREEK #1

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,122,620; E 417,810 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1560' GR. TD 4736' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 23, 1977

Result GAS WELL

Gas Shows 3456' to 3459'

Gas Pays 4522' to 4574'

Main Production _____ Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA WITH 918 BARRELS OF JELLED WATER, AND 15,000 POUNDS OF 80/100 SAND AND 60,000 POUNDS OF 20/40 SAND. BREAKDOWN PRESSURE WAS 1,500 PSI. AVERAGE INJECTION PRESSURE WAS 1850 PSI. INSTANT SHUT IN PRESSURE WAS 1,500 PSI. SHUT IN PRESSURE AFTER 15 MINUTES WAS 1150 PSI. PERFORATED BETWEEN 4557' AND 4565' WITH 17 SHOTS. FINAL FLOW - 231,000 CU. FT.

Initial Production

Oil shows _____

Water FW X at 48' _____ at 185' _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 614' to 616'; 642' to 644'; 733' to 735'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res X Gamma X Neutron _____

Density X Sonic _____ Other TEMPERATURE, CASING COLLAR, PERFORATION DEPTH CONTROL, CALIPER

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion SEPTEMBER 21, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-8

API No. 45-027-20269-00-03 VDMR Well Rep. No.

DMQ File No. BU-155

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN (YUKON POCAHONTAS COAL COMPANY ET AL)

Co. Well No. ISLAND CREEK #6

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,119,430; E 416,920 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1895.' GR. TD 5110' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 2, 1977

Result GAS WELL

Gas Shows

Gas Pays 4933' to 4980'

Main Production 3980' to 4933' Prod. Form. BIG LIME, INJUN, WEIR, AND BEREA

Age MISSISSIPPIAN

Treatment: BROKE DOWN BEREA WITH 650 PSI. FRACTURED WITH 704 BARRELS OF JELLED WATER, 50,000 POUNDS OF 20/40 SAND. AVERAGE INJECTION RATE WAS 21 BARRELS PER MINUTE. AVERAGE INFECTION PRESSURE WAS 1050 PSI.

Initial Production

FINAL FLOW - 14,900 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 117' to 121'; 150' to 154'; 1060' to 1065'; 1242' to 1245'; 1310' to 1319'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CASING COLLAR, PERFORATING DEPTH CONTROL, CALIPER, INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 31, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-2-9

API No. 45-027-19919-00-03 VDMR Well Rep. No. W-35

DMQ File No. BU-4

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 13-1834

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,020; E 414, 970 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2291.6' GR. TD 4951' Form. at TD INJUN

INITIAL FLOW - NONE Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 21, 1951

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 1575' at at

SW at at at at

Coal 295' to 298'; 2072' to 2075'; 2140' to 2144'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2482' to 4953'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 21, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-1

API No. 45-027-19873-00-03 VDMR Well Rep. No. W-27

DMQ File No. A-2-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 11-1723

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,230; E 413,670 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2415.45' GR. TD 5602' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned APRIL 20, 1951

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1850'; 4618'; 5143'

Gas Pays

Main Production Prod. Form.

Age

Treatment: NOT ACIDIZED; NOT SHOT

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 75' at at

SW at at at

Coal 180' to 182'; 322' to 325'; 445' to 446'; 534' to 536'; 1550' to 1552'; 1850' to 1853'; 2190' to 2192'; 2238' to 2240'; 2320' to 2323'; 2385' to 2391'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2698' to 5509'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Date Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JULY 19, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-2

API No. 45-027-19876-00-03 VDMR Well Rep. No. W-26

DMQ File No. A-5-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 10-1722

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,180; E 414,370 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2024.' GR. TD 4504' Form. at TD INJUN

INITIAL FLOW - 128,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MAY 14, 1951

Result GAS WELL

Gas Shows 1400'; 3685'

Gas Pays 4015'; 4253'

Main Production 4268' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL NOT SHOT; WELL PERFORATED FROM 4463' to 4494' AND ACIDIZED WITH 1,000 GALLONS OF ACID ON 5-10-51. (DEPTHS NOT GIVEN).

Initial Production

FINAL FLOW - 6,590,000 CU. FT.

Oil shows

Water FW X at 1355' at at

SW at at at at

Coal 78' to 82'; 505' to 508'; 895' to 897'; 1280' to 1284'; 1355' to 1363'; 1463' to 1465'; 1722' to 1725'; 1827' to 1830'; 1870' to 1877'; 1933' to 1944'

Plat X Plotted X Completion Report X 2038' to 2043'

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1722' to 4008'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 12, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-3

API No. 45-027-19890-00-03 VDMR Well Rep. No. W-10

DMQ File No. A-19-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 2-V-1481

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,121,930; E 414,130 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1726.3' GR. TD 4275' Form. at TD WEIR

INITIAL FLOW - 18,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned FEBRUARY 16, 1949

Result GAS WELL

Gas Shows 458'; 2460'

Gas Pays

Main Production Prod. Form.

Age

Treatment: FORMATION SHOT ON 2-16-49 FROM 2425' to 2475' WITH 150 QUARTS OF NITROGLYCERINE. NOT ACIDIZED

Initial Production

FINAL FLOW - 51,000 CU. FT.

Oil shows 2871'; 3880'

Water FW X at 87' at 765' at

SW at at at

Coal 221' to 223'; 269' to 271'; 1655' to 1658'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2238' to 4262'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 17, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-4

API No. 45-027-19897-00-03 VDMR Well Rep. No. W-8

DMQ File No. A-26-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. I-V-1461

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,122,100; E 414,860 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1619.16' GR. TD 2301' Form. at TD RAVENCLIFF

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned FEBRUARY 1, 1948

Result GAS WELL

Gas Shows 714' to 724'; 1086'; 1406'; 1550'

Gas Pays 2295' to 2301'

Main Production Prod. Form.

Age

Treatment: NOT SHOT OR ACIDIZED; FORMATION PERFORATED FROM 2270' to 2301'.

Initial Production

FINAL FLOW - 17,196,000 CU. FT.

Oil shows 714'; 1086'; 1405'; 1550'

Water FW X at 225' at at

SW at at at at

Coal 89' to 91'; 125' to 129'; 691' to 696'; 1405' to 1406'; 1547' to 1550'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 22' to 2290'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
NORTON	0'	+1619.16'	404'
LEE	426'	+1193.16'	1329'
BLUESTONE	1755'	-135.84'	378'
PRINCETON	2133'	-513.84'	168'

Remarks

References GUDDLE, J. W., JACOBSEN, ELOISE T., WILLIAMSON, A. D., OIL AND GAS WELLS DRILLED IN SOUTHWESTERN VIRGINIA BEFORE 1950: USGS BULLETIN 1027-L, P. 557-558.

Released to Open File: Completion MAY 2, 1948

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-5

API No. 45-027-19898-00-03 VDMR Well Rep. No.

DMQ File No. A-27-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. H. RITTER LUMBER COMPANY

Co. Well No. 3-V-1526

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,121,610; E 414,590 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) DERRICK FLOOR 2278.86' . TD 2986' Form. at TD RAVENCLIFF

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JULY 26, 1948

Result GAS WELL

Gas Shows 1683'; 2946'

Gas Pays 2950' to 2968'; 2952' to 2974'; 2960' to 2986'

Main Production 2977' to 2978' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: NOT SHOT; NOT ACIDIZED

Initial Production

FINAL FLOW - 4,213,000 CU. FT.

Oil shows

Water FW X at 170' to 176' at 180' at 998'; 1779'; 1997'

SW at at at

Coal 345' to 350'; 2175' to 2181'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 24, 1948

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-6

API No. 45-027-19899-00-03 VDMR Well Rep. No. W-15

DMQ File No. A-28-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 4V-1557

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,121,440; E 413,960 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2258.64' DERRICK FLOOR TD 4926' Form. at TD WEIR

INITIAL FLOW - 33,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MAY 22, 1949

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1988' to 1991'; 2475' to 2482'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON 6-14-49 FROM 4588' to 4688' WITH 1,000 POUNDS OF GELATIN. WELL ACIDIZED AT 4866' WITH 2,000 GALLONS OF ACID.

Initial Production

FINAL FLOW - 19,000 CU. FT.

Oil shows 2475' to 2482'

Water FW X at 471' to 491' at ____ ____ at ____

SW X at 1470' to 1480' at 1483' ____ at 1700' to 1710'

Coal 807' to 810'; 2191' to 2200'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet 374' to 4926'

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 20, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-7

API No. 45-027-19903-00-03 VDMR Well Rep. No. W-16

DMQ File No. A-32-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 3-1563

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,120,790; E 414,500 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1673.5' GR. TD 4399' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MAY 7, 1949

Result GAS WELL

Gas Shows 1577'; 1590'; 3885' to 3905'

Gas Pays

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED WITH 750 GALLONS OF ACID AND 2,000 GALLONS OF ACID. (DEPTHS NOT GIVEN). WELL PERFORATED FROM 4073' to 4104'

Initial Production

FINAL FLOW - 6,115,000 CU. FT.

Oil shows

Water FW X at 130' to 135' at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 745' to 748'; 1058' to 1062'; 1422' to 1425'; 1449' to 1454';

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 80' to 4387'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
NORTON	0'	+1673.5'	420'
LEE	500'	+1173.5'	1378'
BLUESTONE	1878'	-204.5'	450'
PRINCETON	2328'	-654.5'	124'
HINTON:			
AVIS LIMESTONE	2452'	-778.5'	78'
HINTON-UNDIVIDED	2530'	-856.5'	562'
STONY GAP SANDSTONE MEMBER	3092'	-1418.5'	110'
BLUEFIELD	3202'	-1528.5'	476'
GREENBRIER	3678'	-2004.5'	460'
MACCRADY	4138'	-2464.5'	68'
PRICE	4206'	-2532.5'	77'

Remarks

References HUDDLE, J. W., JACOBSEN, ELOISE T., AND WILLIAMSON, A. D., 1956, OIL AND GAS WELLS DRILLED IN SOUTHWESTERN VIRGINIA BEFORE 1950: USGS BULLETIN 1027-L, P. 559

Released to Open File: Completion AUGUST 5, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-8

API No. 45-027-19905-00-03 VDMR Well Rep. No. W-19

DMQ File No. A-34-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 5-1647

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,119,550; E 414,050 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1826.4' GR. TD 4358' Form. at TD INJUN

INITIAL FLOW - 518,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 19, 1950

Result GAS WELL

Gas Shows 1767'; 3940'

Gas Pays 4014'; 4095'; 4358'

Main Production 4262' to 4266' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED WITH 1,500 GALLONS OF ACID ON 1-14-50 AND WITH 2,500 GALLONS OF ACID ON 1-15-50. (DEPTHS NOT GIVEN). WELL PERFORATED FROM 4334' to 4358'.

Initial Production

FINAL FLOW - 926,000 CU. FT.

Oil shows

Water FW X at 94' at 173' at 250'; 1260'

SW at at at

Coal 90' to 101'; 294' to 297'; 492' to 495'; 1028' to 1030'; 1609' to 1611'; 1202' to 1208'; 1767' to 1773'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 0' to 4354'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1826.4'	1510'
LEE	1510'	+316.4'	111'
POCAHONTAS	1612'	+205.4'	461'
BLUESTONE	2082'	-255.6'	410'
PRINCETON	2492'	-665.6'	159'
HINTON	2649'	-822.6'	626'
LITTLE STONE GAP MEMBER	2649'	-822.6'	64'
STONY GAP SANDSTONE MEMBER	3221'	-1394.6'	54'
BLUEFIELD	3275'	-1448.6'	346'
GREENBRIER	3621'	-1794.6'	727'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 167-168.

Released to Open File: Completion APRIL 19, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-9

API No. 45-027-19936-00-03 VDMR Well Rep. No.

DMQ File No. BU-21

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 21-2012

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,119,010; E 414,150 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1776.4' GR. TD 5019' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned DECEMBER 17, 1953

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1204' to 1212'; 3914' to 3920'; 4972' to 4977'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED FROM 3826' to 4263' WITH 1,000 GALLONS OF ACID ON 12-17-53. NO RESULTS AFTER ACID. WELL PERFORATED FROM 4240' to 4263'.

Initial Production

FINAL FLOW - 23,000 CU. FT.

Oil shows

Water FW X at 50' to 58' at 270' at 424' to 426'; 947' to 952'

SW X at 1286' to 1288' at 1685' to 1693' at

Coal 424' to 426'; 1207' to 1209'; 1542' to 1543'; 1685' to 1693'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 17, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-10

API No. 45-027-19937-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-22

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm SLOCUM LAND CORPORATION, ET AL

Co. Well No. 5-2047

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,122,480; E 414,130 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1448.5' GR. TD 2147' Form. at TD RAVENCLIFF

INITIAL FLOW - 24,982,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 7, 1953

Result GAS WELL

Gas Shows 831'

Gas Pays 2130'; 2134'; 2136' to 2139'

Main Production 2147' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL NOT SHOT

Initial Production _____

FINAL FLOW - 11,444,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 140' to 142'; 829' to 831'; 859' to 861'; 988' to 991'; 1247' to 1249'; 1370' to 1373'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion NOVEMBER 5, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-11

API No. 45-027-19944-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-29

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 22-2137

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,122,150; E 413,160 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1391.7' GR. TD 3854' Form. at TD INJUN

INITIAL FLOW - 194,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JUNE 14, 1954

Result GAS WELL

Gas Shows 341' to 349'; 645' to 655'; 2073'; 2082'; 3612'

Gas Pays _____

Main Production _____ Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED FROM 3539' to 3645' WITH 1,000 GALLONS OF ACID ON 6-2-54. WELL ACIDIZED FROM 3539' to 3645' WITH 1,000 GALLONS OF ECHING ACID AND 3,000 GALLONS OF REGULAR ACID ON 6-11-54. WELL SHOT ON 4-15-54 FROM 2072' to 2112' WITH 200 QUARTS OF GYLCERINE.

Initial Production _____

FINAL FLOW - 355,000 CU. FT.

Oil shows _____

Water FW X at 20' to 26' at 602' to 612' at 1212' to 1226'

SW _____ at _____ _____ at _____ _____ at _____

Coal 1219' to 1226'; 1343' to 1349'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion SEPTEMBER 12, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-3-12

API No. 45-027-19951-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-37

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 23-2208

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,122,010; E 411,680 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1870.1' GR. TD 4285' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 14, 1955

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 4065'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL ACIDIZED FROM 4000' to 4115' WITH 1,000 GALLONS OF REGULAR ACID ON 1-14-55. DEPTHS NOT GIVEN. NO RESULTS AFTER GAS TREATMENT. WELL PERFORATED FROM 4092' to 4115'.

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW X at 75' ____ at 86' ____ at ____

SW X at 1320' ____ at ____ ____ at ____

Coal 989' to 991'; 1813' to 1817'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion APRIL 14, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-4-1

API No. 45-027-19878-00-03 VDMR Well Rep. No. W-24

DMQ File No. A-7-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY ET AL

Co. Well No. 9-1674

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,118,140; E 413,550 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1472.9' GR. TD 4802' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JULY 13, 1950

Result GAS WELL

Gas Shows 923'

Gas Pays

Main Production 4744' to 4747' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL SHOT ON JULY 14, 1950 FROM 4739' to 4779' WITH 160 QUARTS OF NITROGLYCERINE.

Initial Production

FINAL FLOW - 215,000 CU. FT.

Oil shows

Water FW X at 961' to 963' at 65' at 127'

SW at at at

Coal 878' to 879'; 961' to 963'; 1115' to 1118'; 1450' to 1452'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4783'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 11, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-5-1

API No. 45-027-19908-00-03 VDMR Well Rep. No. W-23

DMQ File No. A-37-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 8-1673

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,117,860; E 416,670 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1648.' DERRICK FLOOR TD 4793' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned APRIL 8, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 310'; 1045'; 1307'; 4460' to 4465'; 4700' to 4704'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL NOT SHOT.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 40' at 70' at 80'; 590'; 1307'

SW at at at

Coal 30' to 32'; 435' to 437'; 1307' to 1318'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 46' to 4785'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source FORMATION BOUNDARIES FROM THESIS OF DAVID BOWEN, VPI

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1648	165'
LEE	165'	+1483'	1481'
BLUESTONE	1646'	+2'	450'
PRINCETON	2096'	-448'	--

Remarks

References BOWEN, DAVID, SUBSURFACE STUDY OF THE LEE FORMATION IN BUCHANAN COUNTY, VIRGINIA: MASTERS THESIS, VIRGINIA POLYTECHNIC INSTITUTE.

Released to Open File: Completion JULY 7, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-9-1

API No. 45-027-19889-00-03 VDMR Well Rep. No. W-6
DMQ File No. A-18-BU

Operator UNITED FUEL GAS COMPANY
Farm HUGH McRAE
Co. Well No. 1-6431

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'
Location (UTM) N 4,112,510; E 414,020 UTM Zone 17
(Lat. and Long.)
Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1799.14' GR. TD 4800' Form. at TD DEVONIAN SHALE
INITIAL FLOW - 133,000 CU. FT. Age DEVONIAN
Date compl. or abandoned JULY 28, 1949
Result GAS WELL
Gas Shows 810'; 1348' to 1352'
Gas Pays 935' to 938'
Main Production 935' to 938' Prod. Form.
Age
Treatment: NOT SHOT

Initial Production
FINAL FLOW - 133,000 CU. FT.
Oil shows
Water FW ____ at ____ ____ at ____ ____ at ____
SW X at 967' to 974' at ____ ____ at ____
Coal 545' to 547'; 607' to 612'; 786' to 790'; 1246' to 1248'; 1348' to 1352'; 1408' to 1418'
Plat X Plotted X Completion Report X
Drillers Log X Geologic Log X
Samples X Interval Sheet X
Sample Interval 275' to 4800'
Remarks
Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____
Density ____ Sonic ____ Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1799.14'	1132'
LEE	1132'	+667.14'	52'
POCAHONTAS	1184'	+615.14'	568'
BLUESTONE	1752'	+47.14'	418'
PRIDE SHALE MEMBER	1974'	-174.86'	196'
PRINCETON	2170'	-370.86'	196'
HINTON	2366'	-566.86'	611'
LITTLE STONE GAP MEMBER	2366'	-566.86'	71'
STONY GAP SANDSTONE MEMBER	2844'	-1044.86'	130'
BLUEFIELD	2977'	-1177.86'	621'
GREENBRIER	3598'	-1798.86'	610'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 169.

Released to Open File: Completion OCTOBER 26, 1949
Samples YES

(Note: UTM measurements in meters, all others in feet)

KEEN MOUNTAIN-9-2

API No. 45-027-20009-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-86

Operator CONSOLIDATION COAL COMPANY

Farm POCAHONTAS FUEL COMPANY

Co. Well No. 10

County BUCHANAN Quadrangle KEEN MOUNTAIN - 7-1/2'

Location (UTM) N 4,112,340; E 413,440 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1799.14' GR. TO 5215' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 202,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 18, 1966

Result GAS WELL

Gas Shows _____

Gas Pays 2175' to 2180'

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL NOT TREATED

Initial Production _____

FINAL FLOW - 202,000 CU. FT.

Oil shows _____

Water FW X at 50' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 60' to 62'; 711' to 714'; 1363' to 1368'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 19, 1966

Samples NONE

(Note: UTM measurements in meters, all others in feet)

MAJESTIC-7-1

API No. 45-027-19995-00-03 VDMR Well Rep. No. W-716

DMQ File No. BU-81

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 9045

County BUCHANAN Quadrangle MAJESTIC - 7-1/2'

Location (UTM) N 4,150,850; E 410,940 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1349.94' GR. TD 3156' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 26, 1962

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 2045'; 3110'

Gas Pays 2045'; 2212' to 2215'; 3110'

Main Production 2212' to 2215' Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW X at 150' at at

SW at at at

Coal 50' to 53'; 270' to 272'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2178' to 3156'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron X

Density X Sonic Other CALIPER, INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 20, 1962

Samples YES

(Note: UTM measurements in meters, all others in feet)

PANTHER-3-1

API No. 45-027-19892-00-03 VDMR Well Rep. No. W-100

DMQ File No. A-21-BU

Operator UNITED FUEL GAS COMPANY

Farm THE NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 1-6416

County BUCHANAN Quadrangle PANTHER - 7-1/2'

Location (UTM) N 4,150,230; E 413,370 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1157.43' GR. TD 5250' Form. at TD DEVONIAN

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 8, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 3567'; 4515'; 615'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON 6-13-50 WITH 8,000 POUNDS OF HERCULES GEL FROM 4505' to 5250'. WELL SHOT ON 5-15-50 WITH 200 POUNDS OF DUPONT GELATIN FROM 3567' to 3588'. PLUGGED BACK TO BASE OF BIG LIME (2960') AND ACIDIZED ON 7-13-50 WITH 1,500 GALLONS OF ACID.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 45' at at

SW at at at at

Coal

Plat Plotted Completion Report

Drillers Log Geologic Log

Samples X Interval Sheet X

Sample Interval 290' to 5218'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRE LATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1157.43'	290'
NORTON	290'	+867.43'	503'
LEE	793'	+364.43'	771'
BLUE STONE	1564'	-406.57'	313'
PRINCETON	1877'	-719.57'	167'
HINTON	2044'	-886.57'	271'
STONY GAP SANDSTONE	2166'	-1008.57'	149'
BLUEFIELD	2315'	-1157.57'	207'
GREENBRIER	2522'	-1364.57'	445'
MACCRADY-PRICE	2967	-1809.57'	228'
BIG STONE GAP SHALE	3195'	-2037.57'	372'
DEVONIAN-PRE-DEVONIAN	3567'	-2409.57'	1651' (DEEPEST SAMPLE)

Remarks

References DAVID BOWEN, 1958, SUBSURFACE STUDY OF THE LEE FORMATION IN BUCHANAN COUNTY, VIRGINIA: UNPUBLISHED THESIS, VDMR LIBRARY.

Released to Open File: Completion SEPTEMBER 6, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

PANTHER-3-2

API No. 45-027-19993-00-03 VDMR Well Rep. No. W-631

DMQ File No. BU-79

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8917

County BUCHANAN Quadrangle PANTHER - 7-1/2'

Location (UTM) N 4,146,820; E 411,640 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1513.46' GR. TD 5320' Form. at TD CORNIFEROUS

INITIAL FLOW - NONE Age DEVONIAN

Date compl. or abandoned SEPTEMBER 28, 1961

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows 1785'

Gas Pays 3073' to 3088'; 4234' to 4246'

Main Production Prod. Form.

Age

Treatment: FRACTURED FORMATIONS FROM 3937' to 5320' (BEREA AND OTHER) ON 10-3-61 WITH 14,700 POUNDS OF GELATIN. ACIDIZED BIG LIME (3030' to 3100') ON 10-25-61 WITH 3,000 GALLONS OF DOWELL XF AND 3,000 GALLONS OF REGULAR ACID. NO RESULTS AFTER ACIDIZED.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 120' to 125' at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 250' to 4932'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other MICROCALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1513.46	1100'
LEE	1100'	+413.46'	737'
POCAHONTAS	1837'	-323.54'	29'
BLUESTONE	1866'	-352.54'	318'
PRIDE SHALE MEMBER	2061'	-547.54'	123'
HINTON	2340'	-826.54'	220'
LITTLE STONE GAP MEMBER	2340'	-826.54'	17'
STONY GAP SANDSTONE MEMBER	2487'	-973.54'	73'
BLUEFIELD	2560'	-1046.54'	305'
GREENBRIER	2865'	-1351.54'	430'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 137-138.

Released to Open File: Completion DECEMBER 27, 1961

Samples YES

(Note: UTM measurements in meters, all others in feet)

PANTHER-4-1

API No. 45-027-20311-00-03 VDMR Well Rep. No.

DMQ File No. BU-176

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 20435-T

County BUCHANAN Quadrangle PANTHER - 7-1/2'

Location (UTM) N4,142,540; E 413,420 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1342.49' GR. TD 5714' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 11, 1979

Result GAS WELL

Gas Shows 4970' to 4974'; 4918' to 4923'; 2811' to 2812'; 2718' to 2722';

Gas Pays 2744' to 2748'

Main Production Prod. Form. MAXON

Age MISSISSIPPIAN

Treatment: 75 QUALITY FOAM FRACTURED SHALE ON 4-2-79 W/500 GALLON MUD ACID; 333,500 SCF N2; 25,000 # 20/40 SAND. YF-4 PSD X-LINK FRACTURED MAXON ON 5-9-79 W/30,000 # 80/100; 30,000 # 20/40 SAND AND 1750 GALLONS MUD ACID.

Initial Production

FINAL FLOW - 198,000 CU. FT.

Oil shows

Water FW X at 85' at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other RESISTIVITY, WELLBORE SIBILATION; CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 9, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PANTHER-4-2

API No. NOT AVAILABLE

VDMR Well Rep. No.

DMQ File No. NOT AVAILABLE

Operator THOMAS D. CABOT

Farm NATIONAL SHAWMUT BANK

Co. Well No. 1 (851)

County BUCHANAN Quadrangle PANTHER - 7-1/2'

Location (UTM) N 4,143,480; E411,780 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1100' GR. TD 4998' Form. at TD

INITIAL FLOW - SHOW Age

Date compl. or abandoned MARCH 22, 1936

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows 1871'; 3825'

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW at at at

SW at at at

Coal 635' to 640

Plat Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 20, 1936

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PANTHER-9-1

API No. 45-027-19879-00-03 VDMR Well Rep. No. W-30

DMQ File No. A-8-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 6V-1736

County BUCHANAN Quadrangle PANTHER - 7-1/2'

Location (UTM) N 4,137,140; E 414,380 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1493.7' GR. TD 6854' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 6, 1951

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1325'; 5803'

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 1418' at at

SW at at at at

Coal 400' to 403'; 1106' to 1111'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1753' to 3480'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 4, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

PANTHER-9-2

API No. 45-027-19880-00-03 VDMR Well Rep. No. W-128

DMQ File No. A-9-BU

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 3-6628

County BUCHANAN Quadrangle PANTHER - 7-1/2'

Location (UTM) N 4,137,400; E 415,060 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1857.74' GR. TD 3831' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned MAY 18, 1951

Result PLUGGED AND ABANDONED; NOT SUFFICIENT GAS

Gas Shows 3515'; 3684'; 3790'

Gas Pays

Main Production Prod. Form.

Age

Treatment: NOT SHOT. WELL ACIDIZED FROM 3425' to 3831' WITH 1,000 GALLONS OF 15% XF ACID. ALSO WITH 2,000 GALLONS AND 3,000 GALLONS OF 15% XF ACID.

Initial Production

FINAL FLOW - 33,000 CU. FT.

Oil shows

Water FW X at 110' at 142' at 452'

SW at at at

Coal 142' to 148'; 927' to 933'; 1357' to 1360'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 986' to 3831'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY J. M. WILSON AND R. C. MILICI, VDMR, SEPTEMBER 1963.

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1857.74'	986'
PENNSYLVANIAN UNDIVIDED	986'	+871.74'	?
BLUESTONE	?	?	?
PRINCETON	2357'	+499.26'	213'
HINTON	2570'	-712.26'	588'
STONY GAP SANDSTONE	2961'	-1103.26'	197'
BLUEFIELD	3158'	-1300.26'	132'
GREENBRIER	3290'	-1432.26'	529'
MACCRADY	3819'	-1961.26'	12' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion AUGUST 18, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

PANTHER-9-3

API No. 45-027-20381-00-03 VDMR Well Rep. No.

DMQ File No. BU-186

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm BUCHANAN ENERGY CORPORATION

Co. Well No. 20225

County BUCHANAN Quadrangle PANTHER-7½'

Location (UTM) N4,141,180; E412,080 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1356.34' GR. TD 5743' Form. at TD CORNIFEROUS

INITIAL FLOW - 0 Age DEVONIAN

Date compl. or abandoned MARCH 3, 1982

Result GAS WELL

Gas Shows

Gas Pays 4960' TO 5668'

Main Production 4960' TO 5668' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: FRACTURED RHINESTREET 12-30-81 FROM 5556' TO 5668' WITH 750 GAL. OF 28% HCL, 585 BARRELS OF 70 QUALITY FOAM, 266,000 SCF NITROGEN, AND 25,000 POUNDS OF 20/40 SAND. FRACTURED LOWER HURON ON 1-20-82 FROM 4960' TO 5227' WITH 1500 GAL. OF 28% HCL, 1092 BARRELS OF 75 QUALITY FOAM, 537,500 SCF NITROGEN AND 30,000 POUNDS OF 20/40 SAND.

Initial Production

FINAL FLOW - 65,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 1, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

PATTERSON-2-1

API No. 45-027-19889-00-03 VDMR Well Rep. No. W-102

DMQ File No. A-22-BU

Operator UNITED FUEL GAS COMPANY

Farm THE NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 2-5810

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,136,630; E 415,840 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1263.12' GR. TD 5302' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 12, 1949

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 222'; 494'; 917'; 1209'; 1350'; 2274' to 2279'; 2308' to 2312'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL SHOT ON 10-10-49 WITH 1,000 POUNDS OF DUPONT GELATIN FROM 2245' to 2350', HOLE BRIDGED FROM 3545' to 3535' FOR ACIDIZING. BIG LIME ACIDIZED WITH 1,500 GALLONS OF PENETRATING ACID ON 8-27-49 WELL SHOT ON 8-17-49 WITH 3,500 POUNDS OF DUPONT GELATIN FROM 4967' to 5300'

Initial Production FINAL FLOW - SHOW

Oil shows

Water FW X at 22' at at

SW at at at at

Coal 85' to 88'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 60' to 5305'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1263.12'	1076'
LEE	1076'	+187.12'	136'
POCAHONTAS	1212'	+51.12'	226'
BLUESTONE	1438'	-174.88'	354'
PRIDE SHALE MEMBER	1635'	-371.88'	157'
PRINCETON	1792'	-528.88'	108'
HINTON	1900'	-636.88'	374'
LITTLE STONE GAP MEMBER	1900'	-636.88'	48'
STONY GAP SANDSTONE MEMBER	2186'	-922.88'	88'
BLUEFIELD	2274'	-1000.88'	452'
GREENBRIER	2726'	-1462.88'	520'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 141.

Released to Open File: Completion NOVEMBER 10, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-3-1

API No. 45-027-19882-00-03 VDMR Well Rep. No. W-31

DMQ File No. A-11-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 7V-1737

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,136,040; E 414,890 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1959.9' GR. TD 3920' Form. at TD INJUN

INITIAL FLOW - 49,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MAY 8, 1951

Result GAS WELL

Gas Shows 1335'

Gas Pays

Main Production 3837' to 3843' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED ON 4-26-51 WITH 1,000 GALLONS OF ACID AND ON 5-2-51 WITH 2,000 GALLONS OF ACID. (DEPTHS NOT GIVEN). WELL PERFORATED FROM 3871' to 3900'

Initial Production
FINAL FLOW - 700,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____
SW ____ at ____ ____ at ____ ____ at ____

Coal 776' to 778'; 1334' to 1337'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2140' to 3920'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 6, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-3-2

API No. 45-027-19886-00-03 VDMR Well Rep. No. W-25

DMQ File No. A-15-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 5-V-1687

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,136,230; E414,800 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1335.7' GR. TD 3323' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JULY 27, 1950

Result GAS WELL

Gas Shows 600' to 602'; 795' to 798'; 830' to 832'; 2855'; 3165'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED ON 7-12-50 WITH 1,000 GALLONS OF ACID AND ON 7-20-50 WITH 2,000 GALLONS OF ACID. DEPTHS NOT GIVEN. WELL PERFORATED FROM 3281' to 3311'.

Initial Production FINAL FLOW - 1,784,000 CU. FT.

Oil shows

Water FW X at 78' at at

SW X at 860' at at

Coal 378' to 380'; 1000' to 1005'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 105' to 3316'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 25, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-3-3

API No. 45-027-19917-0D-03 VDMR Well Rep. No. W-34

DMQ File No. BU-2

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 8V-1829

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,136,360; E 414,350 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2004.2' GR. TD 4005' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JUNE 6, 1952

Result GAS WELL

Gas Shows 1463'; 3918' to 3924'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED WITH 1,000 GALLONS OF ACID ON 4-9-52 AND WITH 2,000 GALLONS OF ACID ON 5-8-52 (DEPTHS NOT GIVEN). WELL PERFORATED FROM 3973' to 4005'.

Initial Production FINAL FLOW - 484,000 CU. FT.

Oil shows

Water FW X at 230' to 238' at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 232' to 234'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2255' to 4005'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 4, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-3-4

API No. 45-027-19921-00-03 VDMR Well Rep. No. W-37

DMQ File No. BU-6

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 9V-1846

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,133,940; E 414,350 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1587.8' GR. TD 4443' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NONE REPORTED Age DEVONIAN

Date compl. or abandoned FEBRUARY 19, 1952

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE REPORTED

Oil shows

Water FW X at 80' at 127' at 1679' (SALT?)

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1772' to 4432'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1587.8'	1772'
BLUESTONE	1772'	-184.2'	270'
PRINCETON	2042'	-454.2'	217'
HINTON	2259'	-671.2'	560'
STONY GAP SANDSTONE	2737'	-1149.2'	82'
BLUEFIELD	2819'	-1231.2'	216'
GREENBRIER	3035'	-1447.2'	559'
MACCRADY-PRICE	3594'	-2006.2'	264'
BIG STONE GAP SHALE	3858'	-2270.2'	416'
DEVONIAN UNDIVIDED	4274'	-2686.2'	158' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion MAY 20, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-3-5

API No. 45-027-19943-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-28

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 13V-2110

County BUCHANAN Quadrangle PATTERSON - 7 1/2'

Location (UTM) N 4,132,380; E 411,790 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2073.8' GR. TD 4064' Form. at TD INJUN

INTIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JULY 13, 1954

Result GAS WELL

Gas Shows 3856'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL WAS SAND FRACTURED ON 5-20-54 WITH 7 BARRELS OF ACID FOLLOWED BY 18 BARRELS OF CRUDE OIL, 2,000 GALLONS OF SAND FRAC OIL, 2,000 POUNDS OF SAND AND 75 BARRELS OF CRUDE OIL. NO RESULTS AFTER SAND FRAC.

Initial Production _____

FINAL FLOW - 298,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 360' to 362'; 1416' to 1420'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion OCTOBER II, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-3-6

API No. 45-027-19952-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-38

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 15-V-2234

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,132,740; E 412,660 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1832' GR, TD 3853' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned OCTOBER 3, 1955

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 3816'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL NOT SHOT OR ACIDIZED

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW X at 232' to 233' at 458' ____ at 1772' to 1774'

SW ____ at ____ ____ at ____ ____ at ____

Coal 232' to 233'; 1178' to 1181'; 1772' to 1774'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JANUARY 1, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-4-1

API No. 45-027-19875-00-03 VDMR Well Rep. No. W-29

DMQ File No. A-4-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. H. MATNEY

Co. Well No. 2-1725

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,129,540; E 413,190 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1501.8' GR. TD 6081' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned FEBRUARY 2, 1951

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 3466' to 3474'; 3595' to 3600'; 3922' to 3925'; 4725' to 4740'; 6017'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED FROM 3287' to 3635' WITH 1,000 GALLONS OF ACID. NO GAS AFTER ACID. WELL SHOT FROM 4680' to 4771' WITH 900 POUNDS OF DUPONT GELATIN.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 65' at 240' at

SW at at at

Coal 209' to 210'; 353' to 355'; 840' to 842'; 897' to 900'; 1055' to 1060'; 1060' to 1068'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1710' to 6081'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1501.8'	1710'
BLUESTONE	1710'	-208.2'	260'
PRINCETON	1970'	-468.2'	240'
HINTON	2210'	-708.2'	611'
STONY GAP SANDSTONE	2670'	-1168.2'	151'
BLUEFIELD	2821'	-1319.2'	229'
GREENBRIER	3050'	-1548.2'	585'
MACCRADY-PRICE	3635'	-2133.2'	311'
BIG STONE GAP SHALE	3946'	-2444.2'	419'
DEVONIAN-PRE-DEVONIAN	4365'	-2863.2'	1716' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion MAY 3, 1951

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-4-2

API No. 45-027-19930-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-15

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 10V-1976

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,130,840; E 411,960 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1544.4' GR. TD 3622' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned FEBRUARY 12, 1953

Result GAS WELL

Gas Shows 1005'; 2089'; 3440' to 3449'

Gas Pays _____

Main Production 2104' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED ON 12-16-52 WITH 311 GALLONS OF ACID. AFTER ACID WELL OUTPUT WAS 25,000 CU. FT. RE-ACIDIZED ON 12-23-52 WITH 1,000 GALLONS OF ACID AND 1,660 GALLONS OF WATER. OUTPUT THEN WAS 21,000 CU. FT. RE-ACIDIZED ON 1-15-53 WITH 1,500 GALLONS OF ACID WITH NO RESULTS. PLUGGED BACK TO

Initial Production 2221'. WELL PERFORATED FORM 3576' to 3600'

FINAL FLOW - 315,000 CU. FT.

Oil shows _____

Water FW X at 80' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 94' to 96'; 1465' to 1468'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 13, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-4-3

API No. 45-027-19935-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-20

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 11V-2014

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,131,700; E 411,960 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1735.7' GR. TD 2285' Form. at TD RAVENCLIFF

INITIAL FLOW - 2,030,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JUNE 16, 1953

Result GAS WELL

Gas Shows 2259'

Gas Pays 2269'

Main Production 2274' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL NOT SHOT. WELL PERFORATED FROM 2258' to 2281'

Initial Production _____

FINAL FLOW - 1,494,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 885' to 888'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion SEPTEMBER 14, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-4-4

API No. 45-027-19941-00-03 VDMR Well Rep. No.

DMQ File No. BU-26

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 12V-2076

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,132,050; E 412,440 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2141' GR. TD 2732' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned NOVEMBER 23, 1953

Result GAS WELL

Gas Shows 1874'; 2649' to 2661'

Gas Pays

Main Production Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL SHOT ON 11-23-53 FROM 2646' to 2668' WITH 110 QUARTS OF NITROGLYCERINE.

Initial Production

FINAL FLOW - 268,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 231' to 233'; 1006' to 1008'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion FEBRUARY 21, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-4-5

API No. 45-027-19945-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-30

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm W. M. RITTER LUMBER COMPANY

Co. Well No. 14-V-2150

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,131,300; E412,530 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1925.77' GR. TD 2476' Form. at TD RAVENCLIFF

INITIAL FLOW - 268,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JULY 9, 1954

Result GAS WELL

Gas Shows 890'; 1245'; 1292'; 2459'

Gas Pays 2465'; 2472'

Main Production 2476' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL WAS SANDFRACED WITH 2,000 GALLONS OF SAND FRAC OIL AND 2,000 POUNDS OF SAND ON 7-9-54. (DEPTHS NOT GIVEN). NO RESULTS.

Initial Production _____

FINAL FLOW - 146,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 298' to 300'; 1849' to 1855'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion OCTOBER 7, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-4-6

API No. 45-027-20388-00-03 VDMR Well Rep. No.

DMQ File No. GU-191

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm SLOCUM LAND COMPANY

Co. Well No. I.C. 49

County BUCHANAN Quadrangle PATTERSON - 7 1/2'

Location (UTM) N4,127,220; E414,810 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2391'GR. TD 4750 Form. at TD DEVONIAN

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned FEBRUARY 19, 1981

Result DRY HOLE: PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment: NONE

Initial Production

FINAL FLOW -

Oil shows

Water FW at at at

SW at at at

Coal 1074' to 1077'; 1222' to 1225'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 20, 1981

Samples NO

(Note: UTM measurements in meters, all others in feet)

PATTERSON-5-1

API No. 45-027-20283-00-03 VDMR Well Rep. No. W-5153

DMQ File No. BU-165

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN

Co. Well No. #11

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,128,500; E 415,340 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2000' GR, TD 5177' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NONE Age DEVONIAN

Date compl. or abandoned JANUARY 27, 1978

Result PLUGGED AND ABANDONED; DRY HOLE

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW at at at

SW at at at

Coal 80' to 81'; 356' to 359'; 915' to 917'; 1411' to 1414'; 1940' to 1946'; 2186' to 2190'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 200' to 5090'

Remarks

Geophysical Logs S.P. Res X Gamma Neutron

Density Sonic Other INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 27, 1978

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-1

API No. 45-027-19961-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-47

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm CLINCHFIELD COAL CORPORATION, ET AL

Co. Well No. I-2400

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,500; E 419,580 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1920.3' GR. TD 4776' Form. at TD BEREA

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 19, 1956

Result DRY HOLE; LOST TOOLS IN HOLE; PLUGGED AND ABANDONED.

Gas Shows 1652'; 3753' to 3758'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL DRILLED TO TOP OF BEREA; FILLED BACK AND ACIDIZED BIG LIME WITH 1,000 GALLONS OF ACID, NO RESULTS, PULLED TUBING, RESUMED DRILLING TO BEREA, IN DRILLING OUT PLUG, TOOLS BLOWN OUT AND STUCK IN 7" CASING. NO SUCCESS IN RECOVERY OF TOOLS OR DRILLING BY.

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW X at 54' _____ at 1280' _____ at 1652'

SW _____ at _____ _____ at _____ _____ at _____

Coal 78' to 80'; 224' to 225'; 383' to 385'; 420' to 422'; 920' to 922'; 1277' to 1280'; 1649' to 1652'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 19, 1957

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-2

API No. 45-027-19966-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-52

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 11-2487

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,470; E 421,370 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2002.8' GR. TD 4797' Form. at TD BEREA

INITIAL FLOW - 144,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 22, 1956

Result GAS WELL

Gas Shows 3840'

Gas Pays 4784' to 4787'

Main Production 4787' to 4795' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL GIVEN PETROGEL TREATMENT ON 10-29-56. (DEPTHS NOT GIVEN).

Initial Production _____

FINAL FLOW - 285,000 CU. FT.

Oil shows _____

Water FW X at 65' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 120' to 121'; 323' to 325'; 495' to 497'; 925' to 927'; 1172'; 1177'; 1425' to 1429'; 1562' to 1569'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 22, 1957

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-3

API No. 45-027-19969-00-03 VDMR Well Rep. No. W-2902

DMQ File No. BU-55

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm CLINCHFIELD COAL CORPORATION, ET AL

Co. Well No. 2R-2559

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,129,060; E 421,260 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2132.3' GR. TD 4981' Form. at TD BEREA

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 27, 1957

Result GAS WELL

Gas Shows 1642'; 3048' to 3054'

Gas Pays 3763' to 4051'

Main Production 4961' to 4981' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL TREATED ON 8-27-57 WITH 73 BARRELS OF FRACTURING OIL, 120 BARRELS OF GELATIN, 5,000 POUNDS OF SAND, 55 BARRELS OF FLUSH OIL AND 12 BARRELS OF OVERFLUSH.

Initial Production

FINAL FLOW - 3,991,000 CU. FT.

Oil shows

Water FW X at 30' at 1228' at 1795'

SW at at at

Coal 625' to 627'; 938' to 940'; 1055' to 1057'; 1399' to 1404'; 1639' to 1641'; 1795' to 1799'; 1952' to 1955'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2130' to 4255'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Date Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 25, 1957

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-4

API No. 45-027-19971-00-03 VDMR Well Rep. No. W-2903

DMQ File No. BU-57

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm CLINCHFIELD COAL CORPORATION, ET AL

Co. Well No. 3-2567

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,500; E 419,540 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1897.7' GR. TD 4854' Form. at TD BEREA

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 26, 1957

Result GAS WELL

Gas Shows 1530'; 4006' to 4014'; 4833' to 4834'; 3575'

Gas Pays 4840'; 4845'; 4854'

Main Production 4851' to 4853' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL SAND FRACTURED WITH 500 GALLONS OF MUD ACID, 6,000 POUNDS OF SAND, AND 120 BARRELS OF GELATIN.

Initial Production

FINAL FLOW - 232,000 CU. FT.

Oil shows

Water FW X at 50' at 1640' to 1645' at

SW at at at

Coal 50' to 51'; 370' to 371'; 905' to 906'; 931' to 933'; 1258' to 1263'; 1640' to 1645'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1995' to 4854'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 25, 1957

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-5

API No. 45-027-19974-00-03 VDMR Wel Rep. No. W-133

DMQ File No. BU-60

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm CLINCHFIELD COAL CORPORATION, ET AL

Co. Well No. 2632

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,130,790; E 421,560 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1940.3' GR. TD 4753' Form. at TD BEREA

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 28, 1958

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW X at 60' at 1047' at 1760'

SW at at at

Coal

Plat X Plotted X Completion Report NO COMPLETION REPORT

Drillers Log Geologic Log X

Samples X Interval Sheet X

Sample Interval 115' to 2064'; 2320' to 2530'; 2658' to 4753'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density Sonic Other CALIPER;

Stratigraphic Data Source CORRELATIONS BY DAVID C. BOWEN, VDMR, 1958

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	1940.3'	628'
LEE	628'	+1312.3'	1358'
BLUESTONE	1986'	-45.7'	334' (LAST SAMPLE)
PRINCETON	2320'	-379.7'	

Remarks

References

Released to Open File: Completion APRIL 28, 1958

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-6

API No. 45-027-19972-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-61

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm CLINCHFIELD COAL CORPORATION, ET AL

Co. Well No. 5-2657

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,128,900; E 419,960 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1714.5' GR. TD 4623' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned OCTOBER 15, 1958

Result GAS WELL

Gas Shows 4187' to 4192'; 4593'; 4596'; 4598'

Gas Pays _____

Main Production _____ Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WATER FRACTURED BEREA ON 10-1-58 WITH 500 GALLONS OF MUD ACID AND 5,000 POUNDS OF SAND.

Initial Production FINAL FLOW - 286,000 CU. FT.

Oil shows _____

Water FW X at 49' _____ at 1450' _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 48' to 49'; 124' to 125'; 231' to 233'; 655' to 656'; 1411' to 1416'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples X Interval Sheet X

Sample Interval 2159' to 4623'

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JANUARY 13, 1959

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-7

API No. 45-027-19973-00-03 VDMR Well Rep. No. W-280

DMQ File No. BU-62

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 14-2694

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,130,720; E 420,150 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2364.' GR. TD 5226' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 415,000 CU. FT. Age DEVONIAN

Date compl. or abandoned DECEMBER 15, 1958

Result GAS WELL

Gas Shows 2251'; 3320' to 3325'; 4475' to 4480'

Gas Pays 5193'; 5205'; 5209'; 5226'

Main Production 5203' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL WATER FRACTURED ON 12-9-58. (DEPTHS NOT GIVEN).

Initial Production

FINAL FLOW - 1,443,000 CU. FT.

Oil shows

Water FW X at 1192' at 2096' to 2101' at

SW at at at

Coal 477' to 479'; 838' to 840'; 981' to 983'; 2099' to 2101';2251' to 2256'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 40' to 5226'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	2364'	1931'
LEE	1931'	+433'	100'
POCAHONTAS	2031'	+333'	425'
BLUESTONE	2456'	-92'	307'
PRIDE SHALE MEMBER	2671'	-307'	92'
PRINCETON	2763'	-399'	192'
HINTON	2955'	-591'	448'
LITTLE STONE GAP MEMBER	2955'	-591'	69'
STONY GAP SANDSTONE MEMBER	3237'	-873'	166'
BLUEFIELD	3403'	-1039'	657'
GREENBRIER	4060'	-1696'	469'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 158.

Released to Open File: Completion MARCH 15, 1959

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-8

API No. 45-027-19981-00-03 VDMR Well Rep. No. W-401

DMQ File No. BU-67

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm CLINCHFIELD COAL CORPORATION, ET AL

Co. Well No. 6-2940

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,129,860; E 422,110 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2034.7' GR. TD 4843' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned DECEMBER 7, 1959

Result GAS WELL

Gas Shows 4045' to 4060'; 4802 ; 4805'

Gas Pays 4806' to 4811'; 4820'; 4827'

Main Production 4827' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL FRACTURED ON 12-3-59 WITH 300 GALLONS OF MUD ACID, 22,000 POUNDS OF SAND AND 600 BARRELS OF WATER. PERFORATED BIG LIME FROM 4808' to 4818' AND BEREA FROM 4830' to 4836'.

Initial Production

FINAL FLOW - 6,530,000 CU. FT.

Oil shows

Water FW X at 82' at 175' at 1606'

SW at at at

Coal 40' to 42'; 390' to 391'; 420' to 421'; 800' to 802'; 1602' to 1606'; 1677' to 1685'; 1770' to 1776'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 267' to 552'; 582' to 1955'; 1980' to 2092'; 2109' to 2320'; 2339' to 2528'; 2549' to 2936' to 3557' to 4447'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density Sonic Other TEMPERATURE, CALIPER

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER VOMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+2034.7'	1426'
LEE	1426'	+608.7'	107'
POCAHONTAS	1533'	+501.7'	447'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 159

Released to Open File: Completion MARCH 7, 1960

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-9

API No. 45-027-19984-00-03 VDMR Well Rep. No. W-455

DMQ File No. BU-70

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 15-3159

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,131,300; E 420,410 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2224.4' GR. TD 5145' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 184,000 CU. FT. Age DEVONIAN

Date compl. or abandoned SEPTEMBER 2, 1960

Result GAS WELL

Gas Shows 4250'

Gas Pays 5071' to 5078'

Main Production Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL PERFORATED FROM 5056' to 5058' AND FROM 5028' to 5043'. WELL FRACTURED ON 8-25-60 FROM 5028' to 5068' WITH 250 GALLONS OF ACID, 3,800 POUNDS OF SAND AND 950 BARRELS OF WATER.

Initial Production

FINAL FLOW - 1,958,000 CU. FT.

Oil shows

Water FW X at 305' at 42' at

SW at at at

Coal 1998' to 2000'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1840' to 4340'; 4360' to 4420'; 4450' to 5140'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron X

Density Sonic Other TEMPERATURE

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 1, 1960

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-10

API No. 45-027-20258-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-149

Operator ASHLAND EXPLORATION, INC.

Farm CLINCHFIELD COAL CORP. ET AL

Co. Well No. 7-(077051)

County BUCHANAN Quadrangle PATTERSON - 7½'

Location (UTM) N4,130,540; E419,070 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPLACHIAN PLATEAUS

Elev. (specify) 2279.5'GR. TD 5233' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 1,000,000 CU. FT. Age DEVONIAN

Date compl. or abandoned AUGUST 29, 1977

Result GAS WELL

Gas Shows 4480' to 4489'; 5153' to 5155'; 5108' to 5122'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: BIG LIME ACIDIZED FROM 4478' to 4488' WITH 4000 GALLONS OF HYDROCHLORIC ACID. BEREA FRACTURED THROUGH PERFORATIONS FROM 5158' to 5166' WITH 40,000 POUNDS OF 20/40 SIZED SAND AND 753 BARRELS OF TREATED JELLED WATER.

Initial Production _____

FINAL FLOW - 1,873,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion NOVEMBER 27, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-11

API No. 45-027-20330-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-180

Operator ASHLAND EXPLORATION INCORPORATED

Farm CLINCHFIELD-KROLL UNIT

Co. Well No. #1 (088151)

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,129,800; E 419,650 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2121' GR. TD 5122' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 121,000 CU. FT. Age DEVONIAN

Date compl. or abandoned OCTOBER 22, 1979

Result GAS WELL

Gas Shows _____

Gas Pays 5038' to 5050'

Main Production _____ Prod. Form. BEREA, UPPER MAXON

Age MISSISSIPPIAN

Treatment: BEREA FORMATION WAS FRACTURED WITH GEL, 45,000 POUNDS OF 80/100 SAND, 45,000 POUNDS OF 20/40 SAND, AND 525 BARRELS OF SAND LADEN FLUID. BEREA FORMATION IS FROM 5002' to 5062'.

Initial Production _____

FINAL FLOW - 2,479,000 CU. FT.

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 408' to 414'; 619' to 623'; 1167' to 1171'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JANUARY 20, 1980

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-12

API No. 45-027-20340-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-183

Operator ASHLAND EXPLORATION INCORPORATED

Farm CLINCHFIELD COAL COMPANY

Co. Well No. # 88961

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,129,940; E 420,920 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2146.7' GR. TD 5078' Form. at TD OEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned APRIL 19, 1980

Result GAS WELL

Gas Shows _____

Gas Pays 4992' to 5011'; 3081' to 3113'

Main Production _____ Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: PERFORATED BEREA WITH 20 HOLES FROM 4992' to 5002'. FRACTURED BEREA WITH 250 SACKS OF 80/100 SAND, 252 SACKS OF 20/40 SAND AND 530 BARRELS OF SAND LADEN FLUID. PERFORATED MAXTON WITH 25 HOLES FROM 3069' to 3113'. FRACTURED MAXTON WITH 300 SACKS OF 80/100 SAND, 207 SACKS OF 20/40 SAND AND A TOTAL OF 360 BARRELS OF SAND LADEN FLUID.

Initial Production FINAL FLOW - 1,143,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW X at 1641' to 2192' at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 18, 1980

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-6-13

API No. 45-027-20446-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-210

Operator ASHLAND EXPLORATION INCORPORATED

Farm CLINCHFIELD-LITZ ET AL UNIT

Co. Well No. 1

County BUCHANAN Quadrangle PATTERSON - 7½'

Location (UTM) N4,129,480; E418,840 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2164.2' GR. TD 5182' Form. at TD DEVONIAN

INITIAL FLOW - 22,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MARCH 5, 1982

Result GAS WELL

Gas Shows _____

Gas Pays 5093' TO 5104'

Main Production 5093' TO 5104' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: PERFORATED BEREA WITH 22 HOLES FROM 5053' TO 5104' PUMPED 500 GALLONS OF 15% HCL AND BREAKDOWN FORMATION WITH TREATED WATER. FRACTURED BEREA (22H/5093'-5104') WITH 75 QUALITY FOAM USING 10,000 80/100 AND 30,000 20/40 SAND.

Initial Production _____

FINAL FLOW - 1,834,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW X at 1812' ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JUNE 3, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-1

API No. 45-027-19942-00-03 VDMR Well Rep. No.

DMQ File No. BU-27

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. I-2105

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,124,810; E 420,480 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1812.3' GR. TD 4704' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 84,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MARCH 9, 1954

Result GAS WELL

Gas Shows 2920' to 2924'; 3660'; 4672'

Gas Pays

Main Production 4677' Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: WELL SHOT ON 2-13-54 FROM 4660' to 4696' WITH 180 QUARTS OF GLYCERINE.

Initial Production

FINAL FLOW - 239,000 CU. FT.

Oil shows

Water FW X at 40' at at

SW at at at at

Coal 927' to 929'; 965' to 967'; 1195' to 1197'; 1381' to 1383'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JUNE 7, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-2

API No. 45-027-19947-00-03 VDMR Well Rep. No.

DMQ File No. BU-32

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 2-2176

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,125,720; E 420,890 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1911.0' GR. TD Form. at TD

INITIAL FLOW - 413,000 CU. FT. Age

Date compl. or abandoned NOVEMBER 1, 1954

Result GAS WELL

Gas Shows 4777' to 4778'

Gas Pays 4778' to 4780'; 4780' to 4784'; 4786' to 4788'

Main Production 4784' to 4786' Prod. Form.

Age

Treatment: WELL GIVEN STRATA FRAC TREATMENT ON 10-23-54 WITH 1,600 GALLONS OF KEROSENE AND 2,500 POUNDS OF SAND.

Initial Production

FINAL FLOW - 1,516,000 CU. FT.

Oil shows

Water FW X at 53' at at

SW at at at

Coal 52' to 53'; 1384' to 1388'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 30, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-3

API No. 45-027-19953-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-39

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS ET AL

Co. Well No. 4-2240

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,124,400; E 419,780 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1763.9' GR. TD 4680' Form. at TD DEVONIAN

INITIAL FLOW - 288,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MAY 12, 1955

Result GAS WELL

Gas Shows 3520'; 3940'; 4666'

Gas Pays 4667'; 4671'; 4678'

Main Production 4680' Prod. Form. DEVONIAN

Age DEVONIAN

Treatment: WELL SAND FRACTURED ON MAY 4, 1955 WITH 10 BARRELS OF CRUDE OIL, 250 GALLONS OF MUD ACID, 2500 GALLONS OF SAND FRAC OIL, 3,100 POUNDS OF 40/60 MESH SAND, AND 70 BARRELS OF FLUSH CRUDE OIL.

Initial Production _____

FINAL FLOW - 398,000 CU. FT.

Oil shows _____

Water FW X at 39' to 92' at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 92' to 94'; 556' to 558'; 967' to 971'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion AUGUST 10, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-4

API No. 45-027-19954-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-40

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 5-2241

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,125,580; E 420,210 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2090.8' GR. TD 5010' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 830,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 3, 1956

Result GAS WELL

Gas Shows 1304'

Gas Pays 3850'; 4976' to 4979'; 4979' to 4980'; 4985'

Main Production 4991' Prod. Form. BIG LIME AND BEREA

Age MISSISSIPPIAN

Treatment: WELL SHOT ON 12-31-55 FROM 4958' to 4998' WITH 200 QUARTS OF NITROGLYCERINE. WELL ACIDIZED FROM 3825' to 3870'(BIG LIME) WITH 2,000 GALLONS OF REGULAR ACID ON 5-11-55. WELL PERFORATED FROM 3847' to 3870' AND 4975' to 4997'.

Initial Production

FINAL FLOW - 555,000 CU. FT.

Oil shows _____

Water FW X at 65' _____ at 1220' _____ at 1462'

SW _____ at _____ _____ at _____ _____ at _____

Coal 835' to 838'; 945' to 950'; 1691' to 1695'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 4, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-5

API No. 45-027-19955-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-41

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 6-2296

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,126,300; E 421,480 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2013.9' GR. TD 4833' Form. at TD BEREA

INITIAL FLOW - 694,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 28,1955

Result GAS WELL

Gas Shows 3900'; 4820'

Gas Pays 4821'; 4824'; 4827'; 4830'

Main Production 4830' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: WELL WAS SAND FRACTURED ON 9-20-55 WITH 250 GALLONS OF MUD ACID, 10 BARRELS OF OIL, 3,000 POUNDS OF 10/60 SAND, 2,500 GALLONS OF SAND FRAC OIL AND 70 BARRELS OF FLUSH OIL.

Initial Production _____

FINAL FLOW - 207,000 CU. FT.

Oil shows _____

Water FW X at 81' _____ at 900' to 902' at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 140' to 142'; 695' to 697'; 725' to 727'; 793' to 795'; 900' to 902'; 1133' to 1135'; 1475' to 1477'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 27, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-6

API No. 45-027-19957-00-03 VDMR Well Rep. No.

DMQ File No. BU-43

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 7-2363

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,126,490; E 420,790 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2049.2' GR. TD 4947' Form. at TD BEREA

INITIAL FLOW - 769,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned NOVEMBER 26, 1955

Result GAS WELL

Gas Shows 1380'

Gas Pays 3673'; 3786' to 3793'; 3970' to 3992'; 4928' to 4931'

Main Production 4138' to 4142' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL SHOT ON 11-14-55 FROM 4901' to 4941' WITH 200 QUARTS OF GYLCERINE. WELL PERFORATED FROM 4920' to 4943'.

Initial Production

FINAL FLOW - 158,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1306' to 1309'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion FEBRUARY 24, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-7

API No. 45-027-19958-00-03 VDMR Well Rep. No.

DMQ File No. BU-44

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 8-2379

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,126,830; E 422,210 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2533.78' GR. TD 5331' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 60,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 24, 1956

Result GAS WELL

Gas Shows 5307'

Gas Pays

Main Production 5309' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: BEREA FORMATION TREATED ON 2-8-56 WITH 6 BARRELS OF MUD ACID, 32 BARRELS OF OIL, 120 BARRELS OF PETROGEL, 7,500 POUNDS OF SAND AND 26 BARRELS OF FLUSH OIL. SWABBED, FINAL OPEN FLOW AFTER PETRO-FRAC WAS 502,000 CU. FT.

Initial Production

FINAL FLOW - 502,000 CU. FT.

Oil shows

Water FW X at 90' to 100' at 360' at

SW at at at

Coal 410' to 412'; 627' to 630'; 784' to 786'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MAY 25, 1956

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-7-8

API No. 45-027-19960-00-03 VDMR Well Rep. No. W-97

DMQ File No. BU-46

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm LON B. ROGERS, ET AL

Co. Well No. 10-2381

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,125,070; E 421,570 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2343.9' GR. TD 3885' Form. at TD

INITIAL FLOW - SHOW Age

Date compl. or abandoned AUGUST 23, 1958

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 2775' to 2777'; 3378' to 3384'

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW at at at

SW at at at

Coal 425' to 427'; 638' to 639'; 1725' to 1727'; 1870' to 1874'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2223' to 3470'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 21, 1958

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-1

API No. 45-027-19912-00-03 VDMR Well Rep. No. W-1

DMQ File No. A-41-BU

Operator PIPELINE CONSTRUCTION AND DRILLING COMPANY

Farm R. J. CARLSON

Co. Well No. 1

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,123,000; E 417,310 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2122.62' GR. TD 4731' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 52,690 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 23, 1949

Result GAS WELL

Gas Shows 1328' to 1333'; 1900' to 1905'; 3172' to 3176'; 3833' to 3835'

Gas Pays 4040' to 4044'

Main Production 4040' to 4044' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ACIDIZED AT 4100' WITH 1750 GALLONS OF ACID.

Initial Production

FINAL FLOW - 343,000 CU. FT.

Oil shows 3397' to 3400'; 3420' to 3425'

Water FW X at 88' to 93' at 368' to 373' at 1232' to 1237'

SW X at 1900' to 1905' at ____ ____ at ____

Coal 70' to 72'; 1800' to 1801'; 1900' to 1905'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1' to 4730'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+2122.62'	1700'
LEE	1700'	+422.62'	60'
POCAHONTAS	1760'	+362.62'	450'
BLUESTONE	2210'	-87.38'	465'
PRIDE SHALE MEMBER	2395'	-272.38'	280'
PRINCETON	2675'	-552.38'	123'
HINTON	2798'	-675.38'	722'
LITTLE STONE GAP MEMBER	2798'	-675.38'	42'
STONY GAP SANDSTONE MEMBER	3391'	-1268.38'	129'
BLUEFIELD	3520'	-1397.38'	410'
GREENBRIER	3930'	-1807.38'	554'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 161.

Released to Open File: Completion MAY 24, 1949

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-2

API No. 45-027-20261-00-03 VDMR Well Rep. No.

DMQ File No. BU-152

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN (YUKON POCOHONTAS COAL, ET AL)

Co. Well No. ISLAND CREEK #3

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,125,940; E 416,440 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1875' GR. TD 5066' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NOT GAUGED Age DEVONIAN

Date compl. or abandoned JULY 20, 1977

Result GAS WELL

Gas Shows 4874' to 4926'

Gas Pays 3728' to 3732'

Main Production 3728' to 3732' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA WITH 844 BARRELS OF JELLED WATER, AND 10,000 pounds of 80/100 SAND AND 50,000 POUNDS OF 20/40 SAND. SET BRIDGE PLUG AT 3910' PERFORATED FROM 3729' to 3732', 13 SHOTS. BROKE FORMATION DOWN WITH 1,000 PSI.

Initial Production

FINAL FLOW - 4,378,000 CU. FT.

Oil shows

Water FW X at 145' at 1771' at

SW at at at

Coal 50' to 53'; 183' to 184'; 191' to 192'; 199' to 202'; 580' to 583'; 874' to 878'; 1630' to 1634'; 1771' to 1776'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other CASING COLLAR, TEMPERATURE, CALIPER, CEMENT BOND

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 18, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-3

API No. 45-027-20374-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-184

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN (YUKON POCAHONTAS COAL COMPANY)

Co. Well No. IC-23

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,040; E 416,760 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1918' GR. TD 4285' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NONE Age DEVONIAN

Date compl. or abandoned FEBRUARY 3, 1981

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows _____

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 212' to 214'; 450' to 454'; 1007' to 1010'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 4, 1981

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-4

API No. 45-027-20375-00-03 VDMR Well Rep. No.

DMQ File No. BU-185

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm GEORGIA PACIFIC

Co. Well No. IC-24

County BUCHANAN Quadrangle PATTERSON-7½'

Location (UTM) N4,125,650; E416,530 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1946' GR. TD 4388' Form. at TD DEVONIAN

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned OCTOBER 29, 1980

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW at at at

SW at at at

Coal 625' TO 760'; 1295' TO 1370'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 27, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-5

API No. 45-027-20386-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-189

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm C. L. RITTER LUMBER COMPANY

Co. Well No. IC-27

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,000; E 415,510 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1913' GR. TD 4352' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned DECEMBER 4, 1980

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows _____

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

FINAL FLOW -

Oil shows _____

Water FW X at 625' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 4, 1981

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-6

API No. 45-027-20387-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-90

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm C. L. RITTER LUMBER COMPANY

Co. Well No. IC-46

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,125,460; E 415,820 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2364' GR. TD 4810' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned JANUARY 18, 1981

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows _____

Gas Pays _____

Main Production _____ Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: _____

Initial Production _____

FINAL FLOW -

Oil shows _____

Water FW X at 235' _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 140' to 143'; 180' to 183'; 940' to943'; 1519' to 1522'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion APRIL 18, 1981

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-8-7

API No. 45-027-20260-00-03 VDMR Well Rep. No.

DMQ File No. BU-151

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm C. L. RITTER LUMBER COMPANY, INCORPORATED

Co. Well No. IC-2

County BUCHANAN Quadrangle PATTERSON-7½'

Location (UTM) N4,126,340; E417,300 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2220' GR. TD 4670' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 227,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JULY 6, 1980

Result GAS WELL

Gas Shows

Gas Pays 4346' TO 4350'

Main Production Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: PERFORATED BIG LIME FROM 4346' TO 4350' WITH 25 HOLES.

Initial Production

FINAL FLOW - 227,000 CU. FT.

Oil shows

Water FW at at at

SW at at at

Coal 113' TO 116'; 210' TO 213'; 293' TO 296'; 1252' TO 1255'; 1695' TO 1700'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 4, 1980

Samples NO

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-1

API No. 45-027-19891-00-03 VDMR Well Rep. No. W-13

DMQ File No. A-20-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm SLOCUM LAND CORPORATION

Co. Well No. 1-1525

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,122,940; E 414,710 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1621.2' GR. TD 2365' Form. at TD RAVENCLIFF

INITIAL FLOW - 280,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 28, 1948

Result GAS WELL

Gas Shows 1015'

Gas Pays 2306'; 2318'; 2319'

Main Production 2319' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL SHOT ON AUGUST 26, 1948 FROM 2305' to 2325' WITH 60 QUARTS OF NITROGLYCERINE. WELL NOT ACIDIZED.

Initial Production

FINAL FLOW - 337,000 CU. FT.

Oil shows

Water FW X at 84' at 182' at 795'

SW X at 1352' at at

Coal 130' to 132'; 304' to 306'; 1531' to 1533'; 1557' to 1560'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1865' to 2365'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
BLUESTONE	0'	+1621.2'	421'
PRINCETON	2286'	-664.8'	79'

Remarks

References J. W. HUDDLE, ELOISE T. JACOBSEN, A. D. WILLIAMSON, 1956, OIL AND GAS WELLS DRILLED IN SOUTHWESTERN VIRGINIA BEFORE 1950: USGS BULLETIN 1027-L, P. 555.

Released to Open File: Completion NOVEMBER 16, 1948

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-2

API No. 45-027-19923-00-03 VDMR Well Rep. No. W-38

DMQ File No. BU-8

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm SLOCUM LAND CORPORATION, ET AL

Co. Well No. 4-1906

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,123,200; E 413,140 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1760.8' GR. TD 4178' Form. at TD INJUN

INITIAL FLOW - 18,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned MAY 2, 1952

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 632'; 1760'; 4095'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED AT 4150' WITH 1,000 GALLONS OF ACID ON 5-1-52. WELL PERFORATED FROM 4118' to 4150'.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 632' at at

SW at at at

Coal 1212' to 1214'; 1582' to 1584'; 1703' to 1705'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2007' to 4147'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JULY 31, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-3

API No. 45-027-19924-00-03 VDMR Well Rep. No. W-39

DMQ File No. BU-9

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 14-1907

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,123,970; E 413,560 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1544.2' GR. TD 3910' Form. at TD INJUN

INITIAL FLOW - 501,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned AUGUST 5, 1952

Result GAS WELL

Gas Shows 1005'; 1240'; 3103'; 3508' to 3513'

Gas Pays 3388'

Main Production 3389' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: WELL ACIDIZED ON 7-9-52 WITH 1,000 GALLONS OF ACID AND ON 7-25-52 WITH 2,000 GALLONS OF ACID. (DEPTHS NOT GIVEN). WELL PERFORATED FROM 3672' to 3700'.

Initial Production

FINAL FLOW - 838,000 CU. FT.

Oil shows

Water FW X at 90' at 980' at

SW at at at

Coal 99' to 101'; 677' to 679'; 980' to 983'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 1794' to 3907'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 3, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-4

API No. 45-027-19926-00-03 VDMR Well Rep. No. W-41

DMQ File No. BU-11

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 16-1931

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,123,870; E 413,230 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1830.6' GR. TD 4187' Form. at TD INJUN

INITIAL FLOW - 94,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JUNE 26, 1953

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 3614'; 3975'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED ON 10-1-52 FROM 3715' to 4184' WITH 1,000 GALLONS OF ACID AND ON 11-13-52 FROM 3715' to 4184' WITH 2,000 GALLONS OF ACID. WELL PERFORATED FROM 4161' to 4184'

Initial Production

FINAL FLOW -

Oil shows

Water FW at at at

SW at at at

Coal 150' to 151'; 1275' to 1277'; 1444' to 1446'; 1641' to 1646'; 1765' to 1767'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 80' to 4387'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 24, 1953

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-5

API No. 45-027-19928-00-03 VDMR Well Rep. No.

DMQ File No. BU-13

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 18-1957

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,124,090; E 414,360 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1841.3' GR. TD Form. at TD INJUN

INITIAL FLOW - 39,000 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned JANUARY 19, 1953

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1336'; 1727'; 3856' to 3860'; 3687' to 3692'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED WITH 1,000 GALLONS OF ACID ON 1-16-53 (DEPTHS NOT GIVEN). NO RESULTS AFTER ACID. WELL PERFORATED FROM 3711' to 3734'.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 85' at 1268' at 1336'

SW at at at

Coal 364' to 366'; 967' to 969'; 1266' to 1268'; 1334' to 1336'; 1727' to 1729'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion APRIL 19, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-6

API No. 45-027-19929-00-03 VDMR Well Rep. No.

DMQ File No. BU-14

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 19-1968

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,123,170; E 414,100 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 2184.1' GR. TD 2857' Form. at TD RAVENCLIFF

INITIAL FLOW - Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 9, 1952

Result GAS WELL

Gas Shows 2116' to 2123'; 2846'

Gas Pays 2849'

Main Production 2857' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment:

Initial Production

FINAL FLOW - 23,071,000 CU. FT.

Oil shows

Water FW X at 990' at at

SW at at at

Coal 288' to 293'; 2216' to 2123'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 9, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-7

API No. 45-027-19934-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-19

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm C. L. RITTER LUMBER COMPANY

Co. Well No. 3-2011

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,420; E 412,270 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1703.1' GR. TD 3989' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned SEPTEMBER 10, 1953

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 615'; 1114'; 3956'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL ACIDIZED FROM 3749' to 3976' WITH 1,000 GALLONS OF DOWELL X ACID ON 9-10-53. WELL PERFORATED FROM 3953' to 3976'.

Initial Production FINAL FLOW - NONE

Oil shows _____

Water FW X at 50' _____ at _____ _____ at _____

SW X at 1383' _____ at _____ _____ at _____

Coal 636' to 638'; 1114' to 1115'; 1193' to 1195'; 1469' to 1475'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Date Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion DECEMBER 9, 1953

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-8

API No. 45-027-19920-00-03

VDMR Well Rep. No. W-36

DMQ File No. BU-5

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm SLOCUM LAND CORPORATION, ET AL

Co. Well No. 3-1835

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,123,500; E 413,700 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1596.4' GR. TD 2300' Form. at TD RAVENCLIFF

INITIAL FLOW - 3,686 CU. FT. Age MISSISSIPPIAN

Date compl. or abandoned OCTOBER 25, 1951

Result GAS WELL

Gas Shows 1423'

Gas Pays

Main Production 2288' to 2300' Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: WELL NOT SHOT.

Initial Production

FINAL FLOW - 22,263,000 CU. FT.

Oil shows

Water FW X at 40' at at

SW X at 1000' at 1521' at

Coal 1000' to 1004'; 1347' to 1349'; 1379' to 1382'; 1521' to 1524'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1906' to 2203'; 2254' to 2283'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 23, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-9

API No. 45-027-20274-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-159

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm C. L. RITTER LUMBER COMPANY

Co. Well No. IC-9

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4 125,510; E 414,790 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1655' GR. TD 4820' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned DECEMBER 1, 1977

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 2340' to 2376'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

FINAL FLOW -

Oil shows _____

Water FW X at 58' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 50' to 54'; 155' to 160'

Plat _____ Plotted _____ Completion Report _____

Drillers Log X Geologic Log _____

Samples X Interval Sheet X

Sample Interval 90' to 4820'

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Date Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MARCH 1, 1978

Samples YES

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-10

API No. 45-027-20275-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-160

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm SLOCUM LAND CORPORATION

Co. Well No. ISLAND CREEK #10

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,127,220; E 414,390 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1905' GR. TD 5052' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NOT GAUGED Age DEVONIAN

Date compl. or abandoned AUGUST 26, 1977

Result GAS WELL

Gas Shows _____

Gas Pays 2673' to 2680'; 3885' to 3888'; 4189' to 4195'

Main Production 2673' to 2680' Prod. Form. RAVENCLIFFE AND BIG LIME

Age MISSISSIPPIAN

Treatment: PERFORATED FORMATIONS FROM 3885' to 3888'-7 SHOTS; 4189' to 4195' 13 SHOTS; 2770' to 2772'-6 SHOTS; 2673' to 2680'-15 SHOTS. SET CIBP AT 2830'. SQUEEZED 2770' to 2772' WITH 96 SACKS OF CLASS A CEMENT. BIG LIME BELOW BRIDGE PLUG.

Initial Production _____

FINAL FLOW - 1,768,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 387' to 389'; 511' to 513'; 969' to 971'; 1259' to 1262'; 1514' to 1517'; 1882' to 1886'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CASING BOND, CASING COLLAR BOND

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion NOVEMBER 24, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PATTERSON-9-11

API No. 45-027-20383-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-187

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm SLOCUM LAND CORPORATION

Co. Well No. IC-21

County BUCHANAN Quadrangle PATTERSON - 7-1/2'

Location (UTM) N 4,126,660; E 414,550 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1736' GR. TD 4226' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 1,774,000 CU. FT. Age DEVONIAN

Date compl. or abandoned FEBRUARY 1, 1980

Result GAS WELL

Gas Shows _____

Gas Pays 4028' to 4033'; 2494' to 2504'

Main Production _____ Prod. Form. BIG LIME AND RAVENCIFF

Age MISSISSIPPIAN

Treatment: BIG LIME PERFORATED FROM 4028' to 4033' WITH 500 GALLONS OF 28% HYDROCHLORIC ACID; PERFORATED RAVENCLIFF FROM 2494' to 2504' WITH 1,000 GALLONS OF MUD ACID, 37,000 POUNDS OF 20/30 MESH SAND AND 500 BARRELS OF FLUID.

Initial Production _____

FINAL FLOW - 1,704,000 CU. FT

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 1752' to 1760'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 2, 1980

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-2-1

API No. 45-027-19939-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-24

Operator CLINCHFIELD COAL CORPORATION

Farm WASHINGTON DEEL

Co. Well No. 154 (ALSO COLUMBIA GAS TRANSMISSION - 9552)

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,122,310; E 393,480 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1515.4' GR. TD 5806' Form. at TD DEVONIAN

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JUNE 1, 1954

Result GAS

Gas Shows 2735' to 2737'; 4400' to 4403'; 5515'; 5700'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: WELL SHOT ON MAY 13, 1954 FROM 5806' to 4367' WITH 12,600 POUNDS OF GELATINE.

Initial Production FINAL FLOW - 1,283,000 CU. FT.

Oil shows _____

Water FW X at 30' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 682' to 685'; 1026' to 1031'; 1738' to 1743'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE; CALIPER;

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks THIS WELL IS ALSO KNOWN AS COLUMBIA GAS TRANSMISSION CORPORATION WELL NO. 9552.

References _____

Released to Open File: Completion AUGUST 30, 1954

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-2-2

API No. 45-027-20046-00-03 VDMR Well Rep. No. W-3110

DMQ File No. BU-94

Operator UNITED FUEL GAS COMPANY

Farm THE PITTSTON COMPANY

Co. Well No. 9586

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,122,850; E 394,500 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1549.99' GR. TD 4511' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 75,000 CU. FT. Age DEVONIAN

Date compl. or abandoned SEPTEMBER 4, 1970

Result GAS WELL

Gas Shows

Gas Pays

Main Production Prod. Form. RAVENCLIFF

Age MISSISSIPPIAN

Treatment: FRACTURED (2692' to 2704') MIDDLE MAXON ON 8-7-70 WITH 21,000 POUNDS OF 10/20 SAND AND 29,830 GALLONS OF FLUID. FRACTURED FROM 2205' to 2398' WITH 11,000 POUNDS OF 30/40 SAND AND 20,286 GALLONS OF FLUID.

Initial Production

FINAL FLOW - 146,000 CU. FT.

Oil shows

Water FW X at 35'; 1/2GPM at 105' 1GPM at 353'

SW at at at

Coal 353' to 355'; 985' to 987'; 1466' to 1469'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 1300'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron X

Density X Sonic Other DUAL INDUCTION, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 3, 1970

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-2-3

API No. 45-027-20147-00-03 VDMR Well Rep. No. W-3940

DMQ File No. BU-132

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #40

Co. Well No. 9781-T

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,122,710; E 394,810 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1567.97' GR. TD 6799' Form. at TD CLINTON

INITIAL FLOW - NON-PRODUCTIVE Age SILURIAN

Date compl. or abandoned OCTOBER 17, 1973

Result PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW -

Oil shows

Water FW at at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 6798'

Remarks DRILLED THROUGH THE CLINTON SAND

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JANUARY 15, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-2-4

API No. 45-027-20164-00-03 VDMR Well Rep. No. W-3924

DMQ File No. BU-137

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #42

Co. Well No. 20009

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,120,760; E 392,930 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1565.25' GR. TD 4556' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 660,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JULY 5, 1974

Result GAS WELL

Gas Shows 3586' to 3590'; 3698' to 3702'

Gas Pays 2862' to 2872'; 4426' to 4431'

Main Production 4426' to 4431' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA ON 6-26-74 WITH 500 GALLONS OF ACID, 22,000 # 10/20 SAND AND 985 BARRELS OF FLUID FROM 4426' to 4431' THROUGH 21 HOLES. FRACTURED MAXON SAND ON 6-24-74 WITH 1,000 GALLONS OF ACID, 24,000 # 20/40 SAND AND 882 BARRELS OF FLUID FROM 2862' to 2872' THROUGH 26 HOLES.

Initial Production FINAL FLOW - 1,871,000 CU. FT.

Oil shows

Water FW X at 108' to FULL at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 1349' to 1350'; 1800' to 1803'; 1498' to 1501'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4530'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron X

Density X Sonic ____ Other TEMPERATURE, CALIPER CEMENT QUALITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion OCTOBER 3, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-3-1

API No. 45-027-20042-00-03 VDMR Well Rep. No. W-3082

DMQ File No. BU-92

Operator UNITED FUEL GAS COMPANY

Farm THE PITTSTON COMPANY

Co. Well No. 9587

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,118,540; E 392,240 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1475.19' GR. TD 5860' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned OCTOBER 27, 1970

Result GAS WELL

Gas Shows 4500'

Gas Pays 4500'

Main Production 4860' to 5860' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTUREO CORNIFEROUS (4860' to 5860') ON 9-23-70 WITH 10,800 POUNDS OF OUPONT GELATIN. PERFORATED BEREA SAND FROM 4428' to 4435'.

Initial Production

FINAL FLOW - 603,000 CU. FT.

Oil shows

Water FW X at 62' ' 1/2 GPM at 68'; 85' at 137'; 274'

SW at at at

Coal 30' to 31'; 67' to 68'; 136' to 138'; 273' to 274'; 1698' to 1699'; 1866' to 1872'.

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 80' to 3140'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other CALIPER, PERFORATING DEPTH CONTROL, DUAL INDUCTION

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1475.19'	907'
LEE	907'	+568.19'	705'
POCAHONTAS	1612'	-136.81'	288'
BLUESTONE	1900'	-424.81'	445'
PRIDE SHALE MEMBER	2165'	-689.81'	180'
PRINCETON	2345'	-869.81'	65'
HINTON	2410'	-934.81'	512'
LITTLE STONE GAP MEMBER	2410'	-934.81'	35'
STONY GAP SANOSTONE MEMBER	2880'	-1404.81'	42'
BLUEFIELO	2922'	-1446.81'	283'
GREENBRIER	3205'	-1729.81'	508'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN ANO LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 164.

Released to Open File: Completion JANUARY 25, 1971

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-3-2

API No. 45-027-20172-00-03 VDMR Well Rep. No. W-4240

DMQ File No. BU-138

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm HOWARD COLEMAN

Co. Well No. 20,005

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,122,640; E 390,350 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1791.37' GR. TD 4735' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned AUGUST 9, 1974

Result GAS WELL

Gas Shows

Gas Pays 4606' to 4635'

Main Production 4606' to 4635' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 7-30-74 WITH 500 GALLONS MCA, 24,500 # 10/20 SAND AND 1019 BARRELS OF FLUID FROM 4600' to 4688' THROUGH 20 HOLES

Initial Production

FINAL FLOW - 622,000 CU. FT.

Oil shows

Water FW X at 50' at at

SW at at at

Coal 65' to 67'; 370' to 373'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4740'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CEMENT BOND, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion NOVEMBER 7, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-3-3

API No. 45-027-20213-00-03 VDMR Well Rep. No. W-4500

DMQ File No. BU-143

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm JOSH DEEL ET. AL.

Co. Well No. 20006

County BUCHANAN Quadrangle PRATER - 7-1/2

Location (UTM) N 4,121,880; E 391,960 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1727.65' GR. TD 4633' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 500,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MAY 4, 1976

Result GAS WELL

Gas Shows 2518'; 3734' to 3745'; 3857'; 4004'

Gas Pays 4589' to 4599'; 3696' to 3700'; 3741' to 3749'; 3864' to 3868'

Main Production Prod. Form. BEREA AND BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 4-15-76 WITH 8,000 # 10/20 SAND, 24,000 # 20/40 SAND AND 1,028 BARRELS SAND LADEN FLUID FROM 4589' to 4599' THROUGH 20 HOLES.

Initial Production

FINAL FLOW - 2,716,000 CU. FT.

Oil shows

Water FW X at 64' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal 62' to 64'; 1230' to 1232'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 2500' to 4577'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma X Neutron ____

Density X Sonic ____ Other CALIPER, TEMPERATURE, CEMENT QUALITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 2, 1976

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-3-4

API No. 45-027-20250-00-03 VDMR Well Rep. No.

DMQ File No. BU-146

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY

Co. Well No. 20343

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,122,830; E 392,150 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1697.46' GR. TD 4628' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 73,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JUNE 21, 1977

Result GAS WELL

Gas Shows

Gas Pays 4544' to 4563'

Main Production 4544' to 4563' Prod. Form. BEREA AND BIG LIME

Age MISSISSIPIAN

Treatment: FRACTURED BEREA ON 5-5-77 WITH 1,176 GALLONS OF MA AND 26,000 # 20/40 SAND AND 13,000 # 10/20 SAND. ACIDIZED BIG LIME ON 5-18-77 WITH 2,000 GALLONS OF 15% HCL ACID.

Initial Production

FINAL FLOW - 933,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log ____ Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CALIPER, PERFORATION, DEPTH CONTROL, CEMENT QUALITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion SEPTEMBER 19, 1977

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-3-5

API No. 45-027-20252-00-03 VDMR Well Rep. No. W-5433

DMQ File No. BU-148

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm STEWART ELSWICK

Co. Well No. 20301

County BUCHANAN Quadrangle PRATER 7½'

Location (UTM) N4,121,000; E391,250 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1800.56'GR. TD 4789' Form. at TD DEVONIAN SHALES

Age DEVONIAN

INITIAL FLOW:

Date compl. or abandoned MAY 5, 1977

Result GAS WELL

Gas Shows

Gas Pays 4708' TO 4717'; 2558' TO 2588'

Main Production Prod. Form.

Age

Treatment: FRACTURED BEREA ON 3/31/77 WITH 36,000 GALLONS OF MA., 27,000 POUNDS OF 20/40 SAND, 3500 POUNDS OF 10/20 SAND. TEST AFTER TREATMENT WAS 561 MCF. FRACTURED RAVENCLIFF ON 4/12/77 WITH 43,000 GALLONS OF MA, 54,000 POUNDS OF 20/40 SAND.

Initial Production TEST AFTER FRACTURE WAS 270 MCF

FINAL FLOW:

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet S

Sample Interval 2860' TO 4690'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density X Sonic ____ Other CEMENT BOND; INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 3, 1977

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-3-6

API No. 45-027-20279-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-162

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm HOWARD COLEMAN ET AL

Co. Well No. 20467

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,122,300; E 391,140 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1755.47' GR. TD 4741' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MAY 1, 1978

Result GAS WELL

Gas Shows _____

Gas Pays 4614' to 4644'

Main Production 4624' to 4639' Prod. Form. BEREA

Age MISSISSIPPIAN

Treatment: FRACTURED BEREA FORMATION ON 4-14-78 WITH 750 GALLONS OF MUD ACID, 650 POUNDS OF J-266, 737 BARRELS OF SAND LADEN FLUID, 30 GALLONS OF F-75, 6 GALLONS OF A-200, 4230 GALLONS OF CO2, 29,000 POUNDS OF 80/100 MESH SAND, AND 23,000 POUNDS OF 20/40 MESH SAND. WELL PERFORATED FROM 4624' to 4639'.

Initial Production _____

FINAL FLOW - 880,000 CU. FT

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res X Gamma X Neutron _____

Density X Sonic _____ Other CONDUCTIVITY; CALIPER, TEMPERATURE

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 30, 1978

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-3-7

API No. 45-027-20298-00-03 VDMR Well Rep. No. _____

DMQ File No. 8U-173

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm. THE PITTSTON COMPANY

Co. Well No. 20554

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,120,230; E 392,820 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1777.53' GR. TD 4731' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned FEBRUARY 9, 1979

Result GAS WELL

Gas Shows 4121' to 4128'; 4628' to 4642'

Gas Pays _____

Main Production _____ Prod. Form. BEREA AND WEIR

Age MISSISSIPPIAN

Treatment: CO2 FRACTURED BEREA ON 11-17-78 WITH 500 GALLONS OF MUD ACID; 32,054 # CO2; 30,000 # 80/100, 30,000 # 20/40 SAND; CO2 FRACTURED WEIR ON 1-10-79 WITH 500 GALLONS OF MUD ACID; 30,000 # CO2, 29,000 # 80/100 AND 29,000 # 20/40 SAND.

Initial Production FINAL FLOW - 803,000 CU. FT.

Oil shows _____

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log _____ Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 10, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-3-8

API No. 45-027-20305-00-03 VDMR Well Rep. No. 6011

DMQ File No. BU-174

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY

Co. Well No. 20553

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,118,240; E 391,700 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1783.82' GR. TD 4790' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 163,000 CU. FT. Age DEVONIAN

Date compl. or abandoned APRIL 16, 1979

Result GAS WELL

Gas Shows 4676' to 4686'; 4220' to 4221'; 4174' to 4184'; 3026' to 3032'

Gas Pays 3022' to 3028'

Main Production 3022' to 3028' Prod. Form. MAXON, WEIR, BEREA

Age MISSISSIPPIAN

Treatment: 75 QUALITY FOAM FRACTURED BEREA ON 2-5-79 WITH 500 GALLONS OF 15% ACID. 342,000 SCF N2; 30,000 # 80/100 AND 30,000 # 20/40 SAND; 75 QUALITY FOAM FRACTURED WIER ON 3-7-79 WITH 2,000 GALLONS FOAMED ACID. 360,000 SCF N2; 25,000 # 80/100 AND 30,000 # 20/40 SAND. CO2 FRACTURED MAXON ON 3-28-79 WITH 750 GALLONS MUD ACID; 32,000 # CO2; 15,000 # 80/100 AND 30,000 # 20/40 SAND

Initial Production FINAL FLOW - 421,000 CU. FT.

Oil shows

Water FW ____ at ____ ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log ____ Geologic Log

Samples ____ Interval Sheet ____

Sample Interval

Remarks

Geophysical Logs S.P. ____ Res X Gamma X Neutron ____

Density X Sonic ____ Other TEMPERATURE, CALIPER, INDUCTION

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion JULY 15, 1979

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-4-1

API No. 45-027-19881-00-01 VDMR Well Rep. No.

DMQ File No. A 10BU

Operator CLINCHFIELD COAL CORPORATION

Farm M. J. WOOD AND CHARLES DEEL

Co. Well No. 125

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,118,350; E 390,820 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1424.1' GR. TD 3748' Form. at TD BIG INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned JULY 31, 1951

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows 2283'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL NOT TREATED

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW at at at

SW at at at

Coal 1649' to 1652'; 1715' to 1719'

Plat X Plotted X Completion Report

Drillers Log X Geologic Log X

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRE LATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1424.1'	880'
LEE	880'	+544.1'	764'
POCAHONTAS	1644'	-219.9'	178'
BLUESTONE	1822'	-397.9'	530'
PRINCETON	2352'	-927.9'	15'
HINTON-BLUEFIELD (UNDIFF.)	2367'	-942.9'	765'
LITTLE STONE GAP MEMBER	2367'	-942.9'	77'
GREENBRIER	3132'	-1707.9'	596'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 163

Released to Open File: Completion OCTOBER 29, 1951

Samples NONE

(Note: UTM measurements in meters, all others in feet)

PRATER-4-2

API No. 45-027-20205-00-03 VDMR Well Rep. No. W-4405

DMQ File No. BU-140

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm THE PITTSTON COMPANY #46

Co. Well No. 20212

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,118,250; E 390,800 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1452.56' GR. TD 4531 Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned MAY 23, 1975

Result PLUGGED AND ABANDONED

Gas Shows

Gas Pays

Main Production Prod. Form.

Age

Treatment: FRACTURED BEREA FORMATION ON 5-6-75 WITH 500 GALLONS OF MCA AND 25,000 # 10/20 SAND AND 1076 BARRELS OF FLUID FROM 4378' to 4420'; 20 SHOTS. TEST AFTER FRACTURE - 0 CU. FT.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 35' at 80' at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 4520'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron X

Density X Sonic Other TEMPERATURE, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion AUGUST 21, 1975

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-7-1

API No. 45-027-20117-00-03 VDMR Well Rep. No. W-3801

DMQ File No. BU-129

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm JOHN W. POBST ET AL

Co. Well No. 9722-T

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,113,630; E 398,600 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1670.86' GR. TD 7296' Form. at TD CLINTON/Rose Hill

INITIAL FLOW - SHOW Age SILURIAN

Date compl. or abandoned NOVEMBER 5, 1974

Result PLUGGED AND ABANDONED

Gas Shows 4944'; 5850'; 7234'

Gas Pays

Main Production Prod. Form.

Age

Treatment: FRACTURED CLINTON FORMATION ON 4-6-73 WITH 1,000 GALLONS OF MCA, 18,000 # 20/40 SAND AND 915 BARRELS OF FLUID FROM 7230' to 7250'; 21 SHOTS. FRACTURED SHALE FORMATION ON 9-19-74 WITH 1,000 GALLONS OF MCA, 24,000 # 20/40 SAND AND 1177 BARRELS OF FLUID FROM 5851' to 5900'; 18 SHOTS.

Initial Production

FINAL FLOW - 0 CU. FT.

Oil shows

Water FW X at 83' at at

SW at at at

Coal 1482' to 1484'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 300' to 7280'

Remarks

Geophysical Logs S.P. Res Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER, CEMENT QUALITY

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness
GREENBRIER	3560		600'
MACRADY	4160		
PRICE	4250?		270±
CHATTANOOGA	4520		1900'
WILDCAT VALLEY	6430		150'
HANDCOCK Dolo.	6600		610'
ROSE HILL	7110		170'

JKP/83

Remarks

References

Released to Open File: Completion FEBRUARY 3, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

PRATER-8-1

API No. 45-027-19894-00-01 VDMR Well Rep. No. W-142

DMQ File No. A-23-BU

Operator CLINCHFIELD COAL CORPORATION

Farm ANDREW THOMAS

Co. Well No. 102 (OWDD IN 1950)

County BUCHANAN Quadrangle PRATER - 7-1/2'

Location (UTM) N 4,112,620; E394,700 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1373.2' GR. TD 5847' Form. at TD DEVONIAN SHALE

INITIAL FLOW - NONE Age DEVONIAN

Date compl. or abandoned APRIL 7, 1950

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1793'; 2039'; 2716' to 2723'; 3768' to 3774'

Gas Pays

Main Production Prod. Form.

Age

Treatment: ON 4-11-50 FRACTURED THE FORMATION FROM 4630' to 5847' WITH 11,400 POUNDS OF 80% GELATIN; ALSO FROM 4588' to 4710' WITH 1,500 POUNDS OF 80% GELATIN.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 50' ____ at ____ ____ at ____

SW X at 1314' ____ at ____ ____ at ____

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 0' to 4508'

Remarks

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other

Stratigraphic Data Source CORRELATIONS BY MARSHALL S. MILLER, VDMR.

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1373.2'	555'
LEE	555'	+838.2'	885'
POCAHONTAS	1440'	-66.8'	274'
BLUESTONE	1714'	-340.8'	465'
PRIDE SHALE MEMBER	2028'	-654.8'	151'
PRINCETON	2179'	-805.8'	112'
HINTON	2291'	-917.8'	494'
LITTLE STONE GAP MEMBER	2291'	-917.8'	51'
STONY GAP SANDSTONE MEMBER	2652'	-1278.8'	133'
BLUEFIELD	2785'	-1411.8'	502'
GREENBRIER	3287'	-1913.8'	449'

Remarks WELL DRILLED TO 4508' ON MAY 6, 1949 AND ABANDONED AS A DRY HOLE. THE WELL WAS DEEPENED TO 5847' BEGINNING 2-1-50 AND ENDING 4-7-50. STILL A DRY HOLE.

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 172.

Released to Open File: Completion JULY 6, 1950

Samples YES

(Note: UTM measurements in meters, all others in feet)

VANSANT-1-1

API No. 45-027-19916-00-03 VDMR Well Rep. No. W-33

DMQ File No. BU-1

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 12-1812

County BUCHANAN Quadrangle VANSANT - 7-1/2'

Location (UTM) N4,119,270; E409,730 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1305.6' GR. TD 6112' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned NOVEMBER 5, 1951

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 610'; 978'; 1241'; 4669'; 6112'

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 58' at 642' at

SW at at at

Coal 321' to 323'; 401' to 404'; 642' to 644'; 679' to 680'; 1122' to 1124'; 1187' to 1188'; 1241' to 1245'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1642' to 3813'; 4177' to 4737'; 5134' to 5827'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY R. C. MILICI AND J. M. WILSON, VDMR, SEPTEMBER 1963

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1305.6'	1642'
BLUESTONE	1642'	-336.4'	264'
PRINCETON	1906'	-600.4'	180'
HINTON	2089'	-783.4'	?
STONY GAP SANDSTONE	?	?	?
BLUEFIELD	?	?	?
GREENBRIER	3061'	-1755.5'	691'
MACCRADY-PRICE	3752'	-2446.4'	425'
BIG STONE GAP SHALE	4177'	-2871.4'	291'
DEVONIAN-PRE-DEVONIAN	4468'	-3162.4'	1359' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion FEBRUARY 3, 1952

Samples YES

(Note: UTM measurements in meters, all others in feet)

VANSANT-1-2

API No. 45-027-20396-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-195

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN

Co. Well No. IC-20

County BUCHANAN Quadrangle VANSANT - 7½'

Location (UTM) N4,119,320; E410,220 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1410.58' GR. TD 6309' Form. at TD CORNIFEROUS

INITIAL FLOW - 60,000 CU. FT. Age DEVONIAN

Date compl. or abandoned MARCH 11, 1981

Result GAS WELL

Gas Shows _____

Gas Pays _____

Main Production _____ Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: PERFORATED: 6231' TO 6235'; 6185' TO 6189'; 6113' TO 6117'; 6069' TO 6071'; 6045' TO 6047'. PERFORATED MIDDLE SECTION OF SHALE, 5518' TO 5524'; 5655' TO 5662'; 5728' TO 5734'; 5768' TO 5776' AND 5868' TO 5870'. FOAM FRACTURED BROWN SHALE, SPOTTED 1000 GAL. OF 28% HCL.

Initial Production _____

FINAL FLOW - N/A

Oil shows _____

Water FW _____ at _____ _____ at _____ _____ at _____

SW _____ at _____ _____ at _____ _____ at _____

Coal 75' TO 78'; 1208' TO 1212'; 1264' TO 1266'; 1272' TO 1275'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JUNE 9, 1981

Samples NO

(Note: UTM measurements in meters, all others in feet)

VANSANT-2-1

API No. 45-027-19901-00-03 VDMR Well Rep. No. W-7

DMQ File No. A-30-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 1-1454

County BUCHANAN Quadrangle VANSANT - 7-1/2'

Location (UTM) N 4,121,390; E 406,650 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1206' GR. TD 6271' Form. at TD ROSE HILL

INITIAL FLOW - SHOW Age SILURIAN

Date compl. or abandoned MARCH 19, 1948

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 653'; 748'; 3085'; 3736';5692'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL NOT ACIDIZED AND NOT SHOT.

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 75' at 644' to 726' at 1105'

SW at at at

Coal 90' to 95'; 285' to 288'; 983' to 985'; 1105' to 1118'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 0' to 6271'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Date Source CORRELATIONS BY MARSHALL S. MILLER, VDMR

Formation	Top	Datum (Subsea)	Thickness
POST-LEE	0'	+1206'	864'
LEE	864'	+342'	119'
POCAHONTAS	983'	+223'	351'
BLUESTONE	1334'	-128'	415'
PRIDE SHALE MEMBER	1547'	-341'	152'
PRINCETON	1749'	-543'	152'
HINTON	1901'	-695'	610'
LITTLE STONE GAP MEMBER	1901'	-695'	86'
STONY GAP SANDSTONE MEMBER	2484'	-1278'	27'
BLUEFIELD	2511'	-1305'	279'
GREENBRIER	2790'	-1584'	695' ✓ JKP/83
MACRRADY	3520		
PRICE	3595?		
CHATT	3780		2150'
"BEREA"	4340 - 4560'		225'
HANDCOCK DOLO	5930		145'
ROSE HILL			145'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 162.

Released to Open File: Completion JUNE 17, 1948

Samples YES

(Note: UTM measurements in meters, all others in feet)

VANSANT-2-2

API No. 45-027-20391-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-194

Operator TEXAS INTERNATIONAL PETROLEUM CORPORATION

Farm BIG VEIN

Co. Well No. IC-16

County BUCHANAN Quadrangle VANSANT - 7½'

Location (UTM) N4,122,210; E406,120 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1649' GR. TD 6535' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned APRIL 8, 1981

Result GAS WELL; SHUT-IN

Gas Shows _____

Gas Pays _____

Main Production _____ Prod. Form. DEVONIAN SHALE

Age DEVONIAN

Treatment: PERFORATED AT 6394' TO 6400', 6319' TO 6323', 6188' TO 6194", 5978' TO 5982'; 5946' TO 5950'; FRACTURED LOWER SHALE. SPOTTED 1000 GAL. of 28% HCL. FRACTURED WITH 12,000 POUNDS OF 80/100 SAND AND 24,000 POUNDS OF 20/40 SAND. PERFORATED: 5795' TO 5801'; 5725' TO 5732'; 5697' TO 5703'; 5567' TO 5571'; 5543' TO 5547'; 5499' TO 5504'. FRACTURED SHALE.

Initial Production _____

FINAL FLOW - N/A

Oil shows _____

Water FW X at 1124' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 7, 1982

Samples NO

(Note: UTM measurements in meters, all others in feet)

VANSANT-4-1

API No. 45-027-19948-00-03 VDMR Well Rep. No. _____

DMQ File No. BU-33

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm _____

Co. Well No. 1-2177

County BUCHANAN Quadrangle VANSANT - 7-1/2'

Location (UTM) N 4,117,960; E 400,570 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1452.6' GR. TD 4615' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned APRIL 7, 1955

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 1326'

Gas Pays _____

Main Production _____ Prod. Form. _____

Age _____

Treatment: _____

Initial Production _____

FINAL FLOW - NONE

Oil shows _____

Water FW X at 945' ____ at ____ ____ at ____

SW ____ at ____ ____ at ____ ____ at ____

Coal _____

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples ____ Interval Sheet ____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. ____ Res ____ Gamma ____ Neutron ____

Density ____ Sonic ____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion JULY 6, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

VANSANT-4-2

API No. 45-027-20110-00-03 VDMR Well Rep. No.

DMQ File No. BU-122

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm JOHN W. POBST ET AL

Co. Well No. 9719-T

County BUCHANAN Quadrangle VANSANT - 7-1/2'

Location (UTM) N 4,115,760; E 401,360 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1987.42' GR. TD 6772' Form. at TD CORNIFEROUS

INITIAL FLOW - 103,000 CU. FT. Age DEVONIAN

Date compl. or abandoned JULY 5, 1973

Result GAS WELL

Gas Shows 3442'; 4435'

Gas Pays 3436' to 3443'; 4428'

Main Production 4428' to 4435' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: FRACTURED MAXON SAND WITH 500 GALLONS MCA, 22,000 # 20/40 SAND AND 925 BARRELS WATER FROM 3436' to 3443' THROUGH 29 HOLES

Initial Production TEST AFTER FRACTURE - 0 - MCF AFTER BLOWING 6 HOURS. TEST AFTER ACIDIZING BIG LIME FROM 4428' to 4435'; 249 MCF AFTER BLOWING 6 HOURS NO RESULTS AFTER SHOOTING THE BROWN SHALE FORMATION.

FINAL FLOW - 249,000 CU. FT.

Oil shows

Water FW at at at

SW at at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples Interval Sheet

Sample Interval

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE, CALIPER, DUAL INDUCTION

Stratigraphic Data Source GAMMA RAY - DENSITY

Formation	Top	Datum (Subsea)	Thickness
PRINCETON	2840		
HINTON	2910		
BLUEFIELD	3450		
GREENBRIER	4040		
MACCRADY	4445		

Remarks

References

Released to Open File: Completion OCTOBER 3, 1973

Samples NONE

(Note: UTM measurements in meters, all others in feet)

VANSANT-6-1

API No. 45-027-19927-00-03 VDMR Well Rep. No. W-42

DMQ File No. BU-12

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 17-1952

County BUCHANAN Quadrangle VANSANT - 7-1/2'

Location (UTM) N 4,117,120; E 410,980 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1560.5' GR. TD 4823' Form. at TD DEVONIAN SHALE

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned NOVEMBER 19, 1952

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 984' to 986'; 1532'

Gas Pays

Main Production Prod. Form.

Age

Treatment:

Initial Production

FINAL FLOW - NONE

Oil shows

Water FW X at 50' at at

SW at at at

Coal 60' to 65'; 245' to 247'; 428' to 430'; 845' to 848'; 880' to 882'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 1856' to 3134'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATIONS BY J. M. WILSON AND R. C. MILICI VDMR, SEPTEMBER, 1963.

Formation	Top	Datum (Subsea)	Thickness
NO SAMPLES	0'	+1560.5'	1856'
BLUESTONE	1856'	-295.5'	382'
PRINCETON	2238'	-677.5'	172'
HINTON	2410'	-849.5'	724' (DEEPEST SAMPLE)

Remarks

References

Released to Open File: Completion FEBRUARY 17, 1953

Samples YES

(Note: UTM measurements in meters, all others in feet)

VANSANT-7-1

API No. 45-027-19902-00-03 VDMR Well Rep. No. W-9

DMQ File No. A-31-BU

Operator UNITED PRODUCING COMPANY INCORPORATED

Farm YUKON POCAHONTAS COAL COMPANY, ET AL

Co. Well No. 2-1466

County BUCHANAN Quadrangle VANSANT - 7-1/2'

Location (UTM) N 4,113,090; E 408,160 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1751.' GR. TD 5100' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JULY 4, 1948

Result GAS WELL; WELL SHUT IN, NOT PRODUCED

Gas Shows 1585'; 3062' to 3076'; 4058'

Gas Pays

Main Production 4375' Prod. Form. WEIR

Age MISSISSIPPIAN

Treatment: WELL SHOT ON 7-21-48 FROM 3060' to 3090' AND FROM 4335' to 4385' WITH 120 QUARTS OF NITROGLYCERINE! WELL ACIDIZED WITH 1,000 GALLONS OF ACID. (DEPTHS NOT GIVEN). NO RESULTS.

Initial Production

FINAL FLOW - 30,000 CU. FT.

Oil shows 1086'

Water FW X at 20' at 55' at 484'

SW X at 1310' at at

Coal 403' to 405'; 484' to 487'; 752' to 756'; 852' to 856'; 953' to 960'; 1120' to 1122'; 1147' to 1151' 1214' to 1218'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 79' to 5100'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source CORRELATION BY MARSHALL S. MILLER, VDMR

	Formation	Top	Datum (Subsea)	Thickness
	POST-LEE	0'	+1751'	1517'
	LEE	1517'	+234'	17'
	POCAHONTAS	1534'	+217'	466'
	BLUESTONE	2000'	-249'	371'
PRIDE	SHALE MEMBER	2205'	-454'	166'
	PRINCETON	2371'	-620'	209'
	HINTON	2580'	-829'	655'
LITTLE	STONE GAP MEMBER	2580'	-829'	65'
STONY GAP	SANDSTONE MEMBER	3145'	-1394'	90'
	BLUEFIELD	3235'	-1484'	345'

Remarks

References MARSHALL S. MILLER, 1974, STRATIGRAPHY AND COAL BEDS OF UPPER MISSISSIPPIAN AND LOWER PENNSYLVANIAN ROCKS IN SOUTHWESTERN VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 84, P. 166-167.

Released to Open File: Completion OCTOBER 2, 1948

Samples YES

(Note: UTM measurements in meters, all others in feet)

VANSANT-8-1

API No. 45-027-20108-00-03

VDMR Well Rep. No. W-3805

DMQ File No. BU-120

Operator COLUMBIA GAS TRANSMISSION CORPORATION

Farm LANDON R. WYATT ET AL

Co. Well No. 9721-T

County BUCHANAN Quadrangle VANSANT

Location (UTM) N 4,110,360; E 405,590 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1717.91' GR. TD 6739' Form. at TD DEVONIAN SHALE

INITIAL FLOW - 280,000 CU. FT. Age DEVONIAN

2200'± CHATT. SHALE

Date compl. or abandoned SEPTEMBER 5, 1974

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 3004'; 3006'

Gas Pays

Main Production Prod. Form.

Age

Treatment: FRACTURED MAXON FORMATION WITH 500 GALLONS OF MCA, 22,000 # 20/40 SAND AND 591 BARRELS FLUID FROM 3004' to 3010'; 25 PERFORATIONS.

Initial Production

FINAL FLOW - 0 CU. FT.

Oil shows

Water FW X at 120' at at

SW X at 588' at at

Coal

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log

Samples X Interval Sheet X

Sample Interval 0' to 6759'

Remarks

Geophysical Logs S.P. Res X Gamma X Neutron

Density X Sonic Other TEMPERATURE, DUAL INDUCTION, CALIPER

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion DECEMBER 4, 1974

Samples YES

(Note: UTM measurements in meters, all others in feet)

WHARNCLIFFE-9-1

API No. 45-027-19949-00-00 VDMR Well Rep. No. _____

DMQ File No. BU-34

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 2-8044

County BUCHANAN Quadrangle WHARNCLIFFE - 7-1/2'

Location (UTM) N 4,153,100; E 413,070 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 1259.46' GR. TD 5466' Form. at TD CORNIFEROUS

INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned JANUARY 31, 1955

Result GAS WELL

Gas Shows 1270'; 2094' to 2100'; 2765'

Gas Pays 2934' to 2939'; 4780'

Main Production 2934' to 2939' Prod. Form. BIG LIME

Age MISSISSIPPIAN

Treatment: ON 1-8-55 FRACTURED FORMATION FROM 3800' to 5466' WITH 11,500 POUNDS OF HERCULES GELATIN. WELL ACIDIZED FROM 2745' to 3004' WITH 2,000 GALLONS OF 15% ACID.

Initial Production

FINAL FLOW - 696,000 CU. FT.

Oil shows _____

Water FW X at 50' _____ at 70' _____ at 2094' to 2100'

SW _____ at _____ _____ at _____ _____ at _____

Coal 694' to 696'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

Formation	Top	Datum (Subsea)	Thickness

Remarks _____

References _____

Released to Open File: Completion MAY 1, 1955

Samples NONE

(Note: UTM measurements in meters, all others in feet)

WHARNCLIFFE-9-2

API No. 45-027-19965-00-03 VDMR Well Rep. No. W-147

DMQ File No. BU-51

Operator UNITED FUEL GAS COMPANY

Farm NATIONAL SHAWMUT BANK OF BOSTON

Co. Well No. 8431

County BUCHANAN Quadrangle WHARNCLIFFE - 7-1/2'

Location (UTM) N 4,153,620; E 413,620 UTM Zone 17

(Lat. and Long.)

Field Province APPALACHIAN PLATEAUS

Elev. (specify) 1465.15' GR. TD 3227' Form. at TD INJUN

INITIAL FLOW - SHOW Age MISSISSIPPIAN

Date compl. or abandoned DECEMBER 31, 1956

Result DRY HOLE, PLUGGED AND ABANDONED

Gas Shows 2250'; 2767'; 3220'

Gas Pays

Main Production Prod. Form.

Age

Treatment: WELL ACIDIZED FROM 3142' to 3150' WITH 2,000 GALLONS OF 15% ACID.

Initial Production

FINAL FLOW - SHOW

Oil shows

Water FW X at 115' at 2320' at

SW at at at

Coal 798' to 800'

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log X

Samples X Interval Sheet X

Sample Interval 2991' to 3227'

Remarks

Geophysical Logs S.P. Res Gamma Neutron

Density Sonic Other

Stratigraphic Data Source

Formation	Top	Datum (Subsea)	Thickness

Remarks

References

Released to Open File: Completion MARCH 31, 1957

Samples YES

(Note: UTM measurements in meters, all others in feet)