

Confidential
11-19-92

Operations Name: EH-42
Permit #: 1763

BU-0413

ENTERED
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 X or Injection ___ well.

Date Well Completed: 8/11/92 Total Depth of Well: 1906'

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: 1387 bbl WF30 w/ 40,000 # 20/40 sand and 20,000 # 10/20 sand
Perforated: 1684' To 1687.5' No. of Perforations: 15 Perforation Size: 40
Formation Broke Down at: No Breakdown PSIG Average Injection Rate: 35 BPM
ISIP 2015 PSIG 5 MIN SIP 1566 PSIG Average Injection Pressure: 2950 PSIG
Date stimulated: 6/4/92

Middle Seaboard, Upper Horsepen, Middle Horsepen,
Zone 2: War Creek, Poca #9, Poca #8, Poca #7 Formation Stimulated With: Acid breakdown and bailout: frac w/2000 bbl 70 Q foam w/17,000 lb 12/20 sand
Perforated: 965' To 1390' No. of Perforations: 17 Perforation Size: 36
Formation Broke Down at: 1909 PSIG Average Injection Rate: 46 BPM
ISIP 2200 PSIG 5 MIN SIP 1593 PSIG Average Injection Pressure: 3700 PSIG
Date stimulated: 8/4/92

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 X After Stimulation
BOD MCFD HOUR TESTED ROCK PRESSURE HOURS TESTED
Zone (1) _____
Zone (2) _____
Final Production if Gas Zones are Comingled * MCFD _____ Hours Tested _____ PSIG _____ Hours Tested

*Not gaugeable
Well still cleaning up

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

Permittee: Virginia Gas Company (Company)

By: [Signature] (Signature)

ENTERED

Operations Name: EH-42
Permit #: 1763



CONFIDENTIAL

6/20/93

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



BM-413

DRILLING REPORT

Pursuant to VR-480-05-22.1, § 1.36, the undersigned Permittee submits this report on Well EH-42 in the North Grundy District of the Buchanan County, Virginia on 21st day, January month, 19 92.

LOCATION

County: Buchanan District: North Grundy
Surface Elevation: 1579.9' Elevation of Kelly Bushing: _____ Quadrangle: Grundy
13350 FT. S. of Latitude 37° 20' 00" and 9730 FT. W. of Longitude 82° 02' 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: 12-17-91 Drilling Contractor: Gasco Drilling
Date Drilling Completed: 12-20-91 Rig Type: X Rotary _____ Cable Tool _____
Total Depth of Well: 1906 ft.

GEOLOGICAL DATA

Fresh Water at:	None	Feet	GPM	Feet	GPM
		_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____
Salt Water at:	None	Feet	GPM	Feet	GPM
		_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA	
				YES	NO
- see attached drillers' log -					None

GAS AND OIL SHOWS:

FORMATION	TOP	BOTTOM	THICKNESS	IPF (MCFD/BOPD)	PRESSURE	HOURS TESTED
War Creek	1293	1296	3'			
Poca #3	1683	1687	4'	15 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 ran on wellbore: GR, DEN, CAL

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
<u>200'</u>	<u>1/4°</u>	<u>1223'</u>	<u>1/2°</u>
<u>400'</u>	<u>3/4°</u>	<u>1286'</u>	<u>1/2°</u>
<u>600'</u>	<u>3/4°</u>	<u>1486'</u>	<u>3/4°</u>
<u>623'</u>	<u>3/4°</u>	<u>1668'</u>	<u>3/4°</u>
<u>823'</u>	<u>3/4°</u>	<u> </u>	<u> </u>
<u>1023'</u>	<u>3/4°</u>	<u> </u>	<u> </u>

* 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	17'	17'	20 ft ³	12-17-91	
<u>Water Protection</u>	8 5/8"	0	429'	429'	115 ft ³	12-17-91	
<u>Coal Protection</u>	4 1/2"	0	1863'	1863'	525 ft ³	12-20-91	
<u>Other Casing and Tubing Left In Well</u>	2 3/8"	0	1744'	1744'			

Liners

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

Edwards & Harding Petroleum Company

WELL: EH-42

Driller's/Geophysical Log

Datum measured from K.B.

Geological Age	Formation	Lithology	Top	Bottom	Thickness	Remarks
		Fill	0	15	15	
Pennsylvanian	Norton	sand & shale	15	297	282	
		Kennedy Coal	297	300	3	
		McClure Sandstone	300	382	82	
		sand & shale	382	389	7	
		sandstone	389	416	27	
		Raven #2 Coal	416	418	2	
		shale	418	477	59	
		Raven Coal	477	479	2	
		sandstone	479	538	59	
		shale	538	593	55	
		sandy shale	593	623	30	
		Jawbone Coal	623	625	2	
		Council Sandstone	625	656	31	
		sand & shales	656	693	37	
		Tiller Coal	693	695	2	
		sand & shale	695	807	112	
		Upper Seaboard Coal	807	808	1	
		sand & shale	808	861	53	
		sandstone	861	965	104	
		Middle Seaboard Coal	965	966	1	
	Lee	sand & shale	966	1050	84	
		sandstone	1050	1080	30	
		Upper Horsepen Coal	1080	1081	1	
		sand & shales	1081	1139	58	
		Middle Horsepen Coal	1139	1140	1	
		sand & shale	1140	1222	82	
		coal	1222	1224	2	
		sand & shale	1224	1293	69	
		War Creek Coal	1293	1296	3	
		sandstone	1296	1341	45	
		Poca #9 Coal	1341	1343	2	
		shale	1343	1350	7	
		Poca #8 Coal	1350	1353	3	
		shale	1353	1389	36	
		Poca #7 Coal	1389	1391	2	
		sand & shale	1391	1458	67	
		Salt Sand	1458	1682	224	11 MCFD @ 1486'
	Pocahontas	shale	1682	1683	1	
		Poca #3 Coal	1683	1687	4	
		sand & shale	1687	1727	40	
		Poca #2 Coal	1727	1729	2	
		sand & shale	1729	1757	28	
		Poca #1 Coal	1757	1759	2	
		sand & shale	1759	1827	68	
		sandstone	1827	1852	25	
Mississippian	Bluestone	Red & green shales	1852	1906	54	
		Total Depth	1906			15 MCFD @ T.D.



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-42 in the North Grundy District of the Buchanan ~~State~~ County, Virginia on 21st day, January month, 1992.

LOCATION

County: Buchanan District: North Grundy
 Surface Elevation: 1579.9' Elevation of Kelly Bushing: _____ Quadrangle: Grundy
13350 FT. S. of Latitude 37° 20' 00" and 9730 FT. W. of Longitude 82° 02' 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: 12-17-91 Drilling Contractor: Gasco Drilling
 Date Drilling Completed: 12-20-91 Rig Type: X Rotary Cable Tool
 Total Depth of Well: 1906 ft.

GEOLOGICAL DATA

Fresh Water at:	<u>None</u>	Feet _____	GPM _____	Feet _____	GPM _____
		Feet _____	GPM _____	Feet _____	GPM _____
		Feet _____	GPM _____	Feet _____	GPM _____
Salt Water at:	<u>None</u>	Feet _____	GPM _____	Feet _____	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 -						None

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>1293</u>	<u>1296</u>	<u>3'</u>			
<u>Poca #3</u>	<u>1683</u>	<u>1687</u>	<u>4'</u>	<u>15 Mcfd</u>	<u>(commingled)</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:

List logs ran on wellbore: GR, DEN, CAL

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
<u>200'</u>	<u>1/4°</u>	<u>1223'</u>	<u>1/2°</u>
<u>400'</u>	<u>3/4°</u>	<u>1286'</u>	<u>1/2°</u>
<u>600'</u>	<u>3/4°</u>	<u>1486'</u>	<u>3/4°</u>
<u>623'</u>	<u>3/4°</u>	<u>1668'</u>	<u>3/4°</u>
<u>823'</u>	<u>3/4°</u>	<u> </u>	<u> </u>
<u>1023'</u>	<u>3/4°</u>	<u> </u>	<u> </u>

* 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	17'	17'	20 ft ³	12-17-91	
<u>Water Protection</u>	8 5/8"	0	429'	429'	115 ft ³	12-17-91	
<u>Coal Protection</u>	4 1/2"	0	1863'	1863'	525 ft ³	12-20-91	
<u>Other Casing and Tubing Left In Well</u>	2 3/8"	0	1744'	1744'			

Liners

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

Edwards & Harding Petroleum Company

WELL: EH-42

Driller's/Geophysical Log

Datum measured from K.B.

Geological Age	Formation	Lithology	Top	Bottom	Thickness	Remarks
		Fill	0	15	15	
Pennsylvanian	Norton	sand & shale	15	297	282	
		Kennedy Coal	297	300	3	
		McClure Sandstone	300	382	82	
		sand & shale	382	389	7	
		sandstone	389	416	27	
		Raven #2 Coal	416	418	2	
		shale	418	477	59	
		Raven Coal	477	479	2	
		sandstone	479	538	59	
		shale	538	593	55	
		sandy shale	593	623	30	
		Jawbone Coal	623	625	2	
		Council Sandstone	625	656	31	
		sand & shales	656	693	37	
		Tiller Coal	693	695	2	
		sand & shale	695	807	112	
		Upper Seaboard Coal	807	808	1	
		sand & shale	808	861	53	
		sandstone	861	965	104	
		Greasy Creek Coal	965	966	1	
	Lee	sand & shale	966	1050	84	
		sandstone	1050	1080	30	
		Upper Horsepen Coal	1080	1081	1	
		sand & shales	1081	1139	58	
		Middle Horsepen Coal	1139	1140	1	
		sand & shale	1140	1222	82	
		coal	1222	1224	2	
		sand & shale	1224	1293	69	
		War Creek Coal	1293	1296	3	
		sandstone	1296	1341	45	
		coal	1341	1343	2	
		shale	1343	1350	7	
		Poca #9 Coal	1350	1353	3	
		shale	1353	1389	36	
		Poca #8 Coal	1389	1391	2	
		sand & shale	1391	1458	67	
		Salt Sand	1458	1682	224	11 MCFD @ 1486'
	Pocahontas	shale	1682	1683	1	
		Poca #3 Coal	1683	1687	4	
		sand & shale	1687	1727	40	
		Poca #2 Coal	1727	1729	2	
		sand & shale	1729	1757	28	
		Poca #1 Coal	1757	1759	2	
		sand & shale	1759	1827	68	
		sandstone	1827	1852	25	
Mississippian	Bluestone	Red & green shales	1852	1906	54	
		Total Depth	1906			15 MCFD @ T.D.

EH-42	CCAL	LAG	GL	1582.22	AS DRILLED
RAMEN		477.25 - 479.00		1.75	
JAWBONE		622.75 - 624.25		1.50	
TILLER		693.50 - 695.00		1.50	
UPPER SEABOARD		807.25 - 807.75		0.50	
MIDDLE SEABOARD		964.75 - 965.25		1.50	SG 970'
UPPER HARSEPEN		1080.50 - 1081.50		1.00	SG 1085'
MIDDLE HARSEPEN		1138.75 - 1140.25		1.50	
		1222.00 - 1222.25		0.25	
		1222.75 - 1223.75		1.00	
WAR CREEK		1293.75 - 1295.75		2.00	
POCAHONTAS #10		1340.00 - 1340.25		0.25	
POCAHONTAS #9		1341.25 - 1342.75		1.50	SG 1346'
POCAHONTAS #8		1350.75 - 1353.00		2.25	
POCAHONTAS #7		1389.25 - 1391.00		1.75	
		1391.50 - 1391.75		0.25	
		1398.25 - 1398.50		0.25	
POCAHONTAS #3		1683.75 - 1687.50		3.75	
POCAHONTAS #2		1727.50 - 1729.25		1.75	
POCAHONTAS #1		1757.00 - 1758.25		1.25	
TD (DRILLER'S)		1915.00			

185
 1582
 675
 957

CCAL THICKNESS BELOW DRAINAGE (SEAMS > 12") 22.25'
 DENSITY ≤ 1.75 g/cc

9730'

LATITUDE 37° 20' 00"

LONGITUDE 82° 02' 30"

TOTAL UNIT AREA = 58.77 ACRES

TRACT C-1
GREEN CHARLES HEIRS- coal, oil & gas
COAL LESSEES
RAPOCA ENERGY CO.
MAPCO
WELLMORE COAL CORP.
58.77 AC. - 100%

TOM HASS surface

MARVIN HIBBITS surface

UNIT BOUNDARY

COORDINATES OF WELL
N 12355.66
E 33272.04 (AS DRILLED)

BETTY JEAN STILTNER surface

JERRY HIBBITS surface

EH - 42

HAROLD HIBBITS surface

N 12000.00
E 32000.00

N 12000.00
E 34000.00

BOUNDARY

BOUNDARY

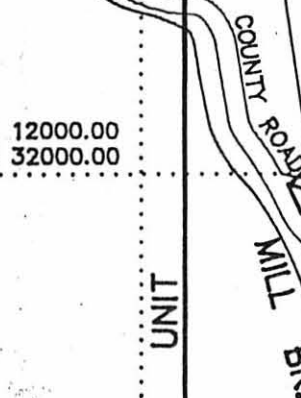
LOWER

UNIT

UNIT

BOUNDARY

13350'



TO ROUTE 83

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 - 42

FARM GREEN CHARLES HEIRS TRACT C-1

LEASE NO. _____ ELEVATION 1582.22 (TRIG)

ACRES 673 AC. 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 JANUARY 9, 1992 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 - 42

+ 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.



Registered Engineer or Certified Land Surveyor In Charge