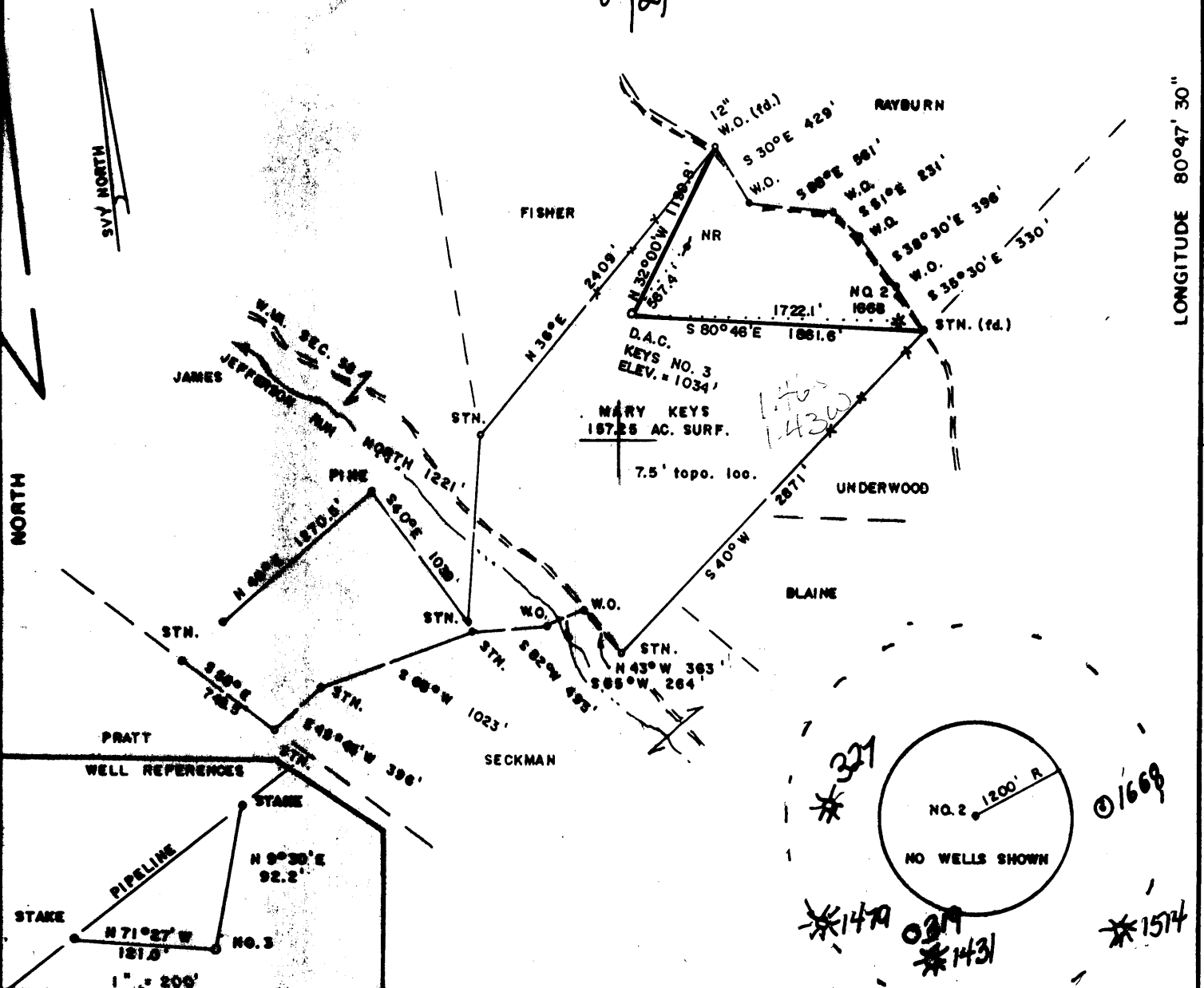


**KEYS LEASE 157.25 AC. ±**

LATITUDE 39°25' 00"

7550' W

*Janice  
12/10/96*

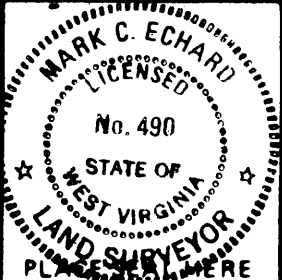


LONGITUDE 80°47' 30"

7600' S

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.  
*Mark C. Echard*  
 (SIGNED) 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 DECEMBER 5, 19 96  
 OPERATOR'S WELL NO. KEYS NO. 3  
 API WELL NO. \_\_\_\_\_  
47 - 095 - 01670  
 STATE COUNTY PERMIT

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

WELL TYPE: OIL \_\_\_ GAS Y LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS" PRODUCTION Y STORAGE \_\_\_ DEEP \_\_\_ SHALLOW Y)  
 LOCATION: ELEVATION 1034' WATER SHED JEFFERSON RUN  
 DISTRICT McELROY 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 Y CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE Y 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 GORDON / BENSON ESTIMATED DEPTH 5,200'  
 WELL OPERATOR D.A.C. DESIGNATED AGENT KENNETH MASON  
 ADDRESS P.O. BOX 99 ADDRESS P.O. BOX 99  
ALMA, WV 26320 ALMA, WV 26320

DEC 13 1996

JAN 15 1997

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

Well Operator's Report of Well Work

Farm Name: Keys, Mary  
 Location: Elevation: 1034'  
 District: McElroy  
 Latitude: 7600 Feet South of  
 Longitude: 7550 Feet West of

Operators Well No.: #3  
 Quadrangle: Shirley  
 County: Tyler  
 39 Deg. 25min. 0sec.  
 80 Deg. 47 min. 30sec.

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	162	142	50
6 5/8	1952	1924	300
4 1/2	5175	5101	80

Agent: Kenneth Mason

Inspector: Mike Underwood  
 Permit Issued: 12//10/96  
 Well Work Commenced: 12/14/96  
 Well Work Completed: 12/20/96  
 Rotary X Cable \_\_\_\_\_ Rig  
 Total Depth (feet) 5175'  
 Fresh Water Depths (ft) 580'  
 Salt Water Depths (ft) 1875'  
 Is coal being mined in area (Y/N) N  
 Coal Depths (ft): none

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5032-5038  
 Gas: Initial open flow smell MCF/D Oil: Initial open flow 0 BBL/D  
 Final open flow 411 MCF/D Final open Flow show BBL/D  
 Static Rock Pressure 1450 psig (surface pressure) after 48 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

Date: 01-02-97

JAN 24 1997

Stage	Formation	Perfs	Sand	N2
12-27-96	Keys #3	5032-37 13 holes 4613-16 3holes	450 sks	391,000scf
1	Benson Riley	16		

ISIP = 1626#  
5 min = 1470#

#### Drillers Log

Formation	Top	Bottom	
clay	0	5	
Sh	5	20	
Sd/Sh	20	219	
Sd	219	311	
Sd/Sh	311	430	
coal	430	434	
Sd/Sh	434	696	1/2" H2O @ 580'
coal	696	700	
sd/sh	700	1850	
sd	1850	1885	
sd/sh	1885	1889	1" H2O @ 1875'
Lime	1889	1907	
sh	1907	1927	
Lime	1927	2020	
sd	2020	2151	gas ck @ 2047 = no show
sd/sh	2042	2685	gas ck @ 2109 = no show
sd	2685	2695	
sd/sh	2695	4980	gas ck @ 2800 = no show
sd	4980	4990	
sd/sh	4990	5175	gas ck @ 5027 = 2/10 in 2" w/w
td	5175		gas ck @ td = 2/10 in 2" w/w

#### Electric Log Tops

Formation	Depth top
Big Lime	1930
Keener	1992
Big Injun	2022
Berea	2512
Benson	5033

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

- 1) Well Operator: DRILLING APPALACHIAN CORPORATION 14425 <sup>311</sup> (5) 607
- 2) Operator's Well Number: KEYS 3 3) Elevation: 1,034'
- 4) Well type: (a) Oil X / or Gas X / *Issued 12/10/96*  
 (b) If Gas: Production \_\_\_ / Underground Storage \_\_\_ / *Expires 12/10/98*  
 Deep \_\_\_ / Shallow X /
- 23006 Proposed Target Formation(s): GORDON, BENSON
- Proposed Total Depth: 5,200 feet *Received FAX 12/9/96*
- Approximate fresh water strata depths: \_\_\_\_\_
- 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) \_\_\_\_\_

**RECEIVED**  
WV Division of Environmental Protection  
DEC 10 1996  
Permitting Office of Oil & Gas

CASING AND TUBING PROGRAM

*New Well*

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	9-5/8"			120'	120'	38CSR18-11.3 CTS- 55 sacks-class
Fresh Water						
Coal						
Intermediate	7"	J-55	17#	1,900'	1,900'	38CSR18-11.2.2 38CSR18-11.3
Production	4-1/2"	J-55	10.5#	5,200'	5,200'	38CSR18-11.3
Tubing						
Liners						

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

For Office of Oil and Gas Use Only

11/23/96  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond Blanket Agent  
 (Type)