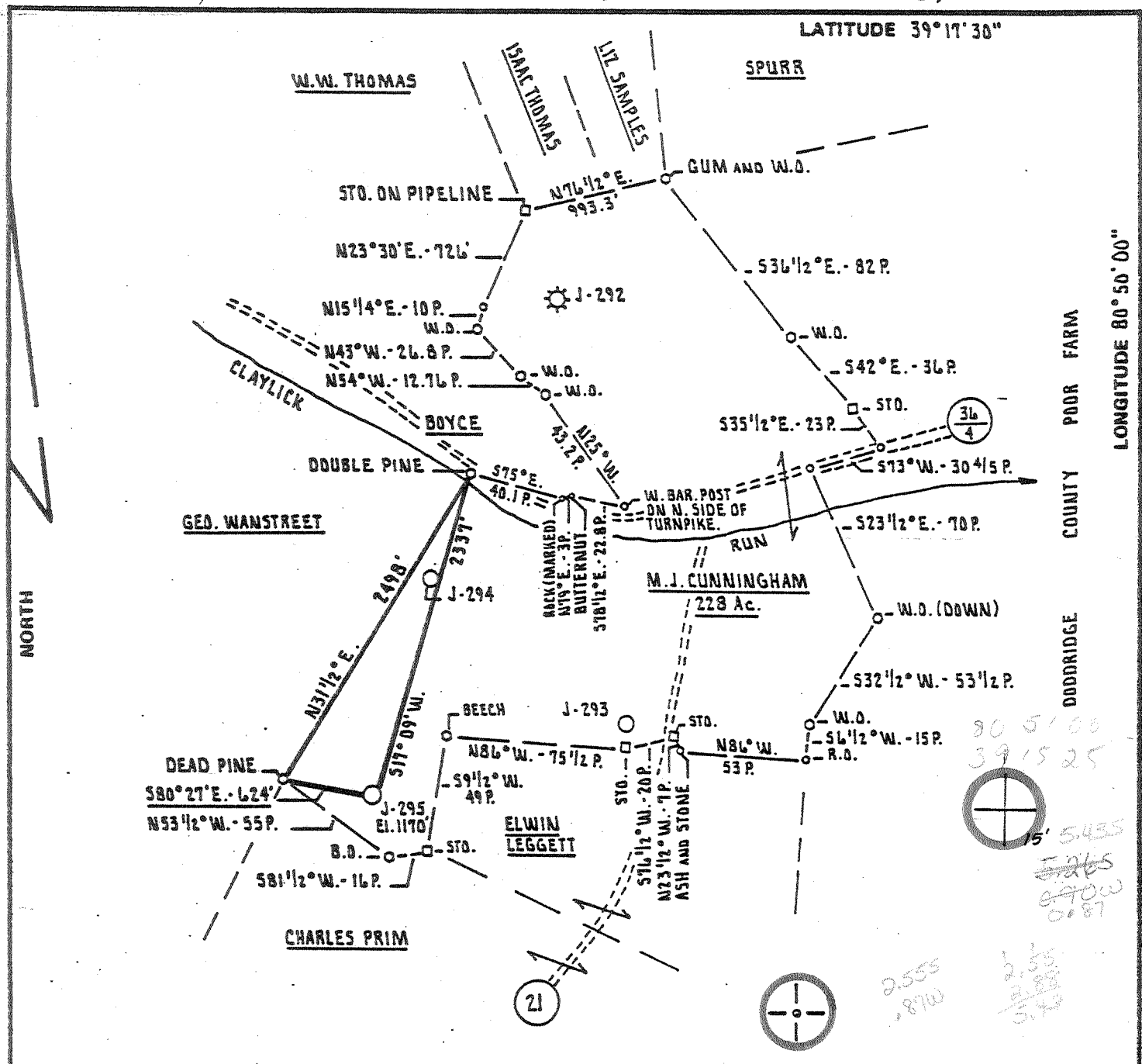


1/20

Plot Card

39° 20'



LONGITUDE 80° 50' 00"

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION J. AND J. ENTERPRISES INC.
WELL # K-II #1 ELEVATION 1156'

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) Cecil R. Main
 R.P.E. _____ L.L.S. 711

PLACE SEAL HERE

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



DATE JANUARY 9th 19 81
 OPERATOR'S WELL NO. J-295
 API WELL NO. _____
47 - 017 - 2952
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1170' WATER SHED CLAYLICK RUN
 DISTRICT CENTRAL COUNTY DODDRIDGE
 QUADRANGLE WEST UNION 7.5
 SURFACE OWNER GLEN KNIGHT ACREAGE 128 Ac.
 OIL & GAS ROYALTY OWNER M.J. CUNNINGHAM LEASE ACREAGE 228 Ac.
 LEASE NO. H-23

PROPOSED WORK: DRILL X 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 5660'
 WELL OPERATOR J. AND 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

6-6 GREENWOOD

FEB 13 1981

89

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: 1170 Watershed: Claylick Run
 District: Central 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 11/9, 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 Paul Garrett
 Address 321 Beech St.
Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Alexander Depth 5301-5417 feet
 Depth of completed well, 5636 feet Rotary X / Cable Tools ___
 Water strata depth: Fresh, 861,2050 feet; salt, ___ feet.
 Coal seam depths: 955-58 Is coal being mined in the area? No
 Work was commenced 12/12, 19 81, and completed 12/18, 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		
Conductor	11 3/4	H-40	42	X		30	0	0 sks. Kinds
Fresh water	8 5/8	ERW	23	X		1817	1817	400 sks.
Coal	8 5/8	ERW	23	X		1817	1817	400 sks. Sizes
Intermediate								
Production Tubing	4 1/2	J-55	10.5	X		5504.90	5504.90	400 sks. Depths set
Liners								Perforations: Top Bottom
								3551 4095
								5098 5101
								5301 5417

RECEIVED
 JAN 8 - 1982

OIL AND GAS DIVISION
 WV DEPARTMENT OF MINES

OPEN FLOW DATA
 Producing formation Alexander Pay zone depth 5301-5417 feet
 Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
 Combined Final open flow, 641 Mcf/d Final open flow, ___ Bbl/d
 Time of open flow between initial and final tests, 4 hours
 Static rock pressure, 1515 psig (surface measurement) after 96 hours shut in
 [If applicable due to multiple completion--] 5098-5101
 Second producing formation Benson & Balltown Pay zone depth 3551-4095 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 1 1
 $t=60+(0.0075 \times 5505) + 459.7=561$ $X=53.35 \times 561 = 29929 = 0.0000334$ $Pf=1515 \times 2.72 (0.0000334)$
 $(0.70) (4484) (0.9) = 1515 \times 2.72 \times 0.095 = 1515 \times 1.099$
 Pf=1666 psi

JAN 27 1982

08-78

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

Alexander: Perforations: 5301-5417 (15 holes)
Fracturing: 100 sks. 80/100 sand: 400 sks. 20/40 sand: 600 Bbls. fluid.

Benson: Perforations: 5098-5101 (12 hoels)
Fracturing: 100 sks. 80/100 sand: 350 sks. 20/40 sand: 500 gal. Acid: 500 Bbls. fluid.

Balltown: Perforations: 3551-4095 (13 hoels)
Fracturing: 80 sks. 80/100 sand: 280 sks. 20/40 sand: 1000 gal. Acid: 400 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
Red rock & shale			0	22	
Sand, red rock and shale			22	115	Damp @ 30'
Sand & shale			115	230	
Red rock, shale & sand			230	660	Damp @ 235'
Red rock, sand & white shale			660	955	Very damp @ 765'
Coal			955	958	
Sand, shale & red rock			958	1030	Hole making pencil stream @ 861'
Red rock			1030	1090	
Sand & shale			1090	1760	1" stream @ 2050'
Sand & shale			1760	1880	
Shale & red rock			1880	1935	
Sand			1935	2160	
Big Lime			2160	2220	
Sand & shale			2220	2790	
Sand & shale			2790	3551	
Balltown <i>+ Spcn</i>			3551	4095	
Shaly			4095	4300	
Sand & shale			4300	4600	
Shale			4600	5098	
Benson			5098	5110	
Shale & sand			5110	5301	
<u>Alexander</u>			5301	5470	
Sand & shale			5470	5636	T.D.

(Attach separate sheets to complete as necessary)

J & J Enterprises, Inc.

Well Operator

By 

Its 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."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-295

API Well No. 47 Q17 2952-R

State County Perm
OLD NO. 2952

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

LOCATION: Elevation: 1170 Watershed: Claylick Run
District: Central County: Doddridge Quadrangle: West Union 7.5

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

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

OIL & GAS ROYALTY OWNER Richard J. Cunningham
Address 8284 Klusman
Cucamota, CA

COAL OPERATOR None
Address _____

ACREAGE 228
SURFACE OWNER Glen Knight
Address Rt. 1
West Union, WV 26456
ACREAGE 128

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name Richard J. Cunningham
Address 8284 Klusman
Cucamota CA

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

Name _____
Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Paul Garrett
Address 321 Beech St.
Clarksburg, WV 26301

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address _____

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NOV - 9 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 4-16, 1980, to the undersigned well operator from Justin Henderson

If said deed, lease, or other contract has been recorded:]
Recorded on 5-16, 1980, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Deed Book 115 at page 74. 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
LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 343-3097

STAMPED BOND

J&J Enterprises
Well Operator

By Peter Battles
Peter Battles Geologist

[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 Co.
Address F.O. Box 48
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5660 feet Rotary / Cable tools /

Approximate water strata depths: Fresh, 185 feet; salt, 1600 feet.

Approximate coal seam depths: None 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		65	0	0	Kinds
Fresh water	8 5/8	ERW	23	X		1650	1650	400 sks	
Coal	8 5/8	ERW	23	X		1650	1650	400 sks	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		5550	5550	410 sks	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 § 22-4-2a 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 renewed. This permit shall expire if operations have not commenced by 7-24-82

Survey

[Signature]
Deputy Director, Oil & Gas Division

The following waiver must be signed 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 _____