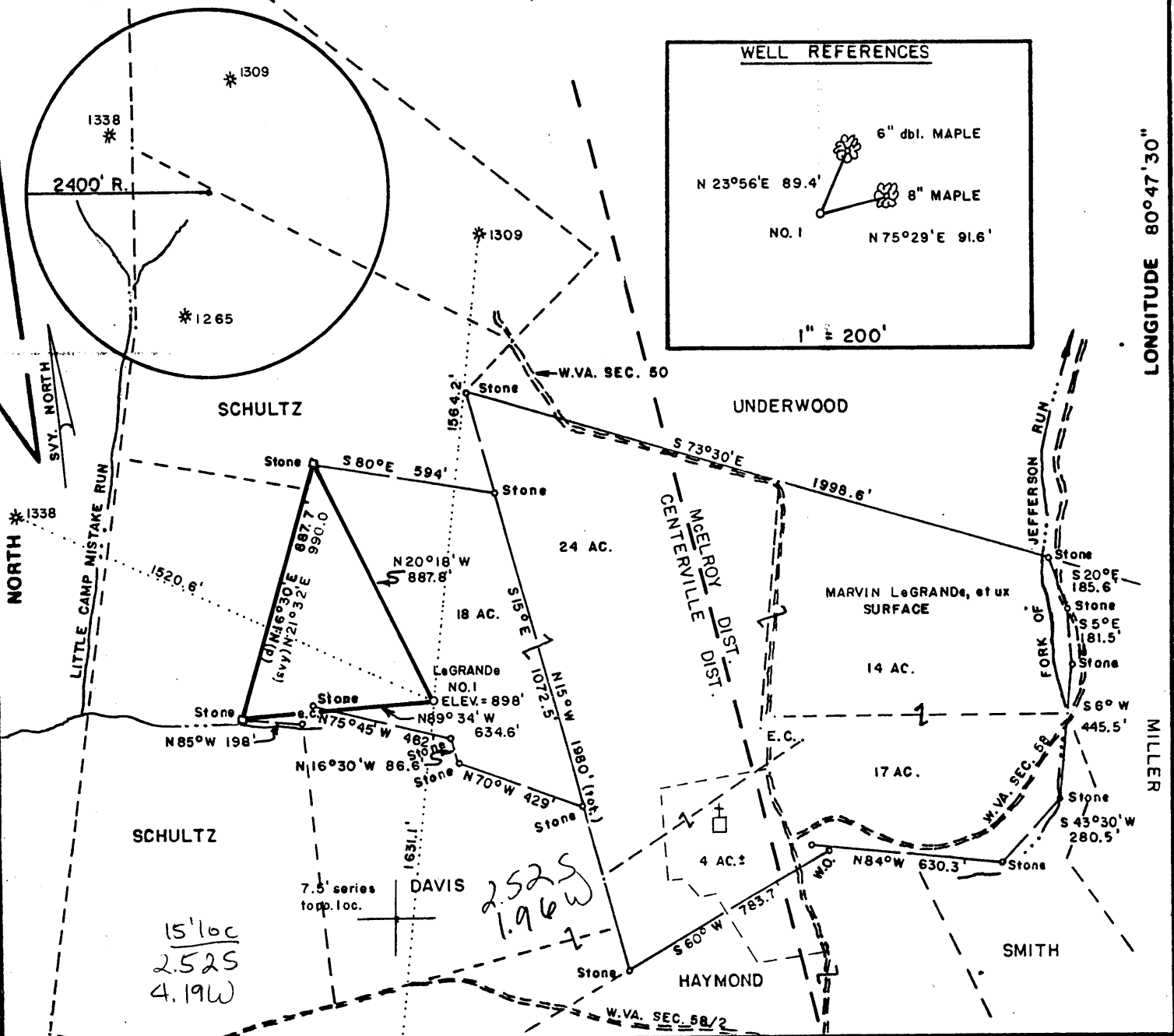
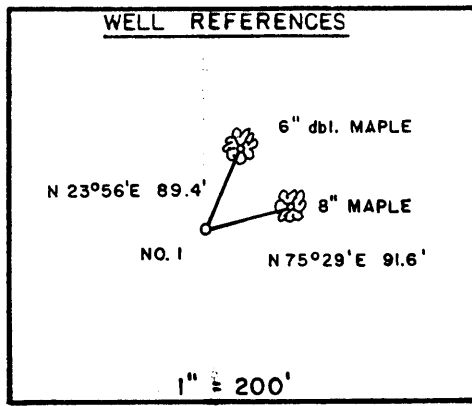


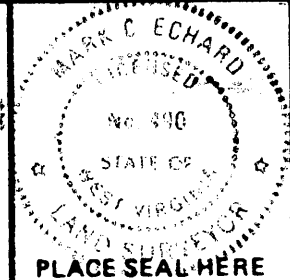
10380
LATITUDE 39°25'00"

Janis 7/1/90
MARVIN LeGRANDe, et al LEASE 73 AC. ±



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION JCT. OF ROADS 2100' ±
 SE OF LOC. ELEV. = 1038'

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 JULY 7, 19 90
 OPERATOR'S WELL NO. ONE
 API WELL NO. 47 - 095 - 1404
 STATE WEST VIRGINIA COUNTY TYLER 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 898-978 WATER SHED LITTLE CAMP MISTAKE RUN
 DISTRICT CENTERVILLE 1 COUNTY TYLER
 QUADRANGLE SHIRLEY 7.5' West Union EC

SURFACE OWNER MARVIN LeGRANDe, et ux ACREAGE 18 of 73
 OIL & GAS ROYALTY OWNER MARVIN LeGRANDe, et ux et al LEASE ACREAGE 73
 LEASE N.J. _____

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION BENSON-RILEY ESTIMATED DEPTH 5300' ±
 WELL OPERATOR D.A.C. DESIGNATED AGENT MR. KENNETH MASON
 ADDRESS P.O. BOX 99 ADDRESS P.O. BOX 99
ALMA, W.V. 26320 ALMA, W.V. 26320

280
 JUL 16 1990

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AUG 29 90
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Oil and Gas Section

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Corrected
Permit #

Well Operator's Report of Well Work

Farm name: MARVIN LeGRANDE Operator Well No.: NUMBER 2

LOCATION: Elevation: 998 Quadrangle: SHIRLEY 7.5'

District: Mc ELROY County: TYLER
Latitude: 13090 FEET SOUTH OF 39° 25' 00"
Longitude: 8680 FEET WEST OF 80° 47' 30"

Company: DRILLING APPALACHIAN CORP
P. O. BOX 99
ALMA, WV 26320-0099

Agent: KENNETH R. MASON

Inspector: GLEN P. ROBINSON
Permit Issued: 07/11/90
Well work Commenced: 08/02/90
Well work Completed: 08/15/90
Verbal Plugging
Permission granted on: _____
Rotary XK Cable _____ Rig _____
Total Depth (feet) 5250
Fresh water depths (ft) 50
510
Salt water depths (ft) 1827

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	1514	1514	405 cu
4 1/2		5088	535 cu

Is coal being mined in area (Y/N)? _____
Coal Depths (ft): _____

OPEN FLOW DATA

Producing formation BENSON SAND Pay zone depth (ft) 4935-38
Gas: Initial open flow SHOW MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 260 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 1550 psig (surface pressure) after _____ Hours

Second producing formation RILEY SAND Pay zone depth (ft) 4512-51
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: DRILLING APPALACHIAN CORP.

By: Kenneth R. Mason
Date: 8/27/90

SEP 14 1990

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 Oil and Gas Section

GEOLOGICAL WELL RECORD DATA

WELL NAME: LeGRANDE #2

PERMIT NUMBER: ~~47-095-1404~~ 47-095-1404

	TOP	BOTTOM	
SOIL	0	15	
BROKEN SAND	50	75	
SANDS AND RED SHALES	75	1223	SALT WATER
1ST SALT SAND	1223	1268	
2ND SALT SAND	1620	1660	
3RD SALT SAND	1828	1843	SALT WATER
BIG LIME	1868	1932	
KEENER	1932	1976	
BIG INJUN SAND	1976	2075	
WEIR	2232	2336	
BEREA SAND	2428	2430	
GORDON SAND	2643	2687	SHOW GAS
FIFTH SAND	2855	2862	
WARREN	3338	3372	
RILEY	4512	4560	SHOW GAS
BENSON	4933	4936	SHOW GAS
TOTAL DEPTH	5225		

WELL TREATMENT SCHEDULE

Benson Sand 4933 - 4936 Perforated with 18 holes
 Formation Break Down 1988 PSI

Hydraulic frac with Nitrogen assist
 Average Treating Rate 19 barrels per min
 384 barrels of gel treated water
 300 sacks of 20/40 sand
 50 sacks of 80/100 sand
 70,000 scf of Nitrogen

Average Treating Pressure 2055 PSI

Riley Sand 4512 - 4551 Perforated with 20 holes
 Formation Break Down 2793 PSI

Hydraulic frac with Nitrogen assist
 Average Treating Rate 19 barrels per min
 368 barrels of gel treated water
 250 sacks of 20/40 sand
 75 sacks of 80/100 sand
 73,000 scf of Nitrogen

Average Treating Pressure 2245 PSI

10942

095 1404
 Issued 07/11/90
 Expires 07/11/92
 Page 3 of 5

FORM WW-2B

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

- 1) Well Operator: DRILLING APPALACHIAN CORPORATION
- 2) Operator's Well Number: LeGRANDE #2 3) Elevation: 998'
- 4) Well type: (a) Oil / or Gas /
 (b) If Gas: Production / Underground Storage /
 Deep / Shallow /
- 5) Proposed Target Formation(s): Benson/Riely 212.5
- 6) Proposed Total Depth: 5300± feet
- 7) Approximate fresh water strata depths: 90'
- 8) Approximate salt water depths: 1500'
- 9) Approximate coal seam depths: _____
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work: Drill, perforate, stimulate new formation
- 12) _____

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
<i>SPR</i> 7/9/90 Conductor	11-3/4"	H-40	42#	100'	100'	CTS
Fresh Water						
Coal						
Intermediate	8-5/8"	J-55	23#	1500'	1500'	38CSR18-11.2.2 38CSR18-11.3
Production	4-1/2"	J-55	10.5#	5138'	5138'	38CSR18-11.1
Tubing						
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

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For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

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

Plat WW-9 WW-2B Bond Agent

548
 19

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Page 1 of 5
Form WW2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

1) Date: July 9, 1990
2) Operator's well number
LeGRANDE #1
3) API Well No: 47 - 095 - 1404
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 Marvin LeGrande
Address HCR 74, Box 77
Wilbur, WV 26320
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Glen Robinson
Address Rt 1, #6 Mt. Pleasant
Mineral Wells, WV 26150
Telephone (304)-_____

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)

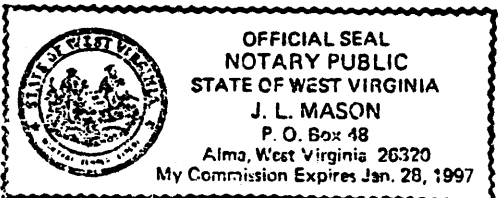
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 5 on the above named parties, by:
____ Personal Service (Affidavit attached)
____ Certified Mail (Postmarked postal receipt 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: *Kenneth Mason*
Its: PRESIDENT
Address PO BOX 99
ALMA, WV 26320-0099
Telephone (304) 758-4638



Subscribed and sworn before me this 9th day of July, 1990

My commission expires 1/28/97

[Signature] Notary Public