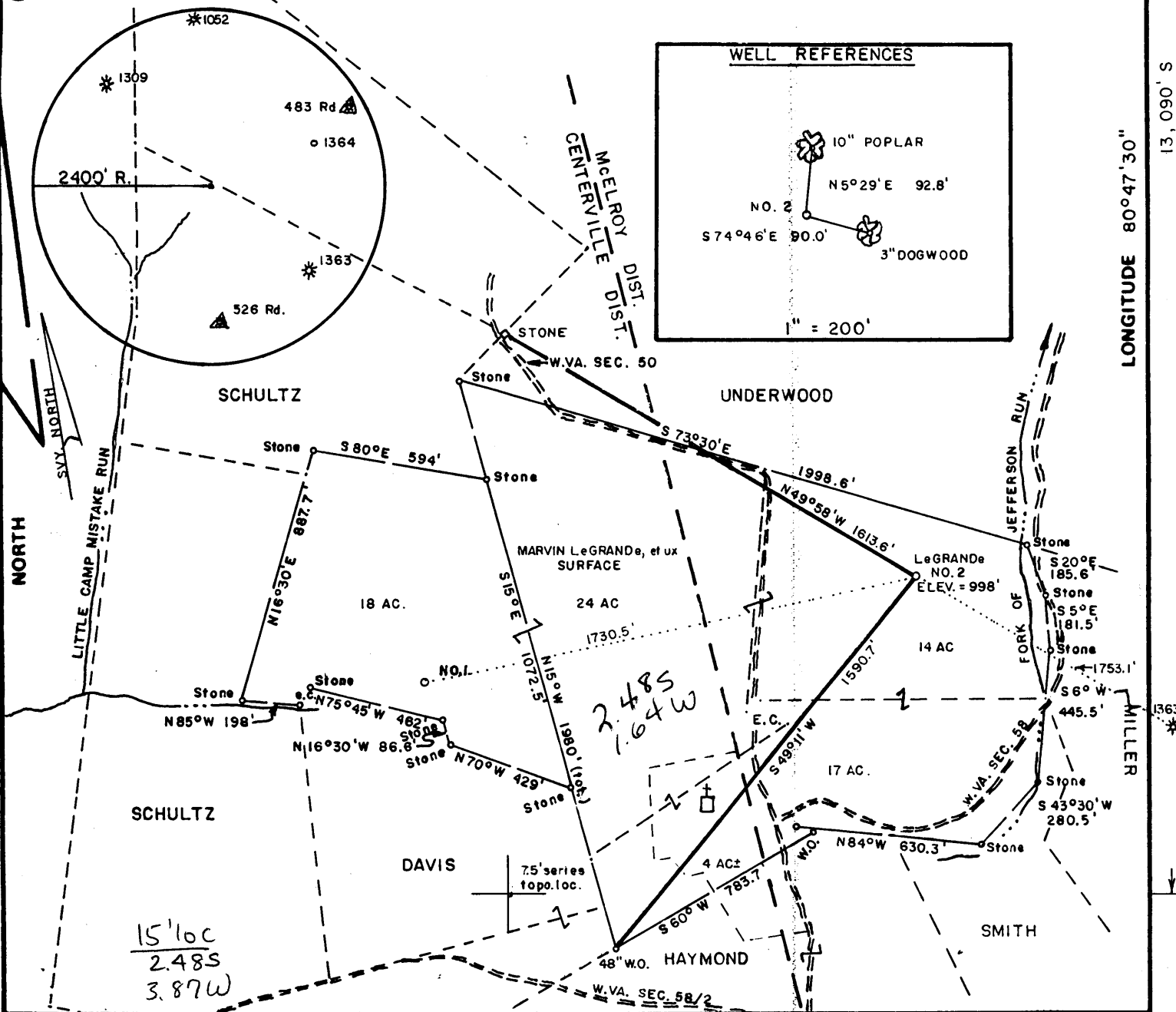


MARVIN LeGRANDe, et al LEASE 73 AC. #

Gene 7/1/90



LONGITUDE 80°47'30"

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION JCT. OF ROADS 1500' ±
 S. 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)



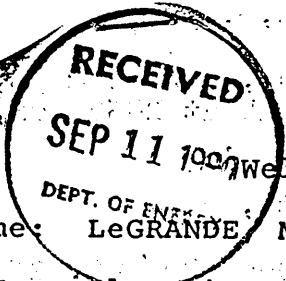
DATE JULY 7, 19 90
 OPERATOR'S WELL NO. TWO
 API WELL NO. 1403
 47 - 095 - 1403
 STATE COUNTY PERMIT

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 998' WATER SHED JEFFERSON RUN
 DISTRICT McELROY S COUNTY TYLER
 QUADRANGLE SHIRLEY 75' West Union Ec
 SURFACE OWNER MARVIN LeGRANDe, et ux ACREAGE 14 of 73
 OIL & GAS ROYALTY OWNER MARVIN LeGRANDe, et ux et al LEASE ACREAGE 73
 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) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION BENSON - RILEY ESTIMATED DEPTH 5300' ±
 WELL OPERATOR D.A.C. 280 DESIGNATED AGENT MR. KENNETH MASON
 ADDRESS P.O. BOX 99 ADDRESS P.O. BOX 99
 ALMA, W.V. 26320 ALMA, W.V. 26320

JUL 16 1990



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

Well Operator's Report of Well Work

Farm name: LeGRANDE MARVIN Operator Well No.: LEGRANDE 1

LOCATION: Elevation: 998.00 Quadrangle: SHIRLEY

District: MCELROY County: TYLER
Latitude: 13090 Feet South of 39 Deg. 25Min.: 0 Sec.
Longitude: 8680 Feet West of 80 Deg. 47 Min. 30 Sec.

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: 7/25/90
Well work Completed: 8/8/90
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig _____
Total Depth (feet) 5069'
Fresh water depths (ft) 200'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11"	86.35'	86.35'	CTS
8-5/8"	1412.85'	1412.85'	300sk CTS
4-1/2"	4942.25'		365sk HI 170sk Th

Salt water depths (ft) 1400', 1505', 1684'

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

OPEN FLOW DATA

4851-56'
4430-36'

Producing formation Riley/Benson sands Pay zone depth (ft) _____
Gas: Initial open flow show MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 658 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 1550 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
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: 8/30/90

SEP 14 1990

Perforated 1st stage at 4851-4856', 20 shots, .039"

Faced 1st stage with 20# gelled water, 5000#, 80/100 & 35,000# 20/40 sand, 57,000 SCF Nitrogen gas. Formation break at 2850 psi, avg psi 2437, avg fluid rate 21 bbl/min, ISIP 1597 psi.

Perforated 2nd stage at 4430'-4436', 24 shots, 0.39"

Faced 2nd stage with 20# gelled water, 10,000# 80/100, 25,000# 20/40 sand, 37,000 SCF Nitrogen gas. Formation break at 2900 psi, avg psi 2401, avg fluid rate 19.6 bbl /min ISIP 1939 psi, 10 min shut in psi 1318.

Permian Sands/Shales	Surface-	500	
Pennsylvanian Sands/Shales	500	1500	
Third Salt Sand	1505	1568	
Shale	1569	1683	
Maxon Sand	1684	1690	
Shale	1691	1759	
Big Lime	1760	1862	
Shale	1863	1872	
Big Injun Sand	1873	1916	
Shale	1917	1925	
Squaw Sand	1926	1960	
Shale	1960	2129	
Weir Sand	2130	2226	
Shale	2227	2322	
Berea Horizon	2323	2324	
Shale	2325	2555	
Thirty Foot	2556	2560	
Shale	2561	2755	
Gordon	2756	2772	
Shale	2773	3239	
Warren	3240	3284	
Shale	3285	3671	
Speechley	3672	3698	
Shale/Siltstone	3699	3855	
Balltown	3856	3888	
Shale/siltstone	3889	4413	
Riley	4414	4460	
Shale/Siltstone	4461	4833	
Benson	4834	4837	show gas
TD	5069		

10942

095-1403
Issued 07/11/90
Page 3 of 5
Expires 07/11/92

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 #1 3) Elevation: 898'
- 4) Well type: (a) Oil X/ or Gas X/
(b) If Gas: Production X/ Underground Storage /
Deep / Shallow X/
- 5) Proposed Target Formation(s): Benson/Riley #3
- 6) Proposed Total Depth: 5300± feet
- 7) Approximate fresh water strata depths: 90' 130'
- 8) Approximate salt water depths: 1500'
- 9) Approximate coal seam depths: OK
- 10) Does land contain coal seams tributary to active mine? Yes / No X/
- 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	
<u>9/11/90</u> Conductor	11-3/4"	H-40	42#	100'	100'	CTS
Fresh Water						
Coal						
Intermediate	8-5/8"	J-55	23#	1400'	1400'	38CSR18-11.2 38CSR18-11.3
Production	4-1/2"	J-55	10.5#	5038'	5038'	38CSR18-11.1
Tubing						
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

RECEIVED
JUL 10 1990

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 Blanket

RECEIVED
JUL 10 1990

1)
2)
3)

Date: July 9, 1990
Operator's well number LeGRANDE #2
API Well No: 47 - 095 - 1403
State - County - Permit

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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 Est.
Mineral Wells, WV 26150
Telephone (304) - 489-2736

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:

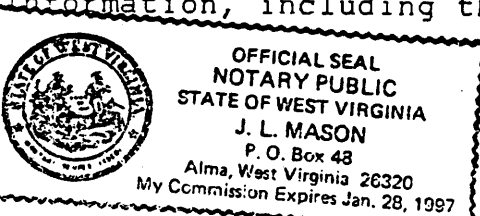
- _____ Personal Service (Affidavit attached)
- _____ Certified Mail (Postmarked postal receipt attached)
- _____ Publication (Notice of Publication attached)

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 Wilson
Its: President
Address P. O. Box 99
Alma, WV 26320-0099
Telephone (304) 758-4638



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