

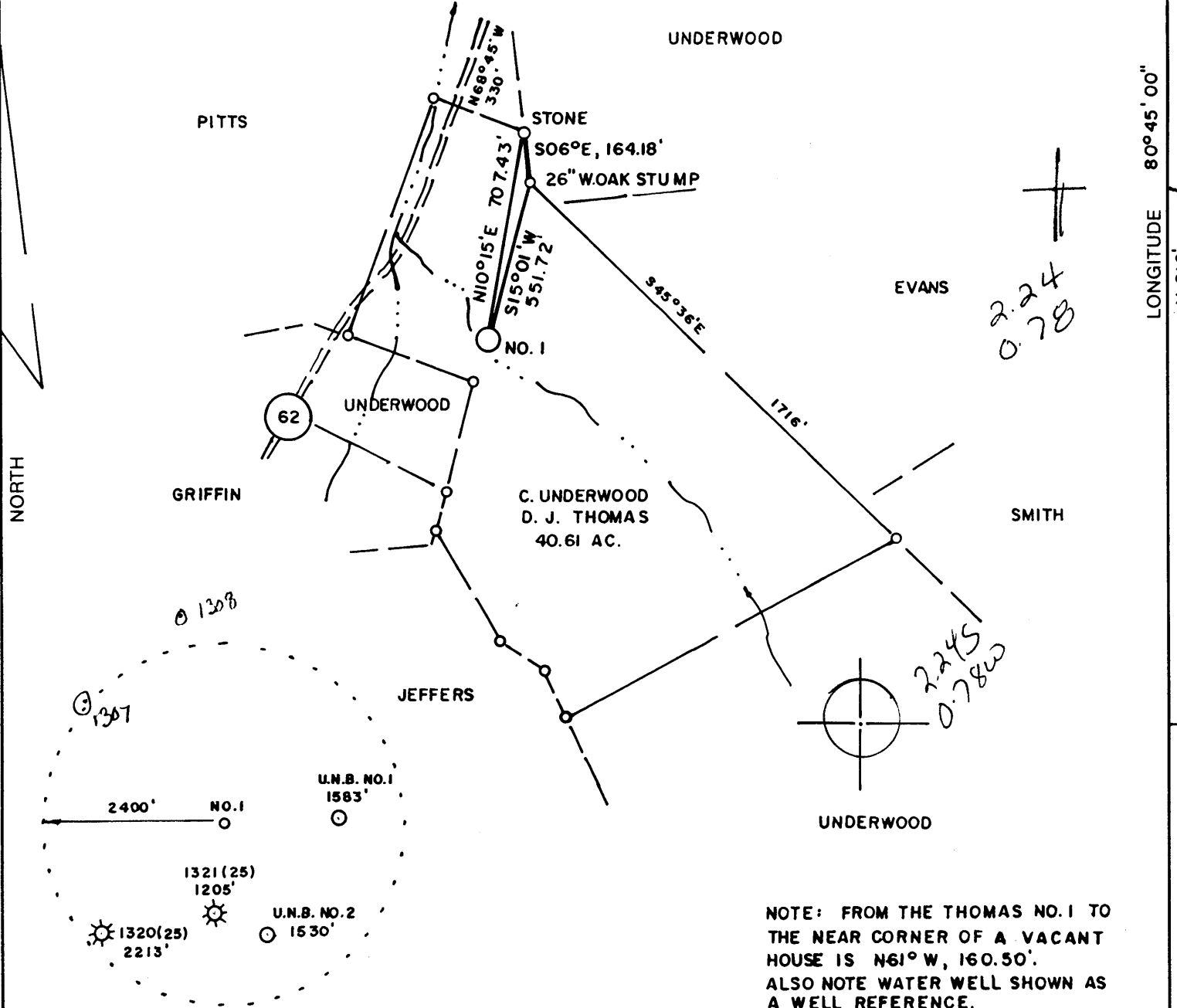
WELL REFERENCES:

N62°W, 153' TO A WATER WELL
S76°W, 134.50' TO A 10" CHERRY

Jamie 8/16/89

LATITUDE 39° 25' 00"

LAND SURVEYING SERVICES
21 CEDAR LANE
BRIDGEPORT, WV 26330
PHONE: 304-842-2018



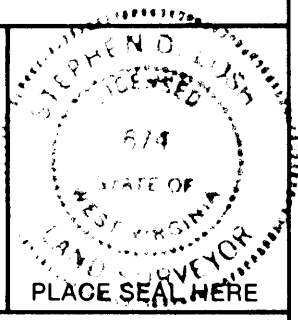
NOTE: FROM THE THOMAS NO. 1 TO THE NEAR CORNER OF A VACANT HOUSE IS N61°W, 160.50'. ALSO NOTE WATER WELL SHOWN AS A WELL REFERENCE.

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 2400'S.E.
 OF LOCATION ELEV. - 1219'

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 ENERGY.

(SIGNED) *[Signature]*
 R.P.E. _____ L.L.S. 674
STEPHEN D. LOSH



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE AUGUST 15, 19 89
 OPERATOR'S WELL NO. THOMAS NO. 1
 API WELL NO. _____

47 - 095 - 1323
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 776' WATER SHED SANDY RUN
 DISTRICT McELROY 5 COUNTY TYLER
 QUADRANGLE SHIRLEY 7.5 min. 607 133 to West Union EC

SURFACE OWNER CLIFFORD UNDERWOOD & DONNA J. THOMAS ACREAGE 40.61
 OIL & GAS ROYALTY OWNER C. UNDERWOOD & D. J. THOMAS LEASE ACREAGE 40.61

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) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5400' **AUG 18 1989**
 WELL OPERATOR DRILLING APPALACHIAN CORPORATION DESIGNATED AGENT KENNETH R. MASON
 ADDRESS P.O. BOX 99 ADDRESS P.O. BOX 99
ALMA, WV 26320 311 ALMA, WV 26320

6-6 Wilbur (092)

FORM WW-6

COUNTY NAME PERMIT

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

Well Operator's Report of Well Work

Farm name: UNDERWOOD, CLIFFORD Operator Well No.: THOMAS #1

LOCATION: Elevation: 776.00 Quadrangle: SHIRLEY

District: MCELROY County: TYLER
Latitude: 11810 Feet South of 39 Deg. 25Min. 0 Sec.
Longitude 4170 Feet West of 80 Deg. 45 Min. 0 Sec.

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

Agent: KENNETH R. MASON

Inspector: GLEN P. ROBINSON
Permit Issued: 08/17/89
Well work Commenced: AUGUST 19, 1989
Well work Completed: AUGUST 31, 1989
Verbal Plugging
Permission granted on: _____
Rotary XXX Cable _____ Rig _____
Total Depth (feet) 4963
Fresh water depths (ft) 37

Salt water depths (ft) NONE

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	1054	1054	to SURFACE
4 1/2		4921	480 SKS

RECEIVED
SEP 12 1989

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

OPEN FLOW DATA

Producing formation BENSON SANDSTONE Pay zone depth (ft) 4790-91
Gas: Initial open flow SNOW MCF/d Oil: Initial open flow - Bbl/d
Final open flow 925 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 25 Hours
Static rock Pressure 1600 psig (surface pressure) after 72 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.

SEP 15 1989

For: DRILLING APPALACHIAN CORP.

By: Kenneth R. Mason
Date: 9/2/89

GEOLOGICAL WELL RECORD DATA

WELL NAME: Thomas #1

PERMIT NUMBER: 47-095-1323

	TOP	BOTTOM	
SOIL	0	15	
BROKEN SAND	15	257	
SANDS AND SHALES	257	995	
DUNKARD SAND	985	1107	
1ST SALT SAND	1232	1290	
2ND SALT SAND	1580	1651	
3RD SALT SAND	1596	1624	
MAXON	1643	1667	
BIG LIME	1684	1742	
KEENER SAND	1742	1768	
BIG INJUN SAND	1770	1887	
WEIR	2048	2130	SHOW GAS
BEREA CAP	2229		
GANTZ SAND	2248	2267	
GORDON SAND	2459	2512	
FIFTH SAND	2682	2690	
WARREN	3147	3187	
RILEY	4301	4357	SHOW GAS
BENSON	4880	4884	SHOW GAS
TOTAL DEPTH	4963		

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SEP 12 1989

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL TREATMENT SCHEDULE

Benson Sand 4789 - 4791 Perforated with 15 holes

Formation Break Down 2250 PSI

Hydraulic frac with Nitrogen assist
Average Treating Rate 17 barrels per min
556 barrels of gel treated water
300 sacks of 20/40 sand
50 sacks of 80/100 sand

Average Treating Pressure 2550 PSI

SEP 15 1989

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

Issued 8/17/89 Expires 8/17/91

- 1) Well Operator: 311
DRILLING APPALACHIAN CORPORATION 14425 (5) 606
- 2) Operator's Well Number: THOMAS #1 3) Elevation: _____
- 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 435
- 6) Proposed Total Depth: 5100' feet
- 7) Approximate fresh water strata depths: 70' 24' @ 414'
- 8) Approximate salt water depths: 924', 970' 1425' 1496'
- 9) Approximate coal seam depths: NA Romby @ 405'-409'
- 10) Does land contain coal seams tributary to active mine? Yes / No X/
- 11) Proposed Well Work: Drill, perforate, stimulate new formation
New Well.
- 12) _____

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
<u>8/15/89</u> Conductor	11 3/4	H-40	27#	100'	100'	38CSR18-11.3
Fresh Water						
Coal						
Intermediate	8 5/8	J-55	20#	1050'	1050'	38CSR18-11.3
Production	4 1/2	J-55	10.5#	5100'	5100'	38CSR18-11.3
Tubing						
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only

466
 Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Blanket Agent
(Type)

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AUG 16 1989

1) Date: August 15, 1989
2) Operator's well number
Thomas #1
3) API Well No: 47 - 095 - 1323
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 Clifford Underwood
Address PO Box 92
Shirley, WV 26434
(b) Name Donna J. Thomas
Address PO Box 92
Shirley, WV 26434
(c) Name _____
Address _____

6) Inspector Glen Robinson
Address RT 1, #6 Mt Pleasant Est.
Mineral Wells, WV 26150
Telephone (304)- 489-9162

5) (a) Coal Operator:
Name N/A
Address _____
(b) Coal Owner(s) with Declaration
Name Same as Surface
Address _____
Name _____
Address _____
(c) Coal Lessee with Declaration
Name N/A
Address _____

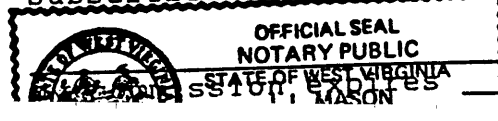
TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

x Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR _____ 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: Benneth Mason
Its: President
Address PO Box 99-Alma, WV 26320
Telephone 304-758-4638

Subscribed and sworn before me this 15 day of August, 1989



[Signature] Notary Public