

Department of Mines, Minerals and Energy
Division of Gas and Oil

Operations Name: A W HALE
Permit #: 3210

Well #: VCP3594
VA File #: DI-0826

Department of Mines, Minerals and Energy
Division of Gas and Oil
P.O. Box 1416
Abingdon, Virginia 24210
540/676-5423

SEP 18 1997
RECEIVED
303 1201

COMPLETION REPORT

WELL TYPE: Oil Gas Coalbed Methane or Injection well

Date Well Completed: 6/9/97 Total Depth of Well: LTD - 2659 DTD - 2650

Attach the Drilling Report; if not previously submitted. In addition, submit any changes in casing or tubing that were approved after the Drilling Report was submitted.

STIMULATION RECORD

Zone 1: COAL SEAMS* Formation Stimulated With: 70Q FOAM W/
36600# 12/20 SAND - 667000 SCF N2 - 510 BF
Perforated: 1295 to: 1928.5 No. of Perforations: 11 Size: 0.34"
Formation Broke Down at: 2023 PSIG Average Injection Rate: 39.5 BPM
ISIP: 1421 PSIG 5 Min SIP: 1332 PSIG Average Injection Pressure 3236
Date Stimulated: 6/9/97

* U SEABOARD, GREASY CREEK, U HORSEPEN, M HORSEPEN, BECKLEY, L HORSEPEN

Zone 2: _____ Formation Stimulated With: _____
Perforated: _____ to: _____ No. of Perforations: _____ Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate: _____
ISIP: _____ PSIG 5 Min SIP: _____ PSIG Average Injection Pressure _____
Date Stimulated: _____

Zone 3: _____ Formation Stimulated With: _____
Perforated: _____ to: _____ No. of Perforations: _____ Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate: _____
ISIP: _____ PSIG 5 Min SIP: _____ PSIG Average Injection Pressure _____
Date Stimulated: _____

FINAL PRODUCTION: _____ Natural _____ X _____ After Stimulation
BOD MCFD HOURS TESTED ROCK PRESSURE HOURS TESTED
Zone (1)
Zone (2)
Zone (3)
Final Production if Gas
Zones are Commingled 50 MCFD 6 Hours Tested 350 PSIG 48 Hours Tested

*Use additional sheets with this format, if more than three (3) zones were stimulated.

Permittee: EQUITABLE RESOURCES ENERGY COMPANY (Company)

By: Joseph W. [Signature] (Signature)

ENTERED

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DRILLING REPORT

Pursuant to VR-480-05-22.1, § 1.36, the undersigned Permittee submits this report on Well VCP3594 in the
KENADY District of the DICKENSON County, Virginia on 12TH day,
SEPTEMBER month, 1997.

LOCATION

County: DICKENSON District: KENADY
Surface Elevation: 2258.5 Elev of Kelly Bushing: 2268.5 Quadrangle: CANEY RIDGE
900 Ft. S of Latitude 37 02 30 and 275 Ft. W of Longitude 82 25 00

DRILLING DATA

Date Drilling Commenced: 5/24/97 Drilling Contractor: UNION DRILLING
Date Drilling Completed: 5/27/97 Rig Type: X Rotary Cable Tool
Total Depth of Well: LTD - 2659 DTD - 2650

GEOLOGICAL DATA

| | | | | | | |
|-----------------|-----------|------|-----|-----------|------|-----|
| Fresh Water at: | 300 feet | DAMP | GPM | 1550 feet | DAMP | GPM |
| | 2231 feet | DAMP | GPM | feet | | GPM |
| | feet | | GPM | feet | | GPM |
| Salt Water at: | feet | | GPM | feet | | GPM |
| | feet | | GPM | feet | | GPM |
| | feet | | GPM | feet | | GPM |

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA | | |
|--------------|------|--------|-----------|----------------|----|-----------|
| | | | | YES | NO | MINED OUT |
| RAVEN | 888 | 891 | 3 | | | |
| JAWBONE | 1030 | 1032 | 2 | | | |
| U SEABOARD | 1295 | 1297 | 2 | | | |
| GREASY CREEK | 1427 | 1429 | 2 | | | |
| L HORSEPEN | 1927 | 1929 | 2 | | | |
| POCO #5 | 2292 | 2294 | 2 | | | |
| POCO #2 | 2336 | 2340 | 4 | | | |

GAS AND OIL SHOWS:

| <u>FORMATION</u> | <u>TOP</u> | <u>BOTTOM</u> | <u>THICKNESS</u> | <u>IPF (MCFD/BOPD)</u> | <u>PRESSURE</u> | <u>HOURS TESTED</u> |
|------------------|------------|------------------|------------------|------------------------|-----------------|---------------------|
| | | <u>2400/2600</u> | | <u>ODOR</u> | | |

Cuttings or samples are are not available for examination by a member of the Virginia Division of Mineral Resources
 Cuttings or samples have have not been furnished to the Virginia Division of Mineral Resources

ELECTRIC LOGS AND SURVEYS

List logs run on wellbore: GR/ DEN/TMP

Did log disclose vertical location of a coal seam? Yes No

SURVEY RESULTS

| DEPTH OF SURVEY | DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL | DEPTH OF SURVEY | DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL |
|-----------------|---|-----------------|---|
| 200 | 1/2° | 1950 | 3/4° |
| 400 | 1° | 1979 | 3/4° |
| 600 | 1° | 2057 | 3/4° |
| 800 | 1° | 2257 | 1° |
| 1000 | 1° | 2387 | 1° |
| 1200 | 1° | 2400 | 1° |
| 1400 | 1° | 2600 | 1° |
| 1498 | 1° | | |
| 1700 | 1° | | |
| 1844 | 1° | | |

CASING AND TUBING

| | SIZE | TOP | BOTTOM | LENGTH | CEMENT USED IN CU/FT | DATE CEMENTED | PACKERS OR BRIDGE PLUGS | | |
|---|--------|-----|---------|--------|----------------------|---------------|-------------------------|------|--------|
| | | | | | | | KIND | SIZE | SET AT |
| <u>Conductor</u> | 11 3/4 | | 31 | 21 | GROUTED | | | | |
| <u>Surface</u> | | | | | | | | | |
| <u>Water Protection</u> | 8 5/8 | | 320 | 310 | 90(106) | 5/24/97 | | | |
| <u>Coal Protection</u> | | | | | | | | | |
| <u>Other Casing and Tubing Left in Well</u> | 4 1/2 | | 2597 | 2587 | 535(690) | 5/27/97 | | | |
| | 2 3/8 | | 2084.55 | | | | | | |

Liners

REMARKS: Shut down, fishing jobs, depths and dates, caving, lost circulation, etc.

DRILLER'S LOG

Compiled by: ENGINEERING

| AGE | FORMATION | GENERAL LITHOLOGY | COLOR | DEPTH | | THICKNESS | REMARKS |
|----------------------|--------------------------|-------------------|-------|-------|--------|-----------|---------|
| | | | | TOP | BOTTOM | | |
| PENN | SAND, SHALE & THIN COALS | RAVEN | | 0 | 888 | 888 | |
| | SAND, SHALE & THIN COALS | JAWBONE | | 888 | 891 | 3 | |
| | SAND, SHALE & THIN COALS | U SEABOARD | | 891 | 1030 | 139 | |
| | SAND, SHALE & THIN COALS | GREASY CREEK | | 1030 | 1032 | 2 | |
| | SAND, SHALE & THIN COALS | L HORSEPEN | | 1032 | 1295 | 263 | |
| | SAND, SHALE & THIN COALS | POCO #5 | | 1295 | 1297 | 2 | |
| | SAND, SHALE & THIN COALS | POCO #2 | | 1297 | 1427 | 130 | |
| | SAND, SHALE & THIN COALS | | | 1427 | 1429 | 2 | |
| | SAND, SHALE & THIN COALS | | | 1429 | 1927 | 498 | |
| | SAND, SHALE & THIN COALS | | | 1927 | 1929 | 2 | |
| | SAND, SHALE & THIN COALS | | | 1929 | 2292 | 363 | |
| | SAND, SHALE & THIN COALS | | | 2292 | 2294 | 2 | |
| | SAND, SHALE & THIN COALS | | | 2294 | 2336 | 42 | |
| | SAND, SHALE & THIN COALS | | | 2336 | 2340 | 4 | |
| | SAND, SHALE & THIN COALS | | | 2340 | 2659 | 319 | |
| LOGGER'S TOTAL DEPTH | | | | 2659 | | | |

Permittee: EQUITABLE RESOURCES ENERGY COMPANY (Company)

By: *Joseph A. King* (Signature)

275'

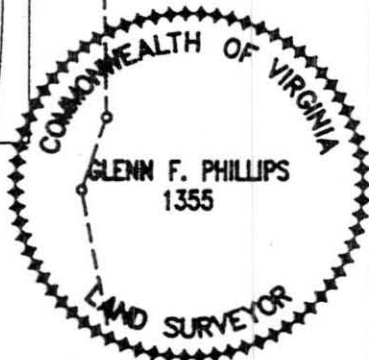
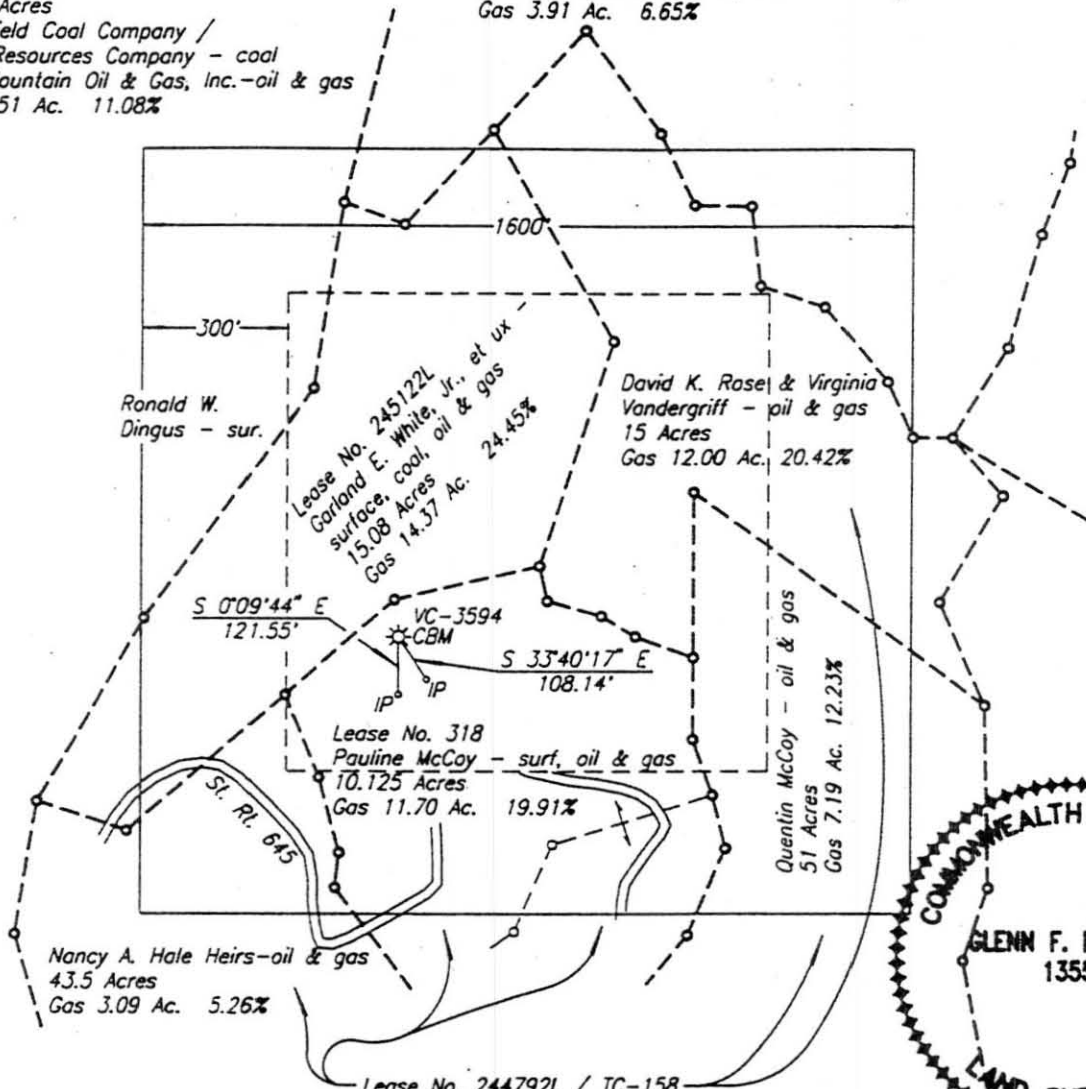
900'

Latitude 37° 02' 30"

Longitude 82° 25' 00"

Lease No. PO-148 / T-123
 S. G. Rose
 70.89 Acres
 Clinchfield Coal Company /
 Pyxis Resources Company - coal
 Pine Mountain Oil & Gas, Inc. - oil & gas
 Gas 6.51 Ac. 11.08%

Lease No. PO-148 / T-28
 Nellie G. Carico
 97.41 Acres
 Clinchfield Coal Company /
 Pyxis Resources Company - coal
 Pine Mountain Oil & Gas, Inc. - oil & gas
 Gas 3.91 Ac. 6.65%



FINAL PLAT

Well elevation determined by trigonometric leveling from BM MLB 1576

Area of Unit = 58.77 Ac.

Well Coordinates: (VA St. Plane S. Zone,
 Calculated from CCC coordinates)
 N 280,716 E 856,861

Well Coordinates: (Clinchfield Coal Co.)
 S 22,116.31 W 9,967.01

WELL LOCATION PLAT

11-G-85

COMPANY Equitable Resources Energy Company WELL NAME AND NUMBER VC-3594
 TRACT NO. TC-158 ELEVATION 2257.56 QUADRANGLE Caney Ridge
 COUNTY Dickenson DISTRICT Kenady SCALE 1" = 400' DATE 6-02-1997

This Plat is a new plat ; an updated plat ; or a final location plat

+ Denotes the location of a well on United States topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Glenn F. Phillips

Licensed Professional Engineer or Licensed Land Surveyor