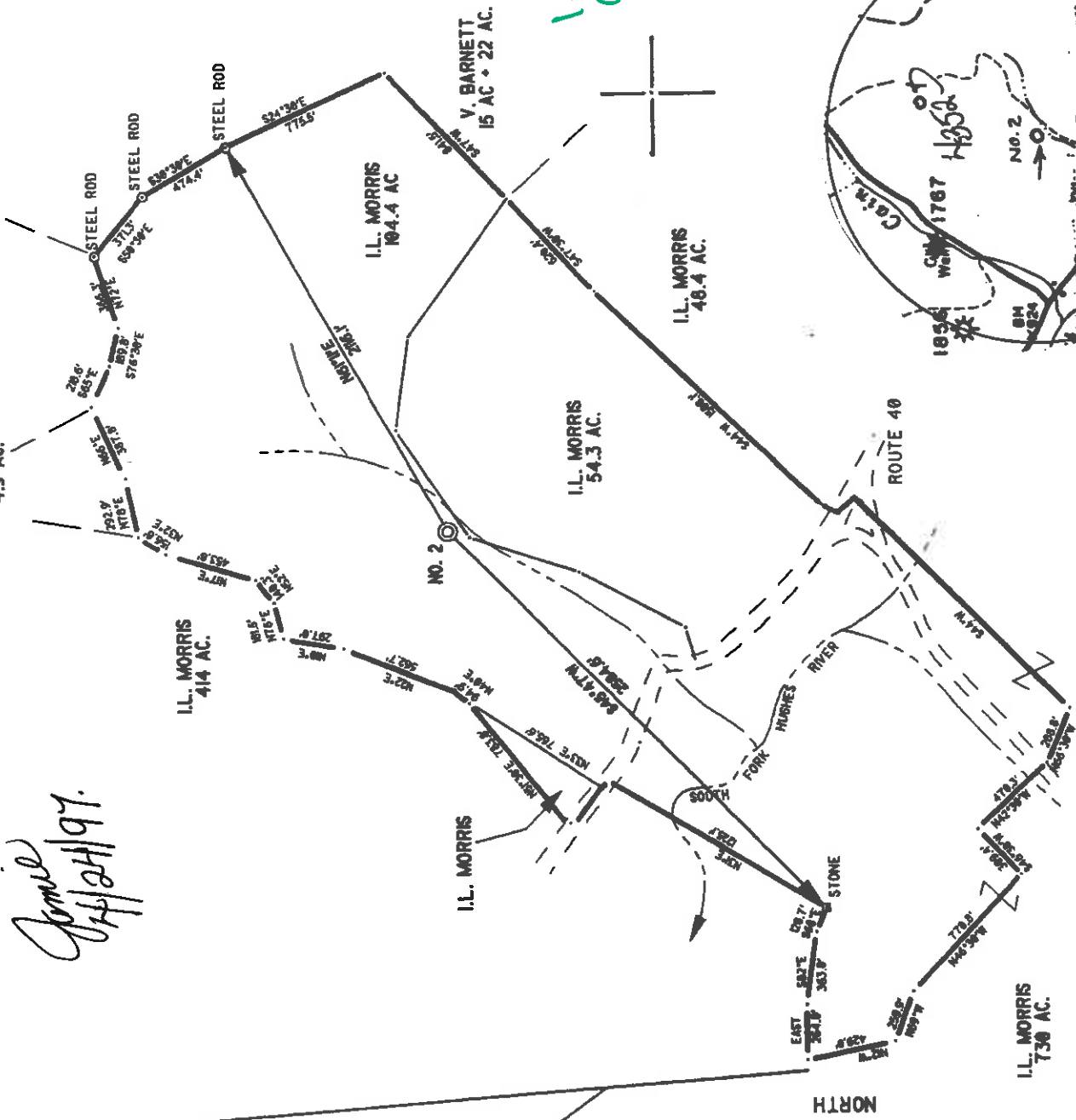


LATITUDE 39°12'30"

LONGITUDE 80°45'00"

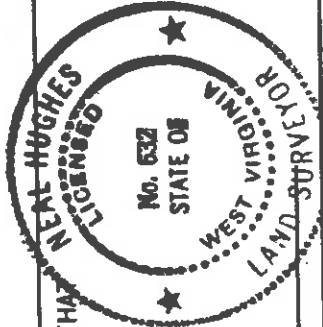
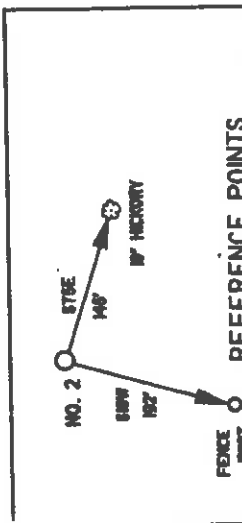
8,600'

3,000'



*James H. H. 1/24/97*

NORTH



(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
DATE MARCH 26, 19 97  
OPERATORS WELL NO. DRENNAN 2

API WELL NO. 47 - 017-04353  
STATE WEST VIRGINIA COUNTY PERMIT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
#10 MCJUNKIN ROAD  
NITRO, WEST VIRGINIA 25148-2506

L.S.S. 632  
MINIMUM DEGREE OF ACCURACY 1/200  
PROVEN SOURCE OF ELEVATION ROAD INTER. 966'  
FILE NO. 97-19  
SCALE 1" = 800'

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  'GAS' PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 976' WATERSHED SOUTH FORK HUGHES RIVER  
DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLE OXFORD  
SURFACE OWNER I. L. MORRIS ACREAGE 104.4  
ROYALTY OWNER SUSAN V. DRENNAN, ET AL LEASE ACREAGE 236  
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' PERMIT APR 28 1997

COUNTY NAME WEST VIRGINIA  
WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN 6-6-134  
ADDRESS 22 GARTON PLAZA WESTON, WV 26452  
ADDRESS 22 GARTON PLAZA WESTON, WV 26452

**RECEIVED**  
WY Dept of Environment & Natural Resources

OCT 17 1997

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

Permitting  
Office of Oil & Gas  
Farm name: MORRIS, I.L.

Well Operator's Report of Well Work  
Operator Well No. : DRENNAN #2

LOCATION: Elevation: 976.00 County: DODDRIDGE  
District: SOUTHWEST  
Latitude: 8600 Feet South of 39 Deg. 12 Min. 30 Sec.  
Longitude: 3000 Feet West of 80 Deg. 45 Min. 0 Sec.

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: 04/27/97  
Well Work Completed: 05/07/97

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) \_\_\_\_\_ 5459'  
Fresh water depths ( ft ) \_\_\_\_\_ 80'  
Salt water depths ( ft ) \_\_\_\_\_ 283'

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

OPEN FLOW DATA  
Warren  
Speechley  
Balltown  
Rileys  
Benson  
Elk

Producing formation: Alexander  
Gas: Initial open flow 84 MCF / d  
Final open flow 1,617 MCF / d  
Time of open flow between initial and final tests N/A  
Static rock pressure 1500 psig ( surface pressure ) after 96 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 \_\_\_\_\_  
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: 

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"	121'	121'	70 sks To Surface
8 5/8"	1757.9	1757.9	510 sks To Surface
4 1/2"	5102.15	5102.15	495 sks
2 3/8"		4955	

3069' - 3119'  
3130' - 3358'  
3482' - 4142'  
4250' - 4642'  
4704' - 4714'  
4825' - 4837'  
4948' - 5055'

Drennan #2 (47-017-04353)  
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander ( 13 holes ) ( 4975.25' to 5045.5' ) Elk (2 holes ) ( 4830 to 4830.25' )	60 Quality Foam. 500 gal. 15% HCL. 40,000# 20/40 sand, 421,000 SCF N2. 618 bbis foam.
2nd Stage:	Benson ( 8 holes ) ( 4705.5' to 4707.25' ) Third Riley ( 3 holes ) ( 4623' to 4623.5' )	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2. 612 bbis foam.
3rd Stage:	Riley ( 8 holes ) ( 4269.75' to 4279.5' ) Balltown (3 holes ) (3862.25' to 3862.75' )	60 Quality Foam. 1000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 438,000 SCF N2, 642 bbis foam.
4th Stage:	Speechley ( 10 holes ) ( 3134' to 3200.75' ) Warren ( 6 holes ) ( 3088.25' to 3105.75' )	60 Quality Foam, 1,000 gal 15% HCL. 5,000# 80/100 sand, 55,000# 20/40 sand, 522,000 SCF N2, 816 bbis foam.

WELL LOG

Fill & Shale	0	15	
Red Rock & Sand & Shale	15	224	½" H2O & 80'
Lime	224	228	
Sand & Shale	228	426	Damp @ 283'
Red Rock & Sand & Shale	426	866	
Sand	866	900	
Red Rock & Sand & Shale	900	1212	
Sand	1212	1290	
Sand & Shale	1290	1453	
Sand	1453	1517	
Sand & Shale	1517	1581	
Lime	1581	1584	
Lime & Sand & Shale	1584	1698	
Little Lime	1698	1712	
Shale	1712	1749	
Big Lime	1749	1838	
Big Injun	1838	1873	
Shale	1873	2810	
Weir	2810	2116	
Shale	2116	2214	
Berea	2214	2224	
Sand & Shale	2224	2395	
Gordon	2395	2446	
Sand & Shale	2446	3069	
Warren	3069	3119	
Shale	3119	3130	
Speechley	3130	3358	
Shale	3358	3482	
Balltown	3482	4142	
Shale & Sand	4142	4250	
Riley	4250	4300	
Shale	4300	4606	
3rd Riley	4606	4642	
Shale	4642	4704	
Benson	4704	4714	
Shale	4714	4825	
Elk	4825	4837	
Shale	4837	4948	
Alexander	4948	5055	
Sand & Shale	5055	5459	
T.D.	5459		

**Gas Checks**

2012' - 2/10ths ½" w/H2O  
 2537' - 30/10ths 2" w/H2O  
 3029' - 16/10ths 2" w/H2O  
 3523' - 16/10ths 2" w/H2O  
 4052' - 14/10ths 2" w/H2O  
 4545' - 14/10ths 2" w/H2O  
 4823' - 12/10ths 2" w/H2O  
 TD - 8/10ths 2" w/H2O  
 Collars - 4/10ths 2" w/H2O

STATE OF WEST VIRGINIA 017-4353  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: KEY OIL COMPANY 25655 (7) 526

2) Operator's Well Number: DRENNAN #2 3) Elevation: 976'

4) Well type: (a) Oil X / or Gas X /  
Issued 04/15/97

(b) If Gas: Production X / Underground Storage 1  
Deep 1 / Shallow X /  
Expires 04/15/99

Proposed Target Formation(s): ALEXANDER

Proposed Total Depth: 5600 feet

Approximate fresh water strata depths: 85'

Approximate salt water depths: 1340' sub-surface gas

Approximate coal seam depths: NONE REPORTED

10) Does land contain coal seams tributary to active mine? Yes 1 / No X /

11) Proposed Well Work: DRILL, STIMULATE PRODUCE

12)

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE	INTERVALS	CEMENT
Conductor						
Fresh Water	11 3/4	ERW	42	132		70 SKS. TO SURFACE
Coal						
Intermediate	8 5/8	ERW	23	1850		500 SKS. TO SURFACE
Production	4 1/2	J-55	10.5	5300		460 SKS.
Tubing	1.5					
Liners						

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

064365  
FOR Office of Oil and Gas Use Only  
Fee(s) paid:  Well Work Permit  Reclamation Fund  WPC3  
 Plat  MW-9  MW-29  Bond \_\_\_\_\_ (Type)  
 Agent

23423

1) Date: APRIL 5, 1997  
2) Operator's well number  
DRENNAN #2  
3) API Well No: 47 - 017 - 4353  
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 I. L. MORRIS  
 Address P. O. BOX 397  
 GLENVILLE, WV 26351  
 (b) Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 (b) Coal Owner(s) with Declaration  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 (c) Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_
- 6) Inspector MIKE UNDERWOOD  
 Address RT. 2 BOX 135  
 SALEM, WV 26426  
 Telephone (304)- 782-1043  
 (c) Coal Lessee with Declaration  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_

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 7TH day of APRIL 19 97  
 My commission expires MARCH 24, 2003

