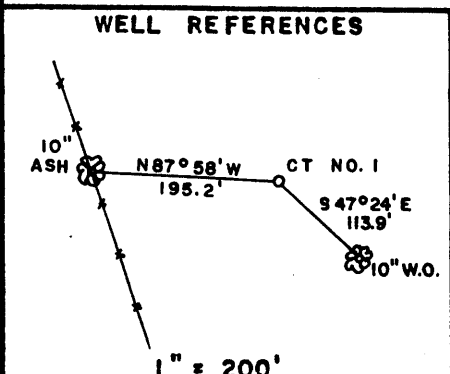
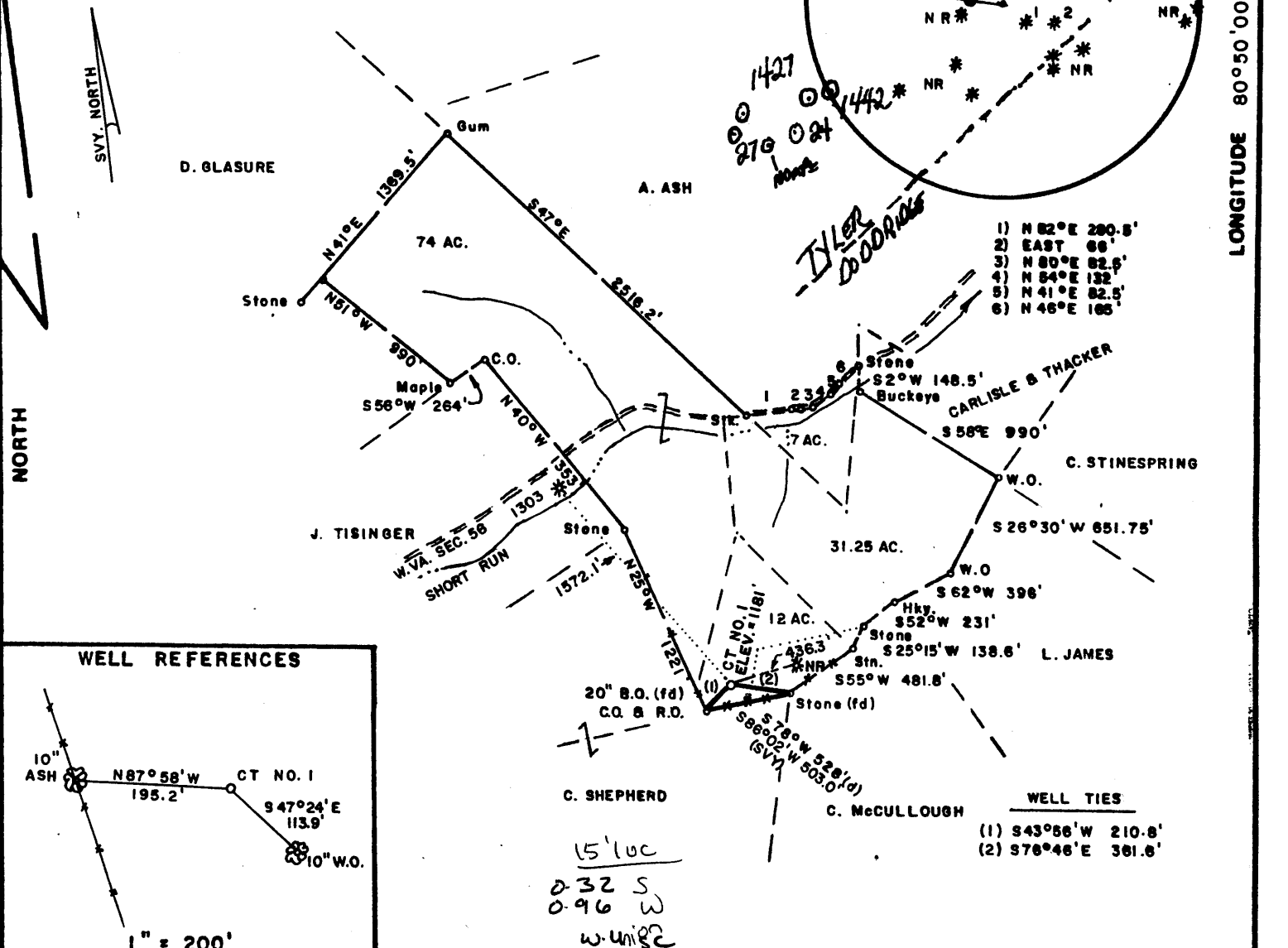


CARLISLE - THACKER LEASE 125.24 AC ±

LATITUDE 39°20'00" LONGITUDE 80°50'00"

MAURICE J. CARLISLE & D. RALPH THACKER 12 AC. SURFACE

Janice 11/21/90



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION SPOT ELEV. EAST
 SIDE OF LEASE ELEV. = 807'

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)

STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

DATE NOVEMBER 13, 19 90
 OPERATOR'S WELL NO. ONE
 API WELL NO. 47-095-1444
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1181' WATER SHED SHORT RUN
 DISTRICT CENTERVILLE 1 COUNTY TYLER
 QUADRANGLE WEST UNION

SURFACE OWNER MARICE J. CARLISLE & D. RALPH THACKER ACREAGE 12 of 125.24
 OIL & GAS ROYALTY OWNER D.A.C., et al LEASE ACREAGE 125.24
 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 5500' ±
 WELL OPERATOR D.A.C. DESIGNATED AGENT KENNETH MASON
 ADDRESS P.O. BOX 99 ADDRESS P.O. BOX 99
ALMA, W.V. 26320 ALMA, W.V. 26320

NOV 21 1990

RECEIVED
of Energy

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

JAN 23 91

Well Operator's Report of Well Work

Farm name: THACKER, RALPH ETAL. Operator Well No.: DAC C & T #1

LOCATION: Elevation: 1181.00 Quadrangle: WEST UNION

District: CENTERVILLE County: TYLER
Latitude: 1620 Feet South of 39 Deg. 20Min..0 Sec.
Longitude 5050 Feet West of 80 Deg. 50 Min. 0 Sec.

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

Agent: KENNETH R. MASON

Inspector: MIKE UNDERWOOD
Permit Issued: 11/21/90
Well work Commenced: 12-1-90
Well work Completed: 12-8-90
Verbal Plugging
Permission granted on: _____
Rotary XX Cable _____ Rig
Total Depth (feet) 5190
Fresh water depths (ft) none

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8	35	32	38csr11
5 1/2	1435	1421	260 sks
3 1/2	5190	5151	85 sks

Salt water depths (ft) 2195

Is coal being mined in area (Y/N)? N
Coal Depths (ft): none recorded

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5050
Gas: Initial open flow smell MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 350 MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 1485 psig (surface pressure) after 24 Hours

Second producing formation Riley Pay zone depth (ft) 4640
Gas: Initial open flow smell MCF/d Oil: Initial open flow 0 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

Riley commingled with Benson

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: Kenny Mason *Kenny Mason*
Date: 1-5-91

8-21-91

Fracturing details as follows

Benson 5050-54 22 holes
50 sks 80/100 350 sks 20/40
453 bbls treated fluid 68,000 scf N2
Avg. rate = 14.3 Avg psi = 2653

Riley 4640-4677 14 holes
50 sks 80/100 250 sks 20/40
339 bbls treated fluid, 300 gal Hcl
Avg rate = 10.6 Avg psi = 2843

ISIP #1162

Dirt	0	15
sd/sh	15	1465
rr	1465	1475
sd/sh	1475	2040
Lime	2040	2130
sd	2130	2225 hole damp
sh	2235	2810
sd	2810	2820
sh/sd	2820	5190 td

Electric Log Tops

Big Lime 2046
Berea 2570
Benson5050

gas check at td smell

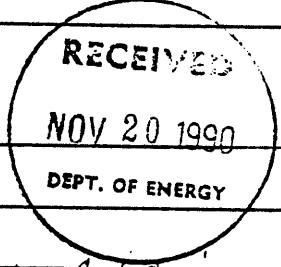
FORM WW-2B

Page 2 of 4

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

Expires 11/21/92

- 1) Well Operator: 311 DRILLING APPALACHIAN CORPORATION 14425 (1) 670
- 2) Operator's Well Number: DAC C&T #1 3) Elevation: 1181'
- 4) Well type: (a) Oil X/ or Gas X/
(b) If Gas: Production X/ Underground Storage /
Deep / Shallow X/
435
- 5) Proposed Target Formation(s): Benson/Riley
- 6) Proposed Total Depth: 5500± feet
- 7) Approximate fresh water strata depths: 100' , 210'
- 8) Approximate salt water depths: 1200' *OK.*
- 9) Approximate coal seam depths: -- Coal Blossoms.
- 10) Does land contain coal seams tributary to active mine? Yes / No X /
- 11) Proposed Well Work: Drill, stimulate, perforate new formation
- 12)



CASING AND TUBING PROGRAM

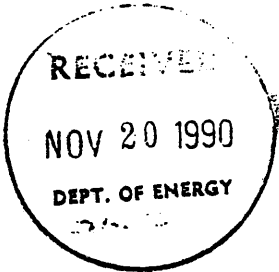
New Well.

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						<i>38CSR11.3</i>
Fresh Water	7"	H-40	17#	100'	100'	CTS
Coal						<i>38CSR11.2</i>
Intermediate	5-1/2"	<i>J-55</i>	14#	2040'	2040'	38CSR11.3
Production	3-1/2"	<i>J-55</i>	9.2#	5200'	5200'	38CSR11.1
Tubing						
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only

6173
34
Fee(s) paid: Well Work Permit Reclamation Fund WPCP
Plat WW-9 WW-2B Bond Blanket Agent
(Type)



Page 1 of 4
Form WW2-A
(09/87)
File Copy

1) Date: November 5, 1990
2) Operator's well number
DAC C&T #1
3) API Well No: 47 - 095 - 1444
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 Ralph Thacker
Address 2838 Canada Hill Rd.
Myersville, MD 21773

(b) Name J. Maurice Carlisle
Address Ralph Thacker
2838 Canada Hill Rd.
~~(c) Name~~ Myersville, MD 21773
Address _____

5) (a) Coal Operator:
Name _____
Address _____

(b) Coal Owner(s) with Declaration
Name _____
Address _____

Name _____
Address _____

6) Inspector Mike Underwood
Address Route 2, Box 135
Salem, WV 26426
Telephone (304)- 782-1043

(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 ___ on the above named parties, by:

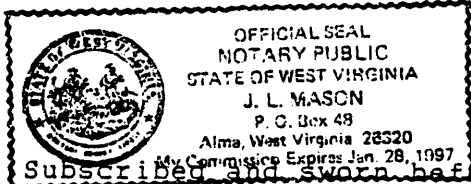
- ___ Personal Service (Affidavit attached)
- ___ Certified Mail (Postmarked postal receipt attached)
- ___ Publication (Notice of Publication attached)

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



Subscribed and sworn before me this 5th day of November, 1990

My commission expires 1/28/97 Notary Public