

APPLICATION CHECKLIST

Noble County, Sharon Twp.

W.D. Morris #3 SWD
 SWIW # 9
 Permit #

	Date	Initials
Enter on Agenda	6/13/12	AA
Completeness Review	6/13/12	AA
Date - Time Stamp	6/13/12	AA
Area of Review	6/21/12	AA
Site Evaluation		
Permitting Section		
Memo to Inspector	7-25-12	AA
Public Notice	8-1-12	AA
Letter	8-1-12	
Date Run		
15 Days		
Review Public Notice		
Affidavit of Notification		
Objections Received	Yes _____ No _____	
Public Hearing Date		
Chief's Order, if Required		
Schematic	6/21/12	AA
Plot on Map	6/28/12	AA
Review by Geologist		
Permit Conditions (Same date as permit)		
Enter on Computer (Same or later date than Chief's Order)		
Enter on Master List	7-6-12	AA
EPA Form	7-6-12	AA
Mail Permit		
Update Agenda		
File		

RECORD OF CONVERSATION

-Must limit injection volume to < 200 BBL/day to keep area of review to 1/4 mile radius & exclude nearby CL/MO SS well.

DAILY ROUTE SLIP

Sharon

APPLICATION NO. aPATT020719

TYPE: Convert

CONAME NORTHWOOD ENERGY CORP API 34121242500000

WELL NAME /NO. MORRIS W D 3

COUNTY 121 NOBLE INITIALS DATE

DATE APPLICATION REC'D PN 6/13/2012

PERMIT FEE AND CHECK NO. \$1,000.00 35531

RUSH AMOUNT RUSH CHECK NO. \$0.00 0

APPLICATION ENTERED PN 6/13/12

APPLICATIONS AND PLATS SENT FOR MINE APPROVAL — —

COAL APPROVAL RECEIVED NA AA 7-23-12

OIL/GAS AFFIDAVIT REC'D _____

URBANIZED AREA NOTIFICATION SENT _____

URBANIZED AREA NOTIFICATION SENT TO INSPECTOR/REC'D BACK _____

URBAN MAP REVIEW _____

SAMPLES: YES _____ /SPECIAL AREAS _____

GEOLOGIST APPROVAL _____

DATA ENTRY /ISSUED _____

PERMIT: TAKEN _____ MAILED _____

FAX TO: _____

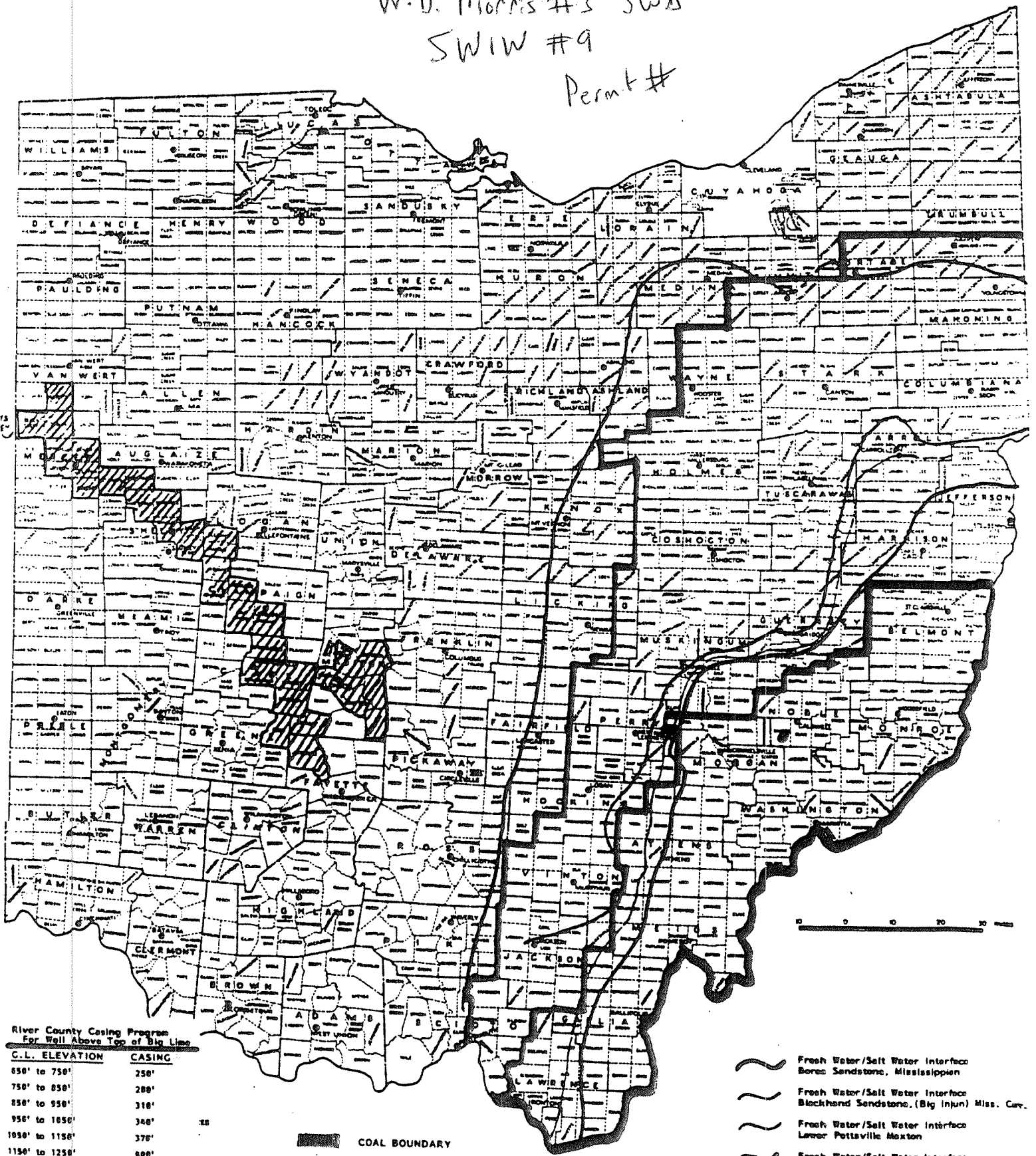
FINAL MAP CHECK _____

COMMENTS: _____

Proof Sheet

APPL NUMBER	aPATT020719	URBANIZED AREA ?	<input type="checkbox"/>
OWNER NUMBER	1634	NAME	
OWNER NAME	NORTHWOOD ENERGY CORP		
EXISTING WELL	-1		
API PERMIT NO	34121242500000	DISPOSAL PLAN 1	ND
APPL TYPE	CO	DISPOSAL PLAN 2	
TYPE OF WELL	SWD	DISPOSAL PLAN 3	
VARIANCE REQUEST		DISPOSAL PLAN 4	
WELL NAME	MORRIS W D (Swu#9)	DISPOSAL PLAN 5	
WELL NUMBER	3	MP Check #	0
PREV/PROPOSED TD	5556		
DRILL UNIT ACRES	277		
TYPE OF TOOL	SERV		
WELL CLASS	Swu	PROPOSED FORMATIONS	
FIRE PHONE	() - 911	CLINTON/MEDINA	
MEDICAL PHONE	() - 911		
COUNTY CODE	121		
COUNTY NAME	NOBLE		
COAL (Y=-1/N=0)	-1		
CIVIL TOWNSHIP	SHARON	TARG CIVIL TWP	
SURF QUAD	CALDWELL SOUTH	TARG QUAD	
Nad 27 SURF ORIG X	2,256,377	Nad 27 TARG ORIG X	
Nad 27 SURF ORIG Y	607,792	Nad 27 TARG ORIG Y	
GROUND ELEVATION	961	TARG ELEV	0
SURF SEC	36	TARG SECTION	
SURF LOT		TARG LOT	
SURF QTR TWP		TARG QTR TWP	
SURF ALLOT		TARG ALLOT	
SURF TRACT		TARG TRACT	
SURF FRACTION		TARG FRACTION	





Noble County, Sharon Twp.
 W.D. Morris #3 SWA
 SWIW #9
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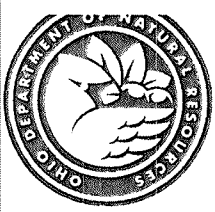


River County Casing Program
 For Well Above Top of Big Lime

C.L. ELEVATION	CASING
650' to 750'	250'
750' to 850'	280'
850' to 950'	310'
950' to 1050'	340'
1050' to 1150'	370'
1150' to 1250'	400'
1250' to 1350'	430'
OVER 1350'	500'

 COAL BOUNDARY

-  Fresh Water/Salt Water Interface
Berea Sandstone, Mississippian
-  Fresh Water/Salt Water Interface
Blackhand Sandstone, (Big Injun) Miss. Cuv.
-  Fresh Water/Salt Water Interface
Lower Pottsville Maxton
-  Fresh Water/Salt Water Interface
Upper Allegheny 2nd Coe Run



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Richard J. Simmers, Chief
Division of Oil and Gas Resources Management
2045 Morse Road, Bldg. F-2
Columbus, OH 43229-6693
Phone (614) 265-6922 Fax (614) 265-6910

August 1, 2012

Mr. Ralph W. Talmage
Northwood Energy Corporation
941 Chatham Lane
Suite 100
Columbus, Ohio 43221

RE: Public Notification for SWIW application for Noble County, Sharon Twp., permit #4250, Northwood Energy Corporation, W. D. Morris #3, injection well

Dear Mr. Talmage:

As outlined in Rule 1501: 9-3-06 (H) (1) of the Ohio Administrative Code, please consider this letter as notification from the Division for you to proceed with the public notice. Enclosed, please find a copy of the notice you will need to have run in the newspaper of general circulation in the area of the proposed injection well. **The public notice must be run for no less than five consecutive days. After running this notice in the newspaper, please send me the original proof-of-publication from the newspaper as soon as possible.**

If you have any questions regarding this matter, please feel free to contact me at (614) 265-6673.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Adgate".

Andrew Adgate, Geologist
UIC Section
Division of Oil and Gas Resources Management
2045 Morse Road, F-2
Columbus, Ohio 43229-6693

Cc: File

PUBLIC NOTICE

Northwood Energy Corporation, 941 Chatham Lane, Suite 100, Columbus, Ohio 43221, (614) 457-1024 is applying to permit a well for the injection of brine water produced in association with oil and natural gas. The location of the proposed injection well is the W. D. Morris #3, Permit #4250, Section 36, Sharon Township, Noble County, Ohio. The proposed well will inject into the Clinton/Medina sandstones at a depth of 5556 to 5716 feet. The average injection is estimated to be 200 barrels per day. The maximum injection pressure is estimated to be 1280 psi. Further information can be obtained by contacting Northwood Energy Corporation, or the Division of Oil and Gas Resources Management. The address of the Division is: Ohio Department of Natural Resources, Division of Oil and Gas Resources Management, 2045 Morse Road, Building F-2, Columbus, Ohio 43229-6693, (614) 265-6633. For full consideration, all comments and objections must be received by the Division, in writing, within fifteen calendar days of the last date of this published legal notice.

INTER-OFFICE MEMO

TO: Dave Ball, Mineral Resources Inspector
FROM: Andrew Adgate, Geologist AA
SUBJECT: Application and Site Evaluation for a SWIW permit
DATE: July 25, 2012

The Division of Oil and Gas Resources Management has received an application for the proposed saltwater injection well as described below:

OPERATOR: Northwood Energy Corporation
WELL NAME & NUMBER: W.D. Morris #3
PERMIT NUMBER: Convert existing Clinton well, SWIW #9
LOCATION: 505' SL & 775' EL of SEC 36, Sharon Twp., Noble County
PROPOSED INJECTION ZONE: Clinton/Medina sandstone
DATE RECEIVED: June 13, 2012

Please inspect proposed site and evaluate for any potential water wells or surface bodies of water within close proximity that would require any additional permit conditions for the construction of the SWIW surface facilities. Please e-mail me a copy of the site inspection report with any recommendations.

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

35531
 \$ 1000.00

AP# 20719

SEE INSTRUCTIONS ON PAGE 2 (BACK)

1. I, We (applicant) <u>Northwood Energy Corporation</u> 2. Owner #: <u>1634</u> (address) <u>941 Chatham Lane, Suite 100, Columbus, Ohio 43221</u> Phone #: <u>614-457-1024</u> hereby apply this date <u>May 24, 2012</u> for a permit to:	
<input type="checkbox"/> Reissue (check appropriate blank) <input type="checkbox"/> Revised Location <input checked="" type="checkbox"/> Convert <input 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>Northwood Energy Corporation</u> <u>941 Chatham Lane, Suite 100</u> <u>Columbus, OH 43221</u>	20. TYPE OF TOOLS: <input type="checkbox"/> Cable <input type="checkbox"/> Air Rotary <input type="checkbox"/> Cable / Air Rotary <input type="checkbox"/> Air / Fluid Rotary <input type="checkbox"/> Cable / Fluid Rotary <input type="checkbox"/> Fluid Rotary <input type="checkbox"/> Cable / Air / Fluid Rotary <input checked="" type="checkbox"/> Service Rig
5. COUNTY: <u>Noble</u>	21. PROPOSED CASING PROGRAM: <u>8 5/8": Existing & set @ 1,559'</u> <u>4 1/2": Existing & set @ 5,834'</u> <u>2 7/8": will be set on packer @ ~5,520'</u>
6. CIVIL TOWNSHIP: <u>Sharon</u>	
7. SECTION: <u>36</u> 8. LOT: _____	
9. FRACTION: _____ 10. QTR TWP: _____	
11. TRACT / ALLOT: _____	
12. WELL #: <u>3</u>	
13. LEASE NAME: <u>Morris, W.D.</u>	
14. PROPOSED TOTAL DEPTH: <u>5,556'</u>	
15. PROPOSED GEOLOGICAL FORMATION: <u>Clinton / Medina</u>	
16. DRILLING UNIT IN ACRES (must be same as acres indicated on plat): <u>277ac.</u>	
17. IF PERMITTED PREVIOUSLY: API #: <u>34-121-2-4250-00-00</u> OWNER: <u>Northwood Energy Corp.</u> WELL #: <u>3</u> LEASE NAME: <u>Morris, W.D.</u> TOTAL DEPTH: <u>5,800'</u> GEOLOGICAL FORMATION: <u>Berea thoguht Medina</u>	22. FIRE AND MEDICAL DEPARTMENT TELEPHONE NUMBERS: (closest to well site) Fire: <u>911</u> Medical: <u>911</u>
18. IF SURFACE RIGHTS ARE OWNED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES Division Name: _____ Division Phone: _____	23. MEANS OF INGRESS & EGRESS: Township Road: <u>TR-78</u> County Road: _____ Municipal Road: _____ State Highway: _____
19. LANDOWNER ROYALTY INTEREST: Is There An Attached List? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Name: _____ Address: _____ Name: _____ Address: _____ Name: _____ Address: _____	24. IS THE WELL LOCATION OR PRODUCTION FACILITIES WITHIN AN URBANIZED AREA AS DEFINED BY 1509.01(Y) ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

RECEIVED

JUN 16 2012

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.

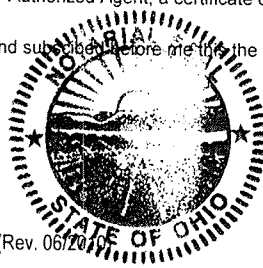
I, the undersigned, further depose and state that I am the person who has the right to drill on the tract or drilling unit and to drill into and produce from a pool and to appropriate the oil or gas that I produce therefrom either for myself or others as described in this application. And furthermore, 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 Ralph W. Talavage
 Name (Type or Print) Ralph W. Talavage Title President

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

Sworn to and subscribed before me this 30th day of May, 2012.



WILLIAM W. ARNHOLT JR
 NOTARY PUBLIC - OHIO
 MY COMMISSION EXPIRES 05/03/2014

William W. Arnholt Jr.
 (Notary Public)

5/3/2014
 (Date Commission Expires)

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

Ohio Department of Natural Resources, Division of Oil and Gas Resources Management
2045 Morse Road, Bldg F-2
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: Clinton Ss / Medina Ss
Injection Interval: From: 5,556' feet to 5,716'
Geologic description of injection zone: 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:
Well was drilled in January, 2008, used 4 1/2" casing was ran to 5,834'. Casing was cemented in w/ 310 sacks of class A cement in 2 stages. 165 sacks was used to cement the Clinton / Medina, TOC is ~5,060'. 145 sacks were used in the 2nd stage from 1,830' - 2,500'.
- B. Proposed method for testing the casing:
Pressure test of the annulus will occur when required by the State of Ohio to a pressure exceeding maximum injection pressure for the well.
- C. Description of the proposed method for completion and operation of the injection well:
2 7/8" tubing will be ran to ~5,520 w/ packer on bottom, all injection volumes will be pumped through tubing.
- D. Description of the proposed unloading, surface storage, and spill containment facilities:
Disposal facility will be constructed at the entrance to the Morris, W.D. #3 off of TR-78. 2 impereable pads w/ 30mil liner will be constructed, 1 on which containment units will be placed, & 1 for pumping equipment & filtration systems. Containment units will consist of ~4x210bbl. tanks & 1x100bbl. tank, for a total of ~940bbl. of capacity on site. Containment units will be surrounded by a dike of size sufficient enough to contain all possible volumes that could be held on site. A concrete unloading pad will be constructed adjacent to dike w/ containment units. The unloading pad will be constructed such that all materials spilled or rain water from the pad, will tavel to the to the rear & be collected in a containment vault at the northwest corner of the pad for disposal.

RECEIVED

2008 10 17

33. PROPOSED INJECTION VOLUMES

- A. Indicate the estimated amount of saltwater to be injected into the proposed injection well per day:
AVERAGE: 200bbl. MAXIMUM: 200bbl.
- B. Indicate the method to be used to measure the actual amount of saltwater injected into the well:
Tank gages &/or flow meter

34. PROPOSED INJECTION PRESSURES

- A. Indicate the estimated pressure to be used for injection of saltwater into the proposed injection well:
AVERAGE: 200# MAXIMUM: 1,280#
- B. Indicate the method to be used to measure the actual daily injection pressure:
Pressure recorder at pump & well head

35. PROPOSED CORRECTIVE ACTION

Explain any corrective action proposed for wells penetrating the proposed injection formation or zone within the area of review:
If any communication is suspected for wells producing from the Clinton &/or Medina in the review area, injection will stop unit it can be determined if communication is occuring. Injection rate will be reduced if communication is proven.

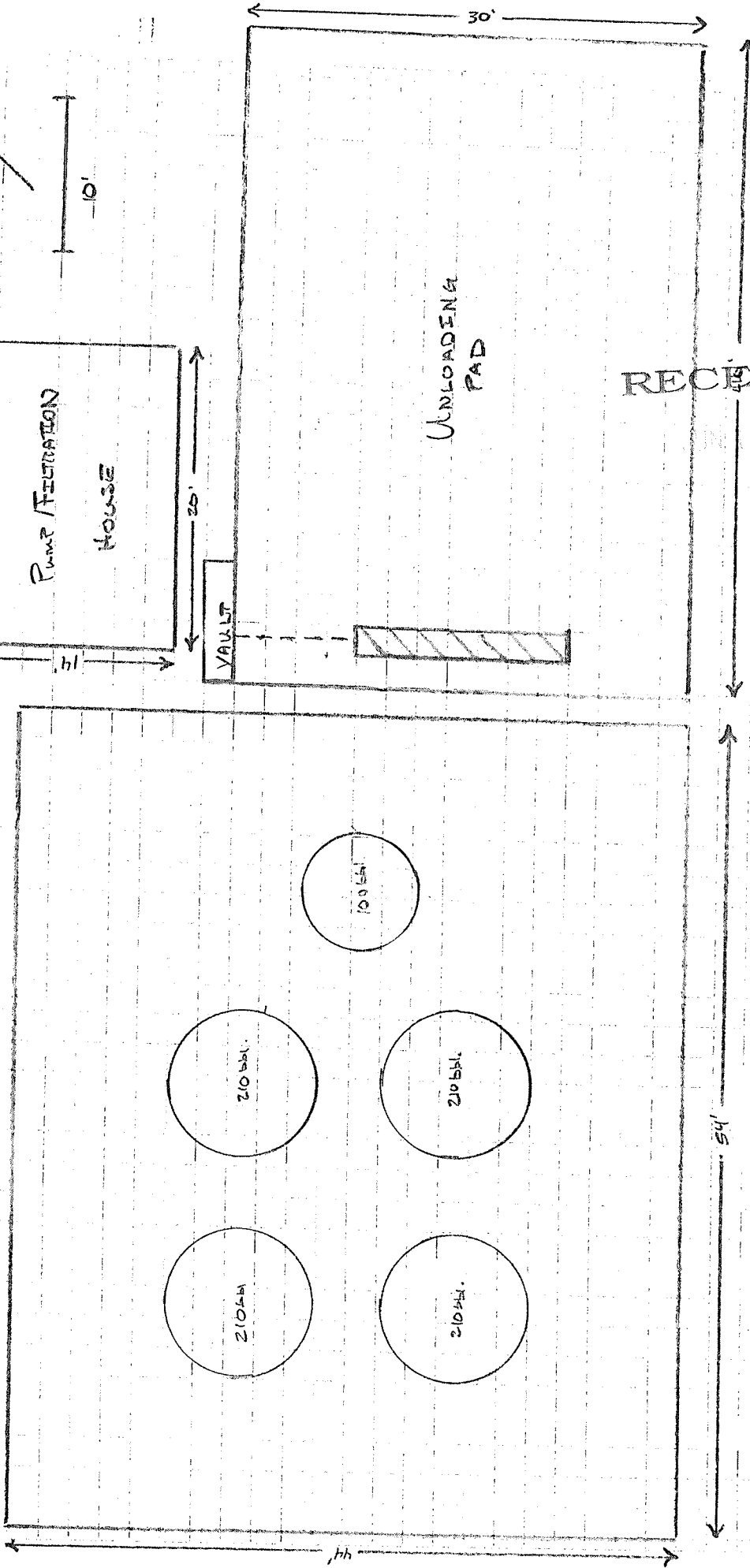


Northwood Energy Corp.

MORRIS, W.D. #3

34-12-2-0000

SHARON TANK, NOBLE CO.



RECEIVED

CONTAINMENT VOLUMES

PAD

TANKS

$$[(25 \times 5) + (25 \times 25)] \times 7.48 \frac{\text{gal}}{\text{ft}^3} = 52,663.75 \text{ gal}$$

$$54' \times 44' \times 3.5' \text{ H} = 82,620 \text{ gal}$$

$$4 \times 210 \text{ bbl} = 840 \text{ bbl} = 840 \times 5.9 \text{ gal} = 4956 \text{ gal}$$

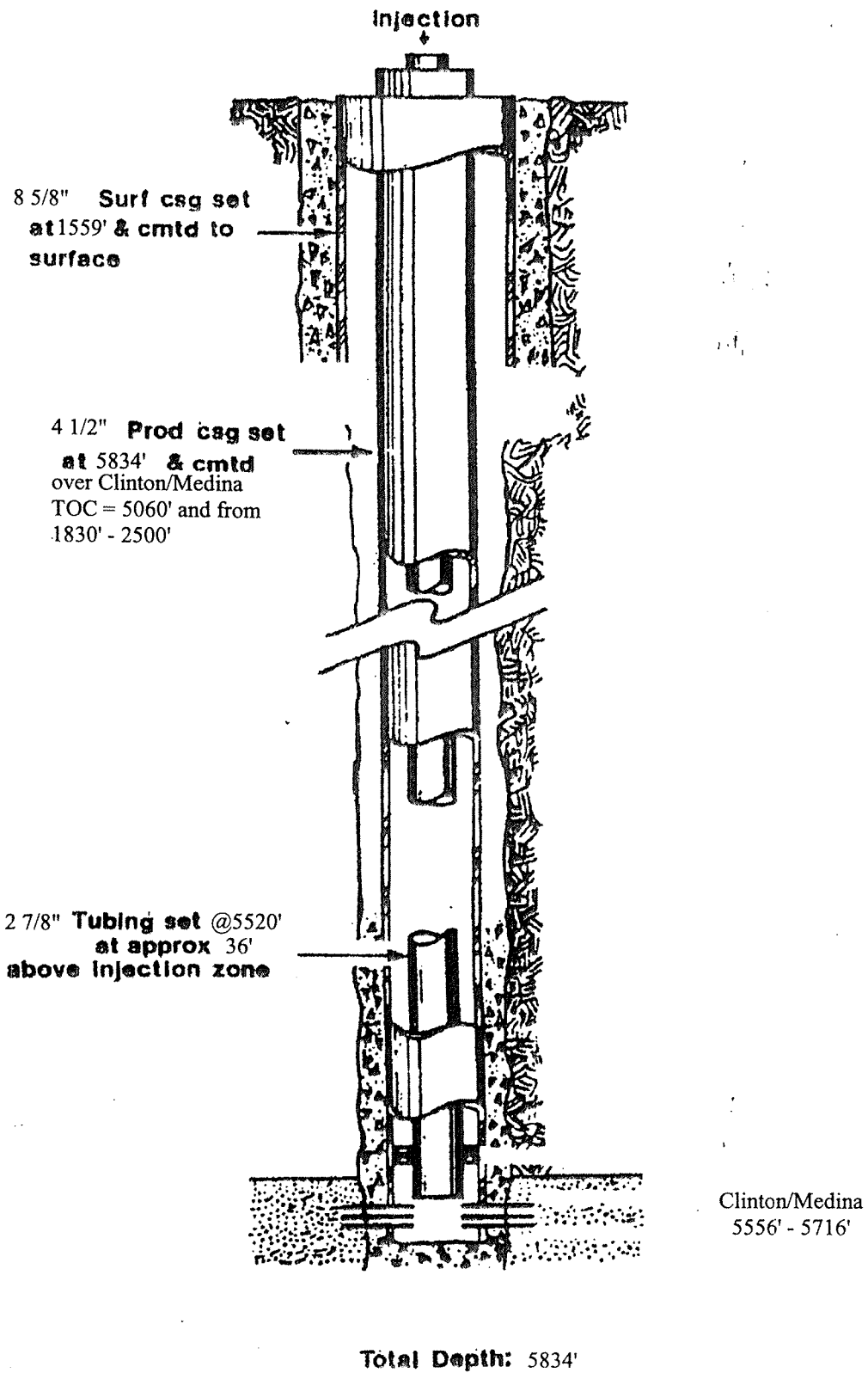
$$1 \times 100 \text{ bbl} = 100 \text{ bbl} = 100 \times 5.9 \text{ gal} = 590 \text{ gal}$$

$$\sim 3646 \text{ gal}$$

Noble County, Sharon Twp., SWIW # 9
W.D. Morris SWD # 3

**Subsurface Construction
For Injection Well**

Maximum Injection Pressure: 1280 psi



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

SEE INSTRUCTIONS ON PAGE 2 (BACK)

1. I, We (applicant) <u>Northwood Energy Corporation</u>		2. Owner #: <u>1634</u>	
(address) <u>941 Chatham Lane, Suite 100, Columbus, Ohio 43221</u>		Phone #: <u>614-457-1024</u>	
hereby apply this date <u>May 24, 2012</u> for a permit to:			
<input type="checkbox"/> Reissue (check appropriate blank)	<input type="checkbox"/> Revised Location	<input checked="" type="checkbox"/> Convert	
<input 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	
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<input type="checkbox"/> Solution Mining*	<input type="checkbox"/> Enhanced Recovery* (* if checked, select appropriate box below)		
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<u>Northwood Energy Corporation</u>		<input type="checkbox"/> Cable	
<u>941 Chatham Lane, Suite 100</u>		<input type="checkbox"/> Cable / Air Rotary	
<u>Columbus, OH 43221</u>		<input type="checkbox"/> Cable / Fluid Rotary	
		<input type="checkbox"/> Cable / Air / Fluid Rotary	
		<input type="checkbox"/> Air Rotary	
		<input type="checkbox"/> Air / Fluid Rotary	
		<input type="checkbox"/> Fluid Rotary	
		<input checked="" type="checkbox"/> Service Rig	
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API #: <u>34-121-2-4250-00-00</u>		23. MEANS OF INGRESS & EGRESS:	
OWNER: <u>Northwood Energy Corp.</u>			Township Road: <u>TR-78</u>
WELL #: <u>3</u>			County Road: _____
LEASE NAME: <u>Morris, W.D.</u>			Municipal Road: _____
TOTAL DEPTH: <u>5,800'</u>			State Highway: _____
GEOLOGICAL FORMATION: <u>Berea thoguht Medina</u>			
18. IF SURFACE RIGHTS ARE OWNED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES		24. IS THE WELL LOCATION OR PRODUCTION FACILITIES WITHIN AN URBANIZED AREA AS DEFINED BY 1509.01(Y) ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Division Name: _____			
Division Phone: _____			
19. LANDOWNER ROYALTY INTEREST:			
Is There An Attached List? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Name: _____			
Address: _____			
Name: _____			
Address: _____			
Name: _____			
Address: _____			

RECEIVED

MAY 13 2012

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.

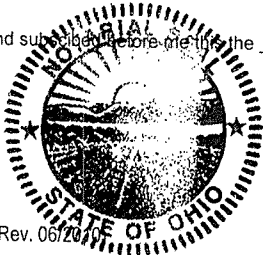
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That I hereby agree to conform with all provisions of Chapter 1509., ORC, and Chapter 1501., OAC, and all orders and conditions issued by the Chief, Division of Mineral Resources Management.

Signature of Owner/Authorized Agent Ralph W. Talavage
 Name (Type or Print) Ralph W. Talavage Title President

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

Sworn to and subscribed before me this 30th day of May, 2012.



WILLIAM W ARNHOLT JR
 NOTARY PUBLIC - OHIO
 MY COMMISSION EXPIRES 05/03/2014

William W. Arnholt Jr.
 (Notary Public)

5/3/2014
 (Date Commission Expires)

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 OHIO DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF MINERAL RESOURCES MANAGEMENT
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9. FRACTION: _____ 10. QTR TWP: _____	
11. TRACT / ALLOT: _____	
12. WELL #: <u>3</u>	
13. LEASE NAME: <u>Morris, W.D.</u>	
14. PROPOSED TOTAL DEPTH: <u>5,556'</u>	
15. PROPOSED GEOLOGICAL FORMATION: <u>Clinton / Medina</u>	
16. DRILLING UNIT IN ACRES (must be same as acres indicated on plat): <u>277ac.</u>	
17. IF PERMITTED PREVIOUSLY: API #: <u>34-121-2-4250-00-00</u> OWNER: <u>Northwood Energy Corp.</u> WELL #: <u>3</u> LEASE NAME: <u>Morris, W.D.</u> TOTAL DEPTH: <u>5,800'</u> GEOLOGICAL FORMATION: <u>Berea thoguht Medina</u>	22. FIRE AND MEDICAL DEPARTMENT TELEPHONE NUMBERS: (closest to well site) Fire: <u>911</u> Medical: <u>911</u>
18. IF SURFACE RIGHTS ARE OWNED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES Division Name: _____ Division Phone: _____	23. MEANS OF INGRESS & EGRESS: Township Road: <u>TR-78</u> County Road: _____ Municipal Road: _____ State Highway: _____
19. LANDOWNER ROYALTY INTEREST: Is There An Attached List? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Name: _____ Address: _____ Name: _____ Address: _____ Name: _____ Address: _____	24. IS THE WELL LOCATION OR PRODUCTION FACILITIES WITHIN AN URBANIZED AREA AS DEFINED BY 1509.01(Y) ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <div style="text-align: right; font-size: 2em; font-weight: bold;">RECEIVED</div> <div style="text-align: right; color: gray;">JUN 13 2012</div>

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.

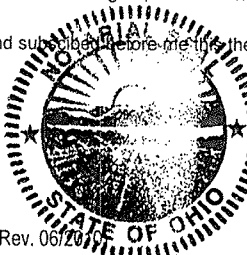
I, the undersigned, further depose and state that I am the person who has the right to drill on the tract or drilling unit and to drill into and produce from a pool and to appropriate the oil or gas that I produce therefrom either for myself or others as described in this application. And furthermore, 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 Ralph W. Talavage
 Name (Type or Print) Ralph W. Talavage Title President

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

Sworn to and subscribed before me this 30th day of May, 2012.



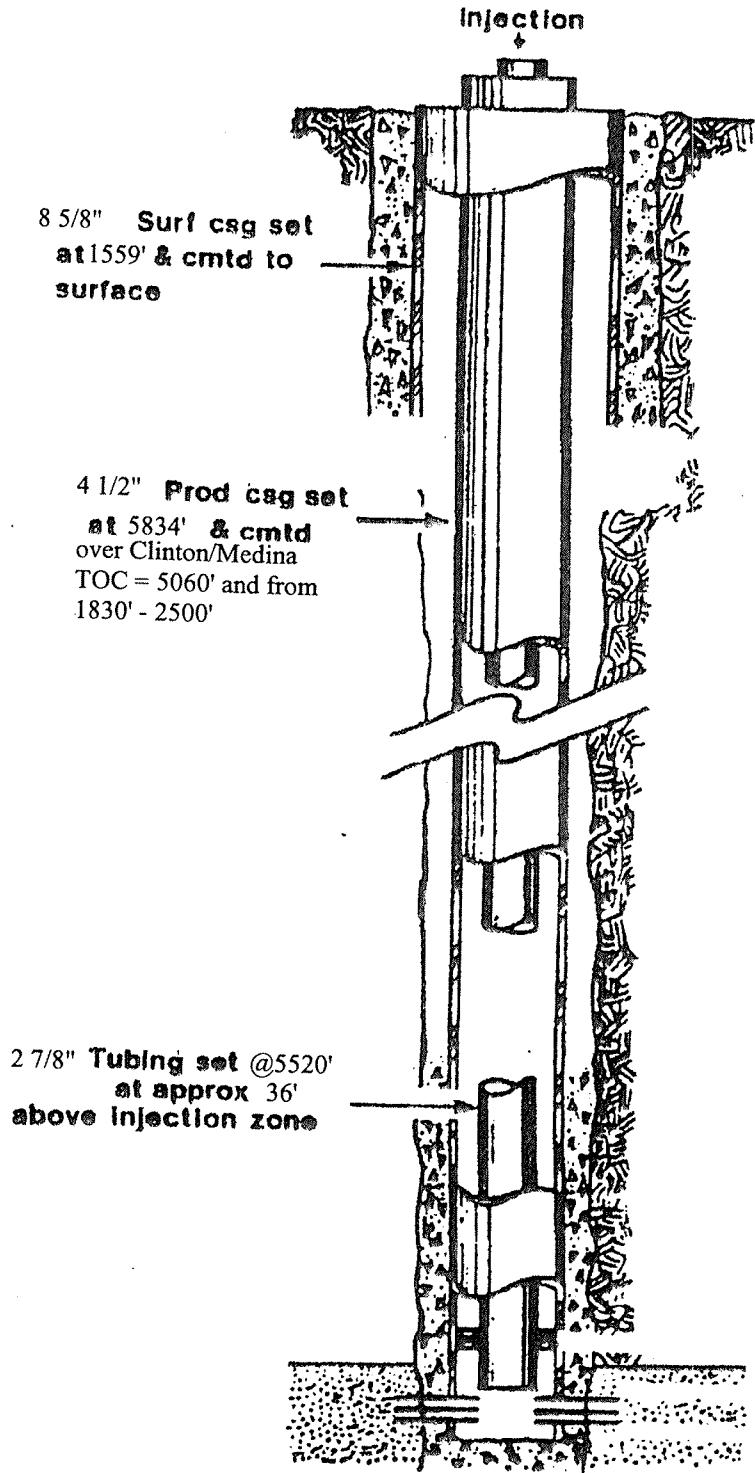
WILLIAM W. ARNHOLT JR
 NOTARY PUBLIC - OHIO
 MY COMMISSION EXPIRES 05/03/2014

Will W. Arnholt Jr.
 (Notary Public)

Noble County, Sharon Twp., SWIW # 9
W.D. Morris SWD # 3

**Subsurface Construction
For Injection Well**

Maximum Injection Pressure: 1280 psi

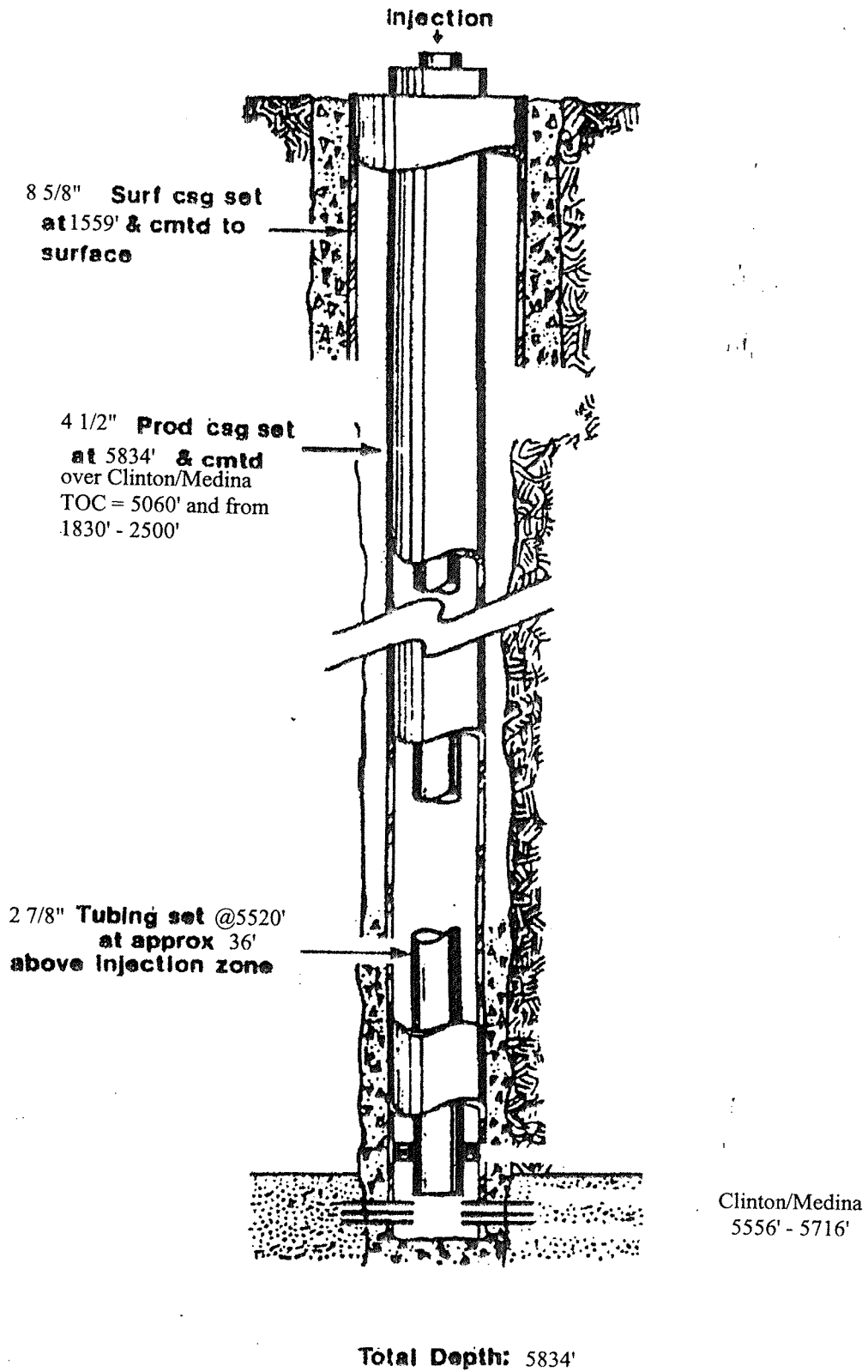


Total Depth: 5834'

Noble County, Sharon Twp., SWIW # 9
W.D. Morris SWD # 3

**Subsurface Construction
For Injection Well**

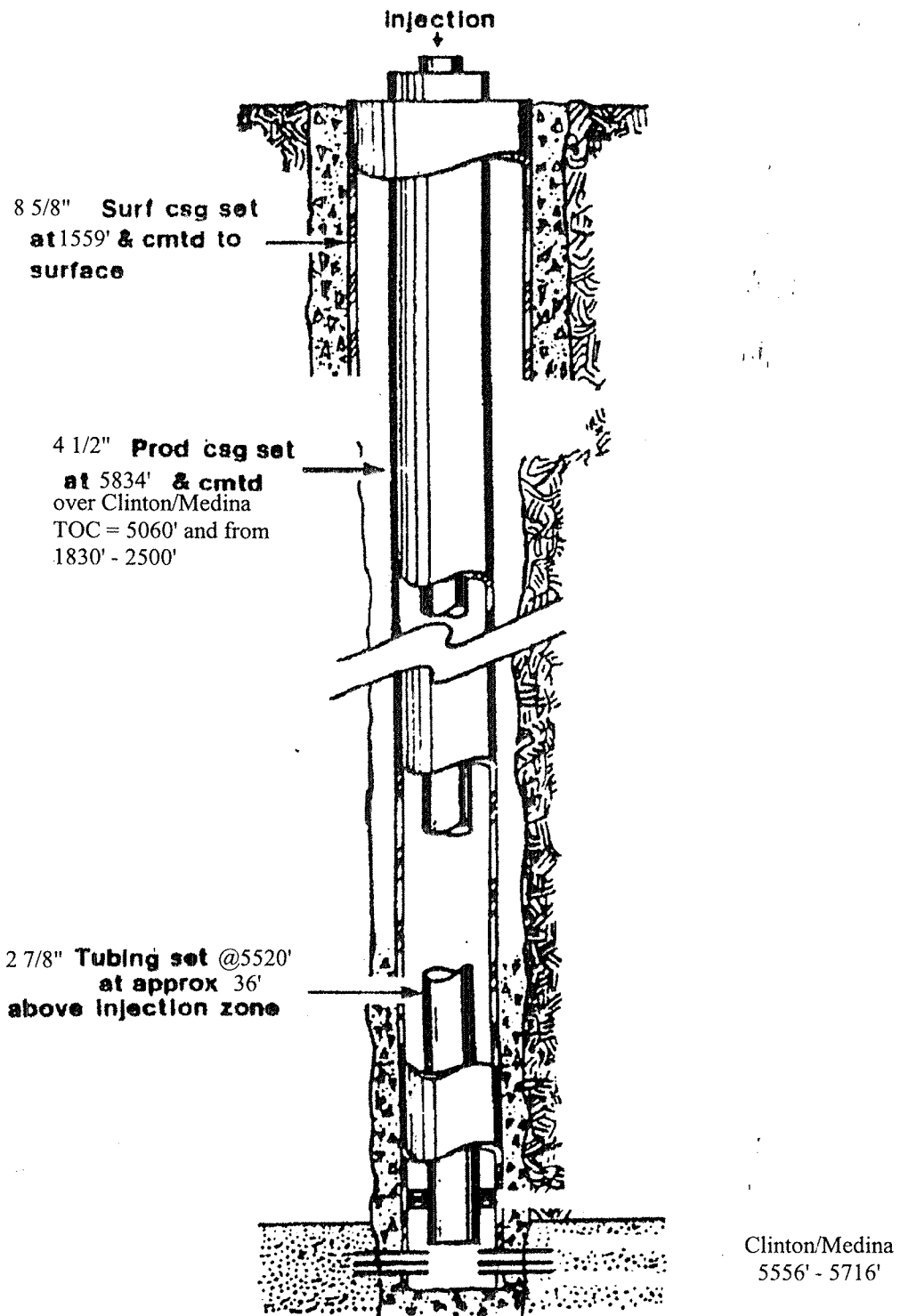
Maximum Injection Pressure: 1280 psi



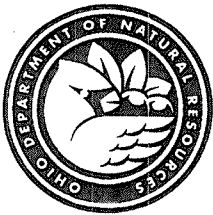
Noble County, Sharon Twp., SWIW # 9
W.D. Morris SWD # 3

**Subsurface Construction
For Injection Well**

Maximum Injection Pressure: 1280 psi



Total Depth: 5834'



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

DAVID MUSTINE, DIRECTOR

June 24, 2011

Mr. Bill Arnholt
Northwood Energy Corporation
941 Chatham Lane, Suite 100
Columbus, Ohio 43221-2416

RE: Donald W. Morris No. 3 well, Permit # 4250, Sharon Township, Noble County, Ohio

Dear Mr. Arnholt:

Pursuant to Section 1501: 9-3-06 of the Ohio Administrative Code, your request to run an injectivity test on the proposed **Clinton/Medina injection zone** in the above-captioned well, the Division hereby grants authorization to conduct the injectivity test. This test is subject to the following stipulations.

1. Dave Ball, Mineral Resources Inspector, shall be notified at (614) 264-7213 at least 48 hours in advance of this test, so that a representative of the Division can be present to witness the test.
2. **Test pressure used to inject fluids is not to exceed 1280 psi** (based on the top of the open-hole at 5,556 feet).
3. The duration of the test is limited to 48 hours.
4. A full report, which includes injection volumes, pressures, and duration, must be submitted to the Tom Tomastik within 15 days after completion of this test.
5. **The authorization to conduct this test on the above-captioned well expires after August 1, 2011.**

If you have any questions, please feel free to contact me at (614) 265-1032.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tom Tomastik".

Tom Tomastik, Geologist
Division of Mineral Resources Management
2045 Morse Road, H-3
Columbus, Ohio 43229-6693

Cc: Dave Ball, Mineral Resources Inspector



941 Chatham Lane, Suite 100
Columbus, Ohio 43221-2416
(614) 457-1024 Fax (614) 457-7295

Tuesday, June 14, 2011

Tom Tomastik
Division of Mineral Resources Management
2045 Morse Road, H-3
Columbus, Ohio 43229-6693

Re: Proposed SWIW, Section 36, Sharon Twp., Noble Co. Donald W. Morris # 3, Permit 4250

Dear Tom:

Northwood Energy Corporation would like to request to do a step-injection test for the above mentioned well. As we discussed, could send me a letter to allow us to work on this well and include your recommendations for pressures, rates, and volumes that we should perform on the well.

We look forward to hearing from you.

Respectfully,

Northwood Energy Corporation

Bill Arnholt

RECEIVED

JUN 16 2011

DIVISION OF MINERAL
RESOURCES MANAGEMENT

tom tomastik-morris 3- ltr-06-14-11



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

DAVID MUSTINE, DIRECTOR

January 31, 2011

Northwood Energy Corporation
Attn: Corey
941 Chatham Lane, Suite 100
Columbus, Ohio 43221

**RE: Proposed SWIW preliminary review, saltwater injection well, Section 36,
Sharon Township, Noble County, Donald W. Morris #3, Permit #4250**

Dear Cory:

Pursuant to your request, the Division of Mineral Resources Management has conducted preliminary area of review to determine the feasibility of injecting fluid into the above-captioned well at volumes less than 200 barrels per day per year (within a 1/4 mile radius) into the **Clinton/Medina sandstones** for saltwater disposal. An evaluation of the area of review indicates that **injection into the Clinton/Medina sandstones is feasible at volumes less than 200 barrels per day**. Additionally, you will need to complete the enclosed surface casing affidavit and once the well is permitted, you would be required to run a cement bond log on the production casing to verify the top of the cement.

Enclosed are the forms required to be submitted for conversion to a saltwater injection well. **The permit fee is \$1000.00.**

If you have any further questions regarding this matter, please feel free to contact me at (614) 265-1032.

Sincerely,

A handwritten signature in cursive script that reads "Tom Tomastik".

Tom Tomastik, Geologist
UIC Section
Division of Mineral Resources Management
2045 Morse Road, H-3
Columbus, Ohio 43229-6693