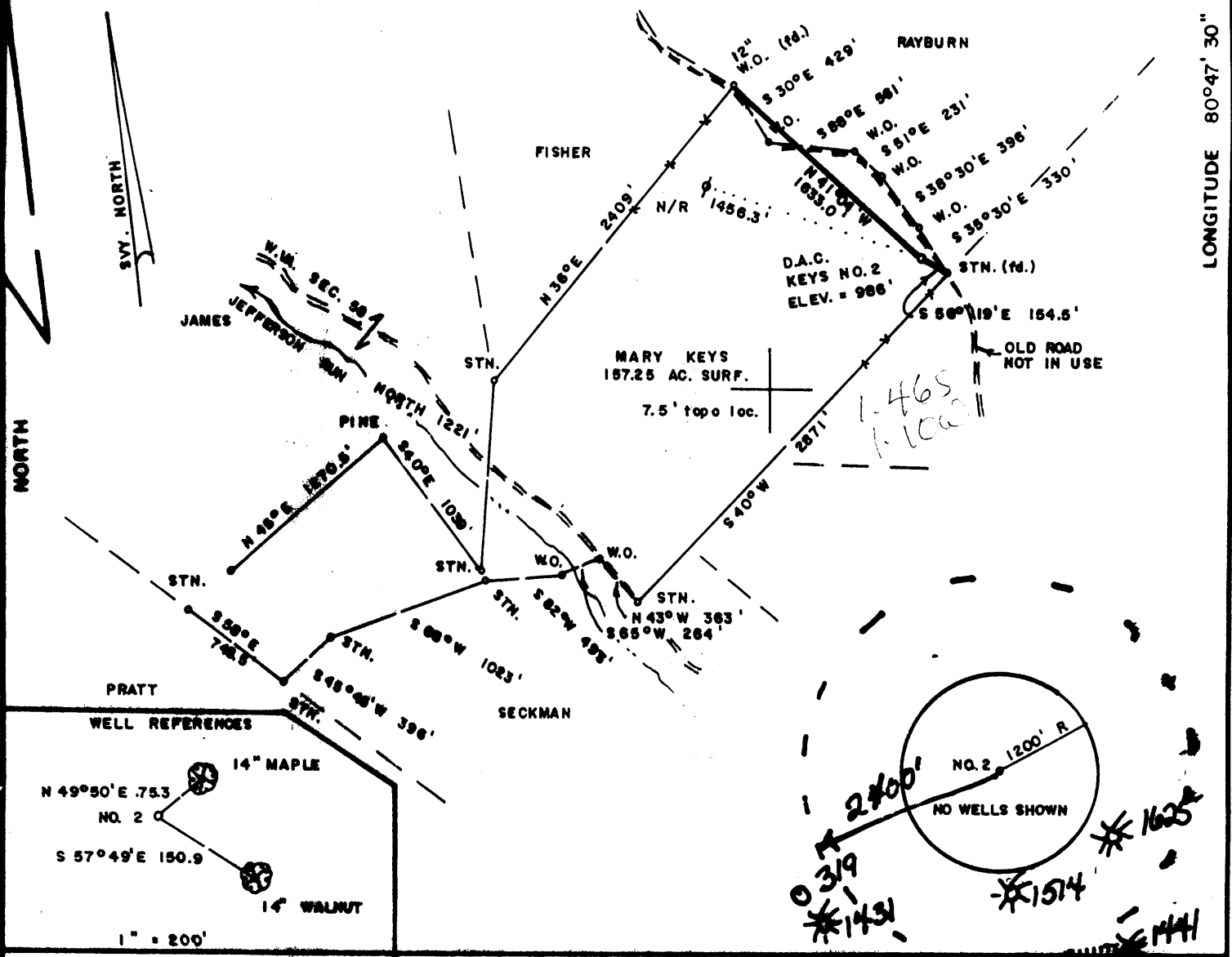


**KEYS LEASE 157.25 AC. ±**

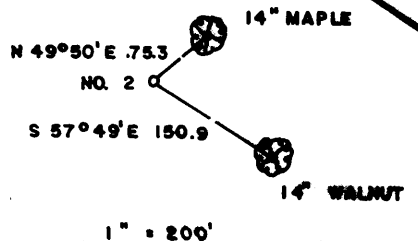
LATITUDE 39°25' 00"

5850' W

*Jamie*  
10/29/96

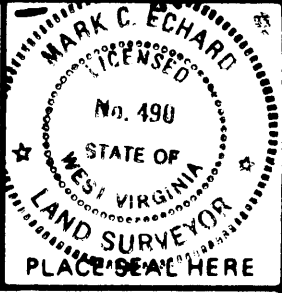


**WELL REFERENCES**



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB NW of LEASE ELEV. = 1125'

I THE UNDERSIGNED, 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 MINES.  
 (SIGNED) Mark C. Echard  
 MARK C. ECHARD  
 R.P.E. \_\_\_\_\_ L.L.S. 490



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)



DATE OCTOBER 11, 1996  
 OPERATOR'S WELL NO. KEYS NO. 2  
 API WELL NO. \_\_\_\_\_  
47 - 095 - 01668  
 STATE COUNTY PERMIT

**STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION**

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 986' WATERSHED JEFFERSON RUN  
 DISTRICT SHIRLEY COUNTY TYLER  
 QUADRANGLE SHIRLEY 7.5'  
 SURFACE OWNER MARY KEYS ACREAGE 157.25  
 OIL & GAS ROYALTY OWNER MARY KEYS LEASE ACREAGE 157.25  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 6-6-92  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG   
 TARGET FORMATION BIG INJUN ESTIMATED DEPTH 2300'  
 WELL OPERATOR D.A.C. DESIGNATED AGENT KENNETH MASON  
 ADDRESS P.O. BOX 99 ALMA, WV 26320 ADDRESS P.O. BOX 99 ALMA, WV 26320

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

Well Operator's Report of Well Work

Farm Name: Key, Mary  
Location: Elevation: 986'  
District: McElroy  
Latitude: 7620 Feet South of  
Longitude: 5850 Feet West of

Operators Well No.: #2  
Quadrangle: Shirley  
County: Tyler  
39 Deg. 25min. 0sec.  
80 Deg. 47 min. 30sec.

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Permitting  
Office of Oil & Gas

Company: Drilling Appalachian Corp  
P. O. Box 99  
Alma, WV 26320

casing tubing	used in drilling	left in well	cement fill up sks
9 5/8	150	121	50
6 5/8	1856	1824	300
4 1/2	2230	2156	80

Agent: Kenneth Mason

Inspector: Mike Underwood  
Permit Issued: 10//10/96  
Well Work Commenced: 10/30/96  
Well Work Completed: 11/03/96  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 2230'  
Fresh Water Depths (ft) 95'  
Salt Water Depths (ft) NA  
Is coal being mined in area (Y/N) N  
Coal Depths (ft): none

OPEN FLOW DATA

Producing formation Big Injun Pay zone depth (ft) 1966-2042  
Gas: Initial open flow 94 MCF/D Oil: Initial open flow 0 BBL/D  
Final open flow 185 MCF/D Final open Flow show BBL/D  
Static Rock Pressure 135 psig (surface pressure) after 24 Hours

Second producing formation \_\_\_\_\_\* Pay zone depth (ft) \*\*\*  
Gas: Initial open flow \_\_\_\_\_\* MCF/D Oil: Initial open flow \_\_\_\_\_\* BBL/D  
Final open flow \_\_\_\_\_\* MCF/D Final open flow \_\_\_\_\_\* BBL/D  
static rock pressure \_\_\_\_\_\* psig (surface pressure) after \_\_\_\_\_\* Hours

For: Drilling Appalachian Corp.

By: Kenneth R. Mason

DEC 6 1996

Date: 11-18-96

Stage	Formation	Perfs	Sand	N2
11-12-96	Keys #2	1966-2042		
1	Big Injun	16	200 sks	285,000scf

ISIP = 1915#

#### Drillers Log

Formation	Top	Bottom
Fill	0	5
Sh	5	15
Sd/Sh	15	151
Sd	151	370
Sd/Sh	370	495
RR	495	952
Sd/Sh	952	988
Sd/Sh	988	1635
Sd	1635	1730
Sh	1730	1844
Lime	1844	1855
Sh	1855	1875
Lime	1875	1945
Sd	1945	2042
Sd/sh	2042	2230
TD	2230	

#### Electric Log Tops

Formation	Depth top
Big Lime	1886
Keener	1942
Big Injun	1958

gas ck @ 1885 = no show  
 gas ck @ 1947 = no show  
 gas ck @ 2041 = 20/10 in 2" with H2O  
 gas ck @ TD = 5/10 in 2" with H2O

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

- 1) Well Operator: 311 DRILLING APPALACHIAN CORPORATION 14425 B 607
- 2) Operator's Well Number: KEYS #2 3) Elevation: 986
- Well type: (a) Oil x/ or Gas x/ *Issued 10/28/96*  
*Expires 10/28/98*
- (b) If Gas: Production x/ Underground Storage /  
Deep / Shallow /
- Proposed Target Formation(s): Big Injun 371
- Proposed Total Depth: 2300' feet
- 7) Approximate fresh water strata depths: \_\_\_\_\_
- 8) Approximate salt water depths: \_\_\_\_\_
- 9) Approximate coal seam depths: \_\_\_\_\_
- 10) Does land contain coal seams tributary to active mine? Yes / No x /
- 11) Proposed Well Work: Drill, perforate, stimulate new formation
- 12)

22772

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WV Division of  
Environmental Protection  
OCT 28 1996  
Permitting  
Office of Oil & Gas

CASING AND TUBING PROGRAM

*Newell*

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
Conductor	9-5/8"			120'	120'	55 sacks-class A
Fresh Water						<i>o.k. - Newell</i>
Coal						<i>38CS18-11.3</i>
Intermediate	7"	J-55	17#	1890'	1890'	38CS18-11.22 <i>11.22</i>
Production	4-1/2"	J-55	10.5#	2200'	2200'	38CS18-11.22
Tubing						<i>11.3</i>
Liners						

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

For Office of Oil and Gas Use Only

3/16/36

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

Plat  WW-9  WW-2B  Bond Blanket (Type)

**RECEIVED**  
WV Division of  
Environmental Protection  
OCT 28 1996  
Permitting  
Office of Oil & Gas

1) Date: October 24, 1996  
2) Operator's well number  
Keys #2  
3) API Well No: 47 - 095 - 1668  
State - County - Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name Mary Keys  
Address HC 74, Box 12  
Wilbur, WV 26320  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Mike Underwood  
Address Rte 2, Box 135  
Salem, WV 26426  
Telephone (304)- 782-1043

5) (a) Coal Operator:  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(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

X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

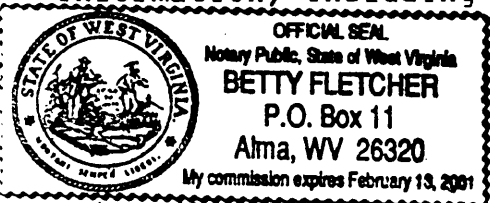
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_ on the above named parties, by:

- \_\_\_ Personal Service (Affidavit attached)
- \_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B 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 DRILLING APPALACHIAN CORPORATION  
By: Rennith Thomas  
Its: PRESIDENT  
Address PO BOX 99  
ALMA WV 26320  
Telephone 304-758-4638

Subscribed and sworn before me this 24th day of October, 1996

Betty Fletcher

Notary Public

My commission expires February 13, 2001