From: <John_Powell@blm.gov>
To: "Priscilla Burton" <priscillaburton@utah.gov>, "Ben Gaddis" <bgaddis@swc...
Date: Thursday, May 01, 2008 8:14 AM
Subject: AVF
Attachments: DOGM101388.PDF

Here is a DOGM letter concluding that there is AVF in Sink Valley. The areas identified could impact both coal projects.

Doug Powell, Geologist
Bureau of Land Management
Grand Staircase-Escalante National Monument
190 E. Center Street, Kanab, UT 84741
Tel: 435-644-4323
Fax: 435-644-4350
john_powell@blm.gov

(See attached file: DOGM101388.PDF)

1988 Internal document 0001. pdf.

From: "Duane Matt" <dmatt@osmre.gov>
To: <pamgrubaughlittig@utah.gov>
Date: Monday, August 06, 2007 8:39 AM
Subject: AVF Determination

Pam-

Check out this link. Paul Clark will probably call you sometime today. This link should give you some good definitions of alluvial deposits. I think we'll need more information before diving into the question you had asked.

Duane Matt

http://scamp.wr.usgs.gov/scamp/html/scg_surf_alluv.html

Duane O. Matt

Technology Coordinator/TIPS Training and Technology Transfer

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http://www.tips.osmre.gov <http://www.tips.osmre.gov/>

http://www.osmre.gov <http://www.osmre.gov/>

From: "Paul Clark" <PClark@osmre.gov>
To: <pamgrubaughlittig@utah.gov>
Date: Wednesday, August 08, 2007 12:44 PM
Subject: RE: Technical Assistance

CC: "Tonya Blackburn" <TBuckmaster@osmre.gov>

Hi Pam. I was going to call you about this, but couldn't find your number on DOGM's new website. I really like the redesign, but it's hard to find contact information for staff. Maybe it's not on there. Anyway..... sorry to hear about the recent mine accident. I'm sure you've been inundated with inquiries about the mine and mining in general, so I'll go directly to your question.

Tonya's on a little R&R, so I'll take a stab at answering.

(1) I did some brief internal inquiries about OSM experts for AVF's, and could not readily identify anyone. So, if my response doesn't suffice, let me know, and I'll probe a little deeper.

(2) Definition of Alluvial Valley Floors at 30 CFR 701.5. Alluvial valley floors means the unconsolidated stream-laid deposits holding streams with water availability sufficient for subirrigation or irrigation agricultural activities but does not include upland areas which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, together with talus, or other mass-movement accumulations, and windblown deposits.

So.....

(1) If no sufficient water bearing potential for irrigation, then it's not an AVF.

(2) If the deposits are in the upland area, then it's not an AVF.

(3) If these deposits are in the channel and store water which may be used for irrigation, then it's an AVF.

Hope this helps. If not, let me know, and we'll get you the guidance you need.

Paul Clark

OSM - Western Region

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(303) 844-1400 x1531

http://www.ott.wrcc.osmre.gov

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<http://www.osmre.gov>

From: Pam Grubaugh-Littig [mailto:pamgrubaughlittig@utah.gov]
Sent: Thu 8/2/2007 6:30 PM
To: Tonya Blackburn
Cc: David Darby; Priscilla Burton
Subject: Technical Assistance

Tonya - we need some help. We are working on an AVF determination and have a question. Does a streamlaid deposit include mudflows and sheetflows?

Who at OSM can we discuss AVF determinations with?

thanks...

Pam

From: "Harold Pranger" <hpranger@osmre.gov>
To: <PAMGRUBAUGHLITTIG@utah.gov>
Date: Monday, December 31, 2007 12:50 PM
Subject: RE: AVF Requests for Coal Hollow Mine

CC: "Billie Clark" <BClark@osmre.gov>, "Bob Postle" <BPostle@osmre.gov>, "Ra...
Pam:

Please accept my apology, before-hand, for the following stream-of-consciousness comments, written in response to the note I recently received from Rick Holbrook (see below). I thought I'd quickly get my thoughts together as soon as possible, let you digest them, and then ask you if there would be anything else you'd like me (or others in OSM) to look at further:

I spent most of this morning reviewing the 1987 AVF determination and geomorphic investigations for the original Alton Coal Mine project - Utah International (circa 1987). From 1986 to 1988 I worked for the consultant (W.E.T., Inc., Fort Collins, CO) that produced the report(s). I have been to Sink Valley, Lower Robinson Creek and have surveyed a number of other nearby tributaries. I also helped characterize the area's pre-mine geomorphology and at one time generated a postmining topographic surface. However, I was not one of the three people who focused on the AVF determination in the Sink Valley/ Lower Robinson Creek areas (those folks would be Mike Harvey, Stan Schumm and Karen Fisher). However, I was around them in the field as they collected the data and in the office as they compiled their data and produced the report. I assume the current Coal Hollow Mine permittee(s) drew heavily from that AVF/ geomorphology report - it was an extremely detailed study of the deposits and geormophology of the area. And if you've read it, you may have noticed that it also used carefully-crafted wording and referred to guidelines and rules that were in effect at that time. I wonder how applicable those are now. They were walking a VERY fine line delicately parsing out, very technically, what were or were not "stream-laid deposits" and "streams." I read your comments on the completeness of the report, and I think you're definitely on the right track with the information you asked for. I particularly agree with your comments too that discuss the need for more information regarding the fact that alluvial fans aren't categorically exempt.

Was report cited? If so, ask to have report included.

Adding to your comments, I think there are at least three items that could be brought to the table at some point. I think that critical to the discussion is how UT will handle an AVF determination where the land surface has been so heavily manipulated by stream diversions and small impoundments. Does having "streams" mean current, natural streams, or do the UT rules require there to at one time in the past have been natural streams. And what impact is there with the man-made diversion channels cut all over the surface, including perhaps even Lower Robinson Creek itself? And what about the fills? Are their fills that could have been originally identified as debris-flow deposits? Also crucial to the discussion is whether or not UT will accept the argument from the report that debris flow deposits aren't "stream-laid" deposits. Undoubtedly there have been a range of flow regimes in Sink Valley/ Lower Robinson Creek that included everything from relatively clear water streams to sediment-choked debris flows. To me, aren't they ALL "streams?" Finally, the federal rule just refers to "stream-laid deposits holding streams." It does not say whether or not the streams have to be contained in a well-defined or incised (or continuous) morphologic CHANNEL. I'm not familiar with current UT guidance, which may address whether the "streams" are defined as something that must have "continuous stream channels" or something like that, so that is a major factor in my mind. I would say that a stream of water of some kind, maybe wide and shallow, maybe at some other times or places (during incision) narrow and deep, carried the deposits to their current resting places in the area.

So, those questions pertain to the EXISTENCE, or not, of an AVF. You had other comments for the operator regarding the SIGNIFICANCE, of the AVF. I'm talking about agricultural significance. I cannot help evaluate those significance comments, but if you'd like input on those comments I'd be glad to route those around to someone in our office if you'd like (Bob Postle, if he has the time, or Amy McGregor, if she'd be willing and able).

Please let me know if there is anything else you'd like our office to evaluate. I would be glad to talk to you in more detail about this project, if you like.

Hal Pranger

Hydrologist
OSMRE-Denver
(303) 844-1400 x1449

-----Original Message-----
From: Richard Holbrook
Sent: Friday, December 21, 2007 1:02 PM
To: Harold Pranger
Cc: Billie Clark; Bob Postle; PAMGRUBAUGHLITTIG@utah.gov; Ranvir Singh
Subject: FW: AVF Requests for Coal Hollow Mine

Hal

A task when you return at the end of the year (12/31) or the beginning of the new year (1/2).

UT DOGM is in the midst of an administrative completeness review of a permit application for the proposed Coal Hollow Mine on private lands near Alton, UT. The application is not administratively complete. DOGM has asked for info on AVF a couple of times, but it has not been forthcoming (i.e., the applicant hasn't provided any AVF information). Pam would like us to review their ACR deficiency letters and let them know if they are "on the right track" with respect to requesting AVF information needed for an application to be complete.

Please look at DOGM's ACR letters and email Pam (PAMGRUBAUGHLITTIG@utah.gov) with your comments (e.g., "it's clear, comprehensive, and complete" or "here are some additional deficiencies that need attention by the applicant" or "some requested information is not supported by the regulations"--bear in mind that the regs occasionally allow "other information requested by the regulatory authority"). The Utah program requirements parrot our requirements, so "critique" the DOGM deficiency letters using our requirements. Please recruit any help you need for this exercise.

First thing, please let Pam know your schedule for getting the review done.

Please copy me in correspondence with Pam.

Thanks

-----Original Message-----
From: Pam Grubaugh-Littig [mailto:PAMGRUBAUGHLITTIG@utah.gov]
Sent: Friday, December 21, 2007 12:28 PM
To: Richard Holbrook
Cc: Priscilla Burton
Subject: [WARNING - NOT VIRUS SCANNED] AVF Requests for Coal Hollow Mine

Hi, Rick - thank you so much for reviewing what we sent to the applicant regarding AVF's. I know you are from the government and are always "here to help"!

We have issued two completeness reviews (August 28, 2006 and August 27, 2007). Both times the application was not complete. The review in 2007 focused more on the AVF issue.

Merry Christmas and a very Happy and Healthy and Prosperous New Year!!!!!!

Mine Name - Coal Hollow Mine
Applicant - Alton Coal Development, LLC

Thanks...

Pam

From: Priscilla Burton
To: hpranger@osmre.gov
Date: Tuesday, July 29, 2008 11:22 AM
Subject: Coal Hollow Application

Hal,

The entire application can be viewed on line at the following link, using the login and password: ogmguest

https://fs.ogm.utah.gov/FILES/COAL/PERMITS/025/C0250005/2008/INCOMING/03202008

In particular, see
Dwg 1-1 permit area
Dwg 1-2 permit area & LBA

Dwg 6-6 Location of Geologic Cross-sections
Dwg 6-3 Geologic Cross-sections

App 7-1 Peterson Hydrologic Report
App. 7-3 Springs
App 7-4 1988 Water Engineering and Technology Report (Geomorphology of Sink Valley) App 7-7 Supplemental AVF information includes Plates 1 - 4

Chap 7, Table 7-9 Estimated rates of Groundwater inflows.

Dwg 7-1 Seep and spring locations
Dwg 7-4 Alluvial groundwater discharge
Dwg 7-7 Subirrigated and Flood irrigated lands
Dwg 7-13 Potentiometric levels

In summary, we have a previous AVF determination for Sink Valley written in 1988, based upon the Utah International Inc. application. (This internal memo is part of the UII record also available on line...when I find it, I will send the web address.) and the Reconnaissance Determination of Alluvial Valley Floor Status....prepared for OSM by Jack Schmidt in 1980. Jack Schmidt determined Sink Valley, Swapp Hollow and the upper reaches of Robinson Creek as AVF. His determination was based upon agricultural use of the waters.

There is agricultural use of the land within and adjacent to the permit area (ponds for watering and subirrigated and flood irrigated lands for grazing). However, there appears to be a lack of terraces and floodplains in the area. How important are these features to the AVF determination is a question we would like to discuss during a conference call on Thursday. Thanks!

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>>> Priscilla Burton 8/5/2008 10:27 AM >>>
AVF Team,
Our last conference call concluded that the geologic criteria for the AVF determination were absent from the proposed permit area. However, there are many records in our files (now on the web) that arrive at the opposite conclusion. In addition, the OSM Identification and Study Guidelines refer to the Alton area as a case study in Appendix D.

In particular, we need to reconcile the illustration of identified alluvial valley floors (Figure 3, App. D) and the following statements from Appendix D of the OSM AVF Identification and Study Guidelines with our assessment of AVF in the Coal Hollow proposed permit area.

Appendix D uses Alton as an example of a situation where
"initial studies of alluvial valley floor status will be sufficient for identification purposes in permit applications, unless the applicant chooses to collect additional data which clarify the regional pattern." (page D-1)

This initial agricultural use study was done back in 1980 by Schmidt and is cited in Appendix D-1, because "Some of the notions about alluvial valley floors in the Powder River Basin are not applicable in this portion of the Colorado Plateau. Therefore, it was necessary to examine the basic role of valleys in the agricultural land use pattern before identification could begin." (pg. D-2)

The Appendix states on page D-4 that "Agriculture in the region could not exist in its present form without the valleys; therefore, alluvial valleys do exist in the region," regardless of entrenchment pattern of irrigation, or geologic criteria (pg. D-6).

"Aside from designating existing irrigated lands and subirrigated areas in valleys as alluvial valley floors, the central question became the assessment of what valleys have the capability to be subirrigated....The assumption was made that water could be transported to any terrace level, providing that a part of that level had historically been irrigated. Terrace levels not irrigated by anyone in the region were not mapped as alluvial valley floors, because there was no demonstration of agricultural importance by the regional agricultural community. The upstream limit of designations extended to the area where streams were characteristically diverted. The most difficult determinations have been related to the status of valleys where the downstream decrease in available water was known. If an applicant wished to propose mining in these areas, however, he would have the discretion of collecting surface water data which might indicate that a site was below the threshold for irrigation development. " (page D-8 and D-9).

The Coal Hollow proposed permit area falls within a previously designated AVF, shown on Figure 3. As noted in App. D, the applicant may demonstrate that the site is below the threshold for irrigation development, based upon "water quantity, water quality or soils data that might show that certain areas could not be irrigated, owing to specific physical limitations." pg. D-9. The Coal Hollow application attempts to show that this formerly irrigated agricultural area has either been abandoned or has negligible activity and that there are reduced water flows.

In conclusion, we should acknowledge the App. D guidance and describe the water requirements for the pastures on Dames and Pugh's lands in relation to the water quantity and quality information in the application.

Priscilla Burton, CPSSc
Division of Oil Gas & Mining
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priscillaburton@utah.gov
(435) 613-3733

From: Dana Dean
To: Steve Alder
Date: 3/2/2010 5:56 PM
Subject: Fwd: Re: Coal Hollow AVF

Looks like I do have some emails, this is one. Should I get you copies of all of them?

>>> Dana Dean 8/5/2008 2:10 PM >>>
Thanks, Priscilla. I know you are all going about this as meticulously as possible and appreciate all of the staff's work.

>>> Priscilla Burton 8/5/2008 1:37 PM >>>
Hi Dana,
We have not formally or finally reached a conclusion. We have only asked for more information. The guidelines have not changed, nor ever been finalized. But, in our telephone conference call last week, Hal Pranger supported Jim's contention that there is no terracing or floodplains and therefore the proposed site would not meet the first test of the geology required for a positive determination. Hal and Jim agreed that based upon geology, the Sink Valley AVF begins somewhere downstream from the proposed site.

I stressed that we would have to write a negative decision such that we could defend the change from the 1987/88 Division decision for the same area. Unknown to me at the time of the conference call, was the fact that information in Appendix D, from the OSM guidelines highlights Alton, provides a map of the AVF and indicates that the geology of the area is not as important as the agricultural use.

Our decision needs to take all of the 1980's decisions and guidelines into account. And, like you say, present a strong argument, if we finally decide that the AVF in Sink Valley begins somewhere below the proposed mine site.

Priscilla.

>>> Dana Dean Tuesday, August 05, 2008 11:37 AM >>>
Priscilla,

I wasn't aware that we had reached a conclusion. Haven't we asked for more information on this? I agree that we need to address the fact that an OSM guideline for AVF determination presents this as an alluvial valley floor. If we are refuting that, we have to have some solid scientific bases. Has anything changed since the guideline was written (other than the lack of farming)?

Thanks,
Dana

>>> Priscilla Burton 8/5/2008 10:27 AM >>>
AVF Team,
Our last conference call concluded that the geologic criteria for the AVF determination were absent from the proposed permit area. However, there are many records in our files (now on the web) that arrive at the opposite conclusion. In addition, the OSM Identification and Study Guidelines refer to the Alton area as a case study in Appendix D.

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