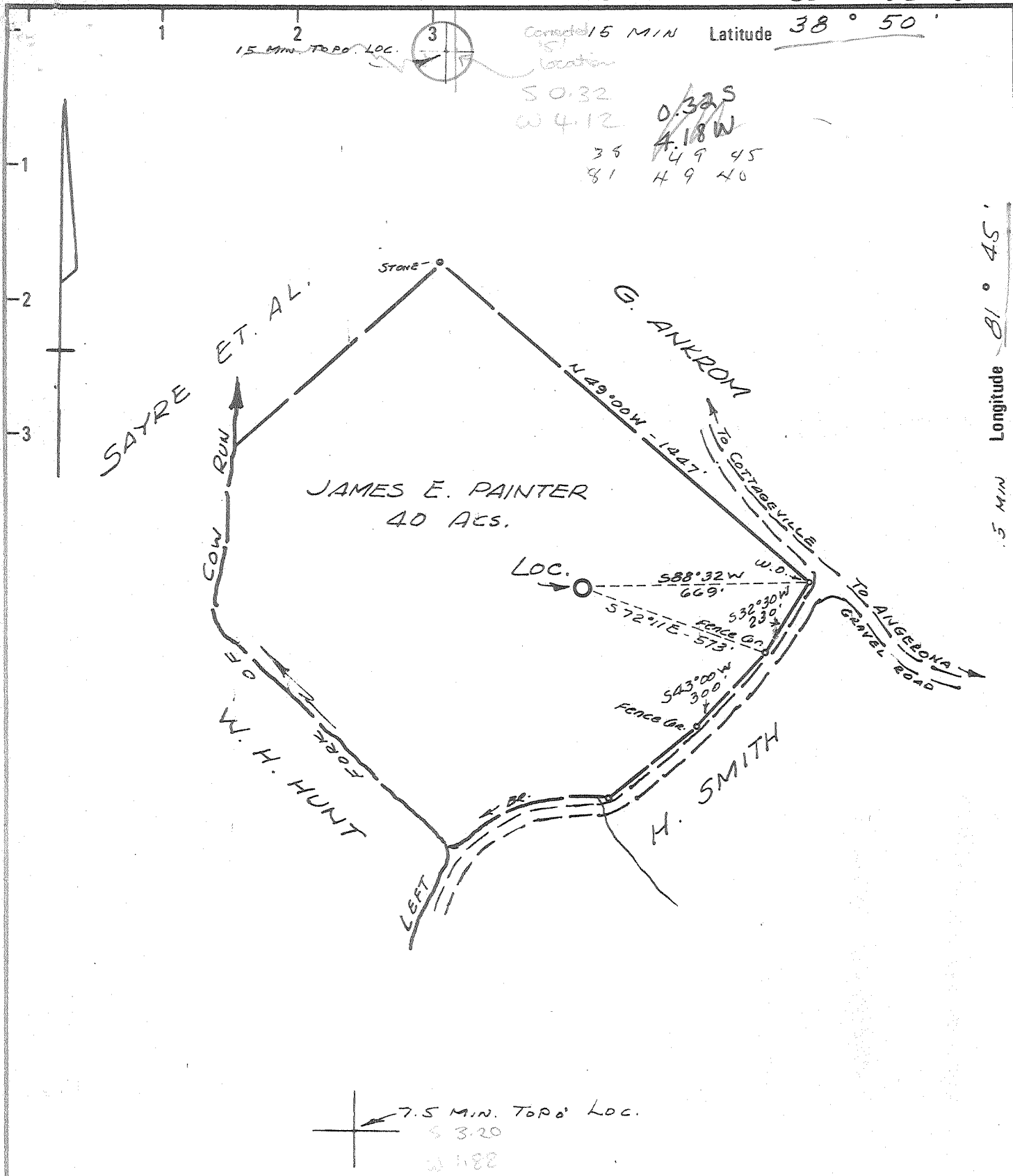


15 MIN TOPO. LOC.



S 0.32  
W 4.12  
0.32 S  
4.18 W  
36 49 45  
81 49 40



5 MIN Longitude 81° 45'  
7.5 MIN 81° 47' 30"

7.5 MIN. TOPO. LOC.  
S 3.20  
W 1.88

New Location   
Drill Deeper   
Abandonment

Minimum Error of Closure 1 IN 200  
Source of Elevation USGS Elev. 672' Road Intersection  
750' EAST OF WELL LOC.  
"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Company KAISER EXPL. & MINING CO.  
 Address BOX 98 RAVENSWOOD, WV  
 Farm JAMES E. PAINTER (SHINN)  
 Tract \_\_\_\_\_ Acres 40 Lease No. \_\_\_\_\_  
 Well (Farm) No. DEK #21 Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 721.0 SE  
 Quadrangle RAVENSWOOD 15'  
15' 7.5' COTTAGEVILLE  
 County JACKSON District UNION  
 Engineer N.L. Syton  
 Engineer's Registration No. 1832  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date 2-5-77 Scale 1" = 400'

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

WELL LOCATION MAP  
FILE NO. JAC-1389

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

47-035



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

RECEIVED  
NOV 4 - 1977  
OIL & GAS DIVISION  
DEPT. OF MINES

Quadrangle Ravenswood

Permit No. JAC-1389

Rotary XXX Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas XXX \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Company Kaiser Exploration & Mining Co.  
Address Box 98, Ravenswood, W. Va.  
Farm James E. Painter Acres 40  
Location (waters) Left Fk. of Cow Run  
Well No. DEK #21 Elev. 721  
District Union County Jackson  
The surface of tract is owned in fee by \_\_\_\_\_  
James E. Painter, Et ux  
Address Given, W. Va.  
Mineral rights are owned by Same as above  
Address Same  
Drilling Commenced 5/23/77  
Drilling Completed 6/3/77  
Initial open flow Show cu. ft. --- bbls.  
Final production 41 M cu. ft. per day \_\_\_\_\_ bbls.  
Well open \_\_\_\_\_ hrs. before test \_\_\_\_\_ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10"			
9 5/8	223	223	200 Sax
8 5/8			
7	2344	2344	75 Sax
5 1/2			
4 1/2	4592	4592	125 Sax
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton  
Perforated 4 1/2" casing @ 4450 - 4452 and 4471 - 4473 and 4482 - 4484 with 8 shots/ft.  
Water frac with 40,000 lbs. of 20/40 sand.

~~Perforated 4 1/2" casing from 4136 to 3675 with 24 shots.~~  
~~Water frac with 1,224 bbl. water and 3,500 lb. sand~~

Coal was encountered at None Feet \_\_\_\_\_ Inches \_\_\_\_\_  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Oriskany - Brown Shale Depth 4450 - 4452; 3675 - 4136

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Shale			0	119		
Sand			119	142		
Shale			142	163		
Sand			163	172		
Shale			172	259		
Sand			259	263		
Red Rock			263	340		
Sand			340	351		
Red Rock			351	390		
Shale			390	430		
Red Rock			430	478		
Sand			478	504		
Red Rock			504	589		
Sand			589	609		
Red Rock			609	702		
Sand			702	749		
Shale			749	872		
Sand			872	891		
Red Rock			891	910		
Shale			910	994		
Salt Sand			994	1051		
Shale			1051	1056		
Sand			1056	1097		
Shale			1097	1160		

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet <sup>6</sup>	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1160	1177		
Shale			1177	1185		
Sand			1185	1204		
Shale			1204	1240		
Sand			1240	1276		
Shale			1276	1330		
Sand			1330	1334		
Shale			1334	1391		
Sand			1391	1414		
Shale			1414	1450		
Sand			1450	1470		
Shale			1470	1528		
Sand			1528	1532		
Shale			1532	1548		
Shale			1548	1598		
Maxon			1598	1605		
Big Lime			1605	1762		
Shale			1762	1786		
Injun Sand			1786	1935		
Shale			1935	2245		
Coffee Shale			2245	2262		
Berea Sand			2262	2276		
Shale			2276	3414		
Brown Shale			3414	3857		
Shale			3857	4254		
Marcellus Shale			4254	4382		
Onondaga L.S.			4382	4463		
Oriskany Sand			4463	4485		
Helderberg L.S.			4485	TD		
Log Total Depth				4636		

Date November 2, 19 77

APPROVED Paul A. Poyner, Owner

By Staff Petroleum Geologist  
(Title)



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD 20

RECEIVED  
NOV 4 - 1977  
OIL & GAS DIVISION  
DEPT. OF MINES

Quadrangle Ravenswood

Permit No. JAC-1389

Rotary XXX Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas XXX Show  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Company Kaiser Exploration & Mining Co.  
Address Box 98, Ravenswood, W. Va.  
Farm James E. Painter Acres 40  
Location (waters) Left Fk. of Cow Run  
Well No. DEK #21 Elev. 721  
District Union County Jackson  
The surface of tract is owned in fee by \_\_\_\_\_  
James E. Painter, Et ux  
Address Given, W. Va.  
Mineral rights are owned by Same as above  
Address Same  
Drilling Commenced 5/23/77  
Drilling Completed 6/3/77  
Initial open flow Show cu. ft. \_\_\_\_\_ bbls.  
Final production \_\_\_\_\_ cu. ft. per day \_\_\_\_\_ bbls.  
Well open \_\_\_\_\_ hrs. before test \_\_\_\_\_ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8	223	223	200 Sax
8 5/8			
7	2344	2344	75 Sax
5 1/2			
4 1/2	4592	4592	125 Sax
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton  
Perforated 4 1/2" casing @ 4450 - 4452 and 4471 - 4473 and 4482 - 4484 with 8 shots/ft.  
Water frac with 40,000 lbs. of 20/40 sand.

~~Perforated 4 1/2" casing from 4136 to 3675 with 24 shots.~~  
~~Water-frac with 1,224 bbl. water and 3,500 lb. sand~~  
~~Testing not complete~~

Coal was encountered at None Feet \_\_\_\_\_ Inches \_\_\_\_\_  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Oriskany - Brown Shale Depth 4450 - 4452; 3675 - 4136

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Shale			0	119		
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Sand			702	749		
Shale			749	872		
Sand			872	891		
Red Rock			891	910		
Shale			910	994		
Salt Sand			994	1051		
Shale			1051	1056		
Sand			1056	1097		
Shale			1097	1160		

(over)

\* Indicates Electric Log tops in the remarks section.

NOV 22 1977

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1160	1177		
Shale			1177	1185		
Sand			1185	1204		
Shale			1204	1240		
Sand			1240	1276		
Shale			1276	1330		
Sand			1330	1334		
Shale			1334	1391		
Sand			1391	1414		
Shale			1414	1450		
Sand			1450	1470		
Shale			1470	1528		
Sand			1528	1532		
Shale			1532	1548		
Shale			1548	1598		
Maxon			1598	1605		
Big Lime			1605	1762		
Shale			1762	1786		
Injun Sand			1786	1935		
Shale			1935	2245		
Coffee Shale			2245	2262		
Berea Sand			2262	2276		
Shale			2276	3414		
Brown Shale			3414	3857		
Shale			3857	4254		
Marcellus Shale			4254	4382		
Onondaga L.S.			4382	4463		
Oriskany Sand			4463	4485		
Helderberg L.S.			4485	TD		
Log Total Depth				4636		

Date November 2, 19 77

APPROVED Charles A. Poyner, Owner

By Staff Petroleum Geologist  
(Title)



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

RECEIVED

FEB 8 1977

DEPT. OF MINES

TO THE DEPARTMENT OF MINES,  
Charleston, W. Va.

Surface Owner James E. Painter, et ux  
Address Given, W. Va.  
Mineral Owner James E. Painter, et ux  
Address Given, W. Va.  
Coal Owner Same as above  
Address \_\_\_\_\_  
Coal Operator Not Operated  
Address \_\_\_\_\_

DATE January 31, 1977  
Company Kaiser Exploration & Mining Co.  
Address Box 98, Ravenswood, W. Va.  
Farm James E. Painter Acres 40  
Location (waters) Left Fk. of Cow Run  
Well No. DFK #21 Elevation 721  
District Union County Jackson  
Quadrangle Cottageville 7 1/2' Ravenswood 15'

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 6-8-77.

INSPECTOR Richard J. Morris  
TO BE NOTIFIED \_\_\_\_\_  
ADDRESS Grantsville, W.Va.  
PHONE 354-7259

Robert L. Jordan  
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated May 10 1975 by Clarence R. Shinn, et ux made to Devon Corp. & Eason Oil Co and recorded on the 4th day of April 1975, in Jackson County, Book 130 Page 505

XXX NEW WELL \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE  
\_\_\_\_\_ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or 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 notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. \*

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address \_\_\_\_\_ day \_\_\_\_\_ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND  
ECONOMIC SURVEY  
P. O. BOX 879  
MORGANTOWN, WEST VIRGINIA 26505  
AC-304 - 292-6331

Address  
of  
Well Operator

Very truly yours, KAISER EXPLORATION & MINING CO.  
(Sign Name) W. F. Wegener  
W. F. Wegener, <sup>Well Operator</sup> Owners Representative  
Box 98  
Street  
Ravenswood  
City or Town  
West Virginia  
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.

JAC-1389

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by \_\_\_\_\_

47-085

BLANKET BOND

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

PROPOSED WORK ORDER TO XXX DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:  
 NAME FWA Drilling Company NAME Bill W. Backus  
 ADDRESS Box 448, Elkview, W. Va. ADDRESS Box 1433, Charleston, W. Va.  
 TELEPHONE 965-3379 TELEPHONE 342-3171  
 ESTIMATED DEPTH OF COMPLETED WELL: 4625' ROTARY XXX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Oriskany  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS XXX COMB. \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8	200'	200	100 sax
8 - 5/8			
7	2350'	2350'	75 sax
5 1/2			
4 1/2	4625'	4625'	125 sax
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS \_\_\_\_\_ FEET \_\_\_\_\_ SALT WATER \_\_\_\_\_ FEET \_\_\_\_\_  
 APPROXIMATE COAL DEPTHS None Anticipated  
 IS COAL BEING MINED IN THE AREA? No BY WHOM? \_\_\_\_\_

TO DRILL:

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 thereof.

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 Code.

\_\_\_\_\_  
For Coal Company

\_\_\_\_\_  
Official Title