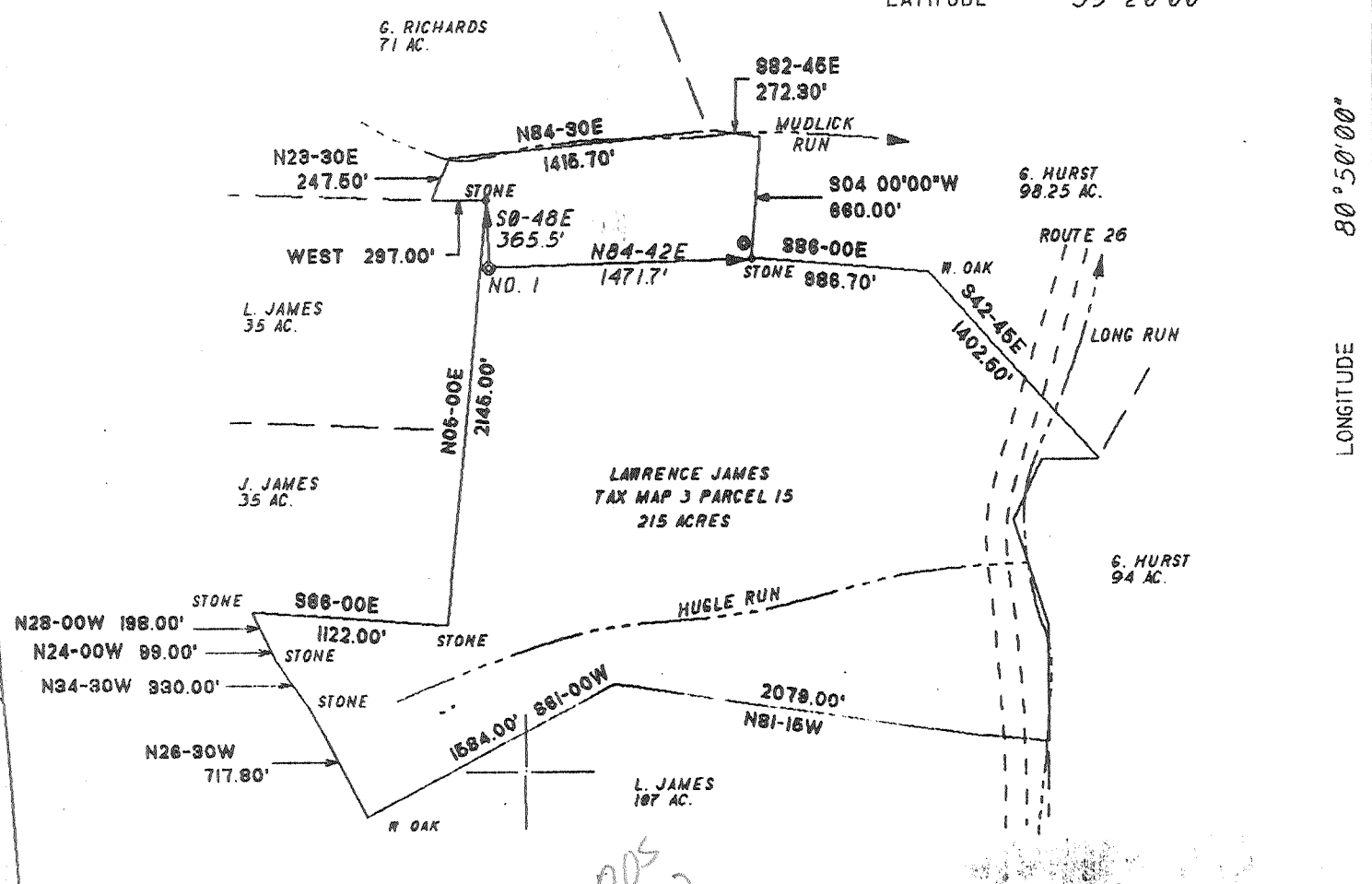


9,450'

LATITUDE 39°20'00"

LONGITUDE 80°50'00"

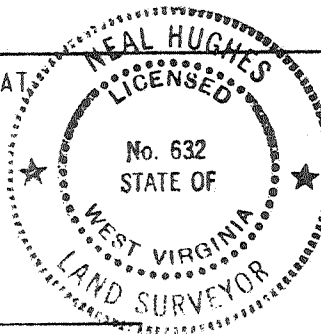
NORTH



REFERENCE POINTS

I THE UNDERSIGNED, DO HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

L.L.S. Neal Hughes  
632



(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 DATE NOV. 5, 19 93  
 OPERATORS WELL NO. JAMES NO. 1  
 API WELL NO. 47 - 017 - 4070  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200  
 FILE NO. 93-106  
 PROVEN SOURCE OF ELEVATION KNOB 1118'  
 SCALE 1"=1000'

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 998' WATERSHED MUDLICK RUN  
 DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION  
 SURFACE OWNER LAWRENCE JAMES ACREAGE 215 SC  
 ROYALTY OWNER LAWRENCE JAMES LEASE ACREAGE 215

PROPOSED WORK:  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER   
 PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION ALEXANDER  
 ESTIMATED DEPTH 5500'

WELL OPERATOR KEY OIL CO 475 DESIGNATED AGENT JAN CHAPMAN  
 ADDRESS 22 GARTON PLAZA 66 Greenwood ADDRESS 22 GARTON PLAZA

COUNTY NAME? PERMIT

RECEIVED  
WV Division of  
Environmental Protection

17-Nov-93  
API # 47- 17-04070

JAN 14 94

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Permitting  
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: JAMES, LAWRENCE Operator Well No.: JAMES #1

LOCATION: Elevation: 998.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE  
Latitude: 8800 Feet South of 39 Deg. 20Min. Sec.  
Longitude 9450 Feet West of 80 Deg. 50 Min. Sec.

Company: KEY OIL COMPANY  
22 GARTON PLAZA  
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 11/18/93  
Well work Commenced: 12-1-93  
Well work Completed: 12-6-93

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5267'  
Fresh water depths (ft) 105', 545'

Salt water depths (ft) NONE

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): NONE

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16	28	28	65 sks.
11 3/4	122	122	to surface
8 5/8	1510	1510	405 sks. to surface
4 1/2		5201	260 sks.
1.5		5112	

OPEN FLOW DATA

Riley 4448'-4482'  
Benson 4852'-4860'  
Alexander Pay zone depth (ft) 5139'-5162'

Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow 25 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 919 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests N/A Hours  
Static rock Pressure 1650 psig (surface pressure) after 96 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: KEY OIL COMPANY

By: Jan Chapman President  
Date: January 10, 1994

JAN 21 1994

JAMES #1 47-017-4070  
 Details of Perforated Intervals and Fracturing  
 3 Stage Foam Frac - Halliburton

Stage 1: Alexander ( 10 holes) (5144.75'-5155') 60 Quality Foam, 500 gal. 15% HC1, 30,000 lbs. 20-40 sand, 358,000 SCF N<sub>2</sub>

Stage 2: Benson (10 holes) (4844.75'-4853.50') 75 Quality Foam, 20,000 lbs. 20-40 sand, 750 gal. 15% HC1, 363,000 SCF N<sub>2</sub>

Stage 3: Riley (10 holes) (4451.25'-4477.75') 60 Quality Foam, 5000 lbs. 80-100 sand, 35,000 lbs. 20-40 sand, 750 gal. 15% HC1, 414,000 SCF N<sub>2</sub>

WELL LOG

FORMATION	TOP FEET	BOTTOM FEET	REMARKS
Sand, shale, red rock	0	1766	1/2" stream H <sub>2</sub> O @105' Soap hole at 545'
Little Lime	1766	1795	
Sand and shale	1795	1859	<u>Gas Checks:</u>  2000' Oil Odor 2320' Gas Smell 2507' N/S 3000' N/S 3503' N/S 4614 N/S T.D. 6/10 thru 1" w/water
Big Lime	1859	1970	
Big Injun	1970	2034	
Sand and shale	2034	4448	
Riley	4448	4482	
Sand and shale	4482	4852	
Benson	4852	4860	
Sand and shale	4860	5139	
Alexander	5139	5162	
Sand and shale	5162	5267 T.D.	
		DF-424	
		IFT-439	

18306

NOV 12 1993

Expires 11/18/95

Permitting STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
 WELL WORK PERMIT APPLICATION

18306

Well Operator: Key Oil Company <sup>475</sup> 25655 (1) 671

Operator's Well Number: James #1 3) Elevation: 998

Well type: (a) Oil  / or Gas  /

(b) If Gas: Production  / Underground Storage  /  
 Deep  / Shallow  /

5) Proposed Target Formation(s): Alexander 439

6) Proposed Total Depth: 5400 feet

7) Approximate fresh water strata depths: 80'

8) Approximate salt water depths: 1425'

9) Approximate coal seam depths: N/A

10) Does land contain coal seams tributary to active mine? Yes  / No  /

11) Proposed Well Work: Drill, Stimulate, Produce

12) *New Well*

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						<i>38 CSRA 11.3</i>
Fresh Water	11 3/4	ERW	42	132'	132'	To surface
Coal						<i>38 CSRA 11.3</i>
Intermediate	8 5/8	ERW	23	1500'	1500'	To surface
Production	4 1/2	J-55	10.50		5300'	260 sks.
Tubing	1.5"					<i>38 CSRA 11.3</i>
Liners						

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

For Division of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCD

*002/83*

1) Date: November 8, 1993  
2) Operator's well number  
James #1  
3) API Well No: 47 - 017 - 4070  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Lawrence James</u> Address <u>Rt. 1 Box 104</u> <u>Greenwood, WV 26360</u></p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p>	<p>5) (a) Coal Operator:</p> <p>Name _____ Address _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name _____ Address _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name _____ Address _____</p>
<p>6) Inspector <u>Mike Underwood</u> Address <u>Rt. 2 Box 135</u> <u>Salem, WV 26426</u> Telephone <u>(304)-782-1043</u></p>	

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

- X Personal Service (Affidavit attached)
- \_\_\_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Key Oil Company  
 By: [Signature]  
 Its: President  
 Address 22 Garton Plaza  
Weston, WV 26452  
 Telephone 304-269-7102

Subscribed and sworn before me this 8th day of November, 1993

[Signature]

Notary Public

My commission expires March 24, 2003

