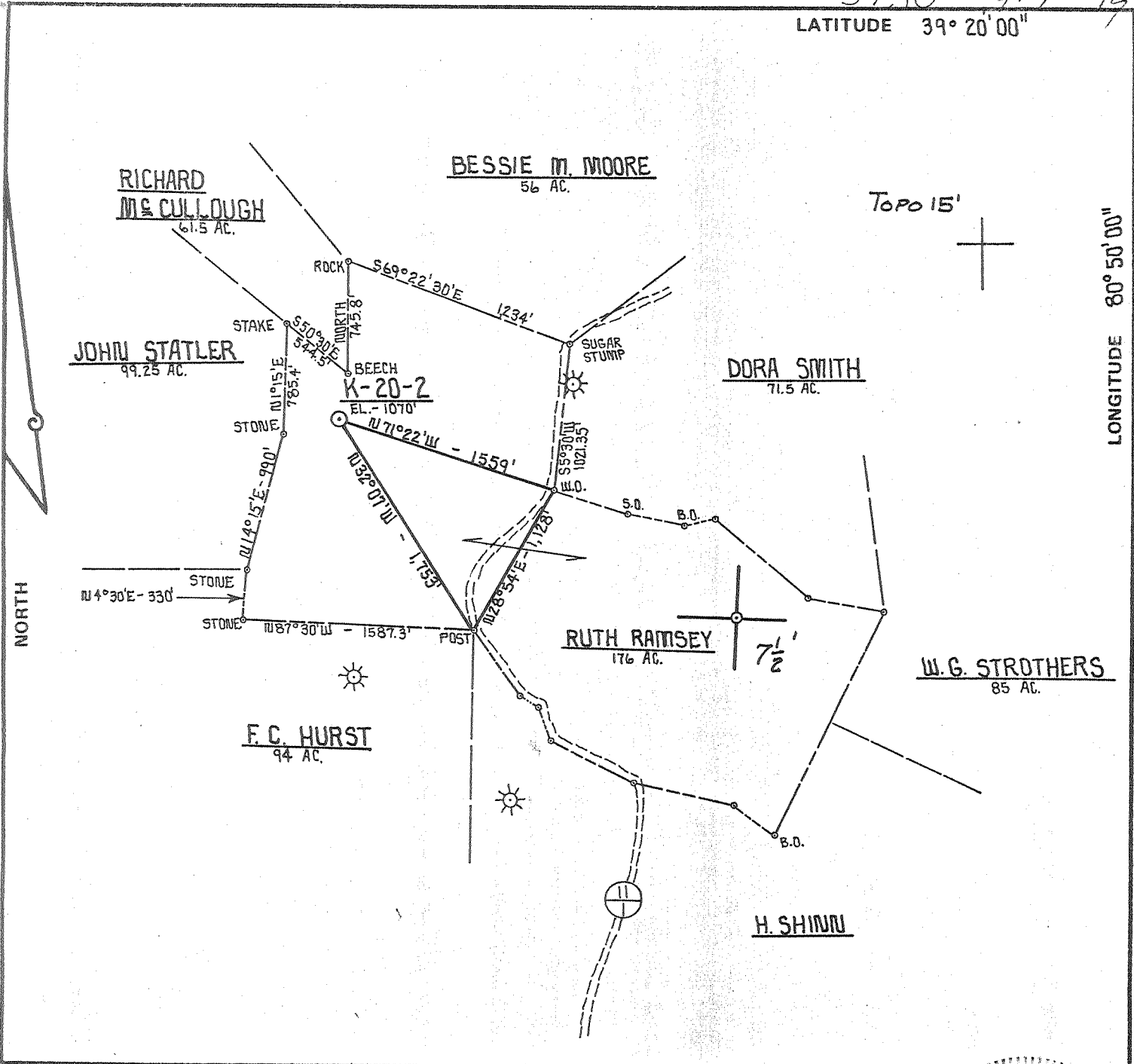


5450 2/13/80

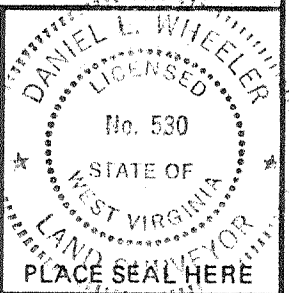
LATITUDE 39° 20' 00"

LONGITUDE 80° 05' 00"



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1,000'  
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
 PROVEN SOURCE OF ELEVATION INT. OF RT. 26 & RT. 11  
ELEV. - 755'

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



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



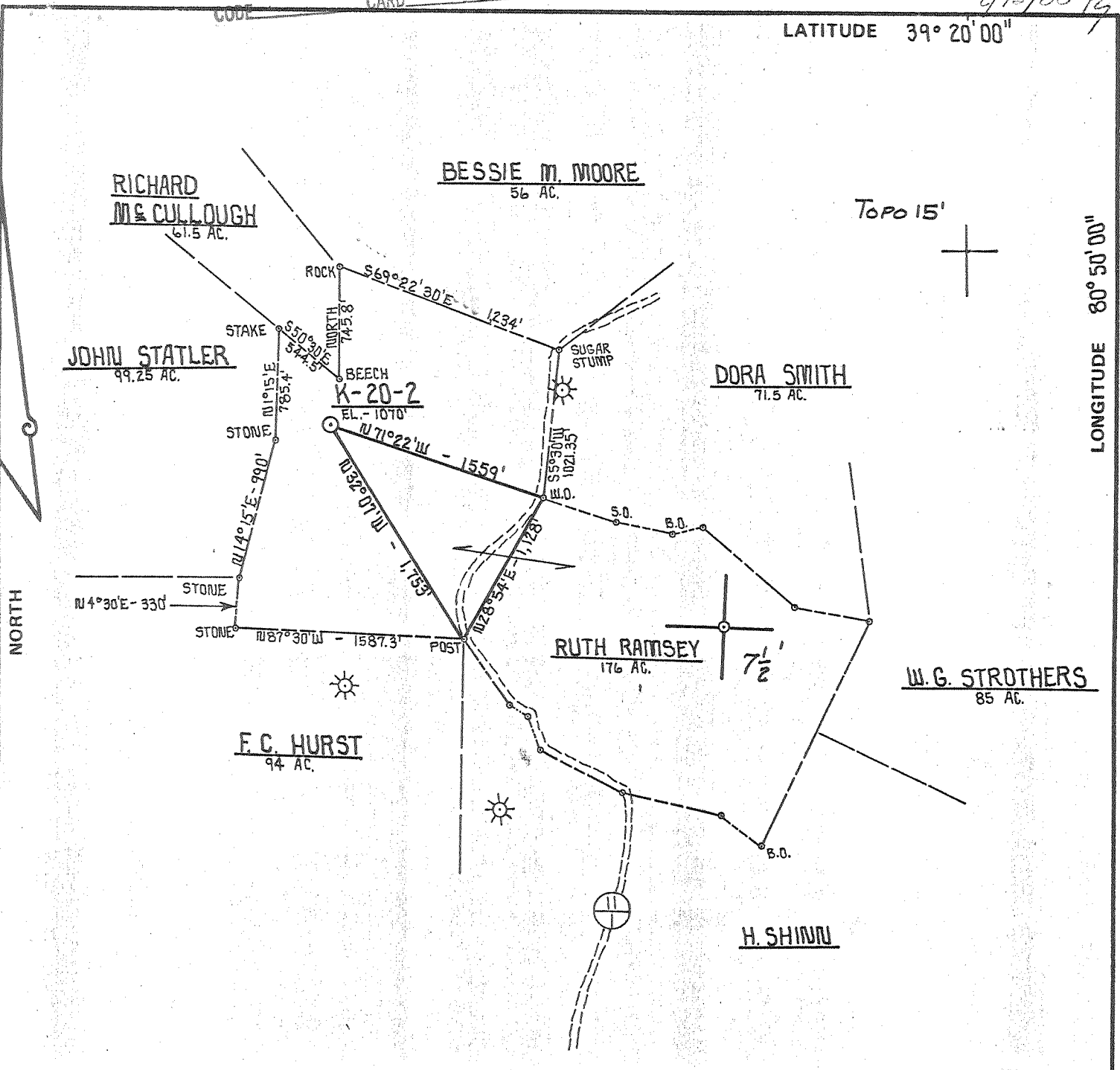
STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE FEBRUARY 5, 19 80  
 OPERATOR'S WELL NO. K-20-2  
 API WELL NO. 47-017-2600-P  
 STATE COUNTY PERMIT  
P.L. CANCELLED

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1070' WATER SHED LONG RUN TO ARNOLD CREEK  
 DISTRICT CENTRAL COUNTY DODDRIDGE  
 QUADRANGLE WEST UNION 7.5', 15'  
 SURFACE OWNER CLARENCE HURST ACREAGE 176  
 OIL & GAS ROYALTY OWNER RUTH RAMSEY LEASE ACREAGE 176  
 LEASE NO. K-20  
 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) \_\_\_\_\_

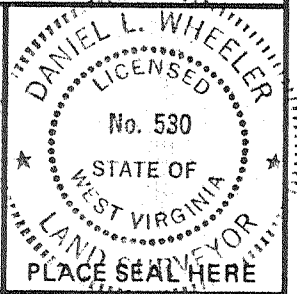
PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5,150'  
 WELL OPERATOR J. & J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT AUG 01 1980  
 ADDRESS P.O. BOX 48 BUCKHANNON, W. VA. 26201 ADDRESS P.O. BOX 48 BUCKHANNON, W. VA. 26201

DADD 2600-P



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1,000'  
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
 PROVEN SOURCE OF ELEVATION INT. OF RT. 26 & RT. II  
ELEV. - 755'

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



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



DATE FEBRUARY 5, 19 80  
 OPERATOR'S WELL NO. K-20-2  
 API WELL NO. \_\_\_\_\_  
47 - 017 - 2600 - P  
 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 1070' WATER SHED LONG RUN TO ARNOLD CREEK  
 DISTRICT CENTRAL COUNTY DODDRIDGE  
 QUADRANGLE WEST UNION 7.5', 15'  
 SURFACE OWNER CLARENCE HURST ACREAGE 176  
 OIL & GAS ROYALTY OWNER RUTH RAMSEY LEASE ACREAGE 176  
 LEASE NO. K-20  
 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 ALEXANDER ESTIMATED DEPTH 5,150'  
 WELL OPERATOR J. & J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT  
 ADDRESS P.O. BOX 48 ADDRESS P.O. BOX 48  
BUCKHANNON, W. VA. 26201 BUCKHANNON, W. VA. 26201

JUN 2 1986



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

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

WELL TYPE: Oil  Gas  Liquid Injection  Waste Disposal   
(If "Gas", Production  Underground storage  Deep  Shallow   
LOCATION: Elevation: 1070 Watershed: Long Run to Arnolds Creek  
District: Central County: Doddridge Quadrangle: West Union 7.5'

WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT H.L. Barnett  
Address Box 48 Address Box 48  
Buckhannon, WV 26201 Buckhannon, WV 26201

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 2-12, 19 80, OIL & GAS INSPECTOR FOR THIS WORK:  
(IF APPLICABLE: PLUGGING TO TRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Paul Garrett  
Address 321 Beech Street  
Clarksburg, WV 26301

GEOLOGICAL TARGET FORMATION: Alexander Depth 5225-5260 feet  
Depth of completed well, 5461 feet Rotary  Cable Tools   
Water strata depth: Fresh, 610 feet; salt, 1450-1595 feet.  
Coal seam depths: 90-92, 690-93 Is coal being mined in the area? No  
1100-1103  
Work was commenced 7-18, 19 80, and completed 7-25, 19 80

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	MARKERS	
	Size	Brand	Weight per ft	New	Used	For drilling			Left in well
Conductor	113/4H-40	42	x			32	32	0 sks.	None
Fresh water	85/8 ERW	23	x			1201.25	1201.25	305 sks.	
Coal	85/8 ERW	23	x			1201.25	1201.25	305 sks.	Signs
Intermediate									
Production	41/2 J-55	10.5	x			2394.65	2394.65	275 sks.	Depth set
Tubing									
Liners									Perforations:
									Top Bottom
									2033 2083
									2330 2353

RECEIVED  
SEP 18 1980

OPEN FLOW DATA

OIL & GAS DIVISION  
DEPT. OF MINES

Producing formation Well Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow, \_\_\_\_\_ Mof/d Oil: Initial open flow, \_\_\_\_\_ Bbl/d  
Combined Final open flow, 211 Mof/d Final open flow, \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests, 4 hours  
Static rock pressure, 975 psig (surface measurement) after 72 hours shut in  
[If applicable in case multiple completion--]  
Second producing formation Injun Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow, \_\_\_\_\_ Mof/d Oil: Initial open flow, \_\_\_\_\_ Bbl/d  
Final open flow, \_\_\_\_\_ Mof/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

08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OF STRATIF, PHYSICAL PROPERTIES, ETC.

Weir: Perforations: 2330-2353 (12 shots)  
Foam frac.: 100 gal citric Acid: 210 sks. 20/40 sand.

Injun: Perforations: 2033-2083 (10 shots)  
Foam frac: 500 gal. Acid: 210 sks. 20/40 sand.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of gas flow and salt water, oil, etc.
Fill			0	12	
Shale			12	22	
Red Rock & Shale			22	40	
Sand & Shale			40	45	
Sand			45	85	
Shale			85	90	
Coal			90	92	
Sand & Shale			92	100	
Sand			100	150	
Red Rock			150	155	
Sand & Shale			155	230	
Red Rock			230	235	
Sand & Shale			235	265	
Red Rock			265	270	
Sand & Shale			270	295	
Sand			295	335	
Red Rock			335	340	
Sand & Shale			340	375	
Red Rock			375	385	
Sand & Shale			385	425	
Red Rock			425	545	
Sand & Shale			545	550	Damp @ 580
Sand			550	640	
Red Rock & Shale			640	690	1/2" stream @ 610
Coal			690	693	
Sand & Shale			693	720	
Shale			720	810	
Sand & Shale			810	845	
Sand			845	960	
Shale			960	963	
Sand			963	1000	
Sand & Shale			1000	1090	
Shale			1090	1100	

(Attach separate sheets to complete as necessary)

J & J Enterprises, Inc.  
Well Operator

By Peter Battles  
Peter Battles  
Geologist

NOTE: Regulation 8.0014 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."

Coal	1100	1103
Sand & Shale	1103	1450
Salt Sand	1450	1595
Sand & Shale	1595	1665
Salt Sand & Shale	1665	1680
Sand & Shale	1890	1925
Sand & Shale	1925	1955
Big Lime	1955	2033
Big Injun	2033	2083
Sand	2083	2100
Sand & shale	2100	2300
Sand	2300	2330
Weir	2330	2353
Sand	2353	2385
Sand & Shale	2385	3255
Sand	3255	3395
Sand & shale	3395	3410
Sand & shale	3410	4740
Benson	4740	4750
Sand & shale	4750	5225
	5225	5260
	5260	5461

Damp @ 1455

Gas ck @ 4600 No show

Gas ck @ 4987 No show

T.D. 5461

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. K-20-#2  
API Well No. 47 - 017 - 2600  
State County Permit

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

LOCATION: Elevation: 1070 Watershed: Long Run to Arnold Creek  
District: Central County: Doddridge Quadrangle: West Union 7.5"

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 Ruth Ramsey/Nell Allen  
Address 316 Stealey Ave/ Box 455  
Clarksburg, W. Va./Pennsboro, W. Va.

COAL OPERATOR None  
Address     

ACREAGE 176  
SURFACE OWNER Clarence Hurst  
Address Greenwood,  
West Virginia 26360  
ACREAGE 176

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name George & Nell Allen  
Address Box 455  
Pennsboro, W. Va. 26415  
Name       
Address     

FIELD SALE (IF MADE) TO:  
Name       
Address     

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address       
FEB 12 1980

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Paul Garrett  
Address 321 Beech St.  
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 X / other contract      / dated June 28, 1978, to the undersigned well operator from Ruth Ramsey.

[If said deed, lease, or other contract has been recorded:]  
Recorded on August 29, 1978, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas Lease Book 104 at page 452. A permit is requested as follows:  
PROPOSED WORK: Drill X / Re-drill      / Redrill      / Fracture or stimulate X /  
Plug & abandon      / Perforate new formation      /  
Other physical change in well (specify)     

...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 other work to be done or required to be done 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  
101 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

J & J ENTERPRISES, INC.  
Well Operator  
By Peter Battles  
PETER BATTLES  
Its      GEOLOGIST

MARKET BOND

[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, 5400 feet Rotary  / Cable tools  /

Approximate water strata depths: Fresh, 50 feet; salt, 1500 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		30	0	0 sks.	Kinds	None
Fresh water	8 5/8	ERW	23	X		1600	1600	400 sks.		
Coal	8 5/8	ERW	23	X		1600	1600	400 sks.	Sizes	
Intermediate										
Production	4 1/2	J-55	10.5	X		5400	5400	300 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 § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

IS PERMIT SEPARATE FROM THE W. Va. Code 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 required as such in the West Virginia Code, Chapter 22, connection therewith.

of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 10-13-80

*Robert H. [Signature]*  
Deputy Director - Oil & Gas Division

shall be filed with the Department of Mines by the coal operator and by any coal owner who has recorded a declaration under Code § 22-4-20, if the permit is not received within fifteen (15) days of receipt thereof:

WAIVER

I, the undersigned coal operator / owner / lessee / of the coal under this well location, have 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 \_\_\_\_\_