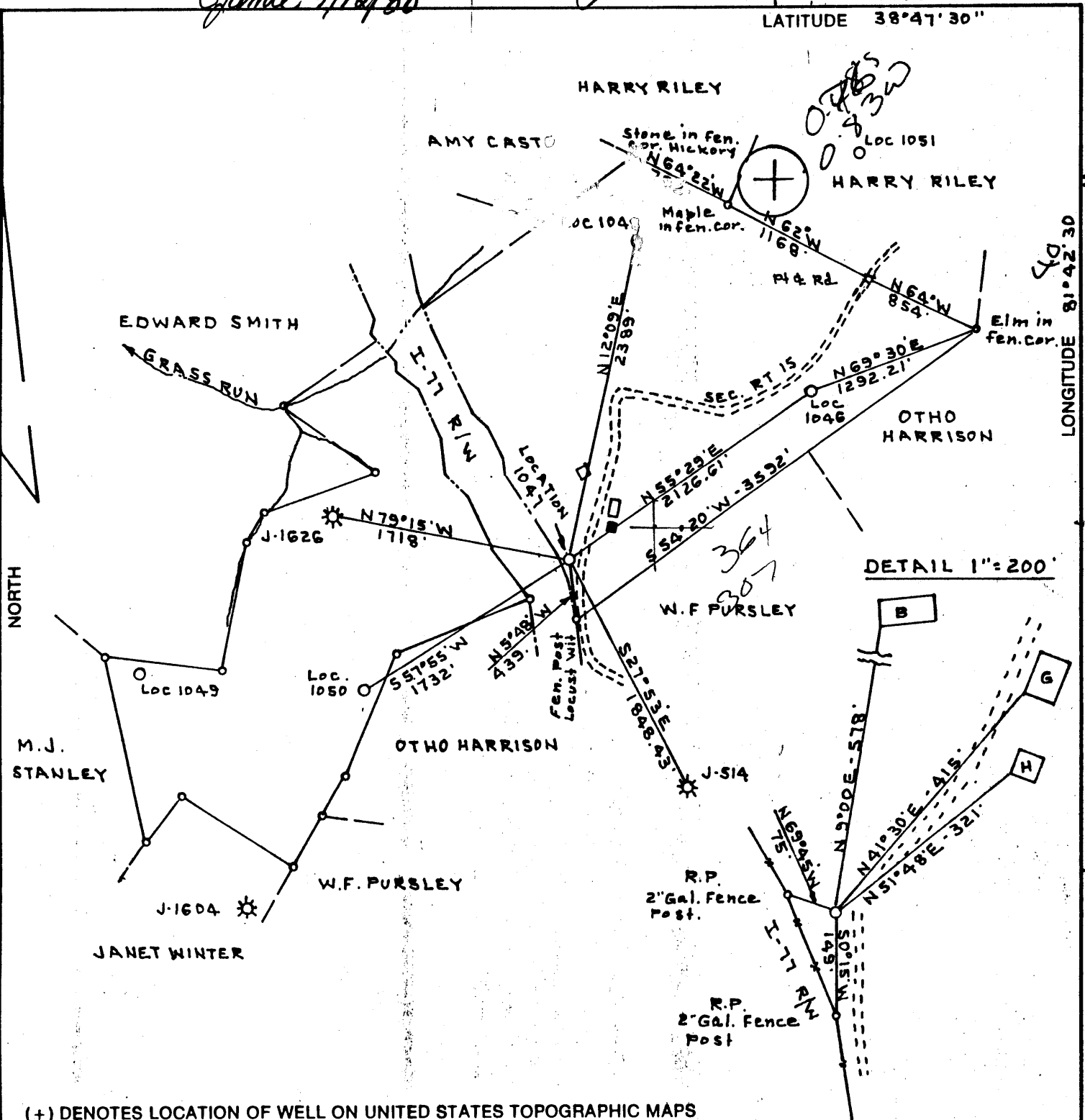


Janie 9/12/88

4500.50

LATITUDE 38°47'30"

LONGITUDE 81°42'30"



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. BK 112 PG 22
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1:2500'
 PROVEN SOURCE OF ELEVATION USGS Road forks 3800' NE of Loc. E1 915'

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 ENERGY.
 (SIGNED) C. S. Volley Jr.
 R.P.E. 11.6.92

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE MAY 14, 1988
 OPERATOR'S WELL NO. 1047
 API WELL NO. 47 035 2171
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 748.56 WATERSHED GRASS RUN OF PARCHMENT CREEK
 DISTRICT RIPLEY COUNTY JACKSON
 QUADRANGLE RIPLEY 578 1127 SW
 SURFACE OWNER CARL W. PIGNATO ACREAGE 254
 OIL & GAS ROYALTY OWNER CARL W. PIGNATO LEASE ACREAGE 254
 LEASE NO. 4884

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 BEREA & BROWN SHALE ESTIMATED DEPTH 4240'
 WELL OPERATOR QUINDCO PETROLEUM INC. DESIGNATED AGENT BILL W. BACKUS
 ADDRESS P.O. BOX 1433 1039 ADDRESS P.O. BOX 1433
CHARLESTON, WY 25325 CHARLESTON WY 25325

SEP 19 1988

COUNTY NAME PERMIT

FORM WW-8 H.T. HALL 48673

WR-35

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State of West Virginia

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

DEPARTMENT OF ENERGY
Oil and Gas Division

Date March 15, 1989

Operator's

Well No. 1047

Farm Carl Pignato

API No. 47 - 035 - 2171

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: 748.56 Watershed Grass Run of Parchment Creek

District: Ripley County Jackson Quadrangle Ripley

COMPANY Quinoco Petroleum, Inc.
ADDRESS 1207 Quarrier St., Charleston, WV 25301

DESIGNATED AGENT Bill W. Backus
ADDRESS Same as Above

SURFACE OWNER Carl W. Pignato
ADDRESS Rt. 2, Box 96, Ripley, WV 25271

MINERAL RIGHTS OWNER Carl W. Pignato
ADDRESS Same as above

OIL AND GAS INSPECTOR FOR THIS WORK Jerry Tephacock
ADDRESS Rt. 1, Box 101-A, Ripley, WV

PERMIT ISSUED 9-12-88

DRILLING COMMENCED 10-17-88

DRILLING COMPLETED 10-23-88

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

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"			
9 5/8	807	807	Surface
8 5/8			
7	2283	2283	200 sxs
5 1/2			
4 1/2	4255	4255	to 1851
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Brown Shale/Berea Depth 4197 feet

Depth of completed well 4340 feet Rotary X / Cable Tools

Water strata depth: Fresh feet; Salt feet

Coal seam depths: Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Brown Shale Pay zone depth 3664-4197 feet

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Final open flow 216 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 940 psig (surface measurement) after hours shut in
(If applicable due to multiple completion--)

Second producing formation Berea Pay zone depth 2436-2448 feet

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Final open flow 216 Mcf/d Oil: 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

(Continue on reverse side)

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

Stage 1 Perforated 3668^H-4197 with 43 shots. Foam fractured interval with 452 bbls sand ladened fluid, 1005 sacks 20/40 sand, 20 perf balls and 1072m Scf N₂

Stage 2 Perforated 2445^{3el}-2448 with 24 shots. Foam fractured interval with 271 bbls sand ladened fluid, 600 sacks 20/40 sand and 650m Scf N₂

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Soil			0	10	
Red Rock & Shale			10	850	
Sand & Shale			850	1675	
Limestone			1675	1747	
Shale			1747	1758	
Big Lime			1758	1946	
Shale			1946	1984	
Big Injun			1984	2030	
Sand & Shale			2030	2318	
Shale			2318	2413	
Coffee Shale			2413	2436	
Berea			2436	2438	
Siltstone & Shale			2438	3664	
Brown Shale			3664	4197	
Siltstone & Shale			4197	4340	
Total Depth				4340	

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

Quinoco Petroleum, Inc.
Well Operator
By: Bill W. Backus
Date: October 20, 1989

Note: Regulation 2.02(i) 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."

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION**

- 1) Well Operator: Quinoco Petroleum, Inc. 40475, 3, 577
- 2) Operator's Well Number: Carl W. Pignato (1047) 3) Elevation: 748.56
- 4) Well type: (a) Oil or Gas /
 (b) If Gas: Production Underground Storage
 Deep Shallow
- 5) Proposed Target Formation(s): Berea/Brown Shale
- 6) Proposed Total Depth: 4400 feet
- 7) Approximate fresh water strata depths: 170', 250', 325'
- 8) Approximate salt water depths: Not available 1442', 1660'
- 9) Approximate coal seam depths: None 1261' - 1269'
- 10) Does land contain coal seams tributary to active mine? Yes No *oil shale 815'*
- 11) Proposed Well Work: Drill, perforate, fracture and complete new well.

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	9-5/8	J		900' 800' OK	900' OK: 800'	To Surface
Fresh Water						38CSR18-11.3
Coal						
Intermediate	7"	J		2200	2200	120 sxs
Production	4-1/2"	J			4400	38CSR18-11.1 2000'
Tubing						
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

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For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

Fee(s) paid: 78 Well Work Permit 78 Reclamation Fund 78 WPCP
 Plat 78 WW-9 78 WW-2B 78 Bond 50 Blanket Agent

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DIVISION OF OIL & GAS 3)
DEPARTMENT OF ENERGY

Date: May 31, 1988
Operator's well number
Pignato 1047
API Well No: 47 - 035 - 2171
State - County - Permit

STATE OF WEST VIRGINIA (Formerly: 035-2139)
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name Carl Pignato
Address Route 2, Box 96
Ripley, WV 25271
(b) Name _____
Address _____
(c) Name _____
Address _____

5) (a) Coal Operator:
Name N/A
Address _____
(b) Coal Owner(s) with Declaration
Name N/A
Address _____
Name _____
Address _____

6) Inspector Jerry Tephabock
Address Route 1, Box 101-A
Ripley, WV 25271
Telephone (304)- 372-6805

(c) Coal Lessee with Declaration
Name N/A
Address _____

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

___ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties, by:

- X Personal Service (Affidavit attached)
- ___ Certified Mail (Postmarked postal receipt attached)
- ___ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Quinones Petroleum, Inc.
By: [Signature]
Its: District Manager
Address Post Office Box 1433
Charleston, WV 25325
Telephone (304) 342-6193

Subscribed and sworn before me this 31st day of May, 19 88

[Signature] Notary Public
My commission expires December 9, 1997