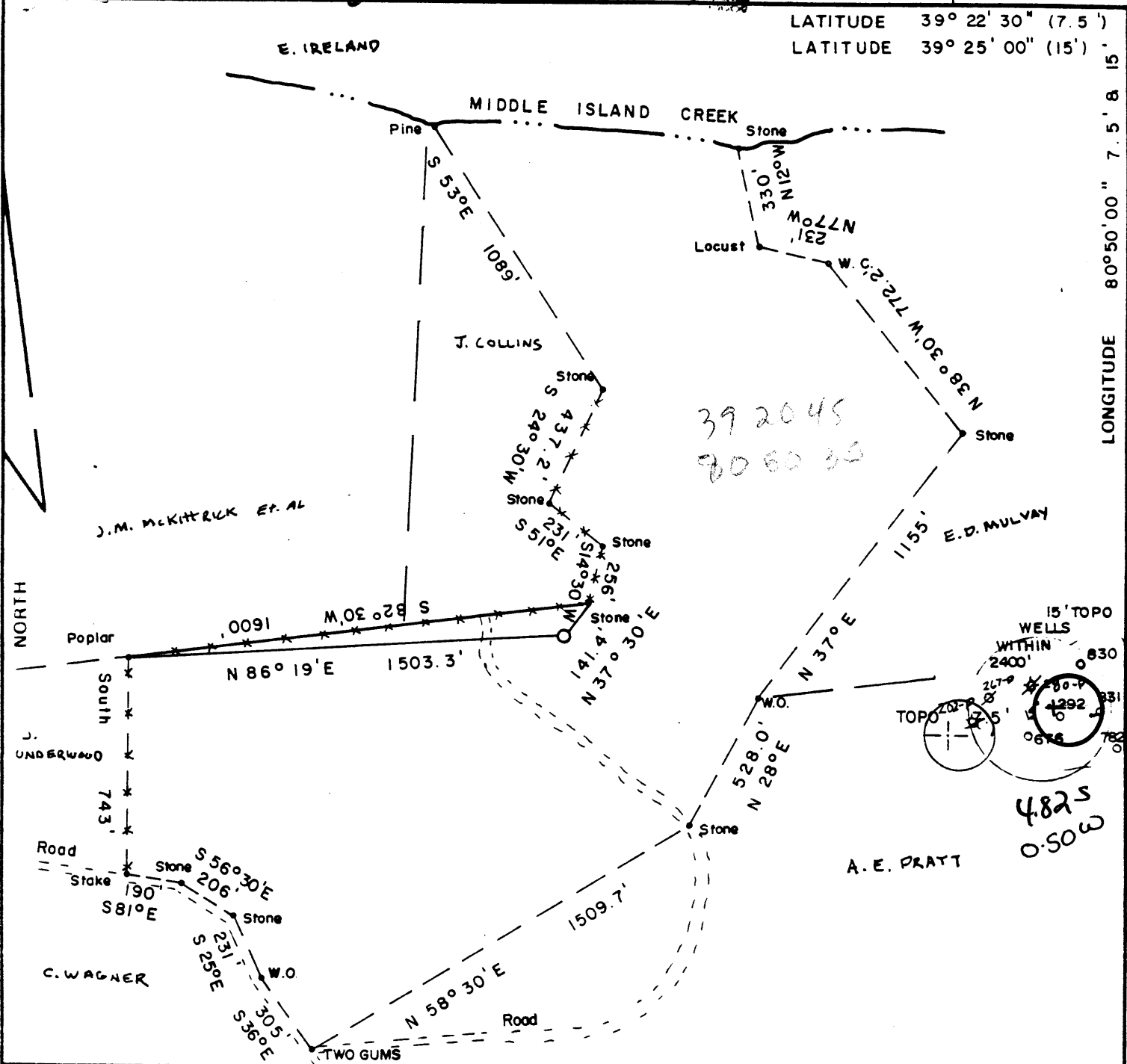


Plot Card CSD

2400'

LATITUDE 39° 22' 30" (7.5')
 LATITUDE 39° 25' 00" (15')



LONGITUDE 80° 50' 00" 7.5' & 15' 10, 150'

FILE NO. 81-894-G
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION BM 790 - 4300'
EAST OF SITE

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) _____
 R.P.E. _____ L.L.S. _____

PLACE SEAL HERE

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



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE APRIL 13, 1982
 OPERATOR'S WELL NO. J-664
 API WELL NO. _____
47-095-0992
 STATE COUNTY PERMIT

WELL TYPE OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS," PRODUCTION X STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION ELEVATION 960 WATER SHED MIDDLE ISLAND CREEK
 DISTRICT CENTERVILLE COUNTY TYLER
 QUADRANGLE WEST UNION +15' C
 SURFACE OWNER R. MCKITTRICK, Heirs & C. WAGNER ACREAGE 18 + 79 = 97
 OIL & GAS ROYALTY OWNER NORMA LONG & JAMES F. DOAN LEASE ACREAGE 97
 LEASE NO. JJ-1103
 PROPOSED WORK DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
 STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW
 FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION BEASON ESTIMATED DEPTH 4800
 WELL OPERATOR J & J ENTERPRISES INC DESIGNATED AGENT HARRY L. BARNETT
 ADDRESS BOX 48 ADDRESS BOX 48
BUCHANNON, W. VA. 26201 BUCHANNON, W. VA. 26201

MAY 3 1982

RECEIVED

JUN 30 1982

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

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

WELL OPERATOR'S REPORT
OF
DRILLING, FRACURING 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: 960 Watershed: Middle Island Creek
District: Centerville County: Tyler Quadrangle: West Union

WELL OPERATOR: J&J Enterprises, Inc. DESIGNATED AGENT: H.L. Barnett
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 4/12, 1982

OIL & GAS INSPECTOR FOR THIS WORK:

(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED

Name: Phillip L. Tracy
Address: Rt. # 23
Alma, WV 26320

GEOLOGICAL TARGET FORMATION: Benson Depth 4757-4760 feet

Depth of completed well, 5014 feet Rotary X / Cable Tools ___

Water strata depth: Fresh, 68 feet; salt, 0 feet.

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

Work was commenced 5/10, 1982, and completed 5/15, 1982

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		17	0	0 sks.	Minds
Fresh water	8 5/8	ERW	23	x		1049.45	1049.45	250 sks.	
Coal	8 5/8	ERW	23	x		1049.45	1049.45	250 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	x		4802.11	4802.11	200 sks.	Depths set
Tubing									
Liners									Perforations:
									Top Bottom
									4345 4348
									4372 4374
									4757 4760

OPEN FLOW DATA

Producing formation: Benson Pay zone depth 4757-60 feet

Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Combined Final open flow, 696 Mcf/d Final open flow, ___ Bbl/d

Time of open flow between initial and final tests, 4 hours

Static rock pressure, 1525 psig (surface measurement) after 96 hours shut in

(If applicable due to multiple completion--)

Second producing formation: Riley Pay zone depth 4372-74 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

$f=P_w \times XGLS$
 $50+(0.0075 \times 4802) +559.7=556$ $X=53.35 \times 556 =29647$ $=0.0000337$ $P_f=1525 \times 2.72 (0.0000337) (0.685)$
 $553) (0.5) =1525 \times 2.72^{0.094} =1525 \times 1.098$

JUL 1 1982

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

Benson: Perforations: 4757-60 (11 holes)

Fracturing: 10,000 lbs. 80/100 sand: 40,000 lbs. 20/40 sand: 542 Bbls. fluid.

Riley: Perforations: 4345-48 (6 holes) 4372-74 (4 holes)

Fracturing: 10,000 lbs. 80/100 sand: 40,000 lbs. 20/40 sand: 527 Bbls. fluid.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Fill			0	43	
Shale, red rock, sand & shale			43	181	1/2" stream @ 68'
Red rock & sandy shale			181	305	
Sand & sandy shale			305	494	Gas ck @ 2007 8/10-2" w/water
Sand & Lime			494	810	119,000 cu.ft.
Red rock, sandy shale & sand			810	1017	
Sandy shale & sand			1017	1045	Gas ck @ 2521 6/10-2" w/water
Sandy shale & sand			1045	1195	103,000 cu.ft.
Shale & sand			1195	1206	
Sandy shale & sand			1206	1285	Gas ck @ 3034 6/10-2" w/water
Shale & sand			1285	1302	103,000 cu.ft.
Sandy shale & sand			1302	1390	Gas ck @ 3507 2/10-2" w/water
Shale, sandy shale & sand			1390	1500	60,000 cu.ft.
Sandy shale & sand			1500	1720	
Sandy shale, Big Lime & Injun			1720	1910	Gas ck @ 4020 5/10-2" w/water
Sandy shale & sand			1910	2185	94,000 cu.ft.
Sandy shale & sand			2185	2261	
Sandy shale			2261	2325	Gas ck @ 4503 5/10-2" w/water
Sand & sandy shale			2325	3265	94,000 cu.ft.
Sandy shale			3265	4345	
Riley			4345	4348	Gas ck @ 4728 5/10-2" w/water
Sandy shale			4348	4757	94,000 cu.ft.
Benson			4757	4760	
Gray shale			4760	5014 TD	Gas ck @ T..D. 6/10-2" w/water
					103,000 cu.ft.

(Attach separate sheets to complete as necessary)

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