BW - 12

SUBSIDENCE MONITORING REPORTS

DATE:

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.

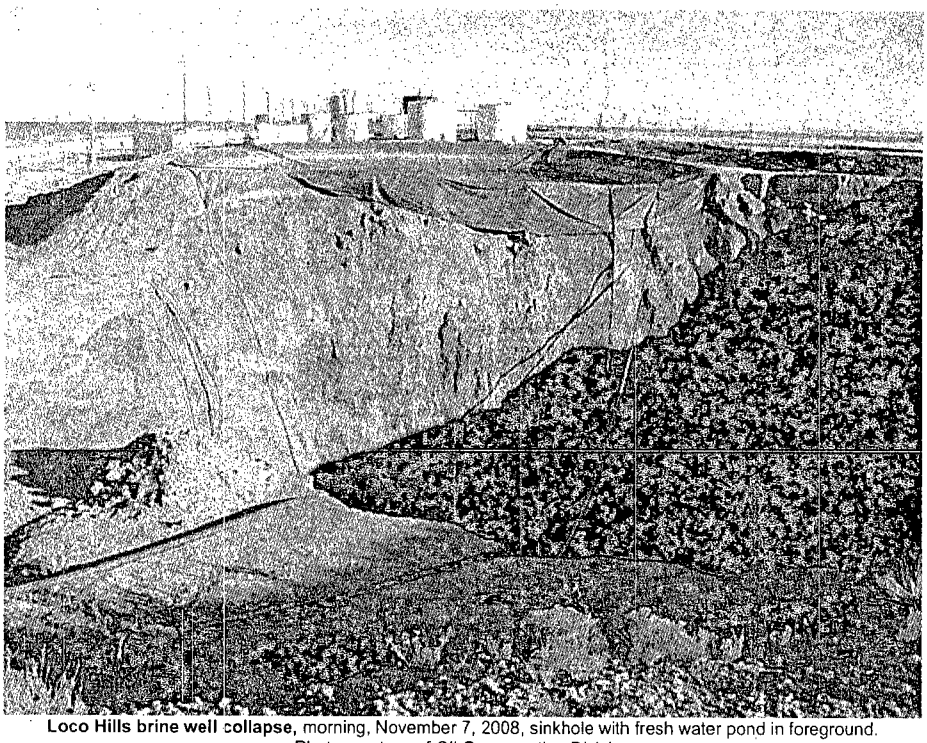
"I am deeply concerned by these two serious incidents and we are taking action to ensure the safety of our citizens and to protect the environment," stated Secretary Prukop.

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.

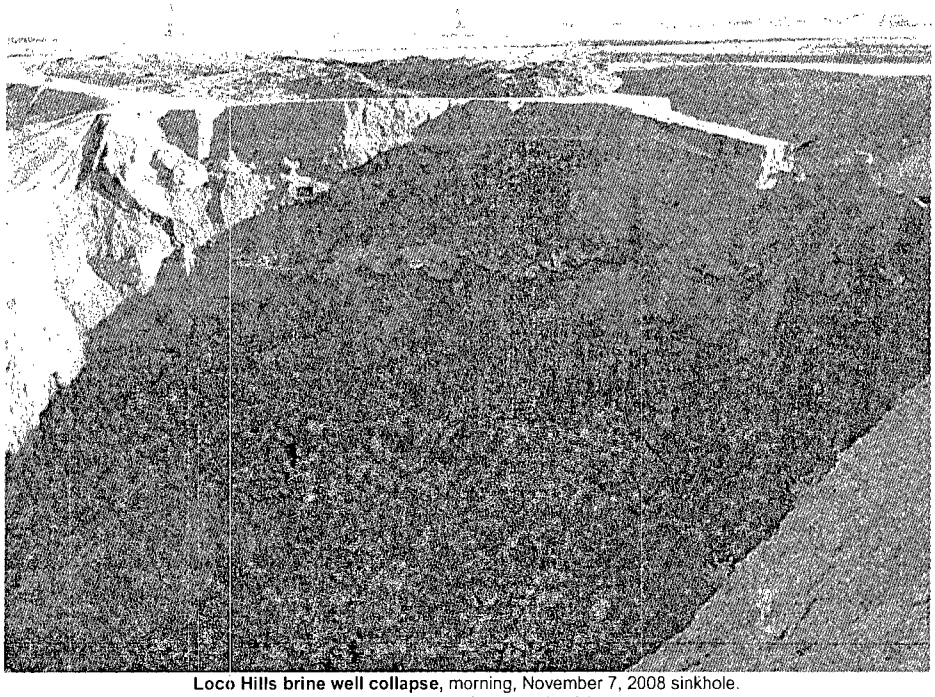
"The moratorium will provide time to properly evaluate the causes of the recent collapses and to discuss the development of new rules or guidelines to ensure the safety and stability of brine well systems," added Secretary Prukop.

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

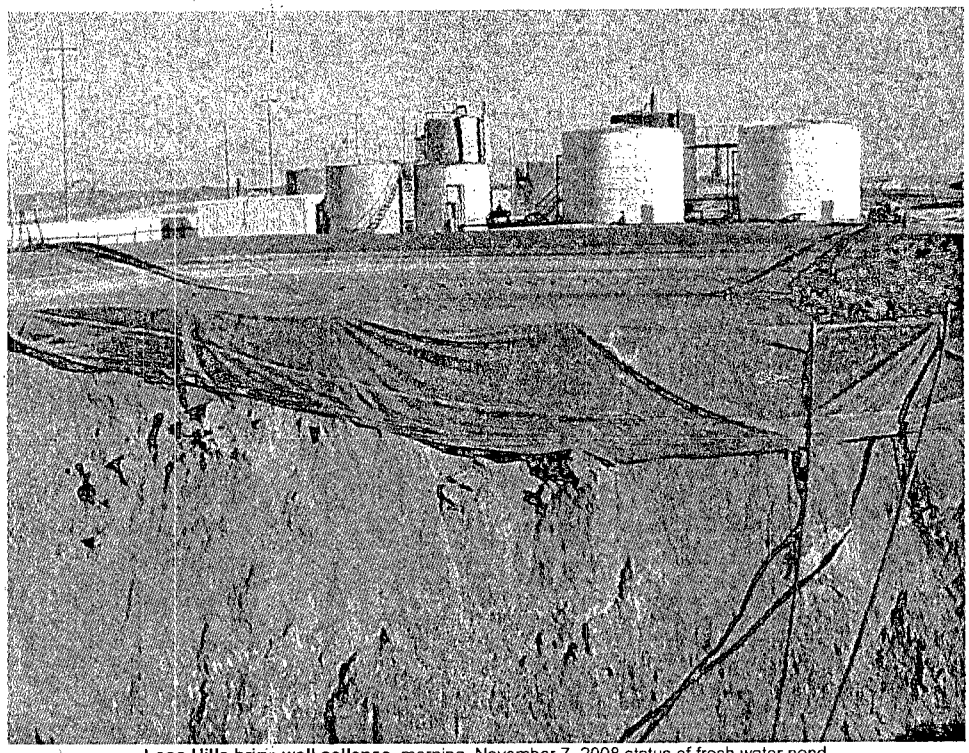
Below are photographs of the two recent collapses:



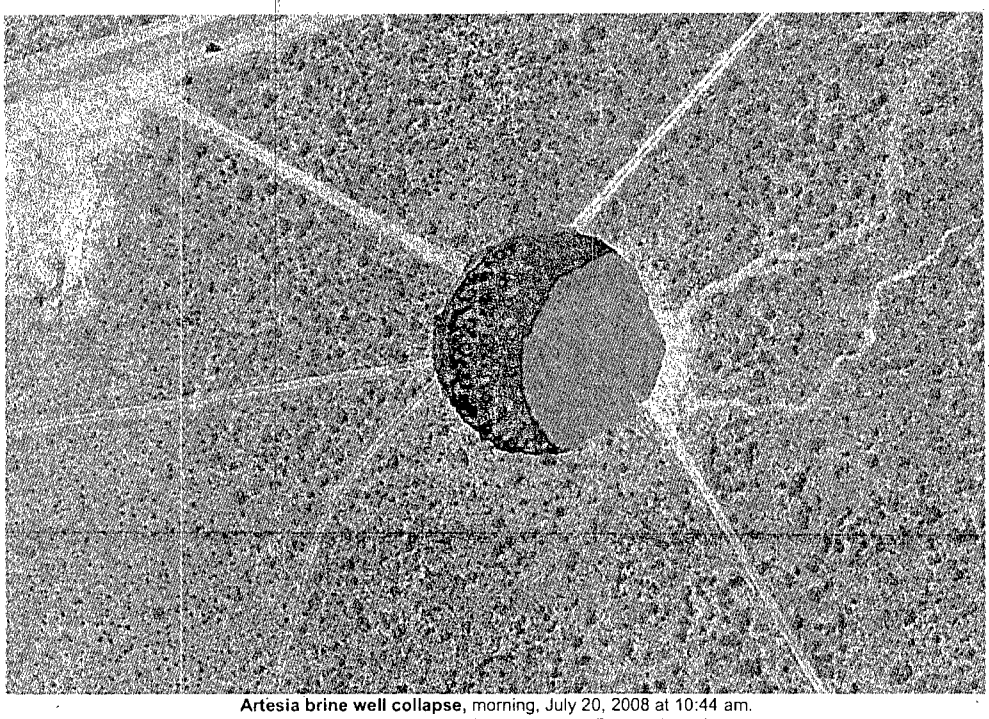
Loco Hills brine well collapse, morning, November 7, 2008, sinkhole with fresh water pond in foreground.
Photo courtesy of Oil Conservation Division



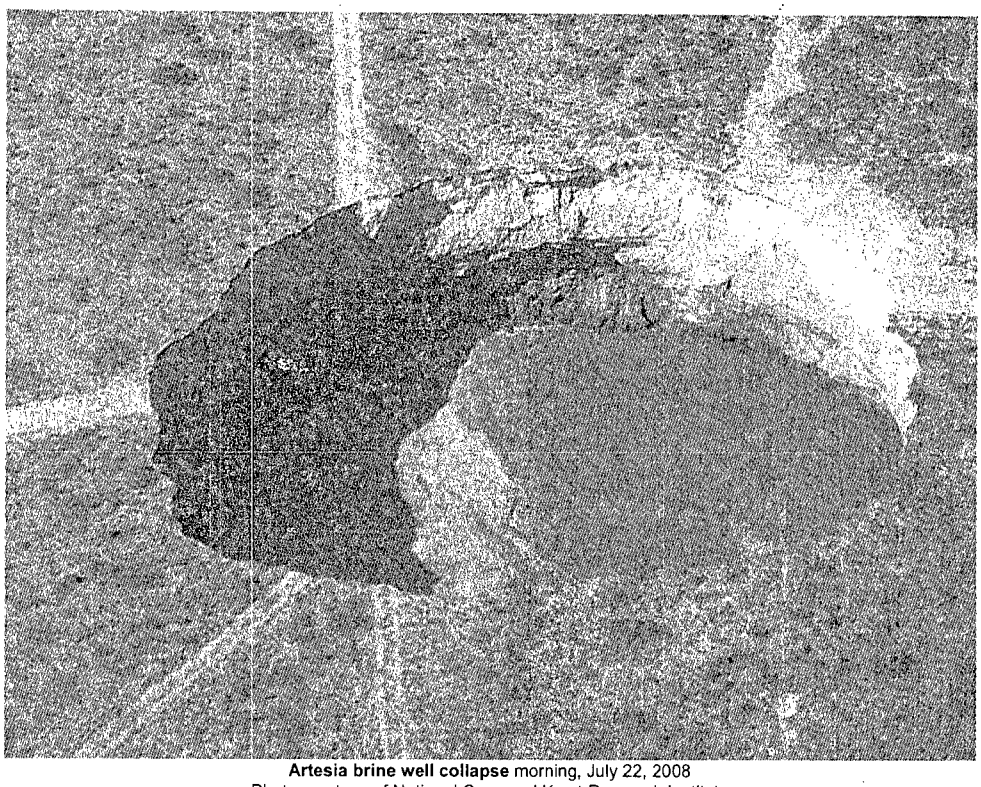
Loco Hills brine well collapse, morning, November 7, 2008 sinkhole.
Photo courtesy of Oil Conservation Division



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 7:55 AM
To: 'Wayne E Roberts'
Cc: Price, Wayne, EMNRD; Hill, Larry, EMNRD; Sanchez, Daniel J., EMNRD
Subject: RE: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing
Sensitivity: Confidential

Mr. Roberts:

Good morning. After discussing Plains plan to plug and abandon the brine well with my Supervisor, Mr. Wayne Price, he indicated that a sonar test in needed before plug and abandonment of the well.

Please plan to conduct a sonar of the well in advance of plugging and abandonment. You may submit your C-103 form for plug and abandonment inclusive of the sonar test. In order to assess public safety, the OCD requires a sonar to evaluate the size and configuration of the existing brine cavern.

Please contact me if you have questions. Thank you.

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

From: Wayne E Roberts [mailto:weroberts@paalp.com]
Sent: Thursday, October 30, 2008 2:24 PM
To: Chavez, Carl J, EMNRD
Subject: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing
Importance: High
Sensitivity: Confidential

Re: OCD August 1, 2008 Letter w/ Brine Well Information Request (BWIR)

Mr. Chavez:

Per your email dated Tue 10/21/2008 5:39 PM; Plains is hereby notifying you that we are making plans to properly plug and abandon the BW-12 Saline No. 1 Well in lieu of any further sonar or Mechanical Integrity Testing. Due to the age, condition and status of the well bore, all service providers for sonar testing are reluctant to test. Plains feels that it is in the best interests of public safety and environmental justice to plug and abandon the well. A Well Plugging Plan of Operations will be filed with and accepted by the Office of the State Engineer prior to plugging, and all plugging and abandonment will be in accordance with NMAC Title 19, Chapter 15, Part 4.

Plains appreciates that the Oil Conservation Division has jurisdiction and authority over all such matters, and respectfully asks for your continued guidance and assistance in our efforts to properly plug and abandon this well.

As soon as possible, I will provide you the Well Plugging plan and seek your approval for each step of our plugging and abandonment.

Respectfully Submitted,

Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American
3705 E. Hwy. 158
Midland, TX 79706
432.686.1767 office
432.413.2574 cell
432.686.1770 fax

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, November 12, 2008 2:47 PM
To: 'Wayne E Roberts'; Pierce Broach; Ronnie D Devore; Dennis L Shearer; Daniel M Bryant; Douglas S Kennedy; Jeffrey P Dann; Jason Henry
Cc: Price, Wayne, EMNRD; Hill, Larry, EMNRD; Sanchez, Daniel J., EMNRD
Subject: RE: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing
Sensitivity: Confidential

Mr. Roberts:

Ok. Please provide 72-hour or ample notification of the date and time that the sonar test will be run on the well. 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
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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: Wayne E Roberts [mailto:weroberts@paalp.com]
Sent: Wednesday, November 12, 2008 2:10 PM
To: Pierce Broach; Ronnie D Devore; Dennis L Shearer; Daniel M Bryant; Douglas S Kennedy; Jeffrey P Dann; Jason Henry
Cc: Price, Wayne, EMNRD; Hill, Larry, EMNRD; Sanchez, Daniel J., EMNRD; Chavez, Carl J, EMNRD
Subject: RE: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing
Sensitivity: Confidential

After exhaustive research, we now have a combined service team identified to begin working on the sonar testing and P&A of BW-12. Sonarwire, Inc.performs regularly-scheduled testing of our gas storage salt domes in our Gulf Coast Division/Pine Prairie, LLC operations, and since they have a MSA and working relationship with Plains, Sonarwire, Inc is our best choice to provide and run the sonar tool. Gray Wireline Service, Inc.will provide the wireline services for the sonar tool and potential MIT or P&A work as required.

Gray Wireline Service, Inc. provides cased-hole wireline services to the natural gas and oil production industry in North America. The company's cased-hole wireline services are delivered from electric-line and slickline units, including logging, perforating, pipe recovery, and other mechanical services. It has operations in New Mexico and Oklahoma.

We will be providing information to Sonarwire, Inc.today to begin formulating our approach and cost estimates, schedules, etc. We will run a dummy tool first to insure the sonar instrument can pass the well bore freely and successfully map the cavern. For more interesting and definitive information on the sonar testing, please visit Sonarwire's web site at http://sonarwire.com. Sonarwire has done extensive testing in the Eunice, Carlsbad, and Hobbs areas.

I will keep you posted on the progress and developments.

Thank you so much,
Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, November 12, 2008 8:55 AM
To: Wayne E Roberts
Cc: Price, Wayne, EMNRD; Hill, Larry, EMNRD; Sanchez, Daniel J., EMNRD
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Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
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Importance: High
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Plains appreciates that the Oil Conservation Division has jurisdiction and authority over all such matters, and respectfully asks for your continued guidance and assistance in our efforts to properly plug and abandon this well.

As soon as possible, I will provide you the Well Plugging plan and seek your approval for each step of our plugging and abandonment.

Respectfully Submitted,

Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American
3705 E. Hwy. 158
Midland, TX 79706
432.686.1767 office
432.413.2574 cell
432.686.1770 fax

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

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, October 22, 2008 12:57 PM
To: 'Wayne E Roberts'; Ronnie D Devore
Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Pierce Broach; Dennis L Shearer; Daniel M Bryant
Subject: RE: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing

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")

From: Wayne E Roberts [mailto:weroberts@paalp.com]
Sent: Wednesday, October 22, 2008 7:03 AM
To: Chavez, Carl J, EMNRD; Ronnie D Devore
Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Pierce Broach; Dennis L Shearer; Daniel M Bryant
Subject: RE: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing

Good morning, Mr. Chavez:

Plains Marketing, L. P. (Plains) received your request and instructions for sonar testing or plugging the subject well. Plains understands the requirements and will comply fully with the utmost concern for public safety and the operational integrity of the well if it should remain in service. Research is under way to determine the feasibility and optimum solution for this well. Most likely, it will be properly plugged and abandoned. I will personally contact you within 8 working days (no later than Tuesday, October 28, 2008) to inform you of our decision(s) and proposed action.

Thank you so much,
Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Tuesday, October 21, 2008 5:39 PM
To: Ronnie D Devore; Wayne E Roberts

Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD
Subject: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing

Ron and Wayne:

Re: OCD August 1, 2008 Letter w/ Brine Well Information Request (BWIR)

Good afternoon. The Oil Conservation Division (OCD) has reviewed Plains All American response to the BWIR for the above subject OCD permitted brine well in Hobbs, NM. Based on the operational life and volume of brine produced from the subject brine well, sonar testing is required along with your MIT on or before July 31, 2009. According to OCD records, no sonar testing has been conducted on the above subject brine well to date. The OCD acknowledges concerns about possible fishing tools and/or lost pipe in the cavern; however, a sonar test must be performed in order to assess public safety concerns from the well (please refer to Figure 1 below). If a sonar test cannot be conducted, the OCD will require that the well be properly plugged and abandoned.

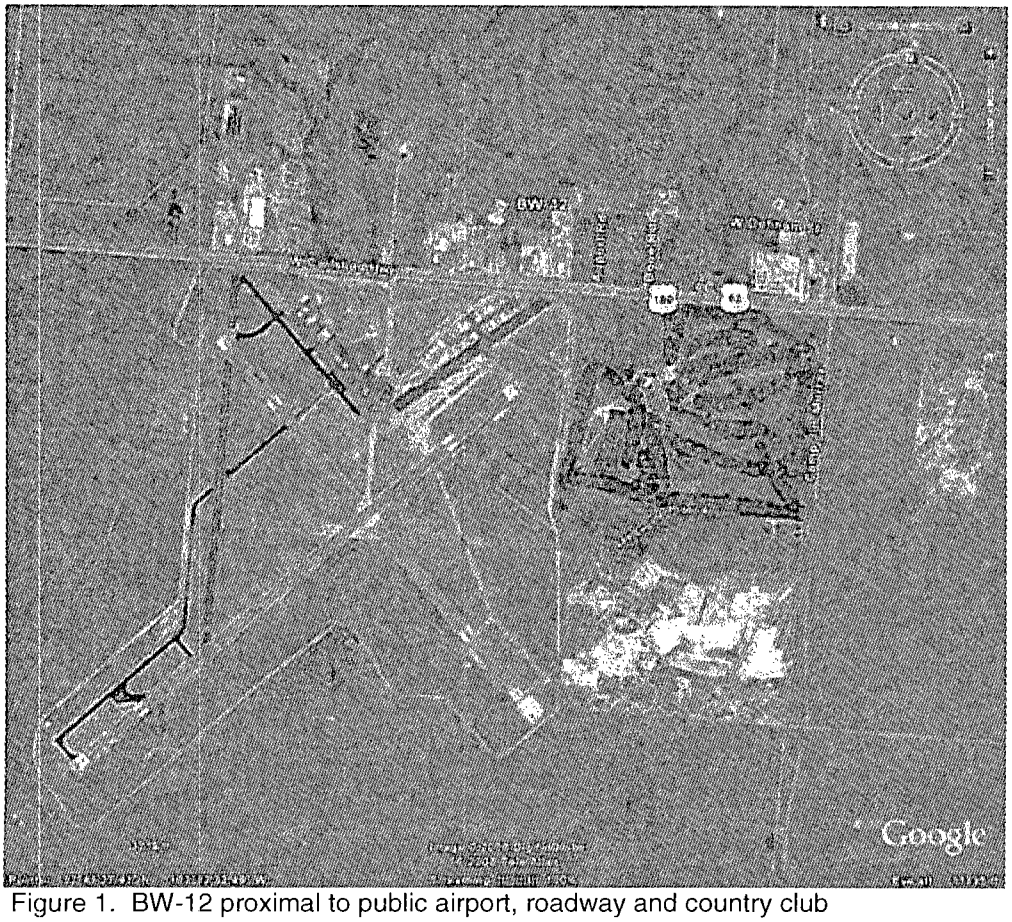

Figure 1. BW-12 proximal to public airport, roadway and country club

Please contact me within 8 working days to arrange the type, date and time for the MIT and corresponding date for sonar testing. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
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1220 South St. Francis Dr., Santa Fe, New Mexico 87505
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Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, October 22, 2008 8:57 AM
To: Hill, Larry, EMNRD
Subject: FW: BW-12 Saline No. 1 Well Upcoming MIT & Sonar Testing

Buddy:

FYI.

Carl J. Chavez, CHMM
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Oil Conservation Division, Environmental Bureau
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Office: (505) 476-3491
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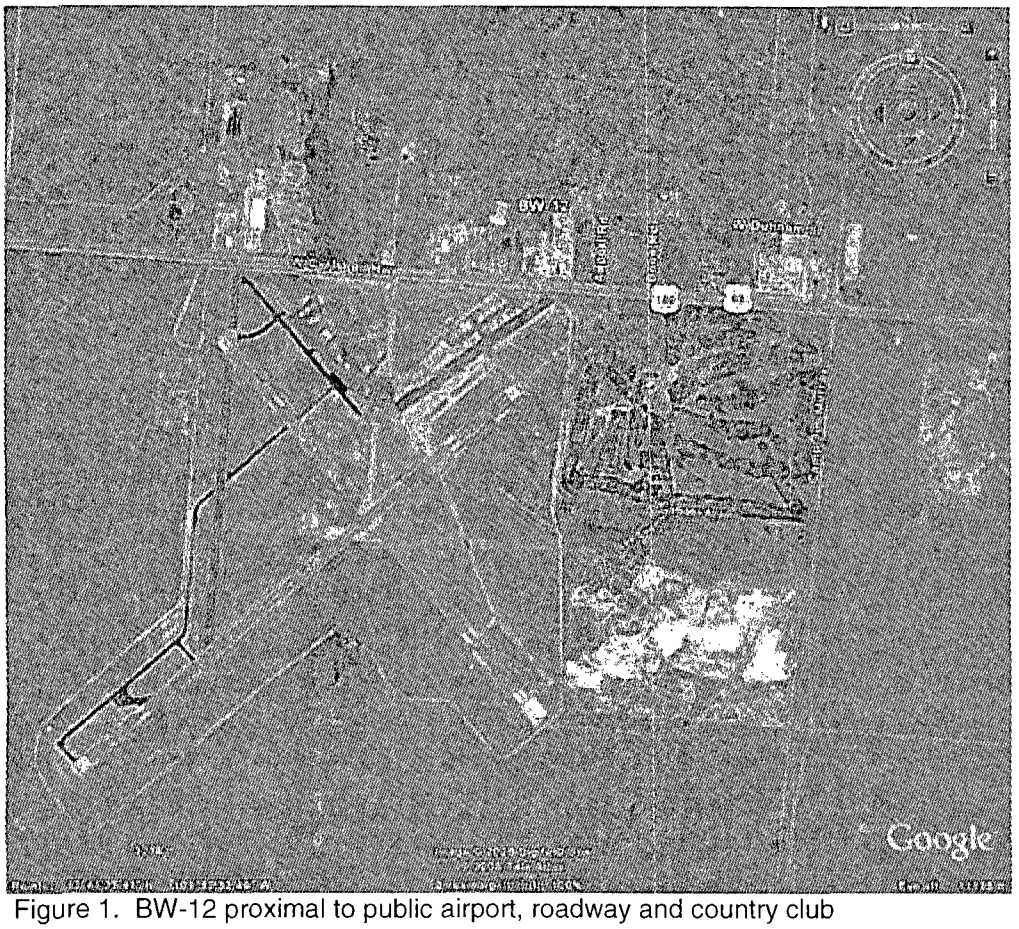

Figure 1. BW-12 proximal to public airport, roadway and country club

Please contact me within 8 working days to arrange the type, date and time for the MIT and corresponding date for sonar testing. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
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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")

Wayne E Roberts

RECEIVED
2008 SEP 9 PM 2 51

From: Wayne E Roberts
Sent: Friday, September 05, 2008 10:28 AM
To: 'wayne.price@state.nm.us'
Subject: Brine Well Information Request (BW-12)

Dear Mr. Price:

Pursuant to your letter dated August 01, 2008, Plains Marketing, L.P. (Plains) hereby submits the Brine Well Information questionnaire and supporting documentation.

Republic Mud Company completed BW-12 in 1963, and though subsequent changes in ownership and operators, each required Mechanical Integrity Test (MIT) shows the well to be structurally sound and stable. Plains is submitting the requested information to assist the NM EMNRD in its efforts to insure brine well safety and stability.

If you have any questions, please contact me by telephone at 432-686-1767 or by e-mail at weroberts@paalp.com.


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pdf (83 KB)


B-W
estionnaire.pdf (41 I


Exhibit_D_Wellbore
.pdf (49 KB)...


Lost Drill Pipe.pdf
(40 KB)


Site map_Saline
1.pdf (277 KB)...


Chavez-Carl
EMNRD.pdf (54 KB.

Thanks & Best Regards,
Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American
3705 E. Hwy. 158
Midland, TX 79706
432.686.1767 office
432.413.2574 cell
432.686.1770 fax

PLAINS MARKETING, L.P.

September 5, 2008

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Attention: Mr. Wayne Price, Environmental Bureau Chief

Re: Brine Well Information Request (BW-12)

Dear Mr. Price:

Pursuant to your letter dated August 01, 2008, Plains Marketing, L.P. (Plains) hereby submits the Brine Well Information questionnaire and supporting documentation.

Republic Mud Company completed BW-12 in 1963, and though subsequent changes in ownership and operators, each required Mechanical Integrity Test (MIT) shows the well to be structurally sound and stable. Plains is submitting the requested information to assist the NM EMNRD in its efforts to insure brine well safety and stability.

If you have any questions, please contact me by telephone at 432-686-1767 or by e-mail at weroberts@paalp.com.

Sincerely,

Wayne E. Roberts
Director, Environmental and Regulatory Compliance
Southern and Southwestern Divisions

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

GENERAL INFORMATION:

Operator Name: Plains Marketing, L. P.
P. O. Box 4648
Houston, TX 77210-4648

Well Name: Saline No.1 Brine Well
API Number: 30-025-12803
Brine Well Permit #: BW-012
Date Permit Expires: July 18, 2009
Location: SW/4, SW/4, of Section 36, Township 18 South, Range 37 East, NMPM, Lea County, New Mexico
GPS of well: Lat: 32.69694440; Long: 103.20972220

Have you reviewed and understand all of your permit conditions? ☒Yes

Are you presently deficient of any condition in your permit? ☒Yes
(Annual Reporting)

Do you operate below grade tanks or pits at the site? ☒No

Do all tanks, including fresh water tanks, have secondary containment? ☒No
(Fresh Water Tank has no secondary containment)

Do you think you have the expertise, knowledge and general understanding of what causes a brine well to collapse? ☒Yes

Do you think OCD should provide guidelines on subsidence and collapse issues? ☒Yes

---

SITING INFORMATION: *Please refer to the attached 7.5-minute* (1": *2000') USGS Quad Map with annotated one-mile search radius.* [Site Map]

Is the brine well located within a municipality or city limits? ☒No

Distance and direction to nearest permanent structure, house, school, *etc. if less than one mile:* McNabb Services office and shop 350' to the west; Guardian Oil Field Services office and shop 500' to the east; Lea County Airport across highway to the south.

Distance and direction to nearest water well *if less than one mile:* Water well 0.190 miles northeast of Saline # 1, shown on attached site map.

Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s) *if less than one mile:* No flood plain, playa lakes, man-made canals, or ponds were observed.

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Distance and direction to nearest known karst features or mines *if less than one mile:*
No surface cave/karst features were observed in the immediate vicinity of the site. However, the well site is located in a low karst potential area.

Distance and direction to nearest producing oil or gas wells) *if less than one mile:*
Provide API Number:
Distance and direction to nearest tank battery (ies) *if less than one mile:*
No producing oil or gas wells or tank battery (ies) were observed.

Distance and direction to nearest pipeline(s), including fresh water pipelines *if less than one mile:* Approximately 0.500 miles north to DCP Midstream LP gas pipeline; shown on attached site map.

Distance and direction to nearest paved or maintained road or railroad *if less than one mile:* 250' south to US Highway 62/180.

Depth to ground water found above the Salado (salt section), regardless of yield: 50'

Name of aquifers: Ogallala

WELL CONSTRUCTION: Exhibit "D" attached provides a diagram depicting the brine well. (Well bore Schematic)

Depth of the top of the salt below ground surface "(feet): 1,750'

Depth to the bottom of the salt below ground surface (feet): 1,750' to top; (below log-possibly 2,500' thick)

Depth(s) to and thickness (es) of any anhydrite section(s) (located above the salt): Top 1,630' to 1,750'.

Depth of casing(s) shoe below ground surface (feet): 1,660'
Is the casing shoe set in the anhydrite or other layer above the salt? ☒Yes
Is the casing shoe set into the salt? ☒No If yes, how far into the salt?

Depth of tubing(s): 2,144' – 2 –7/8" tubing

Do you suspect that your cavern has partially caved in? ☒No

OPERATIONS: *Please provide the following information.*

Start date of brine well operation: May 1963

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OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Total volume of fresh water injected into the brine well to date (bbls) and how determined: 3,883,459 barrels determined by sales receipts and meter readings.
Total volume of brine water produced (bbls) to date and how determined: 3,883,459 barrels determined by sales receipts and meter readings.

Have you ever lost casing or tubing? ☒Yes If yes, please provide details.

On or about June 2, 1994, a string of 4" drill pipe was lost in the well bore. In the process of recovering the 4" drill pipe, it was necessary to perform a wire line assisted free point and back off procedure. The top of free pipe was indicated to be just below 1,800 feet. The 4" was subsequently backed off and at the lowest free tool joint at 1,794 feet, leaving 900 feet of stuck pipe in the hole. Approximately 34' of open hole is between the 8-5/8" surface casing set at 1,760 feet and the top of fish at 1,794 feet.

Conditions of the hole were such that in steps of the completion procedure it was recommended that an attempt to run 2-7/8"tubing past the top of fish and down to 2,690 feet be made prior to investing time and money in casing and cement.

A schematic of the 1994 well condition is attached as 'Lost Drill pipe", as is a schematic of the completed well bore.

Document attached ☒Yes ("Lost Drill Pipe")

On or about February 6, 2007 Plains lost approximately 800' of tubing down hole at about 1700'. Plains replaced tubing down to 1700' prior to running the MIT.

Document Attached ☒Yes "Chavez, Carl J, EMNRD"

Do you maintain a surface pressure on your well during idle times? ☒No

Have you noticed large amounts of air built up during cavity pressurization? ☒No

Have you ever noticed fluids or air/gas bubbling up around the casing during testing or normal operations? ☒No

---

MONITORING: ***Please provide the following information.***

Are you currently monitoring ground water contamination from your brine well or system? ☒No

Have you ever run a sonar log? ☒No

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Considering the down hole condition and recommendations by wire line service company representatives, the $100,000 logging tool could not be insured under the existing circumstances, and that attempts to run the log into the cavern would be ill advised

Provide cavern configuration (dimensions and volume) and methods used to estimate:

No cavern configuration (sonar reports) exists. Assuming a parabolic shaped cavern due to the practice of washing from the bottom through the tubing and returning the brine through the annulus, the maximum diameter is roughly calculated to be 475' with an approximate volume of the paraboloid equaling 14,175.073 cubic feet. Calculations are based on factors and formulae developed in the early 1950's when salt sections of West Texas and New Mexico were first being developed for high vapor pressure hydrocarbon storage.

Do you have a subsidence-monitoring program in place? ☒No

Do you have any geophysical monitoring devices, such as a seismic device positioned near your brine well? ☒No

Have you submitted all of your monthly, quarterly, or annual reports to the OCD? ☒No

Have you failed a brine well mechanical integrity test (MIT)? ☒No

Have you ever had a casing leak? ☒No

Have you ever had a cavern leak? ☒Don't know

Have you ever exceeded the cavern fracture pressure? ☒Don't know

Do you know how to calculate your maximum pressure? ☒Don't know

Have you routinely looked for cracks or fissures in the ground surface around your brine well? ☒Yes

Do you have any minor or major cracks, fissures, tank settlement, or line breakage from settlement or any minor subsidence. ☒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.? ☒No

Have you ever experienced unexpected pressure gain or loss in the cavern? ☒No
If yes, was there a difference in your normal flow rate?

Anytime during the past 5 years, have you experienced a noticeable difference between fresh water volumes pumped into the well versus brine water produced? ☒No

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Are you concerned about pulling the tubing due to the fact it may be difficult to re-enter the hole? ☒Yes

Are you concerned about running a sonar tool in fear of losing tool because of debris in hole? ☒Yes

Have you ever conducted a fly over of your well site? ☒No

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 lifetime of the well then your calculation would be *18,000,000/180,000* =100 x 50 =5000

.

1. Provide the calculated number above here: 1,078.74
2. Now provide the depth (ft) from the surface to your casing shoe: 1,660'

Is the calculated number found in #1 above greater than #2? ☒No

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Comments or recommendations for OCD:

Plains Marketing, L. P. (Plains) Brine Well (BW-12) is currently idled after the most recent MIT resolved the down hole-plugging problem. Plains does not desire to continue brine sales and is actively pursuing selling this well site. Plains respectfully requests to suspend all well operations while pursuing a potential purchase and sales agreement.

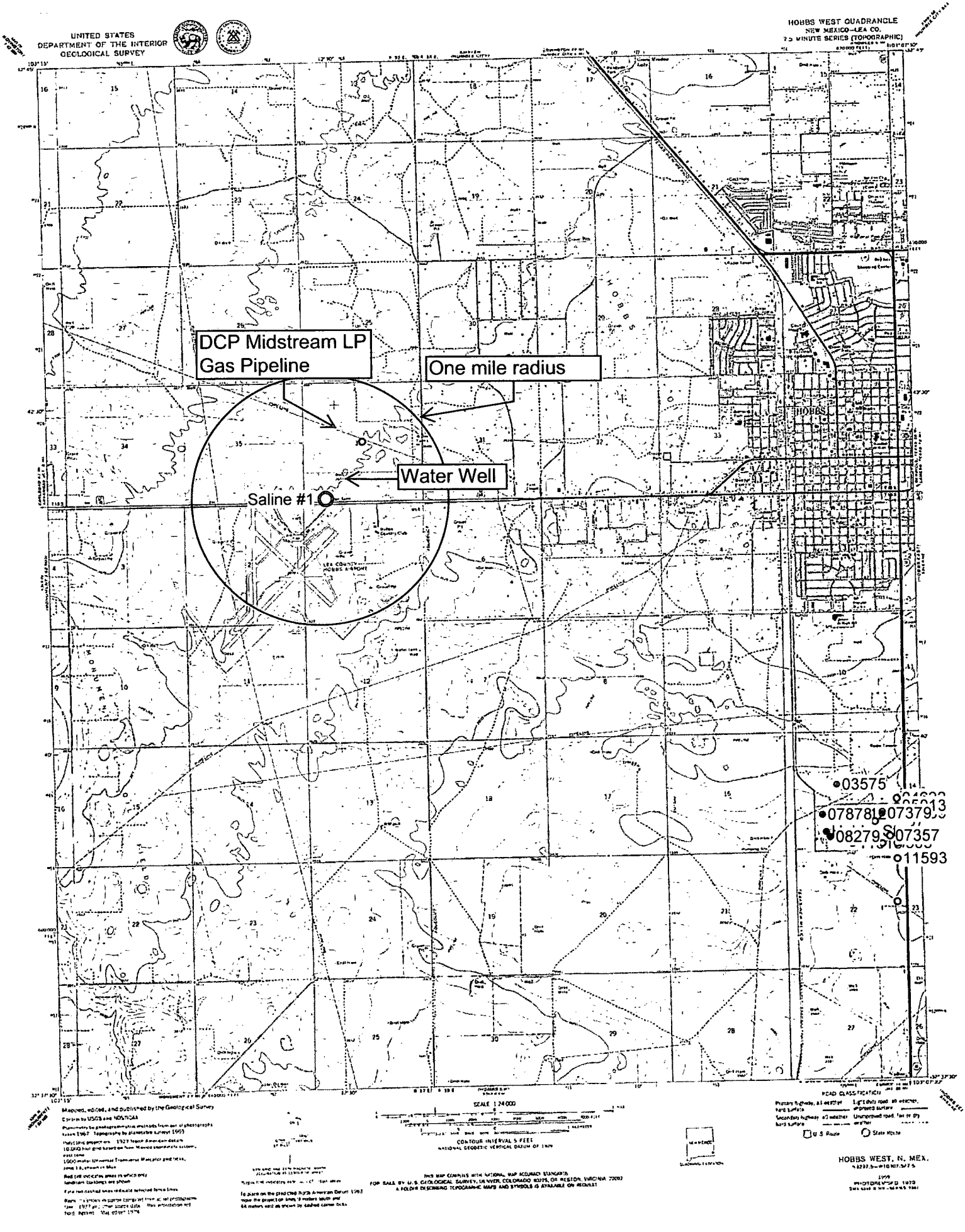
"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe the information is true, accurate, and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

Plains Marketing, L. P.
Company Name – print name above

Wayne E. Roberts
Company representative – print name

Title: Director, Environmental & Regulatory Compliance

Date: September 5, 2008



'Hobbs West; NM'; Scale: 1" = 0.357Mi 574Mt 1,882Ft, 1 Mi = 2.805" , 1 cm = 226Mt

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, October 30, 2007 11:27 AM
To: Price, Wayne, EMNRD
Cc: 'rddevore@paalp.com'
Subject: BW-12 MIT & Other Problems

Wayne:

Re:

The Permian Corporation	SCURLOCK/PERMIAN -HOBBS (Saline #1 Well)	BW-12	30-025-12803

FYI.

I received a call today at around 9:50 a.m. from Mr. Ron Devore at (505) 441-6601. Ron informed me that their BW has not produced in about a month due to what he perceived as a down hole plugging problem. He indicated that they had replaced tubing last year during their 5-yr. MIT. He said that he is awaiting instructions from above on how they are going to proceed with corrective action or other options. He said that they may want to sell the facility and made reference to the recent requirement for an increase in the bond amount to $50,000.00. They would like to cancel their MIT until their down-hole problem can be corrected.

Based on notes from 2/6/07 at 10:56 a.m., there was bent tubing on ground with concerns about a cavern slump problem. Operator had lost 800 ft. of tubing down hole at about 1700 ft. Problem w/ BOP leaking & had to replace before running MIT. BOP removed and Teflon seal set at op of flange & reseated BOP for pressure up tomorrow. District staff requested to be present following day for test.

I informed Ron that I would discuss the situation above with you and that the OCD would respond. 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")

ASHLAND PIPE LINE COMPANY ENGINEERING DEPARTMENT			SHEET AFE
SUBJECT SALINE NO. 1 BRINE WELL			DISTRICT
SECTION 36, 18S, 37E., LEA CO. NMPM			DRAWING
BY S. ROGERS.	CHECKED BY	APPROVED BY	DATE 7/29/94

0427-6 (02/91)

API # 30-025-12803
SALINE NO. 1 BRINE WELL
AS COMPLETED 7/22/94

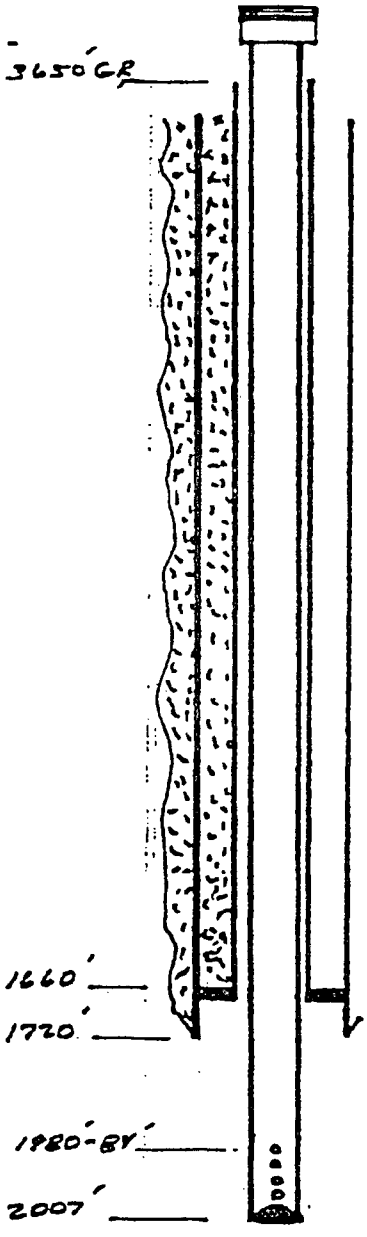


Exhibit 'D'

1660' - FORMATION PACKER SHOE, FLOAT COLLAR, 5½" 15.5# J-55 CASING CEMENT W/200 SX NEAT AND 65 SX W/ 2% CACL2 - TOC 5 FT. FROM SURFACE BY CBL.

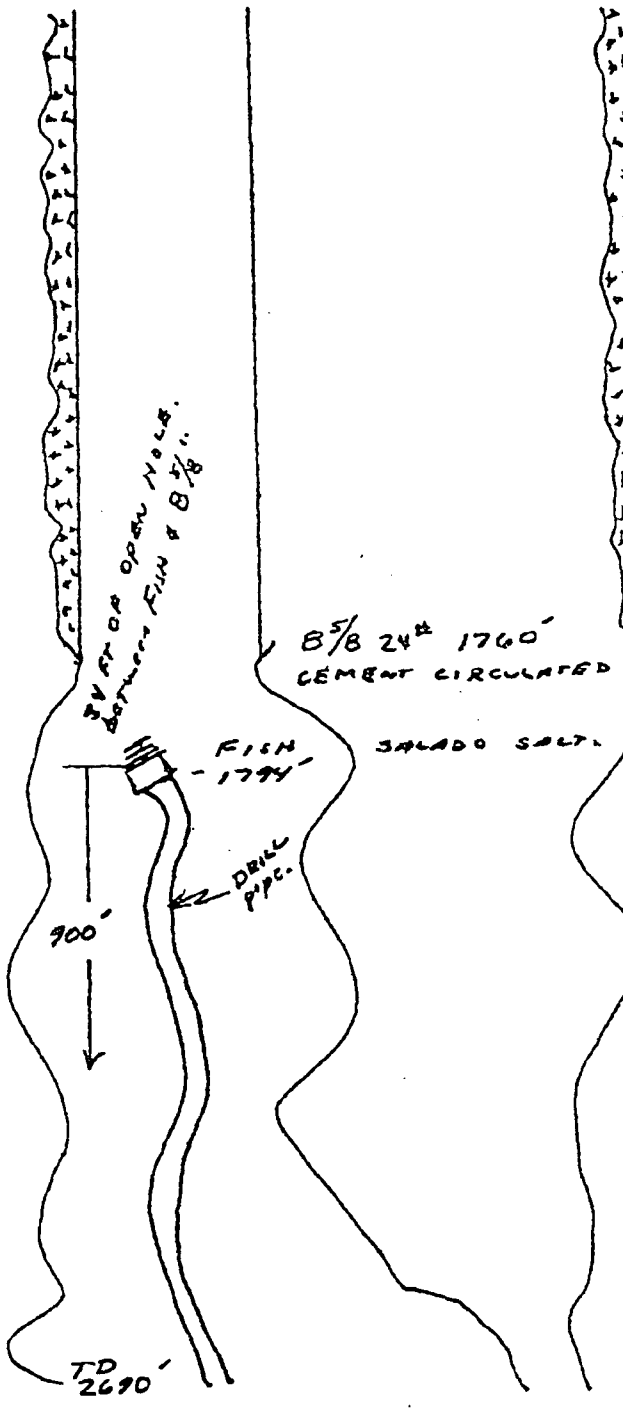
1720' - 8⅝ 24# CASING. CEMENTED WITH 334 SX 50-50 POZ W/18% GEL AND 5% SALT, AND 100 SX 50-50 POZ W/2% CACL2 - CIRC. 26 BBLS CEMENT. (FROM C-103 SUBMITTED 5-26-65).

64 JTS 2⅞ J-55 TUBING - 2007 FT. OPEN ENDED W/ 4 PERFORATIONS AT 1980-1984

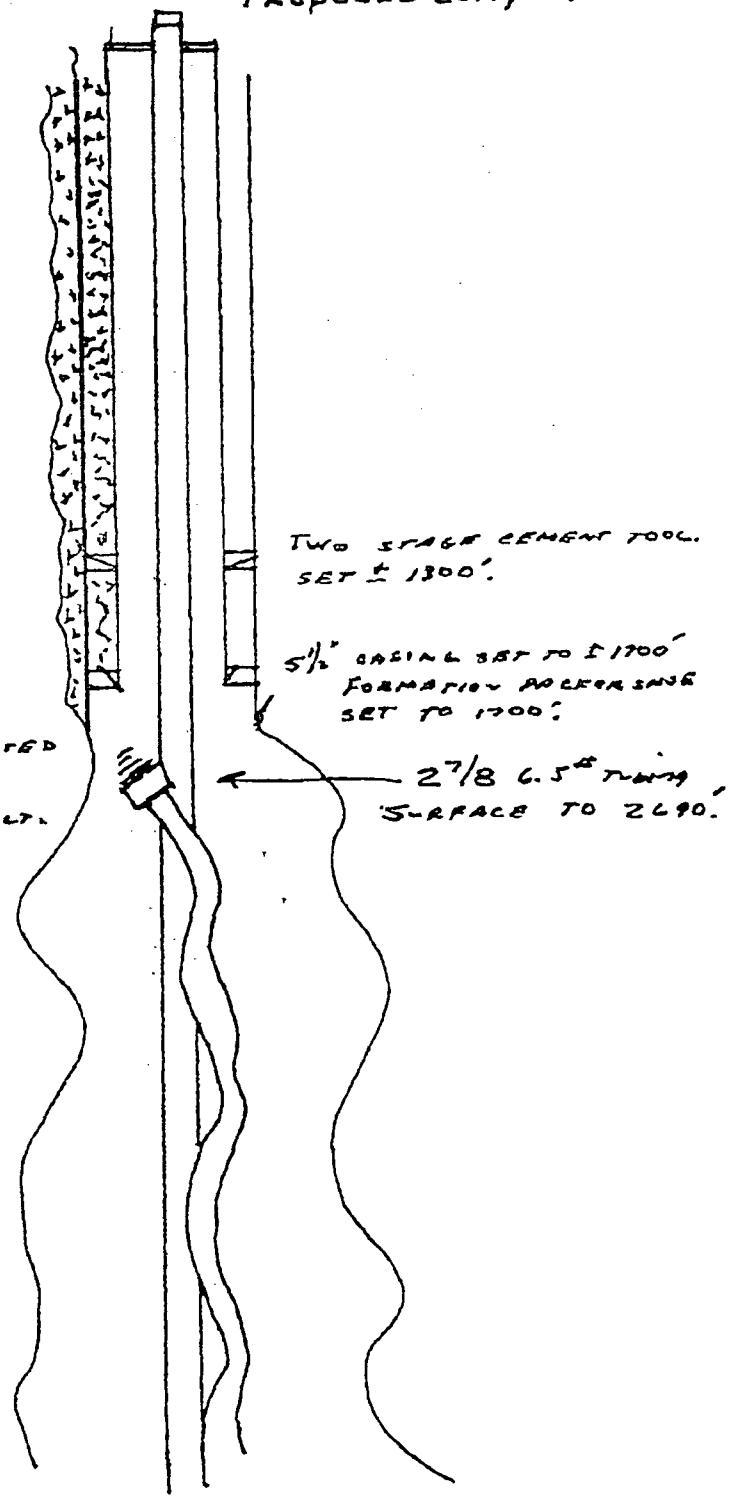
ASHLAND PIPE LINE COMPANY ENGINEERING DEPARTMENT			SHEET AFE
SUBJECT PRESENT AND COMPLETED WELL BORE			DISTRICT
SALINE No. 1			DRAWING
BY J. Rogers.	CHECKED BY	APPROVED BY	DATE 6/14/94

0427-6 (02/91)

PRESENT WELL CONDITION
6/14/94



PROPOSED COMPLETION



Chavez, Carl J, EMNRD

From: Price, Wayne, EMNRD
Sent: Tuesday, September 09, 2008 1:06 PM
To: Chavez, Carl J, EMNRD
Subject: FW: Brine Well Information Request (BW-12)
Attachments: NMEMNRD_9.5.08.pdf; B-W Questionnaire.pdf; Exhibit_D_Wellbore.pdf; Lost Drill Pipe.pdf; Site map_Saline 1.pdf; Chavez-Carl J-EMNRD.pdf

---

From: Wayne E Roberts [mailto:weroberts@paalp.com]
Sent: Friday, September 05, 2008 9:28 AM
To: Price, Wayne, EMNRD
Subject: Brine Well Information Request (BW-12)

Dear Mr. Price:

Pursuant to your letter dated August 01, 2008, Plains Marketing, L.P. (Plains) hereby submits the Brine Well Information questionnaire and supporting documentation.

Republic Mud Company completed BW-12 in 1963, and though subsequent changes in ownership and operators, each required Mechanical Integrity Test (MIT) shows the well to be structurally sound and stable. Plains is submitting the requested information to assist the NM EMNRD in its efforts to insure brine well safety and stability.

If you have any questions, please contact me by telephone at 432-686-1767 or by e-mail at weroberts@paalp.com.

<<NMEMNRD_9.5.08.pdf>> <<B-W Questionnaire.pdf>> <<Exhibit_D_Wellbore.pdf>> <<Lost Drill Pipe.pdf>> <<Site map_Saline 1.pdf>> <<Chavez-Carl J-EMNRD.pdf>>

Thanks & Best Regards,
Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American
3705 E. Hwy. 158
Midland, TX 79706
432.686.1767 office
432.413.2574 cell
432.686.1770 fax

PLAINS MARKETING, L.P.

September 5, 2008

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Attention: Mr. Wayne Price, Environmental Bureau Chief

Re: Brine Well Information Request (BW-12)

Dear Mr. Price:

Pursuant to your letter dated August 01, 2008, Plains Marketing, L.P. (Plains) hereby submits the Brine Well Information questionnaire and supporting documentation.

Republic Mud Company completed BW-12 in 1963, and though subsequent changes in ownership and operators, each required Mechanical Integrity Test (MIT) shows the well to be structurally sound and stable. Plains is submitting the requested information to assist the NM EMNRD in its efforts to insure brine well safety and stability.

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Sincerely,

Wayne E. Roberts
Director, Environmental and Regulatory Compliance
Southern and Southwestern Divisions

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

GENERAL INFORMATION:

Operator Name: Plains Marketing, L. P.
P. O. Box 4648
Houston, TX 77210-4648

Well Name: Saline No.1 Brine Well
API Number: 30-025-12803
Brine Well Permit #: BW-012
Date Permit Expires: July 18, 2009
Location: SW/4, SW/4, of Section 36, Township 18 South, Range 37 East, NMPM, Lea County, New Mexico
GPS of well: Lat: 32.69694440; Long: 103.20972220

Have you reviewed and understand all of your permit conditions? ☒Yes

Are you presently deficient of any condition in your permit? ☒Yes
(Annual Reporting)

Do you operate below grade tanks or pits at the site? ☒No

Do all tanks, including fresh water tanks, have secondary containment? ☒No
(Fresh Water Tank has no secondary containment)

Do you think you have the expertise, knowledge and general understanding of what causes a brine well to collapse? ☒Yes

Do you think OCD should provide guidelines on subsidence and collapse issues? ☒Yes

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SITING INFORMATION: *Please refer to the attached 7.5-minute* (1": *2000') USGS Quad Map with annotated one-mile search radius.* [Site Map]

Is the brine well located within a municipality or city limits? ☒No

Distance and direction to nearest permanent structure, house, school, *etc. if less than one mile:* McNabb Services office and shop 350' to the west; Guardian Oil Field Services office and shop 500' to the east; Lea County Airport across highway to the south.

Distance and direction to nearest water well *if less than one mile:* Water well 0.190 miles northeast of Saline # 1, shown on attached site map.

Distance to nearest watercourse(s), floodplain, playa lake(s), or man-made canal(s) or pond(s) *if less than one mile:* No flood plain, playa lakes, man-made canals, or ponds were observed.

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Distance and direction to nearest known karst features or mines *if less than one mile:*
No surface cave/karst features were observed in the immediate vicinity of the site. However, the well site is located in a low karst potential area.

Distance and direction to nearest producing oil or gas wells) *if less than one mile:*
Provide API Number:
Distance and direction to nearest tank battery (ies) *if less than one mile:*
No producing oil or gas wells or tank battery (ies) were observed.

Distance and direction to nearest pipeline(s), including fresh water pipelines *if less than one mile:* Approximately 0.500 miles north to DCP Midstream LP gas pipeline; shown on attached site map.

Distance and direction to nearest paved or maintained road or railroad *if less than one mile:* 250' south to US Highway 62/180.

Depth to ground water found above the Salado (salt section), regardless of yield: 50'

Name of aquifers: Ogallala

WELL CONSTRUCTION: Exhibit "D" attached provides a diagram depicting the brine well. (Well bore Schematic)

Depth of the top of the salt below ground surface "(feet): 1,750'

Depth to the bottom of the salt below ground surface (feet): 1,750' to top; (below log-possibly 2,500' thick)

Depth(s) to and thickness (es) of any anhydrite section(s) (located above the salt): Top 1,630' to 1,750'.

Depth of casing(s) shoe below ground surface (feet): 1,660'
Is the casing shoe set in the anhydrite or other layer above the salt? ☒Yes
Is the casing shoe set into the salt? ☒No If yes, how far into the salt?

Depth of tubing(s): 2,144' – 2 –7/8" tubing

Do you suspect that your cavern has partially caved in? ☒No

OPERATIONS: *Please provide the following information.*

Start date of brine well operation: May 1963

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Total volume of fresh water injected into the brine well to date (bbls) and how determined: 3,883,459 barrels determined by sales receipts and meter readings.
Total volume of brine water produced (bbls) to date and how determined: 3,883,459 barrels determined by sales receipts and meter readings.

Have you ever lost casing or tubing? ☒Yes If yes, please provide details.

On or about June 2, 1994, a string of 4" drill pipe was lost in the well bore. In the process of recovering the 4" drill pipe, it was necessary to perform a wire line assisted free point and back off procedure. The top of free pipe was indicated to be just below 1,800 feet. The 4" was subsequently backed off and at the lowest free tool joint at 1,794 feet, leaving 900 feet of stuck pipe in the hole. Approximately 34' of open hole is between the 8-5/8" surface casing set at 1,760 feet and the top of fish at 1,794 feet.

Conditions of the hole were such that in steps of the completion procedure it was recommended that an attempt to run 2-7/8"tubing past the top of fish and down to 2,690 feet be made prior to investing time and money in casing and cement.

A schematic of the 1994 well condition is attached as 'Lost Drill pipe", as is a schematic of the completed well bore.

Document attached ☒Yes ("Lost Drill Pipe")

On or about February 6, 2007 Plains lost approximately 800' of tubing down hole at about 1700'. Plains replaced tubing down to 1700' prior to running the MIT.

Document Attached ☒Yes "Chavez, Carl J, EMNRD"

Do you maintain a surface pressure on your well during idle times? ☒No

Have you noticed large amounts of air built up during cavity pressurization? ☒No

Have you ever noticed fluids or air/gas bubbling up around the casing during testing or normal operations? ☒No

---

MONITORING: ***Please provide the following information.***

Are you currently monitoring ground water contamination from your brine well or system? ☒No

Have you ever run a sonar log? ☒No

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Considering the down hole condition and recommendations by wire line service company representatives, the $100,000 logging tool could not be insured under the existing circumstances, and that attempts to run the log into the cavern would be ill advised

Provide cavern configuration (dimensions and volume) and methods used to estimate:

No cavern configuration (sonar reports) exists. Assuming a parabolic shaped cavern due to the practice of washing from the bottom through the tubing and returning the brine through the annulus, the maximum diameter is roughly calculated to be 475' with an approximate volume of the paraboloid equaling 14,175.073 cubic feet. Calculations are based on factors and formulae developed in the early 1950's when salt sections of West Texas and New Mexico were first being developed for high vapor pressure hydrocarbon storage.

Do you have a subsidence-monitoring program in place? ☒No

Do you have any geophysical monitoring devices, such as a seismic device positioned near your brine well? ☒No

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Have you ever had a casing leak? ☒No

Have you ever had a cavern leak? ☒Don't know

Have you ever exceeded the cavern fracture pressure? ☒Don't know

Do you know how to calculate your maximum pressure? ☒Don't know

Have you routinely looked for cracks or fissures in the ground surface around your brine well? ☒Yes

Do you have any minor or major cracks, fissures, tank settlement, or line breakage from settlement or any minor subsidence. ☒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.? ☒No

Have you ever experienced unexpected pressure gain or loss in the cavern? ☒No
If yes, was there a difference in your normal flow rate?

Anytime during the past 5 years, have you experienced a noticeable difference between fresh water volumes pumped into the well versus brine water produced? ☒No

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

Are you concerned about pulling the tubing due to the fact it may be difficult to re-enter the hole? ☒Yes

Are you concerned about running a sonar tool in fear of losing tool because of debris in hole? ☒Yes

Have you ever conducted a fly over of your well site? ☒No

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 lifetime of the well then your calculation would be *18,000,000/180,000* =100 x 50 =5000

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1. Provide the calculated number above here: 1,078.74
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Is the calculated number found in #1 above greater than #2? ☒No

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Comments or recommendations for OCD:

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Company Name – print name above

Wayne E. Roberts
Company representative – print name

Wayne E Roberts

Title: Director, Environmental & Regulatory Compliance

Date: September 5, 2008

ASHLAND PIPE LINE COMPANY ENGINEERING DEPARTMENT			SHEET AFE
SUBJECT SALINE No.1 BRINE WELL SECTION 36, 18S, 37E., LEA Co. NMPM			DISTRICT DRAWING
BY S. ROGERS.	CHECKED BY	APPROVED BY	DATE 7/29/94

0427-6 (02/91)

API # 30-025-12803
SALINE No.1 BRINE WELL
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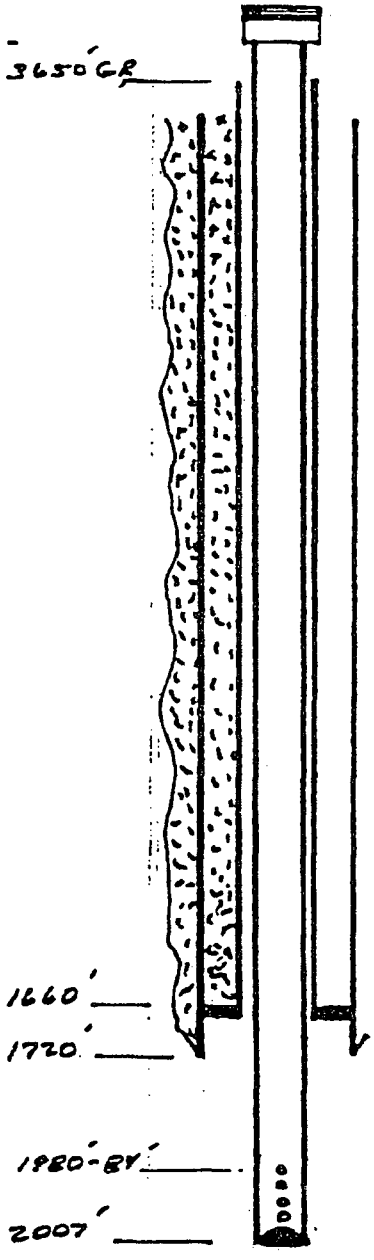

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PRESENT WELL CONDITION
6/14/94

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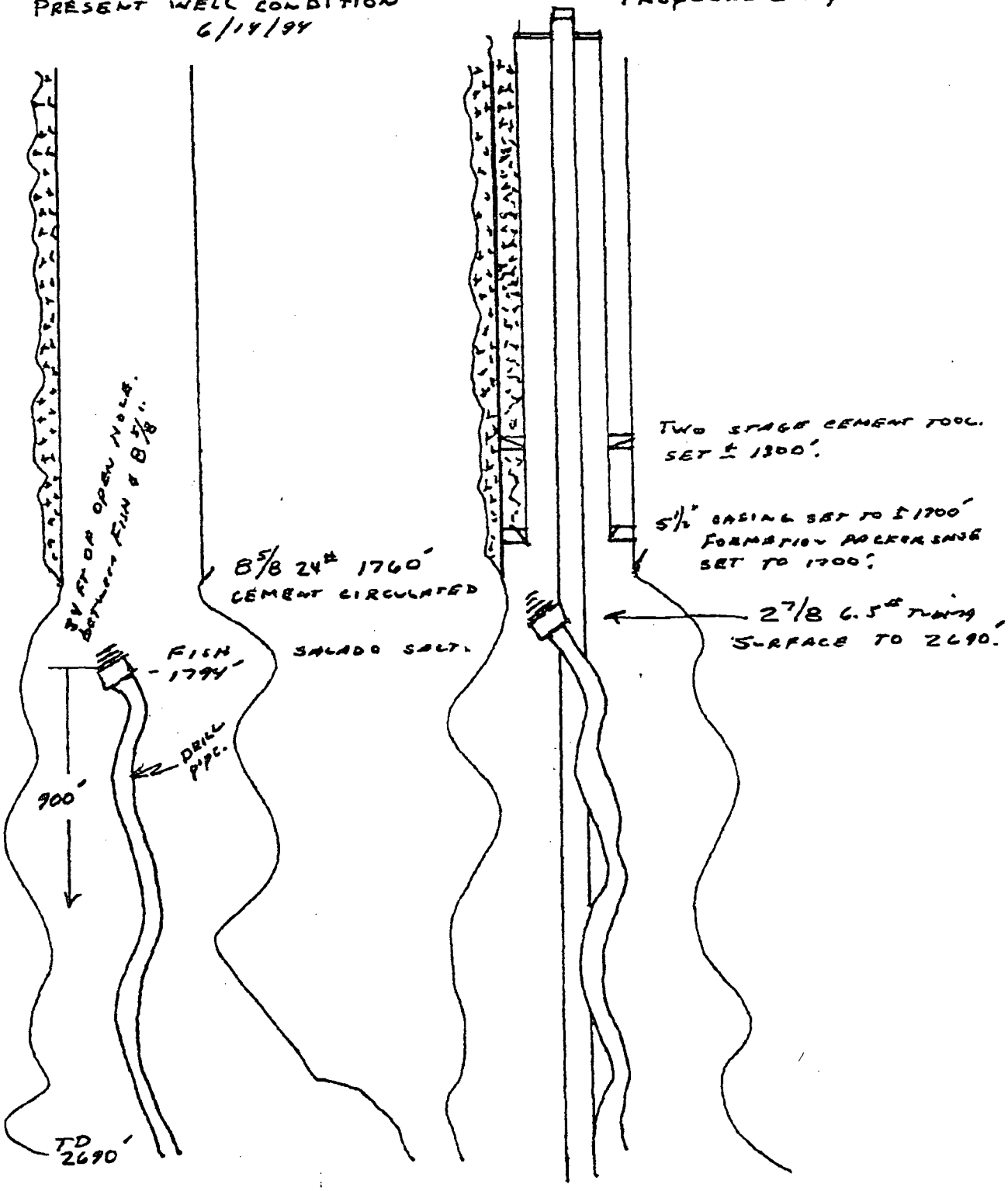

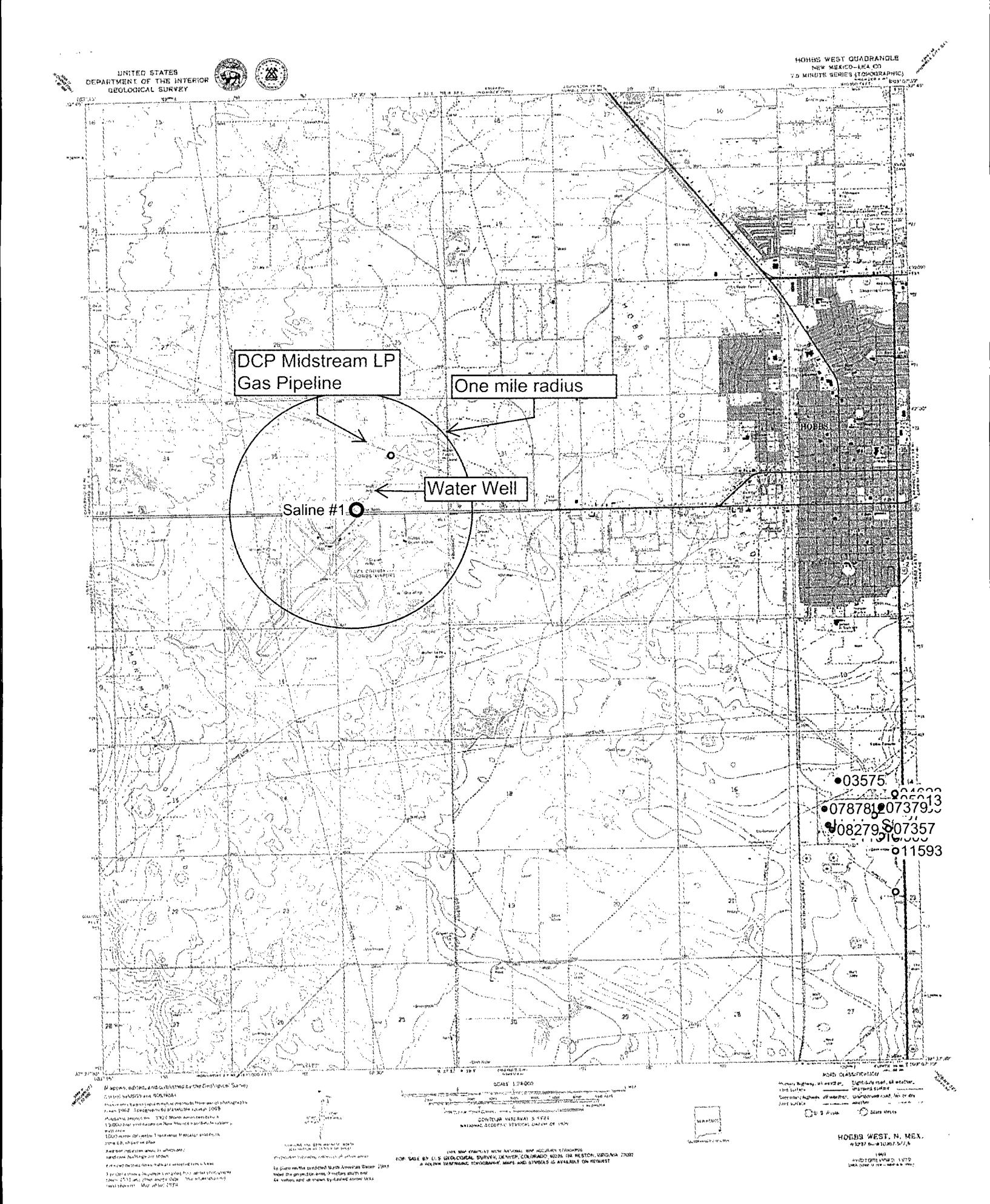

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Thanks & Best Regards,
Wayne E. Roberts
Director, Environmental & Regulatory Compliance
S & SW Divisions - Plains All American
3705 E. Hwy. 158
Midland, TX 79706
432.686.1767 office
432.413.2574 cell
432.686.1770 fax

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 18S Range: 37E Sections: 36

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 02104 APPRO	18S	37E	36							100	40	60
L 02104	18S	37E	36	1	1	2				100	40	60
L 03551	18S	37E	36	1	2	2				110	55	55
L 03551 APPRO	18S	37E	36	1	2	2				110	55	55
L 08599	18S	37E	36	2	3	4				150	81	69
L 03260 APPRO	18S	37E	36	2	4	2				100	35	65
L 03260	18S	37E	36	2	4	2				100	35	65
L 08581	18S	37E	36	3	2					120	52	68
L 09635	18S	37E	36	3	3					130	40	90
L 09655	18S	37E	36	3	3	3				120	58	62
L 08669	18S	37E	36	3	3	3				172	55	117
L 02622 APPRO	18S	37E	36	3	4	1				110	55	55
L 11972 POD1	18S	37E	36	3	4	1				131	56	75
L 02622	18S	37E	36	3	4	1				110	55	55
L 10350	18S	37E	36	3	4	2				160	150	10
L 12171 POD1	18S	37E	36	3	4	2				175		
L 07693	18S	37E	36	3	4	3				172	40	132
L 08476	18S	37E	36	3	4	3				120	46	74
L 11011	18S	37E	36	3	4	3				158		
L 09805	18S	37E	36	4	1					150	38	112
L 10320	18S	37E	36	4	3	2				158	80	78
L 06700	18S	37E	36	4	3	2				100	44	56
L 11784	18S	37E	36	4	4	2				176		
L 11486	18S	37E	36	4	4	4				200		
L 08481	18S	37E	36	4	4	4				120	39	81

Record Count: 25

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 18S Range: 37E Sections: 36

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	37E	36				21	35	150	55

Record Count: 21

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."

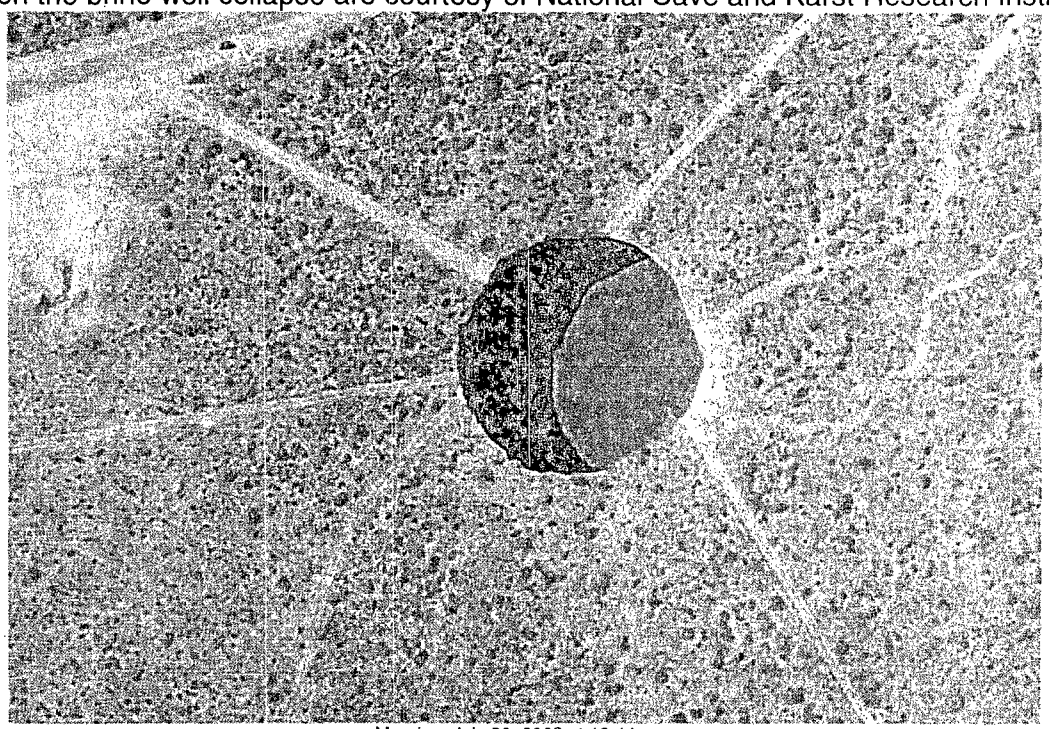
The Oil Conservation Division is continuing to monitor and investigate the collapse of the brine well, located on state trust land 17.3 miles southeast of Artesia, which is still active. The well is owned by Jim's Water Service. County Road 217 remains closed as a safety precaution, and a command center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

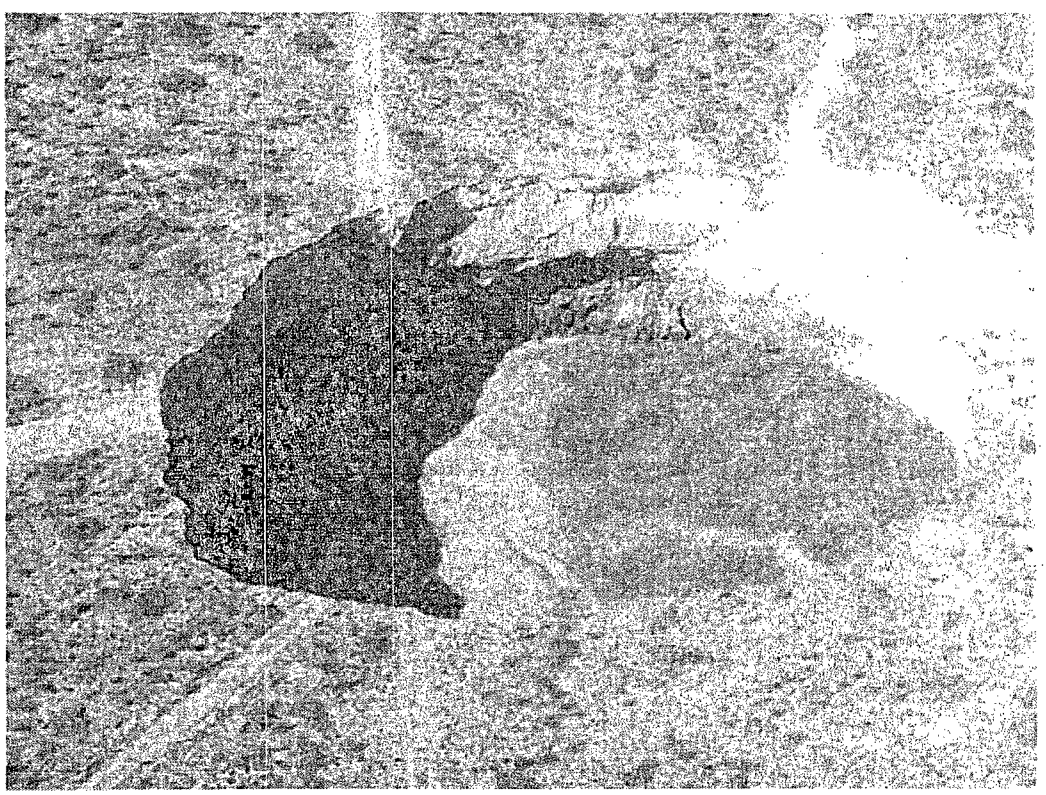
Bureau of Geology and Mineral Resources, and the National Cave & Karst Research Institute are all working together to assess horizontal and vertical movements to project any future subsidence. Work on a protective fence and keep-out signage began yesterday with completion expected on Friday.

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
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

OIL CONSERVATION DIVISION
BRINE WELL INFORMATION REQUEST

GENERAL INFORMATION:
Operator Name_____ Well Name(s)_____ API Number _____ Brine Well Permit # _____ Date Permit Expires? _____ Location: Section _____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
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Hansen, Edward J., EMNRD
Sent: Wednesday, July 23, 2008 5:56 PM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD
Subject: FW: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

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

From: Hansen, Edward J., EMNRD
Sent: Wednesday, July 23, 2008 5:54 PM
To: Porter, Jodi, EMNRD
Subject: RE: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

Jodi,

We counted (from our database: RBDMS):

16 Active Brine Wells

11 Plugged and Abandoned Brine Wells

2 Inactive Brine Wells

From: Porter, Jodi, EMNRD
Sent: Wednesday, July 23, 2008 5:00 PM
Subject: PR-Secretary Prukop Proposes Stricter Conditions on Brine Wells State-wide

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

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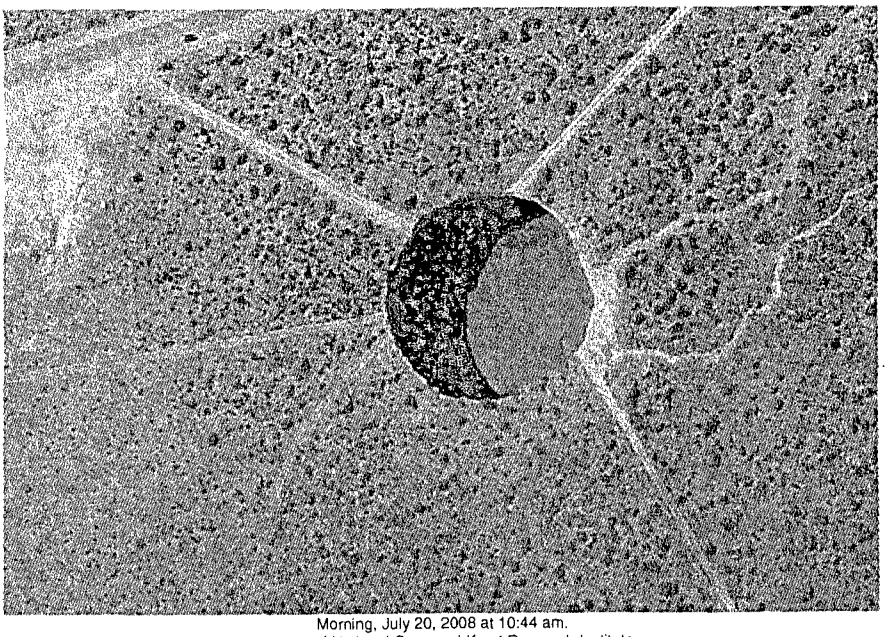
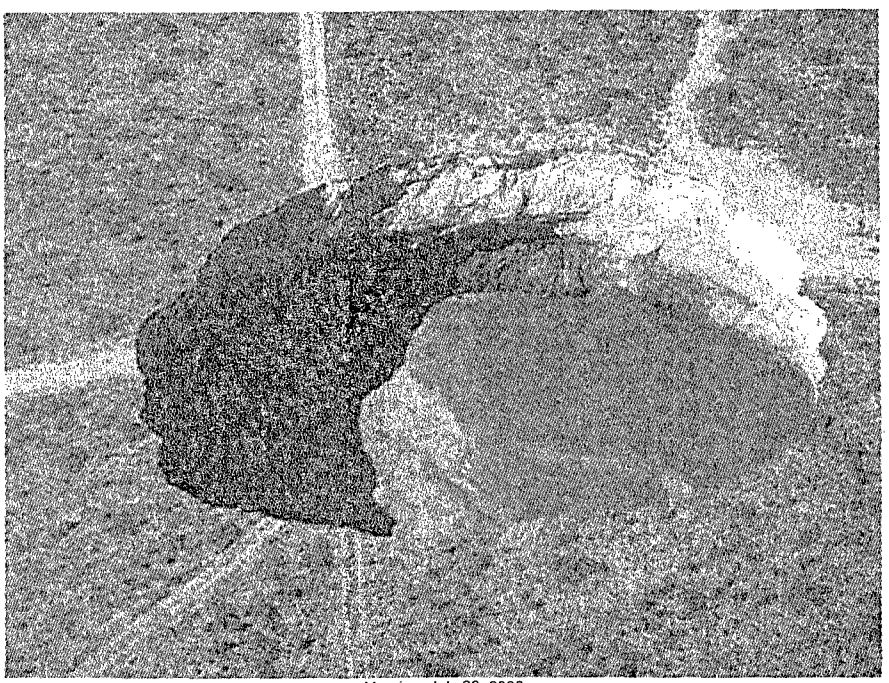


Morning, July 20, 2008 at 10:44 am.
courtesy of National Cave and Karst Research Institute



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