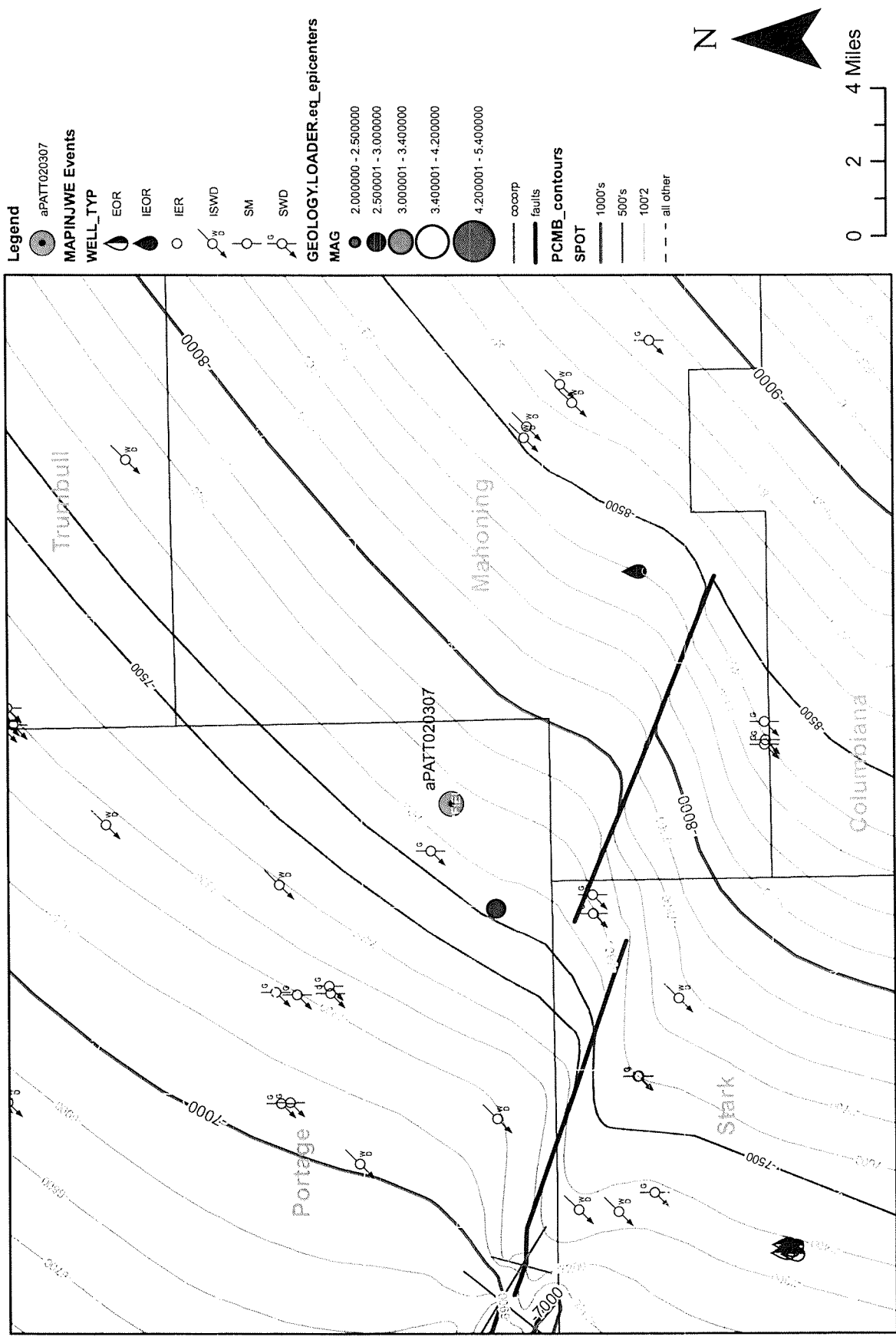
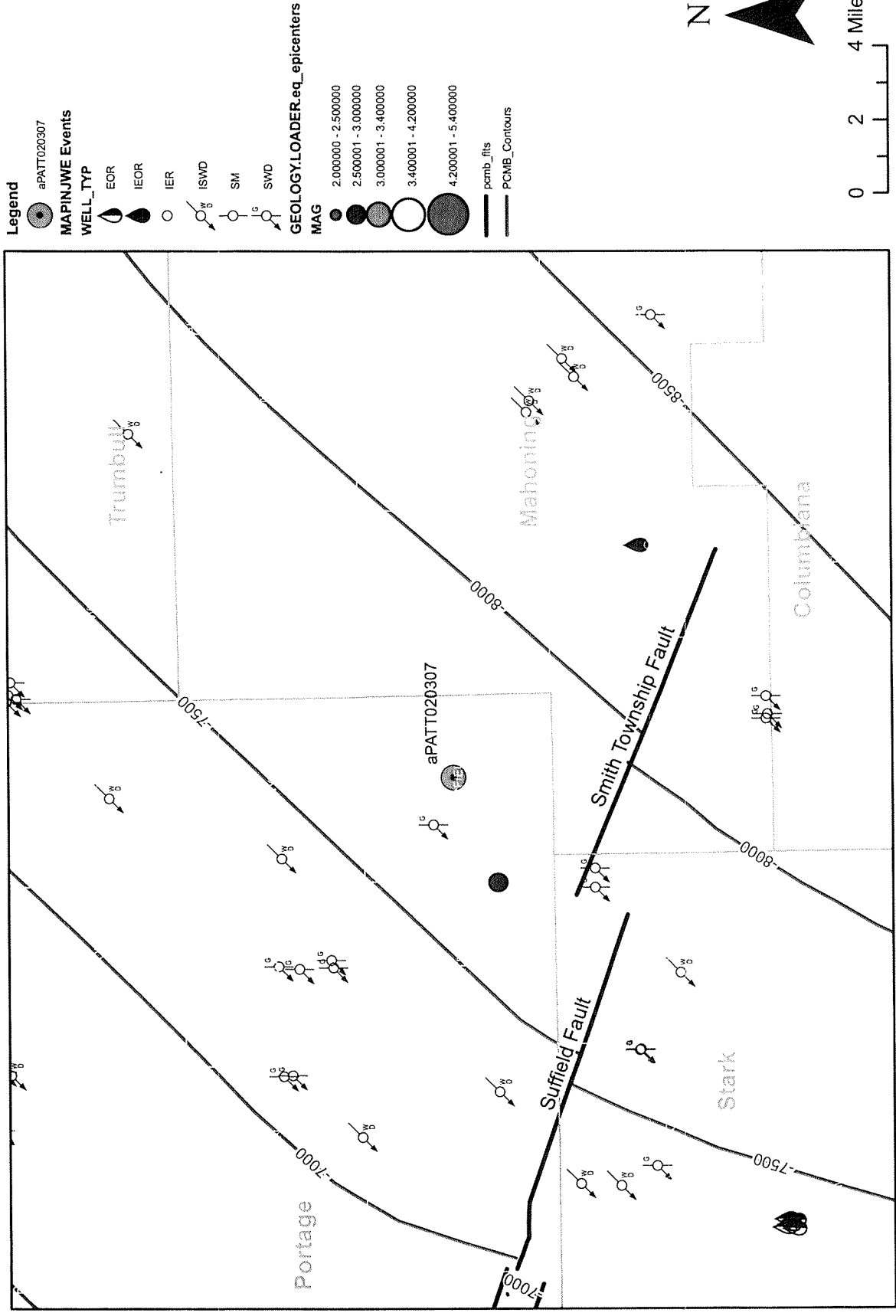


Precambrian Structure Contours from PG-23 (C.I. = 100 feet)



Precambrian Structure Contours (C.I. = 500 feet)



References

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- Ohio Division of Geological Survey, 2003, Structure map of the Lower Kittanning coal, unpublished digital (GIS) map.
- Ohio Division of Geological Survey, 2003, Structure map of the Middle Kittanning coal, unpublished digital (GIS) map.
- Ohio Division of Geological Survey, 2003, Structure map of the Mississippian-Pennsylvanian unconformity, unpublished digital (GIS) map.
- Ohio Division of Geological Survey, 2003, Structure map of the Pittsburgh coal, unpublished digital (GIS) map.

Ohio Division of Geological Survey, 2003, Structure map of the Upper Freeport coal, unpublished digital (GIS) map.

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Slucher, E. R., compiler, Swinford, E. M., Larsen, G. E., Schumacher, G. A., Shrake, D. L., Rice, C. L., Caudill, M. R., and Rea, R. G., 2006, Bedrock geologic map of Ohio: Ohio Division of Geological Survey Map BG-1, scale 1:500,000.

RESTORATION PLAN (Form 4)

Ohio Department of Natural Resources

Division of Oil and Gas Resources Management, 2045 Morse Road, Bldg. H-3, Columbus OH 43229-6693

1. DATE OF APPLICATION: 20-Dec-11		
2. OWNER NAME, ADDRESS, & TELEPHONE NO.: Fortis Energy Partners, LLC 5929 N. May Avenue, Suite 512 City, OK 73112 0308	3. API #:	
	4. WELL #: Washington SWD No. 1	
	5. LEASE NAME: Fortis Energy Partners, LLC	
	6. PROPERTY OWNER: Fortis Energy Partners, LLC	
	7. COUNTY: Portage	
	8. CIVIL TOWNSHIP: Deerfield	
	9. SECTION: 10. LOT: 30	
	11. CURRENT LAND USE:	
	<input type="checkbox"/> Cropland <input type="checkbox"/> Commercial <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Idle Land <input type="checkbox"/> Wetlands <input type="checkbox"/> Recreational <input type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Unreclaimed strip mine <input type="checkbox"/> Woodland: <input type="checkbox"/> Broadleaf <input type="checkbox"/> Needlelike	
	17. TYPE OF WELL: <input type="checkbox"/> Oil <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other	
18. STEEPEST SLOPE GRADIENT CROSSING SITE: <input checked="" type="checkbox"/> 0 to 2% <input type="checkbox"/> 2.1 to 8% <input type="checkbox"/> 8.1 to 10% <input type="checkbox"/> 10.1 to 24% <input type="checkbox"/> greater than 24%		
12. SLOPE GRADIENT & LENGTH DETERMINED FROM: <input type="checkbox"/> Ground Measurement <input checked="" type="checkbox"/> U.S. Geological Survey Topographical Maps <input type="checkbox"/> Other: (explain) _____		
19. LENGTH OF STEEPEST SLOPE CROSSING SITE: <input type="checkbox"/> 1 to 100 ft. <input checked="" type="checkbox"/> 101 to 200 ft. <input type="checkbox"/> 201 to 400 ft. <input type="checkbox"/> greater than 400 ft.		
13. TYPE OF FALL VEGETAL COVER: <input type="checkbox"/> Little or no vegetal cover <input type="checkbox"/> Short grasses <input checked="" type="checkbox"/> Tall weeds or short brush (1 to 2 ft.) <input type="checkbox"/> Brush or bushes (2 to 6 ft.) <input type="checkbox"/> Agricultural crops <input type="checkbox"/> Trees with sparse low brush <input type="checkbox"/> Trees with dense low brush		
20. RESTORATION OF DRILLING PITS: ** <input checked="" type="checkbox"/> Haul drilling fluids and fill pits <input type="checkbox"/> Use steel circulating tanks <input type="checkbox"/> Proposed alternative _____		
14. SOIL & RESOILING MATERIAL AT WELLSITE: <input checked="" type="checkbox"/> Stockpile and protect topsoil to be used when preparing seedbed <input type="checkbox"/> Use of soil additives (e.g., lime, fertilizer) <input type="checkbox"/> No resoiling planned <input type="checkbox"/> Proposed alternative _____		
21. BACKFILLING AND GRADING AT SITE: <input type="checkbox"/> Construct diversions channeled to naturally established drainage systems <input type="checkbox"/> Construct terraces across slopes <input checked="" type="checkbox"/> Grade to approximate original contour <input type="checkbox"/> Grade to minimize erosion & control offsite runoff <input type="checkbox"/> Proposed alternative _____		
15. DISPOSAL PLAN FOR TREES AND TREE STUMPS: <input checked="" type="checkbox"/> No trees disturbed <input type="checkbox"/> Haul to landfill <input type="checkbox"/> Cut into firewood <input type="checkbox"/> Sell to lumber <input type="checkbox"/> Bury with landowner's approval company <input type="checkbox"/> Mulch small trees and branches, erosion control <input type="checkbox"/> Use for wildlife habitat with landowner approval <input type="checkbox"/> Proposed alternative _____		
22. VEGETATIVE COVER TO BE ESTABLISHED AT SITE: <input checked="" type="checkbox"/> Seeding plan <input type="checkbox"/> Sod <input type="checkbox"/> Agricultural crops <input type="checkbox"/> Trees and/or Bushes <input type="checkbox"/> Proposed alternative _____		
16. SURFACE AND SUBSURFACE DRAINAGE FACILITIES: <input checked="" type="checkbox"/> No existing drainage facilities for removal of surface and/or subsurface water <input type="checkbox"/> Tile drainage system underlying land to be disturbed <input type="checkbox"/> Drain pipe(s) underlying land to be disturbed <input type="checkbox"/> Surface drainage facilities on land to be disturbed		
23. ADDITIONAL HOLES: <input checked="" type="checkbox"/> Rat/Mouse, if used, will be plugged		
24. PROPOSED OR CURRENT LENGTH OF ACCESS ROAD: <input type="checkbox"/> 100 ft. or less <input type="checkbox"/> 101 to 500 ft. <input checked="" type="checkbox"/> 501 to 1500 ft. <input type="checkbox"/> greater than 1500 ft.		
25. CURRENT LAND USE OF PATH OF ACCESS ROAD: <input type="checkbox"/> Cropland <input type="checkbox"/> Pasture <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Idle land <input type="checkbox"/> Wetlands <input type="checkbox"/> Recreational <input type="checkbox"/> Industrial <input type="checkbox"/> Residential <input type="checkbox"/> Unreclaimed strip mine <input type="checkbox"/> Woodland: <input type="checkbox"/> Broadleaf <input type="checkbox"/> Needlelike		

****PITS MUST BE FILLED WITHIN TWO MONTHS AFTER COMMENCEMENT OF THE WELL AND WITHIN FOURTEEN DAYS AFTER COMMENCEMENT OF THE WELL IN AN URBANIZED AREA.**

REQUIRED BY SECTION 1509.06 (A)(10), OHIO REVISED CODE -- FAILED TO SUBMIT MAY RESULT IN AN ASSESSMENT OF CRIMINAL FINES NOT LESS THAN \$100.00 NOR MORE THAN \$2,000.00 OR CIVIL PENALTIES NOT LESS THAN \$4,000.00.

RECEIVED

DEC 23 2011

STATE OF OHIO
THE OHIO DEPARTMENT OF NATURAL RESOURCES
THE DIVISION OF OIL AND GAS RESOURCES MANAGEMENT
2045 MORSE ROAD, BUILDING H-3
COLUMBUS, OHIO 43229-6693

OIL AND GAS AFFIDAVIT

Application No. _____
(To be filled in by the Division)

STATE OF Ohio ss:

COUNTY OF Portage

NAME OF LANDOWNER: Fortis Energy Partners, LLC

ADDRESS OF LANDOWNER: 5929 N. May Avenue, Suite 512, Oklahoma City, OK 73112

Being first duly sworn according to law, depose and say that they are the owners of the following described real estate:

Located in _____ Quarter of
Section _____,
Fraction/Lot 30, Deerfield Township,
Portage County, Ohio.

The undersigned certify that they are the owners of the property in fee simple, including the coal rights, and have no objections to the drilling of the Washington SWD #1, by the
(Well Name & No.)

Fortis Energy Partners, LLC on said premises.
(Company)

Further affiant sayeth naught.

Signatures: _____

Signatures: _____

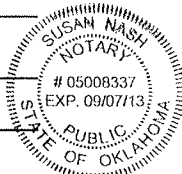
Signatures: _____

Signatures: _____

SWORN to before me and subscribed in my presence this 21st

Day of December, 20 11

Notary Public: Susan Nash



RECEIVED

DEC 23 2011

SALTWATER INJECTION WELL – AFFIDAVIT

Ohio Department of Natural Resources
Division of Oil and Gas Resources Management
2045 Morse Road, Columbus, Ohio 43229-6693

State of Ohio, Portage County, ss
_____ being
first duly sworn says that as principal, or authorized agent, for Fortis Energy Partners, LLC, he or
she has made application for a saltwater injection well in the State of Ohio Portage,
County, Deerfield Township, section/lot number 30; and
further certifies that notice of application has been delivered to each individual entitled to personal
notification in accordance with paragraph (E) of Rule 1501:9-3-.06 of the Ohio Administrative Code.
And further affiant saith not.

[Signature]
(Manager - member)
Affiant Signature

Sworn to before me and subscribed in my presence this 21st day of December,
2011.

[Signature]
Notary Public



RECEIVED

DEC 23 2011

Tomastik, Tom

From: Tomastik, Tom
Sent: Sunday, November 20, 2011 1:52 PM
To: 'Amy L. Lang'
Subject: RE: Fortis Energy Partners, LLC - Deerfield/Portage AOR (Lot 30)
Amy:

I finished your 1/2 mile area of review. No problems at all for anything deeper than the Clinton. You are also OK on the Newburg as long as your top perforation or top of the open-hole is below 4400 feet.

Thanks,

Tom Tomastik, Geologist 4

Division of Oil and Gas Resources Management

2045 Morse Road, H-3

Columbus, Ohio 43229-6693

(614) 265-1032

3225
2225
990 y/si

From: Amy L. Lang [mailto: Amy.Lang@formanenergy.com]
Sent: Monday, November 14, 2011 2:07 PM
To: Tomastik, Tom
Subject: Fortis Energy Partners, LLC - Deerfield/Portage AOR (Lot 30)

Hi Tom,

I wanted to see if you could do a review for the proposed injection well location on the attached map. Not sure of the final location yet, could be further north between P. 2210 and P. 2211. The first well will be a basement test to evaluate all potential zones. Additional wells on the property may just be Newburg.

Please let me know if you need anything else.

~Amy

Amy L. Lang
Partner, Forman Energy, Ltd.
P.O. Box 340346

11/20/2011

Tomastik, Tom

From: Amy L. Lang [Amy.Lang@formanenergy.com]
Sent: Monday, November 14, 2011 2:07 PM
To: Tomastik, Tom
Subject: Fortis Energy Partners, LLC - Deerfield/Portage AOR (Lot 30)
Attachments: Deerfield_Portage.pdf

Hi Tom,

I wanted to see if you could do a review for the proposed injection well location on the attached map. Not sure of the final location yet, could be further north between P. 2210 and P. 2211. The first well will be a basement test to evaluate all potential zones. Additional wells on the property may just be Newburg.

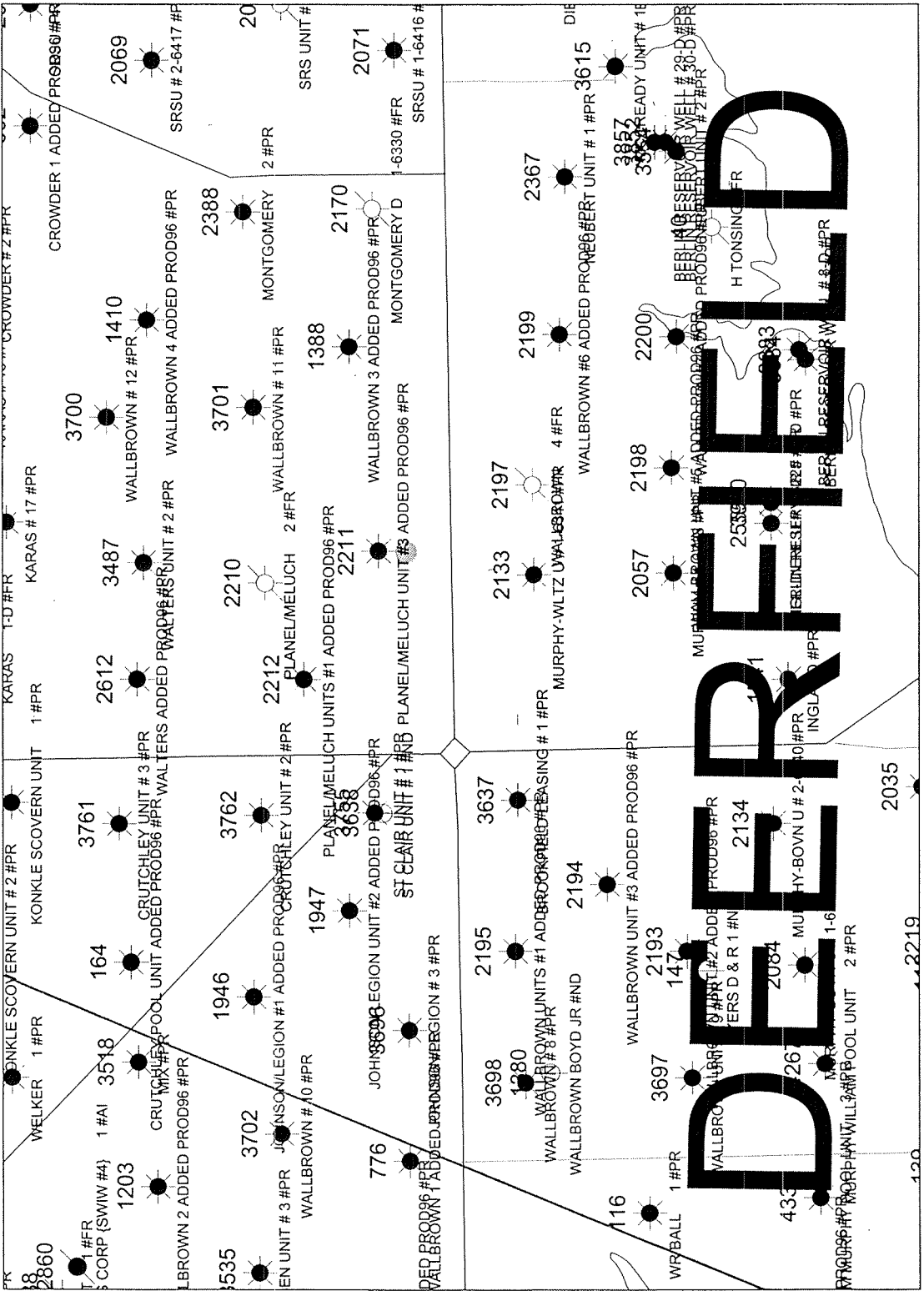
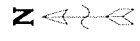
Please let me know if you need anything else.

~Amy

Amy L. Lang
Partner, Forman Energy, Ltd.
P.O. Box 340346
Columbus, OH 43234
(614) 717-9262 Office/Fax
amy.lang@formanenergy.com

11/14/2011

FORTIS ENERGY PARTNERS, LLC	
Portage County Deerfield Township Proposed Injection Well Location	
Author: Amy L. Laag	Date: 14 November 2011
Scale: 1" = 1000'	



1" = 1000'



Interoffice Memo

To: Thomas Tugand, Deputy Chief, ODNR - DOGRM
From: Michael Baker, Chief, Ohio EPA - DDAGW
Date: February 22, 2012
Re: Class II Permit Reviews

Ohio EPA Division of Drinking and Ground Waters has completed its review of four Class II underground injection well permits:

- Washington Co., Newport Twp., Ohio Oil Gathering, #1 Sawmill Run Disposal Well;
- Athens Co., Troy Twp., K&H Partners, #1 K&H Partners;
- Portage Co., Deerfield Twp., Fortis Energy Partners #1 Washington SWD
- Washington Co. existing permit number: 34-167-2-9618-00-00

Our review of the permits focused on well construction relative to the protection of underground sources of drinking water (USDW). More specifically, our review assessed the placement of surface casing and cement relative to the lowest most USDW and location of the surface facilities relative to public water system source water protection areas and other sensitive hydrogeologic settings.

We saw nothing during our review that should cause delay in approving the permits, however, we do have a couple overarching comments. None of the permits reviewed specify the type of cement being used or the use of centralizers. Ohio EPA would recommend that a class A cement with appropriate additives be specified as well as the use of centralizers when placing cement.

Please call me or Chuck Lowe at 614-644-2752 if you have any questions or need additional information.



INTER-OFFICE MEMO

TO: Rick Simmers, Chief, DOGRM
FROM: Tom Tomastik, Geologist 4, DOGRM *TEST*
DATE: February 22, 2012
SUBJECT: Class II injection well review – Application No. aPATT020307, Portage County, Deerfield Twp., SWIW #36, New well, Washington SWD #1, proposed “Newburg” dolomite injection zone

The Division of Oil and Gas Resources Management is in receipt of comments from Ohio EPA and the Ohio Geological Survey on the above Class II saltwater injection well application. This is a new well to be drilled and completed for open-hole injection into the “Newburg” dolomite from depths of 4300 to 4800 feet. The “Newburg” is any porous zone within the Lockport Dolomite geologic formation. The maximum allowable surface injection pressure set by permit for this proposed well is 990 psi. Based upon MRI 3 Bob Worstall’s pres-site field review there is a possibility of encountering an abandoned underground coal mine. The applicant, Fortis Energy Partners, LLC, has been made aware of this potential situation and the possible need to run a mine string if in fact an underground coal mine is encountered during the drilling of this Class II injection well.

Ohio EPA’s only recommendation was the use of Class A cement with centralizers on the casing strings. The Ohio Geological Survey did an extended Class II injection well review which included a number of geologic maps and fault and lineament analysis. There are some lineament trends on the surface topography in the area, which is typical of the NE-SW and NW-SE shear joint set orientation encountered on the bedrock surface in Ohio. There is no evidence of faulting within the proposed “Newburg” dolomite injection zone within a two mile radius of this proposed well location.

Based upon the complete evaluation of this permit application, I would recommend issuance of this Class II saltwater injection well permit. Additional special permit conditions will be attached to this permit to address the continuous pressure monitoring requirement, automatic shut-off switch on the injection pump set at the maximum allowable surface injection pressure, cementing, centralizers, and potential mine string issues.

aPATT020307

Class II Injection Well Permit Review Package

- Overview
- Basic Permit Review
 - Bedrock Topography Layer
 - Water Well Layer
 - Underground Coal Mine Layer
 - Surface Water Layer
 - Surface Topography layer
 - Quaternary Geology Layer
 - Oil and gas Layer
 - Groundwater-Source Water Protection Layer
 - Groundwater-Pollution Potential Layer
 - Coal Layer
- Extended Class II Injection Permit Review
 - Bedrock Topography
 - Bedrock Geology
 - Oil and Gas Fields Map
 - EGSP Aerial Photo Lineament
 - EGSP LANDSAT Lineament
 - Mason Lineament
 - Gravity Bouguer Anomaly
 - Gravity Free Air
 - Magnetic First Derivative
 - Magnetic Second Derivative
 - Magnetic Reduce Dipole
 - Pittsburgh Coal Structure
 - Upper Freeport Coal Structure
 - Middle Kittanning Coal Structure
 - Mississippian/Pennsylvanian Unconformity Surface
 - EGSP Berea Structure
 - EGSP Onondaga Structure
 - Fine Onondaga Structure
 - Trenton Structure
 - Knox Structure
 - Precambrian Structure from PG-23
 - Precambrian Structure
- Disclaimer
- References

Fault and Lineament Review for Class II Wells

Application No. aPATT020307
SWIW: (Salt Water Injection Well)
Proposed Well Depth: 4800 feet
Proposed Injection Zone: Newburg

Faults and lineaments were reviewed in a 30 mile study area for the permit application. Gravity and magnetic maps were examined in a 60 mile study area for possible deep-seated Precambrian faults. The presence of mapped subsurface faults were examined from published studies and include the following structure maps in ascending stratigraphic order: top of Precambrian, top of Knox unconformity, top of Trenton Limestone, top of Onondaga Limestone, top of Berea Sandstone, Mississippian-Pennsylvanian unconformity, top of Middle Kittanning coal, top of Upper Freeport coal, and top of Pittsburgh coal. Bedrock topography, bedrock geology maps and published studies using surface topography were examined for lineaments that may reflect possible subsurface faulting. Published studies of interpreted surface lineaments also were included that were based on LANDSAT and aerial photos. All active and inactive class II wells and all known earthquake epicenters are shown within the study area on all maps.

Gravity and magnetic maps were reviewed with a 60 mile study area. No apparent gravity anomalies or magnetic trends are visible from the maps.

Approximately 4 miles south of the application permit the northwest-southeast trending Akron-Suffield-Smith fault system is present on structure maps on the top of Precambrian, top of Knox unconformity, top of Trenton, top of Onondaga, and top of Berea. None of the mapped coal units extended to the application permit and thus could not be used for fault identification.

A network of surface lineaments is interpreted within the 30 mile study area based on Mason (1999). One of these northwest-southeast trending lineaments, approximately 4 miles to the south of the permit application, coincides with the Akron-Suffield-Smith fault system that is present on the subsurface structure maps. The nearest interpreted lineament is approximately 2 miles to the west and trends northeast-southwest. Numerous lineaments from aerial photos have been interpreted by Gray and others (1982) over and in the immediate vicinity of the permit application. There are 2 dominant directions which are oriented northwest-southeast and northeast-southwest. The LANDSAT lineament map of Gray and others (1982) indicates a northeast-southwest trending lineament approximately 1 mile to the south trending northeast-southwest. The top of bedrock for the permit application is the Pennsylvanian Allegheny and Pottsville undivided. The bedrock topography map indicates two northeast-southwest trending lows to the east and west of the permit application.

Based on the RBDMS database, there are 13 ISWD (inactive salt water disposal) wells, 16 SWD (salt water disposal) wells, 5 EOR (enhanced oil recovery) wells, and 1 IEOR (inactive enhanced oil recovery) well within the 30 mile study area. The nearest injection well is a SM (solution mining) well approximately 1 mile to the northwest of the permit application. Only 1 earthquake epicenter has occurred within the 30 mile study area. It is approximately 3 miles to the southwest and had a magnitude of 3 which occurred in August of 2010.

There are strong northwest-southeast and northeast-southwest lineaments on the bedrock topography map south of the proposed well location. There are similar strong lineations on the Mississippian-Pennsylvanian structure map. These lineaments in conjunction with the known Akron-Suffield-Smith fault system indicate a possibility of additional unknown faults that could be in the area.

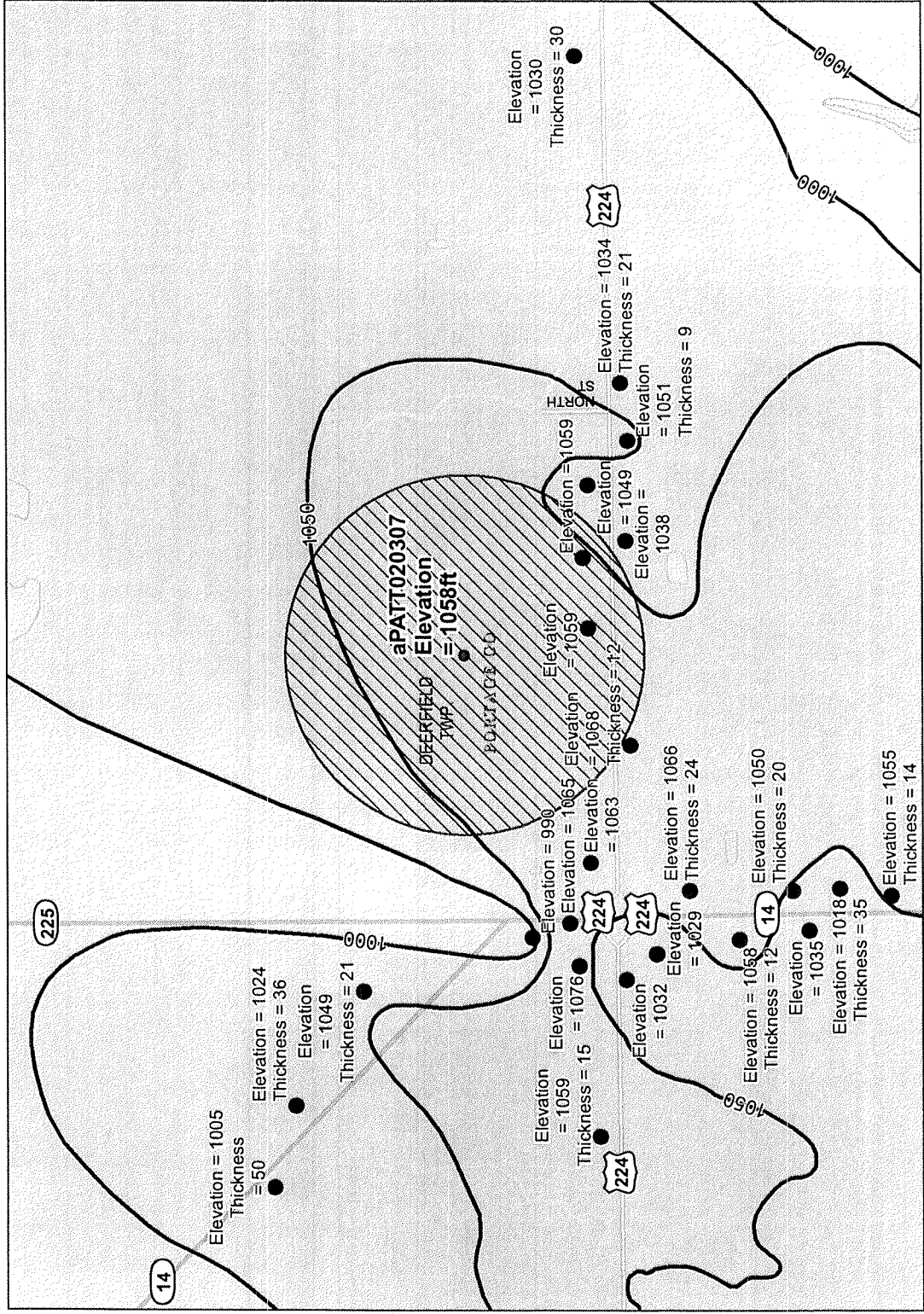
Disclaimer

The products of the Ohio Department of Natural Resources, Division of Geological Survey, both digital maps and printed maps and any other associated documents are intended to provide general geologic information only and should not be used for any other purpose. It is not intended for resale or to replace site-specific investigations. These data were compiled by the Ohio Division of Geological Survey, which reserves the publication rights to this material. If these data are used in the compilation of other data sets or maps for distribution or publication, this source must be referenced.

Neither the Ohio Department of Natural Resources, nor any agency thereof, nor any of their employees, contractors, or subcontractors, make any warranty, express or implied, nor assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this product. Any use thereof for a purpose other than for which said information or product was intended shall be solely at the risk of the user.

Bedrock Topography Layers

Well APPNO - aPATT020307



Basemaps

- Railroad
- Local Road
- State Route
- U.S. Highway
- Interstate
- Hydrography Line
- Hydrography Polygon
- Intermittent
- City
- Township
- County

Bedrock Topography 500K

Value
1: 100
2: 500
3: 1000

Scale: 1:50,000

North Arrow

Scale: 0 to 1000 Feet / 0 to 500 Meters

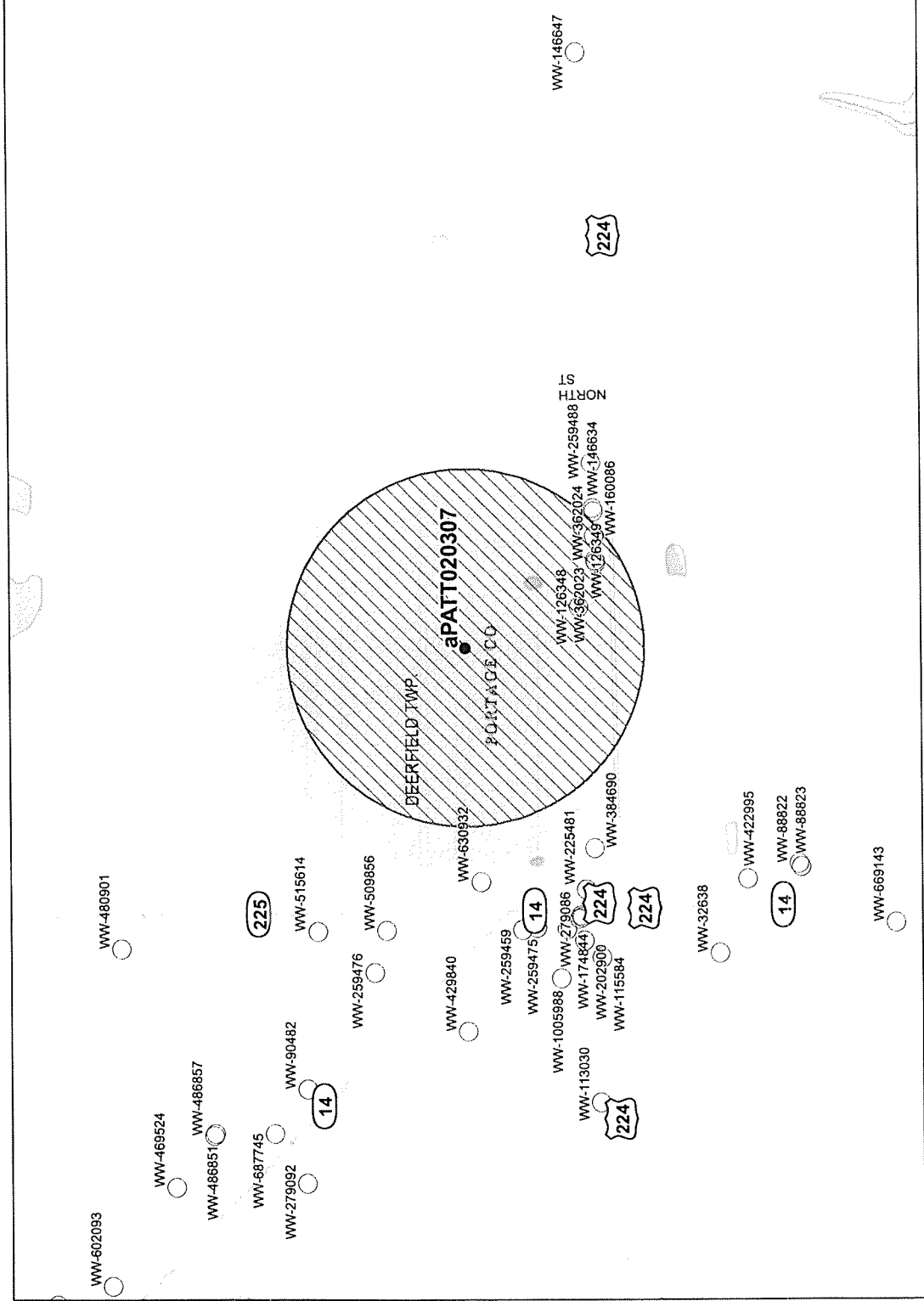
Date Created: 12/28/2011

Data Source: Bedrock Topography Layers, Division of Geological Survey (DGS)

- Gas Permit Well
- Directional Well
- Well Radius Type
- Dir
- Direct Above Ground
- Direct Below Ground
- Non Direct Above Ground
- BT Data Points
- POINT_TYPE
- Approximate data point
- Bedrock exposure
- Data EPN point
- First generation water well
- Class exposure (204)
- Class exposure (204)
- Map/line/area 200K
- 200K survey
- Data Division of Geological Survey reference
- Oil and gas well
- Quality
- U.S. Geological Survey report well
- Water well data from Data Division of Water Control

Water Well Layer

Well APPNO - aPATT020307



Basemaps

- Railroad
- Local Road
- State Route
- U.S. Highway
- Interstate
- Hydrography Line
- Hydrography Polygon
- Hydrography Polygon Intermittent
- City
- Township
- County

Overview

Scale

0 500 1,000 Feet
0 250 500 Meters

Legend

- Well Location
- Well Radius Type
- Directional Line
- D/R
- Direct Above Ground
- Direct Below Ground
- Non Direct Above Ground
- Non Well Location
- Water Well 300' Buffer

Logos

Date Created: 12/28/2011
Data Source: Water Well Layer, Division of Soil and Water Resources (DSWR)