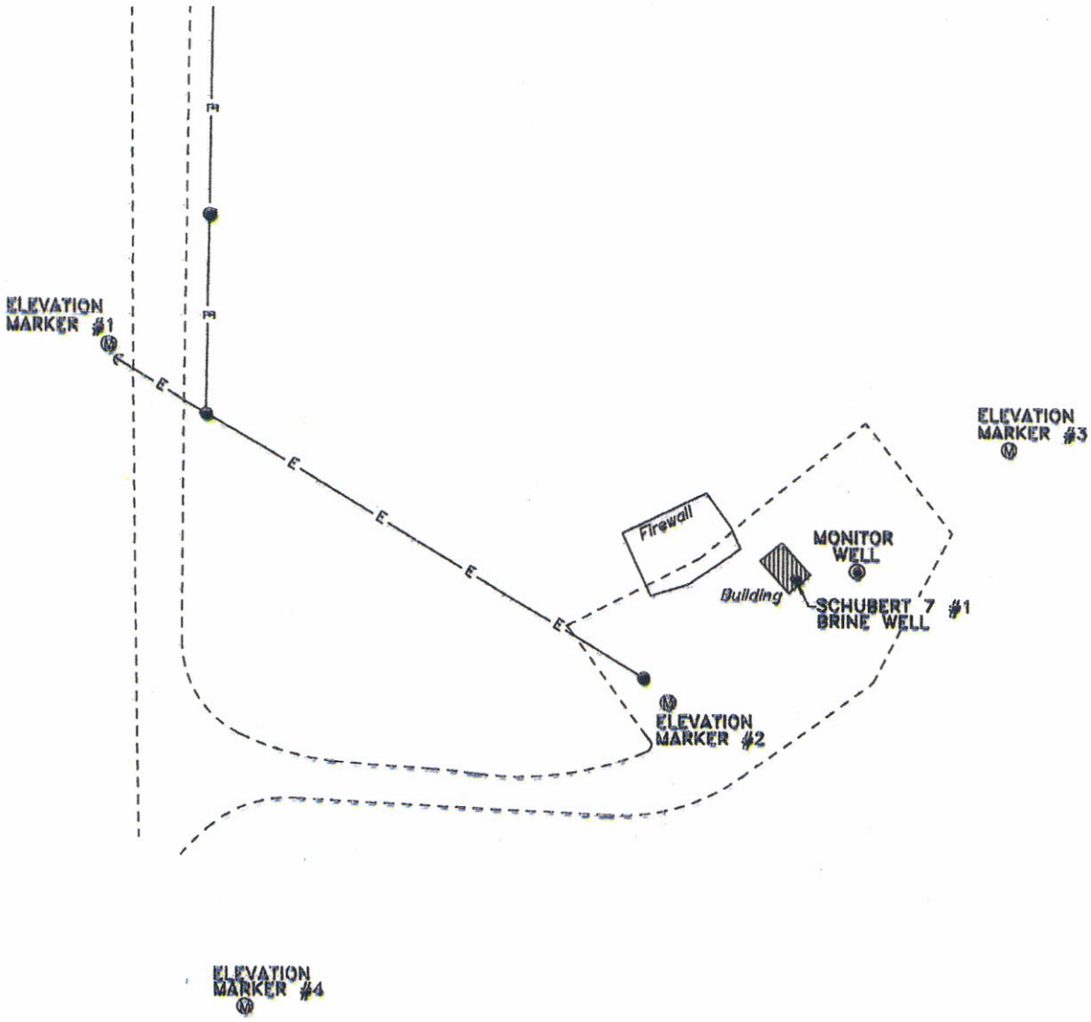
BW - 31

SUBSIDENCE MONITORING REPORTS

DATE:

SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.



NOTE:
ELEVATIONS ARE ON BLACK MARK ON NORTH SIDE OF PVC CASING.

NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEVATION
EM-1	611304.81	925484.92	32°40'27.52"	103°05'05.71"	3591.65
EM-2	611100.65	925800.11	32°40'25.46"	103°05'02.05"	3586.37
EM-3	611248.41	925991.42	32°40'26.90"	103°04'59.79"	3586.23
EM-4	610926.15	925561.84	32°40'23.76"	103°05'04.86"	3586.94

REVISION #	DATE	DESCRIPTION
1	SEPT. 9, 2015	ORIGINAL SURVEY
2	DEC. 15, 2015	RESURVEY-NO CHANGE IN ELEVATIONS
3	APRIL 12, 2016	RESURVEY-NO CHANGE IN ELEVATIONS
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5	OCTOBER 27, 2016	RESURVEY-NO CHANGE IN ELEVATIONS
6	February 6, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
7	May 11, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
8	AUGUST 30, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
9	JANUARY 10, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
10	MAY 1, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
11	SEPTEMBER 5, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
12	JANUARY 15, 2019	RESURVEY-NO CHANGE IN ELEVATIONS
13	MAY 7, 2019	RESURVEY-NO CHANGE IN ELEVATIONS
14	OCTOBER 14, 2019	RESURVEY-NO CHANGE IN ELEVATIONS

N

100 0 100 200 FEET

SCALE: 1" = 100'

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, N.M. P.S. No. 7977
NEW MEXICO P.S. No. 5074

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

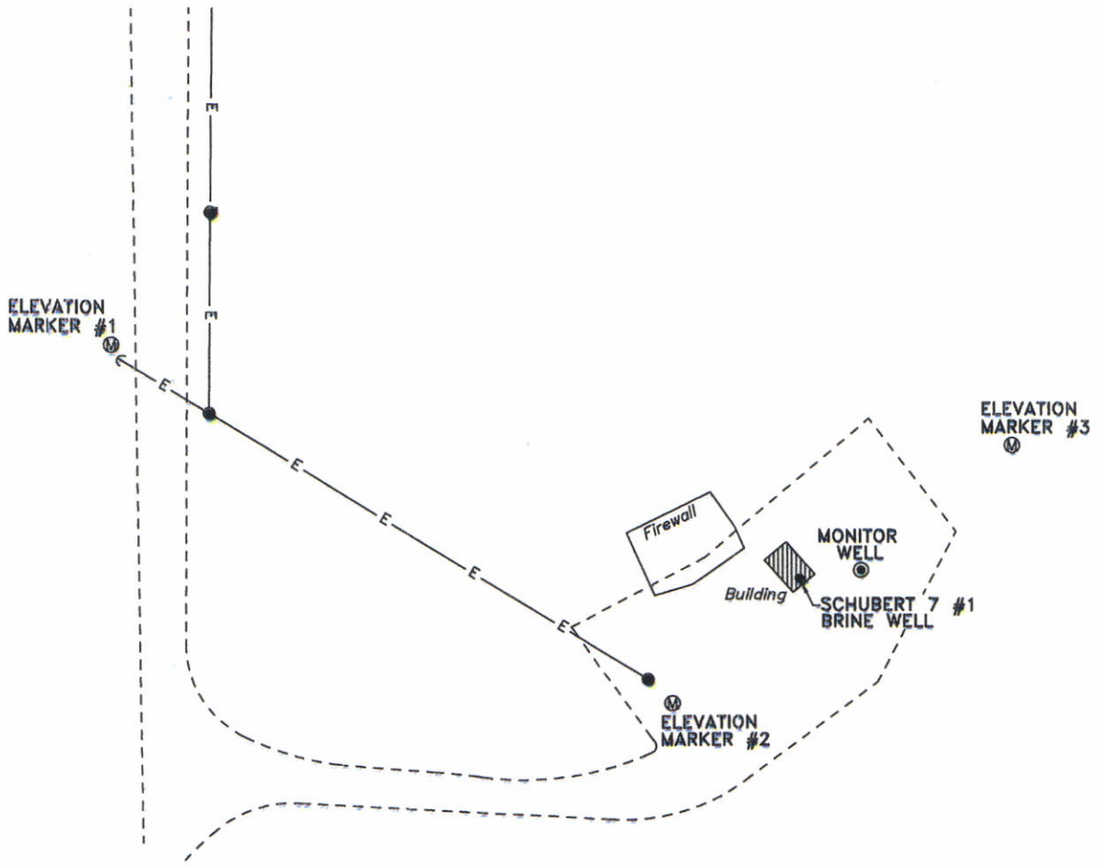
H.R.C. INC.

REF: ELEVATION MARKERS

ELEVATION MARKERS LOCATED IN
SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

W.O. Number: 34905	Drawn By: K. GOAD		
Date: 10-19-2019	Disk: KJG - SCHUBERT MW 34905	Survey Date: 10-14-2019	Sheet 1 of 1 Sheets

SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



NOTE:
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11	SEPTEMBER 5, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
12	JANUARY 15, 2019	RESURVEY-NO CHANGE IN ELEVATIONS
13	MAY 7, 2019	RESURVEY-NO CHANGE IN ELEVATIONS

100 0 100 200 FEET

SCALE: 1" = 100'

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GARY L. JONES, N.M. P.S. No. 7977
TEXAS P.L.S. No. 5074

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

H.R.C. INC.

REF: ELEVATION MARKERS

ELEVATION MARKERS LOCATED IN SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

W.O. Number: 34534	Drawn By: K. GOAD		
Date: 05-08-2019	Disk: KJG - SCHUBERT MW 34534	Survey Date: 05-07-2019	Sheet 1 of 1 Sheets

SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

NOTE:
ELEVATIONS ARE ON BLACK MARK ON NORTH SIDE OF PVC CASING.

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12	JANUARY 15, 2019	RESURVEY-NO CHANGE IN ELEVATIONS
13	MAY 7, 2019	RESURVEY-NO CHANGE IN ELEVATIONS
14	OCTOBER 14, 2019	RESURVEY-NO CHANGE IN ELEVATIONS
15	JANUARY 31, 2020	RESURVEY-NO CHANGE IN ELEVATIONS

N

100 0 100 200 FEET

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GARY L. JONES, NM, P.E. No. 7977
No. 5074

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

H.R.C. INC.

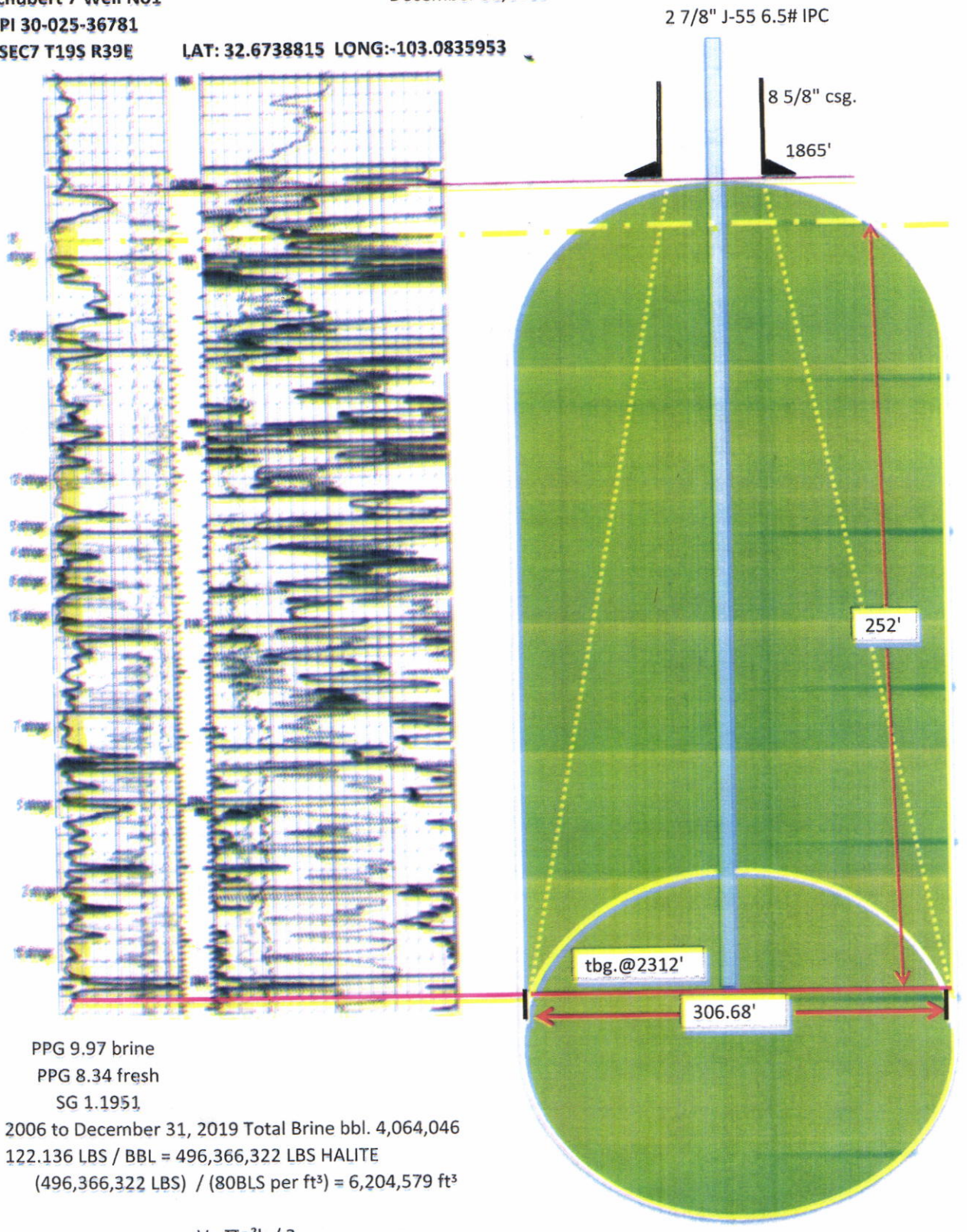
REF: ELEVATION MARKERS

ELEVATION MARKERS LOCATED IN
SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

W.O. Number: 35025	Drawn By: K. GOAD		
Date: 02-03-2020	Disk: KJG - SCHUBERT MW 35025	Survey Date: 01-31-2020	Sheet 1 of 1 Sheets

Schubert 7 Well No1
API 30-025-36781
J SEC7 T19S R39E **LAT: 32.6738815 LONG:-103.0835953**

December 31,2019



PPG 9.97 brine
PPG 8.34 fresh
SG 1.1951
2006 to December 31, 2019 Total Brine bbl. 4,064,046
122.136 LBS / BBL = 496,366,322 LBS HALITE
(496,366,322 LBS) / (80BLS per ft³) = 6,204,579 ft³

$V = \pi R^2 h / 3$
$V = (3.14159 * 153.335^2) * (252') / 3$
$V = 6,204,571$ ft.³

Est. hight is 252'
Est. cavern floor diameter is 306.68'
306.68 / 1865 = 0.1644 factor value

SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

NOTE:
ELEVATIONS ARE ON BLACK MARK ON NORTH SIDE OF PVC CASING.

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GARY L. JONES, N.M. P.S. No. 7977
ARKANSAS P.L.S. No. 5074

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 34534 | Drawn By: K. GOAD

Date: 05-08-2019 | Disk: KJG - SCHUBERT MW 34534

H.R.C. INC.

REF: ELEVATION MARKERS

ELEVATION MARKERS LOCATED IN
SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 05-07-2019 | Sheet 1 of 1 Sheets

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")

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.

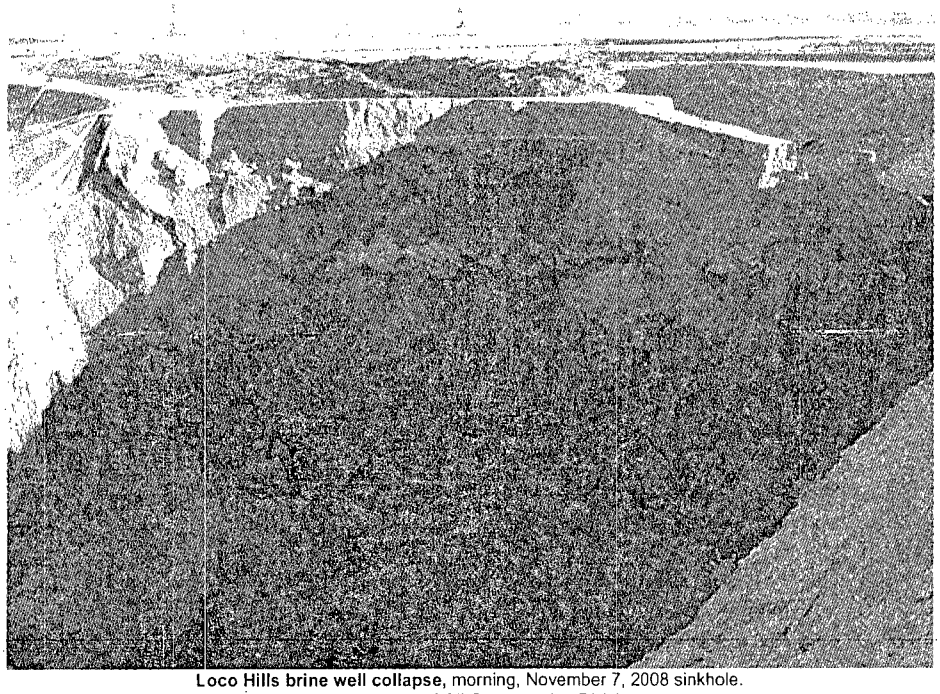
Brine wells are an essential part of the oil and gas drilling industry, particularly in the southeastern part of the state. Oil and gas operators use brine water in the drilling process. Brine is saturated salt water which can be more salty than sea water. Brine is created by injecting fresh water into 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.

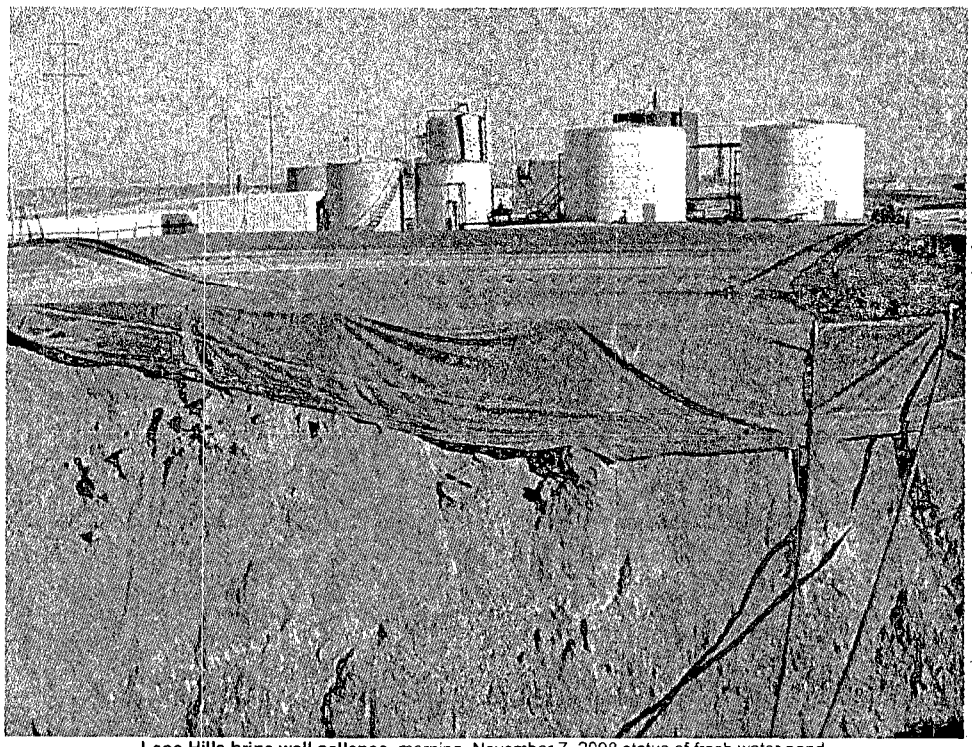
The moratorium will only affect new wells and will not impact existing wells and facilities.

Below are photographs of the two recent collapses:

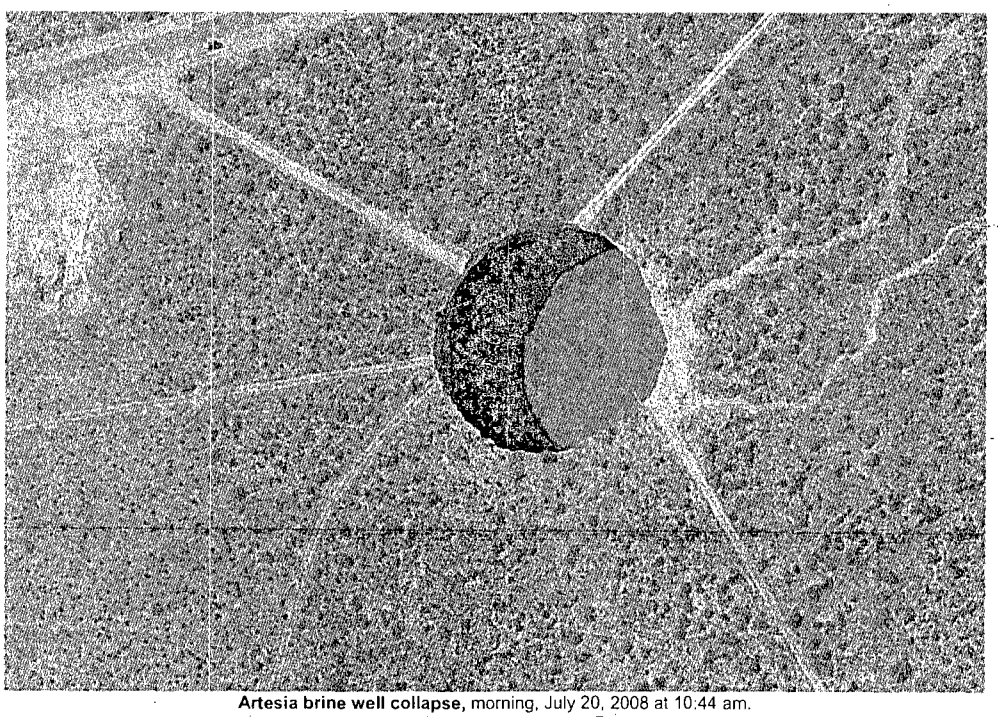
Loco Hills brine well collapse, morning, November 7, 2008, sinkhole with fresh water pond in foreground.
Photo courtesy of Oil Conservation Division



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: 'ziatransports@gmail.com'; 'jrmillett@gmail.com'; 'Patterson, Bob'; Phillber, 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")

HRC, INC.
P. O. Box 5102
Hobbs, NM 88241-5102
Phone # (575) 393-6662
Fax # (575) 393-6662

RECEIVED
2008 SEP 5 PM 2 14

September 3, 2008

Mr. Wayne Price
Environmental Bureau Chief
Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, NM 87505

RE: BW – 031

Dear Mr. Price:

I am enclosing the response to the "Brine Well Information Request". In reviewing the questions, I realized that I have neglected to file the annual water volume production reports, the analysis of injection fluid and brine reports, and the monitor well test results that were due 1/31/08. The water volume productions reports are included in the attached "brine well information request". However in the next 45 days, I will complete the other data and send a complete package of all deficient information for your review.

I apologize for my omission and assure you that I will achieve compliance in this matter at the earliest date possible. Please see attached report and please contact me if I can be of further assistance (575-393-6662 or garymschubert@AOL.com). Thank you for your cooperation.

Sincerely,

Gary M. Schubert

GMS/gp

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 HEC, INC. Well Name(s) SCHUBERT 7 No. 1
API Number 30-025-36781 Brine Well Permit # BW-031
Date Permit Expires? 6/22/2011

Location: Section 7 Ts 19 Rg 39
FNL _____ FSL 2313 FEL 2313 FWL _____
GPS of well(s): Lat: 32°40'25.78" Long: 103°04'59.41" * SEE ATTACHED

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:*
.75 MILE NORTHEAST (HOUSE) * SEE ATTACHED

Distance and direction to nearest water well *if less than one mile:*
.60 MILE NORTHEAST (IRR. WELL)

Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s) *if less than one mile:*
NONE

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) *if less than one mile:*
Provide API Number: .25 MILE WEST TRILOGY OPERATING

Distance and direction to nearest tank battery(ies) *if less than one mile:*
SAME AS ABOVE API # 30-025-37736

Distance and direction to nearest pipeline(s), including fresh water pipelines *if less than one mile:* .30 MILE

Distance and direction to nearest paved or maintained road or railroad *if less than one mile:*
.65 MILE LEA COUNTY ROAD H-63

Depth to ground water found above the Salado (salt section), regardless of yield:
80 FEET

Name of aquifer(s):
OGALALLA

WELL CONSTRUCTION: *Please provide the following information and attach a diagram depicting the brine well. Check box if attached:* * SEE ATTACHED
Copy of a current well diagram: Attached ☑
Copy of formation record with tops: Attached ☑ N/A
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):
1800 TO 1880

Depth to the bottom of the salt below ground surface (feet):
2900

Depth(s) to and thickness(es) of any anhydrite section(s) (located above the salt):
1700' TO 1775 APPROX. 100' DEPTH

Depth of casing(s) shoe below ground surface (feet): 1865
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):
2300'

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:
OCTOBER 2006

Total volume of fresh water injected into the brine well to date (bbls) and how determined:
556,600 BBL BY METER

* SEE ATTACHED

Total volume of brine water produced (bbls) to date and how determined: 561,100 BBL ESTIMATED BY RUN TIME OF PUMP
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☐
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☑ SEE ATTACHED LETTER
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 ☐
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 x 50 = 5000.

561,100 ÷ 180,000 × 50

1. Provide the calculated number above here: = 155.86
2. Now provide the depth (ft) from the surface to your casing shoe: 1865

Is the calculated number found in #1 above greater than #2? Yes☐ No☑

Comments or recommendations for OCD:

I WOULD BE WILLING TO PROVIDE "FLY OVER" PICTURES AND OR INSTALL SEISMIC MONITORING.

"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."

H. R. C., INC.
Company Name-print name above

GARY M. SCHUBERT
Company Representative- print name

Company Representative- Signature

Title PRES.

Date: 9/2/08

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 19S Range: 39E Sections: 7

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

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 Column (in feet)
L 11024	19S	39E	07	1	1	1				227	110	117
L 11042 EXPL	19S	39E	07	1	2	2				200		
L 03803 APPRO	19S	39E	07	1	3					120	80	40
L 03803	19S	39E	07	1	3					120	80	40
L 11041 EXPL	19S	39E	07	1	3	3				200		
L 03382 APPRO	19S	39E	07	2	2	2				120	65	55
L 03382	19S	39E	07	2	2	2				120	65	55

Record Count: 7

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 19S Range: 39E Sections: 7

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	19S	39E	07				5	65	110	80

Record Count: 5

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-36781		WILDCAT

Property Code	Property Name	Well Number
34123	SCHUBERT 7	1

OGRID No.	Operator Name	Elevation
020077	SAHARA OPERATING COMPANY	3585'

Surface Location

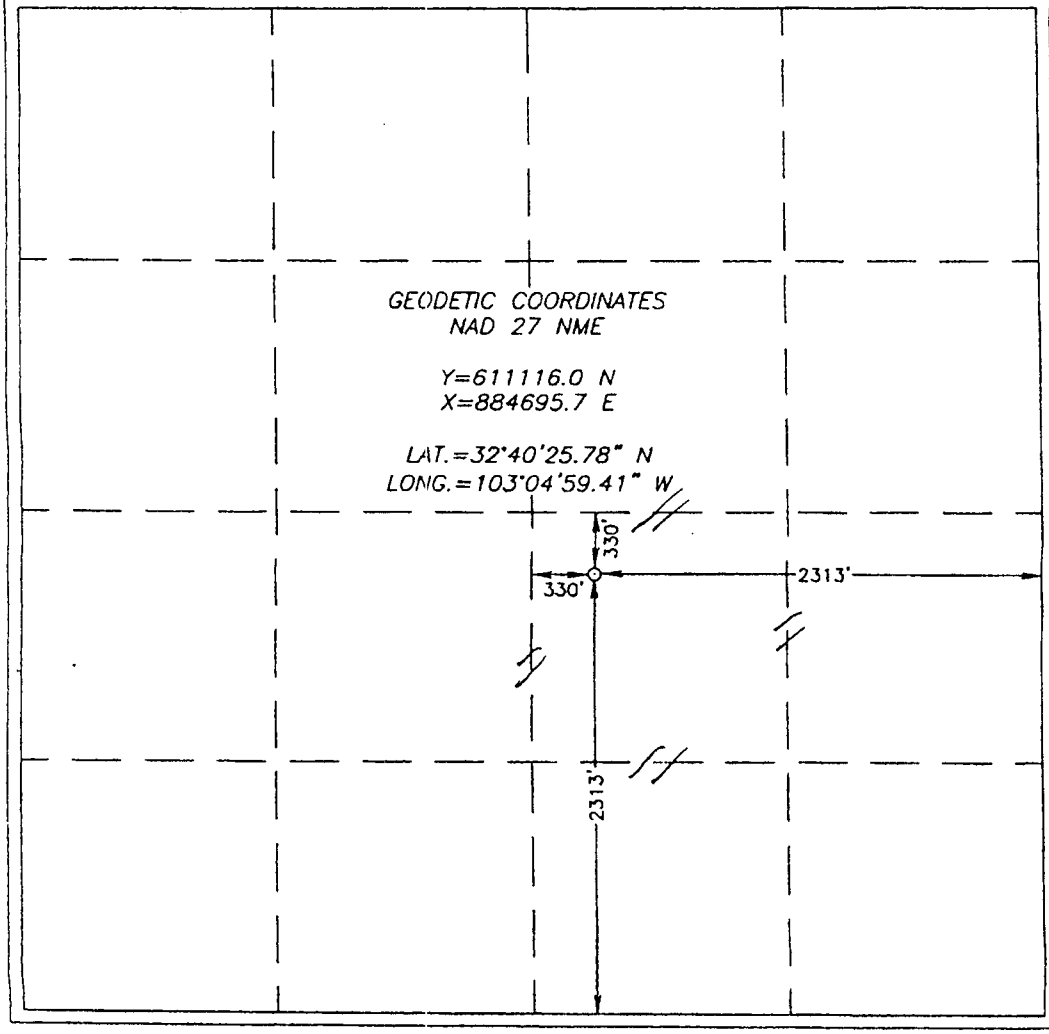
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	7	19-S	39-E		2313'	SOUTH	2313'	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40	N		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

ROBERT McALPINE

Printed Name

PRESIDENT

Title

6/20/04

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

MAY 5, 2004

Date Surveyed JR

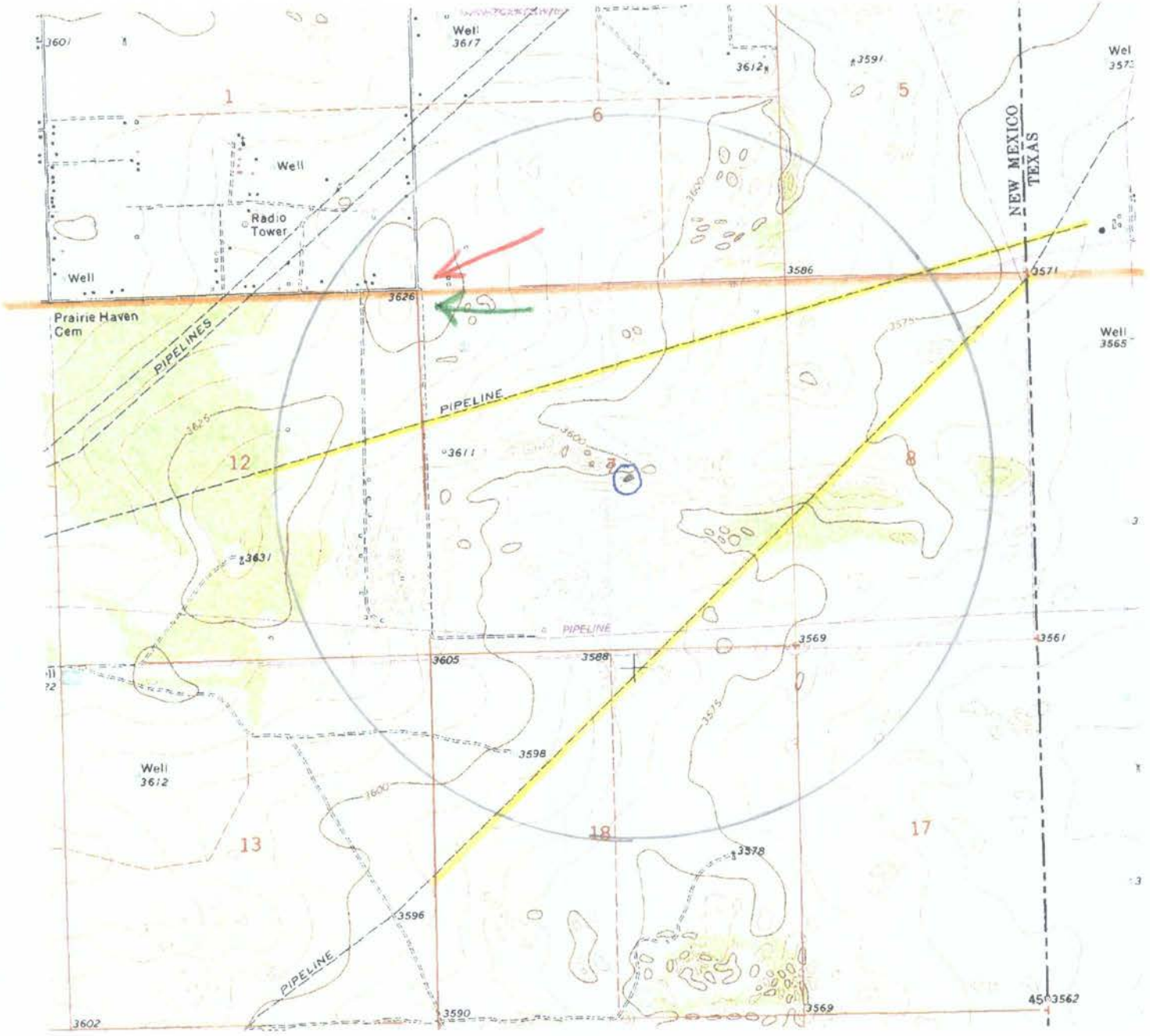
Signature & Seal of Professional Surveyor

NEW MEXICO GARY L. EIDSON 12641 PROFESSIONAL SURVEYOR

Gary L. Eidson 6/16/04

04.13.0728

Certificate No. GARY EIDSON 12641



WELL

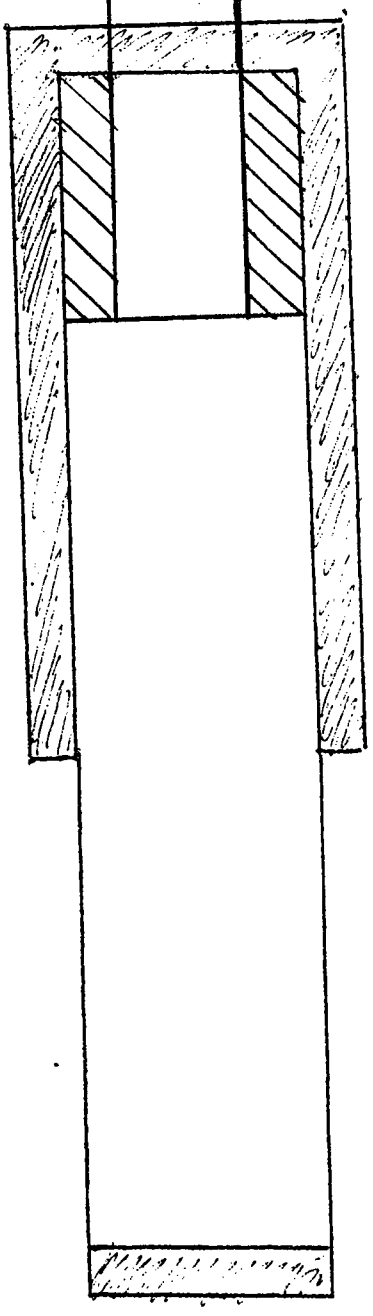
HOUSE

IRRIGATION WELL

PIPELINE

CO. ROAD H-63

Existing Condition
H.R.C., Inc.
Schubert 7 #1

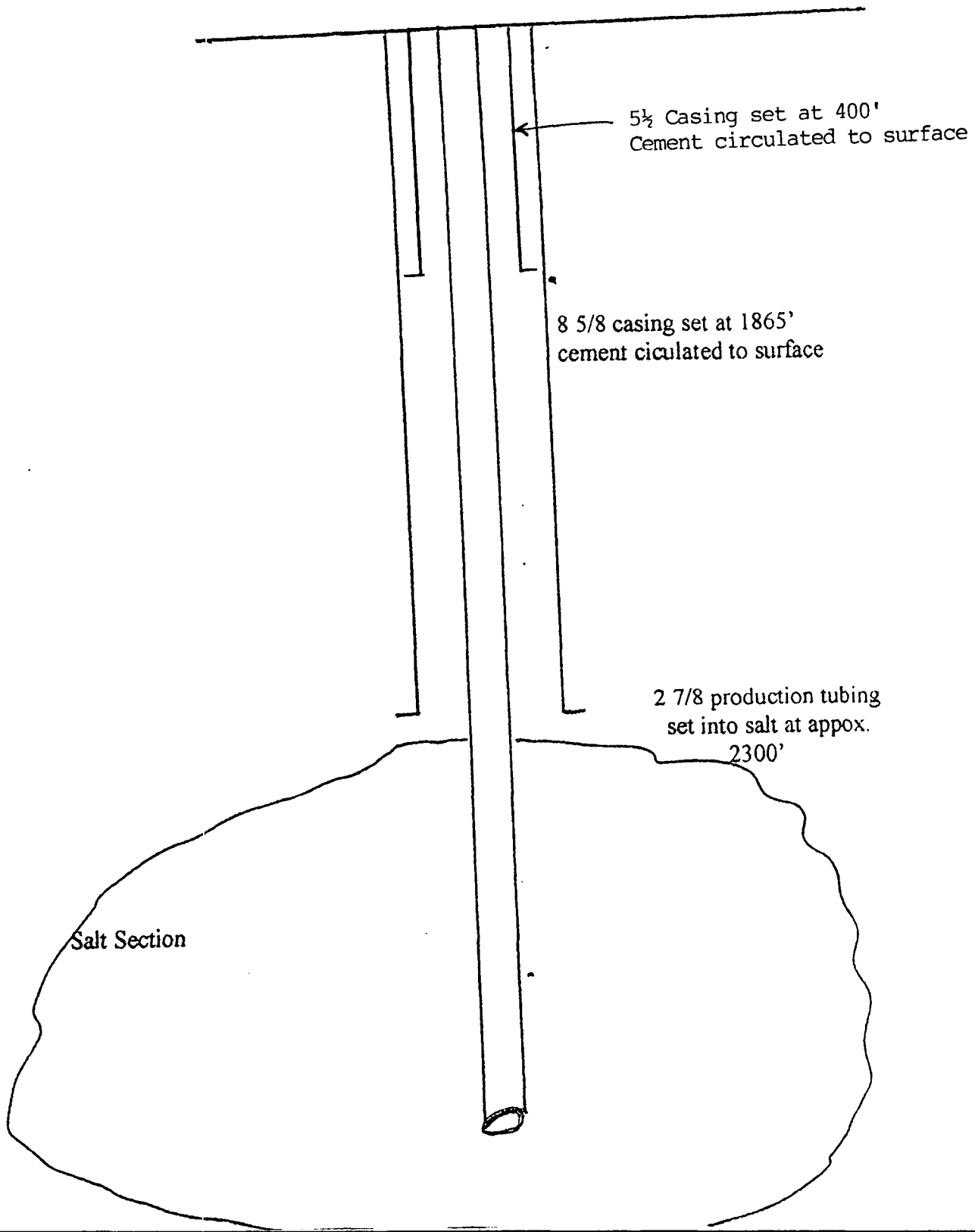


Casing:
Size: 8 5/8
Depth: 1865'
Hole size: 12.25"
Cmt: 900 sxs
TOC: circ. 278 sx.
To pit

Casing: (Liner)
Size: 5½"
Depth: 400'
Cmt: Circ to surface

Well plugged back to 2947' (10/8/04) (See attached C-103 Of 10/11/04)

Proposed completion for
HRC Brine Well
Schubert 7 #1



INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy 1775	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt 1880	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt 2900	T. Atoka	T. Pictured Cliffs	T. Penn. "D"
T. Yates 2930	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers 3160	T. Devonian	T. Menefee	T. Madison
T. Queen 3710	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg 4080	T. Montoya	T. Mancos	T. McCracken
T. San Andres 4396	T. Simpson	T. Gallup	T. Ignacio Otzte
T. Glorieta 5715	T. McKee	Base Greenhorn	T. Granite
T. Paddock 5858	T. Ellenburger	T. Dakota	T.
T. Blinebry 6260	T. Gr. Wash	T. Morrison	T.
T.Tubb 6820	T. Delaware Sand	T.Todilto	T.
T. Drinkard 7050	T. Bone Springs	T. Entrada	T.
T. Abo 7464	T.	T. Wingate	T.
T. Wolfcamp	T.	T. Chinle	T.
T. Penn	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from.....to..... No. 3, from.....to.....

No. 2, from.....to..... No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
2600	2900	300	Salt, Redbed, Shale				
2900	3130	230	Anhydrite, salt, shale				
3130	4080	950	Anhydrite, Dolomite				
4080	4430	350	Dolomite, Anhydrite				
4430	7500	3070	Dolomite, Limestone				
7500	7900	400	Dolomite				

WELL LOGS

API number:	30-025-36781			
OGRID:		Operator:	SAHARA OPERATING CO	
		Property:	SCHUBERT 7	# 1

surface	ULSTR:	J	7	T	19S	R	39E	
			2313	FSL	2313	FEL		
BH Loc	ULSTR:	J	7	T	19S	R	39E	
			2313	FSL	2313	FEL		

Ground Level:	3585	DF:	3598	KB:	3599	
Datum:	KB			TD:	7900	

Land:	STATE	Completion Date: (1)	10/9/2004
		Date Logs Received:	11/15/2004 ***Late***
		Date Logs Due in: (2)	10/29/2004

Confidential:	NO			Date out:		

Confidential period: 90 Days for State & Fee, 1 Year for federal

Date Due In: (1) is equal to Completion Date (1) + 20 days

Logs	Depth interval		
DSN/SDL	1862	7600	Spectral Density Dual Spaced Neutron
DLL/MSFL	2800	7680	Dual Laterolog Micro Sperically Focused Log
BHC	1862	7624	Borehole Compensated Sonic

OCD TOPS

Rustler	1773	Strawn			
Tansill		Atoka			
Yates	2930	Morrow			
7R	3159				
T. Bowers Sd					
B. Bowers Sd					
Queen	3722				
Penrose					
Grayburg	4080				
San Andres	4396				
Glorieta	5715				
Tubb	6320				
Drinkard	7050				
Abo	7464				
Wolfcamp					

ETZ BRINE STATION

YEAR 2006

MONTH	BRINE PRODUCTION (By Sales Receipts)	BRINE PRODUCTION (By Run Time)	FRESH WATER INJECTED (By Meter)
October	24,597	25,200	26,500
November	9,282	9,510	9,700
December	7,804	8,240	8,600
Totals	41,683	42,950	44,800

ETZ BRINE STATION

YEAR 2007

MONTH	BRINE PRODUCTION (By Sales Receipts)	BRINE PRODUCTION (By Run Time)	FRESH WATER INJECTED (By Meter)
January	28,537	29,600	30,500
February	22,842	23,150	23,000
March	32,472	32,670	32,800
April	24,870	25,260	25,600
May	33,709	34,120	34,500
June	31,298	31,810	32,200
July	36,642	37,100	37,300
August	19,164	19,430	19,700
September	13,140	13,410	13,000
October	15,406	15,680	15,900
November	21,321	21,730	21,000
December	28,595	28,840	29,500
Totals	307,996	312,800	315,000

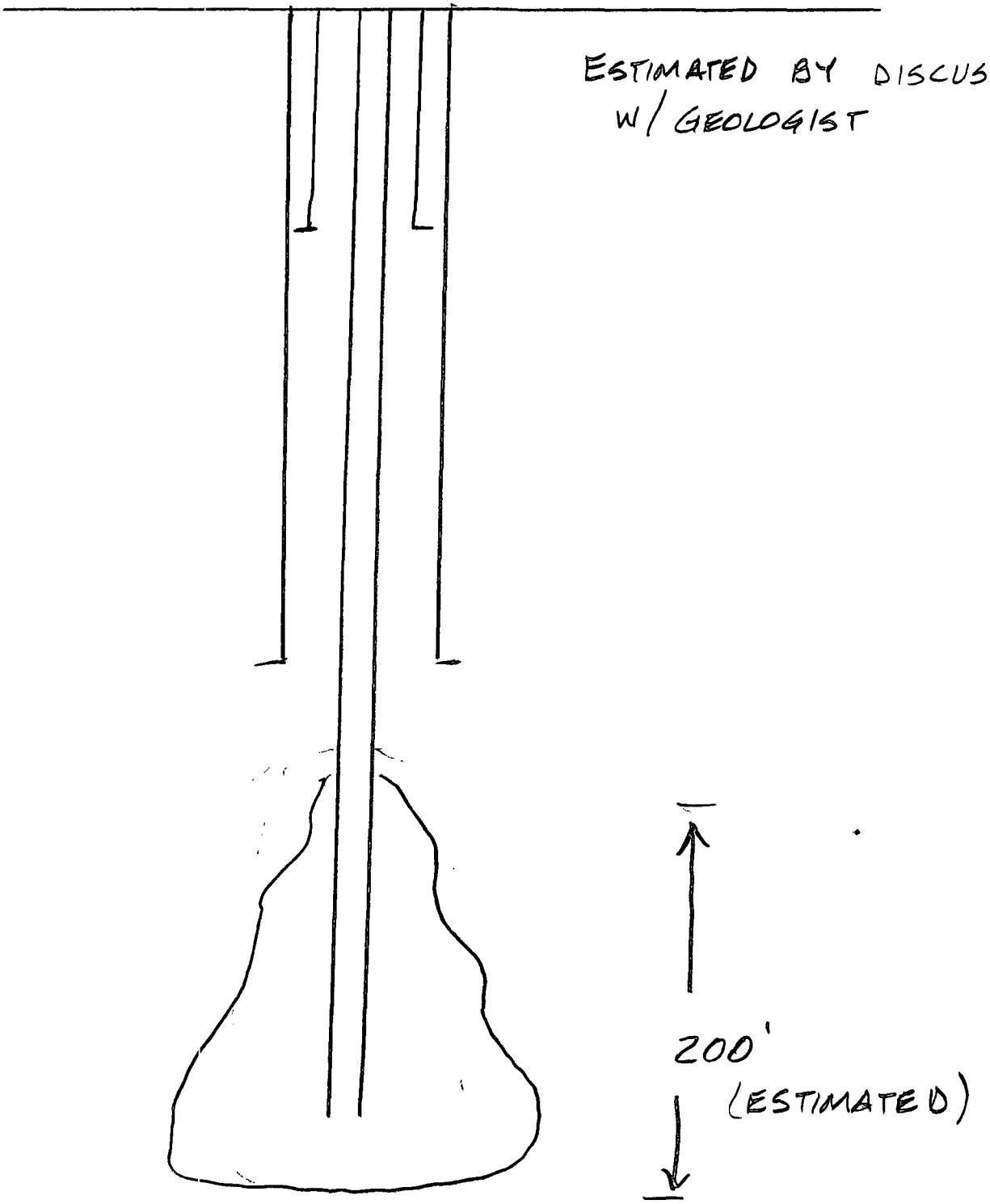
ETZ BRINE STATION

YEAR 2008

MONTH	BRINE PRODUCTION (By Sales Receipts)	BRINE PRODUCTION (By Run Time)	FRESH WATER INJECTED (By Meter)
January	27,797	28,370	28,600
February	23,793	23,800	24,000
March	25,132	25,640	25,900
April	27,832	27,980	28,200
May	25,474	25,890	25,700
June	19,360	19,770	19,900
July	23,778	24,100	24,000
August	29,435	29,810	30,500
September			
October			
November			
December			
Totals	202,601	205,360	206,800

SCHUBERT 7 No. 1

ESTIMATED CAVERN DIAGRAM



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

July 23, 2008

NEWS RELEASE

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."

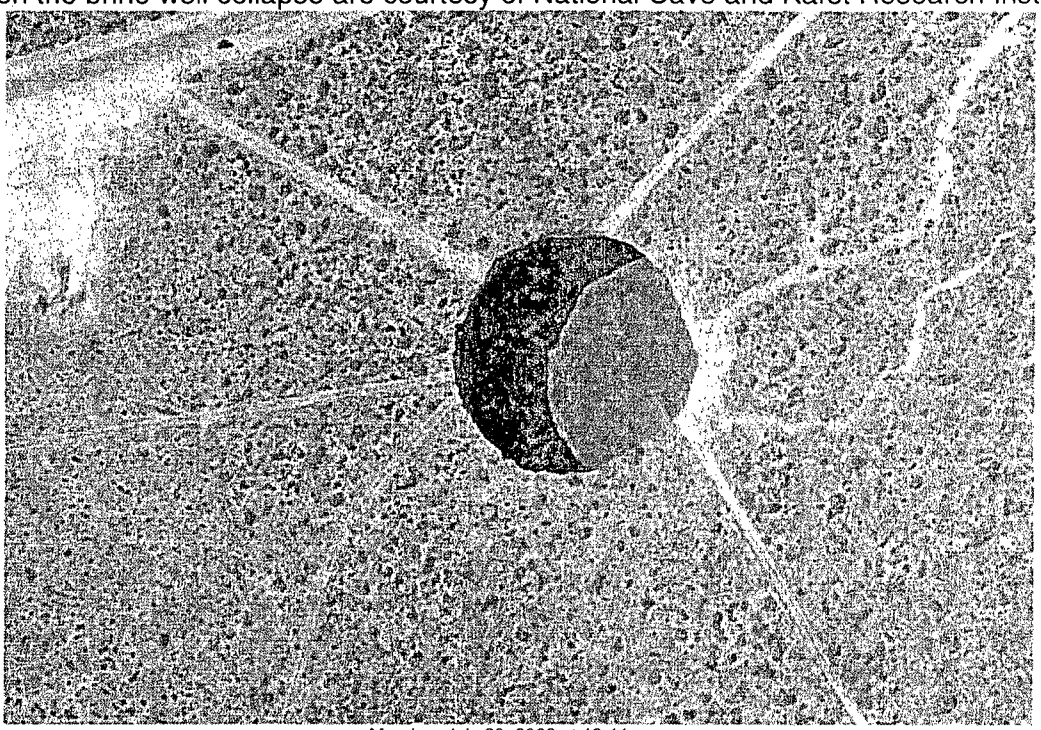
The Oil Conservation Division is continuing to monitor and investigate the collapse of the brine well, located on state trust land 17.3 miles southeast of Artesia, which is still active. The well is owned by Jim's Water Service. County Road 217 remains closed as a safety precaution, and a command center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

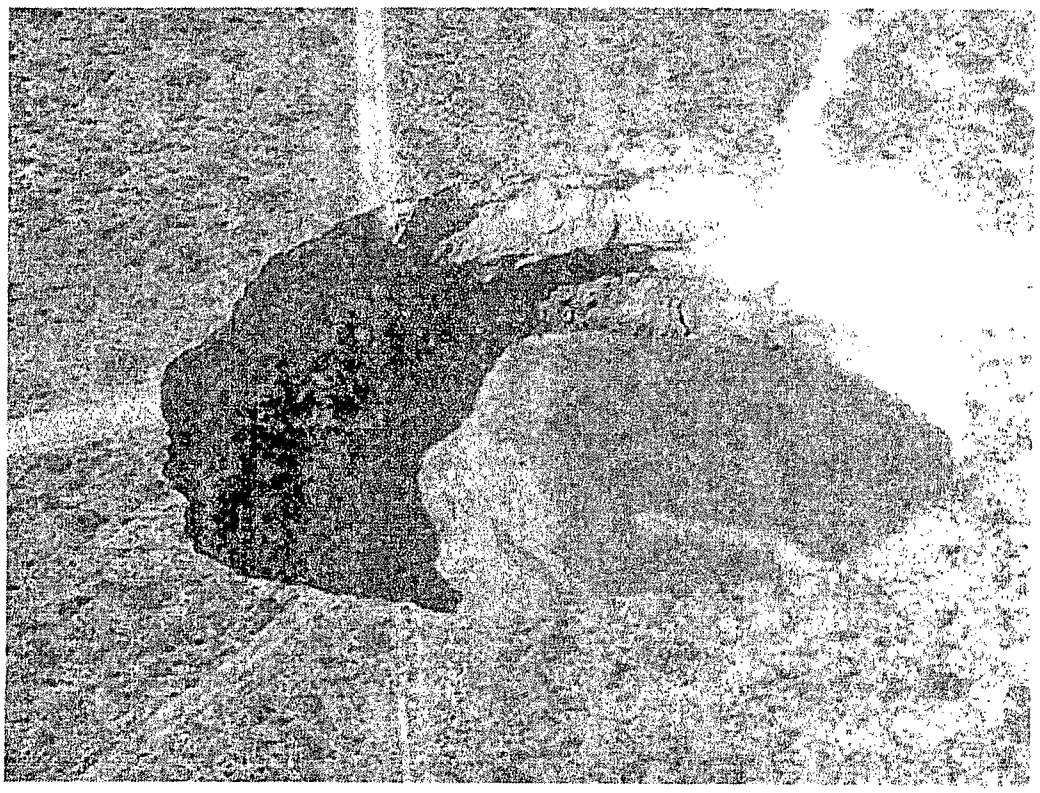
Bureau of Geology and Mineral Resources, and the National Cave & Karst Research Institute are all working together to assess horizontal and vertical movements to project any future subsidence. Work on a protective fence and keep-out signage began yesterday with completion expected on Friday.

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
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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 _____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) *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):
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):
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: *Please provide the following information.*
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 x 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
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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

New Mexico Energy, Minerals and Natural Resources Department

July 23, 2008

NEWS RELEASE

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.

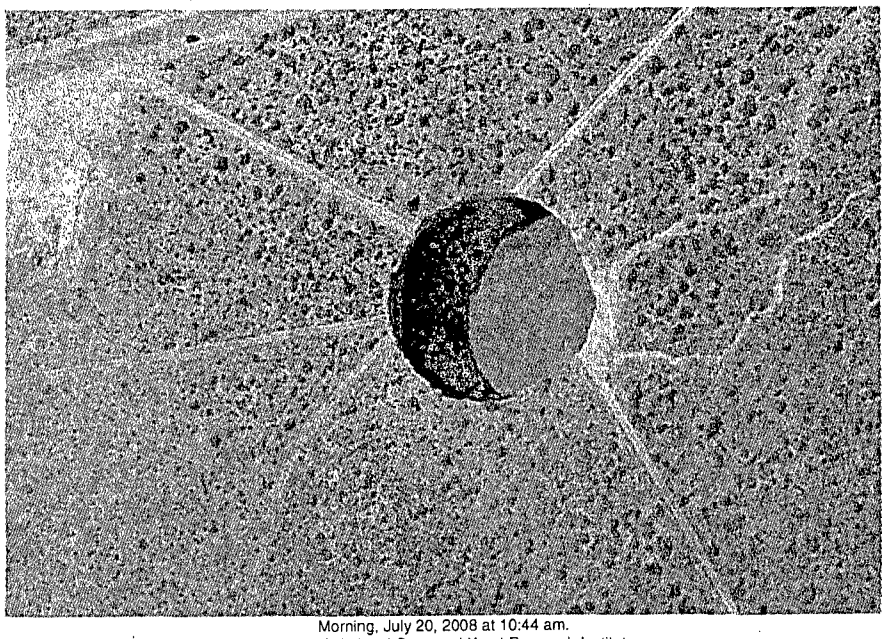
"There are several brine wells in New Mexico and we must ensure that they are all properly monitored to ensure safety and stability," stated Cabinet Secretary Joanna Prukop. "We have now seen that these wells can collapse and the extensive damage such a collapse can generate."

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.

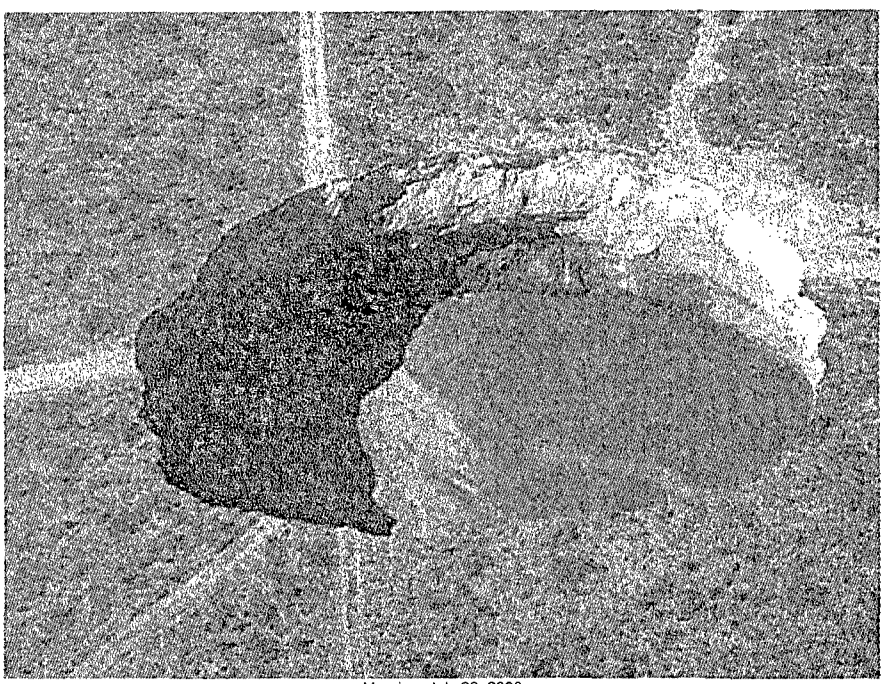
Scientists from the Oil Conservation Division, the Bureau of Land Management, State Land Office, the New Mexico Bureau of Geology and Mineral Resources, and the National Cave & Karst Research Institute are all working together to assess horizontal and vertical movements to project any future subsidence. 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
courtesy 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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7/29/2008

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