

BW - _____ 30 _____

**SUBSIDENCE
MONITORING
REPORTS**

DATE:

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, December 04, 2008 8:21 AM
To: 'sid none'
Cc: Price, Wayne, EMNRD
Subject: RE: Brine well Hobbs State #10 (BW-30)

Mr. Parchman:

Good morning. According to OCD records, your brine well began operation in 2002; therefore, you are not required to run the sonar test; however, you do need to schedule your next MIT before July 30, 2009. The EPA 5-Yr. removal of tubing and pressure up of casing is required every 5 years (30 min. @ 300 – 500 psig), and the formation MIT (4-hr) is run annually with the exception of when the EPA 5 Yr. MIT is run.

Please review the history of your MITs and propose the type of MIT and date that you would like to run it to me within the next couple of weeks. If you don't know or need assistance determining the type of MIT to run this season, please contact me. 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/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

From: sid none [mailto:elkhorn6@hotmail.com]
Sent: Tuesday, November 25, 2008 1:41 PM
To: Chavez, Carl J, EMNRD
Subject: Brine well Hobbs State #10

Liquid Resource Services
1819 N Turner Suite B
Hobbs New Mexico 88240
575-605-4402

RE: Hobbs State #10

Dear Carl ,

In response to the new requirement for MIT and Sonar testing . Last year we conducted a nitrogen test

which tested not only the casing but the entire cavity. As you know the test was successful and held

substantial pressure for over 4 1/2 hours . Could it be argued that our test actually was more difficult to

pass and is better than just testing the casing by installing a packer . If this is the case do we still need

install a packer and run another expensive MIT test ?

12/4/2008

As to sonar requirement, due to our well being so new , could this requirement be waived .

Respectfully Requested

Sid Parchman

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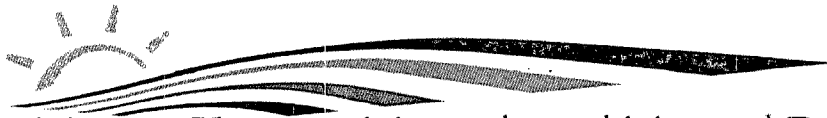
This inbound email has been scanned by the MessageLabs Email Security System.

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/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

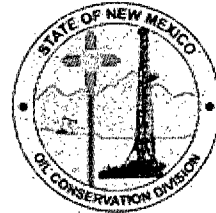


New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



November 14, 2008

NEWS RELEASE

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.

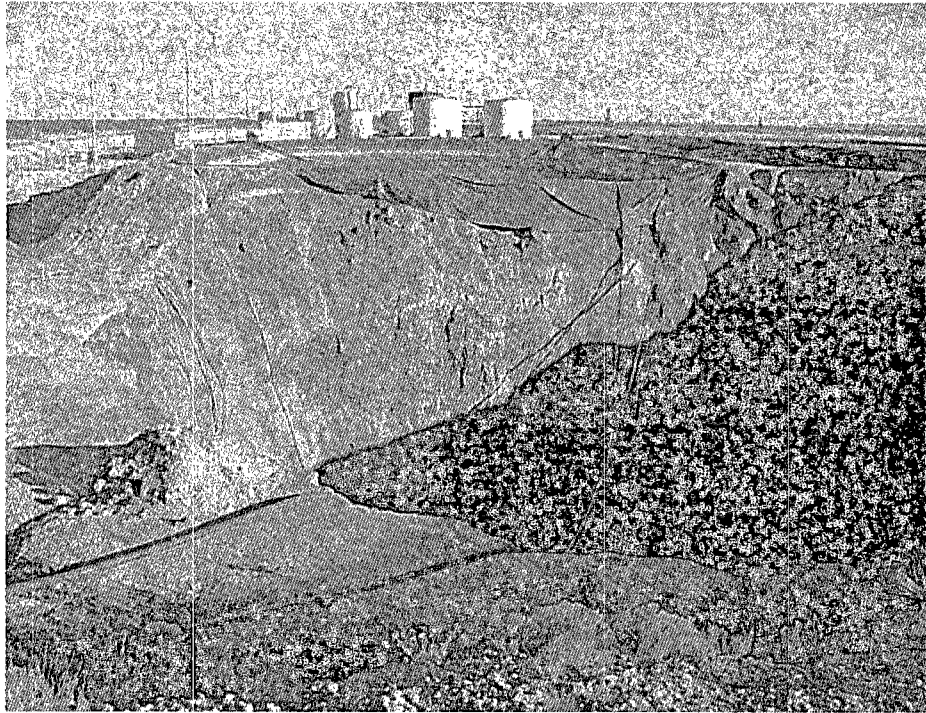
"I am deeply concerned by these two serious incidents and we are taking action to ensure the safety of our citizens and to protect the environment," stated Secretary Prukop.

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.

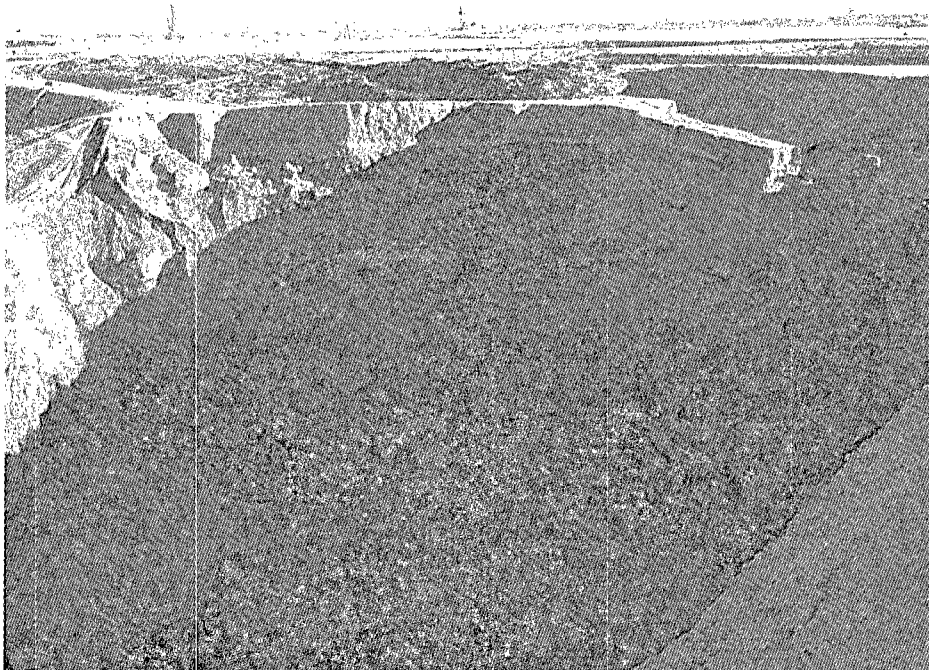
"The moratorium will provide time to properly evaluate the causes of the recent collapses and to discuss the development of new rules or guidelines to ensure the safety and stability of brine well systems," added Secretary Prukop.

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

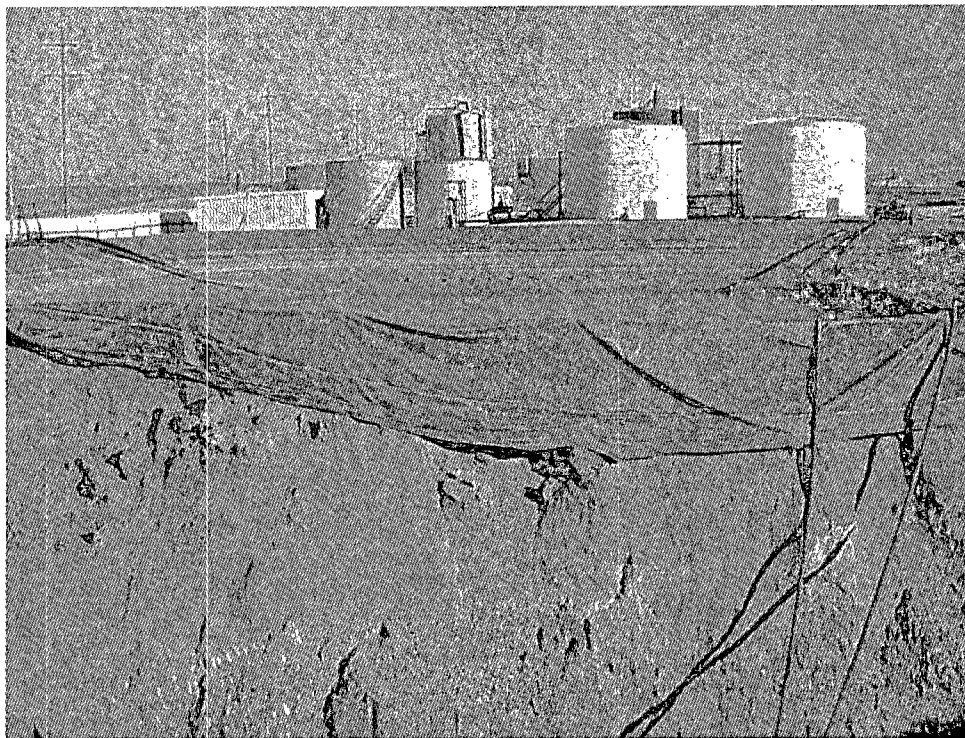
Below are photographs of the two recent collapses:



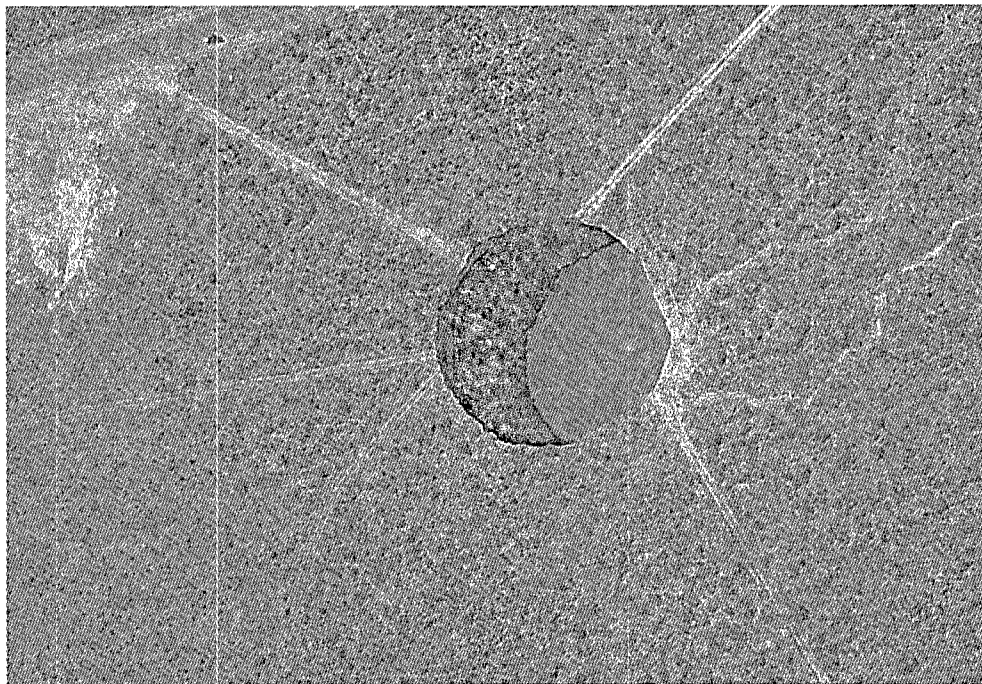
Loco Hills brine well collapse, morning, November 7, 2008, sinkhole with fresh water pond in foreground.
Photo courtesy of Oil Conservation Division



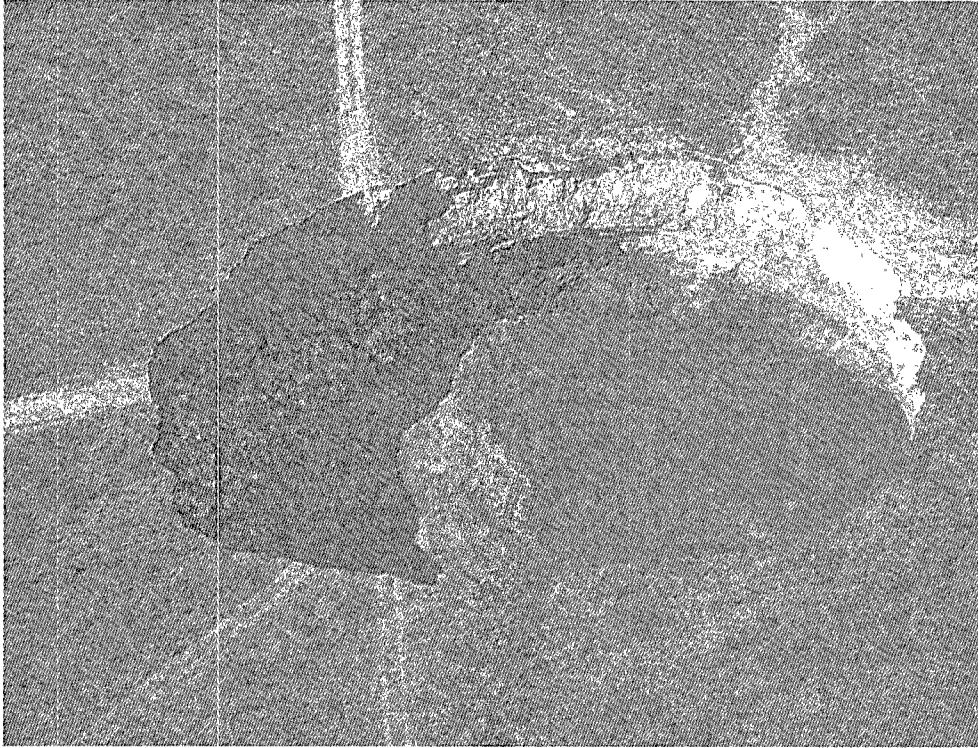
Loco Hills brine well collapse, morning, November 7, 2008 sinkhole.
Photo courtesy of Oil Conservation Division



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: Wednesday, November 12, 2008 11:50 AM
To: 'ziatr transports@gmail.com'; 'jrmillett@gmail.com'; 'Patterson, Bob'; 'Philliber, Mark'; 'rharrisnm@aim.com'; 'gandy2@leaco.net'; 'David Pyeatt'; 'garymschubert@aol.com'
Cc: Price, Wayne, EMNRD; Sanchez, Daniel J., EMNRD; Hill, Larry, EMNRD; Gum, Tim, EMNRD
Subject: Brine Well Sonar Testing Requirement with this season's upcoming MIT Schedule 2009

Gentlemen:

Re: MITs and OCD Sonar Test Requirement

Good morning. It is that time of season when the OCD requests your proposed MIT schedule. The OCD is requiring a sonar test in addition to the MIT this season. The OCD objective is to complete the MITs on or before July 31, 2009. If circumstances require it, the deadline for MITs may be extended to on or before October 31, 2009. Please contact me within 30 days to schedule your MIT and sonar test with date and time that you prefer. Note that brine well operators scheduled for the annual OCD 4-hr. formation MIT may conduct the EPA 5-Yr. 30 minute MIT (+/- 10% to pass) at 300 – 500 psig on casing in lieu of the OCD annual formation MIT this season.

After reviewing the site files and your responses to the recent OCD questionnaire following the Jims Water Service (BW-5) brine well collapse SE of Artesia in Eddy County on 7/16/2008, and the more recent collapse at Loco Hills (BW-21) in Eddy County on 11/3/2008, the OCD is requiring Sonar Testing along with your MIT this season to assess the configuration of your brine well cavern and any threats to public health and safety in your areas. The OCD is focused on the maturity of brine wells and the "Calculation" from the recent questionnaire attempts to assess brine well maturity by comparing the total brine production relative to the depth of the brine well casing shoe. This is one of the reasons why fresh water and brine well production record reporting to the OCD is so critical. Any operators that are planning to plug and abandon their brine wells are required by the OCD to conduct a sonar test of the well in advance of plugging and abandonment. Also, the OCD requires that the brine cavern be filled with brine fluid as this adds structural stability to the cavern and well. This will be required in a C-103 approved with conditions by the OCD. Currently, 3 brine well operators have been required by the OCD to conduct sonar testing within 30 days due to the maturity issue mentioned above. The OCD is continuing to assess its EPA Class III Brine Well program and will keep you updated on improvements and/or changes as needed.

If you feel that your brine well is too new to require sonar testing or a sonar was recently completed at your brine well, please provide the basis for requesting an exemption to this OCD sonar test requirement ASAP for OCD approval.

Please contact me if you have questions. Thanks in advance for your cooperation in this matter.

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")

RECEIVED

2008 SEP 5 PM 2 21

September 2, 2008

NMOCD Environmental
ATTN: Wayne Price
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Liquid Resources Services
BW-030

Mr. Price:

Find within the information requested on the brine facility operated by Liquid Resources Services. Information was obtained from operator personnel, well files and physical observation.

Should you need anything further, please call.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie W. Seay", with a long, sweeping horizontal line extending to the right.

Eddie W. Seay, Agent
Eddie Seay Consulting
601 W. Illinois
Hobbs, NM 88242
(575)392-2236
seay04@leaco.net

cc: Liquid Resources Services

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 Liquid Resource Serv. Well Name(s) Hobbs St #10
API Number 30-025-35915 Brine Well Permit # BW-030
Date Permit Expires? 2012

Location: Section 29 Ts 18 Rg 38
FNL _____ FSL 2565 FEL 2330 FWL _____
GPS of well(s): Lat: 32° 43' 07" Long: 103° 10' 17"
Unit F

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 ☐
Just outside city limits, west Hobbs

Distance and direction to nearest permanent structure, house, school, etc. if less than one mile:
Attached

Distance and direction to nearest water well if less than one mile:
Attached

Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s) if less than one mile: Attached

Distance and direction to nearest known karst features or mines if less than one mile:
None



Distance and direction to nearest producing oil or gas well(s) <i>if less than one mile:</i> Provide API Number: <u>Attached</u>
Distance and direction to nearest tank battery(ies) <i>if less than one mile:</i> <u>Attached</u>
Distance and direction to nearest pipeline(s), including fresh water pipelines <i>if less than one mile:</i> <u>Attached</u>
Distance and direction to nearest paved or maintained road or railroad <i>if less than one mile:</i> <u>Attached</u>
Depth to ground water found above the Salado (salt section), regardless of yield: <u>Attached</u>
Name of aquifer(s): <u>Attached</u>
WELL CONSTRUCTION: <i>Please provide the following information and attach a diagram depicting the brine well. Check box if attached:</i> Copy of a current well diagram: <u>Attached</u> ☒ Copy of formation record with tops: <u>Attached</u> ☒ <u>logs on file OGD</u> Copy of geophysical well logs if available: <u>Attached</u> ☐ <i>If not, well logs within one mile</i> ☐
Depth of the top of the salt below ground surface (feet): <u>Attached</u>
Depth to the bottom of the salt below ground surface (feet): <u>Attached</u>
Depth(s) to and thickness(es) of any anhydrite section(s) (located above the salt): <u>Attached</u>
Depth of casing(s) shoe below ground surface (feet): <u>1700</u> Is the casing shoe set in the anhydrite or other layer above the salt? Yes ☐ No ☐ Is the casing shoe set into the salt? Yes ☒ No ☐ If yes, how far into the salt? <u>55 ft</u>
Depth of tubing(s): <u>2300</u>
Do you suspect that your cavern has partially caved in? Yes ☐ No ☒ Don't know ☐
OPERATIONS: <i>Please provide the following information.</i>
Start date of brine well operation: <u>2002</u>
Total volume of fresh water injected into the brine well to date (bbls) and how determined: <u>1,382,450 bbls city of Hobbs</u>

Total volume of brine water produced (bbls) to date and how determined: 197,492 bbls calculated 7% ratio
Have you ever lost casing or tubing? If yes, please provide details. Document attached ☐ No
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 ☐ monitor well
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 ☐ 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 ☐ No
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 ☐ Step note test
Have you routinely looked for cracks or fissures in the ground surface around your brine well? Yes ☒ No ☐ inspect facility daily for all problems
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 shutting valves, pump start-up, shut-down, etc.? Yes ☐ No ☒

Have you ever experienced unexpected pressure gain or loss in the cavern? If Yes, was there a difference in your normal flow rate?	Yes ☐ No ☒ 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 ☒ No ☐ <u>only getting tubing in & out of hole</u>	
Have you ever conducted a fly over of your well site? No ☒ Yes ☐ 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. <i>Example:</i> 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 $18,000,000 / 180,000 = 100 \times 50 = 5000$.	
1. Provide the calculated number above here: <u>55</u>	
2. Now provide the depth (ft) from the surface to your casing shoe: <u>1700</u>	
Is the calculated number found in #1 above greater than #2? Yes ☐ No ☒	
Comments or recommendations for OCD: $\frac{197,492}{180,000} \times 50 =$$54.9$	

"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."

Liquid Resource Services

Company Name-print name above

Eddie W Saay

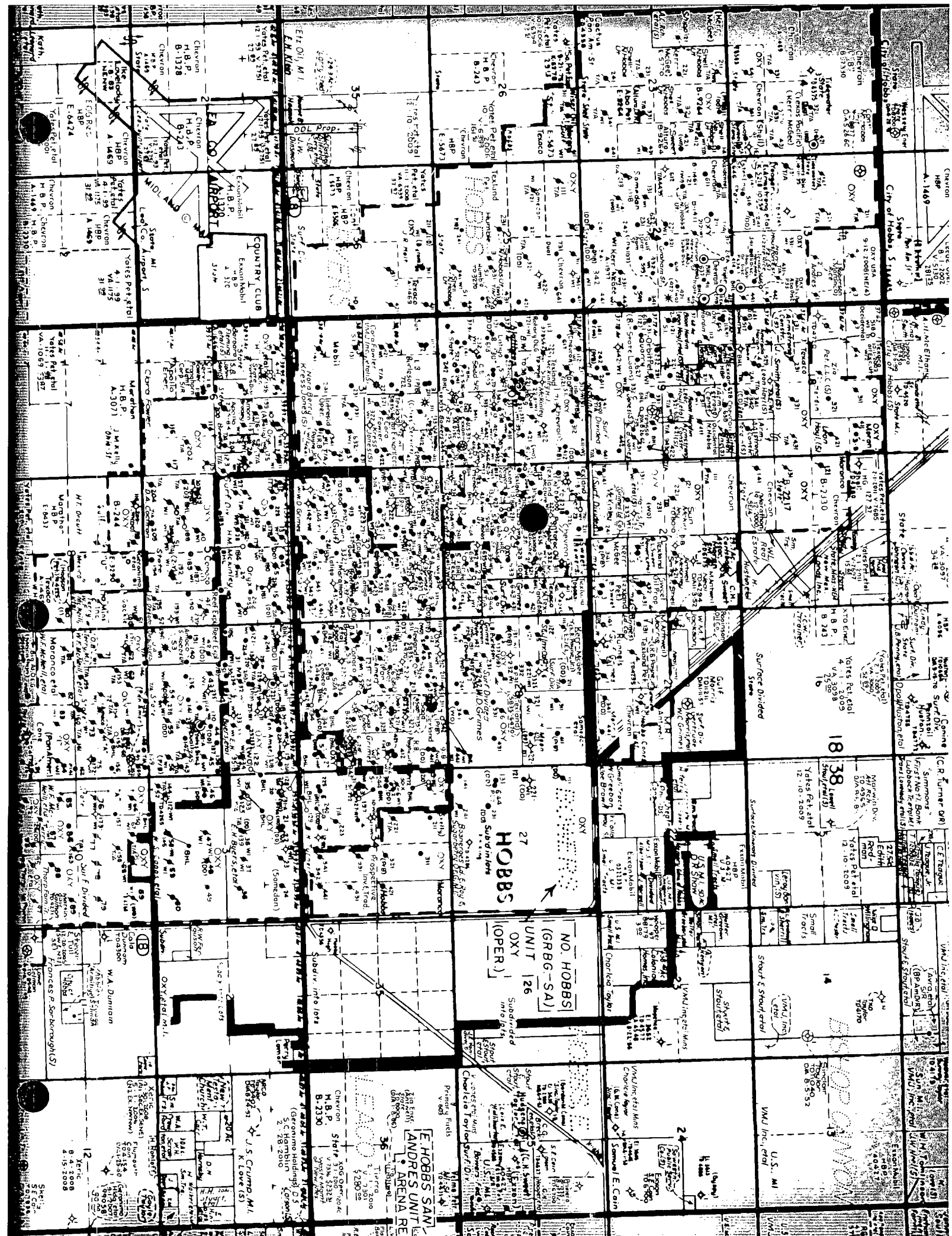
Company Representative- print name

Eddie W Saay

Company Representative- Signature

Title Agent

Date: 9/1/08



API NUMBER	30-025-35915
OPERATOR	LIQUID RESOURCES SERVICES LLC
PROPERTY NAME	HOBBS STATE # 10
LOCATION	F-29-T18S-R38E 2565 FSL 2330 FEL
DEPTH TOP SALT BELOW G.L.	1645 FEET
DEPTH BASE SALT BELOW G.L.	2400 FEET
THICKNESS ANHYDRITE ABOVE SALT	115 FEET
LOGS WITHIN 1 MILE	ALL AVAILABLE ON OCD ONLINE 30-025-27837
West County Road	0.19 miles W
Water Wells	
Water Well (House Well)	0.32 miles E
Water Well (Conocophillips)	0.26 miles SW
Water Well (Monitor Well)	0.02 miles SE
Water Well (OCD Office)	0.48 miles E
Buildings & Structures	
Trinity Church & School	0.56 miles ENE
House	0.32 miles E
Conocophillips Office	0.26 miles SW
OCD Office (State Building)	0.52 miles E
Tank Batteries	
Brine Tank Bat	0.36 miles NE
Van Guard Bat	0.16 miles NE
Mcclure Bat	0.10 miles NNE
Textland Bat	0.47 miles SE
Textland Inj Bat	0.37 miles S
Textland Bat	0.25 miles S
OXY Central Bat	0.39 miles W
Eagle Bat	0.16 miles NW
Pipe Lines	
Numerous Pipe & Flow Line	0.03 miles E
Zia Nat Gas line	0.02 miles SE
Shell Pipe Line	0.02 miles SE
OXY Lines	0.02 miles N
DEPTH TO GROUND WATER	
SANTA ROSA	330-560 FEET

BRINE WELL

3002535915	HOBBS STATE	10	LIQUID RESOURCES SERVICE LLC		BSW	A	Lea	F	29	18 S	38 E	2565 N	2330 W
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Wells within 1 mile of brine well

5280

5280

API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STAT	CO	LAND	U/I	SEC	TWN	RNG	N/S	E/W	Dist	Dir
3002507366	NORTH HOBBS G/SA UNIT	441	OCCIDENTAL PERMIAN LTD	4242	O	TA	Lea	P	P	19	18 S	38 E	330 S	330 E	3931	NW
3002528881	NORTH HOBBS G/SA UNIT	442	OCCIDENTAL PERMIAN LTD	4370	I	A	Lea	P	P	19	18 S	38 E	1100 S	380 E	4558	NW
3002507371	NORTH HOBBS G/SA UNIT	341	OCCIDENTAL PERMIAN LTD	4246	O	A	Lea	P	O	20	18 S	38 E	330 S	2310 E	2964	NE
3002507372	BOWERS B FEDERAL	2	EXXON CORP	4247	O	P&A	Lea	F	J	20	18 S	38 E	1650 S	2310 E	4263	NNE
3002507373	BOWERS B FEDERAL	3	EXXON CORP	4245	O	P&A	Lea	F	P	20	18 S	38 E	330 S	990 E	3496	NE
3002507376	BROWN GRIMES	1	CH SWEET	4244	O	P&A	Lea	P	I	20	18 S	38 E	1650 S	990 E	4648	NE
3002507381	NORTH HOBBS G/SA UNIT	331	SHELL WESTERN E & P INC	4202	O	P&A	Lea	F	J	20	18 S	38 E	1650 S	2010 E	4318	NNE
3002507382	NORTH HOBBS G/SA UNIT	231	OCCIDENTAL PERMIAN LTD	4210	O	TA	Lea	P	K	20	18 S	38 E	2310 S	1320 W	4978	N
3002507383	NORTH HOBBS G/SA UNIT	141	OCCIDENTAL PERMIAN LTD	4253	O	A	Lea	P	M	20	18 S	38 E	330 S	330 W	3518	NNW
3002507384	NORTH HOBBS G/SA UNIT	232	OCCIDENTAL PERMIAN LTD	4210	O	P&A	Lea	P	K	20	18 S	38 E	1325 S	1325 W	4017	N
3002507385	BOWERS FEDERAL	3	CH SWEET	4230	O	P&A	Lea	F	P	20	18 S	38 E	330 S	700 E	3666	NE
3002507386	NORTH HOBBS G/SA UNIT	431	OCCIDENTAL PERMIAN LTD	4252	O	P&A	Lea	P	I	20	18 S	38 E	1650 S	660 E	4796	NE
3002507387	NORTH HOBBS G/SA UNIT	432	OCCIDENTAL PERMIAN LTD	4210	O	P&A	Lea	P	I	20	18 S	38 E	1850 S	990 E	4830	NE
3002512493	NORTH HOBBS G/SA UNIT	241	OCCIDENTAL PERMIAN LTD	4330	O	TA	Lea	P	N	20	18 S	38 E	330 S	2310 W	2895	N
3002523206	NORTH HOBBS G/SA UNIT	131	OCCIDENTAL PERMIAN LTD	4276	I	TA	Lea	P	L	20	18 S	38 E	1650 S	330 W	4665	NNE
3002527214	NORTH HOBBS G/SA UNIT	233	OCCIDENTAL PERMIAN LTD	4510	I	TA	Lea	P	K	20	18 S	38 E	1610 S	1850 W	4202	N
3002507390	NORTH HOBBS G/SA UNIT	141	OCCIDENTAL PERMIAN LTD	4219	O	TA	Lea	P	M	21	18 S	38 E	330 S	330 W	4374	NE
3002522670	GULF GRIMES	2	HAROLD L RUNNELS	420	O	P&A	Lea	P	M	21	18 S	38 E	330 S	990 W	4889	NE
3002507461	H D MCKINLEY	3	GETTY OIL CO	2755	O	P&A	Lea	P	H	30	18 S	38 E	2310 N	330 E	2672	W
3002507467	NORTH HOBBS G/SA UNIT	321	OCCIDENTAL PERMIAN LTD	4256	O	A	Lea	P	G	30	18 S	38 E	2310 N	2310 E	4647	W
3002507468	NORTH HOBBS G/SA UNIT	421	OCCIDENTAL PERMIAN LTD	3199	O	A	Lea	P	H	30	18 S	38 E	2310 N	990 E	3329	W
3002507469	NORTH HOBBS G/SA UNIT	311	OCCIDENTAL PERMIAN LTD	4302	O	TA	Lea	P	B	30	18 S	38 E	330 N	2310 E	5150	NNW
3002507470	NORTH HOBBS G/SA UNIT	411	OCCIDENTAL PERMIAN LTD	4310	I	A	Lea	P	A	30	18 S	38 E	330 N	330 E	3474	NNW
3002507471	BOWERS A FEDERAL	1	EXXON CORP	6017	O	P&A	Lea	F	I	30	18 S	38 E	1980 S	660 E	3079	SW
3002507472	NORTH HOBBS G/SA UNIT	331	OCCIDENTAL PERMIAN LTD	4230	I	A	Lea	F	J	30	18 S	38 E	2335 S	2310 E	4655	WSW
3002507473	NORTH HOBBS G/SA UNIT	441	OCCIDENTAL PERMIAN LTD	4277	O	A	Lea	F	P	30	18 S	38 E	330 S	330 E	3572	SW
3002507474	NORTH HOBBS G/SA UNIT	431	OCCIDENTAL PERMIAN LTD	4229	I	TA	Lea	F	I	30	18 S	38 E	2310 S	990 E	3344	SW
3002507475	BOWERS A FEDERAL	6	EXXON CORP	3190	O	P&A	Lea	F	I	30	18 S	38 E	2310 S	330 E	2690	SW
3002507476	BOWERS A FEDERAL	13	EXXON CORP	3189	O	P&A	Lea	F	J	30	18 S	38 E	1980 S	1980 E	4372	WSW
3002507477	BOWERS A FEDERAL	15	EXXON CORP	3218	O	P&A	Lea	F	P	30	18 S	38 E	480 S	630 E	3709	SW
3002507478	BOWERS A FEDERAL	16	EXXON CORP	3225	O	P&A	Lea	F	O	30	18 S	38 E	660 S	1980 E	4774	SW
3002507488	H D MCKINLEY	6	GETTY OIL CO	3200	O	P&A	Lea	P	G	30	18 S	38 E	1980 N	1650 E	4022	W

3002507489	H D MCKINLEY	7 GETTY OIL CO	3224 O	P&A	Lea	P	B	30	18 S	38 E	330 N	1650 E	4564	WNW
3002512501	NORTH HOBBS G/SA UNIT	342 OCCIDENTAL PERMIAN LTD	4268 O	P&A	Lea	F	O	30	18 S	38 E	440 S	2310 E	5167	SW
3002523144	BOWERS A FEDERAL	5 EXXON MOBIL CORPORATION	6000 O	P&A	Lea	F	P	30	18 S	38 E	330 S	660 E	3824	SW
3002523151	H D MCKINLEY	8 CHEVRON U S A INC	6059 G	P&A	Lea	P	H	30	18 S	38 E	2310 N	430 E	2771	W
3002523221	H D MCKINLEY	9 TEXLAND PETROLEUM-HOBBS	7000 O	A	Lea	P	G	30	18 S	38 E	2235 N	2310 E	4651	W
3002523235	BOWERS A FEDERAL	32 HUMBLE OIL & REFINI	7075 O	P&A	Lea	F	O	30	18 S	38 E	330 S	1980 E	4925	SW
3002523260	BOWERS A FEDERAL	34 HUMBLE OIL & REFINI	7010 O	P&A	Lea	F	J	30	18 S	38 E	1980 S	2120 E	4510	SW
3002523270	NORTH HOBBS G/SA UNIT	313 OCCIDENTAL PERMIAN LTD	6050 I	A	Lea	P	B	30	18 S	38 E	405 N	2272 E	5083	WNW
3002523384	NORTH HOBBS G/SA UNIT	412 OCCIDENTAL PERMIAN LTD	7108 O	A	Lea	P	A	30	18 S	38 E	760 N	550 E	3398	WNW
3002524665	NORTH HOBBS G/SA UNIT	341 OCCIDENTAL PERMIAN LTD	4352 O	A	Lea	F	O	30	18 S	38 E	900 S	1650 E	4374	SW
3002526485	BOWERS A FEDERAL	37 TEXLAND PETROLEUM-HOBBS	3918 G	A	Lea	F	P	30	18 S	38 E	770 S	660 E	3566	SW
3002527001	NORTH HOBBS G/SA UNIT	442 OCCIDENTAL PERMIAN LTD	4510 I	A	Lea	F	P	30	18 S	38 E	1300 S	1050 E	3684	SW
3002527059	NORTH HOBBS G/SA UNIT	422 OCCIDENTAL PERMIAN LTD	4510 I	A	Lea	P	H	30	18 S	38 E	1520 N	1300 E	3777	W
3002528555	NORTH HOBBS G/SA UNIT	223 OCCIDENTAL PERMIAN LTD	4379 I	A	Lea	P	F	30	18 S	38 E	1770 N	2405 W	5265	W
3002528580	BOWERS A FEDERAL	38 TEXLAND PETROLEUM-HOBBS	7300 O	A	Lea	F	I	30	18 S	38 E	2080 S	560 E	2958	SW
3002528954	NORTH HOBBS G/SA UNIT	332 OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	F	J	30	18 S	38 E	2470 S	1600 E	3937	SW
3002528955	NORTH HOBBS G/SA UNIT	333 OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	F	J	30	18 S	38 E	1400 S	2430 E	4938	SW
3002528957	NORTH HOBBS G/SA UNIT	432 OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	F	I	30	18 S	38 E	2260 S	180 E	2550	SW
3002528958	NORTH HOBBS G/SA UNIT	443 OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	F	P	30	18 S	38 E	1300 S	160 E	2863	SW
3002528959	NORTH HOBBS G/SA UNIT	444 OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	F	P	30	18 S	38 E	215 S	1255 E	4370	SW
3002529197	NORTH HOBBS G/SA UNIT	312 OCCIDENTAL PERMIAN LTD	4431 O	A	Lea	P	B	30	18 S	38 E	530 N	1448 E	4291	WNW
3002534983	NORTH HOBBS G/SA UNIT	713 OCCIDENTAL PERMIAN LTD	4403 O	A	Lea	P	B	30	18 S	38 E	1196 N	1823 E	4372	WNW
3002535727	BOWERS A FEDERAL	39 TEXLAND PETROLEUM-HOBBS	6000 I	A	Lea	F	J	30	18 S	38 E	2505 S	1415 E	3750	SW
3002536242	NORTH HOBBS G/SA UNIT	547 OCCIDENTAL PERMIAN LTD	4417 O	A	Lea	F	P	30	18 S	38 E	670 S	686 E	3643	SW
3002536280	NORTH HOBBS G/SA UNIT	546 OCCIDENTAL PERMIAN LTD	4416 O	A	Lea	F	I	30	18 S	38 E	1657 S	620 E	3133	SW
3002536281	NORTH HOBBS G/SA UNIT	538 OCCIDENTAL PERMIAN LTD	4429 O	A	Lea	F	J	30	18 S	38 E	1983 S	1856 E	4249	SW
3002536286	NORTH HOBBS G/SA UNIT	536 OCCIDENTAL PERMIAN LTD	4427 I	A	Lea	F	O	30	18 S	38 E	641 S	2419 E	5182	SW
3002536297	C T MCKINLEY	1 TEXLAND PETROLEUM-HOBBS	7998 O	P&A	Lea	P	F	30	18 S	38 E	1535 N	2418 W	5293	W
3002536837	BOWERS A FEDERAL	45 TEXLAND PETROLEUM-HOBBS	7170 O	A	Lea	F	P	30	18 S	38 E	755 S	285 E	3268	SW
3002507430	NORTH HOBBS G/SA UNIT	221 OCCIDENTAL PERMIAN LTD	4267 O	A	Lea	S	F	29	18 S	38 E	2310 N	1650 W	726	NW
3002507431	NORTH HOBBS G/SA UNIT	321 OCCIDENTAL PERMIAN LTD	4309 I	A	Lea	S	G	29	18 S	38 E	2310 N	1650 E	1324	E
3002507432	NORTH HOBBS G/SA UNIT	311 OCCIDENTAL PERMIAN LTD	4249 O	A	Lea	S	B	29	18 S	38 E	990 N	1650 E	2042	NE
3002507433	NORTH HOBBS G/SA UNIT	211 OCCIDENTAL PERMIAN LTD	4270 O	TA	Lea	S	C	29	18 S	38 E	330 N	2310 W	2235	N
3002507434	STATE B	5 APACHE CORP	3224 O	A	Lea	S	G	29	18 S	38 E	1980 N	1980 E	1132	E
3002507435	STATE B	6 APACHE CORP	3219 O	A	Lea	S	F	29	18 S	38 E	1980 N	1980 W	681	NW
3002507436	NORTH HOBBS G/SA UNIT	331 OCCIDENTAL PERMIAN LTD	4340 I	P&A	Lea	S	J	29	18 S	38 E	1650 S	1650 E	1680	SE
3002507437	NORTH HOBBS G/SA UNIT	241 OCCIDENTAL PERMIAN LTD	4184 I	A	Lea	S	N	29	18 S	38 E	330 S	2310 W	2385	S

3002507438	NORTH HOBBS G/SA UNIT	231	OCCIDENTAL PERMIAN LTD	4255	O	A	Lea	S	K	29	18	S	38	E	2310	S	1650	W	791	S
3002507439	STATE A 29	4	CONTINENTAL OIL CO	3215	O	P&A	Lea	S	J	29	18	S	38	E	1980	S	1980	E	1217	SE
3002507440	STATE A 29	5	CONTINENTAL OIL CO	3200	O	P&A	Lea	S	K	29	18	S	38	E	1980	S	1980	W	814	S
3002507441	STATE A 29	6	CONTINENTAL OIL CO	3172	O	P&A	Lea	S	N	29	18	S	38	E	660	S	1980	W	2084	S
3002507442	STATE I 29	1	CHEVRON U S A INC	4191	O	P&A	Lea	S	P	29	18	S	38	E	990	S	990	E	2610	SE
3002507443	STATE I 29	2	CHEVRON U S A INC	4171	O	P&A	Lea	S	O	29	18	S	38	E	990	S	1650	E	2160	SE
3002507444	NORTH HOBBS G/SA UNIT	441	OCCIDENTAL PERMIAN LTD	4266	O	A	Lea	S	P	29	18	S	38	E	330	S	330	E	3542	SE
3002507445	NORTH HOBBS G/SA UNIT	341	OCCIDENTAL PERMIAN LTD	4250	O	A	Lea	S	O	29	18	S	38	E	330	S	2318	E	2467	SE
3002507446	BOWERS A FEDERAL	9	EXXON CORP	4220	O	P&A	Lea	F	E	29	18	S	38	E	2310	N	990	W	1364	W
3002507447	NORTH HOBBS G/SA UNIT	131	OCCIDENTAL PERMIAN LTD	4280	O	A	Lea	F	L	29	18	S	38	E	2310	S	990	W	1399	SW
3002507448	NORTH HOBBS G/SA UNIT	141	OCCIDENTAL PERMIAN LTD	4258	I	A	Lea	F	M	29	18	S	38	E	330	S	330	W	3112	SSW
3002507449	NORTH HOBBS G/SA UNIT	121	OCCIDENTAL PERMIAN LTD	3200	M	A	Lea	F	E	29	18	S	38	E	2310	N	330	W	2016	W
3002507450	BOWERS A FEDERAL	12	EXXON CORP	3183	O	P&A	Lea	F	L	29	18	S	38	E	1980	S	660	W	1824	SW
3002507451	BOWERS A FEDERAL	14	EXXON CORP	3207	O	P&A	Lea	F	M	29	18	S	38	E	660	S	660	W	2648	SSW
3002507452	BOWERS A FEDERAL	1	HUMBLE OIL & REFINI	4221	O	P&A	Lea	F	D	29	18	S	38	E	330	N	330	W	2999	NW
3002507453	BOWERS AB FEDERAL	1	EXXON CORP	3238	O	P&A	Lea	F	D	29	18	S	38	E	660	N	660	W	2533	NW
3002507454	NORTH HOBBS G/SA UNIT	411	OCCIDENTAL PERMIAN LTD	4335	I	TA	Lea	P	A	29	18	S	38	E	990	N	990	E	2514	NE
3002507455	W D GRIMES	2	HUMBLE OIL & REFINI	4045	O	P&A	Lea		A	29	18	S	38	E	990	N	660	E	2779	NE
3002507456	W D GRIMES	1	GETTY OIL CO	4160	O	P&A	Lea	P	I	29	18	S	38	E	1650	S	990	E	2230	SE
3002507457	W D GRIMES	2	TIDEWATER OIL CO	7075	O	P&A	Lea	S	H	29	18	S	38	E	2310	N	990	E	1976	E
3002507458	NORTH HOBBS G/SA UNIT	431	OCCIDENTAL PERMIAN LTD	4270	O	A	Lea	P	I	29	18	S	38	E	2310	S	330	E	2651	SE
3002507459	NORTH HOBBS G/SA UNIT	421	OCCIDENTAL PERMIAN LTD	4225	O	P&A	Lea	P	H	29	18	S	38	E	2310	N	330	E	2632	E
3002507460	GRIMES	5	TIDAL OIL CO	4200	O	P&A	Lea	P	H	29	18	S	38	E	1650	N	990	E	2163	E
3002512802	RICE SWD F	29	EAGLE DISPOSAL LLC	4522	S	A	Lea	P	F	29	18	S	38	E	1880	N	1745	W	900	NNW
3002521961	BOWERS A FEDERAL CT	22	HUMBLE OIL & REFINI	32	O	P&A	Lea	F	M	29	18	S	38	E	400	S	730	W	2814	SSW
3002521962	BOWERS A FEDERAL CT	23	HUMBLE OIL & REFINI	35	O	P&A	Lea	F	L	29	18	S	38	E	1720	S	730	W	1884	SW
3002521963	BOWERS A FEDERAL CT	24	HUMBLE OIL & REFINI	35	O	P&A	Lea	F	E	29	18	S	38	E	2240	N	730	W	1632	W
3002521964	BOWERS A FEDERAL CT	25	HUMBLE OIL & REFINI	35	O	P&A	Lea	F	D	29	18	S	38	E	920	N	730	W	2294	NW
3002522934	STATE A 29	7	TEXLAND PETROLEUM-HOBBS	6050	O	A	Lea	S	N	29	18	S	38	E	660	N	1850	W	1964	S
3002523022	BOWERS A FEDERAL	28	TEXLAND PETROLEUM-HOBBS	6000	O	A	Lea	F	M	29	18	S	38	E	660	S	990	W	2453	SSW
3002523048	STATE A 29	8	TEXLAND PETROLEUM-HOBBS	5960	O	TA	Lea	S	K	29	18	S	38	E	2150	S	1800	W	774	S
3002523131	BOWERS A FEDERAL	29	TEXLAND PETROLEUM-HOBBS	6000	O	A	Lea	F	L	29	18	S	38	E	2150	S	990	W	1454	SW
3002523173	STATE I-29	5	TEXLAND PETROLEUM-HOBBS	7025	O	A	Lea	S	O	29	18	S	38	E	330	S	2218	E	2494	SE
3002523176	BOWERS A FEDERAL	31	EXXON MOBIL CORPORATION	7050	O	P&A	Lea	F	E	29	18	S	38	E	1980	N	660	W	1769	W
3002523222	BOWERS A FEDERAL COM	33	EXXON MOBIL CORPORATION	6000	O	P&A	Lea	F	D	29	18	S	38	E	800	N	660	W	2429	NW
3002523252	STATE I-29	6	TEXLAND PETROLEUM-HOBBS	7015	O	A	Lea	S	P	29	18	S	38	E	330	S	660	E	3306	SE
3002523400	W D GRIMES	6	LEWIS B BURLESON INC	7050	G	A	Lea	P	I	29	18	S	38	E	1879	S	557	E	2534	SE

3002523585	HOBBS STATE	1	MCCLURE OIL COMPANY, INC	7050	O	A	Lea	S	F	29	18	S	38	E	2130	N	1650	W	807	W
3002523620	HOBBS STATE	2	MCCLURE OIL COMPANY, INC	7075	O	A	Lea	S	G	29	18	S	38	E	1980	N	1830	E	1263	E
3002523621	HOBBS STATE	3	HRC INC	6083	S	A	Lea	S	B	29	18	S	38	E	990	N	1830	E	1932	NE
3002523662	HOBBS STATE	5	HRC INC	4999	M	P&A	Lea	S		29	18	S	38	E	2280	N	1980	W	451	NW
3002523919	NORTH HOBBS G/SA UNIT	111	OCCIDENTAL PERMIAN LTD	4331	O	A	Lea	F	D	29	18	S	38	E	990	N	330	W	2545	NW
3002526917	NORTH HOBBS G/SA UNIT	132	OCCIDENTAL PERMIAN LTD	4513	I	A	Lea	F	L	29	18	S	38	E	1623	S	1218	W	1558	SW
3002526934	NORTH HOBBS G/SA UNIT	222	OCCIDENTAL PERMIAN LTD	4510	I	A	Lea	S	F	29	18	S	38	E	1370	N	1850	W	1287	NW
3002528413	NORTH HOBBS G/SA UNIT	242	OCCIDENTAL PERMIAN LTD	4370	I	A	Lea	S	N	29	18	S	38	E	100	S	1400	W	2775	S
3002528883	NORTH HOBBS G/SA UNIT	322	OCCIDENTAL PERMIAN LTD	4384	I	A	Lea	S	G	29	18	S	38	E	1430	N	2350	E	1283	E
3002528884	NORTH HOBBS G/SA UNIT	342	OCCIDENTAL PERMIAN LTD	4375	I	A	Lea	S	O	29	18	S	38	E	1230	S	2500	E	1551	SE
3002528885	NORTH HOBBS G/SA UNIT	442	OCCIDENTAL PERMIAN LTD	4370	I	A	Lea	S	P	29	18	S	38	E	1230	S	220	E	3107	SE
3002528941	NORTH HOBBS G/SA UNIT	323	OCCIDENTAL PERMIAN LTD	4370	O	A	Lea	S	G	29	18	S	38	E	2540	N	2500	E	450	E
3002528953	NORTH HOBBS G/SA UNIT	122	OCCIDENTAL PERMIAN LTD	4370	I	A	Lea	F	E	29	18	S	38	E	1660	N	180	W	2332	W
3002534644	NORTH HOBBS G/SA UNIT	522	OCCIDENTAL PERMIAN LTD	4400	O	A	Lea	S	P	29	18	S	38	E	925	S	1050	E	2610	SE
3002534869	NORTH HOBBS G/SA UNIT	6232	OCCIDENTAL PERMIAN LTD	4405	O	A	Lea	S	K	29	18	S	38	E	1837	S	2482	W	891	S
3002534870	NORTH HOBBS G/SA UNIT	624	OCCIDENTAL PERMIAN LTD	4410	O	A	Lea	S	N	29	18	S	38	E	1150	S	1948	W	1610	S
3002534871	NORTH HOBBS G/SA UNIT	813	OCCIDENTAL PERMIAN LTD	4400	I	A	Lea	S	L	29	18	S	38	E	1450	S	469	W	2250	SW
3002535376	NORTH HOBBS G/SA UNIT	643	OCCIDENTAL PERMIAN LTD	4411	O	A	Lea	P	J	29	18	S	38	E	2374	S	1213	E	1770	SE
3002535384	NORTH HOBBS G/SA UNIT	634	OCCIDENTAL PERMIAN LTD	4500	O	A	Lea	P	O	29	18	S	38	E	753	S	2067	E	2151	SE
3002535527	NORTH HOBBS G/SA UNIT	814	OCCIDENTAL PERMIAN LTD	4618	O	A	Lea	F	M	29	18	S	38	E	819	S	239	W	2822	SSW
3002535541	NORTH HOBBS G/SA UNIT	533	OCCIDENTAL PERMIAN LTD	4420	O	A	Lea	S	J	29	18	S	38	E	2326	S	1902	E	1117	SE
3002535672	STATE 1-29	7	TEXLAND PETROLEUM-HOBBS	6101	I	A	Lea	S	P	29	18	S	38	E	140	S	1200	E	3113	SE
3002535673	STATE 1-29	9	TEXLAND PETROLEUM-HOBBS	6070	I	A	Lea	S	P	29	18	S	38	E	1080	S	1300	E	2322	SE
3002535674	STATE A 29	10	TEXLAND PETROLEUM-HOBBS	6073	I	A	Lea	S	N	29	18	S	38	E	110	S	1490	W	2737	S
3002535756	NORTH HOBBS G/SA UNIT	42	TEXLAND PETROLEUM-HOBBS	6063	I	A	Lea	F	M	29	18	S	38	E	1290	S	170	W	2587	SSW
3002535852	NORTH HOBBS G/SA UNIT	43	TEXLAND PETROLEUM-HOBBS	6060	I	A	Lea	F	M	29	18	S	38	E	1243	S	1015	W	1973	SSW
3002535914	BOWERS A FEDERAL	44	TEXLAND PETROLEUM-HOBBS	6020	O	A	Lea	F	M	29	18	S	38	E	719	S	800	W	2514	SSW
3002535999	NORTH HOBBS G/SA UNIT	944	OCCIDENTAL PERMIAN LTD	4025	M	A	Lea	P	I	29	18	S	38	E	1528	S	854	E	2408	SE
3002536011	NORTH HOBBS G/SA UNIT	923	OCCIDENTAL PERMIAN LTD	4069	O	A	Lea	P	K	29	18	S	38	E	2114	S	1658	W	901	S
3002536897	BOWERS A FEDERAL 040	40	TEXLAND PETROLEUM-HOBBS	6055	O	A	Lea	F	E	29	18	S	38	E	2440	N	170	W	2163	W
3002537128	NORTH HOBBS G/SA UNIT	636	OCCIDENTAL PERMIAN LTD	4357	O	A	Lea	S	F	29	18	S	38	E	1760	N	2412	W	809	N
3002537213	NORTH HOBBS G/SA UNIT	625	OCCIDENTAL PERMIAN LTD	4430	O	A	Lea	F	E	29	18	S	38	E	1755	N	977	W	1576	W
3002537250	NORTH HOBBS G/SA UNIT	626	OCCIDENTAL PERMIAN LTD	4403	I	A	Lea	S	K	29	18	S	38	E	2320	S	2225	W	408	S
3002537293	STATE A	11	OXY USA WTP LP	26	J&A	P&A	Lea	S	J	29	18	S	38	E	1490	S	1525	E	1879	SE
3002537349	STATE A	11-Y	OXY USA WTP LP	7850	O	A	Lea	S	J	29	18	S	38	E	1484	S	1526	E	1882	SE
3002537409	NORTH HOBBS G/SA UNIT	635	OCCIDENTAL PERMIAN LTD	4398	I	A	Lea	S	I	29	18	S	38	E	1665	S	1240	E	2006	SE
3002537451	NORTH HOBBS G/SA UNIT	711	OCCIDENTAL PERMIAN LTD	4450	O	A	Lea	S	C	29	18	S	38	E	288	N	1650	W	2376	N

3002537474	NORTH HOBBS G/SA UNIT	721	OCCIDENTAL PERMIAN LTD	4409	O	A	Lea	S	C	29	18	S	38	E	781	N	1857	W	1845	N
3002537475	NORTH HOBBS G/SA UNIT	742	OCCIDENTAL PERMIAN LTD	4425	O	A	Lea	S	G	29	18	S	38	E	1670	N	1610	E	1611	E
3002537558	NORTH HOBBS G/SA UNIT	712	OCCIDENTAL PERMIAN LTD	99	I	A	Lea	F		29	18	S	38	E	2378	N	1086	W	1257	W
3002507420	NORTH HOBBS G/SA UNIT	121	OCCIDENTAL PERMIAN LTD	4250	O	A	Lea	P	E	28	18	S	38	E	2310	N	330	W	3289	E
3002507421	NORTH HOBBS G/SA UNIT	231	OCCIDENTAL PERMIAN LTD		I	A	Lea	P	K	28	18	S	38	E	1325	S	1325	W	4495	ESE
3002507422	NORTH HOBBS G/SA UNIT	111	OCCIDENTAL PERMIAN LTD	4235	I	A	Lea	P	D	28	18	S	38	E	990	N	330	W	3638	ENE
3002507423	GRIMES	8	SHELL OIL CO	3230	O	P&A	Lea		K	28	18	S	38	E	1980	S	1980	W	4984	ESE
3002507424	GRIMES	5	SHELL OIL CO	3200	O	P&A	Lea		L	28	18	S	38	E	1980	S	660	W	3684	SE
3002507426	GRIMES	5	SINCLAIR OIL & GAS	3222	O	P&A	Lea	P	E	28	18	S	38	E	1980	N	660	W	3657	E
3002507427	GRIMES	2	SINCLAIR OIL & GAS	4223	O	P&A	Lea	P	F	28	18	S	38	E	2310	N	1650	W	4607	E
3002507428	W D GRIMES	6	REPOLLO OIL CO	3325	O	P&A	Lea	P	F	28	18	S	38	E	1980	N	1980	W	4964	E
3002507429	NORTH HOBBS G/SA UNIT	221	OCCIDENTAL PERMIAN LTD	4310	I	A	Lea	P	F	28	18	S	38	E	1910	N	1650	W	4646	E
3002512496	NORTH HOBBS G/SA UNIT	141	OCCIDENTAL PERMIAN LTD	4232	O	A	Lea	P	M	28	18	S	38	E	330	S	330	W	4055	SE
3002512497	NORTH HOBBS G/SA UNIT	131	OCCIDENTAL PERMIAN LTD	4263	I	A	Lea	P	L	28	18	S	38	E	2310	S	330	W	3304	SE
3002512500	GRIMES	6	SHELL OIL CO	3200	O	P&A	Lea	P	M	28	18	S	38	E	660	S	660	W	4153	SE
3002523246	NORTH HOBBS G/SA UNIT	142	OCCIDENTAL PERMIAN LTD	7102	O	A	Lea	P	M	28	18	S	38	E	731	S	731	W	4181	SE
3002523277	NORTH HOBBS G/SA UNIT	132	OCCIDENTAL PERMIAN LTD	7150	O	A	Lea	P	L	28	18	S	38	E	1880	S	750	W	3793	SE
3002523304	NORTH HOBBS G/SA UNIT	243	OCCIDENTAL PERMIAN LTD	6350	O	A	Lea	P	N	28	18	S	38	E	750	S	1790	W	5131	SE
3002528882	NORTH HOBBS G/SA UNIT	232	OCCIDENTAL PERMIAN LTD	4370	I	A	Lea	P	K	28	18	S	38	E	2300	S	1350	W	4319	ESE
3002528964	NORTH HOBBS G/SA UNIT	122	OCCIDENTAL PERMIAN LTD	4370	O	A	Lea	P	E	28	18	S	38	E	1579	N	211	W	3311	E
3002529276	NORTH HOBBS G/SA UNIT	242	OCCIDENTAL PERMIAN LTD		I	A	Lea	P	N	28	18	S	38	E	1166	S	1823	W	5018	ESE
3002537191	W D GRIMES 28	1	TEXLAND PETROLEUM-HOBBS	6050	O	A	Lea	P	M	28	18	S	38	E	520	S	330	W	3946	SE
3002507490	NORTH HOBBS G/SA UNIT	411	OCCIDENTAL PERMIAN LTD	4290	O	A	Lea	P	A	31	18	S	38	E	330	N	330	E	4043	SE
3002507493	NORTH HOBBS G/SA UNIT	421	OCCIDENTAL PERMIAN LTD	4265	O	A	Lea	P	H	31	18	S	38	E	1370	N	330	E	4874	SE
3002507494	FOWLER	5	CITIES SERVICE OIL	3215	O	P&A	Lea	P	A	31	18	S	38	E	380	N	330	E	4081	SE
3002523204	NORTH HOBBS G/SA UNIT	412	OCCIDENTAL PERMIAN LTD	6260	O	P&A	Lea	P	A	31	18	S	38	E	660	N	660	E	4508	SE
3002507515	NORTH HOBBS G/SA UNIT	311	SHELL WESTERN E & P INC	4160	O	P&A	Lea	S	B	32	18	S	38	E	990	N	2310	E	3759	SW
3002507516	NORTH HOBBS G/SA UNIT	411	OCCIDENTAL PERMIAN LTD	4272	O	A	Lea	S	A	32	18	S	38	E	330	N	330	E	4017	SW
3002507517	STATE A	3	AMERADA HESS CORP	3164	G	P&A	Lea	S	B	32	18	S	38	E	660	N	2083	E	3484	SSE
3002507518	NORTH HOBBS G/SA UNIT	322	OCCIDENTAL PERMIAN LTD	4248	O	A	Lea	S	G	32	18	S	38	E	2310	N	2310	E	5065	SSE
3002507519	W D GRIMES NCT A	1	HRC INC	4260	G	A	Lea	P	D	32	18	S	38	E	330	N	330	W	3643	SSW
3002507520	NORTH HOBBS G/SA UNIT	221	OCCIDENTAL PERMIAN LTD	4155	O	A	Lea	P	F	32	18	S	38	E	1650	N	2310	W	4365	S
3002507522	W D GRIMES NCT-A	4	TECHSYS RESOURCES LLC	4153	G	A	Lea	P	C	32	18	S	38	E	330	N	2310	W	3045	S
3002507525	NORTH HOBBS G/SA UNIT	211	OCCIDENTAL PERMIAN LTD	4252	O	A	Lea	P	C	32	18	S	38	E	990	N	2310	W	3705	S
3002507526	NORTH HOBBS G/SA UNIT	112	OCCIDENTAL PERMIAN LTD	4274	I	A	Lea	P	E	32	18	S	38	E	1370	N	330	W	4548	SSW
3002507528	NORTH HOBBS G/SA UNIT	111	OCCIDENTAL PERMIAN LTD	4250	O	A	Lea	P	D	32	18	S	38	E	660	N	660	W	3765	SSW
3002507529	W D GRIMES NCT A	11	CHEVRON U S A INC	3169	O	P&A	Lea	P	F	32	18	S	38	E	1980	N	1980	W	4708	S

3002507531	W D GRIMES NCT A	13	CHEVRON U S A INC	3222 O	P&A	Lea	P	E	32	18S	38E	1980 N	660 W	4983	SSW
3002512504	NORTH HOBBS G/SA UNIT	532	OCCIDENTAL PERMIAN LTD	4175 O	A	Lea	S	G	32	18S	38E	2310 N	1650 E	5190	SS
3002512506	NORTH HOBBS G/SA UNIT	321	OCCIDENTAL PERMIAN LTD	4275 I	A	Lea	S	G	32	18S	38E	1650 N	2310 E	4411	SSE
3002522627	W D GRIMES NCT A	16	TEXLAND PETROLEUM-HOBBS	7050 O	P&A	Lea	P	D	32	18S	38E	800 N	700 W	3874	SSW
3002522792	W D GRIMES NCT A	17	TEXLAND PETROLEUM-HOBBS	6150 O	A	Lea	P	C	32	18S	38E	660 N	1980 W	3393	S
3002522915	W D GRIMES NCT A	18	TEXLAND PETROLEUM-HOBBS	6020 O	A	Lea	P	F	32	18S	38E	1650 N	2080 W	4372	S
3002522944	SHELL A STATE	6	OCCIDENTAL PERMIAN LTD	6020 O	P&A	Lea	S	G	32	18S	38E	1930 N	2310 E	4688	SSE
3002523007	NORTH HOBBS G/SA UNIT	121	OCCIDENTAL PERMIAN LTD	6051 O	A	Lea	P	E	32	18S	38E	1730 N	330 W	4874	SSW
3002523076	STATE A	4	APACHE CORP	6000 O	P&A	Lea	S	B	32	18S	38E	660 N	2130 E	3473	SSE
3002523116	STATE A	5	APACHE CORP	8044 O	A	Lea	S	A	32	18S	38E	660 N	660 E	4078	SE
3002523130	NORTH HOBBS G/SA UNIT	424	OCCIDENTAL PERMIAN LTD	7020 O	A	Lea	S	H	32	18S	38E	1930 N	660 E	5178	SE
3002526973	NORTH HOBBS G/SA UNIT	323	OCCIDENTAL PERMIAN LTD	4404 I	A	Lea	S	G	32	18S	38E	1370 N	1400 E	4369	SSE
3002527140	NORTH HOBBS G/SA UNIT	222	OCCIDENTAL PERMIAN LTD	4510 I	A	Lea	P	F	32	18S	38E	1720 N	1370 W	4537	S
3002529017	NORTH HOBBS G/SA UNIT	312	OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	S	B	32	18S	38E	210 N	1400 E	3310	SE
3002529074	NORTH HOBBS G/SA UNIT	422	OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	S	H	32	18S	38E	1385 N	110 E	4987	SE
3002530258	NORTH HOBBS G/SA UNIT	212	OCCIDENTAL PERMIAN LTD	4350 O	A	Lea	P	C	32	18S	38E	639 N	1885 W	3383	S
3002530263	NORTH HOBBS G/SA UNIT	313	OCCIDENTAL PERMIAN LTD	4350 O	A	Lea	S	B	32	18S	38E	500 N	2370 E	3266	SSE
3002534907	NORTH HOBBS G/SA UNIT	512	OCCIDENTAL PERMIAN LTD	4405 O	A	Lea	S	F	32	18S	38E	2164 N	2054 W	4886	S
3002534964	NORTH HOBBS G/SA UNIT	541	OCCIDENTAL PERMIAN LTD	4410 O	A	Lea	S	A	32	18S	38E	887 N	586 E	4308	SE
3002535304	STATE A	6	APACHE CORP	7150 O	A	Lea	S	B	32	18S	38E	990 N	1817 E	3874	SSE
3002535657	W D GRIMES NCT A	21	TEXLAND PETROLEUM-HOBBS	6200 I	A	Lea	P	C	32	18S	38E	1090 N	1370 W	3924	S
3002535667	W D GRIMES NCT A	22	TEXLAND PETROLEUM-HOBBS	6110 I	A	Lea	P	C	32	18S	38E	1300 N	2560 W	4021	S
3002535668	W D GRIMES NCT A	23	TEXLAND PETROLEUM-HOBBS	6200 I	A	Lea	P	F	32	18S	38E	2370 N	2325 W	5085	S
3002535670	W D GRIMES NCT A	25	TEXLAND PETROLEUM-HOBBS	6200 I	A	Lea	P	C	32	18S	38E	140 N	2550 W	2863	S
3002535726	STATE A	8	TEXLAND PETROLEUM-HOBBS	6106 I	A	Lea	S	A	32	18S	38E	1250 N	1250 E	4314	SE
3002535820	STATE A	7	APACHE CORP	6200 O	TA	Lea	S	A	32	18S	38E	760 N	500 E	4251	SE
3002535866	W D GRIMES NCT A	26	TEXLAND PETROLEUM-HOBBS	6050 O	A	Lea	P	D	32	18S	38E	518 N	910 W	3531	SSW
3002536149	NORTH HOBBS G/SA UNIT	537	OCCIDENTAL PERMIAN LTD	4405 O	A	Lea	S	B	32	18S	38E	876 N	1403 E	3910	SSE
3002536150	NORTH HOBBS G/SA UNIT	548	OCCIDENTAL PERMIAN LTD	4405 O	A	Lea	S	G	32	18S	38E	1956 N	1477 E	4897	SSE
3002536775	W D GRIMES NCT A	27	TEXLAND PETROLEUM-HOBBS	6056 O	A	Lea	P	F	32	18S	38E	2176 N	1444 W	4970	S
3002512505	NORTH HOBBS G/SA UNIT	111	OCCIDENTAL PERMIAN LTD	4237 I	A	Lea	S	D	33	18S	38E	330 N	330 W	4475	SE
3002512508	STATE B	4	SHELL OIL CO	3192 O	P&A	Lea	S	D	33	18S	38E	660 N	990 W	5187	SE
3002523207	NORTH HOBBS G/SA UNIT	114	OCCIDENTAL PERMIAN LTD	7020 O	A	Lea	S	D	33	18S	38E	660 N	660 W	4941	SE
3002529026	NORTH HOBBS G/SA UNIT	212	OCCIDENTAL PERMIAN LTD	4370 I	A	Lea	S	C	33	18S	38E	205 N	1420 W	5255	SE

COMPLETION SCHEMATIC						APINUM: 30-025-35915																																			
FORM	DEPTH					OPERATOR: LIQUID RESOURCES SERVICES, LLC																																			
Base Ogallala	250					LEASENAME: HOBBS STATE			WELL NO. 10																																
						LOCATION:		UL: F	SEC: 29	TWN: 18S	RNG: 38E																														
						2565 FSL			2330 FEL																																
						TD	PBD	KB	DF																																
									GL																																
						POOL BSW; SALADO			Open Hole 1700-2000																																
						POOL			PERFS																																
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<table border="1"> <thead> <tr> <th colspan="6">CASING RECORD</th> </tr> <tr> <th></th> <th>SIZE</th> <th>DEPTH</th> <th>CMT</th> <th>HOLE SIZE</th> <th>TOC</th> </tr> </thead> <tbody> <tr> <td>SURF.</td> <td>9 5/8</td> <td>450</td> <td>150 sxs</td> <td>17 1/2</td> <td>0' CIRC</td> </tr> <tr> <td>PROD.</td> <td>7</td> <td>1700</td> <td>300 sxs</td> <td>8 5/8</td> <td>0' CIRC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>												CASING RECORD							SIZE	DEPTH	CMT	HOLE SIZE	TOC	SURF.	9 5/8	450	150 sxs	17 1/2	0' CIRC	PROD.	7	1700	300 sxs	8 5/8	0' CIRC						
CASING RECORD																																									
	SIZE	DEPTH	CMT	HOLE SIZE	TOC																																				
SURF.	9 5/8	450	150 sxs	17 1/2	0' CIRC																																				
PROD.	7	1700	300 sxs	8 5/8	0' CIRC																																				
t. Santa Rosa	900																																								
b. Santa Rosa	1200																																								
Rustler	1530																																								
Top Salt	1645	7 @ 1700' TOC @ 0'																																							
Base Salt	2400																																								

PREPARED BY: Eddie Seay
 UPDATED: 08/23/08

CASING RECORD					
	SIZE	DEPTH	CMT	HOLE SIZE	TOC
SURF.	9 5/8	450	150 sxs	17 1/2	0' CIRC
PROD.	7	1700	300 sxs	8 5/8	0' CIRC

PREPARED BY:	Eddie Seay	UPDATED	08/23/08
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OGALLALA Wells which produced Oil

BRINE WELL

30-025-35915	HOBBS STATE	10	LIQUID RESOURCES SERVICE LLC	BSW	A	Lea	F	29	18 S	38 E	2565 N	2330 W
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5280 5280

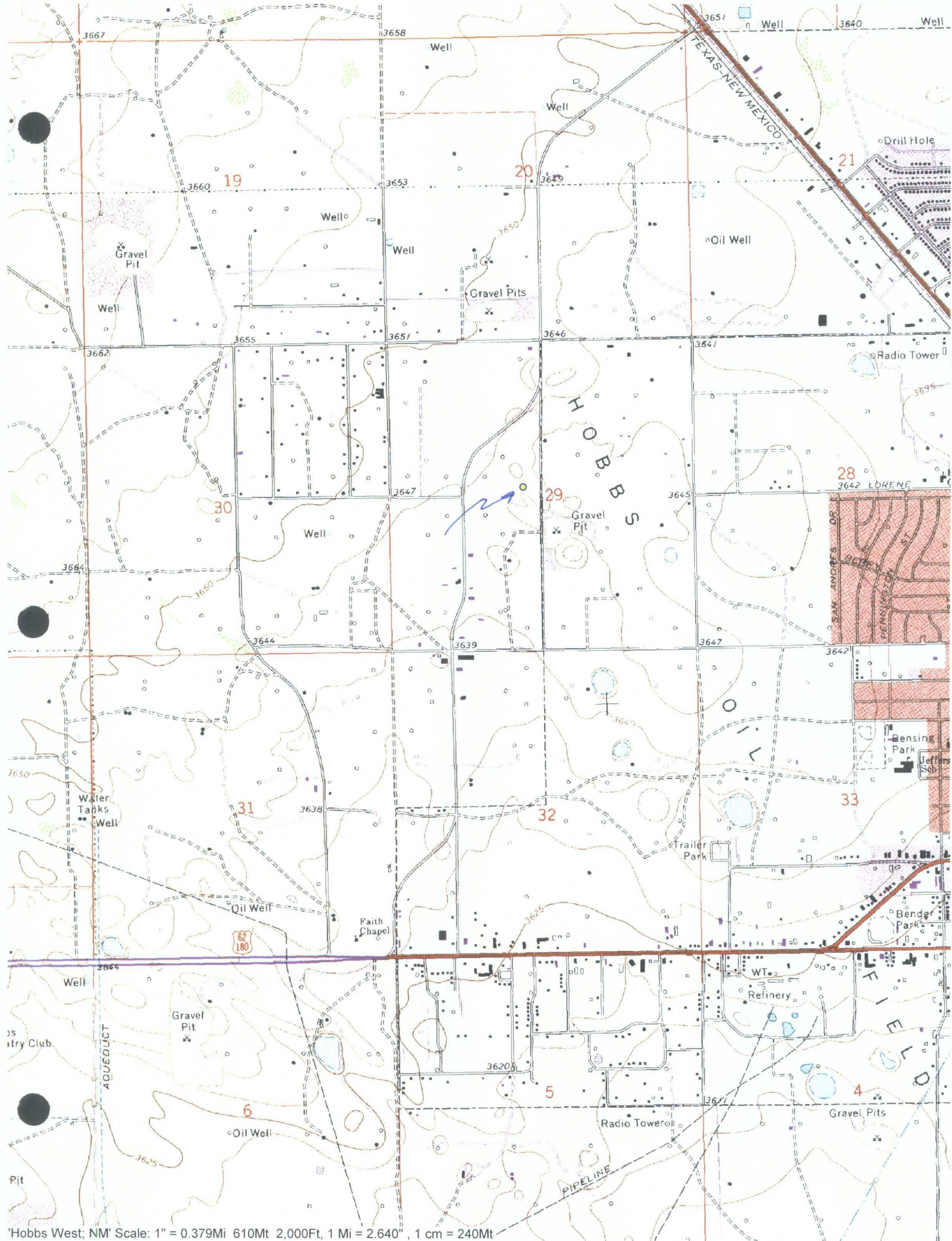
API #	PROPERTY NAME	#	OPERATOR	TD	TYPE	STATU	CO	LAND	U/I	SEC	TWN	RNG	N/S	E/W	Distance
3002508045	B A BOWERS PERMIT	2	HUMBLE OIL & REFINI	106 W	W	P&A	Lea	F	J	30	18 S	38 E	2310 S	2310 E	4657
3002521900	BOWERS A FEDERAL	17	HUMBLE OIL & REFINI	50 W	W	P&A	Lea	F	J	30	18 S	38 E	1815 S	1815 E	4241
3002521965	BOWERS A FEDERAL CT	18	HUMBLE OIL & REFINI	50 W	W	P&A	Lea	F	O	30	18 S	38 E	400 S	2240 E	5122
3002521966	BOWERS A FEDERAL CT	19	HUMBLE OIL & REFINI	30 W	W	P&A	Lea	F	O	30	18 S	38 E	920 S	1720 E	4429
3002521967	BOWERS A FEDERAL CT	20	HUMBLE OIL & REFINI	32 W	W	P&A	Lea	F	P	30	18 S	38 E	400 S	730 E	3837
3002521968	BOWERS A FEDERAL CT	21	HUMBLE OIL & REFINI	37 W	W	P&A	Lea	F	P	30	18 S	38 E	920 S	400 E	3267
3002521969	BOWERS A FEDERAL CT	26	HUMBLE OIL & REFINI	35 W	W	P&A	Lea	F	J	30	18 S	38 E	1815 S	2475 E	4888
3002521970	BOWERS A FEDERAL CT	27	HUMBLE OIL & REFINI	35 W	W	P&A	Lea	F	I	30	18 S	38 E	2475 S	825 E	3164
3002522124	BOWERS A FEDERAL	1	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1898 S	2358 E	4955
3002522125	BOWERS A FEDERAL	2	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1897 S	2392 E	4792
3002522126	BOWERS A FEDERAL	3	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1897 S	2227 E	4629
3002522127	BOWERS A FEDERAL	4	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1897 S	2062 E	4467
3002522147	BOWERS A FEDERAL	10	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1732 S	2393 E	4824
3002522148	BOWERS A FEDERAL	11	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1733 S	2228 E	4662
3002522172	H D MCKINLEY	9	ROTARY OIL & GAS CO	37 W	W	P&A	Lea		F	30	18 S	38 E	2557 N	2392 W	5218
3002522173	H D MCKINLEY	10	ROTARY OIL & GAS CO	37 W	W	P&A	Lea		F	30	18 S	38 E	2392 N	2557 W	5055
3002522189	BOWERS A FEDERAL	5	SHIREY & STEINBERG	38 W	W	P&A	Lea	F	J	30	18 S	38 E	1898 S	1898 E	4306
3002522190	BOWERS A FEDERAL	12	SHIREY & STEINBERG	45 W	W	P&A	Lea	F	J	30	18 S	38 E	1733 S	2063 E	4501
3002522276	BOWERS A FEDERAL	6	SHIREY & STEINBERG		W	P&A	Lea	F	J	30	18 S	38 E	1898 S	1733 E	4144
3002522277	BOWERS A FEDERAL	13	SHIREY & STEINBERG	45 W	W	P&A	Lea	F	J	30	18 S	38 E	1732 S	1898 E	4340
3002522319	SEED SEC 30 STATE	6	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2588 S	2393 W	5218
3002522320	SEED SEC 30 STATE	7	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2393 S	2393 W	5226
3002522321	SEED SEC 30 STATE	8	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2228 S	2393 W	5239
3002522322	SEED SEC 30 STATE	9	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2228 S	2393 W	5239
3002522367	H D MCKINLEY	7	ROTARY OIL & GAS CO	37 W	W	P&A	Lea		F	30	18 S	38 E	2590 N	2590 W	5020
3002522410	H D MCKINLEY	8	ROTARY OIL & GAS CO	37 W	W	P&A	Lea		F	30	18 S	38 E	2145 N	2540 W	5087
3002522994	SEED SEC 30 STATE	1	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2557 S	2557 W	5055
3002522995	SEED SEC 30 STATE	2	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2392 S	2557 W	5063
3002522996	SEED SEC 30 STATE	3	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2227 S	2557 W	5076
3002522997	SEED SEC 30 STATE	4	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	2062 S	2557 W	5095
3002522998	SEED SEC 30 STATE	8	CHARLES E SEED	45 W	W	A	Lea	S	K	30	18 S	38 E	1897 S	2557 W	5118



32.7186111 -103.1711111

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'Hobbs West; NM' Scale: 1" = 0.379Mi 610Mt 2,000Ft, 1 Mi = 2.640" , 1 cm = 240Mt

**New Mexico Office of the State Engineer
POD Reports and Downloads**

Township: 18S Range: 38E Sections: 29

NAD27 X: Y: Zone: Search Radius:

County: LE Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic ☒ All

WATER COLUMN REPORT 10/08/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in feet) Column
L 09777	18S	38E	29	1						150	84	66
L 09792	18S	38E	29	1	1					150	42	108
L 10860	18S	38E	29	1	1	1				160	39	121
L 07163	18S	38E	29	1	2					110	67	43
L 04547 APPRO	18S	38E	29	1	3	1				110	70	40
L 06745 (E)	18S	38E	29	1	3	1				120	49	71
L 04547	18S	38E	29	1	3	1				110	70	40
L 10913	18S	38E	29	1	3	3				160		
L 11365	18S	38E	29	1	4	4				120	55	65
L 08446	18S	38E	29	2						120	42	78
L 08860	18S	38E	29	2						130	39	91
L 08228	18S	38E	29	2	1	4				115	68	47
L 08867	18S	38E	29	2	2					120	52	68
L 07628	18S	38E	29	2	2	1				135	70	65
L 07825	18S	38E	29	2	2	1				105	45	60
L 07673	18S	38E	29	2	2	2				125	50	75
L 08191	18S	38E	29	2	2	2				120	120	
L 09682	18S	38E	29	2	2	3				120	45	75
L 07826	18S	38E	29	2	2	3				110	45	65
L 08370	18S	38E	29	2	2	4				120	60	60
L 08135	18S	38E	29	2	4					130	62	68
L 07754	18S	38E	29	2	4					207	50	157
L 06717	18S	38E	29	2	4					130	55	75
L 07432	18S	38E	29	2	4					125	55	70
L 07427	18S	38E	29	2	4					130	60	70
L 09586	18S	38E	29	2	4					120	76	44
L 08737	18S	38E	29	2	4					132	60	72
L 07839	18S	38E	29	2	4					120	60	60
L 08229	18S	38E	29	2	4	1				115	68	47
L 08448	18S	38E	29	2	4	1				130	38	92
L 12052 POD1	18S	38E	29	2	4	2				218		
L 12068 POD1	18S	38E	29	2	4	2				160		
L 07434	18S	38E	29	2	4	4				125	55	70
L 06444	18S	38E	29	3						141	45	96
L 08131	18S	38E	29	3	1					110	60	50
L 07017	18S	38E	29	3	3					150	60	90
L 07005	18S	38E	29	3	3	1				150	50	100
L 07068	18S	38E	29	3	3	3				183	50	133
L 06570 (E)	18S	38E	29	3	3	3				110	54	56
L 07570	18S	38E	29	3	3	3				122	48	74
L 09705	18S	38E	29	3	3	4				135	65	70
L 11886 POD1	18S	38E	29	3	3	4				172		
L 11171 .	18S	38E	29	3	4	1				206		
L 08429	18S	38E	29	4	1	2				120	62	58
L 11176	18S	38E	29	4	1	4				220	65	155

Record Count: 45

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 18S Range: 38E Sections: 29

NAD27 X:

Y:

Zone:

Search Radius:

County: LE

Basin:

Number:

Suffix:

Owner Name: (First)

(Last)

☐ Non-Domestic☐ Domestic☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 10/08/2008

(Depth Water in Feet)

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
L	18S	38E	29				40	38	120	58

Record Count: 40

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



NEWS RELEASE

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."

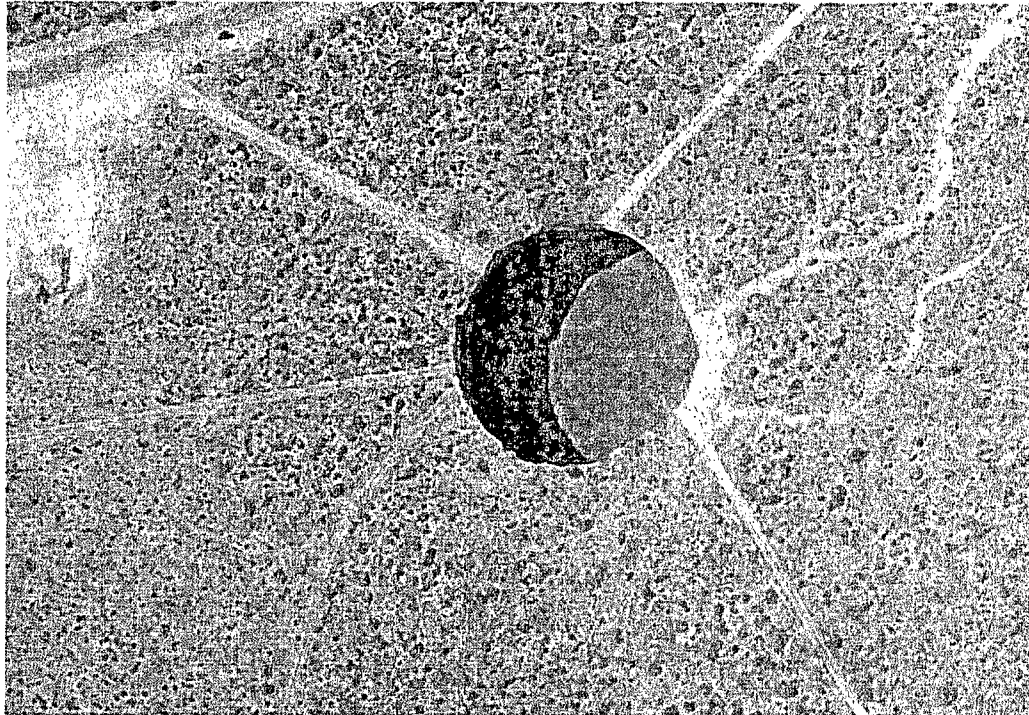
The Oil Conservation Division is continuing to monitor and investigate the collapse of the brine well, located on state trust land 17.3 miles southeast of Artesia, which is still active. The well is owned by Jim's Water Service. County Road 217 remains closed as a safety precaution, and a command center 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



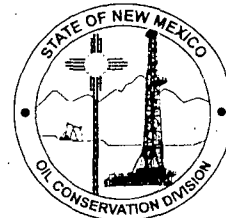
New Mexico Energy, Minerals and Natural Resources Department

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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 _____ Ts _____ Rg _____
FNL _____ FSL _____ FEL _____ FWL _____
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:

Distance and direction to nearest water well if less than one mile:

Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s) if less than one mile:

Distance and direction to nearest known karst features or mines if less than one mile:



Distance and direction to nearest producing oil or gas well(s) <i>if less than one mile:</i> Provide API Number:
Distance and direction to nearest tank battery(ies) <i>if less than one mile:</i>
Distance and direction to nearest pipeline(s), including fresh water pipelines <i>if less than one mile:</i>
Distance and direction to nearest paved or maintained road or railroad <i>if less than one mile:</i>
Depth to ground water found above the Salado (salt section), regardless of yield:
Name of aquifer(s):
WELL CONSTRUCTION: <i>Please provide the following information and attach a diagram depicting the brine well. Check box if attached:</i> 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):
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):
Depth of casing(s) shoe below ground surface (feet): _____ Is the casing shoe set in the anhydrite or other layer above the salt? Yes ☐ No ☐ 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: <i>Please provide the following information.</i>
Start date of brine well operation:
Total volume of fresh water injected into the brine well to date (bbls) and how determined:

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 ☐ 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 ☐

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 ☐ 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 ☐

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 ☐ No ☐	
Have you ever conducted a fly over of your well site? No ☐ Yes ☐ 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 $18,000,000 / 180,000 = 100 \times 50 = 5000$.	
1. Provide the calculated number above here: _____ 2. Now provide 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 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

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

7/29/2008

From: Porter, Jodi, EMNRD

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

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

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

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Mark Fesmire
Division Director
Oil Conservation Division



July 23, 2008

NEWS RELEASE

Contact: Jodi McGinnis Porter,
Public Information Officer 505.476.3226

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Proposes Stricter Conditions on Brine Wells State-wide**

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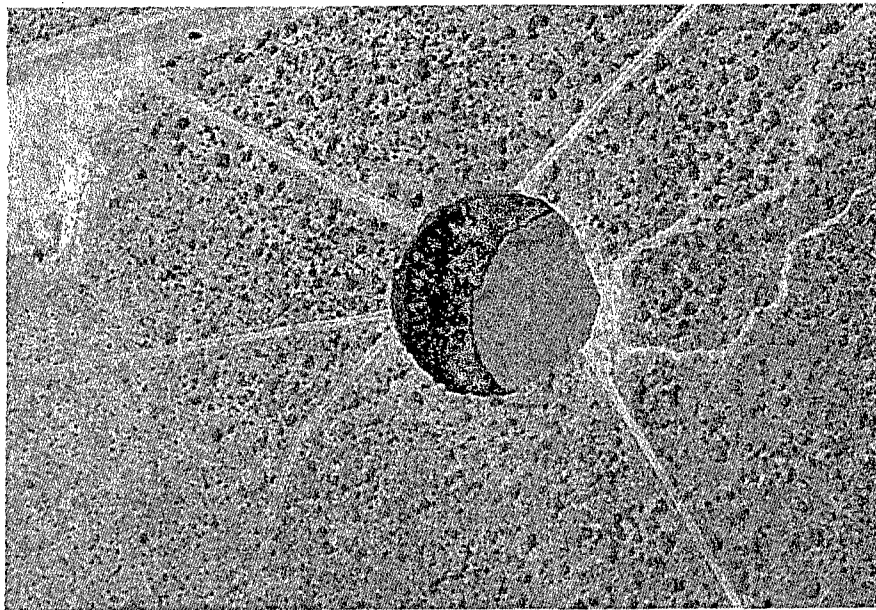
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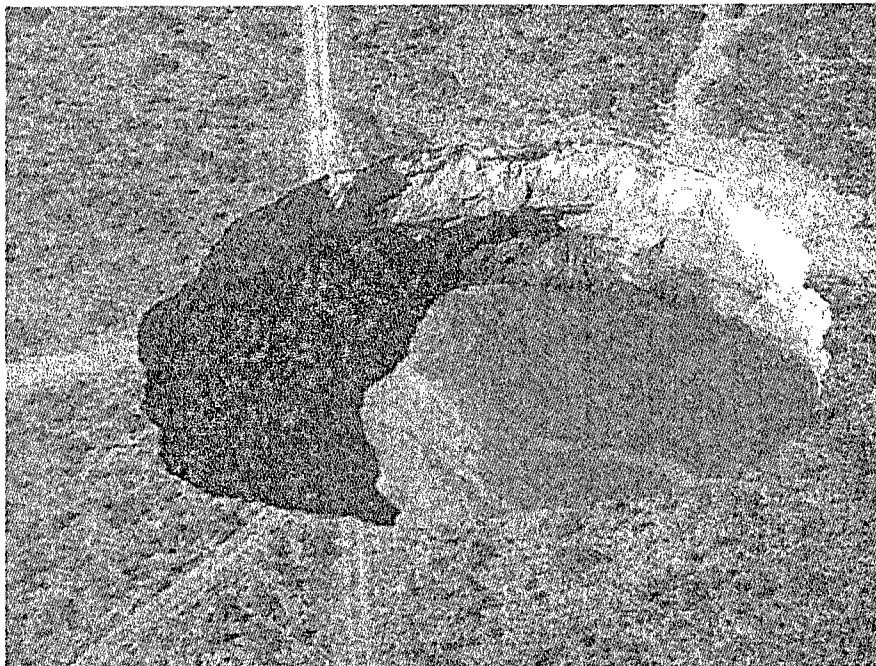
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Morning, July 20, 2008 at 10:44 am.
courtesy of National Cave and Karst Research Institute



Morning, July 22, 2008
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



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

7/29/2008

Fax: (505) 476-3220
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Website: www.emnrd.state.nm.us