

LATITUDE 39° 22' 30"
39° 25'

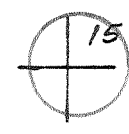
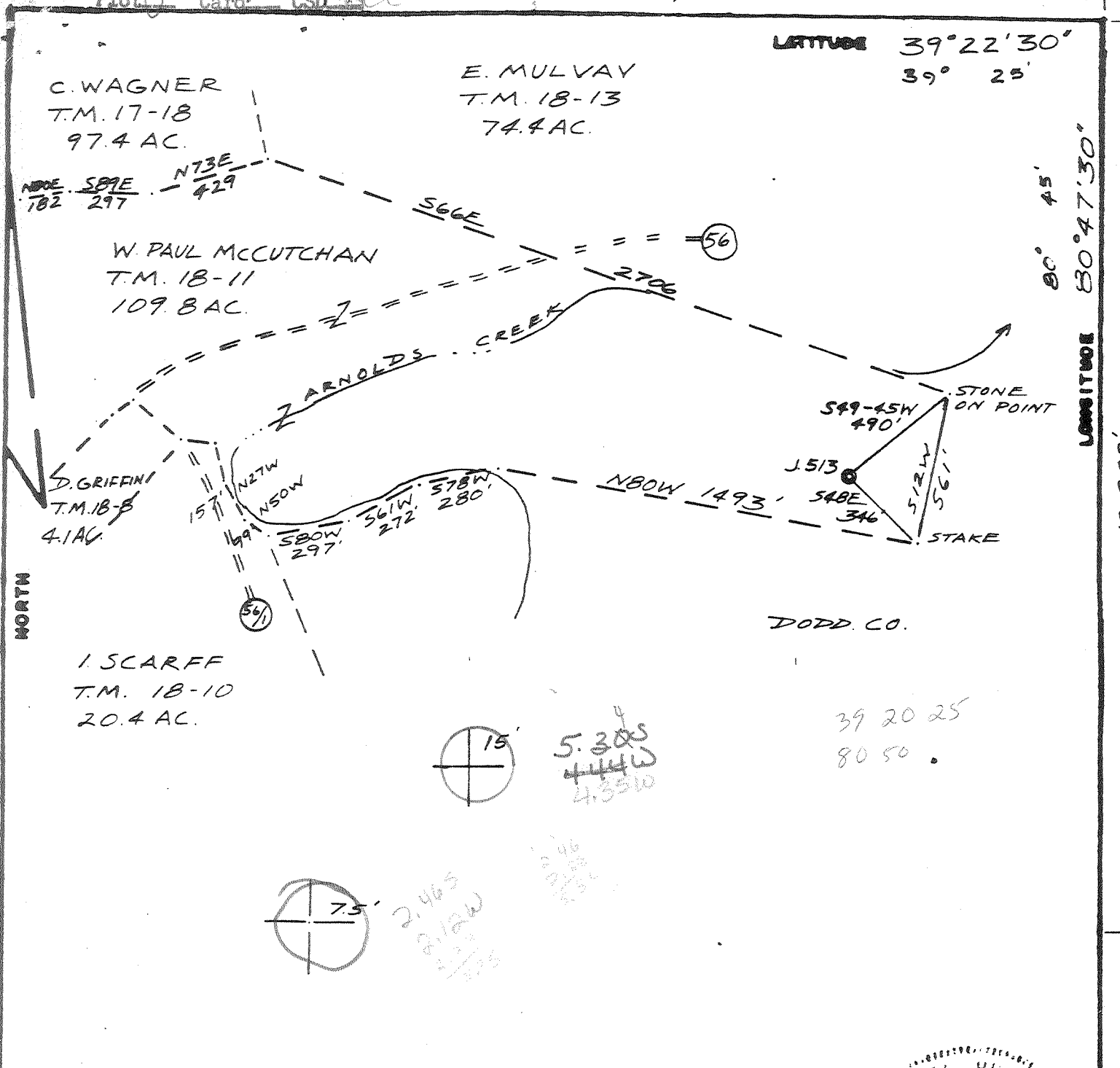
C. WAGNER
T.M. 17-18
97.4 AC.

E. MULVAY
T.M. 18-13
74.4 AC.

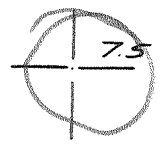
W. PAUL MCCUTCHAN
T.M. 18-11
109.8 AC.

D. GRIFFIN
T.M. 18-8
4.1 AC.

I. SCARFF
T.M. 18-10
20.4 AC.



5.305
444W
43310



2.463
812W
43310

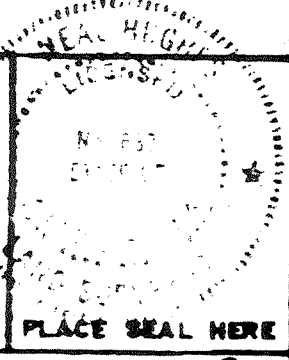
39 20 25
80 50

DODD CO.

LONGITUDE 80° 47' 30"
12,900'

FILE NO. JJ
DRAWING NO. 1
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION RD 750'

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 MINES.
(SIGNED) Neal Hughes
R.P.E. _____ L.L.S. 632



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
FORM IV-6
(8-78)



DATE JUNE 9, 1981
OPERATOR'S WELL NO J 513
API WELL NO. _____
47 - 017 3018
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 920' WATER SHED ARNOLDS CREEK
DISTRICT CENTRAL COUNTY DODDRIE
QUADRANGLE WEST UNION 7.5' x 15' EC
SURFACE OWNER W. PAUL MCCUTCHAN ACREAGE 109.8
OIL & GAS ROYALTY OWNER W. PAUL MCCUTCHAN (1/2) ET AL LEASE ACREAGE 109.8
LEASE NO. JJ1126 Rathleen Upton
PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUS OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

TUB AND JOBBING _____ CLEAN OUT AND REPLUG _____
TARGET FORMATION BRADON ESTIMATED DEPTH 5600
DESIGNATED AGENT Roger Rolston
ADDRESS P.O. Box 48 ADDRESS P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection Waste Disposal
(If "Gas", Production X / Underground storage / Deep / Shallow X)
LOCATION: Elevation: 920 Watershed: Arnolds Creek
District: West Union County: Doddridge Quadrangle: West Union 7.5'

WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT James R. Willett
Address P.O. Box 48 Address P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

PERMITTED WORK: Drill X / Convert / Drill deeper / Redrill / Fracture or stimulate X
Plug off old formation / Perforate new formation
Other physical change in well (specify)

PERMIT ISSUED ON 6/17, 19 81 OIL & GAS INSPECTOR FOR THIS WORK:
(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Stephen Casey
 , 19 Address Rt. # 2, Box 232-D
 Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Benson Depth feet
Depth of completed well, 5305 feet Rotary X Cable Tools
Water strata depth: Fresh, 390 feet; salt, 0 feet.
Coal seam depths: None Is coal being mined in the area? No
Work was commenced 9/19, 19 81, and completed 9/25, 19 81

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP 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		29	29	0 sks.	
Fresh water	8 5/8	ERW	23	X		954.70	954.70	210 sks.	Minds
Coal	8 5/8	ERW	23	X		954.70	954.70	210 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		490.8	490.8	150 sks.	Depths set
Tubing									
Liners									Perforations:
									Top Bottom
									4820 4822
									4400 4429

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4820-22 feet
Gas: Initial open flow, Mcf/d Oil: Initial open flow, Bbl/d
Combined Final open flow, 852 Mcf/d Final open flow, Bbl/d
Time of open flow between initial and final tests, 4 hours

Static rock pressure, 1500 psig (surface measurement) after 96 hours shut in
[If applicable due to multiple completion--]

Second producing formation Riley Pay zone depth 4400-29 feet
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 measurement) after hours shut in
Pf = Pwe X GLS
 $0 + (0.0075 + 4908) + 459.7 = 556.5$ $X = 53.35 \times 556.5 = 29689.3$ $= 0.0000337$ $Pf = 1500 \times 2.72$
 $0.0000337 (0.671) (4611) (0.9) = 1500 \times 2.72 \times 0.094 = 1500 \times 1.098$

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

Benson: Perforations: 4820-22 (4 shots)

Fracturing: 100 sks. 80/100 sand: 400 sks. 20/40 sand; 500 Bbls. fluid.

Riley: Perforations: 4400-29 (9 shots)

Fracturing: 100 sks. 80/100 sand: 400 sks. 20/40 sand; 500 gals. Acid:
500 Bbls. fluid.

WELL 100

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Sand Rock			0	5	Hole Damp @ 390'
Red rock, shale & sand			5	29	
Red rock and sand			29	110	
Sand and shale			110	140	Gas ck @ 2079 No show
Red rock and shale			140	150	Gas ck @ 2263 No show
Sand, shale and red rock			150	245	
Sand and red rock			245	310	Gas ck @ 2572 28/10-1/2" w/water
Gray sand & red rock			310	360	9,955 cu.ft.
Gray sand & shale			360	385	Gas ck @ 4463 8/10-1/2" w/water
White sand & shale			385	650	5650 cu.ft.
Red rock, sand & shale			650	1614	Gas ck @ 4993 10/10-1/2" w/water
Gray shale			1614	1750	5955 cu.ft.
Little lime			1750	1775	
Blue Monday			1775	1785	
Big Lime			1785	1845	Gas ck @ 5120 20/10-2" w/water
Injun			1845	1975	8,419 cu.ft.
Squaw			1975	2005	
Sand & shale			2005	4400	
Riley			4400	4429	
Sand & shale			4429	4455	
Sand & shale			4455	4815	
Benson			4815	4822	
Sand & shale			4822	5120	
Alexander			5120	5165	
Sand & shale			5165	5305	

TD

(Attach separate sheets as complete as necessary.)

J & J Enterprises, Inc.

Well Operator

By

Peter Battles

Its

Geologist

NOTE: Regulation 2.02(f) 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."

08-78J

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-513
API Well No. 47-017-3018
State County Permit

TYPE: Oil / Gas /
(If "Gas", Production / Underground storage / Deep / Shallow /)
Elevation: 920 Watershed: Arnolds Creek
District: West Union County: Doddridge Quadrangle: West Union 7.5'
~~Centerville~~ ~~Tyler~~

OPERATOR J & J Enterprises, Inc.
Address P.O. Box 48
Buckhannon, WV. 26201

DESIGNATED AGENT Roger Rolston
Address P.O. Box 48
Buckhannon, WV 26201

OIL & GAS
PROPERTY OWNER Wm. McCutchan/Kathleen Upton
Address 300 Wood St. /C/O W.W.Upton
West Union, / 4307 Virginia Ave. S.E.

COAL OPERATOR None
Address _____

Acreage WV 26456 /Charleston, WV 25304
109.8

COAL OWNER(S) WITH DECLARATION ON RECORD:

PROPERTY OWNER Wm Paul McCutchan
Address 300 Wood St.
West Union, WV 26456
Acreage 109.8

Name Wm. Paul McCutchan
Address 300 Wood St.
West Union, WV 26456

BUYER (IF MADE) TO:
Unknown

Name _____
Address _____

Address _____

COAL LESSEE WITH DECLARATION ON RECORD:
Name None

OIL & GAS INSPECTOR TO BE NOTIFIED
Phillip L. Tracy
Address Rt. 23
Alma, WV 26320

Address _____

RECEIVED
JUN 17 1981

OIL & GAS DIVISION
DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease / other contract / dated 3/12, 1981, to the undersigned well operator from Kathleen Upton
[said deed, lease, or other contract has been recorded:]

Recorded on /12 , 19 81, in the office of the Clerk of the County Commission of Tyler County, West Virginia, in Oil & Gas lease Book 119 at page 609. A permit is requested as follows:

PROPOSED WORK: Drill / Drill deeper / Redrill / Fracture or stimulate /
Plug off old formation / Perforate new formation /
Other physical change in well (specify) _____

Explained as shown on the work order on the reverse side hereof.

The above named well operator, coal owner(s), and coal lessee are hereby notified that any notices they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL PHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION
100 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 345-3292

BLANKET BOND

J & J Enterprises, Inc.
Well Operator
By Peter Battles
Peter Battles
Geologist

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY: ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN)

S.W. Jack Drilling Company

Address

P.O. Box 48

Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION,

Benson

Estimated depth of completed well, 5600 feet

Rotary Cable tools

Approximate water strata depths: Fresh, 240 feet; salt, 0 feet.

Approximate coal seam depths: None Is coal being mined in the area? Yes No

CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight, New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, Perforations: Top, Bottom)

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and this permit must be posted at the well site.

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 2-23-82.

[Signature] Deputy Director - Oil & Gas Division

Permit is to be issued within fifteen (15) days of receipt thereof.

W A I V E R

The undersigned coal operator / owner / lessee of the coal under this well has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed, if done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

By [Signature]

Its