Operations Name: ANR COAL (J C RICHM Well #: VDP3738

VA File #: WS-0511

Permit #: 3537

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

COMPLETION REPORT

WELL TYPE: GAS WELL

Date Well Completed 08/05/1998

Total Depth of Well:

LTD -

5838

DTD -5838

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: LOWER HURON

Formation Stimulated With: 75Q FOAM

Total Sand Used: 53095 lbs Acid Strength: Sand Size: 20/40 **Total Acid:** 0 gal.

545429 SCF N2 Used: Total Fluid Injected: 339 bbls.

Perforated: 5634 No. of Perforations: 26 Size: 0.34 5481 to Formation Broke Down at: 0 **PSIG** Average Injection Rate: **BPM**

1691 **PSIG** 5 Min SIP: 1502 **PSIG Average Injection Pressure:** 3180

Date Stimulated: 07/02/1998

Zone 2: CLEVELAND SHALE

Formation Stimulated With: 75Q FOAM

Total Sand Used: 56812 lbs Sand Size: 20/40 Total Acid: 0 gal. Acid Strength:

N2 Used: 542699 SCF Total Fluid Injected: 386 bbls.

Perforated: 5007 4897 to 23 Size: 0.34 No. of Perforations: Formation Broke Down at: 989 **PSIG BPM**

Average Injection Rate:

1647 **PSIG** 1479 **PSIG** 5 Min SIP: Average Injection Pressure: 2960

Date Stimulated: 07/02/1998

Zone 3: BIG LIME

Formation Stimulated With: 50Q FOAMED ACID

Acid Strength: 15% **Total Sand Used:** 0 lbs Sand Size: Total Acid: 4500 gal.

N2 Used: 270000 SCF Total Fluid Injected: 413 bbls.

4365 Perforated: 4197 to No. of Perforations: 15 Size: 0.34 Formation Broke Down at: 1047 **PSIG** Average Injection Rate: **BPM**

ISIP: 953 **PSIG PSIG** 5 Min SIP: 920 **Average Injection Pressure:** 1118

Date Stimulated: 07/02/1998

FINAL PRODUCTION: Natural X After Stimulation

> BOD HOURS TESTED MCFD ROCK PRESSURE HOURS TESTED

Final Production If Gas

Zones are Commingled 518 MCF Hours Tested 720

PSIG

Hours Tested 48

Equitable Resources Energy Company (Company)

By:

(Signature)

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

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DRILLING REPORT

Pursuant to VR-480-05-22.1 § 1.36, the undersigned Permittee submits this report on Well VDP3738 in the GLADEVILLE District of WISE County, Virginia on the 15 day, October month, 1998.

LOCATION

County: WISE

District: GLADEVILLE

Surface Elevation: 2263.31 Elev of Kelly Bushing:

2273.31

Quadrangle: POUND

3425 Ft. S of Latitude 37 ° 02 ' 30 " 3290 Ft. W of Longitude 82 ° 32 ' 30 " and

DRILLING DATA

Date Drilling Commenced: 06/03/1998 Date Drilling Completed:

Drilling Contractor: UD 10

5838

X

Rotary __ Cable Tool

06/18/1998 Rig Type: Total Depth of Well: LTD -DTD -5838

GEOLOGICAL DATA

Fresh Water at:

1077 feet

5799.00 STREAM

Salt Water at:

COAL SEAMS: MINING IN AREA

NAME BOTTOM THICKNESS TOP YES NO MINED OUT

UNIDENTIFIED 2096 2099 3

GAS AND OIL SHOWS:

FORMATION TOP **BOTTOM** THICKNESS IPF (MCFD/BOPD) PRESSURE HOURS TESTED 2590 ODOR 3962 ODOR 4157 ODOR 4372 ODOR 4465 ODOR 4745 **ODOR**

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

Operations Name: ANR COAL (J C RICH Well #: VDP3738

Permit #: 3537

VA File #: WS-0511

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

ELECTRIC LOGS AND SURVEYS

List logs run on wellbore:

CBL

CCL DEN

GR **TMP**

Did log disclose vertical location of a coal seam?

No

SURVEY RESULTS

DEPTH OF SURVEY	DIRECTION/DISTANCE/DEGREE FROM TRUE VERTICAL	DEPTH OF SURVEY	DIRECTION/DISTANCE/DEGREE FROM TRUE VERTICAL
200	0.25°	400	0.25°
600	0.50°	800	0.50°
1000	0.75°	1200	0.75°
1400	0.75°	1800	0.75°
2000	0.75°	2097	0.75°
2297	0.75°	2497	1.00°

CASING AND TUBING

					CEMENT USED	DATE	-	CKERS DGE PL	
	SIZE	TOP	BOTTOM	LENGTH	IN CU/FT	CEMENTED	KIND	SIZE	SET AT
Conductor Pipe	16.000	0.00	79.00	79.00					
Conductor Pipe	13.375	0.00	105.00	105.00					
Surface Casing	9.625	0.00	318.00	318.00	136	6/5/98			
Intermediate Casing 1	7.000	0.00	2510.00	2510.00	469	6/10/98			
Production Casing	4.500	0.00	5683.00	5683.00	178	6/19/98			
Tubing String 1	2.375	0.00	5201.00	5201.00					

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

Department of Mines, Minerals and Energy Division of Gas and Oil Operations Name: ANR COAL (J C RICH

Permit #: 3537

Well #: <u>VDP3738</u>
VA File #: WS-0511

DRILLER'S LOG

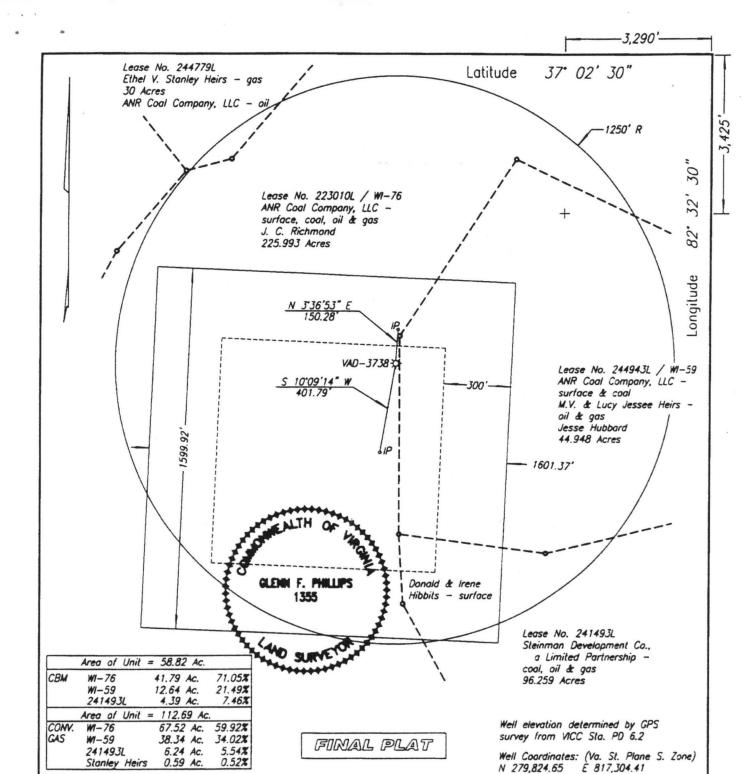
Compiled by: Engineering

DEPTH GENERAL AGE FORMATION* LITHOLOGY COLOR TOP **BOTTOM** THICKNESS REMARKS MISS **RAVENCLIFF** 2944 2966 22 MISS **MAXON** 3051 3584 533 3802 3852 50 MISS LITTLE LIME 578 MISS BIG LIME - U M 3852 4430 378 4430 4808 MISS **BORDEN** 67 4808 4875 MISS **SUNBURY** 19 **MISS BEREA** 4875 4894 944 **DEVO DEVONIAN** 4894 5838 5838 LOGGER'S TOTAL DEPTH

Permittee: Equitable Resources Energy Company (Company)

By: Signature)

^{*}Formations between coal seams are Sand, Shale and Thin Coals



WELL LOCATION PLAT

COMPANY <u>Equitable Resources Energy Company</u> WELL NAME AND NUMBER TRACT NO. <u>WI-76</u> ELEVATION <u>2265.31</u> QUADRANGLE <u>Pour</u>	
COLUMN Wise SISTER Cladeville SCALE 1" - 400'	DATE 7-23-1008
COUNTY Wise DISTRICT Gladeville SCALE 1" = 400'	DATE
This Plat is a new plat; an updated plat; or a final location plat _x	
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.
Me Hailtys	
Licensed Professional Engineer or Licensed Land Surveyor	

Operations	Name:	VAD-3738	

TECHNICAL DATA SHEET FOR PERMIT APPLICATIONS UNDER s 45.1-361.29

orilling Contra	ctor: UNknow	n	*-1	Registered: Y	es No
Address:	ot Formation: Dia	lime Unit Clavel	Telephone Numl and, Devonian Shales, Penns		
	of the Completed		Feet	(tvailiali coats	
orimaton popul	o. mo compressor				
			GEOLOGICAL DATA (ESTIMATED)		
			,		
		DEPTH	THICKNESS		
resh Water:	Possible, at	unknown depths	THICKNESS		
Salt Water:	Possible, at	unknown depths			
				MINING IN AREA	Mine Index Numbe
	NAME	DEPTH	THICKNESS	MINING IN AREA	Mille Index Numbe
Coal Seams:	Rocky Fork	NP			
	Lyons	NP			
	Dorchester	1981			
	Norton	2901		No	Permit# 1100717
	Upper Banner	675 '			Permit# 1100574
	Kennedy	987 ' 1333 '			
	Jawbone Cassay Cassk	1660'			
	Greasy Creek	1838			
	Unamed A Warcreek	2020			
	Beckley	2095 1			
	Lower Horsepen	2183			
Gas and Oil:	Base Lee Sands	2515			
	avencliff	29451			
	axon	3310'			
	ig Lime	3805 '			
В	orden(weir)	4365 1			
C	offee Shale	4735 '			
Be	erea	4805 '			
150	evonian Shale	48301			
	pper Huron Mbr.	5030			
L	ower Huron Mbr.	5410'			

Lime, Borden, Coffee Shale, Berea, Devonian Shale, Upper Huron Mbr., Lower Huron Mbr., White Sands.

PROPOSED CASING AND TUBING PROGRAM

	Size	Depth	Cement Details
Conductor or surface casing:	16"	61'	Cement to surface
Additional conductor or surface casing:	13 3/8"	115'	
Water protection casing:	9 5/8"	317'	Cement to surface
Coal Protection Casing:	7"	2521'	Cement to surface
Other Casing: Production Casing and Tubing:	4 1/2"	5750'	Cement to 500' above pay zone

Attach proposed plugging plan if well is a dry hole or corehole.

Will samples be made available to the Division of Mineral Resources? ___ Yes _X No

Form DGO-GO-9 Rev 5/23/96