(Revised 3-81)



Well No. J. Kee No. | Farm API // - 087- 3581 Dat March 4, 1982

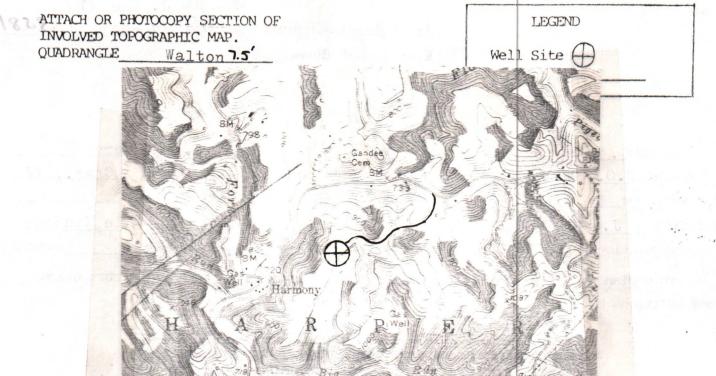
OFFICE OF OIL AND GA	WEST VIHIGINIA S - DEPARTMENT OF	MINES
UILANDGAS WELLE	FRITTA	P L L L L L L L L L L L L L L L L L L L
WILL TYPE OIL / Gov x /		
(If "Gra", Production / Und	erground storage	/ Deep / Shallowx /
District: Harper County:	Roane On	
Will OFFRATOR Allegheny & Western Energy P. O. Box 2587	SYDESIGNATED AGENT	Roland Baer
P. O. Box 2587	Address	P. 0. Box 2587 Chas. WV 25329
Chas., WV 25329 Chas., WV 25329 ROYALIY OWNER Jarrett Ellis Kee	COAL OPERATOR	N/A
Address Gandeeville, WV	Address	A TAY TO THE TAY OF TH
Acre	COAL OWNER(S) WI	TH DECLARATION DN-RECORD:
Address Gandeeville, WV	NAMEAddress	N/A
Acresque 87.5	NAME	
FILLD SALE (IT MADE) TO:	Address	
Address.	COAL LESSEE WITH	DECLARATION ON RECORD:
	NAMEAddress	
OIL AND GAS INSPECTOR TO BE NOTIFIED:	AUG CO	RECEIVED
MAN Richard J. Morris		400 0 7 1000
Grantsville, WV 26147		APR 2 7 1982
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Grantsville, WV 26147 Letephone (304) 354-7259		OIL AND GAS DIVISION WY DEPARTMENT OF MINES
		WV DEPARTMENT OF MINES
The undersigned well operator is entity above location under a deed / lease	/ other contract	oll or gas purposes at the
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Alg	/ other contract an F. Hess	oll or gas purposes at the x / dated 12-10 , 19 81,
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also (1) will deed, lease, or other contract has	/ other contract an F. Hess been record.	oll or gas purposes at the x / dated 12-10, 1981,
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Alace (1) will dead, lease, or other contract has Recorded on 12-11, in the office of the contract of the co	/ other contract an F. Hess been record.	oll or gas purposes at the x / dated 12-10, 1981,
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also (1) will deed, lease, or other contract has	/ other contract an F. Hess been record. (;)	oll or gas purposes at the x / dated 12-10, 19 81, of County Commission of
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Algorithms deed, /ease, or other contract has Recorded on 12-11, 1981, in the off Roane County, West Virginia, in PROPOSED WORK: Drill x / Drill Deeper	/ other contract an F. Hess been record) fice of the Clerk 161 Book at / Redrill	of County Commission of page 696 . A permit is
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also it will dead, lease, or other contract has Recorded on 12-11, 1981, in the off Roane County, West Virginia, in the off PROPOSED WORK: Drill x / Drill Deeper-Plug off old formation	/ other contract an F. Hess been record) fice of the Clerk 161 Book at / Redrill / Perforate new	of County Commission of page 696. A permit is
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also (1) will dead, lease, or other contract has Recorded on 12-11, 1981, in the off Roane County, West Virginia, in PROPOSID WORK: Drill x / Drill Deeper-Plug off old formation Other physical change in	/ other contract an F. Hess been record) fice of the Clerk 161 Book at / Redrill / Perforate new well (specify)	of County Commission of page 696. A permit is fracture or stimulatexy.
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also (1) out the deed, the contract has Recorded on 12-11, 1981, in the off Roane County, West Virginia, in the off PROPOSID WORK: Drill x / Drill Deeper-Plug off old formation Other physical change inplanned as shown on the line above named coal operator, coal owner(s)	Jother contract an F. Hess been record. fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) work order on the , and coal lessee	of County Commission of page 696. A permit is fracture or stimulateXya / formulion x /
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also (1) wild deed, /ease, or other contract has Recorded on 12-11, 1981, in the off Recorded on 12-11, 1981, in the off Roane County, West Virginia, in PROPOSID WORK: Drill x / Drill Deeper-Plug off old formation Other physical change inplanned as shown on the Other physical change in the above named coal operator, coal owner(s) objection they wish to make or are required Department of Mines within fifteen (15) days	down F. Hess been record. fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) work order on th , and coal lessee to make by Code & s after receipt of	of County Commission of page 696. A permit is fracture or stimulateXya formulion x e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also (1) will deed, lease, or other contract has Recorded on 12-11, 1981, in the off Roane County, West Virginia, in PROPOSID WORK: Drill x / Drill Deeper-Plug off old formation Other physical change in Other physical change in Objection they wish to make or are required Department of Mines within fifteen (15) days Copies of this Permit Application and the end of the second operator of the proper of this Permit Application and the end of the second operator of the second operator of the second operator of the second operation and the end of the second operation and the end of the second operator of the second operation and the end of the second operator operator of the second operator of the second operator operator operator operator of the second operator operato	fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) work order on the , and coal lessee to make by Code & s after receipt of	of County Commission of page 696 . A permit is fracture or stimulateXya/ formation x/ e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept eclamation plan have been
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also in the undersigned well operator from Also in the undersigned well operator from Also in the undersigned on 12-11 , 1981, in the off Roane County, West Virginia, in the off PROPOSED WORK: Drill x / Drill Deeper Plug off old formation Other physical change in Other physical cha	den F. Hess been recent. fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) work order on th , and coal lessee to make by Code & s after receipt of nelosed plat and r and to the above n y of the mailing o	of County Commission of of County Commission of page 696 . A permit is fracture or stimulateXya/ formulion_x/ e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept eclamation plan have been amed coal operator, coal own-
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also it will dead, lease, or other contract has Recorded on 12-11, 1981, in the off Roane County, West Virginia, in PROPOSID WORK: Drill x / Drill Deeper Plug off old formation Other physical change in Other physical change in Objection they wish to make or are required Department of Mines within fifteen (15) days Copies of this Permit Application and the endalled by registered mail or delivered by has	den F. Hess been recent. fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) work order on th , and coal lessee to make by Code & s after receipt of nelosed plat and r and to the above n y of the mailing o	of County Commission of of County Commission of page 696 . A permit is fracture or stimulateXya/ formulion_x/ e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept eclamation plan have been amed coal operator, coal own-
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Alse (1) will deed, lease, or other contract has Recorded on 12-11 , 1981, in the office of the contract has requested as follows: PROPOSED WORK: Drill x / Drill Deeper-Plug off old formation Other physical change in Other physical change in Department of Mines within fifteen (15) days (copies of this Permit Application and the emailed by registered mail or delivered by has et (s), and coal lessees on or before the day to the Department of Mines at Charleston, Well and The Department of Mines at Charleston and The D	den F. Hess been record. fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) e work order on th and coal lessee to make by Code & safter receipt of nelosed plat and read to the above new y of the mailing of est Virginia. Allegheny & W	of County Commission of of County Commission of page 696 . A permit is / fracture or stimulateXya / formulion x / e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept eclamation plan have been amed coal operator, coal own- delivery of this Applicatio 09/15/2023 estern Energy Corp.
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also it will dead, lease, or other contract has Recorded on 12-11 , 1981, in the off Roane County, West Virginia, in PROPOSED WORK: Drill x / Drill Deeper-Plug off old formation Other physical change in —-planned as shown on the Objection they wish to make or are required Department of Mines within fifteen (15) days Copies of this Permit Application and the empired by registered mall or delivered by has et(s), and coal lessees on or before the day to the Department of Mines at Charleston, We PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:	fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) work order on the , and coal lessee to make by Code & s after receipt of nclosed plat and reand to the above new y of the mailing of est Virginia. Allegheny & W Well	of County Commission of of County Commission of page 696 A permit is fracture or stimulateXya/ formation x/ e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept eclamation plan have been amed coal operator, coal own- delivery of this Applicatio 09/15/2023 estern Energy Corp. Operator
The undersigned well operator is entity above location under a deed / lease to the undersigned well operator from Also it will dead, lease, or other contract has Recorded on 12-11 , 1981, in the off Roane County, West Virginia, in PROPOSED WORK: Drill x / Drill Deeper-Plug off old formation Other physical change in —-planned as shown on the Objection they wish to make or are required Department of Mines within fifteen (15) days Copies of this Permit Application and the empired by registered mall or delivered by has et(s), and coal lessees on or before the day to the Department of Mines at Charleston, We PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:	den F. Hess been record. fice of the Clerk 161 Book at / Redrill / Perforate new well (specify) e work order on th and coal lessee to make by Code & safter receipt of nelosed plat and read to the above new y of the mailing of est Virginia. Allegheny & W	of County Commission of of County Commission of page 696 A permit is fracture or stimulateXya/ formation x/ e reverse side hereof. are hereby notified that any 22-4-3 must be filed with the this Application by the Dept eclamation plan have been amed coal operator, coal own- delivery of this Applicatio 09/15/2023 estern Energy Corp. Operator

(Revised 3-81)

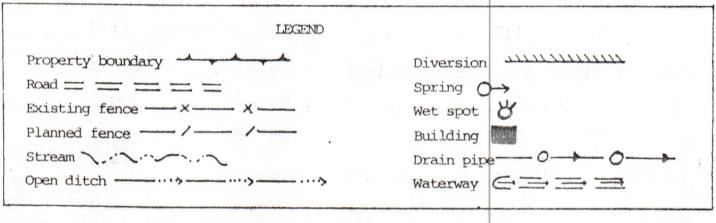
PROPOSED WORK ORDER

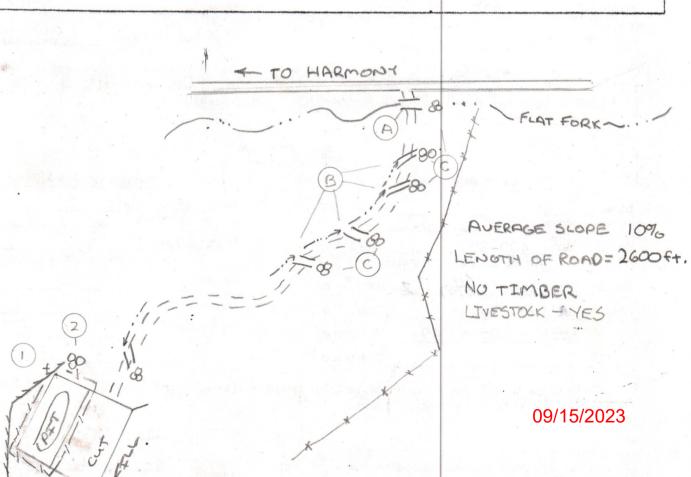
		THIS	IS AN ESTIMATE ONLY:
ACTUAL	INFORMATION	MUST BE	SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING	CONTRAC	TOR (IF	KNOWN)				OKI 1 4 - 33	OFON COMPLET	ION
		,	Address						
					- Charles de Lipa	The second section of the second section section section sections section sections section sec		Commission to the second or organic Arministration of	
			-		-			The second secon	
Арргох Арргох	imate wa	ater str	MIDICICU	hs:	Fresh	200	ellus-Sha et. Rota feet;	$\frac{1e}{ry_{X}}$ / Cab	le tools/
CASING AND	TUBING	PROGRA	м			trefficient desired	one of the construction of		
CASING OR	The reproductive region of the state of the second of the	and the second second second second	CIFICATI	ONS		FOOTAGE	INTERVALS	CEMENT FILL-	PACKERS
TUBING TYP		Grade	Weight per ft	(No.		For Dri	- Left In	UP OR SACKS	CHUNENS
Conductor	13 3/8	SMLS	42 lbs	X	Used	ling	Well 60 f	Cubic ft.	ly! - I
Fresh water	r9 5/8	SMLS	32	X	-		300 f	20 c.t.s	Kinds
Intermed.	7	SMLS	23	x			2500 0		Sizes
Production	4 1/2	SMLS	10.5	X	1		The second secon	into 9 5/	Qepths set
Tubing Liners		-					5582		
riner?				-			3	rule 15.01	red by Perforations:
	In		,	***********************				the the second section is the second section of the s	Top Bottom
						-			The same of the sa
posc. A se where	d well. parate F e fractu it and i UST BE PC NS BEING THE W. VA e dr	Form IV- uring or s noted OSTED AT IN ACCO A. CODE, 1 illing	-2 shall -2 stimula -3 stimula -3 such THE WELL S RDANCE W THE LOCAT THIS PE	not hating on to	De requis to the Fo	well or a uired for be part rm IV-2;	r fracturi	ithin 200 fee	e well, the fee ired by Code et of the pro- ating a well a permit is erewith.
The undersignormal the area of the signed has a	pe iss gned coa s examin well lo	ued with all operation, ction to complied	hin fift tor / propose the well the worl with al	een (owned well look pro	15) do	ys of re VER Vessee ation. I	/ of the added to	the coal under the map exists when the mine map	hich covers the
									dr.
					Ву	Unio	i Timai		
					Its	:			



Sketch to include well location, existing access road, roads to be constructed, wellsite, drilling pits and necessary structures numbered or lettered to correspond with the first part of this plan. Include all natural drainage.





IV-9 (Rev 8-81)



DATE March 4, 1982
WELL NO. J. Kee #1

State of West Wirginia

Department of Mines Gil und Gas Division

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME Allegheny & Western Energy	DESIGNATED AGENT Roland Baer
Address P.O. Box 2587, Chas., WV	Address P.O. Box 2587, Chas., WV
Telephone 343-4327	Telephone 343-4327
LANDOWNER J. Kee	SOIL CONS. DISTRICT Little Kanawha
Revegetation to be carried out by Rola	and Baer, Jr. (Agent)
This plan has been reviewed by Little	Kanawha SCD. All corrections
and additions become a part of this plan:	4-26-82
/ /	(Date) Nreft Newton (SCD Agent)
ACCESS ROAD	LOCATION
Structure Metal Culvert (A)	Structure Diversion Ditch (1)
Spacing Not less than 12 "	Material Earth
Page Ref. Manual 1;8	Page Ref. Manual 1:10
Structure <u>Ditch Relief Cross Drain(B)</u>	Structure Rip Rap (2
Spacing 150 ft.	Material Rock
Page Ref. Manual 1:6	Page Ref. Manual N/A
Structure Rip Rap (C)	Structure RIECEIVE
Spacing Rock	Material APR 27 1982
Page Ref. Manual N/A	Page Ref. Manual OIL AND GAS DIVISION WY DEPARTMENT OF MINES
All structures should be inspected regular commercial timber is to be out and stacked of cut and removed from the site before dirt was	and all prush and small climber to be
REVECETA	TION
Treatment Area I	Treatment Area II
LimeTons/acre	Lime Same as I Tons/acre
or correct to pH 6.5 Fertilizer 400-600 lbs/acre	or correct to pHlbs/acre
(10-20-20 or equivalent)	(10-20-20 or equivalent) Mulch Tons/acre
Mulch Hydroseed (Hay 2 Tons/acre	A. Deplace with a
Seed* Ledino Clover 5 : lbs/acre	Seed* lbs/acre
Orchard Grass 40 lbs/acre	lbs/acre
*Inoculate all legumes such as vetch, trefo	oil and clovers with the proper bacterium.
Inoculate with 3X recommended amount.	09/15/2023 PREPARED BY Alan F. Hess
makes and a special relations to the special s	
NOTES: Please request landowners' cooperation to protect new seedling for one growing season.	Spencer, WV 25276
Attach separate sheets as	PHONE NO. 927-5646

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

Perforated 3754'-4589' w/25 shots and 4722'-5330' w/20 shots. Foam frac 3754'-4589' zone w/1000 gal of HCL, 60,000# of 20/50 US Mesh Sand and 1,025,000 CF of N₂. Foam frac 4722'-5330' zone w/1000 gal of HCL, 60,000# of 20/50 US Mesh Sand, and 768,000 of N₂

WELL LOG

NL Basin Surveys,

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
W-1 P-1		38	
Hard Rock	0		7 110
Sandy SHale	38	420	Fresh Water 110'
Shale & Red rock	420	1920	
Salt Sand	1920	2045	Salt water 1980'
Little LIme	2045	2080	9.5
Pencil Cave	2080	2084	Paragraphy and Control of the Contro
Big Lime	2084	2180	
Injun	2180	2220	
Shale	2220	2610	
Coffee Shale	2610	2622	
Shale (Brown thru Marcellus)	2622	5400	T.D.
		16,749	
	1.		
	1	atada maten	
	1		
			19.40
	opai ^e movid m	o Shere (Pro	7075

(Attach separate sheets as necessary)

Allegheny & Western Drilli	ng Corporation
Well Operator	
By: Olm	
Date: July 18, 1982	09/15/2023

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 well, encountered in the drilling of a well."

IV-35 (Rev 8-81)

JUL 21 1982

State of Mest Wirginia Bepartment of Mines

Date July 18, 1982 Operator's Well No. J. Kee #1 Farm Jarrett Kee

OIL & GAS DIVISION

Bil und Gas Bivision

API No.47 - 087- 3581

DEPT. OF MINES WELL OPERATOR'S REPORT

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

(If "Gas," Production X / Undergrand LOCATION: Elevation: 1017' Watershed				
District: Harper County Re	Oane	Quadranal	. Uolta	7.5
	oane	Quadi ang 1	ewalton	1 /.5
COMPANY A11 1				
COMPANY Allegheny & Western Drilling Corp.	-			
ADDRESS P.O. Box 2587, Chas., WV 25329	Casing	Used in	Left	Cement
DESIGNATED AGENT Roland C. Baer, Jr.	Tubing	Drilling	in Well	fill up Cu. ft.
ADDRESS SAME	Size			
SURFACE OWNER Jarrett E. Kee	20-16 Cond.			
ADDRESS Gandeeville, WV 25243	13-10"			
MINERAL RIGHTS OWNER SAME	9 5/8		336	150 cf
ADDRESS	8 5/8		330	130 CI
OIL AND GAS INSPECTOR FOR THIS WORK	7		2414	175 cf
Deo Mace ADDRESS Sandridge, WV	5 1/2			17.5 61
PERMIT ISSUED March 28, 1982	4 1/2		5040	
DRILLING COMMENCED June 16, 1982	3		5362	284 cf
DRILLING COMPLETED June 21, 1982	2			-
IF APPLICABLE: PLUGGING OF DRY HOLE ON	2			1
CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED	Liners			
ON	used			
GEOLOGICAL TARGET FORMATION Devonian Shale (Br	corm three Ma		+> =====	
Depth of completed well 5400 feet	Potani V	rcelluspep	th 5582	feet
Water strata depth: Fresh 110 feet	rocary X	/ Cabl	e Tools_	
Coal seam depths: N/A	1.5 COA1	being min	ed in the	area?
OPEN FLOW DATA	Maria	.11		
Producing formation Devonian Shale (Brown	m thru Pa	y zone dep	th 3754-5	330 feet
Gas: Initial open flow Mcf/d	Oil: In	itial open	flow_	Bbl/d
Final open flow 325 Mcf/d	Fi	nal open f	low	Bbl/d
Time of open flow between in	itial and f	inal tests	ho	ours
Static rock pressure 1050 psig(surf	ace measure	ment) afte	r 24 hou	ers shut in
(If applicable due to multiple completi				
Second producing formation	Pa	y zone dep	oth	feet
Gas: Initial open flowMcf/d	Oil: In	itial oper	flow	O LA E LEBENS
Final open flow Mcf/d	oil: Fi	nal open f	low_	Bb1/6
Time of open flow between in	nitial and f	inal tests	5_ h	ours
Static rock pressurepsig(surfa	ace measurem	ent) after	ho	urs shut in

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

RECEIVED

OIL AND GAS WELLS DIVISION

JUN 22 1982

INSPECTOR'S WELL REPORTE AND GAS DIVISION WAS DIVISION OF MINES

Permit No. Rega - 358/			Oil or	Gas Well Gas
Company allagany Theters	CASING AND TUBING	USED IN DRILLING	LEFT IN	PACKERS
Address	Size			22.0
Farm Kee Farm.	16			Kind of Packer
Well No.	13			
District Harper County Roane.	81/4			Size of
Drilling commenced 6-15-1982.	65/8			Depth set
	5 3/16			
Drilling completedTotal depth	3		-	Perf. top
Date shotDepth of shot	2			Perf. bottom
Initial open flow/10ths Water inInch	Liners Used			Perf. top
Open flow after tubing/10ths Merc. inInch				Perf. bottom
VolumeCu. Ft.	CASING CEMEN	NTED	_SIZE	No. FTDate
Rock pressurelbshrs.	NAME OF SER	VICE COMPAN	Y	
Oilbbls., 1st 24 hrs.	COAL WAS EN	COUNTERED A	ΛТ	FEETINCHES
Fresh waterfeetfeet	FEET_	INCHE	s	FEETINCHES
Salt waterfeetfeet	FEET_	INCHE	s	FEETINCHES
Drillers' Names AMA Drilling	Contrae	tou		
Remarks:				
336-95/ Cemented 2	to Surfa	ce,		
6-16-1982		7.0	00	P 11
DATE		Las	5	DISTRICT WELL INSPECTOR
				09/15/2023

OF WIED TO DEPARTMENT OF MINES



State of West Virginia

Department of Mines Energy

Oil and Gas Bivision

Charleston 25305

FINAL INSPECTION REPORT INSPECTORS COMPLIANCE REPORT

COMPAN	Chas., W.UA.	PERMIT NO 087-3581 (3-28-82
	Chas., W.UA.	FARM & WELL NO Jarrett Ree #
		DIST. & COUNTY Harper- Roans
RULE	DESCRIPTION	IN COMPLIANCE
23.06 25.04 25.03 16.01 15.03 15.02 15.01 15.05 23.02 25.01 23.04 23.05 23.07 16.01 16.02 7.05	Notification Prior to Starting Work Prepared before Drilling to Prevent High-Pressure Drilling Required Permits at Wellsite Adequate Fresh Water Casing Adequate Coal Casing Adequate Production Casing Adequate Cement Strenght Cement Type Maintained Access Roads Necessary Equipment to Prevent Wast Reclaimed Drilling Pits No Surface or Underground Pollution Requirements for Production & Gather Well Records on Site Well Records Filed Identification Markings	YES NO Waste Fing Pipelines
1 HAVE IN	NSPECTED THE ABOVE CAPTIONED WELL AND	RECOMMEND THAT IT BE RELEASED:
		SIGNED Homes Hi Dougher
Your well with Chap coverage :	record was received and reclamation ter 22, Article 4, Section 2, the abo for the life of the well.	Administrator-Oil & Gas Division
		October 1, 1985 DATE

1.0 API well number: (If not available, leave blank. 14 digits.)	47-087-3581
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	103 Section of NGPA Category Code
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	Allegheny & Western Energy Corporation Name P.O. Box 2587 Street Charleston, WV WV 25329 City State Zip Code
5.0 Location of this well: [Complete (a) or (b).] (a) For onshore wells (35 letters maximum for field name.)	Harper District Field Name Roane County State
(b) For OCS wells:	N/A Area Name Block Number Date of Lease: Mo. Day Yr. OCS Lease Number
(c) Name and identification number of this well: (35 letters and digits maximum.)	J. Kee #1
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	N/A
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	Roaring Fork Gas Corporation 03329 Name Buyer Code
(b) Date of the contract:	N _I /A _I Mo. Day Yr.
(c) Estimated annual production:	18MMcf.
	(a) Base Price (b) Tax (c) All Other Prices (Indicate (b) and (c) (+) or (-).)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	3.1 5 2 0.4 7 3 0.0 0 0 3.6 2 5
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	3.152 0.473 0.000 3.625
9.0 Person responsible for this application: Agency Use Only Date Received by Juris, Agency JUL 221982 Date Received by FERC	Roland C. Baer, Jr. Executive Vice Pres Name Title Signature July 20, 1982 304) 343-4327 Date Application is Completed Phone Number

PARTICIPANTS: DATE: DEC 30 1982	BUYER-SELLER COD
WELL OPERATOR: Allegheny + Western Energy Corp	
FIRST PURCHASER: Roaring Fork Gas Corp.	03329
OTHER:	7 , 2
W. Va. Department of Mines, Oil & Gas Division WELL DETERMINATION FILE NUMBER	Sunhificis
820722-103-087=3581	
Uso Above File Number on all Communications Relating to Determination of this Well	QUALIFIED
CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSITEM NO.	SING
1. FERC -121 Items not completed - Line No.	_
2. IV-1 Agent Raland C. Baer	
3. IV-2 Well Permit	
4. IV-6 Well Plat	
5. IV-35 Well Record	Deepening
6. IV-36 Gas-Oil Test: Gas Only Was Oil Produ	
7. IV-39 Annual Production years	
8. IV-40 90 day Production Days off 1	ine:
9. IV-48 Application for certification. Complete? /	
10-17. IV Form 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 Complete?	/ Affidavit Signed /
18-28. Other: Survey Logs Geological	
Structure Map 1: 4000 Map	Well Tabulations
(5) Date commenced: 6-16 -12 Date completed 6-21	-82 Deepened
(5) Production Depth: 3754-5330	
(5) Production Formation: Devonian Shale (Brown thru He	rcellad
(5) Final Open Flow: 325 MCF	
(5) After Frac. R. P. 1050 # 24 hr.	
(6) Other Gas Test:	
(7) Avg. Daily Gas from Annual Production:	
(8) Avg. Daily Gas from 90-day ending w/1-120 days	
(8) Line Pressure:	PSIG from Daily Repo
(5) Oil Production: From Completion Report	
0-17. Does lease inventory indicate enhanced recovery being done	
0-17. Is affidavit signed?Notarized?	/
oes official well record with the Department confirm the submitte	
dditional information Does computer program confi	
as Determination Objected toBy Whom?	
	7-11

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES, OIL AND GAS DIVISION

Date	Ju	1y	20		_, :	19_82
Operat Well	tor's	J.	Kee	#1		
API We No. 4:	ell 7 -	08	37		35	

09/15/2023

WELL CLASSIFICATION FORM

The state of the s	TORP
NEW ONSHORE PRODUCTIO	N WELL
NGPA Section 103	
DESIG	MATED AGENT Roland C. Baer, Jr.
	SS P.O. Box 2587
	rleston, WV 25329
WELL OPERATOR Allegheny & Western Energy LOCATI	ON Flouris 1917
ADDRESS D O D OFOR	· · · · · · · · · · · · · · · · · · ·
Charleston WV 25320	rshed Flat Fork
CAS PURCHASER Rooming Ford Co. C	Harper County Roane Quad Walton 7.5
ADDRESS P.O. Box 3572	ct No. N/A
Charleston LTV 25227 Meter	Chart Code N/A
Date o	f Contract N/A
* * * * * * * *	* * * * * * * * *
Date surface drilling was begun: June 16, 1982	
June 16, 1982	
Indicate the bottom hole pressure of the well and expla	ain how this was calculated
	and the contract of
Bottom Hole Pressure: 1,165 psia	
Calculation of Subsurface Pressure Usin	ag Average
Compressibility Factors for Static Colu	Imp Case
I. Roland C. Beer Ir bouter bouter	
I. Roland C. Baer, Jr., having been surface drilling of the well for which this determinati 1977; the well satisfies applicable state or federal we within a proration unit, in existence at the time surfareservoir from which gas is or will be produced and whi in commercial quantities or on which surface drilling be was capable of producing gas in commercial quantities. the best of my information, knowledge and belief, that is a new onshore production well and that I am not awar application which is inconsistent with this conclusion.	ce drilling began, which was applicable to the ch applied to any other well producing pas egan on or after February 19, 1977, and which I state, further, that I have concluded to
	Ω
	Shand
	/
STATE OF WEST VIRGINIA,	
COUNTY OF Kanawha . TO WIT:	
I. Debra Rollyson , a Notary Public	in and for the state and county aforesaid,
do certify that Roland C. Baer, Jr whose name is sign	ed to the writing above the second se
the 20thday of July , 19 82 , has acknowledge	ed the same before me
Civen under my hand and official seal this	20th day of Tules
My term of office expires on the 26thday	of February 1982.
Zornday	rebruary 19 90.
NOTARIAL SEAL]	Welle K. Kollyson

DEPARTMENT OF MINES, OIL AND GAS DIVISION

STATE APPLICATION FOR WELL CLASSIFICATION

Date July 20 . 19 82

Operator's Well No. J. Kee #1

API Well No. 47 - 087 State - County

Permit Permit
Previous File No. (If Applicable)
WELL OPERATOR Allegheny & Hockey B
ADDRESS P.O. Boy 2587
Charleston, WV 25329 Charleston, WV 25329 Charleston
Gas Purchase Contract No. N/A and Date N/A
Meter Chart Code N/A (Month, day and year)
Name of First Purchaser Roaring Fork Gas Corporation
P.O. Box 3752
Charleston (Street or P. O. Box) (City) (State) ,25337
FERC Seller Code W/A
TYPE OF DETERMINATION BEING SOUGHT: FERC Buyer Code 039329
[X] (1) Initial determination (See FFRC Form 10) 103
(2) Determination that increased production is the result of enhanced Category Code recovery technology.
(3) Determination of a seasonally affected well.
Roland C. R.
O)(2
Signature
P.O. Box 2587 Street or P. O. Box
Charlesotn, WV 25329
(304 343-4327
Area Phone Number
Certificate of Proof of Service to Purchaser)
SEE ATTACHED
OLD ATTACHED
All of the above to be completed by the Operator/Applicant)
To be completed by Jurisdictional Agency. Executed copy to be returned to Operator/Applicant and
The Department of Mines has received a request. for certification of the above described under the Natural Gas Policy Act of 1978, der Section 108 of (NGPA): or for determination of a seasonally affected well under Section 108 of (NGPA).
All interested parties are hereby notified that on the day of 19 at heard there will be a public hearing, if requested, or if objection is filed.
This Application is assigned File No.
Initial review of information submitted indicates the well [] is. [] is not titled to certification as claimed under the Natural Gas Policy Act (NGPA). A review of this evidence d any additional evidence will be made at the time appointed for a public hearing or as soon thereafter the matter may be heard.
Unless objections are timely filed or a request for a hearing is made within fifteen (15) ys, a hearing will not be held except on ex parte motion of the department and the matter will
WEST VIRGINIA DEPARTMENT OF MINES

JUL 221982

Date received by Jurisdictional Agency

By Title

09/15/2023

1.0 API well number: If not evaluable, leave blank, 14 digits.) 2.0 Type of designation being sought: (Use the coder found on the front of this form) (10 the form) 3.0 Depth of the despect completion focation: (Only needed if sections 103 or 107 in 2.0 above.) 3.0 Depth of the despect completion focation: (Only needed if sections 103 or 107 in 2.0 above.) 3.0 Name, addissers and code number of applicant: (35 letters received by P. O. Box 2587 Solication of this well: (Complete (a) or (bib.) (Id) For conthore wells (36 fecter reasimum for field reasimum.) (b) For OCS wells: Allechery 6. Heatern Energy Computation Seller Code					-	
If the available, leave blank, 14 digital, 2.0 Type of determination being couple; took the control of this form) 3.0 Depth of the despect completion on the form) 3.0 Depth of the despect completion on the form) 3.1 Depth of the despect completion on the form) 3.2 Depth of the despect completion on the form) 3.0 Depth of the despect completion on the form) 3.1 Depth of the despect completion on the form of this depth of the form of this depth of the form of this depth of the form of this depth of this well: [Complete (a) or [bh]] 3.1 Leading of this well: [Complete (a) or [bh]] 3.2 Leading of this well: [Complete (a) or [bh]] 3.3 Leading of this well: [Complete (a) or [bh]] 3.4 For onhore wells 3.5 Street Charleston WV 25329 City State Pro OCS wells: N/A Area Name Dest of Lesse: Mo. Dey Vr. OCS Lesse Number N/A Rea fing Early Code Block Number Dest of Lesse: Mo. Dey Vr. OCS Lesse Number OCS Lesse Number N/A Rearing Early Gas Corporation 1.1 N/A No. Dey Vr. 1.2 Contract price: (a) Base Price [b) For (c) All Other fried the fine of this deplication: (a) Base Price [b) For (c) All Other fried the fine of this application: Agency Uso Only Des Received by Jurin. Agency JUL 2.2 1982 Das Received by Jurin. Agency JUL 2.2 1982 Das Received by Jurin. Agency Jul 2.0 1982 304) 3434-3437		FERC-121		I) Bis	IEGE av 18	1 1
Cut the code found on the front of this form.] Section of NGPA Category Code, Categ	1.0 API well number: (If not available, leave blank, 14 digits.)		47-087-	3581	111 8 2 1002	
Allegheny & Western Energy Corporation spoilant: If code number of applicant: If setters per line maximum. If code number of this well: [Complete (a) or (b).] (a) For onchre wells (b) For OCS wells: (b) For OCS wells: (c) Name and identification number of this well: (3) letters and digits maximum.) (d) I code 4 or 5 in 2.0 above, name of the reservoir. (3) letters and digits maximum.) (d) I code 4 or 5 in 2.0 above, name of the reservoir. (3) letters and digits maximum.) (a) I code 4 or 5 in 2.0 above, name of the reservoir. (3) letters and digits maximum.) (b) Date of the contract: (c) Estimated annual production: (a) Base Price (b) Tax Price (Indicate (Find and Called Number) (b) Date of the contract: (c) Estimated annual production: (a) Base Price (b) Tax Price (Indicate (Find and Called Number) (b) Oate of the contract: (c) Estimated annual production: (a) Base Price (b) Tax Price (Indicate (Find and Called Number) (b) Oate of the contract: (c) Estimated annual production: (a) Base Price (b) Tax Price (Indicate (Find and Called Number) (b) Oate of the contract: (c) Estimated annual production: (a) Base Price (D) Tax Price (Indicate (Find and Called Number) (b) Oate of the contract: (c) Estimated annual production: (a) Base Price (D) Tax Price (Indicate (Find and Called Number) (b) And of filing dise. Complete to 3 decimal places.) (a) Maximum neture rate: (a) An Amenim neture rate: (a) Base Price (D) Tax Price (Indicate (Find and Called Number) (b) An Amenim neture rate: (a) Contract price: (b) Tax Price (Indicate (Find and Called Number) (c) An Amenim neture rate: (a) Contract price: (b) Tax Price (Indicate (Find and Called Number) (c) An Amenim neture rate: (a) Base Price (D) Tax Price (Indicate (Find and Called Number) (b) And (c) Tax Price (Find and Called Number) (c) An Amenim neture rate: (d) An Amenim neture rate: (e) An Amenim neture rate: (find and filing dise. Complete to 3 decimal places.) (g) An Amenim neture rate: (g) An Amenim neture rate: (g) An Ame	(Use the codes found on the front		GPA		WE GAS DIVISION	
applicant: (35 letters per line maximum, if code number not evaluable, leave blank.) S. Location of this well: [Complete (a) or (b).] J. J. For onshore wells (35 letters maximum for field name.) (b) For OCS wells: Marge	location: (Only needed if sections 103		5400	DE	PT. OF MINE	E5
or (b).] (a) For onshore wells (35 letters maximum for field name) (b) For OCS wells: N/A	applicant: (35 letters per line maximum. If code number not	Name P.O. Box 2587 Street Charleston	<u>w</u>	25329		
Ares Name Slock Number Block Number	or (b).] .(a) For onshore wells .(35 letters maximum for field	Field Name Roane		THE R. P. LEWIS CO., LANSING, PRINCIPLE SPRINGS IN		
(c) Name and identification number of this well: (35 letters and digits maximum.) (d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters and digits maximum.) 5.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.) (b) Date of the contract: (c) Estimated annual production: 7.0 Contract price: (As of filling date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filling date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Jurir. Agency JUL 2 2 1982 Date Received by Jurir. Agency July 20, 1982 July 20, 1982 July 20, 1982 304) 343-4327	(b) For OCS wells:	Area Name Date of Let				
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.) 6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.) (b) Date of the contract: (c) Estimated annual production: (a) Base Price (S/MMBTU) (b) Tax (c) All Other Prices (Indicate (+) or (-).) (d) Total of (a), (b) and (c) 7.0 Contract price: (As of filing date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Jurix. Agency JUL 2 2 1982 Date Received by FERC July 20, 1982 304) 343–4327			Yr.	OCS Cease Number		
Roaring Fork Gas Corporation	(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters					
(c) Estimated annual production: 18 MMcf. (a) Base Price (s/MM8TU) (b) Tax (c) All Other Prices (Indicate (+) or (-).] 7.0 Contract price: (As of filing date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Juriz. Agency JUL 22 1982 Date Received by FERC July 20, 1982 304) 343–4327	purchaser: (35 letters and digits maximum. If code number not		s Corporati	on	03329 Buyer Code	
7.0 Contract price: (As of filing date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Jeriz. Agency JUL 2 2 1982 Date Received by FERC July 20, 1982	(b) Date of the contract:					
7.0 Contract price: (As of filing date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Jeriz. Agency JUL 2 2.1982 Date Received by FERC Frices [Indicate (b) and (c)	(c) Estimated annual production:		18MMcf.			
(As of filing date. Complete to 3 decimal places.) 8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Jeriz. Agency JUL 2 2.1982 Date Received by FERC July 20, 1982 304) 343-4327			(b) Tax	Prices (Indicate	1	
(As of filing date. Complete to 3 decimal places.) 9.0 Person responsible for this application: Agency Use Only Date Received by Jeriz. Agency Date Received by FERC Date Received by FERC July 20, 1982 304) 343-4327	(As of filing date. Complete to 3	5.300	0.795	0.0_00	6.095	
Agency Use Only Date Received by Jeriz, Agency Date Received by FERC Date Received by FERC July 20, 1982 304) 343-4327	(As of filing date. Complete to 3	5.300	0.795	0.0-0-0	6.095	
	Agency Use Only Date Received by Jurist Agency JUL 221982	Signature July 20, 1982		Title	ive Vice Pres	

PARTICIPANTS: DEC 30 1982	BUYER-SELLER CO
WELL OPERATOR: Alegheny + Western Fnergy Corp. FIRST PURCHASER: Roan as Fork Care Const.	
FIRST PURCHASER: Roaring Fork Cas Corp.	03329
OTHER:	-
W. Va. Department of Mines, Oil & Gas Division WELL DETERMINATION FILE NUMBER	
820722-107-0-87-3581 QUALIFIE	
Uso Above File Number on all Communications Relating to Determination of this Well	
CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING	
ITEM NO.	
1. FERC -121 Items not completed - Line No.	
2. IV-1 Agent Raland C. Baer	
3. IV-2 Well Permit	
4. IV-6 Well Plat	
5. IV-35 Well Record ✓ Drilling ✓	Deepening
6. IV-36 Gas-Oil Test: Gas Only Was Oil Produced?	
7. IV-39 Annual Production years	
8. IV-40 90 day Production Days off line:	
9. IV-48 Application for certification. Complete? /	
10-17. IV Form 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 Complete?	Affidavit Signed /
18-28. Other: Survey Logs Geological Char	
Structure Map 1: 4000 Map Gas Analyses	
(5) Date commenced: 6 - 16 - 12 Date completed 6 - 21 - 8	2 Deepened
(5) Production Depth: 3754-5330	
(5) Production Formation: Devonian Shale (Brown thru Hercell	nd .
(5) Final Open Flow: 325 MCF	
(5) After Frac. R. P. 1050 24 hc.	
(6) Other Gas Test:	
(7) Avg. Daily Gas from Annual Production:	
(8) Avg. Daily Gas from 90-day ending w/1-120 days	
(8) Line Pressure:	PSIG from Daily Rep
(5) Oil Production: From Completion Report	_
0-17. Does lease inventory indicate enhanced recovery being done	10
O-17. Is affidavit signed?	
oes official well record with the Department confirm the submitted i	09/15/2023 nformation? 425
iditional information Does computer program confirm?	
as Determination Objected toBy Whom?	
	78

STATE OF WEST WIRGINIA

DEPARTMENT OF MINES OIL AND GAS DIVISION

Jete JUly 20 1982 J. Kee #1

- 087 _______3581

WELL CLASSIFICATION FORM HIGH COST GAS WELL - DEVONIAN SHALE

Section Section	107
	DESIGNATED ATENT Roland C. Baer, Jr.
	ADDRESS P.O. Box 2587
	Charleston, WV 25329
WELL OPERATOR Allegheny & Western Energy	LOCATION Elevation 1017'
Charless P.O. Box 2587	Watershed Flat Fork
Charleston, WV 25329	Harper Court Roane - Walton
GAS PURCHASER Roaring Fork Gas Corp.	Gas Purchase
ADDRESS P.O. Box 3752	Contract No N/A
Charlesotn, WV 25337	Meter Chart Code N/A Date of Contract N/A
u u u u u u u	· · · · · · · · · · · · · · · · · · ·
Date surface drilling began: June 16, 1982	
Indicate the bottom hole pressure of the well and	explain how this was calculated
Bottom Hole Pressure: 1,1.65 psia	Calculated
Calculation of subsurface Pressure Using Compressibility Factors for Static Colum	Average in Case
AFFIDAV	TT.
the percentage of footage of the producing interval which is less than 0.7 if a Gamma Ray log described subparagraph (3)(i)(B): I have demonstration subparagraph (3)(i)(B): I have demonstration any information not described in the application which is in high cost natural gas well.	ed that the comments of as indicated by the re-
STATE OF LEGE MERCAN	
STATE OF WEST VIRGINIA.	
COUNTY OF <u>Kanawha</u> , TO WIT	
I. Debra Rollyson . a Nota	ry Public in and for the state and county aforesaid.
to certify that Roland C. Baer; Jr. whose name	is signed to the unities and county aforesaid.
the 20thday of July . 19 82 has ac	sknowledged the same before the
foresaid	detore me, in my county
Given under my hand and official seal	this 20th day of
My term of office expires on the 26th	day of February 19 90
NOTARIAL SEAL,	Deli L. Lollyron

DEPARTMENT OF MINES,	OIL AND GAS DIVISION	Operator's Well No. J. Kee #1
		API Well
STATE APPLICATION FO	OR WELL CLASSIFICATION	No 47 - 087 - 3581 Permit
		Previous File No. (If Applicable)
WELL OPERATOR Allegheny & Western Energy		
ADDRESS P.O. Box 2587		oland C. Baer, Jr.
Charleston, WV 25329	ADDRESS P.O. Box	
Gas Purchase Contract No. N/A and	Charleston, WV	25329
Meter Chart CodeN/A	Date N/A (Month, day and year	ar)
Name of First Purchaser Roaring Fork Gas Co	Orporation	
P.O. Box 3752		
	P. O. Box) WV 25 tate)	327
FERC Seller Code. N/A	()	code)
TYPE OF DETERMINATION BEING SOUGHT:	FERC Buyer Code _039	1329
(1) Initial determination (See FERC Form 121		
 Determination that increased production recovery technology. 	is the result of enhanced	Category Code
(3) Determination of a seasonally affected we		
	Roland C. Baer, J.	r. Executive VP
	P.O. Box 2587 Street or P. O. Box	
	Charlesotn, WV	25329 (Zip Code)
	(304) 343-4327 Area Code Phone Number	
(Certificate of Proof of Service to Purchaser)		
SEE ATTACHED		
SEE ATTACHED		
(All of the above to be completed by the Operator/	Applicant)	
(To be completed by Jurisdictional Agency. Execut purchaser, if known).		
The Department of Mines has received well as meeting the requirements of Section (NGPA); [] for for determination that increased prunder Section 108 of (NGPA); [] or for determinat	a request, for certife under the Naturoduction is the result of ion of a seasonally affection.	fication of the above described ral Gas Policy Act of 1978, f enhanced recovery technology
All interested parties are hereby notificate office of the Oil and Gas Division in Charlestone heard there will be a public hearing, if request	ed that on the day o	of 19 at
This Application is assigned File No.	- objection is i	
Initial review of information submitted and the certification as claimed under the Natural and any additional evidence will be made at the times the matter may be heard.	indicates the well is. ural Gas Policy Act (NGPA ne appointed for a public	is not A review of this evidence chearing or as soon thereafter
Unless objections are timely filed or a magneys, a hearing will not be held except on ex parters to determination.	equest for a hearing is motion of the departmen	made within fifteen (15)
	VEST VIRGINIA DEPARTMENT	OF MINES
JUL 221982		Director
ate received by	Ву	100
urisdictional Agency	Title	A STATE OF THE STA

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

FORM IV-48WC [12-78] Date July 20 . 19 82

WELL: J. Pas #1 API: 47-087-3581 SUBJECT: BOTTONIN HOLE PRESSURE CALCULATION FORMULA: BHP= PI+PI(ex-1) WHEREAS: PI = WELLHEAD PRESSURE = 1.050 G = Specific Gravity = .682 L = DEPTH = 4542 $T = {}^{\circ}F + 460^{\circ} = 560$ x = Gx L - 3 098 - .103716 53.34x T 29.870 CALCULATION: $BHP = P_1 + P_1 \qquad (e^{\times} - 1)$ $BHP = 1.050 + 1.050 (e^{-103716} - 1)$ BHP = 1,050 + 1,050 (1.1092854-1) BHP= 1050 + 115 or 1,165

WELL:
SUBJECT: BOTTONIN HOLZ PRESSURE CALCULATION
FORMULA: BHP = PI+PI(ex-1)
WHEREAS: PI = WELLHEAD PRESSURE = 1,050 G = Specific Gravity = .680
$L = D_{PPTH} = 4542$ $T = F + 460^{\circ} = 550$
$x = G \times L - 3.99 \times103716$ $53.34 \times T = 29.375$
CALCULATION:
$BHP = P_1 + P_1 \qquad (e^{\times} - 1)$
$BHP = 1050 + 1050 (e^{-103716} - 1)$
BHP = 1050 + 1050 (11000 -1)
BHP= + ~

