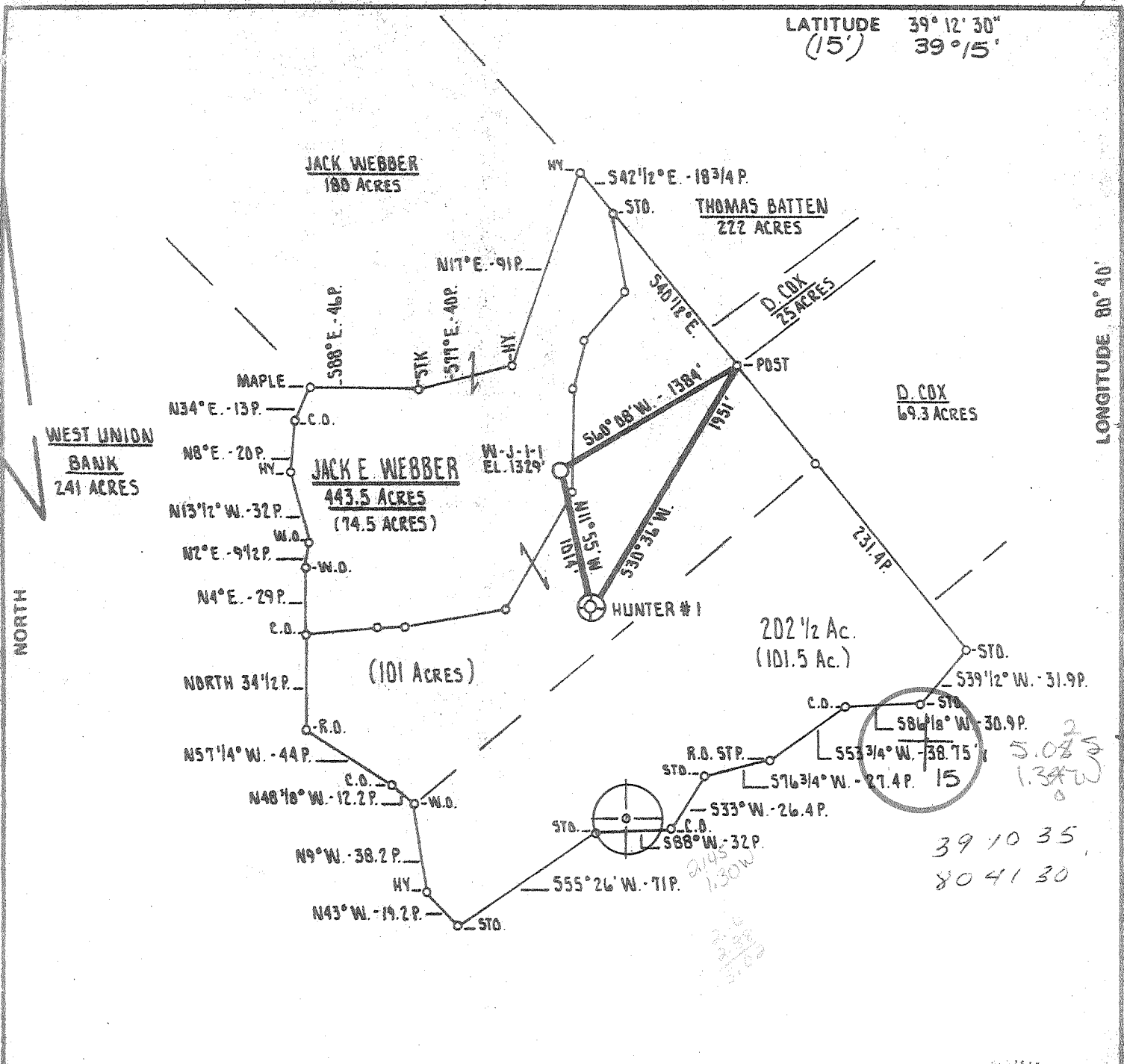


10/12/79

LATITUDE 39° 12' 30"
(15') 39° 15'

LONGITUDE 80° 40'



FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200
PROVEN SOURCE OF ELEVATION J. & J. ENTERPRISES, INC.
WELL # K-510-1 ELEVATION 932.0'

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) Daniel L. Wheeler
R.P.E. _____ L.L.S. 530

PLACE SEAL HERE

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



DATE OCTOBER 9th 19 79
OPERATOR'S WELL NO. 221 (33-2-4)
API WELL NO. _____
47 - 017 - 2506
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 1329' WATER SHED BATTEN RUN
DISTRICT NEW MILTON COUNTY DODDRIDGE
QUADRANGLE NEW MILTON 7.5', VADIS 15'
SURFACE OWNER HAROLD J. HASTINGS ACREAGE 74.5 Ac.
OIL & GAS ROYALTY OWNER JACK WEBBER LEASE ACREAGE 74.5 Ac.
LEASE NO. 33-2-4
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 5150' - 5850'
WELL OPERATOR J. & J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT
ADDRESS P.O. BOX 48 ADDRESS P.O. BOX 48
BUCKHANNON, WEST VIRGINIA 26201 BUCKHANNON, WEST VIRGINIA 26201
OCT 25 1979 (307)

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

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

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

LOCATION: Elevation: 1329 Watershed: Batten Run
District: New Milton County: Dodd Quadrangle: New Milton 7 1/2

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 2620

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

PERMIT ISSUED ON 10-12, 19 79 OIL & GAS INSPECTOR FOR THIS WORK:
Name Paul Garrett
(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Address 321 Beech St.
Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Alexander Depth 5654 feet
Depth of completed well, 5883 feet Rotary / Cable Tools
Water strata depth: Fresh, 180 feet; salt, 1885 feet.
Coal seam depths: None Is coal being mined in the area: NO
Work was commenced 1-27, 19 80, and completed 2-4, 19 80

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 1	3/4	H-40	42	X		30	0	0 Sks.	Kinds None
Fresh water	8 5/8	ERW	23	X		1602	1602	400 Sks	
Coal	8 5/8	ERW	23	X		1602	1602	400 Sks	Sizes
Intermediate									
Production 4	1/2	J-55	10.5	X		5748	5748	550 Sks	Depth set
Tubing									
Liners									Perforations:
									3822' 4033'
									4922' 4926'
									5380' 5380'
									5670' 5680'

MAR 18 1980
OIL & GAS DIVISION
DEPT. OF MINES

OPEN FLOW DATA

Producing formation Alexander & Leopold Pay zone depth 5380-82
Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Bbl/d
Combined Final open flow, 220 Mcf/d Final open flow, _____ Bbl/d
Time of open flow between initial and final tests, 3 hours
Static rock pressure, 1450 psig (surface measurement) after 80 hours shut in
[If applicable due to multiple completion--]
Second producing formation Riley & Balltown Pay zone depth 3822'-4033'
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

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

Alexander-Perforations: 5670'-80' (21 Holes)
 Fracturing: 500 Gal Acid: 30,000 lbs. Sand 80/100 wire mesh;
 30,000 lbs. Sand 20/40 wire mesh: 740 Bbls Fluid.

Leopold & Riley-Perforations: 5380'-82' (4 Holes) 4922'-26' (8 Holes)
 Fracturing: 500 Gal Acid: 10,000 lbs. Sand 80/100 wire mesh;
 27,000 lbs. Sand 20/40 wire mesh: 524 Bbls Fluid.

Balltown-Perforations: 3822-28' (8 Holes) 4031-33 (4 Holes)
 Fracturing: 500 Gal. Acid: 10,000 lbs Sand 80/100 wire mesh.
 30,000 lbs. Sand 20/40 wire mesh: 453 Bbls Fluid.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	REMARKS Including indication of all fractures and salt water, seal, etc. and gas
Clay			0	10	
Shale & Red Rock			10	45	
Sand			45	75	
Shale & Red Rock			75	310	1" Stream water @ 180
Red Rock			310	450	
Shale			450	575	
Sand			575	620	
Shale & Red Rock			620	855	
Sand			855	945	
Shale			945	1105	
Sand			1105	1135	
Shale & Red Rock			1135	1250	
Shale			1250	1320	
Shale & Red Rock			1320	1400	
Shale			1400	1880	
Sand			1880	1950	1/2" stream water @ 1920'
Shale			1950	2220	
Sand			2220	2450	
Big Lime			2450	2520	
Big Injun			2520	2594	
Shale			2594	2710	
Sand			2710	2815	
Shale			2815	2895'	
Sand			2895	2925	
Shale			2925	3440	
Sand			3440	3475	
Shale			3475	3800	
Balltown			3800	4038	
Sand & Shale			4038	4225	
Shale			4225	4580	
Sand & Shale			4580	4910	
Riley			4910	4952	
Sand & Shale			4952	5270	

(Attach separate sheets as complete as necessary.)

J & J Enterprises, Inc.

Operator

Peter Battles
Geologist

NOTE: Regulation 8.02.1 provides as follows:
 "The term 'log' or 'well log' shall mean a systematic, detailed geological record of all formations, including seal, encountered in the drilling of a well."

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Including indication of gas, oil, carbon and salt water, etc., etc.
Benson Sand & Shale			5270	5274	
Alexander			5274	5654	
<u>Shale</u>			5654	5738	
			5738	5883	T.D. 5883 Gas 2/10 thru 2" w/water

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J & J-2-#1
API Well No. 47 - 017 - 2506
State County Permit

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

LOCATION: Elevation: 1329' Watershed: Batten Run
District: New Milton County: Doddridge Quadrangle: New Milton 7 1/2

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

DESIGNATED AGENT H. L. Barnett
Address P. O. Box 48
Buckhannon, W. Va. 26201

OIL & GAS ROYALTY OWNER Jack Webber
Address Route 2
West Union, W. Va. 26456

COAL OPERATOR None
Address _____

ACREAGE 74.5
SURFACE OWNER Harold J. Hastings
Address 6221 Springhill Court
Greenbelt, Maryland 20770

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name None
Address _____
Name _____
Address _____

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

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address _____
RECEIVED
OCT 12 1979

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Paul Garrett
Address 321 Beech Street
Clarksburg, W. Va. 26301

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 March 26, 1974, to the undersigned well operator from Jack Webber

[If said deed, lease, or other contract has been recorded:]
Recorded on March 26, 1974, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas ^{Lease} Book 88 at page 462. 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
1616 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

BLANKET BOND

J & J ENTERPRISES, INC.
Well Operator
By H. L. Barnett
H. L. BARNETT DESIGNATED AGENT
Its _____

[08-78]

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, W. Va. 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5850 feet Rotary X / Cable tools /

Approximate water strata depths: Fresh, 1200 feet; salt, 0 feet.

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

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	30		Kinds
Fresh water	8 5/8	ERW	23	X		1550	1550	375	
Coal									Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		5800	5800	320	Depths set
Tubing									
Liners									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 drilling 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 is noted as such on the Form IV-2 filed in connection therewith.

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 6-12-80.

[Signature]

Deputy Director - Oil & Gas Division
This permit shall be issued 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 _____