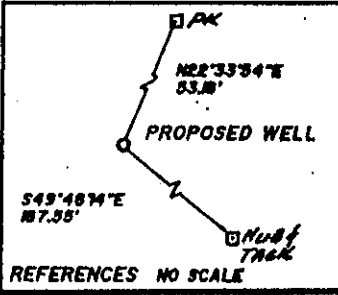
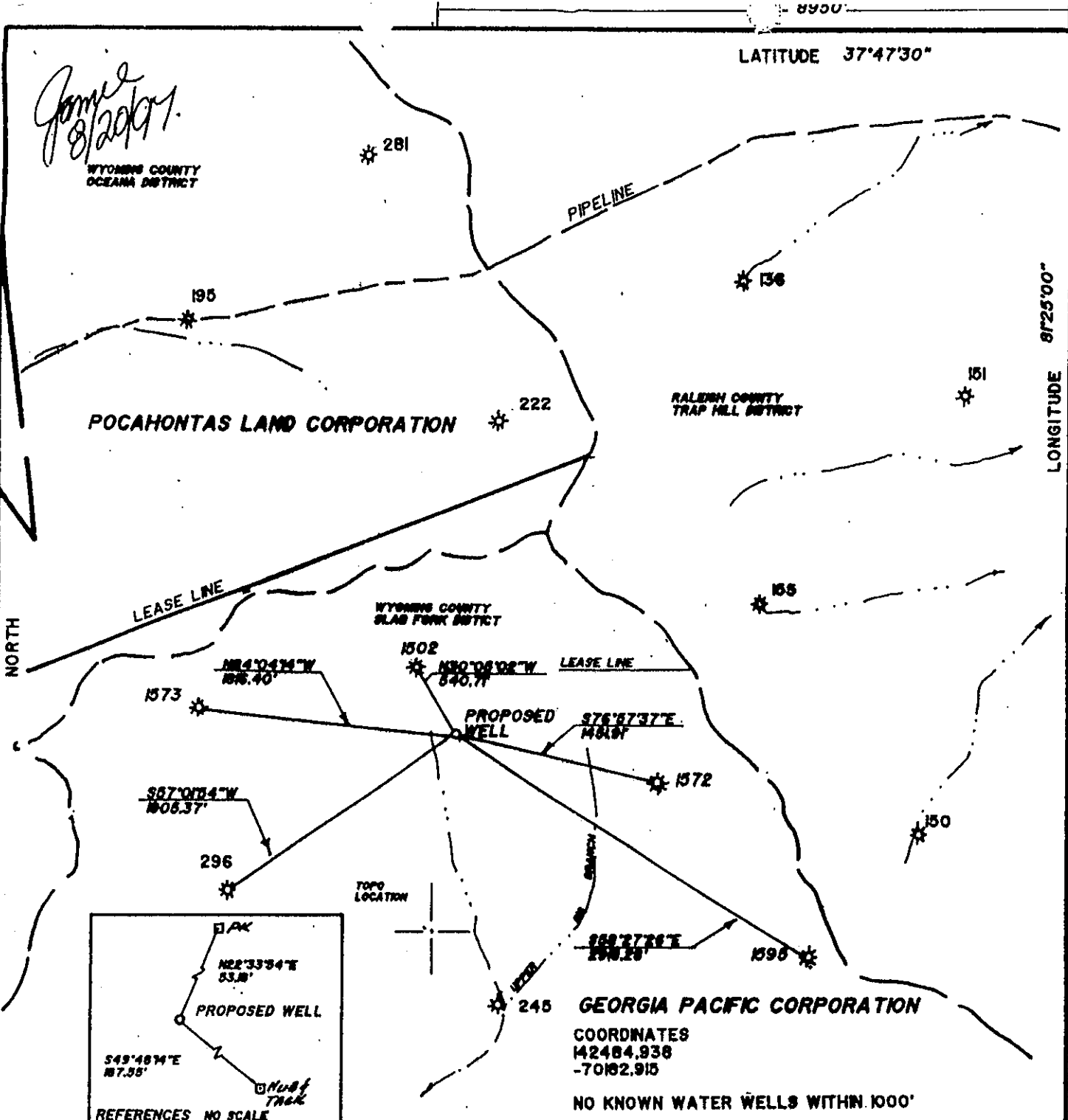


*James*  
8/20/97

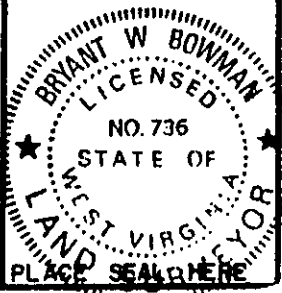
LATITUDE 37°47'30"



**GEORGIA PACIFIC CORPORATION**  
 COORDINATES  
 42484.938  
 -70182.915  
 NO KNOWN WATER WELLS WITHIN 1000'

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1"=1000'  
 MINIMUM DEGREE OF ACCURACY 1/2000  
 PROVEN SOURCE OF ELEVATION USGS BM A-181  
 ELEV. 1734

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) *Bryant W. Bowman*  
 R. P. E. \_\_\_\_\_ L. L. S. 736



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



DATE MAY 15, 19 97  
 OPERATOR'S WELL NO. 12C-293  
 API WELL NO. 47-109-01659-CP  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_)  
 LOCATION: ELEVATION 2574 WATER SHED UPPER BIG BRANCH OF TROUGH FORK  
 DISTRICT SLAB FORK COUNTY WYOMING  
 QUADRANGLE ARNETT, WV 7.8  
 SURFACE OWNER GEORGIA PACIFIC CORPORATION ACREAGE 30582±  
 OIL & GAS ROYALTY OWNER JAGUAR OIL & GAS CORP LEASE ACREAGE 30582±  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
Drwell, Beckley, Yoda: 5, 4, 3  
 PLUG AND ABANDON \_\_\_ CLEAN UP AND REPLUG \_\_\_  
 TARGET FORMATION \_\_\_\_\_ ESTIMATED DEPTH 1900'  
 WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT DANA BLACKSHIRE  
 ADDRESS 999 EXECUTIVE PARK BLYD, SUITE 300 ADDRESS PO BOX 460  
KINGSPORT, TN 37660 RAVENCLIFF, WY 25913

WYO 1659 P

*James  
8/20/97*

WYOMING COUNTY  
OCEANA DISTRICT

281

PIPELINE

195

196

POCAHONTAS LAND CORPORATION

222

RALEIGH COUNTY  
TRAP HILL DISTRICT

151

LEASE LINE

WYOMING COUNTY  
SLAB FORK DISTRICT

1502

N44°04'14"W  
816.40'

N80°08'02"W  
840.71'

LEASE LINE

1573

PROPOSED WELL

S76°27'37"E  
1461.87'

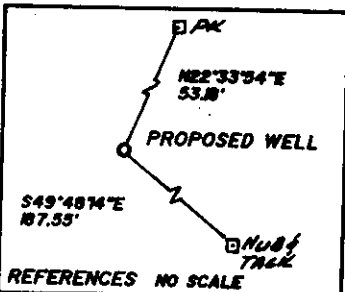
S57°05'54"W  
1805.37'

296

TOPO LOCATION

2.375  
1.69W

1572



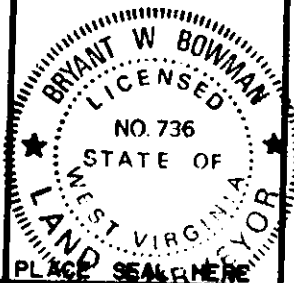
GEORGIA PACIFIC CORPORATION

COORDINATES  
42484.938  
-70182.915

NO KNOWN WATER WELLS WITHIN 1000'

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1"=1000'  
 MINIMUM DEGREE OF ACCURACY 1/2000  
 PROVEN SOURCE OF ELEVATION USGS BM A-181  
 FILE 1794

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) *Bryant W. Bowman*  
 R. P. E. \_\_\_\_\_ L. L. S. 736



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



DATE MAY 15, 19 97  
 OPERATOR'S WELL NO. 12C-293  
 API WELL NO. 47-109-01659-C  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_)  
 LOCATION: ELEVATION 2574 WATER SHED UPPER BIG BRANCH OF TROUGH FORK  
 DISTRICT SLAB FORK COUNTY WYOMING  
 QUADRANGLE ARNETT, WV 7.5'  
 SURFACE OWNER GEORGIA PACIFIC CORPORATION ACREAGE 30582±  
 OIL & GAS ROYALTY OWNER JAGUAR OIL & GAS CORP LEASE ACREAGE 30582±  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Re-drill, Sealed, Yield 5, 4, 3  
 PLUG AND ABANDON \_\_\_ CLEAN UP AND REPLUG \_\_\_  
 TARGET FORMATION \_\_\_\_\_ ESTIMATED DEPTH 1900' SEP 22 1997  
 WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT DANA BLACKSHIRE  
 ADDRESS 999 EXECUTIVE PARK BLVD, SUITE 300 ADDRESS PO BOX 460  
KINGSPORT, TN 37660 RAYENCLIFF, WV 25913

WR-35

15-Aug-97  
API # 47-109-01659 C

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

Well Operator's Report of Well Work

Farm name: GEORGIA-PACIFIC CORP. Operator Well No.: 12-C-293

LOCATION: Elevation: 2,574.00 Quadrangle: ARNETT

District: SLAB FORK County: WYOMING  
Latitude: 12400 Feet South of 37 Deg. 47Min. 30 Sec.  
Longitude 8950 Feet West of 81 Deg. 25 Min. 0 Sec.

Company: PENN VIRGINIA OIL AND GAS  
999 EXEC. PARK BLVD., STE. 300  
KINGSPORT, TN 37660-0000

Agent: ~~DANA-BLACKSHIRE~~  
Harry Jewell

Inspector: OFIE HELMICK  
Permit Issued: 08/20/97  
Well work Commenced: 09/29/97  
Well work Completed: 01/16/98  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig  
Total Depth (feet) 1866'  
Fresh water depths (ft) Damp at 786'

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 240-245, 685-689,  
1106-1110

Size	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
9 5/8"		133'	133'	89
4 1/2"		1850'	1850'	630

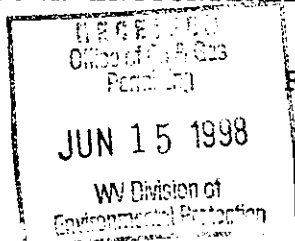
OPEN FLOW DATA

Lower Poca 4, Poca 3,  
Poca 6, Poca 4,

Producing formation Beckley and Sewell Coals Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow 0 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow show MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure N/A psig (surface pressure) after \_\_\_\_\_ 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  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
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: PENN VIRGINIA OIL AND GAS CORPORATION

By: William M. Ryan  
Date: 6/17/98

JUN 22 1998

WYO 1659 C

FORM WR-35R  
(REVERSE)

PERMIT #: 47-109-01659-C  
WELL #: 12C-293

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC

- Stage 1 Perforated the Poca 3 coal from 1734' - 1740' with 7 holes, the Lower Poca 4 coal from 1677' - 1681' with 5 holes and the Poca 4 coal from 1656' - 1660' with 5 holes. Breakdown with 750 gallons of 7.5% HCL acid and water. Treated with 187 barrels water, 3000 lbs 12/20 sand and 174,000 SCF of N2.  
ATR: 40 BPM ATP: 2830 psi ISIP: 1050 psi
- Stage 2 Perforated the Sewell coal from 1103' - 1106' with 4 holes, the Beckley coal from 1366' - 1369' with 4 holes and the Poca 6 coal from 1492' - 1497' with 6 holes. Breakdown with 750 gallons of 7.5% HCL acid and water. Treated with 298 barrels of water, 17,800 lbs 12/20 sand and 442,000 SCF of N2.  
ATR: 36 BPM ATP: 3290 psi ISIP: 2750 psi

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand & Shale	0	317	
Coal	317	322	
Sand & Shale	322	448	
Coal	448	451	
Sand & Shale	451	1103	
Sewell Coal	1103	1106	
Sand & Shale	1106	1140	
Sand	1140	1365	
Beckley Coal	1365	1368	
Sand	1368	1410	
Shale	1410	1495	
Poca 6 Coal	1495	1496	
Sand	1496	1657	
Poca 4 Coal	1657	1659	
Shale	1659	1673	
L Poca 4 Coal	1673	1676	
Sand & Shale	1676	1844	Gas checks - No shows reported

STATE OF WEST VIRGINIA 109-1659-C Page 01

**DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION**

24111

Well Operator: PENN VIRGINIA OIL & GAS CORPORATION 37355 (1) 218

Operator's Well Number: 120-293 3) Elevation: 2574

Well type: (a) Oil    / or Gas X / Issued 08/20/97  
Expires 08/20/99  
 (b) If Gas: Production X / Underground Storage    /  
                   Deep    / Shallow    /

5) Proposed Target Formation(s): Sewell, Beckely, Poca 5, 4 and 3-

6) Proposed Total Depth: 1900 feet

7) Approximate fresh water strata depths: 1000

8) Approximate salt water depths: N/A

9) Approximate coal seam depths: 20, open mine 60, 280, 350, 500, 860,  
   to be treated 1150, 1400, 1620, 1690, 1720\*

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

11) Proposed Well Work: Drill and complete a CBM well in the coals listed above

12) \*Coal depths based on the coal log ran on WP-293

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT Fill-up (cu. ft.)
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water	9 5/8	L.S.	26	120	120	40
Coal						
Intermediate						
Production	4 1/2	M-65	9.5	1900	1900	200
Tubing						
Liners						

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

For Office of Oil and Gas Use Only

Fee(s) paid:     Well Work Permit     Reclamation Fund     WPCP  
 Plat     WW-9     WW-2B     Bond \_\_\_\_\_     Agent  
(Type)

2

1) Date: May 15, 1997  
2) Operator's well number  
12C-293  
3) API Well No: 47 - 109 - 1659-C  
State County Permit

Permitting  
Office of Oil and Gas  
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 Georgia Pacific Corp Name \_\_\_\_\_  
Address PO Box 105605 Address \_\_\_\_\_  
Atlanta, GA 30348
- (b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration  
Address \_\_\_\_\_ Name Wyoming Pocahontas Land Co.  
Address 39 Robin Place  
Beckley, WV 25801
- (c) Name \_\_\_\_\_ Name \_\_\_\_\_  
Address \_\_\_\_\_ Address \_\_\_\_\_
- 6) Inspector Mr. Ofie Helmick (c) Coal Lessee with Declaration  
Address Post Office Box 398 Name \_\_\_\_\_  
Brenton, WV 24818-0398 Address \_\_\_\_\_  
Telephone (304)- 543-0764

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 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)  
X Certified Mail (Postmarked postal receipt attached)  
X 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 PENN VIRGINIA OIL & GAS CORPORATION  
By: [Signature]  
Its: Vice President  
Address 999 Executive Park Blvd., Suite 300  
Kingsport, TN 37660  
Telephone 1-423-392-0500

Subscribed and sworn before me this 14<sup>th</sup> day of July, 1997

[Signature] Notary Public  
My commission expires 2-13-99