

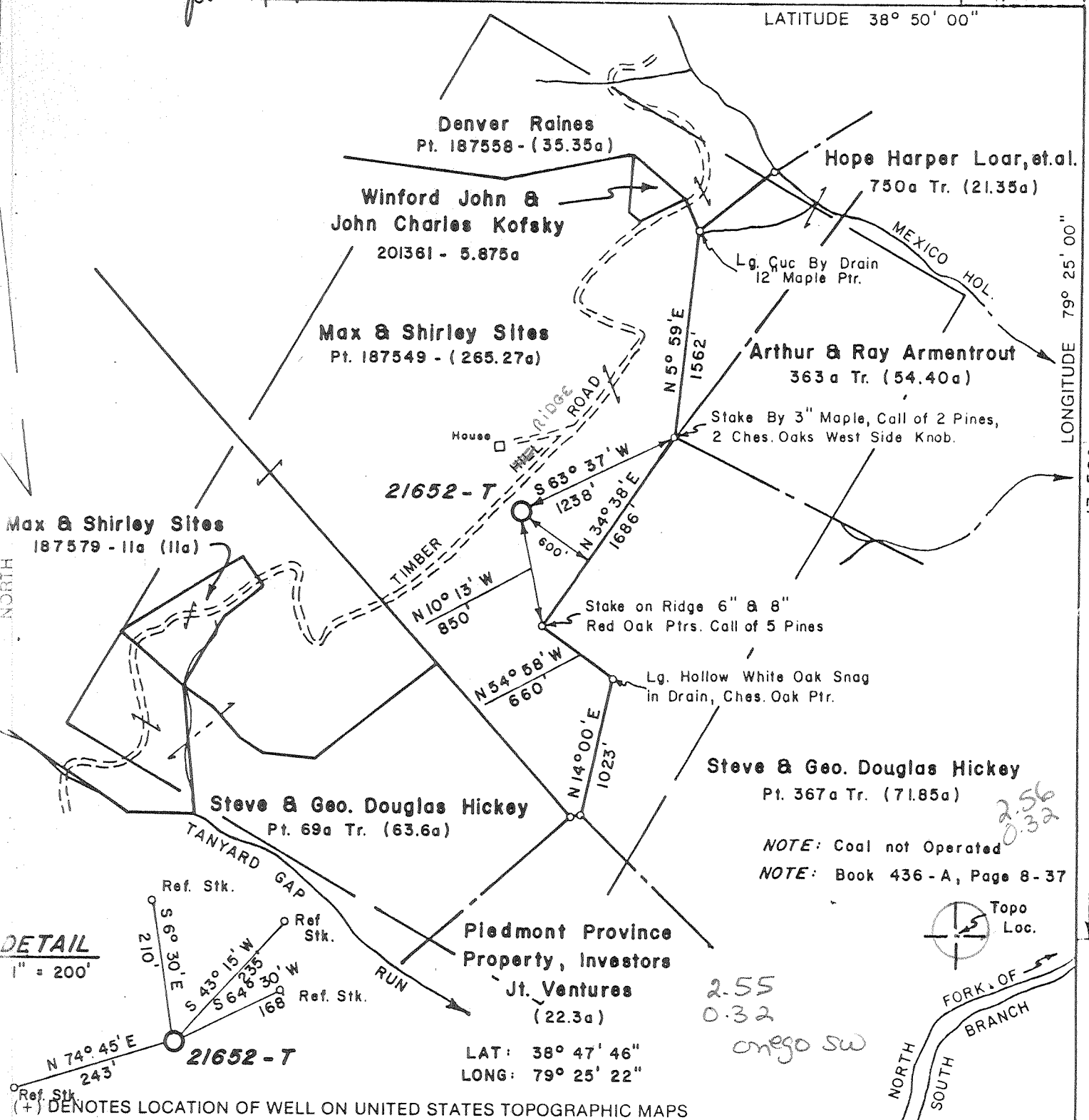
088 11/9/87

1,725'

LATITUDE 38° 50' 00"

LONGITUDE 79° 25' 00"

NORTH



DETAIL
1" = 200'

NOTE: Coal not Operated
NOTE: Book 436 - A, Page 8-37



2.56
0.32

2.55
0.32
onego SW

LAT: 38° 47' 46"
LONG: 79° 25' 22"

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

FILE NO. _____
DRAWING NO. 21652 - T
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 PART IN 2500
PROVEN SOURCE OF ELEVATION U.S. GOV'T. BM
BY W.VA. U.S. RT. 33 - EL. 1655

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) James A. Browning
R.P.E. _____ L.L.S. 398

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

DATE JUNE 15, 19 87
OPERATOR'S WELL NO. 21652 - T (P.I.)
API WELL NO. _____

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP X SHALLOW ___

LOCATION: ELEVATION 2702' WATERSHED NORTH FORK OF SOUTH BRANCH - POTOMAC RIVER
DISTRICT UNION COUNTY PENDLETON
QUADRANGLE ONEGO, W. VA.

SURFACE OWNER MAX & SHIRLEY SITES ACREAGE 473
OIL & GAS ROYALTY OWNER MAX & SHIRLEY SITES LEASE ACREAGE 473 (551 Ac. UNIT)
LEASE NO. 187549

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 ORISKANY ESTIMATED DEPTH 8400'
WELL OPERATOR COL. NAT. RES., INC. DESIGNATED AGENT J. E. CAMBELL
ADDRESS P.O. BOX 1273 ADDRESS SAME
CHAS. W. VA. 25325

DATE APR 20 1990



COUNTY NAME

PERMIT

PEND.
0012-P

DEEP WELL

FO (01)

11/9/87

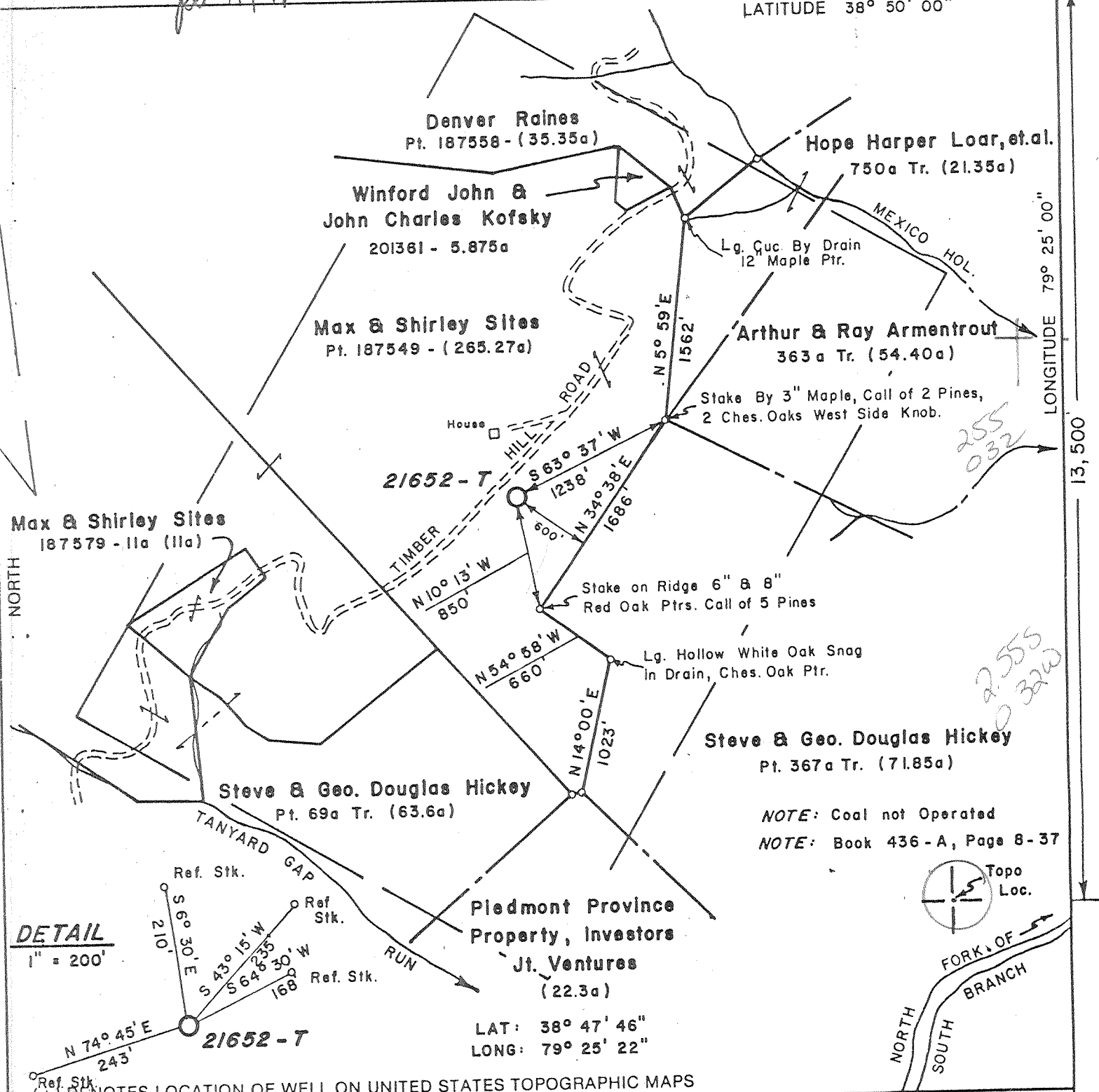
1,725'

LATITUDE 38° 50' 00"

NORTH

LONGITUDE 79° 25' 00"

13,500'



FILE NO. _____
DRAWING NO. 21652 - T
SCALE 1" = 1000'
MINIMUM DEGREE OF
ACCURACY 1 PART IN 2500
PROVEN SOURCE OF
ELEVATION U.S. GOV'T. BM
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(SIGNED) James A. Browning
R.P.E. _____ L.L.S. 398



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE JUNE 15, 19 87
OPERATOR'S WELL NO. 21652 - T (P.L.)
API WELL NO.
47 - 071 - 0012
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP X SHALLOW ___
LOCATION: ELEVATION 2702 WATERSHED NORTH FORK OF SOUTH BRANCH - POTOMAC RIVER
DISTRICT UNION COUNTY PENDLETON
QUADRANGLE ONEGO, W. VA. 522 094 507
SURFACE OWNER MAX & SHIRLEY SITES ACREAGE 473
OIL & GAS ROYALTY OWNER MAX & SHIRLEY SITES LEASE ACREAGE 473 (551 Ac. UNIT)
LEASE NO. 187549
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 ORISKANY ESTIMATED DEPTH 8400'
WELL OPERATOR COL. NAT. RES., INC. DESIGNATED AGENT J. E. CAMBELL
ADDRESS P.O. BOX 1273 ADDRESS SAME
CHAS. W. VA. 25325 1013

NOV 23 1987

COUNTY NAME PERMIT

FORM IV-6 (8-78)

H.T. HALL

11/18/87 Issued
11/18/89 exp. 07112

071-0012

FORM WW-2B

Page 1 of 1

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

- 1) Well Operator: Columbia Natural Resources, Inc. 10460, G, 521
- 2) Operator's Well Number: 21652-TPI 1013 3) Elevation: 2702'
- 4) Well type: (a) Oil / or Gas X /
(b) If Gas: Production X / Underground Storage /
Deep X / Shallow /
- 5) Proposed Target Formation(s): Oriskany Sandstone 475
- 6) Proposed Total Depth: 8400 feet
- 7) Approximate fresh water strata depths: 30'
- 8) Approximate salt water depths: -
- 9) Approximate coal seam depths: -
- 10) Does land contain coal seams tributary to active mine? Yes / No X /
- 11) Proposed Well Work: Drill
- 12) Nothing Drilled in area 1000' Fresh water.

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	13-3/8"	H	48	30'	30'	N/A
Fresh Water					38 CSR 18-11.3	
Coal					C/S	
Intermediate	9-5/8"	H	36	1700'	1700'	550 sk/ 610 cf
Production	5-1/2"	N	17	38 CSR 18-11.1	8400'	600 sk/ 786 cf
Tubing	2-3/8"	J	4.7		8400'	
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only

236
50102759

Fee(s) paid: Well Work Permit Reclamation Fund WPCP

Plat WW-9 WW-2B Bond Agent

(Type)

Page 1 of 1
Form WW2-A
(09/87)
File Copy

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Original
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

1) Date: September 8, 1987
2) Operator's well number 21652-TPI
3) API Well No: 47 - ~~XXXX~~ - 071-0012
State - County - Permit

STATE OF WEST VIRGINIA
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 Max Sites and Shirley Sites
Address _____
Onego, WV 26886
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Phillip Tracy
Address P. O. Box 2536
Etkins, WV 26241
Telephone (304)- 638-8798

5) (a) Coal Operator:
Name Max Sites and Shirley Sites
Address _____
Onego, WV 26886
(b) Coal Owner(s) with Declaration
Name Max Sites and Shirley Sites
Address _____
Onego, WV 26886
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
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
 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:
_____ 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 Columbia Natural Resources, Inc.
By: *Joseph Campbell*
Its Vice President, Drilling & Production Operations
Address P. O. Box 1273
Charleston, WV 25325
Telephone 357-2000

Subscribed and sworn before me this 5th day of November, 1987

Larry G. Burdette
My commission expires August 13, 1989 Notary Public

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE IN TRIPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Coal Operator or Owner	Columbia Natural Resources, Inc.
Address	Name of Well Operator P. O. Box 6070, Charleston, WV 25362
Coal Operator or Owner	Complete Address February 12 1990
Address	WELL AND LOCATION Union District
Max Sites and Shirley Sites Lease or Property Owner	Pendleton County
Onego, WV 26886	WELL NO. 21652
Address	Farm

STATE INSPECTOR SUPERVISING PLUGGING Phillip Tracy

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Kanawha

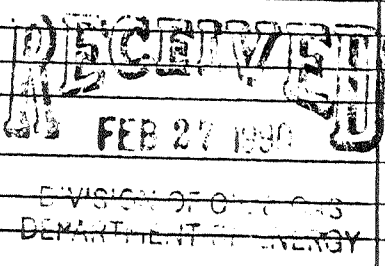
ss:

Marvin Grayson

and

Charles E. Bellinger

being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by Columbia Natural Resources, Inc., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 19th day of July, 19 89, and that the well was plugged and filled in the following manner:

Sand or Zone Record Formation	Filling Material	Plugs Used Size & Kind	Casing	
			C50 PULLED	C50 LEFT IN
Set @ 8200'		5-1/2 Bridge Plug		
Cut 5-1/2 csg. @ 7202'; cutting filled up to 7112'.	Pulled 5-1/2".		7015	1745
Cut 5-1/2 csg. @ 7028'	300' Plug	Cement		
7100' to 6800'	300' Plug	Cement		
6800' to 1876'	276' Plug	Cement		
1876' to 1600'	276' Plug	Cement		
Pulled 9-5/8			1776	
1600' to 86'	86' Plug	Cement		
86' to Surface	86' Plug	Cement	87	
Erect monument as prescribed by law.				
				
Coal Seams	Description of Monument			
(Name)				
(Name)				
(Name)				
(Name)				

and that the work of plugging and filling said well was completed on the 23rd day of July, 19 89.

And further deponents saith not.

Charles E. Bellinger

Sworn to and subscribed before me this 26 day of February, 19 90.

Stephen V. Swolcher
Notary Public

My commission expires:

May 25, 1998

APR 27 1990

Permit No. 47071-0012 P

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: Max & Shirley Sites Operator Well No.: 21652-TPI

LOCATION: Elevation: 2700' Quadrangle:

District: Union County: Pendleton
Latitude: 1825 Feet South of 38 Deg. 47 Min. 30 Sec.
Longitude 1500 Feet West of 79 Deg. 25 Min. Sec.

Company: COLUMBIA NATURAL RESOURCE
P. O. BOX 6070
CHARLESTON, WV 25362

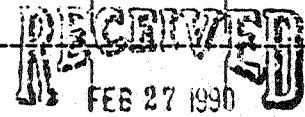
Agent: JOSEPH E. CAMPBELL

Inspector: Phillip Trace
Permit Issued:
Well work Commenced: 07/19/88
Well work Completed: 08/13/88
Verbal Plugging
Permission granted on: 07/19/89
Rotary y Cable Rig
Total Depth (feet) 8755
Fresh water depths (ft) 25, 36, 166

Salt water depths (ft) -

Is coal being mined in area (Y/N)? N
Coal Depths (ft):

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13-3/8"	86	86	60
9-5/8"	1776	1776	556
5-1/2"	8760	8760	280



OPEN FLOW DATA P & A - July 23, 1989
Shriver &

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

Producing formation Corrigansville Chert Pay zone depth (ft) 8542-8704
 Gas: Initial open flow - MCF/d Oil: Initial open flow - Bbl/c
 Final open flow - MCF/d Final open flow - Bbl/c
 Time of open flow between initial and final tests - Hours
 Static rock Pressure - psig (surface pressure) after - Hours

Second producing formation Oriskany Pay zone depth (ft) 8372-8755
 Gas: Initial open flow - MCF/d Oil: Initial open flow - Bbl/c
 Final open flow - MCF/d Final open flow - Bbl/c
 Time of open flow between initial and final tests - Hours
 Static rock Pressure - psig (surface pressure) after - Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: COLUMBIA NATURAL RESOURCES, INC.

By: Joseph E. Campbell
Date: 2-21-90

3129194

071 12

Well 21652

Shriver, Corrigansville, Chert

- 10-21-88 Frac 500 gals. 15% FE acid w/32 bbls. 2% KCl water @ 2500 psi, pumped 1000 gals. 15% FE acid + 11 bbls. 2% KCl water, displaced w/KCl water @ 4600#/4.2 BPM.
- 10-26-88 Prepared 240 bbls. 50/50 mix Methanol/water. Fraced w/2410 bbls. fluid, 1970 bbls. 40# /1000 gals. X-Link gel. 200 bbls. fresh water to flush 384,000 scf of CO₂, 6300# 80/100 sand 150,000# 20/40 Ottawa Sand, 50,000# 20/40 Hetrac Sand, 26 millicuries of tracer sand @ 37.6 BPM.

Oriskany

- 2-20-89 500 gals. 15% FE acid w/32 bbls. 2% KCl water @ 4700 psi.
- 6-6-89 Frac prepad 250 bbls. 50/50 Meoh/H₂O fraced w/2680 bbls. fluid, 2410 bbls. 40# /1000 gals. X-Link gel + 20 bbls. 2% KCl water, 539,000 scf of CO₂, 10,500# 80/100 sand.

<u>Formations:</u>	Briery Gap SS	2270 - 2500	
	Sherr Fm	3580 - 6324	
	Brallier	6324 - 7217	
	Harrell Sh.	7217 - 7440	
	Tulley LS	7440 - 7485	
	Mahantango	7485 - 7810	
	U. Marcellus	7810 - 7853	
	Purcell LS	7853 - 7932	
	L. Marcellus	7932 - 7981	
	Needmore Sh.	7981 - 8064	
	Oriskany	8064 - 8372	
	Helderberg	8372 - 8755	T.D.

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