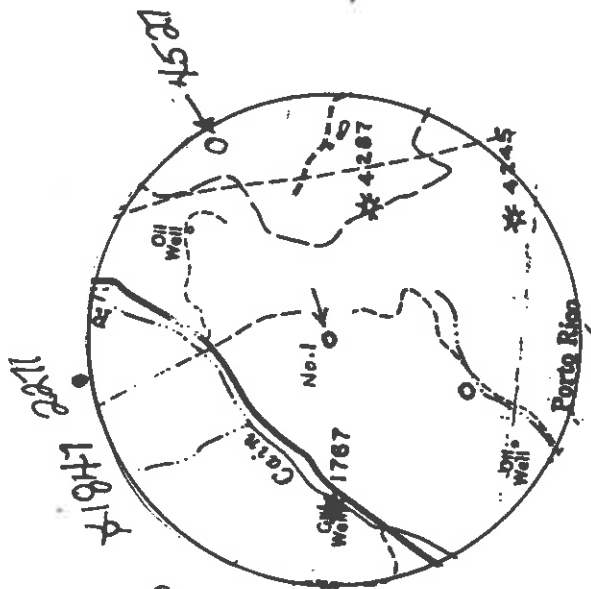
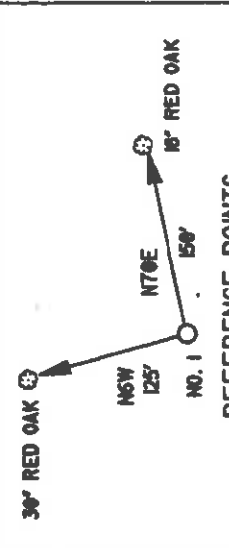
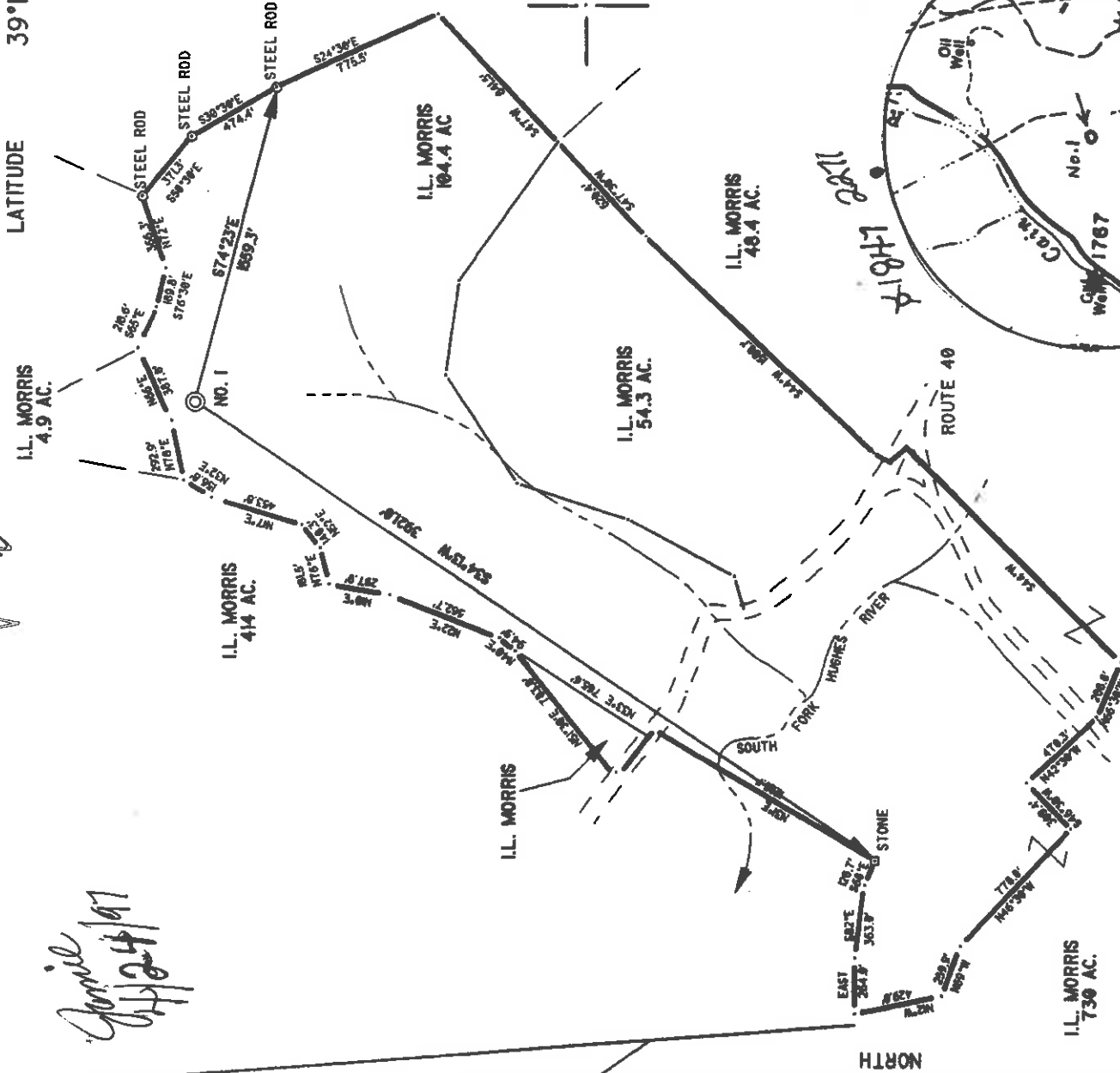


LATITUDE 39°12'30"

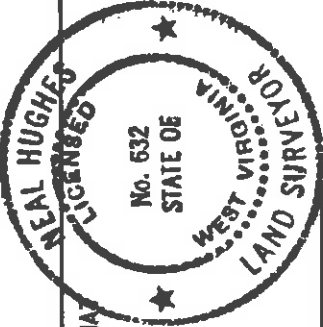
LONGITUDE 80°45'00"

*April 14/97*

*13005*



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 MARCH 26 19 97  
OPERATORS WELL NO. DRENNAN I

API WELL NO. 47 - 017-04352  
STATE COUNTY PERMIT

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

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

LOCATION: ELEVATION 1182' 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

WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN  
ADDRESS 22 GARTON PLAZA WESTON, WV 26452  
ADDRESS 22 GARTON PLAZA WESTON, WV 26452  
ESTIMATED DEPTH 5600' APR 26 1997

COUNTY NAME PERMIT

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

WESTON, WV 26452

RECEIVED  
WV Division of  
Environmental Protection

WR-35

FEB 27 1998

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

15 - Apr - 97  
API # 47 - 17 - 04352

Permitting  
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: MORRIS, I.L.

Operator Well No.: DRENNAN #1

LOCATION: Elevation: 1,182.00

Quadrangle: OXFORD

District: SOUTHWEST  
Latitude: 7125 Feet South of 39 Deg. 12 Min. 30 Sec.  
Longitude: 2625 Feet West of 80 Deg. 45 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: 05/03/97  
Well Work Completed: 05/14/97

Verbal Plugging  
Permission granted on: \_\_\_\_\_ Rig  
Rotary X Cable \_\_\_\_\_  
Total Depth ( feet ) 5372'  
Fresh water depths ( ft ) 35'  
Salt water depths ( ft ) 425'

Is coal being mined in area ( Y / N )? N  
Coal Depths ( ft ): 1274' (5'), 1389' (7')  
1476' (5')

OPEN FLOW DATA

Warren  
Speechley  
Riley  
Benson

Producing formation: Alexander

Gas: Initial open flow 26 MCF / d  
Final open flow 1,632 MCF / d  
Time of open flow between initial and final tests N/A  
Static rock pressure 1500 psig ( surface pressure ) after 96 Hours

3245' - 3304'  
3318' - 3562'  
4424' - 4502'  
4896' - 4909'

Pay zone depth ( ft ) 5144' - 5250'  
Oil: Initial open flow 0 Bbl / d  
Oil: Final open flow show Bbl / d

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

Pay zone depth ( ft ) \_\_\_\_\_  
Oil: Initial open flow \_\_\_\_\_ Bbl / d  
Oil: Final open flow \_\_\_\_\_ Bbl / d

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: February 12, 1998

MAR 06 1998

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	123.45'	123.45'	70 sks To Surface
8 5/8"	1993.75'	1993.75'	580 sks To Surface
4 1/2"	5338.2'	5338.2'	500 sks
2 3/8"		5170'	

Drennan #1 (47-017-04352)  
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander ( 14 holes ) ( 5190.75' to 5242.50' )	60 Quality Foam. 500 gal. 15% HCL. 40,000# 20/40 sand, 421,000 SCF N2, 621 bbis foam.
2nd Stage:	Benson ( 10 holes ) ( 4899.5' to 4901.75' )	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 616 bbis foam.
3rd Stage:	Riley ( 11 holes ) ( 4460.25' to 4475.75' )	60 Quality Foam. 750 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 438,000 SCF N2, 646 bbis foam.
4th Stage:	Speechley ( 8 holes ) ( 3337.75' to 3391.25' ) Warren ( 4 holes ) ( 3289' to 3297' )	60 Quality Foam, 1,000 gal 15% HCL. 5,000# 80/100 sand, 55,000# 20/40 sand, 522,000 SCF N2, 779 bbis foam.

WELL LOG

Fill & Shell	0	16	
Red Rock & Sand & Shale	16	416	½" H <sub>2</sub> O @ 35'
Limy Sand	416	435	Damp @ 425'
Red Rock & Sand & Shale	435	1172	
White Sand	1172	1177	
Sand & Shale	1177	1201	
White Sand	1201	1274	
Coal	1274	1279	
Sand & Shale & Lime	1279	1389	
Coal	1389	1396	
Sand & Shale	1396	1476	
Coal	1476	1481	
Sand & Shale	1481	1862	
Maxon	1862	1875	
Sand & Shale	1875	1888	
Little Lime	1888	1900	
Sand & Shale	1900	1917	
Big Lime	1917	2030	
Big Injun	2030	2066	
Shale	2066	2203	
Weir	2203	2308	
Shale	2308	2406	
Berea	2406	2416	
Sand & Shale	2416	2617	
Gordon	2617	2640	
Sand & Shale	2640	3245	
Warren	3245	3304	
Shale	3304	3318	
Speechley	3318	3562	
Shale	3562	3903	
Balltown	3903	4340	
Shale & Sand	4340	4424	
Riley	4424	4502	
Shale	4502	4896	
Benson	4896	4909	
Shale	4909	5144	
Alexander	5144	5250	
Sand & Shale	5250	5372	
T. D.	5372		

**Gas Checks**  
 2536' - 16/10ths ½" w/H<sub>2</sub>O  
 2998' - 18/10ths ½" w/H<sub>2</sub>O  
 3524' - 6/10ths 2" w/H<sub>2</sub>O  
 4015' - 2/10ths 2" w/H<sub>2</sub>O  
 4420' - 2/10ths 2" w/H<sub>2</sub>O  
 4821' - 2/10ths 2" w/H<sub>2</sub>O  
 5098' - 2/10ths 2" w/H<sub>2</sub>O

Collars - 6/10ths 1" w/H<sub>2</sub>O

STATE OF WEST VIRGINIA 017-4352  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: KEY OIL COMPANY 25653 (D) 526
- 2) Operator's Well Number: DRENNAN #1 3) Elevation: 1182'
- Well type: (a) Oil X / or Gas X / Assigned 04/15/97  
 (b) If Gas: Production X / Undergound 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: 105'
- Approximate salt water depths: 1542'
- Approximate coal seam depths: NONE REPORTED
- Does land contain coal seams tributary to active mine? Yes 1 / No X /
- Proposed Well Work: DRILL, STIMULATE, PRODUCE New Well

12)

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE FOR DRILLING	FOOTAGE INTERVALS	CEMENT
Conductor						
Fresh Water	11 3/4	ERW	42	132		Fill-up (cu. ft.) <u>2084-713</u>
Coal						70 SKS. TO SURFACE
Intermediate	8 5/8	ERW	23	2050		555 SKS. TO SURFACE
Production	4 1/2	J-55	10.5	5500		460 SKS.
Tubing	1.5					<u>505819.1</u>
Liners						

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

04/15/97  
 For Office of Oil and Gas Use Only  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPC2  
 Plat  WW-9  WW-23  Bond \_\_\_\_\_ Agent \_\_\_\_\_  
 (Type)

1) Date: APRIL 5, 1997  
2) Operator's well number  
DRENNAN #1  
3) API Well No: 47 - 017 - 4352  
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 Name NONE Address \_\_\_\_\_  
 (a) Name I. L. MORRIS Address P. O. BOX 397  
 GLENVILLE, WV 26351  
 (b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration Name \_\_\_\_\_ Address \_\_\_\_\_  
 (c) Name \_\_\_\_\_ Name \_\_\_\_\_ Address \_\_\_\_\_  
 Address \_\_\_\_\_  
 6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration Name \_\_\_\_\_ Address \_\_\_\_\_  
 Address RT. 2 BOX 135 SALEM, WV 26426  
 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] PRESIDENT  
 Address 22 GARTON PLAZA  
 WESTON, WV 26452  
 Telephone 304-269-7102

Subscribed and sworn before me this 7<sup>TH</sup> day of MARCH 19 97  
 My commission expires MARCH 24, 2003

