

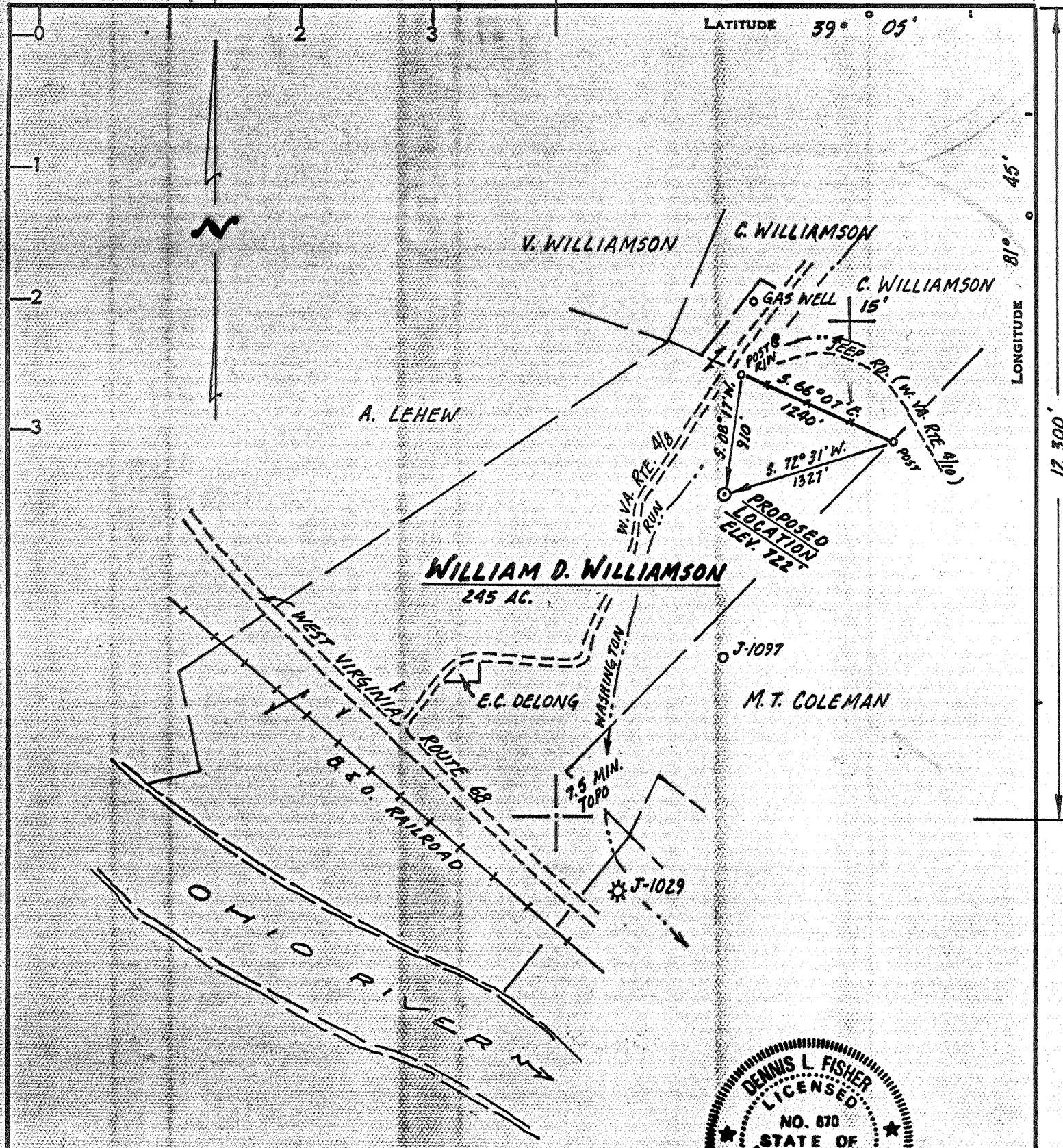
Ch. 8/27

7,200'

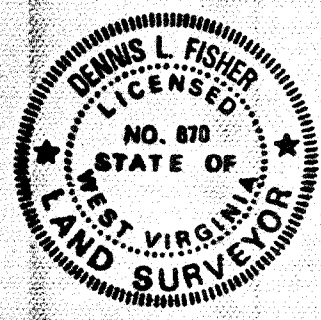
LATITUDE 39° 05'

LONGITUDE 81° 45'

12,300'



[SURFACE : WILLIAM D. WILLIAMSON
 MINERAL : WILLIAM D. WILLIAMSON]



CERTIFICATE

"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."

Minimum degree of accuracy is one part in 200

Signed Dennis L. Fisher LL.S. #670

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY	KAISER EXPLORATION & MINING COMPANY		
ADDRESS	PO BOX # 8, RAVENSWOOD, WEST VIRGINIA		
FARM	WILLIAM D. WILLIAMSON	26164	
MAP	ACRES	LEASE NO.	
	245		
WELL (FARM) NO.	SERIAL NO.	KEM 71	
ELEVATION (SPIRIT LEVEL)	722'		
QUADRANGLE	PORTLAND, OHIO-W.VA. 7.5 MIN.		
COUNTY	DISTRICT	JACKSON GRANT	
POINT OF PROVEN ELEVATION	SPOT ELEV. 602, RD. INTERSECT. 950' NORTH OF PROPOSED LOCATION		
FILE NO.	DRAWING NO.		
DATE	MARCH 16, 1981		
	SCALE 1"=1000'		

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

WELL LOCATION MAP

FILE NO. 47-035-1571-Frac.

FRAC CANCELLED

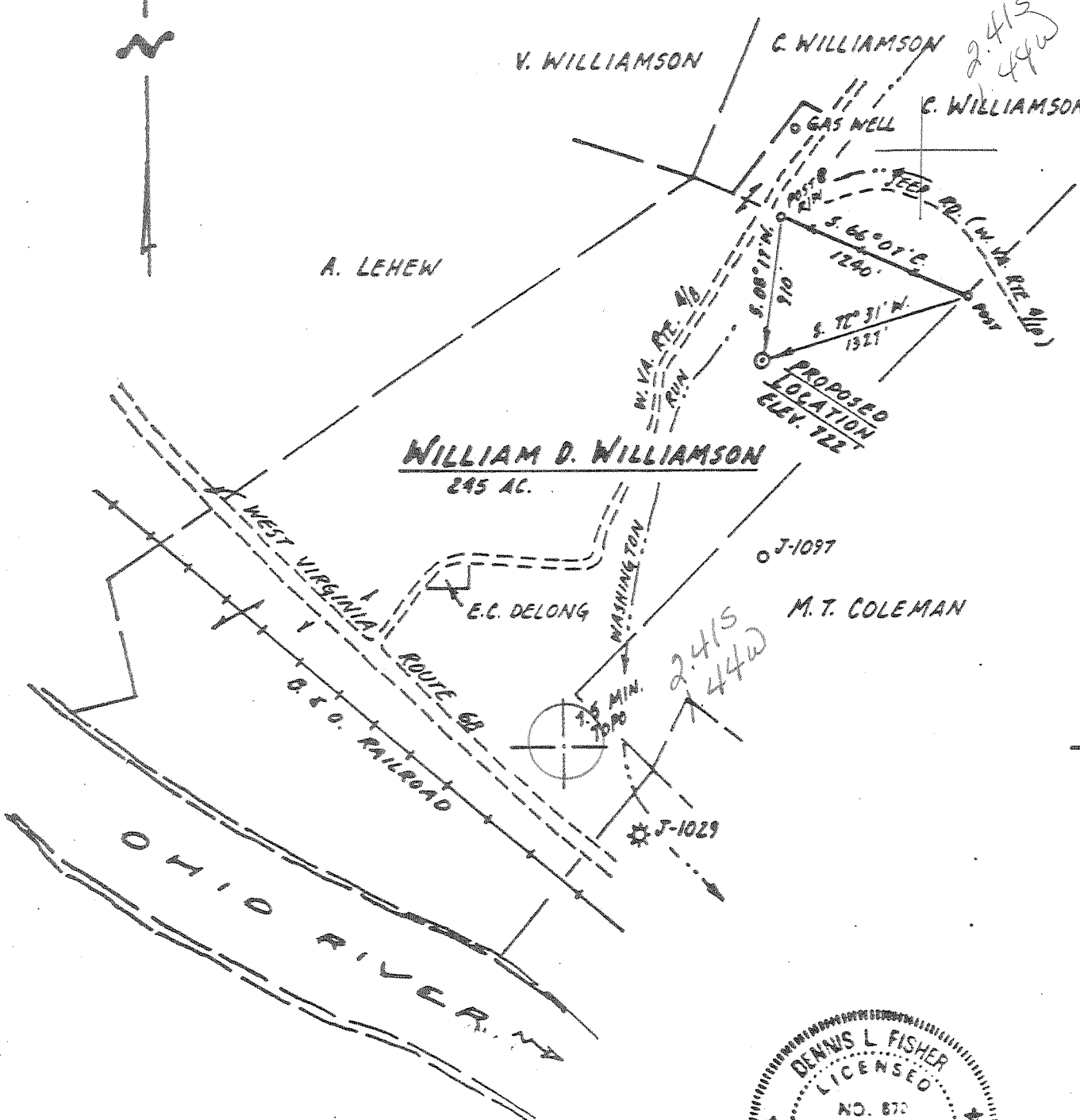
+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 24000 LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

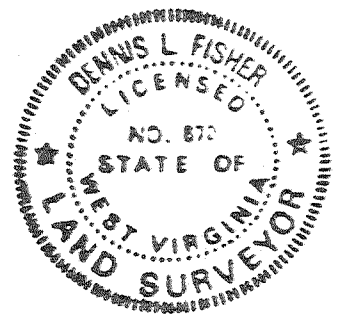
Oriskany 4325'

FEB 3 1989

JACKSON 1571-F



[SURFACE : WILLIAM D. WILLIAMSON
 MINERAL : WILLIAM D. WILLIAMSON]



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Minimum degree of accuracy is one part in 200
 465 *Dennis L. Fisher* LLS. #670

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY	KAISER EXPLORATION & MINING COMPANY		
ADDRESS	PO BOX # 8, RAVENSWOOD, WEST VIRGINIA		
NAME	WILLIAM D. WILLIAMSON	26164	
MAP	245	LEAD NO.	
WELL (FAIR) NO.		SERIAL NO.	KEM 71
ELEVATION (SPOT LEVEL)	722'	555	064 SE 9
QUADRANGLE	PORTLAND, OHIO - W. VA.	7.5 MIN.	
COUNTY	JACKSON	DISTRICT	GRANT
POINT OF PROVEN ELEVATION	SPOT ELEV. 602, RD. INTERSECT. 950' NORTH OF PROPOSED LOCATION		
FILE NO.		DRAWING NO.	
DATE	MARCH 16, 1981		
		SCALE	1" = 1000'

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

WELL LOCATION MAP

FILE NO. 035-1571-F

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 62,666 LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

MAR 17 1986

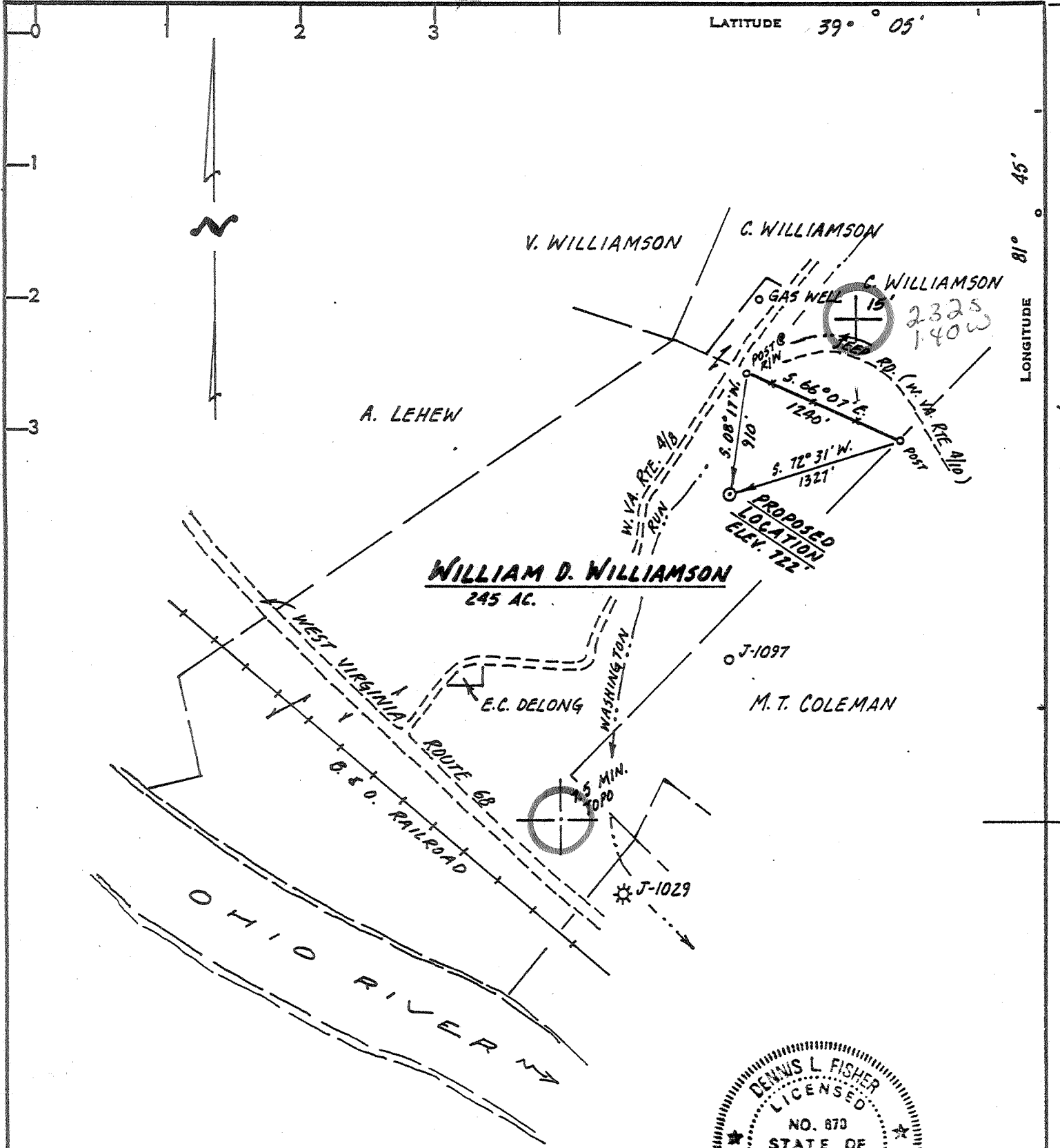
Ch 3/390t Card CSD

7,200'

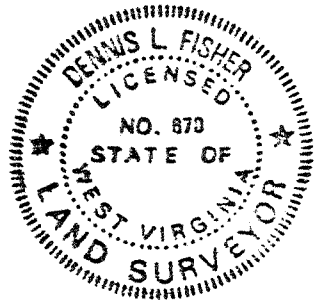
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12,300'



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Minimum degree of accuracy is one part in 200

Signed Dennis L. Fisher LLS. #670

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY	KAISER EXPLORATION & MINING COMPANY		
ADDRESS	PO BOX # 8, RAVENSWOOD, WEST VIRGINIA		
FARM	WILLIAM D. WILLIAMSON	26164	
MAP	ACRES 245	LEASE NO.	
WELL (FARM) NO.		SERIAL NO.	KEM 71
ELEVATION (SPIRIT LEVEL)	722'		
QUADRANGLE	PORTLAND, OHIO - W. VA.	7.5 MIN. Kemo 15 SE	
COUNTY	JACKSON	DISTRICT	GRANT
POINT OF PROVEN ELEVATION	SPOT ELEV. 602, RD. INTERSECT. 950' NORTH OF PROPOSED LOCATION		
FILE NO.	DRAWING NO.		
DATE	MARCH 16, 1981		
	SCALE 1" = 1000'		

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

WELL LOCATION MAP

FILE NO. 47-035-1571

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 24,000 LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

deep well 66 Neptune 4325' (255) APR 13 1981



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Portland, O/WV

Permit No. JAC-1571

Rotary X Oil _____
Cable _____ Gas X _____
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Company Kaiser Exploration and Mining Co.
Address P. O. Box 8, Ravenswood, WV 26164
Farm William Williamson Acres 245
Location (waters) Staats Run
Well No. KEM #71 Elev. 722'
District Grant County Jackson
The surface of tract is owned in fee by _____
William D. Williamson
Address 504 Sand Street, Ravenswood, WV
Mineral rights are owned by Same
Address Same
Drilling Commenced 4/20/81
Drilling Completed 4/26/81
Initial open flow Trace cu. ft. -- bbls.
Final production 1 MM cu. ft. per day -- bbls.
Well open 6 hrs. before test 1500 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10" 10 3/4	255' (KB)	255' (KB)	150 sks class A (to surface)
9 5/8			
8 5/8			
7	1380' (KB)	1380' (KB)	65 sks 50/50 pozm
5 1/2			100 sks class A
4 1/2	4271' (KB)	4271' (KB)	250 sks 50/50 pozm
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

4/30/81 Perforated Oriskany Sand from 4197'-4204' with 3 1/2" galss jet charges, 21 shots; 5/1/81 hydrofractured Oriskany Sand w/15,000# 80/100 sand and 45,000# of 20/40 sand and 172,000 SCF nitrogen.

FOF 1,000 MCF

Coal was encountered at -- Feet -- Inches
Fresh water -- Feet -- Salt Water -- Feet --
Producing Sand Oriskany Sand Depth 4197'-4204'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
*All formation tops taken from electric log depths						
Soil			0	20		
Sand			20	288		
Sand & Shale			288	366		
Sand			366	424		
Shale			424	490		
Sand			490	516		
Shale			516	576		
Sand			576	608		
Sandy Shale			608	807		
Sand			807	829		
Shale & Red Rock			829	998		
Shaley Sand			998	1022		
Shale			1022	1130		
Salt Sand			1130	1194		
Shale			1194	1268		
Shaley Sand			1268	1327		
Shale			1327	1398		
Lime & Shale			1298	1416		
Big Lime (Greenbrier)			1416	1530		
Shale			1530	1977		
Coffee Shale (Sunbury)			1977	1996		

(over)

* Indicates Electric Log tops in the remarks section.

DEC 13 1982

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Berea Sand			1996	1998		
Shale			1998	3130		
Brown Shale			3130	3582		
Shale			3582	3809		
Marcellus Shale			3809	4102		
Onondaga Lime (Corniferous)			4102	4188		
Oriskany Sand			4188	4224	Show/Gas	
Helderberg			4224	4286		
Total Depth			<u>4286</u>			

Date August 26, 1981

APPROVED Bill A. P. _____ (Initial)

By.....General Manager...
(Title)



1) Date: February 7, 1986, 1986
 2) Operator's Well No. KEM #71, Williamson
 3) API Well No. 47 035 1571 -F
 State County Permit

RECEIVED
 FEB 27 1986

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
 DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas X /
 B (If "Gas", Production X / Underground storage / Deep / Shallow X /)
- 5) LOCATION: Elevation: 722 Watershed: Staats Run
 District: Grant County: Jackson Quadrangle: Portland:OH/WV
- 6) WELL OPERATOR Kaiser Exploration and Mining Company CODE: 25350 7) DESIGNATED AGENT R. A. Pryce
 Address P. O. Box 8 Address Same
Ravenswood, WV 26164
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name: Jerry Tephabock
 Address Rt. 1, Box 101-A
Ripley, WV 25271
- 9) DRILLING CONTRACTOR: Name Kaiser Company Tools
 Address Same
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate X /
 Plug off old formation X / Perforate new formation X / Brown
 Other physical change in well (specify) Plug off Oriskany; perf. and fracture Shale
- 11) GEOLOGICAL TARGET FORMATION, 401 and Berea Sand; commingle production
- 12) Estimated depth of completed well, feet
- 13) Approximate strata depths: Fresh, N/A feet; salt, N/A feet.
- 14) Approximate coal seam depths: None Is coal being mined in the area? Yes / No X
- 15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		Kinds	Sizes
Conductor										None
Fresh water	10 3/4	H-40	32.75	X		255(KB)	255(KB)	150 sks		
Coal										
Intermediate	7	K-55	20	X		1880(KB)	1880(KB)	165 sks		
Production	4 1/2	N-80	11.6	X			4271(KB)	250 sks		
Tubing	2 3/8	J-55	4.6	X			4194			
Lin...										
										Perforations:
										Top Bottom
										4197 4204

OFFICE USE ONLY
 DRILLING PERMIT

Permit number: 47-035-1571-Frac

March 7 19 86
 Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires March 7, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>✓</u>	Agent: <u>ALB</u>	Plat: <u>MS</u>	Casing: <u>MS</u>	Fee: <u>969379</u>	WPCP: <u>FRAC TANKS</u>	S&E: <u>MS</u>	Other: <u> </u>
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NOTE: Keep one copy of this permit posted at the drilling location.

[Signature]
 Director, Division of Oil and Gas

File

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



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED
MAR 26 1981

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

Surface Owner William D. Williamson
Address 504 Sand Street, Ravenswood, WV 26164
Mineral Owner Same as above
Address Same
Coal Owner Same
Address Same
Coal Operator None
Address None

DATE March 23, 1981
Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm William Williamson Acres 245
Location (waters) Staats Run
Well No. KEM #71 Elevation 722'
District Grant County Jackson
Quadrangle Portlant, Ohio-WV

THIS PERMIT MUST BE POSTED AT THE WELL SITE

Provisions being in accordance with Chapter 22,
the W. Va. Code, the location is hereby approved
for drilling. This permit shall expire if
operations have not commenced by 12-1-81.

[Signature]
Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED Richard Morris
ADDRESS P. O. Box 372, Grantsville, WV
PHONE 354-7259

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 April 1, 1980 by William D. & Hazel Williamson made to Kaiser Exploration and Mining Company and recorded on the 28th day of April 1980, in Jackson County, Book 155 Page 690

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,
(Sign Name) [Signature]
Well Operator
Kaiser Exploration and Mining Company
P. O. Box 8
Street
Ravenswood
City or Town
West Virginia 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

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

PROPOSED WORK ORDER TO X DRILL DEEPEN FRACTURE-STIMULATE

DRILLING CONTRACTOR: (If Known)
NAME Clint Hurt & Associates, Inc.
ADDRESS P. O. Box 388, Elkview, WV 25071
TELEPHONE 273-5371

RESPONSIBLE AGENT:
NAME Robert A. Pryce
ADDRESS P. O. Box 8, Ravenswood, WV 26164
TELEPHONE 273-5371

ESTIMATED DEPTH OF COMPLETED WELL: Oriskany
PROPOSED GEOLOGICAL FORMATION: 4325'

ROTARY X CABLE TOOLS

TYPE OF WELL: OIL GAS X COMB. STORAGE DISPOSAL
RECYCLING WATER FLOOD OTHER

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8 10 3/4"	250'	250'	150 sks Class A (to surf)
8 - 5/8			
7	1925'	1925'	50 sks pozmix 100 sks cla
5 1/2			
4 1/2	4325'	4325'	225 sks 50/50 pozmix
3			Perf. Top
2		4200'	Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS FEET SALT WATER FEET

APPROXIMATE COAL DEPTHS

IS COAL BEING MINED IN THE AREA? None 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