

Jamie  
5/20/97

NO OTHER WELLS WITHIN 2400'

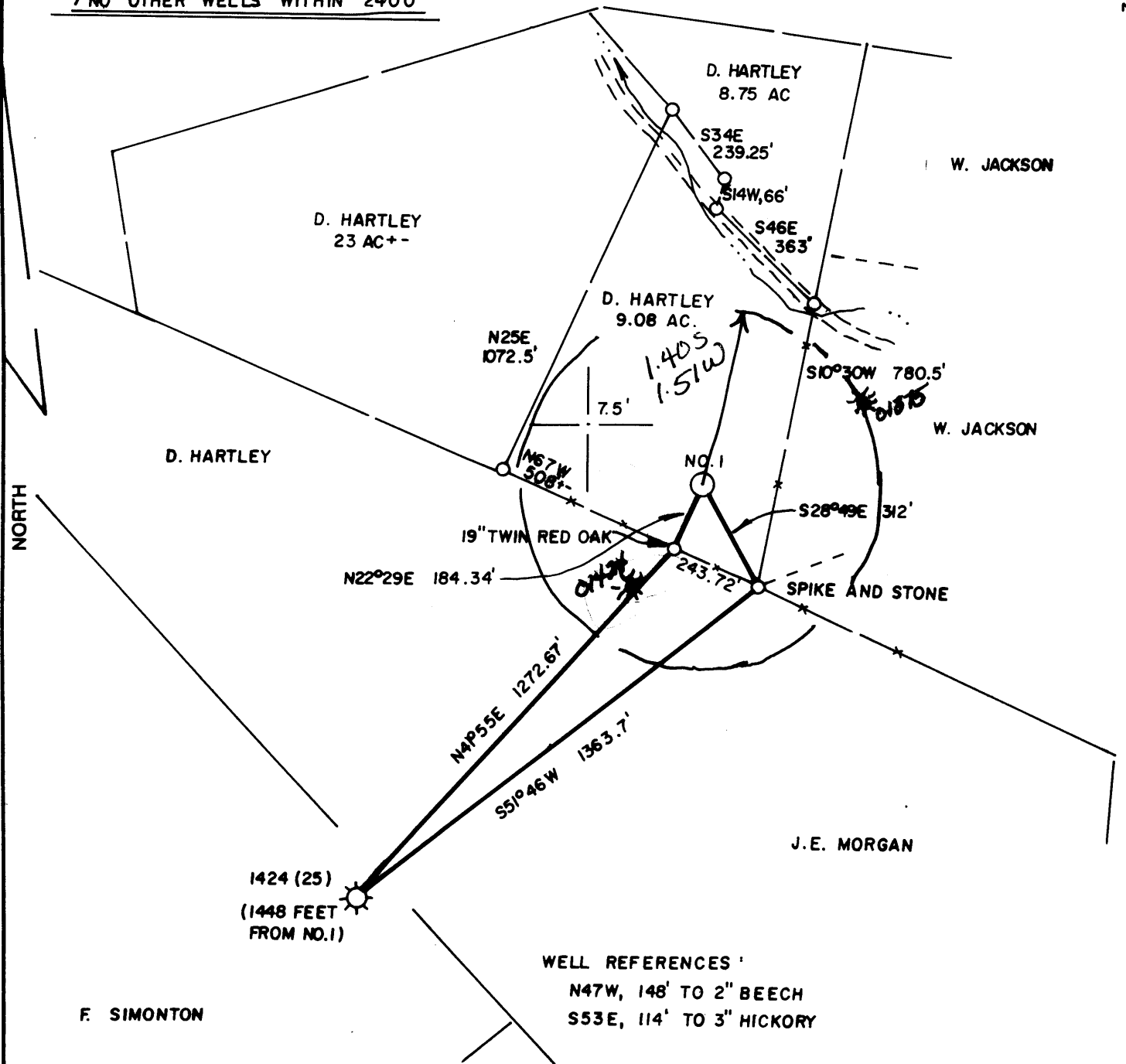
7960'

LATITUDE 39°22'30"

7375'

LONGITUDE 08°15'08"

NORTH

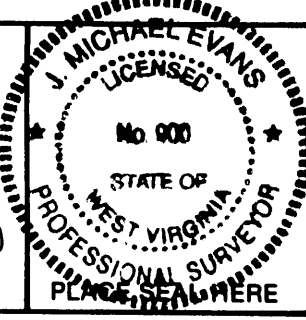


WELL REFERENCES '  
 N47W, 148' TO 2" BEECH  
 S53E, 114' TO 3" HICKORY

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 400'  
 MINIMUM DEGREE OF ACCURACY 1 IN 200  
 PROVEN SOURCE OF ELEVATION WELL 1424 SW, 1448'  
AT 904' AMSL

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) J. Michael Evans  
 R.P.E. \_\_\_\_\_ L.L.S. 900



WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 McJUNKIN ROAD  
 NINTH, WEST VIRGINIA 25143-2506



DATE MARCH 28, 19 97  
 OPERATOR'S WELL NO. D. HARTLEY NO. 1  
 API WELL NO. 47-095-01679  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1064' WATER SHED BRUSH RUN  
 DISTRICT MEADE COUNTY TYLER  
 QUADRANGLE PENNSBORO 7.5'

SURFACE OWNER DAVID HARTLEY ACREAGE 9.08  
 OIL & GAS ROYALTY OWNER DAVID HARTLEY LEASE ACREAGE 9.08  
 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) New drill

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION BENSON ESTIMATED DEPTH 5000'  
 WELL OPERATOR DOMINION APPALACHIAN DEVELOPMENT DESIGNATED AGENT JOHN HASKINS  
 ADDRESS P. O. DRAWER R INC ADDRESS P. O. DRAWER R

JANE LEW, WV 26378-0080

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FORM WV-6

COUNTY NAME

PERMIT

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

Permitting  
 Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: HARTLEY, DAVID

Operator Well No.: HARTLEY #1

LOCATION: Elevation: 1,064.00 Quadrangle: PENNSBORO

District: MEADE County: TYLER  
 Latitude: 7375 Feet South of 39 Deg. 22Min. 30 Sec.  
 Longitude 7960 Feet West of 80 Deg. 57 Min. 30 Sec.

Company: DOMINION APPALACHIAN DEVE  
 P. O. DRAWER R  
 JANE LEW, WV 26378-0000

Agent: JOHN T. HASKINS

Inspector: MIKE UNDERWOOD  
 Permit Issued: 05/20/97  
 Well work Commenced: 7/10/97  
 Well work Completed: 7/16/97  
 Verbal Plugging  
 Permission granted on N/A  
 Rotary x Cable        Rig  
 Total Depth (feet) 5218'  
 Fresh water depths (ft) 75'

Salt water depths (ft) N/A

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	30	PULLED	
8 5/8	815	815	155
4 1/2	5183	5183	190

OPEN FLOW DATA

Producing formation Alexander Pay zone depth (ft) 5140-5144  
 Gas: Initial open flow 33 MCF/d Oil: Initial open flow 0 Bbl/d  
 Final open flow 179 MCF/d Final open flow 0 Bbl/d  
 Time of open flow between initial and final tests 72 Hours  
 Static rock Pressure 950 psig (surface pressure) after 72 Hours

Second producing formation BENSON Pay zone depth (ft) 4918-4925  
 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

\* Commingled

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: Larry J. Cavallo  
 DOMINION APPALACHIAN DEVELOPMENT, INC.

By: LARRY J. CAVALLO; MAG. OF ENGINEERING  
 Date: 10/9/97

10/9/97

WELLS	PERFS	HOLES	BBL	BP	ISIP
Alexander	5140-5144	10	210	2458	1250
Johnson	4918-4925	12	492	2861	1100

FORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
KB-GL			0	10	
Sand & Shale	Gray/Red	Medium	10	75	Hole wet@75'1" st
Sand	Gray	Hard	75	100	
Sand & Shale	Gray/Red	Medium	100	282	
Sand	Gray	Hard	282	326	
Sand & Shale & RR	Gray	Medium	326	474	
Sand	Gray	Medium/hard	474	494	
RR & Shale	Red/Gray	Medium	494	502	
Sand & Shale	Gray	Hard	502	510	
RR & Shale & Sand	Gray/Red	Medium	510	690	
Sand & Shale	Gray	Hard	690	730	
Sand	White	Hard	730	740	
RR & Sand & Shale	Gray/Red	Medium	740	1529	
Sand	Gray	Hard	1529	1550	
Sand & Shale	Gray/Red	Medium	1550	1654	
Sand	Gray	Hard	1654	1676	
Sand & Shale	Gray/Red	Medium	1676	1793	Hole Damp 1765'
Sand	Gray	Hard	1743	1801	
Sand & Shale	Gray	Medium	1801	1883	
Sand	Gray	Hard	1883	1905	Soap Hole 1892'
Shale	Gray	Soft	1905	1909	
B. Lime	Gray	Hard	1909	1966	Gas Ck 1915' No Show
Injun Sand	Gray/White	Hard	1966	2130	Oil O DOT 1966'
Sand & Shale	Gray	Medium	2130	3510	Gas Ck 2039' No Show
Warren	Light Brown	Hard	3510	3540	Gas Ck 2100' No Show
Sand & Shale	Gray	Medium	3540	4748	Gas Ck 2992' No Show
Sand (Riley)	Gray	Hard	4748	4772	Gas Ck 3705' No Show
Sand & Shale	Gray	Medium	4772	4931	Gas Ck 4913' No Show
Sand	Light Brown	Hard	4931	4935	Gas Ck 5002 10/10-
Sand & Shale	Gray	Medium	4935	5218	1" H2O
			TD	5218	Gas Ck@5218' 10/10-
					1" W/W
					Gas Ck @ DC 10/10-
					1" W/W

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

- 1) Well Operator: DOMINION APPALACHIAN DEVELOPMENT, INC. <sup>5735</sup> 4785' (4) 539
- 2) Operator's Well Number: DAVID HARTLEY #1 (11471) 3) Elevation: 1064'
- 4) Well type: (a) Oil \_\_\_/ or Gas X/  
(b) If Gas: Production X/ Underground Storage \_\_\_/  
Deep \_\_\_/ Shallow X/
- Proposed Target Formation(s): BENSON 435
- Proposed Total Depth: 5120' feet
- Approximate fresh water strata depths: 750'
- Approximate salt water depths: None Reported
- 9) Approximate coal seam depths: None Reported
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_/ No X/
- 11) Proposed Well Work: DRILL & STIMULATE NEW WELL
- 12)

Permitting  
Division of Oil & Gas  
1997

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4"		27#	30'	0 PULLED	38 CSR 18-11.3
Fresh Water						
Coal						
Intermediate	8 5/8"		20#	790'	790' CTS	38 CSR 18-11.2.2
Production	4 1/2"		9.5#	5070'	5070'	38 CSR 18.11.1
Tubing						
Liners						

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

For Division of Oil and Gas Use Only

178/19  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond \_\_\_\_\_  Agent  
(Type)

1) Date: MAY 13, 1997  
2) Operator's well number  
HARTLEY #1 (11471)  
3) API Well No: 47 - 095 - 1679  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS**

**NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

- 4) Surface Owner(s) to be served: 5) (a) Coal Operator:  
 (a) Name DAVID HARTLEY Name N/A  
 Address HC 83 BOX 207 Address \_\_\_\_\_  
ELLENBORO, WV 26346  
 (b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration  
 Address \_\_\_\_\_ Name SAME AS SURFACE  
 Address \_\_\_\_\_  
 (c) Name \_\_\_\_\_ Name \_\_\_\_\_  
 Address \_\_\_\_\_ Address \_\_\_\_\_
- 6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration  
 Address ROUTE 2 BOX 135 Name N/A  
SALEM, WV 26426-0135 Address \_\_\_\_\_  
 Telephone (304)-288-4604

**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 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 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:

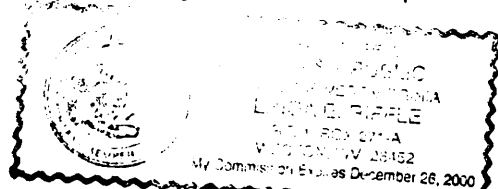
- \_\_\_\_\_ Personal Service (Affidavit attached)  
X Certified Mail (Postmarked postal receipt attached)  
 \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 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 DOMINION APPALACHIAN DEVELOPMENT, INC.  
 By: [Signature] JOHN T. HASKINS  
 Its: SENIOR VICE PRESIDENT  
 Address P O DRAWER R  
JANE LEW, WV 26378  
 Telephone (304) 884-2000



Subscribed and sworn before me this 13 day of May, 1997

[Signature] Notary Public  
My commission expires December 26, 2000