

API NO. 45 - 051 - 21672
WELL NAME: RAINWATER RAMSEY VC2006
DATE DECEMBER 12, 1991

ENTERED

Virginia Oil and Gas Inspector
P. O. Box 1416
Abingdon, VA 24210
703 628-8115

REPORT OF COMPLETION OF WELL WORK

Pursuant to Regulation 4.06 of the Regulations under the Virginia Oil and Gas Act, the undersigned well operator reports completion of the type(s) of well work specified below on the referenced well in ERVINTON District DICKENSON County, Virginia on 24TH day, SEPTEMBER month, 1991.

WELL TYPE: Oil / Gas / Enhanced Recovery / Waste Disposal
If Gas-Production / Underground Storage Exempt by Code Section 45.1-300.B.1. from general Oil and Gas Conservation Law yes / no
WELL WORK: Drill / Deepen / Redrill / Stimulate
Plug Off Old Formation / Perforate New Formation / Plug
Replug / Other physical change in well (specify) _____
The well work was done as shown in the Appendix(es) applicable to the type(s) of well work involved.

CONFIDENTIALITY STATUS UNDER CODE OF VIRGINIA SECTION 45.1-332

X Ninety days from the filing of this report

OR

Two years from _____, the date on which the referenced well was completed, the well being an exploratory well as defined in Code of Virginia, Section 45.1-288.21.

APPLICANT EQUITABLE RESOURCES EXPLORATION
BY Joseph R. Aung
ITS SR. ENGINEER
ADDRESS 1989 EAST STONE DRIVE, KINGSPORT, TN 37660
TELEPHONE 615-378-5101



CONFIDENTIAL UNTIL 3/18/92

COMPLETION REPORT

WELL TYPE: Oil () Gas Production (X) Gas-Underground Storage ()
Enhanced Recovery () Waste Disposal ()

LOCATION

COUNTY DICKENSON DISTRICT ERVINTON

SURFACE ELEVATION 2304.47' QUADRANGLE NORA

LATITUDE 6780 'S 37° 07 ' 30 " LONGITUDE 6520 'W 82° 17 ' 30 "

DRILLING DATA

DATE DRILLING COMMENCED 9-13-91 DRILLING CONTRACTOR UNION DRILLING
DATE DRILLING COMPLETED 9-16-91 ADDRESS P.O. DRAWER 40, BUCKHANNON, WV
DATE WELL COMPLETED 9-24-91 TELEPHONE NUMBER 304-472-4610
TOTAL DEPTH OF COMPLETED WELL LTD=2496 RIG TYPE X ROTARY CABLE TOOL
DTD=2500

GEOLOGICAL DATA

FRESH WATER AT (1) 200 FEET 1/4"STR-GPM: (2) FEET GPM
SALT WATER AT (1) FEET GPM: (2) FEET GPM

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA	
				YES	NO MINED OUT
GREASY CREEK	1477	1481	4		X
UNNAMED "A"	1635	1637	2		
M. HORSEPEN	1698	1700	2		
WARCREEK	1807	1809	2		

OIL AND GAS SHOWS:

FORMATION	TOP	BOTTOM	THICKNESS	IPF (MCFD/BOPD)	PRESSURE	HOURS TESTED
		1839		146 MCFD		
		2050		103 MCFD		
		2270		103 MCFD		
		2500		133 MCFD		

STIMULATION RECORD

WARCREEK, C-SEAM, M. HORESEPEN, UNNAMED "C", GREASY CREEK
ZONE (1) POGO#9, L-HORSEPEN, BECKLEY FORMATION STIMULATED WITH 70 Q FOAM
15000 #12/20 SAND-1,003,000 SCF N2-822 BF
PERFORATED 1478 TO 2029.5 NO. OF PERFORATIONS 16 PERFORATION SIZE .34"
FORMATION BROKE DOWN AT 1100 PSIG AVERAGE INJECTED RATE 16.79 BPM
INITIAL SHUT IN PRESSURE 1806 PSIG 5 MINUTE SHUT IN PRESSURE 1481 PSIG

STIMULATION RECORD

ZONE (2) FORMATION STIMULATED WITH
PERFORATED TO NO. OF PERFORATIONS PERFORATION SIZE
FORMATION BROKE DOWN AT PSIG AVERAGE INJECTED RATE BPM
INITIAL SHUT IN PRESSURE PSIG MINUTE SHUT IN PRESSURE PSIG

FINAL PRODUCTION: () NATURAL (X) AFTER STIMULATION

BOD MCFD HOURS TESTED ROCK PRESSURE HOURS TESTED
ZONE (1)
ZONE (2)
FINAL PRODUCTION IF GAS ZONES ARE COMMINGLED 162* MCFD 6 HOURS TESTED
320 PSIG 48 HOURS TESTED

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS
BECKLEY	1853	1855	2
L. HORESEPEN	1927	1929	2

*NOT ABSOLUTE

CASING AND TUBING

	<u>SIZE</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>LENGTH</u>	<u>PACKERS OR</u>	
					<u>PERFORATIONS</u> <u>FEET TO FEET</u>	<u>BRIDGE PLUGS</u> <u>KIND SIZE SET AT</u>
CONDUCTOR	11 3/4"		31	21		

CASING

Circulated and Cemented to Surface	8 5/8"		365	355		
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WATER PROTECTION

(Casing Set According to Section 45.1-334)	4 1/2"		2342	2332		
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COAL PROTECTION

(Casing Set According to Section 45.1-334)						
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OTHER CASING &

Tubing Left In Well	2 3/8"		2090			
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LINERS

Remaining In Well						
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OTHER used and not left

Is the well underlain by Red Shale Yes No, If Yes, was coal protection string set to Red Shales? Yes No

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

Samples and Cuttings

Will Will not be available for examination by a member of the Virginia Division of Mineral Resources

Will Will not be furnished to the Virginia Division of Mineral Resources upon request

Will Will not require sacks to be furnished by the Virginia Division of Mineral Resources

Electric Logs and Surveys:

Type of Electric Log(s) Ran: SLD/UGR/TLT

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

Was log made at request of a coal owner according to Section 45.1-333.B.1 of the Virginia Code? Yes No

Note: If a coal seam was located, the part of the survey from the surface through the coal is attached in accordance with Section 45.1-333.B.3 of the Virginia Code

Deviation Surveys

Deviation surveys were were not required under Section 45.1-333.C of the Virginia Code "to the bottom of the lowers published coal seam depth."

Note: If a deviation survey(s) was/were required, the survey results are as follows:

<u>Depth of Survey</u>	<u>Feet/Degree Deviated From True Vertical</u>	<u>Depth of Survey</u>	<u>Feet/Degree Deviated From True Vertical</u>
	<u>See Attachment</u>		

A continuous survey was was not required, under Section 45.1-333.C of the Virginia Code.

Note: If a continuous survey was required, the survey results are attached.

Changes in the Permitted Well Work:

The well operator did did not make any change(s) in the permitted well work, verbally approved by the Inspector or Assistant Inspector under Regulation 4.03 of the Regulations under the Virginia Oil and Gas Act, for the purpose of insuring successful completion of the well work.

NOTE: The nature and purpose of each such change, if any, is set out below or on additional sheets if such are required.

Confidentiality Status:

Confidentiality status under Section 45.1-332 of the Virginia Code:

The operator requests that information herein and log(s) be kept confidential (after COMPLETION DATE of the well) for a period of

Ninety (90) days
 two (2) years, if the well is exploratory

DRILLER'S LOG

Compiled by R.J. MACDONALD

Geological Age	Formation	General Lithology	Color	Depth		Thickness	Remarks
				Top	Bottom		
PENNSYLVANIAN		SAND, SHALE & THIN COALS		0	1477	1477	
		GREASY CREEK COAL		1477	1481	4	
		SAND, SHALE & THIN COALS		1481	1635	154	
		UNNAMED "A" COAL		1635	1637	2	
		SAND, SHALE & THIN COALS		1637	1698	61	
		MIDDLE HORSEPEN COAL		1698	1700	2	
		SAND, SHALE & THIN COALS		1700	1807	107	
		WARCREEK COAL		1807	1809	2	
		SAND, SHALE & THIN COALS		1809	1853	144	
		BECKLEY COAL		1853	1855	2	
		SAND, SHALE & THIN COAL		1855	1927	72	
		LOWER HORSEPEN COAL		1927	1929	2	
MISSISSIPPIAN		SAND, SHALE & THIN COALS		1929	2479	550	
		RED ROCK & SHALE		2479	2496	17	
		LOGGER'S TOTAL DEPTH		2496			

DIRECTIONAL SURVEY

WELL VC 2006

<u>DEPTH</u>	<u>DEGREES</u>
235	1/2°
423	3/4°
664	1°
851	3/4°
1060	1/2°
1240	3/4°
1467	3/4°
1652	1°
1839	1°
2050	3/4°
2270	1°
2500	1°

LEGEND
 ○ - Proposed Gas Well
 ⊗ - Offset Well
 —○— - Mineral Line

Ls. # PO-148, T-115
 Rainwater Ramsey Tr.
 1303.00 Ac.
 Clinchfield Coal Co./
 Pyxis Resources Co.-Coal & Surface
 Pine Mountain Oil & Gas Co.-Oil & Gas
 GAS-16.740 Ac., 28.48%

Well Loc.
 VC-2006

P-241
 N 05°55'47" W
 1781.54'

P-318
 N 64°02'32" E
 2372.90'

S 67°02'48" W
 173.63'

S 52°09'17" W
 268.38'

Ls. # PO-148, T-377
 W. B. Stras Tr.
 388.00 Ac.
 Clinchfield Coal Co./
 Pyxis Resources Co.-Coal & Surface
 Pine Mountain Oil & Gas Co.-Oil & Gas
 GAS-28.430 Ac., 48.38%

Ls. # PO-148, T-401
 A. A. Skeen Tr.
 98.08 Ac.
 Clinchfield Coal Co./
 Pyxis Resources Co.-Coal & Surface
 Pine Mountain Oil & Gas Co.-Oil & Gas
 GAS-13.600 Ac., 23.14%

Well Coordinates:
 N-2330.64
 E-20205.91

P-191
 S 20°01'18" E
 1663.55'

887924
 303884



COMPANY Equitable Resources Exploration

ADDRESS 1989 E. Stone Dr., Kingsport, TN 37660

WELL NAME VC-2006

FARM Rainwater Ramsey TRACT T-115

LEASE NO. PO-148 ELEVATION 2304.47

ACRES 1303.00 QUADRANGLE Nora

COUNTY Dickenson DISTRICT Ervinton

REG. ENGINEER X REG. NO. 6992

CERT. LAND SURVEYOR _____ CERT. NO. _____

FILE NO. _____ DRAWING NO. 2910

DATE April 11, 1991 SCALE 1" = 400'

This plat is X new _____ updated
 This plat X is _____ is not based on a mine coordinate
 system established for the areas of the well location.

FORM 5

WELL LOCATION MAP

WELL NO. VC-2006

+ Denotes location of well on United States
 Topographic Maps, scale 1 to 24,000, lat-
 itude and longitude lines being represented
 by border lines as shown.

CERTIFICATION OF WELL PLAT

I, the undersigned, hereby certify that this
 plat is correct to the best of my knowledge
 and belief, and shows all the information
 required by law and the regulations of the
 Va. Well Review Board.

H. L. Baldrige
 Registered Engineer or Certified
 Land Surveyor in Charge