NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor

Joanna Prukop

Cabinet Secretary
Acting Director
Oil Conservation Division

M-E-M-O-R-A-N-D-U-M (3-02-04)

To: Joanna Prukop, Acting Director
From: Frank T. Chavez, District III Supervisor
Subject: Report on Chi Operating Incorporated Well Incident in Carlsbad
Date: May 7, 2004

Attached is the final report of the OCD investigation of the gas well incident in Carlsbad. This completes a portion of the duties you asked me to perform concerning this incident. I intend to complete the evaluation of the OCD response to this incident, and recommendations for rule changes and preventive actions by June 4, 2004.

This incident has resulted in the issuance of a formal Notice of Violation to Chi Operating Incorporated. We will handle this enforcement action through the regular process of calling Chi to an administrative conference and either issue an agreed compliance order or go to a public enforcement hearing which will result in a formal hearing compliance order.

There is much public interest in this report so I am making myself available to Carlsbad City Government representatives and others who have questions about the incident.

Oil Conservation Division Investigation of the Chi Operating Inc. Gas Well Incident in Carlsbad

Overview

1. On Thursday morning, March 11, 2004, the Chi Operating Inc. (Chi) Merland #2 well, located in Section 30, Township 22 South, Range 27 East, within the city limits of Carlsbad, experienced an unexpected surge of gas from the well that was then vented to the atmosphere. This incident caused the evacuation of many residents of Carlsbad and disruption to local business due to concern of a possible explosion and fire. The OCD considers Chi the responsible party per OCD rules and has interviewed Chi and various contractors who worked for Chi. In this report we will avoid jargon and technical language where possible in order to make it more understandable to a broader range of readers.

Summary

2. After the well had been drilled to the necessary depth, the drill pipe was pulled from the hole in order to run a special instrument into the hole for obtaining information about the formations that were drilled. Chi took the usual precautions to retain control of the well during the process of pulling the drill pipe. There was no indication that there was any problem at this time. While a contractor was assembling the instrument and had partially inserted it in the hole, the contractor noticed that the well was flowing back the drilling fluid that had been left in the hole to control it. The flow accelerated expelling all of the drilling fluid and finally only gas was flowing from the hole. During an attempt to safely divert the gas through a special pipe for that purpose, that pipe detached from the control system causing the gas to be vented too close to the drilling rig to safely burn. Chi had a choice to direct the flow through other smaller pipes, to shut off the gas flow entirely, or to continue to allow the gas to flow close to the rig. Chi determined that the first two of those options carried the probability of causing a "downhole blowout," as discussed below. Chi chose to continue to vent the gas unlit. Because this created a gas plume that could have ignited under certain conditions, Chi contacted local emergency agencies. Chi also contacted professional well specialists to assist them to return the gas venting to a safe process and complete their well operations and took other actions to resolve the incident. All of the parties involved cooperated fully in the interviews and in supplying documents and information. The OCD investigation has revealed two potential violations of OCD rules related to this incident; other potential violations are non-contributing or administrative in nature.

Purpose of the investigation

3. Under the Oil and Gas Act, NMSA 1978, Sections 70-2-1 through 70-2-38, the OCD is empowered to conduct investigations and to make rules. The focus of the investigation as spelled out in Attachment B was on " . . . determining the

cause of the blowout, reviewing the operator and OCD response to the blowout, identifying whether there were any violations of OCD rules, advising on appropriate enforcement action, and developing recommendations to prevent similar incidents in the future, including recommendations for appropriate rule changes."

Process

4. We used the team approach to conduct this investigation. The OCD has developed new enforcement processes that allow a District Supervisor or Bureau Chief to request or allow the Director to appoint a person from outside the district or bureau to coordinate the OCD investigation of high profile or highly significant incidents. Secretary Joanna Prukop, as Acting Director, orally appointed Frank Chavez, the District Supervisor of the OCD Aztec office, to lead this investigation. In her absence, the appointment was confirmed in writing by Carol Leach as shown in Attachment B. Tim Gum, the District Supervisor of the Artesia office, Bryan Arrant, the Artesia district geologist, and Van Barton, the head compliance inspector of the Artesia office, were other members of the team. We determined what documentation would be needed and made arrangements to collect it. We also set up interviews with the operator and contractor employees who were on site at the time of the incident. See Attachment A for the documentation collected and the persons involved in the interviews.

Background

5. Chi filed OCD form C-101, APPLICATION FOR PERMIT TO DRILL, REENTER, DEEPEN, PLUG BACK, OR ADD A ZONE, with the Artesia OCD office on December 16, 2003. (Chi also went through a separate approval process with the City of Carlsbad.) Due to the proximity of the well to human habitation, the Artesia office required Chi to include an H2S contingency plan as an extra safety precaution before the permit would be approved. The permit met the OCD requirements and was then approved on January 15, 2004. During their interview concerning the incident, Chi pointed out two important parts of the permit. The intermediate casing was designed to be set through the Delaware formation and into the top of the Bone Spring formation although the standard practice in this area was to set it shallower directly above the Delaware formation. Their opinion was that the Delaware formation could take fluid from the hole especially if higher pressures were encountered during the drilling of the well. By setting the casing through the Delaware, Chi could have more control of downhole conditions by being able to use heavier drilling fluid if necessary. The second point is that Chi's approved permit included a contingency string of casing to be set at 10,400' if high pressures were encountered in the Strawn formation. These plans indicate an awareness of the possibility of pressure problems.

The Incident

6. Chi commenced drilling the well on February 6, 2004, and reached the intended total depth of the well on March 10, 2004. Chi encountered no indications in the drilling fluid or other indication of high pressure that necessitated installing the contingency casing. During drilling, there were no indications of high-pressure formations that would flow in the hole or low-pressure formations that would allow the drilling fluid to flow into those formations. The drilling fluid, usually called "mud," is pumped down through the drill pipe and out through the drill bit. It comes back up around the drill pipe back into special tanks. It serves several important purposes. One is to bring to the surface the material that is removed by the drill bit. Another purpose is to apply hydrostatic pressure to the formations that contain fluid under pressure so that the formation fluids do not flow into the hole. Chi closely monitored and managed the drilling fluid and its properties to meet the current and anticipated hole conditions. During the drilling of a formation called the Strawn, Chi anticipated that there might be gas and redirected the drilling fluid through equipment to separate the gas from the drilling fluid for closer observation of the gas.

7. The last major change to the drilling fluid was at approximately 11,260' when Chi changed the drilling fluid by adding material to make it thicker and give it better properties for drilling the deeper formations. This is a standard practice of operators drilling to this depth in this area. When Chi drilled into that formation the heavier drilling fluid was able to hold the gas in that formation and prevent it from flowing into the hole. This was indicated by the very low amount of gas in the returning drilling fluid. The OCD has reviewed the "drilling fluid log," a technical description of the material that was being brought up and several other drilling measures. This record is very important in determining if gas flows are being encountered while drilling because it records the presence of gas in the drilling fluid as it comes back up the well. Our analysis and the interviews with the drilling fluid-logging contractor do not show that there was any indication that the well was flowing an abnormal amount of gas into the drilling fluid. As required by OCD rules, while the drill pipe was all of the way to the bottom of the hole, enough drilling fluid was pumped down and around the pipe to displace the volume in the hole twice to remove any gas that was trapped in the drilling fluid and to equalize the pressure of the drilling fluid with the pressures in the formations. If the formations had been flowing gas into the hole, gas would have been expected to show up in the drilling fluid.

8. After the drilling fluid volume had been displaced twice, the drilling rig crew began pulling the drill pipe out of the hole in order to lower special scientific instruments into the well. This pipe removal must be done in a manner to prevent the pipe from pulling the thick drilling fluid out of the hole thus allowing gas to enter the void space in the hole created by that action. The procedure includes pulling the pipe slowly and refilling the hole with drilling fluid to take up the space in the hole previously occupied by the pipe. The drill string was pulled at a rate that allowed the crew to measure the length of pipe after it was pulled.

The observations of the crewmembers and others indicate that drilling fluid was being added to the hole as the pipe was being pulled from the hole.

9. A drilling rig crew shift change occurred when there were only ten sections of drill pipe remaining to be removed from the hole. The new crew observed that a measuring device showed that mud had been added to the hole and there were no indications of any problems. At about 8 o'clock in the morning on March 11, the crew finished pulling the remaining pipe and the drill bit from the hole and filled the hole with drilling fluid. The crew then retired to the "doghouse" to eat breakfast. At this time, the crewmember who had the duty to monitor the metal tanks that hold the drilling fluid (called "drilling fluid pits"), was given permission to leave the site for personal business. Nobody else monitored the drilling fluid pits after he left. He stated that when he left, he did a visual inspection of the pits and the pit levels were within expected limits at this stage in the operation.

10. Chi had equipped the drilling fluid pits with a system that sounds an alarm if the level of drilling fluid in the pits becomes too high or too low. The most likely cause if the level of drilling fluid in a pit becomes too high is that the well starts flowing gas and mixing it with the drilling fluid thus increasing the volume, or if the flowing gas displaces the drilling fluid from the hole. The fluid level in the pits becomes too low if during the process of pumping drilling fluid into the hole during drilling or fill up, some of the drilling fluid flows into one or more of the downhole formations. The crewmembers reported that the alarm system was often turned off when they were removing or replacing the drill pipe because the alarms would sound constantly with the changing levels. The alarm level settings are adjustable. The system was calibrated and tested when it was initially installed on the drilling fluid pits at this well site. At some time before or during the process of pulling the pipe the alarms were turned off.

11. After the crew left the rig floor, the contractor who was going to run the specialized instrument into the well began assembling the sections of the instrument. This particular instrument contained two different radioactive sources. The low level of radiation emitted by this instrument reacts with the different rock layers and this reaction is recorded at the surface through a wire in the cable attached to the instrument. The low level of radiation contained in this tool and the strict controls in using the tool mitigated the risk to the public and to the crew. This instrument can be lowered into the hole in one of two ways. First, the well can be opened to the environment at the top of the well control device called the blow out preventer (BOP) stack. Then a packing device to seal around the cable is attached to the top of the BOP stack. Then the instrument is lowered through the packing device and BOP stack. The second method is to use a device called a "lubricator." The lubricator is a long piece of pipe to which the packing device is attached at the top. The instrument is pulled into the pipe and then the pipe is attached to the top of the BOP stack. When the hole is opened to lower the tool it is a completely closed operation and the hole is not open to the environment. The first method is the one generally used when there is no

indication that there may be a pressure problem with the well. On a previous well which indicated a possible pressure problem Chi had used a lubricator. On this well there were no indications of possible pressure problems so Chi chose to not use a lubricator.

12. It took approximately one hour from the time the pipe was pulled from the well for the instrument crew to have the instrument ready. When the BOP was opened in order to insert the instrument, the instrument crew looked directly down into the BOP and noticed that the drilling fluid was bubbling. They asked the drilling rig "pusher", or supervisor, about this occurrence and were told that this was normal. This can occur because the drilling fluid was very thick and the process of pumping the drilling fluid through the pits can dissolve some air in it. Then when the drilling fluid stops moving, the entrained air slowly bubbles out. The instrument crew attached the packing device and began to insert the instrument into the well. The instrument was approximately 90 feet long and was made up of several different-sized segments. They ran into problems because some of the segments of the instrument could not fit through the packing device they had installed. They detached the conductor cable from the instrument in order to remove their packing device and took it to their truck to fix the problem. They noticed that some drilling fluid was starting to squirt up around the instrument and that the drilling fluid was also shooting up into the air at the place where it returns to the drilling fluid pits at the side of the rig. When they returned to their vehicle they called their safety coordinator on the telephone to apprise him of the situation. At this time the rig crew was still in the doghouse. Shortly afterward they observed the pusher moving across the rig floor and to the doghouse.

13. The pusher related that when he had received the question about the bubbling drilling fluid, he was in his vehicle on the telephone with another call. After he responded to the question he returned to his phone call. When he completed that call he left his vehicle and walked around the drilling fluid pit side of the rig. When he saw the level of the drilling fluid in the pits and the drilling fluid erupting from the connections where the fluid returns from the hole to the pits, he ran to the doghouse and alerted the rig crew. The rig crew reported that he told them the pits were running over. The pusher then went to the instrument crew truck and asked them if they could remove their tool so that the BOP could be closed. They responded that they could not return to the rig floor unless their safety coordinator allowed it. During this time the flow of drilling fluid was increasing dramatically and it was shooting high into the air. The pressure of the drilling fluid and gas below the instrument pushed it up out of the well until approximately 40 feet of the instrument was sticking up. The instrument could not come out any further because a special spring on the side of it was extended and could not fit through the opening. One of the rig crew donned a special harness and was pulled up to the top of the instrument by a cable controlled by another crewman in order to reattach the conductor cable to the instrument and allow the instrument crew to pull it out of the hole. The instrument crew had been advised by their safety coordinator not to return to the rig floor to pull the instrument out

until the well stopped erupting. The pusher asked them the diameter of the instrument so that he could close the annular preventer, a device in the top portion of the BOP stack that uses special shaped seals to adapt to whatever is inserted in it. Later, the instrument crew evacuated the location leaving the tool stuck in the blowout preventer.

14. The pusher shut down possible sources of ignition on the rig and was able to close the annular preventer around the instrument to restrict the drilling fluid and gas from flowing around the instrument and creating a dangerous situation on or near the rig floor. The pusher then diverted the flow of the drilling fluid from the well through a special safety pipe installed for that purpose. That special safety pipe is designed to take gas or liquid that flows from the hole and discharge it at a safe distance from the rig. The gas can then be ignited there safely. The pusher discovered that there was a leak at a connection in the pipe and asked two of the rig crew to tighten it after he shut the flow off to that pipe and diverted it to other safety pipes using the valves on the control equipment. The crew discovered that there were actually two connections leaking on that pipe. The pusher was also aware that the current weather conditions might not be conducive to igniting the gas due to high humidity, mist, and little wind. At this time the pusher was in telephone contact with a Chi engineer in Midland apprising him of the situation. The pusher closed the remote control choke valves of the BOP equipment to allow the pressure in the hole to build so that he could observe the pressure and relay it to the Chi engineer. The Chi engineer needed to know the pressure in the hole so that he could make a decision about trying to pump drilling fluid back into the hole. When the pressure reached 1500 PSI and the crew had finished tightening the connections on the special safety pipe, the pusher opened the flow of the drilling fluid to that pipe.

15. The safety pipe separated from the manifold to which it was connected and the force of the drilling fluid pushed the pipe aside. Very shortly most of the drilling fluid was emptied from the hole and only gas was blowing out. The pusher discussed the problem with the Chi engineer in Midland and was instructed to allow the gas to flow through the existing separated connection and begin the necessary emergency notification and safety procedures. The pusher alerted the Carlsbad Fire Department and others. Chi then passed the handling of this incident at the rig to Cudd Pressure Control, Inc., a company specializing in well emergencies. (The technical handling of the release does not pose an issue to be included in this report.)

16. Chi stated that the decision to allow the well to flow through unrestricted connections was made to avoid the likelihood of a condition called a "downhole blowout." If the well had been shut in or diverted through choked restrictions, the pressure from the deeper formations would have been exerted against the yet uncased shallower formations, against the base of the intermediate casing in the hole, and against the intermediate casing itself. If the pressure had been exerted against the shallower formations those formations may have taken some of the

gas that was flowing from the deeper formation until some kind of equilibrium was established that caused the pressures to rise in the hole. If a thin layer of fine material from the drilling fluid effectively sealed those shallower formations, then the high pressures from the deeper formation would have been exerted immediately against the base of the shallower casing and the casing itself. Chi stated that they were concerned that during the drilling of the hole, the drill pipe rubbed against the casing and very likely created some thinning of the pipe. This thinning could have lowered the pressure capacity of the casing. If the pressure from the deeper formations ruptured this thinned pipe, gas may have uncontrollably escaped to even shallower formations or into the water table, and erupted through the ground around the rig. Quite often these eruptions ignite around the rig causing a very dangerous and difficult situation to control. Igniting the gas at the broken connection would have created a large fire at a point close enough to likely cause loss of control of the well by damaging the well control equipment or causing the substructure of the rig to collapse and destroy the BOP thus causing complete loss of control. Attachment C is a photo showing the gas flowing from the connection.

17. A question has arisen about what influence the instrument stuck in the BOP had to this process. By the time the pusher was aware of the problem, the force of the flow was already pushing the instrument out of the hole. By the time the rig hand had attached the cable to the instrument there may have been enough pressure to propel the instrument dangerously around the rig, damaging important equipment needed to control the well, striking a spark, or injuring somebody. Since the annular preventer sealed successfully around the instrument, there was little danger of a flow of gas on the floor around it. Ultimately, the decision to attempt to flare the well through the special safety pipe would have been made regardless of the instrument being stuck in the BOP.

Compliance with the permit to drill

18. The first question to be answered in this investigation is if Chi was in violation of their permit to drill. An inspection by OCD staff determined that Chi was in compliance with the well control requirements of the approved permit to drill. Although the Sundry notice that Chi filed by fax on March 12 does not show the required casing test, the drilling report does document that the pressure tests were performed on February 7 and 19, 2004.

Operational violations of OCD rules

19. OCD Rule 109.B. requires a blowout preventer (BOP) to be installed and maintained "in good working order" on all rigs operating within the corporate limits of any city. On most wells the BOP includes attached equipment such as remotely controlled valves, manifolds, chokes, and safety lines to be effective. A schematic of the actual BOP installation used on this well is shown on Attachment D. The pipe that came loose from the connection and made it

impossible to flare the gas was an important part of the BOP on this well and was necessary for the entire system to be used as intended. Had that line not come loose, the impact of the sudden gas flow would have been minimal because the gas could have been safely burned at the pit. There is a possibility that the force from the drilling fluid moving at high speed through the pipe caused the connection to fail, however, that is what the pipe is supposed to be able to handle. This line was not assembled tightly enough to be usable due to the two leaks that developed the first time that the pusher diverted the flow through it. This also reveals the likelihood that the line was not tested when it was installed. If the line that separated from the manifold had been tested when it was installed, the problem could have been discovered and repaired. The crewmember who tightened the connections on the line told us that one of the leaking connections was adjacent to the threaded connection that actually came apart. The direction of turn to tighten a connection that was leaking was the same direction that would have loosened an upstream threaded connection. He told us he was very aware of this and as he tightened the loose connections he observed that the other upstream connection did not move. As a secondary note, this pipe was not secured to keep it from moving if a large volume of gas had actually been sent through it. Because of the leaks on this line and the inability of the pipe to stay together during a process it was intended to handle, the BOP equipment was not in good working order. Thus Chi was in violation of Rule 109.B.

20. OCD Rule 114.B. requires an operator to maintain drilling fluid in a hole "sufficient to control subsurface pressures." Coming out of the hole with pipe is a process that can cause unequalized, or unbalanced, pressures so it is important for the operator to circulate drilling fluid and maintain the height of the fluid while coming out of the hole with the drill pipe. The subsurface pressures must also be controlled with adequate drilling fluid after the pipe has been removed in order for the hole to remain equalized or balanced. It is even more critical at this time because without the drill pipe in the hole, a flow of the drilling fluid and formation fluids is harder to control. The drilling fluid used in this well was closely monitored during drilling and was sufficient to control the subsurface pressures during the drilling process. The crews pulled the drill pipe from the hole at a rate allowing them to measure it and evidence indicates that they did refill the hole with drilling fluid to balance the pressure and prevent gas from coming into the hole. However, at some point during the trip or after all of the drill pipe had been pulled from the hole, gas began entering the hole. Once that gas entered the hole it started traveling slowly upward in the drilling fluid and expanding in volume as it neared the surface. As the gas expanded and traveled to the surface it displaced drilling fluid from the hole. This drilling fluid was displaced into the drilling fluid pits. The flow of the drilling fluid into the pits is visually observable. As the fluid level in the pits rose, it should have set off the audible alarm to alert rig personnel. However the pit alarm had been turned off. Had this flow been detected earlier, the rig crew could have taken steps to prevent the flow from continuing, such as pumping drilling fluid back down the hole to temporarily control the gas. This might have prevented the conditions that

caused the pipe connection failure and thus allowed safe flaring of the gas. As stated in paragraph 6 above, our review of the information did not indicate that there was a problem with the drilling fluid controlling the well before the drill pipe was removed. Also, the drilling fluid weight required to stop the flow from the well after this incident was the same as the fluid weight used when drilling. This indicates that the drilling fluid weight was adequate to control the subsurface pressure of the well. Chi, however, did not adequately monitor the drilling fluid to see if it was flowing back and did not maintain the height of the drilling fluid sufficiently to control the pressure in the well. Thus Chi was in violation of Rule 114.B.

Non-contributing and administrative violations

21. Rule 13.B. requires operators to conduct their operations in a manner that does not waste gas by allowing it to escape from a natural reservoir. By violating Rule 114.B, Chi allowed approximately 48.7 million cubic feet of gas to escape from the reservoir. Had there not been a violation of Rule 109.B., the amount of gas allowed to escape would have been less because Chi would have begun the process to control the flow sooner. Thus Chi was in violation of Rule 13.B.

22. The second sentence of OCD Rule 114.B. requires that the BOP be tested at least every 24 hours. Without specific test procedures, the operator must use those procedures appropriate to the drilling process being performed. A complete BOP test as generally performed in the industry when the BOP is installed requires that positive pressure be exerted against the BOP. This can only be done when there is a solid surface to test against below the BOP such as after new casing has been set or by using a special packing device. By way of contrast, the pipe rams and other parts of the BOP equipment can be tested daily. The drilling log from the rig indicates "BOP drill 5 minutes" at the beginning of almost every day. However, the rig crew reported that there were seldom any BOP drills actually conducted. The pusher stated that the BOP equipment was actuated about once a week. By not performing daily testing of the BOP, Chi was in violation of Rule 114.B.

23. Rule 1103.C. requires an operator to report that drilling has commenced on a well within ten days. Chi began drilling this well on February 6, 2004. However, the required report was not filed with the Artesia office until it was faxed on March 12, 2004, the day after the incident began, and only after being reminded by an Artesia staff member. Thus Chi violated Rule 1103.C.

24. Rule 1103.D. requires an operator to report on the setting and testing of each casing string within ten days. The surface casing was set and tested on February 7, 2004. The intermediate casing was set and tested on February 19, 2004. These activities were reported on the same C-103 that was faxed to the Artesia district office on March 12, 2004. This report was delinquent and did not include a report of the testing of casing. Thus Chi violated Rule 1103.D.

25. Rule 102.B. requires an operator that intends to drill a well within the corporate limits of a city to notify that city and include evidence of that notification with the form C-101. Chi notified the city of Carlsbad on December 12, 2003, and submitted a C-101 to the Artesia office on December 16, 2003. The form C-101, however, did not contain evidence of notification. The purpose of this rule was served when Chi notified the city four days before filing the permit application. Also, the Artesia OCD office has a practice of supplying a city with a copy of the permit application when it is received.

Attachment A Page 1

Documentation reviewed

Mud logs
Daily drilling reports
Driller's log
Geolograph
Mud Engineer's records

Attachment A Page 2 – Sign in sheet for interview with Baker Atlas

NAME	COMPANY	TITLE	PHONE
Clinton Stone	Baker Atlas	Engineer	432-563-1275
Michael Hare	Baker Atlas	Operator	563 1275
Eddie Williams	BAKER ATLAS	HSE	432-570-1050
Phil Stephe	Baker Atlas	RSO	717-625-4621
Michael Feldewert	Holland & Hart	Atty	505-988-4421
Frank T. Chavez	OCD-Aztec		
Timothy Gum	OCD - Artesia		505-748-1283
Van Barton	OCD Artesia		505-748-1283
Bryan Arrant	OCD - Artesia	PES	505-748-1283
David M Cobb	Baker Atlas	Asset Manager	432-570-1050
Marcus Bace	Baker Atlas	Ops Mgr	432-563-1275
Richard Smith	Baker Atlas	Sales	432-570-105

Attachment A Page 3 – Sign in sheet for interview with Patterson UTI Drilling

NAME	COMPANY	TITLE	PHONE
Frank T. Chavez	OCD	D. S	393. 6158
TERRY RHOADS	COTTON BLEDSOE TIGHE & DAWSON	ATTY	432 685 8570
L. M. BLAKE	PATTUTI		
Jeff Phillips	Patterson-UTI Drilling		432 699 5050
AL MITCHELL	Patterson-UTI Drilling		432-699-5050
Kim Barton	O.C.D		748-1283
Bryan Arrant	O.C.D.		748-1283
[signature]	OCD		748-1283

Attachment A Page 4 - Other interviews

Daylight drilling crew –
George L. Berryman
Todd M. Martin
Darren J. Prosise
Gary D. Hatfield

Mud logger –
John W. Morris

Mud engineer –
Mike Pruitt

Attachment B

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor

Joanna Prukop
Cabinet Secretary
Acting Director
Oil Conservation Division

March 17, 2004

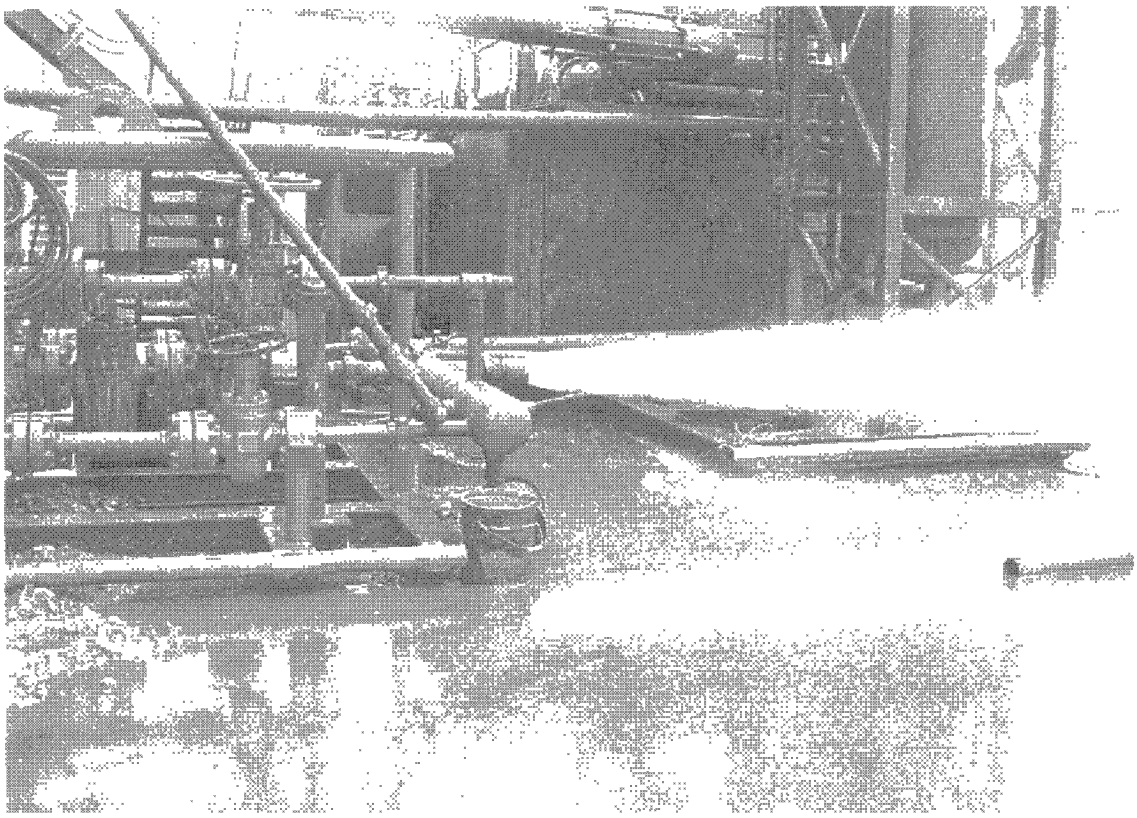
Memorandum:

To: Frank T. Chavez, OCD Aztec
From: Carl Leach, Acting OCD Director
Subject: OCD Investigation of Carlsbad Blowout

In your role as Enforcement Coordinator for the Oil Conservation Division I am appointing you to coordinate the investigation of the recent blowout in Carlsbad effective immediately. The investigation should focus on determining the cause of the blowout, reviewing the operator and OCD response to the blowout, identifying whether there were any violations of OCD rules, advising on appropriate enforcement actions, and developing recommendations to prevent similar incidents in the future, including recommendations for appropriate rule changes. The major portion of the investigation and preliminary findings should be reported to me by April 16.

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

Attachment C



This photo shows the gas flowing from the blowout preventer equipment at the point where the safety pipe came loose. The safety pipe is in the lower right of the photo. Note the drilling fluid covering the area.