

*Jamie*  
4/24/97

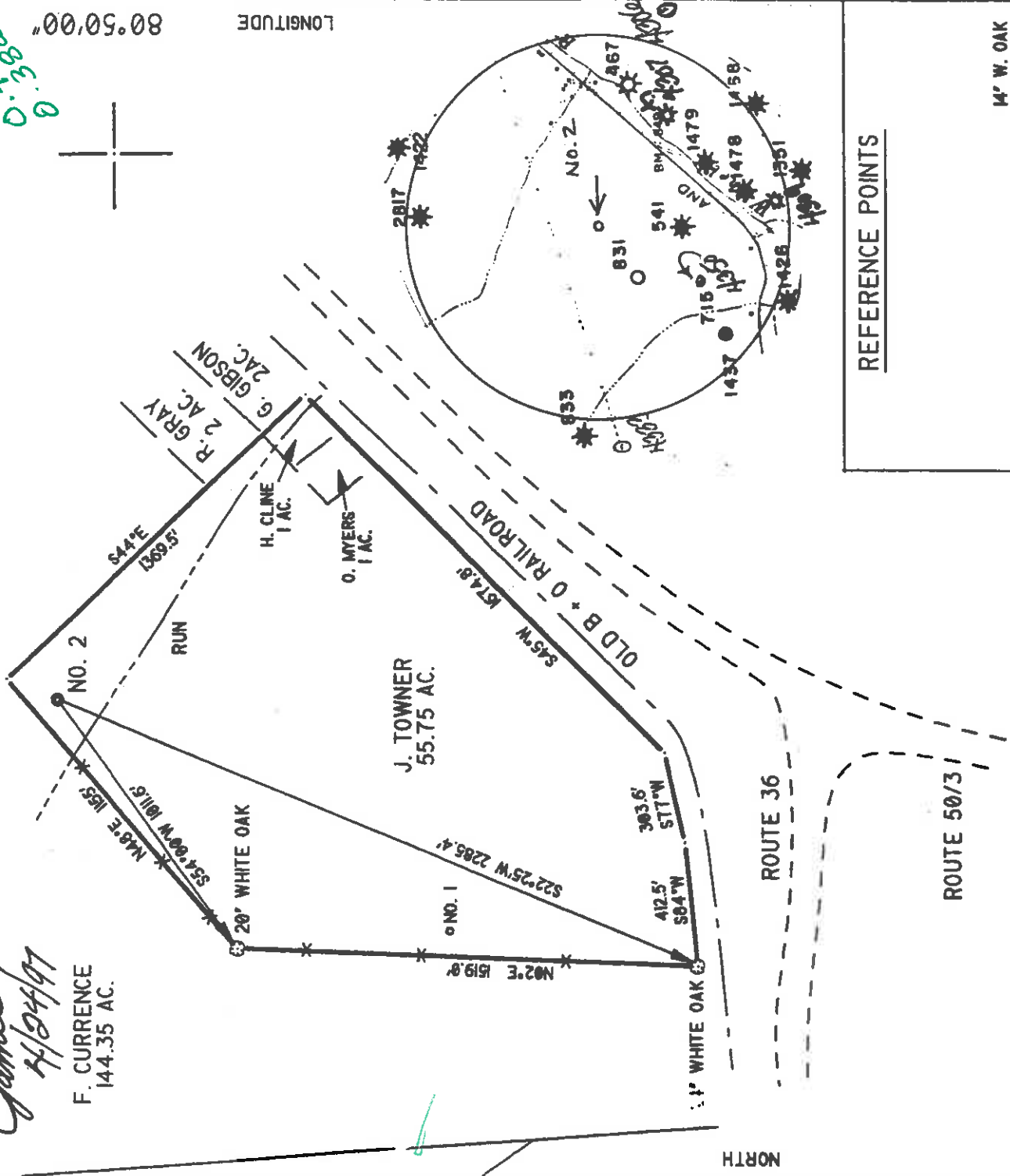
F. CURRENCE  
144.35 AC.

LATITUDE 39°17'30"

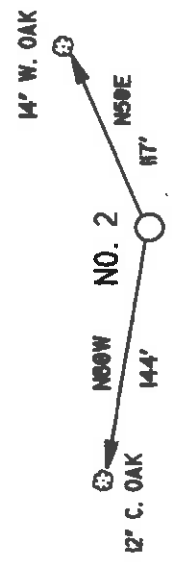
LONGITUDE 80°50'00"

←-2.100'→

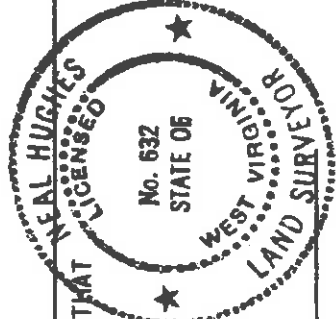
←-2.300'→



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 BY 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 APRIL 1, 19 97  
OPERATORS WELL NO. BENNINGER 2

API WELL NO. 47 - 017-04351  
STATE COUNTY PERMIT

MINIMUM DEGREE 1/200 FILE NO. 97-08  
OF ACCURACY  
PROVER SOURCE RT. 36 + RR INTER 928'  
OF ELEVATION SCALE 1" = 500'

WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
#10 MCJUNKIN ROAD  
NITRO, WEST VIRGINIA 25143-2506

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF 'GAS' PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 1002' WATERSHED WILHELM RUN  
DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION  
SURFACE OWNER JOHN D. + TINA M. TOWNER ACREAGE 55.75  
ROYALTY OWNER JOSEPHINE BENNINGER HEIRS, ET AL LEASE ACREAGE 57-3/4

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' APR 28 1997

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

COUNTY NAME PERMIT

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

OCT 13 1997

Permitting  
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: TOWNER, JOHN D,

Operator Well No. : BENNINGER #2

LOCATION: Elevation: 1,002.00

Quadrangle: WEST UNION

District: CENTRAL  
Latitude: 2300 Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude: 2100 Feet West of 80 Deg. 50 Min. 0 Sec.

County: DODDRIDGE

Company: KEY OIL COMPANY  
22 Garton Plaza  
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 04/15/97  
Well Work Commenced: 04/28/97  
Well Work Completed: 05/08/97

Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) 5418'  
Fresh water depths ( ft ) None  
Salt water depths ( ft ) 649', 1586'

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

## OPEN FLOW DATA

Warren  
Balltown  
Rileys  
Benson

Producing formation Alexander  
Gas: Initial open flow Odor MCF / d  
Final open flow 1,617 MCF / d  
Time of open flow between initial and final tests N/A  
Static rock pressure 1750 psig ( surface pressure ) after 96 Hours

3324' - 3390'  
3754' - 4426'  
4472' - 4899'  
4916' - 4928'  
5166' - 5250'

Pay zone depth ( ft )  
Oil: Initial open flow 0 Bbl / d  
Oil: Final open flow show Bbl / d  
Hours

Second producing formation Commingled

Gas: Initial open flow \_\_\_\_\_ MCF / d  
Final open flow \_\_\_\_\_ MCF / d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock pressure \_\_\_\_\_ psig ( surface pressure ) after \_\_\_\_\_ Hours

Pay zone depth ( ft )

Oil: Initial open flow \_\_\_\_\_ Bbl / d  
Oil: Final open flow \_\_\_\_\_ Bbl / d  
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: Date: OCTOBER 13, 1997

PRESIDENT

OCT 17 1997

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"			
8 5/8"	1012.45	1012.45	270 sks To Surface
4 1/2"	5335.65	5335.65	485 sks
2 3/8"		5186'	

**Benninger #2 (47-017-04351)  
Four Stage Foam Frac - Halliburton**

<b>1st Stage:</b>	<b>Alexander ( 10 holes ) ( 5206.5' to 5236.25' )</b>	<b>60 Quality Foam, 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 811 bbls foam.</b>
<b>2nd Stage:</b>	<b>Benson ( 6 holes ) ( 4922.25' to 4923.50' ) Third Riley ( 4 holes ) ( 4863.50' to 4864.25' )</b>	<b>60 Quality Foam, 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 616 bbls foam.</b>
<b>3rd Stage:</b>	<b>Riley ( 7 holes ) ( 4498' to 4516.5' ) Balltown (4 holes ) (4414.25' to 4423' )</b>	<b>60 Quality Foam, 1000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 438,000 SCF N2, 646 bbls foam.</b>
<b>4th Stage:</b>	<b>Balltown ( 7 holes ) ( 3756.75' to 3921' ) Warren ( 4 holes ) ( 3370' to 3370.75' )</b>	<b>60 Quality Foam, 1,000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 390,000 SCF N2, 638 bbls foam.</b>

**WELL LOG**

Fill & clay	0	13	
Sand & Shale	13	150	
Red Rock & Sand & Shale	150	390	
Sand & Shale	390	874	1/4" H <sub>2</sub> O & 649'
Red Rock	874	890	
Sand & Shale	890	928	
Red Rock & Sand & Shale	928	1063	
Shale	1063	1448	
Sand	1448	1479	
Shale	1479	1532	
Sand	1532	1593	1586' - Damp
Sand & Shale	1593	1907	
Red Rock	1907	1913	
Little Lime	1913	1954	
Shale	1954	1960	
Big Lime	1960	2032	
Big Injun	2032	2108	
Shale	2108	2256	
Weir	2256	2380	
Sand & Shale	2380	3324	
Warren	3324	3390	
Shale	3390	3754	
Balltown	3754	4426	
Shale & Sand	4426	4472	
Riley	4472	4548	
Shale	4548	4820	
3 <sup>rd</sup> Riley	4820	4899	
Shale	4899	4916	
Benson	4916	4928	
Sand & Shale	4928	5166	
Alexander	5166	5250	
Sand & Shale	5250	5418	
T.D.	5418		

**Gas Checks**

1925	No Show
2513	Odor
3009	Odor
3601	Odor
4037	Odor
4745	No Show
5119	NoShow

STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
 WELL WORK PERMIT APPLICATION

- 1) Well Operator: KEY OIL COMPANY 25655 (1) 671
- 2) Operator's Well Number: BENNINGER #2 3) Elevation: 1002'
- 4) Well type: (a) Oil X / or Gas X / Issued 04/15/97  
 (b) If Gas: Production X / Underground Storage 1 Expires 04/15/99  
 Deep 439 / Shallow X /
- Proposed Target Formation(s): ALEXANDER
- Proposed Total Depth: 5600 feet
- Approximate fresh water strata depths: 100'
- Approximate salt water depths: 620'
- 9) Approximate coal seam depths: NONE REPORTED ON OFFSET DRILLER'S LOGS.
- 10) Does land contain coal seams tributary to active mine? Yes    / No X /
- 11) Proposed Well Work: DRILL, STIMULATE, PRODUCE
- 12)

23421  
 23421

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE	INTERVALS	CEMENT
Conductor	11 3/4	ERW	42	42'	0	Fill-up (cu. ft.) <u>3858/11.3</u>
Fresh Water	8 5/8	ERW	23	1002'	1002'	270 SKS. TO SURFACE
Coal						<u>3858/11.22</u>
Intermediate						
Production	4 1/2	J-55	10.5	5375'	5375'	460 SKS.
Tubing	1.5					<u>3858/11.1</u>
Liners						

PACKERS : Kind     
 Sizes     
 Depths set   

For Office of Oil and Gas Use Only

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

Plat  WW-9  WW-2B  Bond    (Type)

1) Date: APRIL 4, 1997  
2) Operator's well number BENNINGER #2  
3) API Well No: 47 - 017 - 4351  
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: NONE  
(a) Name JOHN D. TOWNER  
Address RT. 1 BOX 31-A  
GREENWOOD, WV 26360  
(b) Coal Owner(s) with Declaration  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
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  
X 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:  
X 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 4TH day of APRIL 1997  
My commission expires MARCH 24, 2003  
*[Signature]*

