

2-16-93

4. The proposed methods of exploration drilling and access to the Project Area may affect the cost-effectiveness of the exploration operation to the mining claimant.

Table 1 - Comparison of Alternatives

KEY ISSUE	Method of measuring effects	Alternative A No Action	Alternative B Portable Core Drill	Alternative C Air-Track Drill
Effects to archaeological site RR-980 from equipment and personnel access to Project Area. (Issue 1)	Location and amount of ground disturbance within RR-980.	No effect	No effect. Access not permitted in RR-980.	No effect. Access not permitted in RR-980.
Effects on the traditional uses and values of the Project Area to the Cow Creek Indians. (Issue 2)	Acres disturbed: 5 test holes 12 test holes Timing and duration of operations: Start date 5 test holes 12 test holes	None N/A N/A N/A N/A N/A	0.03 acre 0.05 acre mid-May 19 days 48 days	0.07 acre 0.14 acre mid-May 6 days 13 days
Effect on sacredness of the Project Area to the Cow Creek Indians. (Issue 3)	No method of measuring effect is currently known.	No effect	No known measure of effect.	No known measure of effect.
Cost-effectiveness of the drilling operation to the mining claimant. (Issue 4)	Drilling Costs: 5 test holes 12 test holes	No cost N/A N/A	\$ 26,800 \$ 41,700	\$ 7,700 \$ 16,800

Risk

may not drill

are barrel contamination noise
may
vs. drill stem contamination
contamination to the core

noise

OSHA reviews may accept either as acceptable

uniquely has other - final core drill - collection agreement?

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

This section describes the environmental consequences of implementing each alternative method of proposed exploration drilling in terms of the effects on the human environment (i.e. the physical, biological, economic, and social aspects). In describing these effects, short-term effects are defined as being equal to the duration of the project (1 to 2 months) while long-term effects are those that extend beyond the life of the project.

This analysis of the environmental effects assumes compliance with federal laws, national policies, regional standards and guidelines, and compliance with the Rogue River National Forest Land and Resource Management Plan (Forest Plan).

A. Effects of Implementation: Key Issues

The alternative is analyzed as to its effects on the human environment relative to the four key issues (see Chapter I. pg. 6) that were identified for the proposed exploration drilling project.

1. Alternative A - No Action

This alternative was considered and found to not meet the purpose and need of the proposed project and to not be a viable alternative under the United States Mining Laws and the Forest Service locatable minerals regulations.

The United States Mining Laws confers a statutory right to enter upon federal public lands open to mineral location to search for minerals. Current evidence indicates that the mining claimant has a legal claim and right to the minerals. The Ramex unpatented mining claims are located on reserved National Forest System land open to mineral location. The mining claims are properly located and recorded with the Jackson County Recorder and the USDI Bureau of Land Management. Denial of the statutory rights of the mining claimant may constitute a taking.

The Forest Service responsibility under the locatable minerals regulations is to minimize adverse environmental impacts on National Forest System surface resources pursuant to operations authorized by the United States Mining Laws.

Under this alternative there would be no adverse environmental impacts to National Forest System surface resources. The National Register of Historic Places-eligible "Huckleberry Patch" traditional cultural property and archeological sites would not be adversely effected nor would the religious beliefs of the Cow Creek Indians.

There would be no exploration costs incurred by the mining claimant. The mining claimant would forego the opportunity to explore and establish the value of the mineral deposit. Although the mining claimant would retain ownership of the mining claims, the inability to conduct minerals related activities may prevent the claimant from doing the required annual assessment work, thereby jeopardizing the claimant's continued ownership of the claims. The mining claimant may dispose of or abandon the claims, or submit a new Plan of Operations for the Ramex claims at the same or another location.

2. Exploration: Action Alternatives

The Cow Creek Indians have expressed their opposition to mining on religious grounds. Tribal representatives have stated repeatedly that the "Huckleberry Patch" is a sacred area that would be "desecrated" by mining, including the proposed exploration drilling project in the Project Area; they state that no measures would "lessen" or eliminate the impacts of mining on their religious beliefs. Therefore, the impact to the Cow Creek Indians' religious beliefs would be equal under either of the two exploration drilling alternatives.

The National Historic Preservation Act requires that properties, and the values that make such properties eligible for listing on the National Register, have tangible features. For example, a "prayer seat," "vision quest structure," or a particular rock formation that has site-specific religious associations would be tangible features. While the ethnographic evidence finds that the general area of the Rogue-Umpqua Divide has religious significance to the Cow Creek Indians, there are no tangible features or focal points of sacredness specific to the Project Area.

The general feeling of religious significance or unique spirituality of place, as expressed by the Cow Creek Indians, is under the purview of the American Indian Religious Freedom Act and is outside the scope of the NHPA. Although the Cow Creek Indians' concerns for the spirituality of the "Huckleberry Patch" cannot be mitigated if the proposed exploration drilling occurs, their inherent right of freedom to believe, express, and exercise their traditional religion on National Forest System lands would be protected and preserved under both drilling alternatives.

For those tangible values that make the "Huckleberry Patch" eligible to the National Register (e.g., gathering, hunting, recreational/social interactions), project effects to those values can and would be mitigated by the special protective requirements in Chapter 2, Mitigation and Special Protective Measures.

The Cow Creek Indians' concern for the protection of the traditional cultural values, including spiritual values, of the "Huckleberry Patch" is indicative of the need for continual consultation between the tribe and Forest Service relative to management of the "Huckleberry Patch".

The following two alternatives discuss the environmental consequences of conducting mineral exploration using a portable core drill and an air-track drill.

Alternative B - Portable Core Drill

This alternative would involve drilling with a portable core drill rig. The drill would be packed to the drilling locations by hand. Approximately 0.03 acres would be impacted by 5 test holes and 0.07 acres would be impacted by drilling 12 test holes, including the trail and holeline lay. Excluding adverse weather or equipment breakdowns, the estimated time for site preparation, drilling, sampling, moving between test holes, and reclamation is 17 field days for 5 test holes and 42 days for 12 test holes, excluding adverse weather or equipment breakdowns.

The Mark IX Portable Diamond Drill is the portable core drill used for this environmental assessment (see Appendix for description). The total weight of the assembled drill is just over 200 pounds. One hundred feet of drill rod, the water pump, tanks, tools, and other necessary equipment would add an additional 200 to 250 pounds. Regardless, disassembled the drilling equipment could be easily moved around the Project Area by two or three people.

Surface resource impacts would be generally confined to the area surrounding the drill holes and recycle tanks.

The mining claimant's proposed drilling schedule, beginning in mid-May, is during a period when the "Huckleberry Patch" normally receives relatively low use by the public, including the Cow Creek Indians. Drilling during this period would minimize potential encounters and user-conflicts.

Use of a portable core drill would require a drilling additive, commonly called drilling mud. Drilling mud thickens and increases the viscosity of water, increasing its lubricating ability and core recover.

Drill lubrication is a semi-closed system. After cycling through the drill, the drilling mud would flow through a return line and be discharged into recycle tanks or sumps. The mud would then be pumped from the return tanks to the drill with a portable pump. After drilling each test hole, the drilling mud would be gravity fed or pumped back to the main tank or tank truck. The recycle tanks would be moved to the new drill-hole location with the rest of the equipment and be refilled.

Depending on the water source, the mining claimant may have to acquire a water right. And with no water available on-site, the mining claimant would have to truck water to the Project Area; mix the drilling mud in the truck tank or a portable tank, lay the hoseline, and pump the drilling mud to the drill. The tank truck could be moved along FR 68 reducing the distance the hoseline would run. Because of the lack of space to put a portable tank on the shoulder of FR 68, it would have to be located at the junction of FRs 68 and 910, necessitating a longer hose lay. Regardless, the surface impact of the hoseline would be negligible. In either case, traffic safety devices would be needed to reduce potential hazards to the public and protect equipment.

The manufacturer of the Mark IV portable core drill recommends using a series of three tanks or plastic-lined sumps that have been excavated into the ground. This is to settle out most of the drill cuttings in order to return fairly clean drilling mud to the drill. This would extend the life of the drilling equipment and keep the hole clean. Since no water is available on-site, it would also conserve water. Although environmentally safe drilling muds are available, recycling would contain and minimize discharge of drilling onto the surface.

Periodic recharge of the recycle tanks would be necessary as water would be lost due to evaporation, spillage, and when starting drill holes. If the rock is fractured drilling mud would seep into the subsurface, a likely result of drilling in the silica-quartz. Water loss at the surface that would occur when starting a test hole can be minimized by building a berm and diverting the water back into the recycle tanks or sumps. By recycling the drilling mud, it is possible to operate the drill on 50 gallons of water or less per day.

Excavation of sump holes would enlarge the area impacted and sump holes located in the rock outcrop would leave permanent pits in the surface of the outcrop. Scarring of the rock outcrop and other impacts associated with sumps would be eliminated by using small tanks. The tanks would be located so that there would be little or no damage to surface resources. To catch any overflow from the drill hole or return tanks, earthen or synthetic berms would be necessary at each drill hole.

Since the drill and the drilling-mud hoseline would be hand-carried to each drill location, there would be no need to remove trees or other vegetation to accomplish the drilling. Drill holes would be located to eliminate the need to remove trees or other vegetation.

The surface area impacted by drilling is estimated to be about 20-25 feet around each drill hole. While the area impacted by portable drilling would be less than with an air-track drill, it is a more labor intensive drilling operation and, depending on the number of holes drilled, could take from 8 to 25 days longer to drill with a portable drill than with an air-track.

Increasing the amount of drilling time would increase the potential for user-conflicts to occur. It would also increase the potential for surface impacts resulting from drilling mud and gas/oil spills, and foot traffic by drilling personnel within the Project Area. It may also increase the possibility of inadvertent entry by drilling personnel into archaeological site RR-980.

Except when drilling beside or within sight of FR 68, the drilling operation would not be visible. The drill and water pump would be about as loud as a chainsaw. The increased drilling time may be offset by the lack of visibility, lower noise level, and surface resource impacts of the portable core drilling.

Northern spotted owl habitat would not be removed, nor would the drilling operation disturb spotted owls. Since the Project Area is within a U.S. Fish and Wildlife Service designated Critical Habitat Unit and classified old-growth forest, informal conferencing with the USF&WS would be needed.

A representative of the Diamond Drill Contracting Company, manufacturer of the Mark IX drill, has stated that their drill is capable of drilling rock the hardness of silica-quartz and that 30 feet per day would be the expected penetration rate.

Forest Service minerals specialists have expressed concerns about the capability of drilling silica-quartz with a portable drill due to the hardness of the rock and amount of down hole pressure exerted by the drill. A Geologist with the Oregon DOGAMI has stated that it may be difficult to pull the core from depth.

The Diamond Drill Contracting Company representative also stated that portable drills are primarily owned by private individuals and companies, and they are not common equipment of commercial drilling contractors. For this analysis, it is assumed the mining claimant would have to purchase a portable drill and the associated equipment needed to conduct the drilling operation.

The portable drilling operation would take 19 field days to drill 5 test holes and 48 field days to drill 12 test holes, based on the following assumptions:

- a. 10 hour work day;
- b. 5 test holes would include two 50 foot and three 100 foot holes, 12 test holes would include four 50 foot and eight 100 foot holes;
- c. a drilling rate of 25 feet per day (including sampling);
- d. 1/2 day per hole to move and set up the drill and lubricating system (tanks, hose lay, pump); and

- e. 1 day to reclaim 5 holes or 2 days to reclaim 12 holes.

The cost of a Mark IV portable drill, drill bits, 100 feet of drill pipe, and other essential equipment, such as the drilling mud, would be about \$16,900 (based on costs provided by the equipment and supply manufacturer/distributor).

Three skilled workers would be needed to drill assembly/disassembly, operate the drill and lubricating system, remove cores, and for other necessary operations. Personnel costs would range from about \$8,400 for 19 days to about \$21,100 for 42 days (two workers at \$16/hr, one at \$12/hr, wage rates provided by the mining claimant).

An additional \$1,500 to \$3,700 is estimated for hauling water, crew transportation, camping, and other incidental costs associated with the drilling operation. (Estimated 2 vehicles at 35 miles/day/vehicle at 0.45 cents/mi. plus \$15/person/day, RRNF field per diem rate FY 92).

The total cost of the portable drilling operation is estimated to be about \$26,800 to drill 5 test holes and \$41,700 to drill 12 test holes.

Alternative C - Track-Mounted Drill

Ingersoll Road - 350

This alternative would involve drilling with a air-track percussion drill. Access would be "cross-country," and no new roads would be needed. The estimated acreage that would be impacted by drilling 5 test holes is about 0.07 acres and for 12 test holes about 0.14 acres. The estimated time for moving the equipment to and from the Project Area, site preparation, drilling, sampling, moving between test holes, and reclamation is 9 field days for 5 test holes and 17 field days for 12 test holes, excluding adverse weather or equipment breakdowns.

Potential conflicts between drilling operations and use of the vicinity by the Cow Creek Indians (and other forest visitors) would be minimized. The duration and timing of the exploration drilling operation proposed by the mining claimant, 10 to 20 days beginning in mid-May, would minimize the user-conflicts that may occur if drilling was conducted in the July through October period (i.e., huckleberry picking and deer/elk hunting, seasons of highest use of the "Huckleberry Patch" by the Cow Creek Indians and other people).

Using a track-mounted drill rig, the Project Area may be accessed from several locations along FR 68 eliminating the need to enter the area from FRs 910 or 905. This would prevent any disturbance to archaeological Site RR-980.

Impacts would occur while moving the drill rig into the Project Area and between the drill-hole locations. Minor amounts of scarring of the surface of the rock outcrop, and damage to vegetation in the path of the drill rig and at the drill holes would occur. The most evident impacts would be at cut-banks along FR 68 where the drill rig enters and leaves the Project Area. The impacts would be greater than with a portable core drill but, as with the core drill, would be short-term impacts.

Removing some vegetation and small trees (sapling- and pole-sized) would be necessary to gain entry into the area, but effects can be minimized by prior location of ingress/egress points. A drill rig is maneuverable enough that travel routes between drill holes can be located so that large trees and most other vegetation would be protected against damage.

Northern spotted owl habitat would not be removed, nor would the drilling operation disturb spotted owls. Since the Project Area is within a U.S. Fish and Wildlife Service designated Critical Habitat Unit and classified old-growth forest, informal conferencing with the USF&WS would be needed.

Use of an inverted cone during drilling would accomplish the mining claimants need to capture the cuttings for assay samples. The cone is designed to contain all the cuttings and minimize the amount of rock fragments and dust that escapes into the atmosphere.

Noise generated by the percussion drill and air compressor unit would be greater than that produced by a portable core drill. However, the drilling operation would be about twice as fast as with a portable core drill, and noise could be minimized by use of a noise shield, if available.

Vibrations generated by the drill rig are unavoidable and may cause rock fragments to fall from the vertical exposures along FR 68. Although the amount of rock exposed along FR 68 is small, safety cones, signs, and, if necessary, a flagger, would be placed on FR 68 to minimize hazards to the public. Any rock fragments and debris that fell onto the road would be removed.

Track-mounted drills are self-contained, relatively compact and light weight (the size recommended by a Medford drilling contractor is 12 foot length x 8 foot width; 13,000 lbs.). They are easy to operate, very maneuverable and the extendible drill boom permits vertical drilling on steep slopes and in confined areas. The crawler tracks and winch facilitate moving over rough and steep terrain.

Most pneumatic operated drill rigs have a separate air compressor unit that is attached to the drill rig by an air line although some have built-in air compressors. A inverted cone is used to collect cutting fragments and contain and dust particles. Some newer drill rigs are also equipped with noise shields. The drill rig does not require water or drilling mud.

Air-track drill rigs are the most frequently used kind of drill rig for preliminary exploration drilling. This is because the equipment is both time- and cost-effective. While the adverse environmental impacts to surface resources would be greater than with a portable core drill, they are considerably less than those of the other kinds of commonly used exploration drill rigs.

Two types of air-track drill rigs are normal-circulation (most common) and reverse-circulation. With normal-circulation, air is pumped through the center of the drill and the cutting are blown out between the drill and walls of the drill hole. To contain dust and capture the cuttings, an inverted cone attached to the drill boom covers the opening and a tarp is spread around the opening of the drill hole. Reverse-circulation air-tracks use a gasket around the drill hole to seal the opening and air is pumped down the hole and the cuttings return through the center of the drill steel into a dust collector. With either type, virtually all of the dust and cuttings can be contained.

A Rogue Valley based drilling contractor provided a estimated penetration rate of 40 to 50 feet per hour for drilling and sampling silica-quartz rock (10 foot sample interval) and also agreed that \$920 per day would be a reasonable estimate of the cost of air-track drilling.

The air-track drilling operation is projected to take 6 field days for drilling and sampling 5 test holes and 13 field days for drilling and sampling 12 test holes, based on the following assumptions:

- a. 10 hour work day;
- b. 5 test holes would include two 50 foot and three 100 foot holes, 12 holes would include four 50 foot and eight 100 foot holes;
- c. four 50 foot holes or two 100 foot holes would be drilled and sampled per day;
- d. 1 day to move the drill rig to and from the Project Area;
- e. 2 hours per hole to move and set up the drill at each test hole; and,
- e. 2 days to reclaim 5 holes or 4 days to reclaim 12 holes.

At \$920/day for an air-track drill and operator, it would cost about \$5,500 for 5 holes and \$12,000 for 12 holes.

The mining claimant and one assistant would be on-site to direct the drilling operation, collect the assay sample, and reclaim the Project Area. Personnel costs would range from about \$2,500 for 6 days to about \$4,800 for 13 days (one worker at \$16/hr and one at \$12/hr, based on mining claimant wage rates).

An additional \$500 to \$1,200 is estimated for transportation for the mining claimant and assistant between Applegate, Oregon and the Project Area (Estimated 1 vehicle at 200 miles/day at 0.45 cents/mi.)

The estimated total cost of air-track drilling to the mining claimant is about \$7,700 to drill, sample, and reclaim 5 holes and \$16,800 to drill, sample, and reclaim 12 holes.

Comparison of the two alternative methods of drilling reveals that, for 5 test holes, the time and cost involved in portable drilling is more than triple that of air-track drilling. Drilling 12 test holes reduces the per unit cost differential between portable and air-track drilling, however, the amount of time involved in portable drilling increases to almost 3-1/2 times that of air-track drilling.

B. Other Effects

The following is a summary of effects that were considered during the analysis process. These effects were not necessarily treated as issues, and were not always totally quantifiable. All effects were determined to be consistent within the guidelines identified in the Rogue River Land and Resource Management Plan.

Relationships between local, short-term uses of the human environment and maintenance or enhancement of long-term productivity: Analysis by the IDT indicates that the proposed exploration drilling will not affect relationships between local, short-term uses of the human environment and maintenance or enhancement of long-term productivity.

Irreversible or irretrievable commitments of resources: The mineral sample removed from each drill hole under both action alternatives would not result in an irreversible and irretrievable commitment of surface resources.

Environmental impacts which cannot be avoided: The desecration of the spiritual values of the Project Area to the Cow Creek Indians is an environmental impact which cannot be avoided. The

loss of the silica-quartz rock taken for mineral sampling is an environmental impact which cannot be avoided.

Cumulative effects: The IDT examined the Project Area for issues or management concerns that might warrant a cumulative effects analysis. Because of the small amount of area affected by the action alternatives and as a result of preliminary analysis, the IDT determined that cumulative effects analysis was not necessary.

Social/Economic effects: Under the No-Action alternative, the opportunity to determine the potential of the silica-quartz deposit would be foregone. However, the spiritual integrity of the "Huckleberry Gap" to the Cow Creek Indians would be maintained.

The Cow Creek Indians have stated that both action alternatives would desecrate the sacredness of the Project Area and negatively impact their religious beliefs. The action alternatives would not prevent, restrict, or prohibit the Cow Creek Indians from using the Project Area for traditional and religious purposes.

The action alternatives would allow the mining claimant to obtain samples for assay and evaluation. Analysis of the sample data would be the basis used to determine the validity (quality and quantity) of the silica deposit.

Other than the effects to the religious beliefs of the Cow Creek Indians, there would be no known adverse effects to minority groups or women from the selection of any of the alternatives. None of the alternatives would negatively affect the civil rights of any person.

Recreation (Recreation Opportunity Spectrum and scenic quality): All alternatives would provide for continued outdoor recreational opportunities within the Project Area after the drilling operation is complete, including opportunities for hunting, huckleberry picking, and gathering firewood. By maintaining current recreational opportunities, no economic effect on tourism is anticipated.

The area of proposed harvest is within the "Roaded Natural" Recreation Opportunity Spectrum (ROS) classification. The existing classification would not be changed with implementation of any alternative.

Under all alternatives, scenic resources within the area of consideration would be maintained. All alternatives would meet the Maximum Modification Visual Quality Objective for Management Area 1.

Effects on prime farmland, rangeland and forestland: The Project Area is within National Forest System land. The Project Area is classified as non-forest land, unsuitable for timber harvest. No farmlands or rangelands are involved.

Effects upon wetlands and floodplains: No floodplains, as defined by Executive Order 11988 exists within the Project Area. It was determined that all alternatives would constitute a "no effect" undertaking in relation to the Wetlands Executive Order 11990.

Cultural Resources: Cultural resource surveys of the Project Area have been conducted. It has been determined that the proposed exploration drilling would comprise a "no effect" undertaking relative to prehistoric archaeological sites, and that proposed actions would in compliance with MA-1, Recreation Standards and Guidelines 7-12, in the Forest Plan.

The Project Area is within the "Huckleberry Patch" NRHP-eligible traditional property. Project management requirements and mitigation measures are designed to minimize any adverse effects. The proposed Project Area has not yet been reviewed by the State Historic Preservation Office (SHPO) and the Advisory Council for Historic Preservation (ACHP) as required by 36 CFR 800. This Environmental Assessment is being submitted as the Forest Service's project description in its historic preservation consultation/concurrence process with SHPO and ACHP.

Effects upon potential endangered, threatened, or sensitive species: Surveys were conducted, and biological evaluations have been prepared for species on the USFS Region 6 Sensitive Plant and Animal Lists, as well as for threatened and endangered species that are Federally listed. No such species were found in the Project Area. (Refer to the Biological Evaluations in the Analysis File.) It was determined that the proposed exploration drilling would be in compliance with MA-1, Wildlife, Fish, and Plant Standards and Guidelines, in the Forest Plan.

A northern spotted owl survey has been completed. No spotted owl nesting pairs have been located within the Project Area and no spotted owls were found residing within 1/4 mile of the Project Area in 1992. The Project Area is within suitable spotted owl habitat, but the project would not remove suitable spotted owl habitat. The proposed exploration drilling is in compliance with the ISC Report and the March 3, 1992 Record of Decision on Management for the Northern Spotted Owl in the National Forests and with MA-1, Wildlife, Fish and Plants section Standards and Guidelines, in the Forest Plan.

QUARTZ MOUNTAIN SILICA MINERALS EXPLORATION DRILLING ENVIRONMENTAL ASSESSMENT

Prospect Ranger District
Rogue River National Forest

**QUARTZ MOUNTAIN SILICA
MINERALS EXPLORATION DRILLING
ENVIRONMENTAL ASSESSMENT**

Jackson County, Oregon

Lead Agency: USDA - Forest Service

Responsible Official: Robert L. Wilcox, District Ranger
Prospect Ranger District
Rogue River National Forest

For Further Information
Contact: Robert L. Wilcox, District Ranger
Prospect Ranger Station
Prospect, Oregon 97536
(503-560-3623)

Abstract: The Quartz Mountain Silica Minerals Exploration Drilling Environmental Assessment documents the analysis of an action proposed by a mining claimant. A No-Action alternative and two action alternatives were developed for the proposed exploration drilling within a 3.1 acre Project Area, located on the Prospect Ranger District.

Table of Contents

I.	PURPOSE AND NEED FOR THE PROPOSED ACTION	1
A.	Introduction: The Proposed Action	1
B.	Decision to be Made	3
C.	General Location and Description	3
D.	Background	4
E.	Scoping Process	5
F.	Issues	6
II.	ALTERNATIVES, INCLUDING THE PROPOSED ACTION	9
A.	Alternatives Considered but Eliminated From Detailed Study	9
B.	Alternatives Considered in Detail	10
C.	Mitigation Measures and Management Requirements	11
III.	AFFECTED ENVIRONMENT	15
IV.	ENVIRONMENTAL CONSEQUENCES	20
A.	Effects of Implementation: Key Issues	20
B.	Other Effects	24
V.	CONSULTATION WITH OTHERS	27
	APPENDIX	

QUARTZ MOUNTAIN SILICA MINERALS EXPLORATION DRILLING ENVIRONMENTAL ASSESSMENT

CHAPTER I. PURPOSE of and NEED for the PROPOSED ACTION

The Quartz Mountain Silica Minerals Exploration Drilling Environmental Assessment documents the National Environmental Policy Act environmental analysis of the site-specific effects of the proposed minerals exploration drilling. This environmental analysis identifies the site-specific issues pertinent to the proposal; describes and evaluates the environmental consequences of the no action and exploration drilling alternatives; and prescribes mitigation and reclamation measures to minimize impacts to National Forest System surface resources (36 CFR 228.1) that are determined to be associated with the exploration drilling alternatives.

A. INTRODUCTION: THE PROPOSED ACTION

Mountain Valley Resources, Inc. (Ron Gibson, president) has submitted a Plan of Mining Operations proposing to conduct exploration drilling and sampling for industrial silica, pursuant to the United States Mining Laws (30 USC 21-54) and Forest Service locatable minerals regulations (36 CFR 228, Subpart A--Locatable Minerals).

The area of the proposed minerals exploration drilling project (hereinafter called the Project Area) is approximately 3.1 acres in size and within the Ramex #17 unpatented mining claim. The Project Area is located on the south flank of Quartz Mountain in the NW1/4, SW1/4, Section 34, T30S, R2E, WM, Jackson County, Oregon, on the Prospect Ranger District, Rogue River National Forest. (See vicinity map on following page.)

The proposed minerals exploration would consist of drilling 5 or 12 test holes and collecting samples of the silica-quartz mineral for assay. The size of the test holes would be 1-1/8 to 2-1/2 inches in diameter and from 50 to not more than 100 feet in depth. The mining claimant proposes to access the Project Area "cross-country" and to drill the test holes using a track-mounted reverse-circulation pneumatic drill rig.

The silica-quartz mineral samples are needed to determine if the mineral meets industrial silica specifications; and to establish the chemical composition and quality, quantity, and uniformity of the mineral deposit. The mining claimant would use this information to determine the potential of the Project Area for development of the mineral resource.

The Ramex #17 mining claim is one of a contiguous block of fifteen 20-acre unpatented lode mining claims (Ramex No's 2-6, 8-12, and 14-18) in the vicinity of Quartz Mountain in sections 33 and 34, T30S, R2E, WM. Ron Gibson, president of Ramex, Inc. and Mountain Valley Resources, Inc., is the mining claimant of record. The claims are legally filed on reserved National Forest System lands that are open to mineral location on the Prospect Ranger District, Rogue River National Forest, and the Tiller Ranger District, Umpqua National Forest.

The Project Area is located on lands allocated by the Rogue River National Forest Land and Resource Management Plan (Forest Plan) to Management Area (MA) 20, Timber Suitable 1. On-site analysis by the Interdisciplinary Team (IDT) found that MA-1, Minimum Management, is the proper land allocation due to the shallow soils and rock outcrops of the area. Minerals exploration is not a prohibited activity within either MA-1 or MA-20.

B. DECISION TO BE MADE

The Prospect District Ranger is the responsible official and must decide, based on this environmental analysis, whether to approve the Plan of Mining Operations (Plan of Operations) for exploration drilling as proposed by the Mining Claimant or choose one of the other alternatives considered in detail. The decision must include a determination of the significance of the effects, if any, and whether or not to prepare an environmental impact statement. As required by the National Forest Management Act and implementing regulations, the decision must include a determination of consistency of the proposal with the Forest Plan.

The Prospect District Ranger must also decide:

- (a) Whether the locatable minerals regulations apply to the proposal and, if so,
- (b) what methods of access and exploration drilling to authorize,
- (c) when the project would be initiated,
- (d) if the proposed mitigation measures are adequate to minimize impacts to National Forest System surfaces resources, and
- (e) what reclamation requirements, including bonding, are appropriate.

Refer to 36 CFR 228, Subpart A--Locatable Minerals and 36 CFR 219.1 (b) and 219.10 (e), and Forest Service Handbook 1909.12 (Section 5.31a) for background on these requirements.

C. GENERAL LOCATION AND DESCRIPTION

The Project Area is about 18 miles northwest of Prospect, Oregon, and is reached via State Highway 62 and Forest Road (FR) 68. The road forms the southern boundary of the Project Area. The silica-quartz rock outcrop is visible at the junction of FRs 68 and 910, and abuts FR 68 for about 0.1 miles to the west of this junction. One mile west of the Project Area FR 68 reaches the Rogue-Umpqua Divide at Huckleberry Gap where it changes to Umpqua National Forest Road 30, then continues on toward Tiller, Oregon, 30 miles west on the Umpqua National Forest.

The Project Area lies on the southern flank of Quartz Mountain at 5000' in elevation. The summit of Quartz Mountain, 5657' in elevation, is about one-half mile north of the Project Area. The topography of the Project Area is convex with moderately steep slopes (up to 46%). The Project Area is in the upper reach of McCall Creek, within the Abbott Creek watershed, but there are no well defined drainages.

About 60% of the Project Area is dominated by a mixed-conifer, old-growth forest with a sparse understory of shrubs and herbaceous vegetation. Dense stands of young trees are found in openings, on the fringes of the rock outcrop, and along FR 68. The rock outcrop comprises the remaining 40%, and it supports scattered young and old-growth trees, shrubs, and herbaceous ground cover.

The Project Area is within the 7,650-acre "Huckleberry Patch", a traditional use area of the Cow Creek Band of Umpqua Tribe of Indians that is eligible for listing in the National Register of Historic Places.

D. BACKGROUND

On September 28, 1990 the mining claimant submitted a Plan of Operations proposing to develop an industrial-silica quarry mine, with an on-site crushing and storage area. The quarry was to be contained within a 5-acre area, with initial annual production of 15,000 tons increasing to 40,000 tons within 3-5 years. This 1990 proposal addressed quarry mine development and operation for the first five years, with a total operational life of 50 years.

Following this submittal, the Forest Service's Area Minerals Examiner evaluated analytical data of samples taken from the Quartz Mountain silica deposit with data from several silica-producing operations elsewhere in Oregon and he found that the quality of the Quartz Mountain silica deposit is equal to or better than silica being produced from the other deposits. Based on this evidence, the Area Mineral Examiner concluded that the Quartz Mountain silica deposit is a locatable mineral under the United States Mining Laws and is therefore subject to locatable minerals regulations.

The 1990 publication *Silica In Oregon: Special Report 22*, by Ronald P. Geitgey, State of Oregon, Department of Geology and Mineral Industries (DOGAMI), indicates that the silica-quartz deposit on Quartz Mountain (referred to as "Quartz Mountain/Abbott" in the report) has the potential to supply high-quality products for silicon metal production, but that detailed drilling is needed to establish accurate ore-grade control. The author recommended to the Forest Service (9/3/91 telcon) that drilling be done to verify that the deposit meets industrial silica specifications prior to any developmental activities.

Dow Corning Corporation, Springfield, Oregon, a primary end-user of industrial silica, has assayed silica-quartz samples submitted by the claimant, and has independently conducted its own geologic investigations of the Quartz Mountain deposit. The Dow Corning findings support those of DOGAMI. *inconclusive for silica-metal production*

The U.S. Department of the Interior's (USDI) locatable minerals "marketability test" states "... to justify possession of a location, [the claimant] must show ... that the deposit is of such value that it can be mined, removed, and disposed of at a profit." To determine that the deposit discovered is valuable, an assay must be made in order to establish the quality and quantity of the discovery, the size of the deposit, and the probable cost of production.

The value of the Quartz Mountain silica deposit under the USDI marketability test cannot be determined until the deposit is drilled and samples are taken for assay. Assay would also establish the validity of the mining claims under the United States Mining Laws.

Based on this finding, the Forest Service concluded in 1991 that the proposed Quartz Mountain Silica quarry mine development was not appropriate until an assay report of the mineral deposit supported such development. Following negotiations, the claimant agreed to scale back the proposal from quarry development to minerals exploration drilling. On February 5, 1992, the claimant submitted an amendment to the plan of operations for exploration drilling of 5 or 12 test holes with a track drill.

Any proposed mineral activities beyond the proposed drilling and sampling of the 5 or 12 test holes in the Project Area, including (but not limited to) excavation of a bulk sample, quarry development, or exploration drilling outside of the Project Area, would require separate NEPA environmental analysis and documentation.

E. SCOPING

Following submittal of the Plan of Operations proposal for the quarry in September 1990, internal scoping was conducted by the Prospect Ranger District to identify the preliminary issues and the extent and level of public involvement.

In May, 1991 the proposed quarry project was incorporated into the Leg Timber Sale Analysis Area, and on May 17, 1991 a scoping letter identifying both the quarry and timber sale proposals was sent to individuals and organizations who requested to be notified of all planning activities on the Prospect Ranger District. This was the first contact with the Cow Creek Band of Umpqua Tribe of Indians concerning the quarry proposal. The Cow Creek Indians were contacted because the proposed quarry is located in a Cow Creek Indian traditional-use area known as the "Huckleberry Patch." No written or verbal comments were received from the Cow Creek Indians in response to this initial contact.

Written comments concerning the proposed quarry were received from two parties: one individual and the Rogue Group-Sierra Club (Ashland, Oregon). The individual was concerned with providing the necessary mitigation measures to ensure that quarry operations do not degrade visual quality along FR 68 or interfere with the Cow Creek Indians' area of interest. The Sierra Club was concerned whether mitigation measures, bonding, and oversight of the quarry operation would be adequate to protect against adverse environmental impacts.

On June 28, 1991, the Prospect Ranger District sent a letter to the Cow Creek Indians which described the proposed quarry in greater detail. On July 23, 1991, a follow-up telephone call was made to Sue Shaffer, Tribal Chairman. This resulted in an August 19, 1991 on-site meeting with Jack Ansures. Primary concerns expressed by Mr. Ansures were protection of archeological sites and impacts to the "Huckleberry Patch" from quarry mine development.

In a letter dated August 26, 1991, the Cow Creek Indians expressed "grave concerns" about any mining operations occurring in the "Huckleberry Patch" based on the tribe's long-standing traditional use of the area for hunting, gathering, ceremonial, spiritual, and social purposes. The letter included a number of questions about the classification of silica-quartz as a locatable mineral, the eligibility of the "Huckleberry Patch" to the National Register, potential impacts to threatened and endangered plants and animals, the status of cultural resource surveys, and the effects of quarry mining on air quality, wildlife, and fire danger.

On September 16, 1991 the Forest Service advised the mining claimant of the need to scale back the proposed operation from quarry mining to exploration drilling based on the information gathered during analysis of the quarry mining proposal. And, as stated above, on February 5, 1992 the mining claimant submitted an amendment to the Plan of Operations, one proposing only exploration drilling.

An on-site meeting with the Cow Creek Indians was held on September 30, 1991 to discuss the mining claimant's new minerals exploration drilling proposal. The Cow Creek Indian representatives restated the cultural and traditional significance of the "Huckleberry Patch" and the tribe's objection to any actual mining within the area.

A letter from the Cow Creek Indians was received on October 16, 1991 which stated that the Tribal Board of Directors voted unanimously to uphold "the opinion of our cultural resource representatives ... to oppose any [mining] activity whatsoever on the site, including the drilling of the 12 test holes."

On March 13, 1992 representatives of the Cow Creek Indians met with Prospect Ranger District and Umpqua National Forest officials to discuss the proposed exploration drilling and other projects within the "Huckleberry Patch." During the meeting, the Cow Creek Indian Chairman stated that an Environmental

Impact Statement (EIS) was needed for drilling because of the importance of the "Huckleberry Patch" to the tribe. This was reiterated on several other occasions, at meetings and in writing.

On April 14, 1992 a letter was received from the Cow Creek Indians which raised the issue of ownership of the mineral rights. The letter contended that because the mineral rights in the "Huckleberry Patch" were not specifically abrogated in the United States Treaty With the Umpqua--Cow Creek Band, 1853, the rights remain with the tribe. Their aboriginal land claim is based on Cow Creek Band of Umpqua Tribe of Indians v. United States, No. 53-81L, United States Claims Court, which 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 and the Project Area. This is documented in a letter dated November 13, 1992, from Dennis J. Whittlesey, Attorney for the Cow Creek Indians.

F. ISSUES

1. Key Issues

As a result of public and internal scoping, the Interdisciplinary Team has identified the following key issues pertinent to the proposed exploration drilling:

- * **The exploration drilling may affect the Cow Creek Indians' traditional uses and spiritual values at the "Huckleberry Patch". The timing of operations and magnitude of disturbance are important indicators of effect to the Cow Creek Indians traditional uses, including spiritual values.**
- * **The proposed methods and routes of access to the Project Area could affect prehistoric archeological site RR-980 (35JA60). The effect is measured by the location and amount of ground disturbance associated with access.**
- * **The cost-effectiveness of the exploration drilling to the mining claimant may be affected by the proposed methods of exploration drilling and access to the Project Area. The relative costs to the mining claimant of the alternative methods of drilling and accessing the Project Area is the indicator of cost-effectiveness.**

2. Other Issues

Issues resolved by the Forest Plan, mitigated, or determined to be outside the scope of this proposal are identified below but not considered further.

a. The "Huckleberry Patch" may be affected if a quarry mine is developed.

Development of a quarry mine is not proposed. This NEPA environmental analysis only considers the effects of drilling 5 or 12 test holes in the Project Area. Any proposed actions beyond the current drilling proposal, including development of a quarry mine, would require separate NEPA process analysis and documentation.

b. Exploration drilling may disturb northern spotted owls or remove spotted owl habitat; peregrine falcons or falcon habitat; or other Potential, Endangered, Threatened, or Sensitive (PETS) animal and plant species or their habitat.

Biological evaluations of known occurrences and potential habitat for PETS plants and animals indicate that suitable habitat exists but there are **no PETS** species currently occupying the Project Area or that would be affected by the proposed project. Drilling would not remove any habitat or the potential of the area to support PETS plant or animal species. Monitoring for PETS plant and animal species would continue; if new evidence of use or habitation is discovered, the appropriate mitigation measures would be implemented.

- c. The proposed exploration drilling may affect use and habitation by elk, deer, and other wildlife, including reptiles and amphibians.**

The area affected by (and the time period involved in) the drilling operation may result in minor, short-term disturbance and disruption on use and habitation of the area by wildlife. These effects would occur equally for all exploration drilling alternatives, but would have no impact beyond the period that project operations occur.

- d. The proposed drilling may affect recreation and other public uses of the area.**

Huckleberry Gap, one mile west of the Project Area, receives a moderate amount of public use, particularly during the huckleberry picking and big game hunting seasons. Based on the relatively small amount of area that would be disturbed by drilling, the mid-May through June drilling schedule, and the short duration of drilling, there is no indication that recreation and other public uses of the area would be seriously affected by the drilling project. There may be minor inconveniences to traffic on FR 68 while the drill rig is entering and exiting the Project Area.

- e. The proposed exploration drilling may affect visual quality.**

There is no evidence that would indicate that drilling 5 or 12 test holes would have any discernible or lasting effect on visual quality, regardless of the alternative method of drilling used. This is because the area that would be disturbed by drilling is relatively small, the drill holes would not be visible from FR 68, and the entry/exit points from FR 68 will be reclaimed after the drilling operation is completed.

- f. Dust generated during drilling may affect huckleberry bushes, trees, and other vegetation in the Project Area.**

Virtually all of the drilled material would be captured by a inverted cone (dust umbrella) for gathering the assay samples. This will minimize the amount of dust that escapes into the atmosphere.

- g. Traffic on Forest Development Road 68 may be affected by the proposed exploration drilling.**

The air compressor would be positioned at various locations along the side of FR 68 during drilling and, while accessing the site, the drill rig may delay traffic for brief periods. This may be an inconvenience, but it would not substantially affect traffic movement on FR 68.

- h. The status of silica-quartz for location under the General Mining Law of 1872 has not been determined and may affect the proposed exploration drilling.**

The Area Minerals Examiner has determined that the deposit meets industrial silica specifications and is locatable in the State of Oregon. Documentation of this finding can be found in the Analysis File.

I. The proposed exploration drill may increase the fire hazard in the Project Area.

Drilling may increase the fire hazard, however, the mid-May through June timing and duration of drilling, along with the operator's compliance with Forest Service-required industrial fire precautions, would adequately mitigate fire hazards associated with the exploration drilling operation.

J. Determination of ownership of mineral rights may affect the status of the mining claims and the rights of the mining claimant to conduct exploration drilling.

The Secretary of the Interior has jurisdiction over management of mineral resources and the adjudication of mineral rights. Issues associated with mineral rights ownership must be resolved by the U.S.D.I. Bureau of Land Management. At the present time, Ramex, Inc. is considered to be the legal mining claimant of record. The Forest Service responsibility under the locatable minerals regulations (26 CFR 228 Subpart A) is to minimize adverse environmental impacts on National Forest System surface resources.

k. The mining claimant's proposed method of exploration, by reverse-circulation drilling, may not produce adequate samples for determining if the mineral deposit meets industry specifications.

Samples obtained from core drilling provide the best information on the geologic features of the subsurface (e.g. faulting, seams, anomalies, etc.). This information is not essential to determining whether the deposit meets industrial silica specifications. A representative of the silica industry, contacted by the Forest Service, stated that samples obtained by reverse-circulation drilling would be acceptable, provided that the appropriate sampling procedures and controls are followed. The assay report would indicate whether the silica-quartz deposit in the Project Area meets industrial silica specifications. It is the mining claimant's responsibility (and in the best interest of all concerned) to ensure that the proper sampling procedures are followed.

CHAPTER II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Alternatives were developed through the Interdisciplinary Team (IDT) planning process, during negotiations with the mining claimant, and from input provided by the Cow Creek Indians. Forest Service objectives, issues, and management direction were used to develop a range of reasonable alternatives. Alternatives that did not meet applicable laws or currently approved land use direction and policies were not considered viable.

The viability of a locatable minerals deposit must be established by exploration under the United States Mining Laws before development of a mineral deposit can occur. The potential of Quartz Mountain to supply high-quality silica for industrial silica markets can only be verified through detailed drilling. Exploration drilling would establish the viability of the silica-quartz mineral deposit under the United States Mining Laws.

A. Alternatives Considered But Eliminated From Detailed Study

Exploration Alternatives

All of the exploration alternatives would involve drilling 5 or 12 vertical test holes 6-10" in diameter and 50 to 100 feet deep. The method of access, type of exploration drill rig used, and duration of drilling would be different for each alternative. The method of drilling would be either wire-line core or dual-tube continuous sample drilling, except for Alternative 2, which is reverse-circulation, percussion drilling. For all action alternatives, the additional 7 test holes would be drilled if the initial 5 test holes show substantial variation or inconsistency in the silica-quartz samples.

Sled-Mounted Drill

This alternative would involve drilling with sled-mounted drill rig. A crawler tractor would skid the drill rig into position at each test hole location.

At 18-20 tons, a sled-mounted core drill weighs about three times that of a reverse-circulation drill rig. Control of the sled on the rock outcrop and steep vegetated slope would be difficult. The full length, width, and weight of the sled would be in contact with the ground. Traversing across the hill side may cause the drill rig to slip downhill, increasing the area disturbed by the sled and necessitating skid roads to prevent slippage. The tractor and sled would cause considerable damage to rock, soils, and vegetation in the path. Small trees, vegetation, and soil would be stripped away, and the surface of the rock outcrop would be severely scoured. Large trees rubbed against or used to pivot the sled would be damaged. More area would be impacted while maneuvering the sled into position at and between drill holes.

A projected rate of three days per drill hole, including moving between holes, would result in a total on-site drilling time of 15 days for 5 test holes. The cost of drilling would be between \$50-70 per foot, substantially increasing the mining claimant's exploration costs and reclamation burden.

This alternative was eliminated from detailed study because the adverse environmental impacts to vegetation, soils, and the rock outcrop would be substantial, as would the mining claimant's exploration and reclamation costs.

Truck-Mounted Core Drill

This alternative would involve drilling with a truck-mounted drill rig driven to each drill hole. Roads would have to be built to each drilling location. The estimated time for road construction, drilling, and sampling is 20 to 30 field days for 5 test holes and an additional 21 days for the 7 additional test holes, excluding adverse weather or equipment breakdowns.

This method of drilling would require building about one-half mile of new road to access the proposed drill-hole locations. Removal of trees during road construction may remove spotted owl habitat. Drilling muds or other cooling/lubricating additives are needed for core drilling. While newer core drill rigs have self-contained drill mud tanks, older models require pits for containing and recycling the drilling mud.

This alternative was eliminated from detailed study because the adverse environmental impacts would be extreme and unnecessary; and the time and costs to the mining claimant for constructing roads, drilling, and reclamation would be considerable.

Helicopter Transported Core Drill

This alternative would involve using a helicopter to transport a sled-mounted drill rig to each test hole location. No new roads would be needed. The estimated time for drilling, sampling, and moving the drill rig between test holes is 15 field days for 5 holes and 21 field days for the 7 additional holes, excluding adverse weather or equipment breakdowns.

Helicopter transport of a 18-20 ton drill rig would require a heavy lift helicopter and disassembling and reassembling the drill rig at each drill hole. For helicopter personnel and on-site worker safety, large and hazardous trees would have to be removed at the Project Area and on the approach routes. Traffic on FR 68 would have to be stopped during helicopter operations to ensure the safety of the public.

Removing trees may impact northern spotted owl habitat. To keep weight, time, and operating costs down, the mining claimant would probably prefer using excavated drilling mud pits, rather than mud tanks mounted on the drill rig, which may adversely impact soils, ground water, wildlife, and vegetation.

The drilling operation would cost \$50-70 per foot for the drill rig and \$65-75 per hour for the helicopter costs, with a guaranteed minimum of 3-4 hours per day for the helicopter.

This alternative was eliminated from detailed study because of the potential adverse environmental impacts and safety hazards to drilling personnel and the public associated with helicopter use, helicopter weight limitations, and the operation would be cost prohibitive for the mining claimant.

B. Alternatives Considered in Detail

No Action

Under this alternative the proposed exploration drilling project would not occur. It can be used as a baseline to compare the viable action alternatives that are considered.

Operator has the burden of proving the marketability.

Geology is the pre-eminent over-control. In the case of silica, lithology / mineralogy

Exploration Alternatives - "Rigid"

1 - Portable Core Drill

This alternative involves drilling with a portable core drill. The drill would be packed to the drilling locations by hand. The estimated time for drilling, sampling, and moving between test holes is 15-20 field days for 5 holes and 20 to 30 field days for the additional 7 holes, excluding adverse weather or equipment breakdowns.

2 - Track-Mounted Reverse Circulation Drill

This alternative involves drilling with a track-mounted, reverse-circulation, pneumatic-percussion drill. Access would be "cross-country"; no new roads would be needed. The estimated time for drilling, sampling, and moving between test holes is 10-12 field days for 5 holes and 14-17 field days for the additional 7 holes, excluding adverse weather or equipment breakdowns.

C. Mitigation Measures and Management Requirements

The following mitigation measures and management requirements and constraints applicable to Exploration Alternatives 1 and 2 are designed to protect and/or minimize adverse environmental impacts to National Forest System surface resources in the Project Area that may occur as a result of the proposed exploration drilling. The following requirements apply to both action alternatives unless otherwise noted.

Pre-Operation Requirements

1. A representative of the Cow Creek Indian Tribe would be welcome to accompany the designated Forest Officer (Project Administrator) during field inspections of the drilling project.
2. The Forest Service Archaeologist and Project Administrator would establish a restricted area boundary around archaeological site RR-980.
3. The Forest Service would inspect and approve the drill rig and other equipment to be used by the mining claimant. *in their area of jurisdiction, legally?*
4. The required location of Project Area entry and exit points, drill hole locations, and the travel routes between them, would be flagged by the Project Administrator and mining claimant prior to the beginning of drilling operations.
5. The Project Administrator would approve in advance the placement of the portable tank used for mixing drilling mud, the type of drilling mud, and the hoseline locations. (Alternative 1.)
mud will compromise the integrity of the sample.
6. The mining claimant would have to obtain a water right prior to using water sources located on National Forest System lands for the portable core drilling operation. (Alternative 1.)
7. The Forest Service would conduct northern spotted owl monitoring as soon as the area is accessible in order to determine if spotted owls may have moved to within 1/4 mile of the Project Area. This would determine if a seasonal operating restriction would be needed.

- DOGAME also has regulatory responsibility for mining + exploration conducted within Oregon*
8. The Forest Service would specify all reclamation measures in the approved Plan of Operations and require a reclamation bond based on the estimated cost of reclamation.
 9. The Forest Service would designate camping and equipment-staging areas for the drilling operation and its personnel.

Drilling Operations Requirements

1. The Project Administrator would conduct frequent inspections of the drilling operation to ensure compliance with the Plan of Operations.
2. The mining claimant or his authorized representative would be on-site at all times during drilling.
3. Drilling operations would commence on or about May 15, contingent on weather and resource conditions in the Project Area as determined by the Project Administrator.
4. The mining claimant and drilling operator would comply with all Mine Safety and Health Administration (MSHA) regulations applicable to the drilling operation.
5. Any proposed changes in drilling operations (including equipment, access routes, drill hole locations, scheduling, etc.) would have to be approved in advance by the Project Administrator.
6. Drilling would not be permitted between August 1 and November 1 in order to minimize potential conflicts with Cow Creek Indians and other public users of the area.
7. No project related activities (including work-breaks or travel to the work site) would be permitted in the restricted area around Archaeological Site RR-980.
8. No entry to the Project Area from the east side or use of FRs 910 and 905 to access the Project Area would be permitted. All access for the drilling operation would be conducted from FR 68. Flaggers would be used when operations pose a threat to public traffic.
9. When the air compressor or water truck/tank is operating near the junction of FRs 68 and 910, the air or water line would go directly onto the rock outcrop, and would not be dragged along or placed on the ground within the restricted area.
10. The air compressor or water truck/tank would be placed as far off to the side of FR 68 as possible in order to minimize the safety hazard to passing vehicles. Safety cones would be placed at both ends of the equipment and warning signs would be located 1/4 mile from the Project Area in either direction on FR 68.
11. Any trees, other vegetation, or rock that needed to be removed for the drilling operation would require advanced approval by the Project Administrator.
12. To the extent possible, drill holes and access routes would be located so as to avoid damaging huckleberry bushes and other vegetation, and to minimize surface disturbance.
13. Additives used to make drilling mud for the operation would be non-toxic to animals, fish, plant life, and soil micro-organisms. (Alternative 1.)

14. The drilling mud return tank(s) would be set up below the level of the drill hole opening to capture and recycle the drilling mud. (Alternative 1.)
15. An earthen or synthetic berm adequate in size to contain drilling mud that overflows from the return tank(s) or is purged from the drill hole would be constructed below the tank(s). Excess drilling mud would be removed from the Project Area. (Alternative 1.)
16. Live trees used to winch the drill rig into position or for stabilization during drilling would require a Forest Service-approved protective device around the tree trunk to minimize damage.
17. An inverted cone (dust umbrella) would be used when drilling to capture the "cuttings" and minimize the escape of drilling dust into the atmosphere. (Alternative 2.)
18. To the extent possible, sharp turns by the drill rig, while traversing the Project Area and positioning over drill holes, would be avoided to minimize soil disturbance and scarring of the rock outcrop. (Alternative 2.)
19. On-site storage of fuel, and lubricating and hydraulic oil would be limited to only the amount needed for daily operations.
20. Any major equipment maintenance or repairs would be prohibited within the Project Area.
21. Prework and post-work inspections of the drill rig would be performed daily. If oil or fuel leaks were found, the drill rig would be shut down until repaired. A supply of absorbent pads would be kept available during refueling, maintenance, and repairs to contain possible leaks.
22. The drilling operator would initiate immediate containment and cleanup of any spills or leaking fluids. The Project Administrator would be notified immediately of any spills. Failure to do so could result in suspension of drilling operations.
23. Project-related camping or equipment staging at Huckleberry Gap or other dispersed camps within the "Huckleberry Patch" would not be permitted. If requested, the Project Administrator would permit a representative of the mining claimant or drilling contractor to camp on-site to provide security for equipment.
24. The Project Area, and its camping and staging areas would be cleaned up of garbage, drilling materials, flagging, etc. upon completion of the drilling project.

Reclamation Requirements

1. Project Area reclamation would be completed within 10 days following the completion of drilling operations except for permanent plugging of the drill holes. (see Reclamation Requirement #5)
2. Ingress/egress and internal-access routes used by the drill rig and personnel would be naturalized, i.e. natural debris, limbs, and other vegetation displaced during the drilling operation would be scattered back onto disturbed areas, berms would be removed or broken down, cut banks would be raked and the drainage ditch along FR 68 would be cleaned out, and any broken and damaged limbs along FR 68 would be removed and scattered beyond view from the road.

3. Any drill cuttings not removed from around the drill holes would be raked back into the hole.
4. Drill holes would be capped immediately following drilling as an interim measure to protect small animals from falling into them.
5. For permanent drill hole closure, the mining claimant would comply with State of Oregon drill hole abandonment requirements. *DOGAMS*
6. *Standard Oregon well construction abandonment procedure* → If subsurface water is encountered in a drill hole, the water flow must be permanently sealed with cement, bentonite, or puddling clay to prevent contamination of ground water.
7. At completion of reclamation, the mining claimant and Forest Service Project Administrator would inspect the Project Area to ensure that all reclamation requirements were met prior to release of the bond. Cow Creek Indian representatives would be welcome to participate in final inspection of the Project Area.

DOGAMS would also give a final report.

CHAPTER III. AFFECTED ENVIRONMENT

This section briefly describes the environment in which the proposed exploration drilling would occur. The physical, biological, economic, and social resources are discussed below. More detailed information and specialist reports are contained in the Quartz Mountain Silica Minerals Exploration Drilling Analysis File.

CULTURAL RESOURCES

The Project Area is within the "Huckleberry Patch," a National Register of Historic Places-eligible traditional cultural property. The "Huckleberry Patch" totals approximately 7,650 acres along the Rogue-Umpqua Divide, including adjacent slopes and spur ridges on both sides of the watershed divide.

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 to the present. Although seasonal gathering of huckleberries is the central aspect of traditional use which has annually brought Cow Creek Indians to the area, other continuing uses directly associated with the traditional berry harvest include hunting, recreational and social interactions among Cow Creek Indians, and spiritual renewal.

The "core" of the "Huckleberry Patch" extends from the vicinity of Huckleberry Lake/Neal Springs on the southwest to the Huckleberry Gap/Quartz Mountain area on the northeast and includes, but is not limited to, all areas where huckleberry plants occur.

Ethnohistorical research of the Cow Creek Indians' use of the "Huckleberry Patch" reveals that the area traditionally held several kinds or aspects of spiritual (and often closely related social) values such as group dances and rituals and the teaching of life skills. Solitary religious observances, referred to as "quests, prayer, or communion", occurred at various known and unspecified locations within the "Huckleberry Patch".

Research does not reveal any direct evidence of spiritual activities, either historic or current, occurring within or close to the Project Area. Places within the "Huckleberry Patch" that are documented to have had (or are very likely to have had) special spiritual importance are prominent saddles, peaks, and traditional camping areas along the summit of the Rogue-Umpqua Divide. These areas are situated at higher elevations and on more geographically prominent landforms.

There is no currently known evidence which points to site-specific spiritual values directly associated with the Project Area. However, the absence of historic evidence regarding any specific spiritual activities at (or spiritual beliefs associated with) the Project Area and its immediate environs does not establish that such activities or beliefs were not a part of the past. The actual location of solitary spiritual places was very personal information that was not divulged to family members. Similarly, the absence of testimony regarding any current, on-going site-specific spiritual activities within the Project Area does not deny that such solitary activities by unknown Cow Creek individuals may take place.

Tribal representatives have stated that Cow Creek Indians believe that the entire Cow Creek aboriginal territory, and the high country in particular, is sacred: "... our religion is tied to the earth, the sky; all of that is held sacred by us. The higher you go in the mountains, the closer you are in communion with the Great Spirit."

Surface resource impacts from timber harvest, roads, recreation developments, and other similar kinds of land disturbing activities that have occurred in the "Huckleberry Patch" are not viewed by the Cow Creek Indians as having the same non-renewable, irretrievable character of mining.

No archeological or historic resources have been found within the Project Area. In 1985, an archeological survey was conducted over the entire area under mining claims, including the Project Area. A total of 400 acres were surveyed, 100 acres intensively. Eleven prehistoric sites and one historic site were identified. Six prehistoric sites and one historic site may be National Register-eligible. Archeological surveys have also been done in conjunction with past and currently proposed timber sales in the vicinity of the Project Area.

The only archeological resource in the vicinity of the Project Area is Forest Service-designated Site RR-980 (Oregon State Historic Preservation Office number 35JA60). It is situated immediately southeast of the rock outcrop. Subsequent surveys of the rock outcrop and its immediate surroundings have found no archaeological or historical evidence despite repeated, intensive search efforts.

Although the exact dimensions of site RR-980 are unknown, it does not extend onto the surface of the rock outcrop. Site RR-980 will be managed as a potentially significant, National Register-eligible site unless and until subsurface archaeological testing determines otherwise.

These findings are documented in the Research Summary and National Register of Historic Places Eligibility Evaluation Report for the "Huckleberry Patch" on the Rogue-Umpqua Divide, by Jeff LaLande, Rogue River National Forest Archaeologist, July, 1992, C.R. Job RR-996; and in a letter dated 11/20/92 to the Prospect District Ranger from Jeff LaLande regarding project mitigation measures for cultural resources.

GEOLOGY

Quartz Mountain lies in the Western Cascades physiographic province, an area comprised of volcanic sediments and flows associated with the initial buildup of the Cascades. Rock formations includes beds of volcanic tuff, andesite lava flows, and layers of breccia and agglomerate. Uplift and erosion have produced high-relief topography.

At 5,657' elevation, Quartz Mountain dominates the immediate vicinity. The crest of the mountain is volcanic rock; the silicified quartz replacement (intrusive) body is exposed near the summit and at various rock outcrop on the southern flank of the mountain. The white opaque "quartz" cliffs just below the summit at 5,200' to 5,500' in elevation, are visible from the southeast, when not obscured by forest. The Project Area, approximately 1/2 mile south of the summit and about 5,000' in elevation, is not distinguishable from a distance.

The mining claimant, the State of Oregon-Department of Geology and Mineral Industries, and Dow Corning Corporation have each conducted independent, limited investigations of the quartz body. Based on surface sample assays, some zones within the body have the potential to supply high-quality quartz silica mineral but other zones contain titanium levels that are too high for silicon metal production, a primary end use for the mineral. The size, quality, and chemical makeup of the quartz body have not been completely characterized or delineated, and the deposit reserves remain unknown.

RANGE

The Project Area is within the Whaleback Cattle Allotment (Arnold Ragsdale, permittee). There is little forage in the Project Area and no evidence to indicate that grazing by permitted livestock occurs within the Project Area, except as cattle drift to grazing areas along FR 68.

RECREATION

The Huckleberry Gap/Huckleberry Lake dispersed recreation area is located about one mile west side of the Project Area on FR 68. It is the principal dispersed recreation area on the west side of the Prospect Ranger District, serving recreation visitors on both the Rogue River and Umpqua National Forests. The broad, rounded, and gently sloping ridge along the Rogue-Umpqua Divide provides the natural scenery and setting prerequisite to a quality recreation experience.

The dispersed camps at Huckleberry Gap, Neal Springs, Huckleberry Lake, (all of which were developed campgrounds at one time), receive heavy use during the huckleberry picking and hunting seasons. There are other less frequently used camps in the general vicinity of the Project Area. The south entry to the Rogue-Umpqua Divide Wilderness is from the Huckleberry Gap trailhead (FT 1470) and the Donegan Prairie Trail (FT 1431) and Donegan-Neal Unroaded Recreation Area on the Umpqua National Forest are nearby. Serendipity Falls on upper Abbott Creek and the abandoned lookout site at Abbott Butte are special dispersed recreation features that are also in the general vicinity of the Project Area.

The primary recreational uses that occur in the Huckleberry Gap area are huckleberry picking, big game hunting, camping, hiking, and the gathering of firewood and other miscellaneous forest products. With the wide variety of dispersed recreation opportunities that are available, the Huckleberry Gap/Huckleberry Lake area receives moderate use throughout the summer and fall by campers, huckleberry pickers, hunters, hikers, horse riders/packers, sightseers, and by other recreationists. The highest use occurs in the late summer and fall during the huckleberry picking and hunting seasons.

SOIL AND WATER

The Project Area is located on the south side of a ridge separating McCall and Abbott Creeks. The topography varies from the gently-sloping forested east side near the ridgetop, to the steeper (30-45%), forested west side and similarly steep terrain and breaks of the rock outcrop along FR 68.

Soils in the Project Area have characteristics of those described in the Rogue River National Forest Soil Resource Inventory for Landtype Units 3, 5, and 43. The Project Area is a dissected, moderately steep, convex upper sideslope, with rock outcrops and shallow, well drained soils. Soils are formed by the weathering of rock in place and by the downslope movement of soil and rock fragments.

The Project Area is within the Abbott Creek watershed, surface runoff is into McCall Creek. There are no springs, wetlands, streams, or watercourses in the Project Area. There are wetlands in the vicinity of the Project Area; one is about 0.2 mile downslope and south of FR 68, the other is approximately one-quarter mile to the north on the opposite side of the ridge. There is an intermittent stream about 0.2 mile west of the Project Area.

TRANSPORTATION

Forest Road 68 is the access route to (and forms the southern boundary of) the Project Area. It is the primary travel route to Huckleberry Gap from State Highway 62 and is most heavily used by recreational, Forest Service, and logging-related commercial traffic during the summer and fall months.

A summary of recreational traffic counts taken 0.1 mile south of Huckleberry Gap on FR 68 shows an average of 19.9 vehicles per day between 6/12/91 and 10/24/91. The highest average traffic, 30.2 vehicles per day, occurred from 8/26/91 through 10/24/91. The average daily traffic between 6/12/91 and 6/27/91 was 6.4 vehicles per day. These figures represent noncommercial traffic use.

FRs 910 and 905 are local access roads that were constructed for timber sales; they are currently blocked and closed to vehicle travel at the junction of FR 68. The roads access the east side of the rock outcrop and FR 905 terminates at the east face of the rock outcrop. Both roads may intrude onto archaeological site RR-980.

VEGETATION

Quartz Mountain is within the Upper Forest vegetation zone. Scattered trees, shrubs, and herbaceous vegetation are present on the rock outcrop portion of the Project Area; the area surrounding the rock outcrop is classified old-growth forest, and has a sparse understory. Small brushfields and meadows dot the general vicinity of the Rogue-Umpqua Divide. Huckleberry Gap, about one mile from the Project Area, is known for its huckleberry patches and plentiful forage for deer, elk, and livestock.

Douglas-fir, Shasta red fir, and mountain hemlock dominate the overstory on and around the rock outcrop. White fir and incense-cedar are also present. Trees and shrubs are scattered across the rock outcrop but the low-growing stonecrop, rockbrake fern, and beargrass are more abundant. The forest understory has scattered clumps of serviceberry, huckleberry, current, rhododendron. Pinemat manzanita, prince's pine, and grasses are the main ground covering vegetation.

On the Rogue River National Forest side of the Rogue-Umpqua Divide there have been at least eight timber sales within a two mile radius of the Project Area. Planning for one timber sale (T.S.) is currently in progress. The Shoe II T.S. had one harvest unit that was located at Huckleberry Gap. Helicopter logging was included in the Bootleg T.S. and there are harvest units in close proximity to the Project Area. Roding of the area has occurred in conjunction with the timber harvest program.

Huckleberry bushes cover approximately 12 percent of the Project Area. The greatest concentrations of huckleberry plants are on the open shoulders and base of the cut slopes along FR 68, in openings in the forest canopy, and along the margins of the rock outcrop. Scattered individual plants and small groups of huckleberry are found on the rock outcrop.

Rock outcrops in the area offer potential habitat for a number of Proposed, Endangered, Threatened, and Sensitive (PETS) plant species. A field survey of the Project Area for PETS plant species was initiated in the fall of 1990 and completed during the summer of 1991. No PETS plants were found. This has been documented in a completed biological evaluation.

VISUALS

While the old-growth forest and meadow scenery along the Rogue-Umpqua Divide has substantial natural beauty, other areas have a reduced level of visual quality due to the effects of past timber harvest, road construction, dispersed camp site development and use, road rock quarries, and other land disturbing human activities.

The Visual Quality Objective (VQO) for Management Area MA-20, Timber Suitable 1, is Maximum Modification. This means that human activities may dominate the characteristic landscape but, when viewed as background, they should appear as a natural occurrence. The VQO for MA-1, Minimum Management, the recommended land allocation, permits Maximum Modification.

WILDLIFE AND FISH

Black-tailed deer, Roosevelt elk, coyote, and black bear inhabit the general area. Raptors include golden eagle, red-tailed hawk, and goshawk; other common birds include mountain quail, grouse, flicker, raven, and numerous other smaller birds. Amphibians and reptiles may inhabit the Project Area but none were found during the wildlife survey. The closest known occurrences of frogs or other amphibians are in the wetlands habitats. The nearest populations of fish (rainbow trout) are found in Abbott and McCall Creeks, more than a mile downstream from the Project Area.

The rock outcrop portion of the Project Area is not suitable northern spotted owl habitat, but the surrounding forest is designated as suitable spotted owl habitat. The Project Area is within a U.S. Fish and Wildlife Service designated spotted owl Critical Habitat Unit and about one-half mile from a Forest Service designated Category 4 spotted owl Habitat Conservation Area. The most recently documented spotted owl nest site is about 0.7 miles from the Project Area. A territorial single spotted owl has also been documented in the vicinity of the Project Area.

Quartz Mountain presently has no resident peregrine falcons, nor is there any evidence of such habitation. The cliffs that are approximately one-half mile north of the Project Area contain suitable habitat for peregrine falcons and medium potential for nest sites. This evaluation is based on a field reconnaissance by the Forest Service's Peregrine Falcon Specialist.

The Project Area was surveyed for PETS animal species in 1991 and 1992. The survey concluded that the proposed drilling would not affect any PETS species or habitat. This has been documented in a completed biological evaluation.

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

This section describes the environmental consequences of implementing each alternative method of proposed exploration drilling in terms of the effects on the human environment (i.e. the physical, biological, economic, and social aspects). In describing these effects, short-term effects are defined as being equal to the duration of the project (1 to 2 months) while long-term effects are those that extend beyond the life of the project.

This analysis of the environmental effects assumes compliance with federal laws, national policies, regional standards and guidelines, and compliance with the Rogue River National Forest Land and Resource Management Plan (Forest Plan).

A. Effects of Implementation: Key Issues

The alternative is analyzed as to its effects on the human environment relative to the three key issues (see Chapter I, pg. I-6) that were identified for the proposed exploration drilling project.

No Action

This alternative was considered and found to not meet the purpose and need of the proposed project and to not be a viable alternative under the United States Mining Laws and the Forest Service locatable minerals regulations.

The United States Mining Laws confers a statutory right to enter upon federal public lands open to mineral location to search for minerals. Current evidence indicates that the mining claimant has a legal claim and right to the minerals. The Ramex unpatented mining claims are located on reserved National Forest System land open to mineral location. The mining claims are properly located and recorded with the Jackson County Recorder and the USDI Bureau of Land Management. Denial of the statutory rights of the mining claimant may constitute a taking.

The Forest Service responsibility under the locatable minerals regulations is to minimize adverse environmental impacts on National Forest System surface resources pursuant to operations authorized by the United States Mining Laws.

The spiritual values of the "Huckleberry Patch" as they relate to the Cow Creek Indians religious beliefs would not be effected under this alternative, nor would there be any adverse environmental impacts to National Forest System surface resources.

There would be no exploration costs incurred by the mining claimant. The mining claimant would forego the opportunity to explore and establish the value of the mineral deposit. Although the mining claimant would retain ownership of the mining claims, the inability to conduct minerals related activities may prevent the claimant from doing the required annual assessment work, thereby jeopardizing the claimant's continued ownership of the claims. The mining claimant may dispose of or abandon the claims, or submit a new Plan of Operations for the Ramex claims at the same or another location.

Exploration: Action Alternatives

The Cow Creek Indians' opposition to mining is founded on religious grounds, one aspect of which relates to the renewability and non-renewability of the natural resources. Tribal representatives have stated repeatedly that the "Huckleberry Patch" is a sacred area that would be "desecrated" by mining, including the proposed exploration drilling project; they state that there are no measures that would "lessen" or eliminate the impacts of mining. The Rogue River National Forest Archaeologist has concluded that, exclusive of the "No Action" alternative, mitigation measures relative to currently-held Cow Creek Indian spiritual values apparently do not exist.

The Cow Creeks believe that exploration drilling will adversely impact their religious beliefs and the spiritual values that they associate with the "Huckleberry Patch." Therefore, the impact to the social component of the human environment relative to the Cow Creek Indians' beliefs will be equal for either of the two exploration drilling alternatives.

While the Cow Creek Indians' concerns for the spiritual values of the "Huckleberry Patch" cannot be mitigated if exploration drilling occurs, their inherent right to believe, express and exercise their traditional religion on National Forest land would be protected and preserved under both drilling alternatives.

Alternative 1 - Portable Core Drill

This alternative would involve drilling with a portable core drill rig. The drill would be packed to the drilling locations by hand. The estimated time for drilling, sampling, and moving between test holes is 16 to 28 field days for 5 holes and 21 to 39 additional field days for the additional 7 holes, excluding adverse weather or equipment breakdowns. The area impacted would be localized around the drill hole and recycle tank locations, and for 12 core test holes, it would total about 0.07 acre. The impact of the hose line lays would be negligible.

The mining claimant's proposed drilling schedule, beginning in mid-May, is during a period when the "Huckleberry Patch" normally receives relatively low use by the public, including the Cow Creek Indians. Drilling during this period would minimize potential encounters and user-conflicts.

The area impacted by a portable core drilling operation is estimated to be approximately 20-25 feet around each drill hole. The total weight of the assembled drill is about 200 pounds. Disassembled, the drill could be easily moved around the Project Area by two or three people, and surface resource impacts from the drill rig would be confined to the area surrounding the drill holes.

not acceptable Use of a portable core drill would require an additive, commonly called drilling mud, to lubricate the drill bit and to increase core sample recovery. Impacts would be minimized by using an environmentally safe mud. Since drilling muds are mixed with water, the mining claimant may have to acquire a water right, depending upon the water source.

With no water available on-site, the mining claimant would have to truck water to the Project Area; mix the drilling mud in the truck tank or a portable tank, lay the hose line, and pump the drilling mud to the drill. The tank truck could be moved along FR 68 reducing the distance the hose line would run. Because of the lack of space to put a portable tank on the shoulder of FR 68, it would have to be located at the junction of FRs 68 and 910, necessitating a longer hose lay. In either case, traffic safety devices would be needed to reduce potential hazards to the public.

Drill lubrication is a closed circulation system. After cycling through the drill, the mud would flow through the return line into recycling tanks or plastic lined sumps excavated into the ground. It would then be pumped from the return tanks to the drill with a portable pump.

After drilling each test hole, the drilling mud would be gravity fed or pumped back to the main tank or tank truck. The recycle tanks would be moved to the new drill-hole location with the rest of the equipment and be refilled.

The manufacturer of the Mark IV portable core drill recommends using a series of three tanks or in-ground sumps to settle out most of the drill cuttings in order to return fairly clean drilling mud is recycled to the drill. This would extend the life of the drilling equipment and lubricating system. This would also minimize the amount of water used in the drilling operations.

Periodic recharge of the recycle tanks would be necessary, particularly if the rock is fractured since the drilling mud would seep into the subsurface. By recycling the drilling mud, it is possible to operate the drill on a minimum of 50 gallons of water or less per day.

Excavation of sump holes would enlarge the area impacted and sump holes located in the rock outcrop would leave permanent pits in the surface of the outcrop. Scarring of the rock outcrop and other impacts associated with sumps would be eliminated by using small tanks. The tanks would be located so that there would be little or no damage to surface resources. To catch any overflow from the drill hole or return tanks, an earthen or synthetic berm would be necessary at each drill hole.

The overall surface resource impacts from drilling with a portable core drill would be somewhat less than with reverse-circulation drilling. It would be a more labor intensive drilling operation and would take longer to complete than reverse-circulation drilling.

Since the drill and the drilling-mud hose line would be hand-carried to each drill location, there would be no need to remove trees or other vegetation to accomplish the drilling. Drill holes would be located to eliminate the need to remove trees or other vegetation.

Northern spotted owl habitat would not be removed, nor would the drilling operation disturb spotted owls. Since the Project Area is within a U.S. Fish and Wildlife Service designated Critical Habitat Unit and classified old-growth forest, informal conferencing with the USF&WS would be needed.

Use of a portable drill would extend the amount of time needed to complete the drilling. Depending on the number and depth of the drill holes, and at an estimated 20 feet per day, it could take from as few as 16 days to as many as 67 days to complete the drilling project. Increasing the amount of drilling time would increase the potential for user-conflicts to occur. Except when drilling beside or within sight of FR 68, the drilling operation would not be visible. Operated by a two-cycle gasoline engine, the drill would be about as loud as a chainsaw. The increased drilling time may be offset by the lack of visibility, lower noise level, and surface resource impacts of the portable core drilling.

Forest Service minerals specialists have expressed concerns about the capability of drilling silica-quartz with a portable drill due to the hardness of the rock and amount of down hole pressure exerted by the drill. A representative of the Diamond Drill Contracting Company, the manufacturer of the Mark IX Portable Drill, has stated that their core drill is capable of drilling rock the hardness of silica-quartz.

The Diamond Drill Contracting Company representative also stated that portable drills are primarily owned by private individuals and companies, and they are not common equipment of commercial

drilling contractors. If the mining claimant is unable to find a drilling contractor that has a portable drill, he would have to purchase one.

Purchasing a portable core drill, drill bits, additional sections of core pipe, drilling mud, and other needed equipment would range from about \$5,000 to \$8,000. The cost would be about the same as drilling with a track-mounted reverse-circulation drill. The additional time it would take to complete the drilling is not factored into the cost estimate.

Alternative 2 - Track-Mounted, Reverse-Circulation Drill

This alternative would involve drilling with a track-mounted, reverse-circulation, pneumatic-percussion drill. Access would be "cross-country," and no new roads would be needed. The estimated time for drilling, sampling, and moving between test holes is 10-12 field days for 5 holes and 12-15 additional field days for the additional 7 holes, excluding adverse weather or equipment breakdowns. The estimated acreage impacted by drilling 12 test holes would be about 0.05 acre at the drill holes and an additional 0.15 acre between holes, for a total of 0.2 acres.

Potential conflicts between drilling operations and use of the vicinity by the Cow Creek Indians (and other forest visitors) would be minimized. The duration and timing of the exploration drilling operation proposed by the mining claimant, 10 to 30 days beginning in mid-May, would minimize the user-conflicts that may occur if drilling was conducted in the July through October period (i.e., huckleberry picking and deer/elk hunting, seasons of highest use of the "Huckleberry Patch" by the Cow Creek Indians and other people).

Using a track-mounted drill rig, the Project Area may be accessed from several locations along FR 68 eliminating the need to enter the area from FRs 910 or 905. This would prevent any disturbance to archaeological Site RR-980.

Impacts would occur while moving the drill rig into the Project Area and between the drill-hole locations. Minor amounts of scarring of the surface of the rock outcrop, and damage to vegetation in the path of the drill rig and at the drill holes would occur. The most evident impacts would be at cut-banks along FR 68 where the drill rig enters and leaves the Project Area. The impacts would be greater than with a portable core drill but, as with the core drill, would be short-term impacts.

Removing some vegetation and small trees (sapling- and pole-sized) would be necessary to gain entry into the area, but effects can be minimized by prior location of ingress/egress points. A drill rig is maneuverable enough that travel routes between drill holes can be located so that large trees and most other vegetation would be protected against damage.

Northern spotted owl habitat would not be removed, nor would the drilling operation disturb spotted owls. Since the Project Area is within a U.S. Fish and Wildlife Service designated Critical Habitat Unit and classified old-growth forest, informal conferencing with the USF&WS would be needed.

Use of an inverted cone (dust umbrella) during drilling would accomplish the mining claimants need to capture all the cuttings for preparation of the assay samples. The cone is designed to contain all the cuttings and minimize the amount of rock fragments and dust that escapes into the atmosphere.

Noise generated by the percussion drill and air compressor unit would be greater than that produced by a portable core drill. However, the drilling operation would be about twice as fast as with a portable core drill, and noise could be minimized by use of a noise shield, if available.

Vibrations generated by the drill rig are unavoidable and may cause rock fragments to fall from the vertical exposures along FR 68. Although the amount of rock exposed along FR 68 is small, safety cones, signs, and, if necessary, a flagger, would be placed on FR 68 to minimize hazards to the public. Any rock fragments and debris that fell onto the road would be removed.

Track-mounted drills are self-contained, relatively compact and light weight (the size recommended by a Medford drilling contractor is 12' length x 8' width; 13,000 lbs.). They are easy to operate, very maneuverable and the extendible drill boom permits vertical drilling on steep slopes and in confined areas. The crawler tracks and winch facilitate moving over rough and steep terrain. Most pneumatic operated drill rigs have a separate air compressor unit that is attached to the drill rig by an air line although some have built-in air compressors. A dust shield can be used to contain cutting fragment and dust particles. Some newer drill rigs are equipped with noise shields. The drill rig does not require water or drilling mud.

Track-mounted, reverse-circulation drill rigs are the most frequently used kind of drill rig for preliminary exploration drilling. This is because the equipment is both time- and cost-effective. While the adverse environmental impacts to surface resources are greater than with a portable core drill, they are less than those of the other kinds of drill rigs commonly used for exploration.

? Most drilling contractors have track-mounted reverse circulation drill rigs. Fifty (50) feet per day is the projected daily drilling rate in silica-quartz rock. The total on-site drilling time could be a few as 10 days for drilling and moving between 5 test holes to as many as 24 days for drilling 12 test holes 100 feet deep. The cost of reverse-circulation drilling is relative inexpensive, \$8 to \$10 per foot, in comparison to commercial core drilling rigs, and about the same as the cost of drilling with a portable core drill.

B. Other Effects

The following is a summary of effects that were considered during the analysis process. These effects were not necessarily treated as issues, and were not always totally quantifiable. All effects were determined to be consistent within the guidelines identified in the Rogue River Land and Resource Management Plan.

Relationships between local, short-term uses of the human environment and maintenance or enhancement of long-term productivity: Analysis by the IDT indicates that the proposed exploration drilling will not affect relationships between local, short-term uses of the human environment and maintenance or enhancement of long-term productivity.

Irreversible or irretrievable commitments of resources: The mineral sample removed from each drill hole under both action alternatives would not result in an irreversible and irretrievable commitment of surface resources.

Adverse environmental effects which cannot be avoided: The desecration of the spiritual values of the "Huckleberry Patch" to the Cow Creek Indians is an adverse environmental impact which cannot be avoided. The loss of the silica-quartz mineral taken for sampling is an environmental effect which cannot be avoided.

Cumulative effects: The IDT examined the Project Area for issues or management concerns that might warrant a cumulative effects analysis. Because of the small amount of area affected by the action alternatives and as a result of preliminary analysis, the IDT determined that cumulative effects analysis was not necessary.

Social/Economic effects: Under the No-Action alternative, the opportunity to determine the potential of the silica-quartz deposit would be foregone. However, the spiritual integrity of the "Huckleberry Gap" to the Cow Creek Indians would be maintained.

The Cow Creek Indians have stated that, under both action alternatives, they would suffer a loss of spiritual values associated with the "Huckleberry Patch." The action alternatives would not prevent, restrict, or prohibit the Cow Creek Indians from using the Project Area for traditional and religious purposes.

The action alternatives would allow the mining claimant to obtain samples for assay and evaluation. Analysis of the sample data would be the basis used to determine the validity (quality and quantity) of the silica deposit.

Other than the effects to the Cow Creek Indians, there would be no known adverse effects to minority groups or women from the selection of any of the alternatives. None of the alternatives would negatively affect the civil rights of any person.

Recreation (Recreation Opportunity Spectrum and scenic quality): All alternatives would provide for continued outdoor recreational opportunities within the Project Area after the drilling operation is complete, including opportunities for hunting, huckleberry picking, and gathering firewood. By maintaining current recreational opportunities, no economic effect on tourism is anticipated.

The area of proposed harvest is within the "Roaded Natural" Recreation Opportunity Spectrum (ROS) classification. The existing classification would not be changed with implementation of any alternative.

Under all alternatives, scenic resources within the area of consideration would be maintained. All alternatives would meet the Maximum Modification Visual Quality Objective for Management Area 1.

Effects on prime farmland, rangeland and forestland: The Project Area is within National Forest System land. The Project Area is classified as non-forest land, unsuitable for timber harvest. No farmlands or rangelands are involved.

Effects upon wetlands and floodplains: No floodplains, as defined by Executive Order 11988 exists within the Project Area. It was determined that all alternatives would constitute a "no effect" undertaking in relation to the Wetlands Executive Order 11990.

Cultural Resources: Cultural resource surveys of the Project Area have been conducted. It has been determined that the proposed exploration drilling would comprise a "no effect" undertaking relative to prehistoric archaeological sites, and that proposed actions would in compliance with MA-1, Recreation Standards and Guidelines 7-12, in the Forest Plan.

The Project Area is within the "Huckleberry Patch" NRHP-eligible traditional property. Project management requirements and mitigation measures are designed to minimize any adverse effects. The proposed Project Area has not yet been reviewed by the State Historic Preservation Office (SHPO) and the Advisory Council for Historic Preservation (ACHP) as required by 36 CFR 800. This Environmental Assessment is being submitted as the Forest Service's project description in its historic preservation consultation/concurrence process with SHPO and ACHP.

Effects upon potential endangered, threatened, or sensitive species: Surveys were conducted, and biological evaluations have been prepared for species on the USFS Region 6 Sensitive Plant and Animal Lists, as well as for threatened and endangered species that are Federally listed. No such species were found in the Project Area. (Refer to the Biological Evaluations in the Analysis File.) It was determined that the proposed exploration drilling would be in compliance with MA-1, Wildlife, Fish, and Plant Standards and Guidelines, in the Forest Plan.

A northern spotted owl survey has been completed. No spotted owl nesting pairs have been located within the Project Area and no spotted owls were found residing within 1/4 mile of the Project Area in 1992. The Project Area is within suitable spotted owl habitat, but the project would not remove suitable spotted owl habitat. The proposed exploration drilling is in compliance with the ISC Report and the March 3, 1992 Record of Decision on Management for the Northern Spotted Owl in the National Forests and with MA-1, Wildlife, Fish and Plants section Standards and Guidelines, in the Forest Plan.

CHAPTER V. CONSULTATION WITH OTHERS

Issues associated with the minerals exploration drilling proposal were identified by an interdisciplinary team (IDT) through a scoping process. This process included a review and evaluation of information gathered through specialist input and public correspondence received.

The initial proposal (quarry mining) was incorporated into the Leg Timber Sale Analysis Area and a public involvement letter was given wide distribution in May 1991. Comments relative to quarry mining were received from one individual and the Rogue Group-Sierra Club.

The quarry mining proposal was scaled down to exploration drilling in September 1991. The exploration drilling proposal was displayed and discussed at a public meeting in Medford, Oregon in October 1991. In addition, information regarding the proposed project was available at the Prospect Ranger District.

Numerous meetings and field reviews of the proposal with the mining claimant have occurred since the initial plan of mining operations was submitted in September 1990.

The Cow Creek Band of Umpqua Tribe of Indians have been actively commenting on the proposal since June 1991, and several meetings and site visits were held in 1991 and 1992.

The following Forest Service specialists participated on the Interdisciplinary Team or provided input for the analysis:

Allen Fowler	Integrated Resource Planner, IDT Leader
Scott Armentrout	Wildlife Biologist, Butte Falls Ranger District
Reb Bennett	Locatable & Saleable Minerals Specialist, Region 6
Roy Brogden	Tiller District Ranger, Umpqua National Forest
Lisa Freedman	Lands and Minerals Staff, Region 6
Jim Goode	Wildlife Biologist, Prospect RD
Ken Grigsby	Lead Integrated Resource Planner, Prospect RD
Carol Harmount	Botanist, Prospect RD
James Keyser	Regional Archaeologist, Region 6
Jeff LaLande	Rogue River National Forest Archaeologist
Larry Loftis	Botanist, Okanogan National Forest
Gordon Lyda	Area Minerals Examiner, Region 6
Les McConnell	Tribal Governments Staff Assistant, Region 6
Joel Pagel	Peregrine Falcon Biologist, Region 6
Georganne Shafer	Cultural Resource Specialist, Prospect RD
Jim Shine	Road Manager, Rogue River National Forest
Jerry Sutherland	Director of Lands and Minerals, Region 6
Fred Wahl	Wildlife Biologist, Prospect RD
Bob Wilcox	Prospect District Ranger
John Williams	Timber Management Officer, Gold Beach RD

PLAN OF OPERATIONS
FOR MINING ACTIVITIES
ON NATIONAL FOREST LANDS

Submitted by Ron Gibson OWNER
Signature Title Date

Plan Received by AMH Forester 12/10/92
Signature Title Date

I. GENERAL INFORMATION

- A. Name of Mine/Project Quarts Mountain Silica
- B. Type of Operation Exploration
(lode, placer, mill, exploration, development, production, other)
- C. Is this a (new/continuing) operation? (CIRCLE ONE)
If continuing a previous operation, this plan (replaces/modifies) a previous plan of operation. (CIRCLE ONE)
- D. Proposed start-up date of operation May 15, 1993
- E. Proposed duration of operations 10 to 60 days
- F. Proposed seasonal reclamation close-out N/A
- G. Expected date for completion of all reclamation August 1, 1993

II. PRINCIPALS

- A. Name, address and phone number of operator Ron Gibson
5366 Thompson Creek Road, Applegate, OR 97530
503/846-7831
- B. Name, address, and phone number of authorized field representative (if other than the operator). Attach authorization to act on behalf of operator.
Ron Gibson 5366 Thompson Creek Road, Applegate, OR 97530
503/846-7831
- C. List the owners of the claims (if other than the operator)
RAMEX, INC.

- D. List name and address of any other lessees, assigns, agents, etc. and briefly describe their involvement with the operation, if applicable:

Mountain Valley Resources, Inc.

1019 S.E. Clary, Grants Pass 97526

III. PROPERTY OR AREA

Name of claim, if applicable, and the legal land description where the operation will be conducted.

MC #	Name	Section	Township	Range
0132462	RAMEX #17	34	30-S	2-E

IV. DESCRIPTION OF THE OPERATION

- A. **Access.** Show on a map (USGS quadrangle map or a National Forest map, for example) the claim boundaries, if applicable, and all access needs such as roads and trails, on and off the claim. Specify which Forest Service roads will be used, where maintenance or reconstruction is proposed, and where new construction is necessary. For new construction, include construction specifications such as widths, grades, etc., location and size of culverts, describe maintenance plans, and the type and sizes of vehicles and equipment that will use the access routes.

See Attached

- B. **Map, Sketch or Drawing.** Show location and layout of the area of operation. Identify any streams, creeks or springs if known. Show the size and kind of all surface disturbances such as trenches, pits, settling ponds, stream channels and run-off diversions, waste dumps, drill pads, timber disposal or clearance, etc. Include sizes, capacities, acreage, amounts, locations, materials involved, etc.

See Attached

(If more space is needed to fill out a block of information, use additional sheets and attach to form.)

IV. DESCRIPTION OF THE OPERATION

A. Access

The area of exploratory drilling is approximately 3.1 acres in size and is located north and west of the junctions of forest roads 68 and 910, in section 34, T30S, R2E. Access to the area will be by existing forest roads 68, 910, and 905. No new road construction or reconstruction of existing roads will be needed. The proposed drill hole locations will be accessed overland by a track-mounted drill.

B. Map, Sketch, or Drawing:

Attached map shows drill hole locations and proposed access routes.

Alternative #1 marked in BLUE BOX consists of drilling 5 holes 2 1/2" diameter at least 50 to 100 feet deep. Samples will be taken at 2 foot intervals.

Alternative #2 marked in GREEN BOX consists of drilling 12 holes 2 1/2" diameter at least 50 to 100 feet deep. Samples will be taken at 2 foot intervals.

C. Project Description.

1. For first 12 months:

The exploratory drilling will be completed within one month. The project consists of drilling 5 or 12 holes, 50 to 100 feet deep. The need to drill 7 additional holes, for a total of 12 holes, will depend on the consistency and variability of the initial 5 drill samples. Hole depth will depend on location. Assay samples will be taken at 2' intervals.

Drilling will be done with a track-mounted reverse circulation pneumatic percussion drill with separate air compressor. The size and type of track drill to be used is a Ingersoll-Rand ECM-350 or comparable. The air compressor will be staged at various locations along forest road 68 or at the end of the 905 road. The most direct route possible will be used to run the high pressure air line from the compressor to the drill rig.

Drilling should be completed in 6 to 15 days depending on the number of holes drilled and if there are no unexpected equipment breakdown or weather delays. Drilling will be done as soon as the site can be accessed without impacting soils.

Drill hole location and access routes will be flagged and approved in advance by the Forest Service, as will any proposed changes in exploratory operations. Any trees that need to be cut will also require advanced approval by the Forest Service.

A dust umbrella (dry dust collector) will be used during drilling to capture the cuttings and minimize dust escaping into the atmosphere. Drill holes will be covered until the assay work is completed then refilled with the remaining cuttings and capped with native rock.

To the extent possible, drill holes and access routes will be located, the air compressor line will be moved, and exploratory work will be done to minimize disturbance, damage, or removal of vegetation, with special effort taken to avoid huckleberry bushes. Sharp turns by the drill rig will be avoided to minimize damage to vegetation or scarring exposed rock by the drill rig's tracks. If necessary, anchor trees used for winching the drill rig into

place or for stabilization during drilling will be padded to prevent damage by the winch or stabilization cables.

2. For total life of project: N/A

D. Equipment and vehicles:

Track-mounted drill and portable air compressor.

Fuel truck

Claimant and drillers vehicles

E. Structures.

For equipment security, the driller may request permission to camp or put a portable self-contained trailer on site during drilling operations.

V. ENVIRONMENTAL PROTECTION MEASURES

A. Air Quality

A dust umbrella (dry dust collector) will be used during drilling to capture the cuttings and minimize dust escaping into the atmosphere. The only other impacts to air quality, vehicle emissions, will be handled by normal pollution control devices.

B. Water Quality

1. No water will be used in the operation.

2. N/A

3. N/A

4. N/A

5. N/A

C. Solid Waste

Drill cutting not removed for assay will be returned to the drill hole.

D. Scenic Values

Scenic values will not be affected by drilling.

E. Fish and Wildlife

If applicable drilling will be conducted in compliance with northern spotted owl seasonal restrictions.

F. Cultural Resources

The cultural site east of the area to be drilled will not be impacted nor will putting the air compressor at the end of the 905 road. Drilling will be done as soon as the area can be entered without impacting soils and to minimize conflicts with use of the area by the Cow Creek Indians.

G. Hazardous Substances

1. Only the amount of gas and diesel fuel and hydraulic oil needed for day to day drilling operations will be kept on-site and fueling will be done from a truck mounted tank.

2. No special precautions will be necessary. The drill rig and compressor will be checked daily and periodically during operations for hydraulic fluid and fuel leaks. Leaks will be fixed as soon as possible and an absorbant material will be placed under the leak until it can be fixed. Contaminated soil will be removed and rocks will be washed.

3. No reportable quantities of hazardous materials will be kept on-site. Any spills or leaks will be cleaned up and reported to the Forest Service.

F. Close-out Reclamation

Drill holes will be covered until the assay work is completed then refilled with the remaining cuttings and capped with rock.

ing Federal timber described in 23.189 (a) and (b) of this subpart, a son must apply in writing to the applicable Regional Forester on or before November 20, 1990. The application shall be on company letterhead and, in the case of a corporation, with corporate seal affixed, and must include:

- 1) An agreement to retain records of all transactions involving acquisition and disposition of unprocessed timber from both private and Federal lands within the area(s) involved in certification, for a period of three years beginning November 20, 1990, and to make such records available for inspection upon the request of the Regional Forester, or other official to whom such authority has been delegated.
- 2) A signed certification which reads as follows:

I have engaged in the exporting of unprocessed timber originating from private lands located west of the 100th meridian in contiguous 48 States during the preceding 24 months. I desire to purchase directly from a department or agency of the United States, unprocessed timber originating from Federal lands located in such area of the United States. I make this certification for exemption from the prohibition against export within the preceding 24-month period for purchasing Federal timber required by the Forest Resources Conservation and Shortage Relief Act of 1990, (Pub. Law 101-382, August 20, 1990, 16 U.S.C. 620 *et seq.*) (Act). I hereby certify that I will cease exporting of such unprocessed private timber from west of the 100th meridian in contiguous 48 States of the United States by February 20, 1991. I make this certification with full knowledge and understanding of the requirements of this Act and do fully understand that failure to use such exporting as certified will be a violation of this Act (16 U.S.C. 620d) and the False Statements Act (18 U.S.C. 1001), and I may subject me to the penalties and remedies provided for such violation.

- 3) This certification must be signed by the person making such certification or, in the case of a corporation, by its chief executive officer. The certification must be notarized.

33.193 Determination of surplus species.

Alaska yellow-cedar and Port-land-cedar, those species currently

found by the Secretary of Agriculture to be surplus to domestic processing needs pursuant to § 223.163 of this part, shall continue in that status, until such time as new procedures for determining surplus species under the Act are issued and determinations made.

§ 223.194 Information requirements.

(a) The application procedures in §§ 223.187, 223.189, 223.190, and 223.192 of this subpart constitute information collection requirements as defined in 5 CFR part 1320. These requirements have been approved by the Office of Management and Budget and assigned clearance number 056-0114.

(b) Public reporting burden for this collection of information is estimated to average 2.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief (2400), Forest Service, USDA, P.O. Box 96090, Washington, DC 20090-6090 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

PART 228—MINERALS

Subpart A—Locatable Minerals

- Sec.
- 228.1 Purpose.
 - 228.2 Scope.
 - 228.3 Definitions.
 - 228.4 Plan of operations—notice of intent—requirements.
 - 228.5 Plan of operations—approval.
 - 228.6 Availability of information to the public.
 - 228.7 Inspection, noncompliance.
 - 228.8 Requirements for environmental protection.
 - 228.9 Maintenance during operations, public safety.
 - 228.10 Cessation of operations, removal of structures and equipment.
 - 228.11 Prevention and control of fire.
 - 228.12 Access.
 - 228.13 Bonds.

Forest Service, USDA

Sec.

- 228.14 Appeals.
- 228.15 Operations within National Forest Wilderness.

Subpart B—Leasable Minerals

228.20—228.39 [Reserved]

Subpart C—Disposal of Mineral Materials

- 228.40 Authority.
- 228.41 Scope.
- 228.42 Definitions.
- 228.43 Policy governing disposal.
- 228.44 Disposal on existing Federal leased areas.
- 228.45 Qualifications of applicants.
- 228.46 Application of other laws and regulations.

GENERAL PROVISIONS

- 228.47 General terms and conditions of contracts and permits.
- 228.48 Appraisal and measurement.
- 228.49 Reappraisal.
- 228.50 Production records.
- 228.51 Bonding.
- 228.52 Assignments.
- 228.53 Term.
- 228.54 Single entry sales or permits.
- 228.55 Cancellation or suspension.
- 228.56 Operating plans.

TYPES AND METHODS OF DISPOSAL

- 228.57 Types of disposal.
- 228.58 Competitive sales.
- 228.59 Negotiated or noncompetitive sales.
- 228.60 Prospecting permits.
- 228.61 Preference right negotiated sales.
- 228.62 Free use.
- 228.63 Removal under terms of a timber sale or other Forest Service contract.
- 228.64 Community sites and common-use areas.
- 228.65 Payment for sales.
- 228.66 Refunds.
- 228.67 Information collection requirements.

Subpart D—Miscellaneous Minerals Provisions

- 228.80 Operations within Misty Fjords and Admiralty Island National Monuments, Alaska.

Subpart E—Oil and Gas Resources

- 228.100 Scope and applicability.
- 228.101 Definitions.

LEASING

- 228.102 Leasing analyses and decisions.
- 228.103 Notice of appeals of decisions.

Sec.

- 228.104 Consideration of requests to modify, waive, or grant exceptions to lease stipulations.

AUTHORIZATION OF OCCUPANCY WITHIN A LEASEHOLD

- 228.105 Issuance of onshore orders and notices to lessees.
- 228.106 Operator's submission of surface use plan of operations.
- 228.107 Review of surface use plan of operations.
- 228.108 Surface use requirements.
- 228.109 Bonds.
- 228.110 Indemnification.

ADMINISTRATION OF OPERATIONS

- 228.111 Temporary cessation of operations.
- 228.112 Compliance and inspection.
- 228.113 Notice of noncompliance.
- 228.114 Material noncompliance proceedings.
- 228.115 Additional notice of decisions.
- 228.116 Information collection requirements.

APPENDIX A TO SUBPART E OF PART 228—GUIDELINES FOR PREPARING SURFACE USE PLANS OF OPERATION FOR DRILLING

AUTHORITY: 30 Stat. 35 and 36, as amended (16 U.S.C. 478, 551); 41 Stat. 437, as amended, sec. 5102(d), 101 Stat. 1330-256 (30 U.S.C. 226); 61 Stat. 681, as amended (30 U.S.C. 601); 61 Stat. 914, as amended (30 U.S.C. 352); 69 Stat. 368, as amended (30 U.S.C. 611); and 94 Stat. 2400.

SOURCE: 39 FR 31317, Aug. 28, 1974, unless otherwise noted. Redesignated at 46 FR 36142, July 14, 1981.

Subpart A—Locatable Minerals

§ 228.1 Purpose.

It is the purpose of these regulations to set forth rules and procedures through which use of the surface of National Forest System lands in connection with operations authorized by the United States mining laws (30 U.S.C. 21-54), which confer a statutory right to enter upon the public lands to search for minerals, shall be conducted so as to minimize adverse environmental impacts on National Forest System surface resources. It is not the purpose of these regulations to provide for the management of mineral resources; the responsibility for managing such resources is in the Secretary of the Interior.



Diamond Drill

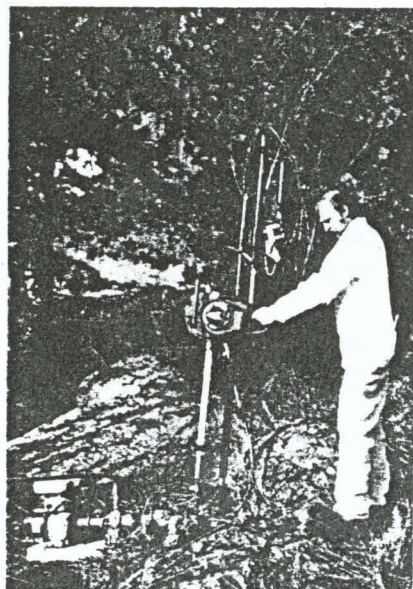
CONTRACTING COMPANY

MARK IX

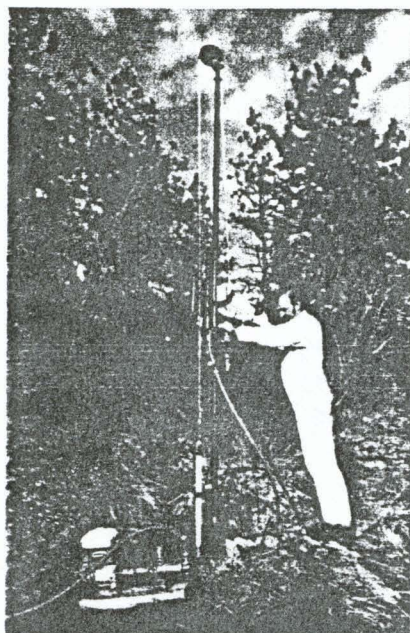
portable diamond drill

MARK IX ULTRA PORTABLE DIAMOND DRILL

- ◆ RUGGED
- ◆ LIGHT WEIGHT
- ◆ DEPENDABLE



Core Drilling



Single Pole Mast

Handles even the toughest core recovery and sampling jobs. Used by many of the World's leading Mining and Construction Companies, Soils Testing Laboratories, Federal, State and County Highway Departments, U.S. Forest Service and Cement Companies. The answer to the Geologist's, Engineer's, and Prospector's requirement for a core drill that is: (1) easily transported; (2) simple enough to be operated by relatively untrained personnel; (3) powerful and rugged enough to withstand hard use; (4) designed to efficiently recover cores and samples under all conditions with the proper tools; (5) economical to operate and maintain. All of this, PLUS — a positive oil hydraulic feed for ease of operation and long bit life.

PROSPECTING

Transport it easily into remote areas, carry it in a jeep, pickup, the trunk of your car, in a boat, in a canoe, light aircraft, on mule or horseback, **even on a pack board.**

SURFACE OR UNDERGROUND

New quick change feature requires only minutes to convert from gasoline power to compressed/air power or electric power.

CORE DRILLING

The MARK IX is capable of recovering a 1-1/32" diameter core from up to 250' or deeper depending upon rock characteristics.

MASONRY DRILLING

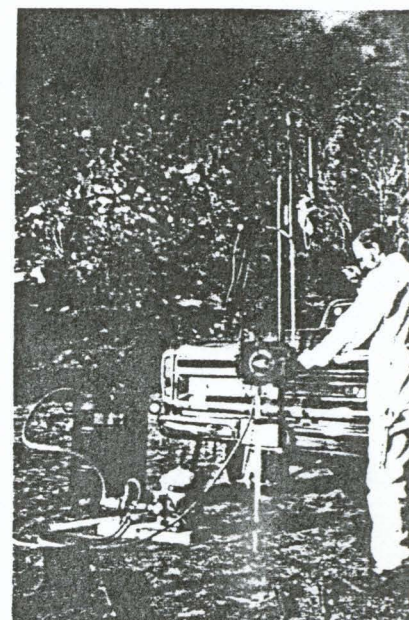
Cut test cores from concrete, asphalt, masonry or rock. Cut access holes for plumbing, wiring, etc., through any type of masonry or concrete structure. Use any of the three available power types.

SOIL SAMPLING

Although basically a diamond core drill, the amazing versatility of the MARK IX drill makes it an ideal tool for soil sampling jobs. The variable speed transmission allows the use of earth augers, and other types of rotating sample barrels. The oil hydraulic feed provides adequate pressure for use of thin wall sample barrels for taking push type samples in cohesive soils.



Transporting



Truck Swivel Mounting

MARK IX

portable diamond drill

**Diamond Drill**

CONTRACTING COMPANY

Power Type**CAPACITY**

	Core Diameter	Hole Diameter
SPO Tools	1-1/32"	1-1/2"
EX Tools	7/8"	1-1/2"
AX Tools	1-1/8"	1-15/16"
BX Tools	1-5/8"	2-3/8"
NX Tools	2-1/8"	3"
Auger Tools		2-3/4"
Masonry Bits up to 10" diameter		

Gasoline**Air****Electric****Depth****Depth****Depth**

			250'	150'	100'
			200'	100'	50'
			125'	50'	40'
			75'	—	—
			40'	—	—
			30'	—	—
			10'	10'	10'

POWER UNIT**HP Rating**

12 HP

7 HP

3.5 HP

Number of cylinders

One

0

Type

2 cycle

Piston Air

AC-DC

Weight

29 lbs.

40 lbs.

35 lbs.

FEED UNIT

Type — double action, infinitely variable, oil hydraulic, hand operated.

Stroke

30"

30"

30"

Down Pressure

0-TO-1500 PSI

0-TO-1500 PSI

0-TO-1500 PSI

Reverse Pressure

0-TO-1000 PSI

0-TO-1000 PSI

0-TO-1000 PSI

Weight

35 lbs.

35 lbs.

35 lbs.

TRANSMISSION**DRILLING ANGLE RANGE**

360°

360°

360°

Type

Fixed Gear

Fixed Gear

Sliding Gear

Gear Options

4

2

2

Bit speeds (N) gear

500

1200

300

RPM (A) gear

1300

—

—

Weight

30 lbs.

HOIST-STANDARD

Single Pole Mast with 6 to 1 Ratio, Hand winch

Weight

41 lbs.

41 lbs.

41 lbs.

MOUNTING Single Column With Expansion Shoe Type Anchor**Weight**

38 lbs.

38 lbs.

38 lbs.

WATER PUMP ENGINE**Power Unit Type**

Gasoline

Air

Electric

HP Rating

3-1/2 HP

2 HP

1/2 HP

Number of cylinders

One

Five

—

Type

4 cycle

Radial

115-220 V
AC-DC**PUMP****Type**

Helical Screw

Same

Same

Pressure

0-TO-150 PSI

150 PSI

150 PSI

GPM

1-TO-7 GPM

6 GPM

6 GPM

Total Weight

68 lbs.

38 lbs.

32 lbs.

OVERBURDEN ANCHOR — FOR SETTING DRILL UP ON OVERBURDEN**Weight**

40 lbs.

Angle Range

180°

VEHICLE MOUNT — FOR MOUNTING DRILL ON TRUCK, JEEP, TRACTOR, etc.**Weight**

15 lbs.

Angle Range

180°

OPTIONAL-EQUIPMENT — Light weight tripod for use with the MARK 9 drill for soil sampling, auger drilling and for drive sampling with the light weight cat head hoist and 140 pound hammer.



Diamond Drill

CONTRACTING COMPANY

MARK IX

operating instructions

MARK IX PORTABLE DIAMOND CORE DRILL

WATER SUPPLY FOR THE DRILL

Water for the drilling operation may be either pumped or hauled to the drill site. The drill pump should be as close to the drill hole as possible, preferably within sight and reach of the drill operator.

SINGLE PUMP METHOD

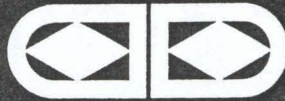
If a water source, such as a pond, creek, or spring, is within sight or sound of the drill site, one pump is sufficient. The pump is set up at the edge of the water source. The suction hose is attached to the suction port of the pump. The end of the suction hose with the foot valve and strainer screen is placed in the water source. It is especially important to keep the foot valve off the bottom to avoid plugging by sand, leaves, or other debris.

Three-fourth inch high-pressure plastic pipe or hose is laid from the discharge port of the pump to the drill site. The relief valve end of the water swivel hose furnished with the water pump is then attached to the end of the supply pipe or hose. The control valve end of the swivel hose is attached to the built-in water swivel on the drill transmission.

The relief valve is set at approximately 85# pressure. It is not necessary to shut the pump off when adding drill rods or when water is not required at the bit for short periods. Shutting off the water control valve at the drill will cause the relief valve to open and discharge the water back into the water source. Opening the water control valve allows the water to flow to the drill bit.

MARK IX

operating instructions



Diamond Drill

CONTRACTING COMPANY

MARK IX PORTABLE DIAMOND CORE DRILL

MULTIPLE PUMP METHOD

Where the water source is not within sight or sound of the drill site, it is necessary to use two or more water pumps. One pump is set at the water source and one at the drill site. The supply pump at the water source is used to pump water as outlined above to the drill site, where it is discharged into a sump or tank.

The pump at the drill site is used to pump the water from the storage sump or tank to the built-in water swivel on the drill transmission and thence through the drill rods to the bit.

In the multiple pump method, each pump should be equipped with a pressure relief valve and a control valve. The supply pump should be equipped also with an additional manually operated by-pass valve. This extra valve provides for draining of the supply line to the drill site, as well as facilitating priming of the pump.

HAULING WATER

In an area where it is not practical to pump the water from the water source to the drill site, it is necessary to transport water by other means. This may be accomplished by tank truck, trailer, drums of water loaded into a jeep or pickup, and in extreme cases by pack horse or packboards.

In such cases the re-use of water is a necessity. By re-use of the drilling water, it is possible to operate the Mark IX drill on a minimum of fifty gallons of water or less per day.

When water is to be re-used, it is necessary to provide a sump or tanks for a water reservoir below the level of the drill hole. A simple excavation lined with a plastic sheet to prevent seepage makes an adequate sump.



Diamond Drill

CONTRACTING COMPANY

MARK IX

operating instructions

MARK IX PORTABLE DIAMOND CORE DRILL

The top few feet of the drill hose is drilled large enough to accept the collar pipe and tee. With the collar pipe inserted, a pipe or hose is connected to the side outlet of the tee and the other end inserted in the sump. The drill pump suction hose is placed in the sump. The drill pump pumps the water from the sump through the drill rods to the bit. From the bit the water flows back out of the drill hole and out through the drill rods to the bit. From the bit the water flows back out of the drill hole and out through the side outlet of the collar tee back into the sump. With this closed circulation method it is possible to operate on a minimum of water.

A certain amount of water is lost through evaporation and when drilling the hole for the collar pipe. It is possible to save most of the water used in drilling the collar by constructing a small earthen dike around the hole to divert the water back into the sump.

In areas where a sump cannot be dug into the surface, a shallow tank may be set at a lower elevation than the hole collar. The water return hose from the tee on the collar pipe is then discharged into the tank. It is preferable to use three shallow tanks, set in steps, with an outlet pipe attached near the top of the first two tanks. The water from the drill hole flows into the first tank, the second tank is set below the discharge pipe on the first tank, and the third tank set below the discharge pipe from the second tank. The suction hose of the drill pump is then placed in the third tank. In this method most of the cutting from the drill bit will settle in the first tank and fairly clean water is returned to the pump via the pump suction hose from the third tank.

MARK IX

operating instructions



Diamond Drill

CONTRACTING COMPANY

MARK IX PORTABLE DIAMOND CORE DRILL

Settling of the drill cuttings in this manner serves two purposes; one, elimination of excessive abrasive wear on the pump, and two, the cuttings serve as a positive sample in the event of core loss. Ordinary round wash tubs make ideal tanks. Tubs are light in weight, are provided with handles and can be nested one inside the other for ease of transporting.

CARE AND TREATMENT OF DIAMOND BITS

Diamond bits should be used in solid formation only. The diamond bit performs best in hard solid rock. However, they also perform quite well in soft rock formations. The diamond bit is an expensive tool and should be treated as such. Diamond bits should not be run in loose gravel or overburden. All loose formation or overburden should be cased down to solid rock before using the diamond set bits. Diamond bits can be damaged in many ways. The most common ways are (1) insufficient fluid circulation at the bit, (2) running the bit in loose rock, (3) careless handling. A diamond will withstand great pressure but is extremely sensitive to shock.

NOT CITED IN TEXT, SPECIFICATION

ECM-350 Crawlair[®]
extendible-boom drill
for 64-127 mm (2½-4") blastholes



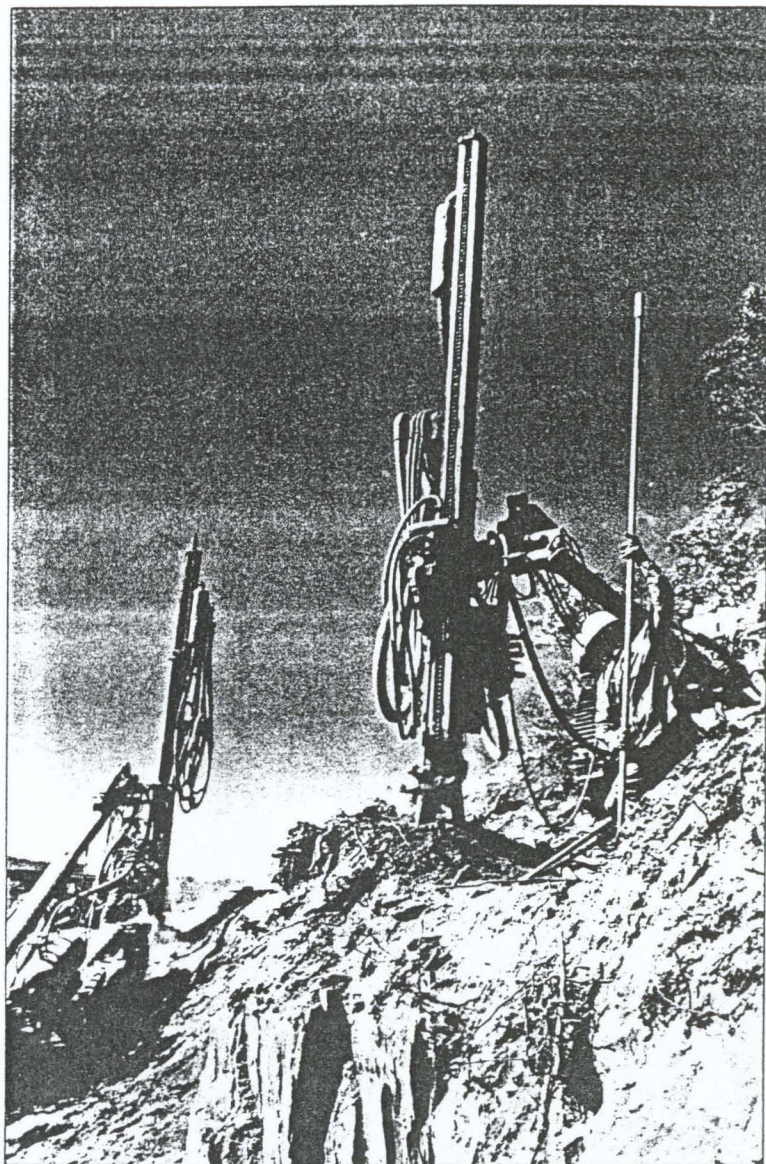
INGERSOLL-RAND[®]
DRILLING EQUIPMENT

ECM-350— a rugged air drill for pioneering work

This agile, powerful drill climbs steep grades over roughest ground, and takes the punishment. You've seen thousands of them on construction jobs of all kinds around the world.

It's a fine quarry drill, too. With an Ingersoll-Rand portable air compressor, you've got a high-performance team that gets more work done faster, more efficiently, and keeps doing it longer than anything else in its class.

The basic ECM-350 design has seen many improvements in its years of service—but every drill produced has set the world standard for reliability and performance in its time.



Traction, brakes ideal for rough ground.

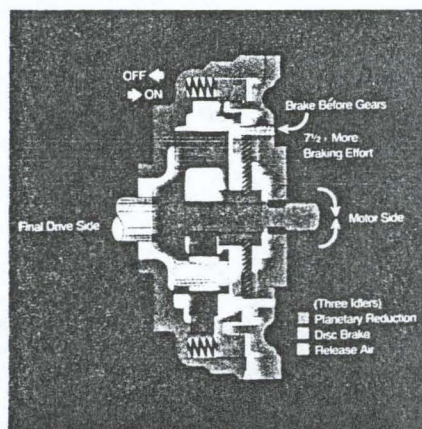
Each track is powered independently by an 11.4-hp piston air motor and an enclosed gear drive. The spring-applied, hydraulically-released disc brakes are equally

effective in forward or reverse.

Controlled hydraulic flow cushions track oscillation to minimize shock loads. Oscillation may be locked out to permit a solid setup for drilling.

Trap-door centralizer.

Simple, rugged design flips open at the touch of a foot. Locks shut with a quick-release pin. No latches, no springs.

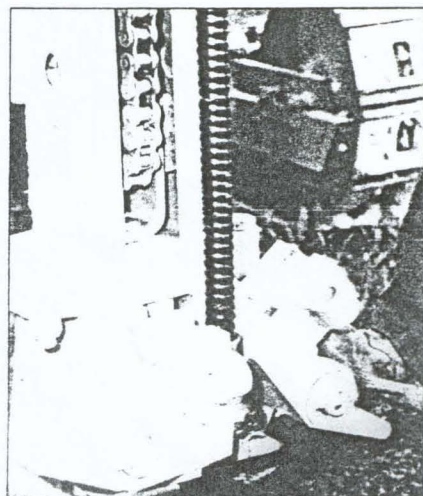


Extendible boom reaches more holes.

The 1.5-m (5') boom extension reaches out over banks, and multiplies the number of holes you can drill before moving. You can drill a line of holes simply by extending the boom.

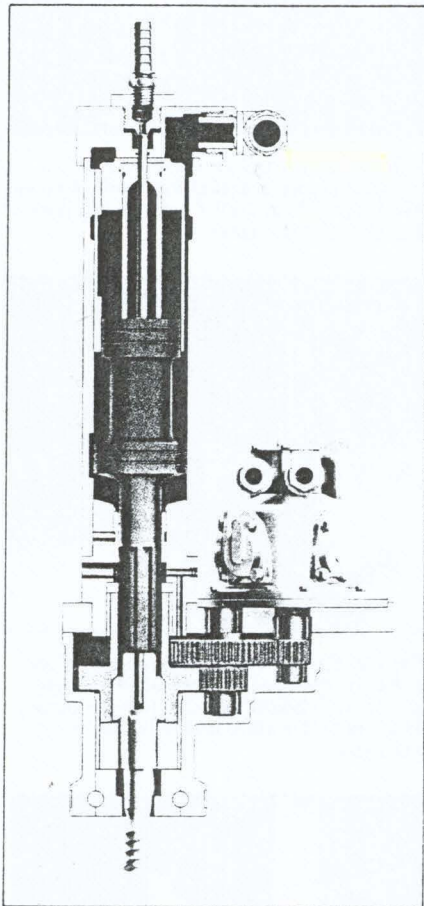
The 1.2-m (4') hydraulic guide extension also reduces setup time; adjust it for drilling on steep slopes or over ledges.

All hydraulic positioning cylinders have lock-check valves.

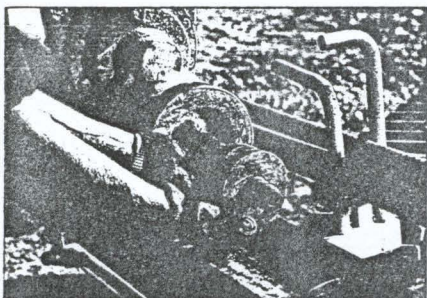


New EVL-130 drifter can cut air use and fuel by 30%.

The next generation of air drifters is here. This revolutionary Ingersoll-Rand air drifter has a new cycle and piston design that have opened a new horizon of drill efficiency. Depending on the compressor used, you can save from 7.5 to 15 liters (2-4 gal.) of fuel per hour.



The EVL-130 drifter is easy to service in the field, if required. To remove the shankpiece, just snap out a split ring and push out two pins. The internals can easily be changed by one man in a few minutes.

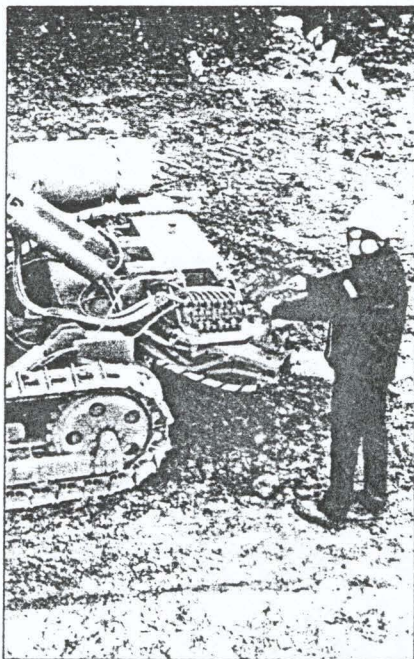


Choice of four valveless drifters.

Drifter	EVL-130	VL-671	VL-140	VL-120
Hole diameter	64-102 mm (2½-4")	76-102 mm (3-4")	64-102 mm (2½-4")	64-89 mm (2½-3½")
Bore	130 mm (5.125")	170 mm (6.69")	140 mm (5.5")	121 mm (4.75")
Stroke	101 mm (4.00")	92 mm (3.62")	92 mm (3.62")	70 mm (2.75")
Weight	222 kg (488 lb.)	238 kg (525 lb.)	195 kg (430 lb.)	170 kg (375 lb.)
Blows/min.	1200	1850	2100	1900
Air required	Less than 17 m³/min. (600 cfm)	25.5 m³/min. (900 cfm)	21.2 m³/min. (750 cfm)	17 m³/min. (600 cfm)

Powerful feed motor.

A piston-type air feed motor drives a heavy roller chain, providing 1362 kg (3000 lb.) of pullout power, and all the pulldown you'll ever need.

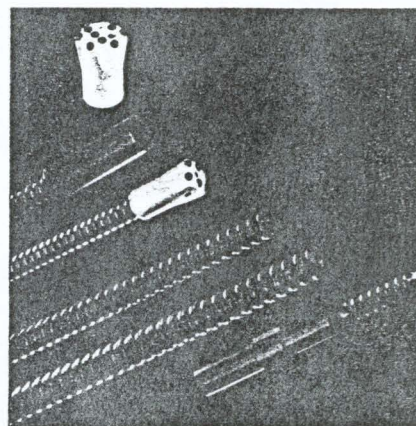


Check these options.

- Dry dust collector.
- Mist-injection dust control.
- 1362-kg (3000-lb.) winch with reversing throttle and brake.

Threaded steel and carbide button bits.

There is a difference! Quality drilling accessories can reduce your drilling costs. I-R carbide button bits, fully-threaded steels, couplings and shankpieces are made to take punishment and live longer. Complete range of sizes. Ask your I-R representative how they can cut your cost per hole.



Convenient controls.

Tramming controls are mounted on a swivel plate which can be pin-locked in any of three positions. A safety-lockout tow hitch prevents using the rear position when a compressor is being towed.

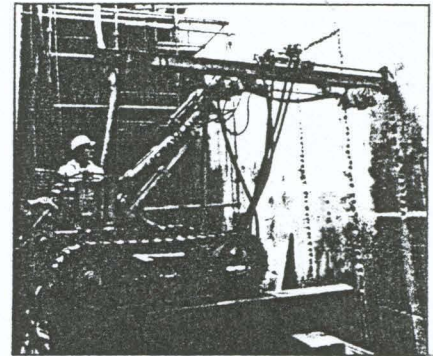
Controls for all drilling functions are mounted on the drill tower. A fine-feed regulator helps the operator collar the hole and prevent stuck steels.

INGERSOLL-RAND
DRILLING EQUIPMENT

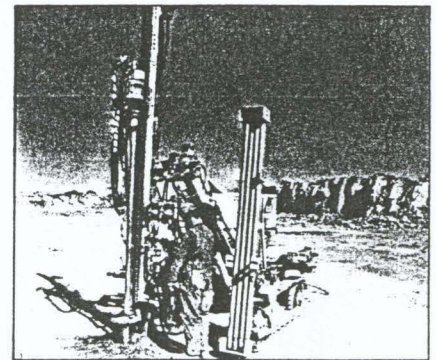
ECM-350 Crawlair drill specifications.

Net weight	12,900 lb.	5851 kg
Overall shipping length	12'0"	3645 mm
Width	8'0"	2438 mm
Height (vertical guide)	18'10"	5753 mm
Steel change	12 ft.	3645 mm
Drill travel	14'3"	4356 mm
Max. horiz. boom swing	40° left, 35° right	
Max. vert. boom movement	45° above, 15° below	
Max. guide swing	50° left, 35° right	
Max. guide dump	180°	
Ground clearance	12"	292 mm
Grouser width	10"	254 mm

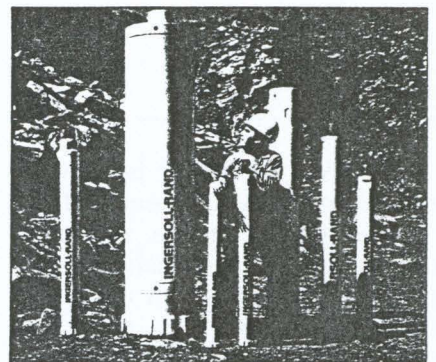
Complete line of crawler drills.



The LM-100 is ideal for small jobs in confined places; it makes fast work of holes 44-64 mm (1¾ to 2½"). Compact, but uses a 3-m (10-ft.) rod change.

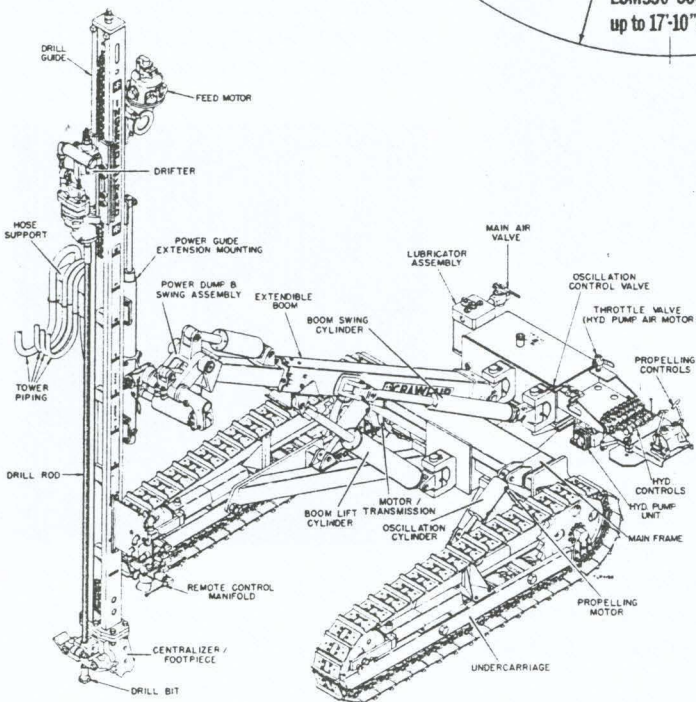
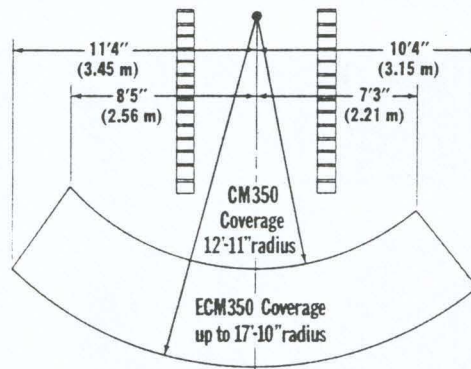


The CM-351 is a compact, powerful rig for drifter or downhole drilling of 64-140-mm (2½ to 5½") blastholes. Fixed-length boom. Its 2.2-m (7'3") width makes it easy to transport.



Ingersoll-Rand offers the widest choice of downhole drills, including the world's largest—the Superdrill for holes up to 30" (762 mm) diameter. Valveless hammers use high-pressure air for fast, efficient penetration in hardest rock.

Nothing contained in this brochure is intended to extend any warranty or representation, expressed or implied, regarding the products described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with Ingersoll-Rand's standard terms and conditions of sale for such products, which are available upon request.

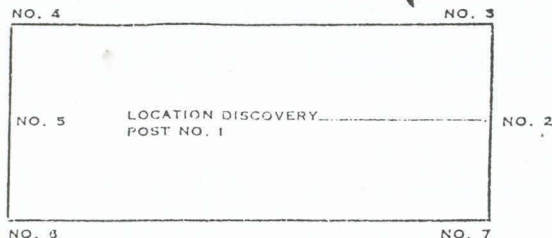


Ingersoll-Rand Co.
Rock Drill Division
7500 Shadwell Drive
Roanoke, VA 24019

INGERSOLL-RAND
DRILLING EQUIPMENT

OL 30-15707

BOOK 1116 PAGE 328

THIS DIAGRAM EXPLAINS METHOD OF
DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas

Unknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #9

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a North direction to an end post marked No. 2, thence
 300 feet in a West direction to a corner post marked No. 3, thence
 1500 feet in a South direction to a corner post marked No. 4, thence
 300 feet in a East direction to an end post marked No. 5, thence
 300 feet in a East direction to a corner post marked No. 6, thence
 1500 feet in a North direction to a corner post marked No. 7, thence
 300 feet in a West direction to said end post marked No. 2.

The locators claim 10 feet in a North

direction from point of discovery to the North end line and 1490

feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being feet from a natural object or permanent monument in the vicinity,

to-wit: The North-west sec. corner of sec. 33 T. 30 S. R. 2 E. is 1455 ft. in a

Northeast direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of STATE OF OREGON, Township

30 S., Range 2 E., of the Willamette Meridian, COUNTY OF DOUGLAS, S.S. Government

or protracted if the land is unsurveyed I, GAY FIELDS, COUNTY CLERK AND RECORDER

OF CONVEYANCES, DO HEREBY CERTIFY THAT

The end lines of the claim are parallel to each other. The adjoining claims are THIS INSTRUMENT WAS RECORDED

RAMEX #4 RAMEX #10 RAMEX #8 RAMEX #14 RAMEX #15 RAMEX #16

1990 OCT 23 AM 11:42

GAY FIELDS
DOUGLAS COUNTY CLERK

IN THE OFFICIAL RECORDS OF DOUGLAS COUNTY

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner of the claim.

The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced.

In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

BY [Signature] DEPUTY

Located October 19, 1990

FEE \$7.00

State of Oregon
County of Douglas

RAMEX, INC.

By Ron Gibson, President

Subscribed before me

23rd day of Oct, 1990

Ron Gibson

Laura Kay Fields

County Public

My Commission Expires 1 May 1991

Locator(s).

90-15707

BANDER

OL

90-15708

BOOK 1116 PAGE 329

Notice of Mining Location

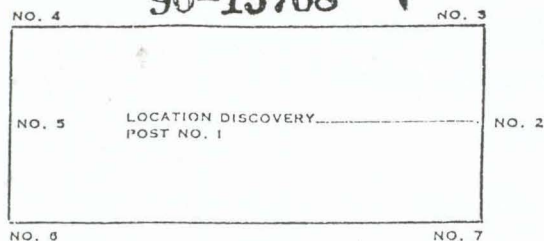
VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas

Unknown

Mining District



THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #14

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence
 10 feet in a North direction to an end post marked No. 2, thence
 300 feet in a West direction to a corner post marked No. 3, thence
 1500 feet in a South direction to a corner post marked No. 4, thence
 300 feet in a East direction to an end post marked No. 5, thence
 300 feet in a East direction to a corner post marked No. 6, thence
 1500 feet in a North direction to a corner post marked No. 7, thence
 300 feet in a East direction to said end post marked No. 2.

The locators claim 10 feet in a North

direction from point of discovery to the North end line and 1490

feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being feet from a natural object or permanent monument in the vicinity,

to-wit: The Northwest sec. corner of sec. 33 T. 30 S. R. 2 E. W.M. is 3150 ft. in a

Northeast direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 33

30 S., Range 2 E., of the Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #15

RAMEX #15

STATE OF OREGON

COUNTY OF DOUGLAS

I, GAY FIELDS, COUNTY CLERK AND RECORDER

OF CONVEYANCES, DO HEREBY CERTIFY THAT

THIS INSTRUMENT WAS RECORDED

1990 OCT 23 AM 11:43

GAY FIELDS

DOUGLAS COUNTY CLERK

IN THE OFFICIAL RECORDS OF DOUGLAS COUNTY

This notice is placed conspicuously at discovery post No. 1 in the official records of Douglas County and both center ends.

The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced.

In construing this location notice, the singular includes the plural and vice versa where the context so requires.

DEPUTY

FEE

RAMEX INC.

By Ron Gibson President

Locator(s).

90-15708

INDEXED

State of Oregon
County of Douglas

Subscribed and sworn to before me

on 23rd day of Oct, 1990,

by Ron Gibson

Loretta Gay Fields

Notary Public

My Commission Expires 1 May 1991

OL

NO. 4 **90-15709** NO. 3

NO. 5 LOCATION DISCOVERY POST NO. 1 NO. 2

NO. 6 NO. 7

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

BOOK 1116 PAGE 330

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas,Unknown Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX # 15

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a North direction to an end post marked No. 2, thence
 300 feet in a West direction to a corner post marked No. 3, thence
 1500 feet in a South direction to a corner post marked No. 4, thence
 300 feet in a East direction to an end post marked No. 5, thence
 300 feet in a East direction to a corner post marked No. 6, thence
 1500 feet in a North direction to a corner post marked No. 7, thence
 300 feet in a East direction to said end post marked No. 2.

The locators claim 10 feet in a North

direction from point of discovery to the North end line and 1490

feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being feet from a natural object or permanent monument in the vicinity,

to-wit: The Northwest sec. corner of sec. 33 T. 30 S. R. 2 E. W.M. is 3000 ft. in a

Northeast direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) Township

30 S., Range 2 E., of the Willamette Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #8 RAMEX #9

RAMEX #10 RAMEX #14 RAMEX #16

GAY FIELDS

DOUGLAS COUNTY CLERK

IN THE OFFICIAL RECORDS OF DOUGLAS COUNTY

BY *Heleen P. Gay*

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends.

The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced.

In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990.

State of Oregon
County of DouglasAttest before me
on 23rd of Oct, 1990,

By RON GIBSON

Lassotta Gay Fields

Notary Public

My Commission Expires 1 May 1991

RAMEX INC.

By Ron Gibson President

Ron Gibson

Locator(s).

90-15709

RECORDED

OL

90-26534

NO. 4		NO. 3
NO. 5	LOCATION DISCOVERY POST NO. 1	NO. 2
NO. 6		NO. 7

THIS DIAGRAM EXPLAINS METHOD OF
DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

500
2:49

STATE OF OREGON,

County of

Jackson

Unknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #4

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10	feet in a	South	direction to an end post marked No. 2, thence
300	feet in a	EAST	direction to a corner post marked No. 3, thence
1500	feet in a	NORTH	direction to a corner post marked No. 4, thence
300	feet in a	WEST	direction to an end post marked No. 5, thence
300	feet in a	WEST	direction to a corner post marked No. 6, thence
1500	feet in a	SOUTH	direction to a corner post marked No. 7, thence
300	feet in a	EAST	direction to said end post marked No. 2.

The locators claim 10 feet in a South direction from point of discovery to the South end line and 1490 feet in the opposite direction from point of discovery to the North end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

to-wit: The Northwest corner of Section 34, T. 30 S. R. 2 E. W.M. is 1430 Ft in a northwest direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township 30 S, Range 2 E, of the Willamette meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #3, RAMEX #5, RAMEX #9, RAMEX #10, RAMEX #11

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990

Jackson County, Oregon
Recorded
OFFICIAL RECORDS

2:49 OCT 19 1990 P.M.

KATHLEEN S. BECKETT
CLERK and RECORDER

By Bellman Deputy

RAMEX INC

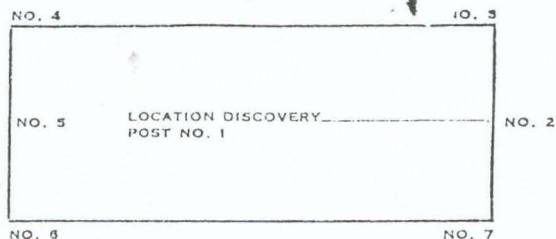
By Ron Gibson President
Ron Gibson

Locator(s).

OL

90-26535

500



THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Jackson,
Unknown Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #5

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence
10 feet in a South direction to an end post marked No. 2, thence
300 feet in a East direction to a corner post marked No. 3, thence
1500 feet in a North direction to a corner post marked No. 4, thence
300 feet in a West direction to an end post marked No. 5, thence
300 feet in a West direction to a corner post marked No. 6, thence
1500 feet in a South direction to a corner post marked No. 7, thence
300 feet in a East direction to said end post marked No. 2.

The locators claim 10 feet in a South direction from point of discovery to the South end line and 1490

feet in the opposite direction from point of discovery to the North end line and 300

feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being 300 feet from a natural object or permanent monument in the vicinity,

to-wit: the Northwest Sec. Corner of Sec. 34, T. 30 S. R. 2 E. W.M. is 1750 ft. in a northwest direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is massive with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township 30 S., Range 2 E., of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #4
RAMEX #6 RAMEX #10 RAMEX #11 RAMEX #12

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990

Jackson County, Oregon
 Recorded
 OFFICIAL RECORDS

2:49 OCT 19 1990 P.M.

KATHLEEN S. BECKETT
 CLERK and RECORDER

By Brian Lake Deputy

RAMEX INC.

By Ron Gibson President
Ron Gibson

Locator(s).

OL

NO. 4

90-26536

NO. 3

NO. 5

LOCATION DISCOVERY
POST NO. 1

NO. 2

NO. 6

THIS DIAGRAM EXPLAINS METHOD OF
DESCRIPTION OF CLAIM.

NO. 7

Notice of Mining Location
VEIN OR LODE CLAIM

STATE OF OREGON,

County of JacksonUnknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #6

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a South direction to an end post marked No. 2, thence
 300 feet in a East direction to a corner post marked No. 3, thence
 1500 feet in a North direction to a corner post marked No. 4, thence
 300 feet in a West direction to an end post marked No. 5, thence
 300 feet in a West direction to a corner post marked No. 6, thence
 1500 feet in a South direction to a corner post marked No. 7, thence
 300 feet in a East direction to said end post marked No. 2.

The locators claim 10 feet in a Southdirection from point of discovery to the North end line and 1490feet in the opposite direction from point of discovery to the North end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

to-wit: The Northwest Sec. Corner of Sec. 34 T. 30 S. R. 2 E.W.M. is 2150 ft. in a Northwest direction from thepoint of discovery of claim.The general course or strike of the vein or lode as nearly as may be determined is Massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township30 S., Range 2 E, of the Willamette Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #5RAMEX #11 RAMEX #12

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990Jackson County, Oregon
Recorded
OFFICIAL RECORDS

2:49 OCT 19 1990 P.M.

KATHLEEN S. BECKETT
CLERK and RECORDERBy Rabaut DeputyRAMEX Inc.By Ron Gibson PresidentRon Gibson

Locator(s).

OL

NO. 4 **90-26537** NO. 3

NO. 5 LOCATION DISCOVERY POST NO. 1 NO. 2

NO. 6 NO. 7

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Jackson,
Unknown Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEx #10

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10	feet in a	North	direction to an end post marked No. 2, thence
300	feet in a	West	direction to a corner post marked No. 3, thence
1500	feet in a	South	direction to a corner post marked No. 4, thence
300	feet in a	East	direction to an end post marked No. 5, thence
300	feet in a	East	direction to a corner post marked No. 6, thence
1500	feet in a	North	direction to a corner post marked No. 7, thence
300	feet in a	West	direction to said end post marked No. 2.

The locators claim 10 feet in a North

direction from point of discovery to the North end line and 1490

feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being feet from a natural object or permanent monument in the vicinity,

to-wit: The Northwest Sec. corner of Sec. 34 T. 30 S. R. 2 E

W.M. 1455 ft. in a Northwest direction from point of

discovery of claim

The general course or strike of the vein or lode as nearly as may be determined is massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township

30 S., Range 2 E., of the Willamette Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEx # 9 # 3

#4 # 5 # 11 # 17 # 16 # 15

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990.

Jackson County, Oregon

Recorded

OFFICIAL RECORDS

2:49 OCT 19 1990 PM.

KATHLEEN S. BECKETT

CLERK and RECORDER

By Barbara L. ... Deputy

RAMEx Inc.

By Ron Gibson PresidentRon Gibson

Locator(s).

OL 90-26538

500

NO. 4	NO. 3
NO. 5	NO. 2
LOCATION DISCOVERY POST NO. 1	
NO. 6	NO. 7

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODGE CLAIM

STATE OF OREGON,

County of Jackson

Unknown Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #11

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10	feet in a	North	direction to an end post marked No. 2, thence
300	feet in a	West	direction to a corner post marked No. 3, thence
1500	feet in a	South	direction to a corner post marked No. 4, thence
300	feet in a	EAST	direction to an end post marked No. 5, thence
300	feet in a	EAST	direction to a corner post marked No. 6, thence
1500	feet in a	North	direction to a corner post marked No. 7, thence
300	feet in a	WEST	direction to said end post marked No. 2.

The locators claim 10 feet in a North direction from point of discovery to the North end line and 1490 feet in the opposite direction from point of discovery to the South end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

feet from a natural object or permanent monument in the vicinity, to-wit: The Northwest Sec. corner of Sec. 34 of T. 30 S. R. 2 E. W. M. is 1775 ft. in a Northwest direction from the discovery point of claim.

The general course or strike of the vein or lode as nearly as may be determined is MASSIVE with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township 30 S., Range 2 E., of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX # 4 # 5 # 6 # 12 # 18 # 17 # 16 # 10

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990

Jackson County, Oregon

Recorded

OFFICIAL RECORDS

2:49 OCT 19 1990 P.M.

KATHLEEN S. BECKETT
CLERK and RECORDERBy [Signature] Deputy

RAMEX INC.

By Ron Gibson President

Ran Hebrun

Locator(s).

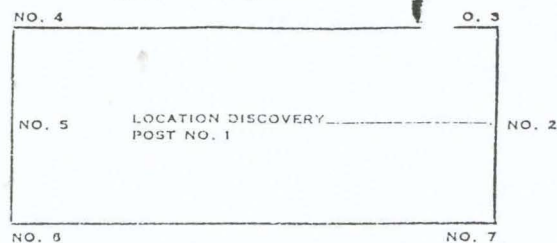
OL

90-26539

500

Notice of Mining Location VEIN OR LODE CLAIM

STATE OF OREGON,

County of Jackson,unknown Mining DistrictTHIS DIAGRAM EXPLAINS METHOD OF
DESCRIPTION OF CLAIM.

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

Ramex #12

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence
10 feet in a North direction to an end post marked No. 2, thence
300 feet in a West direction to a corner post marked No. 3, thence
1500 feet in a South direction to a corner post marked No. 4, thence
300 feet in a EAST direction to an end post marked No. 5, thence
300 feet in a EAST direction to a corner post marked No. 6, thence
1500 feet in a North direction to a corner post marked No. 7, thence
300 feet in a West direction to said end post marked No. 2.

The locators claim 10 feet in a North direction from point of discovery to the end line and 1490

feet in the opposite direction from point of discovery to the South end line and 300

feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

to-wit: The Northwest Sec. Corner of Sec. 34 T. 30 S. R2E.
W.M. is 2175 ft in a Northwest direction from the
point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township 30 S., Range 2 E, of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed.

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #5 #6
#18 #17 #11

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990
Jackson County, Oregon

Recorded
 OFFICIAL RECORDS

2:49 OCT 19 1990 PM

KATHLEEN S. BECKETT
 CLERK and RECORDER

By [Signature] Deputy

RAMEX INC

By Ron Gibson President
Ron Gibson

Locator(s).

OL

NO. 4 90-26540 NO. 3

NO. 5 LOCATION DISCOVERY POST NO. 1 NO. 2

NO. 6 NO. 7

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Jackson,
Unknown Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #16

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10	feet in a	North	direction to an end post marked No. 2, thence
300	feet in a	West	direction to a corner post marked No. 3, thence
1500	feet in a	South	direction to a corner post marked No. 4, thence
300	feet in a	East	direction to an end post marked No. 5, thence
300	feet in a	East	direction to a corner post marked No. 6, thence
1500	feet in a	North	direction to a corner post marked No. 7, thence
300	feet in a	West	direction to said end post marked No. 2.

The locators claim 10 feet in a North direction from point of discovery to the North end line and 1490 feet in the opposite direction from point of discovery to the South end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being 10 feet from a natural object or permanent monument in the vicinity,

to-wit: The Northwest Sec. Corner of Sec. 34 T. 30 S. R 2 E.
W.M. is 3000 ft in a Northwest direction from point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34, Township 30 S., Range 2 E, of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX # 15
9 # 10 # 11 # 17

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990.

Jackson County, Oregon

Recorded

OFFICIAL RECORDS

2:49 OCT 19 1990 PM.

KATHLEEN S. BECKETT

CLERK and RECORDER

By [Signature] Deputy

RAMEX Inc
By Ron Gibson President
Ron Gibson

Locator(s).

DL

90-26541

500

NO. 4	NO. 5	NO. 6	NO. 7
LOCATION DISCOVERY POST NO. 1			

THIS DIAGRAM EXPLAINS METHOD OF
DESCRIPTION OF CLAIM.

Notice of Mining Location VEIN OR LODE CLAIM

STATE OF OREGON,

County of

Jackson

unknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

Ramex # 17

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10

feet in a

North

direction to an end post marked No. 2, thence

300

feet in a

West

direction to a corner post marked No. 3, thence

1500

feet in a

South

direction to a corner post marked No. 4, thence

300

feet in a

East

direction to an end post marked No. 5, thence

300

feet in a

East

direction to a corner post marked No. 6, thence

1500

feet in a

North

direction to a corner post marked No. 7, thence

300

feet in a

West

direction to said end post marked No. 2.

The locators claim 10 feet in a North

direction from point of discovery to the North end line and 1490

feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being feet from a natural object or permanent monument in the vicinity,

to-wit: The Northwest Sec. corner of Sec 34 T. 30 S. R. 2 E.

W.M. is 3150 ft in a Northwest direction from the point

of discovery of claim

The general course or strike of the vein or lode as nearly as may be determined is Massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 34

30 S, Range 2 E, of the Willamette Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are Ramex # 16 #10

11 # 12 # 18

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990

Jackson County, Oregon

Recorded

OFFICIAL RECORDS

2:49 OCT 19 1990 P.M.

KATHLEEN S. BECKETT

CLERK and RECORDER

By Deputy

RAMEX INC.

By Ron Gibson President

Ron Gibson

Locator(s).

OL

NO. 4 **90-26542** NO. 3

NO. 5 LOCATION DISCOVERY POST NO. 1 NO. 2

NO. 6 NO. 7

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

500
2:49

STATE OF OREGON,

County of Jacksonunknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #18

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a North direction to an end post marked No. 2, thence
 300 feet in a West direction to a corner post marked No. 3, thence
 1500 feet in a South direction to a corner post marked No. 4, thence
 300 feet in a EAST direction to an end post marked No. 5, thence
 300 feet in a EAST direction to a corner post marked No. 6, thence
 1500 feet in a North direction to a corner post marked No. 7, thence
 300 feet in a West direction to said end post marked No. 2.

The locators claim 10 feet in a North direction from point of discovery to the North end line and 1490 feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

to-wit: The Northwest Sec. corner of Sec. 34 T. 30 S. R. 2 E. W.M. is 3300 ft. in a Northwest direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive with reference to the natural object or permanent monument described above.

This claim is situated in the N. W. (designate quarter section) of Section 34, Township 30 S., Range 2 E., of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #17 #11 #12

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990

Jackson County, Oregon

Recorded

OFFICIAL RECORDS

2:49 OCT 19 1990 P.M.

KATHLEEN S. BECKETT

CLERK and RECORDER

By Barbara E. Egan DeputyRAMEX INCBy Ron Gibson President
Ron Gibson

Locator(s).

Form 1370-41
March 1984)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIPT AND ACCOUNTING ADVICE

BSH/DR

NO. 1632281
10/31/98

Subject: LOCATION NOTICE

2 16 02

150.00

Applicant:

HYDRA INC
PO BOX 602
REDFORD ON 77501

Remitter:

Signor:

SERIAL NO.
ORMC 132449
thru (Please see attached listing)
ORMC 132463

REFER TO THE ABOVE CASE SERIAL NUMBER IN ALL CORRESPONDENCE. PLEASE INFORM THIS OFFICE OF ANY CHANGE IN ADDRESS.

NOTE: This notice is a receipt for monies paid the United States. If these monies are for required fees in connection with your application to lease, purchase, enter, or otherwise acquire an interest in public lands or resources, this receipt is not an authorization to utilize the land applied for and it does not convey any right, title, or interest in the land for which application is made.

New Claim Filing

15 new claim filings @ \$10.00 = \$150.00

Total fee earned = \$150.00

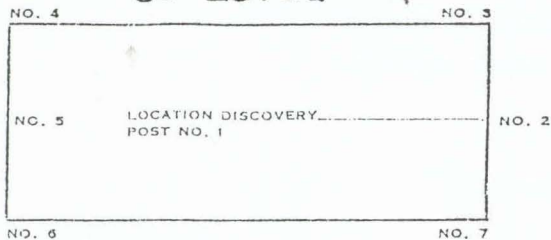
RECEIPT

OR MC 0132449	OCT 31 1990	Ramex, Inc.	Ramex #2
OR MC 0132450			Ramex #3
OR MC 0132451		Ramex, Inc.	Ramex #4
OR MC 0132452			Ramex #5
OR MC 0132453			Ramex #6
OR MC 0132454			Ramex #8
OR MC 0132455			Ramex #9
OR MC 0132456			Ramex #10
OR MC 0132457			Ramex #11
OR MC 0132458			Ramex #12
OR MC 0132459			Ramex #14
OR MC 0132460			Ramex #15
OR MC 0132461			Ramex #16
OR MC 0132462			Ramex #17
OR MC 0132463			Ramex #18

OL

90-15704

BOOK 1116 PAGE 325



THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

Notice of Mining Location

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas

Unknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #2

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a South direction to an end post marked No. 2, thence
 300 feet in a East direction to a corner post marked No. 3, thence
 1500 feet in a North direction to a corner post marked No. 4, thence
 300 feet in a West direction to an end post marked No. 5, thence
 300 feet in a West direction to a corner post marked No. 6, thence
 1500 feet in a South direction to a corner post marked No. 7, thence
 300 feet in a East direction to said end post marked No. 2.

The locators claim 10 feet in a South

direction from point of discovery to the South end line and 1490

feet in the opposite direction from point of discovery to the North end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being feet from a natural object or permanent monument in the vicinity,

to-wit: The Northwest sec. corner of sec. 33 T. 30 S. R. 2 E. of W.M. is 1750 Ft. in a

Northeast direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive

with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 33 Township

30 S., Range 2 E., of the Willamette Meridian is surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are

RAMEX #3 RAMEX #9

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends.

The location of this claim is distinctly marked on the ground so that the location of the claim may be readily traced.

In construing this location notice, the singular includes the plural and vice versa where the context so requires.

Located October 19, 1990, 19

State of Oregon
County of Douglas

Subscribed and sworn to before me

on 23rd day of Oct, 1990

By Ron Gibson

Guiretta Gay Fields

Notary Public

My Commission Expires May 1991

RAMEX INC.

By Ron Gibson President

Ron Gibson

Locator(s).

90-15704

BAND

OL

99-15705

BOOK 1116 PAGE 326

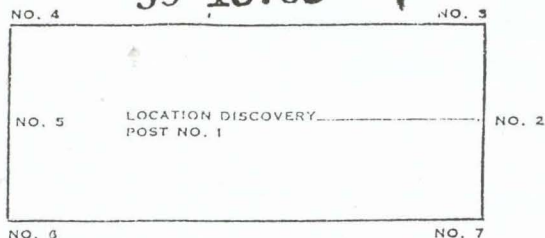
Notice of Mining Location

VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas,Unknown

Mining District



THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #3

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a South direction to an end post marked No. 2, thence
 300 feet in a East direction to a corner post marked No. 3, thence
 1500 feet in a North direction to a corner post marked No. 4, thence
 300 feet in a West direction to an end post marked No. 5, thence
 300 feet in a West direction to a corner post marked No. 6, thence
 1500 feet in a South direction to a corner post marked No. 7, thence
 300 feet in a East direction to said end post marked No. 2.

The locators claim 10 feet in a South direction from point of discovery to the South end line and 1490 feet in the opposite direction from point of discovery to the North end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being feet from a natural object or permanent monument in the vicinity, to-wit: The Northwest sec. corner of sec. 33 T. 30 S. R 2 E. W.M. is 1430 ft. in a Northeast direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be determined is Massive with reference to the natural object or permanent monument described above.

This claim is situated in the N.W. (designate quarter section) of Section 33, Township 30 S., Range 2 E., of the Willamette Meridian, County of Douglas, State of Oregon, Government of conveyances, do hereby certify that

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #2, RAMEX #4, RAMEX #8, RAMEX #9, RAMEX #10. 1990 OCT. 23 AM 11:40

GAY FIELDS
 DOUGLAS COUNTY CLERK
 IN THE OFFICIAL RECORDS OF DOUGLAS COUNTY

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

FEE

5.00

Located October 19, 1990.

State of Oregon
County of Douglas

Subscribed and sworn to before me

23rd day of Oct, 1990
 Ron Gibson
 Lauretta Gay Fields
 Notary Public
 My Commission Expires 1 May 1991

RAMEX INC.

By Ron Gibson President

Locator(s).

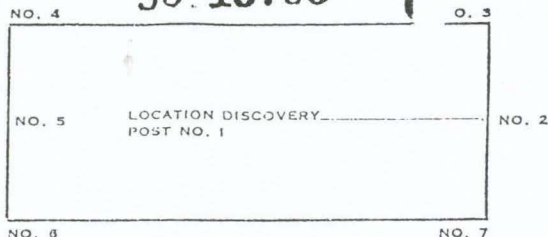
90-15705

RECORDED

OL

90-15706

BOOK 1116 PAGE 327

THIS DIAGRAM EXPLAINS METHOD OF
DESCRIPTION OF CLAIM.

Notice of Mining Location VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas

Unknown

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared an intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

RAMEX #8

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

10 feet in a North direction to an end post marked No. 2, thence
 300 feet in a West direction to a corner post marked No. 3, thence
 1500 feet in a South direction to a corner post marked No. 4, thence
 300 feet in a East direction to an end post marked No. 5, thence
 300 feet in a East direction to a corner post marked No. 6, thence
 1500 feet in a North direction to a corner post marked No. 7, thence
 300 feet in a West direction to said end post marked No. 2.

The locators claim 10 feet in a North direction from point of discovery to the North end line and 1490

feet in the opposite direction from point of discovery to the South end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

to-wit: The Northwest sec. corner of sec. 33 T. 30 S. R. 2 E. of W.M. is 1775 Ft. in a Northeast direction from the point of discovery of claim.

The general course or strike of the vein or lode as nearly as may be ascertained is Massive with reference to the natural dip of the permanent monument described above.

This claim is situated in the N.W. (designated quarter section) Township 30 S., Range 2 E., of the Willamette Meridian, and is subject to the U.S. Government or protracted if the land is unsurveyed.

The end lines of the claim are parallel to each other. The adjoining claims are RAMEX #2, RAMEX #3, RAMEX #9, RAMEX #15, RAMEX #14.

THIS INSTRUMENT WAS RECORDED
 1990 OCT 23 AM 11:41
 GAY FIELDS
 DOUGLAS COUNTY CLERK

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located October 19, 1990, 1990...

State of Oregon
County of Douglas

RAMEX, INC.

Subscribed and sworn to before me
on 23rd day of Oct, 1990,

Ren Gibson

Lauretta Gay Fields

Notary Public
My Commission Expires 1 May 1991

By: Ron Gibson, President

Ron Gibson

Locator(s).

90-15706

RAMEX

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
910 State Office Building 1400 SW Fifth Avenue
Portland, Oregon 97201

SPECIAL PAPER 22

SILICA IN OREGON

By Ronald P. Geitgey
Appendix by Gary L. Baxter
Oregon Department of Geology and Mineral Industries

1990

Conducted and published in conformance with ORS 516.030



GOVERNING BOARD

Sidney R. Johnson, Chair	Baker City
Ronald K. Culbertson	Myrtle Creek
John W. Stephens	Portland

STATE GEOLOGIST

Donald A. Hull

DEPUTY STATE GEOLOGIST

John D. Beaulieu

No discreet iron-bearing minerals are apparent, suggesting that beneficiation to reduce the iron may be impractical.

Cristobalite is manufactured for a foundry medium for high-precision metal castings. Being a form of SiO_2 that is stable at high temperatures, it exhibits greater dimensional stability than quartz in contact with molten metal so that castings with cristobalite molds require less machining. Apparently no attempt is presently made to utilize naturally occurring cristobalite for this purpose.

INTERIOR SAND DUNES (samples 36-39)

Dune fields are developed in several areas of southeastern Oregon, often in playa lake basins. Although isolated from any major market areas, the fields have considerable areal extent and offer relatively simple mining conditions. Four dune fields were sampled: Pueblo Valley, Harney County, sample 36; Alkali Lake, Lake County, sample 37; Fossil Lake, Lake County, sample 38; and Summer Lake, Lake County, sample 39.

The interior dunes are developed primarily from weathered volcanic rocks and have not been reworked by wind or wave action as extensively as the coastal dunes. They are not nearly as well sorted, and chemically and mineralogically they have no value as a source for silica (see Plate 2). All four samples are mixtures of feldspar grains, lithic fragments, pumice fragments, glass shards, and ferromagnesian minerals. Quartz is only a minor constituent.

QUARTZ REPLACEMENT BODIES (samples 40-45)

Silicification in several areas of southwestern Oregon has produced quartz veins and larger replacement bodies of massive quartz (Ramp and Mason, 1969). Although some of the veins are high-purity silica, they contain only limited tonnages, and at present none are in production. Three quartz replacement bodies were sampled: the Quartz Mountain and Bristol Silica deposits, which were described earlier, and Quartz Mountain, an active prospect near Abbott Butte on the Douglas/Jackson County line. This latter Quartz Mountain is about 2 mi from Abbott Butte and will be referred to as Quartz Mountain/Abbott to distinguish it from Quartz Mountain in Douglas County (there are three additional topographic features in Oregon named Quartz Mountain in Lake, Deschutes, and Malheur Counties).

Quartz Mountain and Quartz Mountain/Abbott are silicified volcanic rock, and the Bristol deposit is a silicified carbonate. Each exhibits some chemical variations within the quartz body, but none has been completely characterized or delineated by drilling. The analyses presented in this study are of only two samples from each occurrence and may not necessarily represent the range of compositions of the deposit. Trace-element analyses for the six samples are presented in Table 2. The Quartz Mountain/Abbott deposit is on the southern flank of the mountain; the crest itself is volcanic rock. Claims were staked on the deposit in 1985 and are being actively maintained while the owners evaluate the quartz resources and work to obtain approval of their proposed operating plan (R. Gibson, owner, Quartz Mountain/Abbott claims, personal communication, 1990).

Table 2. Trace-element analyses of quartz replacement bodies.

Sample no.	Ag (ppm)	Au (ppb)	Ca (ppm)	Cd (ppm)	Cr (ppm)	Cu (ppm)	Co (ppm)	Fe (ppm)	Mg (ppm)	Mn (ppm)	Mo (ppm)	Na (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	Ti (ppm)	Zn (ppm)
40	1.0	<1	600	<1	8	2.5	140	1300	300	44	5	400	2	40	2	2800	5.0
41	1.0	4	900	<1	12	2.5	130	1800	100	130	3	400	2	30	<2	2700	0.5
42	0.5	<1	800	<1	18	3.0	2	2400	<100	180	3	400	2	20	2	1200	4.5
43	0.5	<1	700	<1	14	4.0	1	1900	<100	160	3	300	1	20	<2	1500	5.0
44	<0.5	<1	6800	<1	10	3.0	1	1500	300	74	<1	200	1	3400	<2	20	1.0
45	<0.5	3	8200	<1	8	2.0	130	1300	1500	18	<1	300	2	3900	<2	50	9.5

Direct current plasma emission spectrometric analyses, XRAL, Don Mills, Ontario, Canada.

Samples 40-41, Quartz Mountain/Abbott Butte, Jackson County.

Samples 42-43, Quartz Mountain, Douglas County.

Samples 44-45, Bristol Silica and Limestone Company, Jackson County.

DISCUSSION

The data collected in this study indicate there is considerable potential for increased production of quartz and of silica sands in Oregon. Deposits currently in production meet specifications for certain markets, and production may be able to expand by utilizing additional beneficiation techniques, by more aggressive marketing, or both.

The quartz replacement bodies, Quartz Mountain and Bristol Silica, supply high-quality products for specific markets, and Quartz Mountain/Abbott has a potential to meet similar specifications. Bristol Silica has the advantages of multiple markets and of a mill located on a rail line 5 mi from the mine, although no product is currently shipped by rail. Quartz Mountain currently has only one market, Glenbrook Nickel, and a 45-mi truck haul from high altitude, but its quartz provides superior performance for ferrosilicon and nickel production, and the deposit has indicated reserves in excess of 100 million tons. Quartz Mountain/Abbott remains to be evaluated.

At least some parts of each quartz replacement deposit are not suitable for higher value end uses such as silicon metal production. Zones of the Bristol deposit contain apatite, resulting in excessive levels of calcium and phosphorus, and Quartz Mountain and Quartz Mountain/Abbott have titanium levels that are too high for silicon production. Their chemical variability has not been determined by sufficiently detailed drilling to establish accurate ore-grade control, but any one of the deposits may have zones within it that are of higher purity.

The coastal dunes are attractive for development because of their physical and chemical characteristics, their ease of mining, and their proximity to transportation. Beneficiation to reduce the iron content and perhaps the feldspar content would increase the value and expand the market for coastal sands. Although the physical properties of the coastal dunes consistently fall within the range for industrial applications, their mineralogical and chemical compositions are subject to local variations that can preclude their use for some markets or at least require extensive beneficiation. These chemical variations, coupled with the withdrawal from mineral entry of large tracts of dune areas, sharply reduce the number of occurrences potentially suitable for development.

Of the areas sampled in this study, neither the Boardman area, Morrow County, nor the interior dunes of Harney and Lake Counties have sands that are pure enough to justify development for quartz or quartz-feldspar products. However, the sands are suitable for some construction purposes.

Interbeds in the Columbia River Basalt Group such as the Vantage sandstone and the Grouse Creek interbed may be exploitable in certain circumstances. The Vantage crops out in parts of several counties. Detailed mapping to identify zones of appropriate chemical and physical characteristics could guide exploration, but development would depend on locating an occurrence of sufficient volume and minimal basalt overburden. Should the lignite coal of the Troy area be mined, the arkosic sand interbeds would have to be removed and could be a valuable co-product. In the absence of coal mining, however, basalt overburden and the isolated location will preclude large-scale commercial production of these sands.

Arkosic sandstones in the three remaining areas, Astoria, Arbuckle Mountain, and Owyhee, have high potential and deserve more detailed sampling and beneficiation studies.

The sandstones of the Astoria area, particularly the Youngs Bay member of the Astoria Formation, are geologically well delineated. Mapping is sufficiently detailed to set limits on an exploration area, indicated reserves are large, the sands are friable and show marked improvement with only rudimentary beneficiation, and outcrops are on or near both water and rail transportation.

The Herren formation exposed near Arbuckle Mountain in Morrow County exhibited the highest SiO_2 content of all the sandstones sampled, both before and after scrubbing. The area is an active prospect for epithermal gold, and silicification may account for both the 96.7 percent SiO_2 content and the induration of the sandstone. Although somewhat removed from major market areas and dependent solely on truck transportation, the large inferred reserves and the chemical composition indicate the area is an appropriate target for further exploration.

The Owyhee region is the largest and least well mapped of the three areas. It has multiple, thick arkosic sandstone units of wide areal extent whose potential cannot be evaluated with only a limited number of samples. The grain size distribution and chemistry of the samples collected suggest that with beneficiation some of the sandstones could meet specifications for certain industrial applications. Much of the area is relatively isolated at present, but the development of precious-metal mines may improve access, and the Basin Creek area samples were taken from outcrops only 5 mi from rail transportation. The resource potential of the arkosic sands can be better evaluated as the current mapping program progresses.

OREGON ADMINISTRATIVE RULES
CHAPTER 632, DIVISION 33 — DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

on the part of applicants. An Exploration Permit from the department does not constitute authorization to proceed without approval of other agencies if required. It is the applicant's responsibility to obtain other necessary permits.

(2) Information Requirements. The department may require any information reasonably necessary to assess impacts of the proposed exploration and determine the status of any exploration.

(3) Exploration or drilling an exploration drill hole greater than 50' is subject to these rules.

(4) Exploration must be conducted to prevent a decrease in quality or loss of quantity to an existing or potential water supply to the greatest practicable extent.

(5) Exploration shall be conducted so as to minimize adverse effect upon wildlife.

(6) An applicant for an exploration permit is encouraged to contact the department at the Albany office at least 90 days prior to initiation of the proposed drilling activities.

(7) Information required in written form shall include but not be limited to:

(a) Contact Information:

(A) Name, address and telephone number of the applicant;

(B) Name, address, telephone number and verification of consent of the surface owner(s);

(C) Name, address, and telephone number of the project contact person;

(D) Name and address of the drilling contractor(s);

(E) Name, address, and telephone number of the mineral estate owner(s) and lessor if applicable;

(F) Name and address of any designated agent.

(b) Project Description:

(A) Legal description of the project area.

(B) Permit area map(s) of a suitable scale including but not limited to the following information:

(i) Proposed permit area boundary;

(ii) Locations of surface disturbance resulting from exploration activities;

(iii) Proposed location and identification of drill sites, trenches and bulk sampling sites (shall be considered proprietary information if the applicant requests); and

(iv) proposed location and identification of stockpiles and wasterock dumps.

(C) Type of Drilling (air, mud, diamond, rotary, etc.);

(D) Maximum proposed depth and diameter of drill holes (shall be considered proprietary information if the applicant requests);

(E) Drill pad and mud pit dimensions;

(F) Bulk sample volume;

(G) Extent and location of all underground workings to be constructed;

(H) Length and width of roads constructed or upgraded within the project area. Existing road should be identified and documented on an aerial photo or on map(s) of suitable scale;

(I) General description of past land use. In addition, the applicant must comply with federal and state statutes and rules regarding threatened, endangered, or sensitive species;

(J) Proposed starting date and expected duration;

(K) Agreement to notify the department within 48 hours of commencement of exploration activities;

(L) Geologic setting of the project, if available;

(M) Groundwater information, if available.

(c) Reclamation Plan:

(A) These rules recognize that specific field conditions may require alternative reclamation, drill hole abandonment or plugging/sealing requirements other than those listed in these rules to accomplish the purpose of these rules. Alternative reclamation, drill hole abandonment or plugging/sealing procedures shall be approved by the department when they meet the purposes of these rules;

(B) The purpose of the reclamation is to reclaim land disturbed by surface or underground exploration activities;

(C) Land disturbed by exploration activities must be reclaimed to a beneficial use approved by the department and consistent with county comprehensive plans or the appropriate federal agency;

(D) If there is no exploration conducted at the site for two years, reclamation of the site must commence or a written justification provided to the department as to why reclamation has not commenced;

(E) Unless alternative reclamation provisions are approved by the department reclamation of land disturbed by exploration shall include but not be limited to:

(i) Removal of all materials and supplies used in the exploration activity not approved to remain at the permit area.

(ii) Vegetation cleared from the site shall be properly disposed of or dispersed;

(iii) Drill cuttings must be spread to a depth no greater than 1 inch or buried in an approved location;

(iv) Roads, drill pads, mud pits, trenches, and other disturbances shall be backfilled to the approximate original contour and graded to blend with the surrounding land surface;

(v) Roads not to be reclaimed require written approval from the landowner and shall be left in a stable condition acceptable to the department;

(vi) If vegetative cover was destroyed, a department approved revegetation plan shall be used in the first period favorable for planting;

(vii) If necessary to assure successful revegetation, the disturbed areas shall be scarified, fertilized, and mulched to approved specifications;

(d) Exploration Drill Holes Completed As Wells: An exploration drill hole converted to a monitoring well or to a water well shall be completed in accordance with Department of Environmental Quality or Water Resources Department statutes and rules prior to release of the financial security.

(e) Drill Hole Abandonment Provisions:

(A) The purpose of the abandonment plan is to:

(i) Prevent loss of quality and minimize to the greatest extent practicable, loss of quantity to all surface and groundwaters and prevent interaquifer mixing;

(ii) Prevent aquifer contamination from surface drainage.

(B) Unless alternative abandonment procedures are approved by the department all exploration drill holes shall be abandoned as follows;

(C) Any drill hole which produces a natural flow of water to the surface must be filled with neat

OREGON ADMINISTRATIVE RULES
CHAPTER 632, DIVISION 33 — DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

cement slurry from the bottom of the hole to two feet below either the reclaimed land surface or the collar of the hole, whichever is the lowest elevation. Neat cement slurry should be American Petroleum Institute (API) class A or B, or ASTM C-150 Type I or II neat cement with no additives, mixed in the proportion of 5.2 gallons of water per standard 94 pound sack and having a mud weight of 15.6 pounds per gallon;

(D) Any exploration drill hole that encounters groundwater that does not flow to the surface shall be sealed with a hole volume of:

(i) A high quality sodium bentonite product specifically formulated for drill hole abandonment;

(ii) Cement grout;

(iii) Other appropriate drill hole abandonment material.

(E) Whenever a cased drill hole is not completed as a water well, if reasonably possible the surface casing shall be pulled. If the casing cannot be pulled the casing shall be cut off and capped at a minimum depth compatible with local cultivation practices or at the surface in rangeland;

(F) All drill holes shall be surface capped to reduce the potential of downhole contamination from the surface and to prevent injury to wildlife and domestic stock. The surface cap shall consist of a non-slip hole cap placed at a point five feet below the upper surface of bedrock or seven feet below the land surface whichever is the lower elevation. A minimum five foot column of Portland cement or concrete cap shall be placed above the non-slip plug. The top of the Portland cement or concrete cap shall be a minimum of two feet below either the original land surface or the top of the casing whichever is the lower elevation. The remainder of the hole shall be backfilled with native materials and reclaimed consistent with the reclamation provision of the rules. Drill hole abandonment material may constitute a surface cap where abandonment materials remain at or close to the surface and is compatible with local cultivation practices. Void space between the top of the cap and the land surface shall be backfilled with native materials and reclaimed consistent with the reclamation provision of these rules.

(8) Reporting Procedures: SMLR form 33 and appropriate map(s) shall be submitted on or before January 31 of each year. All information in SMLR 33 identified by the permittee as trade secrets and consistent with ORS 192 shall be exempt from public disclosure. SMLR-33 and appropriate map(s) shall include but not be limited to the following information:

(a) Map(s) showing completed bore and core hole locations to a degree of accuracy reasonably obtainable with a Brunton type instrument;

(b) The date each hole was completed, and abandoned;

(c) Total depth and diameter of each hole drilled;

(d) Trade name and amount of abandonment material used on each drilled hole;

(e) Viscosity (in seconds/quart) of drilling medium before and after abandonment material was added;

(f) Viscosity of abandonment material

(g) Depth of water bearing zones as determined through use of equipment and technique normally available to exploration personnel for each hole

drilled including a statement describing any flow to the surface encountered; and

(h) Location of any shaft or adits constructed during exploration.

(9) Financial Security:

(a) The applicant shall submit adequate financial security for the purpose of assuring performance of the requirements of the Exploration Permit. All land must have department approved and accepted financial security prior to disturbance. The department shall determine the amount of the financial security required by estimating the cost of reclamation if the department were to perform the reclamation. The department may accept a blanket financial security covering two or more exploration projects. The total financial security amount of the individual projects shall not exceed the amount of the blanket financial security.

(b) Factors the department will consider in determining the amount of security may include, but are not limited to, the following:

(A) Supervision;

(B) Mobilization;

(C) Costs of equipment;

(D) Equipment capability;

(E) Costs of labor;

(F) Removal or appropriate disposition of debris, junk, equipment, structures, and unwanted chemicals;

(G) Backfilling, contouring, or regarding and topsoil replacement;

(H) Draining, establishment of drainage, erosion control;

(I) Soil tests;

(J) Seedbed preparation, seeding, mulching, fertilizing, netting, tackifiers or other stabilizing agents;

(K) Tree and shrub planting;

(L) Fencing;

(M) Liability insurance;

(N) Long-term stabilization, control, containment or disposal of waste solids and liquids;

(O) Drill hole abandonment provisions; and

(P) Adit or shaft sealing or plugging requirements.

(c) Cost estimate information shall be derived from sources such as:

(A) Comparable costs from similar projects;

(B) Catalog prices;

(C) Guides and cost estimates obtained from appropriate government and private sources;

(D) Applicant estimates;

(E) Equipment handbooks; and

(F) Qualified local contractors.

(d) Seed mixes, fertilizer rates, and other requirements will be derived from departmental experience combined with advice from appropriate sources.

(e) The security amount shall be based on the cost of reclamation. Security amounts shall not include conversion of drill holes to water wells.

(10) Fees. Maximum fees are established by statute and specific fees are set by rule.

(a) Each application for an Exploration Permit shall be accompanied by an initial application fee of \$400. Additional processing and inspection fees anticipated only when the permittee seeks to transition the exploration activity to a mining facility or if a non-compliance is identified. For sites

OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
MINED LAND RECLAMATION OFFICE
1534 QUEEN AVENUE SE
ALBANY, OR 97321
(503) 967-2039

DRILL HOLE ABANDONMENT GUIDELINES

1. Abandonment With Sodium Bentonite Slurry

The sodium bentonite product shall be specifically formulated for drill hole abandonment. This material shall be mixed to a marsh funnel viscosity of 60 seconds/quart or at least 20 seconds/quart greater than that of the drilling mud, whichever viscosity is greater.

2. Abandonment With Cement-Bentonite Grout

Cement used should be American Petroleum Institute (API) Class A or B, or ASTM C-150 Type I or II neat cement with no additives. Up to four (4) percent (by weight of cement) sodium bentonite gel powder with no additives may be added to the cement (3.75 pounds per sack of cement). For each pound of bentonite added, up to an additional 0.7 gallons of water area added to the original neat cement mix of 5.2 gallons per sack, for a maximum water content of 7.8 gallons per sack of cement with four (4) percent bentonite. The water and bentonite should be mixed first, and the cement added to the bentonite slurry.

3. Abandonment With Neat Cement Slurry

Cement used should be American Petroleum Institute (API) Class A or B, or ASTM C-150 Type I or II neat cement with no additives, mixed in the proportion of 5.2 gallons of water per standard 94 pound sack and having a mud weight of 15.6 pounds per gallon.

4. Abandonment With Sodium Bentonite Pellets

Provided a full hole volume of sodium bentonite pellets can be place in the hole, they are considered an excellent abandonment material. Technological advances are expected for the material that likely will overcome the bridging problems associated with this material.

5. Placement of Abandonment Material

A volume of the abandonment fluid sufficient to fill the hole shall be pumped through the drill pipe while on bottom. If the fluid circulates to the surface, the drill pipe shall be pulled out while keeping the hole full.

6. Lost Circulation Sodium-Bentonite

When lost circulation is encountered, the pipe should be pulled to a point above the water table and a second volume with 10 seconds/quart greater viscosity than the initial abandonment viscosity, sufficient to fill the hole shall be pumped from that point.

7. Cement Bentonite Grout/Neat Cement Slurry

Lost circulation may require employment of packer or other downhold plugging devices to ensure plug security.

United States
Department of
Agriculture

Forest
Service

Rogue River
National
Forest

Prospect Ranger District
Prospect, OR 97536

Reply to: 2430 Commercial Timber Sales
1950 NEPA

Date: May 17, 1991

Subject: Leg Analysis Area

To: mNAME
mADDRESSn mZIPn

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.

In addition, the following issues specific to the proposed mining operation were identified:

Visual quality along Forest Road 68.

Protection of cultural resources within the Cow Creek Band of the Umpqua Indian Tribe's area of interest.

A portion of the analysis area lies within a section of the Rogue-Umpqua Divide Roadless Area, as mapped in Appendix C of the Final Environmental Impact Statement for the LRMP. No areas within the roadless portion of this analysis area are proposed for entry with the proposed Leg Timber Sale. It is the Forest Service's intent to complete an environmental impact statement prior to entry into the identified roadless area.

Alternatives for the proposed projects are currently in the developmental stages for this analysis area. Presently, two alternatives have been identified for the proposed mining operation. One alternative is to allow development as proposed by the claim holder and the other alternative is to include additional mitigation to further lessen impacts associated with a mining operation. For the timber sale proposal, two alternative emphasis were identified in addition to the no-action alternative. One alternative is to intensively manage the area while not exceeding the standards and guidelines in the LRMP. The other alternative would emphasize habitat diversity within the analysis area. The estimated timber volume harvested in the proposed alternatives ranges from 2 to 3 million board feet.

Your written comments regarding this analysis should be submitted prior to June 3, 1991. After this date, a final list of issues will be prepared and the proposed alternatives will be finalized based on comments or new information received. A final report and decision are expected around the first week in July, 1991. For more information on the proposed projects or to submit written comments or questions, contact the project interdisciplinary team leader, Don Boucher or Robert Wilcox, District Ranger, Prospect Ranger District, Hwy 62, Prospect, Oregon, 97536. Phone (503) 560-3623.

/s/ Robert L. Wilcox
ROBERT L. WILCOX
District Ranger

RESEARCH SUMMARY
and
NATIONAL REGISTER of HISTORIC PLACES ELIGIBILITY EVALUATION REPORT
for
THE "HUCKLEBERRY PATCH" ON THE ROGUE-UMPQUA DIVIDE

(A TRADITIONAL-USE AREA
of the
COW CREEK BAND of UMPQUA TRIBE of INDIANS,
located in the
ROGUE RIVER NATIONAL FOREST and the UMPQUA NATIONAL FOREST)



Research and report preparation by:
Jeff LaLande
Forest Archaeologist
Rogue River National Forest
Medford, Oregon
July 1992

(C.R. Job RR-996)

--Thin-leaved huckleberry .
(*Vaccinium membranaceum*).

SUMMARY SHEET

FOREST SERVICE EVALUATION OF CULTURAL RESOURCES
 PACIFIC NORTHWEST REGION

Date July 29, 1992

A cultural resource inventory has identified the cultural resources described in the accompanying materials. These resources have been evaluated according to the criteria in 36 CFR 60.6, as documented in the Evaluation Report for each identified resource.

Please indicate your opinion of these findings by marking the appropriate line(s) below. Return this form to the responsible official within 30 working days of receipt of this request. The enclosed documents are copies for your permanent files.

Enclosures:

Responsible Official:

- ☒ Inventory Report
☐ Inventory Form(s)
☒ Evaluation Report(s)
☒ Other map and property description

Name James T. Gladen and Lee F. Coonce
Rogue River NF and Umpqua NF
 Forest/District
 Mailing Address RRNF, P.O. Box 520 Prospect R.
Medford, OR 97501

For further info., contact: Name Jeff LaLonde Phone# 776-3639

----- Evaluation Summary -----

Forest Service Resource Evaluation

*1.0 UGLAS
 +
 JACKSON*

SHPO

Resource Identifier (name or number)	36 CFR ^{60.6} <u>criteria met</u>					NAT'L REG. <u>ELIGIBLE</u>		concur	do not concur	incomplete data *	* deficiencies noted:
	NONE	assoc. w/ events	assoc. w/ person	distinctive/ representative	yield info.	YES	NO				
"The Huckleberry Patch" on the Rogue-Umpqua Divide: a traditional-use property of the Cow Creek Band of Umpqua Tribe of Indians		X				X		C			

*meets NHP eligibility as a "traditional cultural property" as per NPS/NRHP Bulletin 38.

signed L. LaLonde

State Historic Preservation Officer

date AUG 06 1992

NOTED
L. GILSEN

7/12/92

Cow Creek Band of Umpqua Tribe of Indians

RESOLUTION NO. 92-14


- WHEREAS, The Board of Directors of the Cow Creek Band of Umpqua Tribe of Indians, pursuant to Article VII, Section 1, of the Tribal Constitution approved July 17, 1991 by the Bureau of Indian Affairs, is the official governing body of the Tribe, authorized to act in behalf of the Tribal Council, and
- WHEREAS, The Cow Creek Band of Umpqua Tribe of Indians is a Federally Recognized Tribe of Indians whose aboriginal homeland is located in southwest Oregon, and
- WHEREAS, The Board of Directors are responsible to the tribal membership, morally and ethically bound, to protect all cultural resources that are tied to the Tribe, and
- WHEREAS, Such a great deal of our tribal heritage has been lost, the Tribe recognizes that we must make every effort to preserve and protect those most valuable cultural resources that are left, particularly those places meaningful to our people where they met, gathered and worshipped, and
- WHEREAS, The Huckleberry Patch on the Rogue-Umpqua Divide is the location of a significant archaeological site and has long been documented as such, and
- WHEREAS, Oral histories of the Tribe indicate the continual use of the Huckleberry Patch by the Tribe, including the locations of various family campsites, and
- WHEREAS, The Tribal Cultural Resource Representatives have studied the Huckleberry Patch area with representatives of the U.S. Forest Service and although Indian people do not agree to land boundaries, they realize the necessity of establishing them for the purpose of the property being evaluated for nomination on the National Register of Historic Places and agree to them for this purpose only, and
- WHEREAS, The area covered is from Butler Butte to Elephant Head with a map showing the area, and
- WHEREAS, The Tribe has accepted the area shown and identified it as Map B.B. - E.H., now
- THEREFORE BE IT RESOLVED that the Tribe requests that the area shown on Map B.B. - E.H. be officially placed on the National Register, and

ADDENDUM TO C.R. JOB RR-765, QUARTZ MOUNTAIN C.R. SURVEY

(SHPO report #6864)

As stated in the 1985 c.r. survey report for this project, area-specific project activities are to be preceded by a more intensive archaeological survey of proposed project-impact areas. A proposal to quarry 1,000 tons (for "commercial assay" purposes) of silica from the "quartz" outcrop adjacent to Road 68 and west of site RR-980 resulted in such a survey. On September 26, 1990, assisted by Prospect RD cultural resource technician Georganne Shafer, I searched the entire surface of the outcrop for archaeological evidence, with negative results. Site RR-980, situated on forested terrain east of the outcrop, clearly does not extend onto the outcrop, and will not be affected by the project as proposed. The area to be excavated has scattered brush vegetation but is largely without soil of any kind; bare bedrock comprises virtually 100 percent of the proposed project area. Of special concern was any evidence of aboriginal quarrying/lithic reduction of the cryptocrystalline silica "Quartz Mountain chalcedony" bedrock (as is documented for another outcrop to the west: site RR-979); no pits, cores, blanks, flakes, angular waste, or other evidence of quarrying or on-site reduction was found. No lithic debitage, stone tools, stacked-rock cairns or other signs of prehistoric use of any kind were found during the approx. two person-hours spent intensively searching the less-than-4-acre-sized project area. A second search of the area by Shafer and archaeological assistant Brenda Strickland on July 22, 1991 was also negative.

The proposed project, restricted in impact to excavation of the rock outcrop via an excavational access point on Road 68, adjacent to the face of the outcrop, will have "no effect" relative to 36 CFR 800.


Jeff LaLande
Forest Archaeologist

September 4, 1991

FOREST SERVICE DETERMINATION OF EFFECT

The proposed project described in the accompanying text and graphic material has been measured against the "criteria of effect" listed in Revised 36 CFR 800.3 and 800.4 to determine the nature of effect, if any, upon properties determined eligible for or included on the National Register of Historic Places.

- ☒ We have determined that the proposed project will have "no effect" on any listed or eligible cultural resources. We will retain documentation of this determination and proceed with project implementation as proposed if you do not respond within 15 days.
- ☐ We have determined that the proposed project will have "no adverse effect" on any listed or eligible cultural resources. We will document this determination to the Advisory Council on Historic Places and proceed with project implementation as proposed if you do not respond within 30 days.
- ☐ We have determined that the proposed project will have "adverse effect" on cultural resource(s) listed on or eligible for the National Register of Historic Places. A description of each affected resource, and a plan to mitigate anticipated adverse effects are attached. Please advise us of your opinion within 30 days so that we may proceed with development of a preliminary case report.

Attachments

- ☒ Project description
☐ Description of listed or eligible properties
☐ Plan for mitigating adverse effects

PROJECT DATA:

(JOB # 765)

FOREST SERVICE

NAME/KIND Quartz Mountain mining claims
 COUNTY Douglas/Jackson
 USGS QUADS Abbott Butte

By Charles E. Graham
 Title District Ranger
 Date 9/26/85

FOREST/DISTRICT Rogue River/Prospect

SHPO USE:

☒ Concur

☐ Do not concur

Comments: _____

By [Signature]
 Title D.W. POWERS
 Date NOV 26 1985
 DEPUTY CHIEF

SUMMARY SHEET

FOREST SERVICE EVALUATION OF CULTURAL RESOURCES
PACIFIC NORTHWEST REGION

Date 9/26/85

A cultural resource inventory has identified the cultural resources described in the accompanying materials. These resources have been evaluated according to the criteria in 36 CFR 60.6, as documented in the Evaluation Report for each identified resource.

Please indicate your opinion of these findings by marking the appropriate line(s) below. Return this form to the responsible official within 30 working days of receipt of this request. The enclosed documents are copies for your permanent files.

Enclosures:

- ☒ Inventory Report
☒ Inventory Form(s)
☒ Evaluation Report(s)
☐ Other _____

Responsible Official:

Name Chuck Graham, District Ranger
Forest/District Boque River, Wapinitz
Mailing Address FRNT, P.O. Box 520
Madford, OR 97501

For further info., contact: Name Jeff LaLonde Phone# 503 776-3639

----- Evaluation Summary -----

Forest Service Resource Evaluation

Resource Identifier (name or number)	36 CFR ^{60.6} criteria met						SHPO		
	NONE	assoc. w/ events	assoc. w/ person	distinctive/ representative	yield info.	NAT'L REC. ELIGIBLE	concur	do not concur	incomplete data *
						YES	NO		
FR-978					2	*		✓	
RR-979					X	*		✓	
RR-980					X	*		✓	
RR-981	X						X	✓	
RR-982	X				X	*		✓	
RR-983	X						X	✓	
RR-984	X						X	✓	
RR-985					X	*		✓	
RR-986	X				X	*		✓	
RR-199 "35JAC9"					X	* X		✓	
RR-897					X	*		✓	

* deficiencies noted:

*all sites tentative,
not based on
test in, etc.*

**NOT A
FORMAL
DET. OF
ELIGIBILITY**

* = potentially significant site; needs further investigation (test excavation or other evaluation techniques)

signed

[Signature]
State Historic Preservation Officer

date OCT 21 1985



United States
Department of
Agriculture

Forest
Service

Rogue River
National
Forest

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



TREATY WITH THE UMPQUA—COW CREEK BAND, 1853.

Sept. 19, 1853.
 10 Stats., 1027.
 Ratified Apr. 12,
 1854.
 Proclaimed Feb. 5,
 1855.

Stipulations of a treaty made and entered into on Cow Creek, Umpqua Valley, in the Territory of Oregon, this 19th day of September, A. D. 1853, by and between Joel Palmer, superintendent of Indian Affairs, on the part of the United States, and Quin-ti-oo-san, or Bighead, principal chief, and My-n-e-letta, or Jackson; and Tom, son of Quin-ti-oo-san, subordinate chiefs, on the part of the Cow Creek band of Umpqua tribe of Indians.

Cession of land.

ARTICLE 1. The Cow Creek band of Indians do hereby cede and relinquish, for the consideration hereinafter specified, to the United States, all their right, title, interest, and claim to all the lands lying in that part of the Territory of Oregon bounded by lines designated as follows, to wit:

Commencing on the north bank of the south fork of Umpqua River, at the termination of the high-lands, dividing the waters of Myrtle Creek from those of Day's Creek, thence running easterly along the summit of said range to the headwaters of Day's Creek, thence southerly, crossing the Umpqua River to the headwaters of Cow Creek, thence to the dividing ridge between Cow Creek and Grave Creek, thence southwesterly along the said divide to its junction with the ridge dividing the waters of Cow Creek from those of Rogue River, thence westerly and northerly around on said ridge to its connection with the spur terminating opposite the mouth of Myrtle Creek, thence along said spur to a point on the same northwest of the eastern line of Isaac Bailly's land-claim, thence southeast to Umpqua River, thence up said river to place of beginning.

Temporary occupation of part of said cession.

ARTICLE 2. It is agreed on the part of the United States that the aforesaid tribe shall be allowed to occupy temporarily that portion of the above-described tract of territory bounded as follows, to wit: Commencing on the south side of Cow Creek, at the mouth of Council Creek, opposite Wm. H. Riddle's land-claim, thence up said creek to the summit of Cañon Mountain, thence westerly along said summit two miles, thence northerly to Cow Creek, at a point on the same one mile above the falls; thence down said creek to place of beginning. It being understood that this last-described tract of land shall be deemed and considered an Indian reserve until a suitable selection shall be made by the direction of the President of the United States for their permanent residence, and buildings erected thereon and other improvements made of equal value of those upon the above reserve at the time of removal.

Permanent homes to be selected.

Payment for said cession.

ARTICLE 3. For and in consideration of the cession and relinquishment contained in article first, the United States agree to pay to the aforesaid band of Indians, the sum of twelve thousand dollars, in manner to wit: one thousand dollars to be expended in the purchase of twenty blankets, eighteen pairs pants, eighteen pairs shoes, eighteen hickory shirts, eighteen hats or caps, three coats, three vests, three pairs socks, three neckhandkerchiefs, forty cotton flags, one hundred and twenty yards prints, one hundred yards domestic, one gross buttons, two lbs. thread, ten papers needles, and such other goods and provisions as may be deemed by the superintendent or agent most conducive to the comfort and necessities of said Indians, on or before the first day of October, A. D. 1854. The remaining eleven thousand dollars to be paid in twenty equal annual instalments of five hundred and fifty dollars each, commencing on or about the first day of October, 1854, in blankets, clothing, provisions, stock, farming-implements, or such other articles, and in such manner as the President of the United States may deem best for the interests of said tribe.

Houses to be erected.

ARTICLE 4. In addition to the aforesaid eleven thousand dollars there shall be erected for the use of said tribe, at the expense of the United States, two dwelling-houses, the cost of which shall not exceed

two hundred dollars and suitable seed.

ARTICLE 5. That all persons passing over the land of the United States to the

ARTICLE 6. That the United States shall not be interrupted by the Indians for injuries done, but instead thereof the Indian agent shall, upon complaint of any person against whom a punishment, agree in such manner if any violation of any Indian law be tried, and if found guilty by the United States, the utmost of the property which he has in the United States, by the agent or of the United States hereby given indemnification for or taken from the property stolen or reduced that it was. And the chiefs of the U. S., shall deliver up any person.

ARTICLE 7. That the Cow Creek band of Indians, at any time hereafter, be to establish farm be discretionary sent of the Senate any part thereof.

ARTICLE 8. That the contracting parties, the President of the United States and the Senate.

In testimony whereof, the President of the United States, on the part of the Cow Creek band of Umpqua Indians, and seals, the day

Signed in presence of
 J. B. Nickerson
 E. Catcher
 I
 Theodore

John D. F.
 W. Starr,

K BAND, 1853.

*Cow Creek, Umpqua
of September, A. D.
t of Indian Affairs,
-oo-san, or Bighead,
d Tom, son of Quin-
Cow Creek band of*

do hereby cede and
cified, to the United
all the lands lying
by lines designated

k of Umpqua River,
he waters of Myrtle
g easterly along the
Creek, thence south-
aters of Cow Creek,
k and Grave Creek,
its junction with the
ose of Rogue River,
dge to its connection
Myrtle Creek, thence
of the eastern line of
qua River, thence up

ited States that the
porarily that portion
ed as follows, to wit:
the mouth of Council
ence up said creek to
y along said summit
point on the same one
place of beginning.
ract of land shall be
l a suitable selection
of the United States
ted thereon and other
the above reserve at

ssion and relinquish-
s agree to pay to the
asand dollars, in man-
d in the purchase of
pairs shoes, eighteen
ats, three vests, three
on flags, one hundred
nestic, one gross but-
uch other goods and
ndent or agent most
Indians, on or before
ning eleven thousand
ents of five hundred
he first day of Octo-
farming-implements,
the President of the
said tribe.
lve thousand dollars
t the expense of the
hich shall not exceed

two hundred dollars each, and a field of five acres fenced and ploughed, and suitable seed furnished for planting the same.

ARTICLE 5. The said band of Indians agree to give safe conduct to all persons passing through their reserve, and to protect in their person and property all agents or other persons sent by authority of the United States to reside among them.

Protection to trav-
elers.

ARTICLE 6. That the friendship which is now established between the United States and the Cow Creek band of Indians, shall not be interrupted by the misconduct of individuals, it is hereby agreed that for injuries done, no private revenge or retaliation shall take place; but instead thereof complaint shall be made by the party injured to the Indian agent; and it shall be the duty of the chiefs of said band of Indians, upon complaint being made as aforesaid, to deliver up the person against whom the complaint is made, to the end that he may be punished, agreeably to the laws of the United States; and in like manner if any violation, robbery, or murder shall be committed on any Indian belonging to said band, the person so offending shall be tried, and if found guilty, shall be punished according to the laws of the United States. And it is further agreed that the chiefs shall, to the utmost of their ability, exert themselves to recover horses or other property which has or may hereafter be stolen from any citizen of the United States, by any individual of said tribe, and deliver the same to the agent or other person authorized to receive it; and the United States hereby guarantee to any Indian or Indians of said band, a full indemnification for any horses or other property which may be stolen or taken from them by any citizen of the United States, provided, the property stolen cannot be recovered, and that sufficient proof is produced that it was actually stolen or taken by a citizen of the U. S. And the chiefs further agree, that upon the requisition of the President of the U. S., superintendent of Indian affairs, or Indian agent, to deliver up any person resident among them.

Redress for private
grievances.

Restitution of stolen
property.

Indemnification for
property stolen from
Indians.

ARTICLE 7. It is agreed between the United States and the Cow Creek band of the Umpqua tribe of Indians, that, should it at any time hereafter be considered by the United States as a proper policy to establish farms among and for the benefit of said Indians, it shall be discretionary with the President, by and with the advice and consent of the Senate, to change the annuities herein provided for, or any part thereof, into a fund for that purpose.

Farms may be estab-
lished.

ARTICLE 8. This treaty shall take effect and be obligatory on the contracting parties as soon as the same shall be ratified by the President of the United States, by and with the advice and consent of the Senate.

In testimony whereof the said Joel Palmer, Superintendent of Indian Affairs, on the part of the United States, and chiefs of the Cow Creek band of Umpqua Indians, before named, have hereunto set their hands and seals, the day and year aforesaid.

Joel Palmer, [L. S.]
Superintendent Indian Affairs, O. T.
Bighead, Quin-ti-oo-san, his x mark, [L. S.]
Jackson, My-n-e-letta, his x mark, [L. S.]
Tom, son of Quin-ti-oo-san, his x mark, [L. S.]
Tom, Tal-sa-pe-er, his x mark, [L. S.]

Signed in presence of—

J. B. Nichols,
E. Catching,
Interpreters.
Theodore Tierney,
Secretary.
John D. Bown,
W. Starr,
Witnesses.

Historical Note

References in Text. The Act of June 9, 1964, referred to in text, is Act June 9, 1964, Pub.L. 88-317, 78 Stat. 204, which was not classified to the Code.

The Indian Claims Commission, referred to in text, was terminated on Sept. 30, 1978. See Codification Notes under former section 70 et seq. of this title.

Library References

Internal Revenue §3170.
Taxation §1011.

C.J.S. Taxation §§ 1092, 1095.

SUBCHAPTER XXX—WESTERN OREGON INDIANS: TERMINATION OF FEDERAL SUPERVISION

§ 691. Purpose

The purpose of this subchapter is to provide for the termination of Federal supervision over the trust and restricted property of certain tribes and bands of Indians located in western Oregon and the individual members thereof, for the disposition of federally owned property acquired or withdrawn for the administration of the affairs of such Indians, and for a termination of Federal services furnished such Indians because of their status as Indians.

(Aug. 13, 1954, c. 733, § 1, 68 Stat. 724.)

Historical Note

Repeal of Inconsistent Laws. Section 19 of Act Aug. 13, 1954, provided that: "All Acts or parts of Acts inconsistent with this Act [this subchapter] are hereby repealed insofar as they affect a tribe or its members. The Act of June 18, 1934 (48 Stat. 948), as amended by the Act of June 15, 1935 (49 Stat. 378) [sections 461, 462, 463, 464, 465, 466 to 470, 471 to 473, 474, 475, 476 to 478, and 479 of this title], shall not apply to a tribe and its members after the date of the

proclamation provided for in section 13 of this Act [section 703 of this title]."

Separability of Provisions. Section 20 of Act Aug. 13, 1954, provided that: "If any provision of this Act [this subchapter], or the application thereof to any person or circumstance, is held invalid, the remainder of the Act [this subchapter], and the application of such provision to other persons or circumstances shall not be affected thereby."

Library References

§ 2.

C.J.S. Indians § 9 et seq.

§ 692. Definitions

For the purposes of this subchapter:

(a) "Tribe" means any of the tribes, bands, groups, or communities of Indians located west of the Cascade Mountains in Oregon, including the following: Confederated Tribes of the Grand Ronde Community, Confederated Tribes of Siletz Indians, Alsea, Applegate Creek, Calapooya, Chaftan, Chempho, Chetco, Chetlessington, Chinook, Clackamas, Clatskanie, Clatsop, Clowwewalla, Coos, Cow Creek, Eucheas, Galic Creek, Grave, Joshua, Karok, Kathlamet, Kusotony, Kwatami or Sixes, Lakmiut, Long Tom Creek, Lower Coquille, Lower Umpqua, Maddy, Mackanotin, Mary's River,

Multnomah, Munsel Creek, Naltunnetunne, Nehalem, Nestucca, Northern Molalla, Port Orford, Pudding River, Rogue River, Salmon River, Santiam, Scoton, Shasta, Shasta Costa, Siletz, Siuslaw, Skiloot, Southern Molalla, Takelma, Tillamook, Tolowa, Tualatin, Tututui, Upper Coquille, Upper Umpqua, Willamette Tumwater, Yamhill, Yaquina, and Yoncalla;

(b) "Secretary" means the Secretary of the Interior.

(c) "Lands" means real property, interest therein, or improvements thereon, and includes water rights.

(d) "Tribal property" means any real or personal property, including water rights, or any interest in real or personal property, that belongs to the tribe and either is held by the United States in trust for the tribe or is subject to a restriction against alienation imposed by the United States.

(Aug. 13, 1954, c. 733, § 2, 68 Stat. 724.)

Library References

Indians §2.

C.J.S. Indians § 9 et seq.

§ 693. Membership roll; preparation and initial publication; eligibility for enrollment; appeal from inclusion or omission from roll; finality of determination; final publication

Within ninety days after August 13, 1954, the Secretary shall publish in the Federal Register (1) a list of those tribes for which membership rolls will be required for the purposes of this subchapter, and (2) a list of those tribes for which no membership rolls will be required for the purposes of this subchapter. Each tribe on each list shall have a period of six months from the date of publication of the notice in which to prepare and submit to the Secretary a proposed roll of the members of the tribe living on August 13, 1954, which shall be published in the Federal Register. In the absence of applicable law, or eligibility requirements in an approved constitution, by laws, or membership ordinance, eligibility for enrollment shall be determined under such rules and regulations as the Secretary may prescribe. No person shall be enrolled on more than one tribal roll prepared pursuant to this subchapter. If a tribe on list one fails to submit such roll within the time specified in this section, the Secretary shall prepare a proposed roll for the tribe, which shall be published in the Federal Register. Any person claiming membership rights in the tribe or an interest in its assets, or a representative of the Secretary on behalf of any such person, may, within ninety days from the date of publication of the proposed roll, file an appeal with the Secretary contesting the inclusion or omission of the name of any person on or from such roll. The Secretary shall review such appeals and his decisions thereon shall be final and conclusive. After disposition of all such appeals the roll of the tribe shall be published in the Federal Register and such roll shall be final for the purposes of this subchapter.

(Aug. 13, 1954, c. 733, § 3, 68 Stat. 724.)

Library References

Indians §2.

C.J.S. Indians § 9 et seq.

§ 694. Personal property rights; restrictions

Upon publication in the Federal Register of the final roll as provided in section 693 of this title, the rights or beneficial interests in tribal property of each person whose name appears on the roll shall constitute personal property which may be inherited or bequeathed, but shall not otherwise be subject to alienation or encumbrance before the transfer of title to such tribal property as provided in section 695 of this title without the approval of the Secretary. Any contract made in violation of this section shall be null and void.

(Aug. 13, 1954, c. 733, § 4, 68 Stat. 725.)

Library References

Indians §23.

C.J.S. Indians § 28 et seq.

§ 695. Tribal property**(a) Procedure for transfer**

Upon request of a tribe, the Secretary is authorized within two years from August 13, 1954, to transfer to a corporation or other legal entity organized by the tribe in a form satisfactory to the Secretary title to all or any part of the tribal property, real and personal, or to transfer to one or more trustees designated by the tribe and approved by the Secretary, title to all or any part of such property to be held in trust for management or liquidation purposes under such terms and conditions as may be specified by the tribe and approved by the Secretary, or to sell all or any part of such property and make a pro rata distribution of the proceeds of sale among the members of the tribe after deducting, in his discretion, reasonable costs of sale and distribution.

(b) Property not transferred in accordance with recognized procedure; election to retain property

Title to any tribal property that is not transferred in accordance with the provisions of subsection (a) of this section shall be transferred by the Secretary to one or more trustees designated by him for the liquidation and distribution of assets among the members of the tribe under such terms and conditions as the Secretary may prescribe: *Provided*, That the trust agreement shall provide for the termination of the trust not more than three years from the date of such transfer unless the term of the trust is extended by order of a judge of a court of record designated in the trust agreement: *Provided further*, That the trust agreement shall provide that at any time before the sale of tribal property by the trustees the tribe may notify the trustees that it elects to retain such property and to transfer title thereto to a corporation, other legal entity, or trustee in accordance with the provisions of subsection (a) of this section, and that the trustees shall transfer title to such property

in accordance with the notice from the tribe if it is approved by the Secretary.

(c) Compensation of agents or attorneys

The Secretary shall not approve any form of organization pursuant to subsection (a) of this section that provides for the transfer of stock or an undivided share in corporate assets as compensation for the services of agents or attorneys unless such transfer is based upon an appraisal of tribal assets that is satisfactory to the Secretary.

(d) Selection of trustees; approval by Secretary

When approving or disapproving the selection of trustees in accordance with the provisions of subsection (a) of this section, and when designating trustees pursuant to subsection (b) of this section, the Secretary shall give due regard to the laws of the State of Oregon that relate to the selection of trustees.

(Aug. 13, 1954, c. 733, § 5, 68 Stat. 725.)

Library References

Indians §15(1, 2), 23.

C.J.S. Indians §§ 28 et seq., 53 et seq., 62.

§ 696. Individual property**(a) Transfer of unrestricted control**

The Secretary is authorized and directed to transfer within two years after August 13, 1954 to each member of each tribe unrestricted control of funds or other personal property held in trust for such member by the United States.

(b) Removal of restrictions on sales or encumbrances; fee simple title

All restrictions on the sale or encumbrance of trust or restricted land owned by members of the tribes (including allottees, purchasers, heirs, and devisees, either adult or minor) are removed two years after August 13, 1954 and the patents or deeds under which titles are then held shall pass the titles in fee simple, subject to any valid encumbrance. The titles to all interests in trust or restricted land acquired by members of the tribes by devise or inheritance two years or more after August 13, 1954 shall vest in such members in fee simple, subject to any valid encumbrance.

(c) Multiple land ownership; partition; sale; election to purchase; unlocated owners

Prior to the time provided in subsection (d) of this section for the removal of restrictions on land owned by more than one member of a tribe, the Secretary may—

(1) upon request of any of the owners, partition the land and issue to each owner a patent or deed for his individual share that shall become unrestricted two years from August 13, 1954;

(2) upon request of any of the owners and a finding by the Secretary that partition of all or any part of the land is not practicable, cause all or any part of the land to be sold at not less than the appraised value thereof and distribute the proceeds of sale to the owners: *Provided*, That any one or more of the owners may elect before a sale to purchase the other interests in the land at not less than the appraised value thereof, and the purchaser shall receive an unrestricted patent or deed to the land; and

(3) if the whereabouts of none of the owners can be ascertained, cause such lands to be sold and deposit the proceeds of sale in the Treasury of the United States for safekeeping.

(Aug. 13, 1954, c. 733, § 6, 68 Stat. 725.)

Library References

Indians §15(1), 23.

C.J.S. Indians §§ 28 et seq., 53 et seq.

§ 697. Property of deceased members; probate laws

(a) The Act of June 25, 1910 (36 Stat. 855), the Act of February 14, 1913 (37 Stat. 678), and other Acts amendatory thereto shall not apply to the probate of the trust and restricted property of the members of the tribes who die six months or more after August 13, 1954.

(b) The laws of the several States, Territories, possessions, and the District of Columbia with respect to the probate of wills, the determination of heirs, and the administration of decedents' estates shall apply to the individual property of members of the tribes who die six months or more after August 13, 1954.

(Aug. 13, 1954, c. 733, § 7, 68 Stat. 726.)

Historical Note

References in Text. The Act of June 25, 1910 (36 Stat. 855), referred to in subsec. (a), is Act June 25, 1910, c. 431, 36 Stat. 855, which enacted sections 47, 93, 151, 202, 337, 344a, 351, 352, 353, 372, 403, 406, 407, and 408 of this title, sections 5, 6a-1, and 16a of title 41, Public Contracts, and section 148 of title 43, Public Lands, and amended sections 191, 312, 331, 333, and 336 of this title and sections 104 and 107 of former Title 18, Criminal Code and Criminal Procedure. Sections 104 and 107 of former Title 18 were re-

pealed and reenacted as sections 1853 and 1856 of Title 18, Crimes and Criminal Procedure, by Act June 25, 1948, c. 645, 62 Stat. 683. For complete classification of this Act to the Code, see Tables volume.

The Act of February 14, 1913 (37 Stat. 678), referred to in subsec. (a), is Act Feb. 14, 1913, c. 55, 37 Stat. 678, which amended section 373 of this title. For complete classification of this Act to the Code, see Tables volume.

Library References

Indians §18, 28.

C.J.S. Indians §§ 15, 64, 65, 87.

§ 698. Transfer of Federally owned property

The Secretary is authorized, in his discretion, to transfer to any tribe or any member or group of members thereof any federally owned property acquired, withdrawn, or used for the administration of the affairs of the tribes

subject to this subchapter which he deems necessary for Indian use, or to transfer to a public or nonprofit body any such property which he deems necessary for public use and from which members of the tribes will derive benefits.

(Aug. 13, 1954, c. 733, § 8, 68 Stat. 726.) -

Library References

Indians §12.

C.J.S. Indians § 29.

§ 699. Taxes; initial exemption; taxes following distribution; valuation for capital gains or losses

No property distributed under the provisions of this subchapter shall at the time of distribution be subject to Federal or State income tax. Following any distribution of property made under the provisions of this subchapter, such property and any income derived therefrom by the individual, corporation, or other legal entity shall be subject to the same taxes, State and Federal, as in the case of non-Indians: *Provided*, That for the purpose of capital gains or losses the base value of the property shall be the value of the property when distributed to the individual, corporation, or other legal entity.

(Aug. 13, 1954, c. 733, § 9, 68 Stat. 726.)

Library References

Internal Revenue §3119.
Taxation §983.

C.J.S. Taxation § 1096.

§ 700. Protection of minors, persons non compos mentis and other members needing assistance; guardians; other adequate means

Prior to the transfer of title to, or the removal of restrictions from, property in accordance with the provisions of this subchapter, the Secretary shall protect the rights of members of the tribes who are minors, non compos mentis, or in the opinion of the Secretary in need of assistance in conducting their affairs by causing the appointment of guardians for such members in courts of competent jurisdiction, or by such other means as he may deem adequate.

(Aug. 13, 1954, c. 733, § 10, 68 Stat. 726.)

Library References

Indians §6.

C.J.S. Indians § 20 et seq.

§ 701. Advances or expenditures from tribal funds

Pending the completion of the property dispositions provided for in this subchapter, the funds now on deposit, or hereafter deposited in the Treasury of the United States to the credit of a tribe shall be available for advance to

the tribe, or for expenditure, for such purposes as may be designated by the governing body of the tribe and approved by the Secretary.

(Aug. 13, 1954, c. 733, § 11, 68 Stat. 726.)

Library References

Indians ☞23.

C.J.S. Indians § 28 et seq.

§ 702. Execution by Secretary of patents, deeds, etc.

The Secretary shall have authority to execute such patents, deeds, assignments, releases, certificates, contracts, and other instruments as may be necessary or appropriate to carry out the provisions of this subchapter, or to establish a marketable and recordable title to any property disposed of pursuant to this subchapter.

(Aug. 13, 1954, c. 733, § 12, 68 Stat. 727.)

Library References

Indians ☞10.

C.J.S. Indians §§ 19, 28 et seq.

§ 703. Termination of Federal trust

(a) Publication; termination of Federal services; application of Federal and State laws

Upon removal of Federal restrictions on the property of each tribe and individual members thereof, the Secretary shall publish in the Federal Register a proclamation declaring that the Federal trust relationship to the affairs of the tribe and its members has terminated. Thereafter individual members of the tribe shall not be entitled to any of the services performed by the United States for Indians because of their status as Indians, all statutes of the United States which affect Indians because of their status as Indians, excluding statutes that specifically refer to the tribe and its members, shall no longer be applicable to the members of the tribe, and the laws of the several States shall apply to the tribe and its members in the same manner as they apply to other citizens or persons within their jurisdiction.

(b) Citizenship status unaffected

Nothing in this subchapter shall affect the status of the members of a tribe as citizens of the United States.

(c) Education and training program; purposes; subjects; transportation; subsistence; contracts; other education programs

Prior to the issuance of a proclamation in accordance with the provisions of this section, the Secretary is authorized to undertake, within the limits of available appropriations, a special program of education and training designed to help the members of the tribe to earn a livelihood, to conduct their own affairs, and to assume their responsibilities as citizens without special services because of their status as Indians. Such program may include language training, orientation in non-Indian community customs and living standards, vocational training and related subjects, transportation to the

place of training or instruction, and subsistence during the course of training or instruction. For the purposes of such program the Secretary is authorized to enter into contracts or agreements with any Federal, State, or local governmental agency, corporation, association, or person. Nothing in this section shall preclude any Federal agency from undertaking any other program for the education and training of Indians with funds appropriated to it.

(Aug. 13, 1954, c. 733, § 13, 68 Stat. 727.)

Library References

Indians ☞2, 8.

C.J.S. Indians §§ 9 et seq., 23.

§ 704. Revocation of corporate charter; termination of Federal power over tribe

(a) Effective on the date of the proclamation provided for in section 703 of this title, the corporate charter of the Confederated Tribes of the Grand Ronde Community, Oregon, issued pursuant to sections 461, 462, 463, 464, 465, 466 to 470, 471 to 473, 474, 475, 476 to 478, and 479 of this title, and ratified by the Community on August 22, 1936, is revoked.

(b) Effective on the date of the proclamation provided for in section 703 of this title, all powers of the Secretary or other officer of the United States to take, review, or approve any action under the constitution and bylaws of the tribe are terminated. Any powers conferred upon the tribe by such constitution which are inconsistent with the provisions of this subchapter are terminated. Such termination shall not affect the power of the tribe to take any action under its constitution and bylaws that is consistent with this subchapter without the participation of the Secretary or other officer of the United States.

(Aug. 13, 1954, c. 733, § 14, 68 Stat. 727.)

Library References

Indians ☞2.

C.J.S. Indians § 9 et seq.

§ 705. Offset of individual indebtedness; credit

The Secretary is authorized to set off against any indebtedness payable to the tribe or to the United States by an individual member of the tribe, or payable to the United States by the tribe, any funds payable to such individual or tribe under this subchapter and to deposit the amount set off to the credit of the tribe or the United States as the case may be.

(Aug. 13, 1954, c. 733, § 15, 68 Stat. 727.)

Library References

Indians ☞23.

C.J.S. Indians § 28 et seq.

PUBLIC LAW 97-391 [H.R. 6588]; December 29, 1982

COW CREEK BAND RECOGNITION

An Act to provide for Federal recognition of the Cow Creek Band of Umpqua Tribe of Indians, to institute for such tribe those Federal services provided to Indians who are recognized by the Federal Government and who receive such services because of the Federal trust responsibility, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Cow Creek Band
of Umpqua Tribe
of Indians
Recognition Act.

SHORT TITLE

25 USC 712 note.

SECTION 1. This Act may be cited as the "Cow Creek Band of Umpqua Tribe of Indians Recognition Act".

DEFINITIONS

25 USC 712.

SEC. 2. For the purposes of this Act—

(1) the term "tribe" means the Cow Creek Band of Umpqua Tribe of Oregon; and

(2) the term "member", when used with respect to the tribe, means a person enrolled on the membership roll of the tribe in accordance with section 5 of this Act.

EXTENSION OF FEDERAL RECOGNITION, RIGHTS, AND PRIVILEGES

25 USC 712a.

SEC. 3. (a) **FEDERAL RECOGNITION.**—Notwithstanding any provision of the Act approved August 13, 1954 (25 U.S.C. 691 et seq.), or any other law, Federal recognition is extended to the Cow Creek Band of Umpqua Tribe of Oregon. Except as otherwise provided in this Act, all laws and regulations of the United States of general application to Indians or nations, tribes, or bands of Indians which are not inconsistent with any specific provision of this Act shall be applicable to the tribe.

(b) **RESTORATION OF RIGHTS AND PRIVILEGES.**—All rights and privileges of the tribe and the members of the tribe under any Federal treaty, Executive order, agreement, or statute, or under any other Federal authority, which may have been diminished or lost under the Act approved August 13, 1954 (25 U.S.C. 691 et seq.), are restored, and the provisions of such Act shall be inapplicable to the tribe and to members of the tribe after the date of enactment of this Act.

(c) **FEDERAL SERVICES AND BENEFITS.**—Notwithstanding any other provision of law, the tribe and members of the tribe shall be eligible for all Federal services and benefits furnished to federally recognized Indian tribes upon the date of enactment of this Act without regard to the existence of a reservation for the tribe or the residence of members of the tribe on a reservation.

(d) **EFFECT ON PROPERTY RIGHTS AND OTHER OBLIGATIONS.**—Except as otherwise specifically provided in this Act, no provision contained

Dec. 29

COW

in this Act shall alter any F
tual right or obligation, or

ORGANIZATION OF T

SEC. 4. The tribe may ori
an appropriate instrument
tribe when acting in its go
with the Secretary of the
document and any amendm

M

SEC. 5. (a) **IN GENERAL.**—
every individual—

(1) whose name app
of enactment of this A

(2) who is a descen
graph (1).

(b) **LIMITATION.**—Memb
(a) shall not entitle an ir
participate in any distr
under the Act approved N

SEC. 6. The Secretary
necessary to carry out th

Approved December 2

LEGISLATIVE HISTOR

HOUSE REPORT No. 9
CONGRESSIONAL REC

Dec. 6, considered
Dec. 16, considere

§ 706. Indian claims unaffected

Nothing in this subchapter shall affect any claim heretofore filed against the United States by any tribe.

(Aug. 13, 1954, c. 733, § 16, 68 Stat. 727.)

Library References

United States § 105.

C.J.S. United States §§ 143, 155.

§ 707. Valid leases, permits, liens, etc., unaffected

Nothing in this subchapter shall abrogate any valid lease, permit, license, right-of-way, lien, or other contract heretofore approved. Whenever any such instrument places in or reserves to the Secretary any powers, duties, or other functions with respect to the property subject thereto, the Secretary may transfer such functions, in whole or in part, to any Federal agency with the consent of such agency.

(Aug. 13, 1954, c. 733, § 17, 68 Stat. 728.)

Library References

Indians § 16(4), 24.

C.J.S. Indians §§ 7, 18, 30 et seq.

§ 708. Rules and regulations; tribal referenda

The Secretary is authorized to issue rules and regulations necessary to effectuate the purposes of this subchapter, and may in his discretion provide for tribal referenda on matters pertaining to management or disposition of tribal assets.

(Aug. 13, 1954, c. 733, § 18, 68 Stat. 728.)

Library References

Indians § 4.

C.J.S. Indians §§ 9, 74.

SUBCHAPTER XXX-A—SILETZ INDIAN TRIBE: RESTORATION OF FEDERAL SUPERVISION

§ 711. Definitions

For the purposes of this subchapter—

(1) the term "tribe" means the Confederated Tribes of Siletz Indians of Oregon;

(2) the term "Secretary" means the Secretary of the Interior or his authorized representative;

(3) the term "Interim Council" means the council elected pursuant to section 711c of this title;

(4) the term "member", when used with respect to the tribe, means a person enrolled on the membership roll of the tribe, as provided in section 711b of this title; and

(5) the term "final membership roll" means the final membership roll of the tribe published on July 20, 1956, on pages 5454-5462 of volume 21 of the Federal Register.

(Pub.L. 95-195, § 2, Nov. 18, 1977, 91 Stat. 1415.)

Historical Note

Short Title. Section 1 of Pub.L. 95-195 provided: "That this Act [enacting this subchapter] may be cited as the 'Siletz Indian Tribe Restoration Act'."

Legislative History. For legislative history and purpose of Pub.L. 95-195, see 1977 U.S. Code Cong. and Adm. News, p. 3700.

§ 711a. Federal recognition

(a) Extension; laws applicable; eligibility for Federal services and benefits

Federal recognition is hereby extended to the tribe, and the provisions of sections 461, 462, 463, 464, 465, 466 to 470, 471 to 473, 474, 475, 476 to 478, and 479 of this title, except as inconsistent with specific provisions of this subchapter, are made applicable to the tribe and the members of the tribe. The tribe and the members of the tribe shall be eligible for all Federal services and benefits furnished to federally recognized Indian tribes. Notwithstanding any provision to the contrary in any law establishing such services or benefits, eligibility of the tribe and its members for such Federal services and benefits shall become effective upon November 18, 1977, without regard to the existence of a reservation for the tribe or the residence of members of the tribe on a reservation.

(b) Restoration of rights and privileges

Except as provided in subsection (c) of this section, all rights and privileges of the tribe and of members of the tribe under any Federal treaty, Executive order, agreement, or statute, or under any other authority, which were diminished or lost under subchapter XXX of this chapter, are hereby restored, and such subchapter shall be inapplicable to the tribe and to members of the tribe after November 18, 1977.

(c) Hunting, fishing or trapping rights and tribal reservations not restored

This subchapter shall not grant or restore any hunting, fishing, or trapping right of any nature, including any indirect or procedural right or advantage, to the tribe or any member of the tribe, or shall it be construed as granting, establishing, or restoring a reservation for the tribe.

(d) Effect on property rights or obligations, contractual rights or obligations, or obligations for taxes

Except as specifically provided in this subchapter, nothing in this subchapter shall alter any property right or obligation, any contractual right or obligation, or any obligation for taxes already levied.

(Pub.L. 95-195, § 3, Nov. 18, 1977, 91 Stat. 1415.)

in this Act shall alter any property right or obligation, any contractual right or obligation, or any obligation for taxes already levied.

ORGANIZATION OF TRIBE; CONSTITUTION AND BYLAWS

SEC. 4. The tribe may organize for its common welfare and adopt an appropriate instrument, in writing, to govern the affairs of the tribe when acting in its governmental capacity. The tribe shall file with the Secretary of the Interior a copy of its organic governing document and any amendments thereto.

25 USC 712b.

MEMBERSHIP ROLLS

SEC. 5. (a) **IN GENERAL.**—Membership in the tribe shall consist of every individual—

25 USC 712c.

(1) whose name appears on the tribal roll in effect on the date of enactment of this Act; or

(2) who is a descendant of any individual described in paragraph (1).

(b) **LIMITATION.**—Membership in the tribe pursuant to subsection (a) shall not entitle an individual, who is not otherwise entitled, to participate in any distribution of funds pursuant to a judgment under the Act approved May 26, 1980 (94 Stat. 372).

RULES

SEC. 6. The Secretary of the Interior may make such rules as are necessary to carry out the provisions of this Act.

25 USC 712d.

Approved December 29, 1982.

LEGISLATIVE HISTORY—H.R. 6588:

HOUSE REPORT No. 97-862 (Comm. on Interior and Insular Affairs).

CONGRESSIONAL RECORD, Vol. 128 (1982):

Dec. 6, considered and passed House.

Dec. 16, considered and passed Senate.

SUBCHAPTER XXVIII—UTE INDIANS OF UTAH: DISTRIBUTION OF ASSETS BETWEEN MIXED-BLOOD AND FULL-BLOOD MEMBERS; TERMINATION OF FEDERAL SUPERVISION OVER PROPERTY OF MIXED-BLOOD MEMBERS

§ 677d. Restriction of tribe to full-blood members after publication of final rolls; non-interest of mixed-blood members; new membership

Notes of Decisions

Hunting and fishing rights 1
Power of tribe 2

1. Hunting and fishing rights

Where 1954 Act dividing Ute tribe into mixed-blood and full-blood groups was silent on issue of whether mixed-blood Ute Indians retained right to hunt and fish on the reservation, intent on the part of Congress to abrogate that right would not be imputed; hence, defendant, a mixed-blood Ute Indian, who was not otherwise shown to have

been acting in violation of applicable tribal regulations as to the time, method, and manner of fishing or hunting by tribal members, could not be convicted of fishing without a tribal permit on reservation lands. *U.S. v. Felter*, C.A.Utah 1985, 752 F.2d 1505.

2. Power of tribe

Statutory provision that Indian tribes shall consist exclusively of full-blood members did not abrogate power of Indian tribe to control its own membership. *Chapoose v. Clark*, D.C.Utah 1985, 687 F.Supp. 1027.

§ 677i. Division of assets; basis; prior alienation or encumbrance; partition by Secretary upon nonagreement; assistance; management of claims and rights; division of net proceeds; applicability of usual processes of the law to originally owned stock of corporate representative and to corporate distributions

Notes of Decisions

Hunting and fishing rights 5

5. Hunting and fishing rights

Where 1954 Act dividing Ute tribe into mixed-blood and full-blood groups was silent on issue of whether mixed-blood Ute Indians retained right to hunt and fish on the reservation, intent on the

part of Congress to abrogate that right would not be imputed; hence, defendant, a mixed-blood Ute Indian, who was not otherwise shown to have been acting in violation of applicable tribal regulations as to the time, method, and manner of fishing or hunting by tribal members, could not be convicted of fishing without a tribal permit on reservation lands. *U.S. v. Felter*, C.A.Utah 1985, 752 F.2d 1505.

§ 677v. Termination of Federal trust; publication; termination of Federal services; application of Federal and State laws

Notes of Decisions

1. Hunting and fishing rights

This subchapter did not operate directly to extinguish hunting and fishing rights of mixed-

blood group of Ute Indians. *U.S. v. Felter*, D.C. Utah 1982, 546 F.Supp. 1002.

SUBCHAPTER XXX—WESTERN OREGON INDIANS: TERMINATION OF FEDERAL SUPERVISION

§ 704. Omitted

Codification. Section, Act Aug. 13, 1954, ch. 733, § 14, 68 Stat. 727, which revoked the corporate charter of the Confederated Tribes of the Grand Ronde Community of Oregon and provided for termination of Federal power with regard

to the tribe, was omitted in view of the Federal recognition and restoration of the corporate charter of the Confederated Tribes of the Grand Ronde Community of Oregon by section 4 of Pub.L. 98-165. See section 713b of this title.

SUBCHAPTER XXX-B—COW CREEK BAND OF UMPQUA TRIBE OF OREGON

§ 712. Definitions

For the purposes of this subchapter—

(1) the term "tribe" means the Cow Creek Band of Umpqua Tribe of Indians; and

(2) the term "member", when used with respect to the tribe, means a person enrolled on the membership roll of the tribe in accordance with section 712c of this title.

(Pub.L. 97-391, § 2, Dec. 29, 1982, 96 Stat. 1960, amended Pub.L. 100-139, § 5(b), Oct. 26, 1987, 101 Stat. 827.)

1987 Amendment. Par. (1). Pub.L. 100-139 substituted "Umpqua Tribe of Indians" for "Umpqua Tribe of Oregon".

Tribe of Indians Distribution of Judgment Funds Act of 1987."

Short Title of 1987 Amendment. Section 1 of Pub.L. 100-139 provided: "That this Act [amending sections 712, 712a, 712b, and 712c of this title] may be cited as the 'Cow Creek Band of Umpqua

Short Title. Section 1 of Pub.L. 97-391 provided that: "This Act [which enacted this subchapter] may be cited as the 'Cow Creek Band of Umpqua Tribe of Indians Recognition Act'."

§ 712a. Extension of Federal recognition, rights, and privileges

(a) Federal recognition

Notwithstanding any provision of subchapter XXX of this chapter, or any other law, Federal recognition is extended to the Cow Creek Band of Umpqua Tribe of Indians. Except as otherwise provided in this subchapter, all laws and regulations of the United States of general application to Indians or nations, tribes, or bands of Indians which are not inconsistent with any specific provision of this subchapter shall be applicable to the tribe.

(b) Restoration of rights and privileges

All rights and privileges of the tribe and the members of the tribe under any Federal treaty, Executive order, agreement, or statute, or under any other Federal authority, which may have been diminished or lost under subchapter XXX of this chapter, are restored, and the provisions of such subchapter shall be inapplicable to the tribe and to members of the tribe after December 29, 1982.

(c) Federal services and benefits

Notwithstanding any other provision of law, the tribe and members of the tribe shall be eligible for all Federal services and benefits furnished to federally recognized Indian tribes upon December 29, 1982, without regard to the existence of a reservation for the tribe or the residence of members of the tribe on a reservation.

(d) Effect on property rights and other obligations

Except as otherwise specifically provided in this subchapter, no provision contained in this subchapter shall alter any property right or obligation, any contractual right or obligation, or any obligation for taxes already levied.

(Pub.L. 97-391, § 3, Dec. 29, 1982, 96 Stat. 1960, amended Pub.L. 100-139, § 5(b), Oct. 26, 1987, 101 Stat. 827.)

References in Text. Subchapter XXX (§ 691 et seq.) of this chapter, referred to in subsecs. (a) and (b), was in the original a reference to the Act approved August 13, 1954 (25 U.S.C. 691 et seq.).

1987 Amendment. Subsec. (a). Pub.L. 100-139 substituted "Umpqua Tribe of Indians" for "Umpqua Tribe of Oregon".

§ 712b. Organization of tribe

(a) Constitution and bylaws

The tribe may organize for its common welfare and adopt an appropriate instrument, in writing, to govern the affairs of the tribe when acting in its governmental capacity. The tribe shall file with the Secretary of the Interior a copy of its organic governing document and any amendments thereto.

(b) New governing document or amendments or revisions of interim governing document; tribal election

Not less than one year following October 26, 1987, the tribe's governing body may propose a new governing document or amendments or revisions to the interim governing document, and the Secretary shall conduct a tribal election as to the adoption of that proposed document within one hundred twenty days from the date it is submitted to the Bureau of Indian Affairs.

(c) Approval of new governing document

The Secretary shall approve the new governing document if approved by a majority of the tribal voters unless he or she determines that such document is in violation of any laws of the United States.

(d) Interim governing document pending approval

Until the tribe adopts and the Secretary approves a new governing document, its interim governing document shall be the tribal bylaws entitled "By-Laws of Cow Creek Band of Umpqua Tribe of Indians" which bear an "approved" date of "9-10-78".

(e) Governing body pending adoption of final document

Until the tribe adopts a final governing document, the tribe's governing body shall consist of its current board of directors elected at the tribe's annual meeting of August 10, 1986, or such new board members as are selected under election procedures of the interim governing document identified at subsection (d) of this section.

(Pub.L. 97-391, § 4, Dec. 29, 1982, 96 Stat. 1961, amended Pub.L. 100-139, § 7, Oct. 26, 1987, 101 Stat. 828.)

1987 Amendment. Subsec. (a). Pub.L. 100-139 designated existing provision as subsec. (a). Subsecs. (b) to (e). Pub.L. 100-139 added subsecs. (b) to (e).

§ 712c. Tribal membership

(a) Membership prior to publication of membership roll by Secretary

Until such time as the Secretary of the Interior publishes a tribal membership roll as mandated in subsection (b) of this section, the membership of the Cow Creek Band of Umpqua Tribe of Indians shall consist of all persons listed in the official tribal roll approved on September 13, 1980, by the tribe's Board of Directors, and their descendants. Following publication by the Secretary of the tribal membership roll mandated in subsection (b) of this section, the membership of the Cow Creek Band of Umpqua Tribe of Indians shall consist of all persons listed on such roll.

(b) Preparation of membership roll by Secretary; Individuals to be Included

Within three hundred and sixty-five days after October 26, 1987, the Secretary shall prepare in accordance with the regulations contained in part 61 of title 25 of the Code of Federal Regulations a tribal membership roll of the Cow Creek Band of Umpqua Tribe of Indians. Such roll shall include all Indian individuals who were not members of any other federally recognized Indian tribe on July 30, 1987 and who—

- (1) are listed on the tribal roll referred to in subsection (a) of this section;
- (2) are the descendants of any individuals listed pursuant to paragraph (1) born on or prior to December 29, 1982, or
- (3)(A) are the descendants of any individual considered to be a member of the Cow Creek Band of Umpqua Tribe of Indians for the purposes of the treaty entered between such Band and the United States on September 18, 1853; (B) have applied to the Secretary for inclusion in the roll pursuant to subsection (c) of this section; and (C) meet the requirements for membership provided in the tribe's governing documents.

(c) Regulations governing application process

The Secretary shall devise regulations governing the application process under which individuals may apply to have their names placed on the tribal roll pursuant to paragraph 3 of subsection (b) of this section.

(d) Limitation; tribal discretion; additional requirements

After publication of the roll in the Federal Register, the membership of the tribe shall be limited to the persons listed on such roll and their descendants: *Provided*, That the tribe, at its discretion, may subsequently grant tribal membership to any individual of Cow Creek Band of Umpqua ancestry who pursuant to tribal procedures, has applied for membership in the tribe and has been determined by the tribe to meet the tribal requirements for membership in the tribe: *Provided further*, That

nothing in this subchapter shall be interpreted as restricting the tribe's power to impose additional requirements for future membership in the tribe upon the adoption of a new constitution or amendments thereto as provided in section 7 of the Cow Creek Band of Umpqua Tribe of Indians Distribution of Judgment Funds Act of 1987.

(Pub.L. 97-391, § 5, Dec. 29, 1982, 96 Stat. 1961, amended Pub.L. 100-139, § 5(a), Oct. 26, 1987, 101 Stat. 826.)

References in Text. Section 7 of the Cow Creek Band of Umpqua Tribe of Indians Distribution of Judgment Funds Act of 1987, referred to in subsec. (d), is section 7 of Pub.L. 100-139, which amended section 712b of this title.

1987 Amendment. Subsec. (a). Pub.L. 100-139 substituted provision prescribing membership prior to preparation of a membership roll by the Secretary for provision that membership consist of every individual whose name appears on the tribal roll in effect on Dec. 29, 1982, or who is a descendant of an individual on such tribal roll.

Subsec. (b). Pub.L. 100-139 substituted provision requiring the Secretary to prepare a membership roll and designating individuals to be included on that roll for provision that membership in the tribe not entitle an individual, who is not otherwise entitled, to participate in any distribution of funds pursuant to a judgment under Act approved May 26, 1980 (94 Stat. 372).

Subsecs. (c), (d). Pub.L. 100-139 added subsecs. (c) and (d).

§ 712d. Rules

The Secretary of the Interior may make such rules as are necessary to carry out the provisions of this subchapter.

(Pub.L. 97-391, § 6, Dec. 29, 1982, 96 Stat. 1961.)

SUBCHAPTER XXX-C—CONFEDERATED TRIBES OF THE GRAND RONDE COMMUNITY OF OREGON

§ 713. Definitions

For the purposes of this subchapter—

- (1) the term "tribe" means the Confederated Tribes of the Grand Ronde Community of Oregon considered as one tribe in accordance with section 713a of this title;
- (2) the term "Secretary" means the Secretary of the Interior or his designated representative;
- (3) the term "Interim Council" means the council which is established under, and the members of which are elected pursuant to, section 713c of this title;
- (4) the term "tribal governing body" means the governing body which is established under, and the members of which are elected pursuant to, the tribal constitution and bylaws adopted in accordance with section 713d of this title; and
- (5) the term "member", when used with respect to the tribe, means an individual enrolled on the membership roll of the tribe in accordance with section 713e of this title.

(Pub.L. 98-165, § 2, Nov. 22, 1983, 97 Stat. 1064.)

Short Title. Section 1 of Pub.L. 98-165 provided that: "This Act [enacting this subchapter] may be cited as the 'Grand Ronde Restoration Act'."

Library References

Indians ☞ 2.

C.J.S.: Indians § 9 et seq.

§ 713a. Consideration of Confederated Tribes of Grand Ronde Community as one tribe

The Confederated Tribes of the Grand Ronde Community of Oregon shall be considered as one tribal unit for purposes of Federal recognition and eligibility for Federal benefits under section 713b of this title, the establishment of tribal self-government under sections 713c and 713d of this title, the compilation of a tribal membership roll under section 713e of this title, and the establishment of a tribal reservation under section 713f of this title.

(Pub.L. 98-165, § 3, Nov. 22, 1983, 97 Stat. 1064.)

Prepared by:

Jim Goode
Jim Goode : Biological Technician

Reviewed by:

Fred Wahl
Fred Wahl: District Biologist

BIOLOGICAL EVALUATION
For Sensitive, Threatened and Endangered
Animal species

Project Name: Quartz Mt. Mining Exploration
Ranger District: Prospect

Preparer: Jim Goode
Date Prepared: 6/12/92

Introduction

Activities considered in this Environmental Assessment require a Biological Evaluation to be completed (FSM 2672.4). The intent of the Biological Evaluation process is to conduct and document activities necessary to ensure that proposed management actions will not jeopardize the continued viability of:

- A. Species listed, or proposed to be listed, as Endangered or Threatened by the U.S. Fish and Wildlife Service.
- B. Species listed as Sensitive by the Regional Forester.

PROJECT DESCRIPTION

The Biological Evaluation is a 5-step process. Evaluation of impacts on a given species may be complete at the end of step #1 or may extend through step #5. Each Threatened, Endangered and Sensitive species potentially occurring in the Quartz Mt. Mining Exploration area on the Prospect Ranger District was evaluated based on these steps.

There are three alternatives considered in the proposed Quartz Mt. Mining Exploration project Environmental Assessment. Alternative 1 represents no change from the existing condition (no action). Alternative 2 proposes to drill 5 vertical test holes using a track mounted drill (air track) accessing by existing roads. Alternative 3 proposes to drill 5 vertical test holes using a portable tripod mounted drill. This alternative would eliminate ground disturbance caused by use of a track drill.

The list of PETS species occurring on the Prospect Ranger District was reviewed in regards to potential effects on any of these species by the drilling of the test holes. This proposal has no effect on any Proposed, Endangered, Threatened or Sensitive animal species. The proposal does not include any removal of habitat for PETS species and no spotted owl pairs are located within 0.7 miles of the project area. If nesting spotted owls are located within .25 miles of the project area then a seasonal operating restrictions would be implemented from March 1 to September 30 to allow normal nesting and fledging activities to take place.

BIOLOGICAL EVALUATION
For Sensitive, Threatened and Endangered
Plant species

SUMMARY PAGES

Reviewed:
8/6/91
Wayne Rolfe
Zone Botanist

Project Name: Mountain Valley Mining Claim
Ranger District: Prospect

Preparer: L. LOFTIS
Date Prepared: July 3, 1991

Introduction

Activities considered in this Environmental Assessment require a Biological Evaluation to be completed (FSM 2672.4). The intent of the Biological Evaluation process is to conduct and document activities necessary to ensure that proposed management actions will not jeopardize the continued viability of:

- A. Species listed, or proposed to be listed, as Endangered or Threatened by the U.S. Fish and Wildlife Service.
- B. Species listed as Sensitive by the Regional Forester.

The Biological Evaluation is a 5-step process. Evaluation of impacts on a given species may be complete at the end of step #1 or may extend through step #5.

	STEP #1 PREFIELD REVIEW	STEP #2 FIELD RECONNAISSANCE	STEP #3 CONFLICT DETERMINATION	STEP #4 ANALYSIS OF SIGNIFICANCE
	The following species have potential habitat or documented occurrences in the project area (*=documented).	F=Found NF=Not Found NYC=Not Yet Completed	Yes/No	S=significant NS=Not Significant BIU= Biological Investigation Underway
	<u>Cupressus bakerii</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Fraseria unguiculata</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Eritillaria blanda</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Haplopappus whitneyi</u> ssp. <u>discoides</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Hieracium bolanderii</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Mimulus jepsonii</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Arnica viscosa</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Asplenium septentrionale</u>	<u>NF</u>	<u> </u>	<u> </u>
sensitive	<u>Allium campanulatum</u>	<u>NF</u>	<u> </u>	<u> </u>
Review	<u>Hieracium horridum</u>	<u>NF</u>	<u> </u>	<u> </u>
Review	<u>Hieracium Greenei</u>	<u>NF</u>	<u> </u>	<u> </u>
Watch	<u>Erigeron cascadiensis</u>	<u>NF</u>	<u> </u>	<u> </u>

Blank spaces above indicate steps that were not necessary to complete the evaluation. Question marks indicate steps waiting for field reconnaissance results. The presence of NYC, ? and BIU symbols in this summary mean that the Biological Evaluation is not fully complete. Plans to complete field reconnaissance and steps #3 and #4 are described here: _____

All species found in step #2 are discussed on the attached page(s) with explanations of step #3 and #4 determinations. Step #5 (Biological Investigation) is sometimes necessary to complete step #4 and is referenced in the attached discussion when appropriate. Supporting documentation and worksheets for evaluation of habitats, possible species, survey intensity and significance of effects are included in the support file for this environmental assessment and are available for review at the district office.

SPECIES WITH POTENTIAL HABITAT IN THE QUARTZ MT. MINING EXPLORATION: Taken from the Prospect Ranger Districts PETS List:

<u>Strix occidentalis caurina</u> (Northern spotted owl)	Habitat found	No effect	No owl pairs within 0.7 miles.
<u>Falco peregrinus anatum</u> (American Peregrine Falcon)	Habitat found adjacent to project area	No effect	No Peregrine present No impact to nesting habitat.

SURVEY RESULTS AND RECOMMENDATIONS.

The proposed Quartz Mt. Mining Exploration was surveyed for PETS animal species in 1991 and 1992. The survey included night time calling for northern spotted owls. The entire project area has been examined. An evaluation was also completed on Quartz Mt. with regards to Peregrine Falcons. Refer to Peregrine Falcon Specialist input.