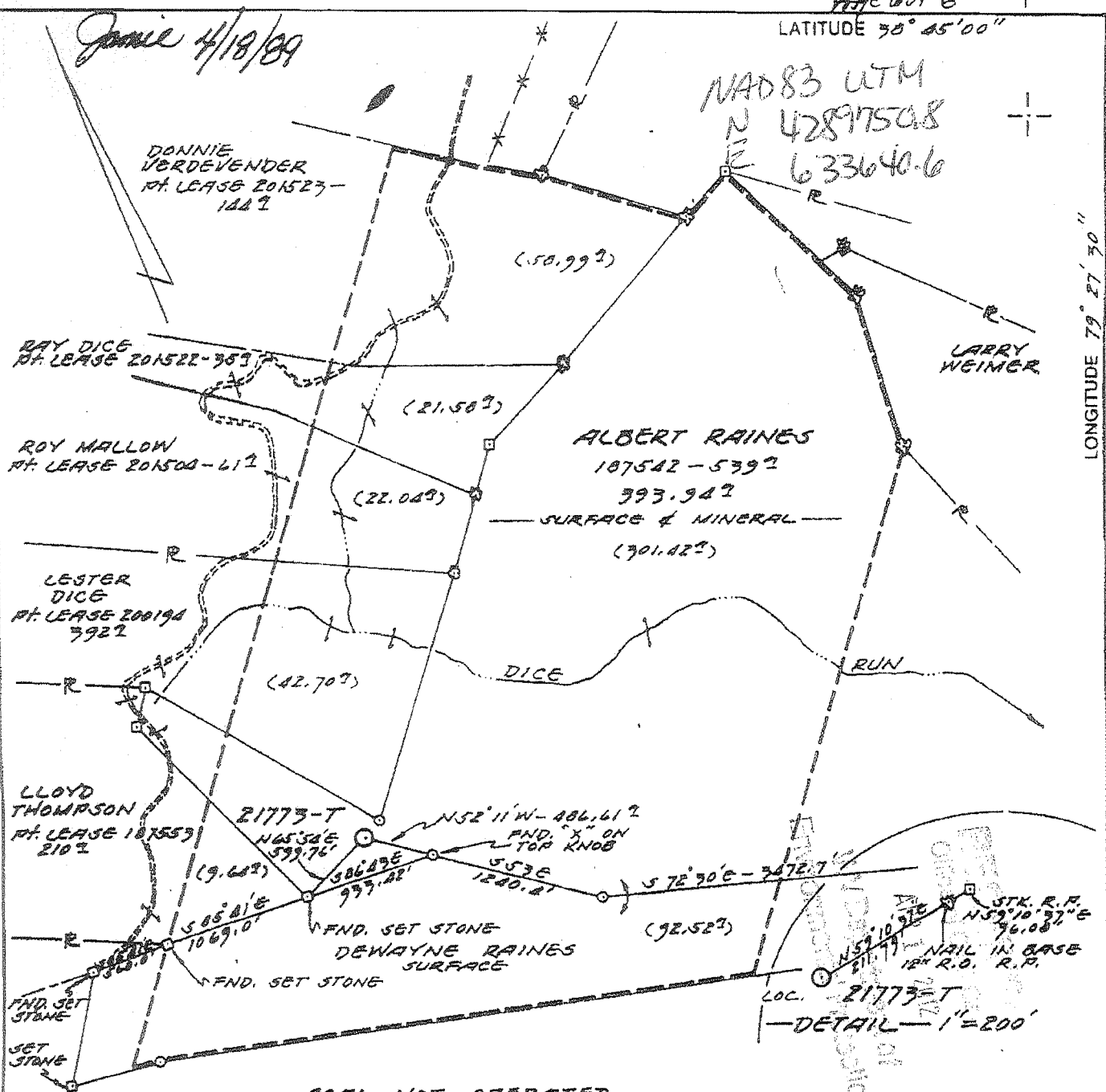


LATITUDE 38° 25' 00"

LONGITUDE 79° 27' 30"



LAT: 38° 25' 00" LONG: 79° 27' 30" NB. 233-A PG. 02-118 L.D.R.  
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 21773-T  
DRAWING NO. \_\_\_\_\_  
SCALE 1"=1000'  
MINIMUM DEGREE OF ACCURACY 1:2500  
PROVEN SOURCE OF ELEVATION U.S. GOVT. G.M.  
ELEV. 2745'

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) James L. Browning  
R.P.E. \_\_\_\_\_ I.L.S. 390



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION

DATE JULY 20 1888  
OPERATOR'S WELL NO. 21773-T  
API WELL NO. 47-071-00013P  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 2077.39' WATERSHED DICE RUN  
DISTRICT UNION COUNTY PENDLETON  
QUADRANGLE CIRCLEVILLE

SURFACE OWNER ALBERT RAINES ACREAGE 811 AC.  
OIL & GAS ROYALTY OWNER SAME LEASE ACREAGE 539 (510.09 AC. UNIT)  
LEASE NO. 187542

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

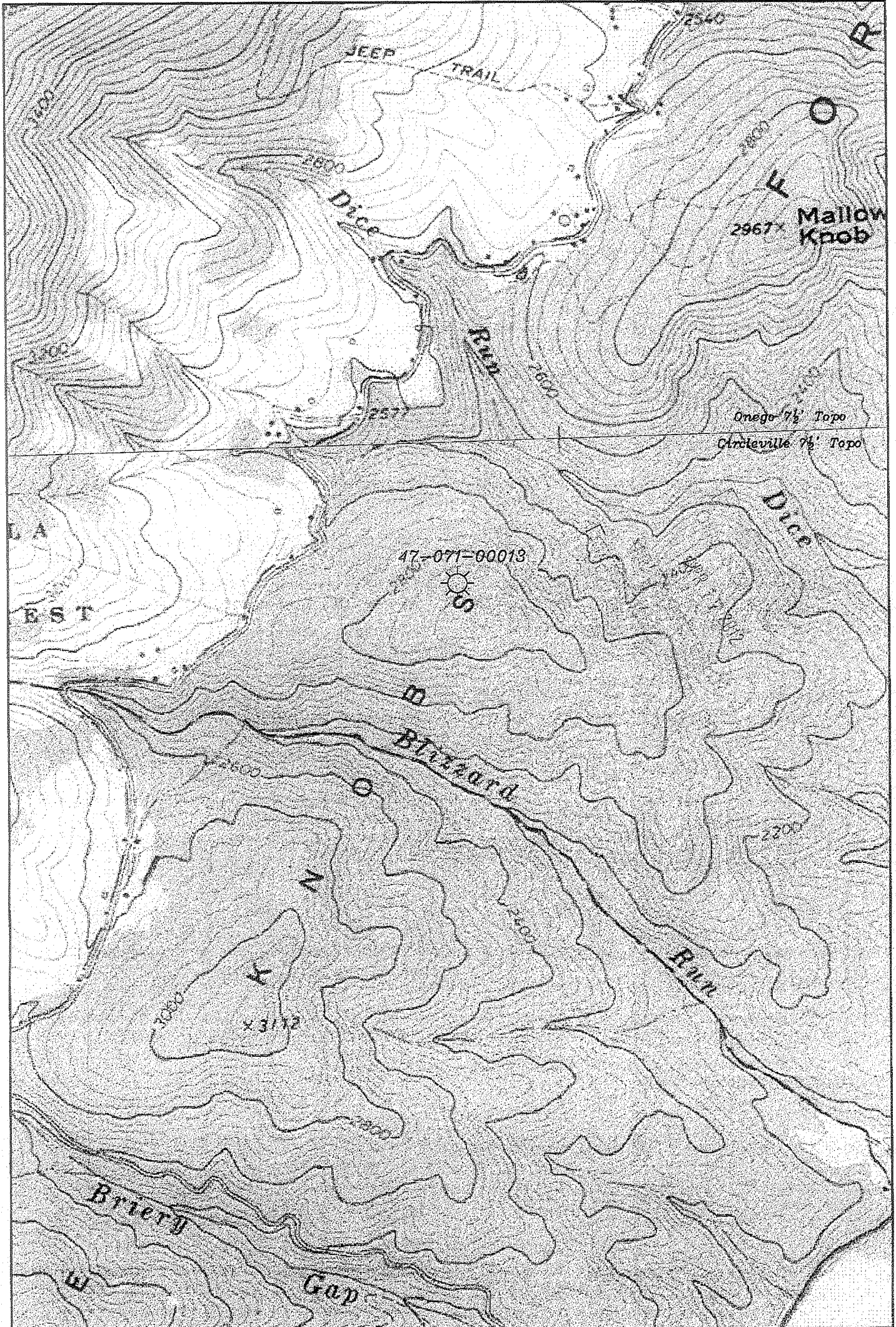
PLUG AND ABANDON  CLEAN OUT AND REPLUG

TARGET FORMATION CRISKANY ESTIMATED DEPTH 8100'  
WELL OPERATOR COL. NATL. RES., INC. DESIGNATED AGENT J.E. CAMPBELL  
ADDRESS P.O. BOX 1273 CHAS., W.VA. 25325 ADDRESS SAME

FORM WVM-6 1-75

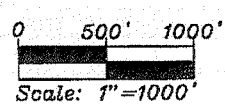
COUNTY NAME PERMIT

71-00013P



WELL: 21775-T  
 PERMIT #: 47-071-00013  
 QUAD: CIRCLEVILLE 7 1/2'  
 DISTRICT: UNION  
 COUNTY: PENDLETON  
 STATE: WEST VIRGINIA

GEOGRAPHIC NAD27  
 Latitude: 38.746048  
 Longitude: 79.462067  
UTM NAD83 (Meters)  
 4289731.5 N  
 633670.3 E

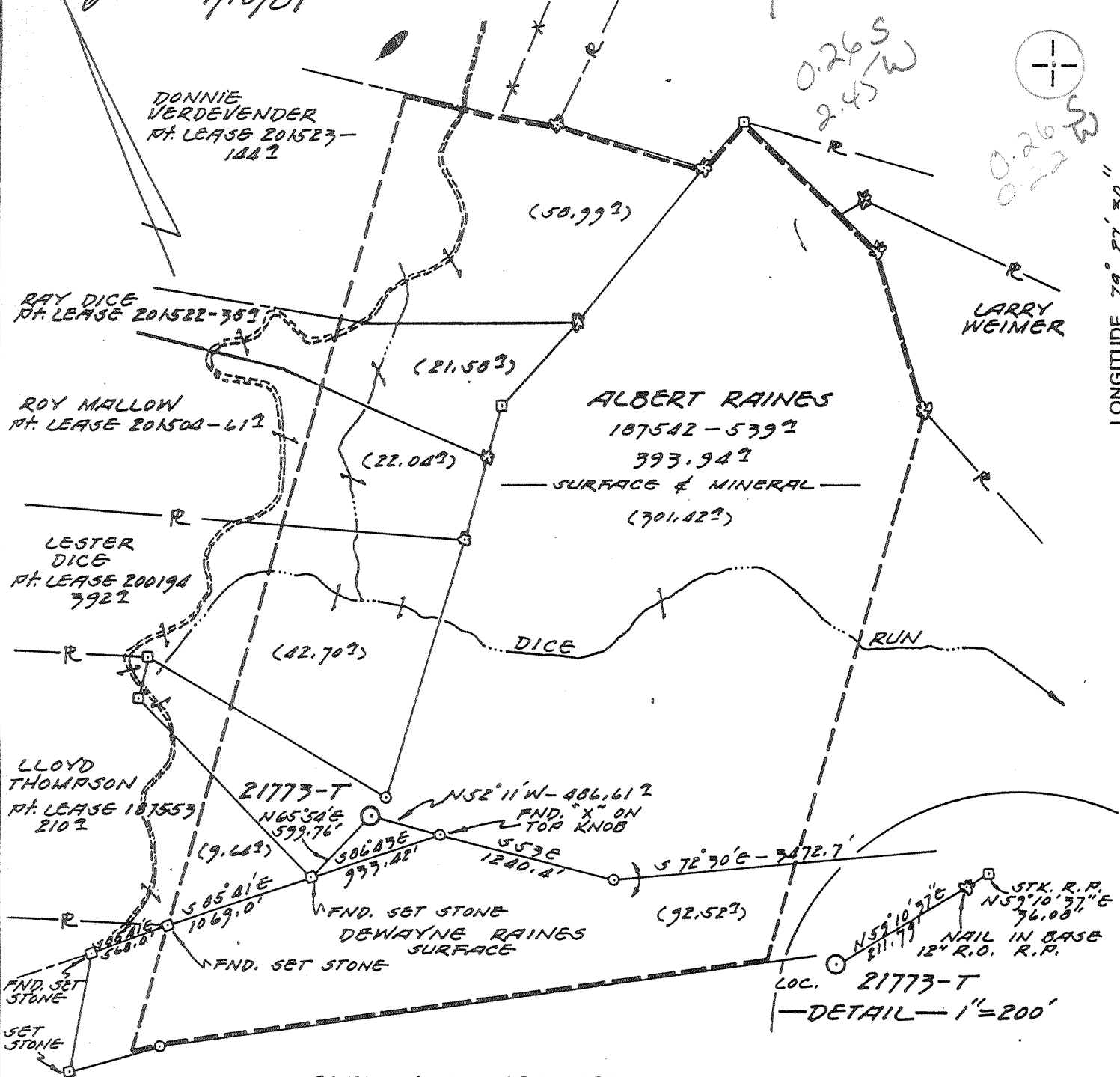


**Chesapeake**  
 ENERGY  
 P.O. Box 18496 Oklahoma City, OK 73154-0496

05/04/2012

June 4/18/89

LATITUDE 38° 45' 00"



LAT: 38° 44' 46" LONG: 79° 27' 48" NB. 439-A PG. 64-118 L.D.R. REVISED 1-27-89

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS NOTE: NO BUILDINGS OR HOUSES WITHIN AREA OF LOCATION

FILE NO. 21773-T  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION U.S. GOVT. B.M.  
ELEV. 2745'

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) James L. Browning  
 R.F.E. \_\_\_\_\_ L.L.S. 398



**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION

DATE JULY 20, 1988  
 OPERATOR'S WELL NO. 21773-T  
 API WELL NO. \_\_\_\_\_

47 - 071 - 00013  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 2077.39' WATER SHED DICE RUN  
 DISTRICT UNION 6 COUNTY RENDLETON  
 QUADRANGLE CIRCLEVILLE 296 025 1 15' NW

SURFACE OWNER ALBERT RAINES ACREAGE 411 AC.  
 OIL & GAS ROYALTY OWNER SAME LEASE ACREAGE 539 (540.89 AC. UNIT)  
 LEASE NO. 187542

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 DRISKANY ESTIMATED DEPTH 8100'  
 WELL OPERATOR COL. NATL. RES., INC. 1013 DESIGNATED AGENT J.E. CAMPBELL  
 ADDRESS P.O. BOX 1273 CHAS., W.VA. 25325 ADDRESS SAME

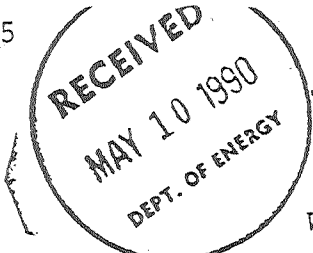
APR 21 1989

"06' 27' 39" 61 EQUIDISTANT

COUNTY NAME PERMIT

21773

DEEP WELL 1-1 unnamed (D)



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

Well Operator's Report of Well Work

Farm name: RAINES, ALBERT Operator Well No.: 21773-TPI

LOCATION: Elevation: 2877.39 Quadrangle: CIRCLEVILLE

District: UNION County: PENDELTON  
Latitude: 1400 Feet South of 38 Deg. 45Min. 0 Sec.  
Longitude 1150 Feet West of 79 Deg. 27 Min. 30 Sec.

Company: COLUMBIA NATURAL RESOURCES, INC.

P. O. BOX ~~12773~~ 6070  
CHARLESTON, WV ~~25325-XXXX~~  
25362

Agent: JOSEPH E. CAMPBELL

Inspector: PHILLIP TRACY  
Permit Issued: 04/21/89  
Well work Commenced: 09/07-89  
Well work Completed: 09/30/89  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 8210'  
Fresh water depths (ft) \_\_\_\_\_  
Damp @ 182'; 1/4" stream @ 241'  
Salt water depths (ft) \_\_\_\_\_

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13-3/8"	43	43	30
9-5/8"	1998	1983	621
5-1/2"	8210	8202	356

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

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth (ft) 7622-7815  
Gas: Initial open flow - MCF/d Oil: Initial open flow - Bbl/d  
Final open flow 1380 MCF/d Final open flow - Bbl/d  
Time of open flow between initial and final tests 72 Hours  
Static rock Pressure 1900 psig (surface pressure) after 72 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
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  
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.

Joseph E. Campbell  
For: COLUMBIA NATURAL RESOURCES, INC.

By: Vice President, Drilling and Production Operations  
Date: May 4, 1990

Well 21773-TPI

Fraced w/2746 bbls. X-Link gel, 160 sks 80/100 sand, 1804 sks 20/40 sand, 30 tons CO<sub>2</sub> - 523,740 Scf CO<sub>2</sub>, treated @ 24 bpm @ 4230 psi. Pumped 600 gals. 15% Fe acid, 34 bbls. 2% KCl water, formation broke down @ 3400 psi, treated formation @ 46 bpm @ 3500 psi.

Sand & Shale	141 - 725	1/4" water @ 241'
White Sand	725 - 825	
Red Rock <i>Hampton</i>	825 - 960	
Sand & Shale	960 - 1942	
Foreknobs	1942 - 3286	
Scherr	3286 - 5912	
Brallier	5912 - 6902	
Harrell Shale	6902 - 7092	
Tully Shale	7092 - 7127	
Upper Marcellus	7246 - 7330	
Purcell LS	7330 - 7404	
Lower Marcellus	7404 - 7449	
Onondaga LS	7449 - 7459	
Needmore Shale	7459 - 7622	
Oriskany	7622 - 7815	
Helderberg	7815 - 8210	
Loggers T. D.	7815'	
Drillers T.D.	8210'	

5704

3

Issued 4/21/89 Expires 4/21/91

FORM WW-2B

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

- 1) Well Operator: Columbia Natural Resources, Inc. 10460, 6, 296
- 2) Operator's Well Number: 21773-TPI 3) Elevation: 2860'
- 4) Well type: (a) Oil  / or Gas  /  
(b) If Gas: Production  / Underground Storage  /  
Deep  / Shallow  /
- 5) Proposed Target Formation(s): Oriskany
- 6) Proposed Total Depth: 8100 feet
- 7) Approximate fresh water strata depths: -
- 8) Approximate salt water depths: -
- 9) Approximate coal seam depths: -
- 10) Does land contain coal seams tributary to active mine? Yes  / No  /
- 11) Proposed Well Work: Drill Deep Well
- 12)

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-40	48#	40	40	28
Fresh Water						
Coal						
Intermediate <sup>P.S.</sup>	9-5/8"	J-55	36#	2000	2000	630
Production	5-1/2"	N-80	17#	8100	8100	252
Tubing						
Liners						

30CSR18-11.3  
30CSR19-11.22  
30CSR18-11.1

RECEIVED  
APR 17 1989

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

501 5311

For Division of Oil and Gas Use Only

Fee(s) paid: Plat WW-9 WW-2B Bond 50 Blanket Agent  
Reclamation Fund WPCP  
(Type)

RECEIVED  
APR 17 1989

Page 1 of 6  
Form WW2-A  
(09/87)  
File Copy

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

1) Date: March 7, 1989  
2) Operator's well number  
21773-TPI  
3) API Well No: 47 - 071 - 00013  
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:	5) (a) Coal Operator:
(a) Name <u>Albert Raines</u>	Name _____
Address <u>P. O. Box 54</u>	Address _____
<u>Riverton, WV 26814</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Albert Raines</u>
	Address <u>P. O. Box 54</u>
(c) Name _____	<u>Riverton, WV 26814</u>
Address _____	Name <u>Dewayne A. &amp; Shelby Raines</u>
	Address <u>H. C. 3, Box 161</u>
	<u>Cross Junction, VA 22625</u>
6) Inspector _____	(c) Coal Lessee with Declaration
Address _____	Name _____
	Address _____
Telephone (304)- _____	

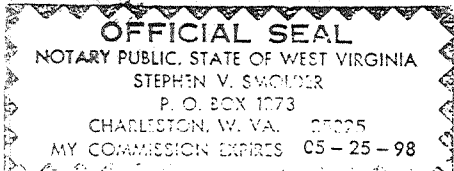
TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ 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:  
\_\_\_\_\_ Personal Service (Affidavit attached)  
X 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: [Signature]  
Its: Vice President, Drilling and Production Operations  
Address P. O. Box 1273  
Charleston, WV 25325  
Telephone 304/357-2000



Subscribed and sworn before me this 10 day of March, 1989  
[Signature] Notary Public  
My commission expires May 25, 1998

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Department, 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.

Farm name: Sites, Shirl Operator Well No.: 821773

LOCATION: Elevation: 2077' Quadrangle: Circleville  
District: Union County: Pendleton  
Latitude: 1400 Feet South of 38 Deg. 45 Min. 0 Sec.  
Longitude: 1150 Feet West of 79 Deg. 27 Min. 30 Sec.

Well Type: OIL \_\_\_\_\_ GAS X

Company Chesapeake Appalachia, LLC Coal Operator \_\_\_\_\_  
PO Box 1300 or Owner \_\_\_\_\_  
Jane Lew, WV 26378 \_\_\_\_\_  
Agent Eric B. Gillespie Coal Operator \_\_\_\_\_  
Permit Issued Date 05-02-2012 or Owner \_\_\_\_\_

AFFIDAVIT

STATE OF ~~WEST VIRGINIA~~ KY  
County of Floyd ss:

Rodney Osborne and Charles Moore 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 the above named well operator, and participated in the work of plugging and filling the above well say that said work was commenced on the 4th day of April, 2013, and the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
6% Gel	5700'	Surface	5508' of 2 3/8"	2694' of 2 3/8"
C1A Cement	5508'	5369'	2127' of 5 1/2"	6075' of 5 1/2"
C1A Cement	3466'	3340'		1998' of 9 5/8"
C1A Cement	2989'	2870'		43' of 13 3/8"
C1A Cement	2130'	1867'		
C1A Cement	254'	Surface		

Description of monument: Aluminum pipe welded on 4" saturated tubing 36" above ground w/ Chesapeake, API #, Well Number, and Plugged date and that the work of plugging and filling said well was completed on the 17th day of April, 2013.

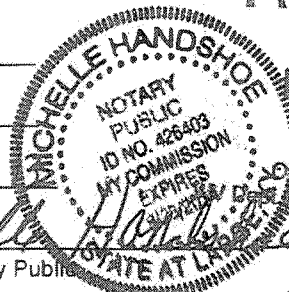
And further deponents saith not. Rodney Osborne

Charles Moore

Sworn and subscribe before me this 22<sup>nd</sup> day of April, 2013

My commission expires: 9-26-14

Michelle Handshom  
Notary Public



Received

MAY 21 2013

Office of Oil and Gas  
Department of Environmental Protection

Affidavit reviewed by the Office of Oil and Gas: Bill Hatfield

Title: 5/9/105/24/2013