

9/4/85

CODE SEC 1/8 CARD PLOT 10,225
PLEASANTS CO BULL CREEK
WOOD CO.

LATITUDE 39°20'00"

LONGITUDE 81°15'00"

ERNIE C. DONAHUE
DB 763 PG 43

ERNIE C. DONAHUE
DB 786 PG 247

DB 777 PG 219
TM 30 PAR. "E"

CARL F. ELLIOTT
DB 512 PG 344

CARL F. ELLIOTT
DB 512 PG 344

H. CLIFTON & DARELL
L. WESTBROOK

2855
195W

NORTH
PRESENT MAGNETIC

Set stone in
old fen. cor.
30" chestnut
oak wit.

N 74°37'E - 945.25'
S 80°40'W - 1056'

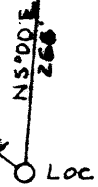
Point in road 16 Elm
bears S 80°40'W - 22'

S 15°18'E
515.6'

PERMIT NO
WOOD 720

R.P.
Power pole
N 9 18-568

R.P.
16" Elm
in fen cor.



2855
195W

FILE NO. BK 95 PG 96
DRAWING NO. _____
SCALE 1" = 400'
MINIMUM DEGREE OF
ACCURACY 1:200'
PROVEN SOURCE OF
ELEVATION Road Forks 2500'
South of location E1 731

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 REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF MINES.
(SIGNED) C. S. Valley Jr.
R.P.E. DLB 92

PLACE SEAL HERE

(+) DENOTES LOCATION OF
WELL ON UNITED STATES
TOPOGRAPHIC MAPS
FORM IV-B
(8-78)



DATE AUGUST 9, 1985
OPERATOR'S WELL NO. DONAHUE N#1
API WELL NO.
47-107-1378
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 623.61 WATER SHED CAMPBELL RUN OF BULL CREEK
DISTRICT WALKER 9 COUNTY WOOD
QUADRANGLE WILLOW ISLAND 686 073 5L9 Marietta
SURFACE OWNER ERNIE C. DONAHUE ACREAGE 33
OIL & GAS ROYALTY OWNER ERNIE C. DONAHUE LEASE ACREAGE 33
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 ___
TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 4400
WELL OPERATOR L.S. D. OIL & GAS CO. DESIGNATED AGENT PATRICK A. BRAKE
ADDRESS 2 Donahue Circle 459 ADDRESS 40 UPPER DRIVE
Callahan, WV 25510 BUCKHANNON WV 26201

SEP 16 1985

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Hitwell perforated Devonian shale 3235-3443 w/26 holes (.39) Select Fire. D/S frac w/750,000SCF N2 & 250 gal. 15% HCl Acid. Hitwell perf @ 3218-3233 w/25 holes, (.39) Select fire. D/S frac w/750,000 SCF N2 & 250 gal. 15% HCl acid. Set a Baker solid bridge plug @ 3180. Perfco perf Devonian Shale @ 2603-3014 w/30 holes, (.39) Select Fire. B.J. Titan frac w/750,000 SCF N2 & 500 gal. 15% HCl acid. Perfco per @ 2117-2202 w/23 holes, (.39) Select Fire. B.J. Titan frac w/750,000 SCF N2 & 500 gal 15% HCl acid. Perfco perf @ 1488-1792 w/22 holes (.39) Select Fire. B.J. Titan frac w/750,000 SCF N2 & 500 gal 15% HCl acid. Baker set & retrieved plugs per stage.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Clay			0	5	
Sand, Shale			5	870	
Coal			364	368	Coal 364-368
Sand, Shale			368	856	856-858
Coal			856	858	
Sand, Shale			858	988	
Lime			988	1060	
Sand, Shale			1060	3835 TD	
Log Tops ✓					
↓ Big Lime			896	986	
Berea			1334	1340	
Devonian Shale			1340	1340	
from nearby logs:					
		top thickness			
U O U	1240	1250			
low hole	2590	950			
Terra	3640				

(Attach separate sheets as necessary)

LSD Oil & Gas Company

Well Operator

By: Ernie Donohue

Date: March 14, 1986

Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



WR-35

APR 30 1986

State of West Virginia DEPARTMENT OF ENERGY Oil and Gas Division

Date March 14, 1986 Operator's Well No. LSD Donahue #1 Farm Donahue API No. 47-107-1378

WELL OPERATOR'S REPORT OF

MAY 28 1986

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil x / Gas / Liquid Injection / Waste Disposal / (If "Gas," Production / Underground Storage / Deep / Shallow)

LOCATION: Elevation: 693.6 Watershed Campbell's Run District: Walker County Wood Quadrangle Willow Island 7.5

COMPANY LSD Oil & Gas Company ADDRESS 2 Donahue Circle, Culloden WV 25510 DESIGNATED AGENT Ernie Donahue ADDRESS 2 Donahue Circle, Culloden, WV 25510 SURFACE OWNER Ernie Donahue ADDRESS 2 Donahue Circle, Culloden, WV 25510 MINERAL RIGHTS OWNER Ernie Donahue ADDRESS 2 Donahue Circle, Culloden, WV 25510 OIL AND GAS INSPECTOR FOR THIS WORK Robinson Rt. 1 #6 Mt Pleasant Estate, Mineral Wells WV. 26150 PERMIT ISSUED 8-29-85 DRILLING COMMENCED September 11, 1985 DRILLING COMPLETED September 26, 1985 IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Table with 4 columns: Casing & Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16, 11 3/4, 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 4400 feet Depth of completed well 3835 feet Rotary y / Cable Tools Water strata depth: Fresh feet; Salt feet Coal seam depths: 364-368 856-858 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 1488-3014 feet Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d Final open flow 198 Mcf/d Final open flow 7-9 Bbl/d Time of open flow between initial and final tests hours Static rock pressure 405 psig (surface measurement) after hours shut in (If applicable due to multiple completion--)

JUN 2 1986 (Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Hitwell perforated Devonian shale 3235-3443 w/26 holes (.39) Select Fire. D/S frac w/750,000SCF N2 & 250 gal. 15% HCl Acid. Hitwell perf @ 3218-3233 w/25 holes, (.39) Select fire. D/S frac w/750,000 SCF N2 & 250 gal. 15% HCl acid. Set a Baker solid bridge plug @ 3180. Perfco perf Devonian Shale @ 2603-3014 w/30 holes, (.39) Select Fire. B.J. Titan frac w/750,000 SCF N2 & 500 gal. 15% HCl acid. Perfco per @ 2117-2202 w/23 holes, (.39) Select Fire. B.J. Titan frac w/750,000 SCF N2 & 500 gal 15% HCl acid. Perfco perf @ 1488-1792 w/22 hole (.39) Select Fire. B.J. Titan frac w/750,000 SCF N2 & 500 gal 15% HCl acid. Baker set & retrieved plugs per stage.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Clay			0	5	
Sand, Shale			5	870	
Coal			364	368	Coal 364-368
Sand, Shale			368	856	856-858
Coal			856	858	
Sand, Shale			858	988	
Lime			988	1060	
Sand, Shale			1060	3835	
<u>Log Tops</u>					
Big Lime			896	986	
Berea			1334	1340	
Devonian Shale			1340	4400	

(Attach separate sheets as necessary)

LSD Oil & Gas Company

Well Operator

By: C. Donahue

Date: March 14, 1986

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



RECEIVED
SEP 6 1985

- 1) Date: August 29, 19 85
- 2) Operator's Well No. Donahue #1
- 3) API Well No. 47 -107-1378
State _____ County _____ Permit _____

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

- 4) WELL TYPE: A Oil / Gas
B (If "Gas", Production _____ / Underground storage _____ / Deep _____ / Shallow)
- 5) LOCATION: Elevation: 693.61 ft. / Watershed: Campbells Run
District: Walker / County: Wood / Quadrangle: _____
- 6) WELL OPERATOR L.S.D. Oil&Gas Co. CODE: _____ 7) DESIGNATED AGENT Patrick A. Brake
Address 2 Donahue Circle Address 40 Upper Drive
Culloden, W.V. 25510 Buckhannon, W.V. 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Glen P. Robinson 9) DRILLING CONTRACTOR: Name Gard Drilling
Address Rt. 1 #6 Mt. Pleasant Est. Address Bulaville-Addison Road
Mineral Wells, w.V. 26150 Gallipolis, Ohio 45631
- 10) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate
Plug off old formation _____ / Perforate new formation _____
Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Devonian Shale (401)
- 12) Estimated depth of completed well, 4400 feet
- 13) Approximate trata depths: Fresh, _____ feet; salt, _____ feet.
- 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No _____

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft.	New	Used	For drilling			Left in well
Conductor	11 3/4	H-40	42#		X	0-250	250	To Surface	Kinds By Rule 15.05
Fresh water	8 5/8	X-42	20-23#		X	1300	1300	To Surface	
Coal									Sizes
Intermediate	4 1/2	J-55	10 1/2#		X	4400	4400	150 sacks	By Rule 15.01
Production								or as needed	
Tubing									
Lin...									Perforations:
									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-107-1378

September 6 19 85
Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires September 6, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee	WCP	S&E	Other
<u>3000</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	

Money order # 55658
NOTE: Keep one copy of this permit posted at the drilling location.

[Signature]
Director, Division of Oil and Gas

File