

HURST LEASE

WELL NO. 2

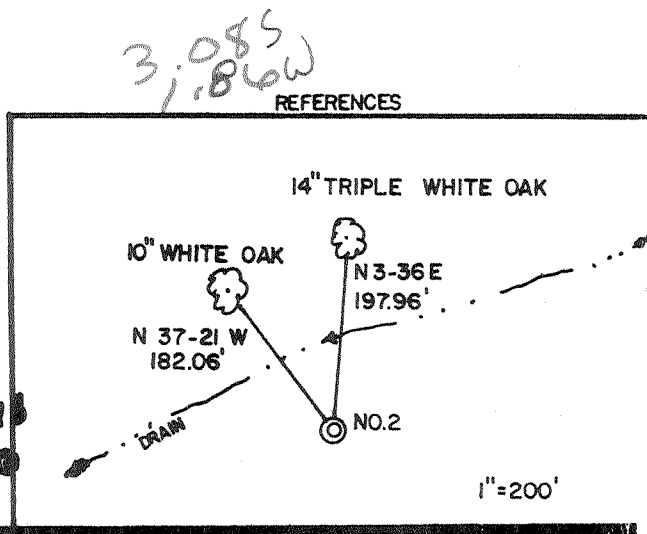
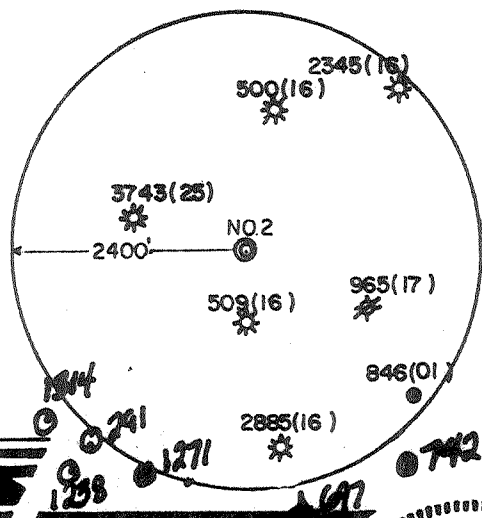
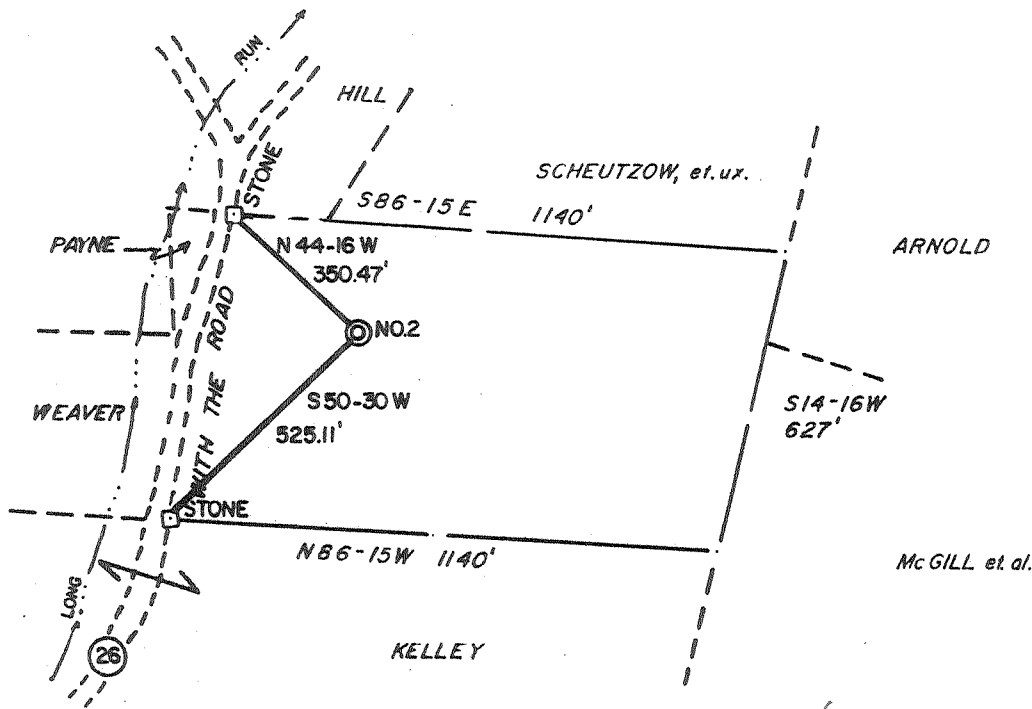
13 ACRES ±

Janie 3/7/90
" 8/25/92

0.205
1.86W

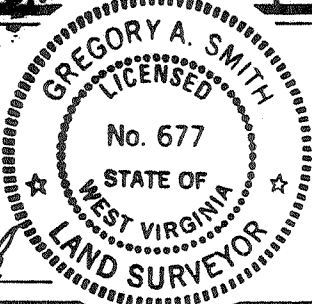
00-05-08
LONGITUDE 80-50-00

NORTH



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.

L.L.S. 677 Gregory A. Smith



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

DATE FEBRUARY 23, 19 90
 OPERATORS WELL NO. HURST NO. 2
 API WELL NO. 47 - 017 - 3800-7
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1233(29-71)
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS SCALE 1" = 400'
 ELEV. 875'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



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

LOCATION: ELEVATION 952' WATERSHED LONG RUN
 DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5' ± 15' SC

SURFACE OWNER MARSHALL R. FERREBEE ACREAGE 13
 ROYALTY OWNER CARL HURST et. al. LEASE ACREAGE 13 OF 25

PROPOSED WORK: LEASE NO.
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) OWWO 6-6 Greenwood (089) TARGET FORMATION DEVONIAN SHALE
 ESTIMATED DEPTH 5995'

WELL OPERATOR DEVONIAN APPALACHIAN COMPANY, INC. DESIGNATED AGENT ROBERT A. ANDERSON
 ADDRESS 2100 114B 4518 ADDRESS RR1 BOX 114B

COUNTY NAME PERMIT

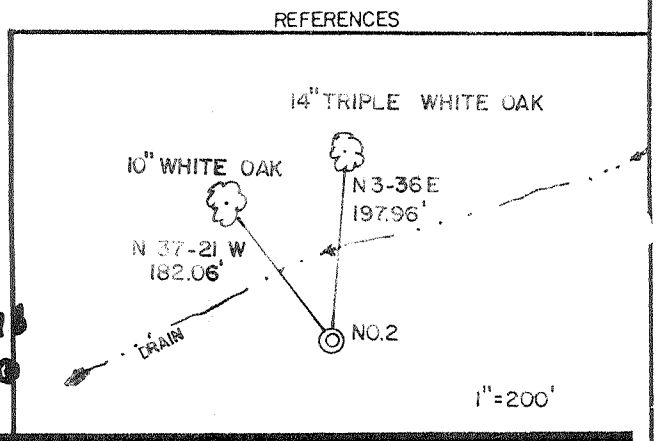
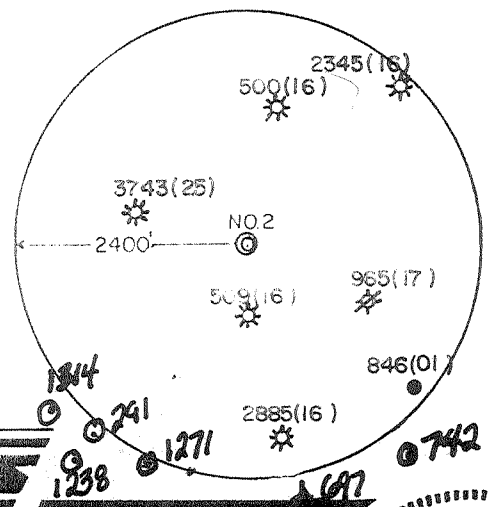
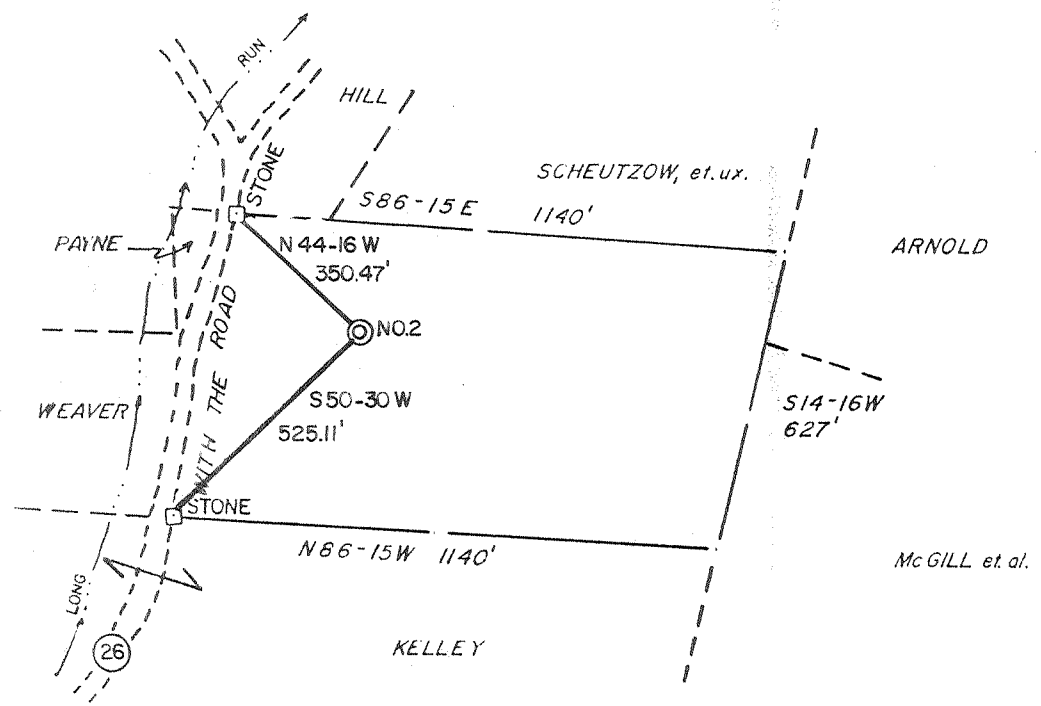
SLS

3.085
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SEP 1 1992

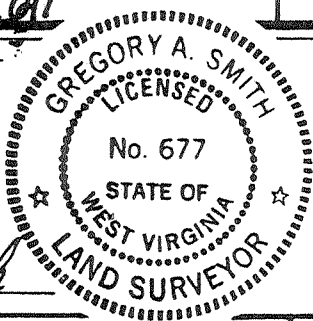
Janice 3/7/90

HURST LEASE
WELL NO. 2
13 ACRES ±



3.085
1.84W


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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE FEBRUARY 23, 19 90
 OPERATORS WELL NO. HURST NO. 2
 API WELL NO. 47 - 017 - 3800
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1233(29-71)
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS SCALE 1" = 400'
 ELEV. 875'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



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

LOCATION: ELEVATION 952' WATERSHED LONG RUN +15' SC
 DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER MARSHALL R. FERREBEE ACREAGE 13
 LOYALTY OWNER CARL HURST et. al. LEASE ACREAGE 13 OF 25

PROPOSED WORK: LEASE NO. ___
 DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
 PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION DEVONIAN SHALE
 ESTIMATED DEPTH 5995'

WELL OPERATOR DEVONIAN APPALACHIAN COMPANY, INC. DESIGNATED AGENT ROBERT A. ANDERSON MAR 19 1990
 ADDRESS RR1 BOX 114B ADDRESS RR1 BOX 114B
MINERAL RIGHTS, W.V. 26150 MINERAL RIGHTS W.V. 26150

COUNTY NAME PERMIT

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

Well Operator's Report of Well Work

Farm name: FERREBEE, MARSHALL R. Operator Well No.: HURST 2

LOCATION: Elevation: 952.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 1070 Feet South of 39 Deg. 17Min. 30 Sec.
Longitude 9800 Feet West of 80 Deg. 50 Min. 0 Sec.

Company: DEVONIAN APPALACHIAN COMP
ROUTE 1, BOX 114B
MINERAL WELLS, WV 26150-0114

Agent: ROBERT A. ANDERSON

Inspector: MIKE UNDERWOOD
Permit Issued: 08/26/92
Well work Commenced: 9/24/92
Well work Completed: 9/24/92
Verbal Plugging
Permission granted on: 2/11
Rotary N/A Cable 2/11 Rig
Total Depth (feet) _____
Fresh water depths (ft) 2/11

Salt water depths (ft) N/A

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
	Recompletion		
	no change		
	See original WR 35		

OPEN FLOW DATA

Producing formation Water Speculley Pay zone depth (ft) 2150
 Gas: Initial open flow 1,150 MCF/d Oil: Initial open flow 0 Bbl/d
 Final open flow 700 MCF/d Final open flow 0 Bbl/d
 Time of open flow between initial and final tests 2 Hours
 Static rock Pressure 360 psig (surface pressure) after 4 Hours

Second producing formation Blue Monday Big Line Pay zone depth (ft) 1740
 Gas: Initial open flow 1,150 MCF/d Oil: Initial open flow 0 Bbl/d
 Final open flow 700 MCF/d Final open flow 0 Bbl/d
 Time of open flow between initial and final tests 2 Hours
 Static rock Pressure 360 psig (surface pressure) after 4 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.

Reviewed TMG
Recorded _____

For: DEVONIAN APPALACHIAN COMPANY, INC.

By: Robert A. Anderson
Date: 10/20/92

NOV 6 1992

First Stage: Perforate Speechley 3431-34 10 shots, Warren 3278-80 4 shots. Frac with 500 gal 15% HCl 440 bbl water with Nitrogen assist and 23,000# 20/40 Ottawa sand

Second Stage: Perforate Weir 2178-80 4 shots; 2166-68 4 shots; 2163-65 4 shots; 2160-62 4 shots. Frac with 750 gal 22% HCl, 549 bbl Water with Nitrogen assist and 45,000# 20/40 Ottawa sand

Third Stage: Perforate Lime from 1917-1920 6 shots, Perforate Blue Monday from 742-750 10 shots. Frac with 750 gal 22% HCl 736 bbl water with Nitrogen assist and 63,200# 20/40 Ottawa sand.

See original WR 35 for well log

92161

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

Well Operator's Report of Well Work

Farm name: FERREBEE, MARSHALL R. Operator Well No.: HURST #2

LOCATION: Elevation: 952.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 1070 Feet South of 39 Deg. 17Min. 30 Sec.
Longitude 9800 Feet West of 80 Deg. 50 Min. 0 Sec.

Company: DEVONIAN APPALACHIAN COMP
ROUTE 1, BOX 114B
MINERALWELLS, WV 26150-0114

Agent: ROBERT A. ANDERSON

Inspector: MIKE UNDERWOOD
Permit Issued: 03/12/90
Well work Commenced: 03/19/90
Well work Completed: 03/25/90
Verbal Plugging
Permission granted on:
Rotary Cable Rig
Total Depth (feet) 5416'
Fresh water depths (ft)

Salt water depths (ft) 370'

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.
11 3/4	175	175	155 sks
8 5/8	1315'	1315'	225 sks
4 1/2	5121	5121	365 sks

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MAR 29 1990

OPEN FLOW DATA

Producing formation Alexander & Benson Pay zone depth (ft) 4210
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

Second producing formation Bradford, Balltown Pay zone depth (ft) 4178, 4396
Gas: Initial open flow 1,350 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 1,350 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 1/2 Hours
Static rock Pressure 1650 psig (surface pressure) after 16 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: Robert A. Anderson
DEVONIAN APPALACHIAN COMPANY, INC.

By: Robert A. Anderson/President
Date: March 28, 1990

APR 16 1990

Alexander: Perf 5075 to 5089 with 16 shots
500 gal HCl and 1,000,000 SCF N₂ with additional 500 gal HCl

Benson: Perf 4791-97 with 8 shots, 4743 with 2 shots, 4688-90 with 4 sho
500 gal 28% HCl 30,000 20/40 Ottawa with N₂ foam

Bradford: Perf 4400 with 4 shots, 4383 with 2 shots

Balltown: Perf 4207 with 4 shots, 4185-87' with 4 shots
4178-81' with 4 shots

Frac as did the Benson adding foam spacer and more acid (for perfs)

Shale and sand:	0-1838	
Lime	1838-1902	
Big Injun	1902-2000	
Squaw	2014-2020	
Shale	2020-2148	
Weir	2048-2212	gas check 50/10 1 1/2"
Shale	2212-2336	
Berea	2336-2338	
Shale	2338-2750	
Fifth sand	2750-2755	
Shale	2755-3249	
Warren	3249-3284	
Shale	3284-3416	
Speechley	3416-3422	
Shale	3422-4128	
Balltown	4128-4210	30/10, 1 1/2"
Shale	4210-4397	"
Bradford	4397-4402	30/10, 1 1/2"
Shale	4402-4792	
Benson	4792-4794	30/10, 1 1/2"
Shale	4794-5074	
Alexander	5074-5090	30/10, 1 1/2"

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MAR 29 1990

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

10501

017-3800 Frac.
 Issued 8/26/92
 Page 1 of 1
 Expires 8/26/94

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

- 1) Well Operator: Devonian Appalachian Co. Inc 14425' (1) 670
- 2) Operator's Well Number: 47-17-3800 3) Elevation: 952
- 4) Well type: (a) Oil / or Gas X /
 (b) If Gas: Production / Underground Storage /
 Deep / Shallow X /
- 5) Proposed Target Formation(s): Speechley, Warren, Weir, Blue Monday
- 6) Proposed Total Depth: recompletion feet
- 7) Approximate fresh water strata depths: N/A
- 8) Approximate salt water depths: N/A
- 9) Approximate coal seam depths: N/A
- 10) Does land contain coal seams tributary to active mine? Yes / No X /
- 11) Proposed Well Work: Set plug, recomplete uphole payzones, then
Squeeze 4 1/2" frac Emulsion Well New Formations
- 12) knock out plug and comingle all producing payzones

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOCTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
Conductor	N/A					
Fresh Water	N/A			11 3/4"	175' <u>CP</u>	115 SKS.
Coal	N/A					
Intermediate	N/A			8 5/8"	1315' <u>CP</u>	225 SKS.
Production	N/A			4 1/2"	5121'	365 SKS.
Tubing	N/A					
Liners						

PACKERS : Kind recoverable
 Sizes 4 1/2"
 Depths set 3450'

For Division of Oil and Gas Use Only

4142/30

Fee(s) paid: 17 Well Work Permit 17 Reclamation Fund 17 WPCP 17
 Plat 17 WW-9 17 WW-2B 17 Bond Blanket 17

AUG 2

- 1) Date: 8/20/92
- 2) Operator's well number Hurst #2
- 3) API Well No: 47 - 17 - 3800 - Recomplete
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 Marshall Ferrebee
Address 214 Morgan Rd.
Ravenna, OH. 44266
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name N/A
Address _____
 - (b) Coal Owner(s) with Declaration
 - Name _____
Address _____
 - (c) Coal Lessee with Declaration
 - Name _____
Address _____
- 6) Inspector Mike Underwood
Address Rt 2 Box 135
Salem, WV. 26426
Telephone (304)-782-1043

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)
- 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 Devonian Appalachian Co., Inc.
By: [Signature]
Its: President
Address Rt 1 Box 114-B
Mineral Wells, WV. 26150
Telephone 489-9314

Subscribed and sworn before me this 24 day of August, 1992

Notary Public

My commission expires _____

017 3800
 issued 3/12/90
 expires 3/12/92

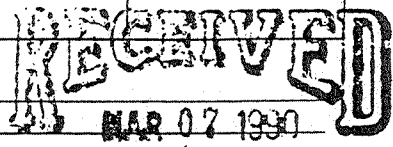
STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
 WELL WORK PERMIT APPLICATION

- 1) Well Operator: Devonian Appalachian Co., Inc. #13530 ⁴⁵¹⁸ (1) 670
- 2) Operator's Well Number: Hurst #2 3) Elevation: 952'
- 4) Well type: (a) Oil ___ / or Gas X /
 (b) If Gas: Production X / Underground Storage ___ /
 Deep ___ / Shallow X /
- 5) Proposed Target Formation(s): Devonian Shale ⁴³⁷
- 6) Proposed Total Depth: 5995 feet
- 7) Approximate fresh water strata depths: 124' @ 490'
- 8) Approximate salt water depths: 1260' @ 952'
- 9) Approximate coal seam depths: N/A OK
- 10) Does land contain coal seams tributary to active mine? Yes ___ / No X /
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	
Conductor	11 3/4			164'	Left in well: 164' <u>CK</u> Fill-up (cu. ft.): Rule 38 CSR 18-11.3
Fresh Water	8 5/8			1350	Left in well: 1350 <u>CK</u> Fill-up: "
Coal					
Intermediate					
Production	4 1/2			5995	Left in well: 5995 Fill-up: By Rule 38 CSR 18-11.1
Tubing					
Liners					

PACKERS : Kind _____
 Sizes _____
 Depths set _____



For Division of Oil and Gas Use Only DEPARTMENT OF ENERGY

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

2473

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MAR 07 1990

1) Date: February 27, 1990
2) Operator's well number
Hurst #2
3) API Well No: 47 - 017 - 3800
State - County - Permit

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY 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 Marshall Ferebee
Address 6214 Morgan Rd.
Ravenna, OH. 44266
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
Name N/A
Address _____
- (b) Coal Owner(s) with Declaration
Name _____
Address _____
- Name _____
Address _____
- 6) Inspector Mike Underwood
Address Rt 2 Box 135
Salen, 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

____ Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

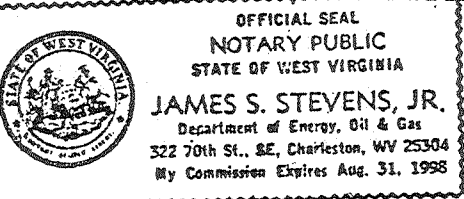
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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the 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 Devonian Appalachian Co., Inc
By: Robert A. Anderson
Its: President
Address Rt 1 Box 114 B
Mineral Wells, WV 26150
Telephone _____

subscribed and sworn before me this 7 day of MARCH, 1990

My commission expires _____ Notary Public

James S. Stevens, Jr.
Aug. 31, 1998