

Attachment A: ODNR Permit Review Summary

9 permits reviewed, including:

- 6 new drills; and,
- 3 conversions of existing wells.

None of the Class II SWDWs reviewed are within 2,000 feet of a PWS well or within a protection area.

New Wells

- ✓ 1. Muskingum Co., Jackson Twp. OOGC #1 Black Run Disposal Well
 - Surface casing depth and amount of cement appear adequate. The type of cement, and number and location of centralizers used on the surface casing should be specified. Lack of this information limits our review.
 - The injection zone is the Knox through the Mt. Simon; however, completion schematic shows only the Mt. Simon as perforated. The injection zone perforations should be corrected to reflect the revised injection zone.
 - Well surface construction appears sufficient.
- ✓ 2. Mahoning Co., Springfield Twp. D&L #7 Mohawk Printup
 - Surface casing depth and amount of cement appear adequate. The permit to drill specifies 350 sacks of superlite cement – Ohio EPA recommends that Class A be used instead. The number of centralizers and their location should be specified. The lack of this information limits our review.
 - The well is located outside of the Youngstown area of concern.
 - Well surface construction appears sufficient.
- ✓ 3. Mahoning Co., Youngstown Twp. D&L #8 Mohawk Meenchan
 - Well construction comments are the same as for the #7 Mohawk Printup well.
 - The #8 Mohawk Meechan well is within the AOR that has experienced seismic activity. This should be evaluated in siting, construction and injection requirements.
4. Muskingum Co., Union Twp. 1960 Well Services #1 C. Goff
 - Surface casing and amount of cement appears adequate. The type of cement, and number and location of centralizers used on the surface casing should be specified. Lack of this information limits our review.
 - The plat map shows two small wetland areas that are adjacent to the well and offloading pad. The permittee should be made aware of associated regulatory requirements.
 - Well surface construction appears sufficient.
- ✓ 5. Trumbull Co., Weathersfield Twp. American Water Mgt. #1 AWM
 - Both surface and injection casing depths and cement appear adequate. The type of cement, and number and location of centralizers used on the surface casing should be specified. Lack of this information limits our review.
 - Open hole disposal into the "Newburg". There are sixteen existing "Clinton" wells within the AOR that are likely un-cemented above the "Clinton" cement top and the base of the surface casing. These well bores could act as a conduit for fluid migration (i.e. either brine or brine displacing formation waters).

- ✓6. Trumbull Co., Weathersfield Twp. American Water Mgt. #2 AWM
- Surface casing depth appears adequate and cemented to surface. The type of cement, and number and location of centralizers used on the surface casing should to be specified. Lack of this information limits our review.
 - The injection casing cement top is shown to surface on the diagram, but states the cement top is at 4000 feet. This should be clarified because the plat map show 112 feet between the two disposal wells (same concerns as outlined in #5).

Converted Wells

- ✓1. Athens Co., Rome Twp., D.T. Atha #1 M. Frost
- Surface casing depth appears adequate; however, no inspectors report to verify cement to surface (315 sacks used on completion report). The surface cement should be verified.
 - Operator proposes to squeeze off the existing perms in the Berea and Ohio Shale, but doesn't show the proposed injection zone perms.
 - Injection casing and tubing construction depths don't agree with the well schematic diagram. This should be resolved.
- ✓2. Knox Co., Morgan Twp., Knox Energy #2 Harstine Trust
- Surface casing and cement job appear adequate.
- ✓3. Morgan Co., Marion Twp., Broad Street Energy #102 Cook
- Surface casing and cement volume (90 sacks) appear adequate.
 - Well surface construction appears adequate.

APPLICATION FOR A PERMIT (Form 1)
 OHIO DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF MINERAL RESOURCES MANAGEMENT
 2045 Morse Road, Building H-3
 COLUMBUS, OHIO 43229-6693
 (614) 265-6633

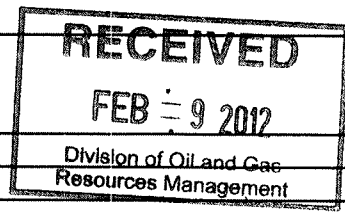
#507181
 \$1,000.00

OHM 0000 725

#8834

SEE INSTRUCTIONS ON PAGE 2 (BACK)

1. I, We (applicant) <u>1960 Well Services, LLC</u>		2. Owner #: <u>412-329-7275 ext 119</u>	
(address) <u>300 Cherrington Parkway, Suite 200, Coraopolis Pennsylvania</u>		Phone #: <u>412-329-7275 ext 119</u>	
hereby apply this date <u>2-Feb</u> , 20 <u>12</u> for a permit to:			
<input type="checkbox"/> Reissue (check appropriate blank)	<input type="checkbox"/> Revised Location	<input type="checkbox"/> Convert	
<input checked="" type="checkbox"/> Drill New Well	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Deepen	
<input type="checkbox"/> Drill Directionally	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Reopen	
<input type="checkbox"/> Drill Horizontally	<input type="checkbox"/> Orphan Well Program	<input type="checkbox"/> Temporary Inactive	
3. TYPE OF WELL:			
<input type="checkbox"/> Oil & Gas	<input type="checkbox"/> Annular Disposal	<input checked="" type="checkbox"/> Saltwater Injection	
<input type="checkbox"/> Stratigraphic Test	<input type="checkbox"/> Gas Storage	<input type="checkbox"/> Other (explain): _____	
<input type="checkbox"/> Solution Mining*	<input type="checkbox"/> Enhanced Recovery* (* if checked, select appropriate box below)		
<input type="checkbox"/> Input/Injection	<input type="checkbox"/> Water Supply	<input type="checkbox"/> Observation	<input type="checkbox"/> Production/Extraction
4. MAIL PERMIT TO: <u>1960 Well Services, LLC</u> <u>300 Cherrington Parkway, Suite 200,</u> <u>Coraopolis, Pennsylvania 15108</u>		20. TYPE OF TOOLS:	
		<input type="checkbox"/> Cable	<input type="checkbox"/> Air Rotary
		<input type="checkbox"/> Cable / Air Rotary	<input checked="" type="checkbox"/> Air / Fluid Rotary
		<input type="checkbox"/> Cable / Fluid Rotary	<input type="checkbox"/> Fluid Rotary
		<input checked="" type="checkbox"/> Cable / Air / Fluid Rotary	<input type="checkbox"/> Service Rig
5. COUNTY: <u>Muskingum</u>		21. PROPOSED CASING PROGRAM:	
6. CIVIL TOWNSHIP: <u>Union</u>		60 feet of 30 inch Conductor Casing - Grout from Top of Conductor with Cement, 400 feet of 20 inch Mine String (if mine encountered) - Balance Cement Job on Bottom and Grout the Top, 1400 feet of 13 3/8 inch of Intermediate Casing - Circulate to Surface, 6550 feet of 9 5/8 inch of Production Casing - Cement back 3000 feet	
7. SECTION: <u>W1/2 of 18. LOT:</u>			
9. FRACTION: <u>10. QTR TWP:</u>			
11. TRACT / ALLOT:			
12. WELL #: <u>GOFF SWD #1</u>			
13. LEASE NAME:			
14. PROPOSED TOTAL DEPTH: <u>8,300</u>			
15. PROPOSED GEOLOGICAL FORMATION: <u>Mt. Simon</u>		22. FIRE AND MEDICAL DEPARTMENT TELEPHONE NUMBERS: (closest to well site)	
16. DRILLING UNIT IN ACRES (must be same as acres indicated on plat): <u>50.84</u>		Fire: <u>(740) 826-4986</u>	
		Medical: <u>(740) 454-4585</u>	
17. IF PERMITTED PREVIOUSLY:		23. MEANS OF INGRESS & EGRESS:	
API #: <u>N/A</u>		Township Road: _____	
OWNER:		County Road: _____	
WELL #:		Municipal Road: _____	
LEASE NAME:		State Highway: <u>SR 40/ SR 22</u>	
TOTAL DEPTH:			
GEOLOGICAL FORMATION:		24. IS THE WELL LOCATION OR PRODUCTION FACILITIES WITHIN AN URBANIZED AREA AS DEFINED BY 1509.01(Y) ?	
18. IF SURFACE RIGHTS ARE OWNED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Division Name: <u>N/A</u>			
Division Phone: _____			
19. LANDOWNER ROYALTY INTEREST:			
Is There An Attached List? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Name: <u>Carol Goff</u>			
Address: <u>9350 E. Pike, Norwich Oh 43767</u>			
Name: _____			
Address: _____			
Name: _____			
Address: _____			



I, the undersigned, being first duly sworn, depose and state under penalties of law, that I am authorized to make this application, that this application was prepared by me or under my supervision and direction, and that the facts stated herein are true, correct, and complete, to the best of my knowledge.

I, the undersigned, further depose and state that I am the person who has the right to drill on the tract or drilling unit and to drill into and produce from a pool and to appropriate the oil or gas that I produce therefrom either for myself or others as described in this application. And furthermore, I the undersigned, being duly sworn, depose and state at this time that I am not liable for any final nonappealable order of a court for damage to streets, roads, highways, bridges, culverts, or drainage ways pursuant to Section 5577.12 of the Ohio Revised Code (ORC). I, the undersigned, further depose and state that all notices required by 1509.06 (A) (9) ORC for this application have been duly provided by me. If applying for a permit to plug and abandon a well, I hereby certify that the written notices, as required in Section 1509.13, ORC, have been given.

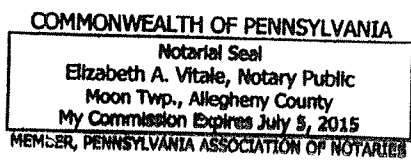
That I hereby agree to conform with all provisions of Chapter 1509., ORC, and Chapter 1501., OAC, and all orders and conditions issued by the Chief, Division of Mineral Resources Management.

Signature of Owner/Authorized Agent [Signature]
 Name (Type or Print) Damian A. Georgino Title Vice President

If signed by Authorized Agent, a certificate of appointment of agent must be on file.

Sworn to and subscribed before me this the 2nd day of February, 2012.

[Signature]
 (Notary Public)



July 5, 2015
 (Date Commission Expires)

**SUPPLEMENT TO APPLICATION
PERMIT FOR A SALTWATER INJECTION WELL (Form 210)**

Ohio Department of Natural Resources, Division of Mineral Resources Management
2045 Morse Road, Bldg H3
Columbus, OH 43229-6693

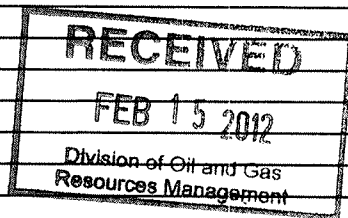
AREA OF REVIEW. An application for a saltwater injection well (SWIW) will be evaluated on the basis of an "area of review" surrounding the proposed well. The area of review for wells in which injection of greater than two hundred barrels per day is proposed shall be the area circumscribed by a circle with the center point at the location of the injection well and a radius of one-half mile. The area of review for wells in which a maximum injection of two hundred barrels per day or less is proposed shall be the area circumscribed by a circle with the center point at the location of the injection well and a radius of one-quarter mile.

31. PROPOSED INJECTION ZONE

Geological Formation: Knox through Mt. Simon
 Injection Interval: From: 6550 feet to 8300
 Geologic description of injection zone: Knox Dolomite through Mt. Simon Sandstone

32. WELL CONSTRUCTION AND OPERATION

- A. Description of the proposed casing and cement program for new wells, or of the casing, cementing or sealing with prepared clay for existing wells to be converted:
60 feet of 30 inch Conductor Casing - Grout from Top of Conductor with Cement,
400 feet of 20 inch Mine String (if mine is encountered) - Balance Cement Job on Bottom and Grout the Top,
1400 feet of 13 3/8 inch Intermediate Casing - Circulate to Surface,
6550 feet of 9 5/8 inch Production Casing - Cement back to 3000 feet
- B. Proposed method for testing the casing:
Hydro Static Pressure Test after Cement
- C. Description of the proposed method for completion and operation of the injection well:
To drill to the Gull River, Set in Cement the Production Casing, Drill through the Mt. Simon Sandstone with 8.5 inch bit, Set 4.5 inch O.D. injection string on a Baker-Lockset Packer (also circulate the annulus with packer inhibitor and pressure test annulus). Install continuous volume and pressure monitoring equipment.
- D. Description of the proposed unloading, surface storage, and spill containment facilities:
Development of Approximately 5.09 acre site with staging to allow for simultaneous truck unloading, approximate 20'x30' maintenance building, brine water storage tanks with a capacity of approximately 4,500 barrels with a containment dike. Rainwater collected in truck unloading area and tank containment area will be collected and taken to a local municipal treatment facility. The site will also have loop access road and stormwater facility.
See Attached Drawing for site layout.



33. PROPOSED INJECTION VOLUMES

- A. Indicate the estimated amount of saltwater to be injected into the proposed injection well per day:
 AVERAGE: 2500 barrels MAXIMUM: 3000 barrels
- B. Indicate the method to be used to measure the actual amount of saltwater injected into the well:
Digital Flowmeter

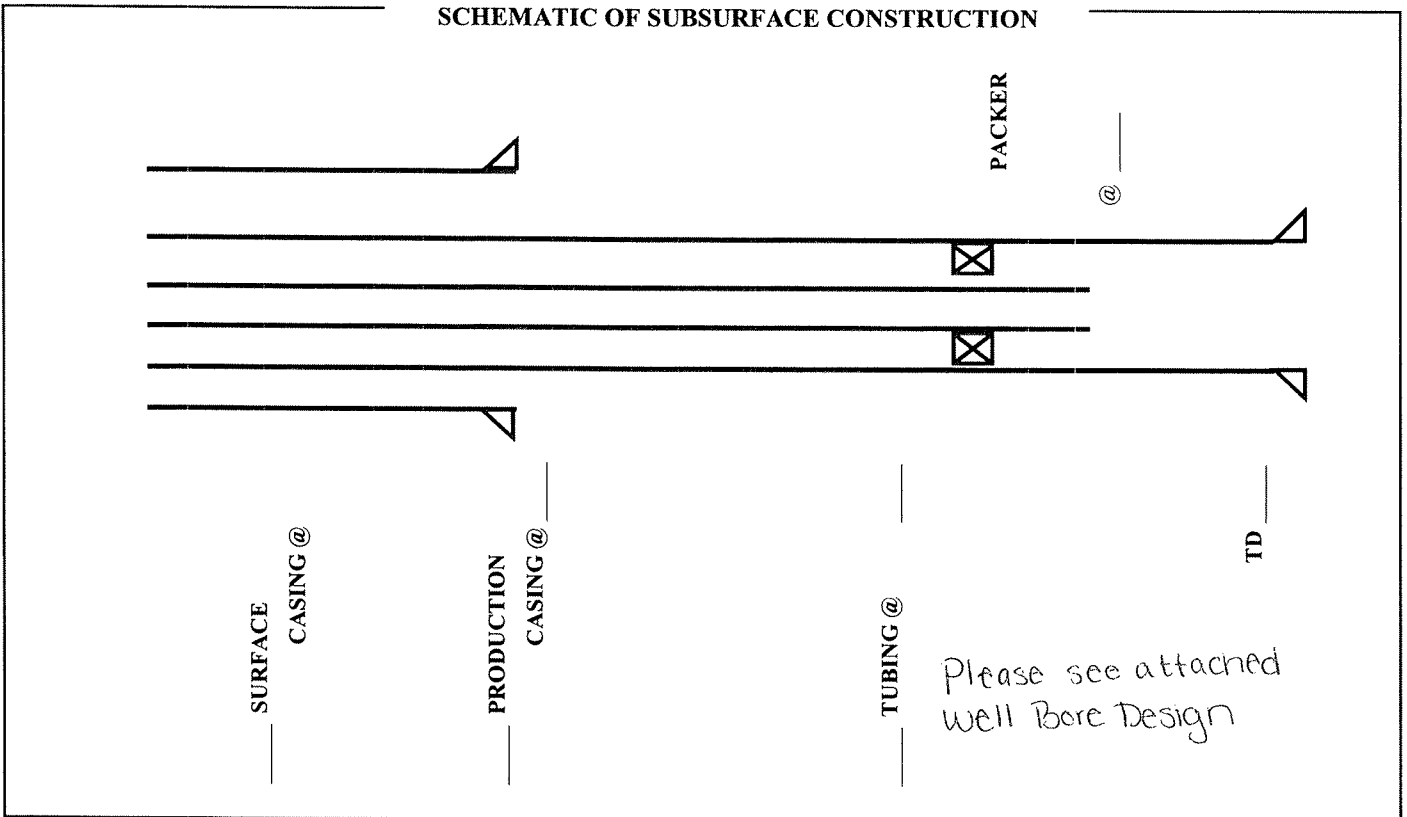
34. PROPOSED INJECTION PRESSURES

- A. Indicate the estimated pressure to be used for injection of saltwater into the proposed injection well:
 AVERAGE: 1500 PSI (expected operating pressure) MAXIMUM: 1600 PSI *1510 AA*
- B. Indicate the method to be used to measure the actual daily injection pressure:
Silver Smith Digital Electronic with Transducers

35. PROPOSED CORRECTIVE ACTION

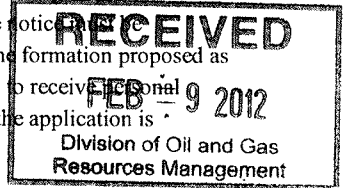
Explain any corrective action proposed for wells penetrating the proposed injection formation or zone within the area of review:
Drill out and re-plug with cement.

36. **MAP.** Each application for a permit shall be accompanied by a map or maps showing and containing the following information:
- A. The subject tract of land on which the proposed injection well is to be located.
 - B. The location of the proposed injection well on the subject tract established by an Ohio registered surveyor showing the distances in feet from the proposed well site to the boundary lines on the subject tract;
 - C. The geographic location of all wells, penetrating the formation proposed for injection regardless of status, within the area of review;
 - D. All holders of the land owner's royalty interest of record, or holders of the severed oil and gas mineral estates of record in the subject tract;
 - E. All owners or operators of wells producing from or injecting into the same formation proposed as the injection formation.
37. **SCHEMATIC DRAWING OF SUBSURFACE CONSTRUCTION.** Label the schematic drawing below indicating size and setting depth of surface casing, intermediate (if any) and production casings; amount of cement used, measured or calculated tops of cement; size and setting depth of tubing; type and setting depth of packer; geologic name of injection zone showing top and bottom of injection interval. If the proposed input well design is substantially different from the schematic below, attach on a separate sheet a schematic of your proposal labeled with the above information.



38. Public notice of an application for an enhanced recovery project is required by law. In addition, the applicant must submit, on an attached sheet, a list of the names and address of those persons required to receive personal notice in accordance with Rule 1501:9-5-05(E)(1), of the Ohio Administrative Code.

After submitting the application, and after a determination by the Division that it is complete as required by the rules of the Division, a legal notice must be published by the applicant in a newspaper of general circulation in the area of review. The legal notice must contain the information described in Rule 1501:9-5-05(E)(1) of the Ohio Administrative Code. A copy of the notice must be delivered to all owners or operators of wells within the area of review producing from or injecting into the same formation proposed as the injection formation. Proof of publication, publication date, and an oath as to the delivery to those entitled to receive personal notice under this method must be filed with the Division within thirty days after the Division determines that the application is complete.



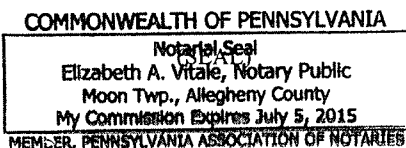
In addition, notice of all applications for enhanced recovery projects will be published in the Division's Weekly Circular.

The undersigned hereby agrees to comply with all provisions for an enhanced recovery project as required by Chapter 1501:9-5 of the Ohio Administrative Code. In addition, the undersigned deposed and says that he shall conform to all provisions of Section 1509.072 of the Ohio Revised Code, and to all orders and rules issued by the Chief, Division of Mineral Resources Management.

Owner/Authorized Agent (Type or Print): Damian C. Georgino
 Signature of Owner/Authorized Agent: [Handwritten Signature] Title: Vice President
 Permanent Address of Home Office: 300 Cherrington Parkway, Ste 200
Coraopolis, PA 15108

If signed by Authorized Agent, a certified copy of appointment of agent must be on file with the Division.

SWORN to and subscribed before me this 2nd day of February, 2012.



Elizabeth A. Vitale
 Notary Public
July 5, 2015
 Date Commission Expires

WELL BORE DESIGN

OWNER	1960 WELL SERVICES, LLC
WELL NAME & NUMBER	
PERMIT NO.:	GOFF SWD # 1
	ROSE RUN/ MT SIMON

NOT TO SCALE

TREE AND MASTER GATE

WELLHEADS

36" HOLE DIAMETER

24" HOLE DIAMETER

17.5" HOLE DIAMETER

12.25" HOLE DIAMETER

ANNULAS CIRCULATED WITH FRESH WATER AND PACKER INHIBITOR

CONDUCTOR CASING 60' X 30" 110 PPF

SURFACE CASING 400' X 20" 94 PPF H
SET AS MINE STRING
IN NEEDED

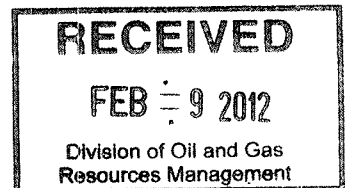
INTERMEDIATE CASING 1400' X 13 3/8"
54.50 PPF K GRADE

CEMENT TOP 1300'
5200' CEMENT FILL UP

PRODUCTION CASING 6550' X 9 5/8"
43.5 PPF N 80 GRADE

PERFORATIONS OR OPEN HOLE 1750' OPEN HOLE

4 1/2" 1 X 11 60 PPF N 80 INJECTION STRING
HDPE LINING



9 5/8" X 4 1/2" RETRIEVABLE INJECTION PACKER
BAKER OIL TOOLS LOC SET PACKER WITH ON OFF TOOL

96540'
10' above injection zone

AD

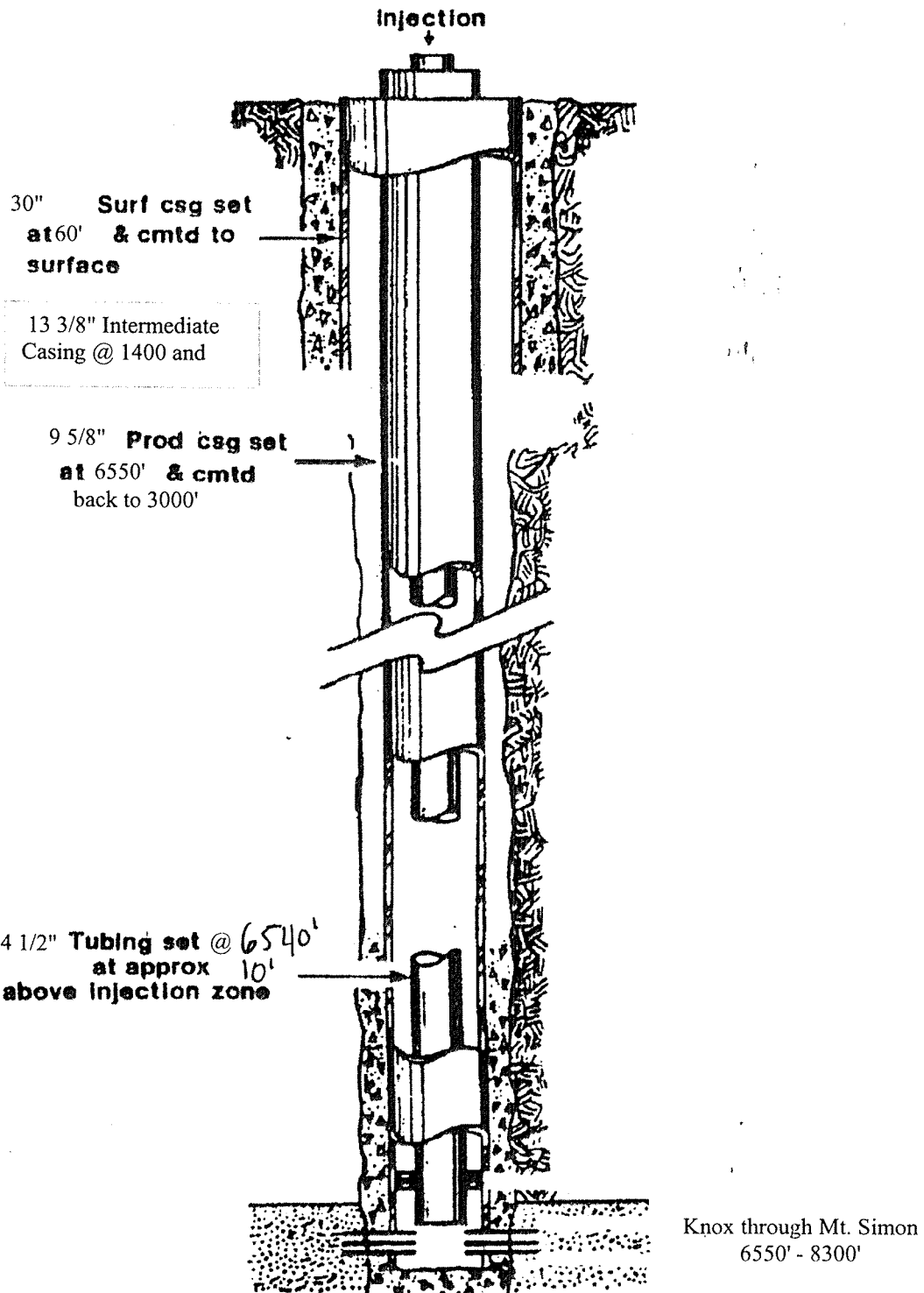
8300' X 8.5" OH TOTAL DEPTH

Provided by: Don Kreager, Drilling Supervisor
David R. Hill, Inc. (740-685-5168)
221 1/2 South 6th Street P.O. Box 247, Byesville, OH 43723
Received January 31, 2012

Muskingum County, Union Twp., SWIW #27
Goff SWD #1

**Subsurface Construction
For Injection Well**

Maximum Injection Pressure: 1510 psi

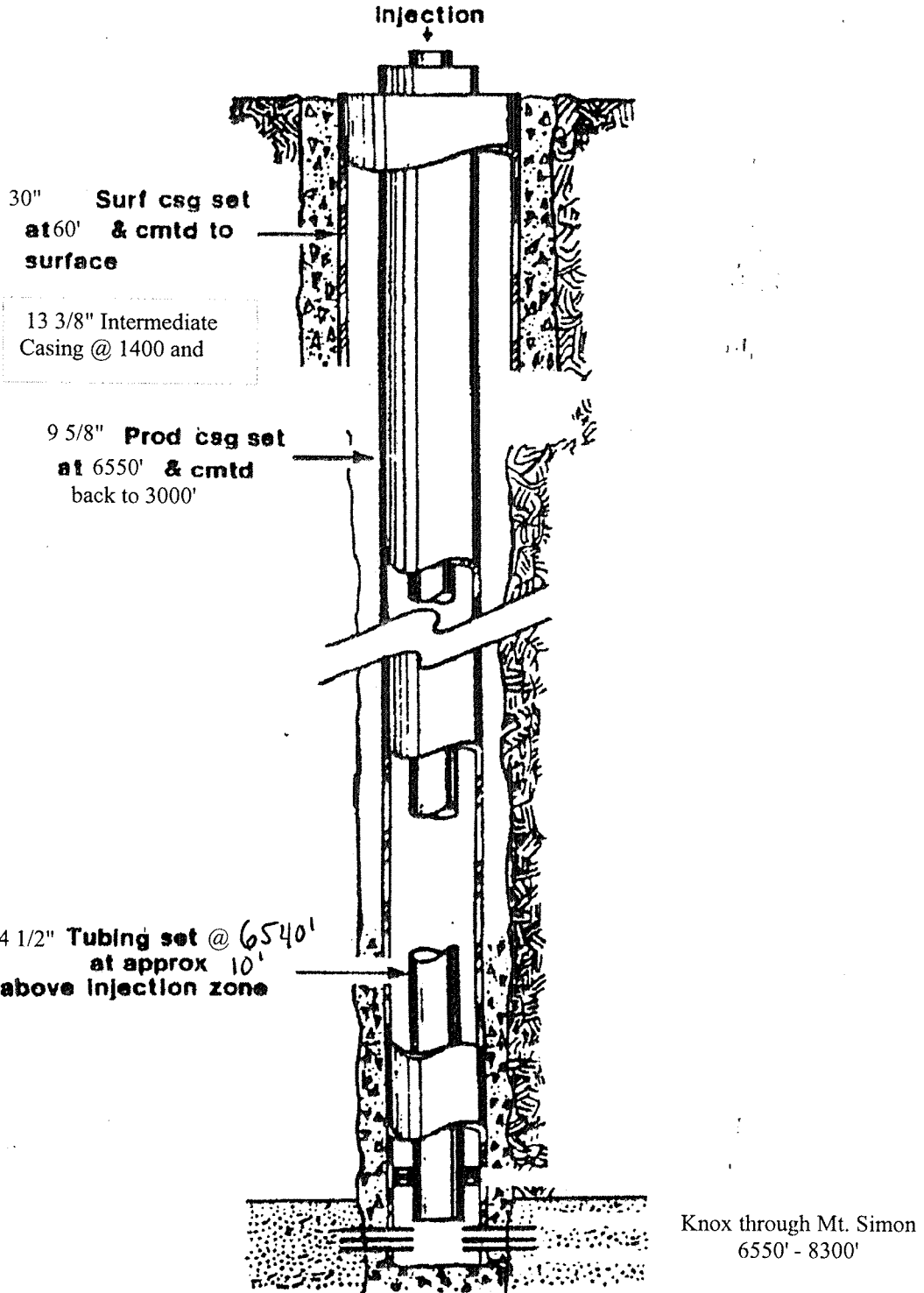


Total Depth: 8300'

Muskingum County, Union Twp., SWIW #27
Goff SWD #1

**Subsurface Construction
For Injection Well**

Maximum Injection Pressure: 1510 psi



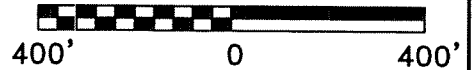
Total Depth: 8300'

WELL UNIT COORDINATES (OH STATE PLANE - SOUTH ZONE):

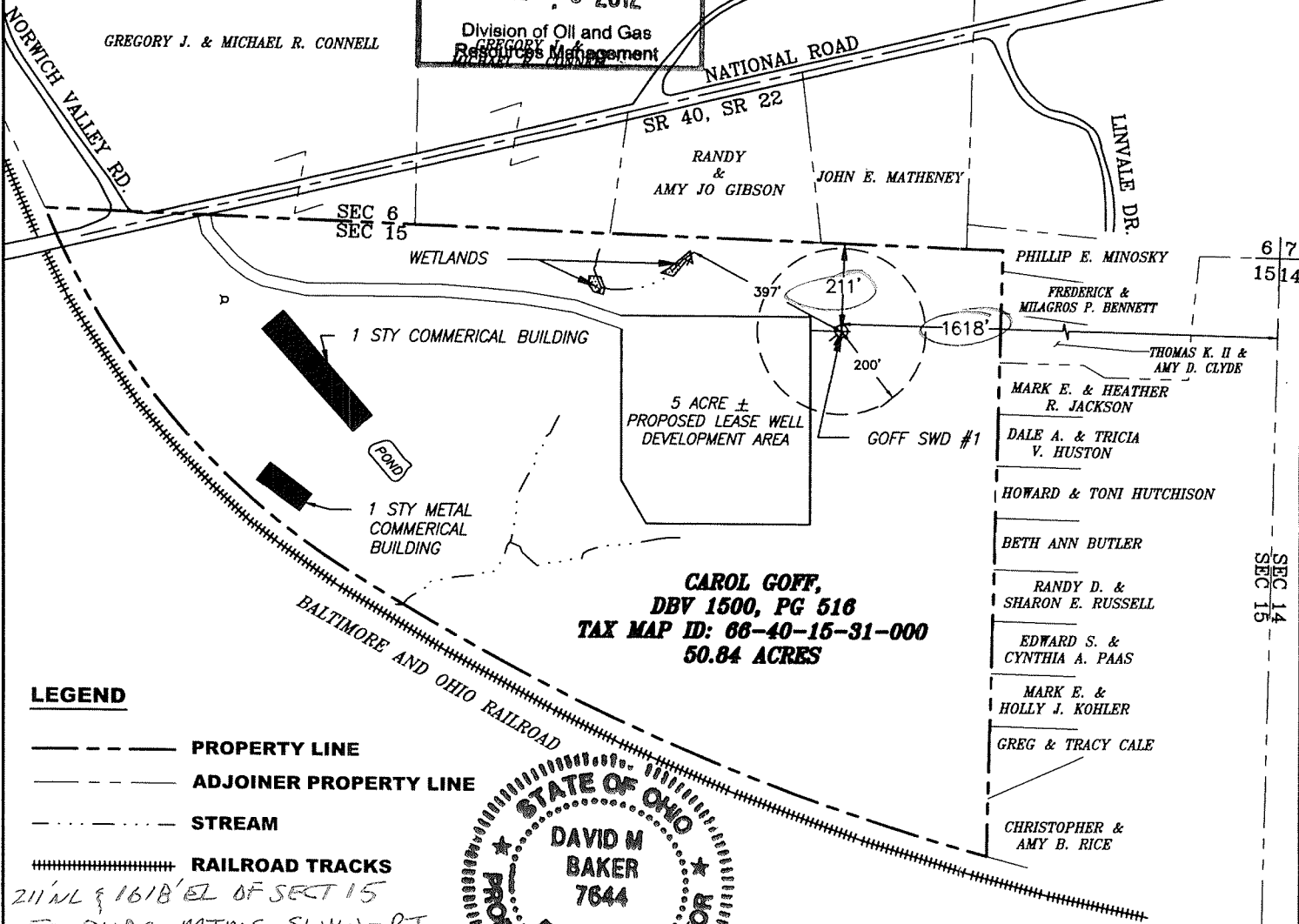
NAD. 83: X: 2162782.16 Y: 720981.16 US SURVEY FEET

NAD. 27: X: 2194246.11 Y: 720940.67 US SURVEY FEET

SCALE: 1" = 400'



RECEIVED
 FEB 9 2012
 Division of Oil and Gas
 Resources Management



CAROL GOFF,
 DBV 1500, PG 516
 TAX MAP ID: 68-40-15-31-000
 50.84 ACRES

LEGEND

- PROPERTY LINE
- ADJOINER PROPERTY LINE
- STREAM
- ===== RAILROAD TRACKS

211' NL & 1618' EL OF SECT 15
 50.84 AC MTMS-SW1W-RT



I hereby certify that this plat is true and correct and was prepared according to the current State of Ohio, Department of Natural Resources, Division of Oil and Gas Regulations.

David Baker, Professional Surveyor No. 7644
 701 Technology Drive, Suite 50, Canonsburg, PA 15317
 PH: 724-873-3545

David M Baker
 REGISTERED SURVEYOR #7644

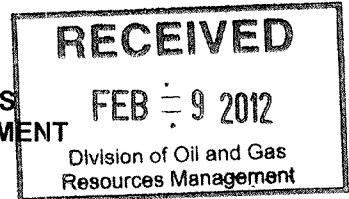
APPLICANT: 1960 WELL SERVICES, LLC
 OPERATOR: 1960 WELL SERVICES, LLC
 ADDRESS: 300 CHERRINGTON PARKWAY, SUITE 200, CORAOPOLIS, PA 15108
 LANDOWNER: CAROL GOFF
 MINERAL OWNER: CAROL GOFF
 WELL NAME: GOFF SWD #1
 WELL NO: 1 DRILLING UNIT AC. 50.84
 PROPOSED WELL DEPTH: 8,300'
 USGS QUAD: NORWICH GROUND ELEVATION: 894.0' NAVD 88
 TOWNSHIP: 1
 RANGE: 5
 SECTION: W 1/2 OF NE 1/4 SECTION 15

gai consultants
 SOUTHPOINTE OFFICE
 701 TECHNOLOGY DRIVE, SUITE 50
 CANONSBURG, PA 15317
 724-873-3545

PROPOSED BRINE WATER INJECTION WELL PLAT
 UNION TOWNSHIP, MUSKINGUM COUNTY, OHIO
 1960 WELL SERVICES, LLC
 300 CHERRINGTON PARKWAY, SUITE 200
 CORAOPOLIS, PA 15108

DWN. JDO	CHKD. DMB	APPD. NET	DATE 1/31/12
SCALE: 1"=400'			TASK NO. 00
PROJECT NO./DASH NO. C111049.00			
DRAWING NO. B-01			

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 Muskingum

NAME OF LANDOWNER: Carol Goff

ADDRESS OF LANDOWNER: 9350 East Pike, Norwich, Ohio 43767

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

Located in West Half of Northeast Quarter of
Section Fifteen,
Fraction/Lot N/A, Union Township,
Muskingum County, Ohio.

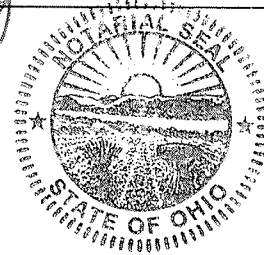
The undersigned certify that they are the owners of the property in fee simple, including the coal rights, and have no objections to the drilling of the Goff SWD #1, by the
(Well Name & No.)
1960 Well Services, LLC on said premises.
(Company)

Further affiant sayeth naught.

Signatures: Carol Goff
Signatures: _____
Signatures: _____
Signatures: _____

SWORN to before me and subscribed in my presence this 02nd
Day of February, 20 12

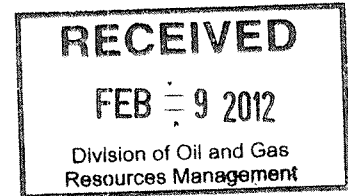
Notary Public: Deanne Stottsberry



February 6, 2012

Project C111049.02

Mr. Thomas Tomastik
Ohio Department of Natural Resources
Division of Oil and Gas Resources Management
2045 Morse Road, H-3
Columbus, Ohio 43229-6693



Permit Application
GOFF Saltwater Disposal (SWD) #1 Saltwater Injection Well
1960 Well Services, LLC
Muskingum County, Ohio

Dear Mr. Tomastik:

GAI Consultants, Inc., on behalf of 1960 Well Services, LLC, is submitting an Application For A Permit for the proposed GOFF SWD #1 Saltwater Injection Well (Project). The Project proposes to advance a borehole to an approximate depth of 8,300 feet for the purpose of salt water disposal into the Mt. Simon Formation at an anticipated average pressure of 1,500 pounds per square inch. Please find, for your consideration, the following permit application documentation:

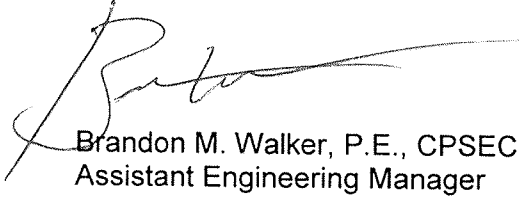
- Form 1 - Application for a Permit;
- Form 210 - Supplement to Application: Permit for Saltwater Injection Well;
- Form 4 - Restoration Plan;
- Project Vicinity Map;
- Well Plat (Application Item #36);
- Schematic Drawing of Subsurface Construction "Well Bore Design" (Application Item #37);
- Preliminary Site Layout Plan;
- Oil and Gas Affidavit; and
- \$1,000 Application Fee.

Please note the current population of Union Township is 1,804 per the 2010 Census obtained from the Ohio Department of Natural Resources Division of Oil and Gas Resource Management and is below the 5,000 person urban threshold per Ohio Administrative Code 1501:9-5-05(E)(1). Therefore, notification of adjacent landowners is only necessary through the public notification process. Once the public notification is completed, GAI will forward the Affidavit for the Saltwater Injection Well.

Mr. Thomas Tomastik
Project C111049.02, Task 035
February 6, 2012

Thank you for your time and consideration. Please feel free to contact me at 412-476-2000, extension 1546, if you have any questions or require additional information.

Respectfully submitted,
GAI Consultants, Inc.



Brandon M. Walker, P.E., CPSEC
Assistant Engineering Manager

BMW:JME/jab
11104902-pa-ltr-jme/jab d-1

Attachment

cc: Mr. Russell Huffmyer, E.I.T, Project Manager, Heckmann Water Resources



**SUPPLEMENT TO APPLICATION
PERMIT FOR A SALTWATER INJECTION WELL (Form 210)**

Ohio Department of Natural Resources, Division of Mineral Resources Management
2045 Morse Road, Bldg H3
Columbus, OH 43229-6693

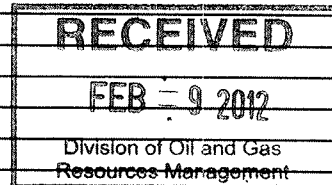
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31. PROPOSED INJECTION ZONE

Geological Formation: Mt. Simon
 Injection Interval: From: 6550 feet to 8300
 Geologic description of injection zone: Mt. Simon Sandstone

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- A. Description of the proposed casing and cement program for new wells, or of the casing, cementing or sealing with prepared clay for existing wells to be converted:
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400 feet of 20 inch Mine String (if mine is encountered) - Balance Cement Job on Bottom and Grout the Top,
1400 feet of 13 3/8 inch Intermediate Casing - Circulate to Surface,
6550 feet of 9 5/8 inch Production Casing - Cement back to 3000 feet
- B. Proposed method for testing the casing:
Hydro Static Pressure Test after Cement
- C. Description of the proposed method for completion and operation of the injection well:
To drill to the Gull River, Set in Cement the Production Casing, Drill through the Mt. Simon Sandstone with 8.5 inch bit, Set 4.5 inch O.D. injection string on a Baker-Lockset Packer (also circulate the annulus with packer inhibitor and pressure test annulus). Install continuous volume and pressure monitoring equipment.
- D. Description of the proposed unloading, surface storage, and spill containment facilities:
Development of Approximately 5.09 acre site with staging to allow for simultaneous truck unloading, approximate 20'x30' maintenance building, brine water storage tanks with a capacity of approximately 4,500 barrels with a containment dike. Rainwater collected in truck unloading area and tank containment area will be collected and taken to a local municipal treatment facility. The site will also have loop access road and stormwater facility.
See Attached Drawing for site layout.



33. PROPOSED INJECTION VOLUMES

- A. Indicate the estimated amount of saltwater to be injected into the proposed injection well per day:
 AVERAGE: 2500 barrels MAXIMUM: 3000 barrels
- B. Indicate the method to be used to measure the actual amount of saltwater injected into the well:
Digital Flowmeter

34. PROPOSED INJECTION PRESSURES

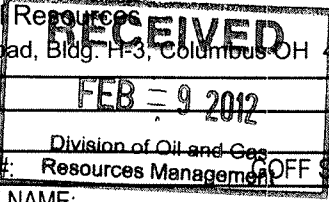
- A. Indicate the estimated pressure to be used for injection of saltwater into the proposed injection well:
 AVERAGE: 1500 PSI (expected operating pressure) MAXIMUM: 1600 PSI 1570 4A
- B. Indicate the method to be used to measure the actual daily injection pressure:
Silver Smith Digital Electronic with Transducers

35. PROPOSED CORRECTIVE ACTION

Explain any corrective action proposed for wells penetrating the proposed injection formation or zone within the area of review:
Drill out and re-plug with cement.

RESTORATION PLAN (Form 4)

Ohio Department of Natural Resources
Division of Mineral Resources Management, 2045 Morse Road, Bldg. H-3, Columbus OH 43229-6693



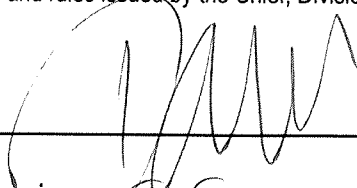
1. DATE OF APPLICATION: 3-Feb-12		3. API #:	
2. OWNER NAME, ADDRESS, & TELEPHONE NO.: 1960 WELL SERVICES, LLC 300 CHERRINGTON PARKWAY, SUITE 200 CORAOPOLIS, PENNSYLVANIA 15108 (412) 329-7275		4. WELL #: OFF \$WD #1	
11. CURRENT LAND USE: <input type="checkbox"/> Cropland <input type="checkbox"/> Commercial <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		5. LEASE NAME:	
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) _____		6. PROPERTY OWNER: 1960 Well Services, LLC	
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		7. COUNTY: Muskingum	
14. SOIL & RESOILING MATERIAL AT WELLSITE: <input type="checkbox"/> Stockpile and protect topsoil to be used when preparing seedbed <input checked="" type="checkbox"/> Use of soil additives (e.g., lime, fertilizer) <input type="checkbox"/> No resoiling planned <input type="checkbox"/> Proposed alternative _____		8. CIVIL TOWNSHIP: Union	
15. DISPOSAL PLAN FOR TREES AND TREE STUMPS: <input type="checkbox"/> No trees disturbed <input type="checkbox"/> Haul to landfill <input type="checkbox"/> Cut into firewood <input type="checkbox"/> Sell to lumber company <input type="checkbox"/> Bury with landowner's approval <input checked="" type="checkbox"/> Mulch small trees and branches, erosion control <input type="checkbox"/> Use for wildlife habitat with landowner approval <input type="checkbox"/> Proposed alternative _____		9. SECTION: W1/2 E1/4 1 10. LOT:	
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		17. TYPE OF WELL: <input type="checkbox"/> Oil <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other	
		18. STEEPEST SLOPE GRADIENT CROSSING SITE: <input type="checkbox"/> 0 to 2% <input type="checkbox"/> 2.1 to 8% <input type="checkbox"/> 8.1 to 10% <input checked="" type="checkbox"/> 10.1 to 24% <input type="checkbox"/> greater than 24%	
		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.	
		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 _____	
		21. BACKFILLING AND GRADING AT SITE: <input checked="" type="checkbox"/> Construct diversions channeled to naturally established drainage systems <input type="checkbox"/> Construct terraces across slopes <input type="checkbox"/> Grade to approximate original contour <input checked="" type="checkbox"/> Grade to minimize erosion & control offsite runoff <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 _____	
		23. ADDITIONAL HOLES: <input 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 type="checkbox"/> 501 to 1500 ft. <input checked="" type="checkbox"/> greater than 1500 ft.	
		25. CURRENT LAND USE OF PATH OF ACCESS ROAD: <input type="checkbox"/> Cropland <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Commercial <input 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.

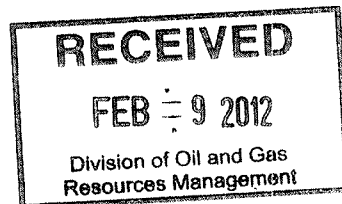
26. SURFACING MATERIAL FOR ACCESS ROAD: <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Brick and/or tile waste <input type="checkbox"/> Slag <input type="checkbox"/> Crushed stone <input type="checkbox"/> No surfacing material to be used <input type="checkbox"/> Proposed alternative _____	29. STEEPEST SLOPE GRADIENT ON ACCESS ROAD: <input type="checkbox"/> 0 to 5% <input checked="" type="checkbox"/> 6 to 10% <input type="checkbox"/> greater than 10%
27. PATH OF ACCESS ROAD TO BE DETERMINED BY: <input type="checkbox"/> Landowner <input type="checkbox"/> Contractor <input checked="" type="checkbox"/> Existing access road <input checked="" type="checkbox"/> Operator	30. APPROXIMATE LENGTH OF STEEPEST SLOPE ON ROAD: <input type="checkbox"/> 0 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.
28. GRADING AND EROSION CONTROL PRACTICE ON ROAD: <input type="checkbox"/> Diversions <input type="checkbox"/> Filter strips <input checked="" type="checkbox"/> Drains <input type="checkbox"/> Riprap <input type="checkbox"/> Open top culverts <input type="checkbox"/> Water breaks <input type="checkbox"/> Outsloping of road <input checked="" type="checkbox"/> Pipe culverts <input type="checkbox"/> Proposed alternative _____	31. HAS LANDOWNER RECEIVED A COPY OF THIS RESTORATION PLAN? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The undersigned hereby agrees to implement all restoration operations identified on this form, and conform to all provisions of Section 1509.072 of the Ohio Revised Code, and to all Orders and rules issued by the Chief, Division of Mineral Resources Management.

Signature of Owner/Authorized Agent 

Name (Typed or Printed) Damian C. Georgino Date Feb 2, 2012

RESTORATION PLAN MUST BE SUBMITTED TO THE DIVISION IN DUPLICATE.



RESTORATION PLAN (Form 4)

Ohio Department of Natural Resources

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

<p>1. DATE OF APPLICATION: 3-Feb-12</p>	<p>3. API #: RECEIVED</p>
<p>2. OWNER NAME, ADDRESS, & TELEPHONE NO.: 1960 WELL SERVICES, LLC 300 CHERRINGTON PARKWAY, SUITE 200 CORAOPOLIS, PENNSYLVANIA 15108 (412) 329-7275</p>	<p>4. WELL #: _____ GOLF SWD #1</p> <p>5. LEASE NAME: FEB - 9 2012</p> <p>6. PROPERTY OWNER: Oil and Gas 1960 Well Services, LLC</p> <p>7. COUNTY: Resources Management Muskingum</p> <p>8. CIVIL TOWNSHIP: Union</p> <p>9. SECTION: W1/2 E1/4 1 10. LOT: _____</p>
<p>11. CURRENT LAND USE:</p> <p><input type="checkbox"/> Cropland <input type="checkbox"/> Commercial</p> <p><input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Idle Land</p> <p><input type="checkbox"/> Wetlands <input type="checkbox"/> Recreational</p> <p><input type="checkbox"/> Residential <input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Unreclaimed strip mine</p> <p><input type="checkbox"/> Woodland: <input type="checkbox"/> Broadleaf <input type="checkbox"/> Needlelike</p>	<p>17. TYPE OF WELL:</p> <p><input type="checkbox"/> Oil <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other</p> <p>18. STEEPEST SLOPE GRADIENT CROSSING SITE:</p> <p><input type="checkbox"/> 0 to 2% <input type="checkbox"/> 2.1 to 8%</p> <p><input type="checkbox"/> 8.1 to 10%</p> <p><input checked="" type="checkbox"/> 10.1 to 24% <input type="checkbox"/> greater than 24%</p>
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<p>14. SOIL & RESOILING MATERIAL AT WELLSITE:</p> <p><input type="checkbox"/> Stockpile and protect topsoil to be used when preparing seedbed</p> <p><input checked="" type="checkbox"/> Use of soil additives (e.g., lime, fertilizer)</p> <p><input type="checkbox"/> No resoiling planned</p> <p><input type="checkbox"/> Proposed alternative _____</p>	<p>21. BACKFILLING AND GRADING AT SITE:</p> <p><input checked="" type="checkbox"/> Construct diversions channeled to naturally established drainage systems</p> <p><input type="checkbox"/> Construct terraces across slopes</p> <p><input type="checkbox"/> Grade to approximate original contour</p> <p><input checked="" type="checkbox"/> Grade to minimize erosion & control offsite runoff</p> <p><input type="checkbox"/> Proposed alternative _____</p>
<p>15. DISPOSAL PLAN FOR TREES AND TREE STUMPS:</p> <p><input type="checkbox"/> No trees disturbed <input type="checkbox"/> Haul to landfill</p> <p><input type="checkbox"/> Cut into firewood <input type="checkbox"/> Sell to lumber</p> <p><input type="checkbox"/> Bury with landowner's approval company</p> <p><input checked="" type="checkbox"/> Mulch small trees and branches, erosion control</p> <p><input type="checkbox"/> Use for wildlife habitat with landowner approval</p> <p><input type="checkbox"/> Proposed alternative _____</p>	<p>22. VEGETATIVE COVER TO BE ESTABLISHED AT SITE:</p> <p><input checked="" type="checkbox"/> Seeding plan <input type="checkbox"/> Sod</p> <p><input type="checkbox"/> Agricultural crops <input type="checkbox"/> Trees and/or Bushes</p> <p><input type="checkbox"/> Proposed alternative _____</p>
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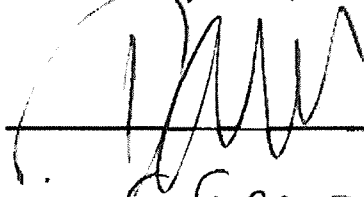
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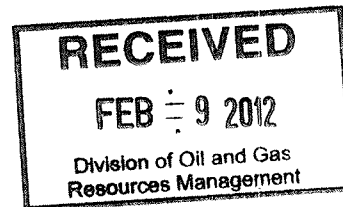


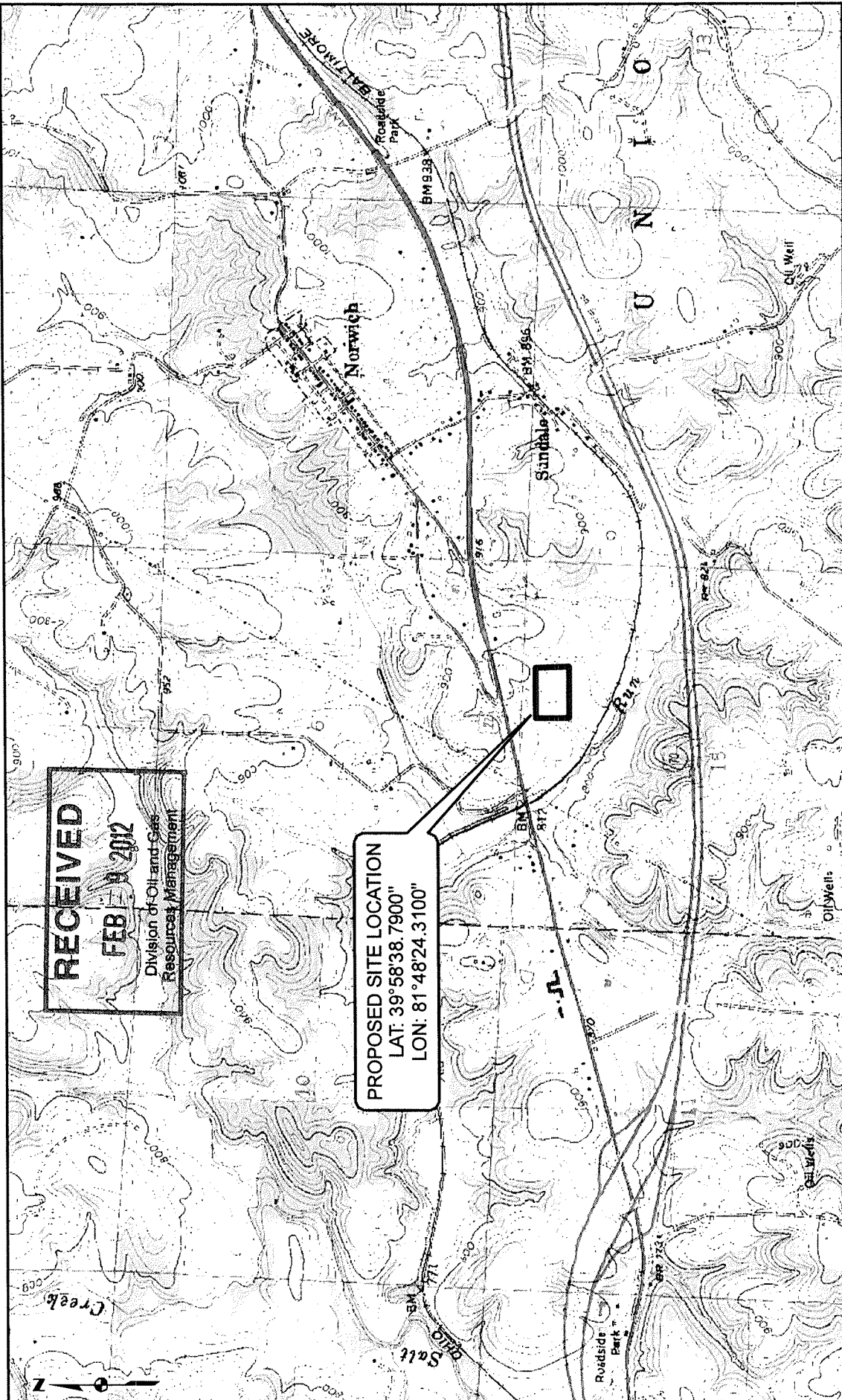
Name (Typed or Printed)

Damian C. Georgino

Date Feb 2, 2012

RESTORATION PLAN MUST BE SUBMITTED TO THE DIVISION IN DUPLICATE.





RECEIVED
FEB 10 2012
 Division of Oil and Gas
 Resource Management

PROPOSED SITE LOCATION
 LAT: 39°58'38.7900"
 LON: 81°48'24.3100"

PROJECT LOCATION

Muskingum County, OH

REFERENCE:
 USGS 7.5 minute topographic
 quadrangle maps of
 Norwich, OH.

LEGEND

Approximate Well Site Boundary

0 1,000 2,000 4,000 Feet

1 inch = 4000 feet

ATTACHMENT 1
PROJECT VICINITY MAP

1960 Well Services, LLC
 NORWICH SALTWATER
 INJECTION WELL SITE

DRAWN BY: TER DATE: 1/17/11
 CHECKED: JAV APPROVED: MAF

Tomastik, Tom

From: Steve Lehrman [S.Lehrman@gaiconsultants.com]
Sent: Tuesday, March 27, 2012 11:39 AM
To: Tomastik, Tom
Cc: Rich Ruffolo; Brandon Walker
Subject: RE: 1960 Well Services, LLC, GOFF Saltwater Disposal #1 Injection Well, Union Township, Muskingham County, Ohio

Mr. Tomastik,

Mr. Walker is leaving GAI Consultants. Please forward any further information to Steve Lehman, Jr., P.E. at the contact information provided below concerning the well for 1960 Well Services, LLC, GOFF Saltwater Disposal #1 Injection Well in Union Township, Muskingham County, Ohio.

Thank you,

Steve Lehrman, Jr., P.E.
Senior Engineer

GAI Consultants, Inc.
385 East Waterfront Drive
Homestead, PA 15120-5005

412.476.2000 ext. 1526 | 412.476.2020 | 412.443.2341 | www.gaiconsultants.com

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3/27/2012