

Athens County

APPLICATION CHECKLIST

SWW # 8, New well, Permit #  
Ohio State

	Date	Initials
Enter on Agenda	11/28/11	DP
Completeness Review	11/28/11	DP
Date - Time Stamp	11/18/11	DP
Area of Review	11/29/11	DP
Site Evaluation	12/20/11	DP
Permitting Section	11/18/11	DP
Memo to Inspector	11/30/11	DP
Public Notice	12/14/11	DP
Letter	12/14/11	
Date Run	12/23/11	
15 Days	1/7/2012	
Review Public Notice	12/27/11	DP
Affidavit of Notification	12/13/11	DP
Objections Received    Yes _____ No <input checked="" type="checkbox"/>	11/10/12	DP
Public Hearing Date	N/A	DP
Chief's Order, if Required	N/A	DP
Schematic	11/30/11	DP
Plot on Map	11/29/11	DP
Review by Geologist		DP
Permit Conditions (Same date as permit)		DP
Enter on Computer (Same or later date than Chief's Order)		DP
Enter on Master List	11/29/11	DP
EPA Form	11/29/11	DP
Mail Permit		DP
Update Agenda		DP
File		DP

**RECORD OF CONVERSATION**

\* - Application incomplete - need SWW affidavit, Cont rights affidavit, and surface facility sketch - 11/29/2011 DP - Received required forms - 12/13/11 DP

\* - Application upheld due to getting company registered as an owner/operator DP

**PROPOSED CLASS II SALTWATER INJECTION WELL APPLICATION NO.  
AAMY0000564 – K & H PARTNERS**

**COUNTY: Athens**

**TOWNSHIP: Troy**

**PERMIT NUMBER: New well**

**LEASE NAME: K & H PARTNERS #1**

**PROPOSED INJECTION ZONE: Ohio Shale**

**PROPOSED TOTAL DEPTH: 3999 feet**

**TOP OF PRECAMBRIAN ROCKS: approximately 9250 feet**

1. There are no known faults within a 2-1/2 mile radius of the proposed injection well location.
2. Proposed injection zone is approximately 5250 feet above the top of the Precambrian basement rocks.

**ADDITIONAL REQUIRED NEW UIC CONDITIONS TO THE PERMIT  
(PURSUANT TO GOVERNOR'S EXECUTIVE ORDER) ALONG WITH THE  
STANDARD SET OF DRILLING, CONSTRUCTION, AND OPERATIONAL  
CONDITIONS**

1. Requires continuous monitoring of the injection and annulus pressures.
2. Requires automatic shut-off device on the injection pump set to the maximum allowable surface injection pressure.
3. Shall run a minimum geophysical logging suite that includes: a gamma ray, compensated density-neutron and resistivity log.
4. Shall use Class A cement with bow-string or rigid centralizers to provide sufficient casing stand off and foster effective circulation of cement to isolate critical zones including aquifers, flow zones, voids, lost circulation zones, and hydrocarbon production zones.

# Proof Sheet

APPL NUMBER	aAMY0000564		URBANIZED AREA ?	<input type="checkbox"/>
OWNER NUMBER	8888		NAME	
OWNER NAME	K & H PARTNERS LLC			
EXISTING WELL	0			
API PERMIT NO			DISPOSAL PLAN 1	ND
APPL TYPE	SWIW		DISPOSAL PLAN 2	
TYPE OF WELL	SWD		DISPOSAL PLAN 3	
VARIANCE REQUEST			DISPOSAL PLAN 4	
WELL NAME	K&H PARTNERS LLC		DISPOSAL PLAN 5	
WELL NUMBER	1	<i>(SWIW #9)</i>	MP Check #	0
PREV/PROPOSED TD	3999			
DRILL UNIT ACRES	36			
TYPE OF TOOL	RTA		<b>PROPOSED FORMATIONS</b>	
WELL CLASS	<i>SWIW</i>		OHIO SHALE	
FIRE PHONE	( ) - 911			
MEDICAL PHONE	( ) - 911			
COUNTY CODE	9			
COUNTY NAME	ATHENS			
COAL (Y=-1/N=0)	-1			
CIVIL TOWNSHIP	TROY		TARG CIVIL TWP	
SURF QUAD	COOLVILLE		TARG QUAD	
Nad 27 SURF ORIG X	2,209,235		Nad 27 TARG ORIG X	
Nad 27 SURF ORIG Y	447,402		Nad 27 TARG ORIG Y	
GROUND ELEVATION	725		TARG ELEV	0
SURF SEC	10		TARG SECTION	
SURF LOT			TARG LOT	
SURF QTR TWP			TARG QTR TWP	
SURF ALLOT			TARG ALLOT	
SURF TRACT			TARG TRACT	
SURF FRACTION			TARG FRACTION	

# DAILY ROUTE SLIP

APPLICATION NO. aAMY0000564 TYPE: Salt Water Injection Well

CONAME K & H PARTNERS LLC API

WELL NAME /NO. K&H PARTNERS LLC 1

COUNTY 9 ATHENS INITIALS DATE

DATE APPLICATION REC'D DM 11/22/2011

PERMIT FEE AND CHECK NO. \$1,000.00 3072

RUSH AMOUNT RUSH CHECK NO. \$0.00 0

APPLICATION ENTERED DM 11/22/2011

APPLICATIONS AND PLATS SENT FOR MINE APPROVAL DM W/A

COAL APPROVAL RECEIVED DM 12/13/11

OIL/GAS AFFIDAVIT REC'D DM NA

URBANIZED AREA NOTIFICATION SENT DM NA

URBANIZED AREA NOTIFICATION SENT TO INSPECTOR/REC'D BACK DM NA

URBAN MAP REVIEW DM NA

SAMPLES: YES DM /SPECIAL AREAS NA

GEOLOGIST APPROVAL \_\_\_\_\_

DATA ENTRY /ISSUED \_\_\_\_\_

PERMIT: TAKEN \_\_\_\_\_ MAILED \_\_\_\_\_

FAX TO: \_\_\_\_\_

FINAL MAP CHECK \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROPOSED CLASS II SALTWATER INJECTION WELL APPLICATION NO.  
AAMY0000564 – K & H PARTNERS**

COUNTY: Athens

TOWNSHIP: Troy

PERMIT NUMBER: New well

LEASE NAME: K & H Partners #1

PROPOSED INJECTION ZONE: Ohio Shale

PROPOSED TOTAL DEPTH: 3999 feet

TOP OF PRECAMBRIAN DEPTH: (approximately) 9250 FEET

1. Review of existing geologic data for known faults – **No known faults or seismic activity within a 2-1/2 mile radius of the proposed injection well location.**
2. Complete suite of geophysical logs – **A gamma ray, compensated density – neutron and resistivity geophysical logging suite will be required.**
3. Evaluation for potential requirement of a seismic survey – **The proposed injection zone is at least 5250 feet above the top of the Precambrian rocks, therefore there is ~~no potential~~ communication with the Precambrian or a need to conduct a seismic survey.** *is unlikely*
4. Well penetrating the Precambrian or plug back from Precambrian – **This proposed injection well is at least 5250 feet above the Precambrian rocks, therefore there will be no penetration into the Precambrian rocks.**
5. Measurement or calculation of original downhole reservoir pressure – **Since this is a shallow proposed injection well, there is no reason to collect original bottomhole pressures.**
6. Conducting a pressure fall-off test or step-rate test – **Since the well does not penetrate into the deep geologic reservoirs, there is no need to perform these tests. Maximum allowable injection pressure will be set by the formula within the Ohio Administrative Code well below formation fracture pressures.**
7. Continuous pressure monitoring of the annulus and injection pressures – **This condition will be required. ~~and has been required on all injection well application since October of 2011.~~**
8. Installation of an automatic shut-off switch on the injection pump set to the maximum allowable surface injection pressure - **This condition will be required. ~~and has been required on all injection well application since October of 2011.~~**

**Tomastik, Tom**

**From:** Ryan McDonald [ryan26104@hotmail.com]  
**Sent:** Tuesday, November 15, 2011 9:52 AM  
**To:** Tomastik, Tom  
**Subject:** FW: Proposed Injection Well in Athens County, Troy Township

Have you had a chance to review?

**Ryan McDonald**

From: ryan26104@hotmail.com  
To: tom.tomastik@dnr.state.oh.us  
Subject: RE: Proposed Injection Well in Athens County, Troy Township  
Date: Thu, 10 Nov 2011 13:41:14 -0500

Ohio shale. We plan on setting 7" casing 50' below berea and cemented back to surface and then drill down to Onadaga. We plan on an open hole completion and injecting through 2 3/8" tubing with packer set 15' above bottom of 7" casing.

**Ryan McDonald**

Subject: RE: Proposed Injection Well in Athens County, Troy Township  
Date: Thu, 10 Nov 2011 13:35:07 -0500  
From: Tom.Tomastik@dnr.state.oh.us  
To: ryan26104@hotmail.com

Ryan:

No I have not. What is the proposed injection zone?

Tom Tomastik, Geologist 4  
Division of Oil and Gas Resources Management  
2045 Morse Road, H-3  
Columbus, Ohio 43229-6693  
(614) 265-1032

**From:** Ryan McDonald [mailto:ryan26104@hotmail.com]  
**Sent:** Thursday, November 10, 2011 1:15 PM  
**To:** Tomastik, Tom  
**Subject:** FW: Proposed Injection Well in Athens County, Troy Township

Have you had time to review this area yet? According to Coolville quadrangle map there are no existing wells with in 1/2 mile radius of this property.

**Ryan McDonald**

11/16/2011

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 ATHENS

NAME OF LANDOWNER: KEH PARTNERS, LLC.

ADDRESS OF LANDOWNER: 2130 HARRIS HIGHWAY WASHINGTON WV 26181

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

Located in SOUTHWEST Quarter of  
Section 10,  
Fraction/Lot 12, TROY Township,  
\_\_\_\_\_ 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 KEH PARTNERS # 1, by the KEH PARTNERS, LLC. (Well Name & No.) on said premises.  
(Company)

Further affiant sayeth naught.

Signatures: \_\_\_\_\_

Signatures: \_\_\_\_\_

Signatures: \_\_\_\_\_

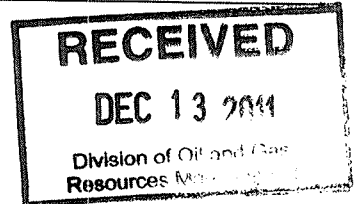
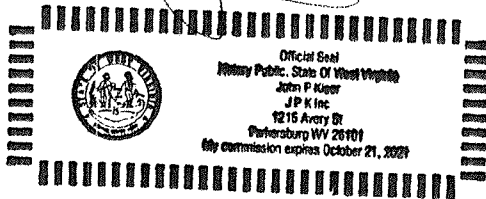
Signatures: \_\_\_\_\_

SWORN to before me and subscribed in my presence this 9th

Day of December, 20 11

Notary Public: \_\_\_\_\_

DNR-744-7001  
Revised 10/2011





# The Athens Messenger

Proof of Publication  
The State of Ohio  
Athens County SS

Athens Messenger

K & H Partners  
Jeff Harper  
2130 Harris Hwy.  
Washington, WV 26181

Reference: 855810      K & H Partners  
Ticket: 7036777

personally appeared for me, a Notary Public in and for Athens County, Ohio. Monica Nieporte, Publisher of The Athens Messenger and made oath that an advertisement, a copy of which is hereto attached, was published in The Athens Messenger, a newspaper printed in and of general circulation in said county, 1 consecutive weeks, the first publication being on the 23rd day of Dec, 2011, and the last publication on the 31st day of Dec, 2011, and that the said paper was during that time printed and published in said county.

*Monica Nieporte*

Sworn to and subscribed before me  
the 23rd day of Dec, 2011.

*Chanal Powell*  
Notary Public

Printer's fee: \$33.00

Published on: 12/23/11



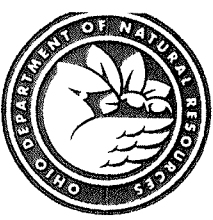
CHANAL POWELL  
Notary Public, State of Ohio  
My Commission Expires  
November 25, 2015

### LEGAL NOTICE

K & H Partners, LLC, 2130 Harris Highway, Washington, WV 26181, (304) 863-8867 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 injector well is the K & H Partners, LLC #1 well, new well, Fraction 12, Troy Township, Athens County, Ohio. The proposed well will inject into Ohio Shale at a depth of 1890 to 3916 feet. The average injection is estimated to be 750 barrels per day. The maximum injection pressure is estimated to be 435 psi. Further information can be obtained by contacting K & H Partners LLC 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 H-3, 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 date of this published legal notice.  
12-23(1)  
7036777

9300 Johnson Road • P.O. Box 4210 • Athens, Ohio 45701 • 740-592-6612





# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

## Division of Oil and Gas Resources Management

*Richard J. Simmers, Chief*

2045 Morse Road, Bldg. H-2

Columbus, OH 43229-6693

Phone: (614) 265-6633 Fax: (614) 265-7998

December 14, 2011

Mr. Jeff D. Harper  
K & H Partners, LLC  
2130 Harris Highway  
Washington, WV 26181

**RE: Public Notification for SWIW application for Athens County, Troy Twp., New well, K & H Partners, LLC #1 injection well**

Dear Mr. Harper:

As outlined in Rule 1501: 9-3-06 (E) (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 only one day. 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) 265-1032.

Sincerely,

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

Tom Tomastik, Geologist

UIC Section

Division of Oil and Gas Resources Management

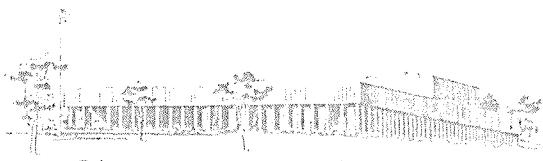
2045 Morse Road, H-3

Columbus, Ohio 43229-6693

Cc: File

## PUBLIC NOTICE

K & H Partners, LLC, 2130 Harris Highway, Washington, WV, 26181, (304) 863-8867 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 K & H Partners, LLC #1 well, new well, Fraction 12, Troy Township, Athens County, Ohio. The proposed well will inject into Ohio Shale at a depth of 1890 to 3916 feet. The average injection is estimated to be 750 barrels per day. The maximum injection pressure is estimated to be 435 psi. Further information can be obtained by contacting K & H Partners, LLC 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 H-3, 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 date of this published legal notice.



# The Athens Messenger

Proof of Publication  
The State of Ohio  
Athens County SS

Athens Messenger

K & H Partners  
Jeff Harper  
2130 Harris Hwy.  
Washington, WV 26181

Reference: 855810      K & H Partners  
Ticket: 7036777

personally appeared for me, a Notary Public in and for Athens County, Ohio. Monica Nieporte, Publisher of The Athens Messenger and made oath that an advertisement, a copy of which is hereto attached, was published in The Athens Messenger, a newspaper printed in and of general circulation in said county, 1 consecutive weeks, the first publication being on the 23rd day of Dec, 2011, and the last publication on the 31st day of Dec, 2011, and that the said paper was during that time printed and published in said county.

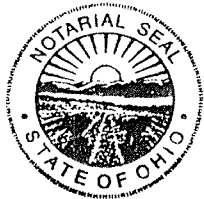
*Monica Nieporte*

Sworn to and subscribed before me  
the 23 day of Dec, 2011.

*Chana L. Powell*  
Notary Public

Printer's fee: \$33.00

Published on: 12/23/11

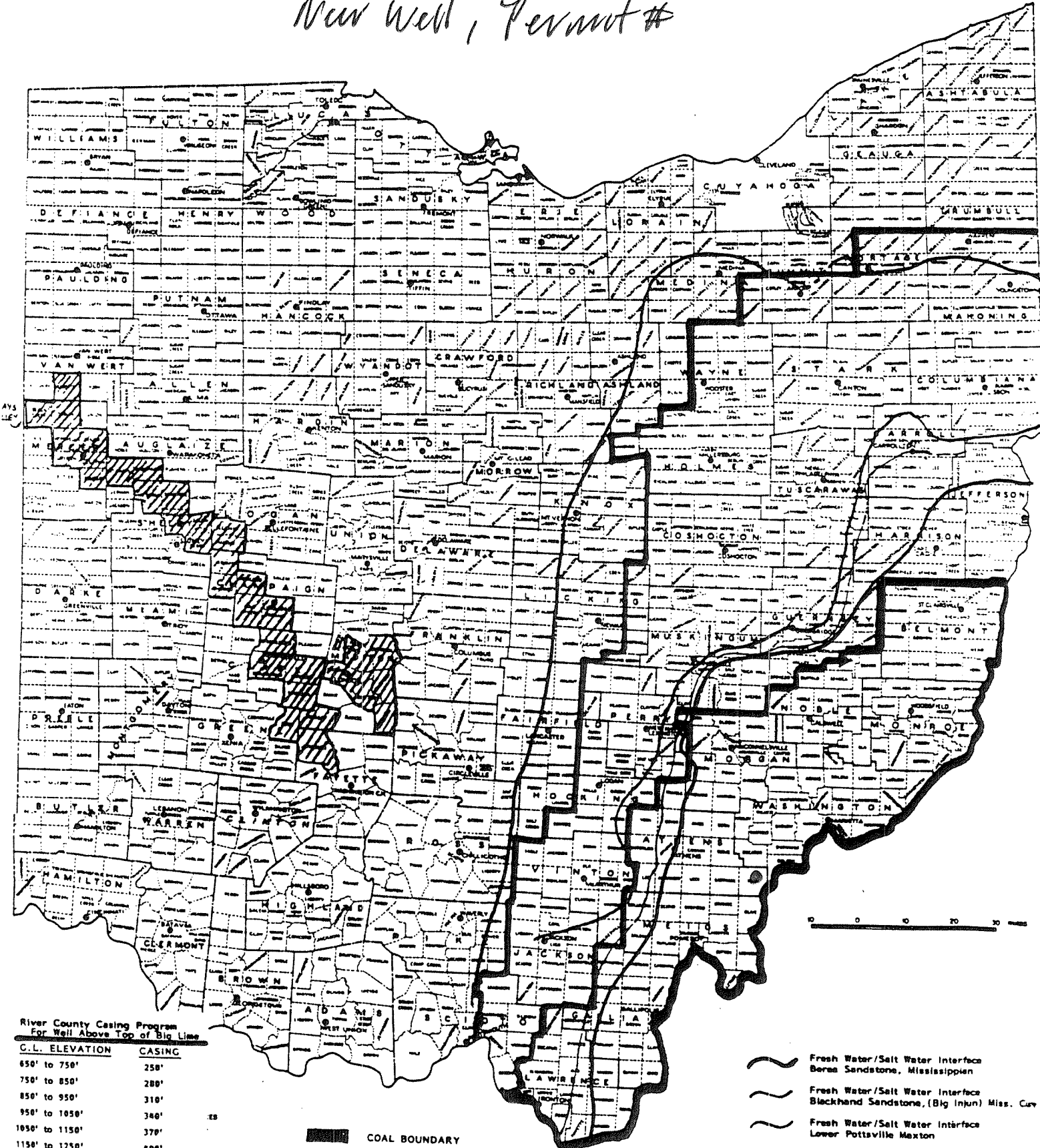


CHANA L. POWELL  
Notary Public, State of Ohio  
My Commission Expires  
November 25, 2015

**LEGAL NOTICE**  
K & H Partners, LLC, 2130 Harris Highway, Washington, WV 26181, (304) 863-8867 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 injector well is the K & H Partners, LLC #1 well, new well, Fraction 12, Troy Township, Athens County, Ohio. The proposed well will inject into Ohio Shale at a depth of 1890 to 3916 feet. The average injection is estimated to be 750 barrels per day. The maximum injection pressure is estimated to be 435 psi. Further information can be obtained by contacting K & H Partners LLC 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 H-3, 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 date of this published legal notice.

RECEIVED  
DEC 28 2011





Athens County, SWW#8,  
New Well, Permit #



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. Cuy
-  Fresh Water/Salt Water Interface  
Lower Pottsville Maxton
-  Fresh Water/Salt Water Interface  
Upper Allegheny 2nd Cow Run

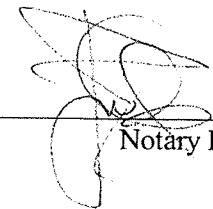
SALTWATER INJECTION WELL - AFFIDAVIT

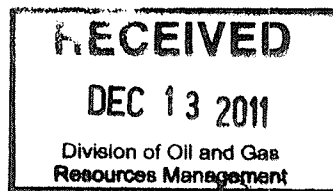
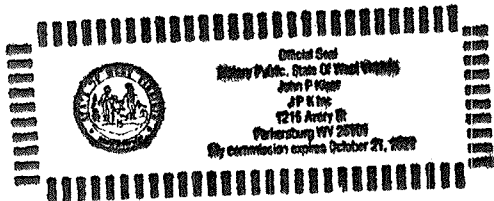
Ohio Department of Natural Resources  
Division of Mineral Resources Management  
2045 Morse Road, Columbus, Ohio 43229-6693

State of OHIO, ATHENS County, ss  
JEFF D. HARPER being first duly  
sworn says that as principal, or authorized agent, for K&H PARTNERS, LLC, he or she has  
made application for a saltwater injection well in the State of Ohio ATHENS, County, TROY  
Township, section/lot number 12; 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.

  
\_\_\_\_\_  
Affiant Signature

Sworn to before me and subscribed in my presence this 9<sup>th</sup> day of December,  
20 11.

  
\_\_\_\_\_  
Notary Public



**INTER-OFFICE MEMO**

**TO: Dan Goins, Mineral Resources Inspector**  
**FROM: Tom Tomastik, Geologist**  
**SUBJECT: Application and Site Evaluation for a SWIW permit**  
**DATE: November 30, 2011**

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

**OPERATOR:** K & H Partners, LLC  
**WELL NAME & NUMBER:** K & H Partners, LLC # 1  
**PERMIT NUMBER:** New well, SWIW #8  
**LOCATION:** 331' NL & 931' EL of SE ¼ of Section 16 in Fraction 12, Troy Twp., Athens County  
**PROPOSED INJECTION ZONE:** Ohio Shale  
**DATE RECEIVED:** November 18, 2011

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.

## 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

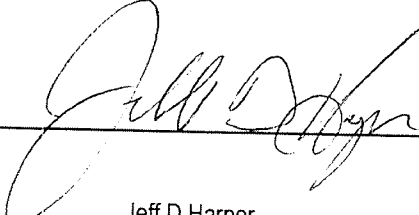
<p>1. DATE OF APPLICATION: <span style="float: right;">8-Nov-11</span></p>																
<p>2. OWNER NAME, ADDRESS, &amp; TELEPHONE NO.: K&amp;H Partners, LLC. 2130 Harris Highway Washington, WV 26181 304-863-8867</p>	<p>3. API #:</p> <p>4. WELL #:</p> <p>5. LEASE NAME: <span style="float: right;">K&amp;H Partners</span></p> <p>6. PROPERTY OWNER: <span style="float: right;">K&amp;H Partners, LLC.</span></p> <p>7. COUNTY: <span style="float: right;">Athens</span></p> <p>8. CIVIL TOWNSHIP: <span style="float: right;">Troy</span></p> <p>9. SECTION: <span style="float: right;">9,10</span>      10. LOT:</p>															
<p>11. CURRENT LAND USE:</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Cropland</td> <td><input type="checkbox"/> Commercial</td> </tr> <tr> <td><input checked="" type="checkbox"/> Pasture</td> <td><input type="checkbox"/> Idle Land</td> </tr> <tr> <td><input type="checkbox"/> Wetlands</td> <td><input type="checkbox"/> Recreational</td> </tr> <tr> <td><input type="checkbox"/> Residential</td> <td><input type="checkbox"/> Industrial</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Unreclaimed strip mine</td> </tr> <tr> <td><input type="checkbox"/> Woodland:</td> <td><input type="checkbox"/> Broadleaf      <input type="checkbox"/> Needlelike</td> </tr> </table>	<input type="checkbox"/> Cropland	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Pasture	<input 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	<p>17. TYPE OF WELL:</p> <p style="text-align: center;"><input type="checkbox"/> Oil      <input type="checkbox"/> Gas      <input checked="" type="checkbox"/> Other</p> <p>18. STEEPEST SLOPE GRADIENT CROSSING SITE:</p> <p style="text-align: center;"><input checked="" type="checkbox"/> 0 to 2%      <input type="checkbox"/> 2.1 to 8%</p> <p style="text-align: center;"><input type="checkbox"/> 8.1 to 10%</p> <p style="text-align: center;"><input type="checkbox"/> 10.1 to 24%      <input type="checkbox"/> greater than 24%</p>			
<input type="checkbox"/> Cropland	<input type="checkbox"/> Commercial															
<input checked="" type="checkbox"/> Pasture	<input 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															
<p>12. SLOPE GRADIENT &amp; LENGTH DETERMINED FROM:</p> <p><input type="checkbox"/> Ground Measurement</p> <p><input checked="" type="checkbox"/> U.S. Geological Survey Topographical Maps</p> <p><input type="checkbox"/> Other: (explain) _____</p>	<p>19. LENGTH OF STEEPEST SLOPE CROSSING SITE:</p> <p style="text-align: center;"><input checked="" type="checkbox"/> 1 to 100 ft.      <input type="checkbox"/> 101 to 200 ft.</p> <p style="text-align: center;"><input type="checkbox"/> 201 to 400 ft.      <input type="checkbox"/> greater than 400 ft.</p>															
<p>13. TYPE OF FALL VEGETAL COVER:</p> <p><input type="checkbox"/> Little or no vegetal cover</p> <p><input checked="" type="checkbox"/> Short grasses</p> <p><input type="checkbox"/> Tall weeds or short brush (1 to 2 ft.)</p> <p><input type="checkbox"/> Brush or bushes (2 to 6 ft.)</p> <p><input type="checkbox"/> Agricultural crops</p> <p><input type="checkbox"/> Trees with sparse low brush</p> <p><input type="checkbox"/> Trees with dense low brush</p>	<p>20. RESTORATION OF DRILLING PITS: **</p> <p><input checked="" type="checkbox"/> Haul drilling fluids and fill pits</p> <p><input type="checkbox"/> Use steel circulating tanks</p> <p><input type="checkbox"/> Proposed alternative _____</p>															
<p>14. SOIL &amp; RESOILING MATERIAL AT WELLSITE:</p> <p><input checked="" type="checkbox"/> Stockpile and protect topsoil to be used when preparing seedbed</p> <p><input 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 type="checkbox"/> Construct diversions channeled to naturally established drainage systems</p> <p><input type="checkbox"/> Construct terraces across slopes</p> <p><input checked="" type="checkbox"/> Grade to approximate original contour</p> <p><input type="checkbox"/> Grade to minimize erosion &amp; control offsite runoff</p> <p><input type="checkbox"/> Proposed alternative _____</p>															
<p>15. DISPOSAL PLAN FOR TREES AND TREE STUMPS:</p> <table style="width: 100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> No trees disturbed</td> <td><input type="checkbox"/> Haul to landfill</td> </tr> <tr> <td><input type="checkbox"/> Cut into firewood</td> <td><input type="checkbox"/> Sell to lumber company</td> </tr> <tr> <td><input type="checkbox"/> Bury with landowner's approval</td> <td></td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Mulch small trees and branches, erosion control</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Use for wildlife habitat with landowner approval</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Proposed alternative _____</td> </tr> </table>	<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 company	<input type="checkbox"/> Bury with landowner's approval		<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 _____		<p>22. VEGETATIVE COVER TO BE ESTABLISHED AT SITE:</p> <p style="text-align: center;"><input checked="" type="checkbox"/> Seeding plan      <input type="checkbox"/> Sod</p> <p style="text-align: center;"><input type="checkbox"/> Agricultural crops      <input type="checkbox"/> Trees and/or Bushes</p> <p style="text-align: center;"><input type="checkbox"/> Proposed alternative _____</p>			
<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 company															
<input type="checkbox"/> Bury with landowner's approval																
<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 _____																
<p>16. SURFACE AND SUBSURFACE DRAINAGE FACILITIES:</p> <p><input checked="" type="checkbox"/> No existing drainage facilities for removal of surface and/or subsurface water</p> <p><input type="checkbox"/> Tile drainage system underlying land to be disturbed</p> <p><input type="checkbox"/> Drain pipe(s) underlying land to be disturbed</p> <p><input type="checkbox"/> Surface drainage facilities on land to be disturbed</p>	<p>23. ADDITIONAL HOLES:</p> <p><input checked="" type="checkbox"/> Rat/Mouse, if used, will be plugged</p> <p>24. PROPOSED OR CURRENT LENGTH OF ACCESS ROAD:</p> <p style="text-align: center;"><input type="checkbox"/> 100 ft. or less      <input type="checkbox"/> 101 to 500 ft.</p> <p style="text-align: center;"><input checked="" type="checkbox"/> 501 to 1500 ft.      <input type="checkbox"/> greater than 1500 ft.</p>															
<p>16. SURFACE AND SUBSURFACE DRAINAGE FACILITIES:</p> <p><input checked="" type="checkbox"/> No existing drainage facilities for removal of surface and/or subsurface water</p> <p><input type="checkbox"/> Tile drainage system underlying land to be disturbed</p> <p><input type="checkbox"/> Drain pipe(s) underlying land to be disturbed</p> <p><input type="checkbox"/> Surface drainage facilities on land to be disturbed</p>	<p>25. CURRENT LAND USE OF PATH OF ACCESS ROAD:</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Cropland</td> <td><input type="checkbox"/> Pasture</td> <td><input type="checkbox"/> Commercial</td> </tr> <tr> <td><input checked="" type="checkbox"/> Idle land</td> <td><input type="checkbox"/> Wetlands</td> <td><input type="checkbox"/> Recreational</td> </tr> <tr> <td><input type="checkbox"/> Industrial</td> <td><input type="checkbox"/> Residential</td> <td></td> </tr> <tr> <td colspan="3"><input type="checkbox"/> Unreclaimed strip mine</td> </tr> <tr> <td><input type="checkbox"/> Woodland:</td> <td><input type="checkbox"/> Broadleaf</td> <td><input type="checkbox"/> Needlelike</td> </tr> </table>	<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
<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.**

<b>26. SURFACING MATERIAL FOR ACCESS ROAD:</b> <input type="checkbox"/> Gravel <input type="checkbox"/> Brick and/or tile waste <input type="checkbox"/> Slag <input checked="" type="checkbox"/> Crushed stone <input type="checkbox"/> No surfacing material to be used <input type="checkbox"/> Proposed alternative	<b>29. STEEPEST SLOPE GRADIENT ON ACCESS ROAD:</b> <input checked="" type="checkbox"/> 0 to 5% <input type="checkbox"/> 6 to 10% <input type="checkbox"/> greater than 10%
<b>27. PATH OF ACCESS ROAD TO BE DETERMINED BY:</b> <input checked="" type="checkbox"/> Landowner <input type="checkbox"/> Contractor <input type="checkbox"/> Existing access road <input type="checkbox"/> Operator	<b>30. APPROXIMATE LENGTH OF STEEPEST SLOPE ON ROAD:</b> <input checked="" type="checkbox"/> 0 to 100 ft. <input type="checkbox"/> 101 to 200 ft. <input type="checkbox"/> 201 to 400 ft. <input type="checkbox"/> greater than 400 ft.
<b>28. GRADING AND EROSION CONTROL PRACTICE ON ROAD:</b> <input type="checkbox"/> Diversions <input type="checkbox"/> Filter strips <input type="checkbox"/> Drains <input type="checkbox"/> Riprap <input type="checkbox"/> Open top culverts <input type="checkbox"/> Water breaks <input checked="" type="checkbox"/> Outsloping of road <input type="checkbox"/> Pipe culverts <input type="checkbox"/> Proposed alternative	<b>31. HAS LANDOWNER RECEIVED A COPY OF THIS RESTORATION PLAN?</b> <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 Oil and Gas Resources Management.

Signature of Owner/Authorized Agent   
Name (Typed or Printed) Jeff D Harper Date 11/8/2011

RESTORATION PLAN MUST BE SUBMITTED TO THE DIVISION IN DUPLICATE.

RECEIVED  
NOV 18 2011



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

# 3072  
 \$1,000.00

a PMV 0000 567

SEE INSTRUCTIONS ON PAGE 2 (BACK)

1. I, We (applicant) <u>K&amp;H Partners, LLC</u>		2. Owner #: <u>888 888</u>	
(address) <u>2130 Harris Highway Washington, WV 26181</u>		Phone #: <u>304-863-8867</u>	
hereby apply this date _____, 20____ 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: K&H Partners, LLC. 2130 Harris Highway Washington, WV 26181		20. TYPE OF TOOLS:	
		<input type="checkbox"/> Cable	<input checked="" 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 type="checkbox"/> Service Rig
5. COUNTY: <u>Athens</u>		21. PROPOSED CASING PROGRAM:	
6. CIVIL TOWNSHIP: <u>Troy</u>		330 Feet 9 -5/8" Casing Cemented to surface, 1890 feet of 7" casing cemented to surface	
7. SECTION: <u>9,10</u> 8. LOT: _____			
9. FRACTION: <u>12</u> 10. QTR TWP: _____			
11. TRACT / ALLOT: <u>1</u>			
12. WELL #: <u>1</u>			
13. LEASE NAME: <u>K&amp;H Partners, LLC.</u>			
14. PROPOSED TOTAL DEPTH: <u>3,999</u>			
15. PROPOSED GEOLOGICAL FORMATION: <u>Ohio Shale</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>36 Acres</u>		Fire: <u>911</u>	
		Medical: <u>911</u>	
17. IF PERMITTED PREVIOUSLY:		23. MEANS OF INGRESS & EGRESS:	
API #: _____		Township Road: <u>173</u>	
OWNER: _____		County Road: <u>63</u>	
WELL #: _____		Municipal Road: _____	
LEASE NAME: _____		State Highway: <u>50</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: _____			
Division Phone: _____			
19. LANDOWNER ROYALTY INTEREST:			
Is There An Attached List? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Name: <u>K&amp;H Partners, LLC. 100%</u>			
Address: _____			
Name: _____			
Address: _____			
Name: _____			
Address: _____			

**RECEIVED**  
 NOV 18 2011

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.

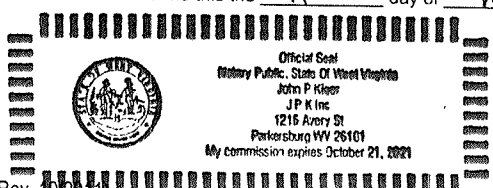
I, the undersigned, further depose and state that I am the person who has the right to drill on the tract or drilling unit and to drill into and produce from a pool and to appropriate the oil or gas that I produce therefrom either for myself or others as described in this application. And furthermore, 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 Oil and Gas Resources Management.

Signature of Owner/Authorized Agent Jeff D Harper  
 Name (Type or Print) Jeff D Harper Title Managing Member

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

Sworn to and subscribed before me this the 11<sup>th</sup> day of November, 2011



John P. Hines  
 (Notary Public)

10-21-2021  
 (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: Ohio Shale  
 Injection Interval: From: 1890 feet to 3916  
 Geologic description of injection zone: shale

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:  
330' of 9 5/8" casing cemented back to surface;  
1890' of 7" casing cemented back to surface  
1875' of 2 3/8" tubing with packer set at 1870'
- B. Proposed method for testing the casing:  
pressure test witnessed by division representative and recorded  
\* Run via packer and set delay and packer at 1875 feet  
and pressure test to at least 435 psi with no more than a free
- C. Description of the proposed method for completion and operation of the injection well: percent dedicated  
open hole completion in Ohio Shale. Injected through 2 3/8" tubing set in 7" casing with packer set 15' above  
Ohio shale.
- D. Description of the proposed unloading, surface storage, and spill containment facilities:  
Above ground enclosed steel tanks for temporary storage placed on a lined 60 mil liner and inside earthen dikes  
built to contain 150 % of volume of steel tanks. Spill containment materials and equipment will be staged on-site in  
event of a release. A stormwater drain will be manually operated to remove rainwater that is contained in the dike.

33. **PROPOSED INJECTION VOLUMES**

- A. Indicate the estimated amount of saltwater to be injected into the proposed injection well per day:  
 AVERAGE: 750 MAXIMUM: 1500
- B. Indicate the method to be used to measure the actual amount of saltwater injected into the well:  
Flowmeter and/or tank strapping.

34. **PROPOSED INJECTION PRESSURES**

- A. Indicate the estimated pressure to be used for injection of saltwater into the proposed injection well:  
 AVERAGE: 250 MAXIMUM: 590 435 psi
- B. Indicate the method to be used to measure the actual daily injection pressure:  
recordable pressure gauge at well head

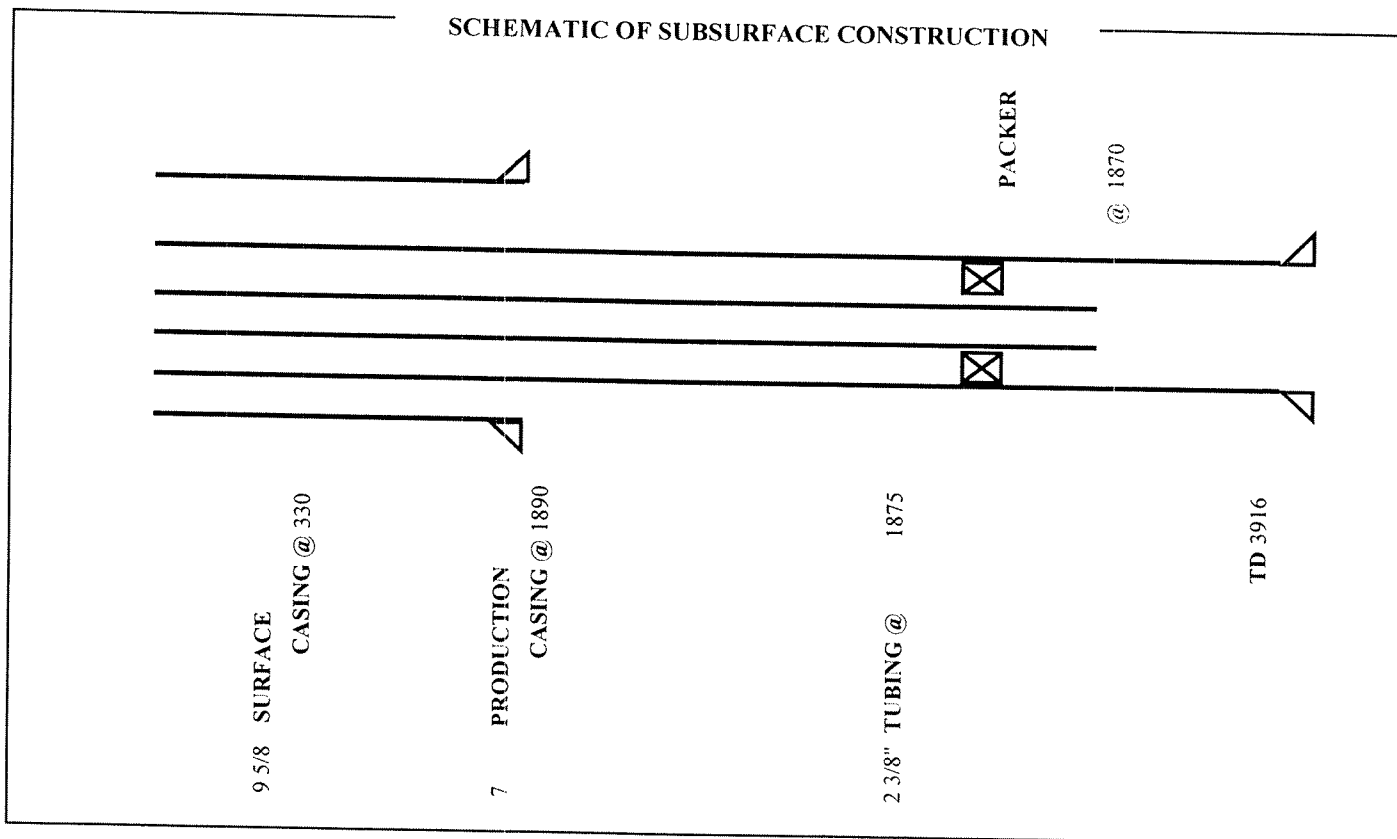
35. **PROPOSED CORRECTIVE ACTION**

Explain any corrective action proposed for wells penetrating the proposed injection formation or zone within the area of review:  
NA (No existing wells in area of review.)

**RECEIVED**  
NOV 18 2011

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 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): Jeff D Harper

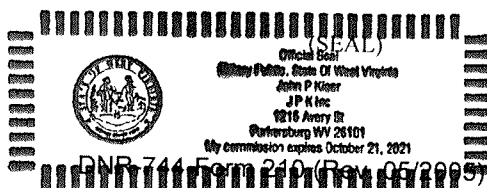
Signature of Owner/Authorized Agent: [Signature] Title: MEMBER

Permanent Address of Home Office: 2310 Harris Highway Washington, Wv 26181

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 15<sup>th</sup> day of November, 2011.

[Signature]  
Notary Public  
Date Commission Expires 10-21-2021



331' N L & 931' E L from SE 1/4 of Section 16  
in Fraction 12

Kyle Counts  
DB 314/2641

**K & H PARTNERS, LLC.**  
**WELL # 1**

RECEIVED

NOV 18 2011

Lawrence James  
DB 202/392

part of  
K & H Partners, LLC.  
DB 462/1931

Christine Purcell  
DB 294/2029



SCALE: 1 INCH = 400 Feet

I hereby certify that all drilling or producing wells within 600 feet and all buildings and streams within 200 feet have been shown, there are no drilling unit lines nearer than 300 feet, that this plot is true and correct and was prepared according to the current State of Ohio, Department of Natural Resources, Division of Oil and Gas Regulations.

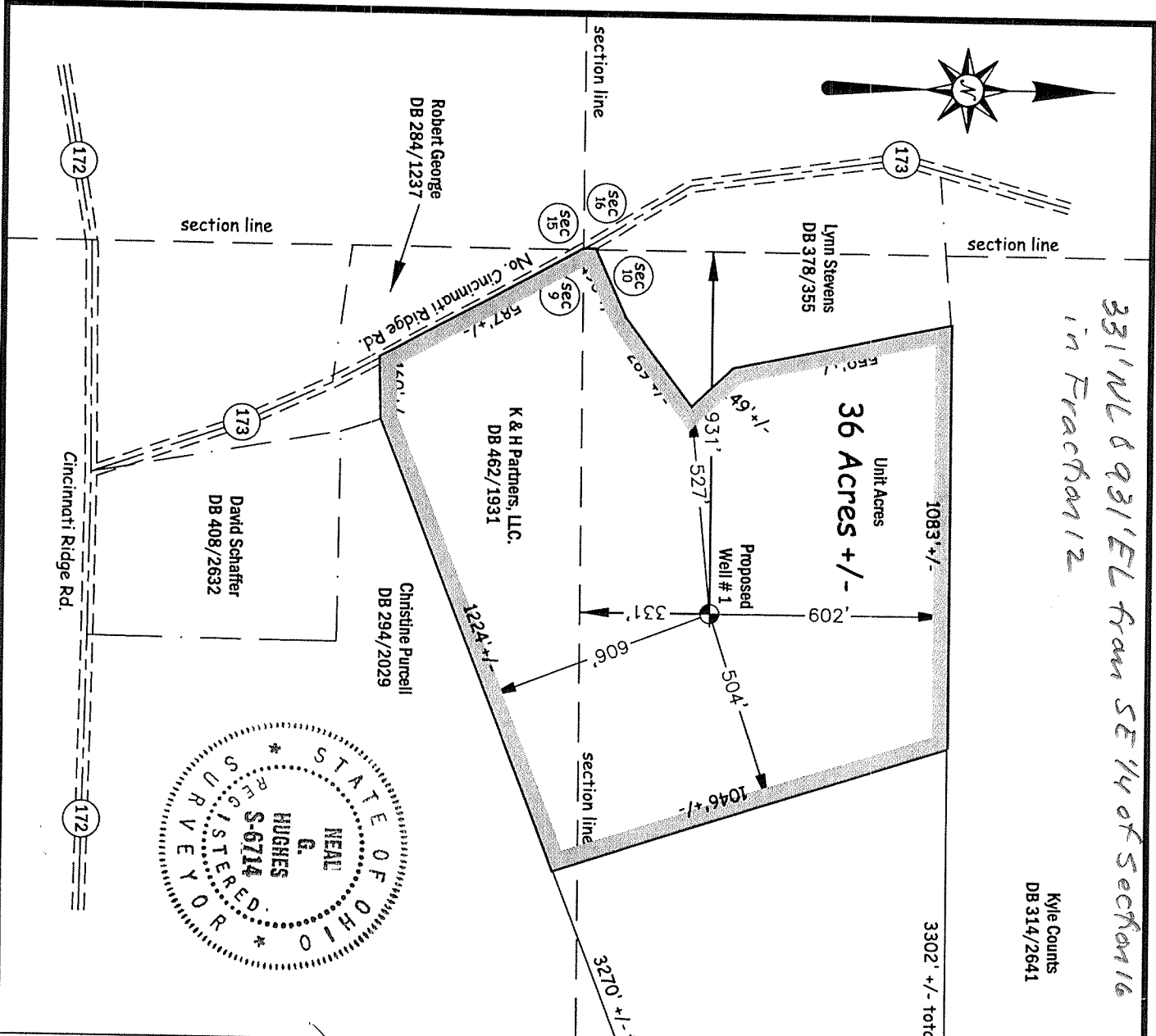
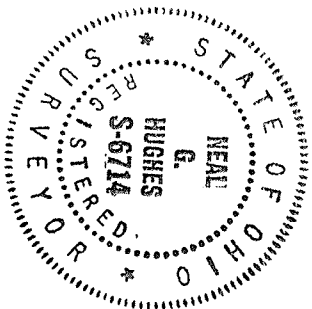
REGISTERED SURVEYOR

WELL OPERATOR K & H PARTNERS, LLC.  
ADDRESS 1215 AVERY ST.  
PARKERSBURG, WV 26101

SURFACE OWNER K & H PARTNERS, LLC.  
MINERAL OWNER K & H PARTNERS, LLC.  
WELL NO. 1 DRILLING UNIT AC. 36  
COUNTY ATHENS TWP. TROY  
QUADRANGLE COOLVILLE  
ELEVATION 725' NAD27  
OHIO PLANE COORDINATES X: 447,402  
Y: 2,209,235  
OHIO PLANE COORDINATES X: 447,439  
Y: 2,177,770

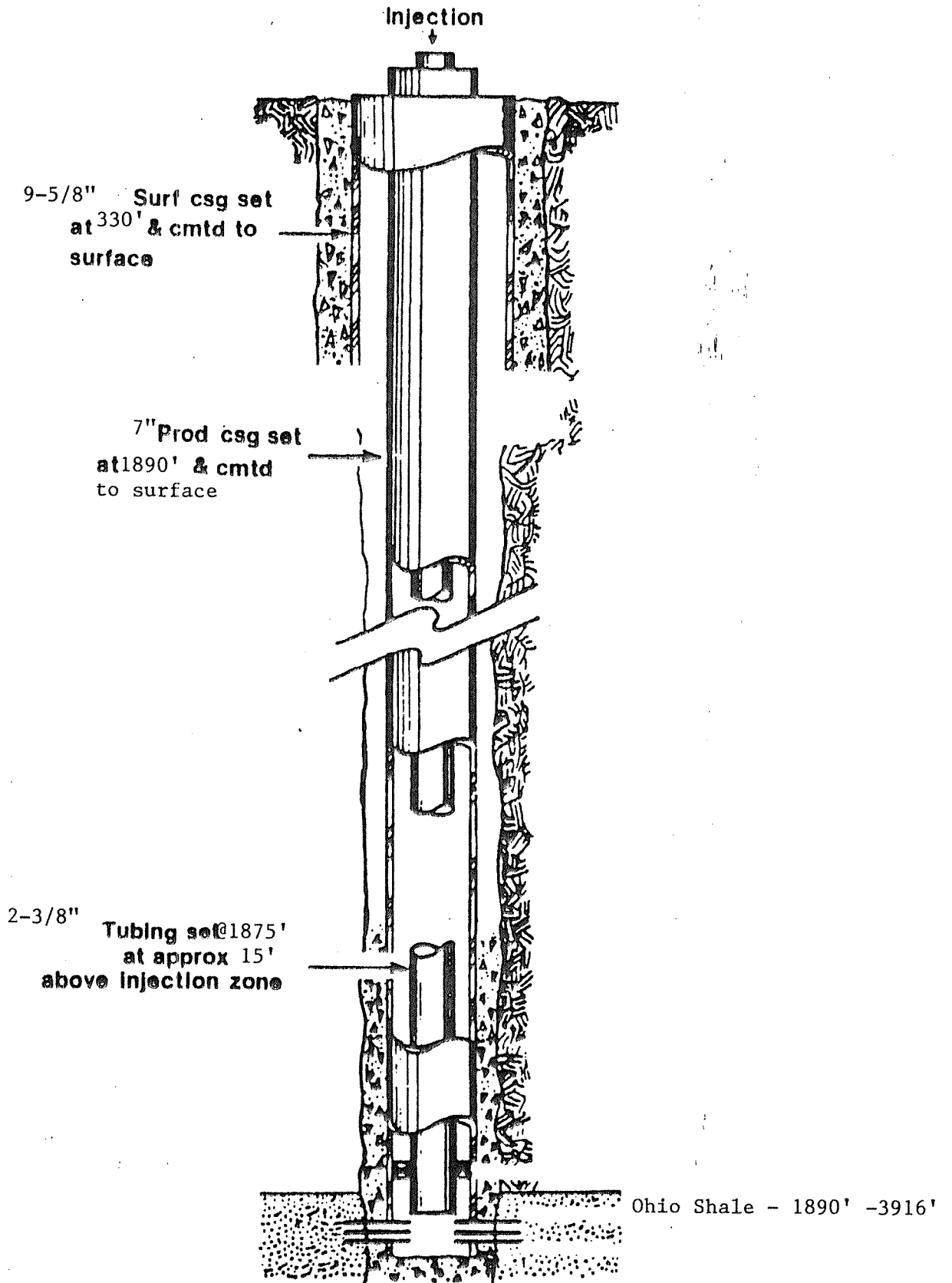
WILLOW LAND SURVEYING PLLC  
P.O. BOX 17  
PENNSBORO, WV 26415  
304-659-1717

SUBDIVISION CIVIL TWP.  
TWP. 5  
RANGE 11  
QUARTER TWP. N/A  
SECTION 10  
TRACT N/A  
ALLOTMENT N/A  
FRACTION 12  
OTHER N/A  
DATE: 11/8/11



Subsurface Construction  
For Injection Well

Maximum Injection Pressure: 435 psi

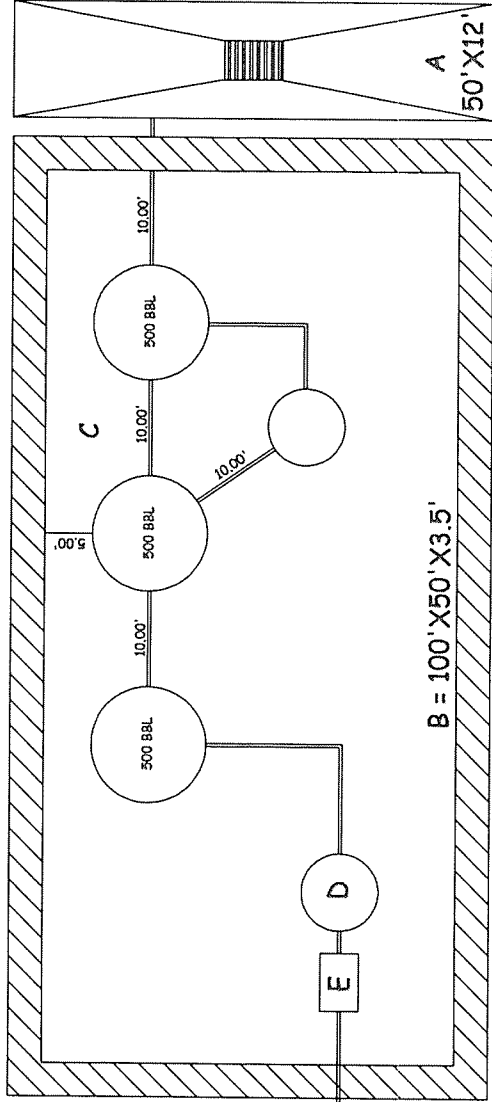
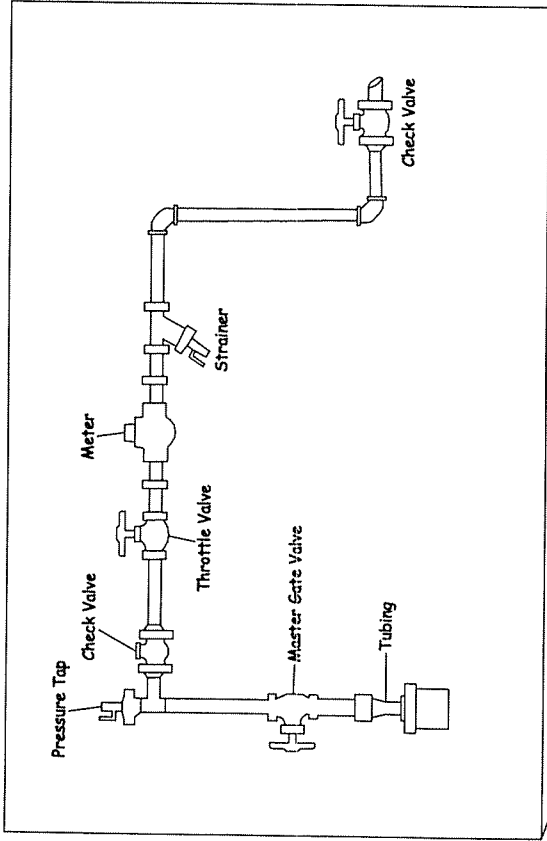


Total Depth: 3916 feet

# K & H PARTNERS, LLC. WELL # 1

**RECEIVED**  
 DEC 13 2011  
 Division of Oil and Gas  
 Resources Management

- A - Concrete unloading pad with concrete vault
- B - Impermeable dike of sufficient capacity to contain volume of largest tank on site
- C - Containment vessels
- D - In-line filter system
- E - Pump



$$100 \times 50 \times 0.0148$$

$$= 74 \times 42^m =$$

3108 barrels of

total storage capacity  
within dike. 12/14/2011 JDD

*331' NW & 931' E from SE 1/4 of Section 16  
 36 Acres in Fraction 12*

**K & H PARTNERS, LLC.  
 WELL # 1**

Kyle Counts  
 DB 314/2641

RECEIVED  
 NOV 18 2011

Lawrence James  
 DB 202/392

part of  
 K & H Partners, LLC.  
 DB 462/1931

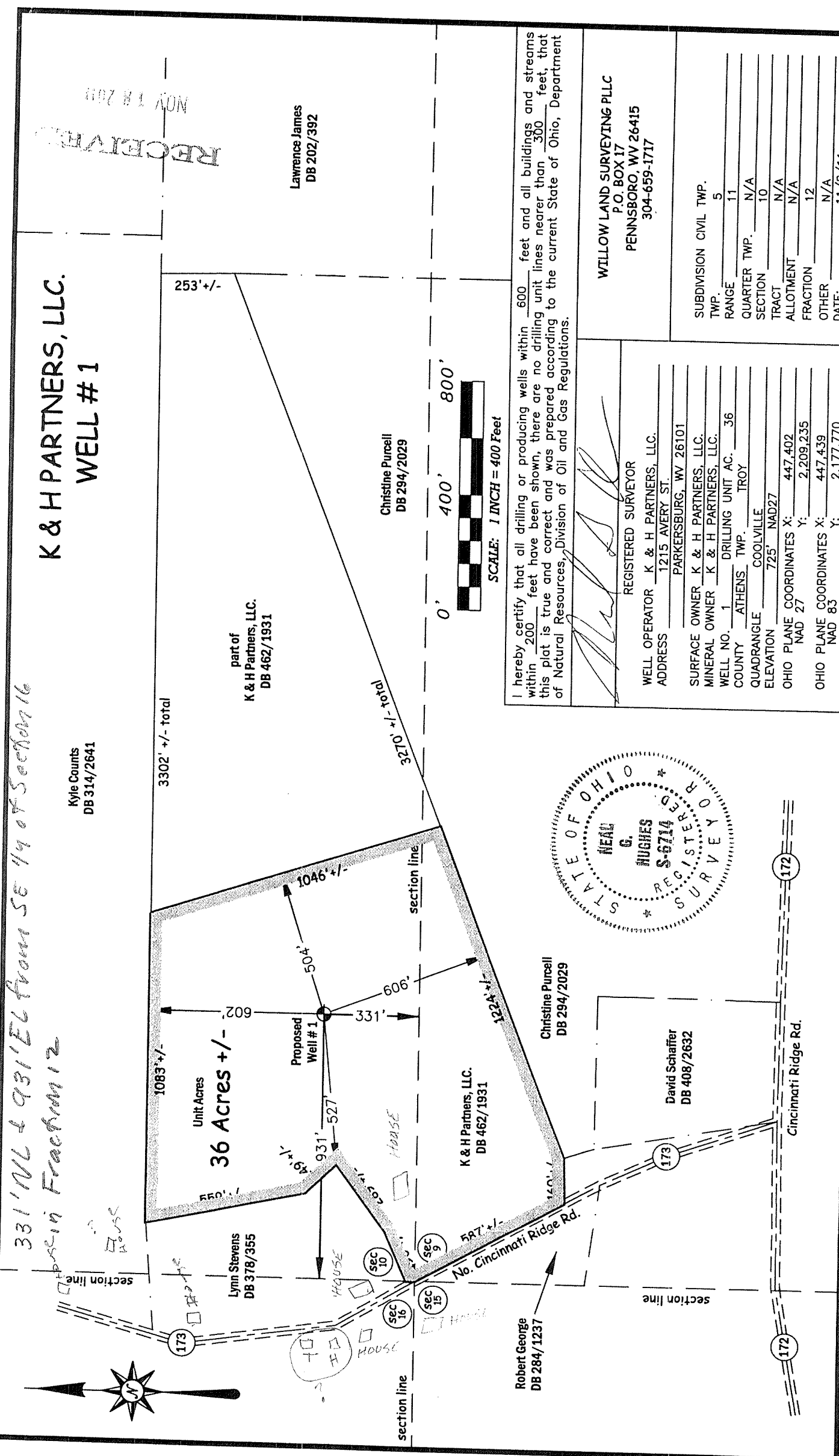
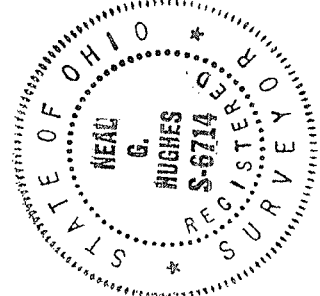
Christine Purcell  
 DB 294/2029

Robert George  
 DB 284/1237

Christine Purcell  
 DB 294/2029

K & H Partners, LLC.  
 DB 462/1931

David Schaffner  
 DB 408/2632



I hereby certify that all drilling or producing wells within 600 feet and all buildings and streams within 200 feet have been shown, there are no drilling unit lines nearer than 300 feet, 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.

REGISTERED SURVEYOR  
 WELL OPERATOR K & H PARTNERS, LLC.  
 ADDRESS 1215 AVERY ST.  
PARKERSBURG, WV 26101  
 SURFACE OWNER K & H PARTNERS, LLC.  
 MINERAL OWNER K & H PARTNERS, LLC.  
 WELL NO. 1 DRILLING UNIT AC. 36  
 COUNTY ATHENS TWP. TROY  
 QUADRANGLE COOLVILLE  
 ELEVATION 725' NAD27  
 OHIO PLANE COORDINATES X: 447,402  
 NAD 27 Y: 2,209,235  
 OHIO PLANE COORDINATES X: 447,439  
 NAD 83 Y: 2,177,770

WILLOW LAND SURVEYING PLLC  
 P.O. BOX 17  
 PENNSBORO, WV 26415  
 304-659-1717

SUBDIVISION CIVIL TWP. \_\_\_\_\_  
 TWP. 5  
 RANGE 11  
 QUARTER TWP. N/A  
 SECTION 10  
 TRACT N/A  
 ALLOTMENT N/A  
 FRACTION 12  
 OTHER N/A  
 DATE: 11/8/11

*\* site review by WATER LEASE & HOOR-UP TO HOUSES  
 Dan Counts - 12/22/11*

61574

23541  
DOR

DO

6151

23571  
DOR

4

ATLANS COUNTY  
TROY TWP.

23572

23575  
DOR

23518  
DOR

- Proposed  
Swim - On ~~3452~~  
MED

- Not drilled

23552  
DOR

23564

5

23585

4

Swim  
10' bh

12

24 (E)

20972  
DOR

3

6

21518  
BE

6

30 (W)



OPERATOR K & H Partners, LLC COUNTY Athens  
TOWNSHIP TROY

P & A	FM	Permit Number	Casing/Cement Program	Well Log and/or Method of Plug
<input type="checkbox"/>	<u>Doh</u>	<u>Newwell</u>	<u>9 5/8" - 370' - cemented to surface</u> <u>7" - 1090' - cemented to surface</u>	
<input type="checkbox"/>	<u>CL</u>	<u>3585</u>	<u>Not drilled</u>	
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

**NOTE:** Proposed injection well should be circumscribed with appropriate radius and all wells clearly labeled and identified. A legend depicting color code is required.

Frans 1/4 of Section 331' N and 931'  
East 1 mi  
1/4 Fraction 17



23585

20771

21518

20768

20972

20785

23776

Miller Co.  
Tray MP

23777

23576

21808

23573

22471

22472

20977

21690

22473

23743

23757

23742

61590

**Tomastik, Tom**

**From:** Ryan McDonald [ryan26104@hotmail.com]  
**Sent:** Thursday, November 10, 2011 1:41 PM  
**To:** Tomastik, Tom  
**Subject:** RE: Proposed Injection Well in Athens County, Troy Township

Ohio shale. We plan on setting 7" casing 50' below berea and cemented back to surface and then drill down to Onadaga. We plan on an open hole completion and injecting through 2 3/8" tubing with packer set 15' above bottom of 7" casing.

**Ryan McDonald**

Subject: RE: Proposed Injection Well in Athens County, Troy Township  
Date: Thu, 10 Nov 2011 13:35:07 -0500  
From: Tom.Tomastik@dnr.state.oh.us  
To: ryan26104@hotmail.com

Ryan:

No I have not. What is the proposed injection zone?

Tom Tomastik, Geologist 4  
Division of Oil and Gas Resources Management  
2045 Morse Road, H-3  
Columbus, Ohio 43229-6693  
(614) 265-1032

**From:** Ryan McDonald [mailto:ryan26104@hotmail.com]  
**Sent:** Thursday, November 10, 2011 1:15 PM  
**To:** Tomastik, Tom  
**Subject:** FW: Proposed Injection Well in Athens County, Troy Township

Have you had time to review this area yet? According to Coolville quadrangle map there are no existing wells with in 1/2 mile radius of this property.

**Ryan McDonald**

From: ryan26104@hotmail.com  
To: tom.tomastik@dnr.state.oh.us  
Subject: Proposed Injection Well in Athens County, Troy Township  
Date: Tue, 25 Oct 2011 09:55:13 -0400

I have attached map with property circled in red. Let me know if this is sufficient? Thanks.

**Ryan McDonald**

11/10/2011

**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: \_\_\_\_\_ Ohio Shale  
Injection Interval: From: 1890 feet to 3916  
Geologic description of injection zone: \_\_\_\_\_ shale

**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:

330' of 9 5/8" casing cemented back to surface;  
1890' of 7" casing cemented back to surface  
1875' of 2 3/8" tubing with packer set at 1870'

B. Proposed method for testing the casing:

pressure test witnessed by division representative and recorded

C. Description of the proposed method for completion and operation of the injection well:

open hole completion in Ohio Shale. Injected through 2 3/8" tubing set in 7" casing with packer set 15' above Ohio shale.

D. Description of the proposed unloading, surface storage, and spill containment facilities:

Above ground enclosed steel tanks for temporary storage placed on a lined 60 mil liner and inside earthen dikes built to contain 150 % of volume of steel tanks. Spill containment materials and equipment will be staged on-site in event of a release. A stormwater drain will be manually operated to remove rainwater that is contained in the dike.

**33. PROPOSED INJECTION VOLUMES**

A. Indicate the estimated amount of saltwater to be injected into the proposed injection well per day:

AVERAGE: 750 MAXIMUM: 1500

B. Indicate the method to be used to measure the actual amount of saltwater injected into the well:

Flowmeter and/or tank strapping.

**34. PROPOSED INJECTION PRESSURES**

A. Indicate the estimated pressure to be used for injection of saltwater into the proposed injection well:

AVERAGE: 250 MAXIMUM: 435 ~~500~~

B. Indicate the method to be used to measure the actual daily injection pressure:

recordable pressure gauge at well head

**RECEIVED**  
NOV 18 2011  
*MSI*

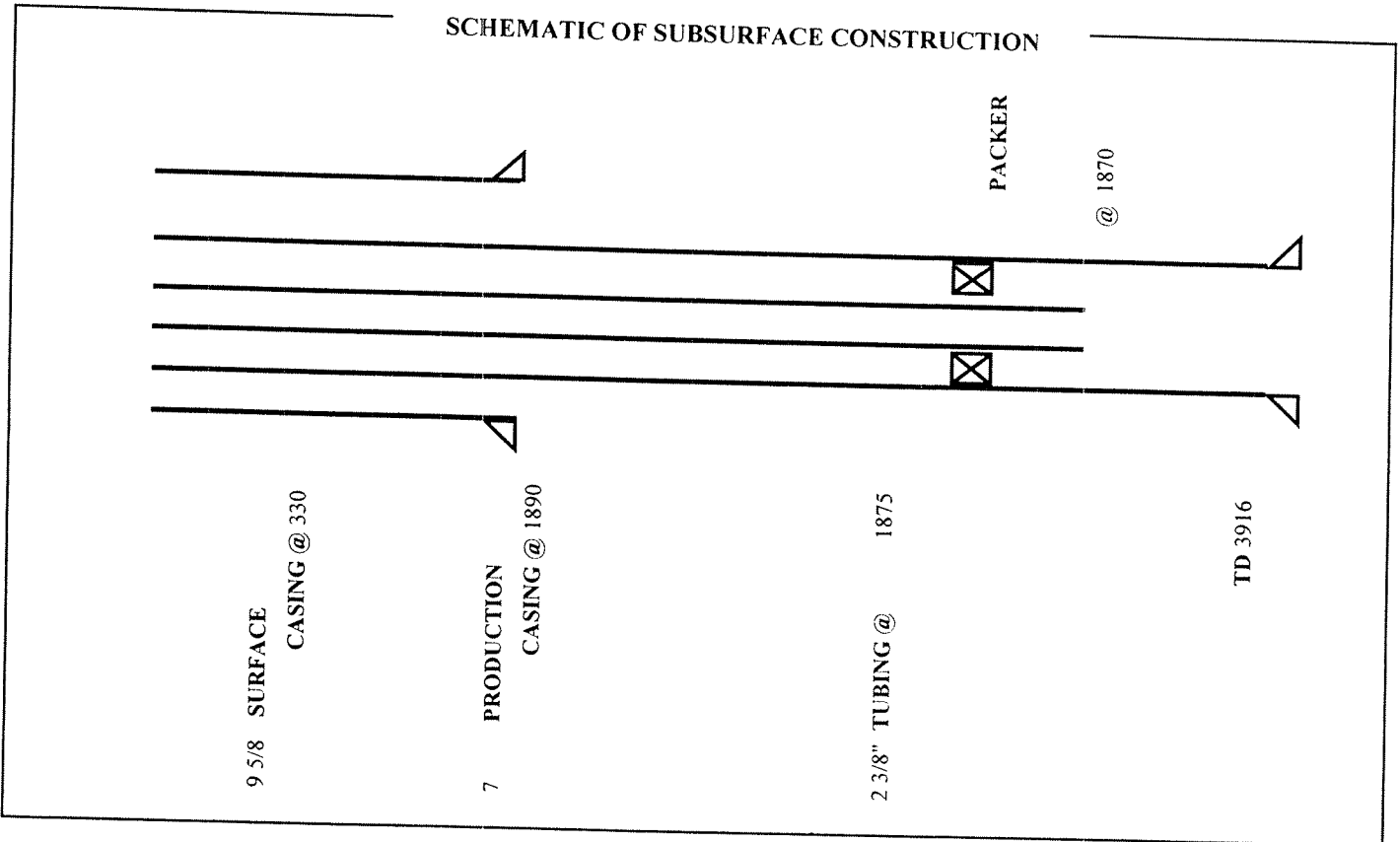
**35. PROPOSED CORRECTIVE ACTION**

Explain any corrective action proposed for wells penetrating the proposed injection formation or zone within the area of review:

NA (No existing wells in area of review.)

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 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.

RECEIVED

In addition, notice of all applications for enhanced recovery projects will be published in the Division's Weekly Circular. NOV 18 2011

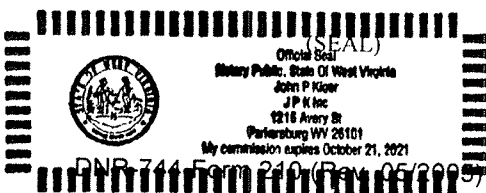
The undersigned hereby agrees to comply with all provisions for an enhanced recovery project as required by Chapter 1501:9-5 of the Ohio Administrative Code. In addition, the undersigned deposed and says that he shall conform to all provisions of Section 1509.072 of the Ohio Revised Code, and to all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

Owner/Authorized Agent (Type or Print): Jeff D Harper  
 Signature of Owner/Authorized Agent: [Signature] Title: MEMBER  
 Permanent Address of Home Office: 2310 Harris Highway Washington, Wv 26181

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 15<sup>th</sup> day of November, 20 11.

[Signature]  
 Notary Public  
 Date Commission Expires 10-21-2021



APPLICATION FOR A PERMIT (Form 1)  
OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL AND GAS 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>K&amp;H Partners, LLC</u> 2. Owner #: _____ (address) <u>2130 Harris Highway Washington, WV 26181</u> Phone #: <u>304-863-8867</u> hereby apply this date _____, 20____ for a permit to:	
<input type="checkbox"/> Reissue (check appropriate blank) <input checked="" type="checkbox"/> Drill New Well <input type="checkbox"/> Drill Directionally <input type="checkbox"/> Drill Horizontally	<input type="checkbox"/> Revised Location <input type="checkbox"/> Plug Back <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Orphan Well Program <input type="checkbox"/> Convert <input type="checkbox"/> Deepen <input type="checkbox"/> Reopen <input type="checkbox"/> Temporary Inactive
3. TYPE OF WELL: <input type="checkbox"/> Oil & Gas <input type="checkbox"/> Stratigraphic Test <input type="checkbox"/> Solution Mining* <input type="checkbox"/> Input/Injection	<input type="checkbox"/> Annular Disposal <input type="checkbox"/> Gas Storage <input type="checkbox"/> Enhanced Recovery* <input type="checkbox"/> Water Supply <input checked="" type="checkbox"/> Saltwater Injection <input type="checkbox"/> Other (explain): _____ (* if checked, select appropriate box below) <input type="checkbox"/> Observation <input type="checkbox"/> Production/Extraction
4. MAIL PERMIT TO: <u>K&amp;H Partners, LLC. 2130 Harris Highway Washington, WV 26181</u>	20. TYPE OF TOOLS: <input type="checkbox"/> Cable <input type="checkbox"/> Cable / Air Rotary <input type="checkbox"/> Cable / Fluid Rotary <input type="checkbox"/> Cable / Air / Fluid Rotary <input checked="" type="checkbox"/> Air Rotary <input type="checkbox"/> Air / Fluid Rotary <input type="checkbox"/> Fluid Rotary <input type="checkbox"/> Service Rig
Athens Troy 8. LOT: _____ 10. QTR TWP: _____ <u>Partners, LLC.</u> TH: <u>3,999</u> L FORMATION: S (must be same as acres) <u>36 Acres</u> ISLY: ON:	21. PROPOSED CASING PROGRAM: 330 Feet 9 -5/8" Casing Cemented to surface, 1890 feet of 7" casing cemented to surface
18. IF SERVICE FACILITIES ARE OWNED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES Division Name: _____ Division Phone: _____	22. FIRE AND MEDICAL DEPARTMENT TELEPHONE NUMBERS: (closest to well site) Fire: <u>911</u> Medical: <u>911</u>
19. LANDOWNER ROYALTY INTEREST: Is There An Attached List? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Name: <u>K&amp;H Partners, LLC. 100%</u> Address: _____ Name: _____ Address: _____ Name: _____ Address: _____	23. MEANS OF INGRESS & EGRESS: Township Road: <u>173</u> County Road: <u>63</u> Municipal Road: _____ State Highway: <u>50</u>
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	

**CENTRALIES**  
Central Environmental Services, LLC

Jeff Harper

Cell: 304.488.0701  
Office: 304.863.8867  
Fax: 304.863.8854  
jharper@centraleironmentalservices.com  
2130 Harris Highway  
Washington, WV 26181

RECEIVED  
NOV 18 2011

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.

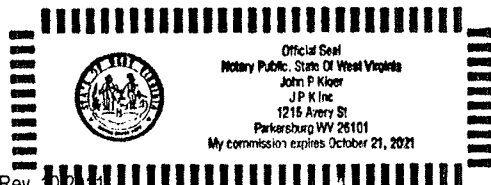
I, the undersigned, further depose and state that I am the person who has the right to drill on the tract or drilling unit and to drill into and produce from a pool and to appropriate the oil or gas that I produce therefrom either for myself or others as described in this application. And furthermore, 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 Oil and Gas Resources Management.

Signature of Owner/Authorized Agent [Signature]  
Name (Type or Print) Jeff D Harper Title Managing Member

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

Sworn to and subscribed before me this the 11<sup>th</sup> day of November, 2011.



[Signature]  
(Notary Public)

10-21-2021  
(Date Commission Expires)

## 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

<p>1. DATE OF APPLICATION: 8-Nov-11</p>																
<p>2. OWNER NAME, ADDRESS, &amp; TELEPHONE NO.: K&amp;H Partners, LLC. 2130 Harris Highway Washington, WV 26181 304-863-8867</p>	<p>3. API #:</p> <p>4. WELL #:</p> <p>5. LEASE NAME: K&amp;H Partners</p> <p>6. PROPERTY OWNER: K&amp;H Partners, LLC.</p> <p>7. COUNTY: Athens</p> <p>8. CIVIL TOWNSHIP: Troy</p> <p>9. SECTION: 9,10      10. LOT:</p>															
<p>11. CURRENT LAND USE:</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Cropland</td> <td><input type="checkbox"/> Commercial</td> </tr> <tr> <td><input checked="" type="checkbox"/> Pasture</td> <td><input type="checkbox"/> Idle Land</td> </tr> <tr> <td><input type="checkbox"/> Wetlands</td> <td><input type="checkbox"/> Recreational</td> </tr> <tr> <td><input type="checkbox"/> Residential</td> <td><input type="checkbox"/> Industrial</td> </tr> <tr> <td><input type="checkbox"/> Unreclaimed strip mine</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Woodland: <input type="checkbox"/> Broadleaf      <input type="checkbox"/> Needlelike</td> <td></td> </tr> </table>	<input type="checkbox"/> Cropland	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Pasture	<input 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		<p>17. TYPE OF WELL:</p> <p style="text-align: center;"><input type="checkbox"/> Oil      <input type="checkbox"/> Gas      <input checked="" type="checkbox"/> Other</p> <p>18. STEEPEST SLOPE GRADIENT CROSSING SITE:</p> <p><input checked="" type="checkbox"/> 0 to 2%      <input type="checkbox"/> 2.1 to 8%</p> <p><input type="checkbox"/> 8.1 to 10%</p> <p><input type="checkbox"/> 10.1 to 24%      <input type="checkbox"/> greater than 24%</p>			
<input type="checkbox"/> Cropland	<input type="checkbox"/> Commercial															
<input checked="" type="checkbox"/> Pasture	<input 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																
<p>12. SLOPE GRADIENT &amp; LENGTH DETERMINED FROM:</p> <p><input type="checkbox"/> Ground Measurement</p> <p><input checked="" type="checkbox"/> U.S. Geological Survey Topographical Maps</p> <p><input type="checkbox"/> Other: (explain) _____</p>	<p>19. LENGTH OF STEEPEST SLOPE CROSSING SITE:</p> <p><input checked="" type="checkbox"/> 1 to 100 ft.      <input type="checkbox"/> 101 to 200 ft.</p> <p><input type="checkbox"/> 201 to 400 ft.      <input type="checkbox"/> greater than 400 ft.</p>															
<p>13. TYPE OF FALL VEGETAL COVER:</p> <p><input type="checkbox"/> Little or no vegetal cover</p> <p><input checked="" type="checkbox"/> Short grasses</p> <p><input type="checkbox"/> Tall weeds or short brush (1 to 2 ft.)</p> <p><input type="checkbox"/> Brush or bushes (2 to 6 ft.)</p> <p><input type="checkbox"/> Agricultural crops</p> <p><input type="checkbox"/> Trees with sparse low brush</p> <p><input type="checkbox"/> Trees with dense low brush</p>	<p>20. RESTORATION OF DRILLING PITS: **</p> <p><input checked="" type="checkbox"/> Haul drilling fluids and fill pits</p> <p><input type="checkbox"/> Use steel circulating tanks</p> <p><input type="checkbox"/> Proposed alternative _____</p> <p>21. BACKFILLING AND GRADING AT SITE:</p> <p><input type="checkbox"/> Construct diversions channeled to naturally established drainage systems</p> <p><input type="checkbox"/> Construct terraces across slopes</p> <p><input checked="" type="checkbox"/> Grade to approximate original contour</p> <p><input type="checkbox"/> Grade to minimize erosion &amp; control offsite runoff</p> <p><input type="checkbox"/> Proposed alternative _____</p>															
<p>14. SOIL &amp; RESOILING MATERIAL AT WELLSITE:</p> <p><input checked="" type="checkbox"/> Stockpile and protect topsoil to be used when preparing seedbed</p> <p><input 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>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>															
<p>15. DISPOSAL PLAN FOR TREES AND TREE STUMPS:</p> <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> No trees disturbed</td> <td><input type="checkbox"/> Haul to landfill</td> </tr> <tr> <td><input type="checkbox"/> Cut into firewood</td> <td><input type="checkbox"/> Sell to lumber company</td> </tr> <tr> <td><input type="checkbox"/> Bury with landowner's approval</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Mulch small trees and branches, erosion control</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Use for wildlife habitat with landowner approval</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Proposed alternative _____</td> <td></td> </tr> </table>	<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 company	<input type="checkbox"/> Bury with landowner's approval		<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 _____		<p>23. ADDITIONAL HOLES:</p> <p><input checked="" type="checkbox"/> Rat/Mouse, if used, will be plugged</p> <p>24. PROPOSED OR CURRENT LENGTH OF ACCESS ROAD:</p> <p><input type="checkbox"/> 100 ft. or less      <input type="checkbox"/> 101 to 500 ft.</p> <p><input checked="" type="checkbox"/> 501 to 1500 ft.      <input type="checkbox"/> greater than 1500 ft.</p>			
<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 company															
<input type="checkbox"/> Bury with landowner's approval																
<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 _____																
<p>16. SURFACE AND SUBSURFACE DRAINAGE FACILITIES:</p> <p><input checked="" type="checkbox"/> No existing drainage facilities for removal of surface and/or subsurface water</p> <p><input type="checkbox"/> Tile drainage system underlying land to be disturbed</p> <p><input type="checkbox"/> Drain pipe(s) underlying land to be disturbed</p> <p><input type="checkbox"/> Surface drainage facilities on land to be disturbed</p>	<p>25. CURRENT LAND USE OF PATH OF ACCESS ROAD:</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Cropland</td> <td><input type="checkbox"/> Pasture</td> <td><input type="checkbox"/> Commercial</td> </tr> <tr> <td><input checked="" type="checkbox"/> Idle land</td> <td><input type="checkbox"/> Wetlands</td> <td><input type="checkbox"/> Recreational</td> </tr> <tr> <td><input type="checkbox"/> Industrial</td> <td><input type="checkbox"/> Residential</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Unreclaimed strip mine</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Woodland: <input type="checkbox"/> Broadleaf      <input type="checkbox"/> Needlelike</td> <td></td> <td></td> </tr> </table>	<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		
<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.**


RECEIVED

NOV 18 2011

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.

<p>26. SURFACING MATERIAL FOR ACCESS ROAD:</p> <p><input type="checkbox"/> Gravel                      <input type="checkbox"/> Brick and/or tile waste</p> <p><input type="checkbox"/> Slag                              <input checked="" type="checkbox"/> Crushed stone</p> <p><input type="checkbox"/> No surfacing material to be used</p> <p><input type="checkbox"/> Proposed alternative _____</p>	<p>29. STEEPEST SLOPE GRADIENT ON ACCESS ROAD:</p> <p><input checked="" type="checkbox"/> 0 to 5%</p> <p><input type="checkbox"/> 6 to 10%</p> <p><input type="checkbox"/> greater than 10%</p>
<p>27. PATH OF ACCESS ROAD TO BE DETERMINED BY:</p> <p><input checked="" type="checkbox"/> Landowner                      <input type="checkbox"/> Contractor</p> <p><input type="checkbox"/> Existing access road              <input type="checkbox"/> Operator</p>	<p>30. APPROXIMATE LENGTH OF STEEPEST SLOPE ON ROAD:</p> <p><input checked="" type="checkbox"/> 0 to 100 ft.                      <input type="checkbox"/> 101 to 200 ft.</p> <p><input type="checkbox"/> 201 to 400 ft.                      <input type="checkbox"/> greater than 400 ft.</p>
<p>28. GRADING AND EROSION CONTROL PRACTICE ON ROAD:</p> <p><input type="checkbox"/> Diversions                      <input type="checkbox"/> Filter strips</p> <p><input type="checkbox"/> Drains                              <input type="checkbox"/> Riprap</p> <p><input type="checkbox"/> Open top culverts                      <input type="checkbox"/> Water breaks</p> <p><input checked="" type="checkbox"/> Outsloping of road</p> <p><input type="checkbox"/> Pipe culverts</p> <p><input type="checkbox"/> Proposed alternative _____</p>	<p>31. HAS LANDOWNER RECEIVED A COPY OF THIS RESTORATION PLAN?</p> <p><input checked="" type="checkbox"/> Yes                              <input type="checkbox"/> No</p>

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 Oil and Gas Resources Management.

Signature of Owner/Authorized Agent 

Name (Typed or Printed) Jeff D Harper Date 11/8/2011

RESTORATION PLAN MUST BE SUBMITTED TO THE DIVISION IN DUPLICATE.

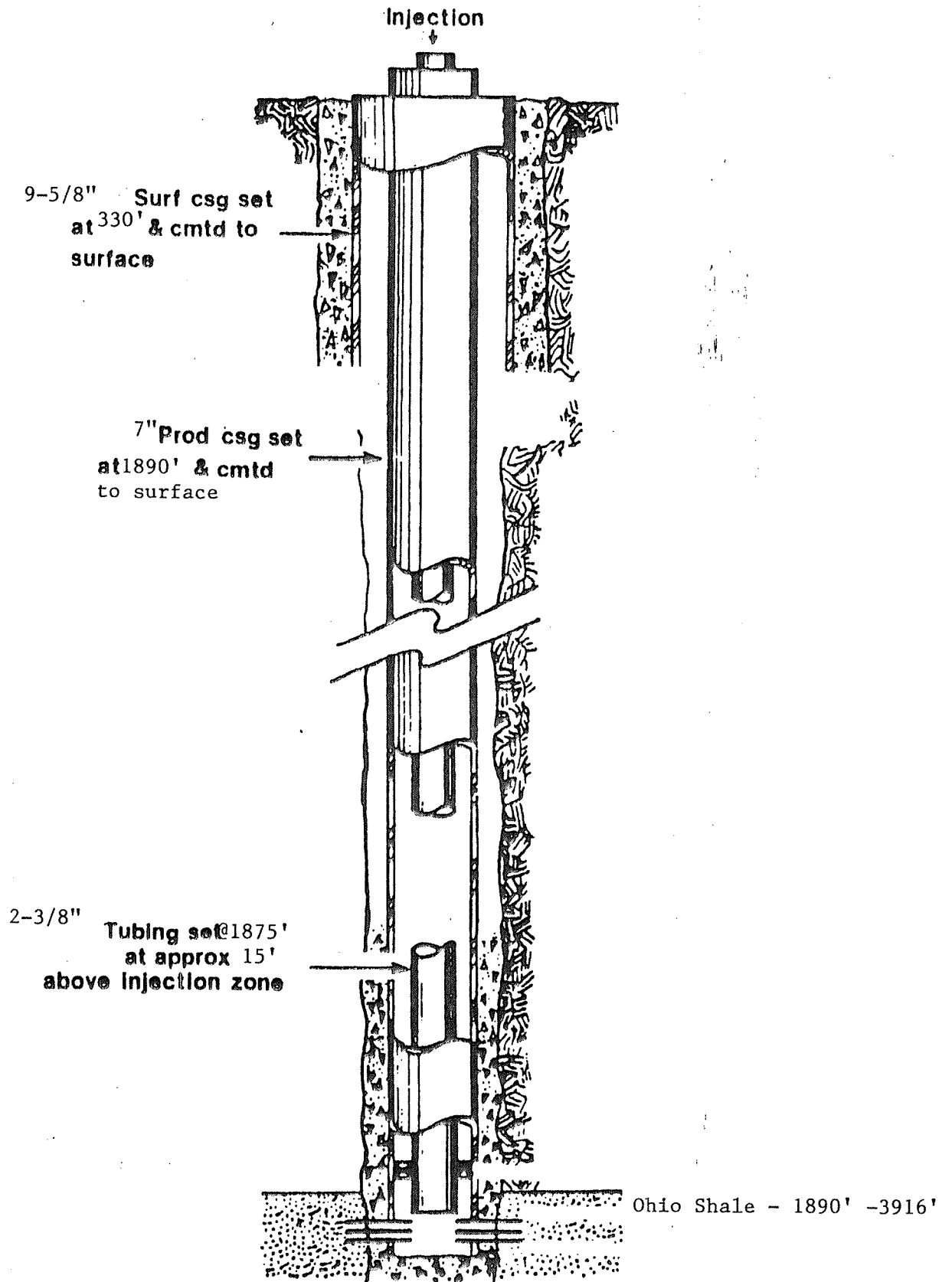
RECEIVED

NOV 18 2011



### Subsurface Construction For Injection Well

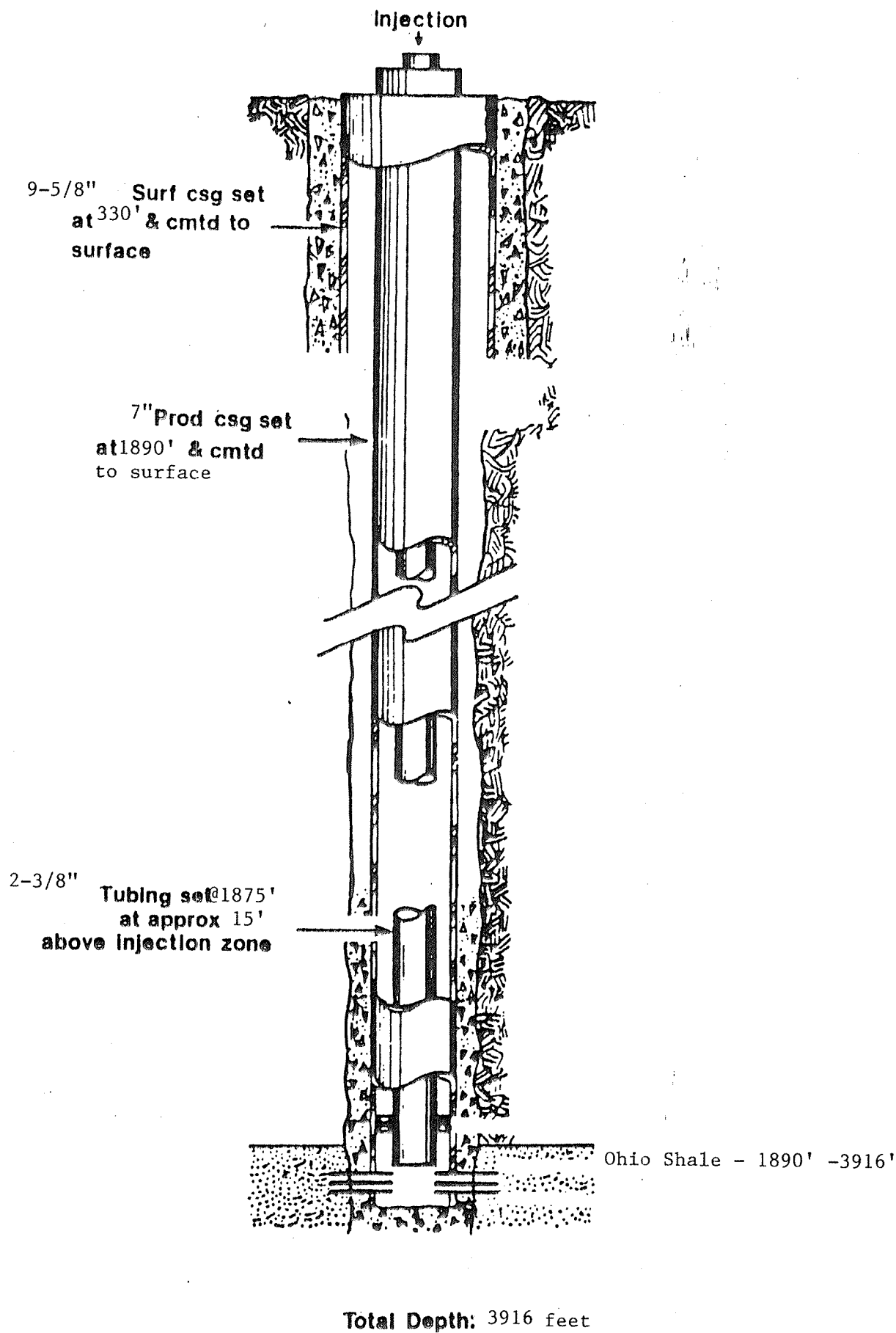
Maximum Injection Pressure: 435 psi



Total Depth: 3916 feet

### Subsurface Construction For Injection Well

Maximum Injection Pressure: 435 psi



**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: \_\_\_\_\_ Ohio Shale  
Injection Interval: From: 1890 feet to 3916  
Geologic description of injection zone: \_\_\_\_\_ shale

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:  
330' of 9 5/8" casing cemented back to surface;  
1890' of 7" casing cemented back to surface  
1875' of 2 3/8" tubing with packer set at 1870'
- B. Proposed method for testing the casing:  
pressure test witnessed by division representative and recorded
- C. Description of the proposed method for completion and operation of the injection well:  
open hole completion in Ohio Shale. Injected through 2 3/8" tubing set in 7" casing with packer set 15' above Ohio shale.
- D. Description of the proposed unloading, surface storage, and spill containment facilities:  
Above ground enclosed steel tanks for temporary storage placed on a lined 60 mil liner and inside earthen dikes built to contain 150 % of volume of steel tanks. Spill containment materials and equipment will be staged on-site in event of a release. A stormwater drain will be manually operated to remove rainwater that is contained in the dike.

33. **PROPOSED INJECTION VOLUMES**

- A. Indicate the estimated amount of saltwater to be injected into the proposed injection well per day:  
 AVERAGE: 750 MAXIMUM: 1500
- B. Indicate the method to be used to measure the actual amount of saltwater injected into the well:  
Flowmeter and/or tank strapping.

RECEIVED  
NOV 18 2011

34. **PROPOSED INJECTION PRESSURES**

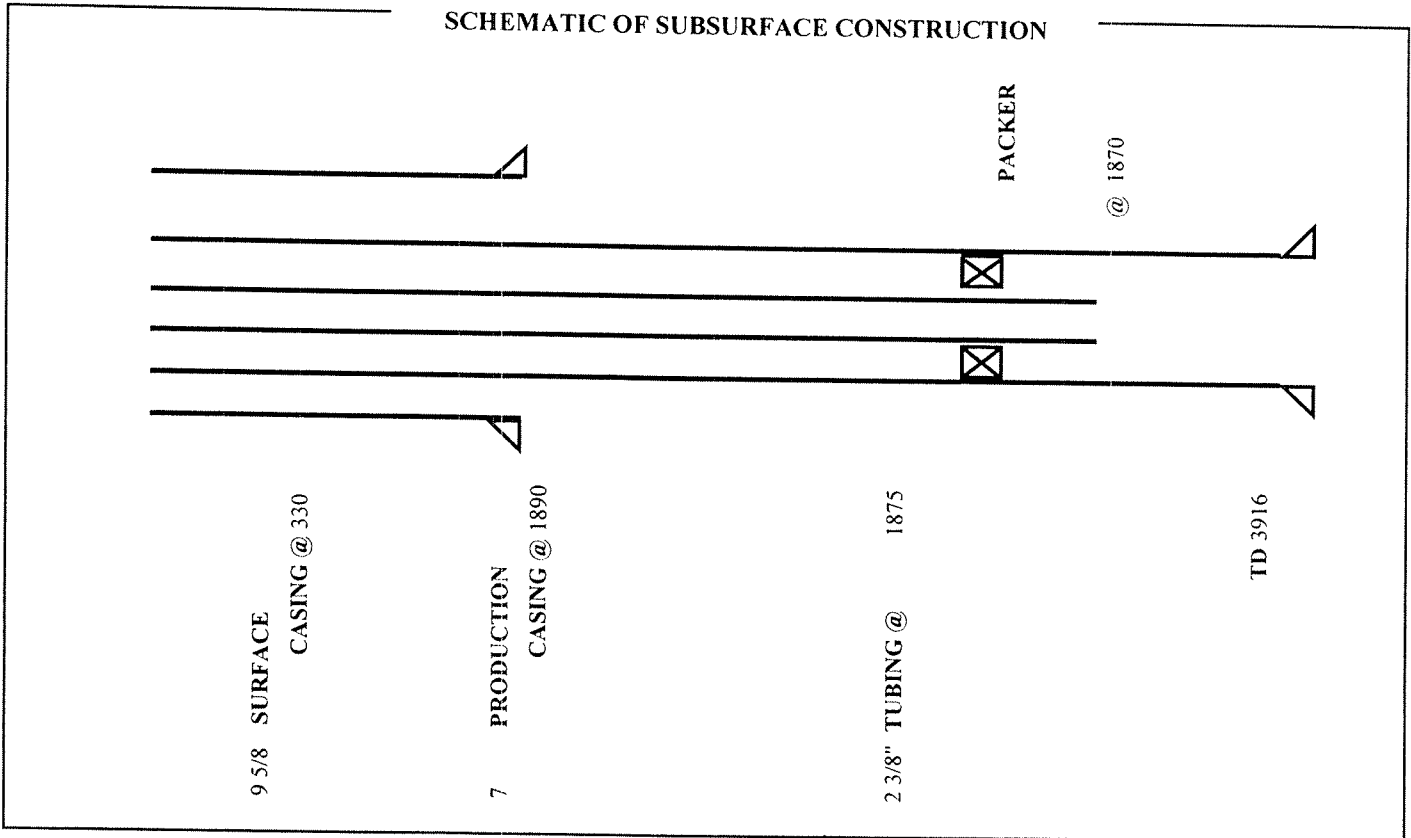
- A. Indicate the estimated pressure to be used for injection of saltwater into the proposed injection well:  
 AVERAGE: 250 MAXIMUM: 590 435 psi
- B. Indicate the method to be used to measure the actual daily injection pressure:  
recordable pressure gauge at well head

35. **PROPOSED CORRECTIVE ACTION**

Explain any corrective action proposed for wells penetrating the proposed injection formation or zone within the area of review:  
NA (No existing wells in area of review.)

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.

RECEIVED

NOV 18 2011

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

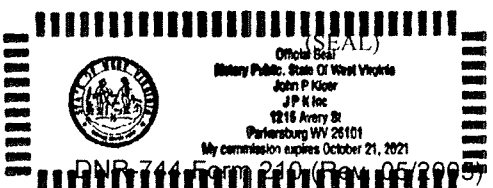
The undersigned hereby agrees to comply with all provisions for an enhanced recovery project as required by Chapter 1501:9-5 of the Ohio Administrative Code. In addition, the undersigned deposed and says that he shall conform to all provisions of Section 1509.072 of the Ohio Revised Code, and to all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

Owner/Authorized Agent (Type or Print): Jeff D Harper  
 Signature of Owner/Authorized Agent: [Signature] Title: MEMBER  
 Permanent Address of Home Office: 2310 Harris Highway Washington, Wv 26181

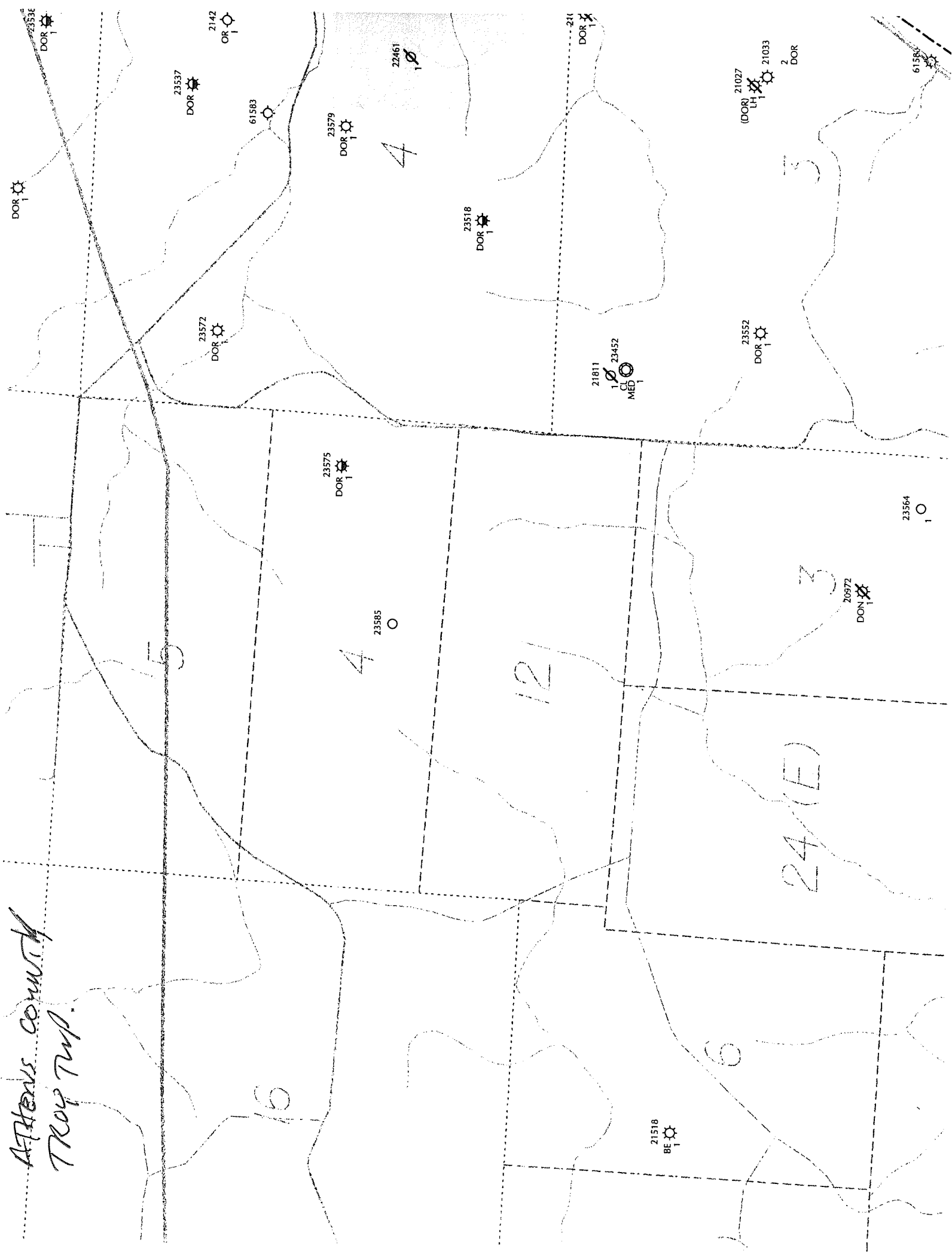
If signed by Authorized Agent, a certified copy of appointment of agent must be on file with the Division.

SWORN to and subscribed before me this 15<sup>th</sup> day of November, 20 11.

[Signature]  
 Notary Public  
 Date Commission Expires 10-21-2021



Attens County  
Troy Twp.



23538  
DOR

23537  
DOR

2142  
OR

23572  
DOR

61583

23579  
DOR

22461

23518  
DOR

21027  
DOR

21811  
23452  
CL  
MED

(DOR) LH  
21027  
21033

2  
DOR

23564  
10

20972  
DON

21518  
BE

**INTERIM GUIDELINE – NEW FEE LEVIED PURSUANT TO SENATE BILL 165  
EFFECTIVE 06/30/2010**

---

SCOPE AND OBJECTIVE

- The guideline applies to all saltwater injection well owners having been issued a permit under ORC 1509.22 and for registered brine haulers.
- Provides the injection well owners and brine haulers interim guidance on how new fees are to be calculated, records to be maintained and when the new fees are to be forwarded to The Division of Mineral Resources Management (DMRM).
- This Interim Guideline dated 06/10/2010 will be in effect until such time it is replaced or new rules are in effect.
- The specific statutory language for changes relating to the new fees can be found at: <http://www.legislature.state.oh.us/>  
Under Current Legislation, select the Senate and enter 165, see 1509.22(D) for the new permit fee and 1509.221 (B)(1) through (4) for the new fee on each substance delivered to an injection well.  
Or, go to LAWriter at <http://codes.ohio.gov/orc/15> and select Chapter 1509, then select 1509.22 or 1509.221 and review the respective portions referenced above.

DEFINITIONS:

- *“Division of Mineral Resources Management Regulatory District”*:  
See <http://www.ohiodnr.com/mineral/inspectors/tabid/10355/Default.aspx>  
for the boundaries of the Mineral Resources Management Districts. **The Districts are our North Region, South Region and West Region.**
- *“Not produced within the Division of Mineral Resources Management Regulatory District in which the well is located or in an adjoining Regulatory District”*: **The substance delivered is not produced in the Division of Mineral Resources Management North, South or West Regions.**