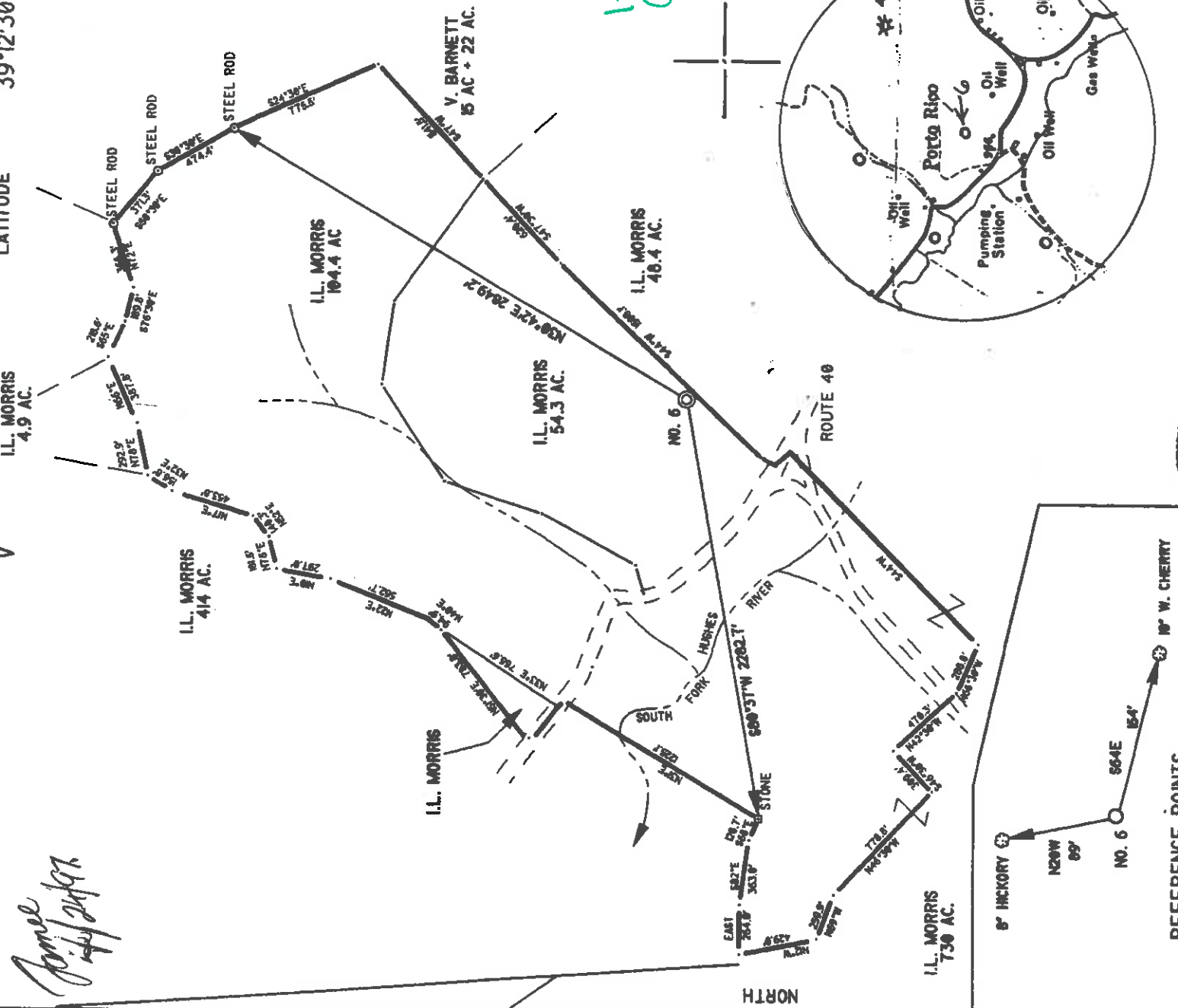


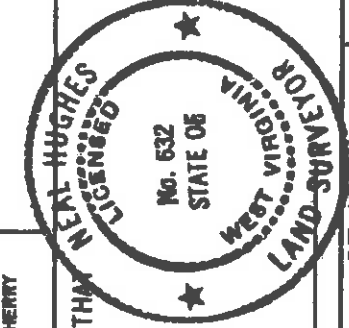
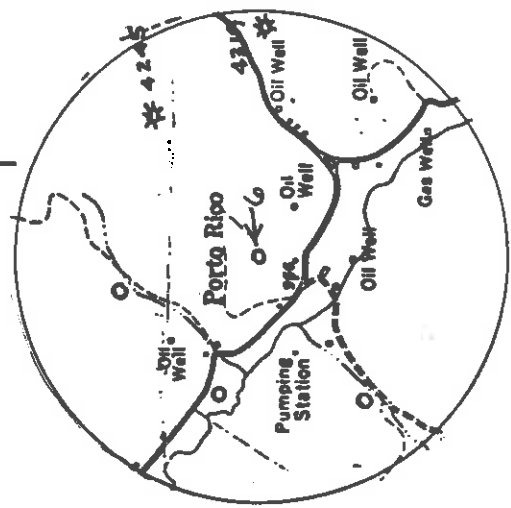
2,650'

LATITUDE 39°12'30"

LONGITUDE 80°45'00"



1.925  
0.500



I THE UNDERSIGNED, DO HEREBY CERTIFY THAT THIS PLAN 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 6  
API WELL NO. 47-017-04357

MINIMUM DEGREE OF ACCURACY	1/200	FILE NO.	97-19	STATE OF WEST VIRGINIA	DEPARTMENT OF ENERGY	OIL AND GAS DIVISION		
PROVEN SOURCE OF ELEVATION	ROAD INTER. 966'	SCALE	1" = 800'	COUNTY	SOUTH FORK HUGHES RIVER	QUADRANGLE	OXFORD	
WELL TYPE: OIL <input checked="" type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/>						ACREAGE	54.3	
LOCATION	ELEVATION	1103'				LEASE ACREAGE	236	
DISTRICT	SOUTHWEST	COUNTY	DODDRIDGE					
SURFACE OWNER	I. L. MORRIS							
ROYALTY OWNER	SUSAN V. DRENNAN, ET AL							
PROPOSED WORK:	DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____							
ESTIMATED DEPTH	5600'						PERMIT	APR 28 1997
DESIGNATED AGENT	JAN CHAPMAN						ADDRESS	22 GARTON PLAZA WESTON, WV 26452
KEY OIL COMPANY	WESTON						ADDRESS	22 GARTON PLAZA WESTON, WV 26452

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

OCT 1 1997

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

Well Operator's Report of Well Work

Operator Well No. : DRENNAN #6

LOCATION: Elevation: 1,103.00

Quadrangle: OXFORD

District: SOUTHWEST

County: DODDRIDGE

Latitude: 10025 Feet South of 39 Deg. 12 Min. 30 Sec.

Longitude: 2650 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: 05/21/97  
Well Work Completed: 06/01/97

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth ( feet ) \_\_\_\_\_ 5459'  
Fresh water depths ( ft ) \_\_\_\_\_ None  
Salt water depths ( ft ) \_\_\_\_\_ 404', 839', 1840'

Is coal being mined in area ( Y / N ) ? N  
Coal Depths ( ft ) : \_\_\_\_\_ 1348' (10' )

OPEN FLOW DATA

- Warren
- Speechley
- Balltown
- Riley
- Benson
- Alexander

Producing formation Elk  
 Gas: Initial open flow 60 MCF / d  
 Final open flow 1,570 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 \_\_\_\_\_ 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"	123.95	123.95	70 sks To Surface
8 5/8"	1994.55	1994.55	585 sks To Surface
4 1/2"	5383.2	5383.2	510 sks
2 3/8"		5128	

- 3224 - 3270
- 3286 - 3510
- 3706' - 4280'
- 4386' - 4470'
- 4857' - 4868'
- 5104' - 5214'
- 5310' - 5322'

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.

OCT 17 1997

For: KEY OIL COMPANY

By: *[Signature]*

PRESIDENT

Date: OCTOBER 13, 1997

Drennan #6 (47-017-04357)  
Four Stage Foam Frac - Halliburton

1st Stage:	Elk ( 2 holes ) ( 5327.25' to 5327.5' ) Alexander (9 holes ) ( 5148.75' to 5201.25' )	60 Quality Foam. 500 gal. 15% HCL. 40,000# 20/40 sand, 421,000 SCF N2, 623 blis foam.
2nd Stage:	Benson ( 10 holes ) ( 4860.5' to 4862.75' )	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 618 blis foam.
3rd Stage:	Riley ( 7 holes ) ( 4434.5' to 4447.75' ) Balltown ( 4 holes ) ( 4003.75' to 4004.5' )	60 Quality Foam. 1000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 438,000 SCF N2, 647 blis foam.
4th Stage:	Speechley ( 9 holes ) ( 3297.5' to 3354.25' ) Warren ( 6 holes ) ( 3252.75' to 3262.25' )	60 Quality Foam, 1,000 gal 15% HCL. 5,000# 80/100 sand, 55,000# 20/40 sand, 522,000 SCF N2, 822 blis foam.

WELL LOG

Fill & Shell	0	12	
Sand	12	29	
Sand & Shale & Red Rock	29	547	
Sand	547	560	Hole wet @ 404'
Shale & Sand & Red Rock	560	1172	
White Sand	1172	1237	Damp @ 839'
Sand & Shale	1237	1348	
Coal	1348	1358	
White Sand	1358	1440	
Sand & Shale	1440	1822	
Maxton Sand	1822	1851	
Shell	1851	1863	
Little Lime	1863	1876	
Sand & Shale	1876	1918	
Big Lime	1918	1948	
Big Injun	1948	2034	
Shale	2034	2168	
Weir	2168	2271	
Shale	2271	2370	
Berea	2370	2381	
Sand & Shale	2381	2550	
Gordon	2550	2605	
Shale & Sand	2605	3224	
Warren	3224	3270	
Shale	3270	3286	
Speechley	3286	3510	
Shale	3510	3706	
Balltown	3706	4280	
Shale & Sand	4280	4386	
Riley	4386	4470	
Shale	4470	4857	
Benson	4857	4868	
Sand & Shale	4868	4980	
Upper Elk	4980	5000	
Shale	5000	5104	
Alexander	5104	5214	
Sand & Shale	5214	5310	
Lower Elk	5310	5322	
Shale	5322	5459	
T.D.	5459		

Wet @ 1840'

**GAS CHECKS**

2514'	No Show
3000'	2/10ths 1/2" w/H <sub>2</sub> O
3525'	6/10ths 2" w/H <sub>2</sub> O
4021'	4/10ths 2" w/H <sub>2</sub> O
4514'	4/10ths 2" w/H <sub>2</sub> O
4823'	4/10ths 2" w/H <sub>2</sub> O
5161'	4/10ths 2" w/H <sub>2</sub> O
5400'	2/10ths 2" w/H <sub>2</sub> O
Collars	2/10ths 2" w/H <sub>2</sub> O

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

- 1) Well Operator: KEY OIL COMPANY 25655 ① 526
- 2) Operator's Well Number: DRENNAN #6 3) Elevation: 1103'  
475 Done 04/15/97  
Expires 04/15/99
- 4) Well type: (a) Oil X / or Gas X /  
 (b) If Gas: Production X / Underground Storage /  
 Deep 430 / Shallow X /
- Proposed Target Formation(s): ALEXANDER
- Proposed Total Depth: 5600 feet
- Approximate fresh water strata depths: 105'
- Approximate salt water depths: 1463' Normaling  
Office of Oil & Gas
- 9) Approximate coal seam depths: NONE REPORTED
- 10) Does land contain coal seams tributary to active mine? Yes    / No X /
- 11) Proposed Well Work: DRILL, STIMULATE PRODUCE Spud Well

23427

12)

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE DRILLING	FOOTAGE INTERVALS	CEMENT	LEFT IN WELL	FILL-UP (cu. ft.)
Conductor								
Fresh Water	11 3/4	ERW	42	132			132	70 SKS. TO SURFACE
Coal								
Intermediate	8 5/8	ERW	23	1975			1975	535 SKS. TO SURFACE
Production	4 1/2	J-55	10.5	5425			5425	460 SKS.
Tubing	1.5							
Liners								

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

For Office of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPC2

Plat  WW-9  WW-25  Bond \_\_\_\_\_ (Type)

00365

1) Date: APRIL 5, 1997  
2) Operator's well number DRENNAN #6  
3) API Well No: 47 - 017 - 4357  
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 I. L. MORRIS Name NONE  
Address P. O. BOX 397 Address             
GLENVILLE, WV 26351

(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 7TH day of APRIL, 19 97  
My commission expires MARCH 24, 2003 *[Signature]*

