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GEOLOGIC RESOURCES DIVISION--NATURAL RESOURCES PROGRAM CENTER  
March 1997 Monthly Report

GEOLOGIC RESOURCES - GENERAL

CAVE FILM GETS PAST HURDLE - The Division's cave specialist has been working for several months to facilitate and assist in the production of a large format film project. In March the cooperative agreement was reviewed and approved by the Solicitor's office with only minor changes, including one regarding the use of the wording "large format" rather than "IMAX" (a copyright name). When this agreement is signed we can begin to fully participate in the "World of Caves" large format film, much of which will be filmed by the Cincinnati Museum Center in National Park Service administered caves. When completed the film will be shown nationally, making the public aware of speleological wonders and hopefully supporting NPS cave preservation efforts. (Kerbo)

LOOK ON THE BRIGHT SIDE - The tendency for all of us is to talk about how bad our budget is and reminisce about the good old days. We thought you might like to hear some good news for a change - to cheer you up that some progress that is being made. For starters, the MOU with the USGS is funding \$1-2 million in park mapping projects and a number of smaller cooperative projects. The Geological Society of America (GSA) has funded two summer geologist positions in parks for this summer and a number of other projects are pending. The National Geographic Society has reviewed twelve geologic project abstracts and has identified one they like and asked the NPS to submit a formal proposal for funding. We are in the process of developing a cooperative agreement with the Denver Museum of Natural History to provide paleontological technicians to the NPS for projects (the price is right, it's free). In the "soft" money arena the NPS is a favorite organization to support. For the most part the Division uses RMP Statements to identify park needs - we are using RMP data almost daily. In most instances with minor changes RMP information can be turned into whatever format the funding organization wants. So it's worthwhile for parks to maintain quality RMP information. (Higgins)

GEOLOGIST-IN-THE-PARK PROGRAM FUNDS MORE GEOLOGIC INTERNS - Three parks received funding from the Division's Geologist-in-the-Park (GIP) Program for geologic interns. These interns will be mapping glacial features in Denali, documenting vertebrate fossils in Badlands, and documenting geologic processes affected by the 1996 Dome Fire and interpreting these processes to the public at Bandelier. A total of 11 parks received funding for geologic interns this fiscal year through the Division's GIP program. (Gese)

DIVISION TALENT GOES INTERNATIONAL - Ron Kerbo visited eight caves in South Africa during the period from February 14 to March 1, 1997. Of particular interest were a number of caves that were National Monuments (one of which has been nominated as a World Heritage Site), one that is one of the most mineralogically diverse caves in the world, and one

cave that was of exceptional size and beauty. Sterkfontein Cave near Johannesburg is an important early man site that is a National Monument and may become a World Heritage Site, Kromdraai Cave near Gauteg, South Africa is a single large chamber that had been mined for limestone to be fired in nearby lime kilns (much as the caves along the C&O Canal), and Cango Cave, 400k east of Cape Town is a National Monument Cave of exceptional size of grand beauty, truly one of the worlds great caves. This introduction to cave management in South Africa was like a trip through a time portal into management practices of yesteryear. Kerbo has been asked to review management plans and make recommendations at a number of the caves.

#### MINERALS MANAGEMENT - GENERAL

COMMENTS ON BLM'S PROPOSED WILDERNESS REGULATIONS - BLM's proposed "plain English" revision of wilderness regulations at 43 CFR 8560 may influence NPS wilderness resource management, since activities in BLM wilderness may affect adjacent NPS wilderness, and since NPS managers may look for guidance to BLM requirements in the absence of applicable NPS policy. Accordingly, the Division submitted careful comments on BLM's proposed wilderness regulations. Comments focused on traditional religious use of wilderness, military overflights, and mining and mineral operations. (Brunner)

NEW TECHNOLOGY SPURS RENEWED INDUSTRY INTEREST IN PARK EXPLORATION - Advances in seismic data acquisition now allow the oil industry to image subtle subsurface targets and display the data in a three dimensional image. This technique, called 3-D seismic, opens up older oil fields to new exploration. Parks having fields considered to be nearing depletion and parks in known oil and gas producing areas may expect to see renewed industry interest. The basic configuration of energy source and geophone receiver lines is retained, but with a higher density over a greater area, with increased surface disturbance for longer periods of time. The first quarter of this year has seen five proposed operations, each described briefly below:

BIG CYPRUS NATIONAL PRESERVE, FLORIDA - The operator, Calumet, proposed a 3-D survey over 16 square miles, most of it in the park. The park and Division worked together on comments to the proposed plan, which was confusing and contained significant changes from a pre-approved master plan. They were up against a nearly impossible deadline of their own making as they submitted a plan for a 90 day operation about 120 days before the wet season begins, with no consultation with USFW over the endangered Florida panther. Ultimately, they opted to wait until next winter.

BIG THICKET NATIONAL PRESERVE, TEXAS - A single operator, Weems, has submitted two proposals for operations in different areas of the park. The first was for a conventional program using high-tech, cableless geophones. The second was a "cable only" 3-D proposal, meaning only the receiver lines would be in the park, with little surface impact.

CHICKASAW NATIONAL RECREATION AREA, OKLAHOMA - A seismic contractor has contacted the park and expressed interest in conducting a 3-D survey. We advised that prior to any other work, land status must be determined. Unless the park does not own the mineral rights and the contractor has permission from the party that does, seismic operations are not permitted on NPS administered land.

JEAN LAFITTE NATIONAL PRESERVE - The park has been approached twice by contractors indicating a desire to conduct 3-D operations. To date, no further action has been taken. Division staff are available to assist parks reviewing seismic proposals. Also, in collaboration with the regional Forest Service and state BLM office, we're hosting an afternoon session on May 15 addressing 3-D impacts. (Heise)

## DISTURBED LANDS RESTORATION - GENERAL

INNOVATIVE FUNDING SOURCE PAYS DIVIDEND - At Lake Mead NRA abandoned mineral site reclamation is proceeding using Federal Emergency Management Act (FEMA) monies. During the winter storms of 1995 considerable damage was done at the abandoned Katherine Mine and Mill Site to exacerbate the already existing problems. Monies were applied for under FEMA and funds were allocated to the park to fix the problems created by the storm. A number of remediation actions have already been taken. At present the park project manager, Bryan Moore, is in the process of contracting for the closure of an additional two mine shafts that were affected by the storm damage. The park is reviewing recommendations from several sources on what to do with the extensive (80 acres) mill tailings. When a plan is finally selected the remaining monies will be used to fund the mitigation work. If there are parks that have sustained damage to their AML sites from natural disasters that have been authorized to use FEMA monies, like the recent winter storms in the Pacific Northwest, and you want information on the criteria for funding, contact Bob Higgins.

## INTERMOUNTAIN REGION

GLEN CANYON DEALS WITH RENEWED ADJACENT URANIUM PRODUCTION - Plateau Resources Ltd., new owners of the long-idled Shootaring Canyon uranium mill (formerly Ticaboo) has applied to the Nuclear Regulatory Commission (NRC) to convert its uranium milling permit from "standby" to "operational." The Shootaring Canyon mill is located six miles upstream from Glen Canyon National Recreation Area. By converting its license to operational status, plateau Resources can begin milling stockpiled ore capitalizing on the recent dramatic upswing in uranium concentrate (U308) prices. The NRC is currently performing an environmental assessment on the proposed licensing. The Division along with Glen Canyon have submitted comments to the NRC on the preliminary draft environmental assessment. NPS comments centered on ground water and surface water contamination concerns, socioeconomic impacts, tailings impoundment design, reclamation requirements, and the fact that the NRC is extensively relying on a 1979 environmental impact statement (from initial mill construction) for much of their data. If U308 prices continue to escalate, the NPS will likely be faced with the reopening of the inactive "Tony M" uranium mine located near the Shootaring Canyon mill. The mine is also now owned by Plateau Resources Ltd. Uranium mining adjacent to Glen Canyon will pose additional interagency challenges as the NRC does not regulate mining. Our likely partners will be the State of Utah and/or the Bureau of Land Management. (Moss)

PLANNING MEETING HELD FOR THREE PARK MINERAL MANAGEMENT PLANS - The first meeting of the Minerals Management Plan Interdisciplinary Team (IDT) charged with developing plans for Padre Island, Big Thicket, and Lake Meredith NRA, was held at Padre Island March 11 - 14, 1997. Seventeen professionals participated representing five parks, two Program Center divisions, and the Support Office. A summary discussion of each is given below.

- The scoping process commences with an open house in Corpus Christi the week of May 5, 1997 to serve as an information clearinghouse on topics for the EIS. Following the open house, a formal public meeting will be conducted. Depending on public response, additional public meetings may be necessary.

- Three alternatives were eventually agreed upon, reflecting varying levels of managed access. Alternative 1 (status quo) would regulate nonfederal oil and gas operations under NPS Part 9B regulations on a case by case basis. Alternative 2 would regulate operations under NPS regulations through defining sensitive resource areas,

performance standards, and impact mitigation standards park wide. Alternative 3 would further restrict access and surface occupancy.

- Determination of Padre Island's sensitive resources, critical for evaluating alternatives, was done by the IDT in conjunction with a field trip.
- A production outline for the PAIS EIS was formulated among the participants. Specific tasks and deadlines were assigned. The bulk of the writing will be done by September of this year, and a first public draft done by December of this year.
- Presentations were made by individual parks on proposed future research needs and budgetary requirements. The results of both the research and budgetary needs will be incorporated in the Project Agreement/Workplan for the superintendents' approval.
- A remaining unresolved was the issue of hydrocarbon contaminated sites, not only in the three MMP parks but in other oil and gas parks in the system as well. Although there are four Servicewide groups having some degree of responsibility and expertise, no one office has a dedicated lead mandate. Additional action on this issue is required. (Heise)

CHANCE MEETING WITH VIKING OIL PRODUCES UNEXPECTED INFORMATION - After a presentation to a local industry group on low impact oil and gas operations, division staff were invited to visit the home office of Viking Oil, who have held oil and gas leases in Glen Canyon National Recreation area for nearly 30 years. Their presence in the park has been a point of contention among the company, the park, and the local BLM for most of this time, with a least one major lawsuit to date. There is increased industry interest in the area since the designation of Escalante/Grand Staircase National Monument. We were given a full presentation on the proposed well, during which time we learned that at least one of the leases had accidentally expired in 1991 and only recently was identified. This loss of a lease may significantly limit future development in the area. We notified Glen Canyon immediately and will pursue further actions in the near future. (Heise)

U.S. FOREST SERVICE REGION 3 RECEIVES ASSISTANCE - Division staff provided expert assistance including a radiation survey during an on-site visit to the U.S. Forest Service's, Region 3, Albuquerque, New Mexico, San Mateo Mine. The Forest Service is in the process of developing an Engineering Evaluation/Cost Analysis for this CERCLA site and requested assistance from the Division's Science and Technical Services Branch. This abandoned uranium mine represents a significant health and safety hazard to the public and Region 3 does not have a disturbed lands or radiation safety experts on staff. This assistance was provided under a cooperative interagency agreement between the Division and the U.S. Forest Service. (Steensen, Gese)

#### PACIFIC WEST REGION

JOSHUA TREE DRAFT GENERAL MANAGEMENT PLAN AMENDMENTS: At the request of the Park Planning and Special Studies group, Division staff commented on the Joshua Tree National Park draft general management plan amendments and environmental impact statement. Division comments suggested that the document authors more thoroughly focus on the parks legislative mandates such as preservation of geological and paleontological features as well as mining claims management issues and wilderness management. These issues are particularly important in light of Joshua Tree's recent conversion to National Park status as well as the new "expansion areas" now encompassed in the park boundaries. Considering the large amount of quality work and studies already performed by the park relating to the expansion area, Division comments suggested that General Management Plan Amendment authors



merely incorporate much of their existing knowledge and data into the amendment by reference. Hopefully, this incorporation by reference will strengthen the General Management Plan without creating an undue paperwork burden on document authors. (Moss)

**NPS ON APPEAL:** Steve Dwyer, a mining claimant in Joshua Tree, has appealed to BLM decision that the two claims for which he failed to pay the annual \$100 fee are null and void. Dwyer claimed that he had qualified for the small miner waiver by performing \$100 worth of assessment work on the claims. However, BLM and the NPS determined that even if he did perform the alleged work, it was unauthorized because he had never submitted a proposed plan of operations for the work to the NPS, and therefore does not qualify for the waiver. Dwyer is now appealing the NPS's requirement of a plan of operations to the Interior Board of Land Appeals. This is a case of first impression, so the Division is working closely with the Solicitor's Office in D.C. and with the BLM California State Office to ensure that our case is well-documented and persuasive. (Brunner)

**GOLDEN QUAIL VALIDITY EXAMINATION COMMENCES IN MOJAVE:** Golden Quail Resources, Ltd. recently submitted a plan of operations to develop an open-pit gold mine in Mojave National Preserve. This triggered a mineral examination conducted by the Division's mineral examiners to determine the validity of the 16 lode mining claims involved in the proposed plan. Operations can only be approved on claims found to be valid, and any claims found to be invalid will be challenged by the federal government for lack of discovery of a valuable mineral deposit. Fieldwork for the examination was begun March 4-14, and will be concluded April 5-10. The validity of at least 3 claims which host the main deposit will be based largely on the company's data from 4 exploratory drilling programs conducted since 1989. Validity of the outlying claims where there is no drilling data will hinge on surface mapping and sampling by the NPS examiners. During the fieldwork, 20 surface samples were taken from 9 of the claims, and 36 "confirmation samples" were taken from remnants left from the drilling programs. Sampling will be completed during the April trip, which will conclude in Reno, Nevada where Golden Quail's engineering consultant will demonstrate their computer-generated mine model and present other information pertinent to validity of the subject claims. Much of the information that will be used in the final mineral report will be generated by Golden Quail, subject to confirmation by NPS geologists. Depending on how much of the work is done by the company, a final report could be generated as early as this fall. (Burghardt)

**DIVISION ASSISTS RESTORATION PROJECT AT MT. RAINIER -** The Sunrise Campground, developed in a subalpine meadow, has been abandoned since 1972. Park staff have set a goal of restoring the site before the Park's 100th Anniversary in 1999. Principal disturbances are related to road cuts and sidecast fills, which disrupt not only the natural contours of this highly visited area, but displace or bury native topsoils and expose subsoils resulting in poor revegetation. In addition, runoff from snowmelt and rain is concentrated into ditches and culverts and is often released at a point where such flow did not occur naturally, locally causing accelerated erosion. Division staff provided volume estimates, equipment hour estimates, and a draft grading plan to the park for review. Physical treatments are designed to correct the effects of the road disturbances as completely as possible. Three primary treatments are proposed: complete recontouring (outsloping), decompaction and shaping, and road/stream crossing excavations. Alleviating the physical disturbances will promote reestablishment of native vegetation; the revegetation treatments are being designed by the park's botanist, Gina Rochefort. The earthmoving component of the project is scheduled for this summer

and will utilize an Engineer Unit of the Washington National Guard to perform the work. The Guard engineers will use the project as a training exercise. (Steensen)

#### SOUTHEAST REGION

CUDJO CAVE MANAGEMENT PLAN - The plan has reached the Interim Draft stage and has been forwarded to Cumberland Gap National Historical Park for review. First reports back from the park are positive. This has been a rather long process involving Geologic Resources Division and DSC staff, specifically Sandy Vana-Miller and Diane Rhodes, both of whom have done a tremendous job on the plan. The next phase of the project will involve a detail of an NPS cave specialist to the park for on site assistance for final details of cave restoration and other cave management goals. (Kerbo)