



IV-35 (Rev 8-81)

State of Mest Birginia Bepartment of Mines

Gil und Cas Bivision

Date 0	ctober	1. 1982	
Operato	r's		
Well No	. <u> </u>	-2	
Farm_	C.J. H	unt	
APT NO	47 -	039 -	3657_TT

WELL OPERATOR'S REPORT

OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

	Elevation:_	746 '	Watershed	Indian Ci	reek		
	District:	E1k	County	anawha	Quadrangle	Blue C	reek
							-3
COMPANY (GARY ENERGY CO	RPORATION					
	12 Indian Lake			Casing	Used in	Tef+	Cement
	D AGENT DANI			Tubing	Drilling		fill up Cu. ft.
	12 Indian Lake			Size	DITITING	11 WELL	Cu. It.
	WNER Russ & O			20-16			
			harleston, W.Va.	Cond.			
MINERAL R	IGHIS OWNER	See Titl	e Opinion	13-10"			
ADDRESS	- · · · · · · · · · · · · · · · · · · ·			9 5/8	0001		Cement to
OIL AND G	AS INSPECTOR I	FOR THIS	WORK Homer	8 5/8	288'	288'	Surface
H. Doughe	erty ADDRESS_	Looneyvi	11e .W.Va.	7			
	SUED October			5 1/2		~	Cement to
	COMMENCED 0c			4 1/2	1936'KB	1936'KB	Cement to Surface
DRILLING (COMPLETED Nov	ember 3,	1980	3			
	ABLE: PLUGGI			2			
CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED		Liners					
ON_		TISSION C		used			
	T TO DOTTE TO DIV	ATION	Pocono Weir		Dep	±h 1790'	feet
GEOLOGICAI	n THUGET LOUN						
		g werr	1920. Teer	waryx			
Depti	h of complete						
Depti Wate	h of complete r strata depti	h: Fresh	feet; ', 223'-243'	Salt <u>11</u>	20' feet	ed in the	area? NO
Depth Waten Coal	h of completer r strata depti seam depths:	h: Fresh	feet;	Salt <u>11</u>	20' feet	ed in the	area? NO
Depth Waten Coal OPEN FLOW	h of completer r strata depti seam depths: DATA	h: Fresh	feet;	Salt <u>11</u> Is coal	20' feet being mine		
Depth Waten Coal OPEN FLOW Produ	h of completed r strata depth seam depths: DATA ucing formation	h: Fresh 161'-167 On Wei	feet; ', 223'-243' r Sand	Salt <u>11</u> Is coal	20' feet being mine y zone dep	-h <u>1790</u>	'feet
Depth Water Coal OPEN FLOW Produ	h of completer r strata depth seam depths: DATA ucing formation Initial open	h: Fresh 161'-167 on Wein flow	feet; ', 223'-243' r Sand Mcf/d	Salt 11 Is coal Pay Oil: In:	20' feet being mine y zone dep	_h <u>1790</u> flow	feet Bbl/d
Depth Water Coal OPEN FLOW Produ	h of completer r strata depth seam depths: DATA ucing formation Initial open	h: Fresh 161'-167 on Wein flow flow	feet; ', 223'-243' r Sand Mcf/d Mcf/d	Salt 11 Is coal Pay Oil: In:	20' feet being mine y zone depi itial open nal open f	_h1790 flow low	feet Bbl/d Bbl/d
Depth Water Coal OPEN FLOW Produ Gas:	h of completer r strata depth seam depths: DATA ucing formation Initial open Final open Time of	h: Fresh 161'-167 on Wei n flow flow f open fl	feet; ', 223'-243' r Sand Mcf/d Mcf/d .cw between init	Salt 11 Is coal Pay Oil: In: Fir	20' feet being mine y zone depi itial open hal open fi inal tests	_h 1790 flow_ lowho	feet Bbl/d Bbl/d wrs
Depth Water Coal OPEN FLOW Produ Gas:	h of completed r strata depth seam depths: DATA ucing formation Initial open Final open Time on ic rock press	h: Fresh 161'-167 on Wei n flow flow f open flure	feet; ', 223'-243' r Sand Mcf/d Mcf/d	Salt 11 Is coal Pay Oil: In: Fir	20' feet being mine y zone depi itial open hal open fi inal tests	_h 1790 flow_ lowho	feet Bbl/d Bbl/d wrs
Depth Water Coal OPEN FLOW Produ Gas: Stat:	h of completed r strata depth seam depths: DATA ucing formation Initial open Final open Time of the content of the content open is applicable during the content open in the content open is rock pressurplicable during the content open is applicable during the content open in the content open is applicable during the content open in the content open is applicable during the content open in the conten	h: Fresh 161'-167 on Wein flow flow f open flure e to mult	feet; ', 223'-243' r Sand Mcf/d Mcf/d .cw between init psig(surfaction)	Salt 11 Is coal Pay Oil: In: Fir tial and fire measurem	20' feet being mine y zone deprintial open hal open fi inal tests ment) after	flowho	feet Bbl/d Bbl/d urs rs shut in
Depth Water Coal OPEN FLOW Produ Gas: Stat:	h of completer r strata depth seam depths: DATA ucing formatic Initial open Final open Time of ic rock press applicable due and producing	h: Fresh 161'-167 on Wei n flow flow f open fl ure e to mult formation	feet; ', 223'-243' r Sand Mcf/d Mcf/d .cw between init psig(surface	Salt 11 Is coal Pay Oil: Incrial and fince measurer 1) Pay	20' feet being mine y zone deprintial open hal open fi inal tests ment) after y zone depri	flowhouhouh	feet Bbl/d Bbl/d urs rs shut in
Depth Water Coal OPEN FLOW Produ Gas: Stat: (If a	h of completed r strata depth seam depths: DATA ucing formation Initial open Time of the control of the control open in th	h: Fresh 161'-167 on Wei n flow flow f open fl ure e to mult formation n flow	feet; ', 223'-243' r Sand Mcf/d Mcf/d .cw between init psig(surfaction)	Salt 11 Is coal Pay Oil: In: Fir tial and fire measurer 1) Pay Oil: In:	20' feet being mine y zone depritial open hal open fi inal tests ment) after y zone depri	flow househ	feet Bbl/d Bbl/d urs rs shut in feet Ebl/d

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

NOTES

This is a new well. Drilled to 1950'. Here H_{20} Ran 288' of all new 8 5/8" (20#/ft.) casing and cemented to surface. Ran 1936' of all new 4 1/2" (J55-12.6) casing and cemented to surface. We plan to use this well for H_{20} Injection.

WELL LOG

	* 1		
FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	<u>REMARKS</u> Including indication of all fres and salt water, coal, oil and ga
Sub Base	0	10	e?
Sand, Shale and Rock	10	161	
Coal	161	167	
Sand and Shale	167	223	
Coal	223	243	
Sand and Shale	243	300	
Shale	300	470	
Shale and Sand	470		
Salt Sand		1120	
	1120	1348	
	1348	1379	
Sand and Shale	1379	1450	
Big Lime	1450	1603	
Big Injun	1603	1650	
Shale	1650	1740	
Shale and Sand	1740	1790	
Weir Sand	1790	1950	
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	pp sales		-
	G-(car-cas-cas-cas-cas-cas-cas-cas-cas-cas-cas		
	Popular Control Contro		44

(Attach separate sheets as necessary)

GARY ENERGY CORPORATION	
Well Operator	
	<u> </u>
By: A Command	
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 coul, encountered in the drilling of a well."

OF WEST VICE
RECEIVED
OCT 1 0 1082

IV-35 (Rev 8-81)

OCT 1 8 1982

Date October 1, 1982							
Operato Well No							
_	C.J. Hunt						
APT No.	47 - 039 - 3657-II						

COMPANDATION Mest Airginia Bepartment of Mines

OCT 1 8 1982

Bil und Gas Bivision

OIL AND GAS DIVISION WELL OPERATOR'S REPORT

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

asing ubing ize 0-16 ond. 3-10" 5/8 5/8 7 5 1/2	Used in Drilling	Left	Cement to Surface
ubing ize 0-16 ond. 3-10" 5/8 7 1/2 1/2 3 2 iners used	Drilling	in Well	fill up Cu. ft. Cement to Surface
ubing ize 0-16 ond. 3-10" 5/8 7 1/2 1/2 3 2 iners used	Drilling	in Well	fill up Cu. ft. Cement to Surface
ubing ize 0-16 ond. 3-10" 5/8 7 1/2 1/2 3 2 iners used	Drilling	in Well	fill up Cu. ft. Cement to Surface
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ize 0-16 ond. 3-10" 5/8 7 5/8 7 5/2 1/2 3 2 iners used	288'	288'	Cement to Surface
0-16 ond. 3-10" 5/8 7 5/8 7 5/2 1/2 3 2 siners used	288'		Surface
ond. 3-10" 5/8 7 1/2 1/2 3 2 iners used	288'		Surface
5/8 7 5 1/2 1/2 3 2 .iners used	288'		Surface
5/8 7 5 1/2 1/2 3 2 .iners used	288'		Surface
7 3 1/2 3 2 2 iners used			Surface
3 1/2 3 2 2 iners	1936'КВ	1936'KB	
1/2 3 2 Liners used	1936'KB	1936'KB	Cement to Surface
3 2 Liners used	1936'КВ	1936'KB	Cement to Surface
3 2 Liners used			
iners used			
iners used			
used			
			······································
	Dep	th 1790'	feet
	/ Cable		
	_{20'} feet		
			e area? NO
Dave	zone den	x+h 1700	ı feet
ray	tial open	. flow	Bb1 /c
	ient) arte	1100	ms sinc m
			foot
l and fi	inal tests	5h	ours
	il: Ini Fir l and fir measurem) Pay il: In: il: Fir l and f:	il: Initial open Final open f l and final tests measurement) afte / Pay zone dep il: Initial open il: Final open f l and final tests	Pay zone depth 1790 il: Initial open flow Final open flow l and final tests homeasurement) after homeasurement) Pay zone depth il: Initial open flow il: Final open flow l and final tests homeasurement) after homeasurement)

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WELL LOG

			REMARKS
FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	Including indication of all fresh
			and salt water, coal, oil and gas
Sub Base	0	10	.5
Sand, Shale and Rock	10	161	
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Sand and Shale	1348	1379 1450	· · ·
Big Lime	1450	1603	
Big Injun	1603	1650	
Shale	1650	1740	
Shale and Sand	1740	1790	
Weir Sand	1790	1950	
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	ANGELORI EST CARE		
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(Attach separate sheets as necessary)

GARY ENERGY CORPORATION	N
Well Operator	
$\langle \cdot \cdot \rangle$) ()
By: A smil 7. H	au Ven
Pate 4	
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 C-2
Well No. 47 - 039 - 3657-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		
	Watershed:Indian Creek	
	County: <u>Kanawha</u> Quadrangle: <u>Blue Creek</u>	
	OCONO (Weir) Approximate depth 2000 feet	
	n target formation 150 psig (surface measurement)	
	rgin reservoir pressure <u>Measurement from adjacent new well</u>	
	unonotion	
WELL OPERATOR Gary Energy Cor		
Address 112 Indian Lake	170.000 A 190.000 A	
Elkview, West V	Virginia 25071 Elkview, West Virginia 25071	
ROYALTY OWNER See title opi	nion coal operator NONE	
Address	Address	
Acreage 700	COAL OWNER(S) ************************************	
SURFACE OWNER Russ & Olive Cu		
Address <u>510 Kanawha Blv</u>		M
Charleston, W.	Va. 25302	
Acreage 178		VIDEO DE LA CONTROL DE LA CONT
OIL & GAS INSPECTOR TO BE NOTIFIE		
	ON A CAS DIVISION	2
Address <u>P. O. Box 554</u>		FS
,	Va. 25045 Name NONE DEPT. OF MIN	
548-6993	Address	
19 <u>80</u> , to the undersigned well [If sail deed, lease, or other or Recorded on August 18, , 19 County, West Virginia, in Assign PROPOSED WORK: Convert / Dr. Plug off old form	80, in the office of the Clerk of the County Commission of Kanawha gnment Book 93 at page 201. A permit is requested as follows: rill X / Drill deeper / Redrill / Fracture or stimulate X mation / Perforate new formation /	
other physical en	hange in well (specify)	
Date of first lic The above named coal o	wn on the work order on the reverse side hereof. quid injection or waste disposal: June 1 , 19 81 perator, coal owner(s), and coal lessee are hereby notified that any	
	re required to make by Code § 22-4-3 must be filed with the Department	
	after the receipt of this Application by the Department.	
	Application and the enclosed plat and reclamation plan have been maile: by hand to the above named coal operator, coal owner(s), and coal leases	
	ing or delivery of this Permit Application to the Department of Mines	
at Charleston, West Virginia.	THE AT ANYTHOUS OF SHIP LETWIN MEMORIPACION OF NEW DESCRIPTION OF WINES	
PLEASE SUBMIT COPIES OF ALL		
SECRETARION TOUR DIRECTLY TO:	Gary Energy Corporation	
WEST VIRGINIA DIL AND GAS	Well Operator	
CONSERVATION COMMISSION 1615. WASHINGTON STREET EAST [CHARLESTON, WV 25311	3y D. D. Vargo	
1615, WASHINGTON STREET EAST	0000	

BLANKET BOWD

RM IV-3 everse) 8-78]

PROPOSED WORK ORDER

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

RILLING CONT	TRACTOR	(IF K				lurt & Asso		<u>(2</u>	
			Α	ddress.		0. Box 3			
					E	lkview, W.	Va. 25071	-	
SEOLOGICAL TA	ARGET F	ORMATI	on,]	ocon	0 (Weir)			
Estimat	ed dept	h of c	<pre>decomplete</pre>	d well	L,	2000	feet	Rotary_X_/	Cable tools/
Approx1:	nate wa	ter st	rata de	pths:	Fre	sh, N/A f	eet; salt,	740 feet.	
Approxi	mate co	al sea	.m dept:	1S:	555-	559 Is	coal being mi	ined in the area:	? Yes / No X /
CASING AND T	UBING F	ROGRAM	L		54 1-	644			
CASING OR TUBING TYPE		SPECI	FICATIO Weight	11			INTERVALS	CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	13	H40	per ft	Х	2867	301	0		Kinds
Conductor	,,,								
Fresh water Coal									Sizes
Intermediate	8 5/8	B H40	20#	Х			4001	To Surface	
	4 ½	K55		Y			2000!		Depths set
Tubing	7 2								
Liners									Perforations:
Liners									Top Bottom

Foreby then same to consoft when is some of the same o	TO IV-3 Regulat Regula	must bion 11 e other the the the lamatid posed A sepagah turing a turing to be constituted by the constitute of the cons	e filed , (ii) r secur r secur on requ by Cod well. rate Fo on the he perm de § 20	with a bond ity all it	the lin lower the lin lower the lin lower the lin lower the ling is lower the ling in lower the line line line line line line line lin	Department, a one of the fid by Code § 22-4-12. de § 22-4-12. de § 22-4-12. de from the oral to be part filed in condition the Different the D	accompanied by the prescrib 22-4-2a, (iii 2, (iv) Form of any we equired for fof the work nection there epartment of epartment of SNE 22, ved	ed by Regulation) unless previou IV-9, "Reclamation 23, and (v) atter well or dwe fracturing or stifor which a permewith.	the form prescribed 12, or in lieu sly paid on the on Plan", applicable if applicable, the lling within 200 feet mulating a well it is sought and stor of a disposal under the
One	rolions	have n	at come		na pe	6-7-81	·e 11		•
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***	Deputy	/// /	Wy.	sy		The state of the s			ng distriction of the second o
location h	or coal is to b The und as exam ion, of	lesse issu lersign mined to	e who hed with	nas reciin the	ator	d a declarat (30) days of WAIV / owne l location. en added to teation provi	ion under Coc receipt ther ER / le: If a mine map. ded. the wel.	ssee / of the	e coal under this well overs the area of the d has no objection to omblied with all
Date:			, 1	9					
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