





IV-35 (Rev 8-81)

State of Mest Nieginia

Beparlment of Mines Gil und Cas Bivision

Date June 20, 1986	
Operator's Well No. KEM 258	
Farm Riley	W
API No. 47 - 035	- 1758
	Frac

WELL OPERATOR'S REPORT OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL '	TYPE:	Oil/ Gas (If "Gas," Pr	X / Liqui	d Injection	n_/ Wast	te Disposa ge / Dee	1/ p X / Sha	ıllow /)
LOCAT	10%:	Elevation: 663	603 Wa	itershed Mi	11 Creek			
		District: Rip	TEY CO	mry oack	2011	Quadrangi	8 Whiel	
COMPA	NY_Ka	iser Exploration	& Mining C					
ADDRE	SS_P.(D. Box 8 Ravensw	<u>ood, WV 2</u>	6164	Casing	Used in	Left	Cement
DESIG	NATED	AGENT R. A. Pr	усе		Tubing	Drilling	in Well	fill up Cu. ft.
ADDRE	SS_s	ame			Size			
SURFA	Œ OW	NER Ralph D. Sp	ellman, et	al	20-16			
ADDRE	SS_31	l 1st Ave Ripley	, WV 2527	1	Cond.			
MINER	AL RI	GHIS OWNER Will	iam A. Rile	У	13-10"		249	150_sx
ADDRE	ss_B	ox 852 Pickens,	S. Carolina	29671	9 5/8			
OIL A	ND GA	S INSPECTOR FOR	THIS WORK	Jerry	8 5/8		0010	
OFFICE PROPERTY AND PERSONS ASSESSED.	COMPANIES TO SERVICE STATE OF THE PARTY OF T	ADDRESS Rt.			7		2210	165 sx
PERMI	T ISS	UED 9/9/82 / S	114/84	25271	5 1/2		4004	1005
		OMMENCED Septe			4 1/2		4984	225 sx
		OMPLETED Octob		, , , , , , , , , , , , , , , , , , , ,				
		BLE: PLUGGING		/	. 2			
CONTI	NWUS	PROGRESSION FR	OM DRILLING	OR	Liners			
KEWOK ON	KLNG.	VERBAL PERMIS	SION OBTAIN	ED	used			
@DIO	GICAL	TARGET FORMATT	ow Oriśkan	y S.S.	Someone constitue de la consti	Dep	th 4878/4	1931 fee t
ĵ	Depth	of completed w	ell 5014	feet	Rotary X	/ Cable		
		strata depth:		,			-	
		seam depths:	_		en equipment of the control of the c		ed in the	aroa? N.
								. aca. Mo
	FLOW I		Dans C		5 0		hh 0000 100	100 E1
		cing formation_						
· ·	oco ,	Initial open f	Company of the Compan				Annual Street, or other Persons and Person	The state of the s
		Final open flo						
	~		pen flow be					
		c rock pressure				ment) after	c_/2_hou	ırs shut ir
		pplicable due t	· ·	•				
		d producing for						
1		Initial open f						
		Final open flo						
			pen flow be					
	Stati	c rock pressure	ps	ig (surface	measureme	ent) after	hou	rs shut in
						(Conti.	SEF	10 1986

FORM IV-35 (REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. See previous IV-35

3/26/86 Young's Wireline perf Berea with 8 holes from 2302-2308.

4/03/86 NOWSCO foam frac Berea. Break down pressure: 2560 psig; sand: 45,000# 20/40; N₂: 712.5 mscf; total fluid: 245 bbl; ISIP: 1500 psig; 5 MIN SIP: 1430 psig.

WELL LOG

						REMARKS Including indication of all free and salt water, coal, oil and go
ORMATION O	DLOR H	iard or sc	OFT	JOB LEEL	BOTTOM FEET	and salt water, coal, oil and go
See previou	us IV-3	35	-			
					•	
•						
					••	
					:	
					-	
y (*)				·		
	7					
•	-					
				•		
						in the control of the
						en la companya di salah sa
						The state of the s

(Attach separate sheets as necessary)

R.A.P Well Operator

By: KAISER EXPLORATION AND MINING COMPANY

Date: June 20, 1986

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 will, encountered in the drilling of a well."



LL TYPE:



State of Mest Alirginia Department of Alines Oil und Vas Division

Date October 29, 1982
Operator's
Well No. KIM #258
Farm W. W. Riley
API No. 47 - 035 -1758

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

Oil / Gas x / Liquid Injection / Waste Disposal / (If "Gas," Production X / Underground Storage / Deep X / Shallow_

ATION: Elevation: 603 Watershed Mil	II Creek	3 4		•
District: Ripley County Jackson	on	Onsdrangle	≥ <u>Ripley</u>	g
PANY Kaiser Exploration and Mining Company			Toft	Cerent
RESS P. O. Box 8, Ravenswood, WV 26164	Casing	Used in		fill up Cu. ft.
IGNATED AGENT R. A. Pryce	Tubing	Drilling	In well	Cu. It.
RESS P. O. Box 8, Ravenswood, WV 26164	Size 20-16			
FACE OWNER Ralph D. Spellman, et al	Cond.			
DRESS 311 First Avenue, Ripley, WV 25271	13-10"		249	150 sks
ERAL RIGHTS OWNER William Riley	9 5/8			
DRESS Box 857, Pickens, S. Carolina 29671	8 5/8			
AND GAS INSPECTOR FOR THIS WORK Homer	7		2210	165 sks
ougherty ADDRESSBox 3A, Linden Rt., Looney	v 5 972 V			
RMIT, ISSUED 9/9/82	4 1/2		4984	225 sks
TILING COMMENCED 9/30/82	3			
HIJING COMPLETED 10/7/82	2			
APPLICABLE: PLUGGING OF DRY HOLE ON		•,	·	
NTINUOUS PROGRESSION FROM DRILLING OR WORKING. VERBAL PERMISSION OBTAINED	Liners used			
WORKLING. VERBALL FILLULOUS COLUMN				
PROGRAM TODAY TODAY TONG Onickeny Sandstone	3	Deg	oth 4878-4	931feet
OLOGICAL TARGET FORMATION <u>Oriskany Sandstone</u> Depth of completed well <u>5014</u> feet	Rotary X			
Water strata depth: Fresh feet;	Salt	feet	t ·	,
		 L being mi	ned in th	e area?
Coal seam depths:				
en flon data		**		Foot
Producing formation Devonian Brown Shale	Pa	ay zone de	ptn <u>3861-</u>	.4118 1eec
This open flow None Mcf/d	Oil: Ir	nitial ope	u itom	BOL/O
Final open flow 162 Mcf/d	F.	inal open	flow	BDI/C
rim of open flow between ini	tial and :	final test	s I	nours
Static rock pressure 880 psig(surfa	ace measure	ement) aft	erho	ours shut in
and to the two to multiple completic)11)			
in a farmation	. P.	ay zone do	pth_	feet
case Initial open flow Mcf/d	Oil: I	nitial obs	II TTOM	
Final open flow Mcf/d	Oil: F	inal open	flow	Bb1/c
Time of open flow between in	itial and	final test	:5	hours
Static rock pressurepsig(surfa	ce measure	ment) after	T. JX	ourssehut si
Section access to access t				reverse side
		; cont	viac on i	proportion original

DETAILS OF PERCONAID IN VALS, FRACTURING OR STIMULATING, PHYSICAL CHARGE, EIC.

10/14/82 Devonian Brown Shale: Set permanent plug in 4 1/2" at 4165' (KB); perforated 3861-4118', shot selectively, 24 holes, 0.39" diameter

10/21/82 Devonian Brown Shale: Fractured with 60,000# of 20/40 sand; treatment pressure: 2700-3200 psig; ISIP: 1500 psig; total of 286 bbl water and 825,000 SCF of nitrogen.

WELL LOG

			REMARKS
RMATION COLOR HAND OR SOFT	TOP FEET	DOTTOM FEET	Including indication of all fresh and salt water, coal, oil and gas
Sandstone & Shale Sandstone & Shale Limestone Sandstone Sandstone Shale Coffee Shale Berea Sandstone Brown Shale H Shale Marcellus & Onondaga Limestone Oriskany Sandstone Helderberg	0 961 1055 1524 1814 1905 2277 2300 3550 4110 4495 4792 4878 4931	961 1055 1524 1814 1905 2277 2300 2310 4110 4495 4792 4878 4931 5014 TD	

(Attach separate sheets as necessary)

KAISER EXPLORATION	AND MINING	COMPANY		
.Well Operator				
By: Z. A.P.				•
Date: October 29.	1982	and the second second		

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 that, encountered in the drilling of a well."



Date: Augu	ıst	31,	6	19	82	ø.	
Operator's	!/ T'B	1 - 11000					

Well No. KEM #258

API Well No. 47

035

1758

	-	DEPARTMENT		ND GAS DIVISION	<u> </u>	roquiy D	'ermit
•	Ü.		Will Dikm	TT APPLICAT	LON	•	
WELL TYPE:	Oil	Gas X		•			
				storage		- 400	<i>/</i>)
LOCATION:	Elevation:	603'	Watershed:	Mill Creek			
	District: R	lipley	County:	Jackson	Quadrangle:	Ripley	
WELL OPERATO	R_Kaiser Ex	ploration and	LMining Co.	DESIGNATED AC	GENT R. A. I	^o ryce ·	
.Address	P. O. Box	8		Address	P. 0. [3ox 8	
ಶ ^{ತ್ರ} . ≪ವ	Ravenswoo	d, WV . 26164			Ravensi	wood, WV	26164
OIL & GAS ROYALTY OWN	ER <u>Willia A.</u>	Riley		COAL OPERATOR	R_None		
Address	Box 857			Address			
	Pickens,	South Carolin	na 29671				
Acteage -	220			COAT OWNER(C)	WITH DECLAR	ATION ON E	
SURFACE OWNE	R Palnh D	to remiler?		COAL OWNER(S) Name None	WIII DECLAR	ATION ON R	ŒCORD:
	311 First		αι				•
			direction of the state of the s	Address			
	<u>Ripley</u> W	<u>V 25271</u>	MERCATO APRIL CALLE CHI SANCO MALLINE SSESSIFICIA	- official desirations			
-	220		ALTERNATURE CONTROL OF THE CONTROL OF T	Name			·
FIELD SALE (IF	MADE) TO:			Address			
_Address			nestrikingsoonskilmiskoonskilminestillija			*	
,				COAL LESSEE WI	ITH DECLARATI	ON ON REC	ORD:
OIL & GAS INSP		NOTIFIED	3	Vame			
Name Deo Mac	ce		NE CONTROL CON	-Address			-i
Address	Rt. 1. Box	5	ECCT/SSMDCCF420mmon reskinolage D	- Approximation and		•	
-	<u>Sandridge</u> ,	WV 25274	- PROMONENTAL MANAGEMENT AND A STATE OF THE				•
The undersigned	well operator is er	atitled to operate fo	r oil or gas purpose	es at the above locat	ion under a deed	/ \$	X
other contract	/dated Ju	1v 18	19 77 to the			1623	
Miley				andcisigned wen	operator from W1	IIa A. & I	rances
(If said deed, least						•	
Recorded on	, 19 mm	, in the offic	e of the Clerk of t	he County Commiss	sion of <u>lackso</u>	<u>n</u> C	unty, Wes
Va. in Leas					•		
· PROPOSED WO	RK: Drill X	/ Drill deeper	/ Redrill_	/ Fracture	or stimulate		
1 · · · · · · · · · · · · · · · · · · ·				v formation			20
		al change in well					

	—planned as	shown on the wo	ork order on the a	everse side hereof			
The above named	coal operator, coa	l owner(s), and coal	l lessee are hereby	notified that any ob	iortion there wish a		
make by Code \$22-	4-3 must be filed	with the Departme	nt of Mines within	i fifteen (15) days	after the receipt o	f this Applies	required to
Department.				,		i mis Appnea	tion by the
Copies of this Perr	nit Application an	d the enclosed plat	and reclamation p	lan have been maile	d by registered ma	il or delivered	by hand to
the above named co:	al operator, coal o	wner(s), and coal k	essee on or before	the day of the mail	ing or delivery of t	his Permit Ap	plication to
the Department of	Mines at Charles	ton, West Virginia	1, 3	•	3		prication (c
PLEASE SUBMIT C	OPIES OF ALL		حاشامات	•		•	
GEOPHYSICAL LO			U/FIN	VATCED EVE)		
				-WINER FYE	LORATION AND		UMPANY_
WEST VIRGINIA (CONSERVATIO		SEP 0	1982		Well Operat	U	
SION 1615 WASHINGTON		• .		by K	1:15		
CHARLESTON, WY		OIL & GA	5 DIVISION	lts <u>General</u>	Manager		Marie Marie and August and August Angelong

OIL & GAS DIVISION DEPT. OF MINES

TELEPHONE: (304) 348-3092

DRILLING C	UNIKAL	.1010 (11	. KMOM			P. O. Box	•	Inc	
				<i>5</i> 10	101633		WV 25071	con executación de extraver en executar de entre en en en en entre entre entre entre entre entre entre entre e	
GEOL OGICAI	. TARG	ET FOR	MATION		0ri	Charles and the same of the sa		·	
				-			et Rutary	v / Cat	ole tools/
								feet.	Commondation and Common
									1 21-
						IS CUA	ocing innea	in the area: 163	/ No/
CASING AND	/ TUDIA	G FROG	IKAN						
					was-and in Collection			- All Control of the	
CASING OR TUBING TYPE	SPE Size	Grade	ONS Weight	New	Used	FOOTAGE	Left in well	CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
Conductor									Kinds
Fresh Water	10 3/	11	-			250'	250'	150 sks class	A (to surface)
Cost		·							Sizes
Intermediate	7"					2177'	2177'	65 sks 50/50 100 sks Class	
Production	4 1/	1 :1				4964'	4964	225 sks 50/50	
Tubing		1				4904	4904	J. 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	JOZIII I X
Liners									Contraction
									Perforations:
- Charles of the Char		<u> </u>							Top Bottom
:									
- Code	\$22-4-8. eparate F	a from th form Iv-2	ne owner shall not l	of any	y wate uired f	r well or dwel	ling within 200	v) if applicable, the confidence of the proposed well where fracturing Form IV-2 filed in confidence or the confidence of the confidence o	d well.
Wells Property	6 42 2 M PP PP	27 - 390 July 201 100 500 5	Mb. 0 2007 000 0 5 0	m	T 494 8 0001 200	•			
THIS PERMIT		•				CHAPTER 22,		•	
ARTICLE 4 O							. •		
						IT SHALL EXPI			
IE OPERATIO	NS HAY		CGAMMEN	VCED_	BY	5-9-83	V		we
BN receivement and the second				J	mecanore no de la constitución	And the second section of the second se		· · ·	
w.				e				P	
decla The undersi	ration di	nder Cod	e 22-4-	20, if _/ ow:	the po	WAIN	issued within f	lowner or coal lessee lifteen (15) days of re	eccipt thereof.
The undersign	ed has n	n a nime o objectio	on to the	work.	en covi propos	ers in e a rea of i ed to oe done	the well lacation	n, the well location ha	s been added to the mine map, operator has complied with all
	*, •, *				•		direction and the second secon		
Date:			, 19_		•		lly		ender hallen en ander de
	ar andre		ulainis neutro e	વેલે જાડિયા	. j., .+ +	and the second s	118		

ST VIST CONTROL OF THE PARTY OF

1)	Date:	April 5	19_84
	_	_	

2) Operator's Well No. KEM #258

3) API Well No. 47 - 035 - 1758 - FRAC State County Permit

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

APPLICATION FOR A WELL WORK PERMIT

4)	WELL TYP				V V									V	
			If "Gas",	Production 603	1^	<u> </u>		Undergroun			_/ Deep		_/ Shallow _	/)	
5)	LOCATIO		evation:				Watershed:		<u>Mill Creek</u>	·		D 1	·		
_			istrict: F					County:		Jackson		angle:			
6)	WELL OPP	n /	D. Box	<u>Q</u>		·····		***************************************	7) DESIGNATED	AGENT		<u>. Pryce</u>		
	Address		enswood	•	2616	. /l		*********		Address		Same			
23	077 2 0 4					<u>T</u>			•						
8)) OIL & GAS INSPECTOR TO BE NOTIFIED Name Jerry Tephabock							9) DRILLING CONTRACTOR: NameClint Hurt							
	Address Rt. 1, Box 101A							Address P. O. Box 388							
	Ripley, WV 25271										<u>ikview</u>				
10)	PROPOSE	D WELL	WORK:			_/ Drill		deeper			/ Stim	ulate	Χ/		
										te new formation_					
					Π.				tre	<u>eat Berea;</u> i	<u>isolate</u>	<u>shale</u>			<u>ıbin</u>
11)	GEOLOGI	CAL TAF	RGET FOR	MATION	, <u>ве</u>	rea S				•			and p	<u>acker</u>	
	12) Estima	ted depth	of complet	ed well,	- 1	<u>4165</u>	, (K	<u>B)fe</u>	et						
	13) Approx	ximate tra	ita depths:	Fresh,		50		feet; sa	alt,_	600	feet.				
	14) Approx		-		N	one		Is o	coal	being mined in the	area? Yes_		/ No	X	_/
15)	CASING A	ND TUB	ING PRO	GRAM											
CASING OR TUBING TYPE			SPEC	IFICATIONS Weight		-	FOOTAGE IN		TERVALS	CEMENT FILL-UP OR SACKS		PACKE	RS		
	DING III E	Size	Grade	per ft.	New	Used		For drilling		Left in well	(Cubic			le le	e C de Toy
Con	ductor								_				Kinds None	عن ي	2
Fresh water		10_3/	<u> </u>	40.50	X			241'(1	KB.) 241'(KB	150 sk	s nea	t Ujā	-	
Coal													Sizes	1. 	
Intermediate		7"	K	20	X			2210'(1	KB)) 2210'(KB	65 sks 100 sk	pozn	17× ¬ ⊙	11	
Prod	luction	4 1/	12" N	11,60	Χ		ļ			4984'(KB			mElepths set		
Tubi	ng	J	ļ.,							,			and the second second		X .
Line	rs	<u> </u>						4165' PE	вП)			Perforations:	čõ	4,
		·	<u> </u>				 (1	permaner	n#	bridge plud)		Тор	Bottom	
			-						_				3861	4118'(KB.)
							<u> </u>							Ş. <u> </u>	· :
													* **	**	
	Constitution						OFF	FICE USE	0	NI.Y					
								LLING P							
		47	-035-1	758-FR	۸ C						3.6	1,			
Permit number_			750 114	.10					May	May 14, 1984					
rent t												Dat			
l nis anir	permit cove:	ring the w	vell operate	or and well	l location	on showr	l belo	w is evidence erse hereof N	e of	permission granted fication must be giv	l to drill in a	accordan	ce with the perti	nent legal r	re-
Vo.	8) Prior to th	e constru	ction of ro	ads, locatio	ons and	pits for	any p	ermitted wor	rk.	In addition, the well	ll operator o	r his con	tractor shall noti	fy the prop	er
distr	ict oil and ga	as inspecto	or 24 hour	s before ac	tual pe	rmitted v	vork l	has commend	ced.)	•			., р	
The	permitted wo	ork is as d	lescribed in	the Notice	e and A	pplication	n, pla	at, and reclai	mati	ion plan, subject to	any modific	ations a	nd conditions spe	ecified on t	he
	rse hereof.										•				
Perr	nit expires _	ria	y 14,	1900			·	unless we	ell w	ork is commenced p	orior to that	date and	prosecuted with	due diligenc	e.
-					• • • • • • • • • • • • • • • • • • • •										
В	ond:	Ager	nt:	Plat:	Casir	18 A	Fee								
	22	m	, ,		1	- 19	66	_			780°				
	20	1111	-/ //		1	کے ا	127					/	1		
								***************************************		`/~~	16	$\leq \downarrow$			
אַזַּייִייִייַ	re. Vaar as	ne 20= =-	f this	. د د د د د د د د د	ا - طه د.	_:::: 1 :				Admir	istrator, Of	fice of O	il and Gas		
	TE: Keep or	re coby 0	i ins pern	ii posted 8	it the a	mining 10	Lation							File	

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.