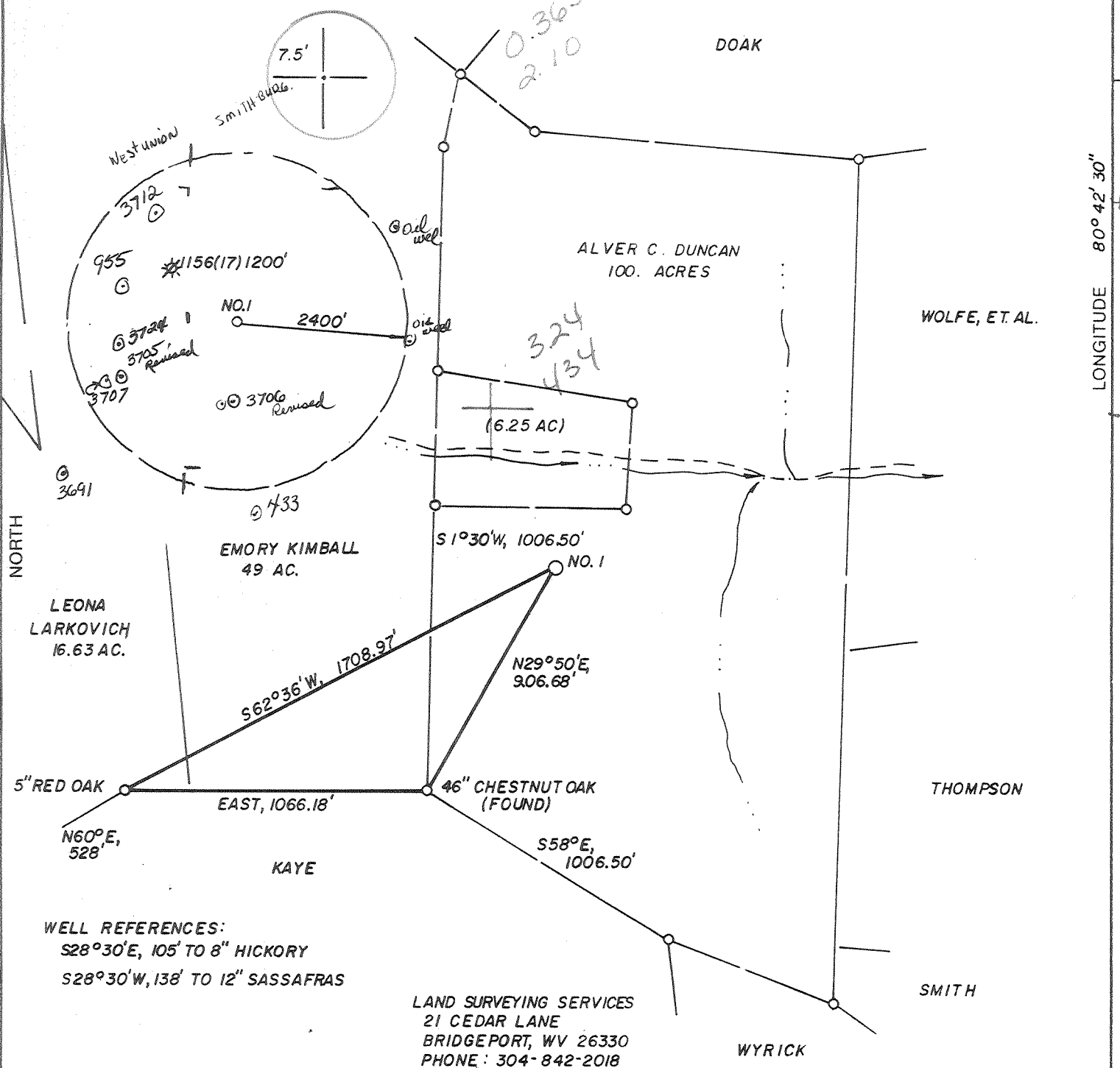


Jamie 7/27/89

11180' LATITUDE 39° 22' 30"



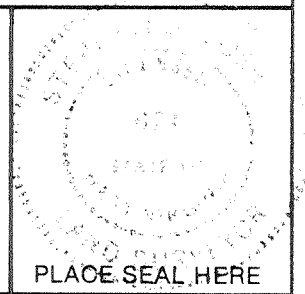
WELL REFERENCES:
 S28°30'E, 105' TO 8" HICKORY
 S28°30'W, 138' TO 12" SASSAFRAS

LAND SURVEYING SERVICES
 21 CEDAR LANE
 BRIDGEPORT, WV 26330
 PHONE: 304-842-2018

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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 1150' SE. OF LOC. AT ELEV. 1284'

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) _____
 R.P.E. _____ L.L.S. NO. 674
 STEPHEN D. LOSH



PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE MARCH 14, 19 89
 OPERATOR'S WELL NO. DUNCAN 1 (59)
 API WELL NO.

47 - 017 - 3737
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1111' WATER SHED LITTLE FLINT RUN
 DISTRICT GRANT 3 COUNTY DODDRIDGE
 QUADRANGLE SMITHBURG 7.5' 611 6224 Centerpoint WC

SURFACE OWNER ANGELINA DUNCAN ACREAGE 100.
 OIL & GAS ROYALTY OWNER ANGELINA DUNCAN LEASE ACREAGE 100.
 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) _____

JUL 28 1989

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION BENSON ESTIMATED DEPTH 5700'
 WELL OPERATOR Drilling Appalachians Corp. DESIGNATED AGENT Kenneth R. Mason
 ADDRESS P.O. Box 99, Alma, W.V. 26320 ADDRESS P.O. Box 99, Alma, W.V. 26320

6-6 Swiger (Flint Run) (097)

FORM WW-6 H.T. HALL 4/86/73

COUNTY NAME PERMIT

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

Well Operator's Report of Well Work

Farm name: DUNCAN, ANGELINA B. Operator Well No.: DUNCAN #1

LOCATION: Elevation: 1111.00 Quadrangle: SMITHBURG

District: GRANT County: DODDRIDGE
Latitude: 1925 Feet South of 39 Deg. 22Min. 30 Sec.
Longitude 11180 Feet West of 80 Deg. 42 Min. 30 Sec.

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

Agent: KENNETH R. MASON

Inspector: MIKE UNDERWOOD
Permit Issued: 07/27/89
Well work Commenced: JULY 29, 1989
Well work Completed: AUGUST 10, 1989
Verbal Plugging
Permission granted on: _____
Rotary Cable _____ Rig
Total Depth (feet) _____
Fresh water depths (ft) 80

Salt water depths (ft) NONE

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

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
8 5/8	1518	1518	to surface
4 1/2	-	5249	155 sks

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SEP 12 1989
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

SEP 15 1989

OPEN FLOW DATA

Producing formation BENSON SANDSTONE Pay zone depth (ft) 5144-50
Gas: Initial open flow SHOW MCF/d Oil: Initial open flow SHOW Bbl/d
Final open flow 412 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 30 Hours
Static rock Pressure 1450 psig (surface pressure) after 12 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: DRILLING APPALACHIAN CORP.

By: Kenneth R. Mason SEP 15 1989
Date: 9/15/89

GEOLOGICAL WELL RECORD DATA

PERMIT NUMBER: 47-017-3737

	TOP	BOTTOM	
SOIL	0	25	
BROKEN SAND	25	198	
SANDS AND SHALES	198	1095	
DUNKARD SAND	1095	1132	
1ST SALT SAND	1212	1290	
2ND SALT SAND	1395	1440	
3RD SALT SAND	1492	1530	
MAXON	1675	1675	
BIG LIME	2060	2105	
KEENER SAND	2140	2182	
BIG INJUN SAND	2285	2260	SHOW GAS and OIL
WEIR	2402	2496	
BEREA CAP	2577		
GANTZ SAND	2603	2621	
GORDON SAND	2814	2850	SHOW GAS
WARREN	3473	3522	
RILEY	4670	4707	SHOW GAS
BENSON	5132	5138	SHOW GAS
TOTAL DEPTH	5318		

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL TREATMENT SCHEDULE

Benson Sand 5144 - 5150 Perforated with 15 holes

Formation Break Down 3130 PSI

Hydraulic frac with Nitrogen assist
Average Treating Rate 20 barrels per min
500 barrels of gel treated water
300 sacks of 20/40 sand
50 sacks of 80/100 sand

Average Treating Pressure 2400 PSI

SEP 15 1989

9319

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

- 1) Well Operator: Drilling Appalachian Corporation 14425 (3) 610
- 2) Operator's Well Number: Duncan #1 3) Elevation: 1111'
- 4) Well type: (a) Oil / or Gas /
 (b) If Gas: Production / Underground Storage /
 Deep / Shallow /
- 5) Proposed Target Formation(s): Benson
- 6) Proposed Total Depth: 5400' feet
- 7) Approximate fresh water strata depths: 135'
- 8) Approximate salt water depths: 1300' 1694
- 9) Approximate coal seam depths: NA Possible Blossom @ 1179'
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 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	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4"	ERW	42#	150'	150' <i>CTS</i>	38 CSR 18-11.3
Fresh Water						38 CSR 18-11.22
Coal						
Intermediate	8 5/8"	ERW	23#	1400'	1400' <i>CTS</i>	38 CSR 18-11.3
Production	4 1/2"	ERW	10.5#	5400'	5400'	38 CSR 18-11.1
Tubing						
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

For Division of Oil and Gas Use Only

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

4359
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JUL 27 1989

1) Date: June 23, 1989
2) Operator's well number
Duncan #1
3) API Well No: 47 - 017 - 3737
State - County - Permit

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY
STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- | | |
|---|--|
| <p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Angelina B. Duncan</u>
Address <u>9749 Cunningham Road</u>
<u>Jacksonville, Florida 32216</u></p> <p>(b) Name _____
Address _____</p> <p>(c) Name _____
Address _____</p> | <p>5) (a) Coal Operator:</p> <p>Name _____
Address _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name _____
Address _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name _____
Address _____</p> |
| <p>6) Inspector _____
Address _____
Telephone (304)- _____</p> | |

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 Drilling Appalachian Corporation
By: Kenneth R. Mason
Its: President
Address P.O. Box 99, Alma, Wva. 26320
Telephone 304-758-4638



OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JAMES S. STEVENS, JR.
Department of Energy, Oil & Gas
322 70th St., SE, Charleston, WV 25304
My Commission Expires Aug. 31, 1998

Subscribed and sworn before me this 27th day of July, 19 89

My commission expires Aug 31, 1998 Notary Public