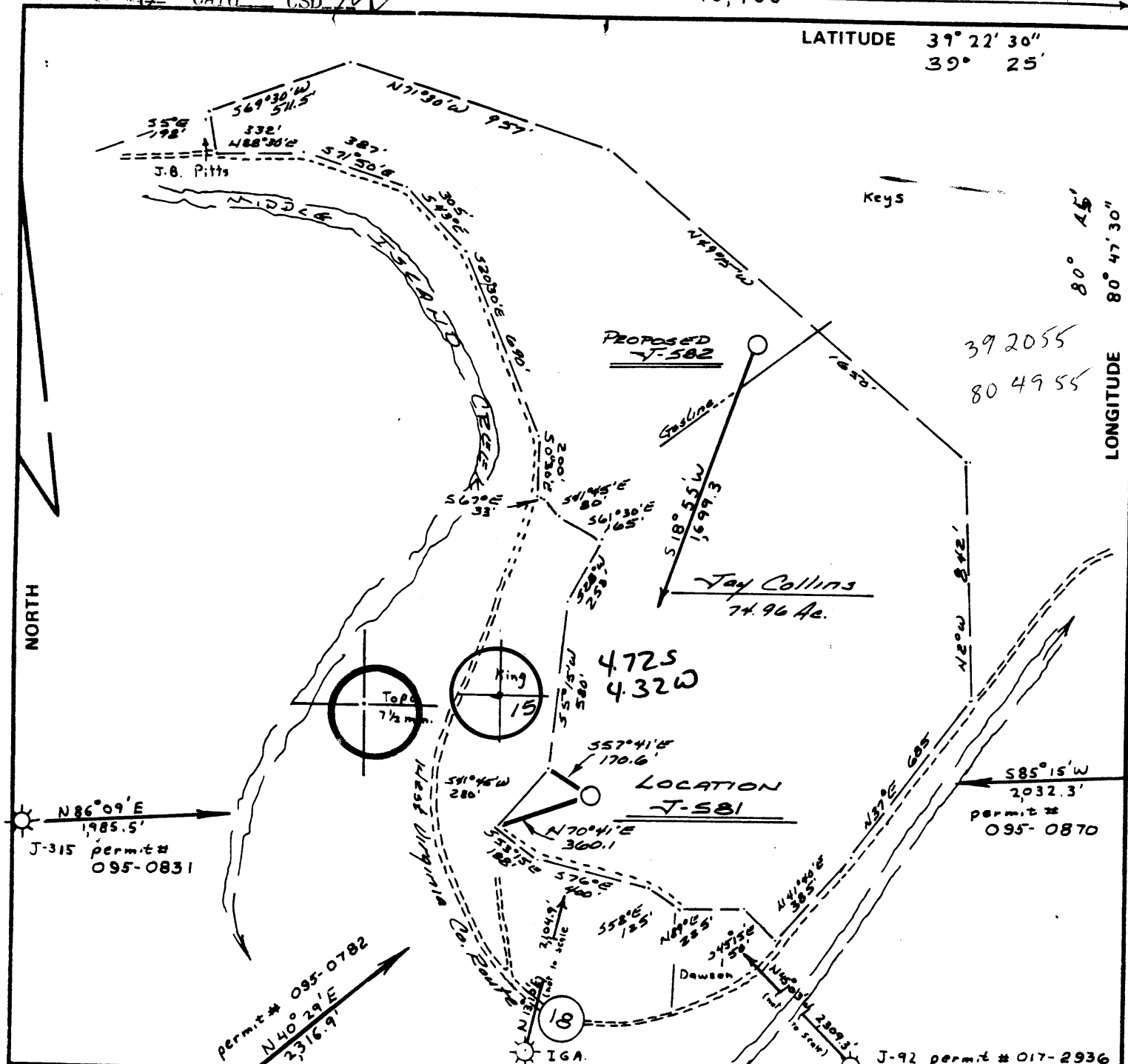


LATITUDE 39° 22' 30"
39° 25'

LONGITUDE 80° 45'
80° 47' 30"



FILE NO. 346.01
 DRAWING NO. 81-43
 SCALE J-167 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION B.M. 790
SE of Location

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) Lufford J. Ostrowski
 R.P.E. _____ L.L.S. 555

PLACE SEAL HERE

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



DATE 6 October, 19 81
 OPERATOR'S WELL NO. J-581
 API WELL NO. _____
47 - 095 - 0955
 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 883 WATER SHED Middle Island Creek
 DISTRICT Centerville COUNTY Tyler
 QUADRANGLE West Union 15' EC
 SURFACE OWNER Jay & Mary Collins ACREAGE 74.96
 OIL & GAS ROYALTY OWNER Jay Collins 1/4, S.P. Smith Hrs, J.J. Hickman Hrs LEASE ACREAGE 74.96
 LEASE NO. J+J-1102
 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 ALEXANDER ESTIMATED DEPTH 5250
 WELL OPERATOR T+T Enterprises, Inc. DESIGNATED AGENT James B. Willet
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48
Buckhannon, W. Va. 26201 Buckhannon, W. Va. 26201

OCT 22 1981

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: 883 Watershed: Middle Island Creek
District: Centerville County: Tyler 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 10/7, 1981 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: Alexander Depth feet
Depth of completed well, 5279 feet Rotary x / Cable Tools
Water strata depth: Fresh, 100 feet; salt, 0 feet.
Coal seam depths: None Is coal being mined in the area? NO
Work was commenced 10/16, 1981, and completed 10/16, 1981

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	0	0 sks.	Kinds
Fresh water	8 5/8	ERW	23	x		1094.40	1094.40	255 sks.	
Coal	8 5/8	ERW	23	x		1094.40	1094.40	255 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	x		4877.80	4877.80	175 sks.	Deaths set
Tubing									
Liners									Perforations:
									Top Bottom
									4370 4401
									4785 4789

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OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4785-89 feet
Gas: Initial open flow, Mcf/d Oil: Initial open flow, Bbl/d
Combined Final open flow, 622 Mcf/d Final open flow, Bbl/d
Time of open flow between initial and final tests, 4 hours
Static rock pressure, 1550 psig (surface measurement) after 96 hours shut in

[If applicable due to multiple completion--]
Second producing formation Riley Pay zone depth 4370-4401 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

Bottom Hole Pressure Static rock pressure, psig (surface measurement) after hours shut in

Pf=PweXGLS
Pw=1550 G=0.676 L=4578 S=0.9 t=60 + (0.0075 x 459.7 = 556.3 X=29672 =0.0000337
Pf=1550 x 2.72 (0.0000336) (0.676) (4578) (0.9) = 1550 x 2.72 0.094 = 1550 x 1.098

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

Benson: Perforations: 4785-89 (13 holes)

Fracturing: 100 sks. 80/100 sand: 500 sks. 20/40 sand: 500 gal. Acid.
605 Bbls. fluid.

Riley: Perforations: 4370-4401 (12 hoels)

Fracturing: 100 sks. 80/100 sand: 300 sks. 20/40 sand: 500 lbs. cid:
531 Bbls. fluid.

WELL 103

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Clay & shale			0	3	
Sand & shale			3	30	
Sand & shale			30	50	1/2" stream @ 100'
Sand & shale			50	170	
Sand & shale			170	260	Gas ck @ 1958 96/10 -2" w/water 413,000 cu.ft.
Shale & red rock			260	350	
White sand			350	460	Gas ck @ 2207 62/10-2" w/water 332,000 cu.ft.
Gray sand			460	510	
Lime			510	525	Gas ck @ 2270 74/10-2" w/water 363,000 cu.ft.
Sand & gray shale			525	630	
Red rock, sand and shale			630	740	Gas ck @ 4411 50/10-2" w/water 298,000 cu.ft.
Gray sand			740	755	
Sand, shale & red rock			55	820	Gas ck @ 4659 50/10-2" w/water 298,000 cu.ft.
Sand & shale			820	1745	
Big Lime			1745	1845	Gas ck @ 4815 60/10-2" w/water 327,000 cu.ft.
Big Injun			1845	1930	
Squaw			1930	1948	Gas ck @ 5279 52/10-2" w/water 304,000 cu.ft.
Sand & shale			1948	2075	
Weir			2075	2190	
Sand & shale			2190	2200	
Gantz			2200	2235	
Berea			2235	2240	
Sand & shale			2240	4370	
Riley			4370	4401	
Sand & shale			4401	4785	
Benson			4785	4810	
Sand & shale			4810	5279	
				T.D.	

(Attach separate sheets as complete as necessary.)

J & J Enterprises, Inc.

Well Operator

By

Peter Battles
Peter Battles Geologist

Its

NOTE: Regulation 2.32(d) 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."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-581

API Well No. 47-095-0955
State County Perm

WELL TYPE: Oil / Gas /
(If "Gas", Production / Underground storage / Deep / Shallow /)

LOCATION: Elevation: 883 Watershed: Middle Island Creek
District: Centerville County: Tyler Quadrangle: West Union 7.5'

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

DESIGNATED AGENT James R. Willet
Address P. O. Box 48
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER Jay & Mary Collins
Address 180 Collins Drive
Follansbee WV 26037

COAL OPERATOR None
Address:

ACREAGE 74.96
SURFACE OWNER Jay & Mary Collins
Address 180 Collins Drive
Follansbee, WV 26037
ACREAGE 74.96

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name Jay & Mary Collins
Address 180 Collins Drive
Follansbee, WV 26037

FIELD SALE (IF MADE) TO:
Name Unknown
Address:

Name:
Address:

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Phillip L. Tracy
Address Rt. #3
Alma, WV 26320

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address:

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OCT 7 1981

OIL AND GAS DIVISION
WV DEPARTMENT 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 March 12, 1981, to the undersigned well operator from Petro-Enterprises, Inc.

[If said deed, lease, or other contract has been recorded;]

Recorded on March 28, 1981, in the office of the Clerk of the County Commission of Tyler County, West Virginia, in Deed Book 119 at page 602. 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) _____

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection 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 on or 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
GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

J & J Enterprises, Inc.
Well Operator

By Peter Battles
Its 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 Co.

Address P. O. Box 48
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5250 feet Rotary X / Cable tools /
Approximate water strata depths: Fresh, 275 feet; salt, 1350 feet.
Approximate coal seam depths: 780 Is coal being mined in the area? Yes / No

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		30	0	0 sks	Kinds
Fresh water	8 ⁵ / ₈	ERW	23	X		1400	1400	To surface	
Coal	8 ⁵ / ₈	ERW	23	X		1400	1400	To surface	Sizes
Intermediate									
Production Tubing	4 ¹ / ₂	J-55	10.5	X		5200	5200	350 sks	Depths set
Liners									Perforations:
									Top Bot

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 drilling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well if this permit is posted at the well site and is noted as such on the Form IV-2 filed in connection therewith.

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 6-9-82.

[Signature]
Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the 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 location 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 to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: , 19

By
Its