

February 17, 1993

Robert L. Wilcox
U.S. Forest Service
Rogue River National Forest
47201 Highway 62
Prospect, OR 97536

Grants Pass Field Office

SUBJECT: Drilling at the Quartz Mountain Silica Project

Dear Bob:

This letter is a product of our discussions concerning possible sample contamination during drilling.

At this stage, two drilling alternatives have been proposed: 1) a hand-held core drill and 2) a track-mounted percussion drill. Both alternatives are subject to contamination from pieces of the bit as it wears down, even though the bits, typically carbide, are harder than silica. Bit wear is largely a function of bit diameter, design, drill-stem pressure, and rock hardness.

The core drill alternative may also be subject to metal contamination as the core sample slides up the core barrel which collects the sample. The core sample may scrape the core barrel and may cause some metal to adhere to the sample. Drilling fluids, however, minimize friction between sample and core barrel, but the sample must be carefully cleaned to remove drilling mud caught in crevices in the core sample. Drilling muds introduce another contaminant to the sample that can affect the silica analysis if not properly handled.

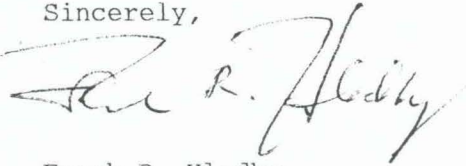
The percussion drill alternative, essentially a normal circulation method, is subject to drill stem contamination. The drill stem can deviate from the true center of the hole and slap the sidewalls of the hole. This may tear free metal particles that may become caught in the stream of cuttings being ejected from the hole. Sieving the cuttings to about 200 mesh and discarding the fine fraction will remove many of the fine metal filings.

Metal contamination is a concern at Quartz Mountain because this deposit has been identified, through surface sampling, as containing naturally occurring titanium at levels that are marginally acceptable to the industry for certain chemical grade uses of silica.



Without further information it is not possible to ascertain which drilling method is more susceptible to metal contamination.

Sincerely,

A handwritten signature in dark ink, appearing to read "Frank R. Hladky". The signature is fluid and cursive, with the first name "Frank" being more prominent and the last name "Hladky" following in a similar style. The initials "R." are clearly visible between the first and last names.

Frank R. Hladky
Resident Geologist

HW11217.L93

xc: Ron Gibson
file

January 12, 1993

DEPARTMENT
OF GEOLOGY
AND MINERAL
INDUSTRIES

Mr. Ron Gibson
Mountain Valley Resources, Inc.
5366 Thompson Creek Road
Applegate, OR 97530

SUBJECT: Quartz Mountain Silica Project, Jackson Co.

Grants Pass Field Office

Dear Ron:

Thank you for the opportunity to review the environmental assessment (EA) of your exploratory drilling project. I have provided some comments to address the exploration aspects. In doing so I have called upon my experience and the experience of associates during exploratory drilling projects for the U.S. Geological Survey. I have also applied my drilling experience as an exploration geologist for Newmont Exploration Ltd.

The EA is very detailed. Environmental concerns of various types were addressed. Several types of drilling platforms were considered (eg.: track, truck, helicopter) to address the short-term environmental impacts to the surface. There is also some discussion on the subsurface impacts of core drilling and reverse-circulation drilling equipment.

In addition to core and reverse-circulation tools, are more common, less complicated, less expensive normal-circulation tools that are viable exploration machines in many instances.

Considering the detail of the EA, I am surprised that normal-circulation tools were not mentioned, although it would be difficult to arrive at an exhaustive list of exploration tools that might do the job. My reading of the USDI marketability test is that the burden of proving up the deposit rests upon the applicant, and that usually includes choosing the exploration tools. In the mining industry, exploration tools and techniques are constantly being advanced. What was once standard becomes obsolete. Tried and true methods, however, prevail for long periods of time. Nevertheless, a lot of research was done on your behalf, and you can consider that a bonus!

From an exploration standpoint, normal-circulation equipment has advantages and disadvantages. It is more common, simpler, and less expensive than core or reverse-circulation equipment. Normal-circulation equipment was used in exploration prior to the development of reverse-circulation equipment. It differs in its operation from reverse-circulation in that the cuttings come up outside the drill-stem, instead of inside. Sample integrity can



5375 Monument Drive
Grants Pass, OR 97526
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Ron Gibson
January 12, 1993
Page 2 of 2

be compromised with normal-circulation equipment when drilling through multiple lithologies, especially if the competency (hardness) of the lithologies varies widely. Sidewall contamination may result.

In a competent unit, such as replacement quartz bodies, sidewall contamination can be minimized because the hole maintains its integrity. In mono-lithologic units whose composition is broadly the same, sidewall contamination may be negligible.

Sidewall contamination using normal-circulation equipment may be volumetrically insignificant or significant depending upon the geochemical precision required for the product, deposit variability, mining methods and economics anticipated, hole diameter, and the increasing depth of the hole. A marginal deposit may require a more stringent drilling and sampling program, if it is estimated that the economics warrants the increased costs.

Different intervals of the silica deposit may vary subtly in their composition. This may or may not be a problem, depending upon your target product specifications, the amount of interchange that occurs between the sidewall and the cuttings, and the compositional variation within drill holes. The more marginal the deposit, the greater the problem. Your drilling project should help you identify those areally significant zones that clearly meet or exceed grade. However, it may not help you much in areas that are both complex and marginal.

Drill hole samples are also subject to contamination from the drilling tools themselves because metal filings are invariably incorporated into the sample. This is true of core, reverse-circulation and normal-circulation equipment. In the case of cuttings, most of the metal filings can be removed by sieving and discarding the fine fraction (to about 1 mm) and/or via a magnet.

The most valuable information on the drilling characteristics of your deposit will come as a result your exploratory drilling.

Good luck!

Sincerely,

A handwritten signature in dark ink, appearing to read "Frank R. Hladky". The signature is fluid and cursive, with the first name "Frank" and last name "Hladky" clearly legible.

Frank R. Hladky
Resident Geologist

HGib112.L93

xc: file



STATE OF OREGON

INTEROFFICE MEMO

TO: FILE

DATE: October 8, 1990

FROM: Tom Wiley

SUBJECT: Quartz Mountain / Abbott / Prospect Silica

Introduction

9/28/90

Wiley attended a meeting between Ron Gibson, representing two companies RAMEX, Inc., and Mountain Valley Resources, Inc., and U.S. Forest Service personnel including Gordon Lyda, Mineral Examiner, and Robert Wilcox of the Prospect Ranger District, Rogue River National Forest. Subject of the meeting was a preliminary operating plan for the Quartz Mountain / Abbott / Prospect Silica mine. Following the meeting the participants visited the proposed surface mine site.

Location

Section 34, T30S, R2E. RAMEX, Inc., owns 15 claims that form a block straddling the Rogue-Umpqua Divide and lying in both Jackson and Douglas Counties. The company proposes to develop claim number 17 which lies in Jackson County at the intersection of Forest Road 68 and Forest Road 910 (see accompanying location map).

Current Status

No mining activity at the site. Forest Service is conducting preliminary faunal and floral inventories and assessing validity of claims for locatable minerals.

History

Claims were staked in 1985 and have been maintained since (Geitgey, 1990). Some faces appear to have been cut as a result of road building for logging, but this may represent earlier investigation of the silica body.

Regional Geology

Smith et al. (1982) show the regional geology to include Miocene pyroclastic, volcanoclastic, and sedimentary rocks (Smith's unit Tc4) cut by a younger intrusive (Ti) and overlain by late Tertiary or Quaternary basalt flows (QTba).

Local Geology

Geitgey (1990) describes the deposit as a silicified rhyolite.

Ore Bodies

The silica body was observed to crop out over most of claim 17 above Forest Service Roads 68 and 910. It

undoubtedly extends beneath the cover and on to the adjacent claims, however these were not visited. Thickness of the ore bodies and the nature and distribution of impurities have not been verified by drilling. Mr. Gibson reported that surface samples run 99.6 to 99.9% silica. However, two samples reported by Geitgey (1990) ran 98.6 and 97.7% silica.

Reserves

Mr. Gibson reports that total reserves "would last several lifetimes" at anticipated production of 100,000 tons per year. He believes that Claim 17 will easily provide 500,000 tons.

Equipment

None.

Plan

The company plans a 5 acre quarry-type operation with material crushed to 6" minus and hauled off site for further processing. Initial production of 15,000 ton/yr will rise to 40,000 ton/yr after three to five years and would eventually top out at 100,000 ton/yr. Using 20 ton trucks running one shift six days a week from May through October (26 weeks), the operation would initially require 4.8 loads per day (one every hour and forty minutes), 12.8 loads per day (one every thirty-eight minutes) in three to five years, and 32.1 loads per day (one every 15 minutes) eventually. Destination was not stated, however, Mr. Gibson believes a truck could make three runs per day, suggesting that each round-trip would be about 2½ hours (Medford, Gold Hill, Roseburg?).

Material 6" minus to plus 1" would be sold to Dow Chemical in Springfield for production of silicon for medical products. Geitgey (1990) reports that Dow requires ore with a minimum of 99.4% silica and a maximum of 0.05% titanium dioxide. Neither of the Quartz Mountain/Abbott samples that he analyzed met these criteria. 1" minus material has other markets, such as toothpaste, which require high-purity silica.

References

Geitgey, R.P., 1990, Silica in Oregon: Oregon Department of Geology and Mineral Industries Special Paper 22, 18p.



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Prospect Ranger District
47201 Highway 62
Prospect, OR 97536

Reply to: 2810

Date: December 21, 1992

Ron Gibson
Mountain Valley Resources, Inc.
5366 Thompson Creek Road
Applegate, OR 97530

Dear Ron:

Enclosed is a copy of the draft Environmental Assessment for the Quartz Mountain Silica Exploratory Drilling Project. I am sending it to you for your review and comment prior to making a decision.

I am pleased to have finally reached this stage of the NEPA process and intend to make a decision soon. Although I have not decided which alternative to select, I tend to favor the least impacting alternative due to the Native American sensitivity for the area. Your comments on the viability of the portable core drilling alternative is important.

I received your updated Plan of Operations on December 10, 1992.

I will be happy to discuss the content of the Environmental Assessment with you. If possible, I would like your comments by January 29, 1993, or sooner.

Sincerely and Happy Holidays,

Robert L. Wilcox
District Ranger



MOUNTAIN VALLEY RESOURCES
1019 S.E. Clarey
Grants Pass, OR 97526

February 5, 1992

ATT. Allen Fowler
Prospect Ranger District
Prospect, Oregon

REF: Exploratory Drilling Proposal

Alternative #1 marked in ~~RED~~ ^{BLUE} BOX consists of drilling 5 holes 2 1/2" in Diameter at least 50 to 100 FT. deep. Samples will be taken every 10 FT. in depth. See map for location of holes 1 to 5 indicated in RED BOX.

Exploratory Drilling Proposal

Alternative #2 marked in ~~BLUE~~ ^{GREEN} BOX consists of Drilling 12 holes 2 1/2" in diameter at least 50 to 100 FT. deep. Samples will be taken every 10 FT. in depth. See map for location of holes 1 to 12 indicated in BLUE BOX.

The size and type of Track Drill anticipated to be used to drill exploratory drill holes, will be an LM-100 Drill or comparable. Enclosed is a Brochure on Track Drill LM-100.

NOTE:

Mountain Valley Resources does not foresee any roads to be built to complete the above Exploratory Drilling.

Expected time to complete exploratory drilling. Approximately 3 to 5 days, once drilling begins, excluding adverse weather or break downs.

If you have any question please let me know.

Sincerely,

Ron Gibson

Ron Gibson,
Mountain Valley Resources

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200 NE Greenfield Road
PO Box 440
Grants Pass, OR 97526-0242

Reply to: 2810 Mining Claims

October 3, 1990

Subject: Quartz Mountain (Mountain Valley Resources, Inc.)

To: Robert Wilcox, District Ranger
Prospect RD

Mr. Ron Gibson, on behalf of Mountain Valley Resources, Inc., has filed a Plan of Operation for mineral activity on mining claims located in Section 34, T. 30 S., R. 2 E., WM.

The Bureau of Land Management recordation files (July 1990) indicate that assessment work for 1989 has not been filed for these claims. Mr. Gibson confirmed this fact, in conversation, on Monday, October 1, 1990. Mr. Gibson stated that new locations of these lands had been made in April, 1990. A telephone conversation with Joanne Nilsen, BLM Record Section, Oregon State Office, on October 3, 1990, indicated that the latest (April) locations had not been recorded with BLM. Notices of location must be filed with the State Office of BLM within 90 days of the date of location, if not, then the claims are considered null and void. Therefore, it must be concluded that the subject lands on Quartz Mountain are not currently under mining claims. This defect may be corrected by proper location and recordation with Jackson County and the Oregon State Office of the Bureau of Land Management.

An attempt to contact Mr. Gibson, at the number given, resulted in a telephone call to a number no longer in service.

Analytical data of samples from the Quartz Mountain silica deposit, as provided by R. P. Geitgey, Silica in Oregon, State of Oregon, Department of Geology and Mineral Industries, Special Paper 22, 1990, have been compared to analytical data from several silica producing operations in Region 6. The quality of silica in the Quartz Mountain silica deposit is equal to or better than the silica being produced from these other deposits in the Region. Therefore, it is concluded that this silica deposit is a locatable mineral under the mining laws of the United States.

An independent cost estimate has been completed for mining, processing and transporting silica from this deposit to a potential market. This cost estimate compares favorably to the confidential cost estimate provided by Mr. Gibson.

Therefore, it is recommended that mineral activities on Quartz Mountain be managed pursuant to 36 CFR 228, Subpart A, following proper entry and location under the mining laws of the United States.

/s/
GORDON R. LYDA
Mining Engineer

Cow Creek Band of Umpqua Tribe of Indians

P.O. Box 456
Canyonville, Ore. 97417
August 22, 1991

Mr. Allan Fowler
U.S. Forest Service
Prospect Ranger District
Prospect, Oregon 97536

Re: Proposed Mining, Sec. 34, T30S, R2E

Dear Mr. Fowler:

As a result of the on-sight evaluation done on August 19th by the Vice Chairman of the Tribe, Wallace Rondeau, Jr. and tribal member, Jack Ansures who work on cultural resource issues, the Tribe has grave concerns about any mining operation whatsoever in that area.

Many questions arise:


1. Is this not a common mineral?
2. What metalurgical process is to be used?
3. Has a Determination of Eligibility been done?
4. Have archaeological sites been duly recorded?
5. If a DOE has been done, what are the boundaries of the sites, how far do they reach?
6. What about fire danger?, blasting?, rolling rocks (how far will they roll or shower)?, dust settling on the huckleberry bushes and other plant life, how will all of this be controlled? what protective measures have been proposed?
7. Has the Environmental Impact Statement been completed?
8. Is this not a Spotted Owl area? What about rare plants and amphibians in the area?
9. What about the effect on other wildlife such as deer and elk?

The Huckleberry Patch and that area has been a meeting place for our tribal people from aboriginal times to the present day. This is a ceremonial area as well as a food gathering area. There are many food sources within the area. Our people have special ties to the mountains. It is our belief that as you ascend the mountain you are in closer communion with the Great Spirit.

The Tribe believes that this entire area should be on the National Register. Protection of the area is a priority with us. We do not believe that it is possible for a mining operation to operate without causing considerable disturbance, therefore, we oppose the proposed operation in its entirety.

Thank you for your cooperation and for meeting with Mr. Rondeau and Mr. Ansures.

Sincerely,


Sue M. Shaffer, Chairman
Cow Creek Band of Umpqua
Tribe of Indians

cc: Roy Brogden
Wallace Rondeau, Jr.
Jack Ansures
Carla Swanson, Tribal Sec.

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Prospect Ranger District
47201 Highway 62
Prospect, OR 97536

Reply to: 2810

Date: June 28, 1991

Susan Shaffer,
Cow Creek Band of Umpqua Tribe of Indians
2400 Stewart Parkway
Suite 300
Roseburg, OR 97470

A. Fowler
your file copy

Dear Ms. Shaffer:

A mining operations plan has been filed with the District Ranger, Prospect Ranger District, to excavate and remove from National Forest System lands metallurgical grade quartz from an outcropping on Quartz Mountain adjacent to forest development road (FDR) 68.

Ramex, Inc. currently holds 15 valid mining claims, Ramex #'s 2-18, in the Quartz Mountain area in sections 33 and 34, T30S, R2E. The quartz outcropping which is the subject of the operating plan occurs immediately adjacent to FDR 68. The claim, Ramex #17, is located in the NW1/4, SW1/4, section 34, T30S, R2E (see attached maps).

The operations plan calls for setting up a rock crusher, storage site, and loading area adjacent to FDR 6800910 on a relatively level flat, and modifying the junction of FDR 68 and 910 to enable tractor-trailer trucks to make an east turn onto 68 toward highway 62. The operator would develop the pit in approximately three lifts/terraces over the next 5 years.

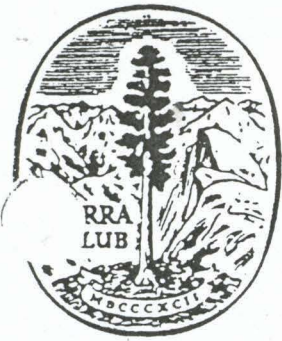
If you have any questions or need further clarification about the mining proposal, please contact Allen Fowler or me at the Prospect Ranger Station, 47201 Hwy 62, Prospect, OR 97536. Phone: (503) 560-3623.

Robert L. Wilcox

Robert L. Wilcox
District Ranger

cc: Wallace Rondeau, Vice-Chairman
Sharri Shaffer

enclosures



Rogue Group - Sierra Club

June 4, 1991

Robert Wilcox, District Ranger
Prospect Ranger District
Rogue River National Forest
Prospect, OR. 97536

Subject: LEG ANALYSIS AREA

Dear Bob,

The main issues identified in your notice of May 17 seem very appropriate. It is especially welcome to see that you will not be entering the roadless areas. My recommendation is that any mining operation be strictly regulated to ensure against negative impacts--all appropriate mitigation measures and bonding should be required.

An alternative that emphasizes habitat diversity is certainly proper and desirable especially considering the great concern all over the country about the continuing loss of this diversity.

It appears that much, if not all, of this area may be within the USFW Service's "critical habitat" designation. This is also an issue needing consideration.

Please send me maps and information describing the alternatives being considered as soon as they are available. Thanks very much, and thanks for sending me the invitation to comment.

Sincerely,

Myra Erwin
300 Grandview Dr.
Ashland, Oregon 97520

482-9293

Robert L. Wilcox,

6.5.91

This letter is in response to your invitation to comment on the Leo Analysis area.

In regards to the proposed mining operation I recommend including as many mitigation measures as necessary to assure that this project does not degrade visual quality along road 68 or interfere with the Umpqua Indian Tribes' area of interest.

In regards to the timber sale proposal I recommend that all unfragmented Old Growth stands be left intact. New road building should not be necessary in this analysis area. An alternative which emphasizes habitat diversity within the analysis area would be acceptable if it does so without sacrificing existing Spotted Owl habitat.

Timber harvesting should be done with uneven age management strategies that retain an unfragmented forest landscape. No clear-cuts or shelterwood (2-stage clearcuts) should be used in this management area. The roadless portions should remain undisturbed to provide a buffer for the neighboring wilderness and research natural area.

[Signature] P11

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Prospect Ranger District
Prospect, OR 97536

Reply to: 2430 Commercial Timber Sales
1950 NEPA

Date: May 17, 1991

Subject: Leg Analysis Area

To: mNAME
mADDRESS mZIP

This is an invitation to comment on the Forest Service's Leg Analysis Area, located on the Prospect Ranger District on the Rogue River National Forest. Your input is needed to help the Forest Service design activities that best meet the interests of all.

The Leg Analysis Area is located in the upper Abbott Creek watershed and includes approximately 3100 acres. The northeastern portion of the analysis area borders the Abbott Butte Research Natural Area while the northwestern boundary of the analysis area is adjacent to the Rogue-Umpqua Divide Wilderness Area on the Umpqua National Forest. (Refer to the enclosed map for the analysis area boundaries) The legal description of the area is: T.30S., R.2E., portions of sections 25,26,27,34,35, and 36; T.31S., R.2E., portions of sections 1,2, and 3; and T.31S., R.3E., portions of sections 6 and 7, W.M., Jackson County, Oregon.

Currently there are two potential projects identified within the analysis area. One is the proposed Leg Timber Sale, identified as sale number 2618 in the Activity Schedule for the Land and Resource Management Plan (LRMP), and the other project is a mining operation proposal to excavate and remove metallurgical grade silica quartz from an outcropping on Quartz Mountain. Other potential projects include development of a recreation trail to access a waterfall on Abbott Creek, interpretive signing along Forest Road 68, and several small road system improvement projects.

The main issues regarding the proposed projects have been tentatively identified by Forest Service specialists based on preliminary scoping.

The main issues relating to the proposed timber sale include:

Consistency with recommendations in the Interagency Scientific Committee report, "A Conservation Strategy For The Northern Spotted Owl".

Protection of site productivity in relation to compaction, slope stability, displacement, surface erosion, and large woody debris.

Minimize fragmentation of old growth habitat.

Protection of water quality in Abbott Creek and adjacent tributaries.



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333 W. 8th Street
P. O. Box 520
Medford, OR 97501

Reply to: 2320

November 20, 1992

Subject: Quartz Mountain exploratory drilling project: Mitigation measures
for cultural resources

To: Prospect District Ranger

This letter deals with cultural resource concerns relative to the proposed exploratory drilling of five or twelve 2.5"-diameter holes at Quartz Mountain by Mountain Valley Resources, Inc. It provides recommendations for mitigation of potential project impacts to both archaeological and traditional cultural properties.

The proposed drilling site is situated on a 3-acre rock outcrop, adjacent to Forest Service road 68 and spur road 910. The silica outcrop is close to archaeological site RR-980 (a lithic scatter at least 0.5 acre in size, situated immediately to the east of the outcrop), and it is located within the boundaries of the Rogue-Umpqua Divide "Huckleberry Patch," a traditional cultural property significant to the Cow Creek Band of Umpqua Tribe of Indians. The "Huckleberry Patch" has been formally determined eligible to the National Register of Historic Places (NRHP).

Archaeological Site RR-980 (35JA60)

Archaeological Values: The project vicinity was first surveyed for archaeological and historical evidence in 1985. At that time, a scatter of prehistoric lithic artifacts and debitage was found east of the rock outcrop. Designated RR-980 by the Forest Service (and assigned site-number 35JA60 by Oregon SHPO), this site was the only archaeological resource found close to the proposed project area. Subsequent surveys of the project area intensively searched the entire surface of the rock outcrop and the forested margins surrounding the outcrop. No evidence of prehistoric silica quarrying/reduction was found on the outcrop, and, aside from site RR-980, no other archaeological or historical evidence was found in the vicinity despite repeated, intensive search efforts.

Site RR-980 is located on a gently-sloping, forested "bench" which is located east of the southeastern base of the project area's rock outcrop. Although its exact dimensions have not been determined by subsurface testing, it definitely does not extend onto the surface of the outcrop. A few artifacts of obsidian and cryptocrystalline silica (largely "jasper," "agate" and other varieties not native to the site area) and associated tool-making debris are the only evidence found during intensive surface searches; most of these items were found exposed in the grade of spur road 980, which apparently passes along the south/east, downslope margins of the site.

Site RR-980 has not been test excavated to determine its exact dimensions to the east, its depth, cultural density, etc. It will be treated as a potentially significant, National Register-eligible site for the purposes of the proposed drilling project, and it will continue to be managed as a NRHP-eligible site unless/until future test excavation determines otherwise.





Recommended mitigation measures: Site RR-980 (35JA6C) should be protected from the adverse effects of any project-related activities. This should be done by formally eliminating the site from the project's area of impact. Equipment and personnel access from FS road 68 to the drilling area should be restricted to the western and northwestern margins of the outcrop, a route that will involve no known archaeological resources. In addition to avoidance of the archaeological site by drilling equipment, project personnel should be restricted from the site area during lunch-time or other work-breaks, as well as during "off hours." In short, the Forest Service's potential approval of the project's operating plan should specifically state that there will be no project-associated activities of any kind permitted within the archaeological site area. The site area should be clearly identified by means of a map as well as by on-the-ground marking by the Forest Archaeologist prior to any project activities.

Traditional Cultural Property: "The Huckleberry Patch"

In July 1992, based on the results of archival research and personal interviews, the Forest Service evaluated a 7,650-acre area of the Rogue-Umpqua Divide--the Cow Creek Indians' "Huckleberry Patch"--as being eligible to the National Register of Historic Places as a "traditional cultural property." The area met all of the relevant NRHP criteria as set forth in the NRHP Bulletin 38. The Oregon SHPO concurred with the Forest Service's evaluation, and the area has the legal status of a National Register property relative to all projects which might affect its traditional cultural values. The site of the proposed exploratory drilling project is located within the NRHP area boundary.

A research summary and evaluation report was prepared for the Huckleberry Patch NRHP area. This letter draws on information gathered during preparation of that document, as well as on personal statements made to Forest Service representatives by leaders of the Cow Creek Band of Umpqua Tribe of Indians.

The Huckleberry Patch is a traditional-use area of the Cow Creek Indians, one that has played an integral part in the group's culture from prehistoric times until the present. Although seasonal gathering of huckleberries forms the "core" traditional use which has annually brought Cow Creek members to the area, other continuing uses directly associated with the traditional berry harvest include hunting, recreational and social interactions among Cow Creek members, and spiritual renewal.

Spiritual Values: Ethnohistorical research of Cow Creek Indians' use of the Huckleberry Patch reveals that the area traditionally held several kinds or aspects of spiritual values. Some of these are so closely related to social values as to be inseparable from them (for example, group dances or "pow-wows" and the teaching of life skills to youngsters). Annual group rituals were once observed near the summit of the Rogue-Umpqua Divide upon first reaching the main berry-gathering area. Solitary religious observances, referred to by some Cow Creeks as "quests" and by others as "praying" or "communion," took place (and continue to take place) at various known and unspecified locations within the Huckleberry Patch.

The ethnohistorical research yielded no direct evidence of specific spiritual activities, either historic or current spiritual activities, occurring at or very close to the proposed project area. Discrete areas or sites that are documented to have had (or are very likely to have had) special spiritual importance as geographically-tangible places are located within the Huckleberry Patch area at prominent saddles, peaks, and traditional camping areas along the summit of the Rogue-Umpqua Divide. These areas are situated at significantly higher elevations, and on more topographically prominent landforms, than the silica outcrop of the proposed project area.





As a historical researcher who has reviewed a substantial amount of information about traditional Cow Creek Indian uses of the Huckleberry Patch vicinity, I can state that I am unfamiliar with any evidence which points to site-specific spiritual values directly associated with the project area in distinction to other areas of the Huckleberry Patch. However, the current absence of historic evidence regarding any specific spiritual activities at, or special spiritual beliefs associated with, the outcrop and its immediate environs does not establish that such activities/beliefs were not held in the past; Cow Creek interviewees indicated that elders typically kept the actual location of solitary spiritual places as very personal information that was not divulged to other family members. Similarly, the absence of testimony regarding any current, on-going site-specific spiritual activities at the outcrop does not deny that such solitary activities by unknown Cow Creek individuals may take place.

The above caveats do not address a geographically more "generalized," and currently expressed spiritual belief of the Cow Creek Indians, one that has been repeatedly stated to Forest Service representatives when discussing the proposed project. This belief is given in emphatic terms that the entire Cow Creek aboriginal territory, and the high country in particular, is sacred: "None of the Cow Creeks has to go to a church to pray; our religion is tied to the earth, the sky; all that is held sacred by us...especially in the mountains." "The higher you go in the mountains, the closer you are in communion with the Great Spirit." "We don't have 'boundary lines' around holy places."

Concomitant to this belief is one that expresses the Cow Creek Indians' "firm and adamant" religious opposition to mining in any form (including exploratory drilling) within areas held as sacred (i.e., in this case, the Huckleberry Patch in particular). This opposition, in contrast to the Cow Creek Indians' past acceptance of timber harvest and associated road building in the Huckleberry Patch, is stated in terms of mining's non-renewable, irretrievable character; even with post-mining rehabilitation, a mined area is "desecrated" according to Cow Creek tribal leaders.

Mitigation of impacts to spiritual values: Because there are no site-specific spiritual values documented for the proposed project area, no such mitigation measures can be recommended. Regarding the Cow Creek Indians' more generalized spiritual beliefs about the Huckleberry Patch, and the associated religious opposition to mining, tribal leaders have stated repeatedly that no measures could "lessen" or eliminate mining-related impacts to those spiritual values. In short, potential mitigation measures relative to currently-held Cow Creek Indian spiritual values apparently do not exist.

Other traditional-use values and current concerns: In addition to spiritual values, the Cow Creek Indians' traditional uses of the Huckleberry Patch include food-gathering (particularly berry-picking but other uses as well, such as deer/elk hunting) and recreational/social activities. Tribal leaders have expressed specific concerns regarding the proposed project's potential impacts to huckleberry bushes and other plant habitat, as well as to wildlife. These concerns have been stated verbally to the Forest Service as well as in Tribal Chairman Sue Shaffer's August 22, 1991 letter to the Prospect Ranger District. Among the concerns that have been specifically identified by the Cow Creek Indians are: the effects of fire danger, blasting (safety and noise), debris and dust settling on huckleberry bushes, and possible interference with deer and elk. Other concerns which can be inferred from Cow Creek representatives' verbal statements include social crowding and visual impacts.





The above concerns involve several different aspects of the proposed project: timing, staging-area location, access route, drilling methods and disturbances/impacts directly associated with drilling activity, and post-project results (i.e., site-restoration concerns). Below are mitigation measures designed to address each of these aspects. Additional measures, or site-specific modifications of the measures presented here, may be needed if the project is approved.

Recommended mitigation measures: The following recommendations provide a response to the on-site, physical (as opposed to the intangible, spiritual) values and concerns that are identifiable at this time.

A. Timing:

1. Seasonally restrict the project to the period between spring snowmelt and mid-July (i.e., avoid the period of highest Cow Creek Indian use during summer [camping, berry harvest] and fall [hunting] seasons.
2. It is assumed that impacts to spring fawning/calving would be a concern only at elevations much lower than the project area; if this assumption is erroneous, then further seasonal modification may be necessary. It is also assumed that spotted owl survey confirms no owl pairs within one-quarter mile of the drilling site, and therefore a seasonal closure for owls will not conflict with the seasonal restriction recommended in #1, above.
3. If project activities were to extend past July 4, drilling should be restricted from the holiday and any subsequent weekends.

B. Staging area, or project camp:

1. It is assumed that the approximate 1-2-week long project would require use of a location where personnel would camp, and where some equipment and materials would be stored; it is also assumed that thorough and timely post-project campsite clean-up will be required as part of the Forest Service approval of the operating plan.
2. No staging area or project camp should be permitted at Huckleberry Gap or other nearby traditional "dispersed campsites" within the Huckleberry Patch NRHP area.
3. A recommended location, providing close proximity to the project site yet outside of the NRHP area, would be off road 68 along either spur roads 780 or 790.

C. Access from FS. road 68 to the drilling sites:

1. All project activities, including access of equipment and personnel to the actual drill sites, should be restricted from the area of archaeological site RR-980. It is therefore assumed that access would be along the west and northwest margins of the outcrop.
2. Access to the drilling sites should be done by "cross-country" travel, without any new road construction. A route should be required that involves the least possible disturbance to soil and vegetation between road 68 and the rock outcrop; additional route distance, if necessary, is preferred to the removal of trees or other vegetation along the route.
3. The access route should be identified by flagging or other temporary marking (i.e., do not use spray-paint) prior to approval by the Forest Service representative.





D. Drilling methods/impacts to the rock outcrop:

1. The rock outcrop has an appearance generally characterized by scattered, mature trees of generally small size and "twisted, weathered" shape; clumps of manzanita and other brush, as well as lichen-covered silica outcrops also give the outcrop its visual quality as a place "where rock and plant meet" in a relatively harsh growth environment. Although the outcrop may not have the "outstanding scenic appearance" of some other places along the Rogue-Umpqua Divide, all drilling and other project activities on the surface of the outcrop should be done so as to cause the least possible impact to the rock surface, to its vegetation, and to its overall aesthetic qualities.
2. The equipment involved in the project is likely to be a small drill-rig that would have a short turning radius and can be relatively easily maneuvered from drill site to drill site. Travel across the outcrop should be done along a pre-flagged route, marked with temporary flagging, that will avoid trees or brush.
3. On areas where the drilling equipment must cross bare rock, the outcrop surface should be protected from scarring or gouging by the drill-rig's tracks. This can be done by means of sections of special protective fabric over the surface of the rock, or perhaps by plywood sheets placed where needed as the equipment moves from site to site.
4. Special measures should be taken to ensure that oil or other chemical contaminants do not leak from the equipment onto the outcrop surface. If equipment repairs become necessary during drilling, similar consideration needs to be given to preventing contamination of the outcrop surface. Any accidental leaks should require prompt clean-up before drilling resumes. All materials necessary for spill clean-up should be required to be on hand before the project begins.
5. The proposed project would not involve any blasting, and safety hazards regarding showers of rock debris are therefore not a concern. The equipment would utilize a "dust blanket" to minimize the escape of fine silica particles away from the immediate drill site. Dust-coating of huckleberry bushes should be extremely minor, probably less than occurs from normal vehicular traffic along road 68.

E. Post-drilling site restoration:

1. The operator should be required to conduct a very thorough clean-up of the entire outcrop surface after the drilling has been completed. All litter, project materials, and route/site marking should be removed.
2. The equipment access route from road 68 to the outcrop surface should be rehabilitated (by handtools or whatever method is most appropriate) wherever soil gouging or other impacts occurred; the goal would be to return the soil surface to its original contours and to eliminate any long-lasting evidence of the route.





3. In addition to the drilling of 5/12 holes to an undetermined depth, the project could involve the removal of a 10-15 lb. rock-sample from the outcrop surface at each drill site. If so, this would of course result in small excavation scars at each drill site. It would be best not to require any "cosmetic" mitigation of these scars on the part of the operator (other than the requirement to keep them as small in size and as few in number as absolutely necessary). Subsequent to the drilling, the Forest Service should then assess whether there are appropriate measures to mitigate the physical/visual impact at the drill sites; the agency, not the operator, would be best equipped to design and implement any such measures.

Aside from the above mitigation measures, I suggest that, if the drilling is approved, the District take special efforts to continue close communication with the Cow Creek Indians during the project. This could include a formal invitation for a Cow Creek representative to be on-site during the drilling; such a representative would not have legal authority to direct the operator in any way, but would have "observer" status and could make any specific concerns known to the Forest Service in a timely manner. Approval of the project operating plan should include a provision allowing for a formal tribal representative on-site during the project. However, due to their strong opposition to the proposed project, it may well be that Cow Creek tribal leaders would refuse to give any sanction to the project by providing such a representative. Nevertheless, if the proposed project were to be approved, I believe that the District should make a good-faith request for an on-site tribal representative.


JEFF LaLANDE
Forest Archaeologist

cc: LaLande
L.Duffy
A.Fowler:06
G.Shafer:06 (Job 765)
J.Keyser:RO-Rec
L.Freedman:RO-L&M



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November 13, 1992

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Mr. Robert L. Wilcox
District Ranger
Prospect Ranger District
47201 Highway 62
Prospect, Oregon 97536

Re: Cow Creek Band of Umpqua --
Mineral Interests at Huckleberry Gap.

RLW
11/18/92

Dear Mr. Wilcox:

This letter responds to your letter of October 22, 1992, concerning the referenced issue and the defining of tribal interests not ceded to the United States by the Treaty of September 19, 1853 (10 Stat. 1027).

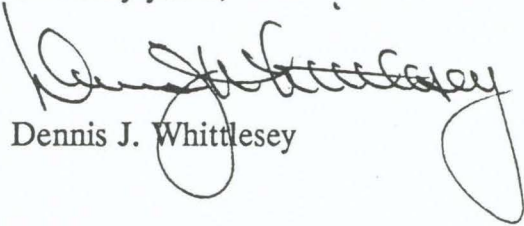
You noted that the aboriginal area of the Cow Creek Band of Umpqua Tribe of Indians is not defined in the Treaty as including the Huckleberry Gap, a statement which is accurate. However, you should know that aboriginal title descriptions in Indian treaties have no legal meaning; indeed, in claims cases for the Government's taking of Indian lands, the courts require tribes to prove what they occupied aboriginally and the treaty descriptions were rejected as proof of any ownership. This certainly was true for this Tribe in its claims case which I handled. See Cow Creek Band of Umpqua Tribe of Indians v. United States, No. 53-81L, United States Claims Court.

The litigation's focus was on establishing the boundaries of the Tribe's aboriginal lands taken by the United States pursuant to the Treaty. In this, we proved to the Government's satisfaction that the Tribe's lands extended far to the east of the treaty area, including the entire area encompassing Huckleberry Gap. Our formal expert reports and maps are in tribal custody and can be made available for your inspection. However, I reiterate that the mining area was firmly fixed as within the Tribe's aboriginal lands.

November 13, 1992
Page 2

I hope this letter addresses your concerns. In any event, I am available to discuss these matters at your convenience.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Dennis J. Whittlesey", with a large, stylized loop at the end.

Dennis J. Whittlesey

DJW/ahr

cc: Cow Creek Band of Umpqua Tribe of Indians

Cow Creek Band of
Umpqua Tribe of Indians

April 13, 1992

Mr. Bob Wilcox
Prospect Ranger Dist.
47201 - Highway 62
Prospect, OR 97536

Dear Bob:

In your notes relative to our meeting on Mar. 13, 1992 I feel that there is an error that should be brought to your attention now rather than later.

In the last part of your last paragraph quote: "or developmental activities may require a project EIS prior to approval of operations." My understanding of the discussion was that there would be an EIS completed, so I suggest that the word may be changed to will.

Enclosed please find copy of the Cow Creek Treaty of Sept. 19, 1853. You will note that mineral rights are not abrogated. Courts have held that when a right is not specifically abrogated, they are retained. I pass this on to you as general information.

Your statement: "Bottom line of this lengthy discussion was that the tribe would oppose any mining activity under any circumstances." This holds true and the tribe is firm in that stance.

It will be interesting to participate in the tribe's effort to protect their culture and heritage. We look forward to working with you in the future.

Sincerely,



Sue M. Shaffer, Chairman
Board of Directors

Encl.

cc: Roy Brogden
Buster Rondeau
Tooter Ansures



United States
Department of
Agriculture

Forest
Service

Rogue River
National
Forest

333 W. 8th Street
P. O. Box 520
Medford, OR 97501

Reply to: 2630

August 29, 1991

Subject: Silica Mining at Quartz Mountain

To: District Ranger, Prospect
ATTN: F. Wahl

I have reviewed the speed memo of August 7 from A. Fowler of the Prospect Ranger District pertaining to silica mining at Quartz Mountain (maps were attached). My review took special attention to issue 4 :Peregrine falcon habitat potential of Quartz Mountain.

On July 11, 1991, I visited the cliffs on a reconnaissance trip to a certain occupancy or potential occupancy of the site by peregrine falcons. On this trip I walked around the base and crossed back across the mid-level of the cliff. During my visitation I did not find any feathers, whitewash (mute) or other sign of occupation by peregrine falcons.

The cliff is approximately 140-180 feet tall with an east-south-east aspect. Taking into consideration the cliff's proximity to water, surrounding vegetation, overall height, availability of ledges, cliff aspect and disturbance potential, I have taken the liberty to rate the cliff for potential future occupation by peregrine falcons. Based upon the above characteristics, and my experience with active peregrine falcon nest sites, I rated the above nest site as a medium potential nest site. This indicates that occupation by peregrine falcons within the near future is possible. This also indicates that enhancement or creation of existing ledges may increase the nesting potential of the site.

Recommendations for the protection of this site are to be certain that the site is monitored for occupation prior to the commencement of mining activities at the site. The speed memo did not indicate the estimated date of the commencement of activities. Peregrine falcons at this elevation should commence nesting activities in February, with egg laying during April/May. If peregrine falcons are noted to occupy the cliff, mining activities should cease until the fate of the nesting attempt is known, or peregrine chicks successfully fledge from the nest site.

Should you have further questions or comments concerning peregrine falcons and the Quartz mountain site, please do not hesitate to contact me.

Joel E. Pagel
JOEL E. PAGEL
Peregrine Falcon Specialist
R-6 USFS

cc: A. Fowler-Prospect RD



Caring for the Land and Serving People

FS-6200-28 (7-82)