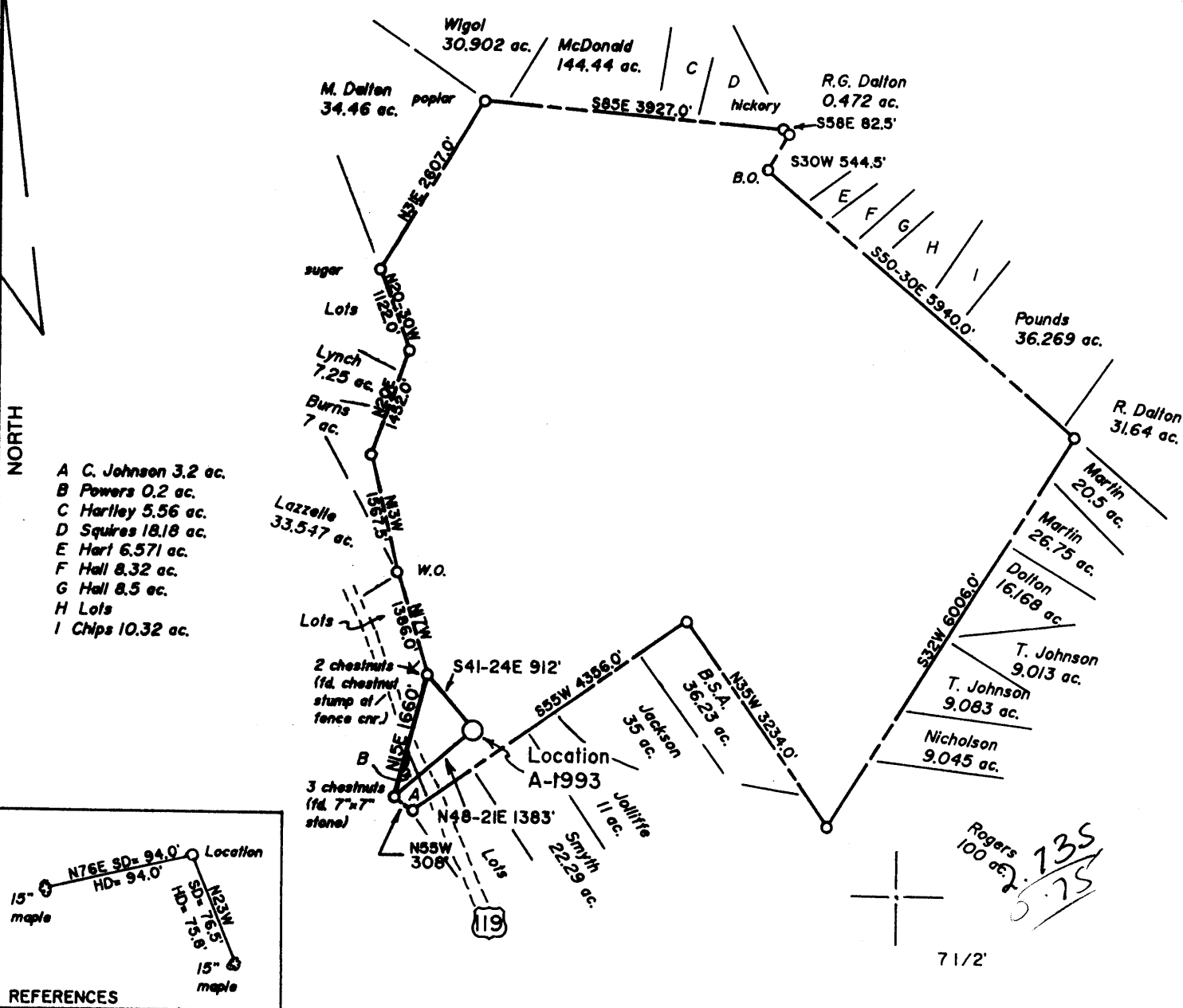


LATITUDE 39-35-00 N

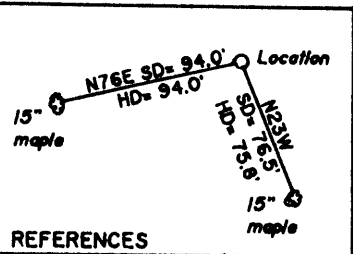
4,000

LONGITUDE 79-55-00 W

NOTE: No wells within 2,400'.



- A C. Johnson 3.2 ac.
- B Powers 0.2 ac.
- C Hartley 5.56 ac.
- D Squires 18.18 ac.
- E Harl 6.571 ac.
- F Hall 8.32 ac.
- G Hall 8.5 ac.
- H Lots
- I Chips 10.32 ac.

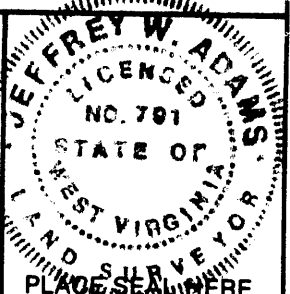


REFERENCES

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. 1  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION BM 1100' SW of Location; elev. 1595'

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) Jeffrey W. Adams  
 R.P.E. \_\_\_\_\_ L.L.S. 791



STATE OF WEST VIRGINIA  
 Division of Environmental Protection  
 OFFICE OF OIL AND GAS

DATE September 22, 19 93  
 OPERATOR'S WELL NO. A-1993  
 API WELL NO. \_\_\_\_\_

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

LOCATION: ELEVATION 1434 WATER SHED Cobun Creek  
 DISTRICT Clinton COUNTY Monongalia  
 QUADRANGLE Morgantown South 7 1/2' N15 S4

SURFACE OWNER Thomas J. Johnson Jr. et al ACREAGE 1264.3  
 OIL & GAS ROYALTY OWNER Thomas J. Johnson Jr. et al LEASE ACREAGE 1264  
 LEASE NO. 4691

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION Oriskany ESTIMATED DEPTH 8000  
 WELL OPERATOR Alamco, Inc. DESIGNATED AGENT Marty Perri  
 ADDRESS P.O. Box 1740, Clarksburg, WV 26302-1740 ADDRESS P.O. Box 1740, Clarksburg, WV 26302-1740

6-0 318  
deep well

FORM WW-6

COUNTY NAME PERMIT

NOV 22 1994

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: LUDWIG, ORA LEE ETAL. Operator Well No.: JOHNSON A-1993

LOCATION: Elevation: 1,434.00 Quadrangle: MORGANTOWN SOUTH

District: CLINTON County: MONONGALIA  
Latitude: 14350 Feet South of 39 Deg. 35Min. Sec.  
Longitude 4000 Feet West of 79 Deg. 55 Min. Sec.

Company: ALAMCO, INC.

200 W. MAIN ST., P.O. BOX 1740  
CLARKSBURG, WV 26302-1740

Agent: MARTY L. PERRI

Inspector: RANDAL MICK  
Permit Issued: 12/07/93  
Well work Commenced: 09/07/94  
Well work Completed: 10/05/94  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 7840  
Fresh water depths (ft) 81  
Salt water depths (ft) 1970

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8-5/8"	1273'	1273'	To surface 395 cu. ft.
4-1/2"	-	7782'	To surface 323 cu. ft.

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 62'-64'; 175'-180'

OPEN FLOW DATA

Producing formation Huntersville Chert Pay zone depth (ft) 7406'-7540'  
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow - Bbl/d  
 Final open flow 0 MCF/d Final open flow - Bbl/d  
 Time of open flow between initial and final tests 4 Hours  
 Static rock Pressure 2350 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.

For: ALAMCO, INC

By: [Signature]  
Date: 11/18/94

Formations: 0-1303' from Drillers Log Book - 1303' to TD from Gamma Ray Log

<u>Top</u>	<u>Bottom</u>	<u>Type</u>	<u>Water, Coal, Gas</u>
0	62	SD & SH	<u>Water:</u> 1/4" @ 81'
62	64	Coal	
64	175	SD & SH	1/2" Saltwater @ 1970'
175	180	Coal	<u>Coal:</u> 62-64'; 175 - 180'
180	622	SD & SH	
622	754	RR & SH	<u>Oil:</u> None
754	780	Little Lime	
780	793	RR & SH	<u>Gas Checks:</u>
793	964	Big Lime	
964	969	SH	1383' N/S
969	1008	Big Injun	1847' N/S
1008	1303	SD & SH	2692' N/S
1303	1341	SH	2910' N/S
1341	1403	Gantz/50'	4501' N/S
1403	1922	SD & SH	5312' N/S
1922	1955	4th Sand	6062' N/S
1955	1990	SH	6747' N/S
1990	2007	5th Sand	7408' Show
2007	2033	SH	
2033	2119	Bayard	
2119	2717	SH & SD	
2717	2746	Speechley	
2746	2875	SH	
2875	2900	Balltown	
2900	4610	SH & SD	
4610	6995	SH	
6995	7096	Tully	
7096	7290	SH	
7290	7388	Marcellus Shale	
7388	7403	Onondaga	
7403	7555	Huntersville Chert	
7555	7594	Needmore	
7594	7701	Oriskany	
7701	7840	Helderberg	

Treatment and Perforations:

Stimulation:

Huntersville Chert  
 (7406 - 7540') 27 Holes; WF-30 w/5%  
 HCl throughout  
 60,000# 20/40; 15,000# 80/100;  
 1250 BBLS total fluid

18248

REC-11  
Environmental

NOV 0 9 93

FORM WW-2B

061-1132  
Issued 12/07/93

Printing

Office of Oil & Gas

Page 3 of 12

Expires 12/07/95

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

Well Operator: ALAMCO, INC. 010 (975) (4) 485

2) Operator's Well Number A-1993 (JOHNSON) 3) Elevation: 1,434'

4) Well type: (a) OIL \_\_\_/ or GAS XX/  
(b) If Gas: Production XX/ Underground Storage \_\_\_/  
Deep XX/ Shallow \_\_\_/

5) Proposed Target Formation(s): ORISKANY 475

6) Proposed Total Depth: 8,000 feet

7) Approximate fresh water strata depths: HOLE DAMP @ 180'  
NONE

8) Approximate salt water depths: NO COAL REPORTED

9) Approximate coal seam depths: NO COAL REPORTED

10) Does land contain coal seams tributary to active mine? Yes \_\_\_/ No XX

11) Proposed Well Work: SEE ATTACHED

12) 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"	LS	32#	40'	40'	NONE
Fresh Water						
Coal						
Intermediate	8-5/8"	J-55	24#	1,260'	1,260'	As req. by 38 CSR 18-1
Production	4-1/2"	M-75	11.60	7,700'	7,700'	As req. by 38 CSR 38-1
Tubing						
Liners						

PACKERS: Kind NONE  
Sizes --  
Depths Set ==

078510/33

For Division of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP

Plat  WW-9  WW-2B  Bond Blanket TYPE  Agent

1) Date: September 23, 1993  
2) Operator's well number  
A-1993 (JOHNSON)  
3) API Well No: 47 - 061 - 1132  
State - County - Permit

Printing  
Office of Oil & Gas

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name Ora Lee J. Ludwig  
Address P. O. Box 676  
Morgantown, WV 26505  
(b) Name Thomas J. Johnson, Jr.  
Address P. O. Box 2248  
Morgantown, WV 26505  
(c) Name One Valley Bank, N.A. Trustee  
Address Pearl J. Frazier  
P. O. Box 698  
Morgantown, WV 26505  
6) Inspector Randal Mick  
Address 111 Blackshere Drive  
Mannington, WV 26582  
Telephone (304) - 986-3324

5) (a) Coal Operator:  
Name Same as Surface Owners  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name Same as Surface Owners  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name Same as Surface Owners  
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  
XX 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 11 on the above named parties, by:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- XX 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 ADAMCO, INC.  
By: Marty [Signature]  
Its: Manager, Land  
Address 200 West Main Street  
P. O. Box 1740  
Clarksburg, WV 26302-1740  
Telephone 304 623-6671

Subscribed and sworn before me this 23rd day of September, 1993

[Signature] Notary Public  
My commission expires December 9, 2002

RECEIVED

W. J. ...  
Environmental ...

NOV 0 1993

Planning  
Office of Oil & Gas

ATTACHMENT TO:  
FORM WW-2B

Page 4 of 12

WELL OPERATOR           ALAMCO, INC.  
OPERATOR WELL NO:     A-1993 (JOHNSON)  
FILE NUMBER            47-061- 1132

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11. Proposed Well Work:

Well A-1993 will be drilled to approximately 1,260' KB. The 8-5/8" casing will be set at approxiamtely 1,260' KB and then cemented to surface. The well will then be drilled to 7,700' KB and the 4-1/2" casing set at approximately 7,700' KB. The 4-1/2" casing will be cemented to 6,400' KB. The well will then be hydraulically fractured in the Oriskany Formation.

12. Plan for partial abandonment: