

October 16, 2003

Mr. Lee McElprang, President
Huntington Cattle Association
P.O. Box 448
Huntington, Utah 84528

Re: Star Point Spring/ Haug Stockpond, Star Point Mine C/007/0006 Outgoing File

Dear Mr. McElprang:

Based on numerous conversations we have had concerning the Star Point Spring and Haug Stockpond, the Division has taken a renewed look at the situation. On file at the Division we have reviewed both a Technical Field report and Inspection report conducted on September 9, 1998, and a copy of an agreement between Cypress Plateau Mining Company (Mine) and the Huntington Cattle Association, all of which are attached to this letter.

The background information submitted as part of the Technical Field report in September 1998 indicates the area beneath the spring was mined in 1986-1987 (pre-water replacement rules), flow information was limited (0.8 gpm in 1986, 0.5 gpm in 1990), and the area was subsided approximately 4-feet. The report concluded, "Since the spring was not monitored frequently to establish seasonal variation in flow the Division is unable to determine if subsidence caused the spring to dry up". According to current water monitoring records, flow has not been recorded at the spring since 1990.

The Inspection report indicated (pages 3 and 4) outlined 7 specific items of understanding between the Cattle Association, Mine Operator, US Forest Service personnel, and DOGM personnel outlining current observations and potential mitigation options to restore flow to the spring. To the knowledge of the Division, no further action has taken place on the items outlined in the Inspection report.

The attached letter from the Mine to Mr. McElprang in October 1998 indicates that the Mine was trying to get additional information and receive your input to perform work on the Star Point Spring and the Haug Pond. Based on conversations with Mr. Johnny Pappas, the information and input requested in the letter was never received from the Huntington Cattle Association.

Page 2
Lee McElprang
October 16, 2003

It appears that the status of any improvements to be done at the spring and pond were to be resolved between the Huntington Cattle Association and Mine personnel. The Division would be interested in knowing how things are progressing in this regard.

If you have any questions, please call me at (801) 538-5325 or Gregg Galecki at (801) 538-5260.

Sincerely,

Daron R. Haddock
Permit Supervisor

an
Enclosure
cc: Price Field Office
O:\007006.STP\FINAL\gagMcElpStPntLtr.doc



**CYPRUS PLATEAU
MINING CORPORATION**
A Cyprus Amax Company

Willow Creek Mine
847 Northwest Highway 191
Helper, Utah 84526
(435) 472-0475
Fax: (435) 472-4780

October 15, 1998

Mr. Lee McElprang, President
Huntington Cattle Association
P.O. Box 448
Huntington, Utah 84528

Re: Agreement Concerning Star Point Spring

Dear Mr. McElprang:

Following our conversation concerning the Star Point Spring and the Hoague Stockpond, I am sending a draft settlement agreement and a draft services agreement for your review. Under the settlement agreement, the Association agrees to release all claims against Cyprus, in exchange for Cyprus to perform the work on the Star Point Spring and Hoague Stockpond. The services agreement formalizes the work Cyprus will perform at those two locations.

You will see that we need some information to fill in a few blanks in the two agreements:

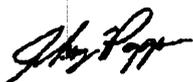
1. We are uncertain why the Huntington-Cleveland Irrigation Company joined in the Citizen Complaint. Since they did join, we've included them as parties to the agreements.
2. What kind of entities are the Huntington Cattle Association and the Huntington-Cleveland Irrigation Company? We've made a guess (in the introductory paragraph of each agreement), but we would like you to tell us.
3. We need the number of the Forest Service Grazing Permit, and the complete name of the Grazing Allotment. Also, it would be very helpful to receive the complete Permit. Could you please send it to us?
4. Does the Grazing Permit allow development and use of water from the Star Point Spring and the Hoague Stockpond?

I will prepare an Exhibit "A" for each agreement. Exhibit "A" is a description of the Star Point Spring and the Hoague Stockpond. Unless you disagree, I intend to describe them by name, quarter-section, Township and Range, and label the location of each on a topographic map of suitable scale.

Mr. Lee McElprang
October 15, 1998
Page 2

Please review the two agreements, and contact me at your convenience to discuss them. We are anxious to move the process along and to resolve this dispute finally and amicably.

Sincerely,



Johnny Pappas
Sr. Environmental Engineer

Enclosure

cc: J. Trackemas (w/o enclosure)
G. Walker (w/o enclosure)
B. Kirchhoff (w/o enclosure)



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

INSPECTION REPORT

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340
(801) 359-3940 (Fax)

Partial: XXX Complete: Exploration:
Inspection Date & Time: 9/9/98 / 7:30a.m.-1:30p.m.
Date of Last Inspection: 8/21/98

Mine Name: Starpoint Mine County: Carbon Permit Number: ACT/007/006
Permittee and/or Operator's Name: Cyprus Plateau Mining Corporation
Business Address: 847 Northwest Highway 191, Helper, Utah 84526
Type of Mining Activity: Underground XXX Surface Prep. Plant Other
Company Official(s): Johnny Pappas
State Officials(s): Bill Malencik Federal Official(s): None
Weather Conditions: Clear
Existing Acreage: Permitted- 9,060 Disturbed- 220 Regraded- Seeded- Bonded- 220
Increased/Decreased: Permitted- Disturbed- Regraded- Seeded- Bonded-
Status: Exploration/ XXX Active/ Inactive/ Temporary Cessation/ Bond Forfeiture
Reclamation (Phase I/ Phase II/ Final Bond Release/ Liability Year)

REVIEW OF PERMIT, PERFORMANCE STANDARDS & PERMIT CONDITION REQUIREMENTS

Instructions

1. Substantiate the elements on this inspection by checking the appropriate performance standard.
 - a. For complete inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check N/A.
 - b. For partial inspections check only the elements evaluated.
2. Document any noncompliance situation by referencing the NOV issued at the appropriate performance standard listed below.
3. Reference any narratives written in conjunction with this inspection at the appropriate performance standard listed below.
4. Provide a brief status report for all pending enforcement actions, permit conditions, Division Orders, and amendments.

	EVALUATED	N/A	COMMENTS	NOV/ENF
1. PERMITS, CHANGE, TRANSFER, RENEWAL, SALE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. SIGNS AND MARKERS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. TOPSOIL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. HYDROLOGIC BALANCE:				
a. DIVERSIONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. SEDIMENT PONDS AND IMPOUNDMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. OTHER SEDIMENT CONTROL MEASURES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. WATER MONITORING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. EFFLUENT LIMITATIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. EXPLOSIVES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. DISPOSAL OF EXCESS SPOIL/FILLS/BENCHES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. COAL MINE WASTE/REFUSE PILES/IMPOUNDMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. NONCOAL WASTE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. PROTECTION OF FISH, WILDLIFE AND RELATED ENVIRONMENTAL VALUES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. SLIDES AND OTHER DAMAGE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. CONTEMPORANEOUS RECLAMATION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. BACKFILLING AND GRADING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. REVEGETATION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. SUBSIDENCE CONTROL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. CESSATION OF OPERATIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. ROADS:				
a. CONSTRUCTION/MAINTENANCE/SURFACING	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. DRAINAGE CONTROLS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. OTHER TRANSPORTATION FACILITIES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. SUPPORT FACILITIES/UTILITY INSTALLATIONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. AVS CHECK (4th Quarter-April, May, June) _____ (date)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. AIR QUALITY PERMIT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. BONDING & INSURANCE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. CITIZEN COMPLAINT / STARPOINT SPRING	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



INSPECTION REPORT
(Continuation sheet)

Page 2 of 4

PERMIT NUMBER: ACT/007/006

DATE OF INSPECTION: 9/9/98

(Comments are Numbered to Correspond with Topics Listed Above)

General Comments

The inspection was a partial and it was completed before the meeting Mr. Helfrich scheduled with the water users, USFS, and mine officials.

2. Signs and Markers

Signs and markers were in place as required by the Utah Coal Rules.

3. Topsoil

Observed the topsoil adjacent to the transfer building. The area is fenced and the runoff goes to and is treated by pond #7. Grass on the topsoil pile has reached the seed stage.

4a. Diversions

Diversions on the tipple area and upper pad were observed. All diversions showed evidence of recent flows; however, no short circuiting was observed.

4b. Sediment Ponds

Sediment ponds #9 and #1 were observed, all contained runoff and were not discharging.

16a. Roads

The road to the main office, ditches, and silt fences had recently been maintained.

22. Citizen Complaint/Starpoint Spring

Messrs. Jensen and McElprang, representing the Huntington/Cleveland Irrigation Company and President Huntington Cattle Association, respectively, wrote a letter to Mr. Braxton, Acting Director, DOGM, about the Starpoint Spring. The Division considered the letter to be a Citizen Complaint under the Utah Coal Law, UCA 40-10-22.

A preliminary meeting was held with the aforementioned individuals on August 27, 1998. At that meeting, it was concluded that a field meeting would be held. Division personnel that were at the August 27, 1998 meeting included: Joe Helfrich, Bill Malencik, Daron Haddock, and Wayne Western.

A field meeting was held on September 9, 1998. All of the aforementioned attended the meeting in addition to: Pool Rider, Mr. Gordon; Starpoint Mine, Johnny Pappas; DOGM, Sharon Falvey, Jim Smith, and Dave Darby.

INSPECTION REPORT
(Continuation sheet)

Page 3 of 4

PERMIT NUMBER: ACT/007/006

DATE OF INSPECTION: 9/9/98

(Comments are Numbered to Correspond with Topics Listed Above)

My conclusions and/or what was agreed to follows:

- Item 1: Neither the mine official nor the water users mentioned herein, provided any hard data to show whether mining did or did not cause the spring to stop flowing.
- Item 2: The spring collection system, trough, nor the log fence protecting the spring shows any signs of maintenance. The spring may have gone dry because of the failure to perform maintenance. Also, no information exists on how the spring was developed, IE., collection system, etc.
- Item 3: Coal was mined beneath the spring. Sharon Falvey mentioned to the group that the mined coal bed lies about 1200 feet below the spring.
- Item 4: I could not definitively state, at this time, whether items (2), (3), some other reason, or a combination of reasons caused the spring to stop flowing.
- Item 5: A tentative understanding was reached among the water users, mine officials, and the USFS official, and brokered by DOGM that:
- a) the water users and the mine would maintain/re-develop the spring.
 - b) if (a) is not successful, a livestock/wildlife water reservoir would be constructed in the same spring service area.
 - c) maintenance/re-development is an ongoing responsibility of the livestock permittee and requires no formal plan as was briefly discussed by USFS.
 - d) the permittee ASAP will prepare a livestock/wildlife reservoir plan and design in the event c) above is not successful.
 - e) in addition to above, the mine would clean an existing reservoir fed by a spring.
- Item 6: Mr. Pappas stated he would contact his management to determine if the mine management would concur with the proposal and participate in this cooperative effort.
- Item 7: The water users stated that they would hold their "citizen complaint" in abeyance in light of the understandings reached on items (5) and (6) above, and when water is re-developed or developed, the citizen complaint will be withdrawn. Should (5) and (6) be unsuccessful, as determined by the water users, they may re-activate their complaint and provide any additional facts to support their initial allegation.

Follow-up

-Mr. Pappas contact his management for their concurrence.

INSPECTION REPORT
(Continuation sheet)

Page 4 of 4

PERMIT NUMBER: ACT/007/006

DATE OF INSPECTION: 9/9/98

(Comments are Numbered to Correspond with Topics Listed Above)

Follow-up (continued)

-Water users make arrangements with USFS officials to:

- a) maintain/re-develop the Starpoint Spring, and at the same time,
- b) submit a plan and design to USFS for a reservoir should a) not be successful. This will provide for the reservoir to be constructed while the equipment is in the area and not bring an additional delay if the spring efforts are unsuccessful.

-Should any of the principal parties believe this does not reflect the understandings, please notify Mr. Helfrich, together with the mine, water user officials, and the undersigned with your suggested changes.

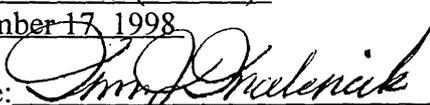
Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas, and Mining.

Copy of this Report:

Mailed to: Johnny Pappas (Plateau) Henry Austin (OSM)

Given to: Joe Helfrich (DOGM) Filed to: Price Field Office

Date: September 17, 1998

Inspector's Signature:  #26
Wm. J. Malencik

sd
enclosures: Water Users Letter
Helfrich Sketch Map



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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Michael O. Leavitt
Governor

Lowell P. Braxton
Division Director

September 29, 1998

Lee McElprang, President
Huntington Cattle Association
P.O. Box 448
Huntington, Utah 84528

Duane K. Jensen, President
Huntington-Cleveland Irrigation Company
Box 395
Cleveland, Utah 84518

Re: Citizens Complaint Star Point Spring, Cyprus Plateau Mining Company, Star Point Mine,
ACT/007/006, File #2, Carbon County, Utah

Dear Messrs. McElprang and Jensen:

Thank you for the opportunity to meet at the Star Point Spring.

Copies of the field report and technical analyses are enclosed. The information contained in these two documents does not indicate that a violation of our Coal Program has occurred or that mining practices by Cyprus Plateau Mining Company caused the disappearance of water flow at the Star Point Spring.

You may appeal this finding by the Division to The Board of Oil, Gas, and Mining however it is our hope that you are successful in your efforts to reestablish flow to the Star Point spring.

If we can be of any assistance in this endeavor please call.

Sincerely,

Joseph C. Helfrich
Permit Supervisor

tam

Enclosures: Field Report, Technical Analysis

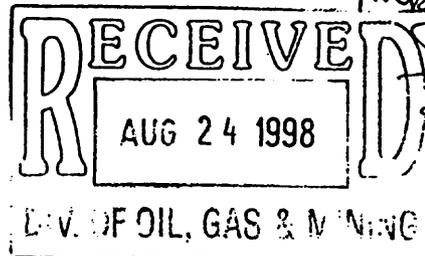
cc: Jeff DeFreest, USFS
Johnny Pappas, Cyprus Plateau
Price Field Office

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HUNTINGTON CATTLE ASSOCIATION

Lee McElprang
P.O. Box 448
Huntington, UT 84528
August 19, 1998

Lowell P. Braxton
Division Director
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-5801



CC Van
Joe
Daron
Sharon P
David
Ken W
Mike S
Tina S
Bill M.

Subject: Star Point Spring

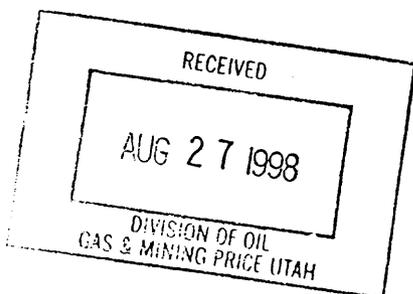
Dear Mr. Braxton,

The Huntington Cattle Association and the Huntington-Cleveland Irrigation Company wish to express our concern with the disappearance of water flows at the Star Point Spring on Gentry Mountain. We feel that the Plateau Mining operation is responsible for this situation and we feel that they should be held responsible for replacement of the water.

We appreciate your attention to our concerns.

Sincerely,

Lee McElprang - President
Huntington Cattle Association



Kay Jensen - President
Huntington-Cleveland Irrigation Company

USDA - Forest Service GRAZING PERMIT - PART 3 (Reference FSM 2230)	Page 10 of 14
	Permittee Number
	Permit Number

Special Terms and Conditions

Responsibilities for Construction and Maintenance of Structural Improvements or for Range Rehabilitation. (List the specific responsibilities of the permittee; or incorporate into the permit the cooperative agreement, management plan or other document which sets forth these responsibilities in detail. Fully identify the particular document or documents.)

The allotment permittee or permittees are responsible for the maintenance of all structural range improvements on this allotment. For allotments managed by an Association or Herd Manager specific maintenance responsibilities may be assigned to individual permittees by the Association President or Herd Manager. The standard of maintenance will be such that the effective life of the improvement will be perpetuated throughout the period of time it is required for the proper protection and management of this allotment. (See the Manti-La Sal National Forest's Maintenance Standards for Range Improvements.)

Range improvements will be maintained yearly, before livestock enter a unit, to the standard they were constructed.

The following improvements are located along or within the boundaries of this allotment:

Allotment # 301 Castle Valley Ridge

Improve.

Number	Improvement Name	Type	Year Const.	Length or Size	Location
30103	Star Point	Trough	1936	10'	Sec. 12, T15S, R7E
30104	Little Park #1	Trough	1966	10'	NW Sec. 11, T15S, R7E
30105	Little Park #2	Trough	1978	10'	NE Sec. 10, T15S, R7E
30106	Bear Wallow	Trough	1978	10'	SE Sec. 3, T15S, R7E
30107	S. Fk. Corner Canyon	Trough	1941	10'	NW Sec. 1, T15S, R7E
30108	N. Fk. Corner Canyon	Trough	1935	20'	SE Sec. 35, T14S, R7E
30109	Head of First Water	Trough	1935	10'	NE Sec. 27, T14S, R7E
30110	L. Fk. Second Water	Trough	1939	10'	NE Sec. 22, T14S, R7E
30111	First Water Ridge	Trough	1939	10'	Sec. 26, T14S, R7E
30124	Christensen	Trough	1979	10'	
30125	Lone Pine	Trough	1979	10'	SE Sec. 23, T14S, R7E

Fences

30101	Nuckwoodward Worm	Fence	1938	.2 mi	Sec. 15 , 22 T14S, R7E
30102	Nuckwoodward Wire	Fence	1977	2.5 mi	Sec. 15 , 22, 23 T14S, R7E 27, 34. Sec 10 T15S, R7E
30118	Bob Wright Boundary	Fence	1977	5.8 mi	Sec. 1, 12, 13 T14S, R7F 24, 25, 36. Sec. 6, T15S, R7E
- 30121	Second Water Allotment	Fence	1979	.3 mi	Sec. 22, T14S, R7E
	Lone Pine Ridge	Fence	1980	.6 mi	Sec. 24, T14S, R7E
	Sinks - L. Park Div.	Fence	1983	2 Sections	Sec. 34, 35, T14S, R7E
	Second Water Fence	2 Fences	1994	Gates	Sec. 14, 23, T14S, R7E
	Corner Canyon Fence (Gate)		1994	Gates	Sec. 36, T14S, R7E
	First Water Fence (Gate)		1994	Gates	Sec. 25, T14S, R7E
	Castle Valley Ridge - Entry	Fence			Sec. 11, 12 T15S, R7E
	Allot Boundary				

• Pump

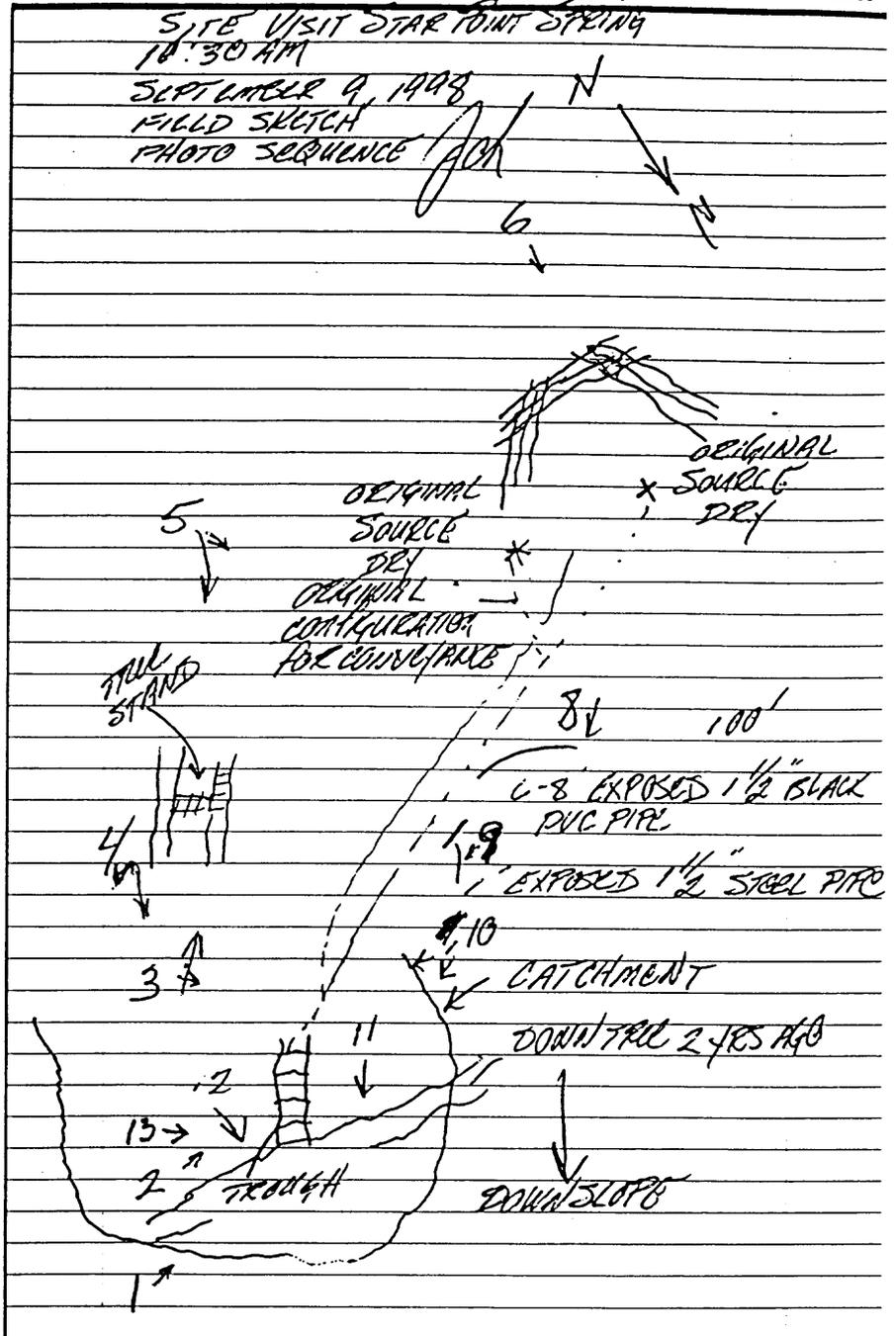
• Arvo Sauer



- Commitments
- Journal Entry
- Thoughts & Ideas
- Agendas
- Conversations

September 1998
Daily Record of Events

8
Tuesday
251st Day 114 Left
Week 36



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Original-CL

-Sketch/Photo Log prepared by DOGM, Joe Helfrich, on September 9, 1998 showing where each of the 13 photos were taken at the Starpoint Spring site.

-Photos are available for observation at either the Salt Lake or Price DOGM Offices. Photos are not enclosed as part of this inspection report.



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
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Michael O. Leavitt
Governor
Lowell P. Braxton
Division Director

**DIVISION OF OIL GAS & MINING
FIELD VISIT FORM
TECHNICAL**

Date : 9/09/1998

Time: 9:00 a.m. - 1:00 p.m.

Mine: Star Point Mine

File Number: ACT 007/006, Folder #2

Subject: Citizens Complaint, Star Point Spring Impacts

DOGM Staff

Joe Helfrich, Bill Malencik, Dave Darby, Jim Smith, Sharon Falvey, Wayne Western

Other Attendees

Johnny Pappas, Cyprus Plateau Mining Corporation (CPMC); Jeff DeFrest, U.S. Forest Service, Manti-LaSal National Forest; Kay Jensen, Lee McElprang and Dennis Ward, Huntington Cattle Association.

Purpose

Observe and collect site information about Star Point Spring on Gentry Mountain (the spring is listed as water monitoring site 971 in CPMC's water monitoring plan). Members of the Huntington Cattle Association and Huntington-Cleveland Irrigation Company filed a citizens complaint on August 24, 1998, which contends Plateau Mining operation has depleted flows to the spring.

Observations

There was no flow at the spring. There was an old cattle trough which records show was developed in 1936. The trough was smashed in the center by a large tree, which the cattlemen said had fallen across it a couple years ago. There was also a rotted and dilapidated log fence surrounded the spring keep the cattle from reaching the effluent source. An embankment had been built by the cattlemen to trap any flows that still come from the site. The pond contained only a skim of water, probably from the last rainstorm. No flow was present in the surrounding region although some sedges and wet meadow plant species were present in the area surrounding

Citizens Complaint
Star Point Spring
ACT/007/006
September 24, 1999
Page 2

the spring. The original effluent location had boulders of sandstone from the surrounding formation.

Background Information

Star Point Spring is located in the SE 1/4, S 1/2 of Section 12, T15S, R7E. The spring lies east of the Bear Canyon Fault where subsidence occurred. The flow rate at this spring was recorded at 0.8 gpm on June 30, 1986 (Map 722.100a) and 0.5 gpm in May 1990. Mining of the panels beneath the spring occurred between 1986 to 1987. Water quality data was obtained on May 30, 1990 and July 15, 1991. The Star Point Spring is approximately 1,200 feet above the Wattis Seam. Longwall panels were mined in the Third Seam from July 1987 through July 1988.

The overburden within Section 12 ranges from 800 to 1,500 feet above the Wattis Seam. This region was mined with a longwall miner. Several panels, oriented west to east, were mined (Map 1, dated February 18, 1990, 1990 Annual Report) in the Wattis Coal Seam which undermined most of the area beneath Haug Ridge in Sections 12 and 13 of T15S, R7E. Two panels were mined in the 3rd Seam, oriented west to east, in Section 12 of T15S, R7E. Both seams were underlie the spring. The spring subsided about 4 feet. According to the 1997 subsidence monitoring report, subsidence cracks which reached the surface varied from 0-2 feet of displacement across cracks and were hairline to 6 inches in width.

The water right to Star Point Spring was filed by the Forest Service under 91-977 for stock watering. The priority date is 1869 and the period of use is referenced to right number 91-982 (WUC 982). Note: the water rights information was obtained off the Internet (World Wide Web) and should be confirmed by the State Division of Water Rights or the Forest Service.

Haug Ridge is the likely recharge source for Springs 971, 753 and 978 (see accompanying maps). Springs 971 and 735 are located on the east side of the ridge, and Spring 953 appears on the south side of the ridge. Mining has subsided most of the area under the ridge. While the Cattlemen claim flows have diminished at Spring 971, groundwater still emanates from Springs 753 and 978. Two noticeable differences exist between Star Point Spring and the other Springs. Spring 971 lies within the subsided zone, while Springs 753 and 978 lies outside the subsidence zone. The later springs lie on the opposite sides of a fault that bisects the ridge from west to east. There is differential settling of the surface between the two sides of the fault zone.

The 1989 Annual Report, illustrates impacts of subsidence by describing how a stream near monitoring point GS-1 was diverted from the stream channel to flow underground. The area where the stream capture occurred is far enough from the dry spring that the two events were not caused by the same subsidence cracks. However, the stream capture does show that the

subsidence cracks can divert surface water. Therefore, the possibility exists that subsidence could have damaged the spring by way of underground fracturing.

Another possible effect is the tilting of bedding planes from subsidence. Subsidence Map 521.121e, Volume III, Star Point MRP, shows that the surface in the vicinity of the spring subsided approximately four feet, and up to 6 feet west of the spring, a change in gradient of about 0.25%, relatively small, but maybe enough to disrupt flow to a intermittent spring. Subsidence could have changed the gradient of the recharge source. A 0.25% change in slope is relatively small, but could create a bowl effect which collects groundwater instead of allowing it to flow along the bedding plane to the surface. The change in dip of the beds could change the flow pattern and potentially cause the groundwater to flow to another discharge site.

Most longwall subsidence damage occurs within twelve months of mining. Since the spring was not monitored frequently to establish seasonal variation in flow the Division is unable to determine if subsidence caused the spring to dry up. It is unknown whether the water supply to the springs has changed since there is a lack of data defining the seasonal flow. The recharge area is small and flow usually deminishes over the summer. These springs appear shallow given their location on the ridge and likely fluctuate directly with snowmelt and rainfall. Previous monitoring indicate that flow from the spring is relatively small. The site review that took place at the Star Point Spring would not necessarily pick up flows that appear in early summer.

There is a possibility that groundwater is still in the vicinity of the spring, but was not reaching the surface. It was suggested that animals tromping in the riparian area could have clogged the effluent and stop the flow to the spring. Mr. Pappas suggests this could also effect Spring 753 if it remains unfenced.

It was decided during the site visit that the Huntington Cattle Association would apply to the Forest Service to conduct trenching operations to redevelop the spring. Cypress Plateau Mining Corporation would assist the Huntington Cattle Association with this development. Additionally, Cypress Plateau will assist them with clean out maintenance at the Stock watering Pond Monitoring site 978 located in the SE $\frac{1}{4}$, S $\frac{1}{2}$ of Section 13, T15S R7E. If adequate water is not supplied by the methods identified above, the Huntington Cattle Association would pursue other avenues to replace the water.

Recommendations/Conclusions:

Without historic flow measurements and seasonal flow data it is difficult to assess the amount of damages if in fact subsidence caused diminished flows. The low flow measurements of 0.8 and 0.5 gpm are relatively low flows. If it is determined in the future that mining has impacted the spring a guzzler could likely be installed to replace the source. Hopefully, the proposed trenching will contact the source.

The Cattlemen should proceed with the excavation plans to see if groundwater can be intercepted. All parties should check to see what type of flow emanates from the spring during the high runoff season. Measurements should be taken of any flow from the site.

Final conclusions of impacts can only be addressed after these steps are taken.

Signature: Joseph Helfrich on September 24, 1998
Joseph Helfrich, Supervisor

Signature: Sharon Falvey on September 24, 1998
Sharon Falvey, Senior Reclamation Specialist

Signature: Jim Smith on September 24, 1998
Jim Smith, Senior Reclamation Specialist

Signature: Dave Darby on September 24, 1998
Dave Darby, Senior Reclamation Specialist

Signature: Wayne Western on September 24, 1998
Wayne Western, Senior Reclamation Specialist