

DI-0530

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 X or Injection ___ well

Date Well Completed: 10-14-91 Total Depth of Well: LTD=2785 DTD=2786

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: M. HORSEPEN, C-SEAM, WARCREEK, LOWER HORSEPEN, POCO#6, POCO#1 Formation Stimulated With: 70 Q FOAM
W/14000 # 12/20 SAND-1139300 SCF N2 - 809 BF
Perforated: 1848.5 TO 2659.5 No. of Perforations: 15 Perforation Size: .34"
Formation Broke Down at: 1380 PSIG Average Injection Rate: 13.2 BPM (42 DH)
ISIP 2500 PSIG 5 MIN SIP 1770 PSIG Average Injection Pressure 3700
Date Stimulated 10-5-91

Zone 2: _____ 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 _____
Date Stimulated _____

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 _____
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 46* MCFD 6 Hours Tested 395 PSIG 48 Hours Test

*O.F. NOT ABSOLUTE

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

Permittee: EQUITABLE RESOURCES EXPLORATION (Company)

By: Joseph A. Army (Signature)

Department of Mines, Minerals and Energy
 Division of Gas and Oil
 P. O. Box 1416
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DRILLING REPORT

Pursuant to VR-480-05-22.1, § 1.36, the undersigned Permittee submits this report on Well PC158 in the ERVINTON District of the DICKENSON City/County, Virginia on 14TH day, OCTOBER month, 1991.

LOCATION

City/County: DICKENSON District: ERVINTON
 Surface Elevation: 2370.25 Elevation of Kelly Bushing: 2380 Quadrangle: NORA
4,440 FT. S. of Latitude 37° 05' 00" and 1,675 FT. W. of Longitude 82° 17' 30"

or, State Plane Coordinates: _____ and _____.

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

DRILLING DATA

Date Drilling Commenced: 9-25-91 Drilling Contractor: UNION DRILLING
 Date Drilling Completed: 9-30-91 Rig Type: Rotary Cable Tool
 Total Depth of Well: LTD = 2785 DTD = 2786

GEOLOGICAL DATA

Fresh Water at:	<u>164</u>	Feet	<u>1/4"</u> STREAM	GRK	Feet	GPM
		Feet		GPM	Feet	GPM
		Feet		GPM	Feet	GPM
Salt Water at:	<u>2302</u>	Feet	<u>1/4"</u> STREAM	GRK	Feet	GPM
		Feet		GPM	Feet	GPM
		Feet		GPM	Feet	GPM

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA		
				YES	NO	MINED OUT
JAWBONE	1204	1209	5		X	
L. HORSEPEN	2102	2104	2			
POCO #6	2436	2441	5			
POCO #1	2755	2757	2			

GAS AND OIL SHOWS:

FORMATION	TOP	BOTTOM	THICKNESS	IPF (MCFD/BOPD)	PRESSURE	HOURS TESTED
		2072		15 MCFD		
		2261		15 MCFD		
		2662		21 MCFD		

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: LTD/1.2" LTD/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
228	3/4°	1196	1/2°
414	3/4°	1416	1/2°
604	3/4°	1604	3/4°
821	1°	1793	1/2°
1040	0°	2072	1/2°
1165	0°	2261	3/4°
		2447	1/2°
		2662	1°

* Use additional sheets if necessary.

CASING AND TUBING

	SIZE	TOP	BOTTOM	LENGTH	CEMENT USED IN CU/FT	DATE CEMENTED	PACKERS OR BRIDGE PLUG KIND	SIZE	SET
<u>Conductor</u>	11 3/4"		48	38					
<u>Surface</u>	8 5/8"		364	354	130 CU FT	9-26-91			
<u>Water Protection</u>	4 1/2"		2746	2736	740 CU FT	9-30-91			

Coal Protection

Other Casing and Tubing Left in Well

Liners

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

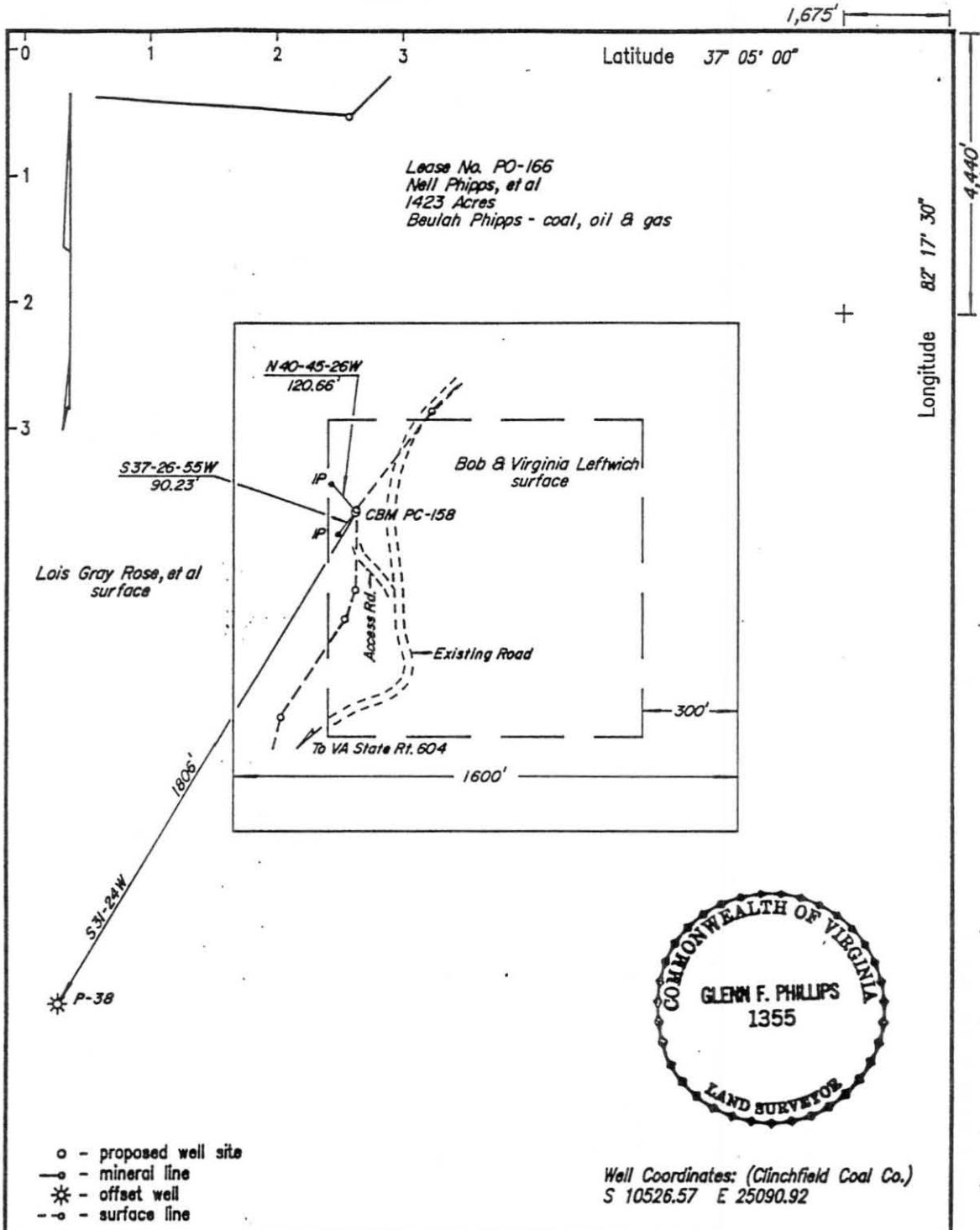
DRILLER'S LOG

Compiled by R. J. MACDONALD

GEOLOGIC AGE	FORMATION	GENERAL LITHOLOGY	COLOR	DEPTH		THICKNESS	REMARKS
				TOP	BOTTOM		
PENNSYLVANIAN ↓	SAND, SHALE & THIN COALS			0	1204	1204	
	JAWBONE COAL			1204	1209	5	
	SAND, SHALE & THIN COALS			1209	2102	893	
	LOWER HORSEPEN COAL			2102	2104	2	
	SAND, SHALE & THIN COALS			2104	2436	332	
	POCO #6 COAL			2436	2441	5	
	SAND, SHALE & THIN COALS			2441	2755	314	
	POCO #1 COAL			2755	2757	2	
MISSISSIPPIAN	SAND, SHALE & THIN COALS			2757	2778	21	
	RED ROCK			2778	2785	7	
	LOGGER'S TOTAL DEPTH				2785		

Permittee: EQUITABLE RESOURCES EXPLORATION (Company)

By: Joseph A. Gray (Signature)



COMPANY Equitable Resources Exploration
 ADDRESS 1989 E. Stone Dr., Kingsport, TN 37660
 WELL NAME PC-158
 FARM Nell Phipps, et al TRACT _____
 LEASE NO. PO-166 ELEVATION 2370.25
 ACRES 1423.00 QUADRANGLE Nora
 COUNTY Dickenson DISTRICT Ervinton
 REG. ENGINEER _____ REG. NO. _____
 CERT. LAND SURVEYOR X CERT. NO. 1355
 FILE NO. _____ DRAWING NO. _____
 DATE 7-27-1990 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 locations.

FORM DGO-GO-5

WELL LOCATION MAP

Well No. PC-158

+ Denotes Location of Well on United States
 Topographic Maps, Scale 1 to 24,000, Latitude
 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.

Glenn F. Phillips

Registered Engineer or Certified
 Land Surveyor in Charge

DL-0530

90	SS	Norton	
195	sist	Norton	
280	SS	Norton	
360	Sh	Norton	
380	SS	Norton	
386	sist	Norton	
388	Coal	Norton	Lower Bonnet
396	sist	Norton	
444	SS	Norton	
446	Coal	Norton	
468	SS	Norton	
472	Coal	Norton	Big Fork
510	SS	Norton	
544	sist	Norton	
546	Coal	Norton	
548	sist	Norton	
550	Coal	Norton	
574	sist	Norton	
578	Coal	Norton	Kennedy
584	sist	Norton	
586	Coal	Norton	
610	sist	Norton	
642	SS	Norton	McClure
708	Sh	Norton	
710	Coal	Norton	Aily
752	sist	Norton	
780	SS	Norton	
782	Coal	Norton	

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802	SIST	Norton	
804	Coal	Norton	Rever #3
810	SIST	Norton	
840	SS	Norton	
900	SIST	Norton	
950	SS	Norton	P
954	Coal	Norton	Rever #2
1032	SIST	Norton	
1035	Coal	Norton	Rever #1
1050	SIST	Norton	
1090	SS	Norton	
1156	SIST	Norton	
1158	Coal	Norton	
1174	SIST	Norton	
1177	Coal	Norton	Sawbone rider
1202	SIST	Norton	
1210	Coal	Norton	Sawbone
1215	SIST	Norton	
1262	SS	Norton	Council
1291	SIST	Norton	
1294	Coal	Norton	Tiller
1300	SIST	Norton	
1327	SS	Norton	
1398	SIST	Norton	
1400	Coal	Norton	U. Seaboard A
1446	SIST	Norton	
1448	Coal	Norton	U. Seaboard
1480	SIST	Norton	

1564	SS	Qtz	Lee	
1568	Sist		Lee	
1570	Coal		Lee	
1597	Sist		Lee	
1600	Coal		Lee	Greasy Creek
1650	Sist		Lee	
1654	Coal		Lee	Middle Seaboard
1686	Sist		Lee	
1690	Coal		Lee	Lower Seaboard
1754	Sist		Lee	
1756	Coal		Lee	Upper Horsepen
1770	Sist		Lee	
1806	SS		Lee	
1847	Sist		Lee	
1850	Coal		Lee	Middle Horsepen
1880	SS		Lee	
1930	Sist		Lee	
1932	Coal		Lee	C
1960	SS		Lee	
1968	Sist		Lee	
1971	Coal		Lee	War Creek
1978	Sist		Lee	
2028	SS		Lee	
2030	Coal		Lee	Fire Creek
2042	Sist		Lee	
2044	Coal		Lee	
2064	Sist		Lee	
2082	SS		Lee	

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2102	SIST		Lee	
2105	Coal		Lee	Lower Horsepen
2110	SIST		Lee	
2152	SS		Lee	
2162	SIST		Lee	
2164	Coal		Lee	
2198	SIST		Lee	
2200	Coal		Lee	Pocahontas #9
2220	SIST		Lee	
2286	SS		Lee Pocahontas	
2318	SIST		Pocahontas	
2370	SS	Qtz	Pocahontas	
2384	SIST		Pocahontas	
2424	SS	Qtz	Pocahontas	
2436	SIST		Pocahontas	
2444	Coal		Pocahontas	Pocahontas #6
2478	SIST		Pocahontas	
2480	Coal		Pocahontas	Pocahontas #5
2580	SS		Pocahontas	
2573	SS	Qtz	Pocahontas	
2610	SIST		Pocahontas	
2614	Coal		Pocahontas	Pocahontas #2
2622	SIST		Pocahontas	
2654	SS		Pocahontas	Pocahontas #7
2660	Coal		Pocahontas	Pocahontas #1
2668	SIST		Pocahontas	
2670	Coal		Pocahontas	
2690	SIST		Pocahontas	

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2730	SS	Pocahontas
2772	Sist	Pocahontas
2726	Sh	Bluestone

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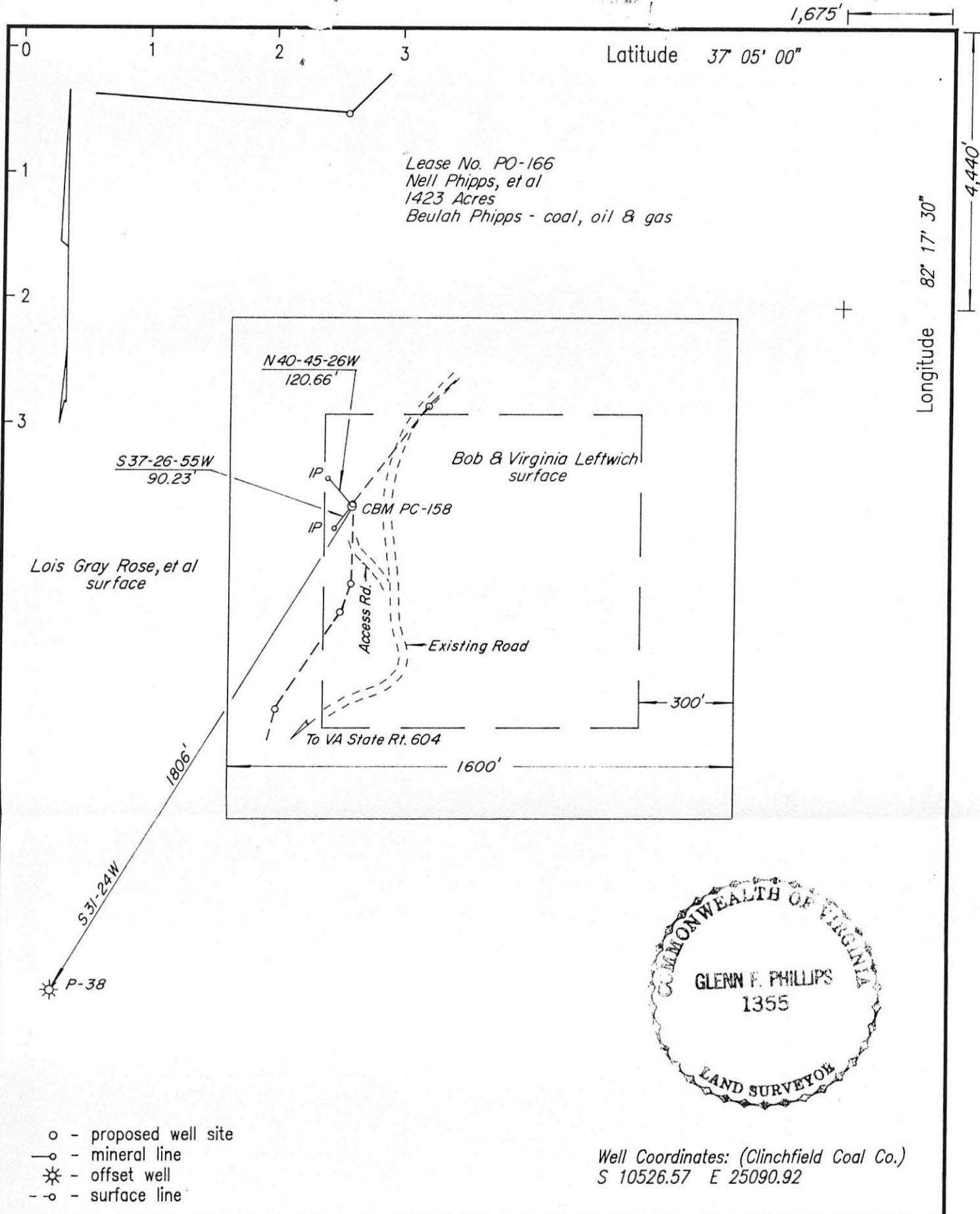
PNTID	BOTTOM	PRIM LITH	SEC LITH	PRIM ZONE	SEC ZONE
DI-0530	86.00	SS		NORTON	
	143.00	SLST		NORTON	
	154.00	SS		NORTON	
	195.00	SLST		NORTON	
	280.00	SS		NORTON	
	360.00	SLST		NORTON	
	380.00	SS		NORTON	
	386.00	SLST		NORTON	
	388.00	COAL		NORTON	
	398.00	SLST		NORTON	
	438.00	SS		NORTON	
	442.00	SLST		NORTON	
	444.00	SS		NORTON	
	446.00	COAL		NORTON	
	448.00	SLST		NORTON	
	468.00	SS		NORTON	
	469.00	SLST		NORTON	
	472.00	COAL		NORTON	
	496.00	SLST		NORTON	
	510.00	SS		NORTON	
	544.00	SLST		NORTON	
	545.00	COAL		NORTON	
	548.00	SLST		NORTON	
	550.00	SH		NORTON	
	575.00	SLST		NORTON	
	578.00	COAL		NORTON	
	584.00	SLST		NORTON	
	586.00	COAL		NORTON	
	594.00	SLST		NORTON	
	643.00	SS		NORTON	
	700.00	SLST		NORTON	
	706.00	SS		NORTON	
	709.00	SLST		NORTON	
	710.00	COAL		NORTON	
	753.00	SLST		NORTON	
	780.00	SS		NORTON	
	782.00	COAL		NORTON	
	784.00	SLST		NORTON	
	796.00	SS		NORTON	
	803.00	SLST		NORTON	
	804.00	COAL		NORTON	
	808.00	SH		NORTON	
	830.00	SLST		NORTON	
	840.00	SS		NORTON	
	902.00	SLST		NORTON	

	942.00	SS		NORTON	
	950.00	SLST		NORTON	
	953.00	COAL		NORTON	
	1033.00	SLST		NORTON	
	1034.00	COAL		NORTON	
	1047.00	SLST		NORTON	
	1090.00	SS		NORTON	
	1106.00	SLST		NORTON	
	1108.00	COAL		NORTON	
	1125.00	SLST		NORTON	
	1127.00	COAL		NORTON	
	1202.00	SLST		NORTON	
	1210.00	COAL		NORTON	
	1218.00	SLST		NORTON	
	1262.00	SS		NORTON	
	1292.00	SLST		NORTON	
	1294.00	COAL		NORTON	
	1301.00	SLST		NORTON	
	1326.00	SS		NORTON	
	1399.00	SLST		NORTON	
	1400.00	COAL		NORTON	
	1408.00	SLST		NORTON	
	1410.00	SH		NORTON	
	1413.00	SLST		NORTON	
	1415.00	SH		NORTON	
	1419.00	SLST		NORTON	
	1423.00	SS		NORTON	
	1432.00	SLST		NORTON	
	1437.00	SS		NORTON	
	1438.00	SLST		NORTON	
	1441.00	SH		NORTON	
	1446.00	SLST		NORTON	
	1448.00	COAL		NORTON	
	1480.00	SLST		NORTON	
	1562.00	SS	QTZ	LEE	
	1568.00	SLST		LEE	
	1570.00	COAL		LEE	
	1598.00	SLST		LEE	
	1599.00	COAL		LEE	
	1618.00	SLST		LEE	
	1652.00	SS		LEE	
	1654.00	COAL		LEE	
	1687.00	SLST		LEE	
	1690.00	COAL		LEE	
	1754.00	SLST		LEE	
	1756.00	COAL		LEE	

1760.00	SH		LEE
1848.00	SLST		LEE
1850.00	COAL		LEE
1854.00	SLST		LEE
1878.00	SS		LEE
1928.00	SLST		LEE
1930.00	COAL		LEE
1959.00	SS		LEE
1968.00	SLST		LEE
1970.00	COAL		LEE
1979.00	SLST		LEE
2018.00	SS		LEE
2019.00	COAL		LEE
2043.00	SLST		LEE
2044.00	COAL		LEE
2050.00	SLST		LEE
2057.00	SS		LEE
2062.00	SLST		LEE
2082.00	SS		LEE
2086.00	SLST		LEE
2102.00	SS		LEE
2105.00	COAL		LEE
2130.00	SS		LEE
2152.00	SS		LEE
2162.00	SLST		LEE
2163.00	COAL		LEE
2177.00	SLST		LEE
2191.00	SS		LEE
2198.00	SLST		LEE
2200.00	COAL		LEE
2202.00	SH		LEE
2220.00	SLST		LEE
2269.00	SS		LEE
2272.00	SLST		LEE
2286.00	SS		LEE
2312.00	SLST		LEE
2318.00	SS		LEE
2370.00	SS	QTZ	POCAHONTAS
2380.00	SLST		POCAHONTAS
2388.00	SS		POCAHONTAS
2424.00	SS	QTZ	POCAHONTAS
2434.00	SLST		POCAHONTAS
2438.00	COAL		POCAHONTAS
2440.00	SLST		POCAHONTAS
2444.00	COAL		POCAHONTAS
2454.00	SLST		POCAHONTAS

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	2468.00	SS		POCAHONTAS	
	2478.00	SLST		POCAHONTAS	
	2479.00	COAL		POCAHONTAS	
	2484.00	SLST		POCAHONTAS	
	2504.00	SS		POCAHONTAS	
	2516.00	SLST		POCAHONTAS	
	2536.00	SS		POCAHONTAS	
	2550.00	SLST		POCAHONTAS	
	2558.00	SS		POCAHONTAS	
	2562.00	SLST		POCAHONTAS	
	2574.00	SS		POCAHONTAS	
	2586.00	SLST		POCAHONTAS	
	2594.00	SS		POCAHONTAS	
	2610.00	SLST		POCAHONTAS	
	2613.00	COAL		POCAHONTAS	
	2654.00	SS		POCAHONTAS	
	2657.00	COAL		POCAHONTAS	
	2659.00	SLST		POCAHONTAS	
	2661.00	COAL		POCAHONTAS	
	2668.00	SLST		POCAHONTAS	
	2669.00	COAL		POCAHONTAS	
	2698.00	SLST		POCAHONTAS	
	2731.00	SS		POCAHONTAS	
	2754.00	SLST		POCAHONTAS	
	2758.00	SS		POCAHONTAS	
	2786.00	SLST		POCAHONTAS	



COMPANY Equitable Resources Exploration
 ADDRESS 1989 E. Stone Dr., Kingsport, TN 37660
 WELL NAME PC-158
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 LEASE NO. PO-166 ELEVATION 2370.25
 ACRES 1423.00 QUADRANGLE Nora
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 REG. ENGINEER _____ REG. NO. _____
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 FILE NO. _____ DRAWING NO. _____
 DATE 7-27-1990 SCALE 1" = 400'

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+ Denotes Location of Well on United States
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 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.

Glenn F. Phillips

Registered Engineer or Certified
 Land Surveyor in Charge