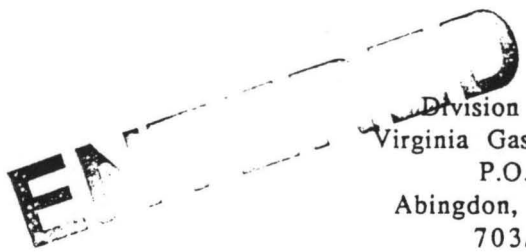


00-0419

Operations Name: EH-46
Permit #: 1782



Division of Gas and Oil
Virginia Gas and Oil Inspector
P.O. Box 1416
Abingdon, Virginia 24210
703/676-5423



COMPLETION REPORT

WELL TYPE: Oil Gas Coalbed Methane or Injection well.

Date Well Completed: 7/1/92 Total Depth of Well: _____

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: Poca #3 Formation Stimulated With: 745 bbl WE30 w/ 3,000 # 12/20 sand

Perforated: 1677' To 1679.5' No. of Perforations: 11 Perforation Size: 40
Formation Broke Down at: No Breakdown PSIG Average Injection Rate: 7 BPM
ISIP 3400 PSIG MIN SIP _____ PSIG Average Injection Pressure: 3700 PSIG
Date stimulated: 12/17/91

Zone 2: War Creek, Poca #9 Formation Stimulated With: 1,100 bbl WE30 w/ 8,900 lbs. 12/20 sand

Perforated: 1285.5' - 1290' To 1346.5' - 1347.5' No. of Perforations: 13 Perforation Size: 40
Formation Broke Down at: 2700 PSIG Average Injection Rate: 20.8 BPM
ISIP 1600 PSIG 5 MIN SIP 1480 PSIG Average Injection Pressure: 2400 PSIG
Date stimulated: 1/3/92

Zone 3: _____ Formation Stimulated With: _____

Perforated: _____ To _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate: _____ BPM
ISIP _____ PSIG MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____

FINAL PRODUCTION: _____ Natural After Stimulation
BOD MCFD HOUR TESTED ROCK PRESSURE HOURS TESTED

Zone (1) _____
Zone (2) _____

Final Production if Gas Zones are Comingled show* MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

*Not absolute
Well still cleaning up

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

Permittee: Virginia Gas Company (Company)

By: C. L. M... [Signature] (Signature)

Operations Name: EH-46
Permit #: 1782



Division of Gas and Oil
Virginia Gas and Oil Inspector
P.O. Box 1416
Abingdon, Virginia 24210
703/676-5423



COMPLETION REPORT

WELL TYPE: Oil Gas Coalbed Methane or Injection well.

Date Well Completed: 7/1/92 Total Depth of Well: 1832

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: Poca #3 Formation Stimulated With: 745 bbl WF30 w/ 3,000 # 12/20 sand

Perforated: 1677' To 1679.5' No. of Perforations: 11 Perforation Size: .40
Formation Broke Down at: No Breakdown PSIG Average Injection Rate: 7 BPM
ISIP 3400 PSIG MIN SIP PSIG Average Injection Pressure: 3700 PSIG
Date stimulated: 12/17/91

Zone 2: War Creek, Poca #9 Formation Stimulated With: 1,100 bbl WF30 w/ 8,900 lbs. 12/20 sand

Perforated: 1285.5' - 1290' To 1346.5' - 1347.5 No. of Perforations: 13 Perforation Size: .40
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ISIP 1600 PSIG 5 MIN SIP 1480 PSIG Average Injection Pressure: 2400 PSIG
Date stimulated: 1/3/92

Zone 3: _____ Formation Stimulated With: _____

Perforated: _____ To _____ No. of Perforations: _____ Perforation Size: _____
Formation Broke Down at: _____ PSIG Average Injection Rate: _____ BPM
ISIP _____ PSIG _____ MIN SIP _____ PSIG Average Injection Pressure: _____ PSIG
Date stimulated: _____

FINAL PRODUCTION:

Natural After Stimulation
BOD MCFD HOUR TESTED ROCK PRESSURE HOURS TESTED

Zone (1) _____
Zone (2) _____

Final Production if Gas Zones are Comingled show* MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

*Not absolute
Well still cleaning up

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

Permittee: Virginia Gas Company (Company)

By: *C. W. [Signature]* (Signature)

Edwards & Harding Petroleum Company

WELL: EH-46

Driller's/Geophysical Log

Datum measured from K.B.

Geological Age	Formation	Lithology	Top	Bottom	Thickness	Remarks
		Fill	0	6	6	
Pennsylvanian	Norton	sand & shale	6	68	62	
		coal	68	71	3	
		sand & shale	71	354	283	Hole Damp @ 159'
		Kennedy Coal	354	355	1	
		McClure Sandstone	355	403	48	
		Aily Coal	403	404	1	
		sandstone	404	436	32	
		Raven #2 Coal	436	438	2	
		shale	438	500	62	
		Raven Coal	500	501	1	
		sandstone	501	558	57	
		shale	558	636	78	
		Jawbone Coal	636	637	1	
		shale	637	641	4	
		Council Sandstone	641	675	34	
		sand & shales	675	699	24	
		Tiller Rider	699	700	1	
		shale	700	709	9	
		Tiller Coal	709	710	1	
		sandstone	710	728	18	
		sand & shale	728	832	104	
		Upper Seaboard Coal	832	833	1	
		sand & shale	833	889	56	
		sandstone	889	948	59	
		Greasy Creek Coal	948	950	2	
	Lee	sand & shale	950	971	21	
		Middle Seaboard Coal	971	972	1	
		sand & shale	972	1015	43	
		sandstone	1015	1088	73	
		Upper Horsepen Coal	1088	1089	1	
		sand & shales	1089	1140	51	
		Middle Horsepen Rider	1140	1141	1	
		sandstone	1141	1145	4	
		Middle Horsepen Coal	1145	1147	2	
		sand & shale	1147	1284	137	
		War Creek Coal	1284	1290	6	Odor of Gas @ 1318'
		sands & shales	1290	1346	56	Hole Damp @ 1318'
		Poca #9 Coal	1346	1347	1	
		sand & shale	1347	1450	103	
		Salt Sand	1450	1675	225	
	Pocahontas	shale	1675	1676	1	
		Poca #3 Coal	1676	1679	3	
		sand & shale	1679	1713	34	
		Poca #2 Coal	1713	1715	2	
		sand & shale	1715	1744	29	
		Poca #1 Coal	1744	1745	1	
		sand & shale	1745	1772	27	
		sandstone	1772	1830	58	
Mississippian	Bluestone	Red shales	1830	1832	2	
		Total Depth	1832			

ENTERED

Operations Name: EH-46
Permit #: 1782

BU-419



CONFIDENTIAL

6/11/93

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



DRILLING REPORT

Pursuant to VR-480-05-22.1, § 1.36, the undersigned Permittee submits this report on Well EH-46 in the North Grundy District of the Buchanan County, Virginia on 11th day, January month, 1992.

LOCATION

~~COOK~~ County: Buchanan District: North Grundy
Surface Elevation: 1565.62 Elevation of Kelly Bushing: 1575.62 Quadrangles: North Grundy
9457 FT. S. of Latitude 37° 20' 00" and 6893 FT. W. of Longitude 82° 02' 00"
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: 12-8-91 Drilling Contractor: Union Drilling
Date Drilling Completed: 12-11-91 Rig Type: Rotary Cable Tool
Total Depth of Well: 1832

GEOLOGICAL DATA

Fresh Water at:	Feet	damp	GPM	Feet	GPM
<u>159</u>					
Salt Water at:	Feet	damp	GPM	Feet	GPM
<u>1318</u>					

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA		
				YES	NO	MINED OUT

- see attached drillers' log -

GAS AND OIL SHOWS:

FORMATION	TOP	THICKNESS	IPF (MCFD/BOPD)	HOURS TESTED
<u>War Creek</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 ran on wellbore: CAL, DEN, GR

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

SURVEY RESULTS:

<u>DEPTH OF SURVEY</u>	<u>DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL</u>	<u>DEPTH OF SURVEY</u>	<u>DIRECTION/DISTANCE/DEGREES FROM TRUE VERTICAL</u>
226'	3/4°	1280'	1° 1724' 1°
431'	1/2°	1318'	1° 1755' 1°
630'	1°	1432'	1°
756'	1°	1474'	1°
1035'	1°	1662'	1°
1080'	1°	1693'	1°

* Use additional sheets if necessary.

CASING AND TUBING

	<u>SIZE</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>LENGTH</u>	<u>CEMENT USED IN CU/FT</u>	<u>DATE CEMENTED</u>	<u>PACKERS OR BRIDGE PLUGS KIND SIZE SET A</u>
<u>Conductor</u>							
<u>Surface</u>	11 3/4"	0	35'	35'	28 ft ³	12-8-91	
<u>Water Protection</u>	8 5/8"	0	353'	353'	110 ft ³	12-8-91	
<u>Coal Protection</u>	4 1/2"	0	1804'	1804'	522 ft ³	12-11-91	
<u>Other Casing and Tubing Left In Well</u>	2 3/8"	0	1760'	1760'			

Liners

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



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



DRILLING REPORT

Pursuant to VR-480-05-22.1, § 1.36, the undersigned Permittee submits this report on Well EH-46 in the North Grundy District of the Buchanan ~~XXXX~~ County, Virginia on 11th day, January month, 1992.

LOCATION

~~XXX~~ County: Buchanan District: North Grundy
Surface Elevation: 1565.62 Elevation of Kelly Bushing: 1575.62 Quadrangle: North Grundy
9457 FT. S. of Latitude 37° 20' 00" and 6893 FT. W. of Longitude 82° 02' 00"

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: 12-8-91 Drilling Contractors: Union Drilling
Date Drilling Completed: 12-11-91 Rig Type: Rotary Cable Tool
Total Depth of Well: 1832

GEOLOGICAL DATA

Fresh Water at:	<u>159</u>	Feet	<u>damp</u>	GPM	<u> </u>	Feet	<u> </u>	GPM
		Feet		GPM		Feet		GPM
		Feet		GPM		Feet		GPM
Salt Water at:	<u>1318</u>	Feet	<u>damp</u>	GPM	<u> </u>	Feet	<u> </u>	GPM
		Feet		GPM		Feet		GPM
		Feet		GPM		Feet		GPM

COAL SEAMS:

<u>NAME</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>THICKNESS</u>	<u>MINING IN AREA</u>	
				<u>YES</u>	<u>NO</u> <u>MINED OUT</u>
- see attached drillers' log -					

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>War Creek</u>				<u>odor</u>		

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:

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1080'	1°	1693'	1°

* Use additional sheets if necessary.

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>							
<u>Surface</u>	11 3/4"	0	35'	35'	28 ft ³	12-8-91	
<u>Water Protection</u>	8 5/8"	0	353'	353'	110 ft ³	12-8-91	
<u>Coal Protection</u>	4 1/2"	0	1804'	1804'	522 ft ³	12-11-91	
<u>Other Casing and Tubing Left In Well</u>	2 3/8"	0	1760'	1760'			

Liners

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

Edwards & Harding Petroleum Company

WELL: EH-46

Driller's/Geophysical Log

Datum measured from K.B.

Geological Age	Formation	Lithology	Top	Bottom	Thickness	Remarks
		Fill	0	6	6	
Pennsylvanian	Norton	sand & shale	6	68	62	Hole Damp @ 159'
		coal	68	71	3	
		sand & shale	71	354	283	
		Kennedy Coal	354	355	1	
		McClure Sandstone	355	403	48	
		Aily Coal	403	404	1	
		sandstone	404	436	32	
		Raven #2 Coal	436	438	2	
		shale	438	500	62	
		Raven Coal	500	501	1	
		sandstone	501	558	57	
		shale	558	636	78	
		Jawbone Coal	636	637	1	
		shale	637	641	4	
		Council Sandstone	641	675	34	
		sand & shales	675	699	24	
		Tiller Rider	699	700	1	
		shale	700	709	9	
		Tiller Coal	709	710	1	
		sandstone	710	728	18	
		sand & shale	728	832	104	
		Upper Seaboard Coal	832	833	1	
	sand & shale	833	889	56		
	sandstone	889	948	59		
	Greasy Creek Coal	948	950	2		
	Lee	sand & shale	950	971	21	Odor of Gas @ 1318' Hole Damp @ 1318'
		coal	971	972	1	
		sand & shale	972	1015	43	
		sandstone	1015	1088	73	
		Upper Horsepen Coal	1088	1089	1	
		sand & shales	1089	1140	51	
		coal	1140	1141	1	
		sandstone	1141	1145	4	
		Middle Horsepen Coal	1145	1147	2	
		sand & shale	1147	1284	137	
		War Creek Coal	1284	1290	6	
		sands & shales	1290	1346	56	
		Poca #9 Coal	1346	1347	1	
	sand & shale	1347	1450	103		
	Salt Sand	1450	1675	225		
	Pocahontas	shale	1675	1676	1	
		Poca #3 Coal	1676	1679	3	
		sand & shale	1679	1713	34	
		Poca #2 Coal	1713	1715	2	
		sand & shale	1715	1744	29	
		Poca #1 Coal	1744	1745	1	
	sand & shale	1745	1772	27		
	sandstone	1772	1830	58		
Mississippian	Bluestone	Red shales	1830	1832	2	
		Total Depth	1832			

ET-46 COAL LOG

KELLY & LOWAY HEARS #1

TD 1832 12/11/91

BY-419 GL 1565.62

SEEN ON

DRILLER'S LOG

COAL SEAM

DEPTHS (FT)

THICKNESS (FT)

DRILLER'S LOG	COAL SEAM	DEPTHS (FT)	THICKNESS (FT)
	ALY	403.50 - 404.00	0.50
✓	RAVEN #2	436.50 - 438.50	2.00
	RAVEN	500.25 - 501.50	1.25
✓	JAWBONE	636.25 - 637.75	1.50
	TILLER RIDER	698.75 - 699.25	0.50
	TILLER	709.75 - 710.25	0.50
	UPPER SEABARD	832.00 - 832.75	0.75
	GREASY CREEK RIDER	944.75 - 945.25	0.50
	GREASY CREEK	947.75 - 949.75	2.00
	MIDDLE SEABARD	971.25 - 972.25	1.00
✓	UPPER HARSEAN	1088.25 - 1089.25	1.00
	MIDDLE HARSEAN RIDER	1140.75 - 1141.25	0.50
	MIDDLE HARSEAN	1145.50 - 1147.00	1.50
✓	WAR CREEK	1284.75 - 1290.50	5.75
	POCAHONTAS #9	1346.25 - 1347.75	1.50
✓	POCAHONTAS #3	1676.00 - 1679.50	3.50
	POCAHONTAS #2 RIDER	1712.00 - 1712.25	0.25
	POCAHONTAS #2	1713.50 - 1714.75	1.25
✓	POCAHONTAS #1	1744.25 - 1745.00	0.75
	RED ROCK	1830	
	TOTAL DEPTH	1832.00	

WET, SG @ 1318

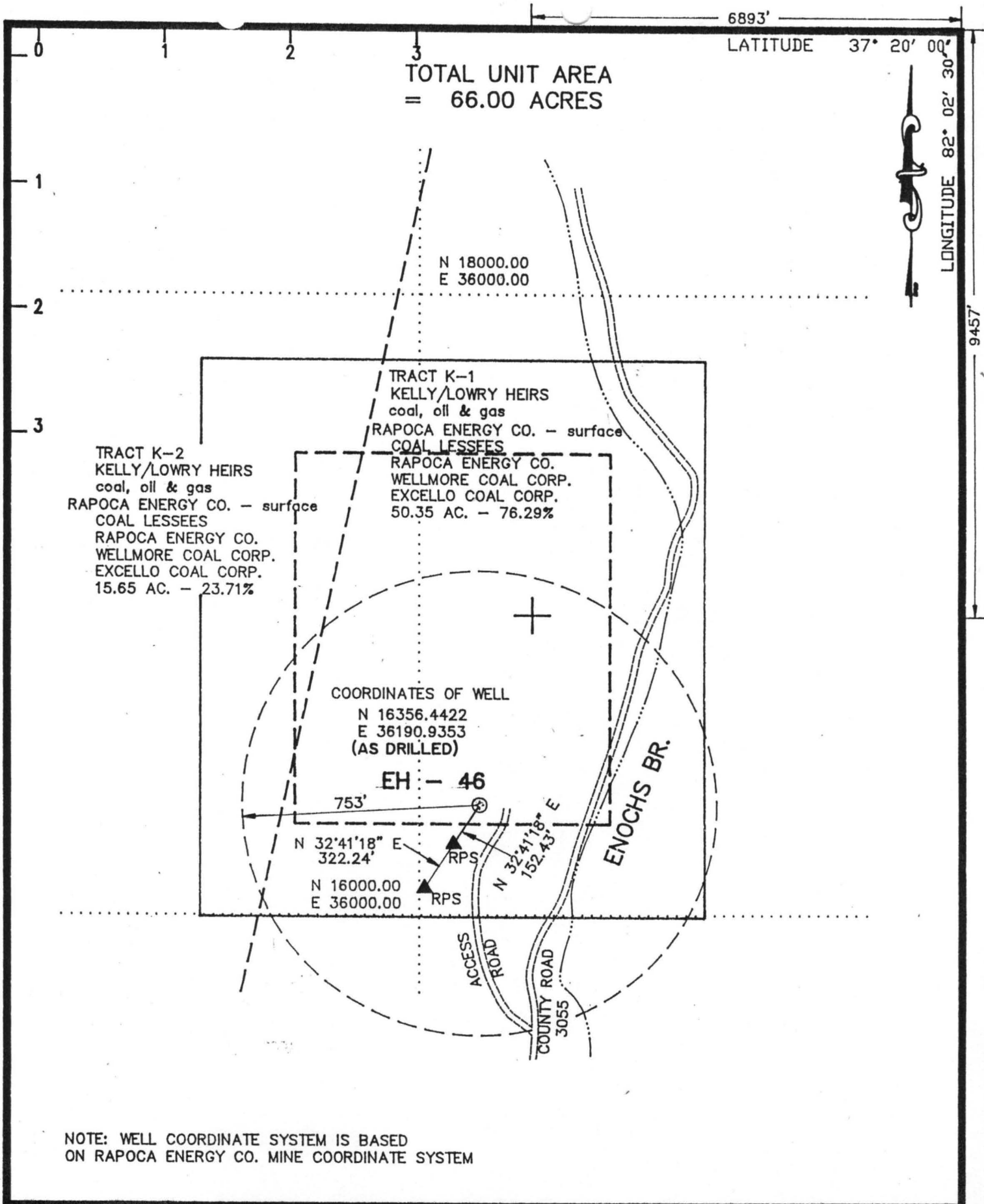
KENNEDY 322-323

150' P3 RR

SALT SAND

1452 - 1675

TOTAL BELOW DRAINAGE: 19.0'



TOTAL UNIT AREA
= 66.00 ACRES

6893'
LATITUDE 37° 20' 00"

LONGITUDE 82° 02' 30"

9457'

N 18000.00
E 36000.00

TRACT K-1
KELLY/LOWRY HEIRS
coal, oil & gas
RAPOCA ENERGY CO. - surface
COAL LESSEES

RAPOCA ENERGY CO.
WELLMORE COAL CORP.
EXCELLO COAL CORP.
50.35 AC. - 76.29%

TRACT K-2
KELLY/LOWRY HEIRS
coal, oil & gas
RAPOCA ENERGY CO. - surface
COAL LESSEES
RAPOCA ENERGY CO.
WELLMORE COAL CORP.
EXCELLO COAL CORP.
15.65 AC. - 23.71%

COORDINATES OF WELL
N 16356.4422
E 36190.9353
(AS DRILLED)

EH - 46

753'

N 32°41'18" E
322.24'

N 16000.00
E 36000.00

N 32°41'18" E
152.43'

ENOCHS BR.

ACCESS ROAD

COUNTY ROAD
3055

NOTE: WELL COORDINATE SYSTEM IS BASED
ON RAPOCA ENERGY CO. MINE COORDINATE SYSTEM

COMPANY Edwards & Harding Petroleum Company

ADDRESS P.O. Box 2404 Abingdon, Virginia 24210

WELL NAME EH - 46

FARM KELLY/LOWRY HEIRS TRACT K-1

LEASE NO. _____ ELEVATION 1565.62(Trig)

ACRES 475 ACRES QUADRANGLE GRUNDY

COUNTY BUCHANAN DISTRICT NORTH GRUNDY

REG. ENGINEER X REG. NO. 8106

CERT. LAND SURVEYOR X CERT. NO. 1340

FILE NO. _____ DRAWING NO. _____

DATE DECEMBER 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

WELL LOCATION MAP

WELL NO. EH - 46



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 regulations of the Virginia Gas & Oil Board.

LAND SURVEYOR

B. J. Leman Kendrick 12/11/91
Registered Engineer or Certified
Land Surveyor in Charge