

W5-380

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

Operations Name: VIGG (JOSEPH MEADE) VC 2929
Permit #: 2435

Department of Mines, Minerals and Energy
Division of Gas and Oil
P. O. Box 1416
Abingdon, Virginia 24210
703/676-5423

ENTERED
COMPLETION REPORT



WELL TYPE: Oil Gas Coalbed Methane or Injection well

Date Well Completed: 7-21-93 Total Depth of Well: LTD = 2560' LTD = 2560'

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: 70 Q FOAM
W/21800 # 12/20 SAND - 1151200 SCF N2 - 2902 BF
Perforated: 1908 TO 2434.5 No. of Perforations: 16 Perforation Size: .34"
Formation Broke Down at: 1597 PSIG Average Injection Rate: 17.1 BPM (57 DR)
ISIP 1940 PSIG 5 MIN SIP 1749 PSIG Average Injection Pressure 3586 PSIG
Date Stimulated 7-22-93

* POCO #8, POCO #7, POCO #6, POCO #5, POCO #4, POCO #1
Zone 2: COAL SEAMS** Formation Stimulated With: 70 Q FOAM
W/15500 # 12/20 SAND - 796400 SCF N2 - 2180 BF
Perforated: 1197 TO 1845 No. of Perforations: 16 Perforation Size: .34"
Formation Broke Down at: 1309 PSIG Average Injection Rate: 19.7 BPM (66 DH)
ISIP 1400 PSIG 5 MIN SIP 1318 PSIG Average Injection Pressure 3295 PSIG
Date Stimulated 7-26-93

**GREASY CREEK, L. SEABOARD, UNNAMED "B", C-SEAM, WARCREEK, L. HORSEPEN, X-SEAM RIDER, X-SEAM
Zone 3: _____ Formation Stimulated With: _____
Perforated: _____ TO _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate: _____
ISIP _____ PSIG _____ MIN SIP _____ PSIG Average Injection Pressure _____ PSIG
Date Stimulated _____

FINAL PRODUCTION: Natural After Stimulation
BOD MCFD HOURS TESTED ROCK PRESSURE HOURS TESTED
Zone (1) _____
Zone (2) _____
Zone (3) _____
Final Production if Gas Zones are Commingled 53 MCFD 6 Hours Tested 305 PSIG 48 Hours Tested

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

Permittee: EQUITABLE RESOURCES EXPLORATION (Company)

By: Joseph L. Long (Signature)

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DRILLING REPORT

Pursuant to VR-480-05-22.1, § 1.36, the undersigned Permittee submits this report on Well VC2929 in the LIPPS District of the WISE County, Virginia on 19TH day, AUGUST month, 19 93.

377362.67E
4089245.38N

LOCATION

County: WISE District: LIPPS
Surface Elevation: 2507.98' Elevation of Kelly Bushing: 2517.98' Quadrangle: COEBURN
5575 FT. S. of Latitude 36° 57' 30" and 625 FT. W. of Longitude 82° 22' 30"
36° 56' 35.28" *82° 22' 30.00"*

Attach a final location plat as required by VR 480-05-22.1, § 1.36.

867204.33E
245276.14N

DRILLING DATA

Date Drilling Commenced: 7-7-93 Drilling Contractor: UNION DRILLING
Date Drilling Completed: 7-11-93 Rig Type: Rotary Cable Tool
Total Depth of Well: LTD=2530 DTD=2560

GEOLOGICAL DATA

Fresh Water at: 118 Feet 1/4"STREAM GPM _____ Feet _____ GPM
146 Feet DAMP GPM _____ Feet _____ GPM
Salt Water at: _____ Feet _____ GPM _____ Feet _____ GPM
_____ Feet _____ GPM _____ Feet _____ GPM

COAL SEAMS:

| NAME | TOP | BOTTOM | THICKNESS | MINING IN AREA | | |
|--------------|------|--------|-----------|----------------|----|-----------|
| | | | | YES | NO | MINED OUT |
| GREASY CREEK | 1197 | 1199 | 2 | | | |
| WARCREEK | 1670 | 1673 | 3 | | | |
| L. HORSEPEN | 1793 | 1795 | 2 | | | |
| POCO #7 | 2102 | 2104 | 2 | | | |
| POCO #6 | 2150 | 2152 | 2 | | | |
| POCO #5 | 2197 | 2200 | 3 | | | |
| POCO #4 | 2232 | 2234 | 2 | | | |
| POCO #1 | 2430 | 2435 | 5 | | | |

GAS AND OIL SHOWS:

| FORMATION | TOP | BOTTOM | THICKNESS | IPF (MCFD/BOPD) | PRESSURE | HOURS TESTED |
|---------------|-----|--------|-----------|-----------------|----------|--------------|
| NONE REPORTED | | | | | | |

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

ELECTRIC LOGS AND SURVEYS

List logs run on wellbore: SLD/TEMP/GR

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

SURVEY RESULTS

| DEPTH OF SURVEY | DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL | DEPTH OF SURVEY | DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL |
|--------------------|--|--------------------|--|
| 207 | 1/4° | 1960 | 1° |
| 440 | 3/4° | 2190 | 1° |
| 680 | 3/4° | 2411 | 1° |
| 868 | 1/2° | 2475 | 1° |
| 1090 | 3/4° | | |
| 1312 | 3/4° | | |
| 1534 | 1/2° | | |
| 1748 | 1/4° | | |

CASING AND TUBING

| | SIZE | TOP | BOTTOM | LENGTH | CEMENT USED | DATE | PACKERS OR BRIDGE PLUGS | | | |
|---|---------|-----|----------|--------|--------------|----------|-------------------------|------|--------|--|
| | | | | | (IN CU/FT) | CEMENTED | KIND | SIZE | SET AT | |
| <u>Conductor</u> | 13 3/8" | | 30' | 20' | | | | | | |
| <u>Surface</u> | 8 5/8" | | 318' | 308' | 125(148) | 7-7-93 | | | | |
| <u>Water Protection</u> | | | | | | | | | | |
| <u>Coal Protection</u> | | | | | | | | | | |
| <u>Other casing and Tubing Left in Well</u> | 4 1/2" | | 2495' | 2485' | 516(666) | 7-11-93 | | | | |
| | 2 3/8" | | 2338.38' | | | | | | | |

Liners

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

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DRILLER'S LOG

compiled by ENGINEERING

| GEOLOGIC AGE | FORMATION | GENERAL LITHOLOGY | COLOR | DEPTH | | THICKNESS | REMARKS |
|--------------------------|--------------------------|----------------------|-------|-------|--------|-----------|---------|
| | | | | TOP | BOTTOM | | |
| PENNSYLVANIAN | SAND, SHALE & THIN COALS | | | 0 | 1197 | 1197 | |
| | GREASY CREEK COAL | | | 1197 | 1199 | 2 | |
| | SAND, SHALE & THIN COALS | | | 1199 | 1670 | 471 | |
| | WARCREEK COAL | | | 1670 | 1673 | 3 | |
| | SAND, SHALE & THIN COALS | | | 1673 | 1793 | 120 | |
| | L. HORESEPEN COAL | | | 1793 | 1795 | 2 | |
| | SAND, SHALE & THIN COALS | | | 1795 | 2102 | 307 | |
| | POCO #7 COAL | | | 2102 | 2104 | 2 | |
| | SAND, SHALE & THIN COALS | | | 2104 | 2150 | 46 | |
| | POCO #6 COAL | | | 2150 | 2152 | 2 | |
| | SAND, SHALE & THIN COALS | | | 2152 | 2197 | 45 | |
| | POCO #5 COAL | | | 2197 | 2200 | 3 | |
| | SAND, SHALE & THIN COALS | | | 2200 | 2232 | 32 | |
| | POCO #4 | | | 2232 | 2234 | 2 | |
| | SAND, SHALE & THIN COALS | | | 2234 | 2430 | 196 | |
| POCO #1 | | | 2430 | 2435 | 5 | | |
| SAND, SHALE & THIN COALS | | | 2435 | 2525 | 90 | | |
| MISSISSIPPIAN | RED ROCK & SHALE | | | 2525 | 2530 | 5 | |
| | LOGGER'S TOTAL DEPTH | | | | 2530 | | |

Permitted: EQUITABLE RESOURCES EXPLORATION (Company)

By: Joseph A. Army (Signature)