



FILE NO. BK 57 P 65
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1-2500'
 PROVEN SOURCE OF ELEVATION USGS 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. S. Tolley Jr.
 R.P.E. _____ J.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-3
 API WELL NO. 47-039-3658 LI
 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 837.71 WATERSHED INDIAN CREEK
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK 7 1/2, CLENDENIN 15' WC
 SURFACE OWNER WESLEY H O'DELL HRS ACREAGE 178
 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 ENEGRY CORP. DESIGNATED AGENT JAY J. VARGO
 ADDRESS FOUR INVERNESS COURT ADDRESS 1268 GREENBRIER ST
ENGLEWOOD COLORADO 80112 CHARLESTON WV 25311

8-0 Blue Creek (217) CO₂ injection well OCT 28 1980



IV-35
(Rev 8-81)

State of West Virginia
Department of Mines
Oil and Gas Division

Date October 1, 1982
Operator's
Well No. C-3
Farm C.J. Hunt
API No. 47 - 039 - 3658-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: 838' 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 Russ & Olive Culpepper
ADDRESS 510 Kanawha Blvd. W., Charleston, W.Va.
MINERAL RIGHTS OWNER See Title Opinion
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Homer
H. Dougherty ADDRESS Looneville, W.Va.
PERMIT ISSUED October, 1980
DRILLING COMMENCED December 13, 1980
DRILLING COMPLETED December 20, 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	621'KB	621'KB	Cement to Surface
7			
5 1/2			
4 1/2	2080'KB	2080"KB	Cement to Surface
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Pocono Weir Depth 1920' feet
Depth of completed well 2093' feet Rotary X / Cable Tools _____
Water strata depth: Fresh _____ feet; Salt 860' feet
Coal seam depths: 395'-404', 575'-586' Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation _____ Pay zone depth _____ 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

(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 2093'.

Ran 621' of all new 8 5/8" (^{H-40} 20#/ft.) casing and cemented to surface.

Ran 2080' of all new 4 1/2" (J55 -12.6) casing and cemented to surface.

We plan to use this well for H₂O 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
Sub Base			0	10	
Rock and Shale			10	205	
Sand and Shale			205	395	
Coal			395	404	
Rock and Shale			404	460	
Shale and Sand			460	575	
Coal			575	586	
Sand and Shale			586	635	
Shale			635	860	
Salt Sand			860	1496	
Maxon Sand			1496	1546	
Little Lime			1546	1590	
Pencil Cave			1590	1595	
Big Lime			1595	1836	
Shale			1836	1920	
Weir Sand			1920	2033	
Shale			2033	2093	

(Attach separate sheets as necessary)

GARY ENERGY CORPORATION

Well Operator

By: Dennis Paul

Date: 2-14-83

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 1, 1982
Operator's
Well No. C-3
Farm C.J. Hunt
API No. 47 - 039 - 3658-LI

RECEIVED State of West Virginia
Department of Mines
Oil and Gas Division
OCT 18 1982

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: 838' 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 Russ & Olive Culpepper
ADDRESS 510 Kanawha Blvd. W., Charleston, W.Va.
MINERAL RIGHTS OWNER See Title Opinion
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Homer
H. Dougherty ADDRESS Looneyville, W.Va.
PERMIT ISSUED October, 1980
DRILLING COMMENCED December 13, 1980
DRILLING COMPLETED December 20, 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	621'KB	621'KB	Cement to Surface
7			
5 1/2			
4 1/2	2080'KB	2080"KB	Cement to Surface
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Pocono Weir Depth 1920' feet
Depth of completed well 2093' feet Rotary X / Cable Tools _____
Water strata depth: Fresh _____ feet; Salt 860' feet
Coal seam depths: 395'-404', 575'-586' Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation _____ Pay zone depth _____ feet
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Final open flow _____ Mcf/d Final open flow _____ Bbl/d
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(If applicable due to multiple completion--)
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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

(Continue on reverse side)

FORM IV-35
(REVERSE)

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

NOTES

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WELL LOG

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					Including indication of all fresh and salt water, coal, oil and gas
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Coal			395	404	
Rock and Shale			404	460	
Shale and Sand			460	575	
Coal			575	586	
Sand and Shale			586	635	
Shale			635	860	
Salt Sand			860	1496	
Maxon Sand			1496	1546	
Little Lime			1546	1590	
Pencil Cave			1590	1595	
Big Lime			1595	1836	
Shale			1836	1920	
<u>Weir</u> Sand			1920	2033	
Shale			2033	2093	

(Attach separate sheets as necessary)

GARY ENERGY CORPORATION

Well Operator

By: David L. Pauling

Date: 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-3
API Well No. 47 - 039 - 3658-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 X / Waste Disposal _____
LOCATION: Elevation: 838 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
SURFACE OWNER Russ & Olive Culpepper
Address 510 Kanawha Blvd. West
Charleston, W. Va. 25302
ACREAGE 178

COAL OWNER(S) ~~XXXXXXXXXXXXXXXXXXXX~~
Name D. L. Ray and Carol Ann Young
Address _____

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

Name _____
Address _____
RECEIVED
OCT - 3 1980

COAL LESSEE WITH DECLARATION ON RECORD:
Name NONE
Address _____
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 X / 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 X / Drill deeper _____ / Redrill _____ / Fracture or stimulate X / 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) 343-3092

Gary Energy Corporation
Well Operator
By J. J. Wargo
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 X/ 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 X/
641-644

ASING AND TUBING PROGRAM

CASING 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			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 cored with a low water loss mud system.
 THIS PERMIT MUST BE POSTED AT THE WELL SITE

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 _____

COAL OPERATOR