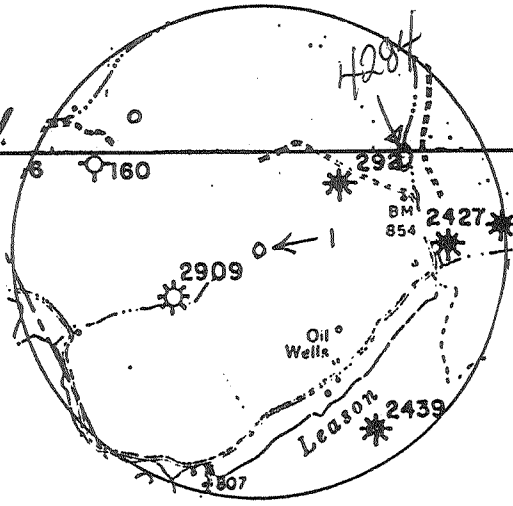


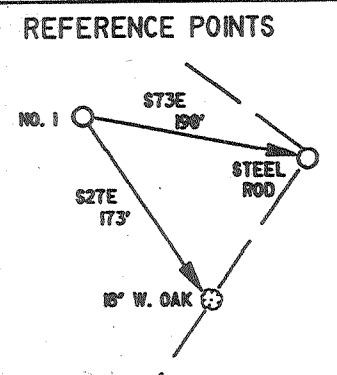
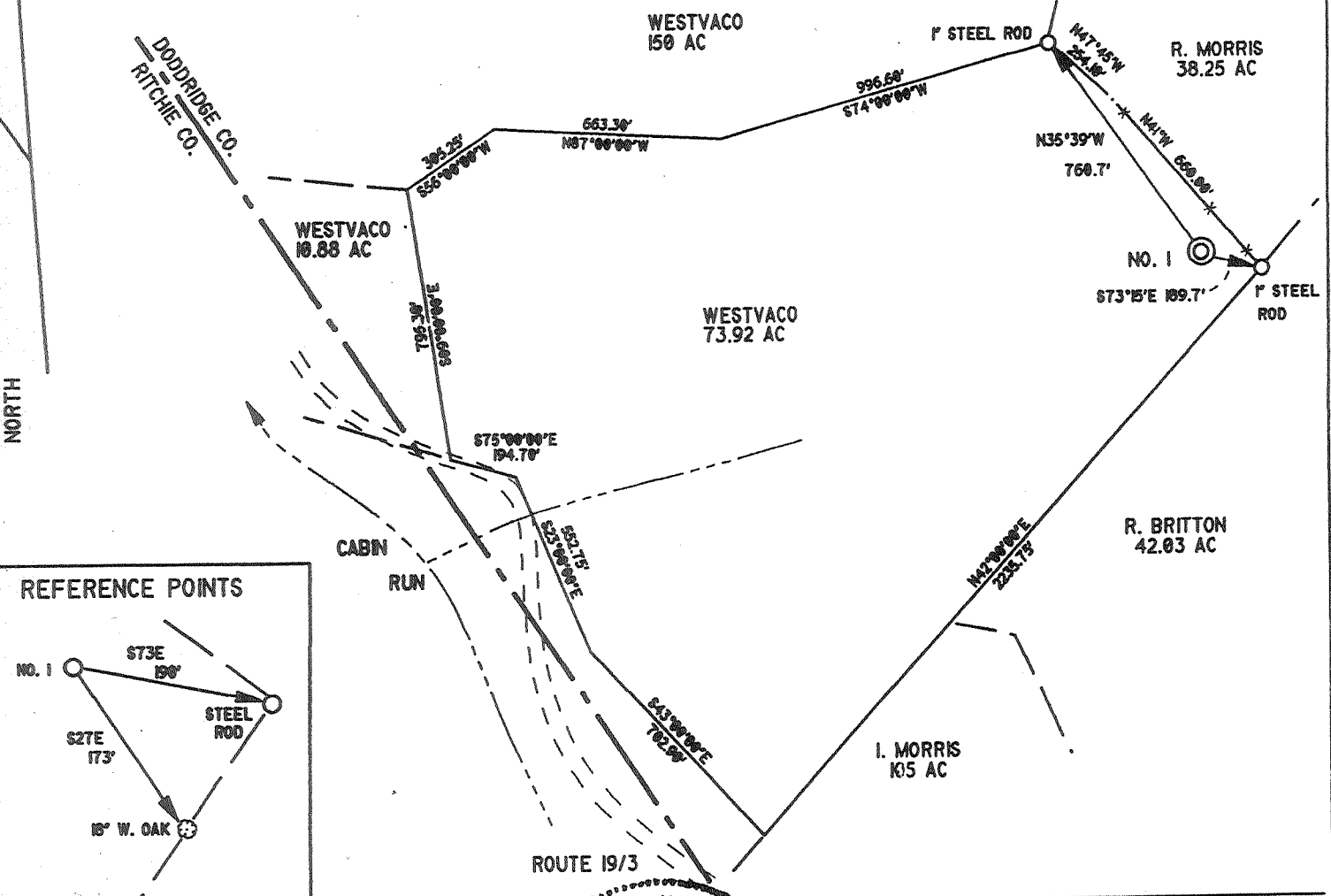
LATITUDE 39°15'00"

West Union Quad.

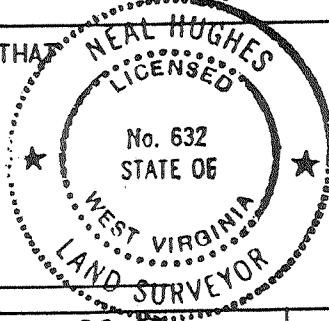
Pennsboro Quad.  
Pullman Quad.



LONGITUDE 80°52'30"



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE AUGUST 16, 19 96

OPERATORS WELL NO. HATTIE O. DOTSON I

API WELL NO. 47 - 017-04303  
STATE COUNTY PERMIT

L.L.S. 632 Neal Hughes

MINIMUM DEGREE OF ACCURACY 1/200  
PROVEN SOURCE OF ELEVATION BM 854'  
FILE NO. 96-67  
SCALE 1" = 500'

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 1140' WATERSHED CABIN RUN  
DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE PULLMAN  
SURFACE OWNER WESTVACO CORPORATION ACREAGE 73.92  
ROYALTY OWNER HATTIE O. DOTSON HEIRS LEASE ACREAGE 235  
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 5600'

WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN  
ADDRESS 22 GARTON PLAZA ADDRESS 22 GARTON PLAZA  
WESTON, WV 26452 6-6 89 WESTON, WV 26452

COUNTY NAME PERMIT

FEB 12 1997

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

Well Operator's Report of Well Work

Farm name: WESTVACO.

Operator Well No. : H. O. DOTSON #1

LOCATION: Elevation: 1,140.00

Quadrangle: PULLMAN

District: CENTRAL County: DODDRIDGE  
Latitude: 1050 Feet South of 39 Deg. 15 Min. 0 Sec.  
Longitude: 3780 Feet West of 80 Deg. 52 Min. 30 Sec.

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

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 09/17/96  
Well Work Commenced: 10/30/96  
Well Work Completed: 11/07/96  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5685'  
Fresh water depths (ft) NONE  
Salt water depths (ft) 1224, 1327  
1830

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

Casing & Tubing Size	Used In Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"			
8 5/8"	1151.95'	1151.95'	310 sks To surface
4 1/2"	5495'	5495'	470 sks
2 3/8"		5310'	

OPEN FLOW DATA

Warren	3492' - 3572'
Balltown	3934' - 4510'
Riley	4652' - 5024'
Benson	5060' - 5072'
Producing formation <u>Alexander</u>	Pay zone depth (ft) <u>5306' - 5394'</u>
Gas: Initial open flow <u>0</u> MCF / d	Oil: Initial open flow <u>0</u> Bbl / d
Final open flow <u>1,459</u> MCF / d	Oil: Final open flow <u>show</u> Bbl / d
Time of open flow between initial and final tests <u>N/A</u> Hours	
Static rock pressure <u>1600</u> psig ( surface pressure ) after <u>96</u> Hours	

Second producing formation Commingled Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow _____ MCF / d	Oil: Initial open flow _____ Bbl / d
Final open flow _____ MCF / d	Oil: 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: 

President

FEB 14 1997

Date: JANUARY 22, 1997

H. O. Dotson #1 (47-017-04303)  
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander (10 holes) (5330.5' - 5366.75')	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 817 bbls foam.
2nd Stage:	Benson (6 holes) (5064' - 5065.25') Third Riley (2 holes) (5008.75' - 5009') Second Riley (2 holes) (4913' - 4913.25')	60 Quality Foam. 750 gal 15% HCL. 35,000# 20/40 sand, 394,000 SCF N2, 570 bbls foam.
3rd Stage:	Riley (8 holes) (4660.5' - 4678.5') Balltown (2 holes) (4490.75' - 4491')	60 Quality Foam. 1000 gal 15% HCL. 10,000# 80/100 sand, 30,000# 20/40 sand, 508,000 SCF N2, 554 bbls foam.
4th Stage:	Balltown (6 holes) (3999' - 4090.25') Warren (6 holes) (3502' - 3550.5')	60 Quality Foam, 1000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 390,000 SCF N2, 589 bbls foam.

WELL LOG

Clay	0	5
Shale	5	14
Sand	14	26
Red Rock & Sand & Shale	26	530
Sand	530	543
Red Rock & Sand & Shale	543	655
Lime	655	681
Red Rock & Sand & Shale	681	872
Lime	872	883
Red Rock & Sand & Shale	883	2013
Maxon	2013	2061
Shell	2061	2070
Little Lime	2070	2082
Pencil Cave	2082	2116
Big Lime	2116	2203
Big Injun	2203	2250
Shale	2250	2426
Weir	2426	2556
Shale	2556	2609
Berea	2609	2616
Sand & Shale	2616	3442
Warren	3442	3572
Shale	3572	3934
Balltown	3934	4510
Shale	4510	4652
Riley	4652	4704
Shale	4704	4876
2nd Riley	4876	4934
Shale	4934	4982
3rd Riley	4982	5024
Shale	5024	5060
Benson	5060	5072
Sand & Shale	5072	5306
Alexander	5306	5394
Silt & Shale	5394	5685
T.D.	5685	

Gas Checks

2568	NO SHOW
2999	NO SHOW
3802	NO SHOW
4509	NO SHOW
4912	NO SHOW
5250	NO SHOW
TD	NO SHOW

**WELL WORK PERMIT APPLICATION**

017 4303  
562

22546

Well Operator: KEY OIL COMPANY <sup>475</sup> 25655 D

Operator's Well Number: HATTIE O. DOTSON #1 3) Elevation: 1140'

Well type: (a) Oil X / or Gas X / Issued 09/17/96  
Expires 09/17/98  
 (b) If Gas: Production X / Underground Storage    /  
 Deep    / Shallow X /

5) Proposed Target Formation(s): ALEXANDER <sup>439</sup>

6) Proposed Total Depth: 5600 feet

7) Approximate fresh water strata depths: -0-

8) Approximate salt water depths: -0-

9) Approximate coal seam depths: N/A

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

11) Proposed Well Work: DRILL. STIMULATE. PRODUCE

12)

W.D. State of  
 Environmental Protection  
 SEP 06 1996  
 Permitting  
 Office of Oil & Gas

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
<u>Conductor</u>						<u>380SR/9.1.3</u>
<u>Fresh Water</u>	<u>8 5/8</u>	<u>ERW</u>	<u>23</u>	<u>1140</u>	<u>1140</u>	<u>310 SKS. TO SURFACE</u>
<u>Coal</u>						<u>380SR/9.1.2.2</u>
<u>Intermediate</u>						
<u>Production</u>	<u>4 1/2</u>	<u>J-55</u>	<u>10.5</u>		<u>5500</u>	<u>400 SKS.</u>
<u>Tubing</u>	<u>1.5</u>					<u>380SR/9.1.1</u>
<u>Liners</u>						

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

For Office of Oil and Gas Use Only

03732  
20

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond Plumper  Agent  
 (Type)

1) Date: SEPTEMBER 3, 1996  
2) Operator's well number  
HATTIE O. DOTSON #1  
3) API Well No: 47 - 017 - 4303  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS**

**NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

- 4) Surface Owner(s) to be served: 5) (a) Coal Operator:  
 (a) Name WESTVACO Name NONE  
 Address 100 WESTVACO DRIVE Address \_\_\_\_\_  
WASHINGTON, WV 26181  
 (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 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 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 22-6 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 3RD day of SEPTEMBER, 1996

My commission expires Karen Cook  
MARCH 24, 2003

