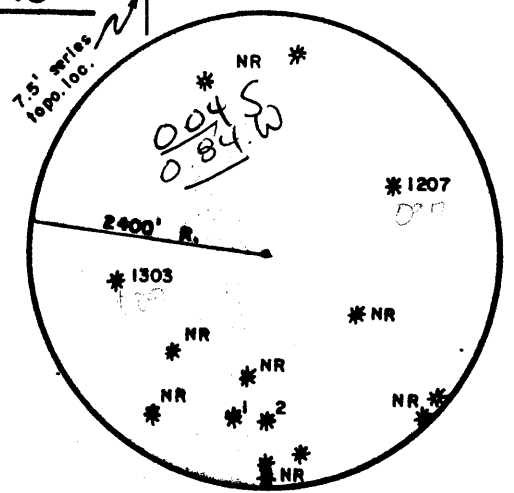


# CARLISLE - THACKER LEASE 125.24 AC

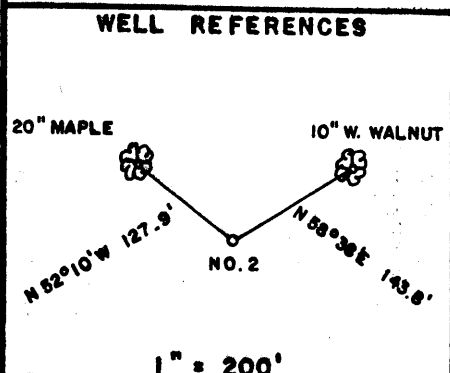
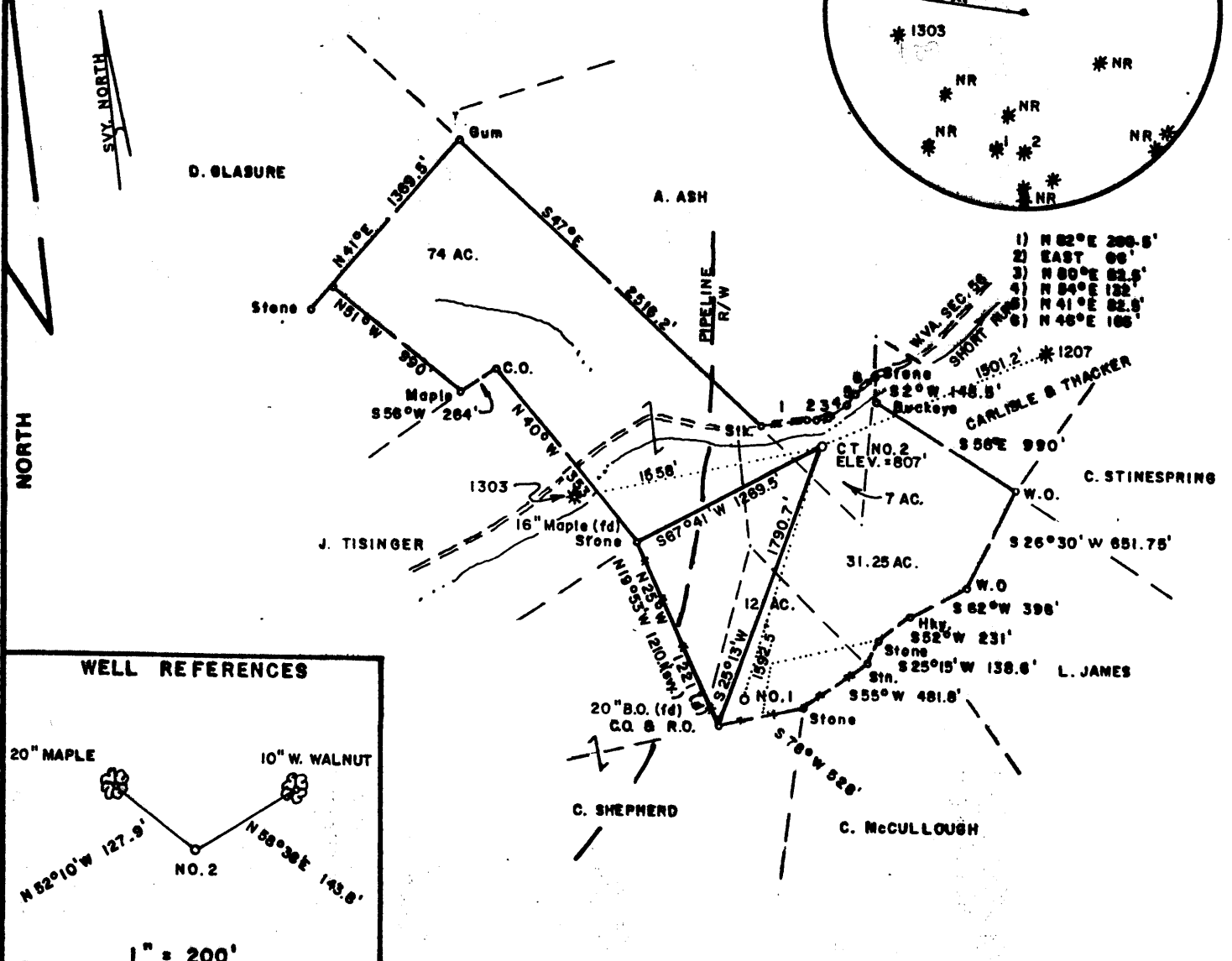
4420' W

LATITUDE 39°20'00"

MAURICE J. CARLISLE & D. RALPH THACKER 7 AC. SURFACE



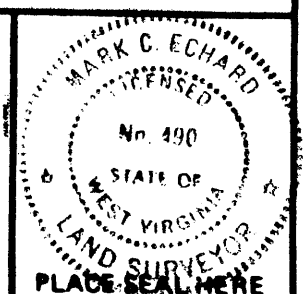
LONGITUDE 80°50'00"



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)



DATE NOVEMBER 15, 19 90  
 OPERATOR'S WELL NO. TWO  
 API WELL NO. \_\_\_\_\_  
47 - 095 - 1495  
 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 807' WATER SHED SHORT RUN  
 DISTRICT CENTERVILLE 1 COUNTY TYLER  
 QUADRANGLE WEST UNION 415 SC  
 SURFACE OWNER MARICE J. CARLISLE & D. RALPH THACKER ACREAGE 7 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 \_\_\_ 6-6 Wilbur (092)  
 TARGET FORMATION BENSON-RILEY 5074 ESTIMATED DEPTH 5500'  
 WELL OPERATOR Nugent & Sons, Inc DESIGNATED AGENT Nugent & Sons, Inc  
 ADDRESS 901 W. Main St Suite 201 ADDRESS 901 W. Main St. Suite 201  
Bridgeport, WV 26330 Bridgeport, WV 26330

MAY 18 1992

WV Division of Environmental Protection

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

API # 47-95-01495

JUL 07 92

Reviewed TMG

Well Operator's Report of Well Work

Recorded \_\_\_\_\_

Farm name: CARLISLE, MARICE/ THACKER Operator Well No.: THACKER #2

LOCATION: Elevation: 852.00 <sup>807 Topo ✓</sup> Quadrangle: WEST UNION

District: CENTERVILLE County: TYLER  
Latitude: 14510 Feet South of 39 Deg. 22Min. 30 Sec.  
Longitude: 5830 Feet West of 80 Deg. 50 Min. 0 Sec.

Company: NUGENT & SONS, INC.  
901 W. MAIN ST, SUITE 201  
BRIDGEPORT, WV 00002-6330

Agent: MICHAEL W. NUGENT, PRES.

Inspector: MIKE UNDERWOOD  
Permit Issued: 05/15/92  
Well work Commenced: 5/20/92  
Well work Completed: 5/28/92  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 5180  
Fresh water depths (ft) 70', 120'  
530'  
Salt water depths (ft) None

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	129	129	CTS 40
8 5/8	1425	1425	CTS 320
4 1/2	5180	5138	CTS 400

Is coal being mined in area (Y/N)? No  
Coal Depths (ft): N/A

OPEN FLOW DATA

Producing formation Alexander/Benson/Riley Pay zone depth (ft) 4275-500  
Gas: Initial open flow 75 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 782 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 1600 psig (surface pressure) after 48 Hours

Second producing formation Comingled Pay zone depth (ft) N/A  
Gas: Initial open flow N/A MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow N/A MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests N/A Hours  
Static rock Pressure N/A psig (surface pressure) after N/A 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: Nugent & Sons, Inc.  
NUGENT & SONS, INC.

By: Michael W. Nugent  
Date: 7/6/92

TREATMENT INFORMATION

Perf Alexander 4953 - 5004 w/8 holes

Frac with 157sks of sand, 41,000 SCF of N2, 303 BBLs of treated fluid

Perf Benson 4685 - 4888 w/13 holes

Frac with 300sks of sand, 66,000 SCF of N2, 358 BBLs of treated fluid

Perf Riley 4275 - 4304 w/8 holes

Frac with 200sks of sand, 53,000 SCF N2, 263 BBLs of treated fluid

Fill	0 - 5	
Sand/Shale	5 - 30	
Redrock/Sand	30 - 90	70' 1/4" H2O
Sand/Shale	90 - 120	
Redrock	120 - 130	120' 1 1/2" H2O
Sand	130 - 181	
Sand/Shale	181 - 272	
Redrock/Shale	272 - 286	
Sand/Shale	286 - 358	
Shale/Redrock	358 - 369	
Sand/Shale	369 - 600	530' 1" H2O
Redrock/Shale	600 - 640	
Sand/Shale	640 - 730	
Redrock/Sand/Shale	730 - 904	
Sand/Shale	904 - 1029	
Sand	1029 - 1081	
Sand/Shale	1081 - 1216	
Sand	1216 - 1310	
Sand/Shale	1310 - 1404	
Sand	1404 - 1422	
Sand/Shale	1422 - 1584	
Sand	1584 - 1610	
Sand/Shale	1610 - 1625	
Lime	1625 - 1651	
Sand/Shale	1651 - 1658	

Electric Log Tops

Big Lime 1668  
 Big Injun 1728  
 Berea 2198  
 Denson 4686

Big Lime 1658 ----- oil 1750'  
 gas 1763' 24/10-1"pw/w  
 Injun ----- 1812  
 Sand/Shale 1812 - 2190  
 Sand ~~Berea~~ 2190 - 2200  
 Sand/Shale 2200 - 2727  
 Brown Sand 2727 - 2740  
 Shale 2740 - 5180  
 gas 3003 20/10-1"pw/w  
 gas 4302 58/10-1"pw/w  
 gas 4736 116/10-1"pw/w  
 gas TD 5180 50/80-1"pw/w

13292

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

- 1) Well Operator: Nugent & Sons, Inc. 34715 (1) 670
- 2) Operator's Well Number: Thacker #2 3) Elevation: 807
- 4) Well type: (a) Oil \_\_\_ / or Gas X /  
 (b) If Gas: Production \_\_\_ / Underground Storage \_\_\_ /  
 Deep \_\_\_ / Shallow X /
- 5) Proposed Target Formation(s): Benson
- 6) Proposed Total Depth: 5180 feet
- 7) Approximate fresh water strata depths: 60
- 8) Approximate salt water depths: 1400
- 9) Approximate coal seam depths: None
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No XXX /
- 11) Proposed Well Work: Drill and stimulate
- 12)

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	11 3/4		32#	135	120	As Per Rule 38CSRQ11.2
Coal						
Intermediate	8 5/8		23#	1400	1450	As Per Rule 38CSRQ11.2
Production	4 1/2			5180	5180	As Per Rule 38CSRQ11.1
Tubing						
Liners						

13692

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

For Division of Oil and Gas Use Only

817-20  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond Cashier (K. 56809)  Agent  
 (Type)

Surface Owner Copy

- 1) Date: 04-16-92
- 2) Operator's well number #2
- 3) API Well No: 47 - 095 - 1495  
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 Marice Carlisle  
Address 19700 Barnesville Rd.  
Dickerson, Md 20642
  - (b) Name Ralph Thacker  
Address 2838 Canada Hill Rd.  
Myersville, Md 21773
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Mike Underwood  
Address Route 2, Box 135  
Summers WV 26426  
Telephone (304)- 782-1043

- 5) (a) Coal Operator:
  - Name N/A
  - Address \_\_\_\_\_
- (b) Coal Owner(s) with Declaration
  - Name \_\_\_\_\_
  - Address \_\_\_\_\_
- (c) Coal Lessee with Declaration
  - Name \_\_\_\_\_
  - Address \_\_\_\_\_

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

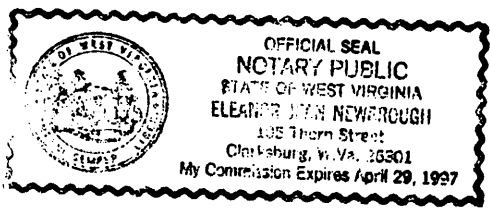
       Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
       Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

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)
- X   Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

INSTRUCTIONS TO SURFACE OWNERS NAMED ABOVE  
(Continued on Reverse)

The well operator named below is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22B of the West Virginia Code. Well work permits are valid for 24 months.



Well Operator Nugent & Sons, Inc.  
 By: Michael W. Nugent  
 Its: President  
 Address 901 W. Main St.  
Bridgeport, WV 26330  
 Telephone (304) 842-5699

Subscribed and sworn before me this 14th day of May, 1992  
Eleanor Jean Newbrough Notary Public  
 My commission expires April 29, 1997