

98/1/29/88

9000'

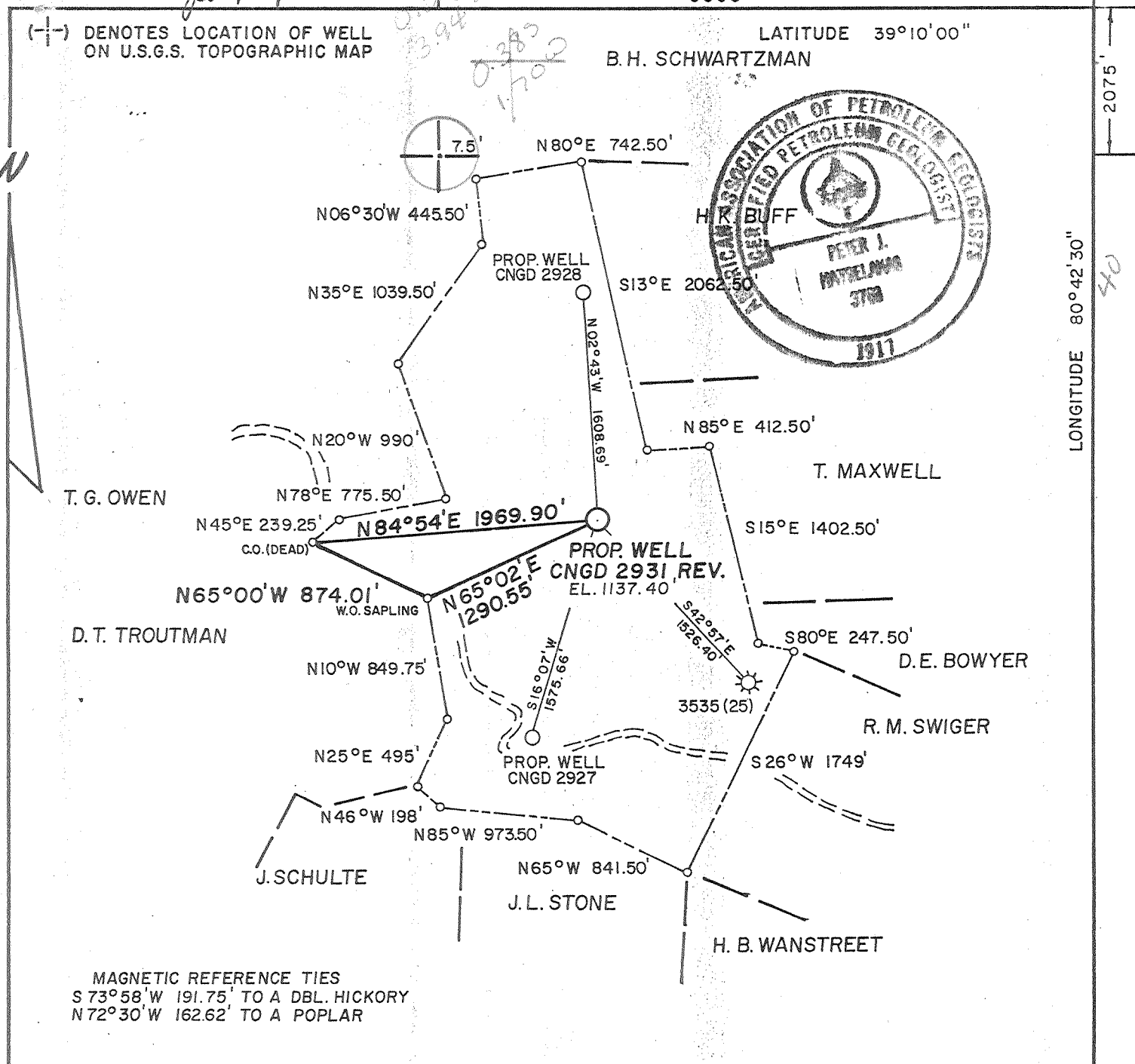
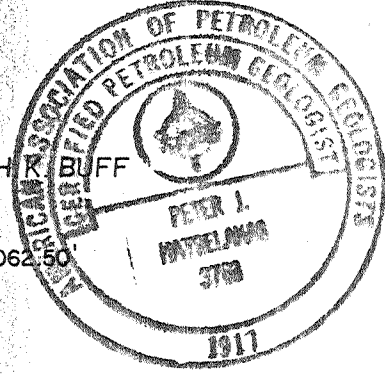
(+/-) DENOTES LOCATION OF WELL ON U.S.G.S. TOPOGRAPHIC MAP

LATITUDE 39°10'00"

B. H. SCHWARTZMAN

2075'

LONGITUDE 80°42'30"



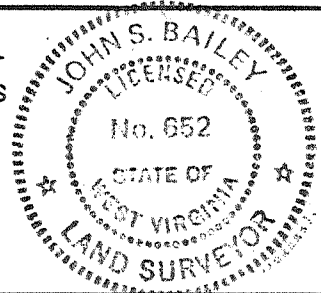
MAGNETIC REFERENCE TIES
S 73°58'W 191.75' TO A DBL. HICKORY
N 72°30'W 162.62' TO A POPLAR

MSES consultants, inc.

FILE NO. MSES 87-764
DRAWN BY RVS/JSB
SCALE 1" = 1000'
MIN. DEGREE OF ACCURACY 1 IN 200
PROVEN SOURCE OF ELEVATION
RD. JCT. ELEV. 922' 6200' SW OF LOC.

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) John S. Bailey
R.P.E. _____ L.L.S. 652



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE DECEMBER 16, 19 87
OPERATOR'S WELL NO. CNGD 2931 REV.
API WELL NO. 47 - 017 - 3625
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
IF "GAS", PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1137.40' WATERSHED TOMS FORK OF MEATHOUSE FORK
DISTRICT NEW MILTON 6 Wadsworth COUNTY DODDRIDGE
QUADRANGLE NEW MILTON 7.5' 511 123 NEAREST TOWN LEOPOLD
SURFACE OWNER DOLORES HINTERER ACREAGE 204.40
OIL & GAS ROYALTY OWNER LOUISA FISHER LEASE ACREAGE 204
LEASE NO. DV-11706

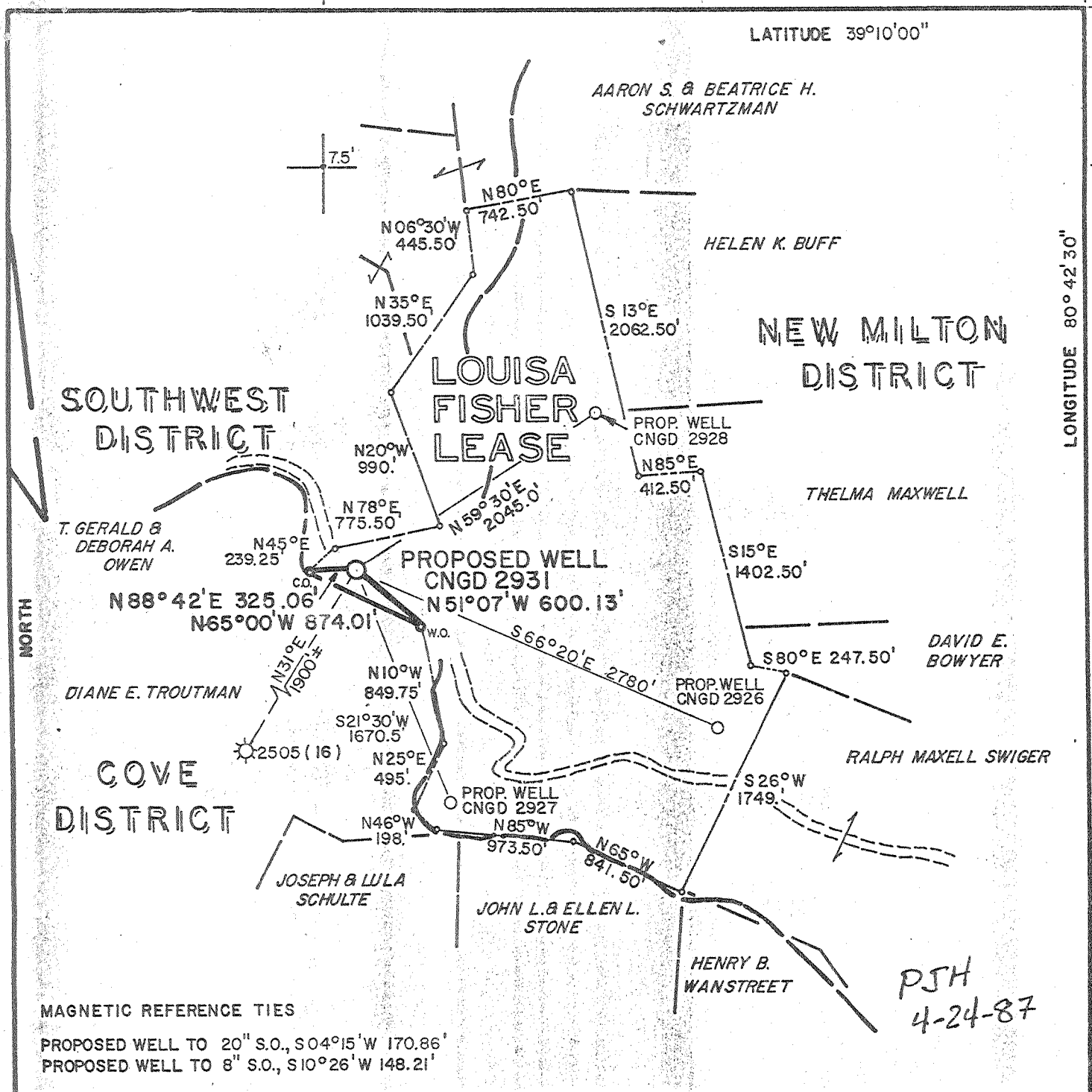
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5620'
WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
ADDRESS P.O. BOX 15746 142 ADDRESS ROUTE 2 BOX 698
PITTSBURGH, PA. 15244 BRIDGEPORT, W.V. 26330

DODDRIDGE COUNTY PERMIT

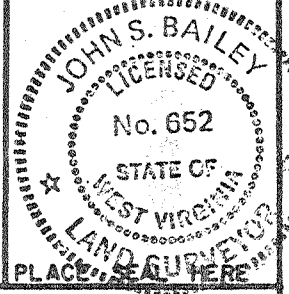
66 Porto Rico (Stout) (134)

FORM IV-6



FILE NO. MSES 87-759
 DRAWN BY VSH/JSB
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION RD. JCT. ELEV. 922', 4200' SW OF LOCATION

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) John S. Bailey
 R. P. E. _____ L. L. S. 652



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



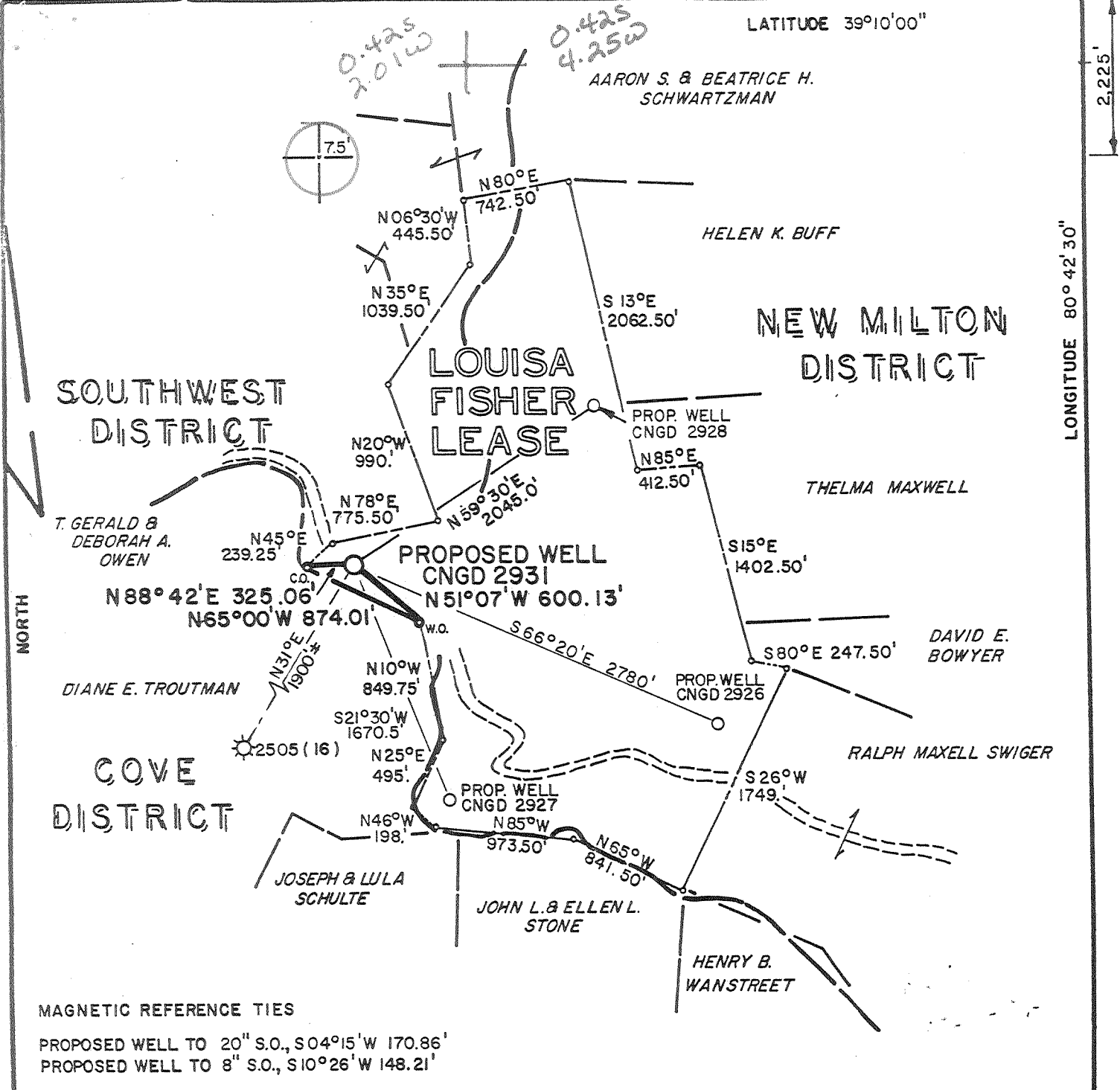
Department of Mines
 Oil & Gas Division

DATE MARCH 17, 19 87
 OPERATOR'S WELL NO. CNGD 2931
 API WELL NO. 47-017-3545
 STATE COUNTY PERMIT

CANCELLED
Now 3625

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X)
 LOCATION: ELEVATION 1172.0' WATER SHED SOUTH FORK HUGHES RIVER OF THE HUGHES RIVER
 DISTRICT NEW MILTON COUNTY DODDRIDGE
 QUADRANGLE NEW MILTON Southwest NEAREST TOWN LEOPOLD
 SURFACE OWNER DOLORES HINTERER ACREAGE 204.40
 OIL & GAS ROYALTY OWNER LOUISA FISHER LEASE ACREAGE 204
 LEASE NO. DV-11706
 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 DEVONIAN SHALE ESTIMATED DEPTH 5620'
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
 ADDRESS P. O. BOX 15746 ADDRESS ROUTE 2, BOX 698
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

DODD, 3545



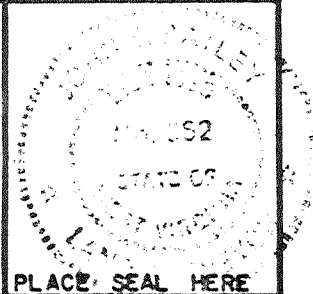
MAGNETIC REFERENCE TIES

PROPOSED WELL TO 20" S.O., S04°15' W 170.86'
 PROPOSED WELL TO 8" S.O., S10°26' W 148.21'

FILE NO. MSES 87-759
 DRAWN BY VSH/JSB
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION RD. JCT. ELEV. 922', 4200' SW OF LOCATION

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) J. R. S. Bailey
 R. P. E. _____ L. L. S. 652



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



Department of Mines
 Oil & Gas Division

DATE MARCH 17, 1987
 OPERATOR'S WELL NO. CNGD 2931
 API WELL NO. 47-017-3545
 STATE COUNTY PERMIT

Now 17-3625

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS", PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X)
 LOCATION: ELEVATION 1172.0' WATER SHED SOUTH FORK HUGHES RIVER OF THE HUGHES RIVER
 DISTRICT NEW MILTON COUNTY DODDRIDGE
 QUADRANGLE NEW MILTON Southwest NEAREST TOWN LEOPOLD
 SURFACE OWNER DOLORES HINTERER ACREAGE 204.40
 OIL & GAS ROYALTY OWNER LOUISA FISHER LEASE ACREAGE 204
 LEASE NO. DV-11706
 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 DEVONIAN SHALE ESTIMATED DEPTH 5620' JUN 1 1987
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
 ADDRESS P.O. BOX 15746 ADDRESS ROUTE 2, BOX 698
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330



IV-35
(Rev 8-81)

Date April 26, 1988
Operator's
Well No. CNGD WN 2931
Farm Louisa Fisher
API No. 47 - 017 - 3625

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MAY 05 1988

State of West Virginia
Department of Mines
Oil and Gas Division

DIVISION OF OIL & GAS WELL OPERATOR'S REPORT
DEPARTMENT OF ENERGY 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: 1137.40 Watershed Toms Fork of Meathouse Fork
District: New Milton County Doddridge Quadrangle New Milton

COMPANY CNG Development Company
ADDRESS P. O. Box 15746
Pittsburgh, PA 15244
DESIGNATED AGENT Gary A. Nicholas
ADDRESS Rt. 2 Box 698
Bridgeport, WV 26330
SURFACE OWNER Dolores Hinterer
ADDRESS Route 1
New Milton, WV 26411
MINERAL RIGHTS OWNER Louisa Fisher
ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK
Mike Underwood ADDRESS Rt. 2, Box 135
Salem, WV 26426
PERMIT ISSUED Feb. 10, 1988
DRILLING COMMENCED 4/1/88
DRILLING COMPLETED 4/7/88

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 Cond.			
13-10"	211	211	To Surf.
9 5/8			
8 5/8	1764	1764	To Surf.
7			
5 1/2			
4 1/2	5564	5564	555 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5620 feet
Depth of completed well 5620 feet Rotary / Cable Tools _____
Water strata depth: Fresh 180 feet; Salt _____ feet
1585
Coal seam depths: -0- Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Alex. Benson Pay zone depth 5325-5416 feet
Halltown 4181-4187
Warren 3495-3576
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 2144. Mcf/d Final open flow 4 Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1650 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)
Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ 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)
MAY 13 1988

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

ALEXANDER - Perf. 5325 - 5416, 29 shots. Pump 1000 gal prepad LGC 30# Gel, 897 bbl Total, Ave Rate 33 BPM, Ave Pres. 2350, 5,000# 80/100 Sand, 70,000# 20/40 Sand, 500 gal Acid, ISIP 1750, 5 min 1430.

BENSON - Perf. 5051 - 5058, 10 holes; 4964 - 4970, 10 shots. Broke 3000#, ISIP 1295, Pump 95 bbl prepad, 648 bbl 30# Gel LGC, 5,000# 80/100 Sand, 35,000# 20/40 Sand, Ave Rate 32 BPM, Ave Pres. 2300#, 500 gal Acid,

BALLTOWN - Perf. 4181 - 4197, 20 shots. Broke 2760, ISIP 1300, pumped 3500 gal prepad, 621 bbl 30# LGC, 5,000# 80/100 Sand, 30,000# 20/40 Sand, Ave Rate 32.6 BPM, Ave Pr. 2630, 500 gal Acid, ISIP 1980, 5 min 1290

WARREN - Perf. 3495 - 3576, 30 shots. Broke 2000#, ISIP 900, pumped 3000 gal prepad 665 bbl 30# LGC, 5,000# 80/100 Sand, 40,000# 20/40 Sand, Ave Rate 34 BPM, Ave Pr 1630 500 gal Acid, ISIP 1200, 5 min 850

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and c
Sand, Shale & RR			0	2114	WATER 1/4" stream @ 85'
Big Lime/Big Injun			2114	2277	1" stream @ 190'
Sand & Shale			2277	2419	1/2" stream @ 1585'
Weir			2419	2519	
Sand & Shale			2519	2598	
Berea			2598	2606	
Sand & Shale			2606	2965	
4th Sand			2965	2971	
Shale			2971	3002	
5th Sand			3002	3010	
Shale			3010	3130	
Bayard			3130	3186	
Shale			3186	3482	
Warren			3482	3500	
Sand & Shale			3500	3665	
Upper Speechley			3665	3760	
Sand & Shale			3760	4169	
Balltown			4169	4298	
Sand & Shale			4298	5066	
Benson			5066	5122	
Sand & Shale			5122	5319	
Alexander			5319	5429	
Shale			5429	5620	
LOG TOPS ✓					
Big Lime			2120	2260	
Big Injun			2260	2276	
Weir			2339	2491	
Berea			2591	2602	
Gordon Gp.			2804	2815	
Warren			3432	3473	
U. Speechley			3492	3578	
Balltown			4180	4200	
Riley			4960	4970	
Benson			5060	5116	
Alexander			5310	5420	

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MAY 05 1988
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator
By: *[Signature]*
Date: 4-26-88

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

MAY 13 1988

FORM WW-2B

Page ___ of ___

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

- 1) Well Operator: CNG Development Company 10110, Co, 510
- 2) Operator's Well Number: CNGD 2931 Rev. 3) Elevation: 1137.4
- 4) Well type: (a) Oil ___ / or Gas X /
(b) If Gas: Production X / Underground Storage ___ /
Deep ___ / Shallow X /
- 5) Proposed Target Formation(s): Alexander 435
- 6) Proposed Total Depth: 5620 feet
- 7) Approximate fresh water strata depths: 950K
- 8) Approximate salt water depths: 1670 OK 2012'
- 9) Approximate coal seam depths: 203'-208'
- 10) Does land contain coal seams tributary to active mine? Yes ___ / No X /
From Doddridge 701, 1607, 3535, 1440
- 11) Proposed Well Work:
- 12) *

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT Fill-up (cu. ft.)
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water	11-3/4	H-40	42	200	200	To surface
Coal						
Intermediate	8-5/8	X-42	23	1750	1750	To surface
Production	4-1/2	J-55	10.5	5620	5620	200-400 sks
Tubing	1-1/2	CN-55	2.75	5520	5520	
Liners						

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JAN 25 1988

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

21334

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

(Type)

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Page 1 of
Form W2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 1) _____
- 2) _____
- 3) _____

Date: January 13, 1988
 Operator's well number _____
 GNGD 2931 Rev. _____
 API Well No: 47 - 017 - 3625
 State - County - Permit _____

5) (a) Coal Operator:

Name _____
 Address _____

(b) Coal Owner(s) with Declaration
 Name Same as surface owner
 Address _____

Name _____
 Address _____

(c) Coal Lessee with Declaration
 Name _____
 Address _____

Surface Owner(s) to be served:

(a) Name Dolores Hinterer
 Address Route 1
 New Milton, WV 26411

(b) Name _____
 Address _____

(c) Name _____
 Address _____

6)

Inspector Mike Underwood
 Address Route 2, Box 135
 Salem, WV 26426
 Telephone (304) - 782-1043

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:

Certified Mail (Postmarked postal receipt attached)
 Personal Service (Affidavit 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 _____

CNG Development Company

BY: _____

Its: Supervisor, Well Programs
 Address One Park Ridge Center, P.O. Box 15746
 Pittsburgh, PA 15244

Telephone (412) 787-4117
 13th day of January, 1988

My commission expires _____

December 19, 1988
 Carl A. Roberts, Notary Public
 PITTSBURGH, ALLEGHENY COUNTY, PA
 MY COMMISSION EXPIRES DECEMBER 19, 1988

Notary Public _____

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MAY 08 1987



1) Date: April 29, 19 87
2) Operator's Well No. CNGD 2931
3) API Well No. 47 State 017 County 3545 Permit

now 3625

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

- 4) WELL TYPE: A Oil Gas B (If "Gas", Production Underground storage Deep Shallow)
- 5) LOCATION: Elevation: 1172 Watershed: South Fork Hughes River of the Hughes River District: New Milton - 6 County: Doddridge 017 Quadrangle: New Milton 510
- 6) WELL OPERATOR: CNG Development Co CODE: 10110 7) DESIGNATED AGENT: Gary Nicholas Address: Crosswind Corporate Park Rt. 2, Box 698, Bridgeport, WV 26330
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED: Name: Mike Underwood Address: Route 2, Box 114 Salem, WV 26426
- 9) DRILLING CONTRACTOR: Name: Sam Jack Drilling Co. Address: P.O. Box 48 Buckhannon, WV 26201
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate / Plug off old formation / Perforate new formation / Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Alexander
- 12) Estimated depth of completed well, 5620 feet
- 13) Approximate trata depths: Fresh, 403 feet; salt, - feet.
- 14) Approximate coal seam depths: 243 Is coal being mined in the area? Yes / No
- 15) CASING AND TUBING PROGRAM see 1440 & 1607

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									Kinds
Fresh water	11-3/4	H-40	42	X		48 430	48 430	To surface	By rule 15.05
Coal									Sizes
Intermediate	8-5/8	X-42	23	X		1575	1575	To surface	By rule 15.05
Production	4-1/2	J-55	10.5	X		5620	5620	200 - 400	Depths set
Tubing	1-1/2	CN-55	2.75	X					By rule 15.01
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

47-017-3545

May 26

87

Permit number _____

Date

19

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

May 26, 1989

Permit expires _____ unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: 18852 202	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
---	--	---	---	-------------------	---	--	---------------------------------

NOTE: Keep one copy of this permit posted at the drilling location.

Director, Division of Oil and Gas

File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.