

7.5' OGIS topo loc	15' loc
1.975	1.975
1.95W	4.21W

FILE NO. BK 57 P 56  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1-2500'  
 PROVEN SOURCE OF ELEVATION U.S.G.S. BM  
2 JJS EL 763.42

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 ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.  
 (SIGNED) C. J. Vargo Jr.  
 R.P.E. \_\_\_\_\_ E.L.S. 92

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)



DATE SEPT 1, 1980  
 OPERATOR'S WELL NO. C-4  
 API WELL NO. \_\_\_\_\_  
47-039-365911  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS \_\_\_ LIQUID INJECTION X WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 1002.38 WATERSHED INDIAN CREEK  
 DISTRICT ELK COUNTY KANAWHA  
 QUADRANGLE BLUE CREEK 7 1/2 CLENDENIN 15' WC  
 SURFACE OWNER FAYETTE LUMBER CO ACREAGE 500  
 OIL & GAS ROYALTY OWNER C.J. HUNT LEASE ACREAGE 700  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE X PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION WEIR ESTIMATED DEPTH 2000  
 WELL OPERATOR GARY ENERGY CORP DESIGNATED AGENT JAY J. VARGO  
 ADDRESS FOUR INVERNESS COURT ADDRESS 1268 GREENBRIER ST.  
ENGLEWOOD COLORADO 80112 CHARLESTON WV 25311  
 OCT 28 1980



IV-35  
(Rev 8-81)

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date October 6, 1982  
Operator's  
Well No. C - 4  
Farm C.J. Hunt  
API No. 47 - 039 - 3659-LI

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil \_\_\_ / Gas \_\_\_ / Liquid Injection x / Waste Disposal \_\_\_ /  
(If "Gas," Production \_\_\_ / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow \_\_\_ /)

LOCATION: Elevation: 1002' Watershed Indian Creek  
District: Elk County Kanawha Quadrangle Blue Creek

COMPANY GARY ENERGY CORPORATION  
ADDRESS 112 Indian Lake Dr., Elkview, W.Va.  
DESIGNATED AGENT Daniel L. Pauley  
ADDRESS 112 Indian Lake Dr., Elkview, W.Va.  
SURFACE OWNER Fayette Lumber Company  
ADDRESS P.O. Box A Dixie, West Virginia 25059  
MINERAL RIGHTS OWNER See Title Opinion  
ADDRESS \_\_\_\_\_  
OIL AND GAS INSPECTOR FOR THIS WORK Homer  
H. Dougherty ADDRESS Looneyville, W.Va.  
PERMIT ISSUED October 3, 1980  
DRILLING COMMENCED October 11, 1980  
DRILLING COMPLETED November 16, 1980  
IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	581.58'	581.58'	Cement to Surface
7			
5 1/2			
4 1/2	2180'	2180'	Cement to Surface
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Pocono Weir Depth 2005 feet  
Depth of completed well 2180 feet Rotary x / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh \_\_\_\_\_ feet; Salt 1000 feet  
Coal seam depths: 440' to 445' , 497'-510' Is coal being mined in the area? NO  
268' to 272'

OPEN FLOW DATA

Producing formation Weir Sand Pay zone depth 2005 feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ hours  
Static rock pressure \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in  
(If applicable due to multiple completion--)  
Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ Mcf/d Oil: Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ hours  
Static rock pressure \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in

MAR 14 1983

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

NOTES

This is a new well. Drilled to 2180'.

Ran all new 8 5/8" casing to 581.58' (Grade H 40, 20#/ft.) cemented to surface.

Ran all new 4 1/2" casing to 2180' ( J55 - 12.6) and cemented to surface.

We plan to use this well for H<sub>2</sub>O Injection.  
*changed to CO<sub>2</sub>*

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale			0	200	
Sand and Shale			200	268	
Coal			268	272	
Sand and Shale			272	465	
Coal			465	477	
Rock, sand with shale			477	485	
Sand Shale			485	554	
Sand and Shale			554	575	
Shale with sand			575	915	
Sand Shale			915	939	
Salt Sand			939	1485	
Sand Shale			1485	1575	
Maxon Sand			1575	1630	
Sand Shale			1630	1666	
Little Lime			1666	1770	
Big Lime			1770	1905	
Shale			1905	1924	
Squaw Sand			1924	1946	
Shale			1946	2005	
Weir Sand			2005	2107	
Shale			2107	2167	

(Attach separate sheets as necessary)

GARY ENERGY CORPORATION

Well Operator

By:

Date:

*2-14-85*

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."


 IV-35  
 (Rev 8-81)

 Date October 6, 1982  
 Operator's  
 Well No. C - 4  
 Farm C.J. Hunt  
 API No. 47 - 039 - 3659-LI
**RECEIVED**

OCT 18 1982

 State of West Virginia  
 Department of Mines  
 Oil and Gas Division

 OIL AND GAS DIVISION  
 WV DEPARTMENT OF MINES

 WELL OPERATOR'S REPORT  
 OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

 WELL TYPE: Oil     / Gas     / Liquid Injection x / Waste Disposal     /  
 (If "Gas," Production     / Underground Storage     / Deep     / Shallow     /)

 LOCATION: Elevation: 1002' Watershed Indian Creek  
 District: Elk County Kanawha Quadrangle Blue Creek

 COMPANY GARY ENERGY CORPORATION  
 ADDRESS 112 Indian Lake Dr., Elkview, W.Va.  
 DESIGNATED AGENT Daniel L. Pauley  
 ADDRESS 112 Indian Lake Dr., Elkview, W.Va.  
 SURFACE OWNER Fayette Lumber Company  
 ADDRESS P.O. Box A Dixie, West Virginia 25059  
 MINERAL RIGHTS OWNER See Title Opinion  
 ADDRESS      
 OIL AND GAS INSPECTOR FOR THIS WORK Homer  
H. Dougherty ADDRESS Looneyville, W.Va.  
 PERMIT ISSUED October 3, 1980  
 DRILLING COMMENCED October 11, 1980  
 DRILLING COMPLETED November 16, 1980  
 IF APPLICABLE: PLUGGING OF DRY HOLE ON  
 CONTINUOUS PROGRESSION FROM DRILLING OR  
 REWORKING. VERBAL PERMISSION OBTAINED  
 ON    

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	581.58'	581.58'	Cement to Surface
7			
5 1/2			
4 1/2	2180'	2180'	Cement to Surface
3			
2			
Liners used			

 GEOLOGICAL TARGET FORMATION Pocono Weir Depth 2005 feet  
 Depth of completed well 2180 feet Rotary x / Cable Tools      
 Water strata depth: Fresh     feet; Salt 1000 feet  
 Coal seam depths: 440' to 445' , 497'-510' Is coal being mined in the area? NO  
268' to 272'

## OPEN FLOW DATA

 Producing formation Weir Sand Pay zone depth 2005 feet  
 Gas: Initial open flow     Mcf/d Oil: Initial open flow     Bbl/d  
 Final open flow     Mcf/d Final open flow     Bbl/d  
 Time of open flow between initial and final tests     hours

 Static rock pressure     psig (surface measurement) after     hours shut in  
 (If applicable due to multiple completion-- )

 Second producing formation     Pay zone depth     feet  
 Gas: Initial open flow     Mcf/d Oil: Initial open flow     Bbl/d  
 Final open flow     Mcf/d Oil: Final open flow     Bbl/d  
 Time of open flow between initial and final tests     hours

 Static rock pressure     psig (surface measurement) after     hours shut in

OCT 25 1982 (Continue on reverse side)

FORM IV-35  
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

NOTES

This is a new well. Drilled to 2180'.

Ran all new 8 5/8" casing to 581.58' (Grade H 40, 20#/ft.) cemented to surface.

Ran all new 4 1/2" casing to 2180' ( J55 - 12.6) and cemented to surface.

We plan to use this well for CO<sub>2</sub> Injection.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale			0	200	
Sand and Shale			200	268	
Coal			268	272	
Sand and Shale			272	465	
Coal			465	477	
Rock, sand with shale			477	485	
Sand Shale			485	554	
Sand and Shale			554	575	
Shale with sand			575	915	
Sand Shale			915	939	
Salt Sand			939	1485	
Sand Shale			1485	1575	
Maxon Sand			1575	1630	
Sand Shale			1630	1666	
Little Lime			1666	1770	
Big Lime			1770	1905	
Shale			1905	1924	
Squaw Sand			1924	1946	
Shale			1946	2005	
<u>Weir</u> Sand			2005	2107	
Shale			2107	2167	

(Attach separate sheets as necessary)

GARY ENERGY CORPORATION

Well Operator

By:

Date:

*David L. Paulay*  
10-15-82

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

[08-78]

Operator's Well No. C-4

API Well No. 47 - 039 - 3659-LI  
State County Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OIL AND GAS DIVISION

LIQUID INJECTION OR WASTE DISPOSAL WELL PERMIT APPLICATION

WELL TYPE: Liquid Injection  / Waste Disposal   
 LOCATION: Elevation: 1002 ft. Watershed: Indian Creek  
 District: Elk County: Kanawha Quadrangle: Blue Creek  
 GEOLOGICAL TARGET FORMATION: Pocono (Weir) Approximate depth 2000 feet  
 Virgin reservoir pressure in target formation 150 psig (surface measurement)  
 Source of information on virgin reservoir pressure Measurement from adjacent new well  
(C. J. Hunt 3-T)

WELL OPERATOR Gary Energy Corporation  
 Address 112 Indian Lake Drive  
Elkview, West Virginia 25071

DESIGNATED AGENT Dan Pauley  
 Address 112 Indian Lake Drive  
Elkview, West Virginia 25071

ROYALTY OWNER See title opinion  
 Address \_\_\_\_\_

COAL OPERATOR NONE  
 Address \_\_\_\_\_

Acreage 700

COAL OWNER(S) ~~XXXXXXXXXXXXXXXXXXXX~~

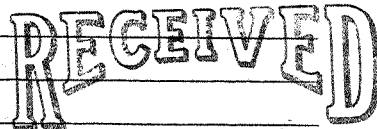
SURFACE OWNER Fayette Lumber Company  
 Address P. O. Box A  
Dixie, West Virginia 25059  
 Acreage 470

Name D. L. Ray and Carol Ann Young  
 Address \_\_\_\_\_  
 Name \_\_\_\_\_

OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Martin Nichols  
 Address P. O. Box 554  
Clendenin, W. Va. 25045  
548-6993

Address OCT - 3 1980

COAL LESSEE WITH DECLARATION ON RECORD  
 Name NONE  
 Address \_\_\_\_\_



OCT - 3 1980

OIL & GAS DIVISION

DEPT. OF MINES

The undersigned well operator is entitled to operate for liquid injection or waste disposal purposes at the above location under a deed  / lease  / other contract  dated July 30, 1980, to the undersigned well operator from Permeator Corporation

[If said deed, lease, or other contract has been recorded:]

Recorded on August 18, 19 80, in the office of the Clerk of the County Commission of Kanawha County, West Virginia, in Assignment Book 93 at page 201. A permit is requested as follows:

PROPOSED WORK: Convert  / Drill  / Drill deeper  / Redrill  / Fracture or stimulate   
 Plug off old formation  / Perforate new formation   
 Other physical change in well (specify) \_\_\_\_\_

--planned as shown on the work order on the reverse side hereof.

Date of first liquid injection or waste disposal: June 1, 19 81

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within thirty (30) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:  
 WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
 1615 WASHINGTON STREET EAST  
 CHARLESTON, WV 25311  
 TELEPHONE: (304) 343-3093

Gary Energy Corporation  
 Well Operator

By J. J. Vargo  
 Its Production Manager

BLANKET BOND

M IV-3  
(reverse)  
-78]

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON  
FORM IV-35 AND/OR FORM IV-37 UPON COMPLETION

DILLING CONTRACTOR (IF KNOWN) Clint Hurt & Associates, Inc.  
Address P. O. Box 383  
Elkview, W. Va. 25071

GEOLOGICAL TARGET FORMATION, Pocono (Weir)

Estimated depth of completed well, 2000 feet Rotary  / Cable tools  /  
Approximate water strata depths: Fresh, N/A feet; salt, 740 feet.  
Approximate coal seam depths: 555-559 Is coal being mined in the area? Yes  / No  /  
641-644

DRILLING AND TUBING PROGRAM

DRILLING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor	13	H40		X		30'	0	Kinds
Fresh water								
Coal								Sizes
Intermediate	8 5/8	H40	20#	X			<u>674</u> 400'	To Surface
Production	4 1/2	K55	105#	X		2000'	To Surface	Depths set
Tubing								
Liners								Perforations:
								Top Bottom

NOTE 1: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-3 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2a, (iii) unless previously paid on the same well, the fee required by Code § 22-4-12a, (iv) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-3 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-3 filed in connection therewith.

NOTE 2: In addition to the permit required from the Department of Mines, the operator of a disposal well must obtain a separate permit from the Department of Natural Resources under the provisions of Code § 20-5A-5(b)(7).

NOTE: This well will be drilled and cased with a low water loss mud system.

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 6-7-81.

J. E. Murray  
Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within thirty (30) days of receipt thereof:

W A I V E R

The undersigned coal operator          / owner          / lessee          / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date:         , 19        

By           
Its