

	IJ-35  erse		DI	EPART	12 4 12 4 12 4 12 4 14 4 14 4 14 4 14 4	OF WINED, OIL	AND GAS DIVIN	Transing	•	, , , , , , , , , , , , , , , , ,
, ros.	73.				WE	LL OPERATOR'S	REPORT	AFT Wet NOOL SHANSE	47	035 _1524
	-	. <u>.:</u> :::	· · · · · · ·	(1) (1)				HAN I		Tamir Term
WELL TYPE						d Indection				
200107011								Free X		• •
LOCATION:						Watersher:				-
	Distri	3%; <u> </u>	Ripley		<del></del>	County:	ckson	an immule:	Elmwood	
WELL OPER	TOR Kai	ser Ex	splorat:	ion a	and M	ining Co.	DESIGNATED AG	ENT SAN	Œ	
	ess									
		Ravens	swood, 1	W 26	3164	•				
PERMITTED	WORK: D:		<u>X</u> / 05	nvert		_/ Drill doep	er		ECE!	VED
	۶.	lug of	r ord re	rmat:	10n	/ Perfora	te new format	10n/		
	01	ther f	hypical	chin	ge in	well (specify	)			
		-							OIL AND GAS	S DIVISION NTOFMINES
PERMIT IS	CUED ON _	Augı	ıst 25		_, _;	81	OIL & DAS IN.	DESTRUK FUR THIS		
(IF APPLI	CABLE: P	Lugain	G OF DE	r Hot.	E ON		Name Richa			
CONT REWO	INUOUS PR RKING. V	OGRESS ERBAL	ION FROM	C DRI ION G	LLING BTAIN	OR ED	Address	P. O. Box 37	72	-
-			_, 19					Grantsville		-
GEOLOGICA	L TARGET	FORMAT	TON:	Or	iska	ny Sandstone		Depth49		
								Cable Tools		
						et; salt,		endrad (i. dilitati com	u <del>nin</del>	
								the area? NO		
								October	-	9 81
• *									y -	
CASING AN	D TUBING	PROGRA	.M							
CASING OR TUBING TY	=	CFEC	IFICATI	SKC	1	FOOTAGE	INTERVALS	CEMENT FILL-UF	رم	CKERS
	Sine	Grade	per ft	New	Vred	For drilling	Left in well	OR SACKS (Oubic feet)		
Crnquetor			<u> </u>		ļ				Finds NO	NE
Freish wate	<u> </u>	1 H	32.75	X	<u> </u>	262(KB)	262(KB)	150sx ClassA		
Coal					<u> </u>				Sides	
Tr. erredt	150 7	K	20	X	ļ	2596(KB)	2596(KB)	65sx Pozmix 100sx Class A	<u> </u>	
Productio:	1 4분	N	11.60	X			4929(KB)	225sx Pozmix	Depths set	
Tuting	2 3/8	J	4.60	X	-		4857(KB)			
liners									Perforation	ns:
						The state of the s			Тэр	Battom
					<u> </u>				4864	4881
2000 2100		<u> </u>	<u> </u>		<u> </u>					
OPEN FLOW			~	hai ale	oner (	Condatono	,		4004	11001
rrodu								Eny zone depth		
								open flow,		
	F11							pen flow,		'et
								's, <u>6</u> hours		
_				•		.*	measurement)	after 16 hou	es shut in	
	ppidoabi.									
								Pay zone depth		
								open flow,		
	F1:							con flow,		•
. • • • • • • • • • • • • • • • • • • •		Time	and ope	n flo	w bet	tween initial.	and final tes	·s hours	nci	1 8 1982
	Statle r	STA FIR	oraune,			osig (surface :	measurement	arer bu	ed shat in	· ** ** ******************************

[08-78]

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

10/14/81: Basin Surveys perforated Oriskany Sandstone w/ 3½" glass jets on strip 4864'-

4868'(KB) and 4975'-4881'(KB); 4 holes/ft; 40 holes.
Halliburton hydrofractured Oriskany w/500 gal. 28% HCL Acid; 15,000# 80/100 sand; 45,000# 20/40 sand; 130,000 SCF of nitrogen; 730 BBL water; Breakdown was 3500 psig; avg. rate was 21.5 BPM; avg. pressure was 4125 psig; instantaneous shut in pressure was 2900 psig. 10/15/81:

#### WELL LOG

	T		,		
FORMATION	Color	Hard or	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, cil and jas
Soil & Shale Sand Shale Salt Sand Shale Big Lime (Greenbrier) Shale Big Injun Sand Shale Coffee Shale (Sunbury) Berea Sand Shale Brown Shale Brown Shale Shale Marcellus Shale Onondaga Lime Oriskany Sand Helderberg Lime			0 160 187 200 280 318 336 560 598 654 674 927 972 1062 1076 1094 1202 1246 1392 1434 1462 1818 2006 2038 2100 2472 2503 2516 3710 4187 4530 4771 4852 4894	160 187 200 280 318 336 560 598 654 674 927 972 1062 1076 1094 1202 1246 1392 1434 1462 1813 2006 2038 2100 2472 2503 2516 3710 4187 4530 4771 4852 4894 4958	Gas show @ 3161,3602 Gas show @ 4078 Gas show @ 4585 Gas show @ 4867
*			4708		

(Attach separate sheets to complete as necessary;

Well Operator
By R.A.P.
ItsGeneral Manager

Regulation 2.01(i) provides as follows:

"The term light or twell logishall mean a apprenation, detailed geologial recent of all formations, including only, encountered in the drilling of a well."



. . whilm said period of ten days from the receipt of

The man issue to the well operator a permit reciting

47-035-1524=REN

. the department and that the same is approve.

\_\_\_\_\_PERMIT FERENCE.

# Oil and Gas Division DEFT. OF MINES

### OIL AND GAS WELL PERMIT APPLICATION

The second secon

THE DEPARTMENT OF MINES,

c. such put, the co

or spettle in a

Charleston, w. va.	DATE January 14, 1981
Surface Owner Curtis L. & Wayne C. Hill	Company Kaiser Exploration and Mining Company
Address 3405 Alcoa Drive, Charleston, WV 2	
Mineral Owner Same as above	Farm Curtis & Wayne Hill Acres 136 Ac
Coal Owner Union Carbide Corporation	Well No. KEM #15 Elevation 838.37
Address 32 Sanderson Road, Clendenin, WV 2	ounty 3 do not not not not not not not not not no
Coal Operator None	Quadrangle_Elmwood
Address None	and the second of the second o
IS PERMIT MUST BE POSTED AT THE WELL SHE	
provisions being in accordance with Chapter 22,	The second of th
- Commence - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	AND CONTRACTOR OF A CONTRACTOR
drilling renewed. This permit shall expire if	INSPECTOR
drilling renewed 100 permit 3000	TO BE NOTIFIED Richard Morris
perations have not commenced by 9-26-81	
The same of the sa	ADDRESS P. O. Box 372, Grantsville, WV 26147
Deputy Director - On A. Gas Division	PHONE 354-7259
Deputy Director	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
GENTLEMEN:	The standard of the same of the control of the same
Wayne Hill made to Kaiser Exploration ar	se dated September 14 1978 by Curtis and day of August
X NEW WELLDRILL DEEPER _	REDRILL FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRIL	
The enclosed plat was prepared by a registered engine have been notified as of the above date.  The above named coal owners and/or operator are here to make by Section 3 of the Code, must be received by, or	by notified that any objection they wish to make, or are required or filed with the Department of Mines within ten (10) days. *  by registered mail, or delivered to the above named coal operators  day
and any control and analysis and copy to are	Department of Mines at Charleston, West Virginia.
DI EACE CURVIT CODIEC OF ATT	remain the state of the state o
	Very truly yours,
PLEASE SUBMIT COPIES OF ALL SEOPHYSICAL LOGS DIRECTLY TO	
GEOPHYSICAL LOGS DIRECTLY TO:	(Sign Name) Well Operator
	(Sign Name) Well Operator  R. A. Pryce
WEST VIRGINIA GEOLOGICAL AND Ad	(Sign Name)  R. A. Pryce  Kaiser Exploration and Mining Company  Street
WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  Ad  2. 0. BOX 879	(Sign Name)  R. A. Pryce  Kaiser Exploration and Mining Company  Street
WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  Ad O. BOX 879  WORGANTOWN, WEST VIRGINIA 26505	(Sign Name)  R. A. Pryce  Kaiser Exploration and Mining Company  Street  P. O. Box 8
WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  Ad  2. 0. BOX 879	(Sign Name)  R. A. Pryce  Kaiser Exploration and Mining Company  Street  Perator  P. O. Box 8  City or Town
WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  Ad O. BOX 879  WORGANTOWN, WEST VIRGINIA 26505	(Sign Name)  R. A. Pryce  Raiser Exploration and Mining Company  Street  P. O. Box 8  Cny or Town  Ravenswood, WV 26164
WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY  Ad O. BOX 879  WORGANTOWN, WEST VIRGINIA 26505	(Sign Name)  R. A. Pryce  Kaiser Exploration and Mining Company  Street  Perator  P. O. Box 8  City or Town

Or loans by the desputioned, a

richard manch, b. depart.

PROPOSED WORK ORDER TO	X DRILL	DEEPEN FF	RACTURE-STIMULATE
DEHLLING CONTRACTOR: (II			
NAME Not known at this	time	NAME R. A. Pryce	
ADDRESS		ADDRESS P. O. Box	8, Ravenswood, WV 26164
TELEPHONE			
ESTIMATED DEPTH OF COMPL	ETED WELL: 49751	ROTARY X	CABLE TOOLS
PROPOSED GEOLOGICAL FORM	MATION: Oriskany	The state of the s	1975 - 1
TYPE OF WELL: OIL_	GAS X CO	MBSTORAGE	DISPOSAL
			ODOTHER
TENTATIVE CASING PROGRAM	<b>1:</b>	_ 6 # \$0 . 1 	and the state of the
CASING AND TUBING	USED FOR	LEFT IN	
SIZE	DRILLING		CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16	at a straight of the second of		
13 - 10			to the state of th
9 - 5/8 10 3/4"	250	250	Cement to surface
8 - 5/8		. Sitter were	
7 5 ½	2700	2700	165 sks = 1400' fillup
4 ½	4975	4975	225 -1 25001 5:33
3	49/5	49/5	225 sks = 2500' fillup
2			Perf. Top Perf. Bottom
Liners			Perf. Top
			Perf. Bottom
		**************************************	
APPROXIMATE FRESH WATER	DEPTHSFEET	SALT WATER	. Tada
TO DRILL:  SUBMIT FIVE (5) COPIES  OF PLAT.	OF OG - 1, \$100.00 PERMIT	FEE, PERFORMANCE BO	ND AND PERMANENT COPY
TO DRILL DEEPER OR REDRIL			
SUBMIT FIVE (5) COPIES O	OF OG - 1, SHOWING ORIGINA O 1929, A PERMANENT COP	AL PERMIT NUMBER AND	PERFORMANCE BOND. ON HE ORIGINAL WELL RECORD
ega tom as the assertion as		Company of the second of	
TO FRACTURE - STIMULATE:		医自己的 的复数有外方数的 直	
BOND PERMANENT PLAT	AND OPICINAL WELL PROCE	JUNE 5, 1929, FIVE (5) C	OPIES OG - 1, PERFORMANCE
	AND ORIGINAL WELL RECOI		and the same of th
ING ORIGINAL PERMIT NUM	MBER, AND PERFORMANCE BO	OR AFTER JUNE 5, 1929	, FIVE COPIES OG - 1, SHOW-
the state of the s	and the control of th	the control of the property of the control of the c	
four (24) hours in advance.			Inspector to be notified twenty-
to the second of the second of the second of	and the second of the second o	umuu ja	and the second of the second o
· ·			
The following waiver must be thereof.	e completed by the coal operat	or if the permit is to be is	sued within ten days of receipt
WAIVER: I the undersigned, Agen	l for	Coal Company Owner	or Coemier of the and under
this lease have examine	d and place on our mine maps	this proposed well location	on.
			ll being drilled at this location,
providing operator has co	omplied with all rules and regulat	tions in Articles 4, 5, and 7,	Chapter 22 of the West Virginia
	. · <b>'b</b>		
			, " <u>b</u> ,
##*		! . :	*** **** *** *** *** *** *** *** *** *
•		-	

#### STATE OF WEST VIRGINIA DEPARTMENT OF MINES

BEHEWAL

- AUG 2 1 1981

## OIL AND GAS DIVISION WY DEPARTMENT OF MINES

### Oil and Gas Division

### OIL AND GAS WELL PERMIT APPLICATION

DATE August 20, 1981
Company Kaiser Exploration and Mining Company
25304 Address P. O. Box 8, Ravenswood, WV 26154
Farm Curtis & Wayne Hill Acres 136 Ac
Location (waters) Thirteen
Well No KEM #15 Elevation 838.37
Quadrangle_Eliiwood
TO BE NOTIFIED Richard Morris
ADDRESS P. O. Box 372, Grantsville, WV 26147
PHONE 354-7259
gradiente gibro de la compressión de l
on the above named farm or tract of land for oil and gas, having fee
ease dated September 14 1978 by Curtis and
and Mining Reseporded on the day of August
Fage 581
REDRILL FRACTURE OR STIMULATE
LLED BEFORE JUNE 5, 1969.
LLED BEFORE JUNE 5, 1969.
seer or licensed land surveyor and all coal owners and/or operators
reby notified that any objection they with to make, or are required
or filed with the Department of Mines within ten (10) days.
ed by registered mail, or delivered to the above named coal operators
e Department of Mines at Charleston, West Virginia.
· · · · · · · · · · · · · · · · · · ·
Very truly yours,
(Sign Name) - A P
R. A. Pryce
Kaiser Exploration and Mining Company
ddress Street
Operator P, O. Box 8
Crity of Town

47-035-1524-REN.

to the upparts of the well operator a permit recitive constituent and to the same is approxi-

consitment and to to the same is approx-

of role of a repairment control, who is use period of ten days from the receipt of

Denin 1811 no andil

erely the control of the

to the south the

13 - 10 9 - 5/8 10 3/4" 250 250 Cement to surface 5 - 5/8 2700 2700 165 sks = 1400' fillup 5 / 8 4975 4975 225 sks = 2500' fillup 6 / 8 4975 4975 225 sks = 2500' fillup 7 2 4975 4975 225 sks = 2500' fillup 7 2 4975 4975 225 sks = 2500' fillup 8 2 4975 4975 225 sks = 2500' fillup 9 2 4975 4975 225 sks = 2500' fillup 10 2 4975 4975 225 sks = 2500' fillup 10 2 4975 4975 225 sks = 2500' fillup 10 2 4975 4975 225 sks = 2500' fillup 10 2 4975 4975 225 sks = 2500' fillup 10 2 507				
DRILLING CONTRACTORS. (If Known)  NAME BOT KNOWN AT CHIS TIME  ADDRESS P. O. BOX B. RAVENSMOND, W.Y. 2015  TELEPHONE  TELEPHONE  TELEPHONE  TELEPHONE  TELEPHONE  TELEPHONE  TOTAL  ROTARY Y. CABLE TOOLS  PROPOSED GEOLOGICAL FORMATION: OTISAINY.  TYPE OF WELL:  OIL GAS Y. COMB. STORAGE DISPOSAL  RECYCLING WATER FLOOD OTHER  TENTATIVE CASING PROGRAM:  CASING AND TUBING  USED FOR  DEFLIE  CASING AND TUBING  USED FOR  DEFLIE  DEFLI	4	V		
NAME BOT LOGGED AT THE ADDRESS P. D. BOX R. RAYPOSHOOD, BY 2515 ADDRESS P. D. BOX R. RAYPOSHOOD, BY 2515 TELLPHONE ZZ3-5371 TELLPHONE ZZ3-5371 TELLPHONE ZZ3-5371 TELLPHONE ZZ3-5371 TO ABLE TOOLS STRATED DEPTH OF COMPLETED WELL A3751 TO ABLE TOOLS TYPE OF WELL:  OIL GAS COMB. STORAGE DISPOSAL RECYCLING WATER FLOOD OTHER  TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARNT HILL OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARNT HILL OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARNT HILL OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARNT HILL OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARNT HILL OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARLE OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARLE OF THE TENTATIVE CASING PROGRAM:  CASING AND TURING USED FOR LIFT IN CHARLES OF THE TENTATIVE CASING PROGRAM:  13-19 2-15 2-15 2-15 2-15 2-15 2-15 2-15 2-15	그 그 그는 그는 그는 그는 그는 그를 가는 것이 되었다. 그는 그는 그를 가는 것이 되었다. 그런 것이 없는 그런 것이 없는 그런 것이 없다.		DEEPEN F	RACTURE STIMULATE
ADDRESS   ADDRES		Property of the state of the s		
TELEPHONE				
ESTIMATED DEPTH OF COMPLETED WELL: 4275. ROTARY Y CABLE TOOLS  PROPOSED GEOLOGICAL FORMATION: Oriskany TYPE OF WELL: OIL GAS Y COME. STORAGE DISPOSAL  RECYCLING WATER FLOOD OTHER  TENTATIVE CASING FROGRAM:  CASING AND TURING USED FOR LEST IN CHMINT HILL OF SIZE DEBLUNG WILL WOR SACKS - CHMIN FT.  20-16  11-10  2-5/R 10 3/4" 250 250 CEMENT to SUFface  3-5/R 2700 2700 165 sks = 1400' fillup  3-5/R 10 3/4" 250 250 CEMENT to SUFface  3-5/R 2700 2700 165 sks = 1400' fillup  3-5/R 2700 2700 165 sks = 1500' fillup  3-5/R 2700 2700 165 sks = 1500' fillup  48 4975 4975 225 sks = 2500' fillup  3-6/R 300' Mellon  48 4975 4975 225 sks = 2500' fillup  50 CALL BEING MINED IN THE ARRAI NO. BY WHOM?  FOR DRILL:  50 COAL BEING MINED IN THE ARRAI NO. BY WHOM?  FOR DRILL:  50 COAL BEING MINED IN THE ARRAI NO. BY WHOM?  FOR BRILLED STORE OF OG - 1, SHOWING ORIGINAL FERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED SRIOR TO 1928, A FERMANENT COPY OF THE FLAT AND THE ORIGINAL WELL RECORD  50 FRACTURE - STEMULATE:  510 CHARLY STEMULATE:  511 CHARLY STEMULATE:  512 CHARLY STEMULATE:  513 CHARLY SERVICE OF STEMULATE:  514 CHARLY STEMULATE:  515 CHARLY SERVICE OF STEMULATE:  516 CHARLY SERVICE OF STEMULATE ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG -1, SHOWING ORIGINAL WELL RECORD  517 CHARLY SERVICE OF STEMULATE:  518 CHARLY SERVICE OF STEMULATE:  519 CHARLY SERVICE OF STEMULATE:  510 CHARLY SERVICE OF STEMULATE:  510 CHARLY SERVICE OF STEMULATE:  510 CHARLY SERVICE OF STEMULATE:  511 CHARLY SERVICE OF STEMULATE:  512 CHARLY SERVICE OF STEMULATE:  513 CHARLY SERVICE OF STEMULATE:  514 CHARLY SERVICE OF STEMULATE:  515 CHARLY SERVICE OF STEMULATE:  516 CHARLY SERVICE OF STEMULATE:  517 CHARLY SERVICE OF STEMULATE:  517 CHARLY SERVICE OF STEMULATE:  518 CHARLY SERVICE O				
PROPOSED GEOLOGICAL FORMATION: ORISKRY TYPE OF WELL: OIL GAS X COMB STORAGE DISPOSAL RECYCLING WATER FLOOD OTHER  RECYCLING WATER FLOOD OTHER  TENTATIVE CASING FROGRAM:  CASING AND TURING USED FOR LIGHT IN CHARNT HILL BY SIZE DEBILLING WHILL GREAKS - CURRE FT.  10. 16  20. 16  27.00 2700 165 sks = 1400' fillup 2. 378 10 3/4" 250 250 Cement to surface 1.478 2.478 2700 2700 165 sks = 1400' fillup 3.5 225 sks = 2500' fillup 3.5 4975 225 sks = 2500' fillup 3.6 4975 4975 225 sks = 2500' fillup 3.7 Port. Top 3.8 Port. Top 3.9 Port. Top 3.0 Port. Top 3.0 Port. Top 3.0 Port. Top 4.0 Port. Top 4.0 Port. Top 4.0 Port. Top 4.0 Port. Top 5.0 COAL BEING MINED IN THE AREA! NO. 3. BY WHOM: 3. DEBILL SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERFORMANCE BOND. ON 3. WELLS DEALLED PRIOR TO 1929, A FERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD 3. WISH ALSO BE SUBMITED. 3. OF FRANCIURE: STIMULATE: 3. OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, FERFORMANCE 3. BOND, FERMANENT FLAT AND ORIGINAL WELL RECORD 4. OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, FERFORMANCE 3. BOND, FERMANENT FLAT AND ORIGINAL WELL RECORD 4. OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, SHOW-INCO OFICIAL FERMIT INUMBER, AND FERFORMANCE BOND. 4. Required forms must be filed within minety (90) days of completion for bond release. Inspector to be notified twenty-toric control of the stand within ten days of receipt 4. The fallowing waiver must be completed by the coal operator if the permit is to be issurd within ten days of receipt 4. The fallowing waiver must be completed by the coal operator if the permit is to be issurd within ten days of receipt 4. The fallowing waiver must be completed by the coal operator in the best on the stand will be to falled at this location.  We the Coal Company, General or of t				
RECYCLING WATER FLOOD OTHER  RECYCLING WATER FLOOD OTHER  TENTATIVE CASING PROGRAM:  CASING AND TUBING USED FOR LIST IN CAMENT HILL OF SIZE DRILLING WHILL FOR SACKS - CHORK FT.  20-16 13-10 1-5/R 10-3/4" 250 2700 2700 165-5Ks = 1400* ffillup 18 18 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10			ROTARY X	CABLE TOOLS
TENTATIVE CASING PROGRAM:  CASING AND TURING  CASIN	PROPOSED GEOLOGICAL FORM	MATION: <u>Oriskany</u>		
CASING AND TUBING  SIZE  DRILLING  WELL  TOR SACKS - CUBIC FT.  20-18  31-10  9-5/8  10-3/4"  250  250  Cement to surface  1-3/8  1-3/8  2700  2700  2700  165 sks = 1400' fillup  165 sks = 2500' fillup  166 sks = 2500' fillup  167 sks = 2500' fillup  165 sks = 2500' fillup  167 sks = 2500' fillup  168 sks = 2500' fillup  169 sks = 2500' fil	TYPE OF WELL: OIL_	GAS X C	OMB STORAGE	E DISPOSAL
CASING AND TUBING  CASING AND TUBING  SIZE  DRILLING  WELL  WELL  CASING AND TUBING  SIZE  DRILLING  WELL  CASING AND TUBING  SIZE  DRILLING  WELL  CASING AND TUBING  SIZE  DRILLING  WELL  CASING AND TUBING  WELL  CASING AND TUBING  SIZE  DRILLING  WELL  CASING AND TUBING  COMMAND  COMMAND  COMMAND  COMMAND  CASING AND TUBING  COMMAND  CASING AND TUBING		RECYCLI	NG WATER FLO	OOD OTHER
CASING AND TUBING  STEE  DRILLING  USED FOR  DRILLING  USED FOR  DRILLING  D				
SIZE DERLING WILL CONSISTS - CONTEST.  DERLING WILL C	TENTATIVE CASING PROGRAM	<b>1</b> :		
SIZE DERLING WILL CONSISTS - CONTEST.  DERLING WILL C	CASING AND THEIRC	ICUN EAD		-
29-16 3-5/8 10 3/4" 250 250 Cement to surface 3-5/8 10 3/4" 250 250 Cement to surface 3-5/8 2700 2700 165 sks = 1400" fillup 3-5/8 2700 2700 165 sks = 1400" fillup 3-6-5/8 2700 2700 165 sks = 2500" fillup 3-6-5/8 2700 2700 165 sks = 2500" fillup 3-6-6/8 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 2700 2700 165 sks = 2500" fillup 3-7/8 2700 2700 2700 2700 2700 2700 2700 270			*	
8-5/8 10 3/4" 250 250 Cement to surface 8-5/8 2700 2700 165 sks = 1400' fillup 3 k	20 - 16			
9-5/3 10 3/4" 250 250 Cement to surface 2.5/5 25 5/5 25/5 27/5 27/5 27/5 27/5 27/5	13 - 10			
2700 2700 165 sks = 1400' fillup  3 4975 4975 225 sks = 2500' fillup  2 Perf. Top  Perf. Bottom  2 Perf. Top  Perf. Top  Perf. Solum  2 Perf. Top  Perf. Solum  2 Perf. Top  Perf. Solum  2 Perf. Solum  3 Perf. Top  Perf. Solum  3 Perf. Top  Perf. Solum  4 Perf. Solum  5 COAL BEING MINED IN THE AREA? No By WHOM?  5 COP FLAT.  5 UBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL FERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED FRIOR TO 1929, A FERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD  5 OF FRACTURE - STIMULATE:  5 OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  5 OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOW-  NG ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  5 Required ferms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-  four (24) hours in advance.  5 The following waiver must be completed by the coal operator if the permit is to be issued within, and days of receipt  5 Perf. Top  6 Coal Company, Owner or Operator of the coal under  5 The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt  6 Coal Company have no objections to said well being drilled at this location,  6 Perf. Top  7 Perf. Top  7 Perf. Top  8 Perf. Top  9 Perf. Top  1 Perf. Top  1 Perf. Solum  1 Perf. Top	9-5/8 10 3/4"	250	250	
15 %  4975 4975 225 sks = 2500' filling Ref. Ton Perf. Bottom Perf. Bo	8 - 5/8			
48 4975 4975 225 sks = 2500' fillup  Perf. Top  Perf. Top  Perf. Top  Perf. Buttons  Perf. Top  Perf. Buttons  Perf. Top  Perf. Buttons  Perf. Top  Perf. Buttons  Perf. Top  Perf. Buttons  Perf. Buttons  Perf. Top  Perf. Top  Perf. Buttons  Perf. Top  Perf. Buttons  Perf. Bu	7	2700	2700	165 sks = 1400' fillup
Perf. Bottom  APPROXIMATE FRESH WATER DEPTHS  APPROXIMATE COAL DEPTHS  SCOAL BEING MINED IN THE AREA? No. BY WHOM?  FO DRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, FERFORMANCE BOND AND PERMANENT COPY OF FLAT.  FO DRILL DEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  FO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929. FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipting lease have examined and place on our mine maps this proposed well incation.  We theCoal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well incation.  We theCoal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	5 %			
Libers Perf. Bostons    Perf. Bostons   Perf. Bostons	4 %	4975	4975	225 sks = 2500' fillup
Perf. Ton Perf. Bottom  APPROXIMATE FRESH WATER DEPTHS FEET SALT WATER FEET  APPROXIMATE FRESH WATER DEPTHS FEET SALT WATER FEET  APPROXIMATE COAL DEPTHS  IS COAL BEING MINED IN THE AREAT NO BY WHOM?  FO DRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.  FO DRILL DEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  FO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt the lease have examined and place on our mine maps this proposed well incation.  We the Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well incation.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapuer 22 of the West Virtual.			• · ·	Perf. Top
APPROXIMATE FRESH WATER DEPTHS FEET SALT WATER FEET APPROXIMATE COAL DEPTHS  S COAL BEING MINED IN THE AREA! No. BY WHOM?  FO DRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF FLAT.  FO DRILL DEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  FO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filted within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipting of the season of the coal under the lease have examined and place on our mine maps this proposed well increasing the filted at this location, providing operator has complied with all rules and regulations to said well being drilled at this location, providing operator has complied with all rules and regulations in Article 4, 5, and 7, Chapter 22 of the West Virtuin.				Perf. Bottom
APPROXIMATE FRESH WATER DEPTHS  FEET SALT WATER FEET  APPROXIMATE COAL DEPTHS  SCOAL BEING MINED IN THE AREA? NO BY WHOM?  FO DRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.  FO DRILL DEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  FO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOW-ING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipting to the second of the coal under the lease have examined and place on our mine maps this proposed well iocation.  We the Coal Company have no objections to taid well being drilled at this location, providing operator has complied with all rules and regulations in Atticles 4, 5, and 7, Chapter 22 of the West Virtue.	Lineis			
APPROXIMATE FRESH WATER DEPTHS FEET SALT WATER FEET  APPROXIMATE COAL DEPTHS  SE COAL BEING MINED IN THE AREA? No. BY WHOM?  NO DRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF FLAT.  NO DRILL DEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  NO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtual providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtual providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtual providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtual providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtual providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtual providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West V				Perf. bottom
SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.  TO DRILL DEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  TO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt this lease have examined and place on our mine maps this proposed well iocation.  We the	IS COAL BEING MINED IN THE		BY WHOM?	*
SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.  TO DRILL BEEPER OR REDRILL:  SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  TO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt the sease have examined and place on our mine maps this proposed well location.  We the	m neili	wan w	1,1	Section 1997 Section 1997
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt this lease have examined and place on our mine maps this proposed well location.  **WAIVER: 1 the undersigned, Agent for		AP AC 4 8140 00 DD	. v	
SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  TO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt this lease have examined and place on our mine maps this proposed well iocation.  We the	OF PLAT.	or og - 1, \$100.00 PERMI	r fee, performance bo	OND AND PERMANENT COPY
SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.  TO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.  WAIVER: I the underzigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.				
MUST ALSO BE SUBMITTED.  TO FRACTURE - STIMULATE:  OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG -1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG -1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: 1 the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.		2-0 →		
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  WAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	WELLS DRILLED PRIOR T	O 1929 A PERMANENT CO	NAL PERMIT NUMBER AND	D PERFORMANCE BOND. ON
OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG -1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG -1, SHOW-ING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  WAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	MUST ALSO BE SUBMITTE	D.		HE ORIGINAL WELL RECORD
OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG -1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.  OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG -1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.  VAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virtuin.	O FRACTURE - STIMULATE			· •
OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOW-ING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: I the undersigned, Agent for				
OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOW-ING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.  Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: I the undersigned, Agent for Coal Company, Gwner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	BOND, PERMANENT PLAT	AND ORIGINAL WELL DEC	le June 5, 1929, five (5) (	COPIES OG - 1, PERFORMANCE
Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty- four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: I the undersigned, Agent for				
Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty- four (24) hours in advance.  The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	ING ORIGINAL PERMIT NUM	MBER, AND PERFORMANCE	BOND.	9. FIVE COPIES OG - 1, SHOW-
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.				
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereof.  VAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	four (24) hours in advance.	within ninety (90) days of co	ompletion for bond release.	Inspector to be notified twenty-
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereo!.  VAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.		•		
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt hereo!.  WAIVER: I the undersigned, Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	D.			
VAIVER: I the undersigned. Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	*		•	
VAIVER: I the undersigned. Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.				
VAIVER: I the undersigned. Agent for Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.  We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	The following waiver must be	e completed by the coal once	nton if the named in the b	
We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	hereof.	and the control of the control of the	and it the beamit is to be a	ssued within ten days of receipt
We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia.	VAIVER: I the undersigned, Agen	t for	Coal Company Compe	or Guerries of the seal under
We the Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia	this lease have examined	d and place on our mine ma-	ps this proposed well incate	on .
providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia				
Code.	providing operator has co	omplied with all rules and and	are no objections to said we	on being drilled at this location,
	- Code	,	meons in Authors 4, 5, and 7	, Chapter 22 of the West Virginia
	•	ð		
				w





OIL & GAS DIVISION DEPT. OF MINES

#### Oil and Gas Division

### OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,	
Charleston, W. Va.	DATE April 30, 1980
Surface Owner Curtis L. & Wayne C. Hill	Company Kaiser Exploration and Mining Company
Address 3405 Alcoa Drive, Charleston, WV 25304	
Mineral Owner Same as above	Farm Curtis & Wayne Hill Acres 136 Ac.
Address Same as above	Location (waters) Thirteen
Coal Owner Union Carbide Corporation	Well No. KEM #15 Elevation 838.37
Address 32 Sanderson Road, Clendenin, WV 25045	District Ripley County Jackson
Coal Operator None	QuadrangleFlmwood
Address None	
PERMIT MUST BE POSTED AT THE WELL SITE	
provisions being in accordance with Chapter 22, he W. Va. Code, the location is hereby approved	SPECTOR Richard Morris
drilling This pormit shall expire if	
rations have not commenced by 1-16-81	BE NOTIFIED <u>Kenneth Butcher</u>
	RESS <u>RFD #1, Barboursville, WV 25504</u>
Deputy Director - Oil & Gas Division PHO	DNE 736-4885 354-7259
Deputy Director - On a Gus Division Price	ME <u>/36-4883                                   </u>
GENTLEMEN:	
The undersigned well operator is entitled to drill upon the a	bove named farm or tract of land for oil and gas, having fee
title thereto, (or as the case may be) under grant or lease dat	edSentehmer 14
Wayne Hill made to Kaiser Exploration and Mackson 148	ining Consider a the land of August
78 Jackson 148 1978, in Mason County, Book 43	Page 581
	REDRILLFRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED I	
The second secon	DEFORE JUNE 5, 1969.
The enclosed plat was prepared by a registered engineer or have been notified as of the above date.	licensed land surveyor and all coal owners and/or operators
have been notified as of the above date.	
The above named coal owners and/or operator are hereby no to make by Section 3 of the Code, must be received by, or filed	tified that any objection they wish to make, or are required
Copies of this notice and the enclosed plat were mailed by re or coal owners at their above shown respective address	gistered mail, or delivered to the above named coal operators
same day with the mailing or delivery of this copy to the Depar	tment of Mines at Charleston, West Virginia.
Ve	ery truly yours.
PLEASE SUBMIT COPIES OF ALL	
GEOPHYSICAL LOGS DIRECTLY TO: (S)	gn Name) Well Operator
WEST VIRGINIA GEOLOGICAL AND	R. A. Pryce
ECONOMIC SURVEY Address	<u>Kaiser Exploration and Mining Company</u> Stree:
P. O. BOX 879 of Well Operator	D. O. Pay O. Payanayand
MORGANTOWN, WEST VIRGINIA 26505 Well Operator AC-304 - 292-6331	P. O. Box 8, Ravenswood City or Town
	<u>West Virginia</u> 26164
	State

\*SECTION 3.... If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

47-035-1524

PERMIT NUMBER

# THIS IS AN ESTIMATE ONLY ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO	XDRILL	DEEPEN F	RACTURE-STIMULATE		
DRILLING CONTRACTOR: (If	Known)				
NAME Not known at this			yce ·		
ADDRESS					
TELEPHONE		TELEPHONE 273-5371			
ESTIMATED DEPTH OF COMPL	ETED WELL: 4975'	ROTARY X CABLE TOOLS			
PROPOSED GEOLOGICAL FORM					
TYPE OF WELL: OIL_	GAS X CO	DMBSTORAGE	EDISPOSAL		
•			DOD OTHER		
•	<u></u>				
TENTATIVE CASING PROGRAM	:		Setting of the Set of the Setting of the Set		
			1 f of Statement .		
CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP		
20 - 16		WILL	OR SACKS - CUBIC 1-T.		
13 - 10					
9 - 5/8 10 3/4"	250	250	1305		
8 - 5/8	Annual Committee of the		125 sx Class A to surface		
7	2700	2700	l65 sx Cement 1400' fill-u		
5 ½		2/00	100 SX Lement 1400'_fill-u		
4 ½		4975	225 sx pozmix 2500' fill-u		
3			Perf. Top		
2			Perf. Bottom		
Liners			Perf. Top		
			Perf. Bottom		
TO DRILL DEEPER OR REDRILL SUBMIT FIVE (5) COPIES O WELLS DRILLED PRIOR TO MUST ALSO BE SUBMITTED TO FRACTURE - STIMULATE: OIL AND/OR GAS WELL OR BOND, PERMANENT PLAT	F OG - 1, SHOWING ORIGIN D 1929, A PERMANENT COI D. IGINALLY DRILLED BEFORD AND ORIGINAL WELL RECO	AL PERMIT NUMBER AN PY OF THE PLAT AND T E JUNE 5, 1929, FIVE (5) O	DND AND PERMANENT COPY D PERFORMANCE BOND. ON THE ORIGINAL WELL RECORD COPIES OG - 1, PERFORMANCE		
ING ORIGINAL PERMIT NUM	BER, AND PERFORMANCE B	NOR AFTER JUNE 5, 1929 SOND.	, FIVE COPIES OG - 1, SHOW-		
Required forms must be filed four (24) hours in advance.	within ninety (90) days of co	mpletion for bond release.	Inspector to be notified twenty-		
	· · · · · · · · · · · · · · · · · · ·				
Th. 6-11			· ·		
The following waiver must be hereof.	completed by the coal opera	tor if the permit is to be is	ssued within ten days of receipt		
	na an a	1			
WAIVER: I the undersigned, Agent	and place as	Coal Company, Owner	or Operator of the coal under		
	and place on our mine map				
We the					
providing operator has con	Coal Company hamplied with all rules and regula	ve no objections to said we tions in Articles 4, 5, and 7	ll being drilled at this location, , Chapter 22 of the West Virginia		
providing operator has con	Coal Company hamplied with all rules and regula	ve no objections to said we tions in Articles 4, 5, and 7	ll being drilled at this location, , Chapter 22 of the West Virginia		
providing operator has con	Coal Company hamplied with all rules and regula	tions in Articles 4, 5, and 7	, Chapter 22 of the West Virginia		
providing operator has con	Coal Company hamplied with all rules and regula	tions in Articles 4, 5, and 7	of Coal Company		