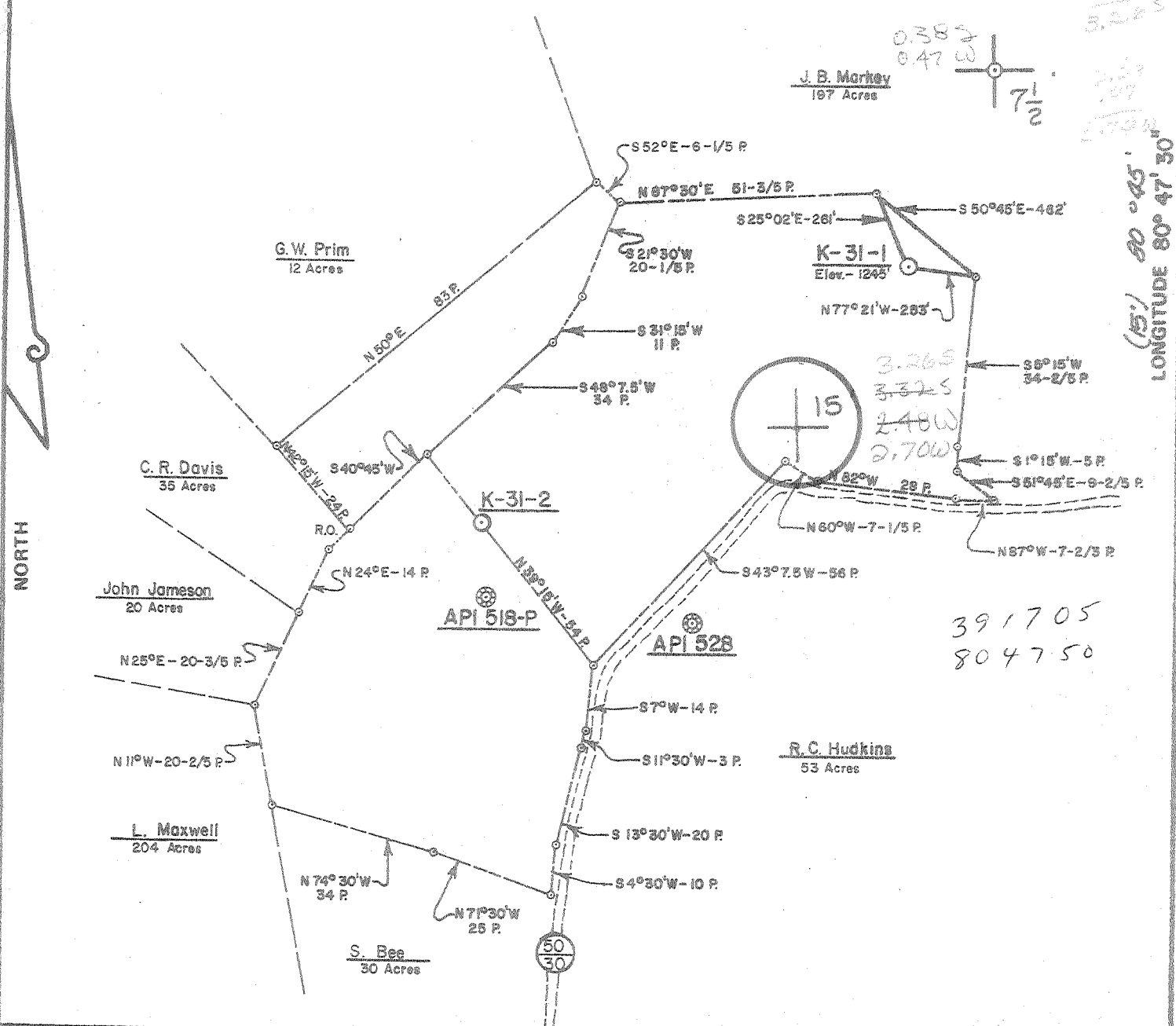
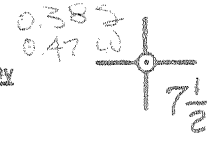


LATITUDE 39° 17' 30"
(15) 39° 20'

11/2/79
3.265
3.325
2.48W
2.70W
391705
804750



J. B. Morkey
187 Acres



FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 Part in 200
PROVEN SOURCE OF ELEVATION U.E. of Rd. Int. 0.6 miles NE. of Jct. Old Rt. 50 & 50/7. Elev. - 1037'

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) Samuel L. Shuler
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 25, 19 79
OPERATOR'S WELL NO. K-31-1
API WELL NO. 47-017-2529
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 1245' WATER SHED Arnold Creek
DISTRICT West Union COUNTY Doddridge
QUADRANGLE West Union 7.5', 15'
SURFACE OWNER Robt. Myers; John Kappshorn; Phillip Nichol ACREAGE 71
OIL & GAS ROYALTY OWNER Mayme Twyford LEASE ACREAGE 71
LEASE NO. K-31-1
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 5600 NOV 26 1979
WELL OPERATOR J. & J. Enterprises DESIGNATED AGENT Harry Barnett
ADDRESS Box 48 ADDRESS Box 48
Buchannon, W. Va. 26201 Buchannon, W. Va. 26201

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

WELL OPERATOR'S REPORT 44

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: 1245 Watershed: Arnold Creek

District: West Union County: Doddridge Quadrangle: West Union 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, W. Va. 26201 Buckhannon, W. Va. 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 November 2, 1979 OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Paul Garrett

Address 321 Beech Street

Clarksburg, W. Va. #301

GEOLOGICAL TARGET FORMATION: Alexander Depth 5440 feet

Depth of completed well, 5684 feet Rotary / Cable Tools

Water strata depth: Fresh, 135 feet; salt, 0 feet.

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

Work was commenced December 6, 1979, and completed December 12, 1979

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		Kind	None
Conductor	11 3/4	H-40	42	X		22	0	0 sks.	Kind	None
Fresh water	8 5/8	ERW	23	X		959.40	959.40	240 sks.		
Coal	8 5/8	ERW	23	X		959.40	959.40	240 sks.	Size	
Intermediate										
Production	4 1/2	J-55	10.5	X		5641	5641	380 sks.	Depth	5446
Tubing										5481
Liners										3538
										3577
										3684
										3698
										3701
										3776
										2336
										2350

Handwritten signature and date
FEB - 5 1980

OPEN FLOW DATA

Producing formation Alexander OIL & GAS DIVISION DEPT. OF MINES Pay zone depth 5446-5481 feet

Gas: Initial open flow, 0 Mof/d Oil: Initial open flow, _____ Bbl/d

TESTING

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

[If applicable due to multiple completion--] _____ 3532-3706

Second producing formation Warren & Weir Pay zone depth 2510-2615 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

FEB 28 1980

008-78

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

Alexander- Perforations: 5446-5481, (10 holes)

Fracturing: 2000 gals. Acid; 20,000 lbs. Sand 80/100 wire mesh;
80,000 lbs. Sand 20/40 wire mesh; 1041 Bbls. Fluid.

Warren-Perforations: 3538-3540, (2 holes), 3563-3577 (7 holes), 3653 (1 hole),
3698-3701, (4 holes).

Fracturing: 400 gal. Acid; 30,000 lbs. Sand 80/100 wire mesh; 30,000 lbs.
Sand 20/40 wire mesh; 620 Bbls. Fluid.

Weir- Perforations: 2473-2476, (3 holes), 2490-2492, (2 holes), 2536-2540, (4 holes),
2546-2550, (4 holes).

Fracturing: 600 gal. Acid; 10,000 lbs. Sand 80/100 wire mesh; 30,000 lbs. Sand
20/40 wire mesh; 581 Bbls. Fluid.

WELL LOG

FORMATION	Color	Hard or Soft	4' Feet	Bottom Feet	Remarks Including indication of gas, sand and salt water, etc.
Red Clay		0	3		
White Sand		3	8		
Red Rock		8	20		
Gray Sand		20	85		
Red Rock & Shale		85	130		
Sand		130	210		135'- $\frac{1}{2}$ " Stream Water
Sand & Shale		210	270		
Red Rock & Shale		270	300		
Sand		300	340		
Shale		340	360		
Sand		360	430		
Red Rock & Shale		430	450		
Sand		450	570		
Red Rock & Shale		570	745		
White Sand		745	810		
Red Rock & Shale		810	1225		
Sandy Shale		1225	1960		
Shale		1960	2120		
Sand		2120	2185		
Big Lime		2185	2295		
Big Injun		2295	2306		
Shale		2306	2469		
Weir		2469	2574		
Shale		2574	2730		
Sand		2730	2770		
Shale		2770	3175		
Sand		3175	3240		
Sand & Shale		3240	3395		
Shale		3395	3532		
Warren		3532	3706		
Shale		3706	3945		
Sand		3945	4000		
Shale		4000	4030		

(Attach separate sheets to complete as necessary.)

J & J ENTERPRISES, INC.

Well Operator

By

PETER BATTLES GEOLOGIST

NOTE: Regulation 8.30(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]

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, 5600 feet Rotary X / Cable tools /

Approximate water strata depths: Fresh, 700 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	0	Kinds
Fresh water	8 5/8	ERW	23	X		900	900	200 sks.	
Coal	8 5/8	ERW	23	X		900	900	200 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		5550	5550	250 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.

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.

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 7-5-80


Deputy Director - Oil & Gas Division

The following conditions must be complied with by the coal operator and by any coal owner or coal lessee who has received 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

