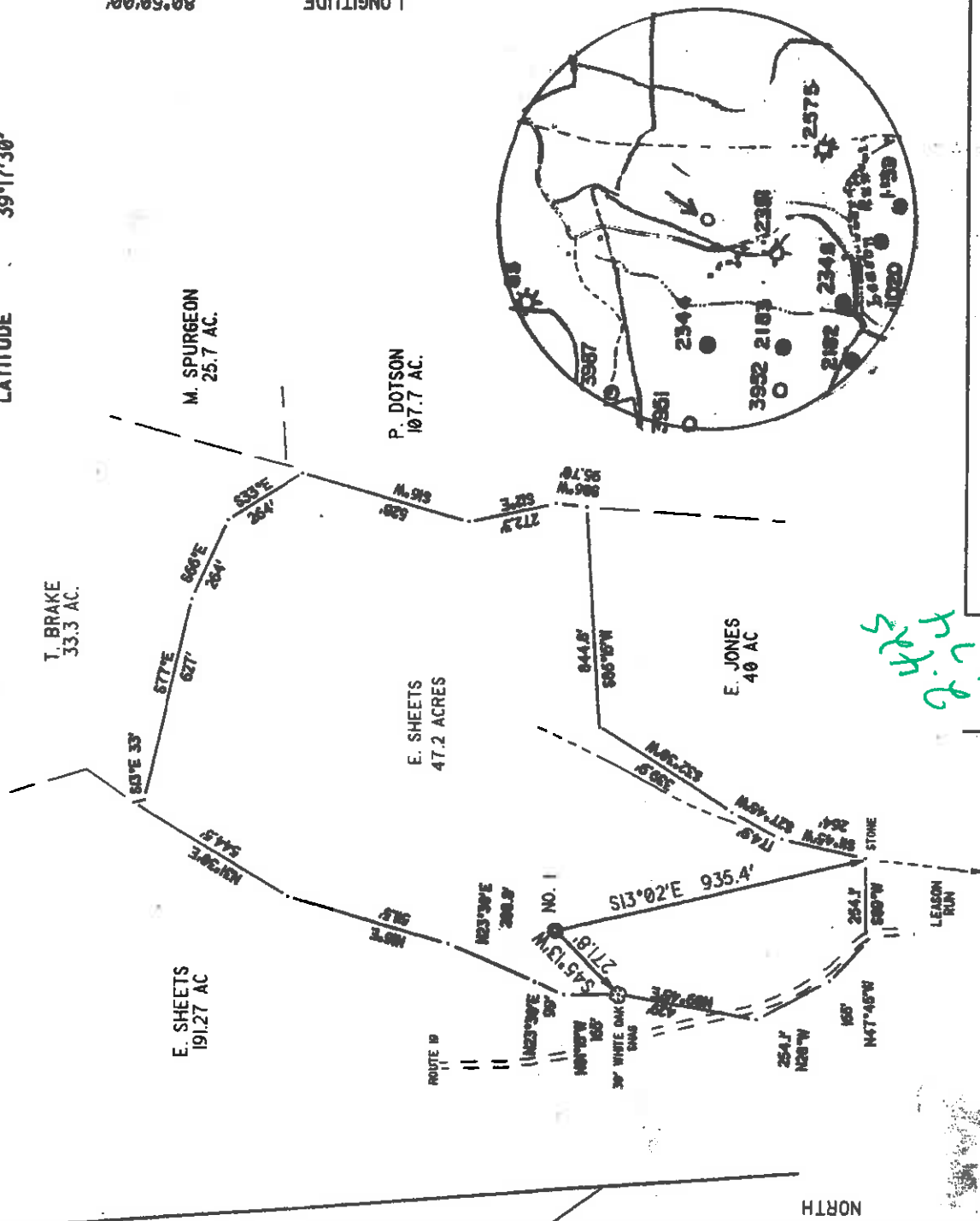


9.100'

LATITUDE 39°17'30"

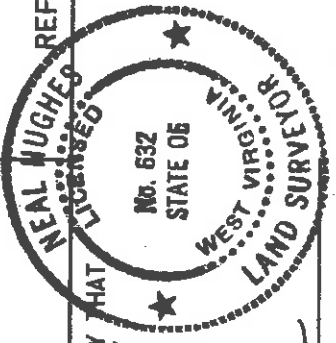
80°50'00" LONGITUDE

12,400'



*Handwritten:* 5.27.96

*Handwritten:* 5.30 1.24



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

(\*) INDICATES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
DATE OCTOBER 19 19 95  
OPERATORS WELL NO. SHEETS 1

API WELL NO. 47 - 017 - 04228  
STATE WEST VIRGINIA COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200' FILE NO. 95-96  
PROVEN SOURCE OF ELEVATION KN08 1332' SCALE 1" = 500'

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  'GAS' PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 1130' WATERSHED LEASON RUN  
DISTRICT CENTRAL COUNTY DODDRIDGE  
SURFACE OWNER ERIE D. SHEETS QUADRANGLE WEST UNION 45 SC  
ROYALTY OWNER ERIE D. SHEETS, ET AL ACREAGE 47.2  
LEASE ACREAGE 47.2

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) ALEXANDER TARGET FORMATION ALEXANDER  
ESTIMATED DEPTH 5400'

WELL OPERATOR KEY OIL CO. DESIGNATED AGENT JAN CHAPMAN  
ADDRESS 22 GARTON PLAZA ADDRESS 22 GARTON PLAZA  
WESTON, WV 26452 WESTON, WV 26452

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WV Division of  
Environmental Protection

DEC 08 1995

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: SHEETS, ERIE D. Operator Well No.: Sheets #1

LOCATION: Elevation: 1,130.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE  
Latitude: 12400 Feet South of 39 Deg. 17Min. 30 Sec.  
Longitude 9100 Feet West of 80 Deg. 50 Min. 0 Sec.

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

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 10/30/95  
Well work Commenced: 10-31-95  
Well work Completed: 11-6-95  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_ Rig  
Rotary  Cable \_\_\_\_\_  
Total Depth (feet) 5636'  
Fresh water depths (ft) -0-  
Salt water depths (ft) -0-

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

OPEN FLOW DATA

Balltown Sands  
Riley  
Benson

Producing formation Alexander  
Gas: Initial open flow 15 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 1,476 MCF/d Final open flow Show Bbl/d  
Time of open flow between initial and final tests N/A Hours  
Static rock Pressure 1725 psig (surface pressure) after 96 Hours

Second producing formation \_\_\_\_\_

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	132'	132'	70 sks to surface
8 5/8	1898'	1898'	495 sks. to surface
4 1/2		5464'	360 sks.
1.5		5310'	

3914-4134  
4624-4688  
5055-5062

pay zone depth (ft) 5301-5384

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:  President

Date: November 30, 1995

6-6-89 11:18:39

Sheets #1 (47-017-4228)  
Four Stage Foam Frac - Halliburton

1st Stage: Alexander (12 holes)  
(5330.25' -5373')

60 Quality Foam, 750 gal. 15% HCl,  
60,000 lbs. 20-40 sand, 490,000  
SCF N<sub>2</sub>. 812 bbls. foamed fluid.

2nd Stage: Benson (10 holes)  
(5057' -5059.25')

75 Quality Foam, 750 gal. 15% HCl,  
5,000 lbs. 80-100 sand, 35,000 lbs.  
20-40 sand, 517,000 SCF N<sub>2</sub>,  
654 bbls. foamed fluid.

3rd Stage: Riley & Lower Balltown  
(11 holes)  
(4468.75' -4651.50')

60 Quality Foam, 750 gal. 15% HCl,  
10,000 lbs. 80-100 sand, 30,000 lbs.  
20-40 sand, 508,000 SCF N<sub>2</sub>,  
612 bbls. foamed fluid.

4th Stage: Balltown (12 holes)  
(3956.25' -4101')

60 Quality Foam, 750 gal. 15% HCl,  
10,000 lbs. 80-100 sand, 50,000 lbs.  
20-40 sand, 629,000 SCF N<sub>2</sub>,  
855 bbls. foamed fluid.

Well Log

Formation	Top Feet	Bottom Feet	Remarks
Sand, Shale, Red Rock	0	2074	
Little Lime	2074	2100	No water reported on drillers log.
Pencil Cave	2100	2118	
Big Lime	2118	2202	
Big Injun	2202	2250	
Sand & Shale	2250	2416	
Weir	2416	2542	2001' N/S
Sand & Shale	2542	3914	2501' N/S
Balltown Sands	3914	4134	2997' N/S
Sand & Shale	4134	4624	3496' N/S
Riley	4624	4688	3900' N/S
Sand & Shale	4688	5055	4490' Gas Odor
Benson	5055	5062	5100' 2/10 thru 1" w/water
Sand & Shale	5062	5301	T.D. 2/10 thru 1" w/water
Alexander	5301	5384	
Shale	5384	5636	
T.D.	T.D.		

OCT 24 1995 DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
 WELL WORK PERMIT APPLICATION

Permitting  
 Office of Operations  
 475 25655 (1) 611

Operator's Well Number: \_\_\_\_\_ SHEETS #1 3) Elevation: 1130'

Well type: (a) OIL  or Gas

Issued 10/30/95  
 Expires 10/30/97

(b) If Gas: Production  Underground Storage   
 Deep  Shallow

5) Proposed Target Formation(s): ALEXANDER

6) Proposed Total Depth: 5500 feet

7) Approximate fresh water strata depths: 105'

8) Approximate salt water depths: 1785'

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)

**CASING AND TUBING PROGRAM**

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE	INTERVALS	CEMENT
Conductor	16	USED		25	Left in well -0- Fill-up (cu. ft.) 2850/113	
Fresh Water	11 3/4	ERW	42	132	132 TO SURFACE	
Coal						
Intermediate	8 5/8	ERW	23	1850	1850 TO SURFACE	
Production	4 1/2	J-55	10.50	5475	5475 TO SURFACE	
Tubing	1.5					
Linings						

PACKERS: KIND \_\_\_\_\_ SIZES \_\_\_\_\_ DEPTHS SEC \_\_\_\_\_

FOR DIVISION OF OIL AND GAS USE ONLY  
 Fee(s) paid: \_\_\_\_\_ Well Work Permit # \_\_\_\_\_ Reclamation Fund # \_\_\_\_\_  
 Date: \_\_\_\_\_

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Environmental Protection

Page 1 of \_\_\_\_\_  
Form **WV2-A**  
(09/87)  
file Copy

**OCT 24 1995**

Permitting  
Office of Oil & Gas

1) Date: OCTOBER 23, 1995  
2) Operator's well number  
SHEETS #1  
3) API well No: 47 - 017 - 4228  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name ERIE D. SHEETS 5) (a) Coal Operator:  
Address RT. 1 BOX 39A Name NONE  
GREENWOOD, WV 26360 Address \_\_\_\_\_  
(b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration  
Address \_\_\_\_\_ Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_ Name \_\_\_\_\_  
Address \_\_\_\_\_ Address \_\_\_\_\_  
6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration  
Address RT. 2 BOX 135 Name \_\_\_\_\_  
SALEM, WV 26426 Address \_\_\_\_\_  
Telephone (304) - 782-1043

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  
 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:  
 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.

OFFICIAL SEAL NOTARY PUBLIC  
STATE OF WEST VIRGINIA

KAREN COOK  
ROUTE 2, BOX 1  
JANES TOWN, WV 26078

My Commission Expires Mar. 24, 2003

Subscribed and sworn before me this 23RD day of OCTOBER, 1995

My commission expires MARCH 24, 2003 Karen Cook Notary Public