

1R - 426-02

**REPORTS**

**DATE:**

7-13-10

ARCADIS

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Mr. Ed Hansen  
New Mexico Energy, Minerals, & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

ARCADIS U.S., Inc.  
1004 North Big Spring Street  
Suite 300  
Midland  
Texas 79701  
Tel 432 687 5400  
Fax 432 687 5401  
www.arcadis-us.com

Environmental

Subject:

**WELL PLUGGING AND GROUNDWATER RECOVERY SYSTEM  
CLOSURE REPORT  
Jcts. K-27 and K-27-1, BD SWD SYSTEM  
Unit K, SEC. 27, T21S, R37E  
NMOCD CASE #s 1R0426-02 and 1R0426-03**

Date:  
July 13, 2010

Contact:  
Sharon E. Hall

Mr. Hansen:

Phone:  
432 687-5400

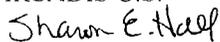
On behalf of Rice Operating Company (ROC), ARCADIS U.S., Inc. (ARCADIS) respectfully submits this Well Plugging and Groundwater Recovery System Closure Report for the above-referenced sites. Per NMOCD's June 2, 2010 notification that the remediation plans are terminated in accordance with 19.15.29 NMAC, and request for well plugging and groundwater recovery system dismantling. As requested, the wells were plugged on June 7 and 8, 2010 with a cement grout with 1% to 3% bentonite. The monitoring well plugging reports and photo documentation is attached. The groundwater recovery system was dismantled and the site was contoured to the surrounding area with clean, imported soil blended with hay. The site was then reseeded on June 14, 2010. Seeding documentation is attached.

Email:  
shall@arcadis-us.com

Our ref:  
MT000834.0001

ROC acknowledges they have met the requirements of 19.15.29 NMAC, the NMOCD terminated the remediation plans (1R0426-02 and 1R0426-03) in accordance with 19.15.29 NMAC and no further actions are warranted.

If you have any questions please contact Hack Conder at (575) 393-9174.

Sincerely,  
ARCADIS U.S.  
  
Sharon E. Hall  
Associate Vice President

Copies:

Page:  
1/2

**Mr. Ed Hansen**  
**July 13, 2010**

Hack Conder, ROC

Attachments:

Well Plugging Reports

Site Seeding Reports and Photographs

Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.

# HARRISON & COOPER, INC.

*Drilling & Pump Professionals*

7414 85<sup>th</sup> Street, Lubbock, Texas 79424-4951

P.O. Box 96, Wolfforth, Texas 79382-0096

Ph: (806) 866-4026

Fax: (806) 866-4044

[harrisoncooper-drilling.com](http://harrisoncooper-drilling.com)

## Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	6/7/2010
Site	BD K-27
Well ID	MW-1
Casing Diameter	4"
Well Depth	50'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-50'
Cement Interval	0'-3'

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Email (Lara Weinheimer; Jordan Woodfin; Hack Conder)

Mail (Rice-Hobbs)

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## Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	6/7/2010
Site	BD K-27
Well ID	MW-2
Casing Diameter	2"
Well Depth	50'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-50'
Cement Interval	0'-3'

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Mail (Rice-Hobbs)

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## Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	6/7/2010
Site	BD K-27
Well ID	MW-3
Casing Diameter	2"
Well Depth	50'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-50'
Cement Interval	0'-3'

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## Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	6/7/2010
Site	BD K-27-1
Well ID	RW-1
Casing Diameter	4"
Well Depth	80'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-80'
Cement Interval	0'-3'

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## Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	6/7/2010
Site	BD K-27
Well ID	MW-4
Casing Diameter	2"
Well Depth	50'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-50'
Cement Interval	0'-3'

Copies: File

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## Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	6/8/2010
Site	BD K-27
Well ID	MW-5
Casing Diameter	2"
Well Depth	50'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-50'
Cement Interval	0'-3'

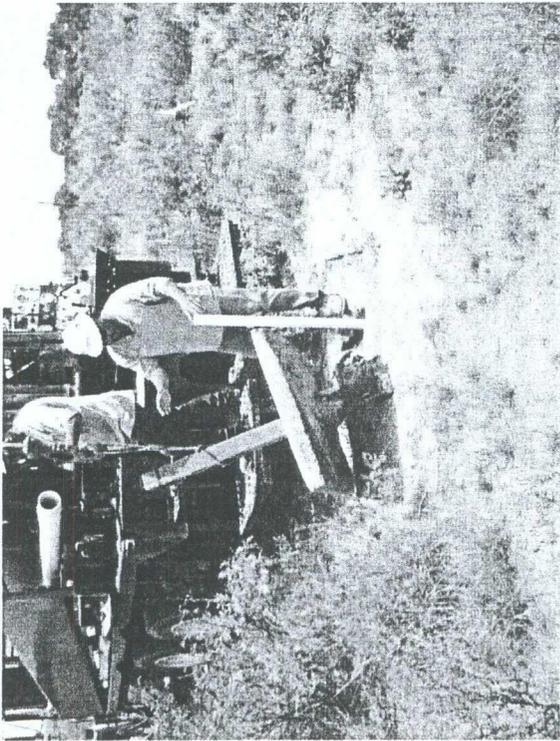
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Email (Lara Weinheimer; Jordan Woodfin; Hack Conder)

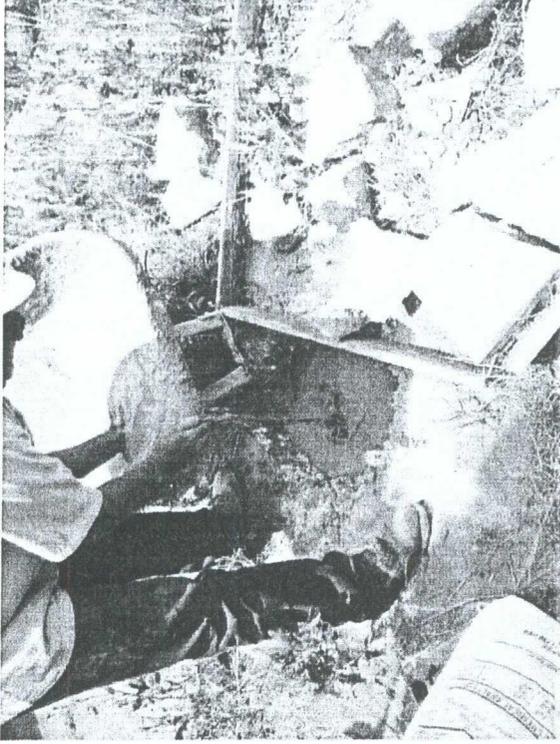
Mail (Rice-Hobbs)

Regulated by: Texas Dept. of Licensing & Regulation, Water Well Division, P.O. Box 12157, Austin, TX 78711, (800) 803-9202

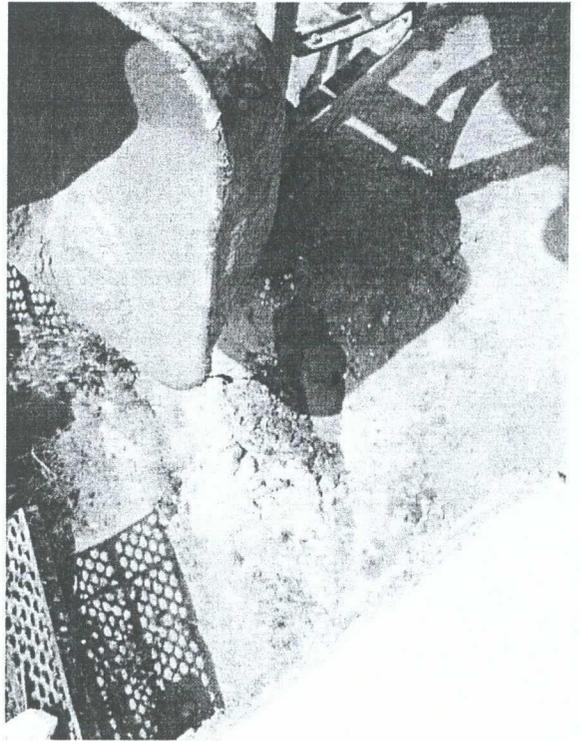
BD K-27 and K-27-1  
plug and abandon wells



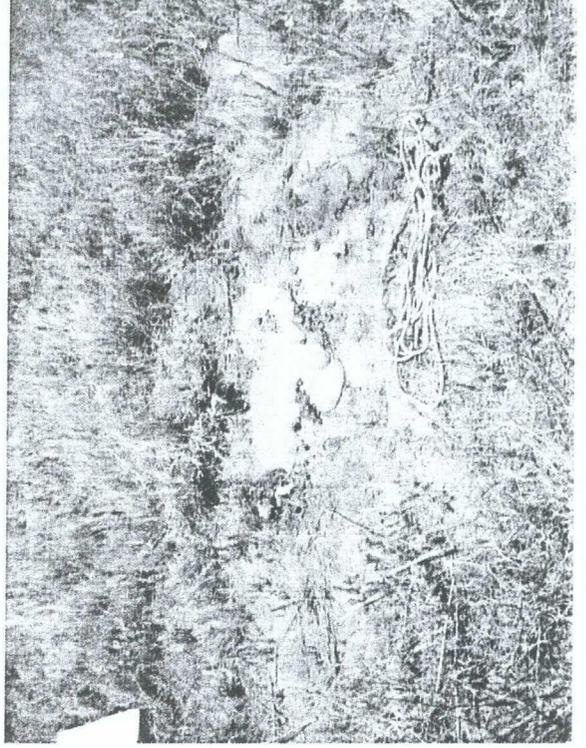
Pulling the monitor wells



Placing a 3' concrete cap



Plugging the well with bentonite/concrete slurry



Completed plugging



112 West Taylor  
 Hobbs, NM 88240  
 Phone: (575) 393-9174  
 Fax: (575) 393-0293

## REVEGETATION FORM

### 1. General Information

Site name: <b>BD Jct. K-27-1</b>						
U/L <b>K</b>	Section <b>27</b>	Township <b>21S</b>	Range <b>37E</b>	County <b>LEA</b>	Latitude <b>32°26'46.521"N</b>	Longitude <b>103°9'12.484"W NAD83</b>
Contact Name: <b>KATIE JONES</b>						
Email: <b>kjones@riceswd.com</b>						
Site size: <b>2000</b>		square feet		Map detail of site attached <input type="checkbox"/>		
Additional information:						

### 2. Soils

*\*Do not rip caliche subsoils: caliche rocks brought to the surface by ripping shall be removed.*

Salvaged from site <input type="checkbox"/>	Bioremediated <input type="checkbox"/>	Imported <input checked="" type="checkbox"/>	Blended <input type="checkbox"/>	Depth (in):	
Texture: <b>SANDY</b>	Describe soil & subsoil: <b>SAND OVER CALICHE</b>				
Soil prep methods:	Rip <input type="checkbox"/>	Depth(in):	Disc <input type="checkbox"/>	Depth (in):	Rollerpack <input type="checkbox"/>
Date completed: / /					

### 3. Bioremediation

Fertilizer <input type="checkbox"/>	Hay <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Type:	Describe:	
Lbs/acre:		

### 4. Seeding

*\*Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R.*

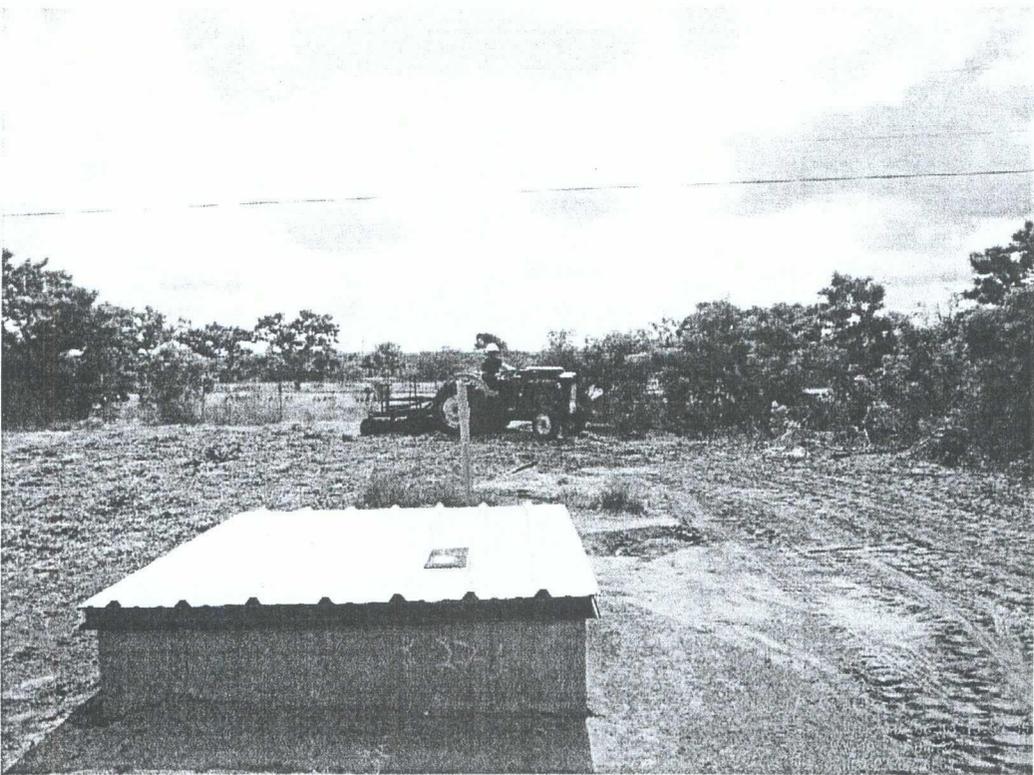
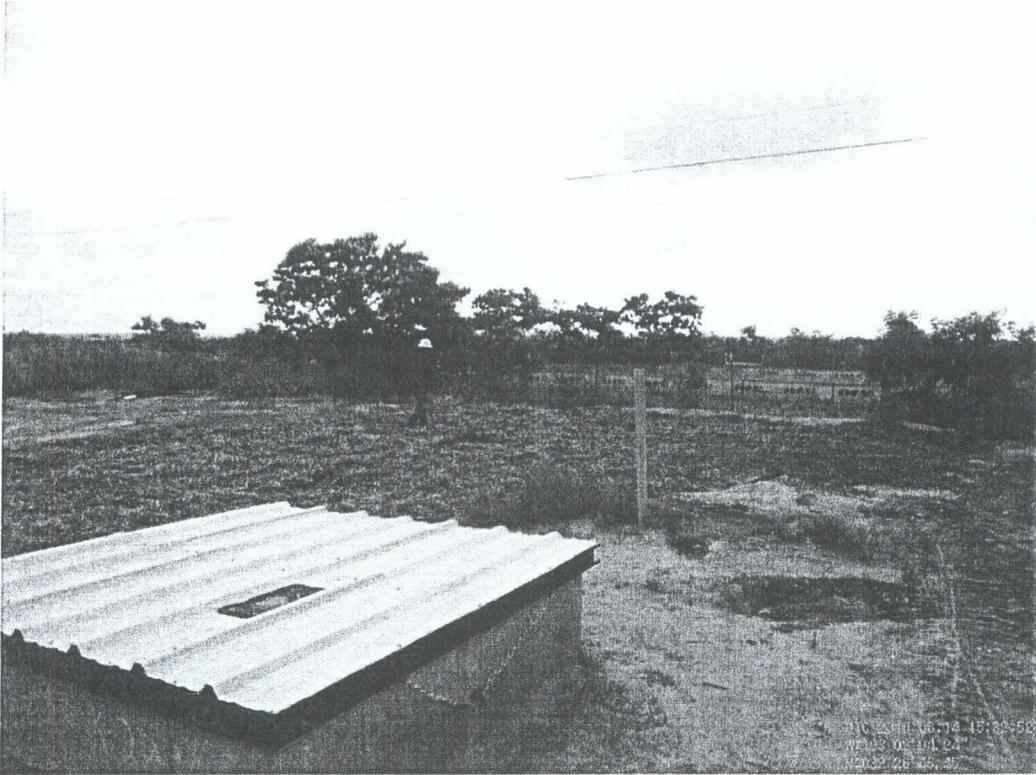
Custom seed mix <input checked="" type="checkbox"/>	Prescribed mix <input type="checkbox"/>	Seed mix name: <b>DOOM MIX</b>	Seeding date: <b>6/14/2010</b>
Broadcast <input checked="" type="checkbox"/>	Method: <b>Broadcast with a hand-cranked seeder</b>		
Soil conditions during seeding: Dry <input checked="" type="checkbox"/> Damp <input type="checkbox"/> Wet <input type="checkbox"/>			
Photos attached <input checked="" type="checkbox"/>	Observations: <b>4 lbs Doom mix, 4 lbs heavy recleaned racehorse oats, 2 lbs blue grama. Till 6 in prior to seeding, till seed in 3 in after seeding.</b>		
Number of photos: <b>2</b>			

### 5. Certification

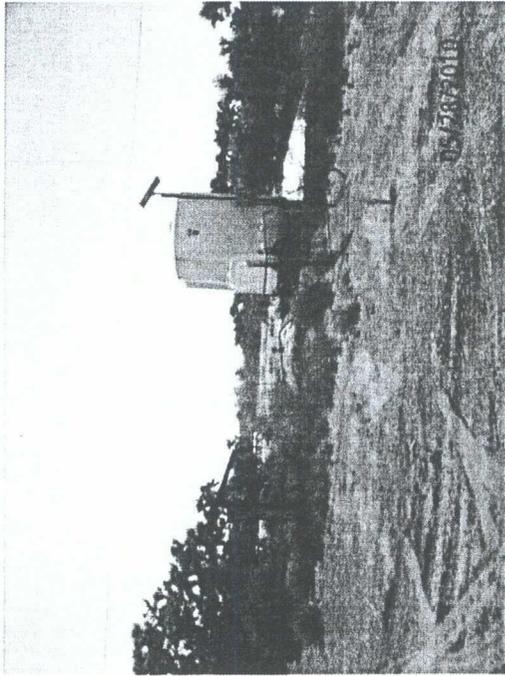
I hereby certify that the information in this form and attachments is true and complete to the best of my knowledge and belief.

Name: <b>Tony Grieco</b>	Title: <b>Environmental Tech</b>	Date: <b>6/25/2010</b>
Signature:		

BD Jct. K-27-1 (1R426-03)

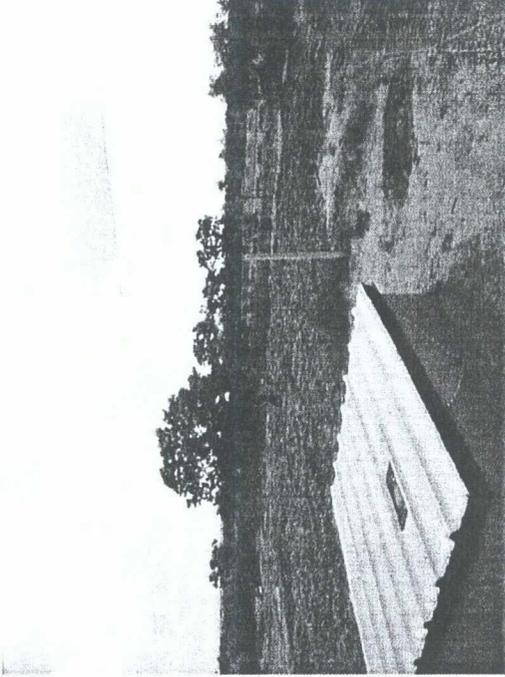


BD Jct. K-27-1 (1R426-03)



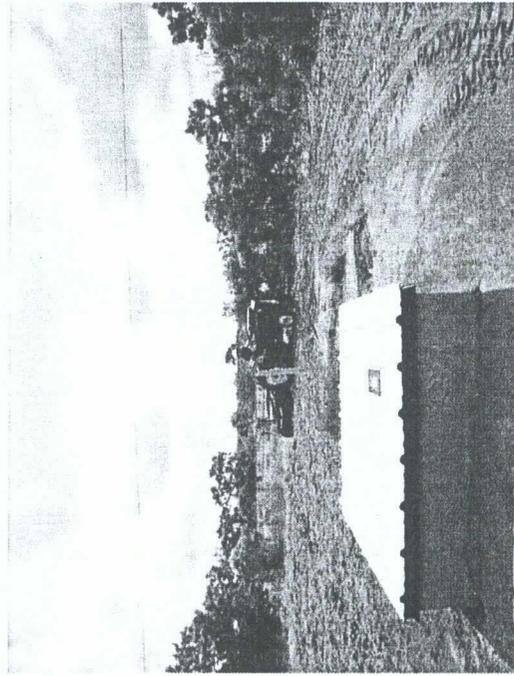
groundwater recovery system

5/28/2010



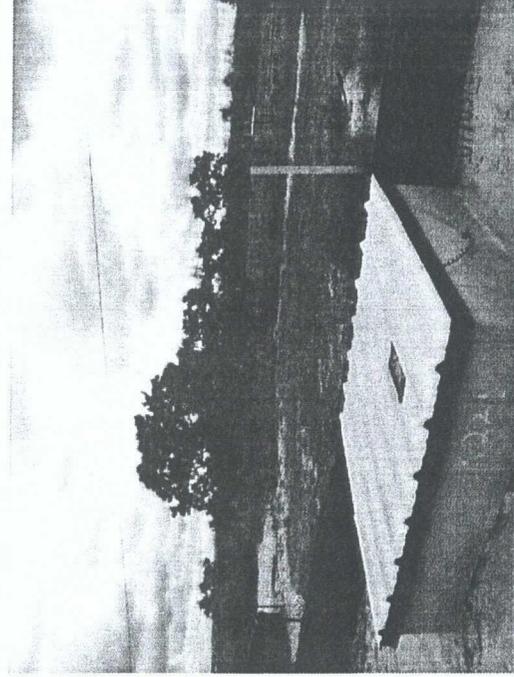
seeding the backfilled area

6/14/2010



tilling in the seed

6/14/2010



site complete

7/9/2010