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February 26, 2013

Ms. Loretta E. Pineda
Division Director
Department of Natural Resources
Division of Reclamation, Mining and Safety
1313 Sherman Street, Suite 215
Denver, CO 80203

RE: Costilla County / BMRI - storage of poor quality waters

Dear Ms. Pineda:

On behalf of the Board of County Commissioners of Costilla County and the Costilla County Conservancy District ("Costilla County"), we respectfully request that the Division of Reclamation, Mining and Safety ("Division") initiate an investigation as to the practices of Battle Mountain Resources, Inc. ("BMRI") concerning water storage at the former BMRI mining site in Costilla County, Colorado.

As part of ongoing post-mining reclamation activities, BMRI is storing poor quality waters on a long-term basis in a facility known as the lined tailings facility ("LTF"). Problematically: (1) the LTF was neither designed nor intended for that purpose; (2) the LTF is located only four miles to the northeast of the town of San Luis; and (3) if there is a significant leak or spill from the LTF, poor quality waters would contaminate the aquifer underlying the Salazar Ranch, the same source of supply as the town's wells. Consequently, BMRI's storage of poor quality waters in the LTF poses a substantial threat to the town's and other community wells' water supply.

Enclosed is a memo outlining Costilla County's concerns.

We would appreciate being kept advised as to the status of the proceedings with BMRI. Thank you for your consideration.

Very truly yours,

John C. McClure, on behalf of
Costilla County Conservancy District
And the Board of County
Commissioners of Costilla County

/s/ Ed Lobato
Edwin J. Lobato, on behalf of
The Board of County Commissioners of
Costilla County, the Montez Ditch, San
Luis Peoples Ditch, Acequia Chiquita
Ditch, and the Espinosa Ditch

JCM:aa

Enclosure

MEMORANDUM

TO: MS. LORETTA E. PINEDA

FROM: MR. JOHN MCCLURE AND MR. ED LOBATO

SUBJECT: CCCD / BMRI – CONCERN RE: STORAGE OF POOR QUALITY WATERS

DATE: FEBRUARY 26, 2013

Both Costilla County's Board of County Commissioners and the Costilla County Conservancy District ("Costilla County") are deeply concerned about BMRI's[1] current water management practices.

As part of on-going post-mining reclamation activities, BMRI is storing poor quality waters on a long-term basis in its lined tailings facility ("LTF"). Problematically, **(a)** the LTF was neither designed nor intended for that purpose, **(b)** the LTF is located only four miles to the northeast of the town of San Luis, and **(c)** if there is a significant leak or spill from the LTF, poor quality waters would contaminate the aquifer underlying the Salazar Ranch, the same source of supply as the Town's wells. Consequently, BMRI's storage of poor quality waters in the LTF poses a substantial threat to the town's water supply.

From 1991 to 1996, BMRI mined gold at its Costilla County project site. As part of those mining operations, BMRI dewatered an area called the West Pit and pierced a green clay confining-layer. *See Exhibit A* – Scott Mefford's 8/20/12 Engineering Report at pp.7-8.

During the post-mining phase BMRI backfilled the West Pit with rock. In 1999, substantial quantities of poor quality waters emanated up and into the West Pit and then spilled into the Rito Seco – a small stream which is adjacent to the West Pit and which proceeds west from the mining area before turning south and heading to the town of San Luis.[2]

During the mining phase, BMRI used the LTF to store tailings. After the mining phase ended in 1996, the LTF was partially but not totally reclaimed (approximately 33 of the 193 acres have not yet been reclaimed). As part of BMRI's current water management practices and water disposal activities, BMRI stores substantial quantities of poor quality waters in a 23 surface-acre reservoir located within the LTF ("reservoir"). *See Exhibit B* – Bill Lyle's[3] 11/2/12 deposition testimony at pp.17.

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[1] Battle Mountain Resources, Inc.

[2] During the early 1990's, BMRI was fined $158,000.00 – one of the largest fines ever issued up to that point – after it spilled a large amount of cyanide at its Costilla County project site.

[3] From 1997 to 2011, Mr. Lyle managed BMRI's Costilla County project site.

After the catastrophic spill in 1999, both the Colorado Department of Public Health and Environment ("CDPHE") and the Division of Reclamation Mining and Safety ("DRMS") became involved. To remedy the spill conditions, and to prevent future spills by lowering the water table and reversing the hydraulic gradient away from the Rito Seco, four "remediation wells" were drilled (in the West Pit). Additionally, to prevent future spills by allowing any escaped waters to be recaptured, seven recapture wells (around the West Pit) were also drilled.

Further, to treat poor quality waters emanating from the West Pit and to discharge good quality waters into the Rito Seco, a reverse osmosis water treatment plant ("RO plant") was constructed next to the West Pit. *See Exhibit B* at p.34. There is nothing that prevents BMRI from using the RO plant exclusively, *see Exhibit C* – Julio Madrid's[4] 11/5/12 deposition testimony at p.63.

It appears that those remedial and preventative measures – which both CDPHE and DRMS continue to regulate – have accomplished their intended purposes.

Disconcertingly, in 2011 and 2012, BMRI used the LTF to store substantial quantities of poor quality West Pit waters. While the LTF is not adjacent to the Rito Seco and while it is regulated solely by DRMS, currently there is no regulation addressing either the quantities of waters which can be stored in the LTF or the water level which should be maintained in the LTF. *See Exhibit C* at p.77.

Annually since 1999, and as allowed by DRMS, approximately 25-35 ac-ft of brine (*i.e.*, discharge from the RO plant) was piped to and then stored in the LTF.

In 2011 and 2012, however, BMRI commenced a new and substantially different water management practice: in addition to the brine, BMRI piped *substantial* quantities – more than 150 ac-ft per year – of poor quality West Pit waters to the LTF and then stored them in it. *See Exhibit D* (providing an illustrative example of BMRI's annual accounting to the Division of Natural Resources; and summarizing BMRI's annual transfers during 2003-12).

In 2011, BMRI piped substantial quantities of poor quality West Pit waters to the LTF's reservoir, stored them in it, and then used them to sprinkler-irrigate (*via* a 50 are center pivot-sprinkler) a canola crop on the LTF. After Costilla County objected, and after the State Engineer's Office concluded that BMRI did not have an irrigation right, that practice ceased. In 2012, BMRI again piped at least 150 ac-ft of poor quality West Pit waters to the LTF, stored them in it, and used them *via* a sprinkler for forced evaporation purposes.

BMRI's 2011 and 2012 water management practices therefore differed significantly from its prior practices. From 2003 through 2010 – an eight year period after the RO plant had been constructed – BMRI had not transferred any West Pit waters to the LTF but had instead treated all West Pit waters at the RO plant. *See Exhibit D*. Consequently, in both 2011 and 2012, BMRI

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[4] Mr. Madrid currently manages BMRI's Costilla County project site.

stored an additional 150 ac-ft of poor quality waters in the LTF and, in turn, BMRI reduced the quantity of poor quality waters treated at the RO plant by approximately fifty-percent.

During the winter and early spring, there is minimal evaporation of waters stored in the LTF. As such, in 2011 and 2012, levels of stored waters increased during those months. In 2011 and 2012, BMRI attempted to lower the LTF's reservoir water level through pumping, but those efforts produced only limited results: the water level was lowered by only approximately five feet and, thereafter, physical restrictions prevented additional pumping. *See Exhibit C* at p.57.

Thus, from 2003 through 2010, BMRI's water management practice focused consistently on treatment of West Pit waters. In 2011, however, BMRI's new practice focused on maximizing evaporation, and experimenting with evapotranspiration. While BMRI grew a canola crop on the LTF to evaluate evapotranspiration, BMRI kept no records regarding it. *See Exhibit B* at pp.70, 75, 76.

Of concern, the LTF was neither intended nor designed to store waters, much less poor quality waters on a long-term basis. BMRI's use of the LTF during the mining-phase (which ended in 1997) differs significantly from the manner in which BMRI is currently using it. In 1990, before BMRI started mining, BMRI's consultants – Rob Dorey and Anne Baldridge – testified before the Mined Land Reclamation Board ("MLRB"). According to their testimony, the LTF was not designed to store waters. *See Exhibit A* at pp.5-6; *Exhibit E* – 1/25/90 MLRB transcript at pp.48, 61. Rather, during the mining phase, a slurry mix containing tailings was taken from the mill and deposited in the LTF; and then water was re-circulated back to the mill. Throughout that process, the LTF's water levels were monitored and BMRI maintained a water balance in it. *See Exhibit E* at p.66. Further, the synthetic liner was designed for use during the operational period of the mine, and not for an indeterminate period of time. *See Exhibit E*, p.65.

After the catastrophic spill in 1999, BMRI's use of the LTF changed. Further, its reclamation concept changed.

According to Mr. Lyle, reclamation at the Costilla County project site would normally have been achieved within 10-15 years after mining had ceased. *See Exhibit B* at pp.94-95. Thus, since mining ceased in 1997, reclamation should have been completed in 2012 (*i.e.*, 15 years after 1997). However, the LTF has been only partially – but not totally – reclaimed. And complete reclamation of the LTF cannot occur as long as there is a storage reservoir on it. Consequently, such reclamation will continue indeterminately. *See Exhibit B* at pp.95-96.

Normally, reclamation would be achieved – *i.e.*, natural conditions would be restored – by importing topsoil and placing it on top of the LTF; and by then re-vegetating the area with natural grasses. However, disposal of poor quality waters became a significant concern after the spill in 1999; until the RO plant's construction was completed, the LTF had to be used as a disposal area for some West Pit waters. Waters were pumped from the West Pit to the LTF for disposal. *See Exhibit B* at pp.23-24. Since waters emanate continually into the West Pit, treating poor quality waters at the RO plant and/or disposal of waters will need to continue indefinitely. However, even though the LTF had served and was intended to serve only a limited purpose

before the RO plant was constructed, its use changed in 2011 and 2012 when BMRI piped substantial quantities of poor quality West Pit waters to the LTF and then stored them in it.

Both the West Pit and the RO plant are apparently regulated heavily by CDPHE and DRMS. For example, BMRI must strictly maintain a designated water level – a 30.80 depth to water below BF-5 wells casing – in the West Pit. In contrast, BMRI is not required to maintain any water level in the LTF. *See Exhibit C* at pp.64-67.

Further, Mr. Lyle essentially testified that a substantial release of poor quality waters from the LTF would reach the aquifer underlying the Salazar Ranch. *See Exhibit B* at pp.127-28. Mr. Mefford, Costilla County's engineering consultant, reached the same conclusion. That aquifer, which is downgradient of the LTF, supplies waters to the town of San Luis's well and other community wells[5]. Because West Pit waters do not meet water quality standards for fluoride, manganese and total dissolved solids, those waters cannot be discharged directly into the stream.

When BMRI started mining, the Salazar Ranch (formerly known as the Dos Hermanos Ranch and the Shalom Ranch) was a separately and independently owned entity. Around 2004, BMRI purchased it.

The ranch, which pumps from two large-center-pivots located on it, grows alfalfa. It also diverts surface waters from the Rito Seco, which is downgradient of BMRI's mine site, for the benefit of both the ranch and four small ditches (the Montez Ditch, Rito Seco Feeder, Acequia Chiquita, and the Espinosa Ditch). Those ditches share a common head-gate with the ranch and divert their surface waters through it.

BMRI's mining and post-mining activities have generated three court cases: [6]

1. 89CW32 (decreed in 1991) – A change of water right and plan of augmentation action related to BMRI's mining activities.

2. 99CW57 (decreed in 2002) – A change of water right and plan of augmentation action which amended 89CW32. During this action the parties stipulated to, among other things, the: (a) creation and pumping of remediation wells in and around the West Pit; (b) construction of the RO plant; and (c) continual pumping of West Pit waters to account for its depletions to the stream.

3. 07CW42 – The current change of water right and plan of augmentation action related to BMRI's (a) retirement of lands within the Salazar Ranch and (b) attendant generation of historic consumptive use credits to provide an augmentation supply, in addition to an existing augmentation supply from a Trinchera irrigation well. In this action, BMRI

[5] Pursuant to 89CW32, one town well is recognized as a designated test site for water quality sampling purposes.

[6] Since Mr. McClure represents Costilla County (and other Opposers), he is familiar with all three cases.

seeks to consolidate 89CW32 and 99CW57 as part of its comprehensive water management plan.

Of significant concern is the means by which BMRI disposes of poor quality West Pit waters.

In 2007, for example, BMRI sought permission from DRMS to pipe poor quality West Pit waters approximately two miles downstream to the Salazar Ranch so that such waters could be used for land disbursal purposes *via* the ranch's two large-center-pivots. Costilla County objected, primarily because that process could contaminate the aquifer underlying the ranch, which supplies waters to both the town of San Luis's wells and other nearby wells owned by various individuals[7]. BMRI subsequently withdrew its application.

Because West Pit waters do not meet water quality standards for fluoride, manganese and total dissolved solids (*see Exhibit B* at pp.104-105), those waters cannot be discharged directly into the stream.

Based on discovery in 07CW42, it is apparent that BMRI: (a) has recently made significant changes to its water management practices at the LTF, (b) has minimal knowledge, at best, about how the LTF should be used safely, and (c) has not implemented reasonable water storage practices. *See Exhibit C* at pp.58, 88-91.

Further, BMRI's agents advise that BMRI has no records regarding its use of the LTF during the mining-phase. The following reflects BMRI's knowledge or, more aptly, its lack of knowledge about the LTF:

i. The LTF's volumetric capacity to store waters is unknown. *See Exhibit B* at pp.89-90; *Exhibit C* at pp.52,55.

ii. Both the quantity of waters currently stored in the LTF and its storage configuration is unknown. *See Exhibit C* at p.55.

iii. The quantity of waters lost by evaporation and evapotranspiration in the LTF is unknown. *See Exhibit B* at pp.101-103; *Exhibit C* at p.45.

iv. The durability and life of the LTF's synthetic liner is unknown. *See Exhibit B* at pp.92-93; *Exhibit C* at pp.57-58.

v. The LTF's life to store waters is unknown. *See Exhibit B* at pp.96-97; *Exhibit C* at p.58.

vi. The quantity of tailings stored in the LTF is unknown. *See Exhibit B* at pp.91-92.

[7] Costilla County was also concerned about the potential negative impacts on soils, domestic animals, and wildlife.

vii. The location of the LTF's pre-mining-phase synthetic liner is unknown (there is also reason to believe that the liner covers only part of the LTF). *See Exhibit C* at pp.57-58.

viii. BMRI conducts no water-balance-measurements on the LTF to understand how the waters introduced into it may be lost through evaporation or other means – including possible leakage. *See Exhibit A* at p.5*; Exhibit C* at pp.61, 88-90.

ix. BMRI employs no internal controls to ensure that waters are stored safely in the LTF – notably absent are controls to prevent overfilling. *See Exhibit B* at p.107; *Exhibit C* at pp.58-59.

x. BMRI does not know how much water can be stored safely in the LTF. *See Exhibit B* at pp.96; *Exhibit C* at pp.58, 81.

xi. The embankments/dams located within the LTF are not designed to hold water. *See Exhibit E* at p.47.

xii. Regarding the dam, BMRI does not conduct safety inspections, it is not inspected by any regulatory agency, and there are no guidelines or standards applied for purposes of reviewing whether it is safe. *See Exhibit C* at pp.78-80.[8]

xiii. BMRI has no policy regarding the quantities of waters which can be stored in the LTF. *See Exhibit C* at pp.58-59.

BMRI's lack of record-keeping and knowledge has significantly hindered – and continues to hinder – Costilla County's ability to have an expert evaluate whether the LTF is viable and/or whether BMRI is using it safely. *See Exhibit F* – 07CW42 12/13/12 transcript at p.3 (the Water Court issuing its final order); at pp.20-21 (statements made by counsel as to the legitimacy of the concerns).

Thus, because BMRI is unable or unwilling to provide critical information, Costilla County has been forced to conduct its investigation based primarily on information obtained from DRMS's website.

Nothing prevents BMRI from treating all West Pit waters at the RO plant before releasing them into the stream. Rather, BMRI is simply choosing not to do so. *See Exhibit C* at p.63.

Additionally, the five acre collection pond below the LTF has a double synthetic liner; and water which leaks from that reservoir is routinely pumped back to the LTF. In contrast, the LTF – which covers 193 acres – has only a single liner; and it does not have any leak-detection system.

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[8] According to Mr. Madrid, "[BMRI doesn't] want a certain amount of water going down there that overflows the dam." *Exhibit C* at p.77-78.

The problematic nature of BMRI's water management practice is demonstrated further when the West Pit area is contrasted with the area around the LTF – *i.e.,* two areas that contain poor quality waters. While the West Pit has inherent safeguards, including remediation and recapture wells which have been adjudicated in and around it, to recapture any waters that might escape, the LTF has no such safeguards. Consequently, waters that escape from the LTF will be lost – and will simply move downgradient.

Without such safeguards, BMRI's use of the LTF to store poor quality waters on a long-term basis significantly undermines the detection-prevention-remediation concepts that are an inherent part of both 89CW32 and 99CW57 – *e.g., in 99CW57* the adjudication of remediation wells and decreed recognition of the RO plant.

A basic premise underlying the LTF's use is that it must be used in a reasonable and safe manner. This is particularly true because, in the event of a breach, the LTF's poor quality waters would reach the Salazar Ranch and the aquifer beneath it. *See Exhibit B* at pp.127-128.

In 07CW42, Costilla County reviewed the LTF's historic use and the inappropriateness of BMRI's current water storage practice. On 12/12/12, a two-day trial was conducted in front of Judge Pattie Swift (Water Court Division 3). While the parties had previously agreed upon virtually all water quantity issues, Costilla County did raise issues regarding (a) BMRI's lack of sound water management practices at the LTF and (b) how both the aquifer beneath the Salazar Ranch and the town of San Luis's water supply will be contaminated if there is a major breach of the LTF or the dam related to it. Although the Court recognized that it had only limited jurisdiction over water quality matters, it acknowledged Costilla County's serious concerns. *See Exhibit F* at pp.12-13.

While the Court stated that Costilla County's concerns should be addressed by administrative agencies – either DRMS and/or the SEO – the Court also made very clear that it is not condoning or approving of BMRI's practices. *See Exhibit F* at p.17 (quote).

In November 2012, after Messrs. Lyle and Madrid were deposed about BMRI's current water management practices at the LTF, Costilla County raised its concerns with both the SEO and (through the Attorney General's Office) DRMS.

Thereafter, the SEO – through its Dam Safety Section ("DSS") – intended to inspect the LTF, in part to determine whether BMRI is using it as a "storage vessel." That inspection was temporarily placed on hold – pending a determination as to whether the SEO or DRMS has administrative jurisdiction over the LTF.[9] Costilla County's understanding is that, based on a compromise reached between DRMS and the SEO, DRMS will exercise jurisdiction over the LTF and the DSS will provide assistance.

Costilla County believes that a comprehensive solution needs to be employed. That solution should address and resolve the specific concerns regarding BMRI's current storage of

[9] Apparently DSS will exercise jurisdiction over a facility (like the LTF) if its intended use during a mining-phase has changed and when waters are being stored in it.

poor quality waters in the LTF, as well as general concerns regarding BMRI's post-mining-phase water management practices.

If, in fact, poor quality waters can be stored safely in the LTF on a long-term basis, at minimum Costilla County needs assurances to that effect from the SEO/DSS – since that agency has the necessary expertise. However, Costilla County believes that an acceptable long-term solution should include the following: (a) prohibit the practice of transferring West Pit waters to the LTF, (b) provide a means to remove poor quality waters from the LTF, and (c) direct West Pit waters to a location not in proximity to the LTF area. Further, it appears that treatment of West Pit waters at the RO plant is an accepted and safe means of disposal. Likewise, disposal of brine should be done in a safe manner. Additionally, Costilla County should be provided with more information about disposal practices.

There are only two former mining sites (of recent vintage) in the San Luis Valley: the Summitville site in Rio Grande County and BMRI's site in Costilla County. Since this matter is presently being addressed by DRMS, CDPHE, and the SEO/DEO, Costilla County sincerely hopes that a solution that provides the necessary assurances to Costilla County can be reached.

Attached hereto are: *Exhibit A* (portion of Scott Mefford's 8/20/12 Engineering Report); *Exhibit B* (Bill Lyle's 11/2/12 deposition testimony); *Exhibit C* (Julio Madrid's 11/5/12 deposition testimony); *Exhibit D* (providing an illustrative example of BMRI's annual accounting to the Division of Natural Resources; and summarizing BMRI's annual transfers during 2003-12); *Exhibit E* (1/25/90 MLRB hearing transcript); *Exhibit F* (07CW42 12/13/12 partial transcript); and *Exhibit G (*a map depicting the RO plant/West Pit/LTF area, the Salazar Ranch immediately west and downgradient of the LTF, and the town of San Luis which abuts the Salazar Ranch at its southwestern border).

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EXPERT REPORT AND SUMMARY OF OPINIONS

Battle Mountain Resources, Inc.
Case No. 07CW42

Prepared for Opposers Costilla County Conservancy District, Board of Commissioners of Costilla County, Montez Ditch, San Luis Peoples Ditch, Acequia Chiquita Ditch and Espinosa Ditch

August 20, 2012

Expert Report and Summary of Opinions
Battle Mountain Resources, Inc.
Division 3 Case No. 07CW42

Introduction

Battle Mountain Resources, Inc. (BMG) has filed for a change of water right and decree allowing them to utilize specific water rights, identified as the Salazar Rights, to augment depletions accruing from reclamation operations at its San Luis Mine site northeast of the Town of San Luis in Costilla County, Colorado. BMG also seeks to consolidate two prior decrees, 89CW32 and 99CW057, into the current decree. Hydrokinetics, Inc. has reviewed the proposed decree, related engineering studies prepared by Lytle Water Solutions, Inc., and other documents as described in the references and has prepared the following comments on behalf of the Costilla County Board of County Commissioners, the Costilla County Conservancy District, the Montez Ditch, the San Luis Peoples Ditch, the Acequia Chiquita Ditch and the Espinosa Ditch.

4. Water Quality

The Proposed Decree (Page 22 Paragraph D) indicates:

> *There was no evidence presented from which the Court in Case Nos. 89CW32 or 99CW057, or this Court, could conclude that Battle Mountain's operations have contaminated or will contaminate anyone's water supply or impair anyone's water rights by degrading water quality. In fact, the evidence was to the contrary.*

Opinion: Although this language is extracted (with modifications) from the 89CW32 decree, incorporation of the language in the current decree is misleading as a number of water quality and contamination issues have arisen since 1989. The quality of water delivered to senior rights continues to be central to the concerns of downstream water users. These users are concerned with the prevention of contamination, the recapture of contaminated waters, and the utilization of appropriate monitoring to assure that any contamination that does occur can be identified before it becomes a serious or unresolvable hazard.

Basis: The potential water quality impacts to downstream users was considered by the court in 89CW32 and led to the incorporation of specific water quality monitoring provisions in the Dos Hermanos Stipulation. Water quality impacting downstream uses was also a focal point in 99CW057.

During mining operations, contamination issues remained of concern to downstream users as an improperly reported cyanide spill in 1992 led to the regulatory agencies levying one of the largest fines ever issued against a mining company.

In 1998, during post mining reclamation, contaminated water from the reclaimed West Pit was

found to be flowing into the Rito Seco, and the adjacent alluvium. This resulted in CDPHE issuing a Cease and Desist Order (Appendix 4) to BMG on Aug. 20, 1999 and the requirement of a CDPHE Discharge Permit (Appendix 5). This in turn led to the development of the TR-15 Response Plan (Appendix 2), and subsequently to the TR-26 West Pit Water Management Plan (TR refers to a Technical Revision to the Mine Permit). Water out of compliance with water quality standards in the mining permit and in violation of CDPHE discharge standards were reaching waters of the State in both the Rito Seco and the adjacent alluvium. Subsequently, Case 99CW057 was pursued in the water court to describe how depletions accruing from implementation of TR-26 would be augmented.

The Proposed Decree continues the sampling of the lysimeters downgradient of the tailings pond facility and indicates they will be operated in conformance with manufacturers guidelines. However, it is likely that porous cup lysimeters that have been in the ground for nearly 20 years are encrusted and non-functional. If the porous cups are plugged, placing a vacuum on them will not result in sample delivery, but rather suggest no sample can be collected. If lysimeters are to be utilized as described, not only do they need to be operated in conformance with manufacturers' specifications, but they also need to be periodically removed, cleaned, and tested if the data is to be of any value.

5. Tailings Pond

Opinion: Insufficient information is provided on the water balance and/or monitoring of the tailings facility to determine if it can reasonably be relied upon for the purposes described in the augmentation plan, including the storage and disposal of fluids.

Basis: Water from the West Pit and/or the treatment facility could be transferred to and stored in the former tailings pond until such time as it dissipates through evaporation and/or evapotranspiration. Based on recent records for 2011, significantly more water is being delivered to the pond now than in prior years. Water enters the tailings pond through direct flows from the West Pit, brine water releases from the RO treatment facility, precipitation, and a small amount of surface drainage.

Since the tailings pond is purported to be isolated from the vadose zone and ground water system, the usual ways in which water can escape the system are through evaporation and evapotranpsiration. The residual capacity of the tailings pond to hold fluids is unknown. Much of the original storage volume is filled with tailings, with reclamation materials, and with contaminated fluids. No information has been provided on the capacity of the pond to accept and dissipate additional fluids (no water balance), and no information is provided describing how fluid volumes in the facility are monitored to avoid overfilling. The tailings pond was designed to decant the fluids from the tailings slurry delivered to the pond and store the tailings, not to store the water. The transcript from the BMG Hearing of 1/29/90 (Appendix 3) states:

Quote from Mr. Dorey, Technical Director for SRK Engineering (Page 61, Paragraph 4 -Page 62)

> *Looking through how the thing will be built, Anne has talked about this main embankment and, to reiterate again, the whole facility is designed to contain solids and not to contain the liquids.*

Quote from Anne Baldridge of SRK Engineering (Page 48, Paragraph 3)

> *From the collection pond, there will be a pump and pump-back system which will pump the water from the collection pond back up to the tailings facility. The tailings facility will have a free water pool on top of it which will allow reclamation of the water from the tailings to be recycled back through the mill to minimize the amount of makeup water needed in the system.*
>
> *It's a closed system and you are constantly recycling the same water back into the mill and then out into the tailings facility.*

Clearly the facility was not designed as a fluids storage and disposal vessel as is now proposed. The original tailings pond facility was constructed with an artificial liner system, and operated based upon the assumption that the overlying drainage layer would prevent buildup of heads against the liner of more than 1 foot. Fluids were to be collected and routed out of the system back to the mill, not stored until evaporated.

It is unclear if the change in use of the tailings facility will create head conditions violating the original design criteria for the artificial liner, or if storage of fluids in the facility until they evaporate is even compatible with the design.

Dorey continues on page 65, paragraph 2 ..

> *We are likely to use a synthetic membrane, very large polyethylene material. It is ideally suited to these situations in terms of ability to stay and maintain its integrity through operations and has the ability to withstand the operating stresses of the layers that are going to be applied to that lining system.*

The liner appears to have been designed to function through the operational period of the mine, not for an indeterminate period beyond that point.

Additionally, in 2011, BMG grew a canola crop in the tailings pond. This is not consistent with previously adjudicated uses. Because BMG has not sought a change in use of the water right to permit agricultural uses, such use of the water in the tailings pond is questionable.

6. West Pit Water Quality

Opinion: Water in the West Pit is not of adequate quality to discharge into the Rito Seco.

Basis: The Lytle Report indicates (Pg 3, Paragraph 1) :

> *The Division of Minerals and Geology (DMG), now the Division of Reclamation, Mining, and Safety (DRMS), concluded in 2005 that West Pit water is at a pre-mining quality (Appendix D). However, to maintain this pre-mining water quality, BMRI must maintain the current water level elevation in the West Pit.*

While this may imply that the West Pit water has reached background levels and can be disposed of in the Rito Seco without treatment, this is not the case. First, it's important to understand the ground water flow regime both before and after mining. This was described in Appendix 4, the Cease and Desist Order for the West Pit releases, in TR-15, and the TR-15 Response Plan (Appendix 2):

Quote from TR-15 Response Plan, Page 2, Paragraph 3:

> *Prior to mining, the site-specific hydraulic connection between the Santa Fe Formation and the pre-Cambrian bedrock was believed to be minimal due to a confining green clay fault zone, which generally separated the Santa Fe from the pre-Cambrian rock (Figure 3). The hydraulic separation between the Santa Fe and the pre-Cambrian rock was demonstrated by distinctly different potentiometric surface elevations in the pre-Cambrian rock from the Santa Fe.*

(Pg 2, Paragraph 4)

> *With the initiation of mining, the green clay separating the Santa Fe from the pre-Cambrian rock was removed in the West Pit area. In fact, during the mining process, the entire ground water flow system through the West Pit was interrupted (Figure 3).*

And also from TR-15 Response Plan, Page 6, Paragraph 1:

> *Historically, the West Pit area contained two aquifers of distinct chemistry, one in the Santa Fe and one in the pre-Cambrian rock. Mining the West Pit has resulted in one composite aquifer that receives water from two upgradient aquifers of distinctly different water quality. In addition, the porosity and permeability in the West Pit is distinctly different from the pre-mining condition. These factors result in a new flow regime and a new mixing ratio of waters.*

And finally also from TR-15 Response Plan, Page 4, Paragraph 6:

> *Pre-mining water quality in the pre-Cambrian bedrock was variable, with lower ion concentration water observed in the vicinity of Rito Seco and higher ion concentration water observed at the higher elevations north of Rito Seco. Figure 5 shows average TDS and sulfate concentrations at each of the monitoring wells for the pre-mining baseline period. As these data show, the sulfate and TDS concentrations at the upgradient pre-Cambrian bedrock monitoring well (87-86) (1,100 mg/L and 530 mg/L, respectively) exceeded the permit condition value set for both sulfate and TDS at all of the downgradient compliance monitoring wells (Figure 5).*

As the above discussion denotes, there were originally two distinct aquifers in the West Pit, each with very different water quality. One aquifer consisted of the Santa Fe Formation and connected alluvium, and the other the Pre-Cambrian bedrock aquifer. The underlying bedrock aquifer was artesian prior to mining and isolated from the Rito Seco in the vicinity of the pit by a layer of low permeability green clay fault gouge. The bedrock aquifer contained considerably poorer quality water than the aquifers overlying the green clay layer. During mining, the green clay aquitard was removed and water from the two aquifers allowed to mix. Consequently, whether or not the current water quality in the West Pit is statistically similar to that in the pre-mining samples, the poorer quality waters from the bedrock in the north portions of the pit were historically prevented from reaching the stream, at least locally, and diminishing the quality of water in the Rito Seco. With the green clay removed, there is no way to prevent these lower quality waters from reaching the Rito Seco without active water level control in the West Pit. Additionally, salts which have formed on the unsaturated portion of the backfill will contribute to the poorer water quality in the West Pit if the water level in the pit is allowed to rise and re-saturate this material.

The discharges from the West Pit operate pursuant to CDPHE Discharge Permit No. CO-0045675. The current expiration date on this permit is September 30, 2012.

7. References

Lytle Water Solutions, LLC, Expert Report in Support of Battle Mountain Resources, Inc.'s Augmentation Plan in Case No. 07CW42, Project No. 1006-04, January 2011.

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Supply Paper 1379,.1958

Siebenthal, C. E., Geology and Water Resources of the San Luis Valley, US Geological Survey Water Supply Paper240, 1910

Machette, Michael and others, Geologic Map of the San Luis Quadrangle, Costilla County, Colorado, US Geological Survey Scientific Investigations Map 2963, 2008

Records and Documents Held by Various State Courts and Agencies Reviewed for the Report

A. Court Decrees and Applications, Division 3 Case Nos.:

07CW42
89CW32
99CW057
W-1730

B. Colorado Division of Water Resources Permit Files for Wells:

21590-F
21590-F-R
19564-RF
19564-F
21589-F

C. Various Documents addressing the Battle Mountain San Luis Gold Project filed under Mine Permit Number M-1988-112 and included in the DRMS imaged documents database, including:

Mine Permit and Reclamation Plan for San Luis Gold Project
TR-15
TR-26
Water Quality Information included in Quarterly and Annual Filings, and other Related water quality records located in this database

D. Colorado Department of Public Health and Environment, CDPS PERMIT NUMBER CO-0045675, COSTILLA COUNTY

E. Mined Land Reclamation Board Transcript of Hearing of January 25, 1990, Re: Application of Battle Mountain Resources, Inc., in Costilla County.

Prepared By:

Scott G. Mefford,
CPG 5021

DISTRICT COURT, WATER DIVISION 3

STATE OF COLORADO

Alamosa County Courthouse
702 - 4th Street
Alamosa, Colorado 81101

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF BATTLE MOUNTAIN RESOURCES, INC., IN COSTILLA COUNTY.	)	No. 2007CW42

DEPOSITION OF WILLIAM S. LYLE

Taken at the instance of the Opposers

November 2, 2012

8:56 a.m.

9015 West Highway 2

Airway Heights, Washington

BRIDGES REPORTING & LEGAL VIDEO
Certified Shorthand Reporters
1312 N. Monroe Street
Spokane, Washington 99201
(509) 456-0586 - (800) 358-2345

B

BE IT REMEMBERED that the deposition of WILLIAM S. LYLE was taken in behalf of the Opposers pursuant to the Colorado Rules of Civil Procedure before Jeffory A. Wilson, Certified Shorthand Reporter 2254 for Washington, on Friday, the 2nd day of November, 2012, at the Hilton Garden Inn, 9015 West Highway 2, Airway Heights, Washington, commencing at the hour of 8:56 a.m.

* * *

APPEARANCES:

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* * *

I N D E X

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF BATTLE MOUNTAIN RESOURCES, INC., IN COSTILLA COUNTY
Case No. 2007CW42
November 2, 2012

T E S T I M O N Y:

PRODUCTION REQUESTS:

(None.)

E X H I B I T S:

(WILLIAM S. LYLE, called as a witness by the Opposers, being first duly sworn to tell the truth, the whole truth and nothing but the truth, was examined and testified as follows:)

(Exhibits No. 1, 2, 3 marked for identification.)

EXAMINATION

BY MR. MCCLURE:

Q. Would you state your name, please, for the record.

A. William Sydney Lyle.

Q. Mr. Lyle, we know each other. My name is John McClure. I'm going to ask you some questions today at this deposition. And if you understand my question, please answer. If you don't, please let me know and I'll try to rephrase it. If you do answer the question, I will assume that you understood it.

Is that a fair enough way to proceed?

A. Yes, sir.

Q. Okay. Your testimony could be used at the trial of this matter, so I wanted to let you know that also.

A. Yes, sir.

Q. Would you please state your address for the record.

A. 41497 Madrid Drive, Parker, Colorado 80138.

Q. You are currently residing in Eastern Washington?

A. I'm working in Eastern Washington. I still reside in Denver.

Q. Okay. Let me hand you three documents. Exhibit 1 is your notice of deposition. Exhibit 2 is a subpoena duces tecum addressed to you. And 3 is a notice of deposition pursuant to 30(b)(6).

Let me just say that the subpoena duces tecum refers to your notice of deposition of you individually. The 30(b)(6) has to do with, generally, categories of testimony; that I assume that you will be able to testify to one or more of those categories.

MR. WITWER: Let me answer on behalf of Mr. Lyle with respect to the 30(b)(6) notice, and also, John and Ed, put on the record the issue about potential documents that are at least potentially responsive to the subpoena duces tecum that I became aware of this morning that is my fault due to a miscommunication with Mr. Lyle.

As to the 30(b)(6) notification, Mr. Lyle has not been designated by BMRI to provide testimony as to any of the 21 matters listed on the 30(b)(6) notice, so

he will not be testifying as a Rule 30(b)(6) representative today at all.

You are, of course, since you've noticed this deposition for him personally, you're certainly free to ask him questions that are germane to the matters here as to his own knowledge and recollection.

I guess moving to the issue of the subpoena, John, just to discuss briefly what we've discussed. Due to miscommunication on my part with Mr. Lyle, he has informed me this morning that he believes he may have a box or two that may contain documents from work he performed for Battle Mountain when he left his offices in Denver to relocate to the Spokane area to begin work here.

He basically was clearing a few things out of his office and took those with him. He hasn't looked at them in a year and did not look at them between the time the deposition subpoena came out and today, so we don't know for certain whether any of those documents are, in fact, responsive to the subpoena.

What Mr. Lyle and I have discussed doing is that I will attempt to review those documents and provide copies as soon as possible to the extent that they are responsive to the subpoena.

Depending on the timing of when today's

subpoena lets out, I may be able to begin that review after the adjournment of the deposition yet today such that you would have copies by very early next week.

If the deposition runs late, it probably won't happen until Mr. Lyle is able to send me the entire box to review early next week in my office. And as soon as it arrives, I will make it a priority and get you any copies that do, in fact, prove responsive to this deposition.

And I apologize for that. I thought I was aware of what was out there, and I thought I had communicated more clearly with Mr. Lyle before this morning about documents.

Q. (By Mr. McClure) Okay. Then I assume we don't have any documents here today in response to the subpoena duces tecum as we sit here today?

A. That's correct.

Q. Let me ask you some background questions, Mr. Lyle.

What's your educational experience?

A. I have a bachelor's of science degree in occupational safety and health.

Q. And where was that from?

A. Montana School of Mines, Butte, Montana.

Q. And what year was that?

A. 1981.

Q. And since that period of time, can you give me, briefly, your experience in the work force.

A. Since 1982, I've been working in the mining industry. I subsequently -- worked in the mining industry before that.

But 1982 to 1986, I worked for ASARCO, Incorporated, out of Omaha, Nebraska, as well as Hayden, Arizona. That was either a primary lead refinery in Omaha or a secondary copper smelter in Hayden, Arizona.

1986 to 1992, I worked for Pegasus Gold in Zortman, Montana. Those two positions were as safety director or safety inspector. In Zortman, I began working in the environmental field doing reclamation, closure, and environmental compliance.

In 1992 to 2001, I worked with Battle Mountain Gold Company, first at the Copper Canyon and Copper Basin mine sites in Battle Mountain, Nevada, until 1997, at which time I began working out of the Houston office for corporate and working as an environmental reclamation/closure specialist.

In 2001, I joined Newmont Mining Corporation, and have been the director of reclamation and closure with that site -- or with that company.

Q. What was your position with ASARCO?

A. ASARCO was safety inspector and safety director. Basically, I was also responsible for industrial hygiene and radiation safety.

Q. When you say safety inspector and related safety matters, what does that entail just in terms of the job?

A. Workplace/employee safety. Safety and compliance.

Q. And I think then you were working for the operation in Montana, I believe it was Pegasus. What was it?

A. Pegasus Gold.

Q. Pegasus Gold. And that was also in safety inspection and reclamation?

A. It was safety. I was safety director.

Q. Okay. What are your duties in that capacity for reclamation?

A. Reclamation was permitting sites, basically disturbance, as well as environmental compliance and reclamation, field reclamation, stabilization of mine-disturbed areas and the closing of them.

Q. And safety inspection for that firm entailed the same sort of thing?

A. Workplace/employee safety and compliance.

Q. Then you started working for Battle Mountain

in 1991; is that correct?

A. 1992. September 3, 1992.

Q. All right. And can you -- well, can you describe what your duties were in the environmental reclamation area?

A. I was basically responsible for environmental permitting, mine compliance with environmental regulations, site reclamation and closure, active and inactive mine operations.

Q. And you continued to work for Battle Mountain when they were acquired by Newmont. And what year was that? I'm sorry.

A. That would have been February 1, 2001.

Q. And what was your position then with -- did you have any other positions with Battle Mountain prior to 2001 other than in the environmental arena and reclamation arena that you just described?

A. I had, until 1997, site responsibilities with the Copper Canyon and Copper Basin mine operations in Battle Mountain, Nevada.

In 1997, I assumed the role as the director for reclamation, closure, and environmental compliance for Battle Mountain. I worked out of the Battle Mountain office, although the corporate office was out of Houston.

I had responsibility for the Battle Mountain

operations as well as the Crown Jewel operations here in Washington and the San Luis operations in Colorado.

Q. And you first started working with the San Luis operation in Colorado in what year, then?

A. 1997.

Q. And what was your official title concerning that site, if there was one?

A. I didn't have a title.

Q. Okay. What were your responsibilities commencing in 1997?

A. Site reclamation and compliance.

Q. Please describe what you mean by "site reclamation."

A. In 1996, San Luis site was closed. October 1996, the mine operations ceased. November 1996, the mill operations ceased. The mine entered closure, and we had the obligation to take and reclaim the disturbed mine property at the mine site.

Q. When you talk about "reclaim the disturbed mine site," could you describe what that generally entails?

A. The mine site is encompassed with three open pits. Basically, one which was completely backfilled prior to 1997. That would be the west -- the east pit. The west pit and the pink gneiss pit were the pits that

were completed in 1996 and mined out. We had an obligation to backfill those pits and to reclaim and place topsoil, revegetate that pit surface.

There was three waste dumps that was waste rock piles which were required to be sloped, topsoiled, and revegetated to stabilize those. And there was additional work to be done remaining to reclaim the lined tailings facility at the San Luis site.

Q. And so when you talk about reclamation, from a general standpoint, does that mean basically filling in the pit, putting in topsoil, revegetating with some sort of a grass? Is that what we mean by --

A. Yes, sir.

Q. -- reclamation?

The mine at Battle Mountain had commenced mining in what year, sir?

A. 1989, from what I recall.

Q. Were you involved with any of that process, the milling?

A. No, sir.

Q. Commencing in 1997, when you were overseeing the Battle Mountain site in Costilla County, who were you working with at the site?

A. Ron Zumwalt.

Q. And what was his position?

A. Ron would have been the project -- site project manager.

Q. And how long was he in that capacity?

A. Probably 1996 -- 1995 to -- I can't speak from before 1997.

Q. Okay.

A. In 1997. I think Ron retired December or thereabouts in 2000, right before the Newmont-Battle Mountain merger.

Q. Who was the -- after he retired, who was his successor?

A. David Long.

Q. And he stayed in that capacity for how long?

A. Approximately three years.

Q. And then his successor?

A. Julio Madrid.

Q. He started in 2002?

A. No. 2003-2004, thereabouts.

Q. And what's his position there? Project manager?

A. That's right. He was site manager, yes.

Q. Generally, what does the site manager do at that facility?

A. He has the obligations for compliance and oversight of site operations.

Q. When you talk about compliance, what are the various regulatory agencies that one deals with at the Battle Mountain site in Costilla County?

A. Primarily the Colorado Division of -- now I've got to remember. It used to be -- Colorado Division of Mines, Reclamation and Safety.

Q. DRMS?

A. Yes, sir.

Q. Do you work with Colorado Department of Health and Environment?

A. Yes.

Q. What sort of things are you working with them on?

A. Basically, it was an annual -- or a monthly compliance report, and basically annual or semiannual compliance audits that were conducted by them. Basically, it's assisting them in coordinating activities with them. And that's for water treatment.

Q. What's the nature of your involvement with DRMS?

A. I have no involvement with DMRS.

Q. No, I mean at the time. At the time, what was the nature of your involvement?

A. Basically, I had a site relationship with them. I had permitting as well as compliance obligations

with them.

Q. Could you describe a little bit more what those obligations are.

A. There was basically periodic reporting to be conducted with them. There was, initially, quarterly audits or quarterly inspections that was conducted by them. There was permitting that was done under a series of technical revisions with relationship to the mine site.

Q. Do they still -- when you left that position in, what, two years ago?

A. Approximately a year ago.

Q. 2011?

A. Yes.

Q. Were they still conducting quarterly inspections?

A. No, not that I recall.

Q. What was their involvement at that point in time?

A. They still conducted periodic inspections that would be anywhere from semiannually to annually, if I recall.

Q. What are they inspecting? Do you know?

A. They are inspecting the mine facilities for the closure status and stability.

Q. What was the closure status in 2011 with them?

A. The west pit, pink gneiss pit had been backfilled. The waste rock dumps and the waste rock piles had been reclaimed. The tailings facility was partially reclaimed. There was approximately still 20 or 25 acres of supernatant pond there, a storage pond. The west pit water, water contained within the west pit, was being actively pumped, treated, and discharged.

Q. When you talk about the term "the west pit has been backfilled," and I think you said partially reclaimed?

A. Basically, it's been reclaimed. It's been topsoiled. It was initially revegetated. That revegetation and topsoil was redisturbed in 1999, when water was discovered leaking from the west pit, and a water treatment plant was constructed on the surface of the west pit.

Q. So in terms of that being partially reclaimed, that still is partially reclaimed, but a portion of it has now been disturbed due to the 1999 leak?

A. Yes.

Q. As a result of the 1999 leak?

A. Yes.

Q. And so what percentage has been reclaimed and what percentage is not reclaimed at the west pit?

A. I would estimate two-thirds of it still remain topsoiled and revegetated. A third of it had ponds or a structure on them or roadways.

Q. And the third that has the ponds on it, that's what's subject to a series of wells in that area that pump to maintain water level?

A. Yes, sir.

Q. Was the lined tailings facility reclaimed prior to 1999?

A. It was partially reclaimed. Prior to 1999?

Q. Yes.

A. It was partially reclaimed. Excuse me.

Q. And when you say "it was partially reclaimed," how much of that had been revegetated?

A. 160 acres.

Q. Out of a total of 204?

A. Out of a total of 193.

Q. What about the remaining 33?

A. That is -- 30 -- 20 to 30 was part of a storage pond that basically was managing water.

Q. And how long prior to 1999 had that storage pond been in existence, to your knowledge?

A. Since 1997.

Q. And how did it happen to become a storage pond in 1997?

A. Basically, it was a storage pond from 1989 forward, because process water from the mill operation had to be deposited there, or was deposited there.

Q. You're somewhat familiar with what occurred during the milling process beforehand?

A. I have a general understanding of the milling process. I was not familiar with the San Luis milling operation.

Q. All right. Do you have any understanding as to what occurred with the San Luis operation in terms of the use of waters in that facility, the lined tailing facility, as it relates to the mining?

A. I would have a general understanding. I wouldn't have had a site -- on-site observation or on-site understanding.

Q. Can you tell me what your general understanding is?

A. The milling process took in crushed ore from the pit. It took and ground that ore in the mill to reduce it to a powder-fine type of substance, which was then CIL leached. That's carbon in leach process. The gold was recovered from it.

The tailings material would have been

taken -- or the voided material, the material the gold was recovered from, would have been slurried to the tailings facility.

Q. There was a source of water, then, for the water that was used for the slurry?

A. Yes, sir.

Q. And was that pumped?

A. That was pumped.

Q. And then that tailings slurry down to the lined tailing facility, and it is deposited down there in the lined tailing facility, and that water then is recirculated back to the mill?

A. I couldn't tell you. I wouldn't have been there during the operation of that. I would imagine so, but I couldn't tell you.

Q. We had -- the reason I'm asking that question, I had some information from a transcript of a hearing, permitting process in front of the -- I believe it was the Mined Land Reclamation Board back in 1990 that talked in terms of that concept, but I'm really asking you what you know about that as much as --

A. I don't understand -- I wasn't a part of the operation.

Q. Okay.

A. And I wouldn't have any experience with that.

I don't know how they recovered their -- if they did or how they recovered the water.

Q. But there is that recirculation concept, because I assume in milling, if you can go ahead and recirculate, then you can avoid additional pumping and the cost?

A. It's a conventional milling process.

Q. So conventional manufacturing concept.

And when you're returning that water then to the mill site, you use it for what purposes? For slurry purposes?

A. For reagent and makeup purposes.

Q. So you can recirculate it through the system, so to speak?

A. Yes, sir.

Q. It goes from the mill, the lined tailings facility, back to the mill?

A. Yeah, it could have been. Like I said, I'm not sure. I'm not sure how they did that or if they did that.

Q. When you came there, I think we talked about 1999 -- is that the year you came there?

A. Basically, I first visited the San Luis project in 1995.

Q. Okay.

A. I became responsible -- or became involved with it in 1997.

Q. You were there for a visit in 1995 but were responsible in 1997?

A. Yes, sir.

Q. So mining had ceased; correct?

A. Yes, sir.

Q. And what was being -- was there any waters being pumped and taken to the lined tailings facility in 1997?

A. It wouldn't have been any water that was being pumped from the pit facilities. The only water I would -- could recall that was pumped to the lined tailings facility would be water that was part of the under-drain that reports from the tailings facility to the downgradient pond. That water is collected and recirculated back to the tailings facility.

Q. Just so -- can you describe what the under-drain is on that facility?

A. That is a lined facility that's probably one of the first, the very few lined facilities in the country. And the moisture that was in the ore, you would have water that got decanted in the pond.

You would have carried moisture through the ore as well -- or through the tailings. That water, as

it typically went through the tailings, got collected on the liner below the tailings, along the subsurface of the tailings.

That water would have reported -- or does report to a collection pond downgradient of it, and that water is then recirculated back up and disposed of -- or deposited on the top of the tailings facility.

Q. And the liner is -- what's the material in that liner itself?

A. I have no idea.

Q. Synthetic? It's a synthetic material, though?

A. It's synthetic. Geomembrane from what I understand.

Q. Okay. This underground drain sits on top of it, the liner?

A. Yes.

Q. So that if the water -- as the tailings are deposited and the water percolates down to the liner, there is a drain that takes it out to the collection pond area?

A. That's right.

Q. Okay. Once it goes to the collection pond, which is below the lined tailings facility, it stays there and then is pumped back into the lined tailings

facility?

A. That's right. That's part of the reason for the pond.

Q. Okay. So for whatever reason, there was a pond there during that 1995 to 1997 time frame?

A. Yes, sir.

Q. And approximately how big of a pond was it in terms of on the surface, the acres?

A. I couldn't tell you. I don't recall.

Q. Roughly, was it 25-30 acres?

A. I wouldn't recall.

Q. Was it more than five acres?

A. I wouldn't recall.

Q. It sounds like it was simply then just stored there. There was some water that was actually stored there, and the only recirculation then was occurring between the lined tailings facility and the collection pond?

A. That's correct. That I know of.

Q. Then as we move forward, did that situation change from 1997 forward until 2011?

A. Yes, sir.

Q. When did that change?

A. If I recall, summer 1999.

Q. All right. Is that when the spill conditions

developed out of the west pit?

A. Yes, sir.

Q. And tell me then how that changed the use of the lined tailings facility.

A. Water from the west pit was pumped from the pit to the tailings facility for use and disposal. I won't say disposal. For use. Water management.

Q. For disposal as opposed to any other purpose?

A. Basically, disposal. For water management.

Q. For water management -- in order to move it away from -- to do something with it, place it there and have it evaporate?

A. Yes, sir. That's correct.

Q. Okay. And then that gets -- in 1995, when you first saw that facility, was any part of the lined tailings facility reclaimed/revegetated? Maybe I just ought to say revegetated.

A. I wouldn't think so because mining operations were still going on, but there were portions of the San Luis mine site that were concurrently reclaimed starting probably about 1993-1994. I don't know whether portions of the tailings facility had been or not.

Q. So generally, reclamation started at a very early stage on portions of the operation is what you're saying?

A. Yes, sir.

Q. But as we direct to the lined tailings facility, when did it first become partially revegetated?

A. There was reclamation that had been done prior to 1997 when I got there. When it started, I couldn't tell you.

Q. From 1997 to 2011, was there increased portions of the lined tailing facility revegetated?

A. Yes, sir.

Q. And approximately how much had been revegetated as of 2011?

A. In 2011, I believe the pond area was 23 acres. Basically, the tailings surface itself is 193 acres. So I would say approximately 170.

Q. And when that was revegetated, was topsoil brought in?

A. Yes, sir.

Q. And when was -- was the topsoil brought in basically during your tenure there?

A. Portions of it.

Q. Was topsoil brought in prior to your tenure on the lined tailing facility?

A. I would imagine so, but I believe there was reclamation -- I know there was reclamation done before I got there.

Q. And when you talk about revegetation, what do you mean by that term?

A. Revegetation, it is the placement -- it's the seeding and the fertilizing of the topsoil and basically the revegetation, the establishment of a vegetative growth with relationship to the reclaimed or disturbed area.

Q. And is that usually the natural vegetative growth in the area?

A. There are, naturally, studies done before the mine site is disturbed that count basically those vegetative species that are documented being there or generally involved and included in a vegetation seed mix so that you're reclaiming with native vegetation.

I would imagine there were also -- I don't recall. I would imagine there were also introduced species, which are not native species, but species that provide a rooting and a stabilization for the emergence -- or as the site is initially reclaimed, initially revegetated.

Q. Is that a DRMS requirement as to what constitutes appropriate revegetation?

A. Yes, sir.

Q. And is the concept that's involved you try to simulate as much as possible the native vegetation that

existed prior to disturbance?

A. The native vegetation, the density, the diversity of the vegetation, and the stability of the soil.

Q. What do you mean by "stability"?

A. Basically, if you don't revegetate topsoil, during storm events it has a tendency to erode. So you're stabilizing the erosion of the topsoil.

Q. When you are filling in a pit such as the lined tailing facility, is there a means of filling that in to provide stability --

A. Could you repeat --

Q. -- in and of itself so it doesn't sink, so to speak?

A. Could you repeat that? Because you mentioned pit and lined tailings facility together.

Q. I'm sorry. Let me repeat it.

Concerning the lined tailing facility, as an example, does one want to make sure that there is no subsidence of the soil?

In other words, the fill material is compacted and presented in such a way that it -- after reclamation, the appearance simulates as much as possible the appearance before there was a disturbance?

A. That lined tailings facility or a tailings

facility is never going to simulate what the surface was prior. There is a volume of material that was placed in there, so it went from a void condition to a fill condition.

With respect to the subsidence, that's the reason why the liner -- the collection system is there; that is, you're continuously trying to dewater that material so it stabilizes it.

Q. Ideally, don't you want to have that dewatered prior to putting in fill material?

A. Not necessarily.

Q. Why is that?

A. You want to minimize the amount of water there, but you don't have to take and actually comp -- or completely dewater it.

We've had facilities where we've taken advance fill over water itself. You don't want to -- we prefer not to take and try to backfill in a pond. But if you've got a dry beach, as that facility starts to dry up, you will advance your topsoil over the top of it.

Q. In a perfect world, you like to have as little moisture as possible underneath it, wouldn't you, from a stability standpoint?

A. It's always a benefit.

Q. Is the purpose of that -- what is that

purpose of the underground drain?

A. That is to drain water. Basically, the purpose of the liner was to preclude the process solution to move out into the natural environment. That drain is to take and collect that percolating water that's in the tailings facility so that you don't develop a hydraulic head on the liner.

Q. Why do you not -- want to avoid having a hydraulic head on the liner?

A. It provides a leakage component or exposure.

Would you mind if I get a cup of coffee?

MR. MCCLURE: Please do. If you need to take a break, we can do that, too.

(Recess from 9:37 a.m. to 9:45 a.m.)

Q. (By Mr. McClure) I didn't ask you what your duties are here in Washington. Could you tell me what you're doing in that capacity in Washington?

A. I am the project manager for a uranium mine and mill site here in Washington, Ford, Washington, just outside of Wellpinit, Washington.

And also I'm responsible for mine operations, reclamation, closure operation in Grass Valley, California, and Battle Mountain, Nevada.

Q. When did you leave your position as being -- having any control over the Costilla County Battle

Mountain operation?

A. Approximately November 2011.

Q. And you have no further responsibilities with that operation?

A. No, sir.

Q. You were talking about the spill that occurred in I think you said it was in 1999 in the west pit area into the Rio Seco.

Can you tell me what occurred from your understanding as to that event?

A. As mentioned, in 1997, when I became involved in San Luis, we were backfilling the west pit. The west pit, during mine operations, was a wet pit. Basically, it had mined below the water table, groundwater table.

When we ceased mine operations, we just continued pumping water out of that pit so we could keep it dry. Of course, the water, once we stopped pumping, recovered and started inundating back into the pit filling it up.

We had an obligation by permit to backfill that pit. We backfilled it with waste rock that we took out of it.

In approximately fall of 1998, we discovered groundwater in one of the wells adjoining it. One of the monitoring wells had elevated TDS, total dissolved

solvents.

In subsequent investigation of that that we're required to do with DMRS permit, we did an investigation from the well installation aspect as well as from the field inspection and discovered water that had been recovered into the west pit inundating that waste rock, had taken and flowed out of the west pit into the Rito Seco. And that would have been what you're terming as the leak. We discovered that, I want to say, the end of October, early November 1998.

Q. Could you determine or did you become aware of how that leak occurred? The source problem.

A. We became aware of the source problem, yes.

Q. And what was that source problem?

A. That was the water that was contained within the west pit that was inundating back into the pit or recharging the groundwater table within the pit.

Q. And this was an upward leakage into the west pit from the groundwater table?

A. This would have been basically groundwater that would have recovered that naturally fed into that area. That area would have been what they termed as Precambrian gneiss bedrock, which was the host material for the pit, for the mineralization.

A portion of that was mined out when they

mined it. We backfilled it and created a void. And when the water recovered, it basically recovered into that void, eventually getting to an elevation which it could outflow from the pit into the Rito Seco alluvium and on into the Rito Seco stream.

Q. And this was a continual flow up into the west pit of this groundwater?

A. Yes.

Q. Continual upward flow?

A. It was a continued upward flow.

Q. And did you have any understanding as to whether or not this was as a result of what they call piercing the green clay layer?

A. Yes, sir.

Q. And what do you understand was the issue?

A. Green clay layer was a confining aquitard. Basically, water beneath that green clay layer was confined. It was not basically providing supply to the upper layer.

When they mined through the Rito Seco alluvium, which was the surface material, through the aquitard into that pink gneiss, it would have acted as a safety relief to the groundwater system.

Therefore, they took that retardant or that aquitard out of the system; therefore, the water

recovered higher than what it originally had been pre-mining conditions.

Q. Was this something that could have been prevented during the mining operation or was this as a natural consequence of the way that the mining occurred?

A. I think the only way to prevent it is not to have a mine.

Q. Okay. There were certain steps then taken after that in working with DRMS and CDPHE.

Can you tell me what those steps were with DRMS to remedy that situation?

A. After the water was discovered, there was an obligation to do an investigation. Report to DRMS the condition, initiate an investigation.

There was approximately 30 wells put in during the latter portion of 1998 and early 1999 to better understand and characterize what the groundwater conditions were.

Like I said, that was first determined by elevated total dissolved solids that was observed in Well M-11R, which those wells were put in -- there was a plan initiated in a technical revision, Technical Revision 27, that was conducted with DMRS to address the situation.

There were dewatering wells that was put in to extract water from the west pit, to lower the

groundwater level within the pit. And originally, the water management of that water was done through a forced evaporation system, mechanical evaporators.

August 28, 1999, Battle Mountain received a cease and desist order from the Colorado Division -- or Colorado Department of Public Health and Environment. They immediately initiated installation of the water treatment plant, an interim water treatment plant. We were in the process of designing a plant at that time.

That interim plant was mobilized and made available for operation by the first week of September. We began operation of that I believe late September, early October of 1999.

That treatment plant treated water that was being pumped from the west pit or that was being pumped back from seeps along the Rito Seco. That operated through the winter of 1999.

Spring of 2000, a new water treatment plant, the treatment plant that is currently operating at the San Luis site or was as of November of 2011, was taken -- or commissioned and initiated operation.

That, basically, operation was to reduce the level -- to reduce and maintain the level of groundwater within the west pit such that it was below the level in which it would flow out into the Rito Seco alluvium and

into the Rito Seco.

Q. Is that pursuant to the DRMS permitting process, CDPHE, or both?

A. Both.

MR. WITWER: Object to the form.

Q. (By Mr. McClure) And that, in fact, then becomes a process of maintaining a certain water level in the west pit which maintains water quality?

A. Yeah, it maintains water -- it basically establishes a level in the west pit which maintains hydraulic control such that water does not flow from the west pit into the surrounding groundwater. It establishes an elevation of 8580, if I recall right, within the west pit.

Q. And by maintaining that elevation of 8580, you reverse that propensity for that water to flow into the Rito Seco?

A. That's correct.

Q. And that also has a dual purpose. By maintaining that certain level, it also maintains a certain level of water quality that you attempt to achieve?

A. That's correct.

Q. And tell me about that latter concept. What is that, what you're attempting to achieve?

A. As I mentioned earlier, Battle Mountain had an obligation to backfill the west pit under the reclamation permit. It backfilled that with waste rock from the mine operations that contained both oxidized as well as sulfide-bearing waste rock.

By maintaining that level, it keeps the level of water within the west pit such that it does not fluctuate and it doesn't allow waste rock that has sulfides, sulfide mineralization to oxidize and ultimately to take and release sulfates and metal concentrations.

Q. The water quality in the west pit was generally high on certain constituents, I think fluoride, magnesium, TDS. Are those -- is that correct?

A. No.

Q. Okay. Tell me what was high.

A. It was high in TDS, sulfate, manganese, and fluoride.

Q. And when you say "high," it exceeded acceptable standards of what? Drinking standards or what standards?

A. It exceeded the stream standards for the Rito Seco.

Q. That was true in 1997. Did that change over time as to any of those constituents?

A. Yes, sir.

Q. Tell me how that changed.

A. By taking and pumping the water level to a steady-state level, elevation within the pit. Like I said, that 8580, just approximately 8579 when I was operating it, that maintained a steady chemistry. It maintained the removal of water, the removal of a constituent loading from the water, that's sulfates, fluoride, manganese, sulfates making up a good portion of the TDS.

By extracting that, treating it, and moving it from the pit, it reduced the manganese, fluoride, and sulfate to what was determined to be pre-mining conditions. That's what the quality of the groundwater was prior to mine disturbance.

Q. And when you talk about reduced it to pre-mining conditions, describe what you mean by "pre-mining conditions" a bit more. You've stated it a little bit, but I just want a better understanding.

A. Prior to mining, groundwater in the upper bedrock area of the Rito Seco hydrology, groundwater hydrology would have had a specific chemistry.

The water that's in the west pit as of probably 2008 on mimicked what the water was prior to being a pit there and what the water quality was prior to

the mining operation.

Q. Is the water quality in 2008 such that you could discharge it directly to the Rito Seco?

A. No, sir.

Q. Was that true when you left in 2011?

A. Yes, sir.

Q. Tell me why it cannot be discharged.

MR. WITWER: For the record, I want to put on what is really a continuing objection as to the legal relevance of the issues related to water quality that are not related to the quality of the replacement water in this pending augmentation plan case and/or related to existing provisions in the existing augmentation plan decrees at Battle Mountain.

If you remember the question --

A. Can you repeat the question, please?

Q. (By Mr. McClure) I think I said -- I believe I said: In 2011, can you discharge that water directly to the Rito Seco. And I think you said no, and I asked you why not.

A. Water chemistry reflects what the groundwater background is, which is different from what the surface water standards are. And the background does not take -- would not be acceptable as a discharge to the surface waters itself. Concentrations are higher in the

background than it is in the surface water standards established by the State of Colorado.

Q. And that's for TDS, sulfate, manganese, and fluoride?

A. For -- without looking at information, I would say for sulfate. I cannot speak to TDS. Manganese and fluoride would be elevated.

Q. Unacceptable when you say "elevated"?

A. Yes, sir.

Q. So at least three out of those four?

A. From what I recall.

Q. All four?

A. No. Three out of the four.

Q. And which one is at acceptable levels?

A. Sulfate.

Q. Is this requiring to tie into Battle Mountain's compliance requirements with CDPHE then on its discharge permit concerning the water treatment facility in any manner?

A. I'm not sure I understood --

Q. That's probably a fair question.

Is this one of the reasons or a primary reason that that water is needed to be treated at the water treatment facility because of these elevated levels of these constituents?

A. That's correct.

Q. And this is required pursuant to that CDPHE discharge permit?

MR. WITWER: Object. Calls for a legal conclusion.

A. Yes, sir.

Q. (By Mr. McClure) Is there anything to indicate that that situation may change in the future from the current state of the knowledge, knowledge you had when you left in 2011?

MR. WITWER: Object to the form.

A. I think the chemistry could change for some constituents, but I think others are in a steady-state condition and might not change. I don't know what happened since November 2011.

Q. (By Mr. McClure) Okay. Which ones are in a steady state, based upon your understanding?

MR. WITWER: Object to the form.

A. I would believe fluoride and likely manganese.

Q. (By Mr. McClure) Okay. When we talk about pre-mining water quality conditions, is there a change in that pre-mining -- a change in post-mining quality due to the mining activities themselves?

Specifically what I'm talking about is at

such time as they pierce that green clay layer.

MR. WITWER: Object to the form.

A. I don't believe -- I think piercing the green clay layer changed hydraulic conditions, not water quality conditions.

Q. (By Mr. McClure) Do you know that for sure?

A. That would be my opinion, my assumption.

Q. Okay. I'm going to refer you to an expert witness report in this case by Mr. Scott Mefford of August 20, 2012, and I'm just going to read to you a quoted section in his report from the report in which he refers to the TR-15 response plan.

Let me just -- it says, quote, "Prior to mining, the site-specific hydraulic connection between the Santa Fe formation and the Precambrian bedrock was believed to be minimal due to a confining green clay fault zone which generally separated the Santa Fe from the Precambrian rock.

"The hydraulic separation between the Santa Fe and the Precambrian rock was demonstrated by distinctly different potentiometric surface elevations in the Precambrian rock from the Santa Fe.

"With the initiation of mining, the green clay separating the Santa Fe from the Precambrian rock was removed in the west pit area. In fact, during the

mining process, the entire ground flow system throughout the west pit was interrupted."

Then it goes on and says, "Historically, the west pit area contained two aquifers of distinct chemistry, one on the Santa Fe and one on the Precambrian rock. Mining the west pit has resulted in one composite aquifer that receives water from two up-gradient aquifers of distinctly different water quality.

"In addition, the porosity and permeability in the west pit is distinctly different than the pre-mining condition. These factors result in a new flow regime and a new mixing ratio of waters." End of quote.

Based upon what appears in his report, does that change your opinion at all?

A. No, sir.

Q. No, sir?

A. No, sir.

Q. I'm sorry. "Yes, sir" or "no, sir"?

A. No, sir.

Q. Okay. And why is that?

A. Because it isn't the aquitard or the green clay hydraulic barrier that altered the chemistry within the pit.

Q. It was what, in fact?

A. It was the placement of waste rock

backfilling the pit.

Q. And that waste rock -- and why is the waste rock the key component?

A. Because the waste rock contained sulfide or reduced mineral constituents. And once they were oxidized, they were allowed to be able to release mineralization and sulfates from them that wouldn't have been present and available pre-mining.

Q. Let me back up to a series of questions we were visiting about before the break.

When you first commenced your duties with the Costilla County Battle Mountain operation, how would you describe your duties in terms of managing the lined tailings facility?

A. When I commenced my involvement there, I wouldn't have had any duties with the lined tailings facility.

Q. Did you assume those duties at some point in time?

A. Over time, yes.

Q. How would you describe your duties as it relates to that facility?

A. They would have developed with relationship to the management of water from the west pit and from the water treatment plant.

Q. So there is a certain amount of water annually generated that needs to be disposed of in some fashion from that west pit operation. Is that a fair statement?

A. That's correct.

Q. Is that -- do you have a rough figure as to what that is on an annual basis?

MR. WITWER: Object to the form.

A. I don't recall.

Q. (By Mr. McClure) Around 300 acre-feet per year? Is that a fair statement?

MR. WITWER: Same objection.

A. I would not believe so.

MR. MCCLURE: I'll come back to that, but let me ask you this.

Well, maybe I won't. Excuse me. Off the record.

(Discussion off the record.)

(Exhibit No. 4 marked for identification.)

Q. (By Mr. McClure) Let me hand you Exhibit 4 and ask if you can identify that document -- or series of documents, excuse me?

And I will represent to you that it appears to be annual reports on the Battle Mountain Costilla

County operation commencing with 2003 through --

A. Yes, sir.

Q. -- 2011, submitted by you to Wayne Williams from the Department of Natural Resources, and I think at the end, it was Julio Madrid.

Are you familiar with that general reporting?

A. Yes, sir.

Q. Can you tell me what those documents reflect?

MR. WITWER: I'd just like to clarify, for the record, John, that it appears to me that Mr. Lyle signed one of these reports and that Mr. Madrid signed the remainder.

MR. McCLURE: Okay. I guess they are what they are. I didn't -- yes, you're correct, Jim.

Q. (By Mr. McClure) Can you generally describe what the purpose of that report is?

A. It's the annual accounting of water withdrawals and augmentation accounting to the State of Colorado.

Q. And why are those reports required?

A. It's part of the decree, water decree.

Q. And is that that 99CW57 decree?

A. Is that the 2003 --

Q. Look at the first paragraph of the report.

A. Yes, sir.

Q. Then that is annual accounting as to how these west pit waters have been managed for each of the years in question?

A. I can speak through the years in which I was involved. It would be the west pit water as well as other water accounting pertaining to the mine site.

Q. On the first report, which is December 9, 2003, that's your signature on that report?

A. Yes, sir.

Q. Does that show the annual amount of water, that report, the annual amount of water that was dealt with in the west pit area for 2003?

A. Yes, sir.

Q. Can you show me where that is on the report or what that number is?

MR. WITWER: Object to the form.

A. Table 2 is -- Table 1 is extraction of water and augmentation water from associated wells.

Table 2 is water that has been treated and discharged as well as water that's been augmented.

Q. (By Mr. McClure) This report deals with both waters in the west pit area as well as what's been referred -- or what is referred to as the farm well, which I assume is the well in the Trinchera area?

A. Yes, sir.

Q. So if we were going to look for 2003 and determine how much water was pumped out of the west pit area, that would be that 404.666 number?

A. That is the number that would have been pumped for 2003 in Table 5, yes, sir.

Q. And then of that sum, 363.01 acre-feet were delivered to the water treatment facility, is that correct, in Table 2?

A. That's correct.

MR. WITWER: I'm sorry, John, to interrupt, but can we get one clarification? Because I think we'll all agree on it.

MR. McCLURE: Sure.

MR. WITWER: That this is a report, the first page is dated December of 2003, and I think either you or Mr. Lyle just referred to the information contained in the report as applying to 2003, but I think that's the water -- so-called water year 2003, which is not the same as the calendar year. And it may be useful to clarify that.

MR. McCLURE: Sure. That's fine. I think it's a good point. Thank you.

Q. (By Mr. McClure) Can you clarify what is the water year for 2003 if that differs from the calendar year 2003?

A. I believe the water year in Colorado is from November of the year to October of the following year.

MR. McCLURE: Okay.

MR. WITWER: Thank you.

Q. (By Mr. McClure) And then on Table 2, we have a number of 75.99 for Rito Seco augmentation.

What is meant by that?

A. That is replacement water, augmentation water to make up for depletions to the system associated with water that -- basically associated with the water that was pumped to the water treatment plant versus the water that was discharged.

And that would include depletions associated with water that's transferred to the tailings facility, as well as water that would have been lost in the treatment process.

Q. Okay. So that would include both water sent to the lined tailings facility plus water that's consumed in the treatment process itself?

A. That's right.

Q. Is there an evaporation concept included in that?

MR. WITWER: Object to the form.

A. From what perspective?

Q. (By Mr. McClure) From the perspective that

waters are sent to the lined tailings facility for purposes of evaporation.

A. No, sir.

Q. Tell me then what you mean -- tell me what evaporation concept means to you in terms of --

A. Basically, the augmentation would account for 100 percent consumption of the water that was sent to the lined tailings facility.

Q. 100 percent that has to be replaced; correct?

A. That's right.

Q. Okay. I guess then my question: Is there a separate evaporation concept shown anywhere in this report --

A. Not that I --

Q. -- so if we want to know how much was evaporated for that 2003 period, we would not be able to see that on this report; correct?

A. I believe that is correct.

Q. Okay. Would we be able to see that on any other report that's kept by -- that you kept while you were working for Battle Mountain?

A. I don't recall.

Q. It's possible?

A. It's possible, but I can't think of which it would be or what it would be.

Q. If we've got, for this 2003 period, 75.99 acre-feet delivered for Rito Seco augmentation, can you tell me how much of that 75.99 was sent to the lined tailings facility?

MR. WITWER: Object to the form.

A. The amount that would have been sent to the lined tailings facility from the water treatment plant would have been the difference between groundwater pumping, 404.666 acre-feet, and I would believe 363.01, I think, without looking at this and studying it closer.

Q. (By Mr. McClure) Okay. Let me ask you if there are two components of waters delivered to the lined tailing facility on any period. And for this period, it was the 2003 period that would constitute, A, brine from the water treatment facility, and B, waters delivered directly to the lined tailing facility for disposal purposes from the west pit area?

A. I would believe so. Periodically throughout them.

Q. Can we -- can you segregate those two numbers out in this report?

MR. WITWER: Object to the form.

A. I don't see that. And the thing that causes me hesitancy, Mr. McClure, is, with regards to the augmentation responsibility associated with Battle

Mountain, you have responsibility to take and augment for extractions from the west pit system.

You also have a 4.28 acre-foot obligation during the winter months to augment from the tailings facility being constructed in the upper waters of the drainage.

And from what I recall, I believe the 75.99 acre-foot augmentation volume also includes six months of 4.28 acre-feet to account for the tailings facility requirement. So I would think that would be 75.99 acre-feet of total augmentation from the ranch well to make the stream whole, minus the six months of 4.28.

Q. Let me go back to that. That's a little confusing. Six months of 4.28 is 4.28 per month?

A. Yes, sir.

Q. And you're saying you take six times 4.28, which is six months, and that was included in this 75.99?

A. I believe so.

Q. Do you know that for sure?

A. I know there is an augmentation for 4.28 that has to be made, and that would be made subsequently from November through April of each month -- or each year.

Q. And tell me --

A. That was an obligation under the decree.

Q. So it's an obligation under the decree.

That's not water that's stored in the lined tailings facility, obviously?

A. That is water that's diverted and captured by being -- the lined tailings facility being the headwaters of that drainage. That is water that would have been depleted from the system. We have an obligation to make the system whole for that installation of that tailings facility.

Q. Okay. How do you replace that obligation?

A. Basically, replace it with augmentation water from the ranch well as augmentation water.

Q. So that is simply a number that's generated on a monthly basis --

A. Yes.

Q. -- and then is replaced?

A. Yes.

Q. Okay. So if that's reflected in that 75.99 number, which is roughly --

A. 27 acre-feet.

Q. -- 27 acre-feet comes off of there?

A. That's correct.

Q. So if we were trying to look at that number and determine how much had been sent to the lined tailings facility through the west pit waters or the brine from the treatment facility, we would subtract off

that 27 from the 75.99?

MR. WITWER: Object to the form.

A. Can I explain something?

Q. (By Mr. McClure) Sure. Well, first, tell me am I correct or not, and then give your explanation.

A. Repeat it, please.

Q. If we wanted to determine how much was sent from the brine -- how much of the brine was sent from the treatment plant plus how much water was delivered from the west pit both to the lined tailings facility, the mathematical calculation would be to take the 75.99 and subtract off 27 acre-feet?

MR. WITWER: Object to the form.

A. I believe so.

Q. (By Mr. McClure) Okay.

A. If you would take a look at page 2, Table 3, you will see November through April there is a tailing facility augmentation of 4.28 acre-feet that is reported there on a monthly basis.

Q. Right. But just in terms of the raw math, that still works, what we talked about?

A. Yes.

Q. Okay.

A. The most accurate way to account for that would be to take the mine facilities groundwater

extractions that were delivered to the west pit water treatment plant for treatment. And basically, that would be water that would have come from the west pit wells, as well as from the groundwater wells M-32 and M-33. And basically, that is your input to the water treatment plant.

Subtract what the water treatment plant treated for the month, which I don't believe is accounted for on this reporting. That is the water that is replaced through the system, the difference that was due to take and go in is an augmentation purpose.

And the water that would have been transferred to the west pit would be the difference between the influent volume and the extraction volume -- or the discharge volume, if that makes sense, sir.

Q. I think so. I'll just go back and clarify one matter. M-32 and M-33 are both west pit wells?

A. No, sir.

Q. Recapture wells?

A. They are Rito Seco alluvial capture wells.

Q. Describe what a Rito Seco alluvial recapture well is, if you could, please.

A. 1998 and 1999 made mention of water basically had hydraulically rebounded in the west pit, overflowed from the west pit into the Rito Seco. It would have

overflowed from the west pit into the Rito Seco alluvium, which ultimately made passage to the Rito Seco Creek.

M-32 and M-33 are wells in that Rito Seco alluvium that are capturing and removing contaminated water that is obligated under CDPHE as well as DMRS to be recovered and to maintain a hydraulic gradient with those wells to recapture those contaminants that outflow from the west pit.

(Exhibit No. 5 marked for identification.)

Q. (By Mr. McClure) Let me hand you Exhibit 5. This is a report -- or a map, a depiction that was prepared by Mr. Bruce Lytle on behalf of Battle Mountain and purports to depict this west pit area.

Do you see that M-32 and M-33 on that?

A. Yes, sir.

Q. And those are outside the west pit area but in the Rito Seco alluvium; is that correct?

A. That's correct.

Q. All right. And then there are four west pit wells that pump in the west pit area itself?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) Or in a position to pump in the west pit area itself?

A. That's correct.

Q. Okay. What are those -- what's the numbers of those four west pit wells?

A. West pit wells that are normally pumped or in a position to pump, BF-4 and BF-5R are the primary wells. BF-5R is the primary well. You have BF-3 as well as BF-1. That stands for backfill pump -- or well. You have a subsequent other well, BF-6, that you could pump from.

Q. And the ones that when you talk about a primary well, that BF-5R, is that the one that's pumped on an annual basis?

A. That is the one that is pumped pretty well continuously.

Q. And BF-4, is that true, also?

A. No, sir.

Q. Okay. BF-5R means that it was a replacement well at some point in time?

A. That's correct.

Q. And that's been pumped continuously since inception?

A. Since the installation.

MR. WITWER: Object to the form.

Q. (By Mr. McClure) Okay. And what about BF-4? How long was it pumped?

A. BF-4 is pumped intermittently. It's pumped

primarily on seasonal conditions, which the extraction wells in the west pit have a limitation of 200 gallons per minute.

So in order to keep that water level at 8579 or the approximate range in which they're trying to operate the pit, if it exceeds 200 gallons a minute, they will take and bring the BF-4 into operation to make up that additional water.

Q. Okay. And the other BF wells besides BF-5R BF-4 are pumped then when?

A. Very, very seldom.

Q. Okay. Same limitation concept?

A. Yes.

Q. If it gets to be greater than 200 gallons per minute, do you have to move to another well?

A. If -- I don't recall. I believe the sequencing the wells that I recall is we would have pumped BF-5R as a primary well, BF-4 as the secondary well. A tertiary well would be BF-3.

I don't even believe BF-1 or BF-6 have pump facilities that pump -- a production pump installation in them. I believe they were just equipped with a monitoring pump.

Q. When was the replacement well installed, reflected by BF-5R?

A. I don't recall the approximate time. I believe it was early on in the dewatering. I want to say it would have been early 2000s. 2001-2002.

Q. Thank you. Going back to your Exhibit No. 4, where you've got, on page 2, M-32 and M-33 being pumped in 2003, why were those being pumped in 2003?

A. Because we had an obligation to pump them.

Q. And that was -- you're actually recovering waters that had escaped the west pit area during that period of time?

A. Yes, sir. There is an obligation to CDPHE to maintain the water level.

Q. Let me go to the November 15, 2011, report. It also reflects -- I'll wait till you get there.

It reflects, on page 2, that M-32 and M-33 are being pumped during that 2011 time period; is that correct?

A. That's correct.

Q. Have they continually been pumped, M-32 and M-33, from 2003 through 2011, generally?

MR. WITWER: Object to the form.

A. Yes.

Q. (By Mr. McClure) Okay. Is there a physical reason -- is that because -- is there a physical reason that that's occurring?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) You want to keep any contaminants out of the Rito Seco. I assume that's one of the purposes or primary purpose.

Is that the purpose for pumping those wells?

MR. WITWER: Same objection.

A. No.

Q. (By Mr. McClure) What is the purpose there?

A. It's a regulatory obligation.

Q. Through whom?

A. CDPHE.

Q. And what kind of an obligation is that? Just in your own words, explain why that's a regulatory obligation.

MR. WITWER: Object to the form.

A. I believe it's both a regulatory obligation under the CDPHE as well as DMRS. And that is to maintain a water elevation of 8540 within the Rito Seco alluvium. 8540 or lower.

Q. (By Mr. McClure) I see. So that pumping to maintain that elevation is not only in the west pit, but it also includes the Rito Seco alluvium?

A. That's correct.

Q. And that's been a requirement from day one with those permits?

A. Yes, sir.

Q. We have a number also, if you go back to your report of 2003, on page 2, west pit infiltration of 0.857.

Can you tell me what that means?

MR. WITWER: I'm sorry. You're on page 2?

Q. (By Mr. McClure) Page 2 of the 2003 report.

A. That was water that was injected back into the west pit early in the water management system. Water was extracted from the seeps along Rito Seco.

There was an injection trench -- or an infiltration trench, excuse me, installed in the west pit to allow water to be pumped back to it. That is water that was to be infiltrated back to the west pit from the seeps.

Q. (By Mr. McClure) How is that pumped back? Through a recapture well?

A. No. That was collected from the periphery of the Rito Seco banks. Basically, you had water that was seeping from the west pit through the alluvial into the stream.

There was a cutoff system put in and pumped back. It would have been both a seepage collection system as well as, I believe, if I remember right, there

were a couple wells there as well. That water was pumped out.

Q. Going back on that same page to M-32 and M-33, you've got a -- M-32 shows a number of 2970 and M-33 as 6.48.

When those wells are pumped, where does that -- where do those two sums go to?

A. Those are pumped to Pond 1 and the water treatment plant.

Q. To Pond 1 by the water treatment plant. So these are pumped for water treatment?

A. That's correct.

Q. Once they get to Pond 1, they go into the water treatment facility?

A. That's correct.

Q. Once they come out of the lined tailings facility, how many different ponds do they go to before they get to the water treatment facility?

MR. WITWER: Object to the form.

A. Your question makes no sense to me.

Q. (By Mr. McClure) Fair enough. Let me try it again. I withdraw the question because I think it was confusing.

MR. WITWER: You mentioned -- John, just in fairness, you mentioned the lined tailings facility in

there.

MR. McCLURE: I did. It's my fault. Excuse me.

Q. (By Mr. McClure) From the west pit area, isn't there a series of ponds before you get to the water treatment facility?

A. There is one pond.

Q. There's just one pond? Pond No. 1?

A. That's correct.

Q. All right. Going to the means that one manages waters coming out of the west pit and the election as to whether they would go to the water treatment facility or the lined tailings facility, is there a policy in place or was there a policy in place while you were there at Battle Mountain as to how those waters would be handled?

MR. WITWER: Object to the form.

A. It depends on what the facility was and what the arrangement was at the time.

Early on, before the west pit was operating -- or the water treatment plant was commissioned, the permit owner is commissioned and operating, water would have been pumped from the west pit to the tailings facility without treatment.

Once that water treatment plant was

commissioned, it was a regular -- I won't say policy, but regular scheduling the water to be delivered to Pond 1, treated, water be discharged, and what brine or what reject came out of the system, that was delivered to the lined tailings facility.

Q. (By Mr. McClure) After -- that was before. Well, you gave me a before and after scenario. You gave me the before and after.

A. The brine would have went after. The west pit water would have went before.

Q. By definition, after, there was a water treatment facility, the brine had to go to the lined tailings facility because there was a water treatment facility and the brine had to go somewhere?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) Is that a fair statement?

MR. WITWER: Same objection.

A. Not initially.

Q. (By Mr. McClure) Okay. Tell me how it was initially, then.

A. Initially, when we started the operation, we tried to maintain the brine within the water treatment circuit. We circulated the water -- the brine to the Pond 1, which was the influent or makeup water to the water treatment plant, and then took it and brought it

back through and treated it.

Q. Okay.

A. We did that for approximately four months, five months as we started up. Matter of fact, I would say during the winter of 2000 we did that.

The TDS got high, so high that we couldn't substantiate and continue treatment. At that point, then we started taking the brine to the tailings facility.

Q. Okay. So after that period of time, it was basically automatic that the brine went from the water treatment facility to the lined tailings facility?

A. That's correct.

Q. Then is there -- was there a policy in place, after the water treatment facility was installed, as to what amount of water went to the water treatment facility and what amount of water went to the lined tailings facility from the west pit?

MR. WITWER: Object to the form.

A. There wasn't a policy in place. Basically, there was a water management -- water management operation that it took -- and until probably about 2010, it was taken and brought water from the west pit through the water treatment plant. Brine went to the tailings facility. Treated water went to the creek.

Q. (By Mr. McClure) What was the allocation up

to 2010?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) How much of each went to the respective water treatment facility or the lined tailings facility?

A. Without going through the numbers, the majority would have went to the creek. The brine, which is 10 -- five, 10, 15 percent of that volume, would have went to the tailings facility. It depends upon what the performance was of the water treatment plant.

Q. If you will look at Exhibit 4, the annual periods are from 2003 through 2011 on the reporting through 2010. The numbers we have -- and I'll just read them off to you in terms of the summary and you can look at it yourself -- 2003 is 363, rounded off, acre-feet; 2004, 323; 2005, 334; 2006, 304; 2007, 306; 2008, 303; 2009, 267; 2010, 277. So this is waters that were delivered for treatment from the west pit.

If you can just take a glance through those and satisfy yourself that that appears to be correct.

MR. WITWER: Object to the form.

Q. (By Mr. McClure) My question to you is: Are we generally in the ballpark of 300 acre-feet annually, plus or minus, during that time frame?

MR. WITWER: Same objection.

A. 275 to 300 --

Q. (By Mr. McClure) I've got 363 starting out in 2003 going down to 277 in 2010, but some bigger numbers in 2003-2004 --

A. You mean 363?

Q. Yeah. 363, 323, and 334, the first three years.

MR. WITWER: Object to the form.

A. There's 363, 323.

Q. (By Mr. McClure) 334?

A. Do you have the numbers there I can look at?

Q. Sure. I'll just show you what I have. This is our own internal summary, but go ahead and look at it. That may help you cross-check it.

MR. WITWER: I'm sorry. Can we somehow make this an exhibit?

MR. McCLURE: It's our own internal. I haven't even checked --

MR. WITWER: I understand. But if you're asking him to confirm a series of numbers that are on a piece of paper that are too much for somebody to keep in their head, I would like to make it an exhibit.

MR. McCLURE: That's fine.

MR. WITWER: Or you can write them out on a separate piece of paper.

MR. McCLURE: I don't really have any problem. It is what it purports to be. I'll have him double-check to make sure.

MR. WITWER: We're not going to have him testify to a piece of paper that is not in the record that it was accurate.

MR. McCLURE: No. No, that is merely a document that I've handed to him simply to help him independently check through each of these numbers in the report. That's all it's being used for. I want him to look at the reports himself.

MR. WITWER: I still want to make this an exhibit because --

MR. McCLURE: I don't have a problem.

MR. WITWER: -- it doesn't have any relevance unless it's cross-checked against this set of numbers.

MR. McCLURE: I think it does, but I'm not going to fuss with it one way or the other.

A. Groundwater pumping, those numbers appear to be right.

MR. WITWER: Can I take a quick look at it?

Thank you.

Q. (By Mr. McClure) I guess then the other

thing I'd like you to check is that second line on the augmentation numbers for that period. It's got, starting with 2003, it's 75.99 and ending in 2010 with 50.76. And if you can just check to see if that's correct.

A. It appears correct.

Q. Thank you.

2009 was the first year of a nine-year period that you dropped below 300 acre-feet delivered to the water treatment facility and went down to 267 from the previous year in 2008, which was 303.

Can you tell me why there was that decrease?

MR. WITWER: I need to object to the form. And I do think it will make a better record if we just clarify, John. You're using the term, on the 2009 report, 267.75. That's in a column on page 2 of the 2009 report, under the heading "Cumulative Acre-Feet Delivered." And you just characterized it, I believe, as water delivered to the water treatment facility.

Q. (By Mr. McClure) Let me back up just one second. I'll just rephrase the question.

It appears, between the annual period of 2008 and 2009, there was a decrease of water treated from 303.61 acre-feet to 267.75 acre-feet.

Assuming that's correct, based on these numbers, do you have an explanation as to why there was

that decrease?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) You can look at this.

A. It appears, if you look at the volumes of water that were extracted from BF-5, BF-4, BF-5R, and between 2008 and 2009, there was a volume difference of about 13 million gallons -- or 13 -- 113 -- or 13 acre-feet there. I would imagine it was seasonal.

Q. Okay.

A. And if you go back to your previous question, Mr. McClure.

Q. The one that Mr. Witwer objected to?

A. No. Go back to when you were talking about the volume of water augmented -- or volume of water transferred to the lined tailings facility.

Q. Correct.

A. If you were to look at these and look at Table 1 of each year, you would see a cumulative volume of water that was extracted. Say, like for 2009, that volume would be 309.9 acre-feet of water.

Q. Correct.

A. That was the total water that was removed from the west pit system.

If you take that number and you subtract 267.75, that was the water that was taken and discharged

from the water treatment plant. That would be the water that was delivered to the Rito Seco.

So the difference for purpose of the water being transferred to the lined tailings facility would be 309 minus 267.

Q. Okay. Were there policy considerations on a year-to-year basis as to how much water went to the water treatment facility and how much water went to the lined tailings facility?

MR. WITWER: Object to the form.

A. There was consistent water management from 2003 to 2010. You would see a difference 2011. There was basically a policy or a management change in 2011 that took and brought more water from the west pit to the tailings facility in 2011.

Q. (By Mr. McClure) So from 2003 to 2010, there was more or less a policy that reflected the allocations that are set forth in the relative numbers?

In other words, it's fairly consistent that most of that water was being treated through the water treatment facility?

A. That's correct.

Q. And why was that policy in place?

A. That was the means of managing and controlling water from the west pit. That was the means

of policy, how we managed water there.

Q. Is the principle that if it is treated and placed into the stream, it is good quality water being reintroduced back to the Rito Seco?

MR. WITWER: Object to the form.

A. Please repeat your question.

Q. (By Mr. McClure) Is the concept behind treatment of waters through the water treatment facility that one then treats and discharges good quality waters back to the Rito Seco?

A. By permit, we're obligated to meet effluent criteria to discharge to the Rito Seco. It's got to meet permit conditions.

Q. And the permit conditions allow waters to be introduced into the Rito Seco that meet the water quality conditions required by CDPHE in the permit?

A. That's correct.

Q. Okay. Tell me, then, the difference in 2011, because we have different numbers in 2011.

We go to that report -- maybe if we go to the 2011 report and see if you agree with me on these numbers.

Of the 337.68 acre-feet pumped, 155.24 went to the water treatment plant and 232.14 went to the west pit, all in acre-feet.

A. No, sir.

Q. All right. Let me go to -- tell me how I'm wrong there.

A. Basically, you said the 232.14-acre feet went to the west pit. It did not go to the west pit.

Q. I'm sorry.

A. It went to the lined tailings facility.

Q. I apologize. Let me start over again. I've had that problem for a couple days.

So of the 337.68 acre-feet pumped, 155.24 goes to the water treatment facility and 232.14 to the lined tailings facility?

MR. WITWER: Object to the form.

THE WITNESS: Pardon me, Mr. Witwer?

MR. WITWER: You may answer.

A. Now that he interrupted, could you please repeat.

MR. WITWER: Whatever he says, I object.

Q. (By Mr. McClure) Just in terms of raw numbers, 2011, we've got 337.68 acre-feet pumped, 155.24 to the water treatment plant, 232.14 to the west pit, 232.14 to the lined tailings facility.

A. That's what it says.

Q. Okay. Any reason to disagree with those numbers?

MR. WITWER: Object to the form.

A. Without doing the math on them, I've got to assume they're correct.

Q. (By Mr. McClure) What policy changes were implemented in the 2011 period to make those numbers what they are in terms of the allocation being different going to the water treatment facility versus the lined tailings facility?

MR. WITWER: Object to the form.

A. They're in the non-winter months. More of a portion of the water is transferred to the lined tailings facility to be managed than was previously treated -- or previously managed there.

Q. (By Mr. McClure) Why was that?

A. Utilizing the lined tailings facility for a water management unit for evaporation and other water control.

Q. I'm sorry. You are utilizing it for evaporation purposes, but that's true, you were utilizing it during the prior years for evaporation purposes also; correct?

A. For brine, yes, sir.

Q. Well, then maybe you better explain because I'm confused. You were using it for brine continually since the -- except for that one four- to five-month

period, the brine was all going to the lined tailings facility; correct?

A. That's correct.

Q. Then we have water being transferred to the lined tailings facility for evaporation purposes as reflected in the numbers from 2003 to 2010?

A. For brine, that's correct.

Q. Correct. And then we have a change in 2011. But in 2011, A, the brine is still going to the lined tailings facility, and you're still operating the water treatment facility. It's just that a substantial amount of water is going to the lined tailings facility over what has occurred in the past?

A. There is more water from the west pit pumping that's being managed at the lined tailings facility than was previously. There was more water going through the water treatment plant previously than there was in 2011.

Q. Let me back up here. In terms of more water being pumped, there is more water pumped in 2011 than 2010, but it's marginally more.

You've got 2011, the number being 337.68. 2010, it's 321.22. And in 2009, if we back up another year, is 309.9. If you want to -- that's what my numbers show. You can please check yourself.

Assuming that's correct, there's not a

material increase in pumping during that 2009-2010 to 2011 time frame. Would you agree with me there?

A. Yes, sir.

Q. Then really what's occurring here is there is a determination made from a water management perspective to move around half of that water that's pumped, close to it, to the lined tailings facility.

Is that a fair statement?

MR. WITWER: Object to the form.

A. There was more water that was extracted from the west pit that would have been pumped -- the west pit water would have been pumped to the tailings facility in 2011 than there was in previous years.

Q. (By Mr. McClure) Okay. But on each year, there is an elective process, is there not? You could either move that water from the west pit to the water treatment facility or move it to the lined tailings facility?

A. That's correct.

Q. Okay. What was the policy change that occurred in the year -- planning year -- or that year 2011?

MR. WITWER: Object to the form.

A. To maximize the evaporation -- utilization evaporation or water management at the lined tailings

facility versus the water treatment plant.

Q. (By Mr. McClure) Was this -- what were the factors that went into that decision-making process?

A. To understand -- to better understand the evaporative ability to manage water versus actively treating it.

Q. Was a canola crop grown in the lined tailings facility in 2011?

A. I believe so.

Q. Was it grown in that facility in any prior years?

MR. WITWER: Object to the form.

A. I don't believe so.

Q. (By Mr. McClure) To your knowledge, has it been grown in that facility in 2012?

A. I wouldn't have knowledge.

Q. Okay. Could you tell me what the policy considerations were for growing a canola crop in the lined tailings facility in 2011?

MR. WITWER: Object to the form.

A. To evaluate evapotranspiration associated with the water management operation.

Q. (By Mr. McClure) In any prior years, was evapotranspiration evaluated?

A. It was a continuous part of the system.

Q. And that's because of the natural vegetation on the portion that had been reclaimed had some evapotranspiration?

A. That's correct.

Q. Anything else on prior years prior to 2011?

A. Not that I recall.

Q. Were there any other crops grown prior to 2011?

MR. WITWER: Object to the form.

A. Not that I recall.

Q. (By Mr. McClure) Native hay?

A. No, sir.

Q. Wheat? Nothing else --

MR. WITWER: Object to the form.

Q. (By Mr. McClure) -- prior to 2011?

MR. WITWER: Same objection.

A. Not that I recall.

Q. (By Mr. McClure) Okay. As to the canola crop that was grown in 2011, how was it -- what use or disposition was made of it?

A. It was harvested and the beans were collected from it.

Q. And what occurred with those?

A. I don't recall.

Q. Were they made into any -- processed in any

manner into canola oil?

A. I don't recall.

Q. Was the canola made available to any farmer in the San Luis Valley?

A. I don't know.

Q. I think there was a gentleman by the name of Christensen. Maybe it was Jim Christensen. Did he receive any of that canola, to your knowledge?

A. I don't know. I don't recall. He cut it. I don't know what the disposition of that was.

Q. He was the one that harvested it?

A. Yes, sir. I believe so.

Q. Waters to grow the canola crop: One used waters through the existing sprinkler system on the facility. Is that a fair statement?

A. I don't know whether it was the previous -- there was a new -- there was a replacement system put there, I believe, in 2011, if I remember right.

Q. Let me back up and ask you about that.

Was there a sprinkler system in existence on the lined tailings facility prior to 2011?

A. Yes, sir.

Q. And would you describe what it looked like?

A. It was a center pivot irrigation system.

Q. And how did waters get to the center pivot?

A. It was pumped from the supernatant pond and tailings facility to the center pivot.

Q. And when was that center pivot installed there?

A. I want to say approximately 2001.

Q. And it stayed in existence until sometime in 2011?

A. I believe there was a replacement put in 2010 or 2011.

Q. And what was it replaced with?

A. A center pivot.

Q. And how big was it?

A. I couldn't tell you.

Q. Approximately 50 acres or was it larger?

A. It would be equivalent to what was there previously. I would say probably about 50 acres.

Q. A newer model then, essentially?

A. Yeah, basically a newer model. A model in better condition.

Q. Was it a used sprinkler or a new one?

A. A used one.

Q. And it's currently there in 2012, also?

A. I couldn't tell you.

MR. WITWER: Object to the form.

Q. (By Mr. McClure) Was there any investigation

made as to the quality of the waters that were used for irrigation purposes on that canola crop by Battle Mountain?

A. I don't recall.

Q. Was there any testing done of those waters to determine their suitability for agricultural purposes?

A. I don't recall.

Q. Was permission asked for by Battle Mountain from DRMS to grow canola crop on that property in 2011?

A. I believe there was conversations or communications with DMRS on that.

Q. And what do you recall about those communications?

A. I believe there was communications that Battle Mountain was looking to evaluate a crop on there, or an irrigation on the tailings.

Q. And did you seek approval from DRMS for the right to -- the ability to grow a canola crop for 2011?

A. I don't recall.

Q. Was there any application process involved?

A. Not that I recall.

Q. Do you recall if you received approval or not from DRMS?

A. I don't believe there's any written approval.

Q. Did Battle Mountain believe that it had the

ability to grow a canola crop on that lined tailings facility without approval of any regulatory agency?

A. I believe they had the ability to manage water on the tailings facility.

Q. But on my specific question, do you believe they had the ability to grow a canola crop without approval, formal approval?

MR. WITWER: Object to the form.

A. Please repeat that.

Q. (By Mr. McClure) Do you believe that Battle Mountain believes that it can grow a canola crop on the lined tailings facility in the future?

A. I can't speak for the future. I'm no longer obligated, responsible for the site.

Q. Do you believe that you had the ability to grow a canola crop on the facility in 2011 without formal approval of DRMS?

MR. WITWER: Object to the form.

A. I believe DMRS was informed and DMRS didn't defer on it.

Q. (By Mr. McClure) Is there any policy going forward as to whether or not a canola crop or any other crop will be grown on that lined tailings facility in the future?

MR. WITWER: Object to the form.

A. I can't speak to that. I'm no longer responsible for that operation.

Could we take break?

MR. McCLURE: Absolutely.

(Recess from 11:23 a.m. to 11:37 a.m.)

Q. (By Mr. McClure) Okay. Back on the record.

Mr. Lyle, when you were acting in your capacity as managing waters at the Costilla County facility, what factors did you take into account in understanding the operations of that system related to the lined tailings facility?

A. I'm not sure I understand what your question is.

Q. That's a fair enough comment.

What was your understanding as to the nature of the liner, synthetic liner beneath the facility?

MR. WITWER: I'm going to make that same objection as to legal relevance that I began the deposition with, because this is the subject of a pending motion and not relevant. I'll, of course, allow the witness to answer, but for the record.

A. I understand that it had a synthetic geomembrane liner system that separated the tailings and the natural environment.

Q. (By Mr. McClure) Did you understand how and

in what manner the tailings were deposited in that lined tailings facility?

MR. WITWER: Same objection. I'll just make it a continuing objection.

A. That would have been conducted prior to my tenure there.

Q. (By Mr. McClure) Were you aware of the amount of tailings in the facility itself that had been deposited when you first came there in 1997, I think you said?

A. My understanding was that there was a 193-acre facility that was constructed in two phases. With regards to the volumetric amount, I don't have an understanding of that. I probably had an understanding at one time. I don't recall that now. It had 193 acres of tailings deposition.

Q. Were you aware of how much had been deposited within that 193-acre facility volumetrically, the amount of tailings?

A. Not that I recall.

Q. Do you know the volumetric capacity to store tailings?

A. I don't recall.

Q. Because that would be some other number aside from just 193 acres, I assume, which is on the surface?

A. That is the surface plan area of it.

Q. What about the volumetric capacity to take on water in that facility?

A. That would be controlled and limited by the under-drain system. I basically don't recall what that volume of water -- that in situ volume of water capacity would be.

Q. During the -- I think we discussed that during the mining phase, there would be water that would be recirculated -- or circulated and recirculated in a facility such as the lined tailings facility and would go back to the mill and then be reused and slurry would then come down into the facility itself and deposit tailings.

That was not true during the reclamation phase. Is that a fair statement?

A. When the mill was shut down in 1996?

Q. Correct.

A. If there was a recirculating capacity within that circuit, that was ceased at that point.

When the facility was operating, there would have been two sources of water within the facility. There would be the supernatant pond that was on top of the tailings facility, and there would have been the under-drain collection coming from the collection pond below that would be pumped back up and put in the

supernatant pond.

Q. What's the term that you used for the pond? Did you say "supernate"?

A. Supernatant, s-u-p-e-r-n-a-t-e-n-t.

Q. And what is a supernatant pond? How do you define that? Or explain that a little better for me.

A. That is the process collection pond within a tailings facility.

Q. Does the -- is that part of the design, to your knowledge, to have a pond on the top of the facility?

A. Every facility that I've ever been associated with has a pond on it.

Q. Of some size?

A. Of some size. The slurry is decanted onto the tailings facility generally in an upstream construction.

When you deposit that slurry on the tailings facility, the tails or the solids settle and the water accumulates on the surface of it. That's your supernatant pond. So it is the process water that is associated with the slurry.

Q. And then you get more slurry introduced during the mining phase, which means more water is brought down into the facility itself; correct?

A. Yes, sir.
Q. And then part of that water is recirculated back to the mill itself?
A. That's correct.
Q. During the reclamation phase, there is no recirculation?
A. That's correct.
Q. So --
MR. WITWER: I'm sorry. I'm going to object to the form, in addition to my continuing objection.
Q. (By Mr. McClure) And, in fact, in the reclamation phase in the conventional sense, the area is filled in, revegetated, and no water would be introduced to it?
A. That is the common practice.
Q. And is that a commonly accepted definition of what constitutes reclamation?
A. I would believe so.
Q. So the difference between that common practice and what occurred here was really a result of the need to dispose "pumped to west pit" waters after that spill occurred?
A. I want to define -- I take reference to the word "spill." I believe it's basically a natural

condition. Once the leakage from the pit occurred, yes, basically the west pit water had to be managed.

Q. And then when the west pit water was managed, it was managed, in part, by taking some of those waters over to the lined tailings facility, as we've discussed?

A. That's correct.

Q. Was there a determination made as to what quantities of water could be taken over to the lined tailings facility and be contained within that facility, as opposed to spilling over it?

A. I believe there was a determination made as to the quantity of water that could be managed there during non-winter months that could be managed as part of that facility. That's why the water treatment plant was periodically operated during 2011 that I had knowledge of.

Q. What quantity of water could be taken over to the lined tailings facility during the non-winter months in which there would be no possibility of a spill occurring?

MR. WITWER: Object to the form.

A. There -- as I mentioned, there was a supernatant pond or there was a pond surface area within the center of the west pit.

As long as water is sustained and maintained

within that exposed area, that is well beyond and below the embankment area of the tailings facility. I believe from the embankment to the downgradient edge of that pond is probably in excess of five feet of freeboard.

Q. (By Mr. McClure) This sounds like you're talking about a quantitative measurement as to how much water was in there. Is that what we're going to?

A. That's right.

Q. What is that -- that's a little bit different than the question I asked, but let me go back on that point.

What is the quantitative concepts that you are taking into effect to determine what quantity of water is being stored in the lined tailings facility?

A. What the volumetric measure is within that pond?

Q. Correct, yes.

A. I couldn't tell you what that quantitative volume is. Now, it's a surface area exposure.

Q. And that surface area exposure we're talking about was the number of acres observable on the surface?

A. That's correct.

Q. And I think you gave me a number for 2011, but if not, can you give me a number?

A. I believe that number was somewhere in the

range of 23 acres.

Q. That's right. Okay.

Aside from then the 23 acre-feet observable on the surface, there's no means, to your knowledge, to determine the volumetric amount of water being held below the surface? Excuse me. That's not a correct way of saying it.

The volumetric level being held in the facility?

A. I don't understand your question.

Q. Approximately -- based upon your testimony that approximately 23 acres of surface water is exposed, is there any way to tell how much water is being held in total from a volumetric standpoint?

A. On the surface?

Q. No. On the surface and below.

A. There is a volumetric or a flow that is calculated from the water that is captured in the evaporation pond -- or not the evaporation pond, but the collection pond, the downgradient portion of it, the under-drain.

When that water is pumped back, there is a known volume of water that is extracted, and there is a time frame that has occurred from the time it was last pumped to the time that it was completed being pumped at

that time, and you'd do a calculation to determine what that volume is.

That volume gives you an understanding of whether the tailings facility is taking on or losing water within the surface or within the pore capacity of the tailings.

Q. Okay. But that can't tell you the total volume of water being held in the tailings facility; correct?

A. That's correct.

Q. So the answer would be: One cannot determine, from your perspective, the total volume being held in the lined tailings facility at any one point of time?

A. With the information that's available at this time that I know of, no. And I think there are means that you could do that if you had to.

Q. How could you do that if you had to?

A. You have a surface area that's been surveyed. You've got an area that you know what the depth and the circumference of that disturbed -- or that pond area is.

You could stage staff gauges in it so you understand the depth of water within that and then calculate from the staff gauges and the survey what the volume of water would be.

Q. That calculation will necessarily have to take into account the amount of tailings in that area above the liner also, would it not?

A. I don't believe so.

Q. Why is that?

A. Because you're asking me what the volume of water is contained on the surface.

Q. No. My question to you is the volume of water contained in the lined tailings facility. That would be a calculation that I would assume that would include the volume that appears on the surface.

A. That would include in situ water as well as surface water.

Q. Right. But when we talk about volume, you have to know what size of container we're dealing with.

And my point is, is that we don't have the same size of container that was present when the facility was built, because by definition, you've got tailings in there on top of --

A. That's correct.

Q. -- of the liner. Is that fair assumption?

A. That's correct.

Q. Okay. So can you help me out? Is there any -- wouldn't you have to know the volume of the tailings as a factor in some regard to determine what's

the nature of the container?

A. You would have to know the volume of tailings. You would also need to know the porosity of those tailings. And you would need to know what portion of the facility is saturated or unsaturated with relationship to pore volume within it.

Q. To your knowledge, that calculation has never been done by Battle Mountain while you were involved in managing that facility?

A. I don't recall it being done.

Q. Is there -- can there be problems with a liner leaking?

A. Please repeat.

Q. Can there be a problem with a liner such as that contained in the lined tailings facility leaking at some point of time?

MR. WITWER: Object to the form.

A. I would believe so.

Q. (By Mr. McClure) What factors does one look at to determine whether or not a liner might leak over time?

MR. WITWER: Same objection.

A. I don't know what was looked at to understand what the longevity and what the performance of that liner is or any liner is.

Q. (By Mr. McClure) Do you know the longevity or did you know the longevity of this liner that was placed in the lined tailings facility?

A. I don't know that.

Q. Do you know if anybody does at Battle Mountain?

A. Not that I know of. Not that I can think of.

Q. Is the longevity of the liner usually tied to the expected life of the mining operation?

MR. WITWER: Object to the form.

A. I wouldn't -- I couldn't tell you. It depends on what the objective of the facility is and what the objective is for the use of the facility.

Q. (By Mr. McClure) Normally, isn't the objective of a facility of this type to do just what one would expect to have occurred that was done during the mining cycle? In other words, it was used to deposit tailings and recirculate waters back to the mining facility?

A. I would believe there would be phases to what the objective or the performance of a liner system or system would be. It would be the mining cycle as well as the reclamation closure cycle as well. And what that term or what length is I couldn't answer.

Q. Here, we had a mining cycle of roughly six to

seven years, something like that?

A. That's correct.

Q. And then, normally, how long would one expect after mining ceasing before reclamation is complete to the extent that one has brought in fill, topsoil, commence growing a crop -- commence growing a vegetative cover?

MR. WITWER: Object to the form.

A. That could be from four -- three, four, 10, 15 years. It depends on what the conditions are.

Q. (By Mr. McClure) Absent the need to take waters from the west pit to the lined tailings facility, what would be the expected closure time on this type of a facility considering what has occurred, weather, any other factors that would influence timing?

A. If you were not to be managing water from the west pit?

Q. Correct, yes.

A. 10 to 15 years, I would imagine.

Q. And 10 to 15 years takes into account having the vegetation come back?

A. That takes into account recontouring, topsoiling, revegetating, and basically monitoring that facility until it's determined it's stable.

Q. Once again, could you give me a definition of

"stable," determined to be stable?

MR. WITWER: Object to the form.

A. That you have erosion stability as well as chemical stability. You have protection of natural resources.

Q. (By Mr. McClure) When you talk about chemical stability, what do you mean by that?

A. Basically, geochemistry. Do you have groundwater conditions that are stable and are satisfactory. Do you have surface water conditions that are stable and satisfactory.

Q. When do you anticipate that is going -- situation will be reached with the lined tailings facility in Costilla County?

MR. WITWER: Object to the form.

A. With regards to the San Luis facility, I think as long as you are managing water there, you're going to have an obligation to utilize a lined tailings facility.

Q. (By Mr. McClure) And basically, from what I am understanding, that's not a determinable period of time right now. Is that fair statement?

A. I think that's a fair statement.

Q. So it's indeterminant as we sit here?

A. Pardon me, sir?

Q. Indeterminant? There is no way to project? It appears to be going forward in the future indefinitely?

A. I would imagine it has -- as long as you have an obligation to manage water from the west pit, it's indeterminable.

Q. And right now, there is an obligation to manage water from the west pit pursuant to DRMS, CDPHE. Is that a fair statement?

A. That's correct.

Q. Let me hand you that subpoena duces tecum -- it's one of the first three exhibits -- and ask if you can look at that.

Going down to two, on the volumetric capacity of the lined tailings facility -- no. Excuse me. Going down to three, the volumetric capacity of the lined tailings facility to store water, Part (d) asks what amount could be safely stored.

Do you have a number for that?

A. Are you looking at 2(d)?

Q. I'm looking at 3(d).

A. I do not have a number for that.

Q. Likewise, when we go down to 4(a), is it a fair statement that we do not know the anticipated life expectancy of the liner beneath the lined tailings

facility?

A. I do not.

Q. Going down to 4(b), do we know the location of the liner within the lined tailings facility to the extent that there could be a portion of that liner that doesn't go clear to the top of the facility?

Do you know that to be true or not?

A. I do not.

Q. Do not?

A. My assumption is it does, but I think that would be documented in as-built reports.

Q. Let me ask you: Do we know if there's any as-built drawings? Have you ever seen those?

A. I believe at one time I saw Phase II as-built reports.

Q. What is a Phase II as-built report?

A. Basically, the tailings facility was constructed in two phases. Phase I was for a volumetric limit. Phase II was an add-on or a construction above that volumetric limit. I believe I've seen it for the Phase II construction, if I remember right.

Q. Maybe this is getting late in the morning, but the Phase II was an addition? Is that what you're saying?

A. That's correct.

Q. And why was there a need for the addition?

A. To dispose of additional tailings.

Q. So the initial as-built was not sufficient to take care of all the tailings, and they had to have a modification to that design?

A. I don't know what the sequencing of it was. I know there was two phases constructed. I don't know whether it was limited by construction season, construction conditions, or operational conditions.

I know, from what I recall, seeing a Phase II as-built report.

Q. Going to No. 5 on the subpoena duces tecum, do you know what safety measures were in place -- are in place or have been in place to take into account the event in the event that the lined tailings facility system or liner fails?

A. There is requirements to measure the under-drain system and the flows that are part of that. That's reported to DMRS on a regular basis.

There are also periodic regular -- I won't say periodic, but regular piezometer and lysimeter measurements that are taken and are reported to DMRS, and there are conditions that should they be out of scope, for investigation to be done. I believe that's done on a monthly basis, if I recall.

Q. Anything with CDPHE?
A. No, sir.
Q. Anything with the Colorado State Division Engineers Office -- Colorado State Engineers Office?
MR. WITWER: Object to the form.
Q. (By Mr. McClure) Dam safety inspection?
MR. WITWER: Same objection.
A. Not that I recall.
Q. (By Mr. McClure) Do you know if that facility is approved for storage by the Colorado State Engineers Office?
A. I don't recall. I don't know. I don't know who the permitting agency -- I don't recall who the permitting agencies were for that facility.
Q. Certainly DRMS was involved, though, were they not?
A. Yes, sir.
Q. You're just not sure who else besides DRMS?
A. That's right.
Q. Do you know if there's any safety plans that have been prepared for that lined tailings facility for any regulatory agencies?
A. I would be making an assumption if I said I believe so. I would assume, but I can't specify.
Q. Have you ever seen one or --

A. Not that I recall.

Q. Who would that be for if you had such a safety measure in place? Would that be for DRMS?

A. I believe so.

Q. And no one else, probably? OSHA would not be involved?

A. OSHA is not involved in that site.

Q. Then going to seven, let me -- we've been over this before, but let me just ask you this question.

Is it a fair statement that you don't know the water storage volume in the lined tailings facility as of December 31, 2011?

A. That's correct.

Q. Or any other time?

A. That's correct.

Q. Is it fair a statement that under No. 9, you don't know the amount of tailings deposited to the lined tailings facility as of December 31, 2011?

A. That's correct.

Q. Or any other time?

A. That's correct.

Q. Is it also correct that you do not know, under No. 10, the amount of water -- no, let me back off of that and rephrase that question.

We actually can tell the amount of water

annually deposited in the lined tailings facility for that 2003 through 2011 time period based upon what we reviewed earlier today?

A. That's correct.

Q. No. 11, do you know the amount of topsoil imported into the lined tailings facility for reclamation purposes while you were in charge of that facility?

A. I don't know the quantity. I believe it could be calculated. I believe that facility had 170 or so acres of the area reclaimed. I believe there was 18 inches of topsoil used to reclaim it, on average.

Q. No. 12, do you know the amounts of water disposed of in the lined tailings facility since the termination of mining?

A. I wouldn't know.

Q. You don't know?

A. No, sir.

Q. Okay. Is there any way to determine annually through evaporation? Which is kind of a subset of 12, which you said you didn't know but I want to ask you that. Or maybe that's a -- let me ask you specifically.

Could you tell annually how much has been evaporated from the lined tailings facility on any year?

A. Not without some type of calculation and assumptions being made.

Q. What kind of assumptions would you have to make?

A. The surface area, the precipitation, and an average evaporation, lake evaporation.

Q. Do you think you have those tools available to do so, if necessary, or not?

A. I believe you have some of them available. I believe you have site precipitation recorded. I believe you have volumes that you pumped to it or that you've transferred there on a seasonal basis.

I think you would have to make assumptions as to the surface area. You have pan evaporation that you can equate to lake evaporation calculations. You can take and do a qualification of what that evaporation might be.

Q. Same question as to evapotranspiration. And here, we're talking about consumption through plants; correct?

A. That's correct.

Q. Could you make that calculation or have the tools to do so?

MR. WITWER: Object to the form.

A. I think that would be difficult.

Q. (By Mr. McClure) Let me go to 13. Are there records of any gauges, meters, or means in place to

monitor how much water is in storage in the lined tailings facility at any one point of time?

A. What do you mean as to "in storage"?

Q. The waters that are reflected as being apparent on the surface. You indicated in 2011, approximately 23 acres were shown on the surface. That's the one known we have.

I don't know what other factors we have or tools to determine anything, and that's my question.

MR. WITWER: Object to the form.

A. I don't recall any meters, gauges being in that supernatant pond area to measure that.

Q. (By Mr. McClure) Okay. Then on 14, do you know the quality of the brine that's being transported, water quality of the brine that's being transported to the lined tailings facility from the water treatment facility?

A. I believe there are records at the mine site that could reflect that.

Q. What kind of records are those?

A. Water quality analysis.

Q. And that's -- where the brine itself has been treated -- tested? Excuse me.

A. Yes, sir.

Q. And is that reported to DRMS?

A. Not that I recall.

Q. That's just your own internal records?

A. I think it was for internal as well as potentially records associated -- or responses to comments associated with permits or questions by the agencies, whether CDPHE or DMRS.

Q. Do you recall which constituents are in the brine that are higher than normal for discharge to the stream?

A. I would imagine sulfate, TDS, manganese, fluoride primarily. I would imagine seeing some brine, some concentration of all the constituents there. There could be several others.

Q. Where are those records kept on those water quality tests on the brine? Right at the mine site?

A. I believe they could be there.

Q. Do you have any idea where else they would be if they're not there?

A. No.

Q. And for what years? Is that all years?

A. I wouldn't know.

Q. For the years that you were there, were there annual tests?

A. I don't recall annual tests.

Q. Periodic testing?

A. Periodic testing or testing on specific dates or conditions associated with questions or inquiries.

Q. Let me go to 15, the water quality of the waters that are transported to the lined tailings facility from the west pit.

Are there internal tests of those?

A. I would believe so.

Q. Same manner that are kept as to the brine?

A. Similar, yes.

Q. Periodic testing?

A. I won't say periodic. Probably testing in relationship to specific questions or requests.

Q. What constituents are higher than normal for discharge into the Rito Seco from waters that are transported from the west pit to the lined tailings facility?

A. TDS, manganese, fluoride.

Q. All in excess of the standards for allowable discharge to the stream?

MR. WITWER: Object to the form.

A. I would think so. I believe there are variations in the stream standards associated with the volumes of which is being discharged. Those volumes -- those concentrations change with the volume.

Q. (By Mr. McClure) With the volume. I see.

Okay. Is that under the CDPHE permit type of concept?

A. That's correct.

Q. Different volumes, different standards?

A. You have three outfalls classification. You have 001A, 001B, 001C, which are regulated by flow.

Q. Do you have any orders or instructions from DRMS as to the amount of waters that can be stored in the lined tailings facility? Quantities?

MR. WITWER: Object to the form.

A. Not that I know of.

Q. (By Mr. McClure) Are there orders from or instructions from CDPHE to that effect?

I would assume the answer to that is no, but I thought I better ask the question.

MR. WITWER: Same objection.

A. From my recollection, CDPHE had no regulatory jurisdiction on the tailings facility.

Q. (By Mr. McClure) What about the State Engineers Office? Same question. Any orders, instructions, regulations as to the amount of water that can be stored in the lined tailings facility?

MR. WITWER: Same objection.

A. Not that I recall.

Q. (By Mr. McClure) Then I assume the answer to

16(b) would be the same as what you've just given concerning both DRMS, CDPHE, and the State Engineers Office?

MR. WITWER: Same objection.

Q. (By Mr. McClure) That there are no instructions or recommendations as to the amount of waters that could be stored in the lined tailings facility within safe parameters?

MR. WITWER: Same objection.

A. Not that I recall.

Q. (By Mr. McClure) Do you have any understanding or internal policies as to what would be safe parameters of storage of waters in the lined tailings facility?

A. Please repeat that.

Q. Yeah. Does Battle Mountain have any policies, procedures, instructions as to the amount of waters that could be stored within the lined tailings facility within safe parameters?

MR. WITWER: Same objection.

A. Not that I recall.

Q. (By Mr. McClure) Going to 18, do you have -- going to 17, do you have records as to how and in what manner the lysimeters were installed in the area below the collection pond pursuant to the 89CW32 case?

A. That would have been before I was ever there.

Q. Okay. While you were there -- going to 18 -- was there any records of maintenance work performed on the lysimeters from installation to 2011, when you were no longer in charge?

A. Not that I recall.

Q. Going to 21, do you have water quality records at Battle Mountain in spreadsheet format that shows the results of all testing at all the monitoring facilities over the years?

MR. WITWER: Object to the form.

A. There would be periodic reports that would be at the mining site that reflect that.

Q. (By Mr. McClure) Do you keep that in some sort of an Excel spreadsheet or other spreadsheet format that allows easy access?

A. I believe there's a database that I don't know whether it continues to be maintained that was maintained by Telesto Solutions, Incorporated, out of Fort Collins.

MR. McCLURE: This is probably not a bad time to break.

(Midday recess from 12:23 p.m. to 1:27 p.m.)

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(Exhibit No. 6 marked for identification.)

Q. (By Mr. McClure) Back on the record.

Mr. Lyle, let me hand you Exhibit No. 6 and represent these were certain accounting forms that were provided to us in discovery in this case. These appear to be monthly accounting reports.

On page 1 and page 2 are June and July monthly reports, but they don't have a date on it. I believe that came with page 3, and it appears to be 2003 reports, but I don't know that for sure.

Are you familiar with the form of these reports?

A. I believe they were a report that Mr. Madrid provided to me electronically monthly.

Q. Okay. And this was part of his duties back in 2003-2004?

A. Yes, sir.

Q. On the first page of that first report, it has -- about halfway down, it has a statement that, quote, "The collection pond was pumped on a weekly basis during the month, the water level in the pond remained low and the leak detection produced 19.65 GPAD."

What does "GPAD" mean? Do you know?

A. Gallons per average day, if I remember right.

Q. What is the leak detection, the concept that he's referring to there?

A. Basically, that collection pond is a double-lined geosynthetic -- or synthetic geomembrane. And leak detection is the amount of water that's between the two liners.

Q. Okay. The first part of that statement says, "The collection pond was pumped on a weekly basis during the month. . ."

That refers to the pumping that occurs in the collection pond back to the lined tailings facility?

A. That referred to -- I believe so, if I recall right.

Q. And was that -- does that collection pond then -- that pumping from the collection pond occur on a regular basis?

A. It occurred on a periodic basis throughout the course of the month.

Q. When it says, "the water level in the pond remained low," does that refer to the pond in the lined tailings facility?

MR. WITWER: Object to the form.

A. That referred to the pond downgradient of the lined tailings facility. It's the under-drain collection pond.

Q. (By Mr. McClure) How does one tell what is in the underground collection pond?

Am I using the right term? The under-drain collection pond?

A. That's correct.

Q. There is a pond that is on top of the lined tailings facility itself?

A. No, sir. Well, repeat that, please.

Q. Is there a pond on top of the lined tailings facility itself below the tailings?

A. Repeat that, please. I'm not sure I understand.

Q. All right. Can you define to me what you talk about -- excuse me.

Can you define what is referred to here as "the pond remained low"? Let's go back to that.

A. The collection pond was pumped on a weekly basis. The water level in the pond remained low. That is the pond that is downgradient of the tailings facility, at the toe of the tailings facility.

Q. All right. Outside of the tailings facility?

A. That is correct.

Q. All right. Thank you.

Then right above that it says, quote, "Weekly, monthly and quarterly samples were collected

from the effluent, monitoring wells, tailings pond and the Rito Seco Creek."

What is that referring to?

A. Effluent is the discharge water quality from the water treatment plant. Monitoring wells were groundwater collections that were collected to be submitted offsite for analysis.

Tailings pond is a sample of the water that's in the supernatant pond. The tailings that was collected to be submitted, I believe that had either a monthly or a quarterly obligation of DMRS.

The Rito Seco Creek, there was basically DMRS as well as CDPHE, as well, if I recall, an agreement with San Luis Water and Sanitation District called for the collection and the analysis of water within Rito Seco. That's water collections and samples sent off for analysis.

Q. That would have been part of that 89CW32 and/or 99CW57 cases on the latter matter?

A. Yes, on the San Luis Water and Sanitation District, that would be part of that.

Q. So when you are testing -- when you refer to the monitoring wells, is that monitoring wells of DRMS?

A. Around the west pit, they have dual obligations. They have DMRS as well as CDPHE. At the

tailings facility, they are DMRS.

Q. And so the samples taken from the tailings pond are sent to DRMS, and those are water quality samples?

A. They are sent to an outside laboratory for analysis, and the analytical results are reported to DMRS.

Q. And how long has that been reported to DRMS?

A. Ever since I've been there.

Q. Okay. So that's been a requirement ever since the leak occurred?

A. Before that from what I understand it.

Q. Before that, too. And how often are samples taken of the tailings pond?

A. I don't recall the exact frequency.

Q. Quarterly?

A. Either monthly or quarterly.

Q. Quarterly. Okay.

Do you recall if the results of those tests from the tailings pond were high in any constituents?

A. The only well I ever recall being high in constituents is I want to say MW-14, which is a well at the upgradient, western upgradient northern part of the tailings facility. I believe that was high in TDS on occasion.

Q. When we talk about the tailings facility, I want to make sure we're talking about the same thing. Are we talking about the lined tailings facility?

A. That's correct.

Q. So there's a well M-14?

A. Yes, sir.

Q. And is that downgradient of that facility?

A. I believe it's upgradient.

Q. Upgradient of the facility? It's above the facility?

A. Uh-huh.

Q. What's the purpose for that well at that location?

A. It would have been put in before I was there, so I'd be speculating.

Q. Okay. Are there a series of M wells downgradient of that collection pond?

A. Yes, sir.

MR. McCLURE: Off the record here a second.

(Discussion off the record.)

Q. (By Mr. McClure) Can you generally describe where those series of M wells are downgradient of the collection pond?

A. I believe they are downgradient along the

periphery of the downstream edge of the tailings facility -- or tailings embankment.

Q. Have there ever been any results from those downgradient M series of wells that showed that there were higher than acceptable levels of any constituents in the water samples?

A. Not that I recall.

Q. How many wells are located down there?

A. I couldn't tell you an exact number.

Q. Do you know how many are monitored on a regular basis for DRMS?

A. Not an exact number, no.

Q. Approximately? I mean, are there 10? Five?

A. Between wells at the west pit and the tailings facility, I would imagine in the order between 10 and 20 would be my assumption or my best estimate.

Q. And then down below the collection pond, how many wells down there that are being monitored on a regular basis?

A. I couldn't tell you. I don't recall.

Q. Those are all DRMS wells?

A. Yes, sir.

Q. Who is in charge of doing that? Is that Julio Madrid?

A. Yes, sir.

Q. Okay. And then there is a series of three locations that are being monitored as a part of that 07CW -- excuse me, 99CW57 case?

A. I believe so.

Q. Okay. Are you aware of how that testing occurred during the period of time where you were overseeing that facility?

A. That sample collection was conducted by Steve Corino, who reports to Julio Madrid.

Q. Who is Steve Corino?

A. He's a Battle Mountain employee.

Q. And he collects those results?

A. Yes, sir.

Q. And is that kept separately, those test results?

A. I couldn't tell you. I don't recall.

Q. Did you ever see these results from any of those tests?

A. There were annual reports produced and submitted to San Luis Water and Sanitation.

Q. So those would be shown on the annual reports going to the San Luis Water and Sanitation District?

A. That's correct.

Q. If you'll look on the June monthly report on that exhibit. It's the next page.

Excuse me. The July monthly report, second page.

A. Yes, sir.

Q. About a fourth of the way up from the bottom, it refers to the quarterly WET test samples were collected and delivered to Chadwick & Associates.

A. Yes, sir.

Q. Can you tell me what that relates to?

A. Basically, the WET test is an aquatic test that is done on the water treatment plant effluent. It basically requires the testing of Ceriodaphnia and fathead minnows. Chadwick & Associates was the biological firm that conducted that testing.

Q. And what's the purpose for those, that test?

A. In accordance with compliance with CDPHE permit requirements.

Q. And at what locations?

A. The effluent discharge.

Q. Okay. And the next page, at the end of it, it refers to "Steve Rogers with Telesto Solutions was on site during the last part of the month and the first part of August performing a pilot test on an RO unit."

A. Yes, sir.

Q. Can you tell me what that refers to? I assume that RO unit is the water treatment facility?

A. The RO unit was basically a phase or a portion of the water treatment facility. Steve Rogers is the certified operator for Battle Mountain.

Q. He's the certified operator of the facility?

A. Yes.

Q. What does that mean?

A. He is licensed with the State of Colorado.

Q. Okay. And so that's performed under contract with Telesto Solutions?

A. Yes.

Q. When he talks about a pilot test on an RO unit, what does that mean?

A. I don't recall what the pilot test was on the RO unit. I would imagine it was for performance.

Q. You referred to the sprinkler on the lined tailings facility. Was the sprinkler operated in years prior to 2010 for forced evaporation purposes?

A. Not for forced evaporation purposes, no.

Q. Was it operated prior to 2010 and prior years for any other reasons?

A. For evaporation.

Q. Just --

A. Water management.

Q. You just simply run the sprinkler to evaporate the waters?

A. Uh-huh.

Q. What's the difference between that and forced evaporation in terms of a concept?

A. A forced evaporation system is a system that is pressurized. It's generally operated by pump. It's in excess of, oh, probably generally 100 psi. It's put through a fan system where the water droplets are atomized and broken up to make fine particles.

The evaporation with the center pivot is just an irrigation application.

Q. If you could go to the October 2004 monthly report. It's about seven pages in.

A. Okay.

Q. At the top of that page, three lines down it says, quote, "A scheduled Pond No. 3 cleaning took place on the 21st and 22nd of this month. 15 loads (37.5 tons) of sludge was removed from old Pond No. 2 and transferred to the tailings impoundment area."

Does that refer to the lined tailings facility?

A. I don't see where you're reading from, sir.

Q. It's the second page on the 2004 -- October 2004 monthly report.

A. Okay. "A scheduled Pond 3 cleaning took place in the 21st-22nd"?

Q. Right.

A. Yes, sir.

Q. That means that 37 and a half tons of sludge were taken to the tailings impoundment area? Is that what --

A. That's correct.

Q. And is that done on a routine basis?

A. That's done on a biannual basis. Spring and fall. The pond at the water treatment plant is -- the sludge is removed. It is contained on a concrete drying pad and dewatered. Once it's dewatered, it's transferred to the tailings facility in accordance with DMRS compliance.

Q. To the best of your knowledge, what is comprised of constituents -- what's the composition of the sludge?

A. Lime, soda ash, and trace metal constituents. Probably sulfates as well.

Q. If you go down there three lines or three dots up from the bottom it says, quote, "Sprinkler at tailings impoundment was operated for two days this month in an effort to lower pond water level."

Does that refer to the pond water level in the lined tailings facility?

A. I would imagine.

Q. What's the policy, if any, in terms of trying to operate that for the purpose of lowering the pond water level?

MR. WITWER: Object to the form.

A. I don't understand -- I don't know what the conditions were associated with the understanding -- or the statement "lower the pond water level."

Q. (By Mr. McClure) Why would one want to lower the pond water level?

A. I have no idea what the intention was.

Q. Is there -- is that something that was done on occasion to attempt to lower the pond water level?

A. I would imagine the pond level was -- well, I won't say -- I know the pond level was managed since the pump at the tailings area -- that was managed for access or for pumping performance and capacity.

Q. There was a general desire to try to lower the pond water level when the opportunity presented itself?

MR. WITWER: Object to the form.

A. I don't recall.

Q. (By Mr. McClure) I'm sorry?

A. I don't recall.

Q. Has there ever been any serious problems with the water treatment facility in terms of operational

considerations?

A. What do you mean by "serious problems"?

Q. Anything that would prevent it from working as planned. I realize there's going to be maintenance issues.

MR. WITWER: Object to the form.

A. I believe so.

Q. (By Mr. McClure) I'm sorry?

A. I believe so.

Q. Could you expand on that, then?

A. As I explained to you earlier, prior to brine being transferred to the tailings facility, there was an excess of TDS constituents within the water that was built up there. I believe that would have affected the performance and the operational ability of the water treatment plant.

Q. And has that been remedied?

A. With the transfer of the brine to the tailings facility, I believe so.

Q. Okay. If you could go down -- if you could go over to the July 2006 monthly report. On page 2, about a third of the way down before "Ranch Property Report," it's got a statement, "Tailings impoundment facility sprinkler system operated for a short period of time this month drawing down water level in tailings

pond." End of quote.

Is this the same type of concept that we just referred to earlier?

A. Yes.

Q. Okay. If you go to the September 2006 monthly report, almost the same place on the page as the previous report above the "Ranch Property Report" it says, "Center pivot of tailings impoundment was utilized this month to draw down water leveling pond. Pump was then disconnected and put back in storage." End of quote.

Same concept we talked about before?

A. Yes, sir.

Q. Before that, moving up that page, there is a statement that says, quote, "Mr. Andrew Neuhart with CDPHE was out this month to tour mine and ranch properties." End of quote.

This is a representative of CDPHE?

A. Yes, sir.

Q. How often did they investigate the property itself?

A. I -- from what I recall, on a periodic basis, which is every couple of years.

Q. If you go to the March 2011 monthly report on page 2, above the "Ranch Property Report" section.

A. Yes, sir.

Q. About a third of the way down that section it says, "Total gallons of water augmented to Rito Seco Creek for the month was zero."

Is this an indication as to what was done with the water treatment facility?

A. No.

Q. What does that mean, then?

A. Basically, that's water that was replaced through -- replaced to Rito Seco Creek. Augmented to Rito Seco Creek.

Q. Okay. I understand.

All right. Moving down through that page, it says, quote, "Irrigation sprinkler located at tailings facility has been disassembled and moved to east edge of impoundment to make room for the new sprinkler." End of quote.

That's what we just talked about in terms of a new sprinkler being installed?

A. Yes, sir.

Q. What was done with the old sprinkler?

A. I don't recall.

Q. It was not used, though?

A. No.

Q. Okay. Right under that it refers to the,

quote, "Ground preparation has begun at tailings impoundment for the planting of canola seed this spring." End of quote.

Is that what it states?

A. It's accurate for what it states.

Q. Go to May 2011 monthly report. I'm also on page 2. About halfway down it says, quote, "Pond No. 1 water continues to be transferred to tailings impoundment for irrigation use this summer." End of quote.

Does that refer to irrigation use of the canola crop?

A. I believe so.

Q. I'm over on July 2011 monthly report. The second page about halfway down says, quote, "Canola has begun to grow, and irrigation system seems to be working fine." End of quote.

This refers to the new sprinkler on the -- in the lined tailings facility?

A. No, sir.

Q. Yes or no? I'm sorry.

A. The irrigation system would refer to the new sprinkler system, that's correct.

Q. It would refer to it. Okay. Thank you.

I'm over on page -- excuse me, I'm on the September 2011 monthly report. Middle of the page it

says, quote, "Canola was cut at the end of September by Christensen Farms using a swather, the next step is to combine the plant and recover the canola seed. This will take place as soon as the crop has had sufficient drying time." End of quote.

To your knowledge, was the seed recovered then from the -- as a result of that exercise?

A. I believe the seed was recovered. I don't know what the disposition of the seed was following recovery. Not that I recall.

Q. I'm now at the November 2011 report, second page, almost the same place, the other references to canola. It says, quote, "Canola was combined and an estimated 9,000 pounds of seed was produced." End of quote.

A. That's consistent with what I just told you.

Q. Correct. Okay.

Now I'm on the December 2011 report. Almost the same place, second page, middle of the page it says, quote, "Mr. Jim Christianson will weigh the canola produced this last summer and draft a proposal on the purchase price for our review." End of quote.

That refers to Mr. Christianson purchasing the canola?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) Is that a correct statement?

A. That's what it says.

Q. Okay. While you were in charge of the Battle Mountain facility in Costilla County, did you ever make any determination as to where -- the location of any --

(Cell phone interruption.)

Q. (By Mr. McClure) Back on the record.

What I'm referring to is the lined tailings facility collection pond below it and the area downgradient of that.

And my question is: In the event that there was a significant release or failure, a major breach of that facility and a quantity of water was discharged downgradient, did you, from an administrative standpoint, ever make a determination as to the path of that discharge, where it would go?

MR. WITWER: Object to the form.

A. I would believe we probably did, but I don't specifically recall.

Q. (By Mr. McClure) Do you, as we sit here today, have an understanding as to where it would go? The path?

MR. WITWER: Object to the form.

A. I would understand where it would go. I

don't know what the nature of the question is.

Q. (By Mr. McClure) Where do you think it would -- where would it go?

A. It would flood down the canyon onto the San Luis ranch.

Q. The Salazar ranch?

A. That's right.

Q. Let me ask you this. Were you involved with the application -- preparing the application in any manner or understanding what was involved in the application concerning this 07CW42 case?

A. I'm not sure I understand what you're talking of.

Q. Well, we have an application, I think several amended applications in the current case, 07CW42, which is why we're here today. And we also have proposed decrees, several of them, which in many respects mirror the applications or amended applications.

My question to you is: Have you been involved in any of that process?

A. What's the date of that application?

Q. Well, the original one was in 2007. I think the most recent one was in 2010. And to refresh your recollection, in 2010, I believe this is like the second amended application. That's when there was the removal

of the concept of taking these west pit waters down to the Salazar ranch for land disbursal purposes. That was taken out. And I believe that is the last application.

A. 2010, I would have been involved.

Q. You would have been?

A. I would have been involved, yes.

Q. All right. There has been a reference to the west pit wells. And I'm going to show you a -- actually, a document that was filed with the court as part of the Battle Mountain stipulation with the Trinchera Water Conservancy District and ask you, on page 11, where it refers to the west pit wells, if, at any time, it was contemplated that any of the west pit wells -- now, these are the remediation wells, those in the west pit or the recapture wells -- were going to be used for any purpose related to this application in which they would -- waters were going to be transferred up to them?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) Transferred to them like as in an alternate point of --

MR. WITWER: Same objection.

A. Where are you referencing this?

Q. (By Mr. McClure) Let me just read it into the record and then I'll show it to you.

It says at Paragraph 11, "Battle Mountain

seeks a ruling that its plan for augmentation to replace out of priority depletions would cause it -- causes to Rito Seco will not cause injury to any owner of or persons entitled to use water under a vested water right or a decreed conditional water right. The plan of augmentation is detailed herein." It says, "(A) structures to be augmented: No. 1, west pit wells."

It's right at the bottom of that page, sir.

A. I'm not sure I understand what your question is, Mr. McClure.

Q. You do not understand my question?

A. No, I do not.

Q. Let me try to put it in a simpler format.

Was there any management concept that you had in mind where it would be what you would like to accomplish is pump those remediation wells for any other purpose besides remediation?

MR. WITWER: Object to the form.

A. Not that I can remember.

Q. (By Mr. McClure) Were you trying to -- was there ever a concept in mind where the idea was to move certain quantities of water up to those west pit wells where you could pump in excess of 200 gallons per minute for any other additional purposes besides remediation?

MR. WITWER: Same objection.

A. Not that I believe.
Q. (By Mr. McClure) Okay. That's fine.
A. Not that I understand.
Q. All right. That's fine. Thank you.
A. I wouldn't believe you would pump those wells unless you needed to remediate them.
Q. You really are pumping those wells for remediation purposes, aren't you?
A. That's correct.
MR. WITWER: Same objection.
A. Otherwise, no reason to pump them.
MR. MCCLURE: Just one moment here.
(Discussion off the record.)
Q. (By Mr. McClure) Okay. Back on the record.
I'm at page 17 of that decree. And there was a change in the -- from the prior decree, which was the 99CW57, on a matter that is reflected in this decree, and here's what it reads. This is on page 17 of 34.
It used to read, "Waters pumped from the west pit wells is principally delivered to the treatment plant where the water is managed and treated by chemical precipitation, filtration and membrane separation and then discharged to the Rito Seco pursuant to a discharge permit."
That was changed and the term "is

principally" was removed, and instead the phrase "can be" was inserted in there.

Let me show you that and ask you if you are familiar with it?

A. Yes, sir.

Q. Okay. My first question to you is: Are you aware of the language that appeared in the 99CW57 decree that talked about the principal means of treating that west pit waters is through the water treatment facility?

A. Vaguely, I believe I recall a discussion about "principally."

Q. Okay. This was changed to "can do."

Were you aware of this change that occurred prior to today's date?

MR. WITWER: Object to the form.

A. I might have been, but I don't specifically recall it.

Q. (By Mr. McClure) Was this something that you had requested from a management standpoint where the term "principally" was deleted and instead this "can" language is included?

MR. WITWER: I'll object and direct the witness not to answer to the extent that constitutes privileged attorney-client communication.

MR. MCCLURE: Better read that question.

I'm not even sure what I asked.

(Question on Page 132, Lines 18 through 21, read.)

MR. WITWER: And my objection is that that sounds like it's inquiring as to his direction to counsel.

MR. McCLURE: No, no, it's not. That's not the purpose of that question.

A. I don't recall. Reading this and looking at it, I'm not sure specifically what the difference would be between "principally" and "can be."

Q. (By Mr. McClure) Do you think there is a difference, or do you think that you are -- excuse me.

From a management standpoint, do you believe that you could have taken limited quantities of water to the lined tailings facility without any guidance from the 99CW57 case language?

MR. WITWER: Object to the form.

A. From my recollection of the case, I don't know if there was a limitation that could be asserted to what water could or could not be transferred there from a volumetric perspective.

Q. (By Mr. McClure) That 99CW57 case was, in fact, stipulated to, wasn't it?

A. I'm not sure I understand what you mean by

the word "stipulated."

Q. Was that one that was agreed to between the parties and it did not go to trial?

A. That's correct.

Q. Okay. Does the term "principally" mean -- to you mean that more than 50 percent?

MR. WITWER: Object to the extent it calls for a legal conclusion.

Q. (By Mr. McClure) In terms of a quantitative standpoint?

A. I believe you're asking me to make an assertion for whatever conditions might be.

Q. No. I'm just asking you, purely from a management perspective and in your capacity as managing that facility, what that term means.

MR. WITWER: Same objection.

A. Principally, I don't see a limitation to it.

Q. (By Mr. McClure) So you think that -- if I can have that back, please.

So would it be your opinion that "water pumped from the west pit wells is principally delivered to the water treatment facility" doesn't mean anything in terms of a guiding principle as to the relative quantities of water that would go to the water treatment facility as opposed to the lined tailings facility?

MR. WITWER: Same objection.

A. I think you're asking me to make an assumption.

Q. (By Mr. McClure) No. I'm just asking you just how you construe the decree, the language that was in there.

MR. WITWER: Same objection.

A. That that was a management alternative? I don't think there was any quantification or a volumetric definition of what "principally" means.

Q. (By Mr. McClure) Let me ask you if this helps out at all. I'm referring to page 18 of the same decree that was entered.

It states on Paragraph 8 as follows, quote, "Battle Mountain's augmentation plan applies to all anticipated out of priority depletions associated with Battle Mountain's pumping operation and capture. Battle Mountain expects to treat and discharge water pumped from the backfilled west pit as a principal means of water management, and at times Battle Mountain pumps water from the water treatment plant or west pit and delivers it to a lined tailings facility. In the future, Battle Mountain expects to continue managing water as identified above."

A. I've read that.

Q. Do you believe that that's helpful in giving direction --

A. I think that provides some clarification.

Q. And in what regard?

MR. WITWER: Same objection.

A. With regards to the operation of the treatment plant in association with the pumping, I think it basically provides some definition as to that pumping and the water treatment plant operation.

I think it also provides some assumptions with regards to transferring waters to the tails as well. I don't think there's any definition on what amount of water is going to the tails.

Q. (By Mr. McClure) How do you read that language as being helpful in terms of providing some guidance as to how to manage those waters?

MR. WITWER: Same objection. Pardon me. Same objection.

A. "Battle Mountain's augmentation applies to all anticipated out of priority depletions associated with Battle Mountain's pumping operation and water capture."

That's the water that's within the west pit or within the Rito Seco alluvium.

"Battle Mountain expects to treat and

discharge water pumped from the backfilled. . .as a principal means of water management, and at times Battle Mountain pumps water from the water treatment plant or west pit and delivers it to the lined tailings facility."

I think it defines "principal" as a means that is primary or -- the primary source of how you manage that water. I think it provides alternative as well, but. . .

Q. (By Mr. McClure) So it would be more than 50 percent would be treated at the water treatment facility?

MR. WITWER: Same objection.

A. I think you could read that in there.

Q. (By Mr. McClure) Can you talk about the -- we've talked about the size of the surface area on the water on the top of the lined tailings facility over the years.

Do you know if there has ever been any aerial photos taken of that area?

A. Not that I recall.

Q. Was there any internal measurement means used to determine the size of that surface water area?

A. I believe Telesto did a civil survey of that area in the past. I don't recall exactly what time frame that was. I believe 2004-2005 time frame, maybe.

Q. Has Telesto been involved in any of those water management issues concerning the lined tailings facility in any regard?

A. Telesto has been involved with the project since I've been involved with it, since probably 1999 forward.

Q. What about management issues considerations?

A. Not from a management issue consideration.

Q. They have been -- have they -- but they -- from a measurement/testing concept?

A. Yes, sir.

Q. Did you ever review the MLRB transcript from 1990 concerning the permitting process for the lined tailings facility?

A. I don't recall.

Q. I'm sorry?

A. I don't recall.

Q. Did you happen to see Scott Mefford's report of April 20, 2012, in this case?

A. No, I have not.

Q. Has there ever been a water balance calculation performed on the lined tailings facility?

So that would be -- and when I talk about water balance, it would be inputs of water and outputs of water and respective measurements.

A. I would suspect there was during operational times, but I have not seen any of that. I don't recall it since I've been involved.

Q. Who would have done that water balance for this facility?

A. I believe SRK is the ones that designed the tailings facility. I don't know if they would have done one or not. I would suspect that.

Q. You would suspect that they did at one point in time?

A. I would think so.

Q. Do you believe that they did so at some point in time after the year 2000, 1999, after that leakage occurred and there was increased use of the lined tailings facility?

A. Not that I recall.

Q. Do you think you saw water balance at some point in time?

A. Not that I ever recall.

Q. Do you believe that the lined tailings facility was designed for water management purposes outside of the mining process?

A. You're asking me to speculate. I don't know whether it was or wasn't.

Q. Do you have any information on that one way

or another?

A. I do not.

Q. I'm going to hand you Mr. Mefford's report of August 20, 2012, and we'll go off the record a moment, and I'd like you to read his opinion on pages 5, 6, and 7.

His opinion was that insufficient information is provided on the water balance and/or monitoring of the tailings facility to determine if it can reasonably be relied upon for the purpose described in the augmentation plan, including the storage and disposal of fluids. It then goes on and gives the bases of his opinion.

If we could be off the record a moment.

(Discussion off the record.)

(Recess from 2:34 p.m. to 2:36 p.m.)

Q. (By Mr. McClure) My question to you is: Were you familiar with any of the content of his report, not so much as to the opinion, but as to the testimony from Mr. Dorey of SRK and Ann Baldridge of SRK?

A. No, sir.

Q. I'm sorry?

A. No, sir.

Q. And does that provide information to you that you think is material for these purposes as to how the lined tailings facility was designed to be used?

MR. WITWER: Object to the form. Sorry.

A. It provided an opinion on what Mr. Dorey and Ms. Baldridge asserted there.

Q. (By Mr. McClure) Yes. Is any of that material to you for purposes of consideration in how and what manner that should be used?

MR. WITWER: Same objection.

A. I would need to understand what the context was of the opinion or the question that was posed with relationship to SRK and Mr. Dorey and Ms. Baldridge.

Q. (By Mr. McClure) There's reference to the fact that the lining is designed to last through the life of the facility.

Is that -- assuming that that is correct, is that a material consideration from your standpoint?

MR. WITWER: Same objection.

A. I believe that's a geotechnical question, and I'm not qualified to answer that.

Q. (By Mr. McClure) Mr. Mefford indicates that the tailings pond was designed to decant the fluids from the tailings slurry delivered to the pond and store the tailings, not to store the water.

Do you have any comment concerning his finding in that regard?

MR. WITWER: Object to the form.

A. I don't know what the specific design of that system was. I would believe Mr. Mefford has an opinion to it. He's probably qualified to make it.

Q. (By Mr. McClure) Do you know if the obligations to -- strike that question.

Do you know if the jurisdiction of DRMS is still intact as to that facility and they're still asserting jurisdiction over it?

A. I believe so.

Q. Is that --

A. As of November 2011, I believe that was the case.

Q. Is it true of CDPHE, also?

A. CDPHE had no jurisdiction over it.

Q. Under the discharge permit?

A. They have no jurisdiction over it.

Q. Over the lined tailings facility, but they do over -- with the discharge permit?

MR. WITWER: Object to the form.

Q. (By Mr. McClure) At the water treatment facility?

A. With the west pit, that's correct.

MR. MCCLURE: Yes. I should be clear on that.

Okay. I think the best way to handle this,

Jim, is we'd like to recess the deposition at this time and let you look at those records to see if there's any of those that would be produced under the subpoena duces tecum. And my suggestion is that we could talk about, if there are any records, how this would be handled going forward in the future.

We obviously do not want to come back here with the time and expense. We've been here. But perhaps this could be handled by telephone on a few follow-up questions, if necessary.

MR. WITWER: Well, we'll certainly look at the documents, and to the extent that they are -- they overlap with the information that was in the subpoena, we'll produce them.

I think where we go from there, I think, you know, will depend on whether there really is an overlap. And then obviously you need to evaluate whether you would want to ask questions.

MR. McCLURE: Well, we may not want to ask any questions. I'd just like to have that opportunity to do so, and I just don't want to be prejudiced.

MR. WITWER: I understand that that's your position. And I guess to the extent that I had a hand in not letting you see what might have been

responsive at the time you were here, I -- you know, I'm not saying we will resist that at this time, but I'm also not conceding anything, particularly with respect to Mr. Lyle's very limited availability.

But let us get you the documents as soon as we reasonably can and let's take it from there.

MR. McCLURE: Okay. That's fine.

MR. LOBATO: I was going to ask questions, but I'm not.

(Proceedings adjourned at 2:43 p.m.)

(Signature reserved.)

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STATE OF WASHINGTON)
)
County of Spokane)

I, Jeffory A. Wilson, do hereby certify that at the time and place heretofore mentioned in the caption of the foregoing matter, I am a Certified Court Reporter for Washington; that at said time and place I reported in stenotype all testimony adduced and proceedings had in the foregoing matter; that thereafter my notes were reduced to typewriting and that the foregoing transcript consisting of 145 typewritten pages is a true and correct transcript of all such testimony adduced and proceedings had and of the whole thereof.

I further certify that the witness, before examination, was duly sworn by me, pursuant to RCW 5.28.010.

I further certify that I am herewith securely sealing the said original deposition transcript and promptly delivering the same to Attorney John C. McClure.

Witness my hand at Spokane, Washington, on this 12th day of November, 2012.

Jeffory A. Wilson, RDR, CRR
Washington CCR No. 2254
License Effective Until: 7/28/2013

CERTIFICATE OF WITNESS

STATE OF _____)
)
COUNTY OF _____)

I, William S. Lyle, declare under penalty of perjury under the laws of the State of Washington, that I am the witness named in the foregoing deposition and that I have read the questions and answers thereon as contained in the foregoing deposition, consisting of pages 1 through 144; that the answers are true and correct as given by me at the time of taking the deposition, except as indicated on the correction sheet.

_____
William S. Lyle

Executed on the _____ day of _____, 2012, at _____ (City), _____ (State).

In the Matter of the Application for Water Rights of Battle Mountain Resources, Inc., in Costilla County

CORRECTION/REASON

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William S. Lyle

DISTRICT COURT, WATER DIVISION NO. 3
STATE OF COLORADO

Case No. 2007CW42

DEPOSITION OF JULIO MADRID

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF BATTLE MOUNTAIN RESOURCES, INC., IN COSTILLA COUNTY

Monday, November 5, 2012

1:06 p.m.

PURSUANT TO NOTICE and the Colorado Rules of Civil Procedure, the above-entitled deposition was taken on behalf of Costilla County Conservancy District and the Board of County Commissioners of Costilla County at 1401 17th Street, Suite 660, Denver, Colorado, before Denise A. Freeman, Registered Professional Reporter and Notary Public within Colorado.

C

APPEARANCES:

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By Telephone for the Board of County Commissioners of Costilla County, Montez Ditch, San Luis Peoples Ditch, Acequia Chiquita Ditch, and Espinosa Ditch:
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Alamosa, Colorado 81101

I N D E X

(Exhibits attached to original, hard-copy, and electronic transcripts to counsel ordering same.)

P R O C E E D I N G S

MR. McCLURE: Let's go on the record on this particular matter.

MR. WITWER: This is Jim Witwer, and I just wanted to be clear to John and to Ed -- and I have e-mailed and I here hand-deliver to John a copy of a letter dated today from me that expounds a little bit more on some preliminary concerns that I had expressed on behalf of Battle Mountain on October 26 when we got the deposition subpoena for Bill Lyle and the Rule 30(b)(6) deposition notice. There are some overlapping issues with both.

But to talk a little bit about the subpoena duces tecum for Mr. Lyle, that had a number of requests that, if converted to document production requests under the rules associated with document production requests, each request, including any individual subpart having to be considered a single request, it was 46 document production requests, when document production requests are limited to 20 in number.

And there had been previously some production requests issued in the case, there were additional issues that, again, I had touched on in an e-mail on October 26.

But we have a pending motion for a

protective order that relates to certain water-quality-related discovery requests that had previously been propounded by several of the opposers in this case represented by Messrs. McClure and Lobato, which remain pending, and we reassert the same general objection there.

There is a related rule for a motion for determination of a question of law pending that the judge has similarly not ruled on yet, and we have the continuing objection to discovery related to that.

I think there are some additional grounds related to the burden of receiving this set of document requests and a very broad Rule 30(b)(6) deposition notice so late in the game here, as it were, after several extensions of time on so many matters, some of which concern matters that really would only have been relevant to the time Battle Mountain Resources was operating the mine and the mill and potentially had information at that time.

Which, of course, the mine ceased operation, as I understand it, anyway, in about 1995, and the mill in 1996. So these are older documents.

And I think the combination of late timing, the extent of the requests, and the fact that they focus on issues that would not have been relevant to Battle

Mountain's ongoing operations for probably at least 10 or 15 years add to the burdensome nature of the requests.

Having said all that, I stated on Friday that I had discovered that Mr. Lyle did have a box of documents that he considered to be related to Battle Mountain Resources that he had actually taken with him from Denver to Spokane, when he was cleaning out his office.

That because of the logistics of Friday with people needing to make planes and everything and the distance between his house, where the box was located, and our deposition site in Spokane, we weren't able to review those prior to the conclusion of Friday's deposition.

But that box has been shipped to my office and did arrive today and is under review. And without waiving the objections that I have just stated, it's my present intent to try to make any nonprivileged documents that are in that box that overlap with the broad requests of the subpoena duces tecum available to opposers as soon as reasonably possible, with respect to that.

I guess, if we turn to today's topic, which is really the notice of the deposition pursuant to

Rule 30(b)(6), Battle Mountain is producing or designating Mr. Julio Madrid on certain of the very numerous and broad categories that are in the deposition notice. But I think, in many cases, not going to designate him and does not presently intend to designate anyone further with respect to some of the designated -- or requested matters for the reasons that are stated in the letter.

What we are going to try to designate Mr. Madrid on today as the Battle Mountain representative who will testify to them -- I am trying to go back through and take them in order. I think matter 5(b) discusses something about safety inspections of the lined tailings facility.

Broadly construed, I think that that includes potentially some information that Mr. Madrid, given his background, maybe has background into. And that has to do with what he calls in-house inspections of the Battle Mountain stormwater management system per the requirements of the Colorado Department of Public Health and Environment. I think that's CDPHE in the acronym.

The requirements of the CDPHE for the stormwater management plan for the Battle Mountain site, which would include the area around the lined tailings

facility, he can and will be available for providing testimony on that issue.

And I have discussed with him -- and Counsel is free to discuss with him -- we don't believe that there are additional matters that he is qualified to talk about in terms of additional matters relevant to part 5(b). But that's one area.

The other area -- and I believe I touched on this in a previous phone call with Mr. McClure -- No. 10 discusses the amount of water annually deposited in the LTF -- that's the lined tailings facility -- since construction, presumably, of the facility.

Once again, consistent with a lot of those other answers, to go back to the construction of the tailings facility in the late 1980s or early 1990s wouldn't be something that Battle Mountain is in a position to do or believes that it is necessary to do to meet its obligations to discuss relevant information in this case.

However, the amount of water that may have been pumped to that site, to the lined tailings facility, per the Battle Mountain augmentation plan in Case No. 99CW57 since water year 2003, Mr. Madrid has information about that portion of the requested matter in item 10.

Continuing on -- and we may need to take a break here, John, so that you can maybe make some copies. I don't think that I thought about making this available to Ed via phone, so maybe you can have somebody scan and send this to him. I don't know.

There are requests in matters 14, 15 and 21 that relate explicitly to water quality matters, including water quality matters that are monitored, water quality matters related to the so-called brine from the existing Battle Mountain water treatment plant process, and water quality of the waters that have been transported to the lined tailings facility from the West Pit, presumably from the pumping of wells located in the West Pit.

While Battle Mountain has not and does not waive its objection on relevance grounds for the reasons that are described in the letter and in the pending motions, Battle Mountain is willing to make available, in spreadsheet table format, some water quality sampling results that Mr. Madrid can describe probably more accurately, but are, generally, as I understand it, quarterly sampling of the water quality in the pond area that is located on the lined tailings facility for certain -- I guess I would say, metals that are required to be tested on a quarterly basis and submitted to what

is now the Division of Reclamation and Mine Safety pursuant to, I guess, permitting requirements.

This data, as I say, has been submitted to them, but this is a summary of what I understand is the concentrations of those several metals or analytes that have been measured since, it appears, March of 1999 through July of 2012. And Mr. Madrid will know a lot more about this.

He has asked that a spreadsheet be prepared from the sampling that -- some of which he conducted personally -- from Battle Mountain's consultant on that subject.

Let me see if I have got other matters that Mr. Madrid may be able to testify to. I think, as to items 16, 17 and 18, Mr. Madrid can testify on behalf of Battle Mountain pursuant to the deposition notice. I think item 19 that deals with water levels that must be maintained in the West Pit, he has some information on a water level that he believes must be maintained. So he can provide some information with respect to item 19.

I think that is it, and that is what Mr. Madrid, anyway, is prepared to testify to today.

MR. McCLURE: Okay.

MR. WITWER: If you want to go off the record, I can show you this table that he has asked to

be prepared.

MR. McCLURE: Let's go off the record.

(Deposition Exhibit 11 was marked.)

(Break was taken from 1:20 to 1:22.)

JULIO MADRID,

having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. McCLURE:

Q. Would you state your name for the record, please.

A. Julio Frank Madrid.

Q. And your address, sir?

A. Is 15170 Highway 159, San Luis, Colorado.

Q. Mr. Madrid, have you ever had your deposition taken before?

A. Once.

Q. I am going to ask you some questions. Mr. Witwer may do so also. If you don't understand my question, please let me know and I will try to rephrase it. If you understand the question, then I will assume you will answer it and we will proceed kind of on that basis. Does that work for you?

A. Sure.

Q. And this is testimony that's taken down by

the court reporter and it's under oath, so it's sworn testimony.

A. Okay.

Q. Could you give me your education level, sir?

A. High school education, 12th grade.

Q. And since that period of time, what's been your work experience?

A. I worked at a general store in San Luis through my high school years. Went into the military. Once I was discharged from the military, went back to the work at the general store until I started working for Battle Mountain Resources in 1991.

Q. And what was your position with Battle Mountain in 1991?

A. Warehouse clerk.

Q. And how long did you hold that position?

A. Probably, four months.

Q. And then what did you do after that?

A. I ended up bidding out to the mine department as an operator, equipment operator.

Q. Equipment operator. All right. And did you become an equipment operator then for Battle Mountain?

A. Yes.

Q. What did you do in that regard?

A. Drove haul trucks, motor grader, dozer.

Q. And how long did you hold that position then, sir?

A. Until, roughly, about 1993.

Q. What position did you take on at that time?

A. I was assigned to the blasting crew.

Q. And this was during the mining operation?

A. Correct.

Q. And what did you do then in that position?

A. Backfilled stem holes for blasting and designed patterns for the blasting operation.

Q. How long did you do that then?

A. Approximately a year and a half.

Q. What was your next position after that?

A. Surveyor. Basically surveying the ore control and any ground control that was required.

Q. What do you mean, "surveying the ore control"?

A. Basically identifying ore zones and setting points in on the blasting material and staking it so that the loader operator can identify which material is considered ore and which is waste.

Q. What did you do after that, sir?

A. I bid into the environmental department and then started doing groundwater monitoring.

Q. What year did you start with the

environmental department?

A. Probably the first part of 1996.

Q. When did you start the groundwater monitoring?

A. About midyear 1996.

Q. Is there still mining at this point in time?

A. No.

Q. They have stopped?

A. It stopped, correct.

Q. What were your duties commencing in 1996 while working for the environmental department?

A. I still was required to do some surveying in the areas, but also to learn the groundwater monitoring program, which is water sampling.

Q. And you were sampling for what is now called the Division of Reclamation, Mining and Safety?

A. Correct. DMG at the time.

Q. DMG at the time.

A. Right.

Q. And tell me, where were you doing that groundwater monitoring?

A. It was around the shop area, the tailings area, and around the creek area. There were a couple of sites.

Q. When we talk about the tailings area, is

this what we referred to as the lined tailings facility?

A. Correct.

Q. And do you know, roughly, how many wells were being monitored during that time frame?

A. They were compliance wells, and I believe probably 10 wells.

Q. How many in the lined tailings facility area?

A. On --

Q. On or below.

A. On or below.

Q. Down-gradient.

A. Eight.

Q. How many in the lined tailings facility itself?

A. None in the facility.

Q. All below?

A. There was one well that was located just north of the tailings facility, and then the rest were below.

Q. Roughly, in what area? How far below?

A. Are we talking -- can you be more specific as to --

Q. Below the collection pond, were you within a quarter of a mile, half a mile?

A. In the collection pond there's actually one, two, three wells that are probably within 50 to 100 feet of the collection pond. There's one that is located approximately 150 feet south of the collection pond, and there's four wells that are located approximately 200 feet west of the collection pond.

Q. I want to continue asking you some more about your type of work, but I would like to jump forward and digress a second. Are any of those wells currently in operation and being monitored?

A. Yes.

Q. All of them?

A. Yes.

Q. Okay. Thank you. So that's been continuous monitoring over the years?

A. Yes.

Q. And all this reporting goes directly to what's now called DRMS?

A. That's correct.

Q. Go ahead and tell me what else was part of your duties as part of working for the environmental department.

A. Primarily, water monitoring. There wasn't much going on after the operation had ceased.

Q. Let me ask you, was there any other well

monitoring occurring at that time other than these eight wells? This will be 1996.

A. No.

Q. Go ahead. Continue then, sir.

A. What was your question?

Q. My question was what other duties you had for Battle Mountain.

A. That was primarily it as far as water monitoring throughout 2001.

Q. Up until 2001. And who were you reporting to at Battle Mountain?

A. Bill Lyle.

Q. Anybody else?

A. Actually I will take that back. I was reporting to -- Ron Zumwalt was my immediate supervisor.

Q. And then to Bill Lyle?

A. Ron retired in, I believe, 2000 and Dave Long was hired for approximately a year and a half until he retired. And then it was Bill Lyle probably midyear 2001.

Q. And you reported to him from when to when?

A. I reported to Bill from midyear 2001 until last February of this year, February of this year.

Q. And who do you report to now?

A. To Larry Fiske.

Q. And what's Larry's position in the company?
A. He's in charge of the Colorado legacy sites and a couple of sites in Canada.
Q. When you talk about "legacy sites," these are old mill sites, for lack of a better term?
A. Correct. He's a senior manager of reclamation and closure.
Q. Where is his office?
A. It's located here in Denver.
Q. Then your duties stayed essentially the same from 1996 to 2001 -- is that correct -- as part of environmental compliance?
A. Correct.
Q. And then from 2001 forward, tell me what your position or duties were at that time.
A. It was basically a site manager. It still included the well monitoring until 2010.
Q. And as the site manager, were you in charge of the entire site at the old mine site?
A. Correct.
Q. Did your duties expand when the Salazar Ranch was acquired?
A. Yes, they did.
Q. And when did that occur?
A. In 2003.

Q. And what were your duties from that point forward, 2003 forward?

A. It included the ranch, managing the ranch property.

Q. That would be the Salazar Ranch?

A. Correct.

Q. Did your duties include the Columbian Ranch also?

A. Yes, they did.

Q. When did you start managing the Colombian Ranch?

A. Actually it was in 2001. It was just the farm well that is used for augmentation purposes is all that I was responsible for.

Q. So from 2001 then to 2010, you had the overall responsibility for really the operation there in Costilla County?

A. Correct.

Q. And did that change then in 2010?

A. As far as the water monitoring, that was -- those duties were given to Steve Carino. The managing portion I was still in charge of.

Q. Water duties were given to a gentleman, and what was his last name?

A. Carino, C-A-R-I-N-O.

Q. Where is he from?

A. He's from San Luis.

Q. And what was his position there?

A. Actually at the time he was the lead man in the water treatment facility.

Q. And his water duties were what then, commencing in 2010?

A. Ground and surface water monitoring and sampling.

Q. Did he report to you?

A. Yes.

Q. Let me digress on that a second. By that time in 2010, you were still monitoring the eight well locations you described previously around the lined tailings facility, one north and seven either south or west. Were there other locations?

A. In 2010?

Q. Yes.

A. There were several wells that had been drilled in 2000 and 2001 in the West Pit area that were also being monitored.

Q. And is that the four wells that are actually in the West Pit area that are used to maintain the water level in the West Pit?

A. Can you be more specific as to which --

there are several wells in the West Pit.

Q. Yes. I thought there were four. If you can tell me if I am wrong, please do.

A. BF-5 is one of the wells. BF-4 and BF-6, I believe those are probably the wells that you are talking about.

Q. BF-4, BF-5, BF-6?

A. Correct. BF-3 is also located in the West Pit.

Q. And then there were several recapture wells that were drilled also?

A. Correct.

Q. Do you know how many were drilled around that 2000, 2001 time frame?

A. In the West Pit area?

Q. Yes.

A. I would have to say, roughly, 40 wells.

MR. McCLURE: Off the record.

(Break was taken from 1:39 to 1:40.)

Q. (BY MR. WITWER) Let me hand you Exhibit 5 that was already marked in this matter. Let me suggest to you that this is a document that was prepared by Mr. Bruce Lytle or under his control in the context of this case. And it purports to represent wells in and around the West Pit area, Rito Seco alluvium. Are you

familiar with that document?

A. Yes.

Q. What is your understanding that that document represents?

A. That these were wells that were either used for monitoring or -- groundwater monitoring and depth of water monitoring water levels in the wells.

Q. Then as we sit here today, are there any additional wells that are not represented on this Exhibit 5 or are different than the eight wells that you have described previously in and around that West Pit or lined tailings facility area or down-gradient?

A. There is one that is located just north of Rito Seco Creek, and that is monitoring well M-10.

Q. M-10. Can you just generally describe where it is?

A. Approximately a mile north of the old shop building, directly north, roughly 300 feet from Rito Seco Creek.

Q. Do you know when that well was drilled?

A. No, I don't.

Q. Was it drilled sometime after 2002?

A. No. It was drilled prior to 2002.

Q. Do you take samples from that well?

A. Yes.

Q. Where do you send those test results to?
A. To CDRMS. It's not a compliance well, but we still submit the samples to CDRMS.
Q. CDRMS is what?
A. CDMG.
Q. Is it the Department of Health or the Division of Reclamation, Mining and --
A. Division of Reclamation.
Q. So that's a monitoring well?
A. Correct.
Q. Thank you.
A. One more is RS-5, just because it's not on here, which is --
Q. Which is not on Exhibit 5?
A. Right, but it's along Rito Seco Creek.
Q. Where is it, generally?
A. It is on the west boundary, permit boundary, and property boundary also, along Rito Seco Road.
Q. How far is that from this area shown on 5? Within a mile? Within 100 feet?
A. Yeah, probably half a mile. And actually I have got to correct myself. Rito Seco 5 is actually just a stream monitoring station, but there is a monitoring well right in the same area. I just -- I don't recall the name of the well. I have got to back

up and say that the RS is a Rito Seco monitoring station on the creek.

Q. So there is a surface monitoring station plus a well right next to it?

A. Correct.

Q. Do you know when that well was drilled?

A. I don't recall.

Q. That's another DRMS well that you report to DRMS on?

A. I believe so.

Q. Are there any wells which are tested and the test results sent to CDPHE?

A. M-19, 21, 24, and 11R.

Q. And how long have those results been sent to them?

A. Since 2001.

Q. Are those reflected on Exhibit 5?

A. Yes, they are.

Q. All of them are?

A. All of them are.

Q. Are test results on M-19, 21, 24 and 11R sent only to CDPHE or also DRMS?

A. To DRMS also.

Q. Have we missed any wells or testing locations or is what you have testified to pretty much

comprehensive, as we stand here today?

A. That's pretty much it.

Q. Just on M-19, 21, 24 and 11R, how often do you test those wells?

A. They're sampled?

Q. Sampled, correct.

A. Those are on a monthly basis.

Q. Then you send the test results in to a lab?

A. Correct.

Q. Which lab do you send that to?

A. To SVL, Silver Valley Labs, in Kellogg, Idaho.

Q. And do you get those test results back then or where are they sent?

A. They are sent to us.

Q. To you?

A. Correct.

Q. You keep those test results?

A. Correct.

Q. Is that true also of all testing that's done at any of these other sites for DRMS?

A. Correct.

Q. Are there any other governmental agencies that you take water samples for or report to?

A. There is the Division of Water Resources.

We report a sulfate level and a cyanide level at RS-5 on a monthly basis.

Q. And was that done as a part of that 99CW57 decree?

A. Correct.

Q. Any other testing that's done?

A. No.

Q. Did the scope of your duties change after Mr. Lyle's departure in February of this year?

A. Yes, they did.

Q. And tell me how those have changed.

A. I am now responsible for the site -- the Leadville Resurrection mine site and the site in Telluride, the Idarado Mining Company.

Q. It sounds like you might be traveling a bit?

A. I have been, yes.

Q. Are you in charge of dealing with DRMS in any regard?

A. Yes.

Q. And what are your duties in that regard?

A. As a representative of Newmont Mining Company, to be present at any inspections and to supply monthly and quarterly reports to DRMS.

Q. Test results or other reports also?

A. A report -- two separate reports, test

results and other reports. Test results are usually on a quarterly basis, and then I supply a monthly report to DRMS.

Q. Do you do the same thing in any regard with CDPHE, Department of Health?

A. That's a quarterly report and -- just a quarterly report to CDPHE.

Q. With test results or other matters also?

A. Test results, monitoring wells plus treatment plant water results.

Q. Quantities or testing of the treatment plant waters?

A. Both.

Q. Is the CDPHE permit still in place, the discharge permit?

A. Yes. It's been extended until, I believe -- wet test criteria has been developed, but we have received an extension from CDPHE.

Q. How long is that extension for?

A. We will be notified when our permit is going to be renewed.

Q. But you haven't been advised that it will be renewed?

A. Correct.

Q. And DRMS, is that -- are you still working

under a permitting process with them also?

A. We operate under a permit through DRMS.

Q. Right. The original mining permit, and that's been amended?

A. Yes. There's been several amendments to that original permit.

Q. But that's currently in place and in effect?

A. Yes.

Q. Any other regulatory agency?

A. Division of Water Resources.

Q. And what's the nature of your relationship with them?

A. We supply a monthly report to the Division.

Q. Any other reporting that you do to them?

A. An annual report. A monthly and annual report.

Q. Any other agency?

A. No.

Q. Do you deal with the Dam Inspection Division of the Department of Natural Resources?

A. We have on the Salazar Ranch, yes.

Q. On the Salazar Ranch Reservoir?

A. Correct.

Q. Not any other reservoir or facility?

A. That has been the only reservoir that they

have come out and inspected.

Q. What about the lined tailings facility or that dam embankment?

A. No.

Q. Any other governmental agency?

A. As far as -- maybe clearer on -- as far as reporting?

Q. Reporting, correct.

A. We supply monitoring well results to the San Luis Water & Sanitation District. Supply results or reports to the Costilla County Conservancy District.

Q. Anyone else then?

A. I can't think of anyone else.

Q. How often does DRMS come to your facility for inspections?

A. It's usually an annual inspection.

Q. CDPHE, do they have inspections?

A. They have inspections and it's -- to my knowledge, it's been about every two years.

Q. The decision-making process as to waters that are moved to the lined tailings facility, who makes those decisions?

A. Prior to Bill Lyle's departure, it's been me.

Q. Prior to his departure, that was you?

A. Right. Or excuse me. Bill Lyle made the decision as far as waters to be transferred. And once he has left, I make the decisions.

Q. Tell me how those decisions are made. On what basis? Is there a policy manual or is there a policy?

A. No policy.

Q. Are there documents that you use? Guidelines?

A. No.

Q. Is there any direction you receive from any third person?

A. No.

Q. So it's 100 percent discretionary, for example, in your role since February 2012 how much is going to be moved to the lined tailings facility?

A. Correct.

Q. And that's made on a monthly basis, weekly basis?

A. It's usually on a weekly basis.

Q. And what criteria do you use to determine how much would be moved there? When I say, "how much would be moved there," I mean as opposed to taking the waters to the water treatment facility.

A. It's based on the operation of the treatment

facility. If we have got water that is going to exceed a level in the pond that we feel that we need to manage it in a different way, then we'd send that volume of water over to the tailings facility.

Q. For example, if you have excessive levels or some level that you would consider a number that you would like to get rid of in the West Pit area, you would pump that West Pit, those wells; is that correct?

MR. WITWER: Object to the form.

A. The wells are continuously pumped. They are not started and shut down. And that is -- we store water in a holding pond, and we will treat that water. Once we have finished treating for the week, anything that's excess will be moved over to the lined tailings facility for water management purposes.

Q. (BY MR. McCLURE) There's water taken to a holding pond from the West Pit area?

A. Correct.

Q. A certain quantity of that water is taken and treated, and then a certain quantity of that water may be taken to the lined tailings facility?

A. Correct.

Q. Tell me how that works, just from an operational standpoint. Do you try to treat all the water that you can treat?

A. Correct. We try to treat all the water that we can treat for the amount of man-hours that we have scheduled for that week.

Q. That's based upon a personnel matter?

A. Correct.

Q. When you are operating that treatment facility at full capacity, how many people will be there?

A. There's two operators.

Q. And is this a 24-hour, 7-day-a-week operation?

A. It's a 12-hour, 4-day-a-week operation.

Q. And the other three days a week, it's shut down?

A. It's restoring water that has already been treated to bring that pond level back up. And anything that we consider to be going over a level that would be treated the following week is transferred to the tailings facility.

Q. Let me back up here a bit, just so I can understand a little bit better about your operation. When you are pumping water in the West Pit area, do you pump that water and take it to the holding pond?

A. Correct.

Q. That's all that takes place in the West Pit

in terms of physical manipulation of the water?

A. That's correct.

Q. So then there's a certain quantity of water that is in the tailings pond normally, and then when you pump into it, it increases that quantity?

MR. WITWER: Object to the form.

A. Correct.

Q. (BY MR. McCLURE) And normally what level is the tailings pond -- this holding pond -- excuse me -- kept at?

A. I have no idea.

Q. But when water is taken to the holding pond, then a determination is made as to how much water will be treated and how much water would not be treated. Is that a fair statement?

A. That's correct.

Q. So the water that's treated is taken to the water treatment facility, and if it's working at its maximum capacity, would be run for four days on 12-hour shifts?

A. Correct.

Q. If you are not able to treat all of the water during that four days at a 12-hour shift, treat it and discharge it to the Rito Seco, then one needs to take the excess water from the holding pond over to the

lined tailings facility?

A. Correct.

Q. Is the amount of water that you would treat on a monthly basis relatively stable?

A. Can you be more clear as to --

Q. Sure, sure. Let me back up, before I ask you that question, and ask you a different one. Is the amount of water that is being pumped from the West Pit into the holding pond relatively the same amount every month?

A. Yes.

Q. What is that quantity; do you know right off the top of your head?

A. I don't know right off. I can give you the gallons per minute that are pumped into the holding pond.

Q. Sure.

A. And that's approximately 200 gallons a minute from the backfill well, BF-5, and approximately 10 gallons a minute from M-32 and M-33 combined.

Q. Combined. So the pumping capacity, which is on a continual basis, would be about 210 gallons per minute?

A. Correct. It fluctuates with the season.

Q. And tell me how that fluctuates.

A. During this time of the year, the fall, we will see the volume pumped to the holding pond, the gallons permitted, drop off to, roughly, 180 gallons per minute. And that's in BF-5, BF-5R.

In the springtime, we may see them come up as high as 210 gallons a minute.

Q. Why is that? If you could explain that, please.

A. There must be an influence from -- I'll back up. I am not sure. All I can do is guess at why it is, but I can't give you an answer.

Q. Let's just, roughly, use this 210-gallon-per-minute pumping concept. When that goes to the holding pond, is the decision generally to then take 210 gallons per minute from the holding pond, that rate of flow, to the water treatment facility?

A. The actual amount of water that is taken into the treatment facility is right around 500 gallons a minute, 500 to 550 gallons per minute.

Q. And how is that sum arrived at?

A. That's the amount of water that can be run through the water treatment facility.

Q. So when you are operating -- you have got it manned up to the max, so to speak -- you would have 550 gallons per minute that you can take and treat?

A. That's about the max.

Q. And when you say, "take and treat," that's take, treat, and discharge?

A. Discharge.

Q. Less the brine?

A. Correct.

Q. And just so I understand that one component, it's my understanding the brine then goes to the lined tailings facility?

A. Eventually, yes.

Q. Help me with my math here. If we have, roughly, 210 gallons per minute going from the West Pit area into the holding pond and 500 to 550 gallons per minute being treated at the water treatment facility, where is this 300-plus gallons per minute coming from to help supply the water treatment facility?

A. That's the reason that we don't operate on a full week because we just don't have the -- the treatment plant treats at a higher volume.

Q. Some of that water from that holding pond can go directly to the lined tailings facility?

A. It does go to the lined tailings facility.

Q. Without pulling out some numbers, I had a recollection that, in some answers to certain written discovery in this case, in 2009 and 2010 all the waters

were treated and none went to the lined tailings facility. Maybe I am wrong, but I am just -- that was my recollection. Does that sound like it makes sense to you or not?

A. That sounds like it makes sense to me.

Q. So during 2009 and 2010, for those two years -- and I understand that's not on a -- it's a fiscal year as opposed to an annual year?

A. Correct.

Q. -- all waters were treated that went from the West Pit into the holding pond?

A. Correct.

Q. And what were the policy reasons for treating all those waters?

A. I don't believe there are any policy reasons. There's no policy reasons for treating all those waters.

Q. Do you know why all those waters were treated as opposed to moving some of them to the lined tailings facility?

A. At the time the decision hadn't been made to manage more water in the tailings facility versus treating it.

Q. Can you explain to me what you mean by "managing more water in the tailings facility"?

A. By being able to evaporate and dispose of the water versus treating it.

Q. One of the reasons to take the water down to the lined tailings facility is for evaporation purposes?

A. Correct.

Q. Is that the primary reason?

A. Correct.

Q. Are there any other reasons?

A. During 2011 we grew a crop of canola on the tailings facility.

Q. And additional waters then were taken in 2011 to the lined tailings facility?

A. Correct.

Q. And how was that decision arrived at?

A. Can you be more clear as --

Q. Yes. What was the decision-making process to take more waters to the lined tailings facility? I assume it was to aid in growing a canola crop?

A. I couldn't answer that question because I didn't make the decision.

Q. Who did make that decision?

A. Mr. Lyle.

Q. Do you know the basis of that decision?

A. No, I don't.

Q. But you know that there were additional

waters taken?

A. Yes.

Q. In 2011?

A. Yes.

Q. And were those waters used for purposes of placing them in a sprinkler to grow a crop?

A. Yes.

Q. And they were, in fact, used in that manner?

A. Not all the water was used for the crop production.

Q. What was it used for?

A. Actually it was water that was left over after the crop had been harvested and it was evaporated.

Q. But we have a different use of the water in 2011 than 2009 and 2010 in terms of how the waters were going to be treated as they left the holding pond?

A. Correct.

Q. Let me go back. Do you recall what quantity of waters were taken to the lined tailings facility in 2008? Was it very similar to 2009 where virtually all or all was taken to the water treatment facility?

A. Can you repeat the question?

Q. Sure. We talked about, in 2009 and 2010, it sounded like all that water that went out of the holding pond went to the water treatment facility. My question

to you is, was that true in 2008 also?

A. I would have to look at the annual report provided to CDR or the Division of Water Resources.

(Deposition Exhibit 12 was marked.)

Q. (BY MR. McCLURE) This has already been marked once, but let me hand you Exhibit No. 12 and ask you if this is a series of annual reports that were sent to the Department of Natural Resources by Battle Mountain related to this facility commencing in 2003?

A. Yes, it appears to be.

Q. And in 2008 can you tell me what quantity of water was taken to the water treatment plant?

A. There were 303 acre-feet.

Q. And were there 65 acre-feet used for augmentation purposes?

A. Correct.

Q. What does that number mean? Is that water that's taken to the lined tailings facility?

A. Which number are you --

Q. That 65. It's a 65.42.

A. It was actually augmented to the creek.

Q. So if we are looking at 2008, we have 303.61 which were treated at the water treatment facility and actually discharged to the creek?

A. Yes.

Q. And the 65.42 -- I'm sorry. That was waters that were pumped from the Columbian Ranch well?

A. Correct.

Q. Then no waters were taken to the lined tailings facility in 2008 aside from brine?

A. No.

Q. No, there were no waters taken to the lined tailings facility in 2008?

A. In 2008, it appears by the spreadsheet, there was 20.77 acre-feet delivered to the tailings impoundment.

Q. Is that brine or not brine, that number?

A. That would be brine.

Q. So that was the only water that was taken to the lined tailings facility in 2008?

A. Correct.

Q. What about in 2007?

A. 2007 was 26.81 acre-feet of brine.

Q. Of brine. And there were no waters aside from that taken from the lined tailings facility -- no other waters aside from that taken from the West Pit to the lined tailings facility?

A. Correct.

Q. So, once again, all other waters were treated and what was left over was the brine that was

taken and that was it?

A. Correct.

Q. What about in 2006?

A. 2006 was 26.78 acre-feet.

Q. Which was the brine taken to the lined tailings facility?

A. Correct.

Q. Aside from that, no other waters were taken from the West Pit to the lined tailings facility?

A. Correct.

Q. And all other waters were treated?

A. Correct.

Q. Is that the same answer for 2003, 2004 and 2005, that we just have a certain amount of brine taken to the lined tailings facility and that's it for all three years?

A. 2004. I don't see 2003 as far as a spreadsheet that I recognize. 2004 and 2005, that's correct.

Q. Again, merely the brine goes to the lined tailings facility?

A. Correct.

Q. From 2004 through 2010, no waters were taken directly from the West Pit to the lined tailings facility?

A. Well, brine was taken to the --

Q. Except for the brine, but the brine is the byproduct from the water treatment, so --

A. Right. No waters other than the brine.

Q. Then let's talk about 2011. What are the numbers for 2011?

A. 2011, 164.91 acre-feet were transferred to the tailings impoundment.

Q. And how much was treated that year?

A. It was 155.24 acre-feet.

Q. Was treated at the water treatment facility. And after treatment how much of that brine went to the lined tailings facility?

A. I wouldn't have a number on --

Q. Is that a fairly stable number year in and year out or not? When I say, "stable," does that vary, roughly, around 25 to 35 acre-feet per year?

A. Yes. As far as the brine production?

Q. Yes.

A. Or volumes?

Q. Yes. Volumes that go directly to the lined tailings facility.

Let me ask you, in 2012 are all the waters coming out of the holding pond being treated at the lined tailings facility?

A. No.

Q. Can you tell me what's happening there?

A. The water is coming out of the West Pit -- or you have got treatment, water treatment. And then you have got some water transfer to the tails.

Q. And I don't know if I have numbers for that. Do you know what those numbers are, roughly, as we sit here today? I am not asking for anything accurate, just --

A. I would have to say, my recollection is, it's probably 50 percent, probably 12 to 14 acre-feet are treated and the same is transferred over to the tailings facility.

Q. So it's, roughly, 50/50?

A. Yes.

Q. Then that's the same that occurred in 2011, although the numbers are slightly different than that. But in 2012 it's roughly 50/50?

A. Yeah. It's actually a little less being transferred to the tailings facility, but it's -- without looking at the numbers and the monthly reports, I would have to say, it may be 50/50.

Q. So in other words, the policy change that occurred in 2011 carried over to 2012 in terms of the split?

A. Yeah, correct.

Q. You indicated you weren't aware of what the 2011 policy position was. Are you aware of what the 2012 policy position is?

A. Still water management in the tailings -- evaporation, remediation.

Q. Evaporation? I'm sorry?

A. Evaporation and remediation.

Q. Do you know what quantity of water is or can be, either one, evaporated from the lined tailings facility on an annual basis?

A. No. I don't have an idea.

Q. No idea. Okay. And the water treatment facility for 2011, what was the manpower there? Person power, I guess.

A. Two operators.

Q. Working how many days a week?

A. The operators were employed full-time and treated water approximately 10 hours one day a week.

Q. So it went from 12 hours four days a week the prior year in 2010, to 2011 would be 10 hours one day a week?

A. Correct.

Q. And in 2012 is that, roughly, the same?

A. No. 2012 we have been actually treating

more water. We operate about 40 hours a week, and so we have actually been treating a bit more water than we have been transferring to the tailings facility.

Q. In terms of the standards that we were talking about, would that be -- we were at 10 hours one day a week in 2011. What would that be in 2012, using that same standard? It would be increased somewhat, but could you use the same standard and give me --

A. And when I say operate the treatment plant, there's more than just treating the water. So if we were on a 10-hour-a-day work schedule, we may treat water eight hours a day because we have got preshift startup plus we have got to, at the end of the day, set up our RO membranes to permeate the water. So you are actually getting maybe 32 hours of actual treatment.

Q. I just want to make sure we are comparing apples to apples as opposed to apples to oranges. In 2011 are you treating 10 hours per day for one day?

A. Yes.

Q. And in 2012 are you treating 20 hours, 10 hours a day for two days?

A. It would be more like -- actual treatment is probably about 32 hours or treatment would be eight hours a day, four days a week.

Q. What is the policy reason for increasing the

amount of waters in 2012 that are not treated and instead taken to the lined tailings facility that BMRI has?

A. I don't believe that there's an increase that's not treated taken to the tailings facility. I believe in 2012 more water has been treated versus the previous year.

Q. Okay. But I guess I am asking -- I am just not trying to tie 2012 to 2011. I am trying to tie 2012 to what occurred from 2004 to 2010. And there's some type of policy or appears to be some sort of policy in place to not treat as much water, and my question is, what is that policy?

A. There is no policy.

Q. Is this solely a discretionary matter that you have determined?

A. My prior supervisor's, and that is the way the site is to be managed even with my current supervisor's knowledge.

Q. I'm sorry. I just don't understand the answer. Your current supervisor has given some indication that this is the way he wants to have the site managed. My question is, what's the basis for managing it that way, if you know?

A. It's an alternative way of managing the

water versus treatment.

Q. Instead of taking the water through the treatment facility, it then goes to the lined tailings facility. I understand. But is there something that I am missing? Is this a cost consideration? Is this a preference? Is this a -- why would you change the means of treating that occurred from 2004 to 2010 in 2012?

A. There's no reason. Just continuing managing the water and treatment that we have for the past couple years.

Q. My assumption is, if you are moving -- in 2012 you are moving about half the water down there that is coming out of the West Pit -- is that correct -- to the lined tailings facility?

A. To this point, correct.

Q. So you are cutting down by about half the amount of water you've treated in the past from 2004 to 2010 at any rate?

A. Correct.

Q. And you are not growing a canola crop?

A. Correct.

Q. And you are not growing any crop in there, correct?

A. Correct.

Q. So you are simply taking water down there

and storing it?

A. We have evaporated water through a sprinkler system that we have got on the tailings that was used to manage the brine that was transferred over, and then it was used to irrigate the canola when the canola crop was in.

And this last year no crop has gone in, so it's gone back to irrigating and evaporating. I shouldn't say irrigating, but evaporating water that's been transferred from the West Pit.

Q. So the sprinkler is used for no other purpose but just spraying it in the air for forced evaporation?

A. Correct.

Q. Is that sprinkler used to irrigate any vegetative cover?

A. Not anything that we have planted as far as any kind of reclamation crop or cover -- excuse me -- but there is some vegetation growing out in the --

Q. Nothing that is planted by all of you. It's just that there is some vegetation or weeds out there, for lack of a better expression?

A. Correct.

Q. Let me ask you this: Do you have an understanding as to the quantity of water that was in

the pond in the lined tailings facility, free water surface, in 2003?

A. No. No, I don't.

Q. What about '04, '05, '06?

A. No.

Q. '07, '08, '09?

A. No.

Q. 2010, two years ago, was there water in a pond there?

A. Yes.

Q. Has there been water in a pond since 2003?

A. Yes.

Q. Do you have any idea of the surface of that area?

A. No, I don't.

Q. What about in 2011?

A. Yes, there's water.

Q. Did the pond increase over 2010 in terms of size?

A. No.

Q. It stayed about the same or shrunk?

A. It probably increased on the west, east, and south edges of the pond. It was not a major increase.

Q. Minor increase?

A. Yeah. The slope in those areas is a little

more than gradual, so you don't notice a large increase.

Q. The pond is at the south side next to the embankment; is that correct?

A. It is located on the north side right about in the center of the tailings.

Q. In the center of the tailings. Is there a dry area to the south of it?

A. Yes, there is.

Q. In 2012 did the size of the pond increase?

A. No.

Q. It stayed about the same?

A. It decreased.

Q. It decreased?

A. Yes.

Q. And how much did it decrease?

A. On the east end I would approximate it's moved in about 50 feet and I would have to say about probably 5 feet in elevation.

Q. There's 5 feet less in elevation?

A. Yes.

Q. Do you know why that is?

A. Because we evaporated water throughout the summer.

Q. Did you conduct any studies or were there any studies conducted by Battle Mountain concerning this

process of forced evaporation through the sprinklers?

A. Not that I am aware of.

Q. And is that the plan in the future, to continue this process of using a sprinkler for forced evaporation?

A. That would be a direction that I would have to receive from my supervisor.

Q. You don't make that decision?

A. No.

Q. And that's Mr. Fiske? Is that his name?

A. Yes.

Q. In the past has there been any effort to shrink that size of the pond by using a sprinkler?

A. In the past, yes. It's actually got to a point where it's almost dry, and it's at that point currently.

Q. The pond is almost dry currently?

A. Well, there's standing water, but it's to a level that we are unable to pump for pumping purposes.

Q. Now we are talking about standing water in the lined tailings facility?

A. Correct.

Q. And so do you know how deep it is now?

A. I don't have an idea what it would be at the deepest point.

Q. When you say there's not enough water to pump from it, can you tell me what you mean by that?

A. Basically where we have got our pump set, we have -- the pond has dropped to that point and any further pumping would cause damage to the pump.

Q. And this is the pump that you use to run the sprinkler?

A. Correct.

Q. So you cannot, on November 5 of 2012, operate the sprinkler right now?

A. We may be able to operate for a short period of time because of some of the water we have transferred over in the past month and brine that we have transferred over that would allow us to pump for a short period of time or run the evaporation system for a short period of time.

Q. When you bring the brine over to the lined tailings facility, do you try to commingle that brine with other waters in the pond in the lined tailings facility?

A. Yes. It's all deposited in the same --

Q. But that brine is pretty thick, isn't it?

A. No. It's water consistency.

Q. So that actually then is commingled and that's what's run through the sprinkler?

A. Yes.

Q. Does it produce any clogging in the sprinkler?

A. No.

Q. Is there a plan to continue to try to drop that water level in the pond in the lined tailings facility?

A. The plan -- it's the same plan that's been in operation or that we have been operating under since, roughly, 2003. And that is to manage the water through the sprinkler system to reduce the volume of water in the tailings pond.

Q. So since 2003 you have been using that sprinkler and pumping that?

A. Yes.

Q. Then the only year that it was -- you didn't use forced evaporation was in 2011, in which you used that to grow a canola crop?

A. For part of the growing season.

Q. What do you mean?

A. Or for the growing season, I should say. Now we actually used it prior to growing the crop and we used it after the crop was harvested.

Q. For the same purpose, the forced evaporation?

A. Correct.

Q. What are the plans now that the water level has dropped, but it's difficult to pump out of the -- using the existing pump to continue lowering that water table in the lined tailings facility?

A. There is no plan in place.

Q. Nothing else can be done at that point of time?

A. Correct.

Q. So there's a certain quantity of water that's in that pond. You are not sure how deep it is, what the volume of it is, but you can't do anything more with it right now simply because the pump is not operable for purposes of this forced evaporation. Is that a fair statement in terms of where we are?

A. That's a fair statement, correct.

Q. Can you approximate the size of the surface in November this year as to that pond?

A. I would say, approximately 20 acres.

Q. Then the plan would be, unless the water level comes up, to do no more pumping until next year, 2013, when additional waters would be taken over from the West Pit to the lined tailings facility?

A. That's correct.

Q. In the number of years that you have been

there, Julio, has there ever been a storm event -- snow, sleet, rain -- that has contributed significantly to the amount of water flowing into that lined tailings facility?

A. No. I have never seen anything that was unusual or that was large enough to stick out in my mind.

Q. Are you acquainted with the liner beneath the lined tailings facility?

A. Can you be more clear?

Q. Yes. Is there a liner beneath the lined tailings facility?

A. Yes, there is.

Q. Have you ever seen it?

A. Yes, I have.

Q. Where and when?

A. During the construction phase of the tailings impoundment.

Q. Were you involved in that construction?

A. No.

Q. You just observed it?

A. Yes.

Q. Have you seen it since its construction?

A. No.

Q. We have some information in some testimony

that the liner only comes partially up the side of that lined tailings facility. Do you have any information concerning that one way or another?

A. What do you mean by "partially up"?

Q. It doesn't come up to the top. So there is a liner, but the liner is along the bottom and partially along the sides.

A. At what location?

Q. I don't know. It's been a general description in some testimony that we have seen.

A. To my knowledge, the liner is constructed underneath the main embankment.

Q. Does it come up to the top of the embankment?

A. No.

Q. How far does it come up? About a third of the way?

A. It doesn't come up the main embankment.

Q. So the embankment on the south end, we are talking about?

A. The embankment on the south end -- actually it doesn't come up the face of the embankment. It comes up on the sides of the embankment to the top of the embankment.

Q. Is there a place where it only comes up

partially along the sides?

A. Not to my knowledge.

Q. Do you know where the as-built drawings are on this facility? In other words, how it was constructed, the lined tailings facility, and the placement of the liner?

A. No, I don't know where an as-built would be located.

Q. Do you have any knowledge about the strength or integrity of the liner?

A. No, I don't.

Q. Or the life of the liner?

A. No, I don't.

Q. Do you have any understanding as to the amount of waters that could be safely placed in that lined tailings facility? And when I say, "safely," done so in a manner that there's not a spill?

A. No.

Q. Do you have any knowledge about how much water could be placed in there and be retained within the liner itself?

A. No.

Q. To your knowledge, does Battle Mountain have any guidance or instructions or policies in place that you rely upon and have knowledge of in making decisions

as to how much water to put into that lined tailings facility?

A. No, I don't.

Q. To your knowledge, there are none?

A. To my knowledge, there are none.

Q. There is an underground drain -- is that correct -- on top of the liner?

A. Correct.

Q. And that causes a certain amount of water to drain down into the collection pond?

A. Yes, that's correct.

Q. And that collection pond then is pumped on a regular -- there's a pump down there in the collection pond; is that correct?

A. Correct.

Q. And that pump is run on a regular basis?

A. Correct.

Q. Continual basis?

A. No, not a continual basis.

Q. And as it fills up to a certain level, waters are then pumped out of the collection pond into the lined tailings facility?

A. Correct.

Q. And tell me how that operates and how those decisions are made when to run the pump.

A. Once the level has been dropped, it's given time for the level to come back up, whatever drains from the underdrain into the collection pond. Then once it reaches a -- it's not a set level, but the level that we feel is sufficient enough to pump into the tailings, then we will start pumping.

Q. So you start pumping when the concern is the collection pond would be getting too full?

A. No, it never gets too full. The level is kept low in the collection pond, but it may be a week's accumulation of water and then it's pumped.

Q. So it's pumped more or less on a weekly basis?

A. Correct.

Q. And then you are pumping to maintain a certain level in the collection pond, correct?

A. We try to dry it out.

Q. You try to dry it out. And so you would then pump it dry, so to speak, by taking the waters out of the collection pond and back into the lined tailings facility?

A. Correct.

Q. And how much do you usually pump out of there per month?

A. We don't have a totalizer, so I couldn't

give you a volume.

Q. Is there anything shown on Exhibit 12 which would indicate how much that's pumped out on a --

A. No.

Q. So in other words, you really don't know how much is pumped out on a monthly basis?

A. Right. There's not a required reporting, so there's -- so we pump when it needs to be pumped.

Q. What's the purpose of pumping out of that collection pond back into the lined tailings facility?

A. To keep it from overflowing.

Q. You want to keep it low enough, close to being dry, if possible, so it won't overflow?

A. We want to keep it low enough that we can manage it.

Q. What is the manageable level?

A. Maybe a couple feet.

Q. You want to have no more than 2 feet --

A. Right.

Q. -- within the pond, vertical depth at any one time?

A. Right.

Q. How big is that pond?

A. I would have to approximate maybe 3 acres, the surface. Volume, I don't have an idea.

Q. Incidentally, do you have people that work under you at that facility?
A. Yes.
Q. How many people are employed up there?
A. Three others.
Q. And their duties are testing, maintenance, pumping?
A. Correct. Everything that is entailed in the operation.
Q. Do you know why not all of the waters out of the West Pit area are taken to the lined tailings facility?
A. No.
Q. Were you there during the period of time during mining when slurry was taken down from the mill to the lined tailings facility?
A. I was employed at the time, yes.
Q. Were you involved in that process at all?
A. No.
Q. Or managing any of that water?
A. No.
Q. Did you see that occurring?
A. I did see it occurring.
Q. Did that stop then when the mining operation ceased?

A. When the milling operation ceased.
Q. When the milling operation ceased?
A. Yes.
Q. Was that pretty much the same as the mining period?
A. Actually the mill would run maybe a month after the mining operation had quit hauling material up to the stockpile, the ore stockpile.
Q. Is there any physical reason that more waters could not be taken to the water treatment plant in 2012 than are being taken this year?
A. No.
Q. So more waters could be taken. It's just that the election has been made by Battle Mountain to take less waters there?
A. Correct.
Q. Do you know if there's a double liner beneath the lined tailings facility or just a single liner, the synthetic?
A. I couldn't tell you. I don't know.
Q. Do you have any personal discretion in 2012 as to how much -- what quantity of waters would go to the water treatment facility as opposed to the lined tailings facility?
MR. WITWER: Object to the form.

A. Limited. It would be more a directive from my supervisor.

Q. (BY MR. McCLURE) When you say, "limited," within what parameters?

A. If we were experiencing problems within the treatment plant, then it's my -- I have got the authority to transfer water to the tailings facility, should we not be able to treat water and we start seeing the levels in the holding pond get to an unsafe level.

Q. So to a certain degree, that's then driven by the amount of waters in the holding pond?

A. Yes.

Q. Can you tell me what are safe levels in the holding pond?

A. We try to manage and keep that holding pond under a 5-foot level.

Q. Under 5-foot?

A. Correct.

Q. From the bottom?

A. From the bottom, yes.

Q. Five vertical feet?

A. Five vertical feet.

Q. How big is that holding pond, roughly?

A. Roughly, 4 acres, surface. Volume, it's got -- 5-foot is the deepest portion of the pond and

then it gradually shallows out.

Q. And so 5 feet is generally the maximum amount you would want to have in there. The concern is, if you get over 5 feet, it could do what?

A. Actually it would have to get over probably 7 feet before we start seeing problems that would -- it would start leaving the containment.

Q. Have you ever seen that happen?

A. No.

Q. So there's pretty close watch kept on that to make sure that that doesn't occur?

A. Correct.

Q. Is that basically your instructions, to keep it under 5 feet, or is this just something you've decided on your own?

A. It's been a practice, a common practice, and was a direction of Bill Lyle at the time, but has been continued.

Q. And so then the holding pond and the West Pit area are really tied closely together, are they not?

A. Yes.

Q. Because you are also then trying to maintain a certain water level in the West Pit area?

A. Correct.

Q. And what is that level you are trying to

maintain in the West Pit?

A. 85.82 is the water level. We maintain a 30.80 depth to water below the top of the casing at BF-5.

Q. So BF-5 is a well. So you are tying that into the top of the casing on BF-5?

A. We measure from the top of the casing to the static water level.

Q. To the static water level. I see. And you are going to want to have a static water level at what?

A. At 30.80 is where we maintain that depth.

Q. And is this custom and usage or are these specific instructions you have?

A. Instructions, but it's a requirement in our discharge permit.

Q. So that is a CDPHE requirement which basically ties in from the discharge permit at the treatment plant going back -- clear back to the West Pit area?

A. Correct.

Q. Do they likewise have a requirement as to how much water can be retained in the holding pond?

A. Not that I am aware of.

Q. And has that been relatively successful in terms of being able to pump those three wells that you

mentioned before? And I think BF-5 was the primary well?

A. Correct.

Q. Has that been relatively successful in pumping those three wells to maintain that 30.80 depth?

A. Yes.

Q. And that's your target, is it not?

A. Correct.

Q. What's the 85.82 then?

A. That would be the elevation.

Q. I'm sorry. Okay. So you really only have one key number you are tying into that water level, and that's the 30.80?

A. Correct.

Q. Does the CDPHE then target an amount of water that can be in the holding pond?

A. Not that I am aware of.

Q. It's just discretionary?

A. Yes.

Q. Some of the documents we have seen have indicated that Battle Mountain doesn't intend to grow a canola crop in the lined tailings facility in the future. Do you know anything about that?

A. That's my understanding.

Q. How did you arrive -- get that

understanding?

A. Just coming from my supervisor.

Q. Mr. Fiske?

A. Yes.

Q. Was this a written instruction to you?

A. No. Verbalized.

Q. What did he say?

A. That if we weren't allowed to grow a crop, we wouldn't grow a crop.

Q. You say, if you are not allowed to grow the crop?

A. If we are not allowed to use these waters for irrigation.

Q. Then you won't do it?

A. Right.

Q. Do you have any reason to believe that you are either allowed or not allowed to use the waters for irrigation?

A. No.

Q. I don't know whether you indicated this or not, but are water samples actually taken from the lined tailings facility for any reason for testing purposes?

A. From the tailings facility --

Q. Pond.

A. -- the tailings pond. We monitor on a

quarterly basis the water quality in the tailings pond.

Q. Is this then sent to DRMS?

A. Correct.

Q. How do you test? Do you take samples from the pond itself?

A. From the pond itself.

Q. One per quarter?

A. Correct.

Q. And are those sent to a lab?

A. Correct. Those are Silver Valley Labs also.

Q. In Idaho?

A. Correct.

Q. And then you get copies of those results?

A. Correct.

Q. Have those results indicated that any of the constituents were higher than standards?

A. "Standards" meaning?

Q. There is acceptable water quality standards for stream purposes.

A. I am sure that there are several that are over stream standards because it's made up of West Pit water and brine.

Q. And that's manganese and fluoride, to your knowledge?

A. Sulfate.

Q. Sulfate? All three?
A. Correct.
Q. Is the brine tested separately before it reaches the lined tailings facility after it comes out of -- at or after treatment?
A. We don't monitor the brine.
Q. You don't monitor or test it?
A. Don't test it, correct.
Q. Going back to the testing that occurs in the West Pit area -- and I am not sure if I asked you about this or not -- but is there testing of waters that occur in the West Pit?
A. Yes.
Q. And how often are samples taken?
A. Some samples are taken on a monthly basis. Some are quarterly.
Q. Which ones are taken on a monthly basis?
A. M-19, 21, 24, and 11R.
Q. Which ones are taken quarterly?
A. BF-4 and BF-6 -- I believe that's it -- in the West Pit.
Q. Are they tested for different constituents, the two series?
A. Yes. The M wells are tested for constituents that are outlined in the DMR. And BF-4 and

BF-6 for -- actually they are both DMR, but they all get reported to the DRMS also. And I don't recall if DMR has a list of constituents.

Q. DMR?

A. DRMS.

Q. DRMS. They are both tested for purposes of DRMS?

A. Correct.

Q. And taken to the same lab in Silver Valley, Idaho?

A. Correct.

Q. And all test results go to DRMS?

A. Yes.

Q. Is CDPHE involved in either of those?

A. Yes.

Q. Both?

A. Both.

Q. Are the West Pit waters that have been tested coming back currently at levels that exceed stream standards for certain constituents?

A. I am unaware of what the stream standards are, so I couldn't answer that question.

Q. I thought you had indicated that, at the lined tailings facility, they were high comparatively per constituent as it relates to stream standards?

A. Right. And the reason I said that is, if we didn't -- if we met stream standards, we wouldn't be required to treat water.

Q. Sure. Let me just go back to the West Pit waters. Are you aware of it being high in certain constituents like fluoride, manganese, TDS?

A. The backfill, BF-4 and BF-6, I am aware that the fluoride level is pretty consistent with what we see in BF-5, which is about 4 milligrams per liter. But as far as the others, I haven't reviewed them recently.

Q. As of last year?

A. Yeah, probably.

Q. Were they high in something besides fluoride?

A. I couldn't tell you.

Q. But you know that they cannot be discharged to the stream and meet the stream standards?

A. Right. They are all in the same vicinity as -- close proximity to BF-5, anyway.

Q. Which was around 4 milligrams per liter with fluoride? Is that what you are saying?

A. Correct.

MR. McCLURE: Let's take a break.

(Break was taken from 3:17 to 3:36.)

Q. (BY MR. McCLURE) Back on the record. I

think I asked you this, but if not, let me ask you again. Exhibit 12 is monthly reports that you prepare in the ordinary course of business?

A. The monthly reports are, yes.

MR. WITWER: I am going to object to the form. You are now talking about monthlies?

Q. (BY MR. McCLURE) Exhibit 12 was the annual reports. Did you prepare the annual reports?

A. For what years?

Q. This was prepared --

A. That was by Bill Lyle.

Q. This was prepared from 2003 through 2011. And without going through each report, Mr. Lyle's signature appears on the 2003. Yours appears on the 2011?

A. Right.

Q. Does that comport with your understanding? Here it is.

A. Yes.

(Deposition Exhibit 13 was marked.)

Q. (BY MR. McCLURE) Exhibit 13 appears to be monthly reports for fiscal year 2011, November to November. To the extent we haven't -- and for some reason I believe one is missing. I couldn't find. But if you could just check that, if you could, please.

A. It looks like they are all here.

Q. Good. Apparently we found them. That's something that you prepare, sir?

A. Yes.

Q. And that's prepared in the normal course of business?

A. Yes.

(Deposition Exhibit 14 was marked.)

Q. (BY MR. McCLURE) Let me hand you Exhibit No. 14 -- this is a document that Mr. Witwer brought with him today -- and ask if you can identify that document.

A. It's tailings pond analysis results or sampling results.

Q. So this is sampling that has occurred at the tailings pond from what year to what years?

A. 1999 through 2012.

Q. And is this something that you keep in your possession, these results?

A. Yes.

Q. And is that a spreadsheet that you prepared then?

A. No.

Q. Who prepared that?

A. This was prepared by Telesto.

Q. What does that purport to represent, if you know? Obviously, we have different constituents named by their symbol. For example, Fe, if my memory serves me correctly, is iron?

A. Iron.

Q. Zn is zinc?

A. Zinc.

Q. Is that what that purports to represent, test results for various constituents?

A. Yes.

Q. Does this document have any significance to you in and of itself other than just what you have represented it to be?

A. Can you explain?

Q. That's a fair statement. You have explained that this is a composite of the testing information from 1999 to 2012, and this is testing from -- when you say, "the tailings pond," this is the lined tailings facility?

A. Correct.

Q. Does that document have any significance to you in terms of representing something or not representing something?

A. No. It's a reporting requirement to DRMS.

Q. Does that reporting requirement continue as

long as there is free water standing in the lined tailings facility?

A. To my knowledge, yes.

Q. What happens if there's no longer free water standing there?

A. You are unable to collect the sample.

Q. That's never been the case thus far?

A. No.

Q. But you are indicating, at least from 2011 to 2012, that pond has shrunk?

A. Yes.

Q. How are samples taken actually of that, physically taken?

A. A grab sample actually uses the bottles themselves, and it's directly collected into the bottle.

Q. Do you take it at a certain depth?

A. At the edge of the pond, the edge of the pond.

Q. This is simply going up and scooping up a sample from the edge of the pond?

A. Correct. Unless it's iced over, of course. Then you have got to actually break through the ice and collect it, and it's usually taking out just a little bit.

Q. That lined tailings facility is not fenced

currently; is that correct? Fenced around the exterior perimeters?

A. No.

Q. As waters are taken down to the lined tailings facility from either the brine, from the water treatment facility, or the waters directly from the West Pit, are there any administrative tolerances dictated to Battle Mountain that you must follow? In other words, you don't want it to reach a certain height or -- in terms of the free water level?

A. Not that I am aware of.

Q. In other words, there's no administrative requirements, to your knowledge, that are similar to those that refer to the West Pit area or the holding pond?

A. No, not that I am aware of.

Q. Are there any internal administrative policies or guidelines, to your knowledge, that are provided to you or available to you to follow about how much water should be going down there?

A. No.

Q. So in other words, aside from -- and I am not trying to be facetious, but you don't want to have a certain amount of water going down there that overflows the dam, correct?

A. Correct.

Q. Other than that, there is no standard?

A. Not that I am aware of.

Q. You have been involved in this facility a long period of time. Do you think there should be some sort of standard involved?

MR. WITWER: Object to the form.

A. I couldn't answer that question.

Q. (BY MR. McCLURE) Mr. Witwer indicated that, as to the 30(b)(6) notice of deposition, you had some knowledge about 5(b), which was the safety inspections of the lined tailings facility. If you could take a look at that document, it is somewhere there. If you could go to 5(b), sir.

A. Okay.

Q. Five refers to "Safety measures in place in the event the LTF fails including, but not limited to, safety plans prepared for any regulatory agencies." And (a) deals with "safety inspections of the dam;" (b) deals with "safety inspections of the lined tailings facility."

Mr. Witwer indicated that you could talk about 5(b). Could you explain what you know about that.

A. There are no safety inspections on the lined tailings facility itself. There are safety inspections

or stormwater inspections in the vicinity of the tailings facility.

Q. And who conducts those inspections?

A. The CDPHE.

Q. And when you say, "in the vicinity," could you describe where, please?

A. On the south side of the tailings impoundment or lined tailings facility that runs east and west. There's a channel that runs east and west, a stormwater channel.

Q. When you talk about stormwater, this is some sort of event of heavy precipitation?

A. Correct.

Q. All you are saying is, there has been some inspections of those by the Department of Health?

A. It's reported. We actually do the inspections in-house twice a year, and occasionally the Department of Health will send out an inspector and review those sites.

Q. What about the dam itself, the safety of the dam? Is that inspected by any regulatory agency?

A. Not to my knowledge.

Q. If the dam fails, would it release waters? Aren't some of those free waters close to the dam?

MR. WITWER: Object to the form.

Q. (BY MR. McCLURE) Or does one know?

MR. WITWER: Same objection.

A. I couldn't tell you. I couldn't say if it would release water or not.

Q. (BY MR. McCLURE) That's simply because you can't stick your head underground and know exactly what's going on?

A. Right.

Q. Is there any internal inspection conducted by Battle Mountain as to the safety of that dam?

A. No.

Q. Are there any guidelines or standards that you know that need to be applied for review of the safety of that dam?

A. Not that I am aware of.

Q. Has the dam safety division of the Division of Natural Resources been to that site?

A. Not that I am aware of.

Q. Is there any oversight, to your knowledge, of that by them -- of the dam by them?

A. Not that I know of.

Q. I think I have asked you this question, but maybe not quite the same way. Do you know the volumetric capacity of the lined tailings facility?

A. No, I don't.

Q. Specifically do you know the volumetric capacity of the lined tailings facility to store water?

A. No, I don't.

Q. Do you have any knowledge as to the capacity, as to the amount of water that could be safely stored in terms of volume?

A. No, I don't.

Q. Are you aware of how much of that lined tailings facility is comprised of tailings that have been stored previously during the mining process?

A. No, I don't.

Q. No. 10 on that 36(b) is, "The amount of water annually deposited in the lined tailings facility since construction." Do you have some knowledge concerning that?

A. No, I don't.

Q. Are there any reports that would indicate that, to your knowledge, that have been generated by Battle Mountain?

MR. WITWER: Other than the ones you have been talking about today?

Q. (BY MR. McCLURE) Correct, yeah.

A. No, I have no knowledge of any reports.

Q. No. 14 refers to, "The water quality of the brine that is transported to the lined tailings facility

from the water treatment facility." Mr. Witwer indicated you have some knowledge about that?

A. Of the water quality?

MR. WITWER: For the record, I think I combined that one with the following one, 15, and 21 and said that he would be able to talk about the testing that has gone on in the tailings pond, the results of which we gave you and you marked as Exhibit 14.

Q. (BY MR. McCLURE) Do you know anything specifically about the water quality of the brine?

A. No.

Q. I think you had indicated the water quality of the brine is not tested?

A. Correct.

Q. From the time it leaves the water treatment facility prior to discharge into the lined tailings facility?

A. That's correct.

Q. "The water quality of the waters that are transported to the lined tailings facility from the West Pit" is No. 15. We have already talked about that somewhat. You have indicated that there was water quality testing in the West Pit itself, A; and, B, there was water quality testing in the lined tailings facility, correct?

A. That's correct.

Q. No. 21, "Water quality records in spreadsheet format for all wells and monitoring facilities at the site." Is there such a document in your possession?

A. As far as a spreadsheet consisting of the results, no.

Q. Are there several spreadsheets, one for DRMS, one for CDPHE?

A. DRMS receives copies of the results, but they are not put in a spreadsheet format. They actually receive a copy of the results.

Q. Internally does Battle Mountain take those and put them on a spreadsheet?

A. No.

Q. Let me back up to No. 20 there. I think you have already talked about the amount -- the levels of water that must be maintained in the West Pit to maintain water quality with your prior testimony; is that correct? We talked about water levels?

A. Sure.

Q. Is there anything else, aside from your prior testimony, that bears upon that subject of how one maintains -- generally the issue of how one maintains water levels in the West Pit to maintain the water

quality?

A. Just like I explained, it's through pumping.

Q. Nothing more than that?

A. No.

Q. Let's go to 17. You are familiar with these lysimeters that were installed after what we call 89CW32, but that was the first water court case?

A. Correct.

Q. And what was your involvement in the installation of the lysimeters?

A. I wasn't involved at all.

Q. When did you have any involvement with those lysimeters at all?

A. Beginning in 1996.

Q. What was your first involvement with them?

A. Being able to actually monitor the lysimeters and how they functioned.

Q. How did you become aware of what to do or become involved with that function?

A. I was trained by the person that was actually leaving that I was replacing.

Q. Who was that person; do you recall?

A. Sally Hayes.

Q. A lady?

A. Lady.

Q. Did she live down there?
A. She lived in Alamosa, I believe.
Q. What was her job?
A. At the time she left, in this time frame, she was an environmental superintendent.
Q. What did she describe to you needed to be done?
A. That these lysimeters were used to collect any water that would be collected through -- the way they were designed is through a vacuum system.
Q. And did she show you how one takes a sample from the lysimeter?
A. Yes.
Q. And what did she show you?
A. Are we talking about actually collecting a sample?
Q. Collecting a sample, right. First talk about collecting a sample, yes.
A. First is verification that there's a vacuum still on the line. And then you would -- basically use a hand pump. And one is a vacuum port, and on the same pump one is a discharge or pressure port.

And so when you create a vacuum on the line, you use the vacuum side. And then you pinch off of that, and that will hold a vacuum on that lysimeter.

And to collect a sample, you reverse that and you actually run -- the pressure line would force water from the lysimeter out the sample line and you would collect the sample.

Q. And after she showed you that, was that your task after that or somebody else's?

A. That was my task.

Q. You have performed that task for how long?

A. Since 1996 to actually currently until I get my replacement or Steve Carino trained on doing that.

Q. How often do you take -- or attempt to take samples?

A. You check for a vacuum on a monthly basis and attempt to collect the sample, if there's any water present in the lysimeter, on a quarterly basis.

Q. And have you ever gotten a sample?

A. No.

Q. That's from the entire time that you have tried, you have never gotten a sample?

A. Correct.

Q. Do you need the vacuum to draw a sample?

A. No. You need the vacuum to create a source to draw any fluid into the lysimeter.

Q. And tell me how that occurs.

A. Basically you create a vacuum on the line

and through the vacuum -- and I have never seen the lysimeters themselves, so I can't explain the function, total function, of them. But my understanding is that you create a vacuum and it draws any liquid or any water into the sampling portion of that lysimeter.

Q. And is there a hose that then sticks down into the lysimeter?

A. Yes.

Q. Do you have to maintain any suction on the hose?

A. Yes.

Q. How do you do that?

A. Through that hand pump. You create a vacuum on there, and it's got a gauge. And you create the vacuum. You pinch the line off, and the vacuum should hold until the next time you monitor it.

Q. Does the suction hose need to be maintained or not?

A. We have never maintained them, but they appear to work fine. They are not exposed to sunlight.

Q. And how many testing locations do you try to draw from on the lysimeters?

A. There's three locations with two lysimeters at each location.

Q. And do you know the depths of them?

A. The deepest is approximately 60 feet. They are fairly shallow.

Q. And are they at varying depths?

A. Correct. They range from 30 feet to 60 feet.

Q. If you could go to that notice of deposition, let me ask you a few other questions.

Going down to No. 7 -- I think you probably answered this question, but let me just ask it in a little different form. If one wanted to know the water storage volume in the lined tailings facility as of December 31, 2011, is there any way of knowing that, to your knowledge?

A. To my knowledge, there's no way of knowing.

Q. Then on No. 8, is there any way of knowing the available water storage that could be placed in the lined tailings facility as of December 31, 2011, to your knowledge?

A. To my knowledge, there's not a way of knowing.

Q. No. 9, we don't know the amount of tailings that have been deposited in the lined tailings facility as of December 31, 2011, correct?

A. Correct.

Q. And, No. 10, we also don't know the amount

of water annually deposited in the lined tailings facility since construction?

A. Correct.

Q. No. 11, we don't know the amount of topsoil imported into the lined tailings facility for reclamation?

A. That's correct.

Q. No. 12, we don't know the amount of water that's been disposed of in the lined tailings facility since termination of mining?

A. That's correct.

Q. Either, A, annually through evapotranspiration, correct?

A. Correct.

Q. Or annually through evapotranspiration through plants?

A. Correct.

Q. On No. 13, is it correct there are no records of gauges, meters, or means in place to monitor how much water is in storage in the lined tailings facility?

A. That's correct.

Q. No. 14, I guess we don't know the water quality of the brine that is transported to the lined tailings facility from the water treatment facility?

A. That's correct.

Q. Because, once again, there is no testing on that?

A. Right.

Q. Do you know if there are -- No. 16, any orders from DRMS as to the amount of water or instructions or guidelines as to the amount of water that can be stored in the lined tailings facility?

A. Not that I am aware of.

Q. Likewise, any orders from CDPHE as to the amount of water that could be stored into the lined tailings facility or instructions or guidelines?

A. No, not that I am aware of.

Q. And the same thing, anything from the State Engineer's Office -- instructions, guidelines, orders -- as to the amount of water that can be stored in the lined tailings facility?

A. Not that I am aware of.

Q. When I talk about the amount of water that can be stored there, there's both physically and then what I would call safely.

A. Okay.

Q. Is your answer the same for all of those as to what can safely be stored in there?

A. That's correct.

Q. Then just from the standpoint -- from your position, Julio, in managing that facility, there's certainly a number of unknowns about the facility. Is that a fair statement?

MR. WITWER: Object to the form.

Q. (BY MR. McCLURE) Let me clarify. Is it a fair statement to say that there are a number of unknowns about how and in what manner water can be stored in that lined tailings facility and have a comfort level that it's being done in a manner that is not going to cause a problem in the future?

MR. WITWER: Object to the form.

Q. (BY MR. McCLURE) Dam failure, for example?

MR. WITWER: Object to the form.

A. I would have no idea.

Q. (BY MR. McCLURE) When you say, "I have no idea," that means you do not know if there could be a problem or not?

A. That's right.

Q. Have you ever been advised by anyone that the lined tailings facility is an appropriate structure for storage of water?

MR. WITWER: Object to the form.

A. No.

Q. (BY MR. McCLURE) Have you ever seen any

written documents to that effect, that it's an appropriate structure for the storage of water?

MR. WITWER: Same objection.

A. No.

Q. (BY MR. McCLURE) Were you ever advised or had any knowledge to the effect that it was not designed for the storage of water?

MR. WITWER: Object to the form.

A. No.

Q. (BY MR. McCLURE) We've reviewed some testimony from a 1990 transcript before the Mined Land Reclamation Board that indicated that the system was designed to maintain its integrity through operations. My question to you is, do you have any knowledge of that one way or another?

MR. WITWER: Object to the form.

A. No, no knowledge of that.

Q. (BY MR. McCLURE) And the mining operations, you indicate to me, ceased in 1996?

A. Correct.

Q. And actually, ever since that time, there's always been freestanding water to some degree on top of the lined tailings facility?

A. Correct.

Q. Would you agree with me, since you have

probably more experience than anyone at that facility, that one could lessen the amount of water significantly that is in that facility if the water is treated at the water treatment facility instead of taken from the West Pit over to the lined tailings facility?

MR. WITWER: Object to the form.

A. I do.

Q. (BY MR. McCLURE) I'm sorry?

A. I do.

Q. You do have an opinion?

A. I do agree with you. That's what you asked.

Q. That that would be a way to manage the amount of water that's stored in the lined tailings facility?

A. Right.

Q. Do you have any understanding, from Battle Mountain's standpoint, as to why the last two years there's been a substantial quantity of water taken over from the West Pit to the lined tailings facility?

A. An alternate way of managing water.

Q. You indicate that water is being taken over there to the lined tailings facility through forced evaporation and used in a manner of disposal through forced evaporation, but you were not able to indicate how much was evaporated on an annual basis?

A. Correct.

Q. Do you know if anybody is performing that exercise at Battle Mountain?

A. Not that I am aware of.

Q. And the only evapotranspiration that's occurring at present is simply some weeds that are growing on top of a portion of that lined tailings facility?

MR. WITWER: Object to the form.

A. I haven't actually gone out and viewed what's coming up and there hasn't been a study on what is actually growing there currently.

Q. (BY MR. McCLURE) Nothing has been planted there by Battle Mountain?

A. Correct.

Q. So whatever is there is some type of natural vegetation that's seeded itself on the top of that?

A. I would have to say so.

Q. Was any topsoil hauled in at any one point of time?

A. During some of the reclamation on the tails. A big portion of the tails has been reclaimed.

Q. Do you know approximately how much of that tailings area has been reclaimed?

A. Approximately, 140 acres.

Q. Out of the, roughly, 203 or something like that?

A. I think it's 192.

Q. 140 out of 192 have been reclaimed?

A. Correct.

Q. When you say, "reclaimed," that means that topsoil has been brought in on that area?

A. Correct.

Q. Are you aware of what the target is as to when there will be total reclamation? A target date of total reclamation of the lined tailings facility?

A. No, I am not.

Q. As matters have progressed currently, is it totally unknown how long that would be?

A. That's correct.

Q. That's simply because there are waters that are coming out of the West Pit that need to be dealt with in some fashion, treated or taken to the lined tailings facility, from your standpoint?

A. That's part of it, yes.

Q. Is there more to it than that?

A. Well, you still deal with the underdrain collection pond that is pumped back to the tailings facility.

Q. That's kind of a constant function?

A. Yes.

Q. And because there's a constant amount that accrues in that collection pond, that gives you a reason to believe there's a certain volume of water that's in that lined tailings facility that's not visible to the eye?

A. Correct.

MR. McCLURE: I think that's all I have.

MR. WITWER: I don't have any questions.

EXAMINATION

BY MR. LOBATO:

Q. I just have a couple of questions. Mr. Madrid, can you hear me?

A. I can hear you.

Q. Concerning the center pivot on the tailings facility --

A. Okay.

Q. -- how many towers is that?

A. I want to say five, possibly six.

Q. Do you meter the water that runs through that facility through the towers?

A. No.

Q. You run that in the spring and in the summer; is that correct?

A. Primarily in the summer.

Q. And do you run it continuously or just certain days of the week?

A. Certain days in the week.

Q. And about how many hours per day or how many hours per rotation?

A. You are looking about -- whenever we are actually out there, when the guys are on shift, is the times that we will run the center pivot.

Q. Is there a panel that monitors that rotation or is it just a switch that runs it?

A. There's a panel that you can direct the direction of the pivot, not of the flow.

Q. So you can't control the amount of water being applied to the panel?

A. We can at the pump.

Q. Okay. So you control it by the number of gallons that go through the pump then?

A. More the -- yeah, I would say the gallons, but the volume. There's actually a valve on the line.

Q. A pressure valve or what?

A. No. It's a butterfly valve.

Q. Have you ever tested the soil underneath the pivot?

A. Not to my knowledge.

Q. And during the winter months, I am assuming

that the pond, the supernatant pond -- and that's what that pond is called, isn't it, a supernatant pond?

A. It's got about four or five different names, but yeah.

Q. Does that freeze up during the winter?

A. Yes, it does.

Q. And did you say you had to break the ice to test to draw samples?

A. Correct, during the colder times of the year.

Q. Do you take samples from the holding pond?

A. From which holding pond?

Q. I understand that there's a holding pond that you pump into from the West Pit?

A. No.

Q. No, you don't take samples or, no, you don't pump into a holding pond?

A. We do pump into a holding pond, but we don't sample from that holding pond. We don't send samples for analysis.

Q. Is this year the first year there's been a draw-down in that pond within the tailings facility?

A. No. In the tailings facility we draw -- historically have drawn that down.

Q. You say it's down about -- you think about

5 feet?

A. That's a rough estimate, yes.

Q. Is that normally where you end up at the end of the summer? I guess it's only been in the last two years you have run that center pivot; is that right?

A. No. We've run the center pivot since 2003, if I recall correctly.

Q. And did it always draw down by the end of the summer?

A. Yes.

Q. At about the present depth of the draw-down?

A. Correct.

Q. It just fills up during the winter and then you start this all over again in the spring?

A. Correct.

Q. Does the water flow continuously during the winter months into that pond?

A. No.

Q. Do your lines freeze up or what happens?

A. It's just determined by the amount of water of brine and the amount of water that we decide to send over from the holding pond, but it's not determined by freeze-up.

Q. You treat, obviously, more water in the wintertime; is that right?

A. Historically, yes.
Q. And you discharge into the Rito Seco?
A. Correct.
Q. Do you have any freezing problems in that discharge process?
A. No.
MR. LOBATO: Those are all the questions I have got.
MR. WITWER: I don't have any questions.

FURTHER EXAMINATION

BY MR. McCLURE:

Q. I have got a couple. Is there anything to indicate that the water treatment facility is not operating as designed?
A. No.
Q. It's been, from Battle Mountain's standpoint and your standpoint, an acceptable means of accomplishing what it's designed to accomplish?
MR. WITWER: Object to the form.
A. Correct.
Q. (BY MR. McCLURE) Which is to take poor quality waters and make them fit enough to discharge into the Rito Seco?
A. To meet our discharge requirements.
Q. To meet your discharge requirements.

Getting to the Salazar Ranch, I have a question. While you have been there, have any of those wells ever been pumped and the waters taken directly to the Salazar Reservoir?

A. No.

Q. All the pumping that's been occurring has been used for the two center pivots?

A. Correct.

Q. When is the last time, to your knowledge, there was any irrigation of that 80 acres south of the Salazar Reservoir by surface irrigation?

A. I would say, 2004.

Q. Was a crop grown?

A. Yes.

Q. What crop was grown?

A. Alfalfa.

Q. So that was not under the sprinkler?

A. Correct.

Q. And prior to that?

A. Prior to that --

Q. How many years do you go back?

A. We purchased the ranch in 2003.

MR. McCLURE: That takes care of that. Thank you. I appreciate your time.

(WHEREUPON, the deposition concluded at 4:27 p.m.)

I, JULIO MADRID, do hereby certify that I have read the foregoing transcript and that the same and accompanying correction sheets, if any, constitute a true and complete record of my testimony.

_____
Deponent

( ) No changes ( ) Amendments attached

Subscribed and sworn to before me this _____ day of _____, 2012.

My commission expires _____.

_____
Notary Public

Address _____

_____

df

In the Matter of the Application for Water Rights of Battle Mountain Resources, Inc., In Costilla County

REPORTER'S CERTIFICATE

STATE OF COLORADO)
) SS.
COUNTY OF DENVER)

I, Denise A. Freeman, do hereby certify that I am a Registered Professional Reporter and Notary Public within the state of Colorado; that previous to the commencement of the examination, the deponent was duly sworn by me to testify to the truth.

I further certify that this deposition was taken in shorthand by me at the time and place herein set forth and was thereafter reduced to typewritten form, and that the foregoing constitutes a true and correct transcript.

I further certify that I am not related to, employed by, nor of counsel for any of the parties or attorneys herein, nor otherwise interested in the result of the within action.

I further certify reading and signing not requested pursuant to CRCP Rule 30(e).

In witness whereof, I have affixed my signature this 8th day of November, 2012.

PATTERSON REPORTING & VIDEO
Denise A. Freeman
Registered Professional Reporter
and Notary Public

PATTERSON REPORTING & VIDEO
2170 South Parker Road, Suite 263
Denver, Colorado 80231

November 8, 2012

JAMES S. WITWER, ESQ.
Trout, Raley, Montano, Witwer & Freeman, PC
1120 Lincoln Street, Suite 1600
Denver, Colorado 80203-2141

Case Name: In the Matter of the Application for Water Rights of Battle Mountain Resources, Inc., In Costilla County
Case No. 2007CW42
Deposition of JULIO MADRID

The deposition in the above-entitled matter is ready for reading and signing. Please attend to this matter by complying with ALL blanks checked below:

_X__ arrange with us at (303)696-7680 to read and sign the deposition in our office

OR (if applicable),

_X__ have deponent read your copy; signing attached original signature page and any amendment sheets.

____ read enclosed deposition, sign attached signature page and any amendment sheets.

_X__ within 35 days of the date of this letter.

____ by _____ due to a trial date of _____.

Please be sure that the signature page and accompanying amendment sheets, if any, are signed before a notary public and returned to our office at the above address.

If this matter has not been taken care of within said period of time, the deposition will be filed unsigned pursuant to the Rules of Civil Procedure.

Thank you.
Enclosures: (As above noted)
cc: John C. McClure, Esq.

PATTERSON REPORTING & VIDEO
2170 South Parker Road, Suite 263
Denver, Colorado 80231

November 8, 2012

JOHN C. McCLURE, ESQ.
McClure & Eggleston, LLC
1401 17th Street, Suite 660
Denver, Colorado 80202

Dear Mr. McClure:

Re: Deposition of JULIO MADRID

____ Signed, no changes.

____ Signed, with changes, copy attached.

____ No signature required.

__X_ Reading and signing not requested pursuant to CRCP Rule 30(e).

____ Signature waived.

__X_ Forwarding original transcript unsigned; signature pages and/or amendments will be forwarded, if received.

____ Original exhibits included in ongoing notebook and will be filed with counsel at conclusion of discovery.

____ Via Email.

Enclosures: (As above noted)
cc: James S. Witwer, Esq.

BATTLE MOUNTAIN RESOURCES, INC.

November 15, 2011

D
PART 1

Mr. Robert Schultz
Department of Natural Resources
Division of Water Resources
#1 Lake of the Falls Parkway
Mosca, CO 81146

Re: Annual Report
Battle Mountain Resources Inc.
Costilla County, Colorado

Dear Mr. Schultz:

Enclosed please find the Battle Mountain Resources Inc. (BMR) "San Luis Mine" (Case No. 99CW057) annual water report for water year 2011. BMR makes this report subsequent to Case No. 99CW057 which was finalized and approved on July 2, 2002 and amends Case No. 89CW032.

The West Pit water treatment plant operated intermittently (2 ½ to 3 days per week) throughout the year discharging water to Rito Seco Creek. Ground water was extracted either continuously or intermittently from ground water wells BF-4, BF-5R, M-32 and M-33 to maintain hydraulic ground water gradients established by the water treatment plant operations. These ground water hydraulic gradients have been established and maintained in accordance with regulatory requirements established by the Colorado Division of Reclamation, Mining and Safety and the Colorado Department of Public Health and Environment. Reject concentrate (brine) from the RO membrane separation units of the water treatment plant was transferred to the tailings disposal facility throughout the year.
Water losses from the system (i.e., reject concentrate, evaporation) were augmented to the Rito Seco Creek on a monthly basis from farm well 8324. In addition, augmentation water was provided for natural water losses associated with tailings disposal facility and several retention ponds as required by the Decree. Tables 1 through 5 below summarize ground water withdrawals, augmentation volumes and precipitation accumulations for water year 2011.

Table 1- Water Year 2011 Ground Water Withdrawals

Ground Water Well	Beginning Totalizer Reading (11/01/10)	Ending Totalizer Reading (10/31/11)	Cumulative Gallons Withdrawn	Cumulative Acre-Feet Withdrawn
BF-3	13,172,100	13,172,100	0	0
BF-4	131,645,000	131,877,900	232,100	.71
BF-5R	592,952,100	697,198,600	104,246,500	319.94
BF-6	300,900	331,100	30,200	.09
French Drain	0	0	0	0

Table 1 (cont.)- Water Year 2011 Ground Water Withdrawals

Ground Water Well	Beginning Totalizer Reading	Ending Totalizer Reading	Cumulative Gallons Withdrawn	Cumulative Acre-Feet Withdrawn
M-18	8,905,100	8,905,100	0	0
M-19	8,566,900	8,566,900	0	0
M-20 *	2,457,100	2,457,100	0	0
M-28	4,320,900	4,320,900	0	0
M-29	9,063,400	9,063,400	0	0
M-32	69,700,200	73,672,600	3,972,400	12.19
M-33	25,598,800	27,142,600	1,543,800	4.74
Total			110,025,000	337.68
Farm Well 8324	241,796,700	321,860,800	80,064,100	245.72

* Totalizer rolled over during year.

Table 2 –Water Year 2011 Deliveries to Rito Seco

Deliveries to Rito Seco Creek	Beginning Totalizer Reading	Ending Totalizer Reading	Cumulative Gallons Delivered	Cumulative Acre-Feet Delivered
Water Treatment Facility	5,644,328	56,227,900	50,583,572	155.24
Rito Seco Augmentation	680,193,000	755,831,000	75,638,000	232.14
West Pit Infiltration	439,000	439,000	0	0

Table 3- Water Year 2011 Augmentation for Precipitation

Month	Tailing Facility Augmentation (acre-feet)	West Pit Run-off Augmentation (acre-feet)	Retention Pond Augmentation (acre-feet)
November	4.28	0	0
December	4.28	0	0
January	4.28	0	0
February	4.28	0	0
March	4.28	0	0
April	4.28	0	0
May	0	0	0
June	0	0	0

Table 3 (cont.) - Augmentation for Precipitation

Month	Tailing Facility Augmentation (acre-feet)	West Pit Run-off Augmentation (acre-feet)	Retention Pond Augmentation (acre-feet)
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
Total	25.68	0	0

Table 4- Water Year 2011 Precipitation

Month	Precipitation (inches)
November	.01
December	.29
January	.02
February	.09
March	0
April	.01
May	0
June	0
July	0
August	.56
September	.84
October	.53
Total	2.35

Table 5- Water Year 2011 Augmentation Water Balance

Withdrawals from the System:	(acre-feet)
Ground Water Pumping	337.68
Tailing Facility, Retention Ponds	25.68
Total System Withdrawals	363.36
Deliveries to the System:	
Water Treatment Plant Delivery	155.24
Augmentation	232.14
West Pit Infiltration	0
Total System Deliveries	387.38
Augmentation Balance*	24.02

*(Total System Withdrawals – Total System Deliveries = Augmentation Balance)

Ground Water volumes extracted from wells M-32 and M-33 during the year was 5,029,100 gallons (15.43 acre-feet) yielding a monthly average of 419,092 gallons (1.29 acre-feet); this monthly average is well below the 6.8 acre foot limitation identified per the terms and conditions of the augmentation plan.

Analytical results from Rito Seco surface stream sampling was conducted monthly throughout the year, the reported total sulfate concentration and WAD cyanide concentrations were below the 0.2 mg/l WAD cyanide and 250 mg/l total sulfate concentrations identified in Section 24.14 of the Decree. Therefore, there was no requirement to augment water to Rito Seco creek per the terms and conditions of the Decree.

There were no precipitation events during the period May through October 2011 water year which exceeded 0.5 inches of precipitation, an equivalent 0.25 inches of precipitation runoff, or retention pond accumulation which required augmentation. No water was augmented for this period per the terms and conditions of the decree. During the period of November 2010 through April 2011, monthly precipitation augmentation (4.28 acre-feet) for snowfall accumulation on the tailing facility was conducted per the terms and conditions of the Decree.

Should you have any questions or comments regarding this report or the attached water accounting forms, please contact me at (719)379-0798.

Sincerely,

Julio Madrid
Environmental Coordinator III

Cc: Costilla County Conservancy District
Craig Cotten
David Faucette
Bill Lyle
Bruce Lytle
John McClure
Tom Stewart
file

MONTHLY FARM WELL DIVERSION ACCOUNTING FORM
BATTLE MOUNTAIN'S SAN LUIS GOLD PROJECT
CASE NUMBER 99CW057

Month/Year: Oct-11

Farm Pumping:		Monthly Meter Reading (gal)		Monthly Volume Diverted		Monthly Power Meter Reading (Kwhr)		Cumulative Volume Diverted For Water Year (ac-ft)	Annual Volumetric Limitation (ac-ft) 2)
	Permit No.	Start	End	gal	ac-ft 1)	Start	End		
	8324	316,849,000	321,860,800	5,011,800	15.38	0	0	245.72	

Number of Fields Dried Up: 1

Rito Seco Augmentation:	Monthly Meter Reading (gal)		Monthly Volume Augmented		Previous Month's Augmentation (ac-ft)
	Start	End	gal	ac-ft 1)	
Outfall:	751,033,000	755,831,000	4,798,000	14.73	27.23

Other Uses:	Monthly Volume Diverted	
	gal	ac-ft 1)
	3)	0.00

Summary:

Total Monthly Volume Diverted from Farm Well:	15.38	ac-ft
Total Monthly Augmentation Volume Delivered to Rito Seco from Farm Well:	14.73	ac-ft
Cumulative Volume Diverted for Mining and Deliveries to Rito Seco (Water Year):	245.72	ac-ft
Cumulative Augmentation Volume Delivered to Rito Seco (Water Year):	0.00	ac-ft

1) ac-ft = gal/(325,828.8)
2) Maximum annual diversion per well.
3) The mill is no longer operational and water usage is not metered. Value listed is either water used for dust suppression or is water that has backflowed to Rito Seco Creek. Value is calculated as [Well 8324-R] minus [Outfall].

MONTHLY WEST PIT DIVERSION ACCOUNTING FORM
BATTLE MOUNTAIN'S SAN LUIS GOLD PROJECT
CASE NUMBER 99CW057

Month/Year: Oct-11

West Pit Pumping 2):		Monthly Meter Reading (gal)		Monthly Volume Diverted		Cumulative Volume Diverted For
Well ID	Permit No.	Start	End	gal	ac-ft 1)	Water Year (ac-ft)
BF-3	52740-F	13,172,100	13,172,100	0	0.00	0.00
BF-4	52741-F	131,870,600	131,877,900	7,300	0.02	3.03
BF-5R	52742-F	687,998,800	697,198,600	9,199,800	28.24	320.89
BF-6	52743-F	323,700	331,100	7,400	0.02	0.09

Rito Seco Alluvium Pumping 3):							Well Use 3)	Injection sum	Treatment sum
French Drain 7)		0	0	0	0.00	0.00	T	0	0
M-18 7)	52744-F	8,905,100	8,905,100	0	0.00	0.00	T	0	0
M-19 7)	52745-F	8,566,900	8,566,900	0	0.00	0.00	T	0	0
M-20 7)	52748-F	2,457,100	2,457,100	0	0.00	0.00	T	0	0
M-28 7)	52746-F	4,320,900	4,320,900	0	0.00	0.00	T	0	0
M-29 7)	52747-F	9,063,400	9,063,400	0	0.00	0.00	T	0	0
M-32	53737-F	73,235,900	73,672,600	436,700	1.34	12.19	T	0	436700
M-33	53738-F	27,011,000	27,142,600	131,600	0.40	4.74	T	0	131600

Tailings Meter:					
	115,118,300	121,539,600	6,421,300	19.71	164.91

Treatment Plant Effluent:	Monthly Meter Reading (gal) Start	End	Monthly Volume Delivered gal	ac-ft 1)	Previous Month's Delivery (ac-ft)
Deliveries to Rito Seco 4):	53,716,908	56,227,900	2,510,992	7.71	5.44
Deliveries to West Pit 5):	439,000	439,000	0	0.00	0.00

Summary

Total Monthly Volume Diverted from West Pit 2):	28.28 ac-ft
Total Monthly Volume Diverted from Alluvium and Injected 3):	0.00 ac-ft
Total Monthly Volume Diverted from Alluvium and Treated 3):	1.74 ac-ft
Total Monthly Volume Discharged from Treatment 6):	7.71 ac-ft
Total Monthly Volume Delivered to Rito Seco 4):	7.71 ac-ft
Total Monthly Volume Reinfiltrated to West Pit 5):	0.00 ac-ft
Cumulative Volume Diverted from West Pit (Water Year) 2):	324.01 ac-ft
Cumulative Volume from Alluvium Injected (Water Year) 3):	0.00 ac-ft
Cumulative Volume from Alluvium Treated (Water Year) 3):	16.93 ac-ft
Cumulative Volume Discharged from Treatment (Water Year) 6):	155.25 ac-ft
Cumulative Volume Delivered to Rito Seco (Water Year) 4):	155.25 ac-ft
Cumulative Volume Reinfiltrated to West Pit (Water Year) 5):	0.00 ac-ft

1) ac-ft = gal/(325,828.8)
2) Water is pumped to treatment plant for treatment and return to Rito Seco or to evaporation pond.
3) Water is either pumped directly into the West Pit "I" or sent to treatment plant "T".
4) Discharge from treatment returned directly to Rito Seco.
5) Discharge from treatment plant reinfiltrated into the West Pit.
6) Total discharge from treatment plant.
7) Water from the West Pit curtain wells and French Drain will not be diverted without notification of the Conservancy District and Division Engineer except for routine water quality sampling.

MONTHLY AUGMENTATION PLAN ACCOUNTING FORM
BATTLE MOUNTAIN'S SAN LUIS GOLD PROJECT
CASE NUMBER 99CW057

Month/Year: Oct-11

Row	Pumping Summary	
1	Farm Wells to Mine and Augmentation 1):	15.38 ac-ft
2	West Pit Pumping 2):	28.28 ac-ft
3	Alluvial Pumping to West Pit 2):	0.00 ac-ft
4	Alluvial Pumping to Treatment 2):	1.74 ac-ft
5	Treatment Plant Effluent Infiltrated to West Pit 2):	0.00 ac-ft
	Ground Water Pumping Effects:	
6	West Pit and Alluvial Capture Pumping 3):	30.02 ac-ft

Tailings Runoff Depletion (May-October):

	Date	Rainfall Events (in)	Runoff From Curve 82 (in) 4)	Area Affected (ac)	Depletion (ac-ft) 5)
7a		0	0.00	192	0.00
7b		0	0.00	192	0.00
7c		0	0.00		0.00
	Total monthly Runoff (in):		0.00		

West Pit Runoff Depletion: 0

	Upper Pond Staff Gage (ft)	Upper Pond Depletion (ac-ft) 6)	Lower Pond Staff Gage (ft)	Lower Pond Depletion (ac-ft) 6)	Total Pond Depletion (ac-ft)
7d	0.00	0.00	0.00	0.00	0.00
7e (Start of 2nd Event)	0.00	0.00	0.00	0.00	
7f (End of 2nd Event)	0.00	0.00	0.00	0.00	
7g Second Event [7f minus 7e, Column 3 and 5]		0.00		0.00	0.00

Retention Pond Depletion:

	Staff Gage (ft)	Pond Depletion (ac-ft) 6)	Total Pond Depletion (ac-ft) 6)
7h	0.00	0.00	0.00
7i (Start of 2nd Event)	0.00	0.00	
7j (End of 2nd Event)	0.00	0.00	
7k Second Event [7j minus 7i]			0.00

7	Total Runoff Depletion [Summation of rows 7a through 7d, 7g, 7h, and 7k(Column 5)]	0.00
	Snowfall Depletion (November-April):	
8a	a) Monthly Snowfall (Paragraph 30 of Decree)	0 ft
8b	b) Area Affected	192.00 ac
8	c) Depletion [(Row 8a) x (Row 8b)]	0.00 ac-ft
9	**Total Monthly Mining Depletive Effect** (Row 6 + Row 7 + Row 8)	30.02 ac-ft
	Deliveries to Rito Seco	
10a	West Pit Return Flow Delivered to Rito Seco from Treatment 8):	7.71 ac-ft
10b	Augmentation Water Delivered to Rito Seco from Farm Wells 1):	14.73 ac-ft
10	**Total Water Delivered to Rito Seco** (Row 10a + Row 10b)	22.44 ac-ft
11	**Net Surplus(+)/Deficit (-) of Augmentation Water Provided** (Row 10 - Row 9)	-7.59 ac-ft

1) See accompanying "Monthly Well Diversion Accounting Form".
2) Water pumped for ground water control, see accompanying "Monthly West Pit Diversion Accounting Form".
3) (Row 2) + (Row 4) - (Row 5). Depletion from alluvial capture wells is included in West Pit pumping when discharge from the alluvial capture wells is pumped into West Pit.
4) Tailings runoff will be augmented on a weekly basis whenever the runoff is 0.25 inch, or greater.
5) [{(Row 7) (Column 3)} x {(Row 7) (Column 4)}]/12
6) Based on the area-capacity curve for the pond.
7) Upper Pond (Column 3) plus Lower Pond 2 (Column 5).
8) Water pumped from West Pit (Row 2) treated and released to Rito Seco.

MONTHLY AUGMENTATION SUMMARY
BATTLE MOUNTAIN'S SAN LUIS GOLD PROJECT
CASE NUMBER 99CW057

Month/Year: Oct-11

Month/Year	Total Monthly Depletion (ac-ft)	Monthly Deliveries to Rito Seco (ac-ft)	Water Year Cumulative Deliveries to Rito Seco (ac-ft)	Monthly Surplus (+) or Deficit (-) (ac-ft)	Water Year Cumulative Surplus (+) or Deficit (-) (ac-ft)	
Nov-10	33.81	24.61	24.61	-9.20	-9.20	
Dec-10	31.78	26.16	50.77	-5.63	-14.83	
Jan-11	34.19	22.83	73.59	-11.36	-26.19	
Feb-11	28.51	20.52	94.11	-7.99	-34.18	
Mar-11	32.72	10.54	104.66	-22.17	-56.36	
Apr-11	34.65	71.93	176.59	37.28	-19.08	
May-11	27.74	38.69	215.29	10.95	-8.13	
Jun-11	28.05	62.44	277.72	34.39	26.26	
Jul-11	29.44	23.45	301.17	-5.99	20.28	
Aug-11	28.86	31.11	332.28	2.25	22.53	
Sep-11	26.85	32.67	364.95	5.82	28.35	
Oct-11	30.02	22.44	387.38	-7.59	20.76	
					-19.86	2010 WATER YEAR OBLGATION
					0.9	

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Withdrawals from the System:										
Ground Water Pumping	404.666	362.49	383.65	360.88	354.39	341.23	309.9	321.22	337.68	324.58
Tailing Facility, Retention Ponds	33.46	25.68	25.68	28.12	25.68	25.68	25.68	25.68	25.68	25.71
Total System Withdrawals	438.126	388.17	409.33	389.00	380.07	366.91	335.58	346.90	363.36	350.29
Deliveries to the System:										
Water Treatment Plant Delivery	363.01	323.33	334.87	304.87	306.39	303.61	267.75	277.96	155.24	190.10
Augmentation	75.99	64.41	75.67	84.53	75.71	65.42	68.88	50.76	232.14	169.34
West Pit Infiltration		0.49								
Total System Deliveries	439.00	388.23	410.54	389.40	382.10	369.03	336.63	328.72	387.38	359.44
Augmentation Balance	0.874	0.06	1.21	0.40	2.03	2.12	1.05	-18.18	24.02	9.15

D
PART 2

MINED LAND RECLAMATION BOARD
STATE OF COLORADO

REPORTER'S TRANSCRIPT OF PUBLIC HEARING
Volume I

January 25, 1990

IN RE:

APPLICATION OF BATTLE MOUNTAIN RESOURCES, INC., IN COSTILLA COUNTY.

PURSUANT TO NOTICE to all parties in interest, the above-entitled matter came on for public hearing before the Mined Land Reclamation Board on January 25, 1990, at 1313 Sherman Street, Denver, Colorado.

BOARD MEMBERS PRESENT:

Terry O'Connor, Chair
James Cooley, Acting Chair
Dennis Donald
Chris Douglas
Mike Entz

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complies with the statute and the regulations. We have reached that same conclusion and we've got experts that are here and available to testify and document that conclusion.

With that, why don't we get going and describe what it is we are proposing here. Anne Baldrige, project manager for this project, will be the first speaker.

MS. BALDRIGE: My name is Anne Baldrige. I am project manager for Steffen Robertson and Kirsten. Steffen Robertson and Kirsten are the consulting engineers hired to do the design and permitting for this project by Battle Mountain Gold Company.

I have a bachelor's degree in geology and have 10-plus years working in the mining industry, specifically on environmental-type concerns, including water quality and hydrology.

Just prior to going to work for SRK, I worked for the Mined Land Reclamation Division for four years, so I am very familiar with the requirements of the Mined Land Reclamation Act.

I'm going to start out by giving a broad overview of the history of this project and then I will get into some of the design changes that this

amendment addresses. I'm going to give a brief overview, and then the design engineer, Rob Dorey, will go into some depth on the technical aspects of the tailings facility design.

This -- Battle Mountain Gold acquired this site in 1987 and they did a successive operator to an existing permit at that time, Permit No. M-79051-HR. The existing permit was for an open pit mine and heap leach at this site.

Battle Mountain Gold evaluated the property and believed that they had come up with a more environmentally and economically sound manner of going about extracting ore at the project, and they submitted a new permit application to supersede the existing permit last fall. That -- I'm sorry, the fall of '88.

That permit was eventually approved by the Board at the March 1989 Board meeting. That permit included two open pit mines, five waste rock disposal areas, plus waste rock disposal backfilling one of the open pit mines. It included the removal of 13 million tons of ore, half of which was to be processed through heap leaching and the other half of which was to be processed through a conventional mill circuit, with the concentrates from that mill

circuit going through a carbon in leach process very similar to what is being proposed in the amendment.

The tailings from that mill were to be mixed with waste rock and disposed in the south waste rock disposal area. The site was to be reclaimed to its approximate preexisting condition as range land for wildlife and grazing.

Some of the work completed to date on the project includes a lot of reclamation last summer on drill sites and drilling activities that have occurred on the site over the last several years that Battle Mountain has been investigating the property.

Battle Mountain has also constructed access roads, they have constructed support facilities, including the office shop warehouse and laboratory. They are in the process of that construction right now.

They have not constructed any of the mill facility nor have they done any work in the heap leach area, and they have not done any mining on the project.

The permit amendment that we are addressing today was submitted on October 10, 1989. The amendment addresses a change in the

benasphyxiation process to recover gold from the ore. That change was promoted by some pretty significant evaluation by Battle Mountain Gold. They believe this is a better method of recovering the ore -- the gold.

The process change is a change from half heap leaching and half conventional milling to processing the entire ore through a mill facility with a carbon in leach circuit within the mill facility. We will get into that in a minute, because that is the major portion of the amendment. But there were also some minor changes that were made as part of the amendment process and I've put some maps on the Board -- on the wall, and I will show you those minor changes.

Three of the waste rock disposal areas that were part of the approved permit remain unchanged from the approved permit, as do the two mine pits. This map is the general facilities arrangement from the approved permit, and from this point over (indicating), nothing has changed on the project.

This is basically part of the approved permit and the amendment does not address that. This is the area that most of the changes have

occurred.

The first change was to move this waste rock disposal area, waste rock disposal Area A, to this point. It's located on the south side of Rito Seco Creek now and is located further away from the Rito Seco Creek than the previous approved permit.

Now, I just want to make note that these maps are of two different scales, so don't think that the sizes have been downscaled. It's just a difference in the scale and the maps.

The second change in the waste drop disposal, Area B of the approved permit, that disposal area was downsized somewhat and you will see it here. Basically, we just took out the western portion of the waste rock disposal area.

The south waste rock disposal area was a combination waste rock disposal and tailings disposal area. Since we were going to build a tailings disposal facility in place of the heap leach, we no longer need the capacity in that south waste rock area to include the waste rock tailings, so the south waste rock disposal area was essentially downsized to include only waste rock in that disposal area.

The design concepts that were used for the waste drop disposal area remain unchanged from the approved permit. Those design concepts included construction of the waste rock disposal area and 50-foot high lifts with 75-foot setbacks before beginning the next lift.

That would achieve a 3 horizontal to 1 vertical slope, and as I will get into in the reclamation, it will also allow those to be graded out upon reclamation to an approximate 3 horizontal to 1 vertical slope.

The waste rock stability analysis that was performed for these new disposal areas used the same criteria that was part of the approved permit and indicates acceptable factors of safety under both static and pseudostatic conditions for the waste rock disposal areas that were changed.

The geochemistry of the waste rock hasn't changed because the waste rock is the same material as what was included in the previously approved permit. As I said, I will address reclamation of the waste rock disposal areas in my discussion about reclamation.

The biggest change in the amendment was the change in the milling process and the ultimate

disposal of the milled ore. The milling process or the mill facilities themselves remain in the same area as in the approved permit. The mill is located in a saddle area at the top of the drainage divide saddle area.

It's located in that area to control drainage and direct it away from the Rito Seco Creek and into a dry wash that is tributary to Culebra Creek. The mill itself is designed with containment structures to capture and control any leakage or spillage that could occur in the mill.

In addition, as stipulated in the approved permit, a cyanide storage area has been designed adjacent to the mill, which is fenced, secured. It is -- the cyanide will be on a concrete pad which will have curbing so that, in the event of a spill, nothing can escape that area.

UNIDENTIFIED PERSON: Anne, can you show me where on these maps the mill is and where the drainage is relative to the Rito Seco?

MS. BALDRIGE: Sure. This is the amendment. The plant site sits right here. This is the Rito Seco and this is -- this drainage is dry wash which comes out of this valley and makes a turn to the south. And we've got another map which I

will pull up for you later that shows this drainage, traces it on down, and it intersects Culebra Creek.

UNIDENTIFIED PERSON: So exactly --

UNIDENTIFIED PERSON: Rito Seco on down further.

MS. BALDRIGE: No. And the topography, if you look at it, you can see the drainage. The town is right here. I've got another map. This map will show you over in the tailings area that we are going to be discussing in a minute.

This is the town of San Luis, this is the Rito Seco channel, and this is the drainage coming out of the channel. This is Culebra Creek.

(Inaudible voices not herein transcribed.)

MS. BALDRIGE: That map, that part was submitted in response to one of the adequacy concerns raised by the Division in the initial adequacy response submitted January 8 or 9 -- January 9.

(Discussion off the record.)

MS. BALDRIGE: The mill facility will be designed to crush the ore, to find particles and then to add water to it to make a slurry. The slurry is pumped into one of eight leach tanks. The

leach tanks will be enclosed in steel structures that will contain all the slurry and solution.

The solution will then be leached with a dilute cyanide solution, and I want to point out that the concentrations in this process are approximately half the strength of the concentrations required in the heap leach process, and that's due in part to the finer particle size that you are leaching in the carbon in leach.

UNIDENTIFIED PERSON: What is that concentration?

MS. BALDRIGE: 125 parts per million total cyanide and estimated 60 parts per million free cyanide.

UNIDENTIFIED PERSON: Thanks.

UNIDENTIFIED PERSON: Will the vats be totally buried or totally on the surface?

MS. BALDRIGE: They sit on a concrete pad with curbing. Several of them are within the mill building and others are outside the mill building, but they sit on a concrete pad with curbing.

The slurry that's put into the leach tanks is agitated and air is added and after approximately 40 hours the solution can be removed

and processed further to obtain the gold.

UNIDENTIFIED PERSON: How long do you estimate -- you won't be changing them during -- they will last --

MS. BALDRIGE: They will last for the life of the project, yes.

UNIDENTIFIED PERSON: What happens if the tanks rupture?

MS. BALDRIGE: If the tanks rupture, the curbing -- the concrete pad has curbing which will contain anything that comes out of the tanks in the event of a rupture. The curbing is put there to provide containment in the event of a leak or spill of any solution or slurry from that.

UNIDENTIFIED PERSON: If there is a problem with the curbing --

MS. BALDRIGE: If there's a problem with the curbing, all the drainage is directed from the saddle area into the tailings facility area. After the gold is removed from the slurry, the slurry will be treated using sulfuric acid to lower the pH and volatilize the cyanide.

Just by way of explanation, aqueous cyanide is not a stable compound once the pH drops below about 9-1/2, and it will begin to volatilize

as a cyanide gas from the facility. And for the tailings, the sulfuric acid will lower the pH to about 7.6, 7.7. And based on our test results, the levels of cyanide in the tailings will be less than 3.8 parts per million free cyanide.

At that point the slurry is sent to the tailings disposal area for disposal. I'm going to give a brief discussion of the tailings disposal area and then I'll let Rob Dorey, at the end of my presentation, go into depth on that.

The point that I want to make is that this is not a traditional tailings impoundment. This is a unique design concept. There are no other tailings impoundments, to my knowledge, like this in the state of Colorado, although it is used quite commonly in other parts of the U.S. and the world.

This tailings facility design is a method called thin layer deposition. As I said, Rob will get into the design concepts, but I want to explain to you the difference between traditional tailings disposal and thin layer deposition.

Traditional tailings disposal usually occurs using one or two deposition points and the stuff is just put out there in a pipe. In thin layer deposition, you actually create a spigotting

system around the entire perimeter of the tailings disposal facility.

The spigots are turned off or on in an area just large enough to -- just long enough to allow deposition of a thin layer of tailings and then they move to the next area. The spigots are turned on in the next area and off in the previous area, the thin layer of tailings deposits along a beach area.

What this does is this allows the tailings to dry out and densify in that thin layer before you go back and put another thin layer of slurry on top of them. It allows you to make the best use of the tailings area capacity because you are densifying the tailings as you place them.

It also creates lower permeability tailings because as the things dry out and desiccate and densify, the permeability decreases. It also allows the tailings to consolidate quite rapidly and, unlike traditional tailings impoundments, when this facility is completed, you can begin reclamation fairly quickly because you don't have that mass of unconsolidated wet materials sitting out there waiting to dry out before you can get equipment on to reclaim it.

There is not a lot of water trapped in the pores of the tailings, so you don't entrain a lot of water into the system.

Now, Rob can address this much better, but I think the point that needs to be made is this is not a typical, traditional tailings impoundment.

UNIDENTIFIED PERSON: Is there much water when you initially lay the material out or it's just laid out thinly and then water evaporates more quickly?

MS. BALDRIGE: Laid out thinly and the water evaporates more quickly.

UNIDENTIFIED PERSON: Has anything ever gone wrong? You said there are in other parts of the world, in other parts of the United States, these types of things. Nothing -- anything undesirable there?

MS. BALDRIGE: If the method is done correctly, it's a very efficient method of disposing of tailings, both from an operator's standpoint and also from the standpoint of environmental concerns.

I'm going to talk a little bit about the tailings disposal area itself. The disposal area is fully lined and designed to be nondischarging over the life of the facility.

The disposal area has six components that I want to touch briefly on. The first component is the tailings delivery and distribution system. That is a line coming from the mill facilities and it will be connected to a spigot line that runs around the entire perimeter of the tailings disposal area.

In the initial stages there will be two disposal areas and the spigotting will be done slightly differently. That's because you are at the bottom of the valley. You don't have as long a beach slope to work with, so you have to do things a little bit differently.

Eventually, the center berm will be covered with tailings and there will be one large tailings facility. The tailings area, as I indicated before, is lined. It's lined with a composite liner system consisting of a compacted subsoil, compacted to 10 to the minus 5 centimeters per second permeability and a 40 mill very low density polyethylene synthetic liner.

In addition, as you place the tailings, the tailings will also consolidate and compact. And the testing that we have run on the tailings indicates that the tailings are expected to compact

to somewhere on the order of 10 to the minus 5 or 10 to the minus 6 centimeters per second permeabilities.

There are two embankments associated with this initially and then the larger embankment will -- the larger downstream embankment will be the embankment that will be in place for the life of the facility. Those embankments will be built using fill available on-site and they are built with the drainage blankets to promote drainage through the embankments.

These embankments are not dams and they are not designed to impound water. They are designed to allow water to drain through them to achieve the consolidation and dewatering of the tailings that you want to achieve in this process.

There is an internal water collection system associated with the tailings. That will -- that also is designed to enhance tailing, dewatering and reduce the head. That is designed to be effective throughout the life, but will serve its primary function during the initial stages of deposition when the tailings are being deposited right on top of the liner.

That is a drainage blanket consisting of

cobbles and a pipe network, and the pipe network, this sits above the liner, and it runs through the embankment and into a collection pond system. The collection pond system and the ditch that leads to the collection pond system are also both lined facilities. The collection pond is double-lined with an upper liner of 60 mill HDPE and a lower liner of 40 mill, very low density polyethylene.

The collection pond has been designed based on the drainage layer, capacity of the drainage layer to transmit flows to the collection pond and a 100-year, 24-hour design storm to hold 9.4 million gallons of water.

From the collection pond, there will be a pump and pump-back system which will pump the water from the collection pond back up to the tailings facility. The tailings facility will have a free water pool on top of it which will allow reclamation of the water from the tailings to be recycled back through the mill to minimize the amount of makeup water needed in the system.

It's a closed system and you are constantly recycling the same water back into the mill and then out into the tailings facility.

In addition, there are diversion ditches

around the south side of the tailings facility designed for the 100-year, 24-hour storm, which has been the Mined Land's standard design requirements for these type of facilities.

The diversion ditch on the south side comes -- empties into the existing drainage just west of the collection ponds, and you can see that on the map behind you.

(Discussion off the record.)

MS. BALDRIGE: This is Figure C-12 from the amendment application and this is Figure C-11 from the amendment application. This is Phase 1 of the tailings distribution and water reclamation system and this is Phase 2.

This is the diversion ditch right here. This is -- carries it over the hillside. This will be a 48-inch culvert to prevent erosion and then it drops back into the existing drainage and into the existing channel below.

This system -- this system is also in place in Phase 1. You can see it here. In addition, there is a small diversion that comes around this side and diverts a small amount of water around this side and down into the Rito Seco.

This is upland water. This is water

that is not involved in the processing.

UNIDENTIFIED PERSON: Did you say that the embankment goes up as the tailings increases over time at other stages?

MS. BALDRIGE: Rob will answer this in a minute, but I didn't cover that. The embankment is built in one stage initially and then there are two raises to that initial stage.

UNIDENTIFIED PERSON: How does the liner system work into that?

UNIDENTIFIED PERSON: (Inaudible).

MS. BALDRIGE: No, because you want it to drain. There a drainage blanket on the upstream slope. Underneath the embankment system is lined. The whole valley bottom would be lined, but not either of the embankment faces.

Rob will get into more specifics on the design.

(Inaudible.)

MS. BALDRIGE: The diversion system, as I indicated before, is designed for the 100-year, 24-hour storm. However, there is an extra measure of safety built into this project because, should a storm greater than a 100-year, 24-hour occur and the ditch overtops and the water runs into the tailings

disposal area, that disposal area is designed to handle the probable maximum precipitation at all times during the life of the operation.

Rob will discuss the stability analysis for the tailings embankment. That stability analysis was performed on the embankments and the subsequent raises to the embankments and indicates acceptable factors of safety under both static and pseudostatic conditions.

Very briefly, I'm going to touch on several other aspects of the project that have changed slightly.

A water source has been obtained for the project. I'll go into more depth on that water source in just a minute. The security for the project will remain essentially the same as the approved permit. I've already touched on the cyanide, the secured cyanide storage area.

The tailings area will be fenced with a standard 4-foot high barbed wire fence, four-strand barbed wire fence. The collection area will be fenced with a 7-foot high fence, primarily to protect the liner from damage should any wildlife get into the pond.

The levels of those cyanide and metals

in the water that will be associated with this facility are not considered to be toxic to wildlife or to birds. The birds generally established criteria for avian mortality based on cyanide is 50 parts per million free cyanide and we are anticipating less than 3.8 parts per million free cyanide in this. So we are odds of magnitude less than the avian mortality criteria.

I also want to point out that we have amended the emergency response plan that was presented in the approved permit. That plan has been amended to include the tailings facility and to eliminate the heap leach facility. The emergency response plan is designed to allow Battle Mountain Gold flexibility to react on a case-by-case basis, depending on the circumstances of any spill that could occur on-site.

I spoke on water rights earlier. We -- the Battle Mountain Gold will comply with the condition of its approved reclamation permit that requires it to obtain water rights and the legal right to utilize these rights prior to leaching or processing of any ore.

Since the approved permit was issued, Battle Mountain has acquired adequate water rights

for the operation and they have prepared and filed a temporary substitute supply plan and an augmentation plan to adjudicate the use of its water rights. In addition, they filed an application to adjudicate nontributary groundwater located beneath the land that they own.

Both of those are currently pending in the State Engineer's Office and the Division 3 Water Court in Alamosa.

Water monitoring for this project will be very similar to what was approved in the original application with the exception of reevaluation of water monitoring in the area of the tailings facility.

Battle Mountain Gold has placed four additional wells in the area of the tailings facility. For those four additional wells, as well as other wells and surface water monitoring in the area of the tailings facility, they will comply with the stipulation placed on the approved permit. That stipulation required monthly monitoring of ground and surface water in the vicinity of the heap leach and quarterly reporting to the Mined Land Reclamation Division. They will comply with that as it relates to the tailings facility.

I will briefly talk on reclamation. Reclamation -- the reclamation concepts for this project remain unchanged from the approved permit. The re-vegetation, topsoil replacement comment -- the topsoil replacement and re-vegetation criteria are the same as were approved for the original application.

The waste rock disposal area reclamation is the same as was approved for the original application. That is grading out the waste rock on the slopes to approximately 3 horizontal to 1 vertical, replacing 18 inches of topsoil and re-vegetating with the approved seed mixture.

The tailings facility is unique in that, because you are spigotting all the way around the facility, you can do a lot of re-contouring during your final couple months of disposal, just by the way you spigot out of the tailings area.

And so a lot of the tailings disposal area contouring will be done through control of tailings disposal in the last several months of operation. There will be some final grading that will be required, but that will be a minimal amount.

The free water that will be pooled on top of the tailings disposal area will be

spray-evaporated upon reclamation and then grading can commence with that tailings disposal facility. The grading will establish a general direction toward the north, toward the northwest corner of the tailings embankment.

In addition, channels will be established across the tailings embankment, the tailings disposal area, to tie in the preexisting drainages and route them across the tailings disposal area.

A spillway will be constructed in the northeast corner of the embankment, and I don't believe any of the drawings I have up there show the location of the spillway, but I'll point it out to you. The spillway is located approximately here and it comes down and outlets in the area of the collection pond.

The purpose of the reclamation plan is to establish a drainage pattern that approximates pre-mining condition and also to allow routing of flood flows across the tailings impoundment without damage to the integrity of the tailings disposal area.

The design criteria for the low flow channels for the tailings impoundment was the

2-year, 24-hour storm. The greater storms that occur on the tailings disposal area will be handled because the slope of the tailings disposal area is very gentle. It's a 1/2 percent slope coming across the area.

Greater storms will be handled in the drainage swales. There are low flow channels and then there are drainage swales that are provided as part of the post-reclamation contouring.

The drainage swales have been designed for the 100-year, 24-hour storm, up to the probable maximum precipitation event, and the spillway has been designed to route the probable maximum precipitation event through it without any damage to the tailings facility itself.

UNIDENTIFIED PERSON: Excuse me. The drainage swale is like a stilling basin; is that what you mean?

MS. BALDRIGE: No. The contouring for the facility creates a channel, a defined channel, and then gently undulating topography to create a swale.

UNIDENTIFIED PERSON: I picture that as kind of a stilling basin, a wider area. Or am I misunderstanding here?

MS. BALDRIGE: It's a wider area to carry the flow. But in a stilling basin -- maybe Rob can address this in his presentation -- but in a stilling basin, what you are trying to do is slow the velocity to prevent erosion, and in this case the grade of the tailings themselves acts to slow the velocity.

So it's not a true stilling basin in that sense.

UNIDENTIFIED PERSON: I see.

MS. BALDRIGE: There is a stilling basin at the outlet of the spillway and that stilling basin will act to slow the flows as they come over the hill before they intercept the existing drainage. Once the contouring is done on top of the tailings facility, the 18 inches of topsoil will be replaced and the facility will be re-vegetated.

One thing that I forgot to mention is that the embankments will be reclaimed as they are constructed, so that the first downstream embankment that is constructed will be immediately reclaimed. It will be built in its final configuration and it will be immediately reclaimed.

Any subsequent raises to that embankment will also be reclaimed as soon as they are

constructed. I think that Rob can give you some more technical explanations of both the tailings disposal and the tailings reclamation.

One final point that I would like to make is that the tailings material itself, we have done extensive geochemical testing on the tailings material that's to be used at this facility, and we had previously done extensive tailings -- geochemical testing on the tailings from the approved permits application.

The test results have been reviewed by our geochemical expert, Dr. Adrian Smith, and in our opinion they do not indicate a potential for meadow oxygenation or meadows mobilization.

However, as an additional conservative measure, Battle Mountain Resources commits that they will ensure that there is excess buffering capacity in the tailings as measured through the humidity cell test methods at the points of the deposition throughout the life of the facility.

This will be monitored on a three-month frequency and the data will be submitted to the Division upon availability.

UNIDENTIFIED PERSON: How are we doing on time, Terry?

MR. O'CONNOR: You used almost 29 minutes.

UNIDENTIFIED PERSON: We would like to have Rob get into a more detailed discussion of the tailings facility itself now.

(Discussion off the record.)

MR. DOREY: Good morning. While Anne is putting the map up and another one, I will run through who I am. I am a technical --

UNIDENTIFIED PERSON: You have used 29 -- you have used 30 minutes.

(Discussion off the record.)

MR. DOREY: My name is Rob Dorey. I am technical director for the company of Steffen Robertson and Kirsten, known as SRK. I am a professional engineer raised in the state of Colorado as well as several other western and other states in the United States.

My role with the company is, apart from being the president of the company, I am responsible for the technical aspects of the geotechnics that are performed by the company. I have been responsible for the professional engineering that went into the application and, in my role as an overviewer, I was familiar with the work that was

CONTINUATION OF TRANSCRIPT

First section of 59 pages received on 11-8-90

RE: Application of Battle Mountain Resources, Inc.

Public Hearing Held January 25, 1990

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MR. DOREY: My name is Rob Dorey. I am technical director for the company of Steffen Robertson and Kirsten, known as SRK. I am a professional engineer raised in the state of Colorado as well as several other western and other states in the United States.

My role with the company is, apart from being the president of the company, I am responsible for the technical aspects of the geotechnics that are performed by the company. I have been responsible for the professional engineering that went into the application and, in my role as an overviewer, I was familiar with the work that was

performed on the previous application which is accepted.

I have in excess of 14 years' experience in specifics related to geotechnics. I worked in mining waste management and other waste management design for approximately 15 years. I'm familiar with what the Mined Land Reclamation Act is within this state and have participated in several applications to the Board and have attended several hearings previously.

I think Anne did an excellent job overviewing the various components of what the tailings facility is and I think I will primarily dwell on several of the reasons why we ended up with this kind of design, and then talk through how this facility will be operated to achieve what our design objective is.

Firstly, when we come across a project like this, we evaluate both the site conditions and the metallurgical processing that's going to be performed, the waste products that are going to be developed, and look at what is the best alternative and the most efficient alternative, economically and from an environmental containment standpoint, and from those precepts develop a design which we

believe will function adequately at the site.

Our primary objective on this facility, obviously, is to create a stable facility which has zero discharge capability, that can work and operate effectively throughout the life of the project and, obviously, contain the entire projected wastes that will be produced.

I think my best option is to walk up and talk through the plans that are on the wall and deal with those as I go. Anne mentioned that this facility involved some unique aspects. Of course, every facility is unique in terms of its (inaudible).

However, all these design concepts and all these operating procedures have a proven track record and have proven history across the United States and worldwide. We have assimilated some of the alternatives that are available and produced something here which I think is ideally suited to the site conditions, both from a climatic standpoint and from the materials that are available to us to use on the property.

Looking through how the thing will be built, Anne has talked about this main embankment and, to reiterate again, the whole facility is

designed to contain solids and not to contain the liquids.

Our objective is to, as rapidly as possible, allow solution which is retained within the solids, deposited as a slurry, to get those out of the system so that towards the end of the operations we will be able to proceed with our planning for the reclamation which will be incurred in the last -- with the last day of (inaudible).

In concert, what we have is a section through the impoundment here, which is a disposal area, and as Anne indicated, that system extends from the upstream limit and through the entire perimeter of the facility, extends beneath the embankment and ties there to the double-lined containment pond at the base.

Now, the way the shape of the valley is, we elected to opt for an additional scenario which has two cells, upper cell and a lower cell. The reason to do that is to allow us to very rapidly get into the situation where we can manage the thin layer deposition technique.

Initially, it will be deposited at a ratio between the upper and lower areas so we can keep the rate of rise -- and that's the rate the

tailings go in there -- as low as possible, and so that after the phases -- Phase 1 is developed, we get to the point where both of these cells are at the same elevation.

Now, Phase 1 embankment construction involves 90 feet of material placed in a embankment. This is all natural on-site materials. As Anne said, these materials are not designed to be an impermeable structure. They are designed to allow drainage, horizontally and vertically, through the embankment to the ponds from the tailings themselves.

The slurry Anne talked about, for the reason of splitting the two areas in the initial deposition area phase, is also use of on-site materials and is permeable.

Phase 1 has approximately 3-1/2 to 4 years' operating capacity. It has a total tonnage capacity on the order of 6 to 7 million tons. Once that operation has been completed, prior to that there will be an increase with the two additional stages which are rated on the initial 30 feet, approximately. That provides total containment capacity of between 12-1/2 and 13 million tons.

The discrete factors, discrete

description of what is actually handled in the impoundment here, it's best, I think, to talk about what our liner or containment system is. We did a very extensive evaluation of what the subsoil and substrate materials are on the property.

We have done material testing in terms of what is the permeability of the materials and what the permeabilities that are available by reworking those materials on the site.

The drainage system should be considered as involving the tailings themselves. The tailings, as Anne said, have the ability to reduce the permeability following deposition. From all our test programs, we believe that the permeability of the material which is in direct contact with the drainage member will be as low as 10 to the minus 6 centimeters per second. It will be equivalent to 1 foot per year.

So the tailings is in contact with the drainage member itself and there are 3 feet of that material where the drainage network within it is to the entire line system.

You can't ignore the tailings as having a very positive proponent in reducing the potential solution migration out of the base of that tailings

that is deposited, which is then collected and routed out of the system.

We are likely to use a synthetic membrane, very large polyethylene material. It is ideally suited to these situations in terms of ability to stay and maintain its integrity through operations and has the ability to withstand the operating stresses of the layers that are going to be applied to that lining system.

Be that (inaudible) an area that has sufficient fine-grained materials to allow us to rework and compact that material to a density which will provide us a minimum of 10 to the minus 5 centimeters per second.

Now, in terms of how the facility will operate, as I mentioned, initial deposition will be split between those two cells. As the tailings develop within these areas, and schematically shown on this plan here are deposition points which will allow us to fill out the base and plate over that drainage member as quickly as we can.

From the first contact of those (inaudible) to the drainage member, we are creating a secondary line within the impoundment. As the deposition continues, the rate of rise of these

areas will decrease, so we have sufficient time as each layer is placed to dry through natural evaporative processes, to desiccate, to reach moisture condition which is below that of saturation, and essentially produce a dense, solid, low permeability stable tailing product.

As that process continues, we have evaluated from our operations standpoint that we can achieve approximately 50 percent of the area under evaporative forces at all times. In other words, half will be under deposition, half will be drying and desiccating.

We have an area where we have designed to collect and allow recircling of the solution that's associated with the tailings and have that pumped back to the mill site.

On a water balance standpoint, the operation of this facility is continuously requiring makeup supply. We can supply back approximately 400 of the 800 gallons a minute that are required to operate and transport the slurry from here to here.

Our objective is to isolate, as quickly as we can, the free water pool from the basin of the impoundment which has the drainage system and the lining containment. As soon as we replace tailings

between the pond and the liner, we essentially raise that way and have it not in contact with any of the drainage network, and it then becomes its own isolated solution slurry for recirculating to the pond.

Intensive design objectives we have, as Anne said, a number of tests that give us a confidence level that we have achieved a material that has a dry density of about 90 pounds per cubic foot, a material which has a permeability certainly in contact with the drainage network of 10 to the minus 6.

We will also anticipate permeabilities of the desiccated tailings between 10 to the minus 5 and 10 to the minus 6. As I say, there is sufficient capacity within the space to contain the entire tailings product that comes from processing.

In terms of the reclamation scenario, Anne talked about the ability and affectability of this procedure to allow us to selectively deposit materials around the perimeter of the facility. As we deposit, it is seen there are a cycle -- or a circle of the tailings distribution system which goes entirely around the facility.

To allow us to develop a beach area,

there will be spigotting from specific areas to create that beach. That will create this thin layer of managed layers that are deposited.

At the end of the operations, we are in a position to concentrate the deposition in particular areas to allow us to recontour and create the final reclamation on the facility, such as we have positive drainage from the perimeter through the impoundment surface to the discharge at the spillway. And, as Anne said, that is designed for the PM (inaudible).

Essentially, without drawing much more, Anne did such a good job explaining it, I will leave that and ask if you have any questions.

I'm sorry, Anne did remind me about one aspect that I needed to talk about, and that was the stability of the embankment.

The stability is obviously controlled by the static conditions that we have designed. The primary control on stability, in fact, is not being -- in designing this facility, we did not look at designing the minimum embankment that would remain stable. The embankment configuration is more dictated by the reclamation criteria we have adopted for the project.

So we analyze the shape of the facility, of the embankment, and say, "How stable is that?" And it provides for us a high confidence level that we have a stable facility.

We also looked at, as Anne mentioned, dynamics stability. The seismicity in the area is known. Several documents and several papers have been produced on the potential seismicity of that area, as was extensively referenced in one of our responses to a question from one of the staff members. That was reviewed in great depth.

We have come to a design criteria which we believe, under probable and prudent design concepts, will provide a stable facility even under an earthquake of the kind of magnitude which is discussed in the paperwork and the documents that have been produced.

THE CHAIRMAN: Any questions by the Board?

UNIDENTIFIED PERSON: What are the pipeline specs indicated on the return flow? Do you have any way of containing that material if you do have a problem with pipeline? I assume it's pipeline.

MR. DOREY: Yes, the pipeline -- all of

the pipelines coming from the mill to the impoundment area in the lined ditch -- there are 10 pipelines -- although the final details of those designs aren't completed, will involve a containment or a -- there will be a sealed facility which will have, obviously, some monitoring on a daily basis to evaluate their containment capabilities.

UNIDENTIFIED PERSON: Thank you.

UNIDENTIFIED PERSON: Problems mentioned in this thin layer deposition technique that hasn't been used in Colorado but it has been used other places in this country and around the world.

What kind of problems have occurred that maybe we can anticipate?

MR. DOREY: In terms of this particular design for thin land management deposition technique, to my knowledge there are perhaps five operating facilities in the U.S. that utilize a type -- the same type of deposition technique.

Obviously, the constraints on the operations, are we going to get desiccation, are we getting at the densities we are looking for. Typically, you can't stop evaporation from taking place.

The only procedure you need to do is

monitor it, and that monitoring program has been discussed and defined in the application. And you have the ability with this technique to modify it, to adjust to actual conditions in the field.

So you can accommodate variations from the design concept by just simply modifying the operating philosophy.

THE CHAIRMAN: Have there been problems in other places that you know about?

MR. DOREY: I am not aware of any. In terms of the actual technique itself, no.

UNIDENTIFIED PERSON: You mentioned that the design of this took into account economic considerations and environmental. I will assume what you and Anne are both saying, environmentally we are coming out in a net gain in this process.

But can you tell me if you think there are any environmental costs that are being weighed against the environmental benefits? What are we sacrificing environmentally with this amendment, if anything?

MR. DOREY: If I understand your question, Battle Mountain Gold has elected to treat the tailings product to produce a relatively inert solid and liquid waste. That election obviously was

incorporated into the design in terms of containment facilities that we developed.

Alternatively, if one was talking about a more conventional CIL tailings product, we may have looked at extra levels of confidence in terms of containment capabilities. There is a play-off there between a decision Battle Mountain Gold made to utilize current technology in treating the tailings as a total stream versus the containment facility we've designed.

I don't believe there is any -- there was any horse trading in terms of environmental benefit versus cost. I think the objective of this was to produce an environmentally sound disposal system.

UNIDENTIFIED PERSON: I'm not assuming any horse trading. Just assuming sometimes when you move things around in terms of tailings and technique (inaudible) operation, there are in fact some trade-offs, and I was trying to get a handle on what those trade-offs might have been.

UNIDENTIFIED PERSON: There are?

MS. BALDRIGE: There are several trade-offs. The biggest one is this process uses less cyanide and ends up with a relatively inert

DISTRICT COURT
WATER DIVISION 3
STATE OF COLORADO

702 Fourth Street
Alamosa, CO 81101

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF BATTLE MOUNTAIN RESOURCES, INC., IN COSTILLA COUNTY

^COURT USE ONLY^

Case No. 2007CW42

For the Petitioner:
JAMES S. WITWER, #19482
ANDREA ASEFF, #42571
KRISTIN BAILEY, #44868

For the Board of Cty Cmmr's of Costilla County & Costilla Cty Conservancy District:
JOHN C. MCCLURE, #2896

For the Board of Cty Commr's & Montez, Espinosa, Acequia Chiquita, & San Luis People's Ditches:
Edwin J. Lobato, #4699

REPORTER'S TRANSCRIPT
(Excerpt of Proceedings)

The trial in this matter continued on Thursday, December 13, 2012, before the HONORABLE PATTIE P. SWIFT, Water Judge within and for the 12th Judicial District, State of Colorado.

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MORNING SESSION, THURSDAY, DECEMBER 13, 2012

00:00:08 (The court reconvened at approximately
00:00:13 10:25 a.m., and the following proceedings were
00:00:23 had:)

00:41:31 THE COURT: We'll go back on the record
00:41:33 this morning. This is 2007 CW 42, In the Matter
00:41:38 of the Application of Battle Mountain Gold --
00:41:44 Battle Mountain Resources, Inc., excuse me.

00:41:49 At the conclusion of Costilla County's
00:41:51 case yesterday afternoon, Battle Mountain asked
00:41:54 this Court to rule on Battle Mountain's objections
00:41:57 to the admission of evidence concerning water
00:42:00 quality and, specifically, evidence concerning how
00:42:04 Battle Mountain manages water in the Lined
00:42:09 Tailings Facility, the LTF.

00:42:11 Battle Mountain argued that none of this
00:42:15 evidence is relevant to the Court's decision on
00:42:17 the matter that is actually before the Court in
00:42:19 this case; that is, whether to approve Battle
00:42:22 Mountain's request to change the use of the
00:42:24 Salazar Ranch water rights and to approve the
00:42:28 request to allow those water rights to serve as
00:42:31 replacement water in the augmentation plan
00:42:35 previously approved in Case No. 99 CW 57.

00:42:41 The evidence before the Court on this

point is as follows. And I apologize; I actually thought there would probably be more people from the community in the audience; and I kind of wrote this decision, in part, to make sure that people understood what I was talking about. Counsel may say, "Boy, Judge, why are you going into all of this?" But I'm going to go ahead and read to you what I have.

After gold mining ceased at the San Luis gold mine in 1996, Battle Mountain began reclamation of the site. In the late 1990s, there was a release of poor quality water from the West Pit into the Rito Seco.

This release of poor quality water occurred and would continue to occur to this day if there were no remediation, because the mining operation pierced what has been called the green clay layer that had previously stopped the poor quality water from traveling to the Rito Seco.

To remediate this problem, one or both of the regulatory agencies overseeing Battle Mountain's reclamation efforts; that is, the Colorado Division of Reclamation and Mining Safety or the Colorado Department of Public Health and Environment, ordered Battle Mountain to drill and

00:43:56 pump water from wells in the West Pit to lower the
00:43:59 water table so that that poor quality water would
00:44:02 not flow into the Rito Seco. Case No. 99 CW 57
00:44:08 approved that plan for augmentation that allowed
00:44:11 this out-of-priority pumping to occur.

00:44:16 Part of the reclamation and remediation
00:44:18 plan required Battle Mountain to construct a
00:44:21 reverse osmosis water treatment facility to treat
00:44:24 this water. From 2003 to 2010, Battle Mountain
00:44:28 pumped all of the West Pit water to the reverse
00:44:31 osmosis plant where the water was treated and then
00:44:33 discharged into the Rito Seco.

00:44:36 A by-product of the reverse osmosis plant
00:44:39 is brine, which is water that contains the
00:44:41 contaminants removed from the West Pit water in a
00:44:45 concentrated form. Battle Mountain pumps the
00:44:48 brine through a pipe to a lined tailings facility,
00:44:52 where the brine -- where the water evaporates.

00:44:55 The Lined Tailings Facility was
00:44:58 constructed at the time the mine began operations.
00:45:01 It is the location where the tailings, the
00:45:03 material left over from processing the ore to
00:45:06 remove the gold, were transported in a slurry and
00:45:10 where the solid material decanted from the slurry
00:45:14 and where those solids remain to this day.

00:45:17 In 2011 and again in 2012, Battle
00:45:21 Mountain did not pump all of the West Pit water to
00:45:24 the reverse osmosis treatment facility. Rather,
00:45:27 in those two years, Battle Mountain pumped over a
00:45:31 hundred acre-feet of West Pit water directly to
00:45:35 the Lined Tailings Facility. Such water is not
00:45:38 treated to remove contaminants. Rather, it is
00:45:41 allowed to evaporate, leaving the contaminants in
00:45:45 place in the lining tailings facility with the
00:45:49 other mine tailings.
00:45:51 During the last two days of trial,
00:45:53 Costilla County has presented evidence, by way of
00:45:56 cross-examination and in their case in chief,
00:45:58 concerning their lack of information about the
00:45:59 construction and the suitability of the Lined
00:46:02 Tailings Facility to store water and concerning
00:46:04 the possibility that a spill or a leak from the
00:46:08 Lined Tailings Facility would contaminate
00:46:12 downstream water rights, including the Salazar
00:46:16 Ranch water rights, which are part of the
00:46:18 replacement water included in the plan for
00:46:20 augmentation in this case.
00:46:22 It is this evidence that Battle Mountain
00:46:24 seeks to exclude. Battle Mountain argues that
00:46:28 this evidence is irrelevant to the Court's

00:46:29 decision on the augmentation plan and the change
00:46:32 of water rights application.
00:46:36 In deciding this issue, the Court has
00:46:39 first considered the fact that the Colorado Rules
00:46:42 of Evidence define "relevant evidence" as evidence
00:46:44 having any tendency to make the existence of any
00:46:48 fact that is of consequence to the determination
00:46:51 of the action more probable or less probable than
00:46:55 it would be without the evidence.
00:46:59 Under Colorado water law, the Court shall
00:47:01 approve a change of water right and/or a plan for
00:47:05 augmentation if such change or plan will not
00:47:10 injuriously affect the owner of or persons
00:47:14 entitled to use water under a vested water right
00:47:17 or a decreed conditional water right. That is
00:47:21 CRS, 37-92-305(3)(a).
00:47:28 In ruling on a plan for augmentation, the
00:47:31 Court must determine whether there will be
00:47:33 sufficient water available from the substitute
00:47:35 water supply to replace all out-of-priority
00:47:39 depletions in time, place, and amount.
00:47:43 In addition, in determining whether to
00:47:44 approve a plan for augmentation, the Court must
00:47:47 decide whether the water to be substituted will be
00:47:51 of the quality necessary to, quote, meet the

requirements for which the water of the senior appropriator has normally been used, unquote, CRS, 37-92-305(5). These are the only issues before this Court in this augmentation plan and change of water rights application.

The facts that are of consequence to this Court's decision then are facts concerning the amount of out-of-priority depletions caused by the West Pit wells, the amount of historic consumptive use of the Salazar Ranch water rights that are available to replace those depletions, the location of where that water can be replaced in the stream or aquifer, and whether that water produced by the Salazar Ranch water rights is of a sufficient quality to meet the requirements of senior water users.

Costilla County has essentially conceded that these facts have been proved. Costilla County, however, argues that Battle Mountain is seeking permission from this Court concerning how it disposes of poor quality water from the West Pit and that, therefore, the evidence concerning what Battle Mountain is doing at the Lined Tailings Facility is relevant to this Court's decision.

00:49:11 I previously reviewed what water quality
00:49:13 issues this Court could properly decide in this
00:49:17 Application for Change of Water Rights and
00:49:19 Application for Approval of a Plan for
00:49:21 Augmentation, and I'm just going to quote from my
00:49:25 previous ruling.
00:49:26 This is the conclusion: "The Court
00:49:28 generally agrees with Battle Mountain that the
00:49:31 only water quality issue before a court in a
00:49:34 typical case in which an applicant seeks approval
00:49:37 of a plan for augmentation is whether the water
00:49:40 being substituted is of sufficient quality to be
00:49:45 suitable for the use the senior water users
00:49:49 previously made of their water.
00:49:51 "In the current case, however, because of
00:49:53 the parties' previous agreements concerning
00:49:55 monitoring and remediation of water quality, the
00:50:00 Court has jurisdiction to require those terms to
00:50:02 be included in the final decree in this case.
00:50:06 "In addition, the Court has jurisdiction
00:50:08 to review the water quality effects of Battle
00:50:13 Mountain's management of water that does not enter
00:50:15 the Rito Seco only if Battle Mountain is seeking a
00:50:19 change in the protective provisions to which it
00:50:23 previously agreed in 89 CW 32 and 99 CW 57, as

00:50:30 1 those provisions apply to the management of such
00:50:33 2 water, or if Costilla County proves that there is
00:50:36 3 a likelihood that such water will contaminate the
00:50:40 4 proposed replacement water."
00:50:43 5 So under this ruling, there are two ways
00:50:45 6 in which evidence of water management in the Lined
00:50:50 7 Tailings Facility could be relevant to my
00:50:52 8 decision. First, if Battle Mountain were asking
00:50:56 9 to delete or change previous conditions from the
00:50:58 10 previous decrees in the current decree, the Court
00:51:01 11 would have to determine whether that was
00:51:03 12 appropriate. Here, however, Battle Mountain has
00:51:05 13 agreed to include all of the terms in the final
00:51:08 14 decree that were included in the previous decrees.
00:51:11 15 Costilla County points out that there are
00:51:14 16 terms in the proposed final decree that concern
00:51:17 17 how the West Pit water will be managed, in
00:51:20 18 particular, the new term included at the request
00:51:23 19 of the state and division engineers that no crops
00:51:26 20 be grown on the Lined Tailings Facility. These
00:51:32 21 terms, however, are included as court enforceable
00:51:36 22 agreements between the parties to settle disputes
00:51:38 23 between the parties.
00:51:40 24 As I said in my written decision, the
00:51:42 25 inclusion of these terms does not give this Court

00:51:45 jurisdiction over water quality issues generally;
00:51:50 rather, the Court has ancillary jurisdiction to
00:51:53 make sure the parties' previous agreements are not
00:51:56 undermined by the terms of the current decree.
00:51:59 That does not make it appropriate for the
00:52:01 Court to add other nonstipulated water quality
00:52:04 terms to this order or to make changes in the
00:52:07 previously agreed terms to clarify them to read in
00:52:12 a way one or the other party now desires them to
00:52:14 read.
00:52:16 Since the Court will not be adding
00:52:17 additional water quality provisions, except any to
00:52:21 which the parties themselves agree, evidence
00:52:24 concerning the means by which Battle Mountain
00:52:27 manages water on the Lined Tailings Facility or
00:52:29 the wisdom of any of those water management
00:52:32 programs is irrelevant to this Court's decision.
00:52:37 Under my Rule 56(h) decision, I also
00:52:40 determined that there was another way in which
00:52:42 evidence of Battle Mountain's management of the
00:52:45 West Pit waters could be relevant to my decision,
00:52:48 and that would be if Costilla County proved that
00:52:51 there is a likelihood that water stored in the
00:52:54 Lined Tailings Facility will contaminate the
00:52:57 proposed replacement water.

00:53:00 Costilla County has argued that Battle
00:53:02 Mountain's use of the Lined Tailings Facility as
00:53:04 an alternate location for the disposal of poor
00:53:07 quality water could result in a spill of that
00:53:10 water, which could contaminate the Rito Seco, thus
00:53:14 contaminating the water available under the
00:53:17 Salazar Ranch water rights and thus impairing the
00:53:21 quality of the replacement water provided under
00:53:27 the augmentation plan.
00:53:28 Since the quality of the replacement
00:53:30 water is a question for the Court in approving an
00:53:33 augmentation plan, this evidence would be relevant
00:53:36 if Costilla County has shown that it is likely
00:53:39 that the waters in the Lined Tailings Facility
00:53:42 will contaminate the Salazar Ranch replacement
00:53:46 water supplies.
00:53:47 Battle Mountain disputed this claim
00:53:49 arguing that it has complied with all of the
00:53:52 previous water quality monitoring requirements and
00:53:54 that there have been no issues.
00:53:57 There is some evidence before this Court
00:53:59 that if there were a spill or if there were a leak
00:54:02 from the Lined Tailings Facility, it would likely
00:54:06 travel to the Salazar Ranch location and could
00:54:09 contaminate the Salazar Ranch wells; however,

00:54:13 there is no evidence before the Court to suggest
00:54:15 that such a leak or a spill from the Lined
00:54:19 Tailings Facility is likely or probable; or, in
00:54:23 terms of the burden of proof, there is no evidence
00:54:25 that it is more probably true than not that such a
00:54:29 leak or a spill will occur.
00:54:32 The evidence before the Court is that the
00:54:34 water produced from the Salazar Ranch water rights
00:54:37 is of a sufficiently good quality to properly
00:54:40 replace the out-of-priority depletions caused by
00:54:44 pumping of the West Pit wells. The evidence
00:54:47 before the Court does not establish that any of
00:54:49 the other activities of Battle Mountain are more
00:54:52 likely than not going to impair that water
00:54:54 quality.
00:54:55 The Court's finding on this point is not
00:54:58 intended to diminish the serious concerns that
00:55:01 were presented to this Court. This Court must
00:55:03 agree with Costilla County's frustration in not
00:55:06 having more information about the construction and
00:55:09 appropriateness of the Lined Tailings Facility as
00:55:13 a water storage facility.
00:55:15 It is easy enough for lawyers and
00:55:18 engineers who do not live below the tailings
00:55:21 facility to tell this Court, as well as Costilla

County citizens and officials, "Don't worry. It will all be okay. We're doing everything we're required to do." All of us have lived long enough to be aware of numerous instances around the country in which such assurances proved not to be reliable.

The Court heard Mr. Gallegos' testimony concerning his prior predictions of harm having come true, but such predictions cannot be a basis for this Court's rulings.

Furthermore, this Court is not an administrative or regulatory body; and the Court has no investigatory powers. The Court must wait for disputes to be brought to it, and then it must rule on the evidence it has before it. And the evidence before the Court at this time does not establish a likelihood that the Lined Tailings Facility will leak and cause contamination of the Salazar Ranch water rights.

Thus, the evidence before the Court does not show a connection between Battle Mountain's disposal of poor quality water in the Lined Tailings Facility and the quality of the replacement water to be provided under the augmentation plan; and so evidence concerning the

00:56:37 wisdom of the disposal of poor quality water in
00:56:41 the Lined Tailings Facility is not relevant to any
00:56:45 decision that this Court has to make in this case.
00:56:49 During arguments yesterday, the
00:56:52 suggestion was made that this Court should
00:56:54 exercise some authority over the Lined Tailings
00:56:58 Facility because it is an undecreed water storage
00:57:00 facility. The issue of whether the Lined Tailings
00:57:05 Facility should have a water decree is not before
00:57:07 this Court and this change of water rights and
00:57:10 augmentation plan proceeding.
00:57:12 If the Lined Tailings Facility is, in
00:57:15 fact, a reservoir or is created by a dam that
00:57:19 impounds water, then it may be that the division
00:57:21 engineer should be regulating it pursuant to
00:57:23 CRS, 37-87-101, et seq. Such a regulatory
00:57:30 function belongs to the state and division
00:57:33 engineers. They can investigate the situation,
00:57:35 and they can take regulatory action.
00:57:39 As I said before, however, the Court must
00:57:42 wait for a dispute to be brought to the Court; and
00:57:44 the Court's rulings are confined to the matters at
00:57:47 issue in the dispute before it.
00:57:49 Before me is the question of approval of
00:57:52 a plan for augmentation and a change of water

rights. There is no request before the Court to approve Lined Tailings Facility for water storage. The division engineer has looked at the application and hasn't said anything to the applicant about a need to request such a water storage right, and there is no injunctive proceeding before me asking me to order that the Lined Tailings Facility not be used for water storage. It is not an issue before me at this time.

Yesterday, the argument was also made that Battle Mountain is violating prior decrees in this case by the way in which it is disposing of the West Pit waters in the Lined Tailings Facility.

As I said yesterday -- or as I questioned -- I guess, as I implied yesterday, and as I said in my written ruling, if Battle Mountain is violating those prior decrees, that is a matter that can be brought to the Court's attention in an injunctive proceeding; but that is not what I have before me. This is not a proceeding for an injunction.

And, as I said, this Court is not a regulatory agency that can determine whether

00:59:04 Battle Mountain's operation of the Lined Tailings
00:59:07 Facility and the use of that facility to evaporate
00:59:10 larger quantities of water complies or does not
00:59:14 comply with the reclamation plan in this case.
00:59:17 The only issue before this Court concerns
00:59:19 the right to use water and to change the use of
00:59:23 water, not how the Lined Tailings Facility is
00:59:26 used.
00:59:28 It appears that Battle Mountain has
00:59:29 agreed to include all of the terms from the
00:59:32 previous decrees in the current stipulated
00:59:36 proposed decree. To the extent that there is new
00:59:43 language proposed that would change the prior
00:59:45 stipulations in the prior decrees, then I will
00:59:48 consider those arguments in ruling on the actual
00:59:51 language to be included in the final decree.
00:59:53 There was some argument yesterday that
00:59:55 some of the wording actually changes what the
00:59:57 prior decrees provided; and certainly, I think,
01:00:01 that's an appropriate matter to be brought to this
01:00:04 Court's attention in determining what final
01:00:06 language will be approved. And so I will allow
01:00:09 the parties to argue these language issues before
01:00:11 I issue a final ruling and decree, but those
01:00:14 language issues don't have to do with -- the

01:00:19 Court's not going to be deciding the wisdom of how
01:00:21 the Lined Tailings Facility is used in making
01:00:24 decisions on those language questions.
01:00:31 Also, the argument was made yesterday
01:00:33 that, if the Court approves the decree in this
01:00:36 case, the Court will in some way be approving
01:00:41 Battle Mountain's choice in how it is managing the
01:00:43 West Pit waters and how it's transporting waters
01:00:46 to the Lined Tailings Facility at this time; and I
01:00:50 want to make clear that, from this Court's
01:00:52 perspective, any ruling on the decree in this case
01:00:54 is not an approval of that mechanism of dealing
01:00:59 with the West Pit waters.
01:01:02 I'm specifically finding by what I'm
01:01:04 ordering right this very minute that the way in
01:01:07 which the Lined Tailings Facility is managed is
01:01:10 not an issue for this Court or not relevant to
01:01:13 this Court's decision on the augmentation plan or
01:01:16 the change of water rights; therefore, this
01:01:19 Court's decision cannot approve that method of
01:01:25 dealing with the West Pit waters. And I will
01:01:29 include a specific provision in the final decree
01:01:32 that says that. Counsel can propose something to
01:01:36 the Court, and I will include that in the decree.
01:01:40 So I am generally granting Battle

Mountain's request that evidence presented concerning the wisdom or advisability of disposing poor quality West Pit water in the Lined Treatment -- I'm sorry, in the Lined Tailings Facility or the ability of the Lined Tailings Facility adequately to store that water -- that those issues are not relevant to any question before this Court and; therefore, will not be considered by the Court in any decision.

I'm not striking the evidence that such water has been transported to the Lined Tailings Facility or the amount of such water that has been transported or the fact that a canola crop was grown in the Lined Tailings Facility in 2011. So that's the Court's ruling.

MR. LOBATO: Thank you, Your Honor.

THE COURT: Mr. Witwer, then, are you ready to proceed with your rebuttal?

MR. WITWER: Could I have just one moment to confer, Your Honor, in light of the ruling?

THE COURT: You may. You may.

(There was a brief pause in the proceedings at this time.)

THE COURT: All right. Mr. Witwer.

MR. WITWER: Thank you, Your Honor. I

01:05:04 appreciate the Court's analysis and rendering the
01:05:06 opinion, and we can talk in a moment about next
01:05:09 steps. I think in light of the Court's ruling,
01:05:12 Battle Mountain probably does not intend to put on
01:05:15 any rebuttal case.

01:05:17 I would like to offer a few thoughts on
01:05:21 some of the items in the Court's ruling. One,
01:05:27 given the concerns about information exchange,
01:05:34 et cetera, et cetera, I think we have discussed
01:05:35 that this property -- it was 15 years ago or more
01:05:41 that mining ceased on the property, and a lot of
01:05:45 the issues in the long permit amendment and
01:05:48 technical revisions process are, at least, lost to
01:05:51 the memories of any current Battle Mountain
01:05:54 employees.

01:05:55 The company was bought by its current
01:06:03 owner in, I believe it was, 2001, long after
01:06:06 mining had ceased and it's been longer since. We
01:06:10 have spent considerable time in recent time, since
01:06:13 the Court's November 14 ruling, trying to look
01:06:16 through the online database at the Colorado
01:06:20 Division of Mining, Reclamation and Safety, to
01:06:24 unearth additional documents, other than the one
01:06:27 the Court has heard about today. And had the
01:06:30 Court made a different ruling with respect to the

likelihood standard, the Court would have been offered those documents in evidence today.

We have shared those documents -- I want to say, as a practical matter -- this morning with counsel for both parties. And I would hope that, to the extent their clients and this Court remain frustrated, that that proffer, a lot of work in a pretty clunky online database of probably hundreds of thousands of pages of documents, will provide some comfort that, in fact, a number of the issues concerning flood water safety and the amount of water that was going on the tailings during mining and how it was designed to take all of that water versus what is there -- that additional comfort can be provided to a community that there's no dispute, as Battle Mountain has numerous employees who live downstream and downgradient of this same community in the town of San Luis. One could point out that they're not going to do anything to themselves and their families any more than anyone else.

But those are legitimate concerns; and those are concerns that information from those files that we believe we shared with the opposers today, we would hope, would have some beneficial

effect, regardless of whether those issues are brought before this Court or, informally, in further discussions or in front of other forums; but that it is certainly not the company's intent.

Despite the fact of the long passage of time and the difficulty in retrieving things rapidly -- because a lot of the tailings impoundment issues did not come up in this case until October -- that we would hope that we made a good faith effort to try to provide some information, regardless of the fact that it's not going to come up in this case, as it turns out.

I would point out one item with respect to the Court's ruling. I think the Court suggested that the property might be a reservoir and, therefore, subject to state engineer jurisdiction over that.

That issue has been specifically addressed in the 1989 CW 32 decree in paragraph 47 of that decree. This is Exhibit 8, paragraph 47 of that decree on page 46. It states, in the Conclusions of Law, "The tailings disposal facility and collection pond are exempt from the Rules and Regulations For Dam Safety and Dam Construction." And there's a citation, including

01:09:30 to the 37-87 statute, but also to the rules of the
01:09:34 state engineer.
01:09:36 And it continues, "The absence of such
01:09:38 approval in any event does not affect the
01:09:41 jurisdiction of this Court to enter this Decree,"
01:09:44 and that was the augmentation plan.
01:09:46 I think the Court's rationale is sound
01:09:49 rationale, which is, in any event, this is a
01:09:51 change case and an augmentation plan case, wherein
01:09:55 issues like that wouldn't come up and so, I think,
01:09:58 consistent with the prior finding that the
01:10:01 jurisdiction of this Court to enter a decree is
01:10:04 not affected by that exemption.
01:10:05 And the practical matter is it's exempt
01:10:08 from dam safety jurisdiction by one agency; but
01:10:12 those issues in the impoundment, from cradle to
01:10:19 grave, the regulation of that facility, really
01:10:23 remains consigned to the DRMS agency, where it has
01:10:30 been all of this time and where, you know, large
01:10:33 volumes of documents included with permit
01:10:38 amendments and over 30 technical revisions, which
01:10:42 are also very voluminous, rest.
01:10:45 I guess the only thing I would finally
01:10:47 say, and I know I reiterated this last night, is
01:10:51 if the Court knows today that there are additional

provisions, either as a result of its ruling or as a result of things that were not directly addressed in the case concerning the proposed decree, wherein it would be useful to hear testimony from Mr. Lytle on engineering matters, we certainly offer him to the Court; but otherwise, we don't intend to put on a rebuttal case.

THE COURT: All right. Thank you. Well, I --

MR. MCCLURE: I just have a couple of quick comments, just in response to Mr. Witwer.

In all fairness to his comment about the documents that were produced today -- and we received these this morning, basically, DRMS records from the mining period or premining period. In terms of those giving us additional comfort, we disagree with that. It really doesn't.

What occurred during the mining period and what is occurring now, in an extended period of reclamation that apparently won't end, is two different matters; and our concerns were, I think, expressed yesterday about the manner and use of that Lined Tailings Facility now.

01:12:08 And, in terms of good faith efforts to
01:12:09 provide information, I -- in all due respect, I
01:12:14 don't think that's occurred. We have been trying
01:12:16 to get information in discovery; and at every
01:12:20 stage, we have been thwarted.
01:12:26 And, if there was a good faith effort,
01:12:30 then we would hope those good faith efforts would
01:12:32 manifest themselves in addressing this issue
01:12:36 where, apparently, they are contending they can
01:12:38 take unlimited waters, quantities of poor quality
01:12:42 water, up to the Lined Tailings Facility. We just
01:12:47 feel that actions speak louder than words.
01:12:53 MR. LOBATO: May I? Just one quick
01:12:56 comment. Your Honor, as Mr. Witwer indicated,
01:13:01 trying to access information from the files of
01:13:07 DRMS, the electronic files of DRMS, is a
01:13:12 monumental chore. I've spent countless hours
01:13:16 trying to access and retrieve information about
01:13:19 this structure, and it's a real challenge.
01:13:24 I will say one thing. In my
01:13:27 investigation, I found that in 1992 the employees
01:13:34 at DRMS had written some correspondence with the
01:13:39 mine where DRMS challenged the impermeability of
01:13:47 that liner and wrote that mine and said, "You
01:13:51 overstated the impermeability. The information

provided by your engineering firm, by the Geotechnical firm, is inaccurate. We want a response to this. We want a response to this finding."

And in all of my efforts, I could never find a response that was provided by SRK; wherein the DRMS stated to SRK or to Battle Mountain, "For every foot of water on this liner, you diminish the impermeability of this liner significantly."

We heard yesterday that, at a minimum, there was 5 feet of water that is piped in there and piped out of there every year. In the opinion of that engineer at DRMS, there was a real question of the viability of that liner.

We've yet -- we've never, in any of the discovery, received any information about the impermeability of that liner; and to the extent that we consider it a real safety concern, we'll pursue it where we have to pursue it. Thank you.

THE COURT: Thank you, Mr. Lobato. Since then there is not going to be any rebuttal evidence, I think that what would be most useful for me would be either written closings.

I've got a proposed decree; and I think, based on what I've just done as far as the oral

ruling of the Court, I think the issue remaining is whether there are specific provisions in that proposed final decree that Costilla County believes change the provisions that were included in the prior decrees because, as I've said over and over again, the Court's going to require that those same provisions be in there.

And so that's what I'd like to give the opportunity to the -- to Costilla County, to provide me in written form discussion of what terms you think should -- are not the same as what were in the prior decrees and proposed language that you think would make it the same as the prior decrees.

Also, propose the language that I said I would include that the Court was not making a finding concerning Battle Mountain's management of the water; that the Court's not finding it's appropriate or not. The Court simply is not deciding that. That's not before the Court.

I think that that's what is necessary to finish this up. And I don't think I need anything other than that. Is there any disagreement as far as that? Does anybody want to make some other argument to me beyond that?

indicate that the Court was making -- was not authorizing any particular practice of water management, and it would -- does the Court have some language that it is going to draft that's going to include that?

THE COURT: I'm asking you to propose it to me.

MR. LOBATO: Okay.

THE COURT: And then I'll decide. No, I don't have any specific.

MR. LOBATO: Thank you.

THE COURT: So then we want a response time for Battle Mountain. How much time do you need to respond to that?

MR. WITWER: Sometime around the end of the month.

THE COURT: So a couple of weeks. That's fine then. So by the 31st of January, which is a Thursday, you can file your -- any response; and then I'll give Costilla County seven days to file any reply to that. That would be by the 7th of February. And then I will issue a decree after that. Mr. Witwer.

MR. WITWER: This is just, frankly, in aid of the task before the parties. Obviously, it

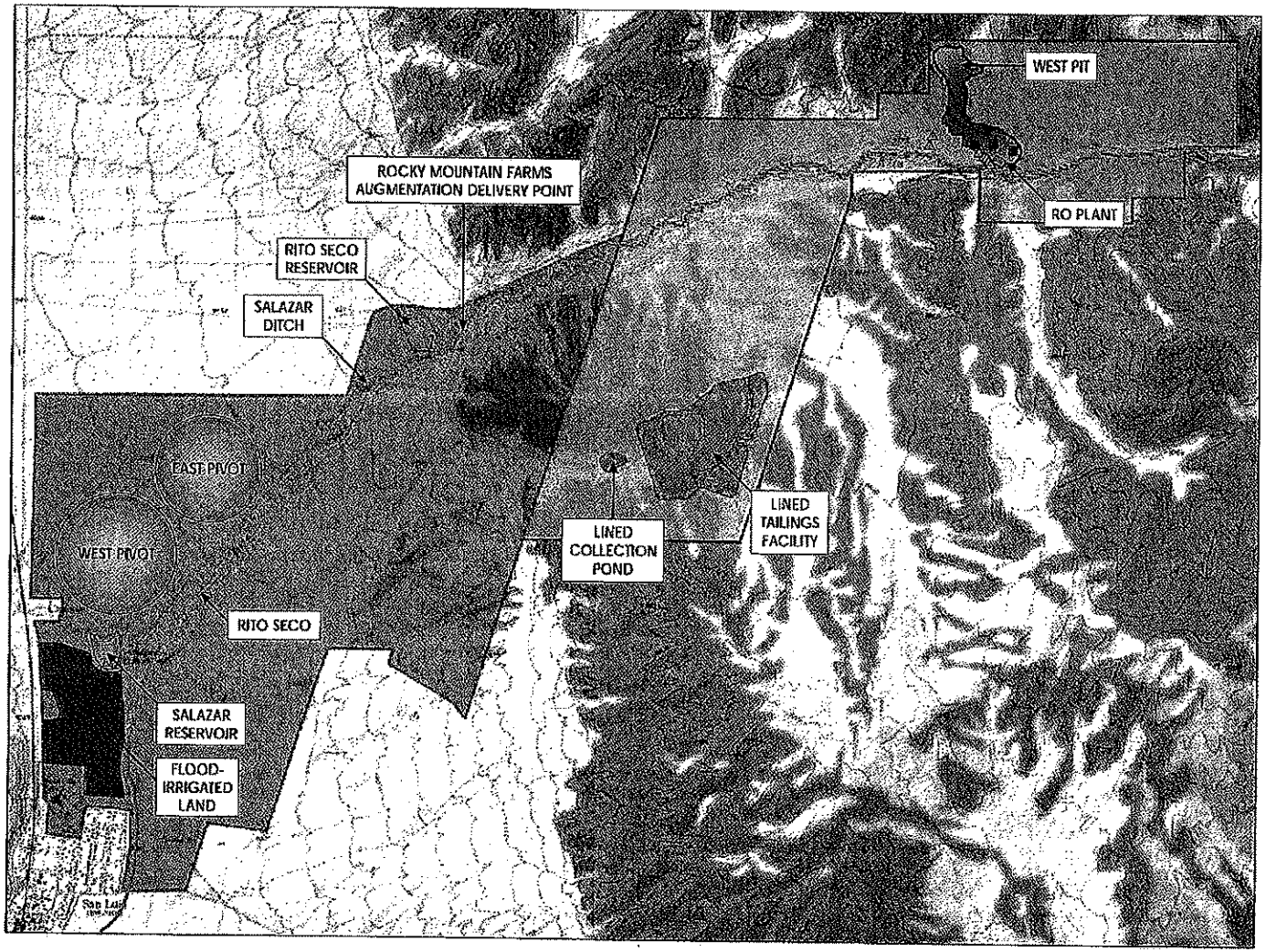
REPORTER'S CERTIFICATE

The above and foregoing is a true and complete transcription of my stenotype notes taken in my capacity as Official Certified Reporter within and for the 12th Judicial District, State of Colorado, at the time and place above stated.

Dated this 7th day of January, 2013.

Catherine W. Rodriguez
Registered Merit Reporter

Lytle Water Solutions, LLC



LEGEND

- ALLUVIAL RECOVERY WELLS
- WEST PIT RECOVERY WELLS
- SALAZAR DITCH
- RITO SECO

BOUNDARIES - PERMIT & RANCH

- SALAZAR RANCH
- BMRI MINE PERMIT AREA

N

0 0.5 miles

BATTLE MOUNTAIN RESOURCES, INC.

BATTLE MOUNTAIN SITE PLAN

File Name: SitePlan.cdr		Date: 04/06/2011
Project No.: 1006-04	Drawn By: VAL	Fig. No.: 1

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