# SUBSIDENCE MONITORING REPORTS

## Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Friday, November 14, 2008 4:38 PM

To:

'ziatransports@gmail.com'; 'jrmillett@gmail.com'; 'rharrisnm@aim.com'; 'gandy2@leaco.net'; 'seay04@leaco.net'; 'iwcarlsbad@plateautel.net'; 'Patterson, Bob'; 'Dimas Herrera';

'gil@mull.us'; 'David Pyeatt'; 'Wayne E Roberts'; Dennis L Shearer; 'garymschubert@aol.com';

'dgibson@keyenergy.com'; 'Clay Wilson'; 'Prather, Steve'; Ronnie D Devore

Cc:

Hill, Larry, EMNRD; Gum, Tim, EMNRD; Price, Wayne, EMNRD

Subject:

Brine Well Moratorium Press Release Today

Attachments: PR-OCD Brine Well Moratorium.pdf

FYI, please see the attached NM OCD Press Release issued today. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

### **Bill Richardson**

Governo

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire Division Director Oil Conservation Division



November 14, 2008

Contact: Jodi McGinnis Porter,

Public Information Officer 505.476.3226

# Energy, Minerals and Natural Resources Cabinet Secretary Prukop Orders a Six Month Moratorium on New Brine Wells

Oil Conservation Division to Investigate Brine Well Collapses and Provide Recommendations

SANTA FE, NM – Secretary Joanna Prukop today ordered the Oil Conservation Division to place a six month moratorium on any new brine well applications located in geologically sensitive areas. Secretary Prukop's action comes following the second brine well collapse in less than four months in southeastern New Mexico. The Secretary has also directed the Oil Conservation Division to work with the Environmental Protection Agency, other states, technical experts and oil and gas industry representatives to examine the causes of recent collapses, and provide a report with recommendations to the Oil Conservation Commission for a safe path forward. The report should be completed by May 1, 2009.

"I am deeply concerned by these two serious incidents and we are taking action to ensure the safety of our citizens and to protect the environment," stated Secretary Prukop.

Brine wells are an essential part of the oil and gas drilling industry, particularly in the southeastern part of the state. Oil and gas operators use brine water in the drilling process. Brine is saturated salt water which can be more salty than sea water. Brine is created by injecting fresh water into salt formations, allowing the water to absorb the salt and then pumping it out of the well. This method creates an underground cavity.

"The moratorium will provide time to properly evaluate the causes of the recent collapses and to discuss the development of new rules or guidelines to ensure the safety and stability of brine well systems," added Secretary Prukop.

The moratorium will only affect new wells and will not impact existing wells and facilities.

Below are photographs of the two recent collapses:

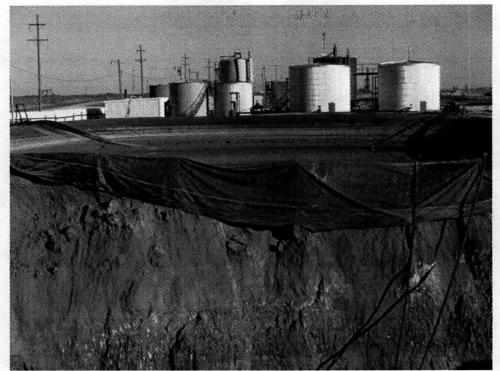


Loco Hills brine well collapse, morning, November 7, 2008, sinkhole with fresh water pond in foreground. Photo courtesy of Oil Conservation Division

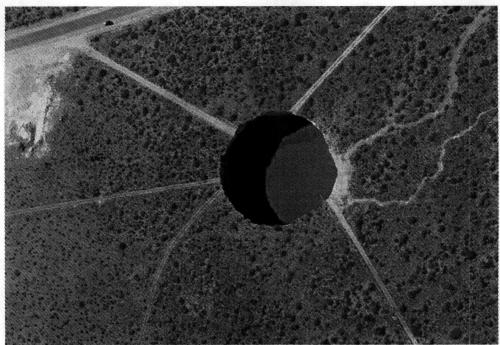


Loco Hills brine well collapse, morning, November 7, 2008 sinkhole.
Photo courtesy of Oil Conservation Division

November 14, 2008 Page 3



Loco Hills brine well collapse, morning, November 7, 2008 status of fresh water pond. Photo courtesy of Oil Conservation Division



Artesia brine well collapse, morning, July 20, 2008 at 10:44 am. Photo courtesy of National Cave and Karst Research Institute



Artesia brine well collapse morning, July 22, 2008
Photo courtesy of National Cave and Karst Research Institute

### #30#

The Energy, Minerals and Natural Resources Department provides resource protection and renewable energy resource development services to the public and other state agencies.

Oil Conservation Division
1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3440 • Fax (505) 476-3462 • www.emnrd.state.nm.us/OCD



# Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, November 13, 2008 1:15 PM

To:

'mando1106@gmail.com'

Cc:

Price, Wayne, EMNRD; VonGonten, Glenn, EMNRD

Subject:

FW: Daily Logs of Activity BW-21

Attachments: Daily Logs of Activity BW-21 11-12-08.doc

Mr. Villanueva:

Good afternoon. I am the OCD UIC Class I, II (LPG Storage), III and V Well Inspector for the NMOCD in Santa Fe. Could you please send me copies of all reports and photos from now on.

A. Frank

The OCD is tracking site activities on its OCD On-line computer system at <a href="http://ocdimage.emnrd.state.nm.us/imaging/AEOrderFileView.aspx?appNo=pENV0000BW0024">http://ocdimage.emnrd.state.nm.us/imaging/AEOrderFileView.aspx?appNo=pENV0000BW0024</a>.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/index.htm">http://www.emnrd.state.nm.us/ocd/index.htm</a> (Pollution Prevention Guidance is under "Publications")

From: VonGonten, Glenn, EMNRD

Sent: Thursday, November 13, 2008 12:50 PM

To: Chavez, Carl J, EMNRD

**Subject:** FW: Daily Logs of Activity BW-21

Carl.

You should have them send you copies of all reports and photos.

Glenn von Gonten Senior Hydrologist Environmental Bureau Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87505 505-476-3488 fax -476-3462 glenn.vongonten@state.nm.us

From: Armando Villanueva [mailto:mando1106@gmail.com]

Sent: Thursday, November 13, 2008 11:40 AM

To: david\_herrell@blm.gov; VonGonten, Glenn, EMNRD; Carr, Jim A.; Price, Wayne, EMNRD

11/13/2008

**Subject:** Daily Logs of Activity BW-21

This inbound email has been scanned by the MessageLabs Email Security System.



# SOUTHWEST SAFETY SPECIALISTS

2325 W. County Road P.O. Box 5169 Hobbs, NM 88241 505-393-3072 Fax 505-393-3082 1-800-477-2918

> Web: www.southwestss.com E-mail: swss@leaco.net

# Daily Site Safety Work Plan, Process, Public, and Worksite Protection Plan for 11-12-08

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 021

# **Daily Objectives and Status**

Southwest Safety Specialist was contacted by Wayne Price of OCD had asked about rainwater runoff berms, requested more photos, asked to get some current aerial photos, and asked about worker and public site safety, asked for current hole dimensions. SWSS went to drop off all reports to Dick Malony including long term plan and the three previous daily reports. Southwest Safety Specialists continued monitoring the collapse site. The Eddy County Road Department came out to survey the area for the new road. DCP Midstream also came out to survey the area to figure if the placement of the new pole is going to conflict with pipeline that currently runs in the area. Tim W. Gum With Oil Conservation Department came by to survey and took pictures of the sinkhole.

Central Valley Electric COOP had stated that they will be treating this as a natural disaster and they will installing two new poles and the remove the old pole. The pole is 93 ft from the sinkhole and the new pole needs to be at least 200 ft from the previous pole that is currently inside of the fence. The new pole will be put up on 11-13-08. There will be a 5 hour period of loss of electricity. This plan will set around noon.

BLM geologists and surveyors toured the site, inspected the width and length of the hole. BLM geologists and surveyors also inspected the radial crack and used a GPS on it. BLM said that they would return on 11-13-08. At 2:47, Southwest Safety Specialists left message with Penasco Valley Telecommunication will need to move their line due to it being in the danger zone. If they could be at the site while the Eddy County Road Department and BLM are at the site rerouting the road. They can get a verification where they can reroute their wire in a safe zone. Southwest Safety Specialist was contacted by Dick Maloney and informed him that Central Valley Electric COOP moved the plan to Thursday the 13<sup>th</sup> instead of Friday the 14<sup>th</sup>. Dick Maloney said

# Action Items for 11-13-08

- 1. Call Dick Maloney at Loco Hills Water Disposal to inform him that he will not have power on the 13<sup>th</sup> along with all that will be affected with the power loss
- 2. Contact Kevin Rogers and Dick Maloney for the berms that OCD is requesting for rainwater or spills and locks that need to be purchase by Southwest Safety Specialists for the New Mexico State Land
- 3. SWSS will continue setting stakes, flagging, and signs around the unsafe area of the Brine Station for the safety of the employees or drivers working at the facility. This will be placed in the south of the two vessels to the east of second brine pond in potential unsafe area and across south pit to the fence.
- 4. Central Valley Electric COOP moved work to be performed 11-14-08 to 11-13-08
- 5. Jeannette Martinez with BLM will be here Thursday @ 8:30-8:45 with the Eddy County Road Department to discuss where the new road will be. She will also speak with Penasco Valley Telecommunications to inform them where they can run their lines
- 6. Send daily reports to OCD
- 7. Continue to gather data and build long term plan
- 8. Southwest Safety Specialist will continue to maintain 24 hour instant command, site safety, and the monitoring of the hole.

Contact Southwest Safety Specialist at 1-800-477-2918 or Scott Magness at (575) 441-2479

that he will need to make arrangements with the loss of power for approximately half of the day. Dick Maloney also said that he had arranged for the aerial photos for Thursday 11-13-08. Southwest Safety Specialists is trying to find other means to have aerial photos taken to help with the surveying and monitoring of the collapse site. At 3:21, Penasco Valley Telecommunication called back and said that they would be on site at 8:30-8:45 on the Thursday the 13<sup>th</sup>.

Southwest Safety Specialist surveyed facility for H<sub>2</sub>S and all is clear. The sinkhole is continually moving and widening. Southwest Safety Specialists continues to take pictures and measurements of the growth of the collapse site for daily logs. East-west measurement on 11-12-08 was at 198 ft with Bushnell range finder. The North-South measurement on 11-12-08 was at 140 ft which was 40 ft north of zero point and 100 ft south of zero point. Did not have any curious By passers wanting to see the sinkhole.

# Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Thursday, November 13, 2008 11:42 AM

To: 'Pham.Lisa@epamail.epa.gov'

Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Gum, Tim, EMNRD

Subject: RE: Loco Hills Brine Well (BW-21) API# 30-015-32068 UL:M Sec. 16 17S 30E (Eddy County)

Lisa:

Good morning. Please find the OCD's responses to your questions below:

What is/was the well's purpose?

10 lb. brine production (Class III Well Mineral Extraction) for drilling activity in the oilfield.

What was the well's construction?

7 inch surface casing to 499 ft. 5.5 inch production casing to 404 ft. 2 7/8 tubing downhole.

What was the well's MIT history?

Most recent MITs: 8/18/2004 passed OCD annual formation MIT (4-hr.) @ 300 psig; 10/27/2005 passed EPA 5-Yr. MIT (30 min.) @ 320 psig; 9/19/2006 passed EPA 5-Yr. MIT (30 min.) @ 300 psig; and 6/18/2008 failed OCD annual formation MIT (4-hr.) w/ claim of suspected casing leak.

What was the well's volumes injected?

Fresh water injection ~ 9,148,000 bbls and Total estimated (10/17/2008 Operator) brine Production ~ 7,978,000 bbls.

What actually failed mechanically?

During the June 18, 2008 annual MIT inspection, the owner/operator suspected a leak in the casing.

How long did the operator/owner(s) inject after the failure (if any)?

On June 18, 2008, the date that the well could not pass the scheduled OCD annual MIT, the operator was ordered to shut-in the well. The owner/operator was in the process of requesting a new brine well at the facility.

What have they done in terms of enforcement?

The Owner/Operator was given 90 days to implement corrective action(s). An OCD approved C-103 Form for plug and abandonment (P/A) was received and approved by OCD on 6/18/2008. The well was officially PA'd on 7/21/2008.

Please note that there was another collapse south of Carlsbad, New Mexico this week that was non-oilfield related. In the incident, a heavy equipment operator near Hwy-285 fell 80 feet into a sinkhole and survived.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462 E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

----Original Message----

From: Pham.Lisa@epamail.epa.gov [mailto:Pham.Lisa@epamail.epa.gov]

Sent: Wednesday, November 12, 2008 12:15 PM

To: Chavez, Carl J, EMNRD

Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD

Subject: Re: Loco Hills Brine Well (BW-21) API# 30-015-32068 UL:M Sec. 16 17S 30E (Eddy County)

Hi Carl,

Thank you for informing us about this. It is remarkable that this well collapsed shortly after being plugged. Could you please provide us the following information regarding this well:

- What is/was the well's purpose, construction, MI history, and volumes injected?
- What actually failed mechanically?
- How long did the operator/owner(s) inject after the failure (if any)?
- What have they done in terms of enforcement?

Best regards,

Lisa

"Chavez, Carl J, EMNRD" <CarlJ.Chavez@state.nm.us> wrote on 11/10/2008 05:22:13 PM:

> Lisa:

> Good afternoon. I am writing to report a brine well collapse (see

- > attached press release) that occurred on Monday, November 3, 2008 at
- > about 14:30. Subsidence cracking was noticed after lunch around 13:00
- > according to the operator. There have been no injuries reported to date.

> The sinkhole feature is being fenced off with the fence-line

- > transecting and stopping traffic at the nearby N-S county road at two
- > locations west of the subsidence feature. The county road will likely
- > need to be reconstructed around the area to facilitate oil field
- > traffic in the area.

>

- > The OCD is currently updating its OCD Online website to provide more
- > detailed correspondence with photos of the command center similar to
- > Jims Water Service at http://ocdimage.emnrd.state.nm.
- > us/imaging/AEOrderFileView.aspx?appNo=pENV0000BW0024. The photos and
- > correspondence will be scanned in this coming Wednesday morning.

> Please contact me if you have questions. The OCD will be off tomorrow

> to observe the Holiday and back in Wednesday. Thank you.

> Carl J. Chavez, CHMM

- > New Mexico Energy, Minerals & Natural Resources Dept.
- > Oil Conservation Division, Environmental Bureau
- > 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
- > Office: (505) 476-3491
- > Fax: (505) 476-3462
- > E-mail: CarlJ.Chavez@state.nm.us
- > Website: http://www.emnrd.state.nm.us/ocd/index.htm

- > (Pollution Prevention Guidance is under "Publications") [attachment > "PR-OCD Brine Well 11 03 08.pdf" deleted by Lisa Pham/R6/USEPA/US]

This inbound email has been scanned by the MessageLabs Email Security System.

APPROVED BY

Conditions of approval, if any:

DATE

Form C-103 State of New Mexico Submit 3 Copies Revised March 25, 1999 Energy, Minerals and Natural Resources Department To Appropriate District Office WELL API NO. DISTRICT OIL CONSERVATION DIVISION 1625 N. French Dr., Hobbs, NM 88240 2040 South Pacheco 5. Indicate Type of Lease Santa Fe, NM 87505 FEE STATE 🔽 811 South First, Artesia NM 88210 6. State Oil & Gas Lease No. DISTRICT III 1000 Rio Brazos Rd., Azicc. NM 87410 7. Lease Name or Unit Agreement Name: SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR, USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS Type of Well: Other BRINE Oil Well Gas Well 8. Well No. Name of Operator 9. Pool name or Wildcat Address of Operator P.O. Box Well Location feet from the South line and 230 feet from the WEST line 600 Unit letter Township /7 5 Range 30 E NMPM EDOY Section 10 Elevation (Show whether DF, RKB, RT, GR, etc.) Check Appropriate Box to Indicate Nature of Notice, Report or Other Data SUBSEQUENT REPORT OF: NOTICE OF INTENTION TO: REMEDIAL WORK  $\mathbf{Z}$ ALTERING CASING | | PLUG AND ABANDON 🔲 PERFORM REMEDIAL WORK PLUG AND COMMENCE DRILLING OPNS. TEMPORARILY ABANDON 🔠 CHANGE PLANS ABANDONMENT PULL OR ALTER CASING MULTIPLE CASING TEST AND CEMENT JOB COMPLETION OTHER: 12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. 1/5/01 RUN 404' 512" 15.5" J-55 CSNG SET IN RETAINER PACKER SAUE CMT WI 100 SXS clars "E" HEAT. BUMB PLUL @ 2:14 PM CIRE 30 SXS to Pit PRESSURE TEST CSNG 300# 4hm Nu BLEAD OFF DRILL OUT PLUE TAC FILL C523 WORK THROUGH RETAL SEVERAL TIME; - 1/16/01 1/14/01 SPUT 75 5x5 PCUL @ 523 SPOT ZOU SXS PLUL C 520 116/01 SPOT 375 SXI PLUL C 5/8 119/01 PRILL OUT 122/01 I hereby certify that the information to is true and complete to the best of my knowledge and belief. TITLE GEORGEST SIGNATURE 505-67 7-2 370 Telephone No. Lypc or print name (This space for State use)

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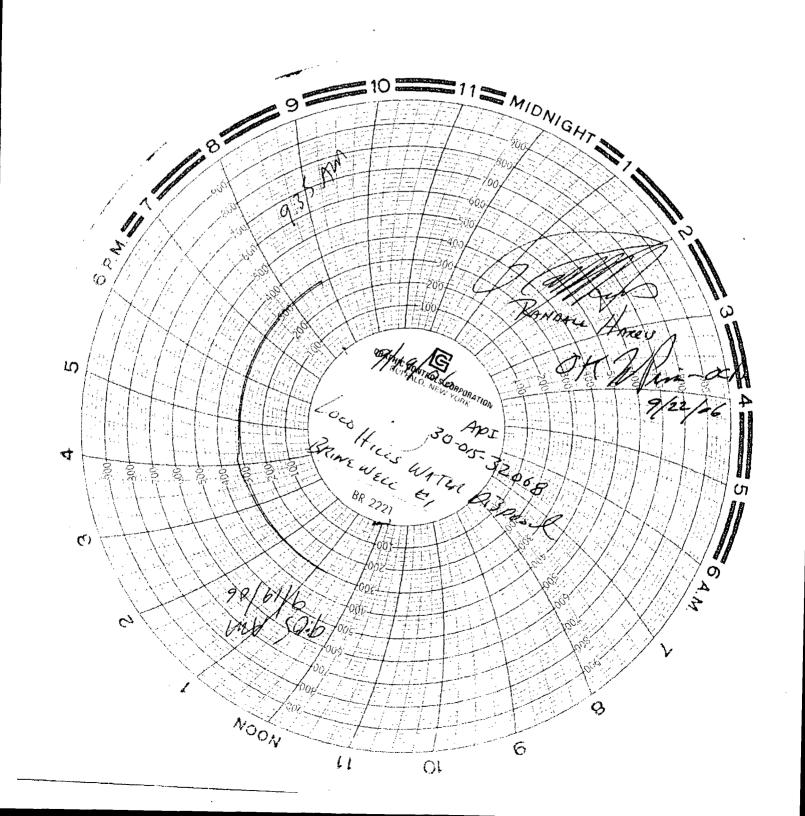
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Submit 3 Copies To Appropriate District Office	State of I				Form C-103
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6/18/2008 Pressure test casing did n Set CIBP @ 402'	ot pass MII. Plugging ap	provea by	Carl Chaves and W	ayne Price of the NMO	CD Santa Fe.
301 CIDI (a) 402					
6/19/2008 Circulate 80 sxs Class "C	" cement from CIBP to Si	urface.			
I hereby certify that the information	above true and complete	e to the be	st of my knowledge	and belief. I further certi	fy that any pit or below-
grade tank has been/will be constructed or	plosed according to NMOCD g	guidelines 🗌	], a general permit 🖸 (	or an (attached) alternative O	CD-approved plan 🔲.
SIGNATURE /		TITLE	Geologist	DATI	E 7//72008
11/01/16	<i>X</i> /			DATI	J
Type or print name Randall Harris	Commence of the second	E-ma	il address: rharrisr	nm@aol.com 'Telephone	No. 575.677.2370
For State Use Only ACCEPTE	ed for record	<i>r</i> ·.	Approved for pluggin	g of well bore onfe	35
	MOOD AI	TITLE	I whill the under bond's	storiania i i	re 1/2/1/08
Conditions of Approval (if any):	"		The second secon	Report of Well Plugging A	1/ -1/00
	ı		Forms, www.cmnrd.st.	ite.nm.us/ocd.	,

Submit 3 Copies To Appropriate District Office	State of New Mexi	co	Form C-103
District 1	Energy, Minerals and Natural	Resources	May 27, 2004
1625 N. French Dr., Hobbs, NM 88240		ĺ	WELL API NO.
District II 1301 W. Grand Ave., Artesia, NM 88210	OIL CONSERVATION D	IVISION	30-015-32068
District III	1220 South St. Franci		5. Indicate Type of Lease
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fe, NM 8750		STATE FEE
District IV	Santa Pe, NW 6/30	))	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505			
SUNDRY NOTIC (DO NOT USE THIS FORM FOR PROPOS DIFFERENT RESERVOIR. USE "APPLIC.	CES AND REPORTS ON WELLS ALS TO DRILL OR TO DEEPEN OR PLUG ATION FOR PERMIT" (FORM C-101) FOR		7. Lease Name or Unit Agreement Name
PROPOSALS.)  1. Type of Well: Oil Well   (	Sas Well 🔯 Other Brine Well		8. Well Number 1
2. Name of Operator	Das Well Z Other Brine Well		9. OGRID Number
	rine Company		y. Gorde (valle)
3. Address of Operator P.O. Box 68, Loco Hills, NM 8825.	^		10. Pool name or Wildcat
4. Well Location			
Unit Letter M :	660feet from theSouth	line and23	feet from the _Westline
Section 16	Township 17S Ran	ige 30E	NMPM County
***	11. Elevation (Show whether DR, R		100
	,	, , ,	
Pit or Below-grade Tank Application 🗌 or	Closure		
Pit typeDepth to Groundwat	erDistance from nearest fresh water	r well Dista	nce from nearest surface water
Pit Liner Thickness: mil	Below-Grade Tank: Volume	bbls; Cor	nstruction Material
12. Check A	ppropriate Box to Indicate Nati	ure of Notice, I	Report or Other Data
NOTICE OF INT	TENTION TO:	SUR	SEQUENT REPORT OF:
PERFORM REMEDIAL WORK		REMEDIAL WORK	
TEMPORARILY ABANDON	1	COMMENCE DRIL	
	<del></del>	CASING/CEMENT	
TOLE OF ALIEFT OAGING	MOETH EE COMP	on and ordinary	
OTHER:		OTHER:	
			give pertinent dates, including estimated date ach wellbore diagram of proposed completion
6/18/2008 Pressure test casing did no Set CIBP @ 402'	ot pass MIT. Plugging approved by C	Carl Chaves and W	/ayne Price of the NMOCD Santa Fe.
6/19/2008 Circulate 80 sxs Class "C"	annant from CIRD to Surface		
6/19/2008 Circulate 80 sxs Class C	cement from CIBP to Surface.		
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The least of the second of the	L	-C 1 1 - 4	- I to the Community of
			and belief. I further certify that any pit or belower an (attached) alternative OCD-approved plan
SIGNATURE	TITLE(	Geologist	DATE7//72008_
Type or print name Randall Harris  For State Use Only	E-mail	address: rharrist	nm@aol.com Telephone No. 575.677.2370
ror state use only		70/	alrolok
APPROVED BY:	TITLE	pc	
Conditions of Approval (if any):			- [ ·

Submit 3 Copies To Approp	oriate District	State	of New M	exico			Form C-103
District I		Energy, Minera	als and Nati	ural Resources			May 27, 2004
1625 N. French Dr., Hobbs	, NM 88240				WELL API NO.		
District II 1301 W. Grand Ave., Artes	ia, NM 88210	OIL CONSE	RVATION	NOISION	30-015-32068	of Logge	
District III		1220 So	uth St. Fra	ncis Dr.	5. Indicate Type STATE	_	FEE []
1000 Rio Brazos Rd., Azte District IV	c, NM 87410	Santa	Fe, NM 8	7505	6. State Oil & G		
1220 S. St. Francis Dr., Sar	nta Fe, NM		~ - <b>,</b> - · · · ·		o. State on & d	as Lease 1	10.
87505	AIDDV MOTE	CEC AND DEPORTS	ON WELL	0	7 Lease Name a	Timis A o	
1		CES AND REPORTS SALS TO DRILL OR TO D			7. Lease Name of	or Unit Ag	reement Name
		CATION FOR PERMIT" (F			Brine Well		
PROPOSALS.)					8. Well Number	1	
1. Type of Well: Oil	Well	Gas Well Other	Brine Well	· · · · · · · · · · · · · · · · · · ·			
2. Name of Operator					9. OGRID Numl	per	
Loco Hills Brine Com  3. Address of Operate					10. Pool name o	- Wildoot	
P.O. Box 68, Loco Hi		55			10. Pool name o	i wildcat	Ì
4. Well Location	113, 1414 0023				<u> </u>		
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		11. Elevation (500W	wneiner DK	L, KKD, KI, GK, EIC.			
Pit or Below-grade Tank A	pplication 🔲 o	r Closure			(Magaga		IN KAMBER OF BRIDGE CONTROL ENVIRON
Pit typeDep			nearest fresh v	water well Dis	tance from nearest sur	face water	
Pit Liner Thickness:	mil			bbls; C		_	
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1.	2. Check A	Appropriate Box to	Indicate N	vature of Notice,	Report or Other	Data	
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OTHER:	··-			OTHER:	· · · · · · · · · · · · · · · · · · ·		
		leted operations. (Clea					
		ork). SEE RULE 1103	. For Multip	ole Completions: At	ttach wellbore diagr	am of pro	posed completion
or recompletio	n.						
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oct CIDI at base of cas.	mg 404 im t	to surface with comen	•				
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I hereby certify that the grade tank has been/will be	information constructed of	closed according to NMO	olete to the b CD guidelines [	est of my knowledg □, a general permit □	e and belief. I furth or an (attached) alteri	er certify the	at any pit or below- -approved plan .
1	///	M) M					
SIGNATURE /		/-/-	TITLE	Geologist	· · · · · · · · · · · · · · · · · · ·	DATE	_06/18/2008
Tyma or mint mana	Pandall Us-	, <b>y</b> tic	E-mail add	rece.	ТаІ	enhone M	o.575.677.2370
Type or print name For State Use Only	Randall Harr	15	E-man ado	n ^22.	1 61	chrone M	0.23.011.6310
roi State Use Univ			,				
ADDDAVED DV.	and of	March	מ ודוד	Environmental		DATE	Fight 1 a
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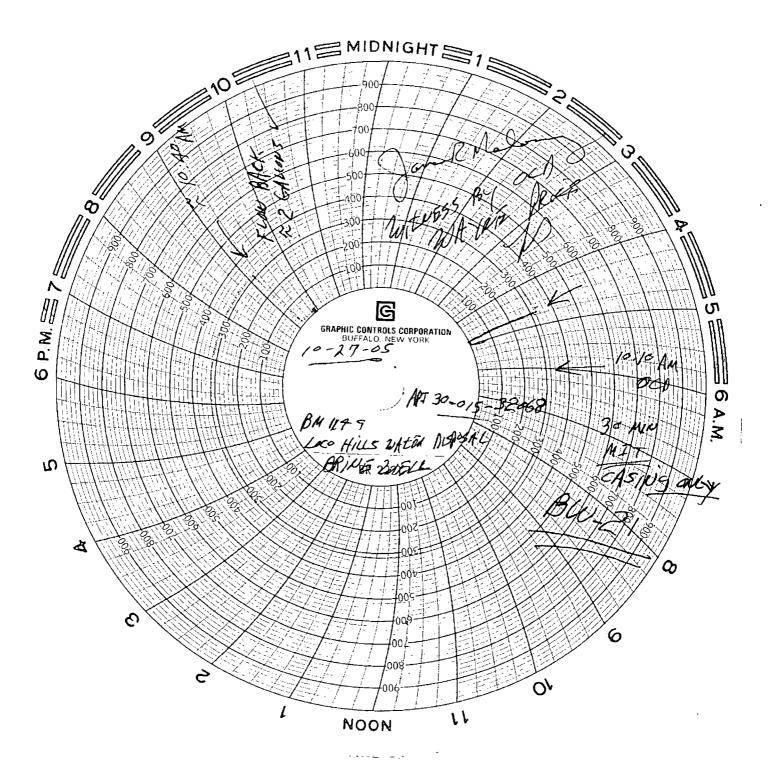


# **BJ Services Company**

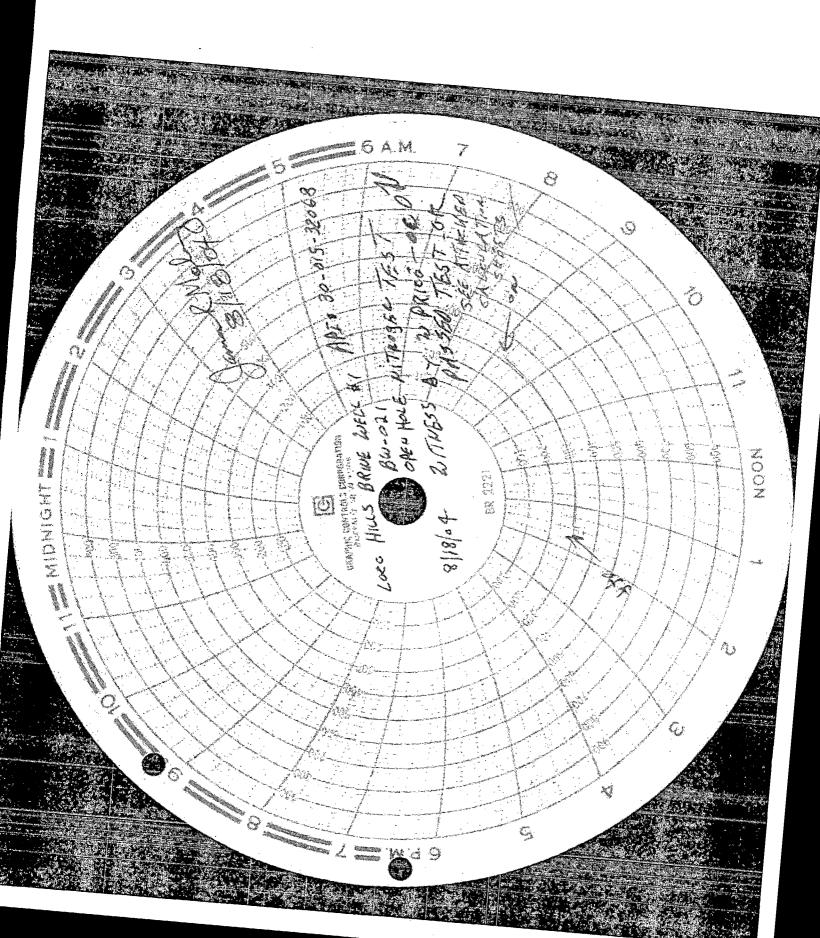


E MANNER.					•		_	
E MANNER.			BJ SERVICES APPROVED				SEE LAST PAGE FOR GENERAL	SEE LAST PAG
E MANNER.		AGENT	CUSTOMER AUTHORIZED AGENT	×	) ORDER.	HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.	HAVE	CUSTOMER REP.
ICES LISTED WERE	ORKMANLIKI	ERFORMED IN A W	RECEIVED AND ALL SERVICES PERFORMED IN A WORKMANLIKE MANNER.		ERMS AND CONDITION OF THE PRESENT THE	PRINTED ON THE LAST PAGE OF THIS FORM AND REPRESENT THAT I	19 2006 07:30 INSTR	ARRIVE MO.
	S AND SERVI	HAT THE MATERIAL	SERVICE RECEIPT: I CERTIFY THAT THE MATERIALS AND SERVICES LISTED WERE	SERVICE RE	GIN PER SERVICE	SERVICE OBDED: I AUTHORIZE WORK TO REGIN PER SERVICE		
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1 161 00	409	1 935 00	4300	450	200			505
AMOUNT	PERCENT DISC.	GROSS AMOUNT	LIST PRICE UNIT	QUANTITY	UNIT OF MEASURE	DESCRIPTION	DE	PRODUCT
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<u>.</u>		,		JOB TYPE CODE :	STATE	COUNTY/PARISH	LEGAL DESCRIPTION	
					5,000		MBER	WELL NAME AND NUMBER
				GAS USED ON JOB :		TO WELL DEPTH/#)		Odessa Coiled Tubing
				Disposal	5,000		C	BJ SERVICES DISTRICT
				WELL CLASS:		OR DEPTH (A)	2000	COMPCCIED OF
				WELL TYPE: New Well	Ne.	UPERVISOR WELL API NO:	DAY YEAR BJ SERVICES SUPERVISOR	
		88255	New Mexico	Loco Hills	1001	P.O. Box 4	T	INVOICE TO:
		ZIP CODE	STATE	₹	CITY	STREET OR BOX NUMBER	STREET OF	Westell ray
3			20094782 - 20094782		FURCHASE UNDER NO	CREDIT APPROVAL NO.	NAME)	CUSTOMER (COMPANY NAME)
	NVOICE MIMBER	Z	SER NIMBER		BIRCHARE OBORS W			

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11 /6 173 30 E W BHUFF LKO HILLS WALLER ARIME ZUEZZ 13 NOON



P = pressure psig V = Volume FT<sup>3</sup> R = 55.15 constant for N2 MW of N2 is 28..016 Input P1 PSIG Set V1=V2 Input T2 Deg F Input T1 Deg F n = number of moles Temp  $R^0 = 459.69 + F^0$ Solve P2 PSIG Ideal Gas Law for N2 Ans Loss in BBI's/hour Length of test in hours Input volume in BBL's \*\*\* Loss allowed in BBL's/day Loss allowed in BBL's/year Nitrogen Brine Well Test Input stop pressure (psig) Input start pressure (psig) Loss allowed in BBL's/hour 298,3703356 PV=nRT 160 0.099055851 **SAP** 1000 0.11 2.74 C. It por SALT ILSTITUTE GUINGLINGS!  $^{***}$  N $_2$  SCF divided by compressibility number form engineering charts \*\*\* Example: 20,000 scf / 111 = 180 bbls of  $N_2$  300 psig @ 80 f see page 11-2 BJ engr. book PRESSURE DROP NUETO TEMP CHAUSE <V1 - V1\*(Pf/Ps)>/time (P1\*V1)/T1 = (P2\*V2)/T2PRESSURA DRUP DUE TO LEAKAGE PMSSED OK Lola P in PSIG V in Ft<sup>3</sup> T in degress Rankin MIT TEST - Offer TO FORMATION LOCO HILLS BRING WALL

MT \$ 30-015-32068

8/18/04 Whin-och

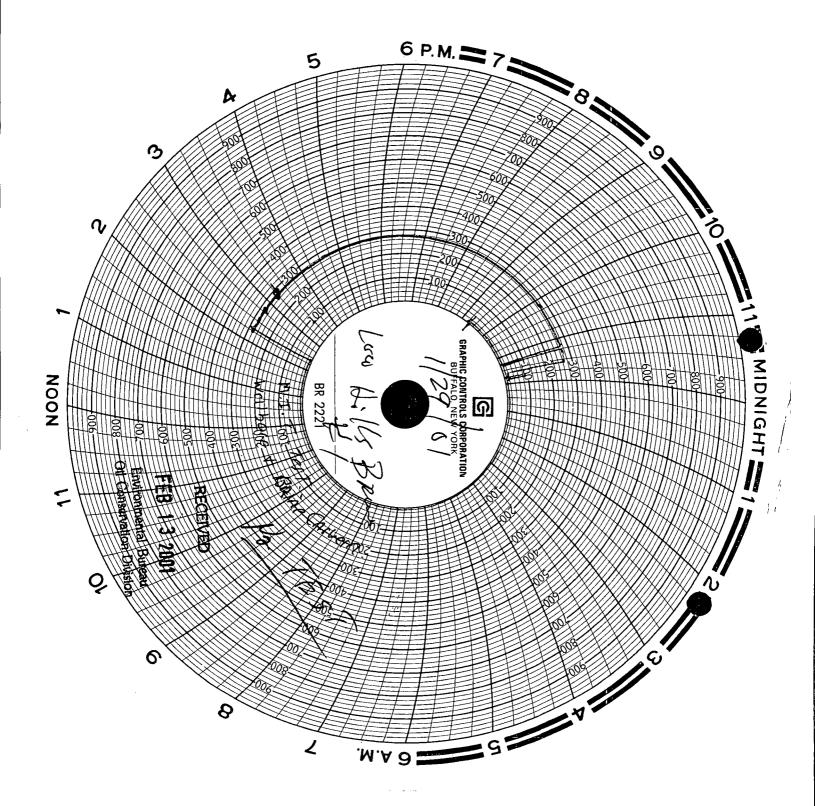


## TREATMENT REPORT

8/18/04 AMI 30-015-32068

Page\_\_\_\_ of \_\_\_\_

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Date 8-/				0007	F.	Receipt_	195810044	Customer_KA	y Wastalk
Lease / L County/	ignil _			#_/	Fi	eld <i><u>LcRo t</u></i>	41114 WATER OBS	ocation	<u> </u>
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L				•		Flush Dens	, lb./gal.		
1208 (1/98)		-							



# **Bill Richardson**

Governor

2008 OCT 20 PM 3 47

Joanna Prukop **Cabinet Secretary** Reese Fullerton **Deputy Cabinet Secretary**  **Mark Fesmire Division Director** Oil Conservation Division



# **OIL CONSERVATION DIVISION BRINE WELL INFORMATION REQUEST**

WELL IS TO						
GENERAL INFORMATION:						
API Number 30-015-32068 Brine Well Permit # BW-21						
API Number 30-015-32068 Brine Well Permit # 8w-21						
Date Permit Expires?						
Location: Section 16 Ts 175 Rg 30 F						
Location:       Section       16       Ts       17 S       Rg       30 F         FNL       FSL       600       FEL       FWL       230         GPS of well(s):       Lat:       Long:						
GPS of well(s): Lat: Long:						
Have you reviewed and understand all of your permit conditions? Yes ♥ No□						
Are you presently deficient of any condition in your permit? Yes □ No ☑ Don't know □						
Do you operate below grade tanks or pits at the site? Yes□ No 🗷						
Do all tanks, including fresh water tanks, have secondary containment? Yes⊠ No□						
Do you think you have the expertise, knowledge and general understanding of what causes a						
brine well to collapse? Yes No						
Do you think OCD should provide guidelines on subsidence and collapse issues? Yes⊠ No□						
SITING INFORMATION: Please provide the following information and depict on 7.5						
minute (1": 2000') USGS Quad Map. Limit search to one mile radius.						
Is the brine well located within a municipality or city limits? Yes□ No⊠						
Distance and direction to nearest permanent structure, house, school, etc. if less than one mile:						
> / MILE						
Distance and direction to nearest water well if less than one mile:						
> 1 MICE						
Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s)						
if loss than one mile:						
1) less than one mile.						
Distance and direction to nearest known karst features or mines if less than one mile:						
> 1 mile						
) / mive						

Oil Conservation Division October 14, 2008 Page 2

Provide API Number: 30-015-04163 500' ±1 50414 EAST
Distance and direction to nearest tank battery(ies) if less than one mile:
SOU' + SOUTHEAST
Distance and direction to nearest pipeline(s), including fresh water pipelines if less than one mile: NUMEROUS PIPE (ING IN EVERY DIRECTION
Distance and direction to nearest paved or maintained road or railroad if less than one mile:
CR 217 150' TO WEST
Depth to ground water found above the Salado (salt section), regardless of yield:
NONE
Name of aquifer(s):
None
WELL CONSTRUCTION: Please provide the following information and attach a
diagram depicting the brine well. Check box if attached:
Copy of a current well diagram: Attached 🗹
Copy of formation record with tops:  Attached  Attached
Copy of geophysical well logs if available: Attached $lacksquare$ If not, well logs within one mile $\Box$
Depth of the top of the salt below ground surface (feet):
510'
Depth to the bottom of the salt below ground surface (feet):
Depth(s) to and thickness(es) of any anhydrite section(s) (located above the salt):
230'- \$88' 758' THICK
Depth of casing(s) shoe below ground surface (feet): 419
Is the easing shoe set in the anhydrite or other layer above the salt? Yes \( \subset \text{No } \subset \)
Is the casing shoe set into the salt? Yes No If yes, how far into the salt?
Depth of tubing(s):  ΝοΝε
Do you suspect that your cavern has partially caved in? Yes⊠ No□ Don't know□
OPERATIONS: Please provide the following information.
Start date of brine well operation: $8/1985$
Total volume of fresh water injected into the brine well to date (bbls) and how determined:
9,148,000 SYEAR AVERAGE

Total volume of brine water produced (bbls) to date and how determined:
7,978,000 5 YEAR AVERAGE
Have you ever lost casing or tubing? If yes, please provide details.    Document attached □
Do you maintain a surface pressure on your well during idle times? Yes□ No⊠
Have you noticed large amounts of air built up during cavity pressurization? Yes□ No⊠
Have you ever noticed fluids or air/gas bubbling up around the casing during testing or normal operations? Yes□ No⊠
MONITORING: Please provide the following information.
Are you currently monitoring ground water contamination from your brine well or system? Yes ☒ No□
Have you ever run a sonar log? Yes No□  If yes, please provide last date: 2/7/01
Provide cavern configuration (dimensions and volume) and method(s) used to estimate: If sonar report please attach $\mathbb{R}$ If other, please specify and provide a sketch of cavern: $\square$
Do you have a subsidence monitoring program in place? Yes ₩ No□
Do you have any geophysical monitoring devices, such as a seismic device positioned near your brine well? Yes \(\Pi\) No\(\ma\)
Have you submitted all of your monthly, quarterly, or annual reports to the OCD? Yes ☑ No□
Have you failed a brine well mechanical integrity test (MIT)? If yes, please attach details and results. Attached & FAILED ON 6-17-08 PLUGED 6-18-08
Have you ever had a casing leak? Yes □ No□ Have you ever had a cavern leak? Yes □ No☒ Don't know □ Have you ever exceeded the cavern fracture pressure? Yes □ No☒ Don't know □ Do you know how to calculate your maximum pressure? Yes ☒ No□ Don't know □ Have you routinely looked for cracks or fissures in the ground surface around your brine well? Yes ☒ No□
Do you have any minor or major cracks, fissures, tank settlement, line breakage from settlement or any minor subsidence. Yes \( \text{No} \)
During operations have you experienced any ground vibration, ground movement, or well movement after opening or shunting valves, pump start-up, shut-down, etc.? Yes No

Oil Conservation Division October 14, 2008 Page 4

Have you ever experienced unexpected pressure gain or loss in the cavern? Yes□ No⊠
If Yes, was there a difference in your normal flow rate?  Yes□ No⊠
Anytime during the past 5 years, have you experienced a noticeable difference between fresh water volume pumped into the well verses brine water produced? Yes □ No.
Are you concerned about pulling the tubing due to the fact it may be difficult to re-enter the hole? Yes No
Are you concerned about running a sonar tool in fear of losing tool because of debris in hole?  Yes \( \text{NoN} \)
Have you ever conducted a fly over of your well site? No\(\mathbb{N}\) Yes\(\mathbb{I}\) if yes, please provide photo.  □ Photo(s) attached
<b>Calculation:</b> Please divide your estimated total volume of produced brine by 180,000 and multiply by 50. <b>Example:</b> If you have produced a total of $18,000,000$ bbls of brine in the life time of the well then your calculation would be $18,000,000/180,000 = 100 \times 50 = 5000$ .
<ol> <li>Provide the calculated number above here:</li></ol>
Is the calculated number found in #1 above greater than #2? Yes▶ No□
Comments or recommendations for OCD:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Company Name-print name above

RANDALL HARAS

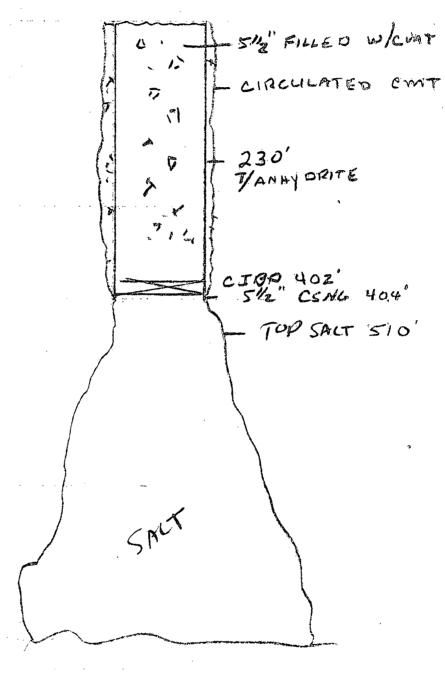
Company Representative- print name

Company Representative- Signature

Title GEOLUGIST AGENT

Date: 10/17/08

BRIME WELL & 1 BW-21 30-015-32068



# Chavez, Carl J, EMNRD

From:

Price, Wayne, EMNRD

Sent:

Wednesday, November 12, 2008 12:28 PM

To:

Chavez, Carl J, EMNRD

Subject:

FW: Loco Hills Brine Well (BW-21) API# 30-015-32068 UL:M Sec. 16 17S 30E (Eddy County)

Carl please get with me on this issue, before you respond.

-----Original Message-----

From: Pham.Lisa@epamail.epa.gov [mailto:Pham.Lisa@epamail.epa.gov]

Sent: Wednesday, November 12, 2008 12:15 PM

To: Chavez, Carl J, EMNRD

Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD

Subject: Re: Loco Hills Brine Well (BW-21) API# 30-015-32068 UL:M Sec. 16 17S 30E (Eddy County)

Hi Carl,

Thank you for informing us about this. It is remarkable that this well collapsed shortly after being plugged. Could you please provide us the following information regarding this well:

- What is/was the well's purpose, construction, MI history, and volumes injected?
- What actually failed mechanically?
- How long did the operator/owner(s) inject after the failure (if any)?
- What have they done in terms of enforcement?

Best regards,

Lisa

"Chavez, Carl J, EMNRD" < Carl J. Chavez @ state.nm.us > wrote on 11/10/2008 05:22:13 PM:

> Lisa:

>

- > Good afternoon. I am writing to report a brine well collapse (see
- > attached press release) that occurred on Monday, November 3, 2008 at
- > about 14:30. Subsidence cracking was noticed after lunch around 13:00
- > according to the operator. There have been no injuries reported to date.

>

- > The sinkhole feature is being fenced off with the fence-line
- > transecting and stopping traffic at the nearby N-S county road at two
- > locations west of the subsidence feature. The county road will likely
- > need to be reconstructed around the area to facilitate oil field
- > traffic in the area.

>

- > The OCD is currently updating its OCD Online website to provide more
- > detailed correspondence with photos of the command center similar to
- > Jims Water Service at http://ocdimage.emnrd.state.nm.
- > us/imaging/AEOrderFileView.aspx?appNo=pENV0000BW0024. The photos and
- > correspondence will be scanned in this coming Wednesday morning.

>

- > Please contact me if you have questions. The OCD will be off tomorrow
- > to observe the Holiday and back in Wednesday. Thank you.

> >

- > Carl J. Chavez, CHMM
- > New Mexico Energy, Minerals & Natural Resources Dept.
- > Oil Conservation Division, Environmental Bureau 1220 South St. Francis
- > Dr., Santa Fe, New Mexico 87505
- > Office: (505) 476-3491

- > Fax: (505) 476-3462
   > E-mail: CarlJ.Chavez@state.nm.us
   > Website: http://www.emnrd.state.nm.us/ocd/index.htm
   > (Pollution Prevention Guidance is under "Publications") [attachment
   > "PR-OCD Brine Well 11 03 08.pdf" deleted by Lisa Pham/R6/USEPA/US]

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### Chavez, Carl J, EMNRD

From:

Armando Villanueva [mando1106@gmail.com]

Sent:

Friday, November 14, 2008 11:22 AM

To:

Chavez, Carl J, EMNRD

Subject:

Daily Logs of Activity BW-21 11-9-08 to 11-13-08

Attachments: Daily Logs of Activity BW-21 11-9-08 revised.doc; Daily Logs of Activity BW-21 11-10-08 revised.doc; Daily Logs of Activity BW-21 11-11-08.doc; Daily Logs of Activity BW-21 11-12-

08.doc; Daily Logs of Activity BW-21 11-13-08.doc

### Mr. Chavez

This is all the the Daily logs we have for now. Todays Daily Logs will be sent later tonight. The pictures are pretty big and take much time to send if its ok with you I will send that tonight as well. If there anything else just let me know or the email the office at <a href="mailto:swss@leaco.net">swss@leaco.net</a>. Thanks!

#### Armando Villanueva

This inbound email has been scanned by the MessageLabs Email Security System.



2325 W. County Road P.O. Box 5169 Hobbs, NM 88241 505-393-3072 Fax 505-393-3082 I-800-477-2918

> Web: <u>www.southwestss.com</u> E-mail: <u>swss@leaco.net</u>

# Site Safety Work Plan, Process, Public and Worksite Protection Plan

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 1 November 6, 2008

## **Emergency Response Planning**

### **Philosophy**

Loco Hills Water Disposal, along with Southwest Safety Specialists, is committed to minimizing health, safety and environmental risks involved in our operations. While covering all possible emergency situations is impossible, this plan containing/controlling those hazards. This plan covers the "basics" of an emergency situation and should be viewed as a guidance in most emergency situations.

# Using this document

This plan covers the procedure of an emergency situation. Good communication protocols are set forth as primary and should be regarded in a serious fashions. Personnel should complete immediate actions for any emergency, then contact Management so as to take advantage of collective reasoning regarding an emergency situation.

### **Objective**

To ensure that site and public safety are met by monitoring, surveying the area, and ongoing determination of the collapse site as well as the determination of how much of Loco Hills Water Station must be taken out of service. Limiting the environmental impact of any rainwater run off or any other contaminate that would affect the site.

Re: BW-21 (API #30-015-36119) Collapse site located approximately one mile north of Loco Hills on Eddy County Road 217

# Protection for the public and the environment due to the brine well (BW-21) Collapse

1. Public access has been excluded temporarily by barricading the entrances with barrels, cones, caution tape, four strand barbed wire fence (which is used around the Hot Zone), and signs from the State located at every 100 ft spacing along will state:

## STATE TRUST PROPERTY NO TRESPASSING OR DUMPING

Violators subject to a \$500.00 fine or six months imprisonment For more information, contact the New Mexico State Land Office

> (505) 885-1323 1004 Paisano Carlsbad, NM 88220

Commissioner Patrick H. Lyons Says: "DON'T TRASH THE TRUST"

BLM signs on the BLM side will state:

Danger No Trespassing Violators Will Be Prosecuted Phone (575) 234-5972

- 2. Southwest Safety Specialists has staked out the concentric crack with number stakes measured, photographed and monitored to show an idea of how much the concentric crack has developed throughout a course of time. This will be monitored 24 hours a day in shifts of 12 hours. Within these shifts there will be no entry in the hot zone by any personnel unless escorted by a member of Southwest Safety Specialists. The buddy system and safety equipment will be implemented when within the fenced area, safety concerns will be set as needed such as H<sub>2</sub>S monitors from the neighboring drilling rigs. Emergencies are to call 911 for state police and sheriff department. For health issues, all personnel will be taken to medical facility in Carlsbad.
- 3. Southwest Safety Specialists will be responsible for the Incident Command once the OCD has released the site from the Incident Command System, and will report to OCD with any major activities at the site on a daily basis.
- 4. A detour is set for vehicular traffic around the area of collapse site by having vehicles use dirt roads that can be found around the area for use to and from the drilling units and pump jacks so the are able to service and monitor so that no job is stalled or stopped due to the collapse site.
- 5. Southwest Safety Specialists has communicated with Central Valley COOP and plans are made in the event of a collapse of a power pole servicing the area. Southwest Safety Specialists and Central Valley COOP have been made plans to place Generators to power house that will be affected while Central Valley COOP place new poles in a safe zone that will lined out by Southwest Safety Specialists so that power can be restored to the areas in need of it.
- 6. Southwest Safety Specialists has communicated with DCP, a pipeline company in the area of the collapse site. The pipeline that DCP has is in a safe zone and is not in jeopardy of the collapse site.
- 7. The plan is to stake off from the concentric crack (300 ft from the center of the well head) to 600 ft diameter from the well head. Berms will be placed from the North and South sides of the road as well as along the west side of the road to control rainwater or possible spills from the facility. Southwest Safety Specialists will also bring out survey equipment to survey out the area.

8. Fresh water pond has been emptied and the removal of the salt water pond nearest to the Hot Zone is the process of being emptied and moved to the furthest pond within the Safe Zone. Oil Conservation Division, BLM, and the State of New Mexico has approved to keep rainwater, run offs, or spill containments to kept away and controlled within a contained area with the use of berms.

If you have any questions regarding these safety measures and/or procedures contact me (Charles Scott Magness) @ (575)441-2479



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# Daily Site Safety Work Plan, Process, Public, and Worksite Protection Plan for 11-9-08

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 021

# **Daily Objectives and Status**

On 11-8-08, the four-stranded barbed wire fence was being completed. The fence crew did not work 11-9-08. There is one gap in the fence that needs to be completed on Monday. It is temporarily flagged with a barrier. Chains and locks need to be added at the access gates. Loco Hills Water Disposal is providing 2 combination locks for North and South gates as well as a lock on a vehicle gate in the north side when gets installed. Southwest Safety Specialists surveyed the area of the site to identify concentric cracks. All concentric cracks and 600 ft diameter are now identified with stakes and neon green flagging.

On 11-9-08, Southwest Safety Specialist took measurements to accurately pin point the potential 600 ft diameter and concentric cracks. Marker was set at 170 ft due west of wellhead (zero marker). Measurements were done 300 ft north and south of zero point on east edge of asphalt road. Painted neon orange lines on the asphalt are set every 10 ft. West measurements were set at 130 ft from point zero. The markings west of zero are set at 180 ft, 200 ft, 220 ft, 240 ft, 260 ft, 280 ft, and 300 ft. A rebar marker was placed 156.6 yards east of zero point which makes it 300 ft from wellhead. All markers that are 300 ft from wellhead are flagged neon green while all other markers are neon orange. The concentric crack markers neon green are numbered and photographed with tape measure laying across crack to identify movement.

The fresh water pond is empty, the berm on the south side is almost all gone, and the two brine water ponds going east are being emptied. The berm south of the two insulated oil tanks has been posted "NO ENTRY," the berm north-south of second brine pond is posted "NO ENTRY," and all Loco Hills Water Disposal operators have been briefed and trained.

Southwest Safety Specialist surveyed facility for H<sub>2</sub>S and all is clear. The sinkhole is continually moving and widening. East-

west measurement on 11-9-08 was at 168 ft with Bushnell range finder. Did not have any curious By passers wanting to see the sinkhole.

## **Action Items for 11-10-08**

- 1. Coordinate with Lea County Road Department
- 2. Coordinate the Central Valley Electric COOP
- 3. Morning meeting with Dick Maloney
- 4. Contact Jim Carr of the New Mexico Land Office per his request
- 5. Contact David Herrell of BLM per his request
- 6. Contact Kevin Rogers for the status of fence, locks, and signs. Berms for rainwater or spills
- 7. Continue with surveys of any concentric cracks and collapsed hole
- 8. Send daily report to OCD
- 9. Continue to gather data and build long term plan
- 10. Southwest Safety Specialist will continue to maintain 24 hour instant command and site safety.

Contact Southwest Safety Specialist at 1-800-477-2918 or Scott Magness at (575) 441-2479

Revised 11-12-08



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# Daily Site Safety Work Plan, Process, Public, and Worksite Protection Plan for 11-10-08

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 021

# **Daily Objectives and Status**

On 11-10-08 Southwest Safety Specialists met with Eddy County Road Department (8:26am - 10:40 am) to survey a new road that will reroute traffic to go around the facility. Southwest Safety Specialists also met with Central Valley Electric COOP (10:00am) to discuss about the transmission line (that currently stands inside the barbed wire fence) about rerouting the power. Central Valley Electric COOP took down the service power lines. These lines were rolled up and laid by the pole inside the four strand barbed wire fence. The transmission line is for certain that it will go down due to being in the fall zone. At this point it is critical that this matter be taken serious because at this time this transmission pole is currently LIVE.

Jim Carr came by at 10:45 in the morning to bring more signs to post and also to discuss boundary markers, and signage. He also discussed with Southwest Safety Specialists to add him in to the daily E-Mails so that he could be up-to-date on all the plans and assist when possible. David Herrell of BLM was contacted by Southwest Safety Specialist at his request. He gave Southwest Safety Specialists a number to Cave Karst as well as giving more names and numbers to help assist on surveying the collapse area and the surrounding areas.

Southwest Safety Specialists has contacted Kevin Rogers and will continue to follow-up with him on the status of the fence, locks, and chains. Southwest Safety Specialists will also follow-up on the number of signs needed for BLM and the status about the berms to keep any rain water and contaminates away from the collapse area.

Southwest Safety Specialist surveyed facility for H<sub>2</sub>S and all is clear. The sinkhole is continually moving and widening. Eastwest measurement on 11-10-08 was at 189 ft with Bushnell range finder at 5:00 pm. One curious By passer wanting to take pictures

of the sinkhole and another drove passed the road closed signs and drove to the rig east of site. Southwest Safety Specialists built up the barriers for curious By passers to not through or close to the hot zone.

## **Action Items for 11-11-08**

- 1. To write in orange paint on road "Detour"
- 2. Central Valley Electric COOP will have to talk to supervisor about rerouting power off of transmission pole
- 3. Morning meeting with Dick Maloney
- 4. Contact Kevin Rogers for the status of fence, locks, and give him the number of signs that will be needed for BLM, State as well as signs for Northwestern berms. Berms for rainwater or spills
- 5. Continue with surveys of any concentric cracks and collapsed hole
- 6. Send daily report to OCD
- 7. Continue to gather data and build long term plan
- 8. Southwest Safety Specialist will continue to maintain 24 hour instant command and site safety.

Contact Southwest Safety Specialist at 1-800-477-2918 or Scott Magness at (575) 441-2479



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# Daily Site Safety Work Plan, Process, Public, and Worksite Protection Plan for 11-11-08

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 021

# **Daily Objectives and Status**

Southwest Safety Specialists went out to survey the collapse site @ 7:36 am and also took pictures of its current size. At 8:08 am Dick Malony came by to ask about the size of the collapse site and to let Southwest Safety Specialists know that he was still continuing to work on the fence to complete it and informed Southwest Safety Specialists that he would be at the last trailer if assistance was needed from him. He is continuing two brine ponds that are in the potential collapse area. Jack Callaway and Gary Conklin of Central Valley Electric COOP came by at 10:00 am - 11:00 am to survey where the transmission pole needs to be relocated to be put in a safe zone.

Kevin Rogers brought out Phillip Lara, Lucas Palomino, and Bernard Martinez of MSI to complete and fix the four strain barbed wire. Kevin Rogers and Southwest Safety Specialists agreed that (9) signs would be the sufficient amount of signs needed on the BLM side of the fence. Upon completion of the fence Dick Malony placed locks and chains on the north and south ends of the gates. The North gate has a pad lock but the South gate has a combination lock. He then said that when the gate for vehicle's is completed he would lock it up as well.

Southwest Safety Specialists then placed stakes out every 20 ft from point zero. The markings are set at 20 ft, 40 ft, 60 ft, and 80 ft out with neon orange flags for the use of monitoring and surveying when the hole increases. At 1:07 pm Ralf Baker of the New Mexico State Police Department stop by to see the status of the collapse site and said that it had increased over the past several days and possibly come by tomorrow as well. Southwest Safety Specialists continued to place more stakes marked in green neon flags. These flags were heading north and south from point zero to 247 ft for marking the concentric circle on the road.

Central Valley Electric COOP called to inform Southwest

Safety Specialists @ 1:30 pm that they plan to install a new and taller pole on the north end side in the safe zone outside of the fenced area. They would the old transmission pole inside the fence line. This plan by Central Valley Electric COOP will be done on Friday the 14<sup>th</sup>. If all goes as plan power will be down for only 5 hours, then all power will be back to normal operations. Robert Hououghtaling of Penasco Valley Telecommunications came by the briefing area to let Southwest Safety Specialists know the location of their lines. Their lines are located on the west shoulder of the road, and wishes to be contacted if his lines are in danger so they can make plans to relocate them as soon as possible. Temporarily, until the signs come in, detour and directions to go around hot zone have been painted on the road.

Southwest Safety Specialist surveyed facility for H<sub>2</sub>S and all is clear. The sinkhole is continually moving and widening. Eastwest measurement on 11-11-08 was at 195 ft with Bushnell range finder. On 11-11-08 @ 12:15 am a by passer stopped at the briefing area for Southwest Safety Specialists to ask for detour roads to get to the rig that is north of the collapse site.

## Action Items for 11-12-08

- 1. Call Dick Maloney at Loco Hills Water Disposal to inform him that he will not have power on the 14<sup>th</sup> along with all that will be affected with the power loss
- 2. Contact Kevin Rogers for the berms for rainwater or spills
- 3. Contact David Harrell of BLM and Jim Carr of the State to verify if it is ok to have Penasco Valley Telecommunications to reroute their lines along the fence, and to let Penasco Valley Telecommunications know that their lines are in the fall zone
- 4. Check on the status of the vehicle gate and lock with Dick Maloney
- 5. Give Central Valley Electric COOP a layout on where the new pole for the transmission pole will be at on the outside of the fence and the measurements from the pole to the hole
- 6. Send daily reports to OCD
- 7. Continue to gather data and build long term plan
- 8. Southwest Safety Specialist will continue to maintain 24 hour instant command and site safety.

Contact Southwest Safety Specialist at 1-800-477-2918 or Scott Magness at (575) 441-2479



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# Daily Site Safety Work Plan, Process, Public, and Worksite Protection Plan for 11-12-08

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 021

# **Daily Objectives and Status**

Southwest Safety Specialist was contacted by Wayne Price of OCD had asked about rainwater runoff berms, requested more photos, asked to get some current aerial photos, and asked about worker and public site safety, asked for current hole dimensions. SWSS went to drop off all reports to Dick Malony including long term plan and the three previous daily reports. Southwest Safety Specialists continued monitoring the collapse site. The Eddy County Road Department came out to survey the area for the new road. DCP Midstream also came out to survey the area to figure if the placement of the new pole is going to conflict with pipeline that currently runs in the area. Tim W. Gum With Oil Conservation Department came by to survey and took pictures of the sinkhole.

Central Valley Electric COOP had stated that they will be treating this as a natural disaster and they will installing two new poles and the remove the old pole. The pole is 93 ft from the sinkhole and the new pole needs to be at least 200 ft from the previous pole that is currently inside of the fence. The new pole will be put up on 11-13-08. There will be a 5 hour period of loss of electricity. This plan will set around noon.

BLM geologists and surveyors toured the site, inspected the width and length of the hole. BLM geologists and surveyors also inspected the radial crack and used a GPS on it. BLM said that they would return on 11-13-08. At 2:47, Southwest Safety Specialists left message with Penasco Valley Telecommunication will need to move their line due to it being in the danger zone. If they could be at the site while the Eddy County Road Department and BLM are at the site rerouting the road. They can get a verification where they can reroute their wire in a safe zone. Southwest Safety Specialist was contacted by Dick Maloney and informed him that Central Valley Electric COOP moved the plan to Thursday the 13<sup>th</sup> instead of Friday the 14<sup>th</sup>. Dick Maloney said

that he will need to make arrangements with the loss of power for approximately half of the day. Dick Maloney also said that he had arranged for the aerial photos for Thursday 11-13-08. Southwest Safety Specialists is trying to find other means to have aerial photos taken to help with the surveying and monitoring of the collapse site. At 3:21, Penasco Valley Telecommunication called back and said that they would be on site at 8:30-8:45 on the Thursday the 13<sup>th</sup>.

Southwest Safety Specialist surveyed facility for H<sub>2</sub>S and all is clear. The sinkhole is continually moving and widening. Southwest Safety Specialists continues to take pictures and measurements of the growth of the collapse site for daily logs . East-west measurement on 11-12-08 was at 198 ft with Bushnell range finder. The North-South measurement on 11-12-08 was at 140 ft which was 40 ft north of zero point and 100 ft south of zero point. Did not have any curious By passers wanting to see the sinkhole.

## **Action Items for 11-13-08**

- 1. Call Dick Maloney at Loco Hills Water Disposal to inform him that he will not have power on the 13<sup>th</sup> along with all that will be affected with the power loss
- 2. Contact Kevin Rogers and Dick Maloney for the berms that OCD is requesting for rainwater or spills and locks that need to be purchase by Southwest Safety Specialists for the New Mexico State Land
- 3. SWSS will continue setting stakes, flagging, and signs around the unsafe area of the Brine Station for the safety of the employees or drivers working at the facility. This will be placed in the south of the two vessels to the east of second brine pond in potential unsafe area and across south pit to the fence.
- 4. Central Valley Electric COOP moved work to be performed 11-14-08 to 11-13-08
- 5. Jeannette Martinez with BLM will be here Thursday @ 8:30-8:45 with the Eddy County Road Department to discuss where the new road will be. She will also speak with Penasco Valley Telecommunications to inform them where they can run their lines
- 6. Send daily reports to OCD
- 7. Continue to gather data and build long term plan
- 8. Southwest Safety Specialist will continue to maintain 24 hour instant command, site safety, and the monitoring of the hole.

Contact Southwest Safety Specialist at 1-800-477-2918 or Scott Magness at (575) 441-2479



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1-800-477-2918

# Daily Site Safety Work Plan, Process, Public, and Worksite Protection Plan for 11-13-08

For

Loco Hills Water Disposal Loco Hills, NM Brine Well NO. 021

# **Daily Objectives and Status**

BLM Reality (Paul Evans, Jim Rutley, and Janette Martinez) arrived to the briefing area at 9:03 am to speak with Eddy County Road Department (Robert Fernandez) to discuss the reroute for Eddy County Road 217. BLM Reality also needed to speak with Penasco Valley Telecommunications (Zach Simer and Laura Wedige) about rerouting their line that is currently on the west shoulder of the road. Paul Evans also stated that the owner of Marbob Energy (Johnny Grey) owns a helicopter as well as with his brother-in-law. Southwest Safety Specialists had given him a card in hopes to be contacted by him to ask if he would be able to take some aerial photos for SWSS. At 10:00 am, there was no set plan for the reroute of the road nor for Penasco Valley Telecommunications line.

The crew for Central Valley Electric COOP arrived at 10:30 am. The crew consisted of eight people Aaron Horner, Don Reynolds, Gary Conklin, Jaime Olivas, Chris Gabaldon, Kance Velasquez, Stan Cyrus, and Gabriel Rodriguez. They planned the installation of a new and taller transmission pole and the removal of three poles. Southwest Safety Specialists monitored their safety for the removal of the pole closest to the collapsed area as well as the removal of the pole in front of Loco Hills Water Disposal even though the pole was in a safer location.

Southwest Safety Specialists surveyed the northeast berms and discussed that it be best to have the stakes in 50 ft increments instead 25 ft for the safety of LHWD workers and truck drivers. Southwest Safety Specialists spoke with Dick Malony and he said that it is ok to have berms in the put in for the rainwater and spills in on Monday.

Southwest Safety Specialist surveyed the area for H<sub>2</sub>S and all is clear. The sinkhole is continually moving and widening. At 5:00 pm, East-West measurement on 11-13-08 was at 198 ft with

Bushnell range finder and at 175 ft from North-South. . At 6:30 pm, a rig worker came by the barricade to ask for directions on how to get around the hot zone.

## **Action Items for 11-14-08**

- 1. Dick Maloney set a time to put up berms for rainwater or spills on Monday
- 2. SWSS will continue setting stakes, flagging, and signs around the unsafe area of the Brine Station for the safety of the employees or drivers working at the facility. This will be placed in the south of the two vessels to the east of second brine pond in potential unsafe area and across south pit to the fence.
- 3. Send daily reports to OCD
- 4. Continue to gather data and build long term plan
- 5. Southwest Safety Specialist will continue to maintain 24 hour instant command, site safety, and the monitoring of the hole.

Contact Southwest Safety Specialist at 1-800-477-2918 or Scott Magness at (575) 441-2479

### Chavez, Carl J, EMNRD

From: VonGonten, Glenn, EMNRD

Sent: Friday, November 14, 2008 12:43 PM

To: Price, Wayne, EMNRD; Hansen, Edward J., EMNRD; Snyder, Jim, EMNRD; Griswold, Jim, EMNRD; Chavez, Carl J,

EMNRD

Cc: Fesmire, Mark, EMNRD; Porter, Jodi, EMNRD

Subject: Emailing: Worker tells of plunge into sink hole - Carlsbad Current-Argus.htm

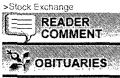


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### Worker tells of plunge into sink hole

Click photo to enlarge

By Stella Davis Current-Argus Staff Writer Article Launched: 11/13/2008 09:36:24 PM MST

Thanksgiving, giving thanks will have special meaning for Burnell Booker. Plummeting 80 feet into a sink hole while sitting on his front end loader without getting killed is something to be more than thankful for, he said. The 41-year-old road construction worker was pulled to safety after waiting in the hole for more than two hours Wednesday afternoon before help arrived. "When my loader hit the bottom of the sink hole it lost all power, and there was no cell phone service

CARLSBAD — This

Carlsbad firefighter David McDougall begins his descent into the 80-foot sink hole from which he pulled construction worker Burnell Booker Wednesday afternoon. Booker had spent two hours in the hole after the earth opened up and swallowed his heavy front loader as he worked at a gravel pit off U.S. 62-180 near the state line. Submitted photo

down there," he said. "All I could do was yell for help and hope they would find me." Speaking from his hospital bed on Thursday, Booker, an employee with James Hamilton Construction the firm contracted for the widening of U.S. 62-180 from Carlsbad to the Texas state line said he feels lucky to be alive. His co-workers feel the same, he said.

"They have been rubbing my arm for good luck," said Booker, who sustained some cuts and bruises in the freak mishap and was kept in the hospital overnight for observation.

#### Advertisement

/> The ground opened up and swallowed Booker and his machine as he worked at a pit that provides crushed material for the road construction project. The site is about a mile north of the highway.

### **Front Page**

#### MORE FRONT PAGE HEADLINES

- 1 Worker tells of plunge into sink hole
- Several issues of concern follow initial incident

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He said he got bogged down and radioed for help to free the loader he was operating. "After I called on the radio I decided to try and move the loader one more time," Booker said. "At first, I thought it might be on a little bitty sink hole."

But it was more than a "little" one.

"The next thing I know I'm heading straight down a huge hole. As I was going down, it wasn't like my life flashed before my eyes. It felt like a ride that drops you down in just a few seconds. "As I was going down, I held on. I didn't know how far down I was going to go until I hit bottom. It was really quick."

He said it was about 45 minutes until his coworkers came with another piece of machinery to get him unstuck. But they couldn't find him at the location where they expected him to be. "When they didn't find me where I said I would be, they started checking the whole area. Finally, some of the guys shouted that there appeared to be a hole in the ground and headed in that direction.

"That's where they found me, screaming for help. I never doubted that I would be found. I just didn't know how long it would be." Carlsbad firefighter David McDougall, who rappelled into the sink hole to bring Booker to safety, said Booker was glad to see him. "He wanted to get out of the hole, that's for sure," McDougall said. "He was standing up and was talking. He didn't appear to have any broken bones, but he said that his back and stomach hurt. He was transported to the hospital after we brought him to the surface."

McDougall said the rescue was a team effort with fellow firefighters Scott Maxwell and Nate Skelton.

"The three of us went to the National Rescue Commission School to learn everything we need to know for this type of rescue," McDougall explained. "This type of rescue was a first for me."

McDougall said his teammates operated the highline that kept him safe as he rappelled down into the sinkhole.

"I couldn't have done it without them," he said. Eddy County Sheriff's Deputy Kelly Callicoat said he arrived at the scene about the same time two other deputies arrived.

"I called down to him (Booker) to make sure he was OK. I didn't want to get too close to the sinkhole in case it would collapse some more," Callicoat said. "When the guys from the fire department came, things began to move pretty quickly to get him out. He was probably down in the hole for a good two hours."

Booker said he is grateful to the people who rescued him. He said he planned to take the rest of the week off.

"Everybody is telling me how lucky I am to be alive. I believe it. It certainly was a ride, but one I don't ever want to repeat," he said.

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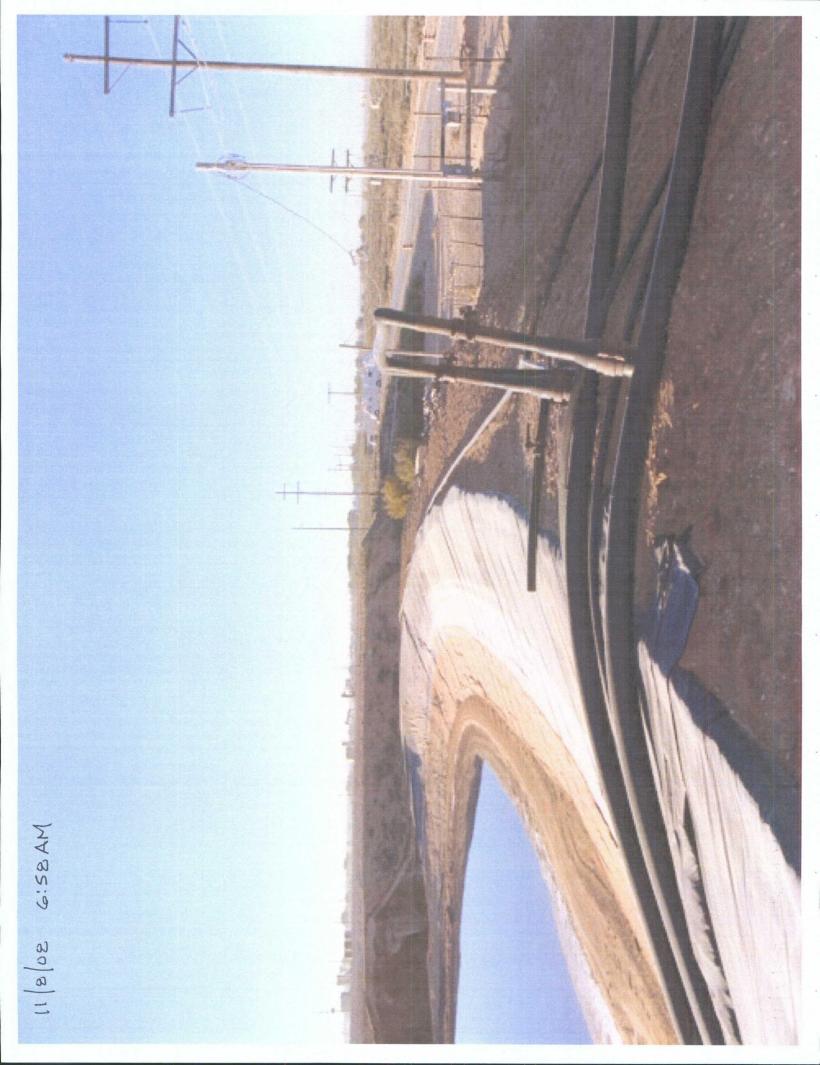
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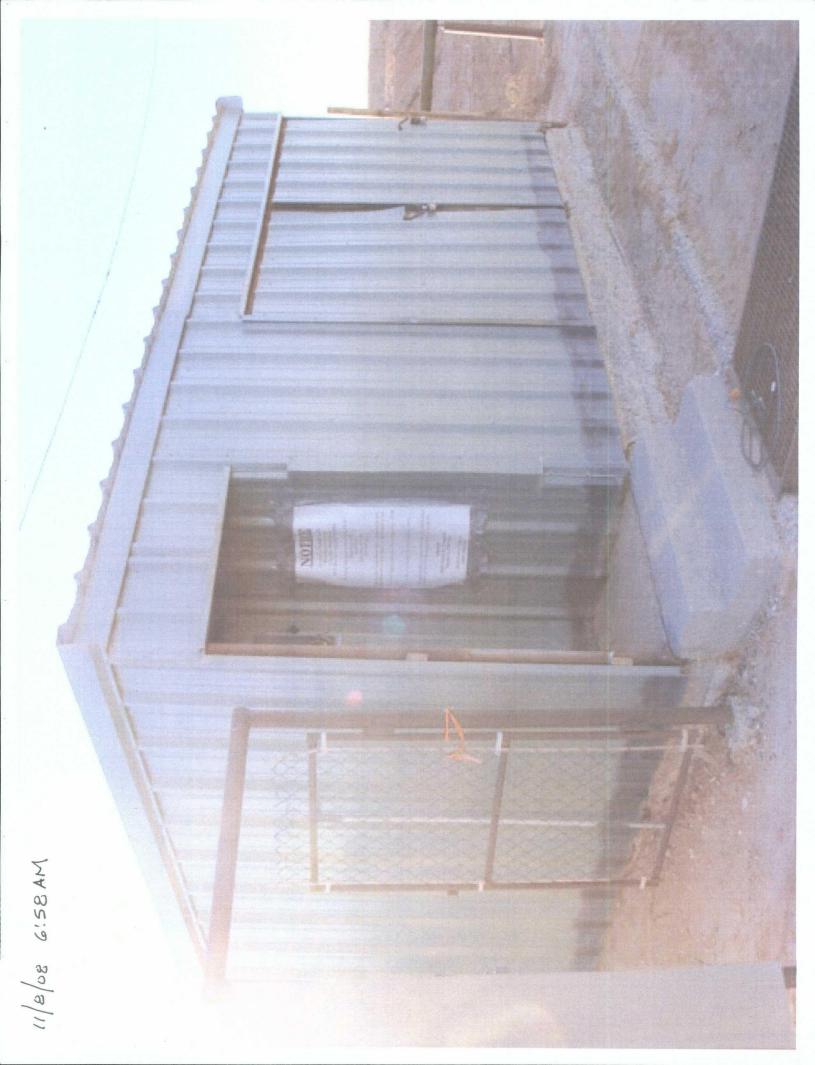
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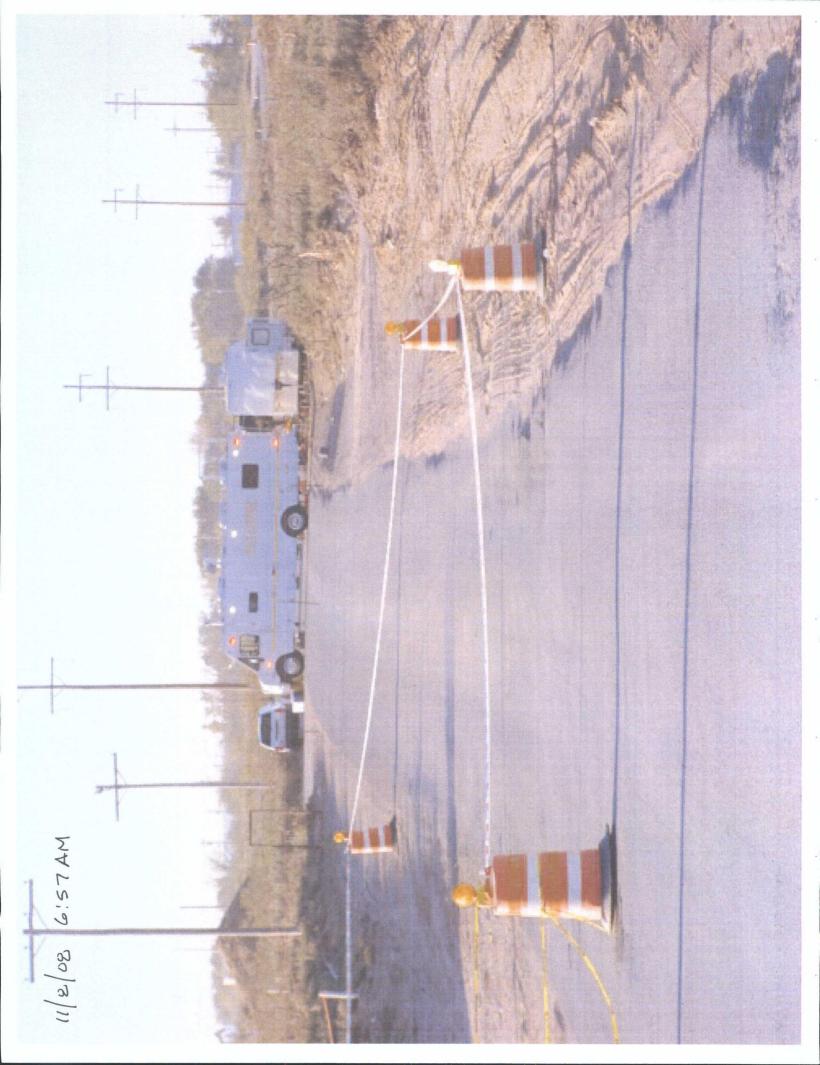
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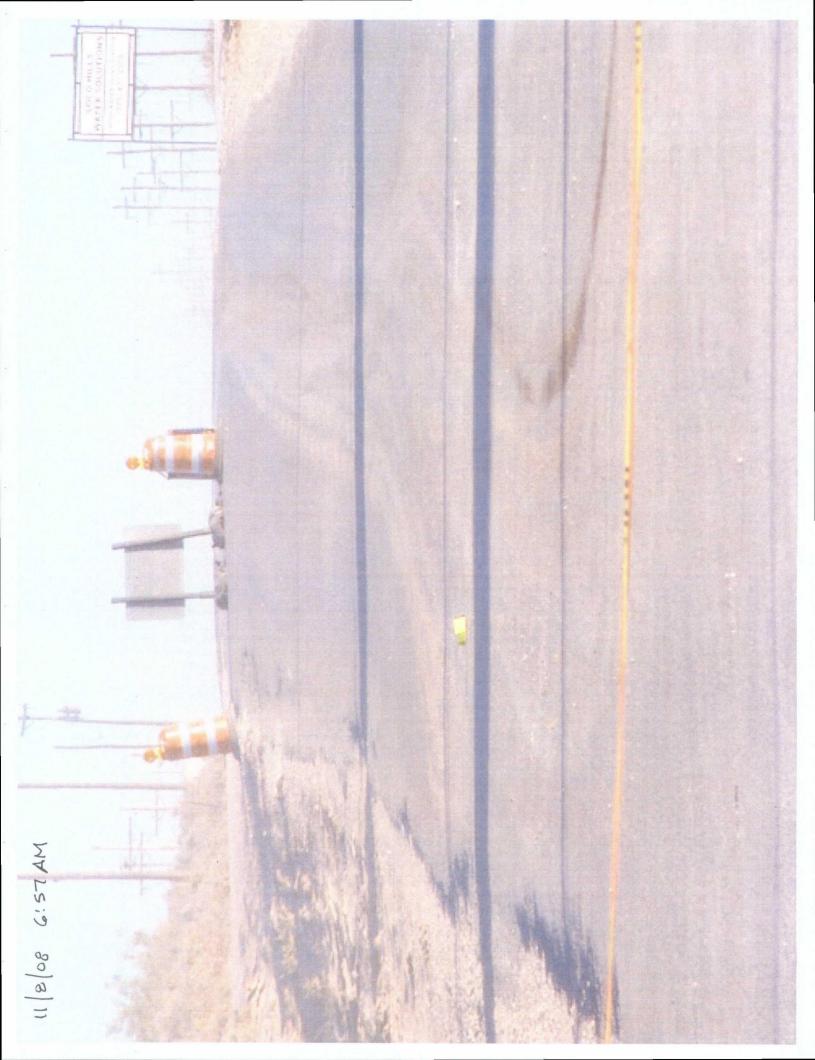


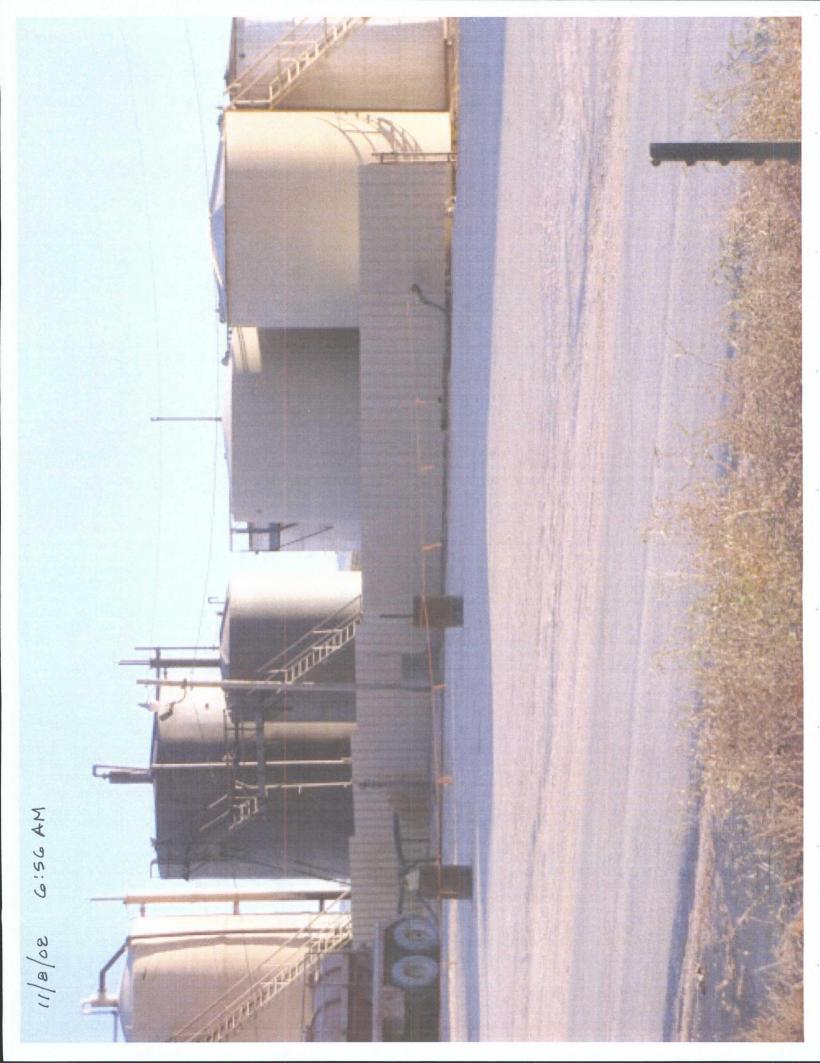


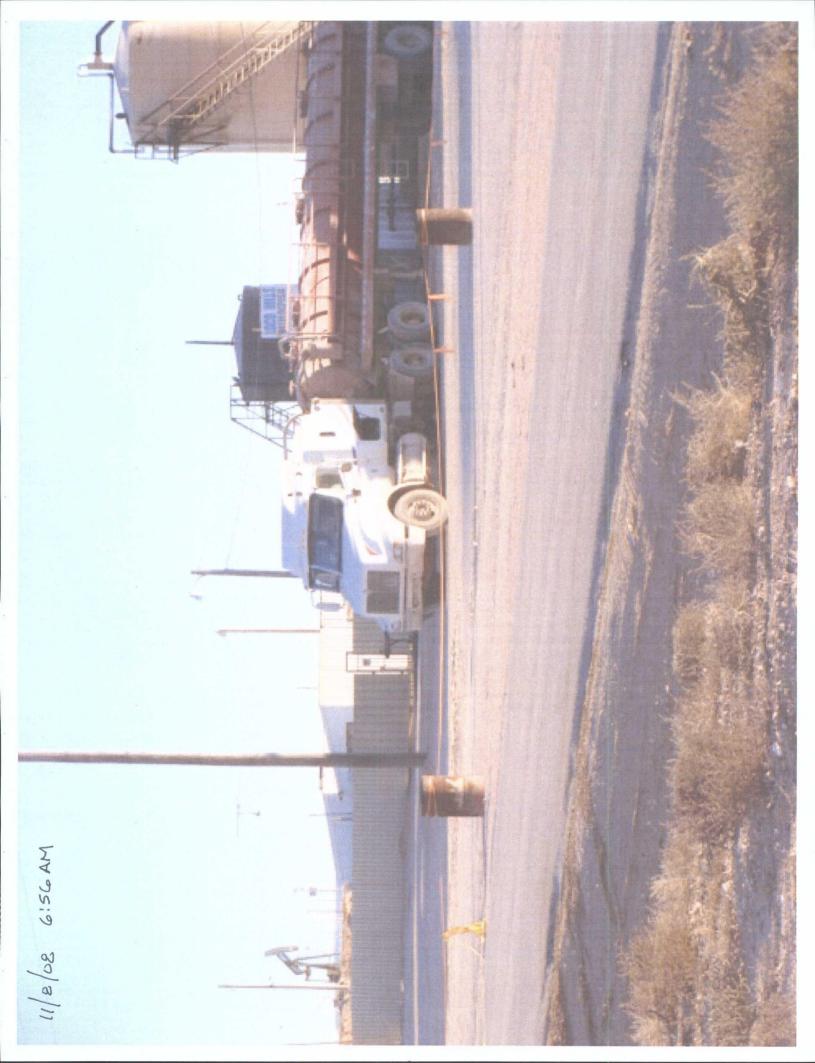


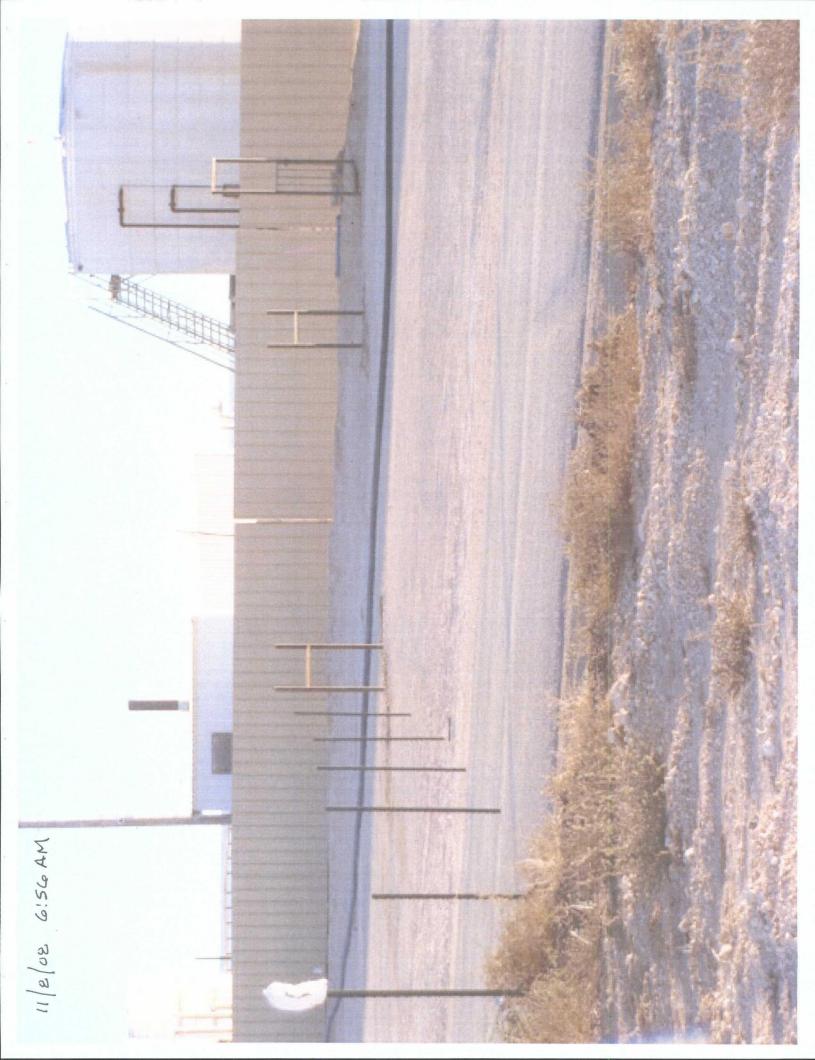


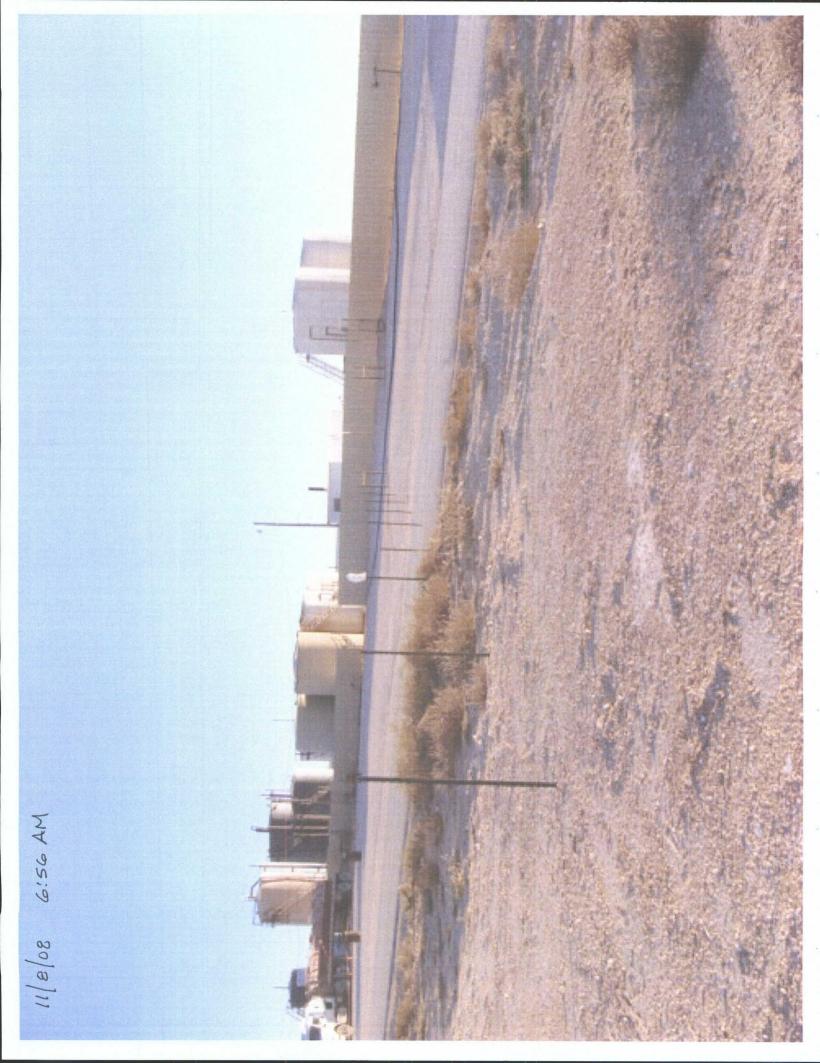


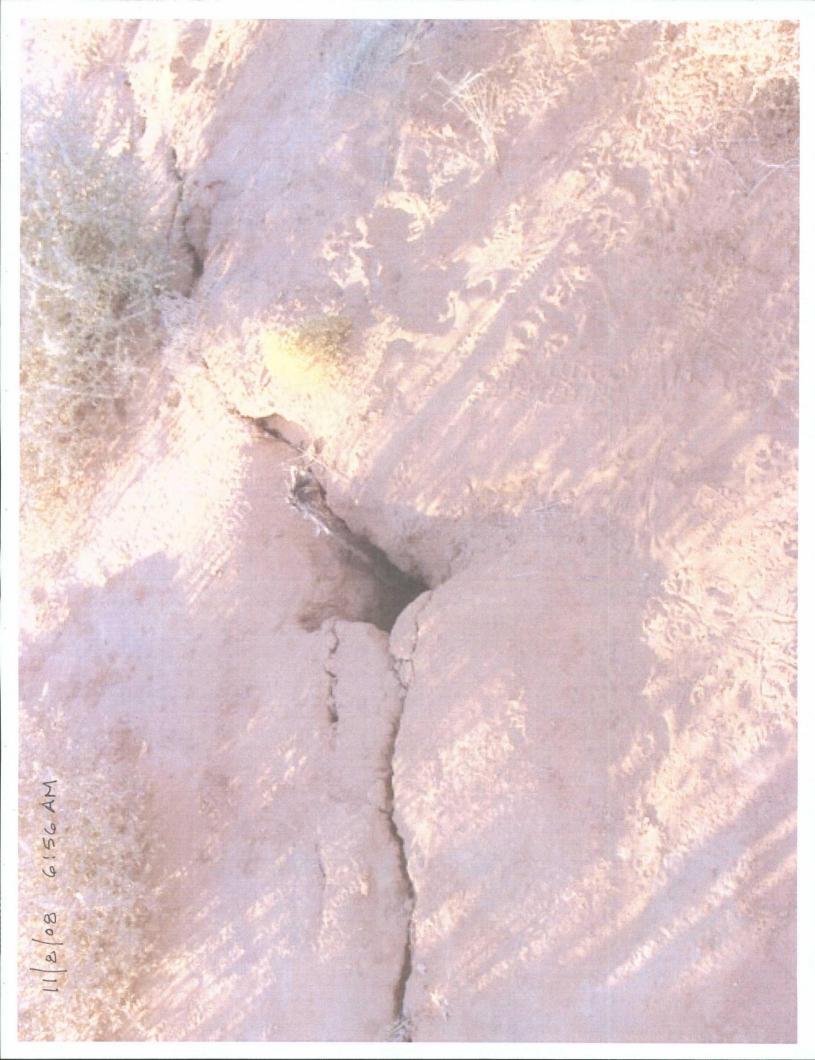






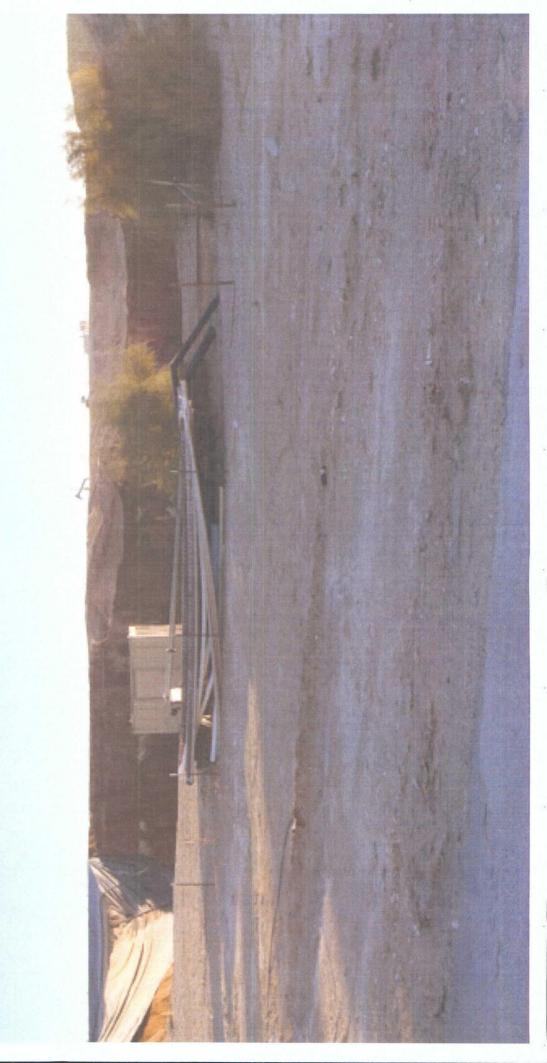


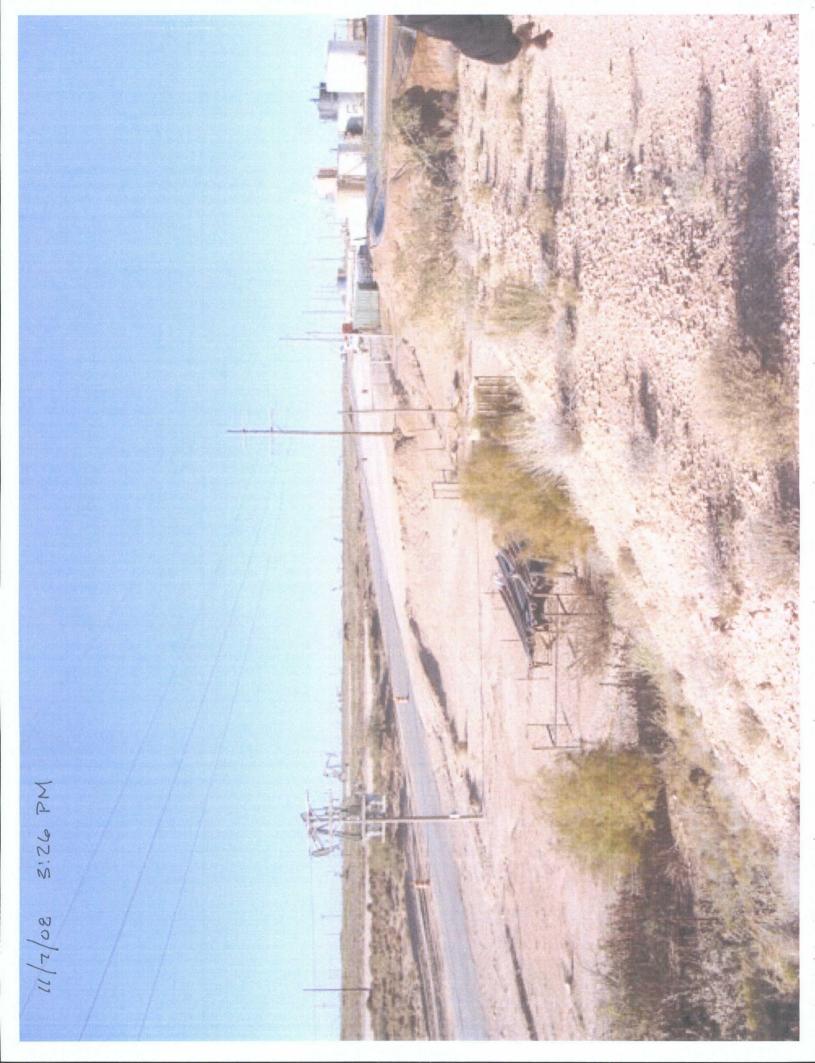


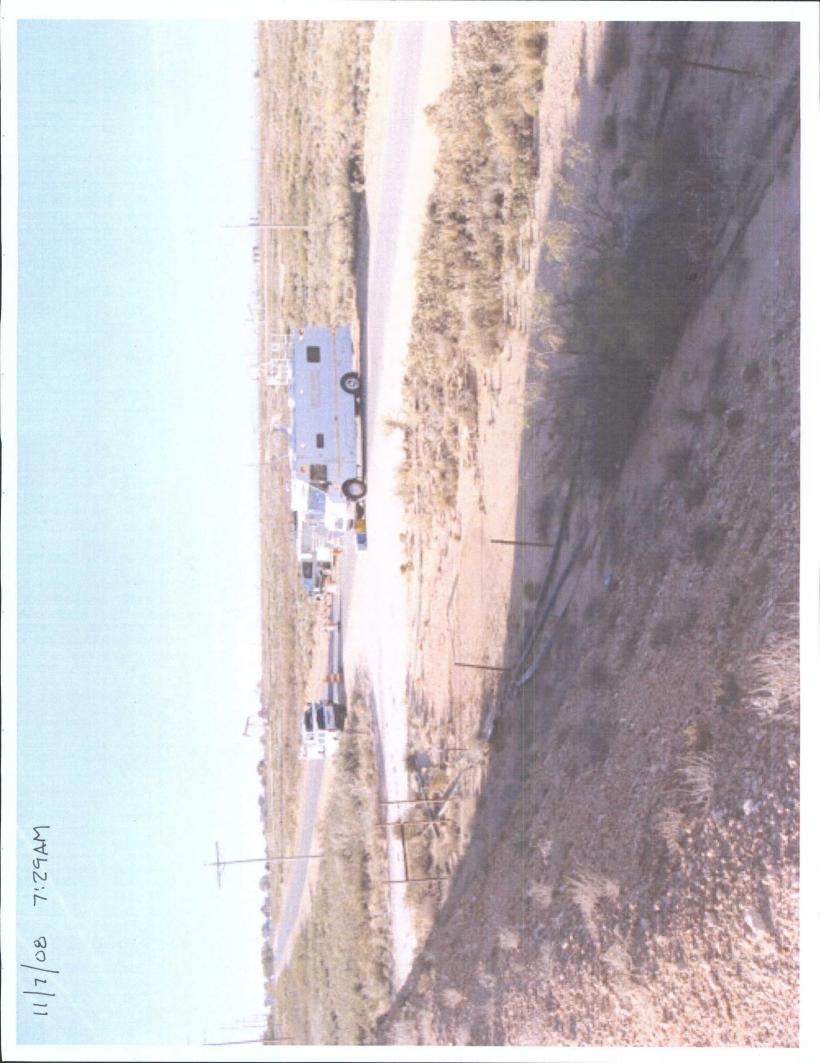


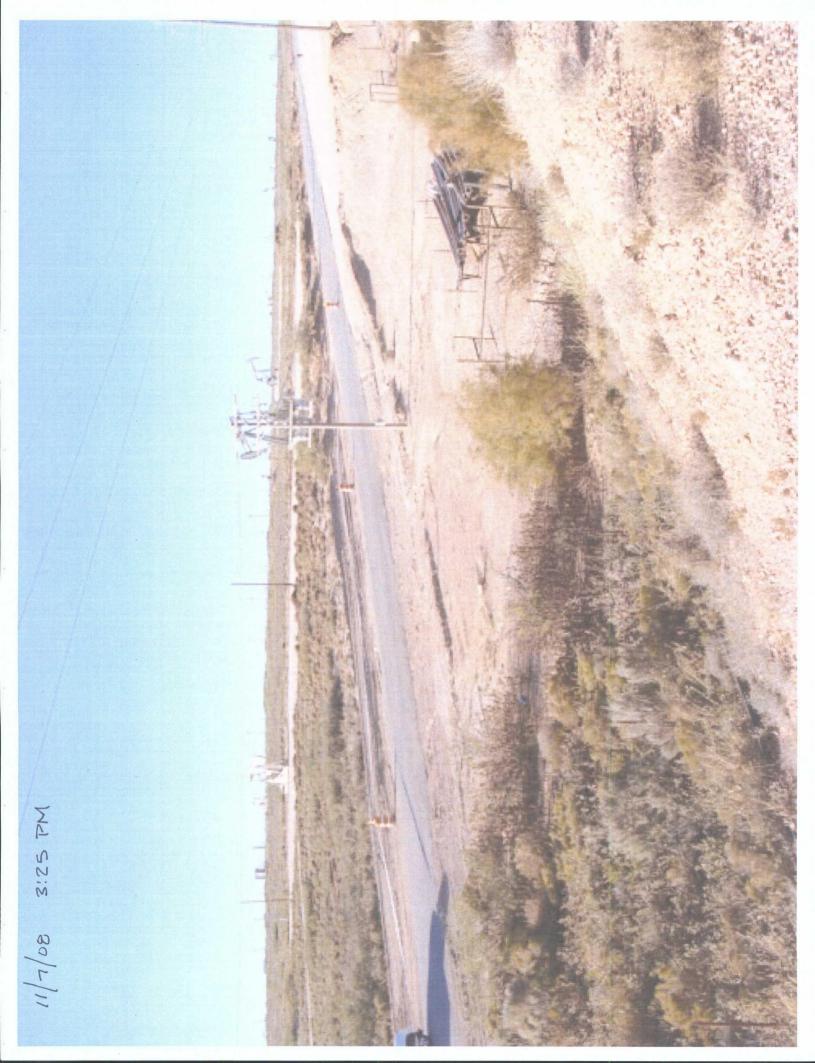


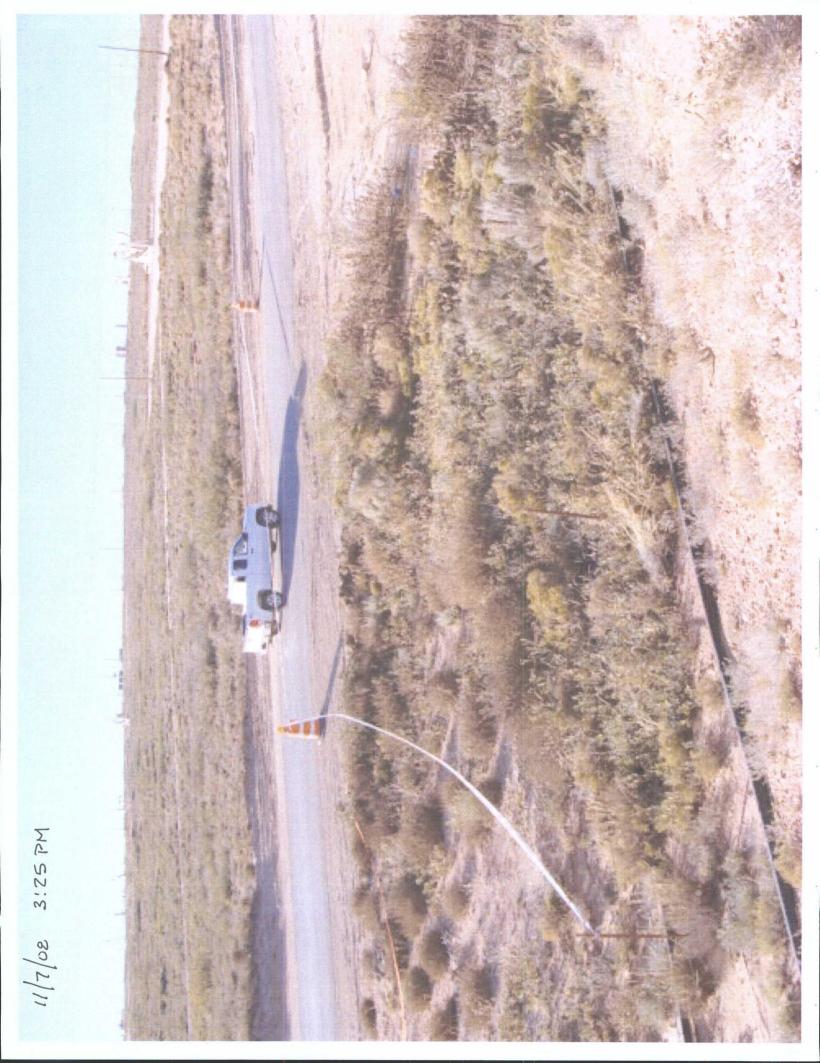
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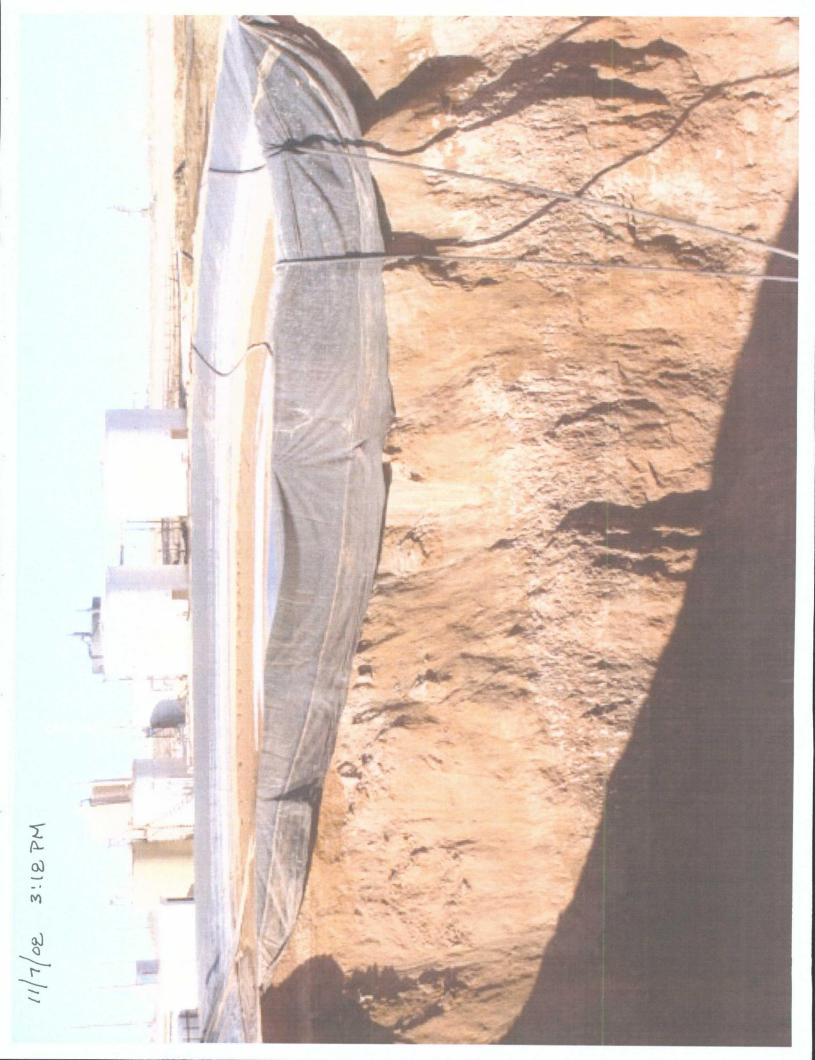


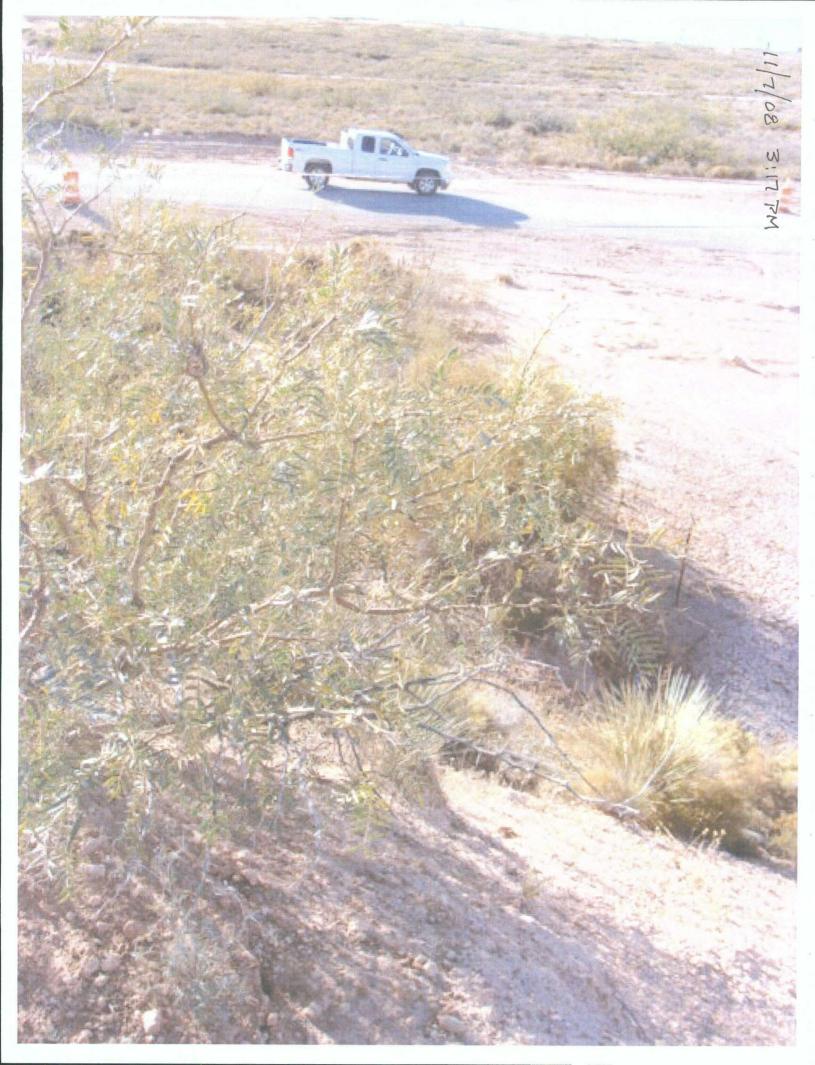






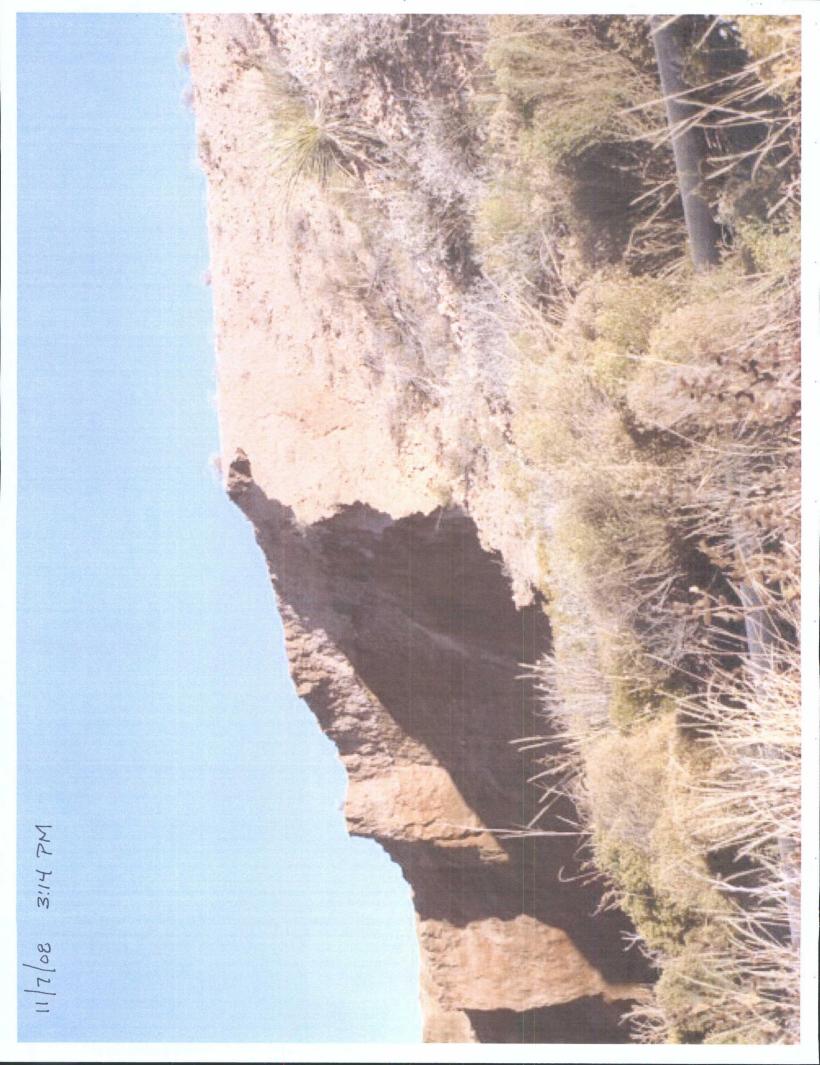


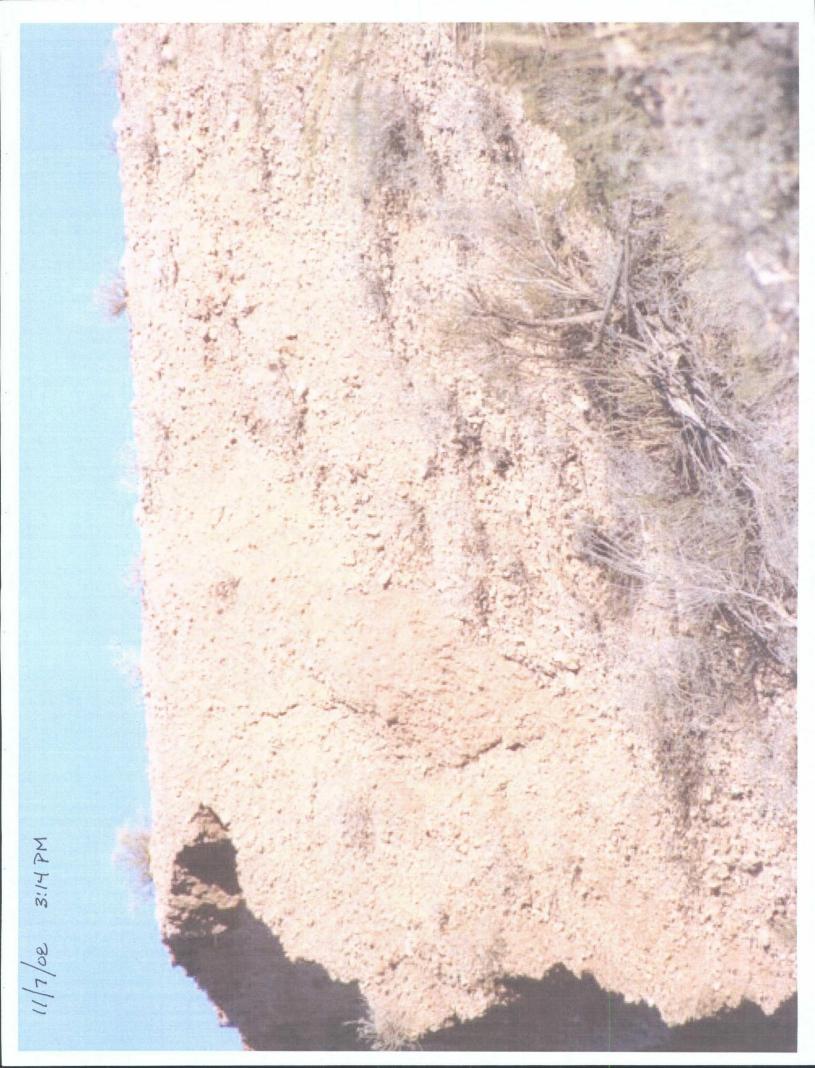




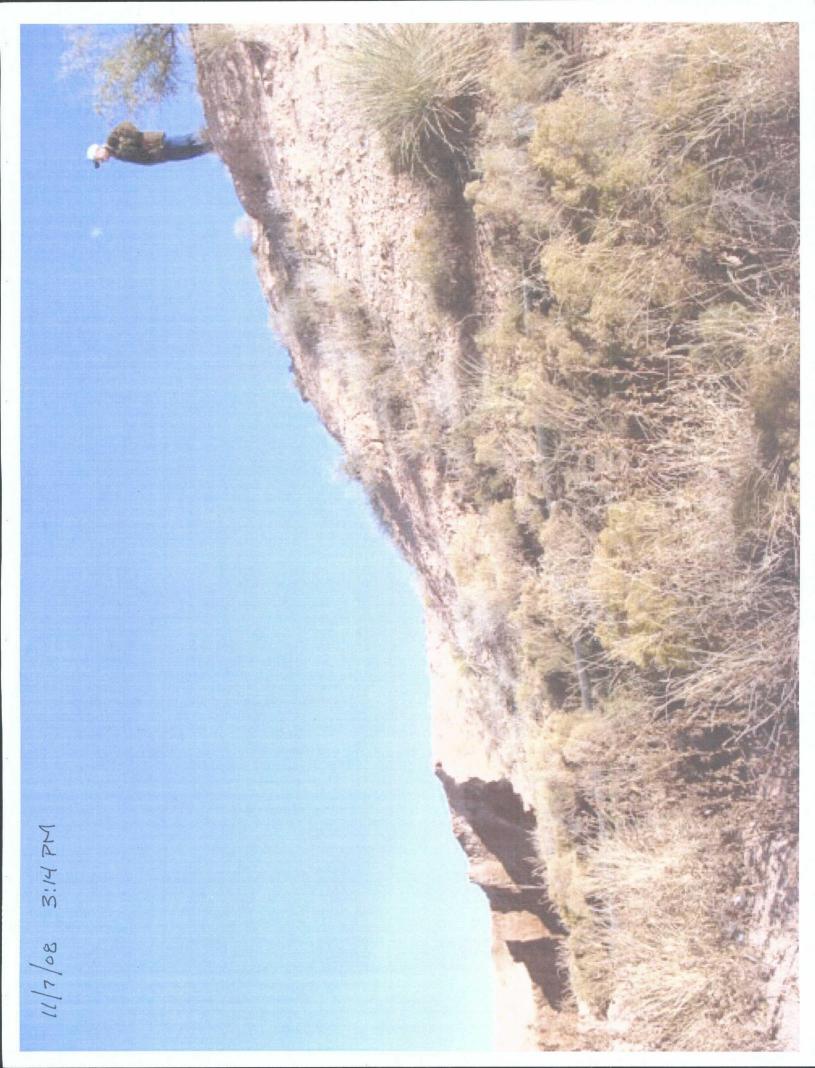


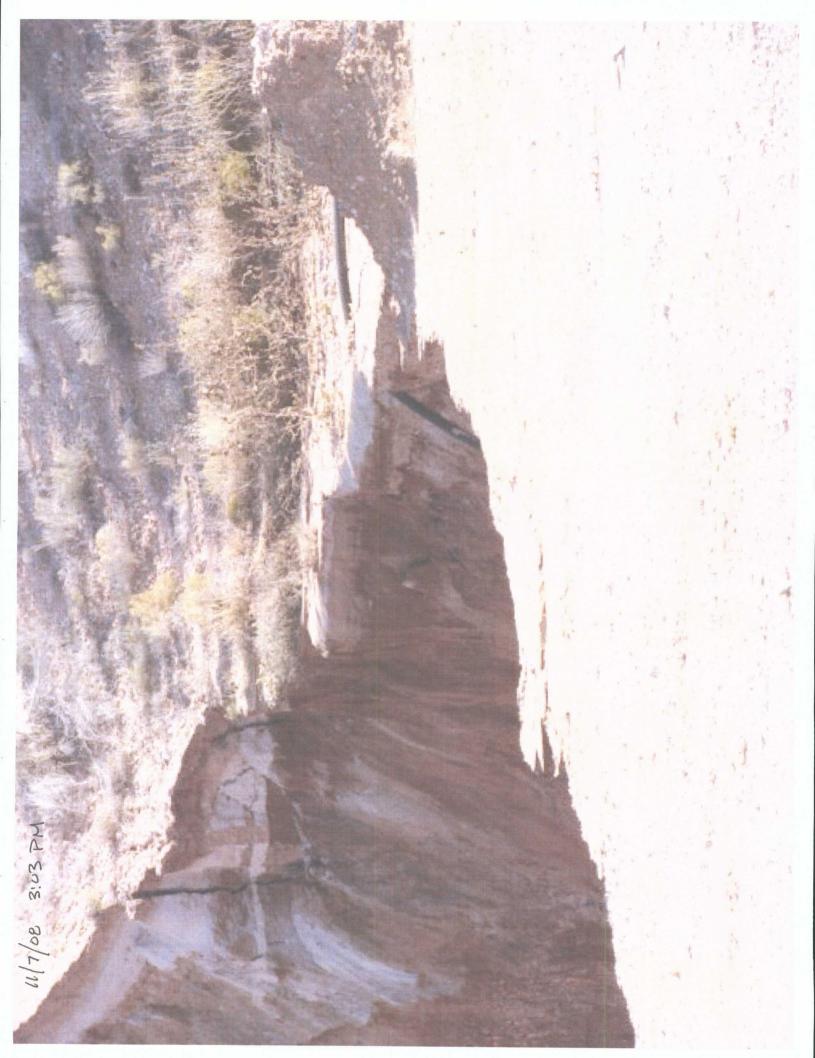


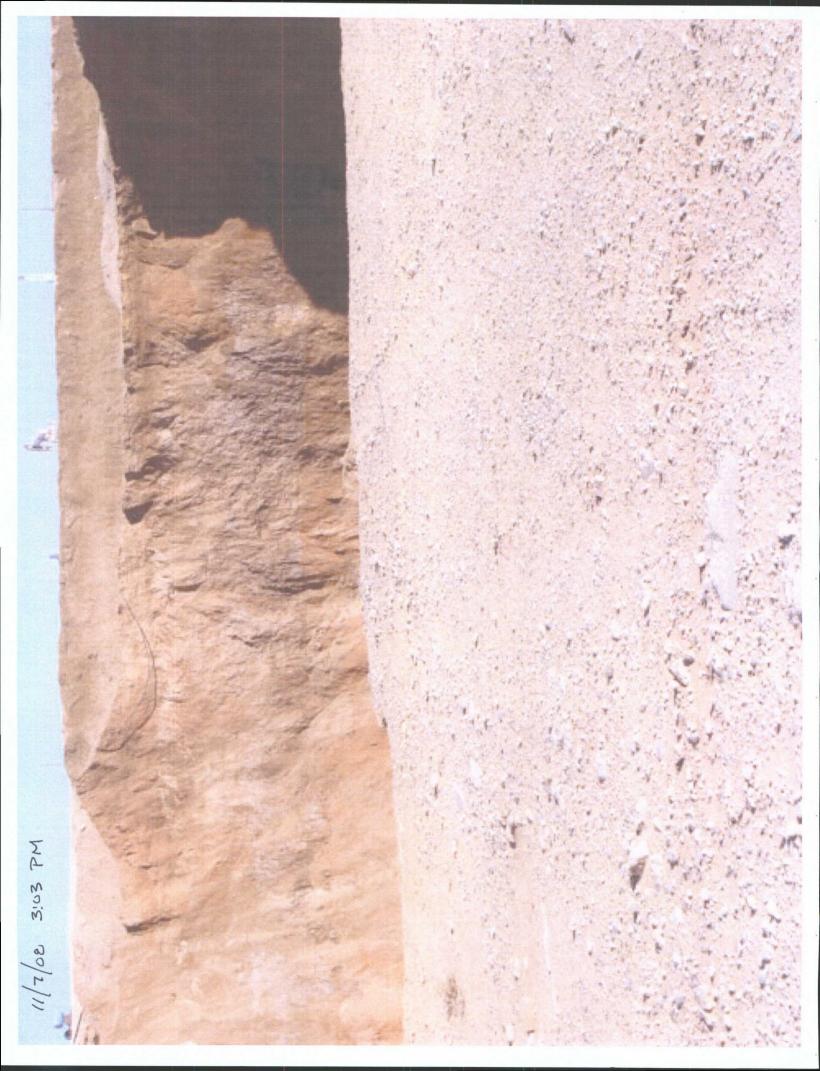




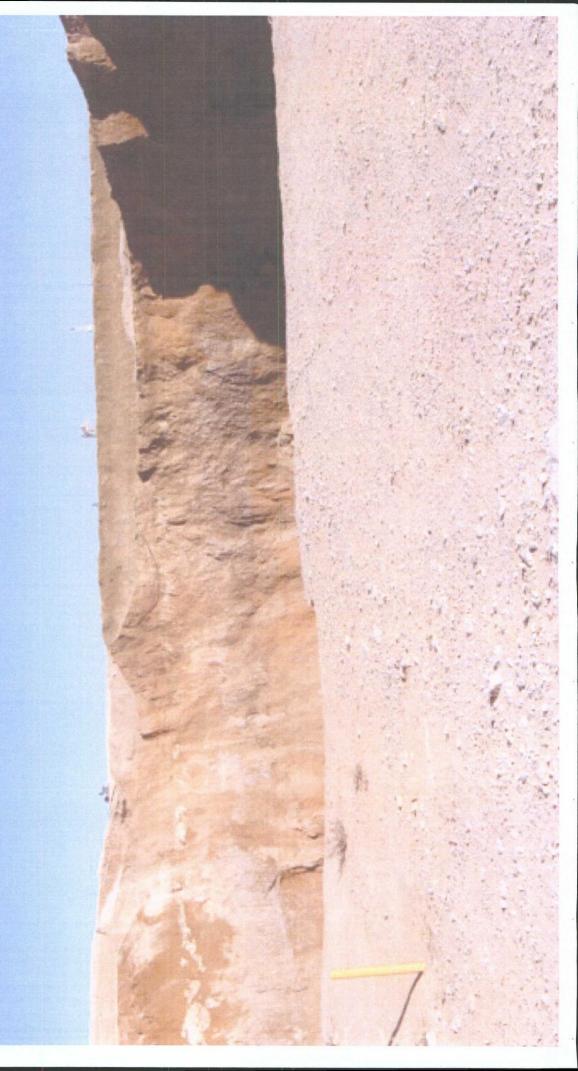












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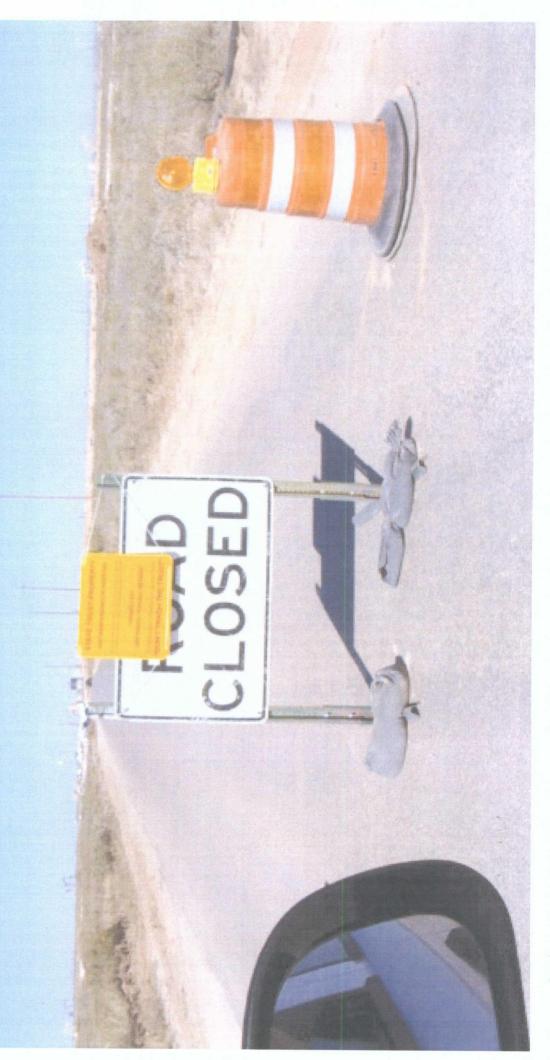
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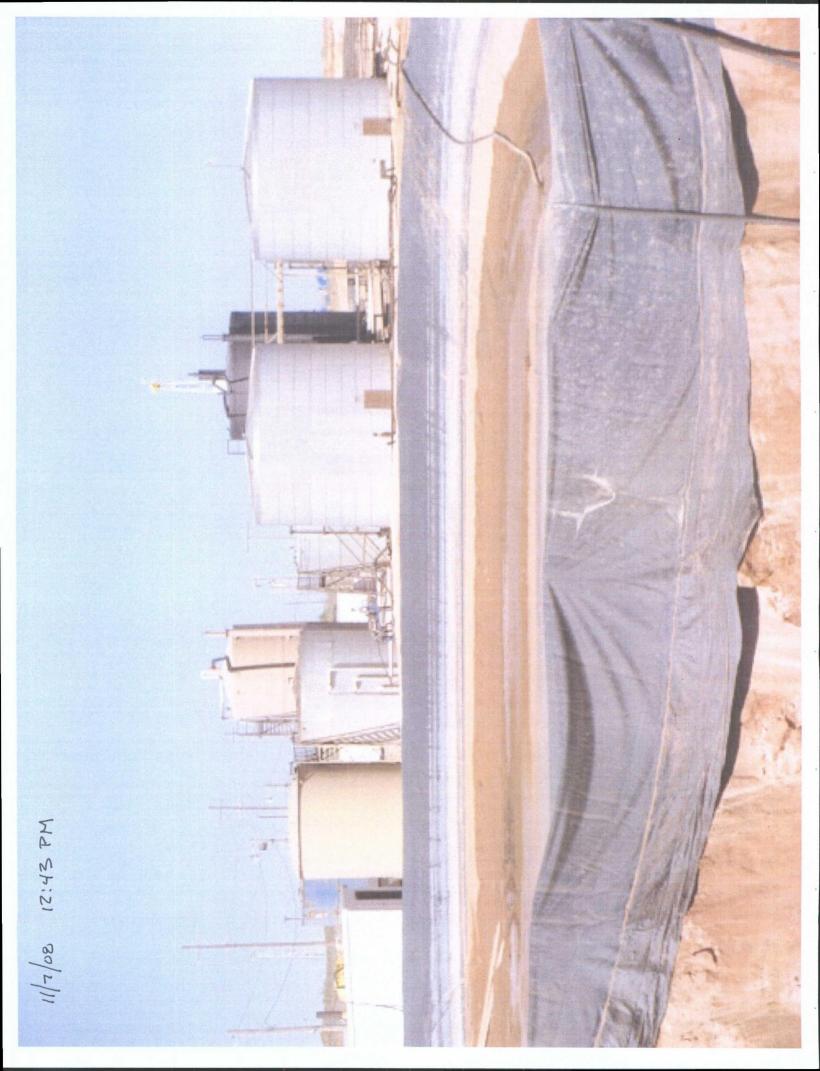
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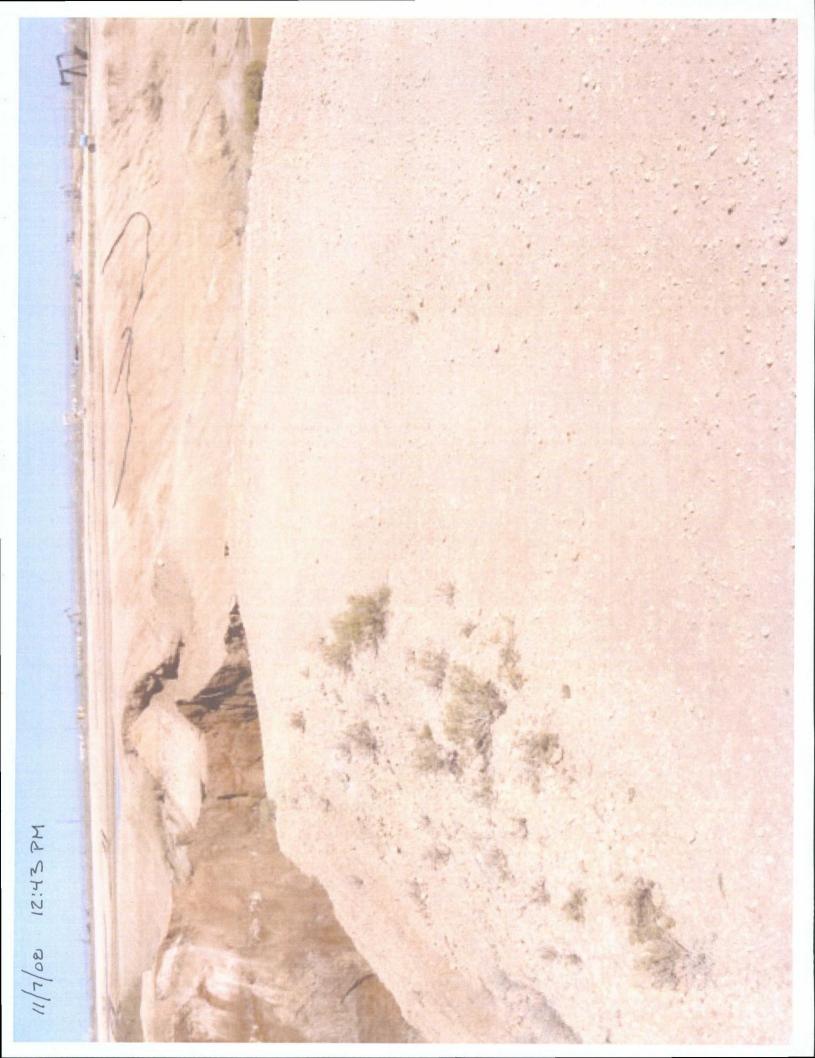
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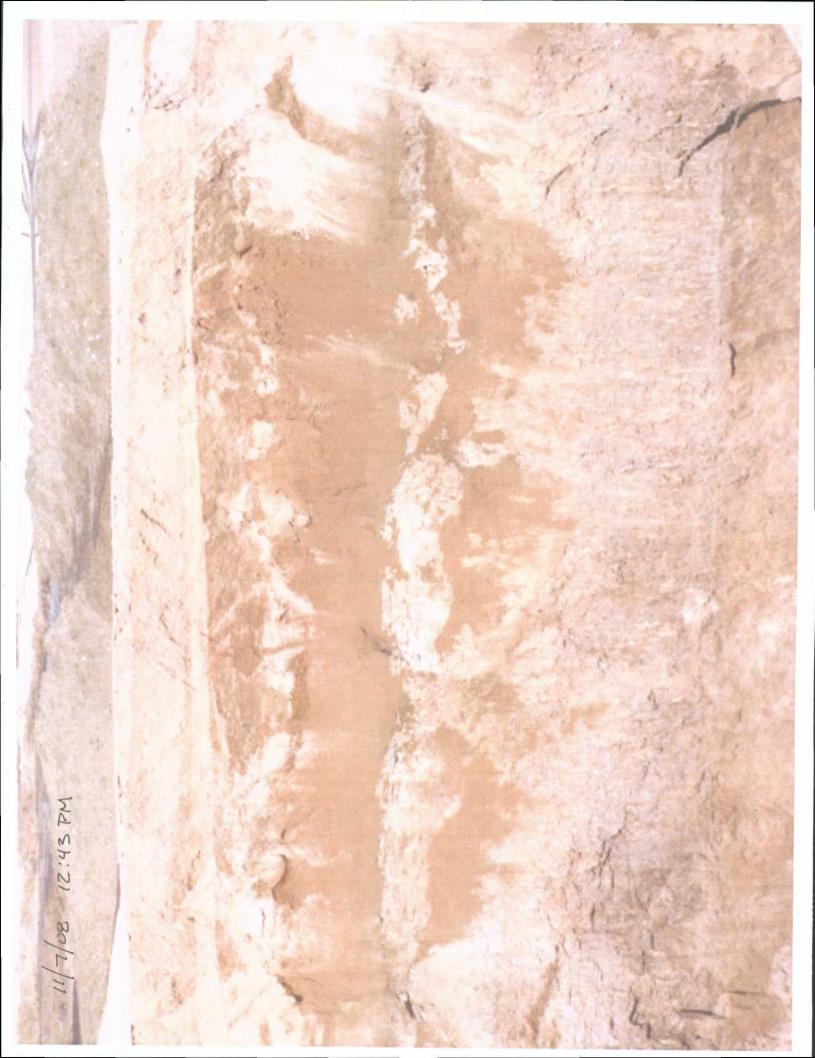


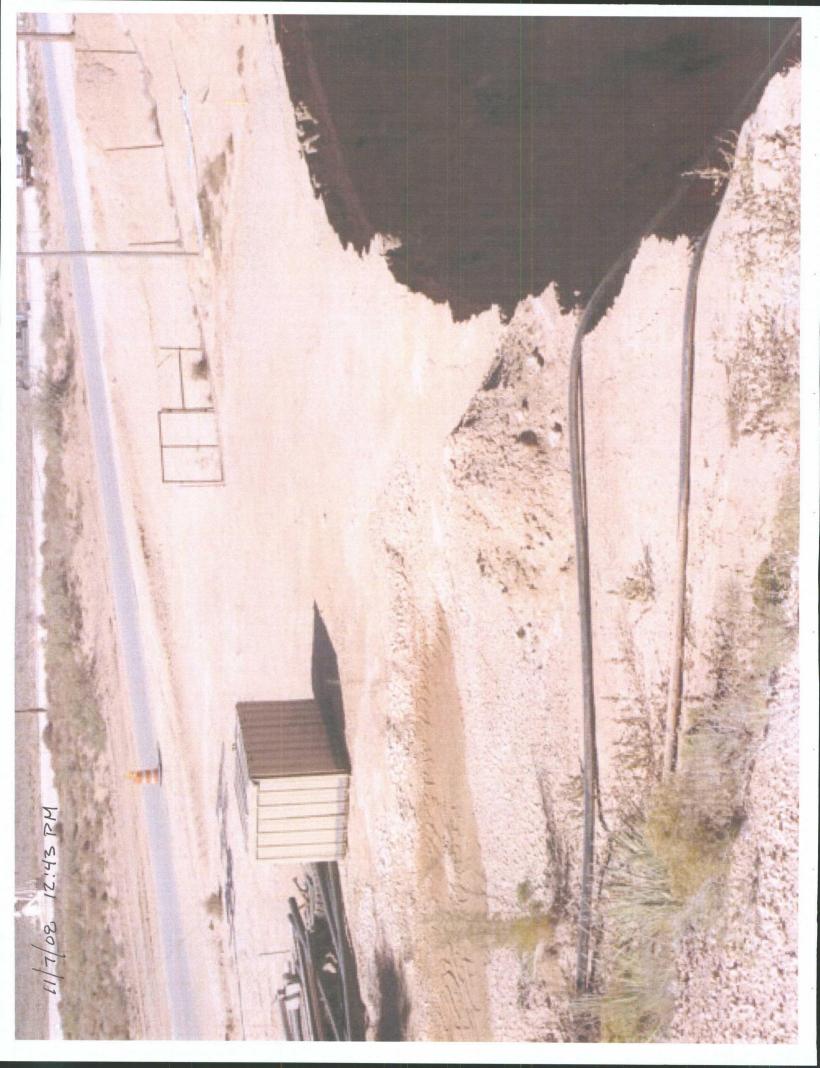
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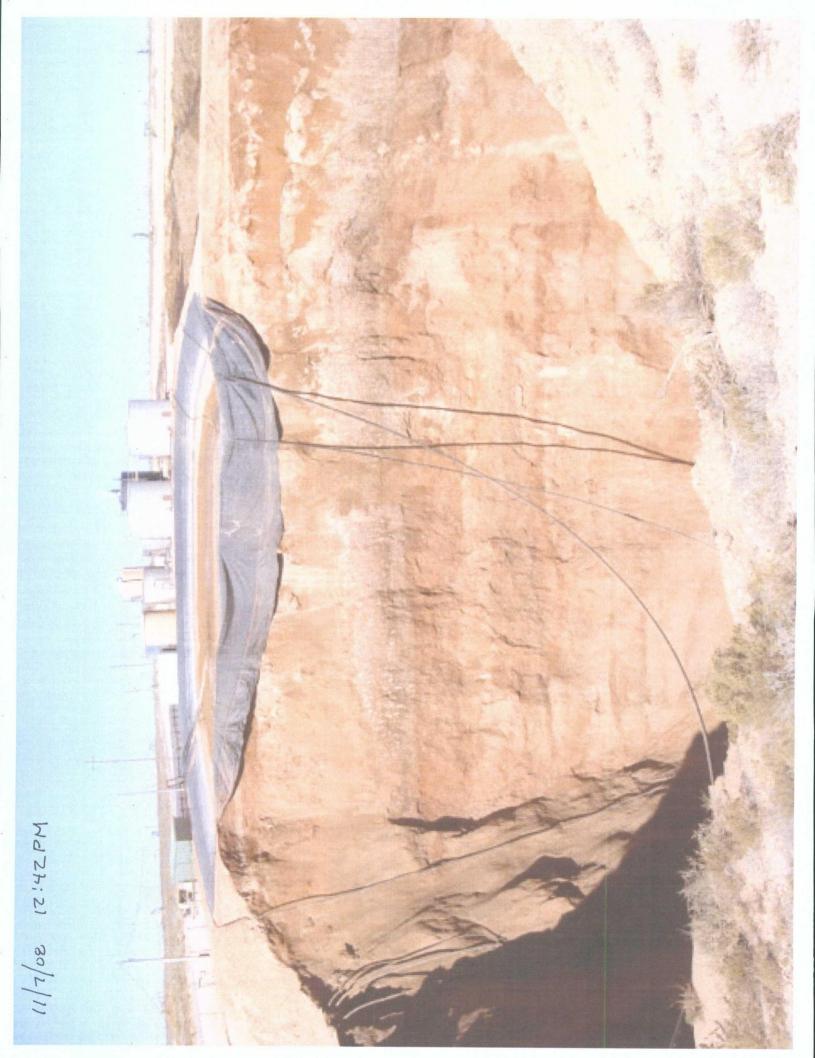




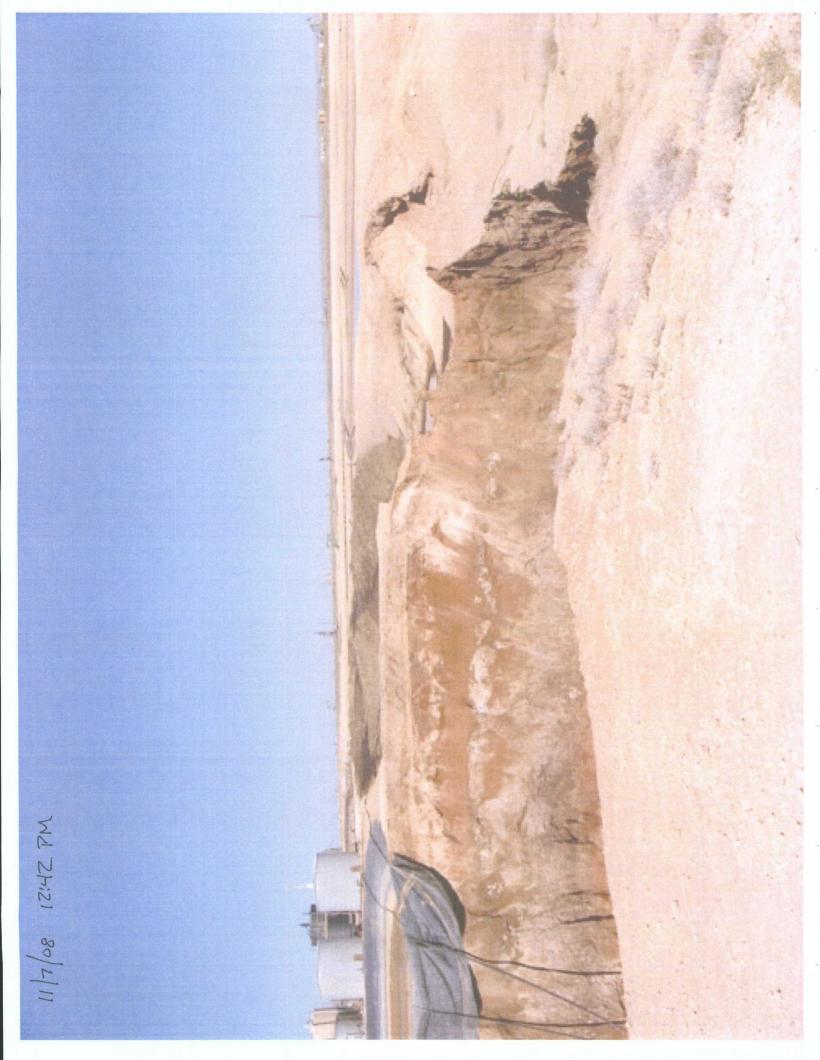


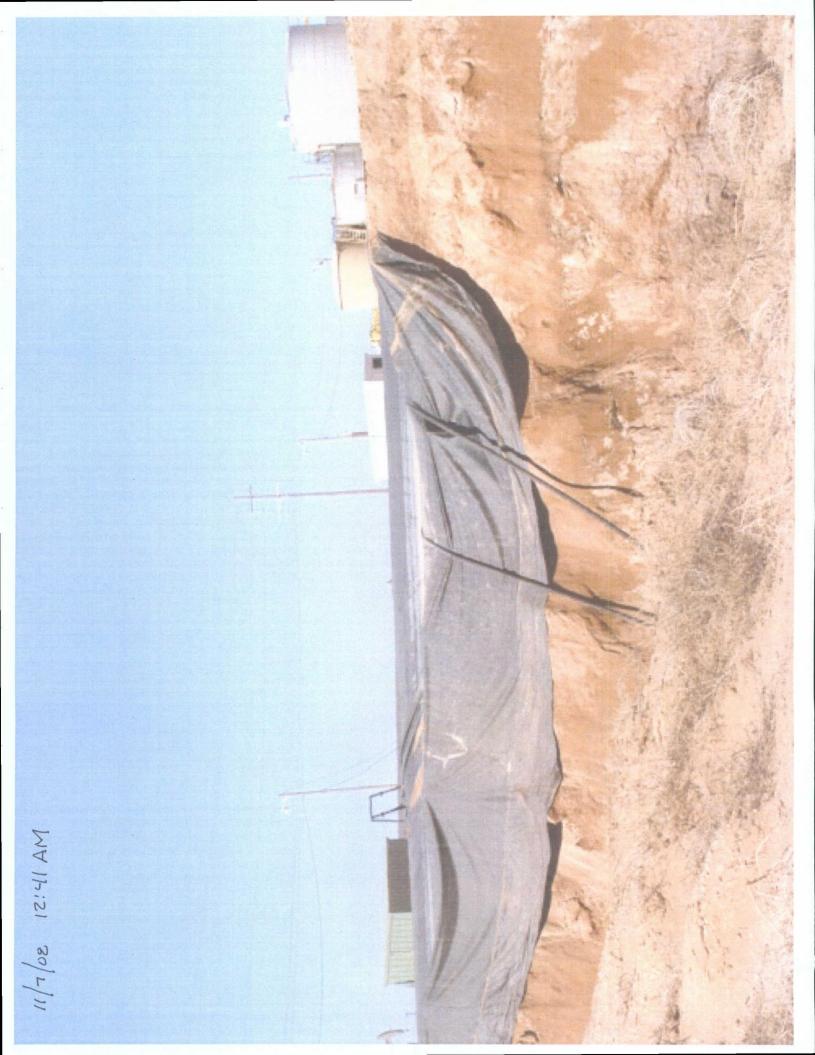


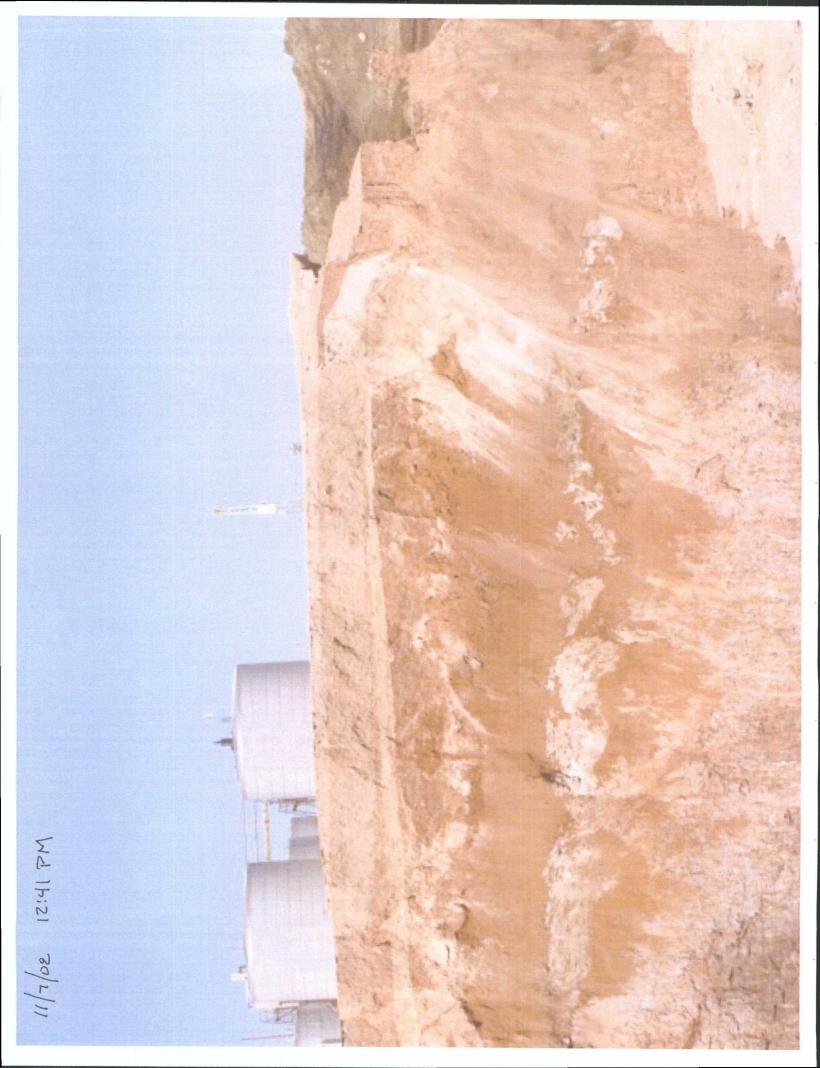


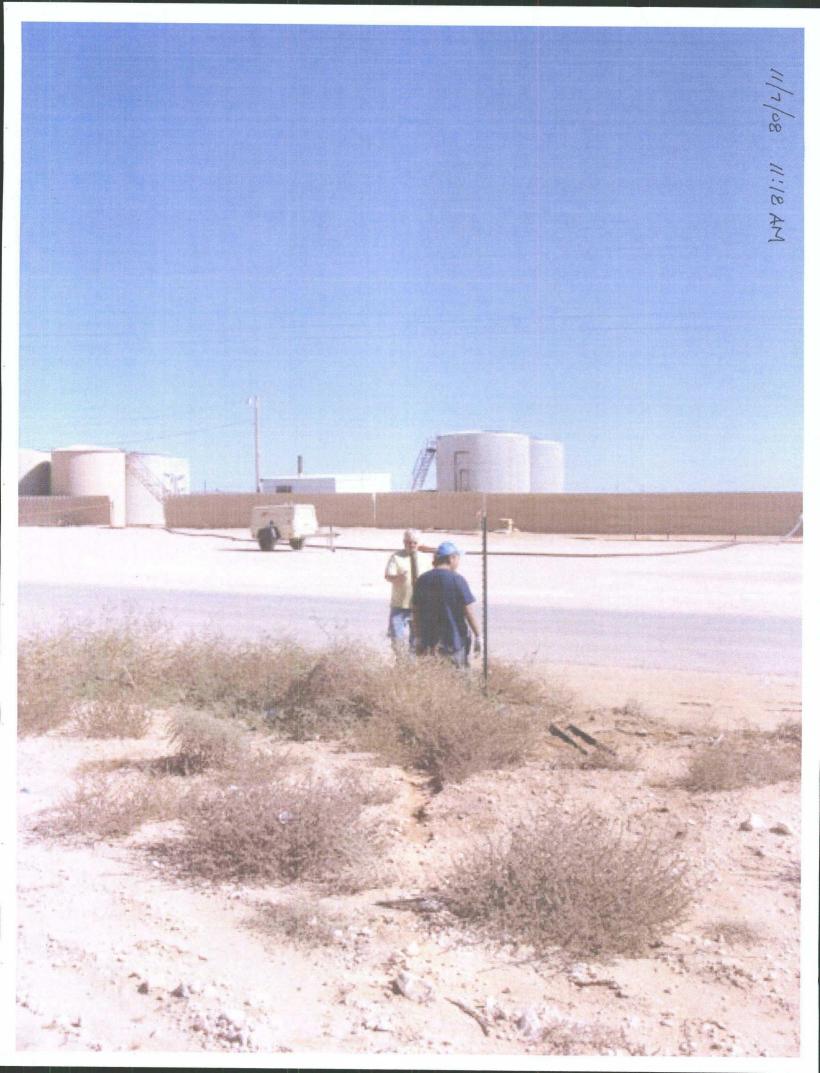


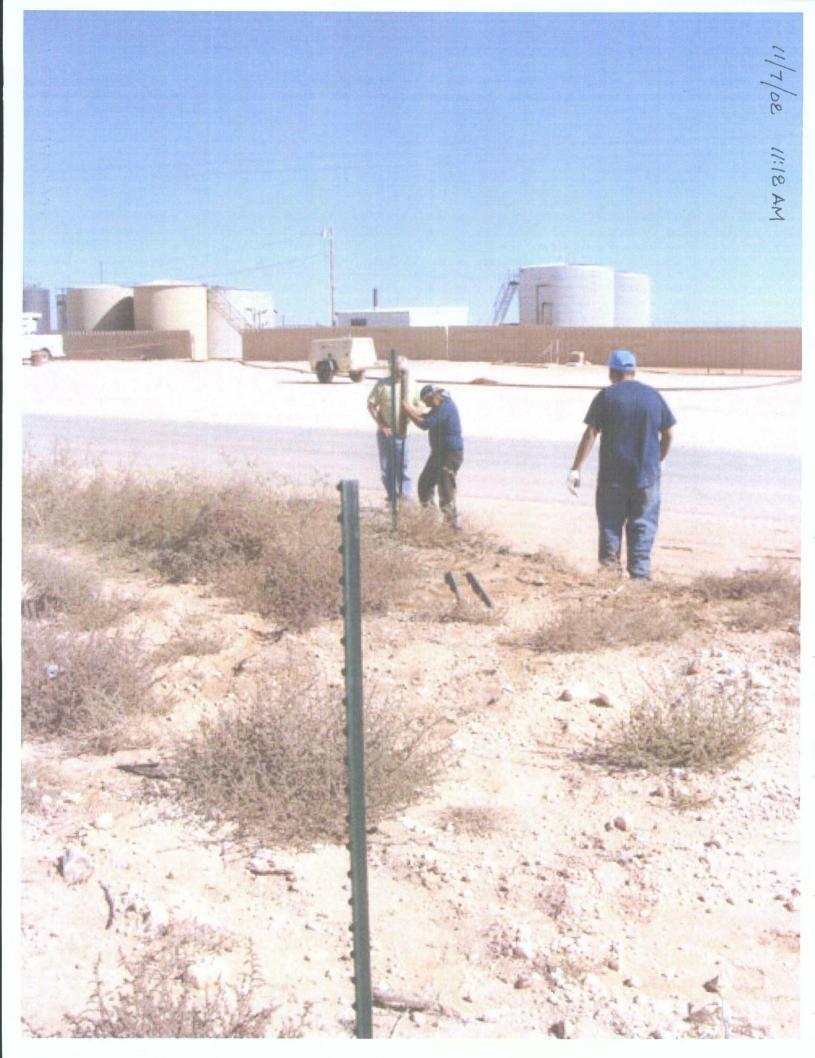
















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Commissioner Patrick H. Lyons Says.

"DON'T TRASH THE TRUST"

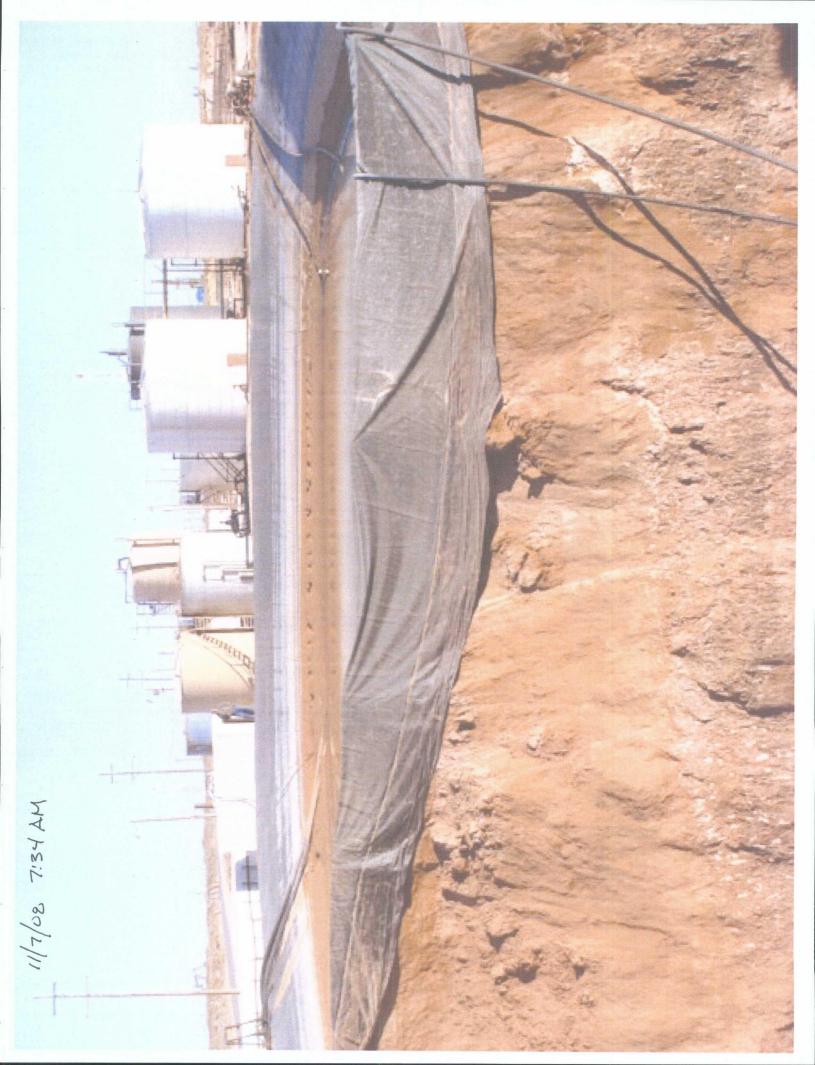
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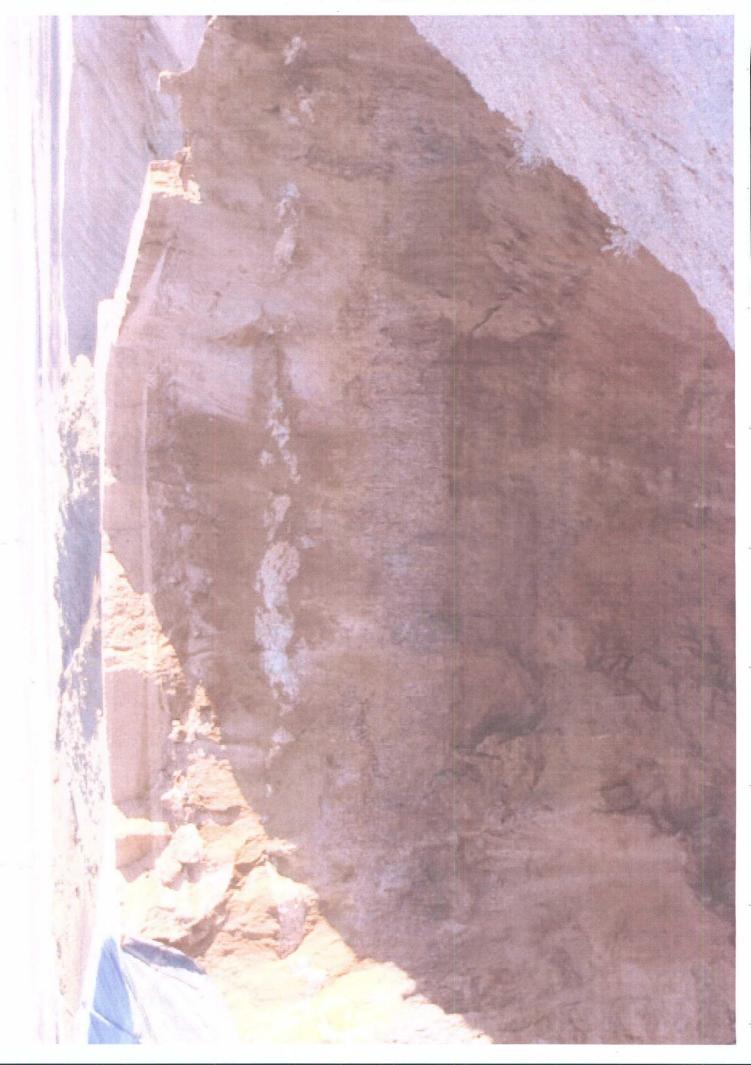
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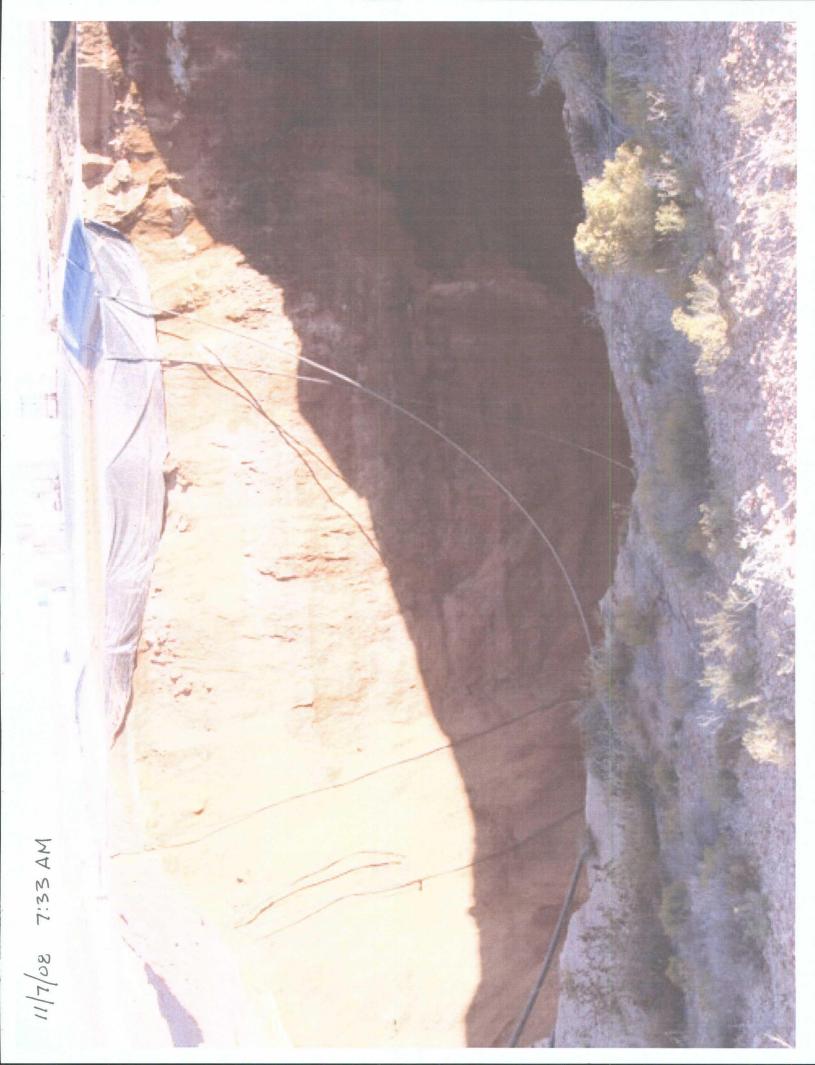
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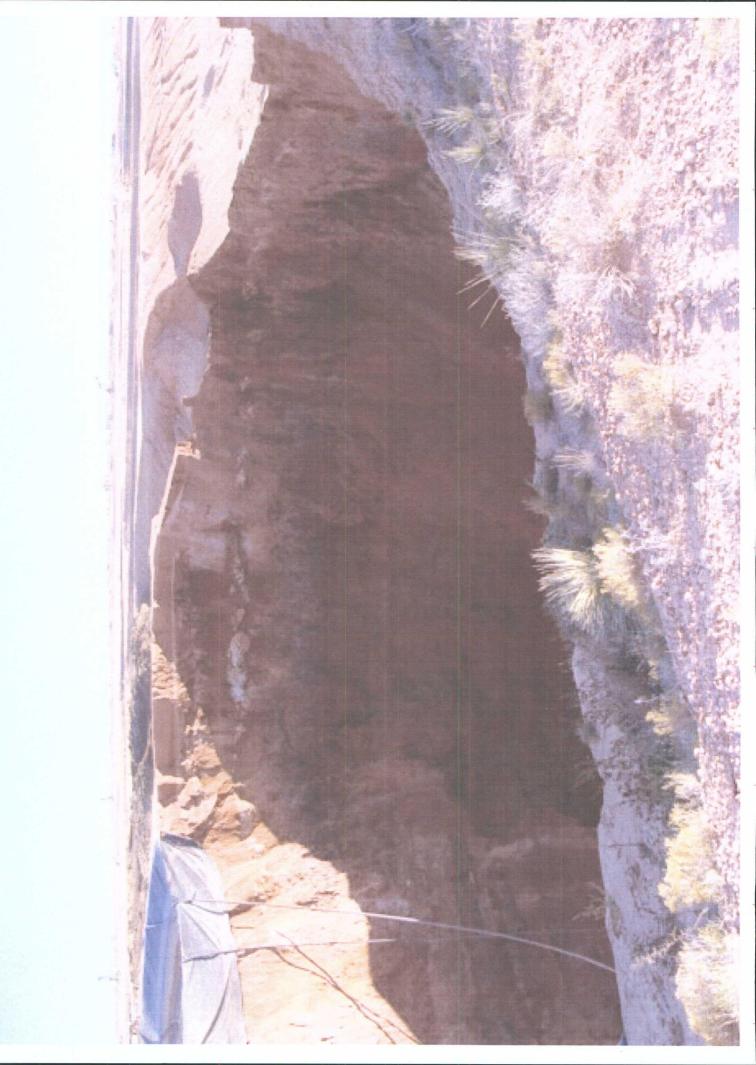




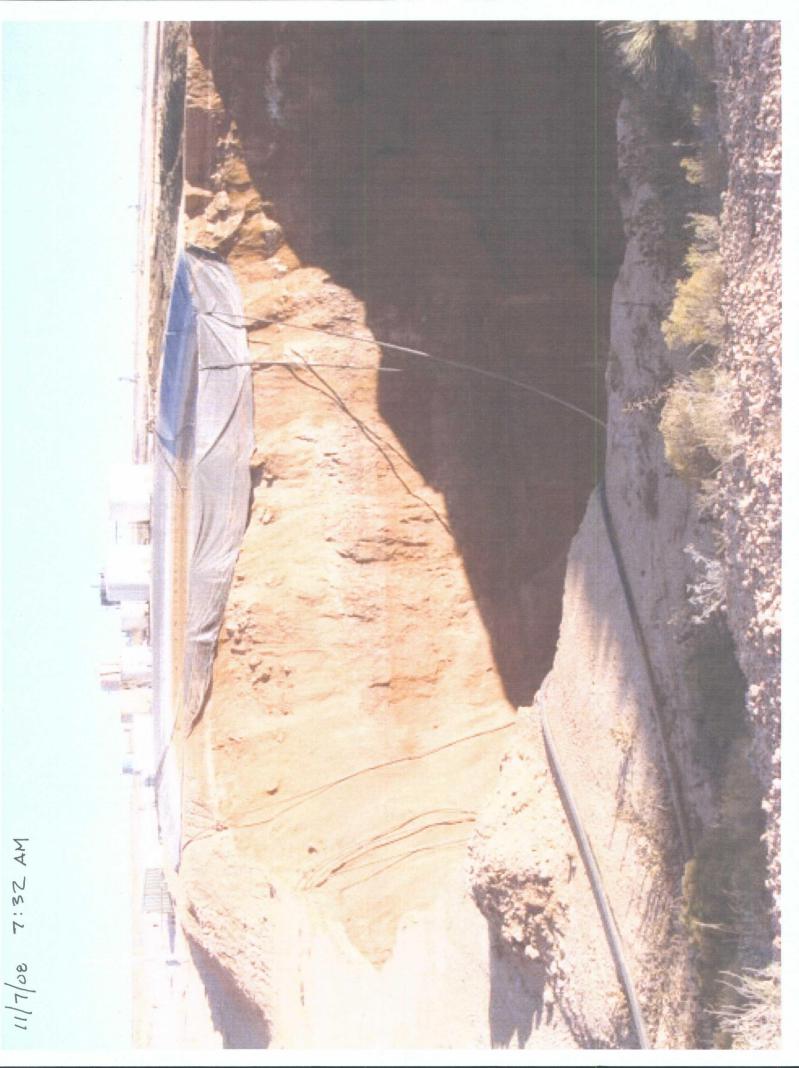


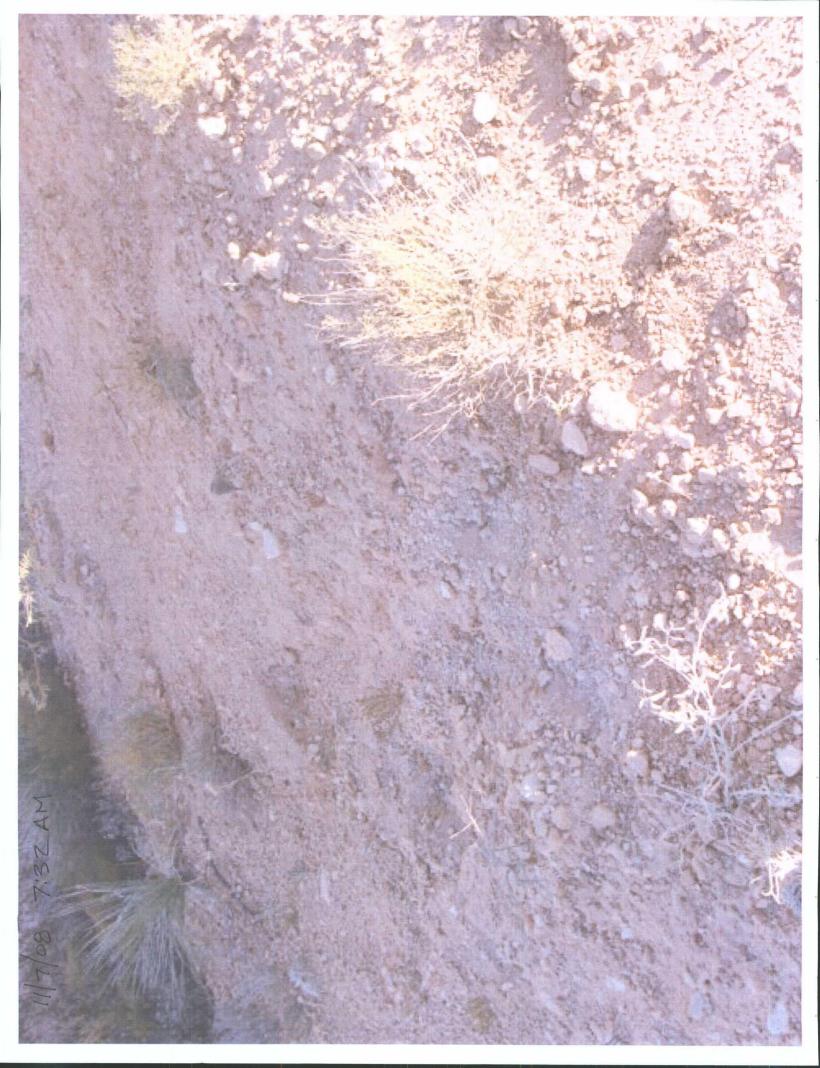
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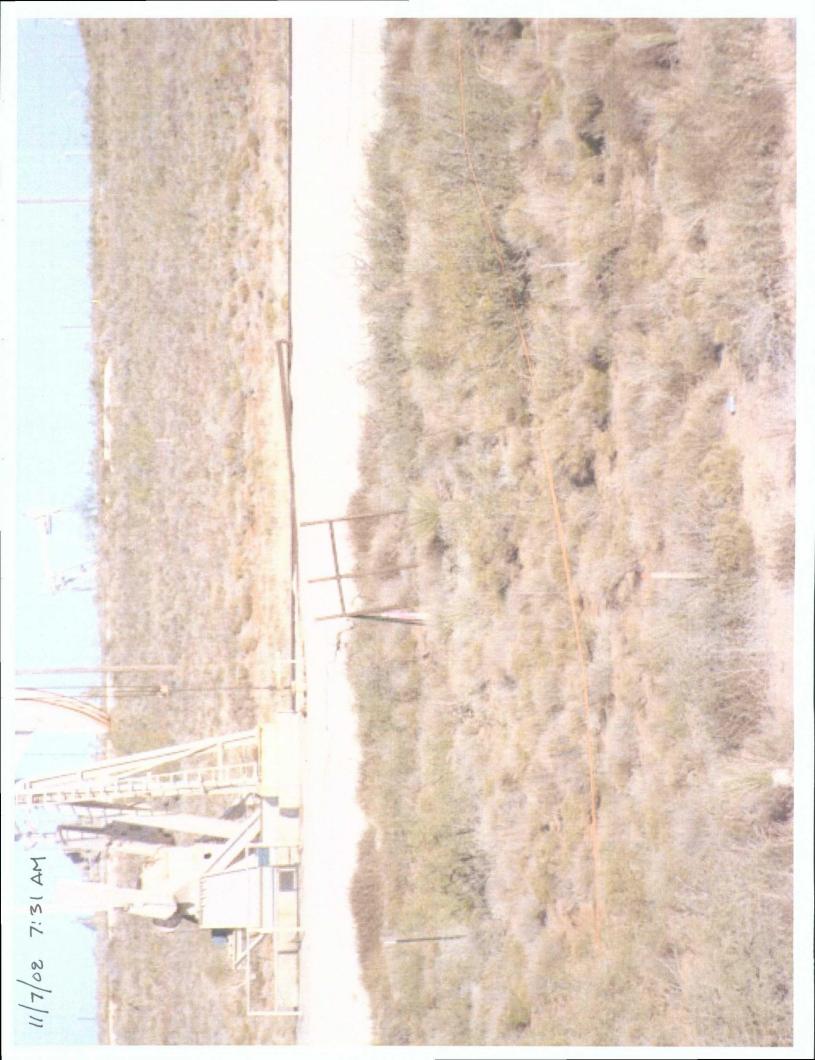
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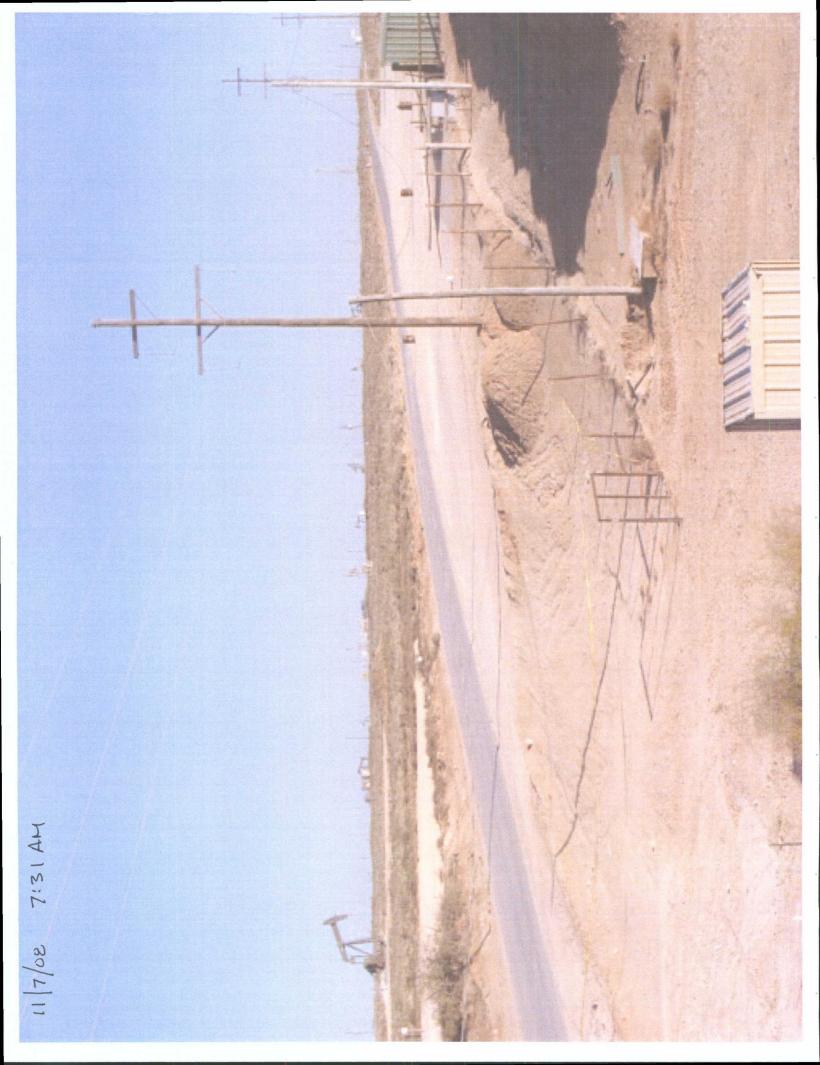


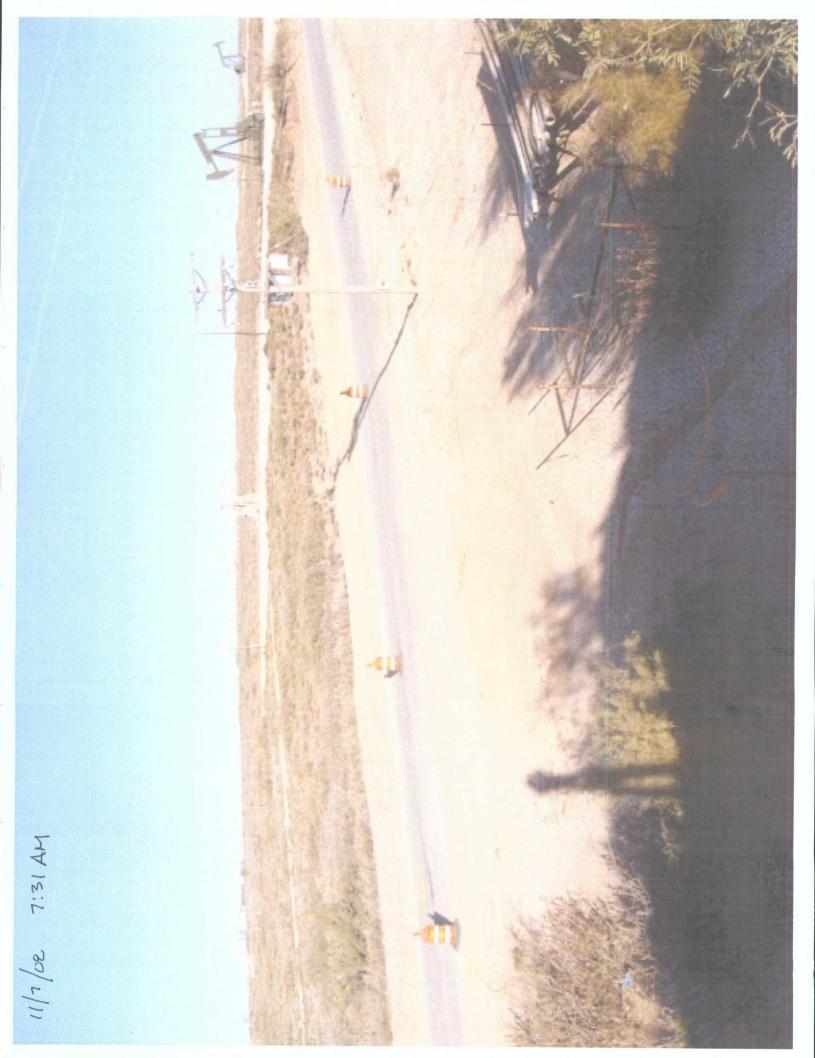


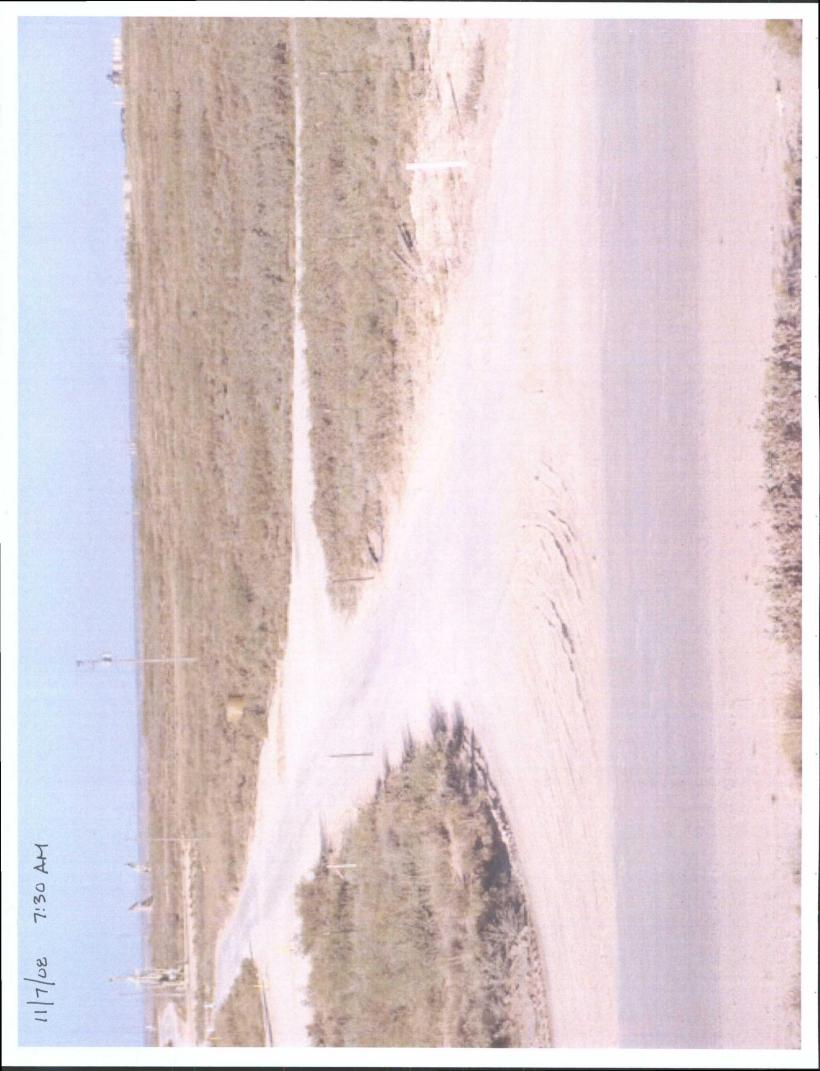


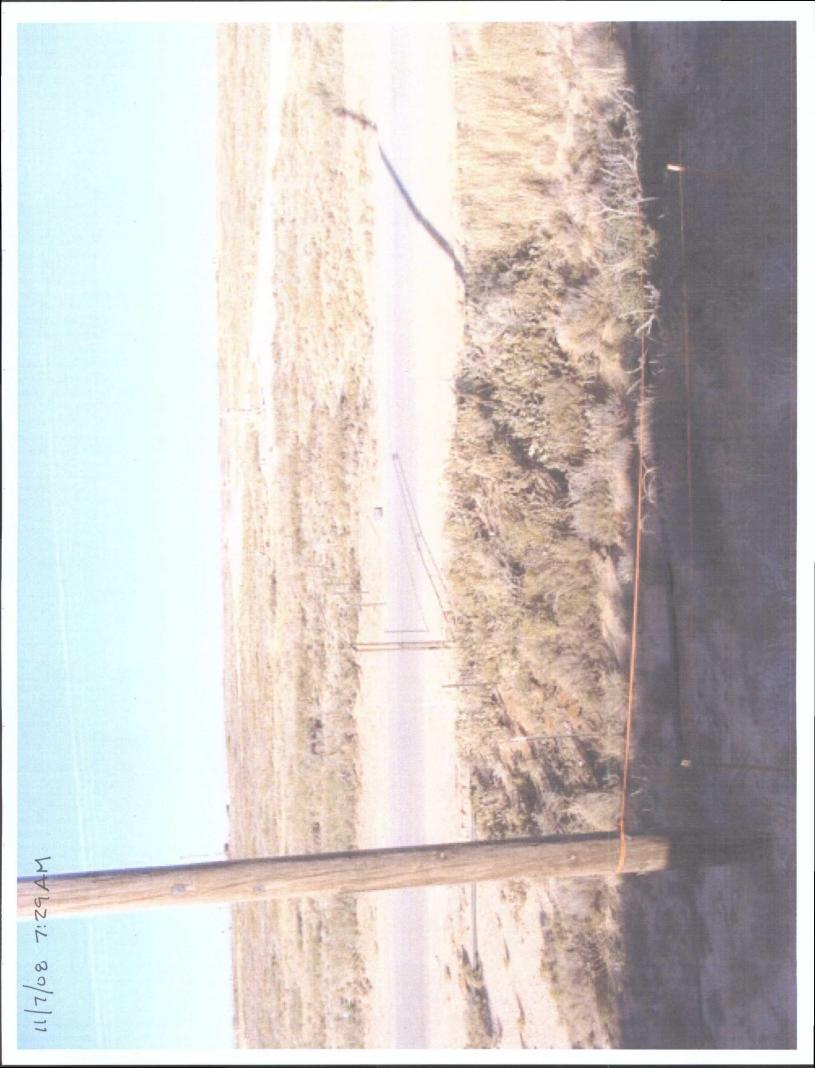


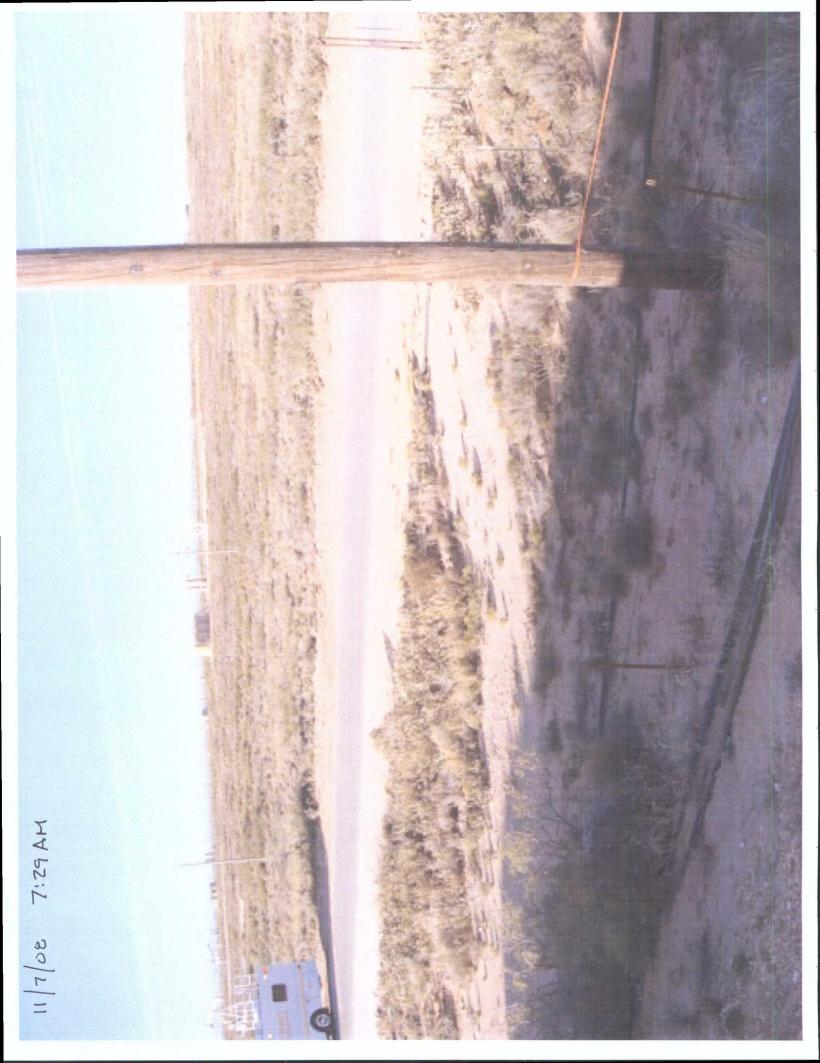


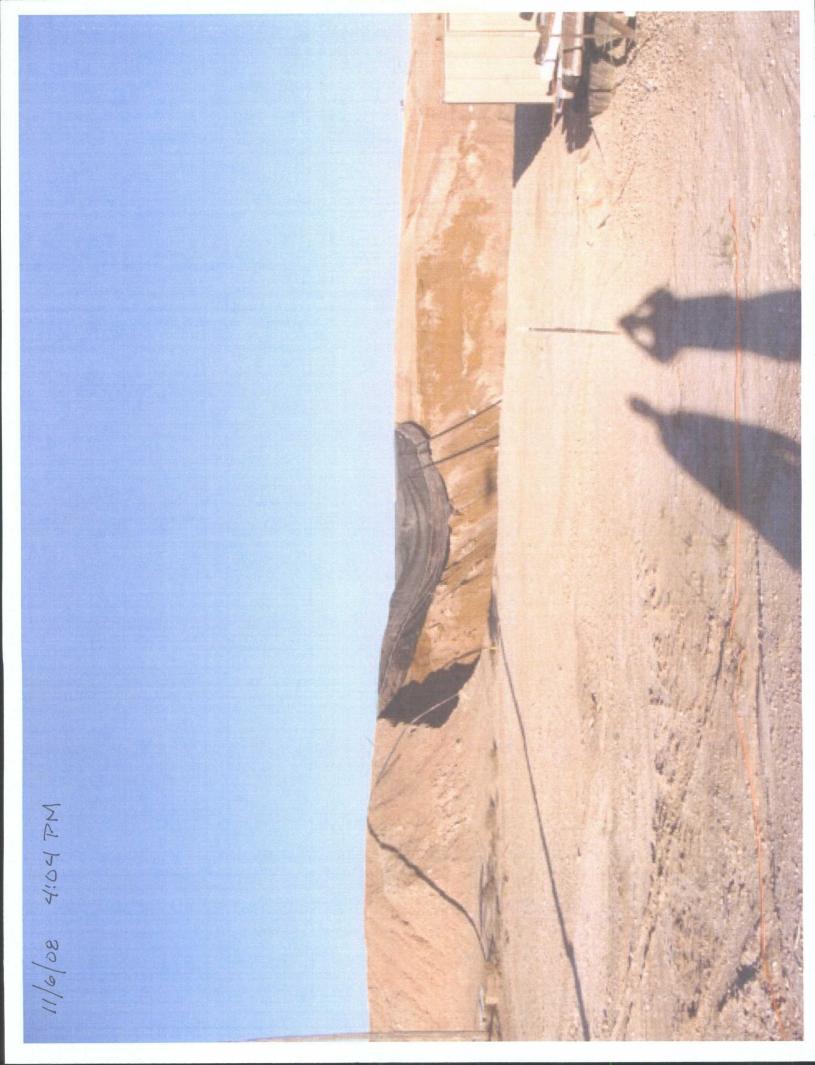








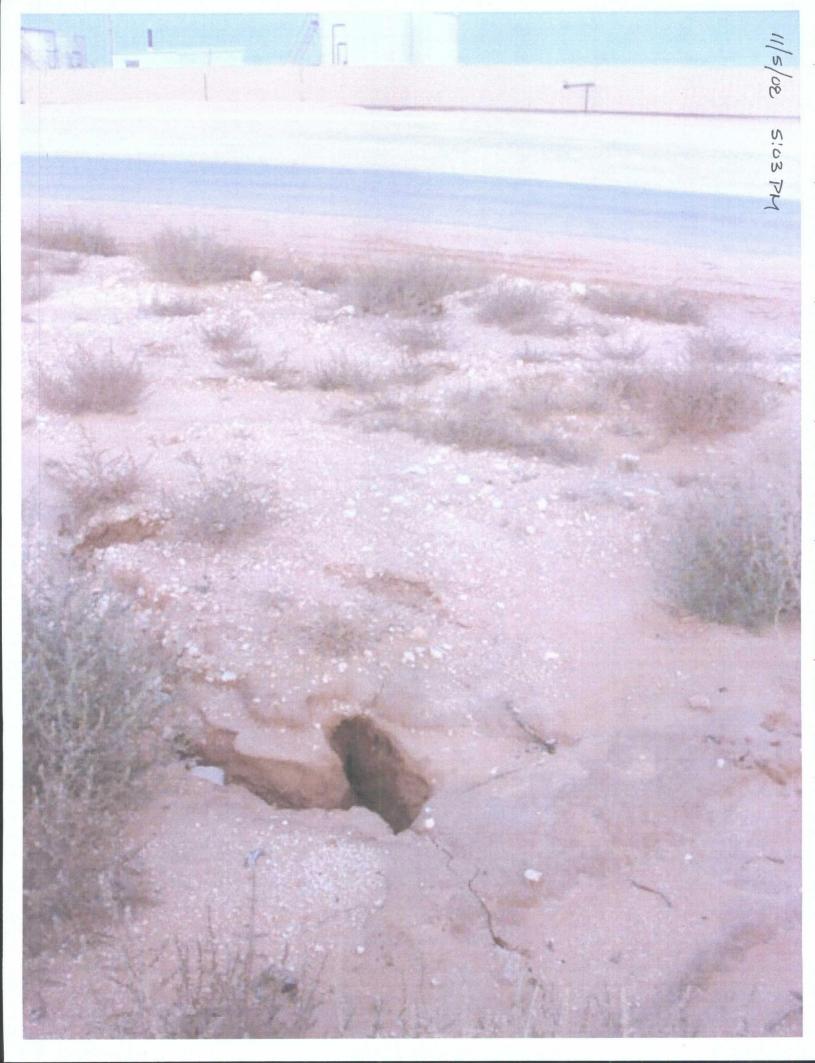


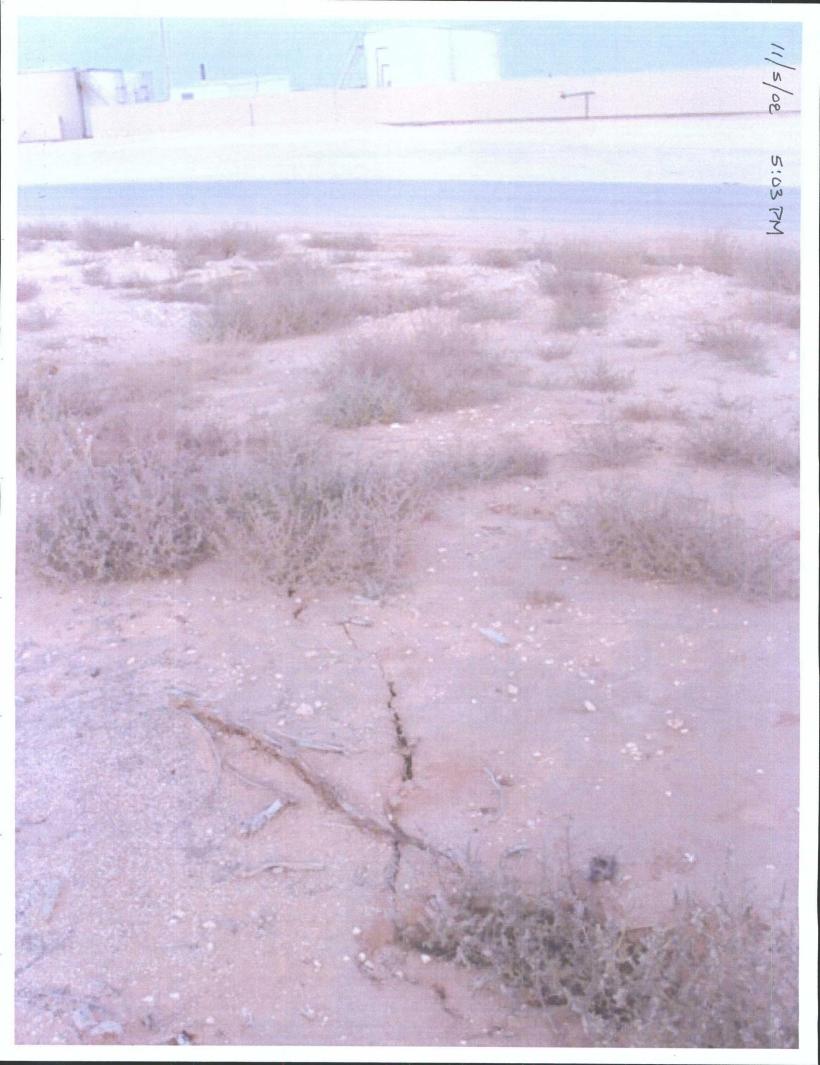


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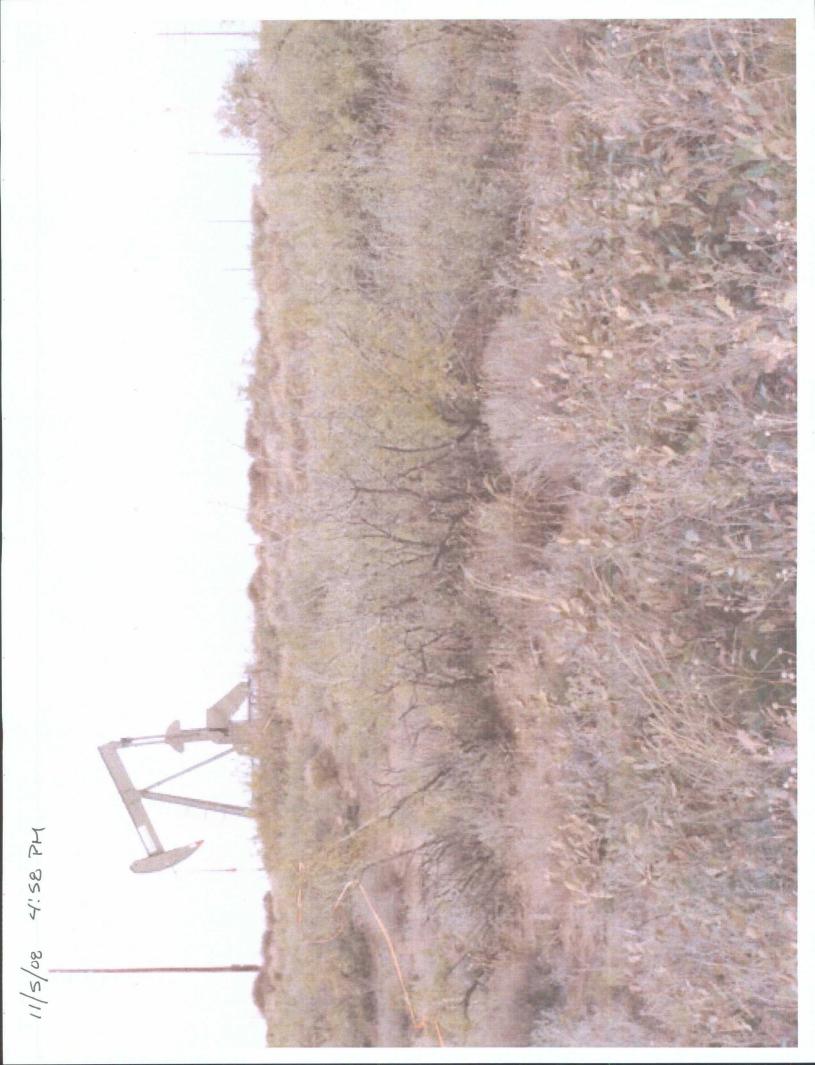
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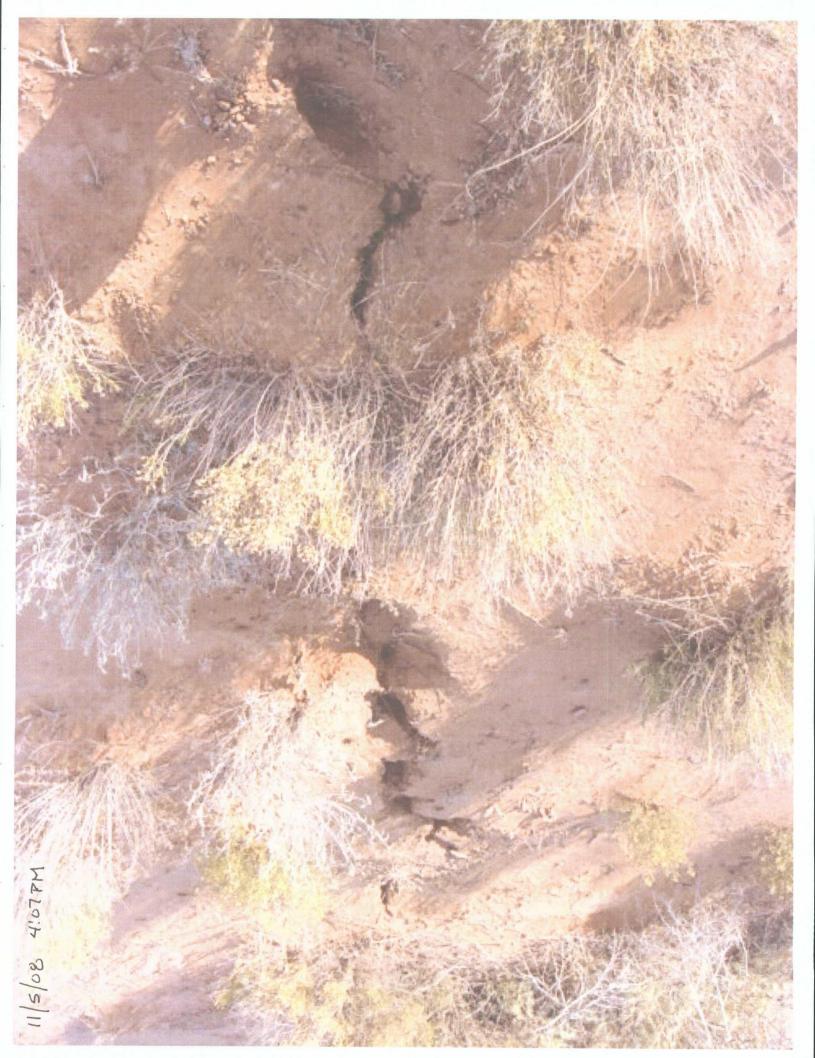


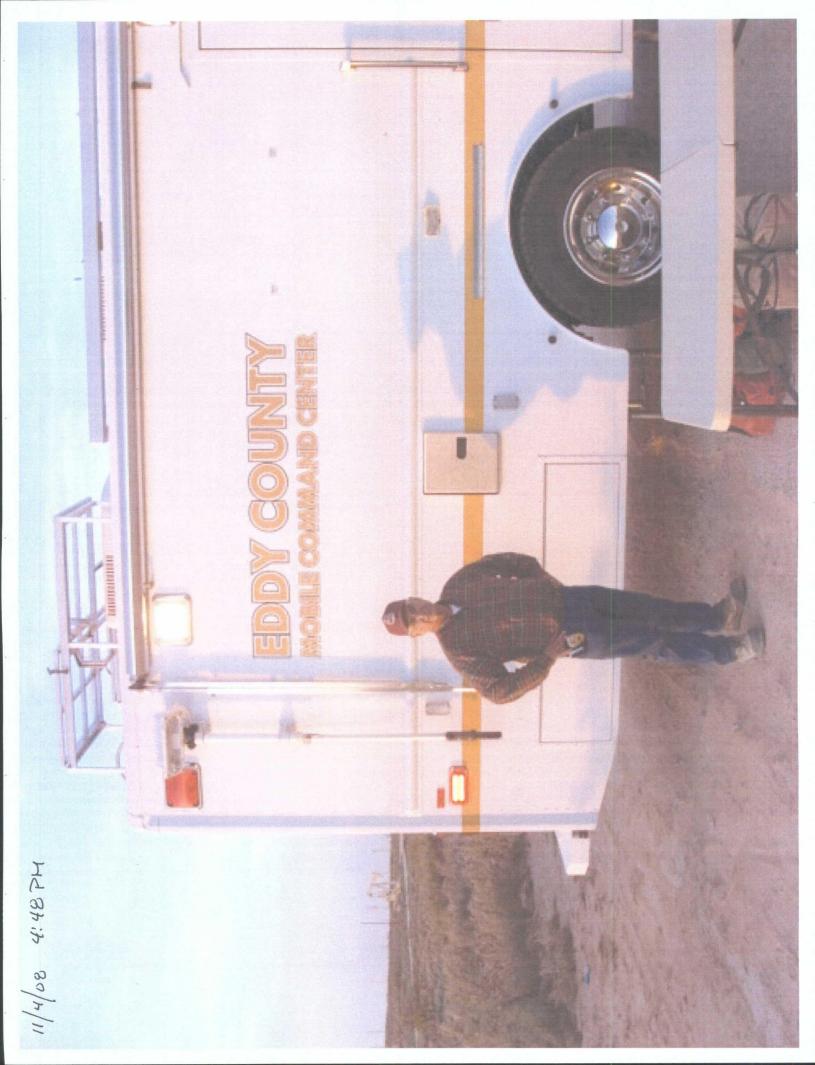
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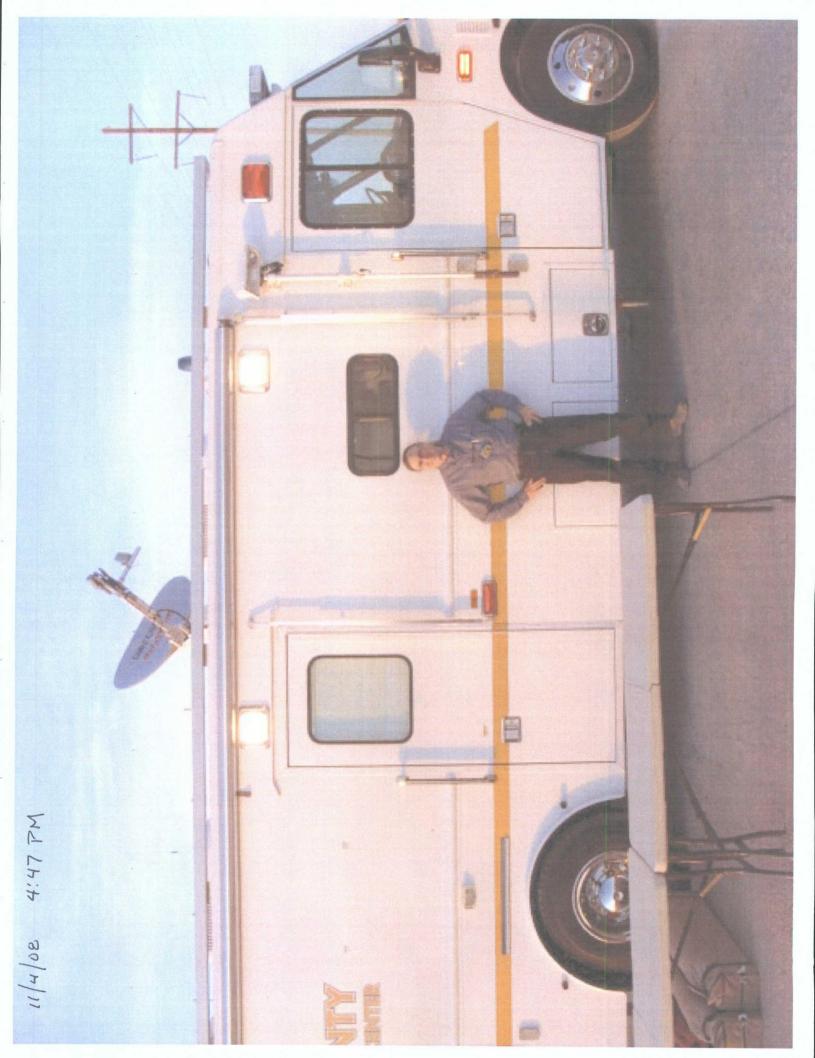




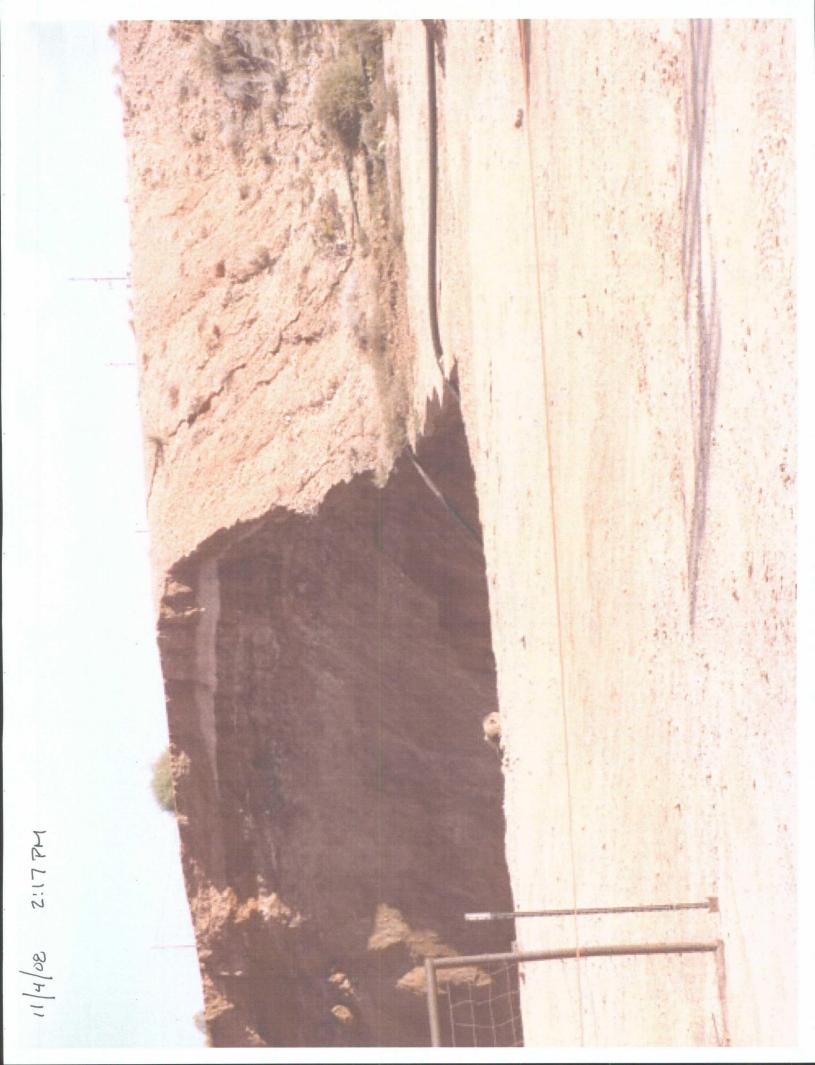








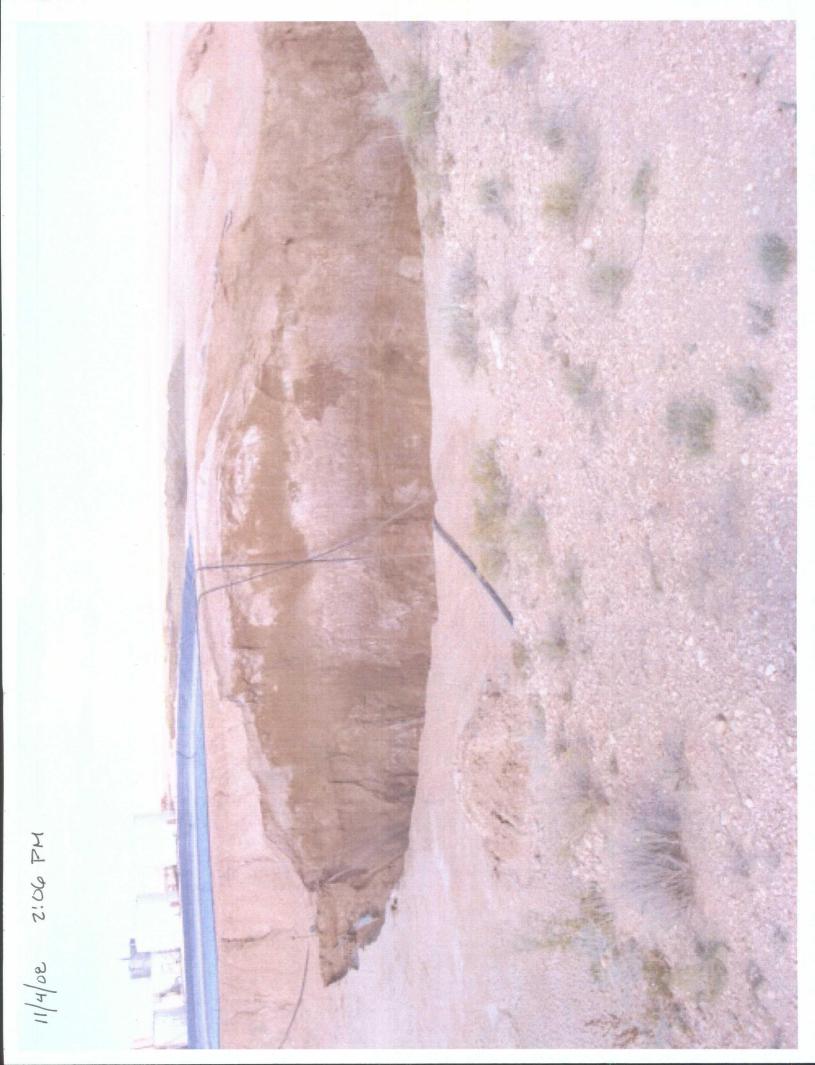


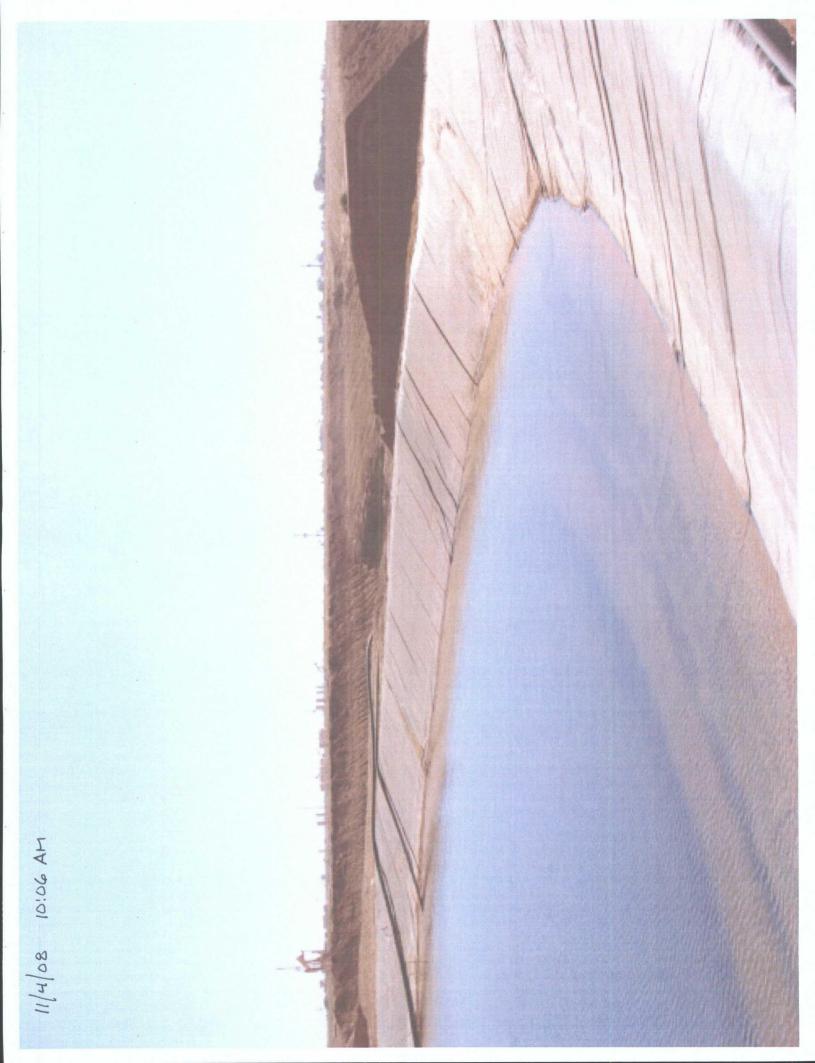


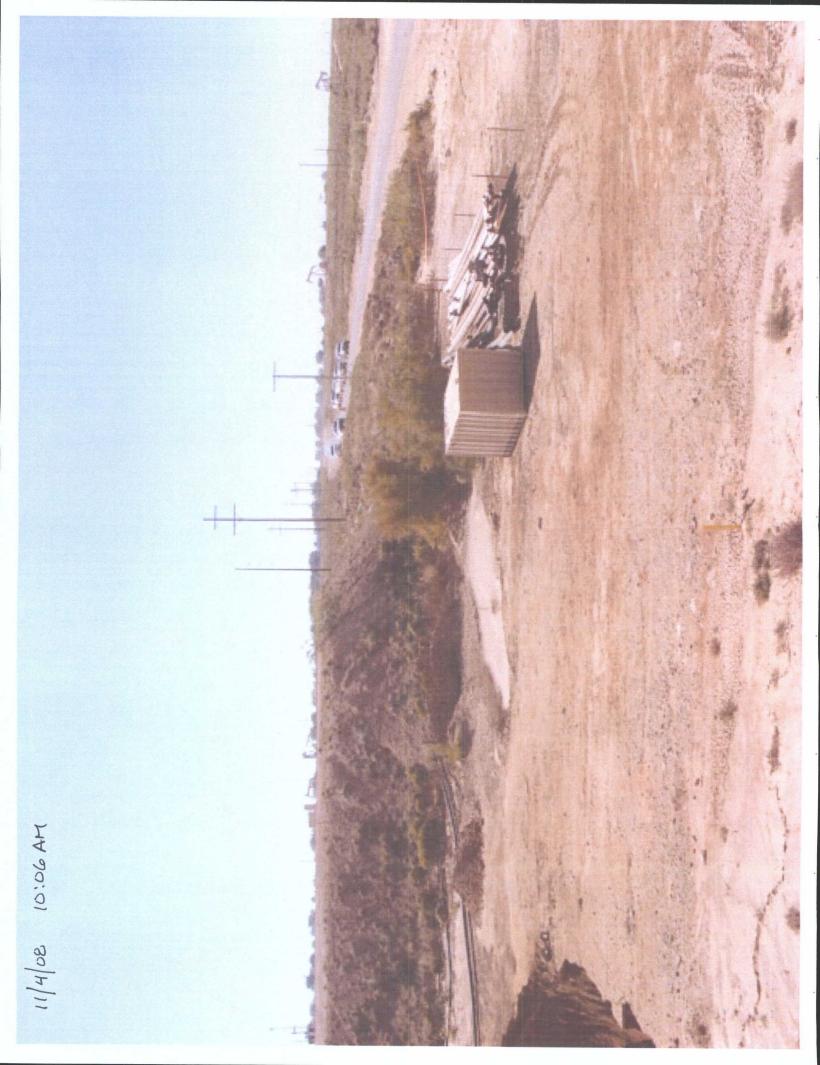
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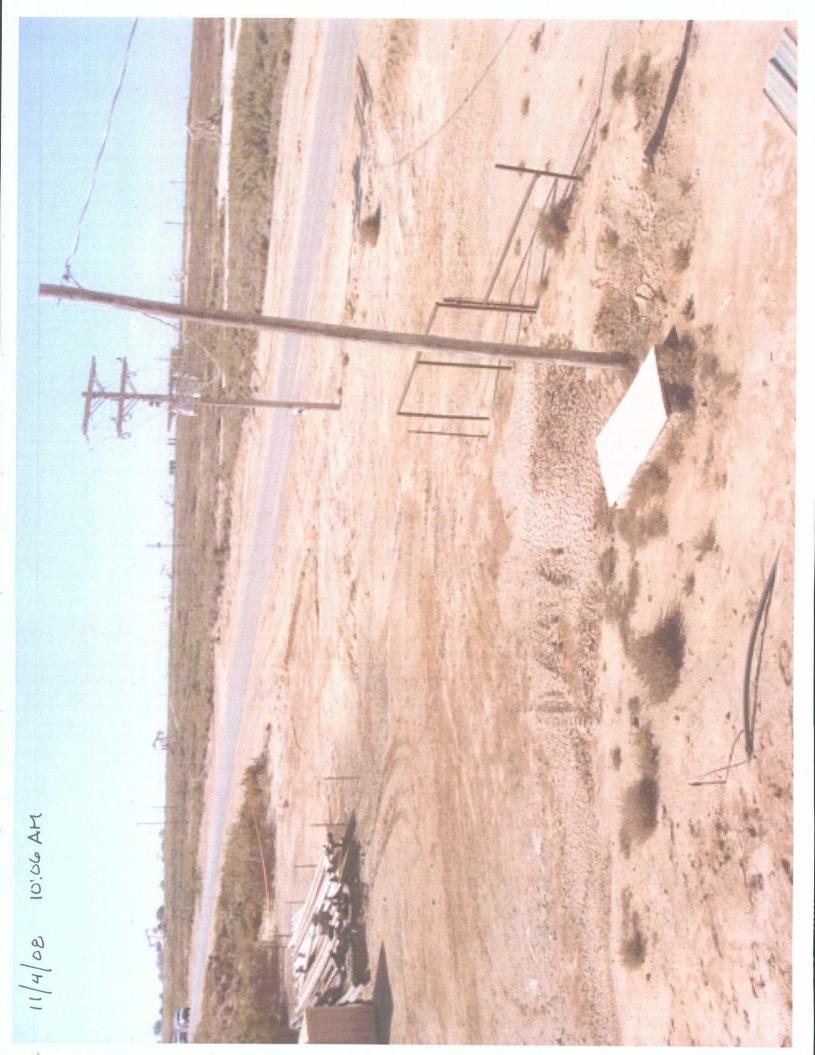
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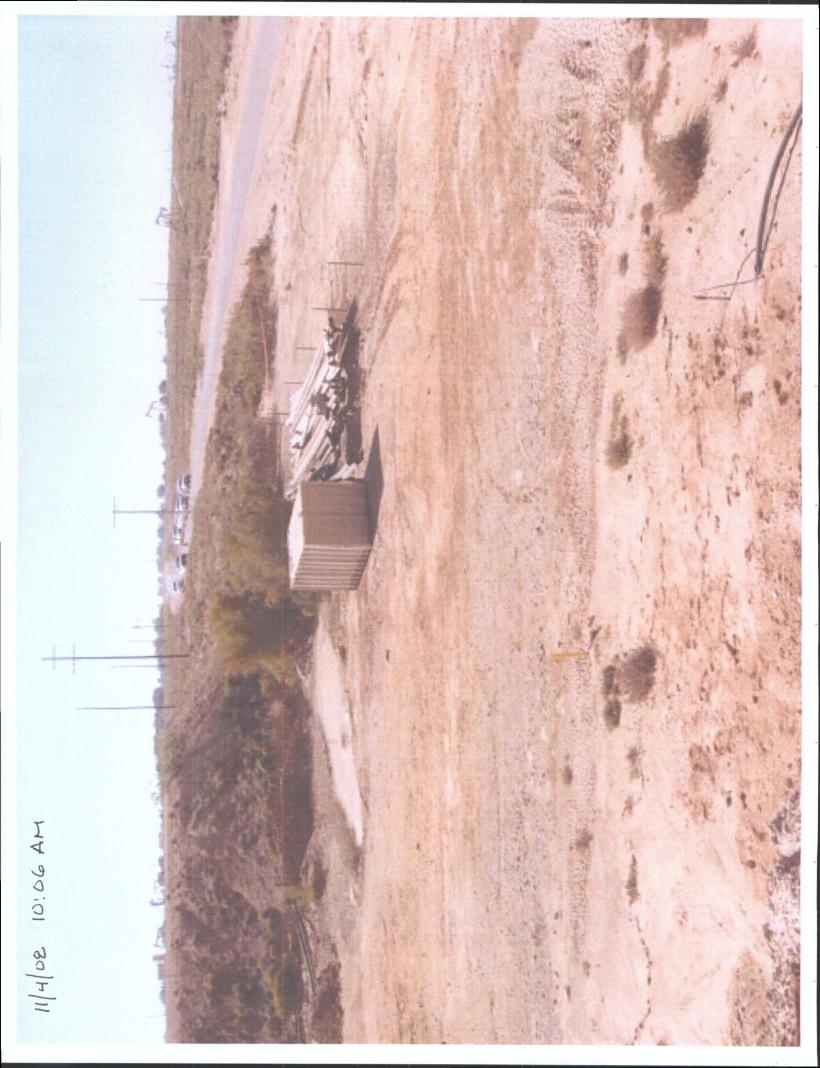










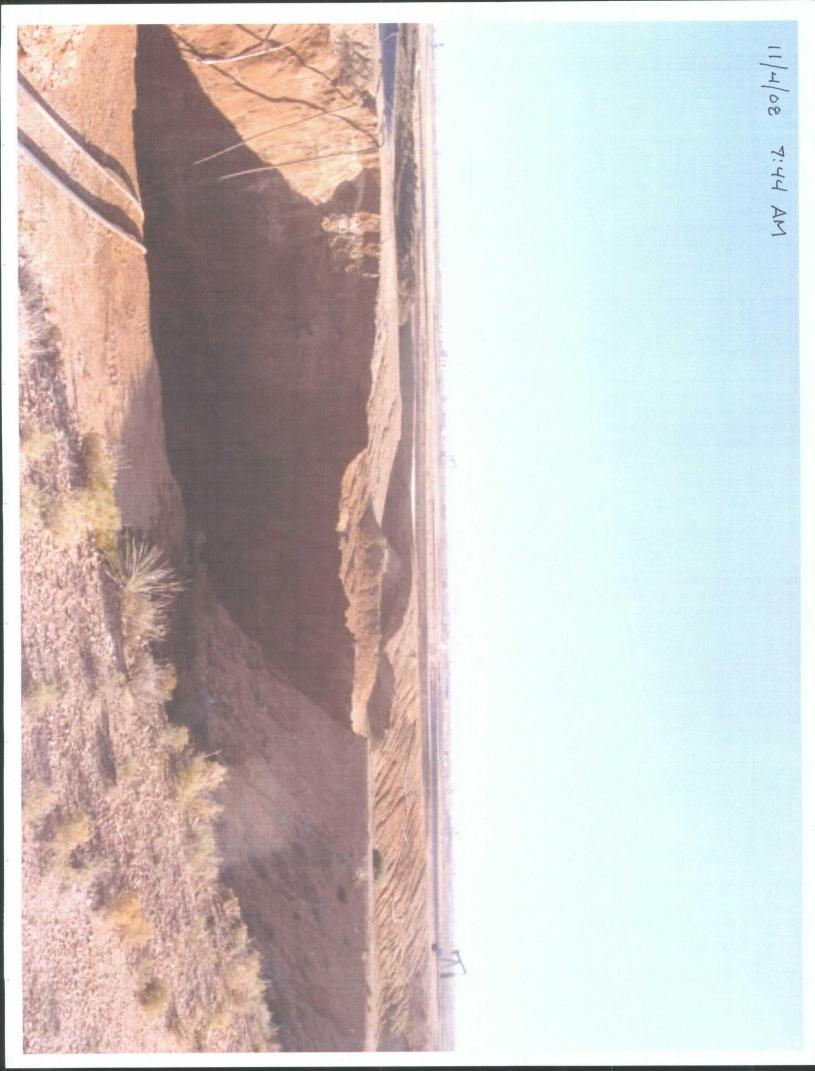


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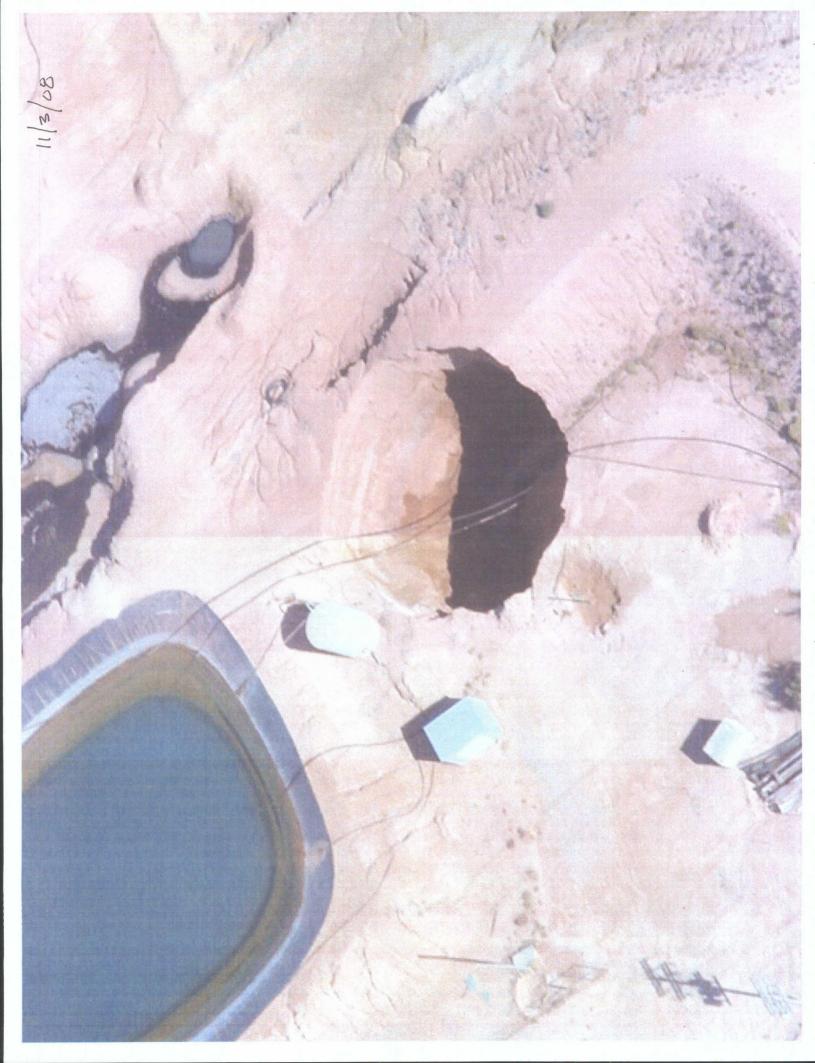


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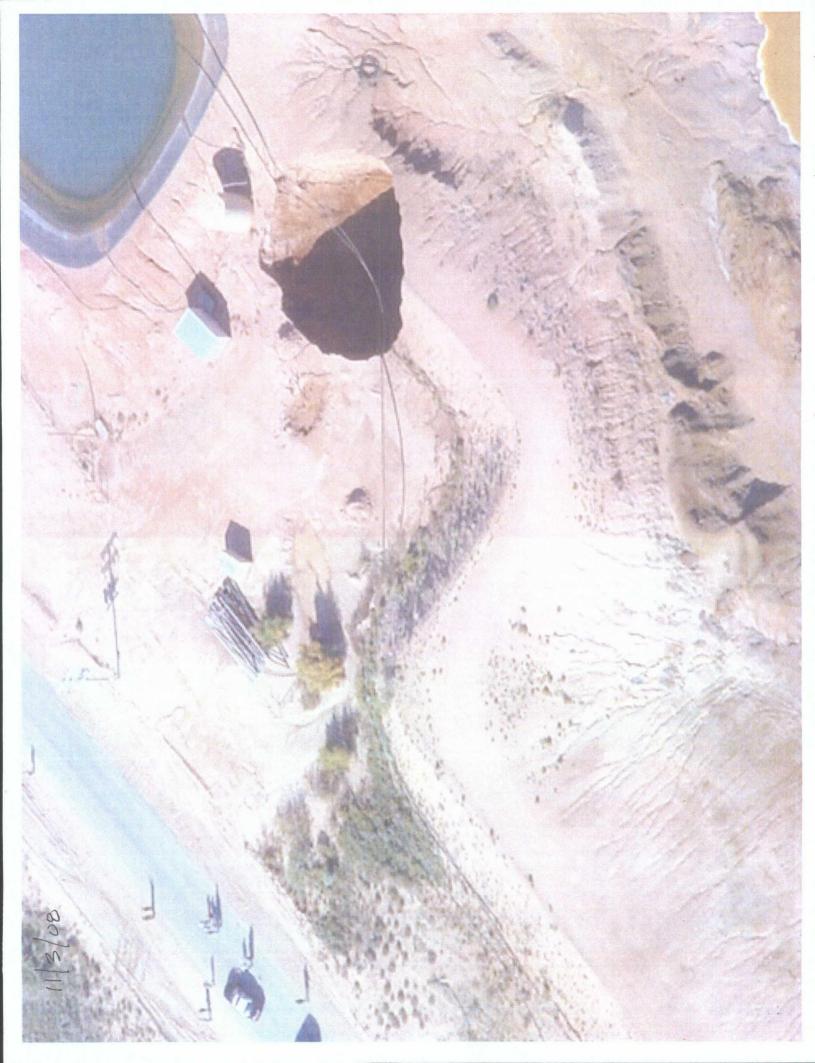
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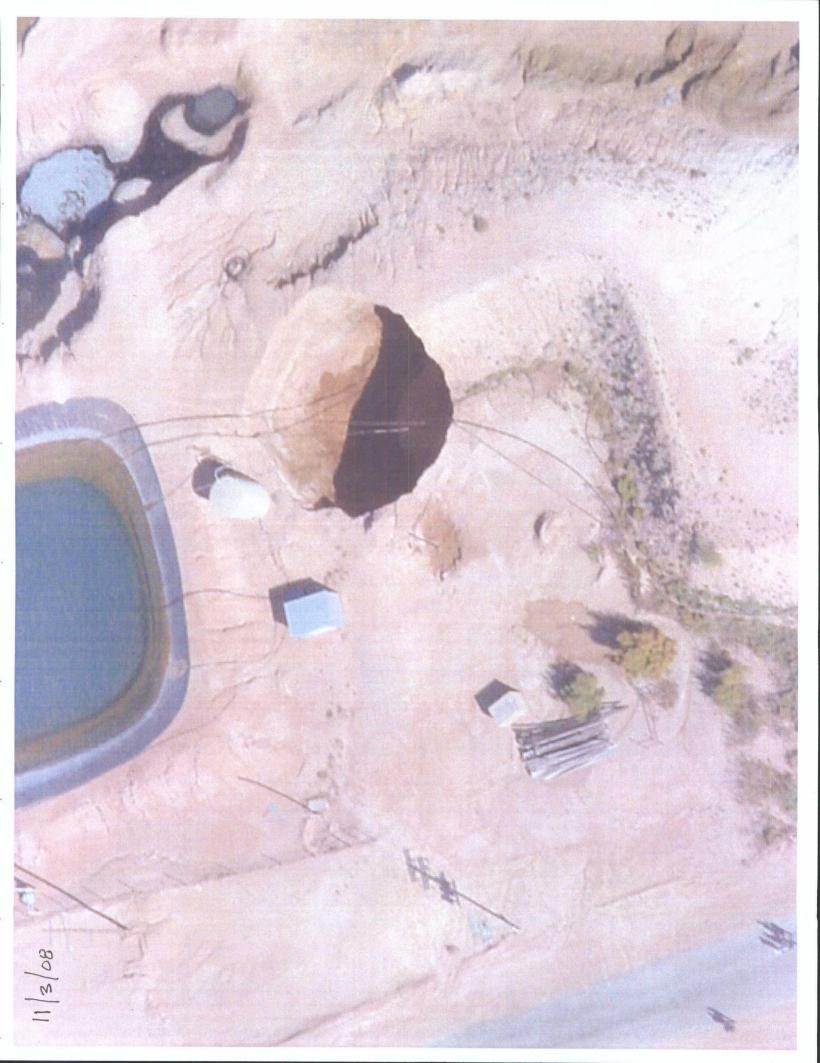




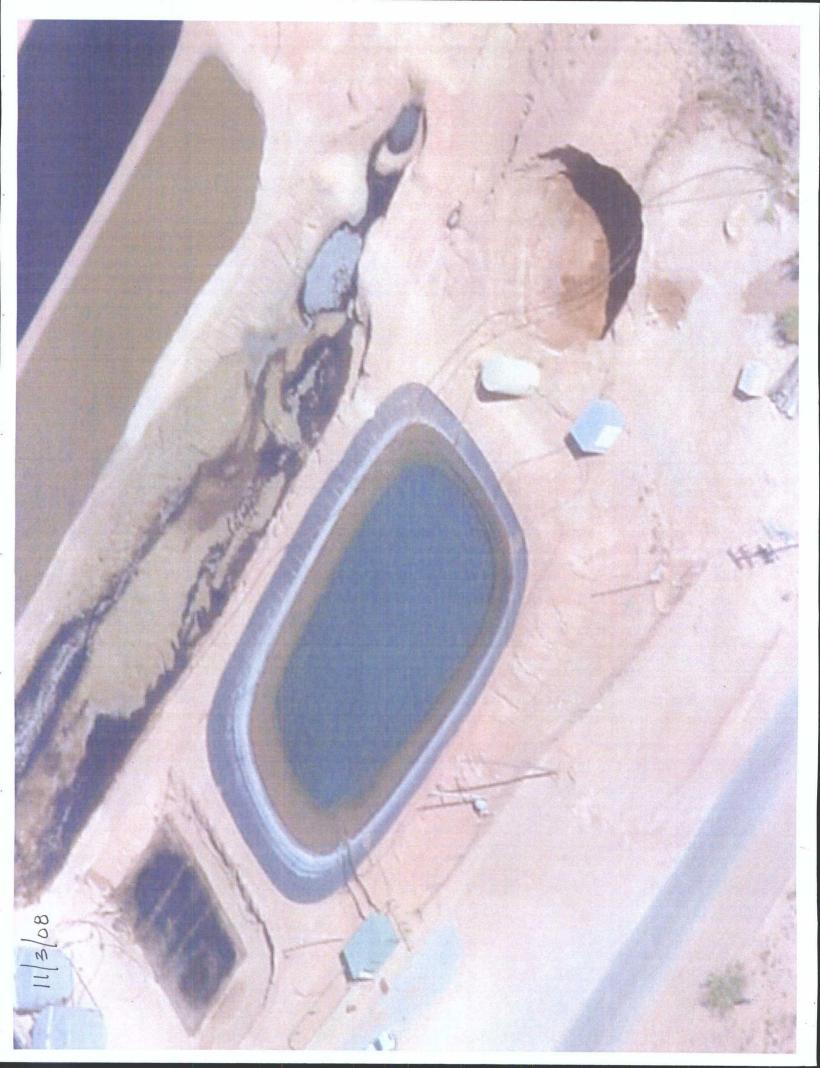




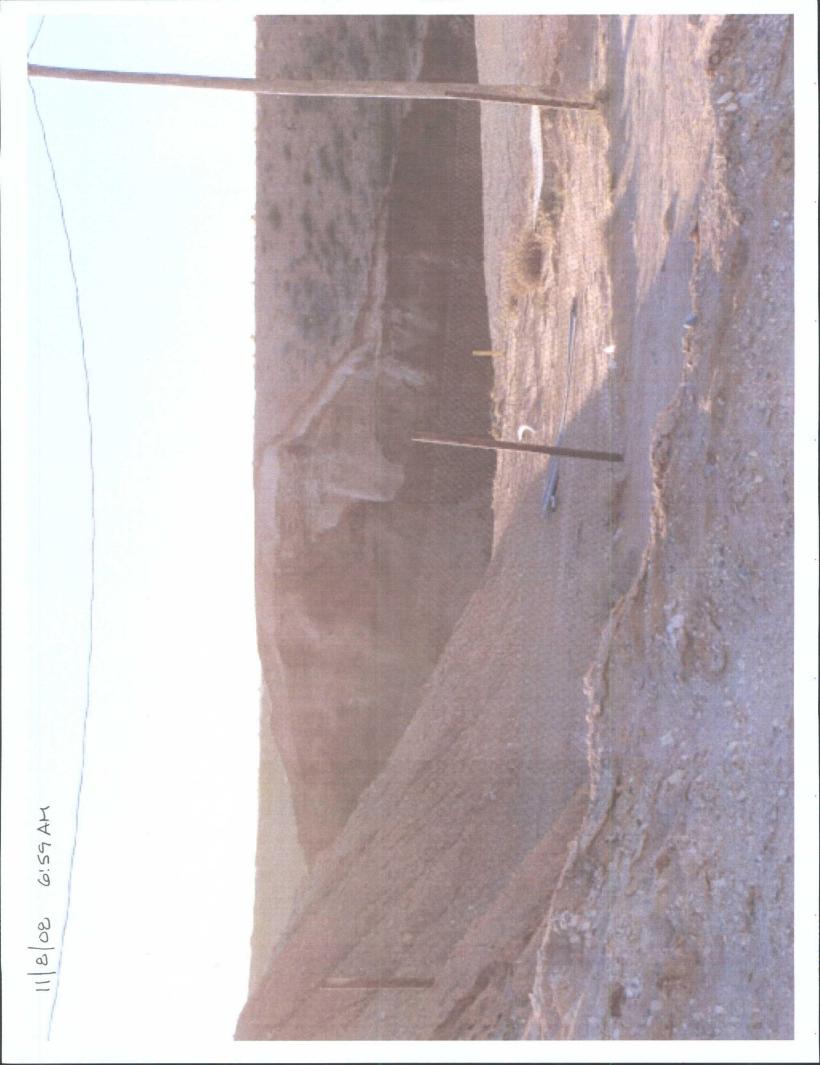




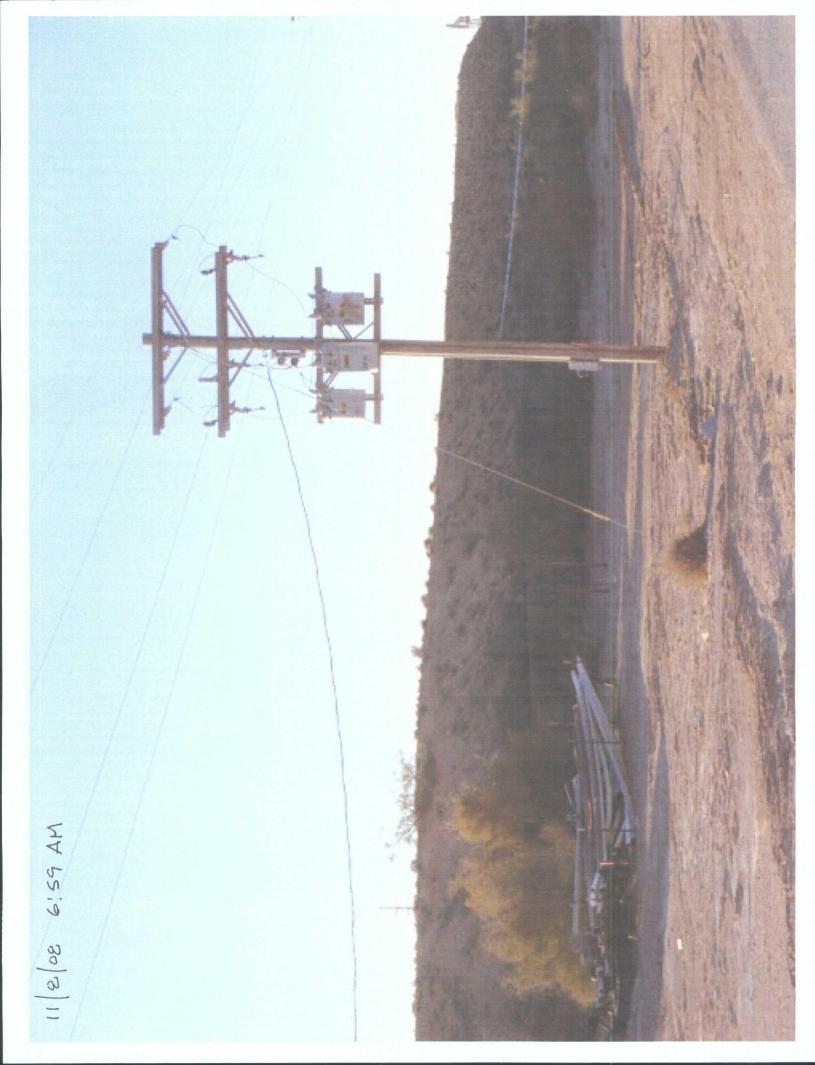




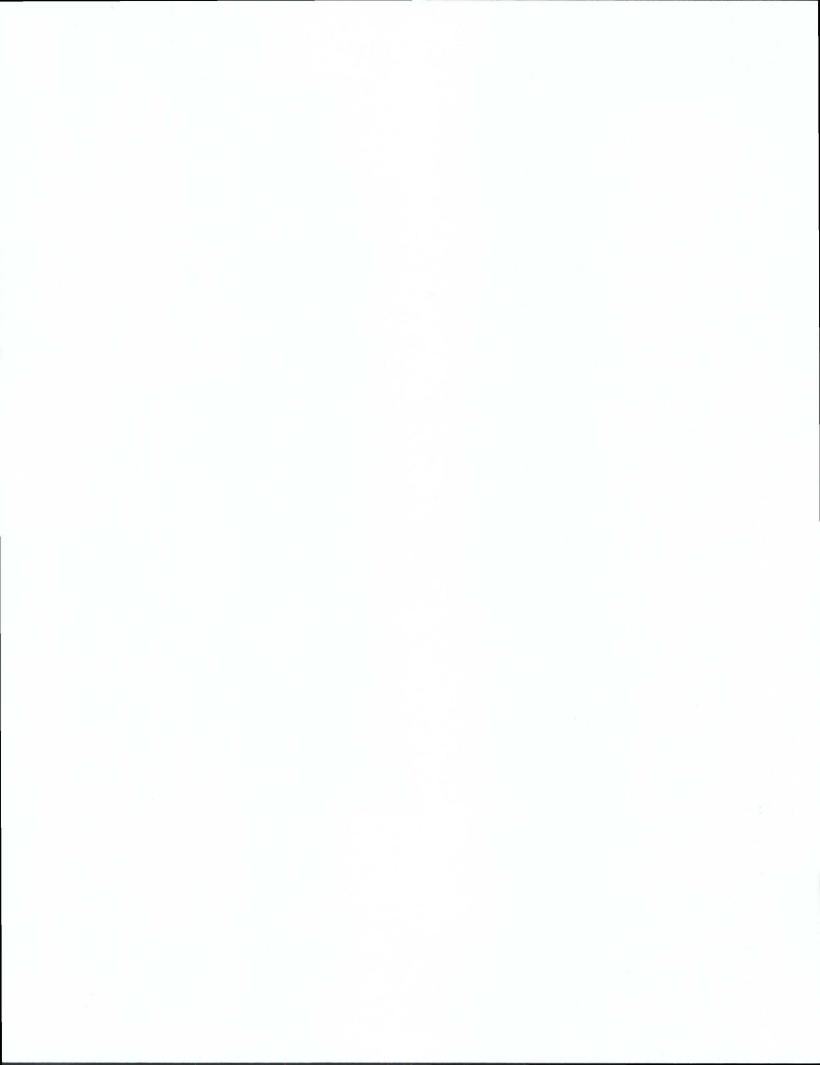


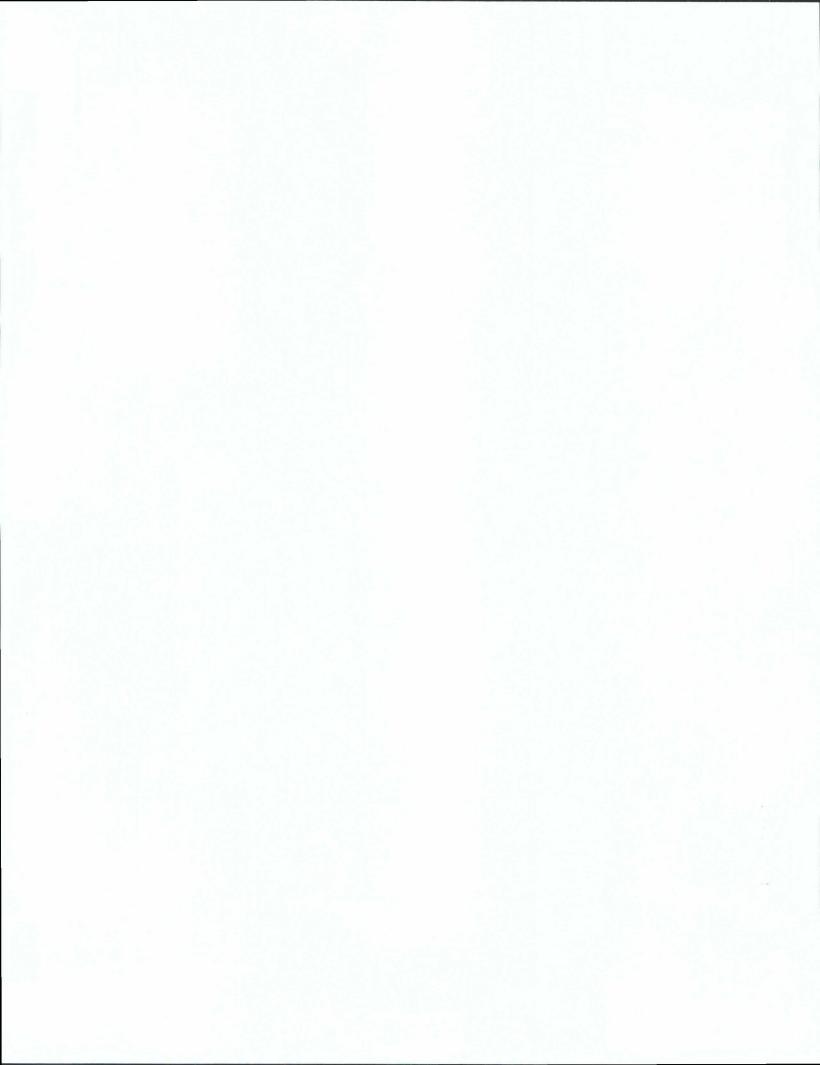




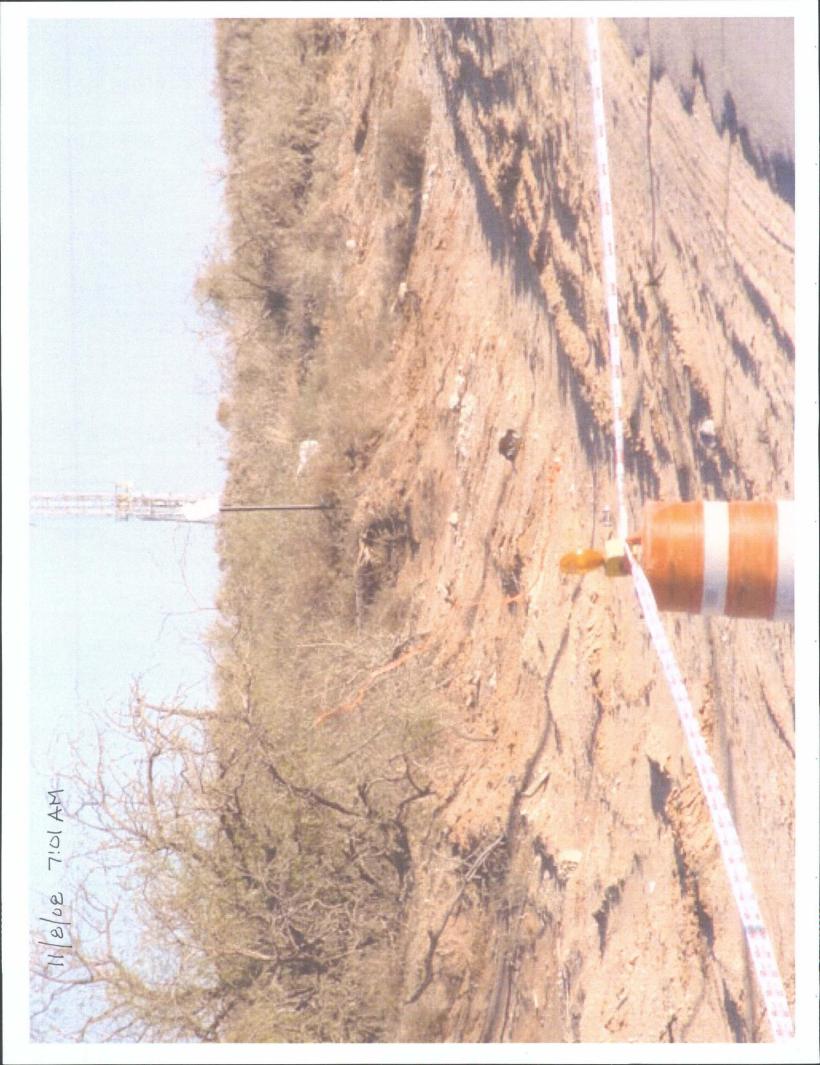


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From:

Chavez, Carl J, EMNRD

Sent:

Monday, November 10, 2008 4:22 PM

To:

Pham.Lisa@epamail.epa.gov

Cc:

'Leissner Ray@epamail.epa.gov'; Price, Wayne, EMNRD; Sanchez, Daniel J., EMNRD

Subject:

Loco Hills Brine Well (BW-21) API# 30-015-32068 UL:M Sec. 16 17S 30E (Eddy County)

Attachments: PR-OCD Brine Well 11 03 08.pdf; image002.jpg; image006.jpg; image007.png

#### Lisa:

Good afternoon. I am writing to report a brine well collapse (see attached press release) that occurred on Monday, November 3, 2008 at about 14:30. Subsidence cracking was noticed after lunch around 13:00 according to the operator. There have been <u>no</u> injuries reported to date.

The sinkhole feature is being fenced off with the fence-line transecting and stopping traffic at the nearby N-S county road at two locations west of the subsidence feature. The county road will likely need to be reconstructed around the area to facilitate oil field traffic in the area.

The OCD is currently updating its OCD Online website to provide more detailed correspondence with photos of the command center similar to Jims Water Service at <a href="http://ocdimage.emnrd.state.nm.us/imaging/AEOrderFileView.aspx?appNo=pENV0000BW0024">http://ocdimage.emnrd.state.nm.us/imaging/AEOrderFileView.aspx?appNo=pENV0000BW0024</a>. The photos and correspondence will be scanned in this coming Wednesday morning.

Please contact me if you have questions. The OCD will be off tomorrow to observe the Holiday and back in Wednesday. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a> index.htm (Pollution Prevention Guidance is under "Publications")



**Bill Richardson** 

C-----

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire Division Director Oil Conservation Division



November 3, 2008

Contact: Jodi McGinnis Porter,

Public Information Officer 505.476.3226

## Loco Hills Brine Well Collapses

SANTA FE, NM – A brine well collapsed today in Eddy County near Loco Hills. This morning the Loco Hills Water Disposal Company reported to the Oil Conservation Division that there were early indications of a collapse. By 2:30 pm today, the operator reported a cave-in of approximately 50 feet across with an estimated depth of 30 feet. The brine well, BW-21,is located 150 feet from County Road 217 near Loco Hills, Sec. 16, Township 17 South, 30 East. Local, county, and state officials have been notified and County Road 217 has been closed.

Energy, Minerals and Natural Resources Department Cabinet Secretary Joanna Prukop ordered a statewide review, internal audit and inspection of all existing brine wells in New Mexico last summer following a brine well collapse near Artesia that created a sinkhole over 400 feet across. That collapse caused immense concern as to how brine wells are managed by their operators and their apparent lack of oversight.

"The Artesia brine well collapse sounded the alarm on how these wells are managed by operators and the need for consistent monitoring," stated Secretary Prukop. "The Loco Hills well was shut-in because of the Oil Conservation Division's findings regarding its mechanical integrity. Its collapse may lead us to shut-in others if indications warrant."

The Loco Hills Brine well had been closed and plugged three months ago when it failed an Oil Conservation Division mechanical integrity test, as part of Secretary Prukop's statewide inspection and review. Since the Artesia brine well collapse, all brine well operators are required to conduct daily inspections.

"These inspections are working, because the operator detected subsidence before the collapse actually occurred," stated Wayne Price, Environmental Bureau Chief for the Oil Conservation Division.

The Oil Conservation Division will continue to monitor and investigate the collapse of this brine well.

#30#

The Energy, Minerals and Natural Resources Department provides resource protection and renewable energy resource development services to the public and other state agencies.

Oil Conservation Division
1220 South St. Francis Drive - Santa Fe, New Mexico 87505
Phone (505) 476-3440 - Fax (505) 476-3462 - www.emnrd.state.nm.us/OCD



From:

Price, Wayne, EMNRD

Sent:

Monday, November 10, 2008 11:04 AM

To:

Hansen, Edward J., EMNRD; Lowe, Leonard, EMNRD; VonGonten, Glenn, EMNRD

Cc:

Chavez, Carl J, EMNRD

Subject:

IC info

Ed, please get a hold of Dave or the safety officer and make sure we get all of the documentation, unit log, maps charts for the emergency response for the BW-21.

Wayne Price-Environmental Bureau Chief Oil Conservation Division 1220 S. Saint Francis Santa Fe, NM 87505

E-mail wayne.price@state.nm.us

Tele: Fax: 505-476-3490 505-476-3462

From: Chavez, Carl J, EMNRD

**Sent:** Monday, November 10, 2008 12:05 PM

Price, Wayne, EMNRD

To: Chavez, Carl J, EMNRD

Subject: BW-21 Loco Hills Brine Well Collapse Note to File

#### Note to File:

Cc:

Randall Harris a representative of Loco Hills called and left a message on my work answering machine on Monday, November 3, 2008 at 12:34 p.m. to report an emergency at the facility.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/index.htm">http://www.emnrd.state.nm.us/ocd/index.htm</a> (Pollution Prevention Guidance is under "Publications")

From: Porter, Jodi, EMNRD

Sent: Monday, November 03, 2008 6:49 PM

To: Prukop, Joanna, EMNRD; EMNRD-OCD - SANTA FE; EMNRD-DIV. DIRECTORS; Tabor, Jane,

EMNRD; Ware, Daniel, EMNRD

Cc: Shipley, Pahl, GOV; Cottrell, Sarah, GOV

Subject: AP-BC-NM--Brine Well Collapse/125

Date: 11/3/2008 7:56 PM

BC-NM--Brine Well Collapse/125

Eds: APNewsNow.

Brine well collapses in Eddy County

LOCO HILLS, N.M. (AP) \_ The state Oil Conservation Division is investigating the collapse of a brine well in northeastern Eddy

County

The Loco Hills Water Disposal Co. reported the collapse to state officials Monday. The resulting sinkhole is about 50 feet across and 30 feet deep. County Road 217 is closed as a precaution.

Energy, Minerals and Natural Resources Secretary Joanna Prukop ordered a statewide review, internal audit and inspection of all existing brine wells in New Mexico last summer following a brine well collapse near Artesia.

The Loco Hills well was closed and plugged three months ago when it failed a mechanical integrity test as part of the statewide review.

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#### Summary

Jodí

Jodi McGinnis Porter
Public Information Officer
Energy, Minerals and Natural Resources Department (EMNRD)
1220 South St. Francis Drive
Santa Fe, NM 87505
Phone: (505) 476-3226

Fax: (505) 476-3220 Cell: (505) 690-1689

E-mail: <u>jodi.porter@state.nm.us</u> Website: <u>www.emnrd.state.nm.us</u>

From:

Porter, Jodi, EMNRD

Sent:

Monday, November 03, 2008 5:32 PM

Subject:

PR-OCD-Loco Hills Brine Well Collapses

Attachments: image001.jpg; image005.jpg; PR-OCD Brine Well 11 03 08.pdf



Bill Richardson

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



November 3, 2008

Contact: Jodi McGinnis Porter,

Public Information Officer 505.476.3226

#### **Loco Hills Brine Well Collapses**

SANTA FE, NM — A brine well collapsed today in Eddy County near Loco Hills. This morning the Loco Hills Water Disposal Company reported to the Oil Conservation Division that there were early indications of a collapse. By 2:30 pm today, the operator reported a cave-in of approximately 50 feet across with an estimated depth of 30 feet. The brine well, BW-21,is located 150 feet from County Road 217 near Loco Hills, Sec. 16, Township 17 South, 30 East. Local, county, and state officials have been notified and County Road 217 has been closed.

Energy, Minerals and Natural Resources Department Cabinet Secretary Joanna Prukop ordered a statewide review, internal audit and inspection of all existing brine wells in New Mexico last summer following a brine well collapse near Artesia that created a sinkhole over 400 feet across. That collapse caused immense concern as to how brine wells are managed by their operators and their apparent lack of oversight.

"The Artesia brine well collapse sounded the alarm on how these wells are managed by operators and the need for consistent monitoring," stated Secretary Prukop. "The Loco Hills well was shut-in because of the Oil Conservation Division's findings regarding its mechanical integrity. Its collapse may lead us to shut-in others if indications warrant."

The Loco Hills Brine well had been closed and plugged three months ago when it failed an Oil Conservation Division mechanical integrity test, as part of Secretary Prukop's statewide inspection and review. Since the Artesia brine well collapse, all brine well operators are required to conduct daily inspections.

"These inspections are working, because the operator detected subsidence before the collapse actually occurred," stated Wayne Price, Environmental Bureau Chief for the Oil Conservation Division.

The Oil Conservation Division will continue to monitor and investigate the collapse of this brine well.

#30#

The Energy, Minerals and Natural Resources Department provides resource protection and renewable energy resource development services to the public and other state agencies.

#### Oil Conservation Division 1220 South St. Francis Drive • Santa Fe, New Mexico 87505 Phone (505) 476-3440 • Fax (505) 476-3462 • <u>www.emnrd.state.nm.us/OCD</u>

Jodi

Jodi McGinnis Porter
Public Information Officer
Energy, Minerals and Natural Resources Department (EMNRD)
1220 South St. Francis Drive
Santa Fe, NM 87505
Phone: {505} 476-3226
Fax: (505) 476-3220
Cell: (505) 690-1689
E-mail: jodi.porter@state.nm.us

Website: www.emnrd.state.nm.us

## Price, Wayne, EMNRD

From:

Porter, Jodi, EMNRD

Sent:

Monday, November 03, 2008 2:13 PM

To:

Prukop, Joanna, EMNRD; Fesmire, Mark, EMNRD; Cottrell, Sarah, GOV; Price, Wayne,

EMNR(

Cc:

Gallegos, Gilbert, GOV; Shipley, Pahl, GOV

Subject:

Loco Hills Brine Well Collapse

Importance:

Low

Working on a news release, but still waiting on more facts. Here's what I know thus far:

Loco Hills Brine Well-21 collapsed and it is still caving in.

The well is operated by Ray Westall

Last report today at 13:33 had the cave in at approximately 50 ft. across and approximately 30 ft. deep.

The well is located 150 feet from County Road 217 near Loco Hills, Sec. 16, Township 17 South, 30 East.

Local, County and State Police have been notified.

Local law enforcement officials are working together to close County Road 217, but it was still open at 13:33.

The well is caving to the east toward several unlined ponds and the worst case scenario could be a catastrophic release of produced water.

There are 6 producing oil wells in the area and 2 injection wells within a 1 mile radius and pipelines all around. OCD is in the process of notifying all the operators in the area and instructing them to evaluate their situation and voluntarily shut in if necessary as a safety precaution.

The goods news this well was plugged three months ago and monitoring was ordered because Secretary Prukop imposed stricter conditions for all brine wells. These new stricter conditions allowed us to catch this incident early.

I'll be drafting a release, and working with OCD on fact checking.

Jodi

Jodi McGinnis Porter
Public Information Officer
Energy, Minerals and Natural Resources Department (EMNRD)
1220 South St. Francis Drive
Santa Fe, NM 87505
Phone: (505) 476-3226

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# New Mexico Energy, Minerals and Natural Resources Department

#### Bill Richardson

Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire
Division Director
Oil Conservation Division



November 5, 2008

Hand Delivered

James R. Maloney Loco Hills Water Disposal Company P.O. Box 68 Loco Hills, NM 88210

Re: BW-21 (API #30-015-36119) Collapse Site located approximately one mile north of Loco Hills on Eddy County Road 217

Dear Mr. Maloney:

Due to the brine well (BW-21) collapse, the New Mexico Oil Conservation Division (OCD) requires the following in order to protect the public and the environment:

- 1. Public access must be excluded by temporary fencing (i.e., 4-strand bared wire or other designs) with warning signs at a safe distance completely around the collapse site.
- 2. A temporary subsidence monitoring plan must be submitted for the collapse site to the Incident Commander and OCD within 48 hours for OCD approval.
- 3. A Safety Officer is required to be assigned to the site and approved by the OCD. The Safety Officer must report to the OCD any major activities at the site on a daily basis. This Officer must be a participant of the Incident Command System and report to the Incident Commander, if different than OCD. The Safety Officer may be responsible for the Incident Command once the OCD has released the site from the Incident Command System.
- 4. The Safety Officer shall be responsible for the coordination with the Eddy County Road Department, or other parties, to provide safe and adequate access for vehicular traffic in the area of the collapse. A progress report shall be submitted to the OCD with copies to the Incident Commander, New Mexico State Land Office on a daily basis until OCD approves otherwise. E-mails are acceptable.
- 5. The Safety Officer shall be responsible for the coordination with the Central Valley Electric Coop to ensure an uninterrupted power supply for the area oil field and area residences. A progress report shall be submitted to the OCD with copies to the Incident



Commander, New Mexico State Land Office on a daily basis until OCD approves otherwise. E-mails are acceptable.

- 6. The Safety Officer shall be responsible for the coordination with any pipeline companies that have pipelines in the area of the collapse site to ensure the public safety. A progress report shall be submitted to the OCD with copies to the Incident Commander, New Mexico State Land Office on a daily basis until OCD approves otherwise. E-mails are acceptable.
- 7. The Safety Officer shall prepare a contingency plan for a catastrophic release that may be caused by the collapse. The plan must include measures to monitor and contain any release. The plan must be submitted to the Incident Commander and OCD within 48 hours for OCD approval.
- 8. The Safety Officer shall make recommendations to the Incident Commander and OCD to ensure safety at the site (e.g., removal of water from ponds in close proximity to collapse site). In addition, the Safety Officer shall be responsible for maintaining safety barriers, signs, detours and/or another on and off-site safety issues.

If you have any questions regarding this matter, please contact me at (505) 476-3490.

Sincerely,

Wayne Price

Environmental Bureau Chief

WP:eih

Mark Fesmire, Director, OCD, Santa Fe
Daniel Sanchez, OCD, Santa Fe
Tim Gum, OCD, Artesia
Brian G. Henington, State Land Office, Santa Fe
David Herrell, BLM Incident Commander
Joel Arnwine, Eddy County Emergency Manager, Carlsbad
Frank Weldon, Eddy County Road Department, Artesia
Gary Conklin, Central Valley Electric Coop, Inc., Artesia
Ray Westall, Loco Hills Water Disposal, Artesia



1

#### Bill Richardson Governor

2008 OCT 20 PM 3 47

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire
Division Director
Oil Conservation Division



## OIL CONSERVATION DIVISION BRINE WELL INFORMATION REQUEST

WELL IS PLUGEP

GENERAL INFORMATION:
Operator Name Loco Hick WATEN DID Well Name(s) BRINE WELL #/ API Number 30-015-32068 Brine Well Permit # BW-21
API Number 30-015-32068 Brine Well Permit # BW-21
Date Permit Expires?
Location:         Section         16         Ts         17.5         Rg         30 F           FNL         FSL         600         FEL         FWL         230           GPS of well(s):         Lat:         Long:
FNL FSL 600 FEL FWL 230
GPS of well(s): Lat: Long.
Dong.
Have you reviewed and understand all of your permit conditions? Yes ℞ No□
Are you presently deficient of any condition in your permit? Yes \( \subseteq \text{No} \subseteq \text{Don't know} \)
Do you operate below grade tanks or pits at the site? Yes \(\text{Now}\)
Do all tanks, including fresh water tanks, have secondary containment? Yes No
Do you think you have the expertise, knowledge and general understanding of what causes a
brine well to collapse? Yes⊠ No□
Do you think OCD should provide guidelines on subsidence and collapse issues? Yes⊠ No□
SITING INFORMATION: Please provide the following information and depict on 7.5 minute (1": 2000') USGS Quad Map. Limit search to one mile radius.
Is the brine well located within a municipality or city limits? Yes□ No⊠
is the office wen rocated within a municipality of city minus:
•
Distance and direction to nearest permanent structure, house, school, etc. if less than one mile:
> 1 MILE
,
Distance and direction to nearest water well if less than one mile:
> 1 MICE
Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s)
if less than one mile:
7 I MICE
Distance and direction to nearest known karst features or mines if less than one mile:
,
> 1mice

Oil Conservation Division October 14, 2008 Page 2

Distance and direction to nearest producing oil or gas well(s) if less than one mile:
Provide API Number: 30-015-04163 500' ±1 SouthEAST
Distance and direction to nearest tank battery(ies) if less than one mile:
500' ± South EAST
Distance and direction to nearest pipeline(s), including fresh water pipelines if less than one mile: NUMBROUS PIPE (INC. IN EVERY PIRECTION.
Distance and direction to nearest paved or maintained road or railroad if less than one mile:
CR 217 150' TO WEST
Depth to ground water found above the Salado (salt section), regardless of yield:
NONE
Name of aquifer(s):
NONE
WELL CONSTRUCTION: Please provide the following information and attach a
diagram depicting the brine well. Check box if attached:
Copy of a current well diagram: Attached 🗹
Copy of formation record with tops: Attached 🗹
Copy of geophysical well logs if available: Attached 🗹 If not, well logs within one mile 🗆
Depth of the top of the salt below ground surface (feet):
510'
Depth to the bottom of the salt below ground surface (feet):
Depth(s) to and thickness(es) of any anhydrite section(s) (located above the salt):
230'- \$88' 758' THICK
Depth of casing(s) shoe below ground surface (feet): 419
Is the casing shoe set in the anhydrite or other layer above the salt? Yes $\Box$ No $\Box$
Is the casing shoe set into the salt? Yes□ No□ If yes, how far into the salt?
Depth of tubing(s):
Do you suspect that your cavern has partially caved in? Yes♥ No□ Don't know□
OPERATIONS: Please provide the following information.
Start date of brine well operation: 8/1985
Total volume of fresh water injected into the brine well to date (bbls) and how determined:
9,148,000 SYEAR AVERAGE
·

Total volume of brine water produced (bbls) to date and how determined:
7,978,000 5 YEAR AVERAGE
Have you ever lost casing or tubing? If yes, please provide details.    ✓ Document attached □
Do you maintain a surface pressure on your well during idle times? Yes□ No⊠
Have you noticed large amounts of air built up during cavity pressurization? Yes□ No♥
Have you ever noticed fluids or air/gas bubbling up around the casing during testing or normal operations? Yes□ No⊠
MONITORING: Please provide the following information.
Are you currently monitoring ground water contamination from your brine well or system?  Yes ⋈ No□
Have you ever run a sonar log? Yes⊠ No□  If yes, please provide last date: 2/7/01
Provide cavern configuration (dimensions and volume) and method(s) used to estimate:  If sonar report please attach \( \mathbb{S} \) If other, please specify and provide a sketch of cavern:
Do you have a subsidence monitoring program in place? Yes ⊠ No□
Do you have any geophysical monitoring devices, such as a seismic device positioned near your brine well? Yes \( \Bar{\sqrt{No}} \Bar{\sqrt{No}} \)
Have you submitted all of your monthly, quarterly, or annual reports to the OCD? Yes № No□
Have you failed a brine well mechanical integrity test (MIT)? If yes, please attach details and results. Attached & FAILED ON 6-17-08 PLUGED 6-18-08
Have you ever had a casing leak? Yes □ No□  Have you ever had a cavern leak? Yes □ No⊠ Don't know □  Have you ever exceeded the cavern fracture pressure? Yes □ No☒ Don't know □
Do you know how to calculate your maximum pressure? Yes ℜ No□ Don't know □
Have you routinely looked for cracks or fissures in the ground surface around your brine well?  Yes ☑ No□
Do you have any minor or major cracks, fissures, tank settlement, line breakage from settlement or any minor subsidence. Yes \( \text{No} \)
During operations have you experienced any ground vibration, ground movement, or well movement after opening or shunting valves, pump start-up, shut-down, etc.? Yes No

Oil Conservation Division October 14, 2008 Page 4

Have you ever experienced unexpected pressure gain or loss in the cavern? Yes□ No⊠
If Yes, was there a difference in your normal flow rate?  Yes□ No⊠
Anytime during the past 5 years, have you experienced a noticeable difference between fresh
water volume pumped into the well verses brine water produced? Yes □ No⊠
Are you concerned about pulling the tubing due to the fact it may be difficult to re-enter the hole? Yes Nos
Are you concerned about running a sonar tool in fear of losing tool because of debris in hole?  Yes \( \text{NoN} \)
Have you ever conducted a fly over of your well site? No\(\mathbb{N}\) Yes\(\propto\) if yes, please provide photo.
□ Photo(s) attached
Calculation: Please divide your estimated total volume of produced brine by 180,000 and multiply by 50. Example: If you have produced a total of 18,000,000 bbls of brine in the life time of the well then your calculation would be 18,000,000/180,000 = 100 x 50 = 5000.  1. Provide the calculated number above here: 22 216  2. Now provide the depth (ft) from the surface to your casing shoe: 404  Is the calculated number found in #1 above greater than #2? Yes No□
Comments or recommendations for OCD:
We will a major a solar of law that I have more and by a coming and and a familiar with the information and with a limit

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

Company Name-print name above

RANDALL HARRIS

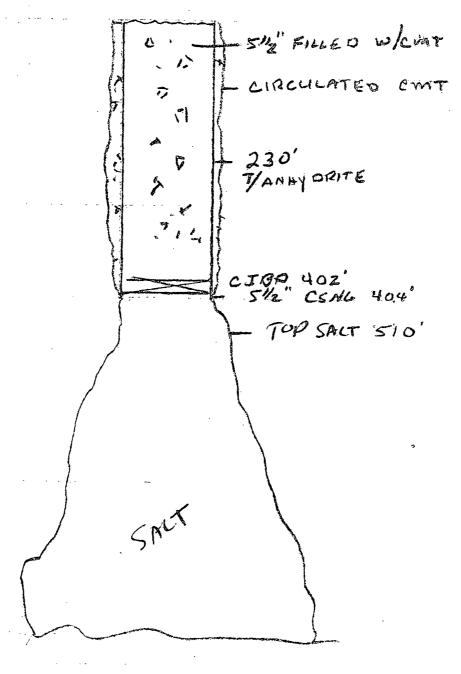
Company Representative- print name

Company Representative- Signature

Title GEOLUGIST AGENT

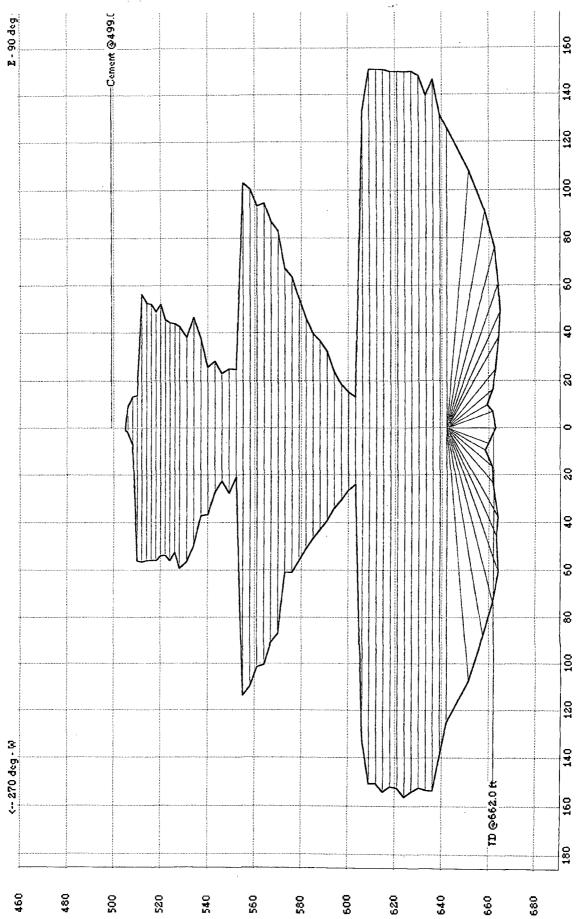
Date: 10/17/08

BRIME WELL & 1 BW-21 30-015-38068



GEOLOGICAL SURVEY

Submit 3 Copies To Appropriate District     Office     State of New Mexico	Form C-103
District   Energy, Minerals and Natural Resources	May 27, 2004
1625 N. French Dr., Hobbs, NM 88240-	WELL API NO.
1301 W. Grand Ave., Artesia, NM 88210 OIL CONSERVATION DIVISION	30-015-32068
District III 1000 Rio Brazos Rd., Aztec, National IIII 21 PM 122015 buth St. Francis Dr. Santa Fe NM 87505	5. Indicate Type of Lease STATE S FEE
District IV Santa Fe, NM 87505	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505	
SUNDRY NOTICES AND REPORTS ON WELLS	7. Lease Name or Unit Agreement Name
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	7. Lass Name of Olit Agreement Hange
1. Type of Well: Oil Well Gas Well Other Brine Well	8. Well Number 1
Name of Operator     Loco Hills Brine Company	9. OGRID Number
3. Address of Operator	10. Pool name or Wildcat
P.O. Box 68, Loco Hills, NM 88255	
4. Well Location	
Unit Letter M: 660 feet from the South line and 2	30feet from theWestline
Section 16 Township 17S Range 30E	NMPM County
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	
Pit or Below-grade Tank Application [] or Closure []	
Pit type Depth to Groundwater Distance from nearest fresh water well Dist	ance from nearest surface water
Pit Liner Thickness: mil Below-Grade Tank: Volume bbls; Co	nstruction Material
12. Check Appropriate Box to Indicate Nature of Notice,	Report or Other Data
NOTICE OF INTENTION TO: SUB	SEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WOR	
TEMPORARILY ABANDON CHANGE PLANS COMMENCE DRI	<del></del>
PULL OR ALTER CASING	L'IOB 🔲
OTHER:	-
13. Describe proposed or completed operations. (Clearly state all pertinent details, and	d give pertinent dates including estimated date
of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attor or recompletion.	
6/18/2008 Pressure test casing did not pass MIT. Plugging approved by Carl Chaves and V Set CIBP @ 402'	Vayne Price of the NMOCD Santa Fe.
CIAMAGE Circulate 90 and Class "C" compant from CTDD to Surface	
6/19/2008 Circulate 80 sxs Class "C" cement from CIBP to Surface.	,
•	
	·
I hereby certify that the information above true and complete to the best of my knowledge grade tank has been will be constructed or supply according to NMOCD guidelines [], a general permit []	e and belief. I further certify that any pit or below- or an (attached) alternative OCD-approved plan
	•
SIGNATURETITLE Geologist	DATE7//72008_
1/( // // // // // // // // // // // // /	•
Type or print tame Randall Harris E-mail address: rharris For State Use Only	nm@aol.com Telephone No. 575.677.2370
ADDROVED BY: TITLE	DATE
AFI KOVED DI:	
Conditions of Approval (if any):	



<-- Range in Teet -->

N/A N/A IIT ICES		1	PROD STRING	ഥ	RECORD SIZE WT/FT GRADE TYPE JOINT TOP	11			-	FROM	BOREHOLE RECORD TUBING RECORD	Υ	RECORDED BY OLIVAS	LOCATION HOBBS	4631	BTM.	WELL READY ON ARRIVA	MAN ROCK FOR CIDO TO CIDO	SEL ATON SE	FLUID	HOLE SIZE	OG INTERVAL	LOG INTERVAL	DEPTH LOGGER 433'	RILLER	RUN NO.: ONE	DATE: 12/27/00	KELLY BUSHING	SROUND LEVEL ELEV. N/A ELEV. K.B.	W IF C SEC.	ELL	BF Z/P	LOCATION:	Y COUNTY EDDY STATE N.M.	FIELD	ST ZOOT TO THE STATE OF THE STA	ATTI	COMPANY RAY WESTALL			CCL		CANNA DAY
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SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFULL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES, OR EXPENSES INCURRED OR SUSTAINED BY ANY ONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS SET OUT IN OUR CURRENT PRICE SCHEDULE.

REMARKS:

NO CORRECTION MADE-WIRELINE DEPTH ONLY

\* FOUND BOTTOM OF CASING AT 419'. USED GROUND LEVEL FOR ZERO POINT.-

SBT:139

CCL: 152 GR: 153

THANK YOU!!!!

v.10.05.99

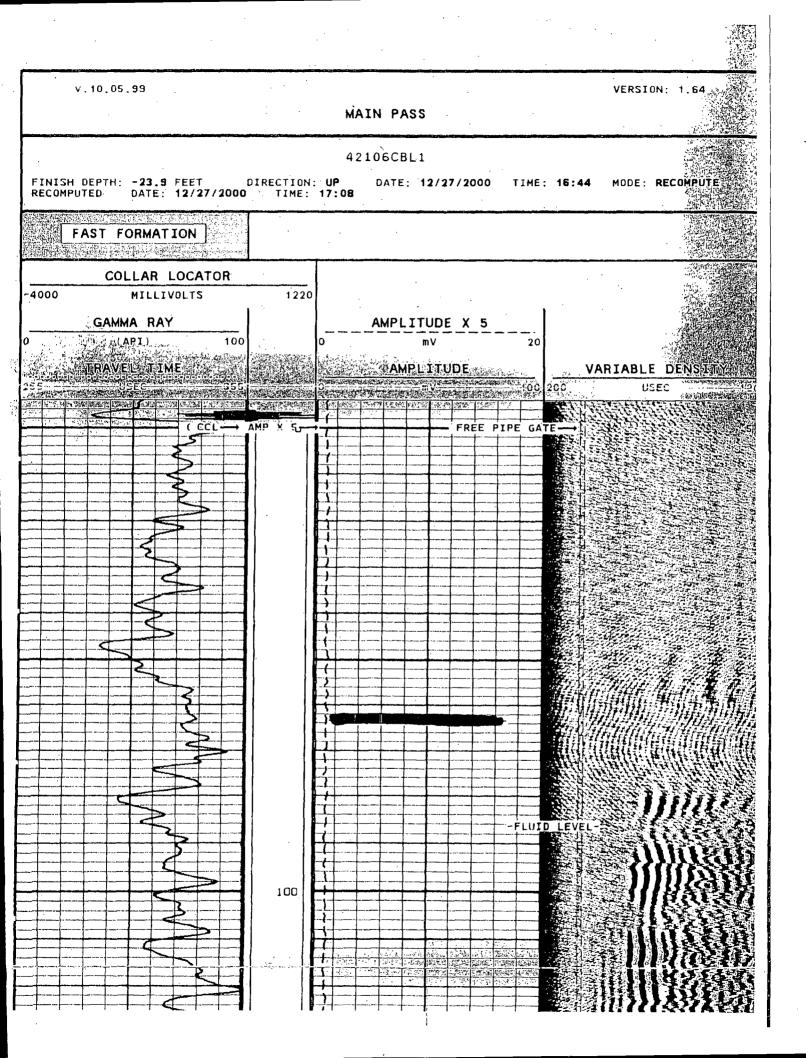
VERŞÎON: 1.64

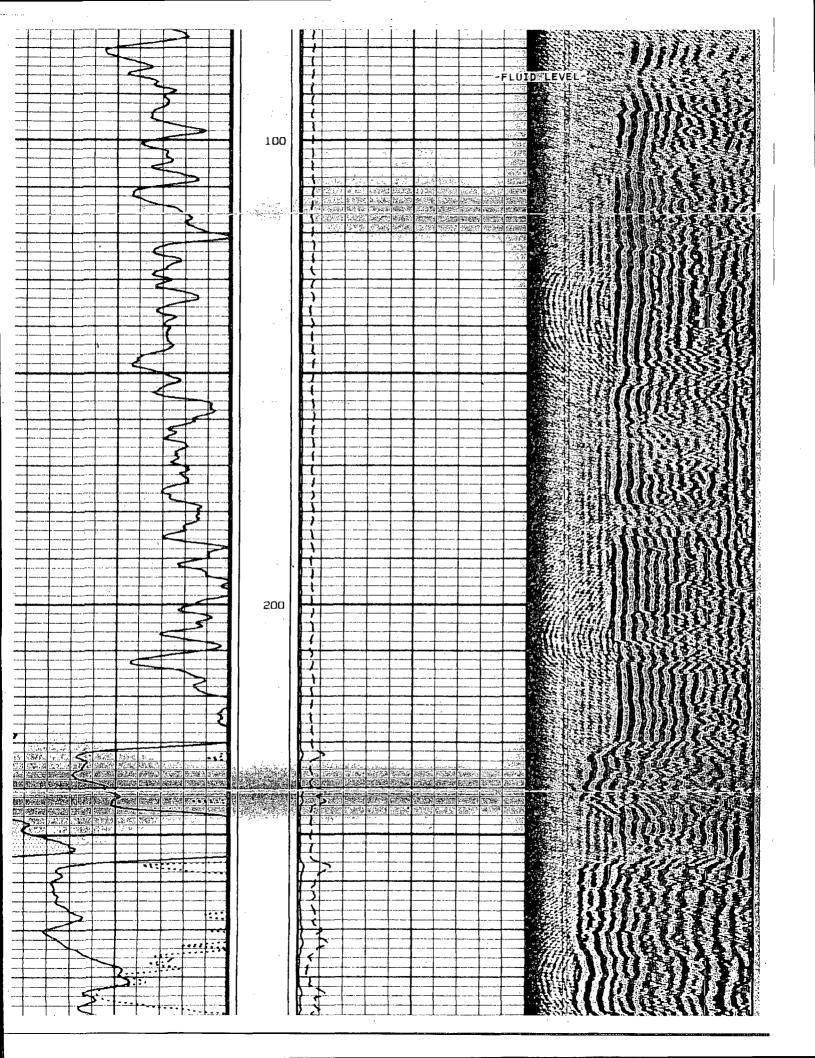
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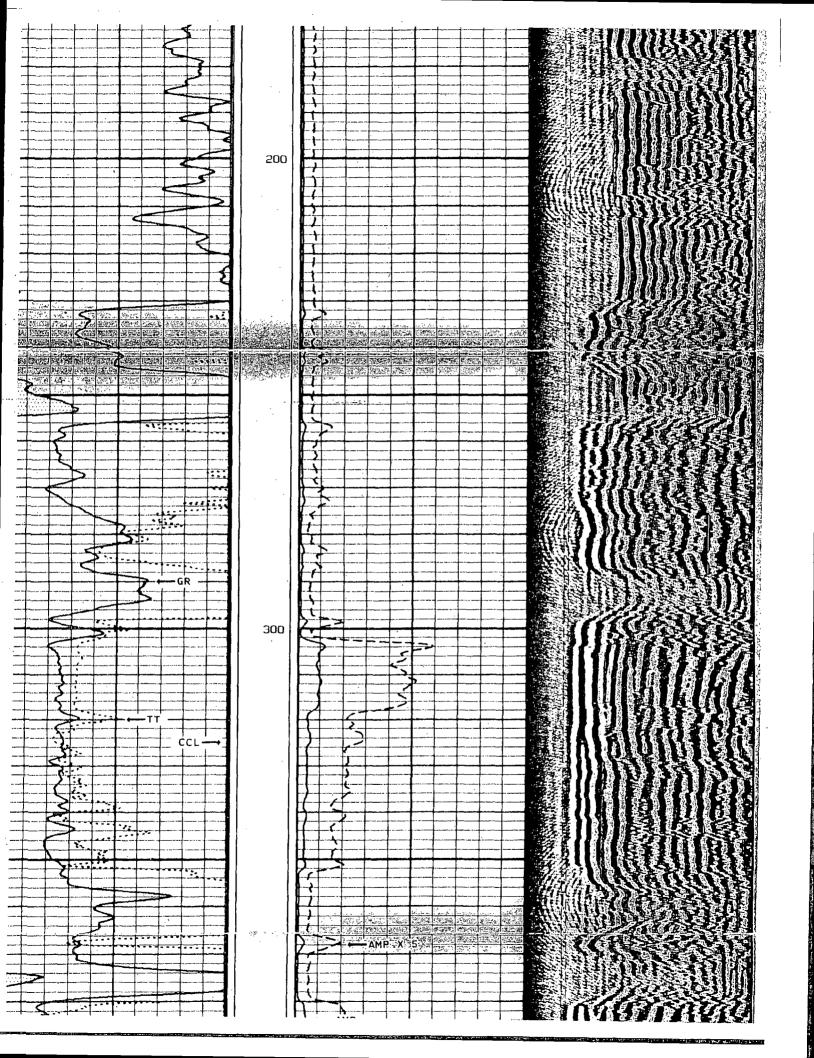
MAIN PASS

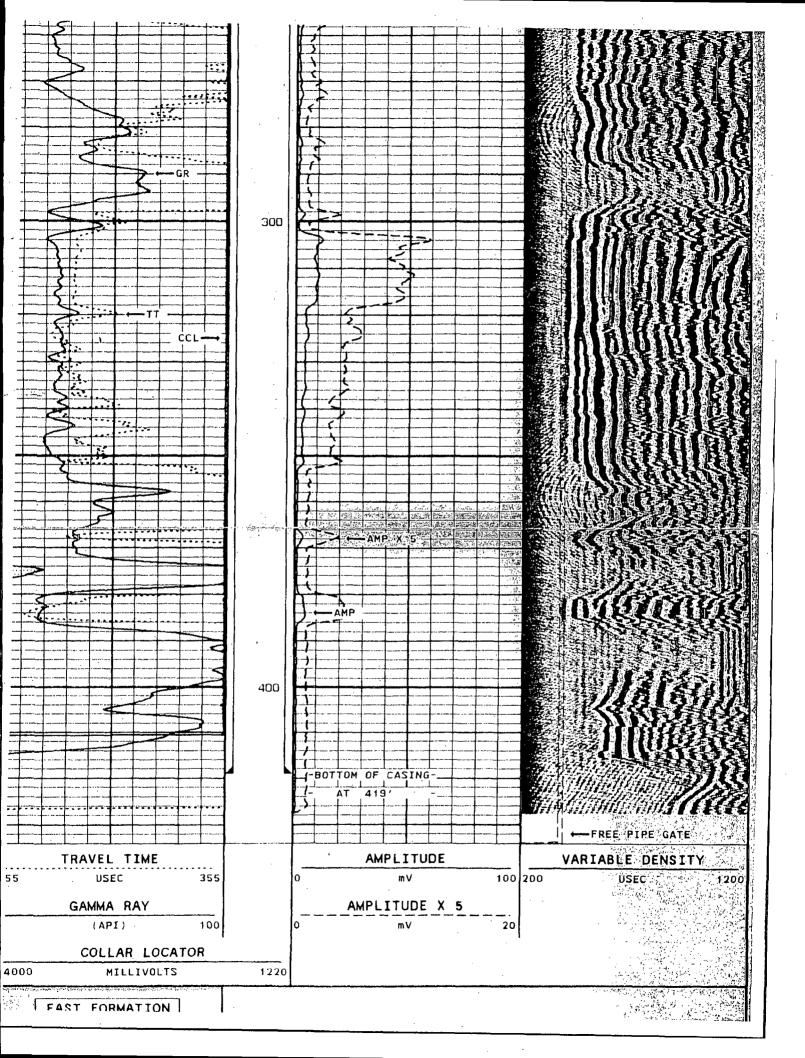
42106CBL1

MODE RECOMPUTE DIRECTION: UP TIME: 17:08 FINISH DEPTH: -23.9 FEET RECOMPUTED DATE: 12/27/2000 DATE: 12/27/2000 TIME: 16:44









### Single Conductor Adaptor Head

1 LB Weight 12 IN Length 1 7/16 IN Max. Diameter

Total Stack Length 200 LBS in air 10tal Stack Length 26.39 FT

## Slim Hole Centralizer

10 LBS Weight 2.49 FT Length 2.75 IN Max. Diameter

## Collar Locator

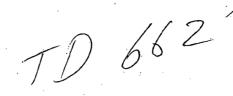
40 LBS Weight 3.40 FT Length - - Max. Blameter - 2.75\_IN

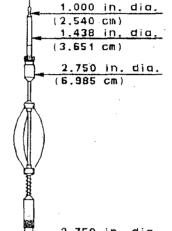
## Stim Hote Gamma Ray

40 LBS Weight. 4.71 FT Length Max. Diameter 2.75 IN

## Slim Hole Centralizer

10 LBS Weight 2.49 FT Length 2.75 IN Max. Diameter





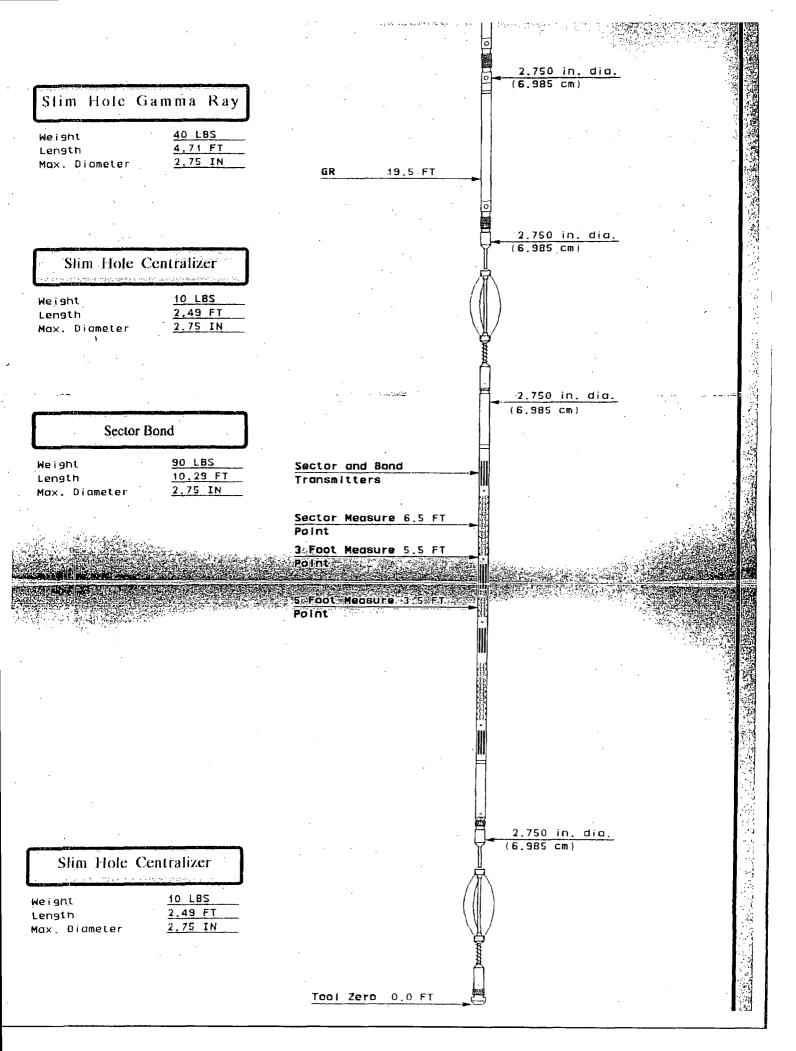
2.750 in. dia. (6.985 cm)

2.750 in. dia. (6.985 cm)

19.5 FT

2.750 in. dia. (6.985 cm)

2.750 in. dia. (6.985 cm)



COMPANY	RAY WESTALL	
		COMBUTATOR
WELL	BRINE WELL NO. 1	LUMPUIALUU
FIELD	STATE N.M.	

Ed Reed and Associate

Consulting Hydrologists
MIDLAND - CORPUS CHRISTI

FEB 16 1983

OIL CONSERVATION DIVISION

SANDANEER RESDENT

708 GUARANTY BANK PLAZA CORPUS CHRISTI, TEXAS 78475 512-883-1353

February 8, 1983

A. JOSEPH REED
PRESIDENT
CHESTER F. SKRABACZ
VICE PRESIDENT FIELD OPERATIONS
1109 N. BIG SPRING
MIDLAND, TEXAS 79701
915 682-0556

ED L. REED, P.E.

Mr. James Jennings
Jennings & Christy
P.O. Box 1180
Roswell, New Mexico 88202-1180

Dear Mr. Jennings:

In accordance with the Oil Conservation Division Order R-6811-B, three Rustler-depth monitor holes have been completed near the Loco Hills Disposal Facility. These monitor holes were drilled in late January, 1983. The sample logs and completion forms are enclosed.

These monitor holes were drilled with water to a depth sufficient to encounter the top of the Rustler Formation. The Rustler Formation was encountered at depths ranging from 245 feet in monitor hole #12 to 288 feet in monitor hole #11. After the holes were drilled they were cased with 4-inch PVC which was slotted with 1/8-inch cuts from total depth to 4 feet below the surface. Each of the monitor holes was jetted for 40 minutes. There was no indication that either the Triassic or the upper Rustler was producing water. These three monitor holes will now be part of a system which includes five Rustler depth and eight 60 foot deep monitor holes.

Please review these data and submit a copy to the Oil Conservation Division. If you have any questions, please call.

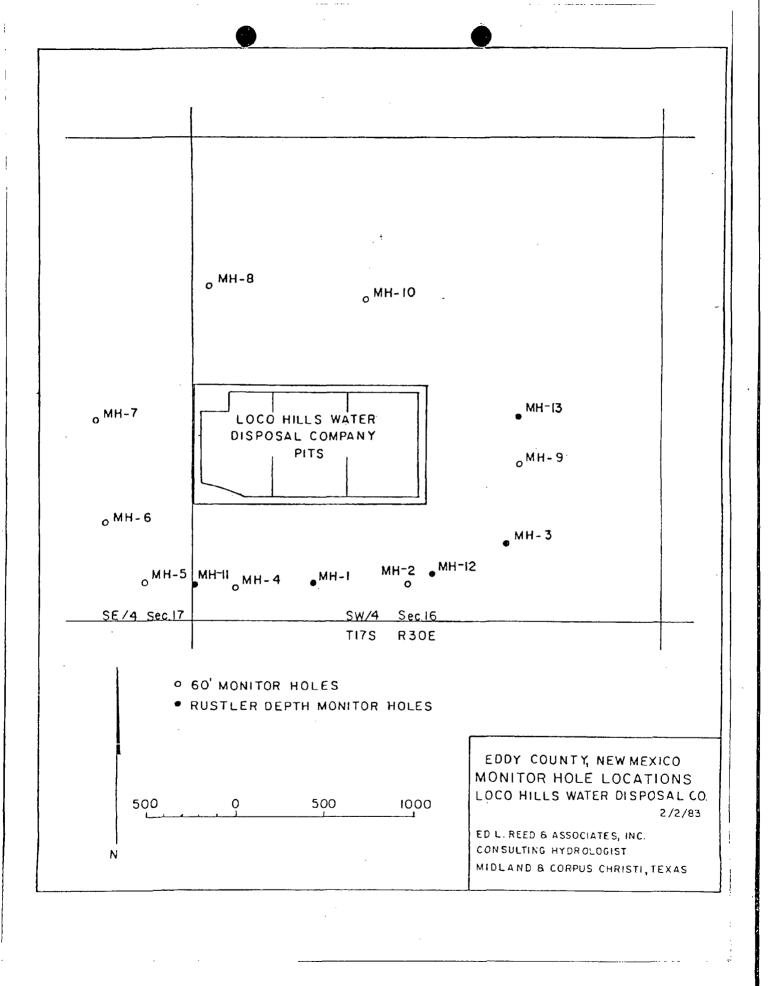
Very truly yours,

ED L. REED & ASSOCIATES, INC.

V. Steve Reed

VSR:ljs

Enclosures



290 TOTAL DEPTH\_ LITHOLOGIC COMPLETION CLIENT LOCO HILLS LOG LOG 1/19/83 DATE\_ CEMENT FROM 3' TO SURFACE PERFORATIONS 25 -50 -SAND E CLAY SANDY CLAY OR CLAYEY SAND 75-SILTY SAND TI CALCAREOUS SAND - 100 GRAVEL 100 -ANHYDRITE 125-- 125 150 150 --175 175 -200 200-225 -225 250 250 -275 275 288' TO RUSTLER 300 -

CLIENT	Loco	Hills	Water	Iposal	Co.	s
-				•		

s.w.L. Blown Pry 1/24/83

LOCATION ? FEL, 195' FSL, S.E. 1/4. Sec.17, T175, R30E, Eddy Co. N.M. DATE 1/19/83

PERFORATIONS4' to TD 6-3/4"/1.5', 1/8"

WELL NUMBER MH-11 (Rustler Depth)

DRILLER L. Scarborough

CASING 4" PVC

ELEVATION Est. 3,653'

Rustler Top 288! (+3,365')

6-1/2" bit, drilled with water

MH-11 entered approx. 277' from MH-4 and MH-5 (Total distance between MH-4 and

INTERVAL	DESCRIPTION	POROSITY
0-10	70% sand, reddish brown, fine grained; 30% clay,	Fair
	calcareous (caliche)	
10-20	100% clay, reddish brown, sandy and silty, slightly	Poor
	calcareous	
20-30	90% clay, reddish brown, slightly calcareous: 10% sand,	Poor
	fine grained, silty	
30-40	Same as above	Poor
40-50	Same as above	Poor
50-60	85% clay, reddish brown, slightly calcareous; 15% sand,	Poor
	very fine grained, silty	
60-70	Same as above	Poor
70-80	Same as above	Poor
80-90	Same as above	Poor
90-100	80% clay, reddish brown, slightly calcareous; 20% sand,	Poor
·	very fine grained, silty (report: 96'-107' gravels,	
	multicolored, fine-medium, subangular, dominantly	
	calcareous)	
100-110	70% clay, reddish brown, sandy, slightly calcareous; 30%	Poor
	gravels, fine-medium (report 107'-115' clay, reddish	
	brown, soft and sticky)	
110-120	75% clay, reddish brown, sandy and silty, slightly	Poor
	calcareous; 75% gravels, fine, subangular-subrounded	
120-130	85% clay, reddish brown, calcareous: 15% sand, fine	Poor
	grained, silty (report: 124'-131' clay, soft and sticky/	
	131'-134' sand, firm)	
	Same as above	Poor
140-150	80% clay, reddish brown, slightly calcareous, 15% sand,	Poor
	fine grained, silty; 5% gravels, fine-medium, subangular	
150-160	85% clay, reddish brown, slightly calcareous some	Poor
	sparse gravels; 15% sand, fine grained, silty	
160-170	Same as above (report: 159'-170' drilling rate increased,	Poor
_	firm interval)	
	100% clay, reddish brown, silty, calcareous, sticky and	Poor
	pasty	
180-190	90% clay, reddish brown, silty, slightly calcareous; 10%	Poor
	gravels	
190-200	Same as above (report: 180'-197' drilling rate increased,	Poor
	firm interval)	
200-210	Same as above (report: 197'-200' drilling rate decreased,	Poor
	soft and sticky interval)	
210-220	100% clay, reddish brown, silty, calcareous, sticky and	Poor
	pasty (report: 211'-218' drilling rate decreased, soft	

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Page

MIDLAND-CORPUS CHRISTI, TEXAS

CLIENT LOC	Hills Water Sposal Co. S.W.L. Blown bry 1/24/83	
LOCATION ?	FEL, 195'FSL, S.E.1/4, Sec 17CASING 4" PVC E, Eddy Co. N.M.	
T17S, R30E DATE 1/19/8	PERFORATIONS 4' to TD 6-3/4"/ wide	1.5',1/8"
WELL NUMBE	R MH-11 (Rustler Depth) DRILLER L/ Scarborough	
ELEVATION	Est. 3,653' Rustler Top 288' (+3,365)	
6-1/2" bit	t, drilled with water	
	ered approx. 277' from MH-4 and MH-5 (Total distance between	en MH-4 and
5 is 554		1
INTERVAL	DESCRIPTION	POROSITY
210-220		Poor
220-230	and sticky interval) Same as above	Poor
	Same as above	Poor
240-250	Same as above (in addition trace chips of Anhydrite)	Poor
250-260	Same as above (in addition trace chips of Anhydrite)	Poor
260-270	Same as above (in addition trace chips of Anhydrite)	Poor -
270-280	Same as above (in addition trace chips of Anhydrite)	Poor
280-290	80% Anhydrite, white angular chips; 20% clay, reddish	Poor
<u> </u>	brown (report: numerous Anhydrite stringers started at 285')	<del> </del>
	203 /	<del>                                     </del>
	Top of Rustler 288'	
	Total Depth 290'	
	Cemented from surface to 3'	
<u> </u>	Started jetting hole approx. 116 hrs. after completion	
	Total jetting time 40 minutes.  Drilling fluid and mud produced for 15 minutes. Nothing	ļ
	Drilling fluid and mud produced for 15 minutes. Nothing produced last 25 minutes.	
	Produced 1850 25 minutes.	
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	& ASSOCIATES, INC. HYDROLOGISTS Page	

MIDLAND-CORPUS CHRISTI, TEXAS

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280' TOTAL EPTH. COMPLETION LOG LITHOLOGIC LOG LOCO HILLS CLIENT . 1/25/83 DATE\_ CEMENT CEMENT FROM 3' TO SURFACE PERFORATIONS 25 ~ 50 50 -75 CALCAREOUS SAND 100 GRAVEL 100 -ANHYDRITE 125-125 150 -150 175 -175 200-200 225 -225 250 250-ΛΛ ΛΛ 275-277' TO RUSTLER 275 300

	 	_		
27.11		7 C. N.	1 1 1	101

CLIENT Loco Hills Water Disposal Co.	S.W.L.Blown Dry 1/25/83
LOCATION 810'FEL, 1,100'FSL, SW 1/4,	CASING 4" PVC
DATE1/25/83 Sec. 16, T17S, R30E, Eddy Co.	PERFORATIONS 4'-TD, 6-3/4"/1.5', 1/8"wide
WELL NUMBER MH-13 (Rustler Depth)	DRILLER L. Scarborough
ELEVATION Est. 3,669'	Rustler Top 277' (+3,392)
6-1/2" bit, drilled with air til	
120', then with water til TD, Location	: 250' approximately North of MH-9

		<del></del>
INTERVAL .	DESCRIPTION	POROSITY
0-10	80% caliche, tannish white-brownish pink, mostly fine	Fair
0-10	powder with some calcite crystals; 20% silt, white-clear	
10-20	80% clay, reddish brown, calcareous, slightly compacted;	Poor
	20% fine sand amd silt	1
20-30	Same as above	Poor
30-40	90% clay, reddish brown, calcareous, fairly well compacted	
,	10% silt	
40-50	80% silt, reddish brown, sandy, powdery; 20% clay,	Fair
	calcareous, compacted	
50-60	Same as above (except increase in clay content to 30%)	Fair
60-70	90% sand, light rust brown very fine grained, silty,	
	powdery; 10% clay, calcareous	Fair-Good
70-80	80% sand, reddish brown, very fine grained, silty; 20%	Fair-Good
	clay, slighty calcareous	
80-90	Same as above (except darker in color)	Fair-Good
90-100	Same as above (except slightly lighter in color)	Fair-Good
100-110	90% sand, goldish rust brown, fine-medium grained, silty	Fair-Good
	argillaceous, slightly calcareous; 10% gravels, tannish	
	white, translucent-opaque, subrounded and flat	
110-120	Same as above	Fair-Good
120-130	90% sand, dark reddish brown, fine-coarse grained, silty,	Fair-Good
	some gravel; 10% clay calcareous	
130-140	75% sand, dark reddish brown, fine-medium grained, silty	Fair
	some gravel; 25% clay, slightly calcareous, sticky	
140-150	60% sand, dark reddish brown, very fine-medium grained,	Poor-Fair
	silty, some sparse gravel; 40% clay, calcareous, sticky	
<u>.</u>	land pasty.	
150-160	65% clay, reddish brown, slightly calcareous, pasty: 35%	Poor
	sand, very fine-fine grained, silty, some sparse grayel	
160-170	Same as above (except decrease in sand content to 25%)	Poor
170-180	Same as above (except decrease in sand content to 25%)	Poor
180-190	80% clay, reddish brown, faintly calcareous, sticky and	Poor
190-200	pasty; 20% silt and fine sand	<del> </del>
200-210	Same as above (except decrease in silt content to 10%)	Poor
210-210	Same as above (except decrease in silt content to 10%)	Poor
Z1U-ZZU	100% clay, reddish brown, silty, faintly calcareous, sticky and soupy	Poor
220-230	Same as above	1 -
230-240		Poor
240-250	Same as above (except some sparse fine limestone chips) Same as above (except slightly more calcareous)	Poor
250-260	190% clay, reddish brown, silty, slightly calcareous,	Poor
	pasty; 10% Anhydrite, white, fine chips	Poor
	pasty, 10% Annyulite, white, line chips	1

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CLIENT Loco Hills Dispos Co.	s.W.L. Blow Dry 1/25/83
LOCATION 810'FEL, 1,100'FSL, SW 1/4	CASING 4" PVC
Sec.16,T17S,R30E, Eddy Co., DATE 1/25/83	PERFORATIONS 4'-TD, 6-3/4"/1.5', 1/8"wi
WELL NUMBER MH-13 (Rustler Depth)	DRILLER I. Scarborough
ELEVATION Est. 3,669'	Rustler Top 277' (+3,392)
6-1/2" bit, drilled with air til	un. 250' approximately North of MH-9

INTERVAL	DESCRIPTION	POROSITY
260-270	80% clay, reddish brown, silty, faintly calcareous, sticky	Poor
200 210	20% gravel, multicolored (dark gray, maroon, black,	
	purple) very fine-medium angular fragments, quart comp.	
270-280		D
270-280	60% Anhydrite, white-light gray, opaque-translucent, fine-	Poor
<del></del>	medium angular fragments; 40% clay, reddish brown, silty,	·
	faintly calcareous	<u> </u>
· · · · · · · · · · · · · · · · · · ·	Top of Rustler 277'	
	Total Depth 280'	
	Cemented from surface to 3'	
<u> </u>		
~~~~	Started jetting hole 3 hours after completion	
<del> </del>	Total jetting time 40 minutes	
	Drilling fluid and mud produced for 20 minutes. Nothing	
	produced last 28 minutes.	
		·
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		~ <del>_~</del> _

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250 TOTAL DEPTH \_\_ LITHOLOGIC LOG COMPLETION LOG CLIENT LOCO HILLS 1/20-21/83 DATE\_ CEMENT FROM 4' TO SURFACE PERFORATIONS 25 -CEMENT 50 -SANDY CLAY OR 75 SILTY SAND CALCAREOUS SAND 100 -100 GRAVEL ANHYDRITE 125-125 150 -150 175 -200-200 225 225 245' TO RUSTLER ۸۸ 250 -250 275 275 300 -

CLIENT Loco Hills Water Sposal Co.	S.W.L. Blow bry 1/24/83
	CASING 4" PVC
DATE 1/20-21/83 R30E, Eddy Co., N.M.	PERFORATIONS4' to TD, 6-3/4"/1.5', 1/8"
WELL NUMBER MH-12 (Rustler Depth)	
ELEVATION Est. 3,663'	Rustler Top 245' (+3,418')

6-1/2" bit, drilled with water, Location: slightly south of line connecting MH-2 to MH-3

INTERVAL	DESCRIPTION	POROSITY
0-10	70% caliche, yellowish white, angular chips; 30% sand,	Fair
77.77	reddish brown, fine grained, silty	
10-20	100% clay, reddish brown, silty, calcareous, sticky and	Poor
20-30	pasty Same as above	Door
30-40		Poor
30-40	90% clay, reddish brown, calcareous, sticky; 10% sand,	Poor -
40-50	fine grained, silty	
40-30	100% clay, reddish brown, silty, slightly calcareous, pasty	Poor
50-60	Same as above	70
60-70	Same as above	Poor Poor
70-80	90% clay, reddish brown, slightly calcareous; 10% sand,	Poor
	very fine grained, silty	1001
80-90	85% clay, reddish brown, faintly calcareous; 10% silt,	Poor
	5% gravels, fine, angular (report: 86'-87' gravels,	
	multicolored, fine, subangular)	
90-100	90% clay, reddish brown, slightly calcareous, sandy; 10%	Poor
	siltstone, greenish yellow, calcareous matrix, angular	
	fragments	
100-110	75% clay, reddish brown, sandy, faintly calcareous; 25%	Poor
	gravels, multicolored, fine-medium, subangular-subrounded	
	(report: 103'-110' drilling rate increased)	
110-120	100% clay, reddish brown, silty, faintly calcareous, pasty	Poor
120-130	90% clay, reddish brown, silty, slightly calcareous; 10%	Poor
	limestone, white, angular fragments	
130-140	100% clay, reddish brown, silty, faintly calcareous, pasty	_Poor
140-150	90% clay, reddish brown, sandy and silty, faintly	Poor
	calcareous; 10% gravels white-clear, fine, subrounded,	
	chert and limestone composition	
150-160	100% clay, reddish brown, silty, faintly calcareous,	Poor
	sticky and pasty	
160-170	Same as above	Poor
170-180	80% clay, reddish brown, silty pasty; 20% gravels, white-	Poor
	yellow, fine-medium, subangular-subrounded, limestone and	
180-190	sandstone composition 90% clay, reddish brown, faintly calcareous, sticky; 10%	
190-130	coarse sand and fine gravels, subangular	Poor
190-200	Same as above	Door
		Poor
200-210	100% clay, reddish brown, sandy and silty, faintly	Poor
210-220	calcareous, soupy	
Z I U - Z Z U	100% clay, reddish brown, silty, slightly calcareous,	Poor

ED L. REED & ASSOCIATES, INC. CONSULTING HYDROLOGISTS MIDLAND-CORPUS CHRISTI, TEXAS

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THITTE (COHELTHGER)

CLIENT Loco Hills Water sposal Co.	S.W.L. Blown Dry 1/24/83
•	CASING 4" PVC
	PERFORATIONS 4' to TD 6-3/4"/1.5', 1/8" wide
•	DRILLER L. Scarborough
	Rustler Top 245' (+3,418')

6-1/2" bit, drilled with water, Location: slightly south of line connecting MH-2 to MH-3

INTERVAL	DESCRIPTION	POROSITY
220-230	Same as above	Poor
230-240	Same as above	Poor
240-250	70% Anhydrite, white, translucent, friable angular chips:	Poor
	30% clay, reddish brown, silty, faintly calcareous, pasty	Poor
	Top of Rustler 245'	
	Total Depth 250'	
	Cemented from surface to 4'	
	Ctarted jetting help and in the last of th	
	Started jetting hole approximately 70 hrs after completion Total jetting time 40 minutes	
	Drilling fluid and mud produced for 10 minutes. Nothing	
	produced last 30 minutes.	
		<del></del>

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Effective 1-1-65

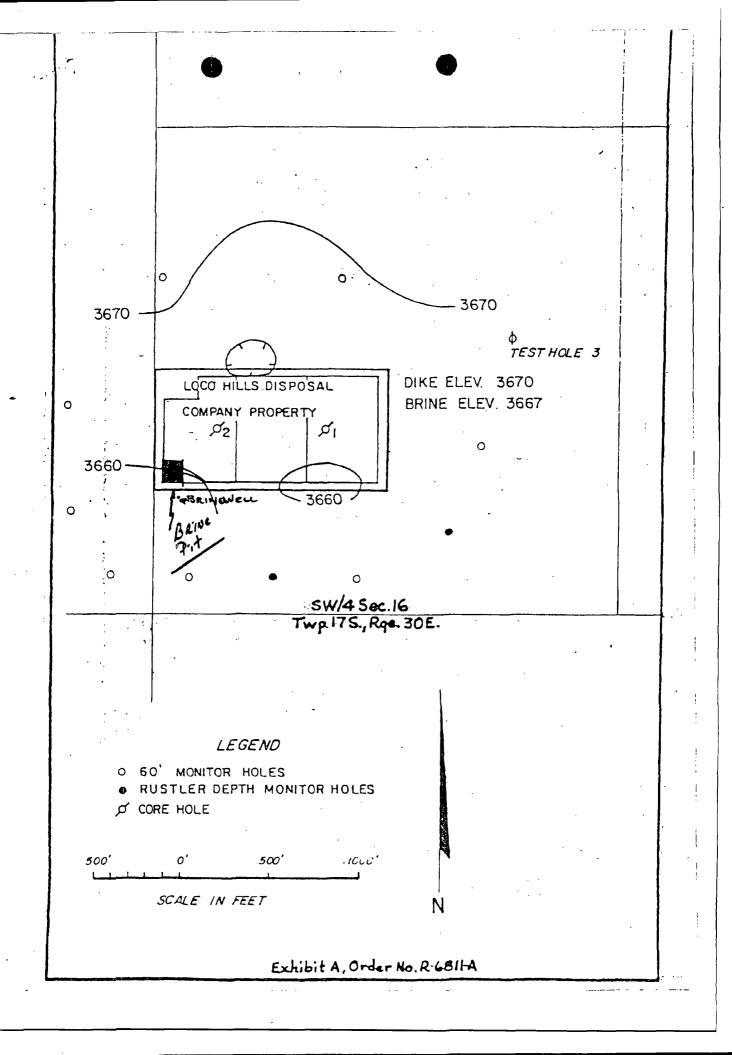
All distances must be from the outer boundaries of the Section Operator LOCO HILLS BRINE CO. LOCO HILLS BRINE CO. STATE Unit Letter Section Township 17 South 30 East 16 Eddy Μ Actual Factage Location of Well: South 230 600 West feet from the line and feet from the Ground Level Elev: Producing Formation Dedicated Acreage: 3655. Acres 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? Yes ☐ No If answer is "yes," type of consolidation If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.). No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commis-CERTIFICATION I hereby certify that the information contained herein is true and complete to the my knowledge and bellef. ay Wo Company Date Surveyed May 14, 1985 Registered Professional Engineer and/or Land Surveyor Certificate No. NM PE&LS NO.

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# New Mexico Energy, Minerals and Natural Resources Department

#### Bill Richardson

Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire Division Director Oil Conservation Division



Certified Receipt/Return Requested:

August 01, 2008

Attention Brine Well Operator(s):

One of the permitted brine wells has experienced a total collapse and created an enormous sinkhole. The well was located approximately 17 miles SE of Artesia, NM. on State Trust Land. The operator was Jim's Water Service and the brine well permit is BW-005. OCD has enclosed a press release with photos of the event.

The magnitude of this event warrants an immediate investigation of all brine wells in the state. Therefore, please find enclosed a "BRINE WELL INFORMATION REQUEST" form to be filled out and returned to this office no later than September 05, 2008. Failure to properly fill out and return the form in a timely manner may result in OCD requesting you shut down your operations until further notice. If you have any questions please do not hesitate to call me at 505-476-3490 or E-mail wayne.price@state.nm.us.

Sincerely,

Wayne Price

Environmental Bureau Chief Oil Conservation Division

Attachments: (2)

Cc: EMNRD Cabinet Secretary-Joanna Prukop

OCD Director-Mark Fesmire

NMSLO- Brian Henington SF, Jim Carr-Carlsbad

BLM-Carlsbad Office- Dave Herrell

Eddy Co. Emergency Management-Joel Arnwine

NM State Police -Roswell Sqt. Les Clements

National Cave and Karst Research Institute- Dr. George Veni

NMOSE-John Stewart

Solution Mining Research Institute-John Voigt

### Price, Wayne, EMNRD

From:

Porter, Jodi, EMNRD

Sent:

Wednesday, July 23, 2008 5:00 PM

Subject: Attachments: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

PR-OCD.Brine.Wells07.23.08.pdf

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson

Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire
Division Director
Oil Conservation Division



July 23, 2008

Contact: Jodi McGinnis Porter,

Public Information Officer 505.476.3226

## Energy, Minerals and Natural Resources Cabinet Secretary Joanna Prukop Proposes Stricter Conditions on Brine Wells State-wide

Artesia brine well collapse prompts statewide review

SANTA FE, NM – Secretary Joanna Prukop has directed the Oil Conservation Division (OCD) to conduct a complete evaluation of the rules and regulations concerning brine wells, a method of creating saturated salt water used in oil and gas production. The OCD evaluation will include an internal audit and inspection of all existing brine wells in New Mexico. Secretary Prukop is considering strengthening oversight of brine wells to protect against well failures such as the recent collapse in Artesia that created a huge sinkhole and forced the closure of an Eddy County road.

"There are several brine wells in New Mexico and we must ensure that they are all properly monitored to ensure safety and stability," stated Cabinet Secretary Joanna Prukop. "We have now seen that these wells can collapse and the extensive damage such a collapse can generate."

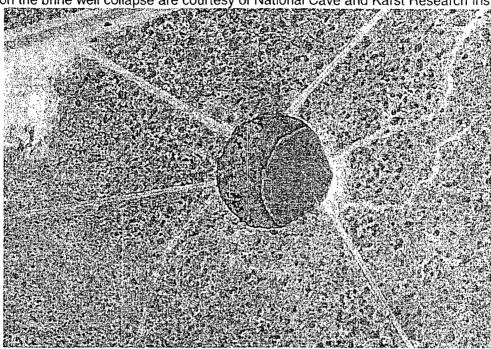
The Oil Conservation Division is continuing to monitor and investigate the collapse of the brine well, located on state trust land 17.3 miles southeast of Artesia, which is still active. The well is owned by Jim's Water Service. County Road 217 remains closed as a safety precaution, and a command center is on site. Division engineers estimate that the well is approximately 300 to 400 feet in diameter, 70 feet to the water level, and the actual depth to the bottom is unknown.

Scientists from the Oil Conservation Division, the Bureau of Land Management, State Land Office, the New Mexico

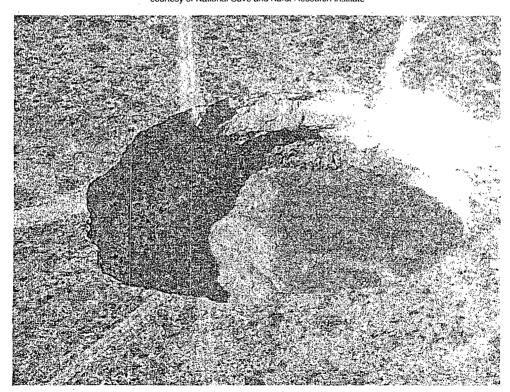
Bureau of Geology and Mineral Resources, and the National Cave & Karst Research Institute are all working together to assess horizontal and vertical movements to project any future subsidence. Work on a protective fence and keep-out signage began yesterday with completion expected on Friday.

In a related issue, the Oil Conservation Division has also been closely monitoring a brine well operated by I & W, Inc located in Carlsbad, NM. Yesterday, following ongoing inquiries from OCD the operator decided voluntarily to stop operation of the well The division will work with I & W, Inc. to ensure that the well is properly plugged, permanently abandoned, and monitored for the long term.

Images provided on the brine well collapse are courtesy of National Cave and Karst Research Institute:



Morning, July 20, 2008 at 10:44 am. courtesy of National Cave and Karst Research Institute



### New Mexico Energy, Minerals and Natural Resources Department

### Bill Richardson

Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire
Division Director
Oil Conservation Division



### OIL CONSERVATION DIVISION BRINE WELL INFORMATION REQUEST

GENERAL INFORMATION:					
Operator Name	Well Name(s)				
API Number	Brine Well Permit #				
Date Permit Expires?					
Location: Section					
FNLFSL	FEL FWL				
GPS of well(s): Lat:					
Have you reviewed and understand	l all of your permit conditions? Yes □ No□				
	condition in your permit? Yes □ No□ Don't know□				
Do you operate below grade tanks of					
, , ,	tanks, have secondary containment? Yes \(\text{No}\)				
Do you think you have the expertise, knowledge and general understanding of what causes a					
brine well to collapse? Yes \(\sigma\) No \(\sigma\)					
, <u>-</u>	guidelines on subsidence and collapse issues? Yes□ No□				
	se provide the following information and depict on 7.5 Map. Limit search to one mile radius.				
Is the brine well located within a m	nunicipality or city limits? Yes No				
Distance and direction to nearest pe	ermanent structure, house, school, etc. if less than one mile:				
Distance and direction to nearest w	rater well if less than one mile:				
Distance to nearest watercourse(s), if less than one mile:	floodplain, playa lake(s), or man-made canal(s) or pond(s)				
Distance and direction to nearest kn	nown karst features or mines if less than one mile:				



Oil Conservation Division August 1, 2008 Page 2

Distance and direction to nearest producing oil or gas well(s) if less than one mile: Provide API Number:
Distance and direction to nearest tank battery(ies) if less than one mile:
Distance and direction to nearest pipeline(s), including fresh water pipelines if less than one mile:
Distance and direction to nearest paved or maintained road or railroad if less than one mile:
Depth to ground water found above the Salado (salt section), regardless of yield:
Name of aquifer(s):
value of aquifer(s).
WELL CONSTRUCTION: Please provide the following information and attach a
diagram depicting the brine well. Check box if attached:
Copy of a current well diagram: Attached □
Copy of formation record with tops: Attached $\Box$
Copy of geophysical well logs if available: Attached $\Box$ If not, well logs within one mile $\Box$
Depth of the top of the salt below ground surface (feet):
Depth to the bottom of the salt below ground surface (feet):
Depth to the bottom of the said below ground surface (rect).
Depth(s) to and thickness(es) of any anhydrite section(s) (located above the salt):
Depth of casing(s) shoe below ground surface (feet):
Is the casing shoe set in the anhydrite or other layer above the salt? Yes $\square$ No $\square$
Is the casing shoe set into the salt? Yes□ No□ If yes, how far into the salt?
Depth of tubing(s):
Do you suspect that your cavern has partially caved in? Yes□ No□ Don't know□
OPERATIONS: Please provide the following information.
Of Blairing Treate promise the Jenes and Sugarination
Start date of brine well operation:
Total volume of fresh water injected into the brine well to date (bbls) and how determined:

Oil Conservation Division August 1, 2008 Page 3

Total volume of brine water produced (bbls) to date and how determined:
Have you ever lost casing or tubing? If yes, please provide details.
Document attached
Do you maintain a surface pressure on your well during idle times? Yes□ No□
Have you noticed large amounts of air built up during cavity pressurization? Yes No
Have you ever noticed fluids or air/gas bubbling up around the casing during testing or normal operations? Yes□ No□
MONITORING: Please provide the following information.
Are you currently monitoring ground water contamination from your brine well or system?  Yes □ No□
Have you ever run a sonar log? Yes□ No□  If yes, please provide last date:
Provide cavern configuration (dimensions and volume) and method(s) used to estimate:  If sonar report please attach   If other, please specify and provide a sketch of cavern:
Do you have a subsidence monitoring program in place? Yes □ No□
Do you have any geophysical monitoring devices, such as a seismic device positioned near your brine well? Yes \( \Bar{\substack} \) No\( \Bar{\substack} \)
Have you submitted all of your monthly, quarterly, or annual reports to the OCD? Yes □ No□
Have you failed a brine well mechanical integrity test (MIT)? If yes, please attach details and results. Attached □
Have you ever had a casing leak? Yes \( \) No\( \) Don't know\( \) Have you ever had a cavern leak? Yes\( \) No\( \) Don't know\( \) Have you ever exceeded the cavern fracture pressure? Yes\( \) No\( \) Don't know\( \) Don't know\( \) Do you know how to calculate your maximum pressure? Yes\( \) No\( \) Don't know\( \) Have you routinely looked for cracks or fissures in the ground surface around your brine well? Yes\( \) No\( \)
Do you have any minor or major cracks, fissures, tank settlement, line breakage from settlement or any minor subsidence. Yes ☐ No□
During operations have you experienced any ground vibration, ground movement, or well movement after opening or shunting valves, pump start-up, shut-down, etc.? Yes No

Oil Conservation Division August 1, 2008 Page 4

	·				
	enced unexpected pressure gain or loss in the cavern? Yes□ No□ fference in your normal flow rate? Yes□ No□				
	bast 5 years, have you experienced a noticeable difference between fresh d into the well verses brine water produced? Yes □ No□				
Are you concerned all hole? Yes□ No□	oout pulling the tubing due to the fact it may be difficult to re-enter the				
Are you concerned all Yes□ No□	bout running a sonar tool in fear of losing tool because of debris in hole?				
Have you ever conduphoto.  □ Photo(s) attached	cted a fly over of your well site? No \( \text{Yes} \( \text{if yes, please provide} \)				
Calculation: Please multiply by 50. Example 10.	divide your estimated total volume of produced brine by $180,000$ and <i>mple:</i> If you have produced a total of $18,000,000$ bbls of brine in the life your calculation would be $18,000,000/180,000 = 100 \times 50 = 5000$ .				
<u> </u>	alculated number above here: the depth (ft) from the surface to your casing shoe:				
Is the calculated number found in #1 above greater than #2? Yes□ No□					
Comments or recommendation	mendations for OCD:				
this document and all atta obtaining the information	f law that I have personally examined and am familiar with the information submitted in achments and that, based on my inquiry of those individuals immediately responsible for a, I believe that the information is true, accurate, and complete. I am aware that there are ubmitting false information including the possibility of fine and imprisonment."				
	Company Name-print name above				
	Company Representative- print name				
	Company Representative- Signature				
	Title				
	Date:				

#### Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Friday, July 25, 2008 4:21 PM

To:

Hansen, Edward J., EMNRD; Price, Wayne, EMNRD

Cc:

Sanchez, Daniel J., EMNRD

Subject:

RE: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

Attachments: image001.jpg; image007.jpg

Ed. Wayne, et. al:

Based on my records and knowledge of current activities at NMOCD BWs, my tally is as follows:

There are a total of 15 active UIC Class III Brine Well Permits (excluding BW-5 JWS & BW-6 I&W)

There are currently 13 active UIC Class III Brine Wells in operation (BW-2; BW-4; BW-8; BW-9; BW-12; BW-13; BW-22; BW-25; BW-27 Wells 1 & 2; BW-28; BW-30; and BW-31)

There are currently 6 brine wells that have actually been PA'd including: BW-5 JWS Collapse w/ Site Closure; BW-6 Eugenie #2; BW-21 Loco Hills Well #1 recently PA'd; BW-26 Salado Brine Sales; BW-29 Marbob; & William Brininstool.

There are currently 3 pending PAs of BWs including: BW-6 Eugenie #1 w/ Site Closure; BW-18 Key w/ redrill; and BW-19 Key w/ redrill.

There are currently 5 inactive brine wells (BW-5 Collapse w/ Site Closure; BW-6 needs PA Eugenie #1 w/ Site Closure; BW-18 needs PA w/ redrill; BW-19 needs PA w/ redrill; and BW21 needs redrill)

Let me know how we need to straighten RBDMS out. Please contact me if you have questions. Thanks.

#### Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Hansen, Edward J., EMNRD

Sent: Wednesday, July 23, 2008 5:56 PM

**To:** Price, Wayne, EMNRD **Cc:** Chavez, Carl J, EMNRD

Subject: FW: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

Wayne,

Jane and I tallied these numbers off of RBDMS (you may want to double check).

From: Hansen, Edward J., EMNRD

Sent: Wednesday, July 23, 2008 5:54 PM

To: Porter, Jodi, EMNRD

Subject: RE: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

Jodi,

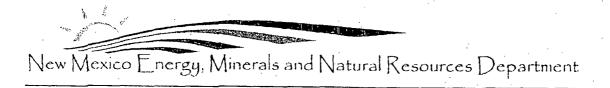
We counted (from our database: RBDMS):

- 16 Active Brine Wells
- 11 Plugged and Abandoned Brine Wells
- 2 Inactive Brine Wells

From: Porter, Jodi, EMNRD

Sent: Wednesday, July 23, 2008 5:00 PM

Subject: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide



Bill Richardson Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deouty Cabinet Secretary

Mark Fesmire Division Director Oil Conservation Division



July 23, 2008

Contact: Jodi McGinnis Porter,

Public Information Officer 505.476.3226

### Energy, Minerals and Natural Resources Cabinet Secretary Joanna Prukop Proposes Stricter Conditions on Brine Wells State-wide

### Artesia brine well collapse prompts statewide review

SANTA FE, NM – Secretary Joanna Prukop has directed the Oil Conservation Division (OCD) to conduct a complete evaluation of the rules and regulations concerning brine wells, a method of creating saturated salt water used in oil and gas production. The OCD evaluation will include an internal audit and inspection of all existing brine wells in New Mexico. Secretary Prukop is considering strengthening oversight of brine wells to protect against well failures such as the recent collapse in Artesia that created a huge sinkhole and forced the closure of an Eddy County road.

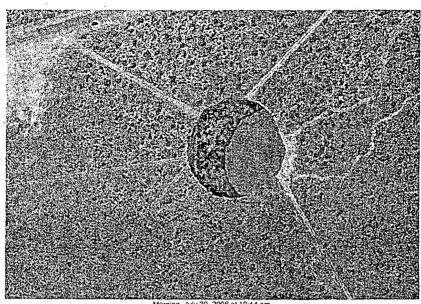
"There are several brine wells in New Mexico and we must ensure that they are all properly monitored to ensure safety and stability," stated Cabinet Secretary Joanna Prukop. "We have now seen that these wells can collapse and the extensive damage such a collapse can generate."

The Oil Conservation Division is continuing to monitor and investigate the collapse of the brine well, located on state trust land 17.3 miles southeast of Artesia, which is still active. The well is owned by Jim's Water Service. County Road 217 remains closed as a safety precaution, and a command center is on site. Division engineers estimate that the well is approximately 300 to 400 feet in diameter, 70 feet to the water level, and the actual depth to the bottom is unknown.

Scientists from the Oil Conservation Division, the Bureau of Land Management, State Land Office, the New Mexico Bureau of Geology and Mineral Resources, and the National Cave & Karst Research Institute are all working together to assess horizontal and vertical movements to project any future subsidence. Work on a protective fence and keep-out signage began yesterday with completion expected on Friday.

In a related issue, the Oil Conservation Division has also been closely monitoring a brine well operated by I & W, Inc located in Carlsbad, NM. Yesterday, following ongoing inquiries from OCD the operator decided voluntarily to stop operation of the well The division will work with I & W, Inc. to ensure that the well is properly plugged, permanently abandoned, and monitored for the long term.

Images provided on the brine well collapse are courtesy of National Cave and Karst Research Institute:



Morning, July 20, 2008 at 10:44 am. courtesy of National Cave and Karst Research Institute



Morning, July 22, 2008 courlesy of National Cave and Karst Research Institute

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The Energy, Minerals and Natural Resources Department provides resource protection and renewable energy resource development services to the public and other state agencies.

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Jodi

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