

OWNERSHIP

No Coal
Surface and Minerals are owned by Hazel Perrine

Minimum Error of Closure 1 in 200

Source of Elevation USGS B.M. at mouth of Cox Run = 736'

- Fracture
- New Location
- Drill Deeper
- Abandonment

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: [Signature]
Squares: N S E W

Map No.

Company MERT DEVELOPMENT, INC.
 Address Route 8, Box 336 AA - Fairmont, West Va. 26554
 Farm Hazel Perrine, et al
 Tract _____ Acres 383 Lease No. _____
 Well (Farm) No Mert No. 1 Serial No. _____
 Elevation (Spirit Level) 857 863
 Quadrangle Periel 7 1/2 Spencer 15
 County Roane District Curtis
 Engineer [Signature]
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date Dec. 28, 1979 A.D. Scale 1"=1000'

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

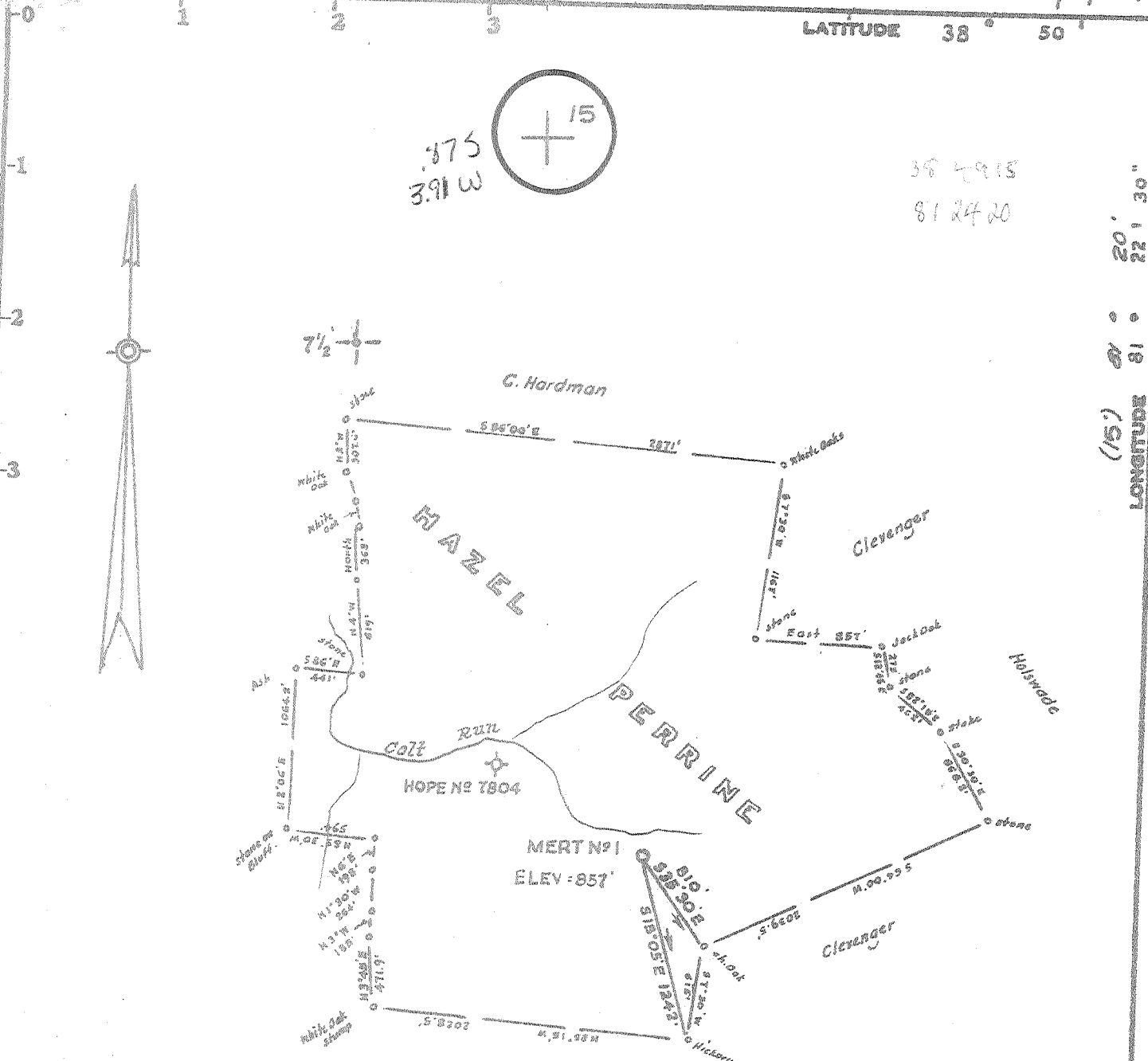
WELL LOCATION MAP

FILE NO. 47-087-3237-DD

+ Denotes location of well on United States Topographic Maps, scale 1 to ^{24,000}/_{62,500}, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

3-3 Spencer (164) deep well ←



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I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: Matthew J. [Signature]
 Squares: N S E W

Company MERT DEVELOPMENT, INC.
 Address Route 2, Box 336 AA - Fairmont, West Va. 26554
 Farm Hazel Perrine, et al
 Tract _____ Acres 383 Lease No. _____
 Well (Farm) No Mert No. 1 Serial No. _____
 Elevation (Spirit Level) 863'
 Quadrangle Periel 7 1/2' Spencer 15' 5C
 County Roane District Curtis
 Engineer Matthew J. [Signature]
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date Dec. 28, 1979 A.D. Scale 1" = 1000'

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

WELL LOCATION MAP
 FILE NO. 47-087-3237

+ Denotes location of well on United States Topographic Maps, scale 1 to 25,000 to 62,500, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Rotary fr Oil ---
Cable --- Gas X
Recycling --- Comb. ---
Water Flood --- Storage ---
Disposal --- (Kind) ---

Quadrangle Peniel 7.5
Permit No. 47-087-3237
Company MERT Development Inc.
Address Fairmont WV
Farm Hazel & Buck Perrine Acres 283
Location (waters) Colt Run
Well No. 1 Elev. 863
District Curtis County Roane
The surface of tract is owned in fee by Hazel Perrine
Address Reedy WV
Mineral rights are owned by Hazel Perrine
Address Reedy WV
Drilling Commenced 5-9-80
Drilling Completed 12-29-81
Initial open flow 0 cu. ft. --- bbls.
Final production 750 m cu. ft. per day --- bbls.
Well open --- hrs. before test 1200 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8	204	204	CTS
8 5/8			
7	2016	2016	2020'
5 1/2			
4 1/2		5791	600' fillup
3			
2			
Liners Used			

Well treatment details: Held → Drisk 5710-5720 Attach copy of cementing record.
Held 5720-5725
Perforated Oriskany (5710-5725) 14 Holes. Nitrogen Frac with 4000 gal. Hydrochloric Acid (Raw 32%). ISIP 2500 Avg PSI 3300.
Perforated Marcellus (5452-5492) 25 Holes. Nitrogen Frac with 1000 gal. 21% HCL, 900,000 scf N₂.
Perforated Devonian Shale (5126-5402) 20 holes. Nitrogen Frac with 1000 gal 21% HCL, 900,000 scf N₂. Rhine 5126-5254, Sonyea 5254-5320, Genesee 5320-5402
Coal was encountered at Not Encountered Feet --- Inches ---
Fresh water 1050 Feet --- Salt Water 1707 Feet ---
Producing Sand Oriskany, Marcellus, Devonian Shale Depth (5710-5725) (5452-5492) (5126-5402)

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Redrock			0	330		
Sand			330	360		
Redrock			540	620		
Sand			620	660		
Redrock			660	720		
Sand/Shale			720	1750		
Lime			1750	1806	water 1707	
Injun			1806	1835		
Lime			1835	1940		
Sand			1940	2080		
Shale/Sand			2080	2410		
Sand			2410	2420		
Shale			2420	2480		
Sand			2480	2570		
Shale			2570	2635		
Shale/Sand			2635	4840		
Sand			4840	4865		
Shale			4865	5505		
Lime/chert			5505	5650		
Sand			5650	5720		
Lime			5720	5928		
TD			5928	5928		

LOG TOPS
U. DEV - 2480
HURON - 3710
JAVA - 4515
ANGOLA - 4697
RHINE - 4969
SONYEA - 5254
GENESSEE - 5320
MARC. - 5421
ONOND. - 5510
ORISK. - 5683
HELD. - 5720

5928
5550
418

Indicates Electric Log tops in the remarks section. (over)
DD - fig
5928 NEW TD
2635 OLD TD
3293 - new fig
JS rec'd 7/29/85



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORD

Quadrangle Peniel 7.5'
Permit No. 47-087-3237

Rotary X Oil _____
Cable _____ Gas ✓
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ Dry
(Kmd)

Company MERT Development Inc.
Address Fairmont WV
Farm Perrine Acres 283
Location (waters) Colt Run
Well No. 1 Elev. 863 ~~863~~
District Curtis County Roane
The surface of tract is owned in fee by _____
Hazel Perrine
Address Reedy WV
Mineral rights are owned by Hazel Perrine
Address Reedy WV

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8	204	204	CTS
8 5/8			
7	2016	2016	2020'
5 1/2			
4 1/2			
3			
2			
Liners Used			

Drilling Commenced _____
Drilling Completed 5-9-80
Initial open flow 0 cu. ft. _____ bbls.
Final production 0 cu. ft. per day _____ bbls.
Well open _____ hrs. before test _____ RP.

Well treatment details:

Attach copy of cementing record.

Well dry in Berea, run 7" pipe and cement with need cement

Coal was encountered at mpt encountered Feet _____ Inches _____
Fresh water 1050 Feet _____ Salt Water 1707 Feet _____
Producing Sand None Depth _____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
RR			0	330		
Sd			330	360		
RR			540	620		
Sd			620	660		
RR			660	720		
Sd/Sh			720	1750	water 1707	
Lime			1750	1806		
Injun			1806	1835		
Lime			1835	1940		
Sd			1940	2080		
Sh/Sd			2080	2410		
Sd			2410	2420		
Sh			2420	2480		
Sd			2480	2570		
Sh			2570	2635		
TD				2635		

BEREA

E-LOG OF 12/29/81 shows T.D. of 5928'

E-LOG TIPS
U. DEV - 2480'
Huron - 3710'
Lava - 4510'
Lange - 4687'
Phon - 4969'
Jonasa - 5254'
Genice - 5310'
Morales - 5421'

gas TD no show

Grand - 5510 - 5683
Orisk - 5683 - 5720
Held - 5720 - 5928

RECORDED

JUL - 6 1981

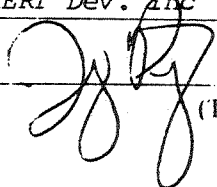
(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks

Date July 3, 19 81

APPROVED MERT Dev. Inc Owner

By  Geologist
(Title)



STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

Oil and Gas Division

RECEIVED
DEC 31 1979
OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

Surface Owner Hazel Perrine et.al.
Address Reedy, WV
Mineral Owner As above
Address "
Coal Owner As above
Address "
Coal Operator NONE
Address _____

DATE 12-26-79
Company MERT Development, Inc.
Address Fairmont, WV
Farm Hazel Perrine et al Acres 283
Location (waters) Colt Run
Well No. 1 Elevation 863
District Curtis County Roane
Quadrangle Peniel 7 1/2 min

THIS PERMIT MUST BE POSTED AT THE WELL SITE

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 9-2-80.

Robert H. Bell
Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED _____
ADDRESS _____
PHONE _____

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated August 22 1979 by Hazel Perrine et.al made to MERT Development, Inc. and recorded on the 7 day of Sept. 1979, in Roane County, Book 150 Page 556

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address of Well Operator

Very truly yours,
(Sign Name) [Signature]
Well Operator
Rt 8 Box 336-AA
Street
Fairmont
City or Town
West Virginia 26554
State

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by [Signature]

BLANKET 8013

47-087-3237

PERMIT NUMBER

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME FWA Drilling Company NAME R.J. Yedlosky
 ADDRESS Box 448, Elkview, WV 25071 ADDRESS Rt 8 Box 336-AA, Fairmont, WV
 TELEPHONE 304-965-3379 TELEPHONE 304-366-9111
 ESTIMATED DEPTH OF COMPLETED WELL: 2550 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Berea
 TYPE OF WELL: OIL X GAS _____ COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT PUT UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10	30'	30'	
9 - 5/8			
8 - 5/8	200'	200'	CTS
7			
5 1/2			
4 1/2	2550'	2550'	1000' FU
3			Perf. Top 2480
2			Perf. Bottom 2485
Liners			Perf. Top 2390
			Perf. Bottom 2395

APPROXIMATE FRESH WATER DEPTHS 20 FEET SALT WATER 1699 FEET
 APPROXIMATE COAL DEPTHS none reported
 IS COAL BEING MINED IN THE AREA? no BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title

Farm _____
Name: Perrine DD
API No. 47 - 087 3237
State _____ County Permi _____

OIL AND GAS WELL PERMIT APPLICATION

TYPE: Oil _____ / Gas X /
(If "Gas", Production _____ / Underground Storage _____ / Deep _____ / Shallow X /
Elevation: 863 Watershed: Colt Run
District: Curtis County: Roane Quadrangle: Diniel

WELL OPERATOR MERT Development Inc DESIGNATED AGENT Jerry Poling
Address Route 8, Box 336-AA Address Route 8, Box 336-AA
Fairmont, WV 26554 Fairmont, WV 26554

OIL & GAS
PROPERTY OWNER Hazel Perrine
Address Reedy WV

Preage 283

COAL OPERATOR _____
Address _____

FACE OWNER Hazel Perrine
Address Reedy WV

Preage 283

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name Hazel Perrine
Address Reedy WV

Name _____
Address _____

OLD SALE (IF MADE) TO:
Colombia Gas Transmission Corp
Address Charleston, WV

COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED:
Richard Morris

The undersigned Well Operator is entitled to operate for Oil or Gas Purposes at the above location under a Deed _____ / Lease X / Other Contract _____ / Dated 8-22, 1979, to the undersigned Well Operator from Hazel Perrine (If said Deed, Lease or Other Contract has been recorded:) recorded on 9-7, 1979, in the Office of the Clerk of the County Commission of Roane County, West Virginia, in O & G Book 150, at Page 556. A Permit is requested as follows:

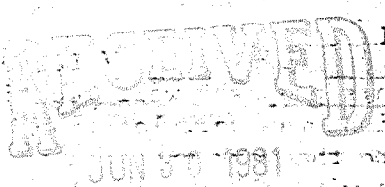
PROPOSED WORK: Drill _____ / Drill Deeper X / Redrill _____ / Fracture or Stimulate _____ / Plug Off Old Formation _____ / Perforate New Formation _____ / Other Physical Change in Well (Specify) _____

--Planned as shown on the work order on the reverse side hereof.

The above named Coal Operator, Coal Owner(s), and Coal Lessee are hereby notified that any objection they wish to make or are required to make by Code 522-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by Department. Copies of this Permit Application and the enclosed Plat and Reclamation Plan have been mailed Registered Mail or delivered by hand to the above named Coal Operator, Coal Owner(s), and Lessees on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL PHYSICAL LOGS DIRECTLY TO: OFFICE OF OIL AND GAS 15 Washington Street, East Charleston, West Virginia 25311

MERT Development Inc.
Well Operator
By: Jerry Poling Geologist



OIL & GAS DIVISION
DEPT. OF MINES

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) S. W. Jack
Address Indiana
Pennsylvania

GEOLOGICAL TARGET FORMATION, Oriskany

Estimated Depth of Completed Well 6100 feet Rotary X / Cable Tools _____
Approximate Water Strata Depths: Fresh, _____ feet; Salt, _____ feet.
Approximate Coal Seam Depths: _____ Is Coal Being Mined In The Area? Yes ___ / No X

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	Size	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic Feet)	PACKER OR SIZES	
		Grade	Weight Per Ft.	New	Used			For Drilling
Conductor							Kinds	
Fresh Water	9 5/8			X		209	209	CTS
Intermediate	7"			X			2016	2010'
Production	4 1/2						6080	6080' 408 sgs. 6080' for as reqd. by rule 15.01
Tubing								Perforations:
Liners								Top Bott

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 drill deeper. This permit shall expire if operations have not commenced by 4-28-82.

J. E. Huggins
Deputy Director - Oil & Gas Division

The following waiver must be completed by the Coal Operator and by any Coal Owner or Coal Lessee who has recorded 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 _____