

**MEMORANDUM OF AGREEMENT
BETWEEN THE
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT WINNEMUCCA DISTRICT OFFICE
AND THE
NEVADA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
FLORIDA CANYON MINE
AMENDED PLAN OF OPERATIONS #18 PROJECT**

WHEREAS, the United States Department of the Interior, Bureau of Land Management, Winnemucca District (BLM) plans to issue a Notice to Proceed to Florida Canyon Mining, Inc. (FCMI), a wholly owned subsidiary of Alio Gold, Inc., the owners of the Florida Canyon Mine, for the proposed expansion of existing mine facilities (hereinafter known as the Project) situated in Pershing County, Nevada, thereby making the Project and

WHEREAS, the BLM is the lead federal agency for the Project; and

WHEREAS, the Project will consist of an expansion of the Headwaters Pit (also referred to as the Switchback Pit and Radio Towers Pit), a heap leach pad expansion, a waste rock dump expansion, and realignment and development of access and haul roads (Full description in Appendix A); and

WHEREAS, the Project is an undertaking subject to review under the National Historic Preservation Act, codified at 54 U.S.C. § 306101 et seq., and its implementing regulations at 36 Code of Federal Regulations (CFR) § 800 et seq., and is a standalone undertaking unconnected to any other undertakings; and

WHEREAS, BLM has defined the Project's Area of Potential Effects (APE) as several discontinuous areas totaling 77 acres on public and private lands along the western slope of the Humboldt Range in Pershing County, Nevada, located in Township 32 North, Range 33 East, section 34, and Township 31 North, Range 33 East, sections 1 and 12 (Figures in Appendix A); and

WHEREAS, the BLM, in consultation with the Nevada State Historic Preservation Officer (SHPO), has determined that implementation of the Project will have a direct adverse effect on site 26PE2786/CrNV-02-6312, a prehistoric rock shelter and lithic scatter (hereinafter known as the historic property) which is eligible for listing in the National Register of Historic Places (NRHP) under the Secretary of Interior's Significance Criterion D; and

WHEREAS, in 2004 the BLM signed a Decision Record for the National Environmental Policy Act (NEPA) process authorizing the Project with the stipulation that the site be avoided or mitigated; and

WHEREAS, the Advisory Council on Historic Preservation (ACHP) has not been invited to participate in this undertaking because the BLM has determined that it does not meet the regulatory requirements for ACHP participation as stipulated in Component 5 of the 2012 *Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act*; and

WHEREAS, the BLM has notified Native American tribes in the area—the Lovelock Paiute Tribe and the Winnemucca Indian Colony—and has offered said tribes the opportunity to be concurring parties to this Memorandum of Agreement (MOA); and

WHEREAS, the BLM has coordinated public participation for this MOA through the process set forth in the NEPA process, and has determined that there are no interested members of the public who might have concerns regarding the effect of the Project on historic properties; and

WHEREAS, the BLM has consulted with FCMI regarding the effects of the Project on historic properties and has invited FCMI to sign this MOA as an invited signatory; and

WHEREAS, jointly the BLM, the SHPO, and FCMI will be called the signatories and individually as signatory or by their name; and

WHEREAS, the definitions given the 2014 State Protocol Agreement regarding the identification, evaluation, and treatment of historic properties on lands managed by the Nevada BLM are applicable throughout this MOA;

NOW, THEREFORE, it is mutually agreed by the signatories to this MOA that the Project will be implemented in accordance with the following stipulations in order to take into account the effects of the Project on the historic properties.

STIPULATIONS

BLM shall ensure that the following stipulations are implemented:

- I. Historic Properties Treatment Plan (HPTP) Implementation
 - A. The BLM, in consultation with the SHPO, has developed a HPTP (Appendix B, Stoner and Cunnar 2018) for the historic property that cannot be avoided by the Project and will be adversely affected.
 - B. FCMI shall ensure completion of the HPTP and that a qualified (as determined by the BLM through the cultural resource use permitting process, in addition to, meeting the Secretary of the Interior's qualifications in archaeology) cultural resource management firm (hereinafter known as the cultural contractor) completes the treatments and data recovery as outlined in the HPTP.
 - C. The schedule for completion of HPTP tasks (Appendix B, Chapter 4) will be revised by FCMI and the cultural contractor, and approved by the BLM, to accurately reflect the start dates, weeks of fieldwork, archival research, and report completion. FCMI shall submit the revised schedule to the BLM for review and approval. If changes are needed after the start date due to any unforeseen circumstances associated with the Project and the schedule, the dates will be revised accordingly by FCMI and the cultural contractor and submitted to the BLM for review and approval by the BLM. The BLM shall provide the revised schedule to all signatories to this MOA and incorporate it into Appendix B. This revision will not require an amendment to the MOA per Stipulation V.

II. Progress Reports and Notices to Proceed

- A. FCMI shall ensure that the cultural contractor provides progress reports to the BLM and FCMI as each task in the HPTP is completed. The BLM has five (5) business days to review and comment on the progress reports. The cultural contractor will address any comments raised by the BLM within five (5) days of receipt.
- B. The BLM may issue Notices to Proceed (NTP) to FCMI after the BLM and the SHPO have had the opportunity to review the following to ensure conformance with the HPTP:
 1. FCMI shall not begin any ground disturbing activity within the boundary of the historic property until the BLM issues a NTP.
 2. FCMI shall ensure that the cultural contractor provides the BLM with a summary of the fieldwork (e.g., surface reconnaissance, photo-documentation, detailed mapping, and site recordation when appropriate) for the historic property after it is completed. FCMI shall ensure the fieldwork summary is submitted to the BLM within five (5) business days of completion of fieldwork.
 3. BLM shall complete their review of the fieldwork summary within ten (10) business days of receipt. The BLM will determine if the fieldwork satisfies the requirements of the HPTP. FCMI shall ensure that the cultural contractor addresses any comments raised by the BLM within ten (10) business days of receipt and resubmit the field summary for BLM review.
 4. BLM will forward to the SHPO the fieldwork summary and the BLM's intention to issue an NTP and request concurrence from the SHPO. The SHPO will complete their review within ten (10) business days.
 5. If the SHPO identifies any concerns, the BLM will work with them to resolve the issues.
 6. BLM will submit the updated and approved fieldwork summary to the SHPO.
 7. If the SHPO does not respond within five (5) business days from date of receipt, the BLM may issue the NTP.

III. Discoveries

- A. Inadvertent discoveries or unanticipated adverse effects to historic properties during implementation of the HPTP will be addressed in accordance with the process outlined in the HPTP. In the event that inadvertent discoveries are made, or unanticipated adverse effects are determined that cannot be addressed by the HPTP, then the processes outlined in 36 CFR § 800.13(b)(2) or the NAGPRA regulations at 43 CFR § 10.3 and 43 CFR § 10.4, as appropriate, will be implemented.

- B. Human remains and associated grave goods discovered on private land will be handled according to the provisions of Nevada Revised Statutes 383. This MOA is intended to meet the terms found in NRS 383.121 as amended (Chapter 523, Statutes of Nevada 2017, page 3544) for an “existing agreement with a federal agency that was executed pursuant to federal law and that relates to the discovery of prehistoric native Indian human remains or a funerary object”. Execution of this MOA means that the provisions for notification found in NRS 383.121, as amended, do not apply. Standard notification requirements found in NRS 383.150 to NRS 383.190, amended, do apply.

IV. Dispute Resolution

- A. Should any signatory object to any proposed actions or to the manner in which the terms of this MOA are implemented, the BLM shall consult with the objecting party to resolve the objection. If either the objecting party or the BLM determines the objection cannot be resolved, the following actions may be taken:
 - 1. The BLM shall forward all of the documentation relevant to the dispute to the ACHP. The ACHP shall provide the BLM and the objecting party its advice on resolution of the objection within 30 days of receipt of adequate documentation. Prior to reaching a final decision on the dispute, the BLM shall prepare a written response that takes into account the advice provided by the ACHP and any comments from signatories or concurring parties to this MOA. The BLM shall provide the written response to all signatories and concurring parties. The BLM shall then proceed according to its final decision.
 - 2. If the ACHP does not provide advice regarding the dispute within 30 days, the BLM may make a final decision provided it has taken into account the comments provided by the signatories and concurring parties. The BLM shall provide all parties and ACHP with the final written decision and proceed accordingly.
 - 3. BLM’s responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of a dispute will remain unchanged.

V. Amendments

- A. This MOA may be amended with the written consent of the signatories. Any amendment will be effective on the date a copy is signed by all of the signatories. The BLM shall provide a copy to the ACHP.

VI. Termination

- A. If any signatory to this MOA determines that its terms will not or cannot be carried out, that signatory shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation V, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatory and invited signatory.

If the MOA is terminated, and prior to work continuing on the undertaking, the BLM must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request, take into account,

and respond to the comments of the ACHP under 36 CFR § 800.7. The BLM shall notify the signatories as to the course of action it will pursue.

VII. Duration

- A. This MOA will become effective upon execution by the BLM and the SHPO, and will expire if its stipulations are not carried out within four (4) years from the date of full execution or unless it is terminated under Stipulation VI. At such time, and prior to work continuing on the Project, BLM shall either (a) execute a MOA pursuant to 36 CFR § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. Prior to such time, BLM may consult with the SHPO and FCMI to reconsider the terms of the MOA and amend it in accordance with Stipulation V. above. BLM shall notify the SHPO and FCMI as to the course of action it will pursue.

VIII. Execution

- A. Execution of this MOA by the BLM and SHPO, and implementation of its terms evidence that the BLM has taken into account the effects of the Project on historic properties.
- B. This MOA may be executed in counterparts, each of which shall constitute an original, and all of which shall constitute one and the same agreement.

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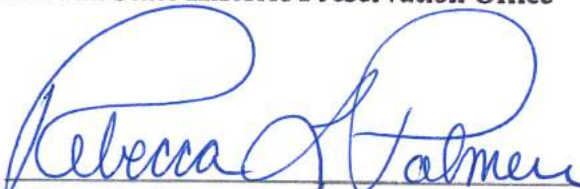
SIGNATORIES:

Department of the Interior, Bureau of Land Management, Winnemucca District


ACTING FOR

David Kampwerth, Humboldt River Field Manager
7/9/19
Date: _____

Nevada State Historic Preservation Office



Rebecca L. Palmer, Nevada State Historic Preservation Officer
07/26/19
Date: _____

INVITED SIGNATORY:

Florida Canyon Mining, Inc.



Joe Campbell, Florida Canyon Mine General Manager
7/23/19
Date: _____


CONCURRING PARTIES:

Lovelock Paiute Tribe

Stephanie Rhodes, Chairwoman
Date: _____

CONCURRING PARTIES:

Winnemucca Indian Colony

Judy Rojo, Chairwoman

Date:

APPENDIX A:
PROJECT DESCRIPTION AND FIGURES

The Florida Canyon Mine Amended Plan of Operations #18 (the Project) is described below. The description is made up of direct quotes from the official Plan of Operations document submitted to the Bureau of Land Management (BLM) Winnemucca District by Florida Canyon Mining, Inc., (FCMI) with minor formatting and organizational changes by the BLM to increase readability.

Mining activities within the Florida Canyon Mine operations area have expanded periodically since production began in August 1986... Current mine facilities consists of a series of connected and satellite pits, waste rock dumps, a heap leach pad and associated processing plant, access and haul roads, and other ancillary facilities... There are approximately 5,522 acres within the current permit boundary and authorized disturbance (*previously authorized under the November 03, 2003 Minor Modification*) is 1,957.5 acres (1,034.1 acres of BLM-administered public lands and 923.4 acres of private lands)... All areas disturbed by FCMI since August 1986 remain active.

Under this Amended Plan of Operations, proposed activities (Headwaters Pit Expansion) would require a modification to the existing Plan of Operations Permit Boundary. The Plan of Operations Permit Boundary would be expanded on private lands by approximately 9.0 acres within the north half of Section 12, R31N, T33E. The boundary expansion would increase the total acres within the Plan of Operations Permit Boundary from to 5,522 acres to 5,531 acres.

Exploration activities and subsequent mine modeling have identified additional ore reserves adjoining and below the existing Headwaters Pit. This Amended Plan of Operations represents an additional 77.1 acres that would be disturbed by the proposed mine expansion, of which 24.0 and 53.1 acres are BLM-administered public lands and private lands, respectively.

FCMI proposes:

- expansion of the existing Headwaters Pit;
- expansion of the existing Headwaters Waste Rock Dump;
- expansion of the existing heap leach pad by addition to the North Heap Leach Pad area;
- re-alignment of the Section 34 Haul Road to facilitate the leach pad expansion;
- expansion the Plan of Operations Permit Boundary to facilitate the proposed Headwaters Pit development;
- access/haul road development through the Radio Tower West Pit backfill; and
- reduction of authorized exploration activities and disturbance.

Headwaters Pit Expansion

Exploration activities and subsequent mine modeling have identified additional ore reserves adjoining and below the existing Headwaters Pit. To facilitate extraction of the additional ore

reserves, expansion of the Headwaters Pit would essentially involve a pit highwall layback... Mining would be initiated from an upper elevation of approximately 6,250 feet and mined down to an ultimate bottom elevation of approximately 5,200 feet. Mining would generate approximately 15.0 to 20.0 million tons of ore and approximately 10.0 to 20.0 million tons of waste rock... Expansion of the Headwaters Pit would envelop approximately 95.8 additional acres, resulting in 44.3 acres of new land disturbance to both public and private lands, 15.5 acres and 28.8 acres, respectively. The remaining 51.5 acres encompassed by the pit expansion are existing mining related disturbances. Overall, the total pit disturbance would increase from approximately 33.3 acres to 129.1 acres.

Headwaters Dump Modification

The existing Headwaters Waste Rock Dump (not currently constructed) was designed to accommodate approximately 4.6 million tons and result in approximately 27.5 acres of disturbance to private lands... As proposed, the Headwaters Pit Expansion would encroach upon approximately 10.4 acres of area originally proposed for waste rock placement; therefore, reducing the surface disturbance to approximately 17.1 acres.

To facilitate additional waste rock placement, the Headwaters Waste Rock Dump would be expanded on private lands approximately 37.3 acres. This would provide placement for approximately 10.0 to 15.0 million tons of waste rock from the Headwaters Pit. Any additional waste rock generated from expansion of the Headwaters Pit would be placed either at the North Waste Rock Dump or as backfill into existing pits. Overall, the expanded Headwaters Waste Rock Dump would encompass a total of approximately 54.5 acres of private land. This would result in approximately 24.3 acres of new land disturbance to private lands. The remaining 13.0 acres encompassed by the waste rock dump are existing mining related disturbances.

Waste rock would be placed in approximately 50- to 100- foot lifts at the angle of repose with terraces between each lift. This would allow for contouring to the final 3H:1V reclamation slope. The stability of slopes in the dump would be maintained by constructing in lifts and recontouring during reclamation.

Heap Leach Pad Expansion

The existing 404 acre elliptical shaped heap leach pad consists of the original 238 acre circular pad, a 75 acre semi-circular leach pad addition, and a 91 acre north leach pad expansion... The total capacity of the heap leach pad is approximately 165.1 million tons of ore at an ultimate height of 300 feet.

In order to facilitate the additional ore placement resulting from the proposed Headwaters Pit Expansion, FCMI proposes to expand the existing 91 acre North Heap Leach Pad directly to the east. The proposed East Heap Leach Pad Expansion would occur entirely on BLM-administered public lands and increase the existing heap leach pad surface area by approximately 33.6 acres. However, only 8.3 acres of the pad expansion would occur as new disturbance and the remaining 25.3 acres would involve previously disturbed lands.

The heap leach pad expansion would have a capacity for approximately 20.0 million tons of ore when completed to a vertical height of 300 feet.

The proposed Heap Leach Pad Expansion has been designed in the same manner as the North Heap Leach Pad Expansion, and would consist of at least 1 foot of compacted (95 percent at optimum moisture) native alluvial material that achieves a hydraulic conductivity of 1×10^{-5} centimeters per second (cm/s) or lower, as required by NAC 445A.434. The low permeability soil layer, would be covered with a synthetic primary liner made of 80-mil thick, high density polyethylene (HDPE) geosynthetic membrane. The HDPE would then be covered with a minimum 3-foot protective cover layer of crushed ore material.

Section 34 Haul Road Re-alignment

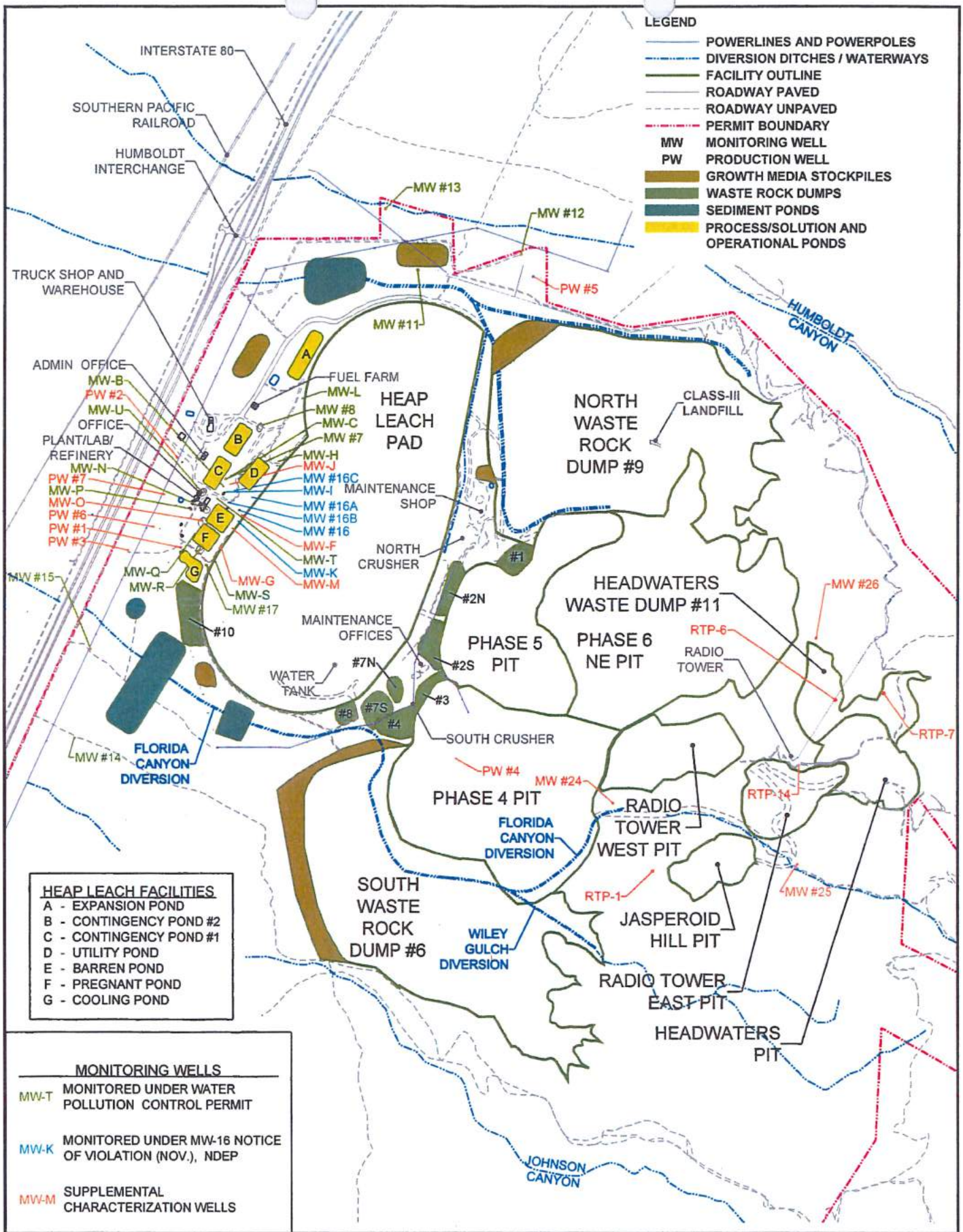
The proposed heap leach pad expansion would require a portion of the existing Section 34 Haul Road to be relocated. The haul road re-alignment would disturb approximately 0.2 acres of BLM-administered public lands. At the end of mining or when the haul road is no longer required, the road would be reclaimed by ripping the compacted surface as needed, pulling up as much of the fill slope as practical, and filling the cut slope to approximate the form of the land prior to disturbance. All culverts would be removed to restore natural drainage patterns. Water bars or other structures may be left in place to reduce any undue erosion. Suitable plant growth material would be spread (as required) and the area would be revegetated.

Haul Road Modification

Initially, to facilitate backfill placement of waste rock generated from the Headwaters Pit into the upper portion of the completed Radio Tower West Pit, an access/haul road approximately 360 feet long was constructed. The access/haul road (Radio Tower West Pit Access/Haul Road) resulted in approximately 0.6 acres of disturbance to public lands and approximately 0.6 acres of disturbance to private lands.

To afford ore and waste hauls from the proposed Headwaters Pit Expansion, FCMI proposes to extend the access/haul road through the backfill material that was placed into the completed Radio Tower West Pit. The proposed access/haul road extension would be constructed approximately 5,800 feet long and have an average 70-foot-wide operating width. The access/haul road would encompass approximately 9.4 total acres (4.7 acres of public and 4.7 acres of private land).

At the end of mining or when the access/haul road is no longer required, the road would be reclaimed by re-contouring the backfill road material to a final 3H:1V reclamation slope.



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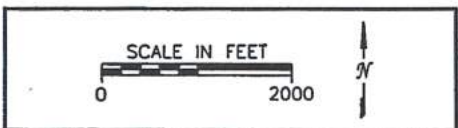
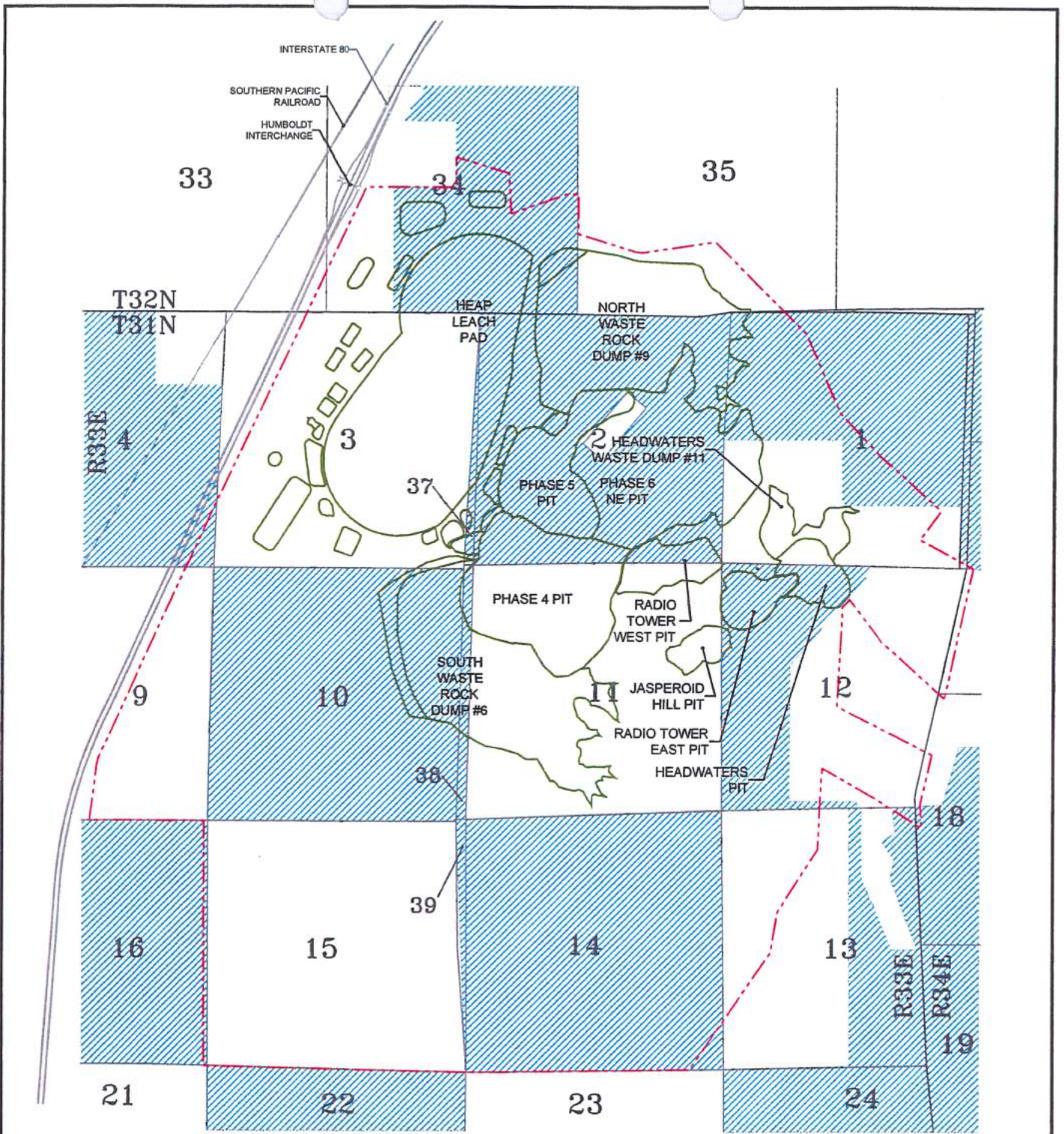


FIGURE 1-2
CURRENT MINE FACILITIES

DATE:	MAY 2004
PROJECT:	209108
TASK NUMBER:	1



LEGEND

- - - PERMIT BOUNDARY
- PUBLIC LAND ADMINISTERED BY THE BLM
- PRIVATE PROPERTY

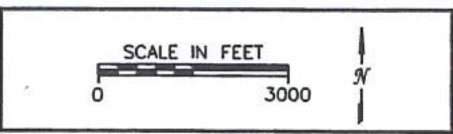
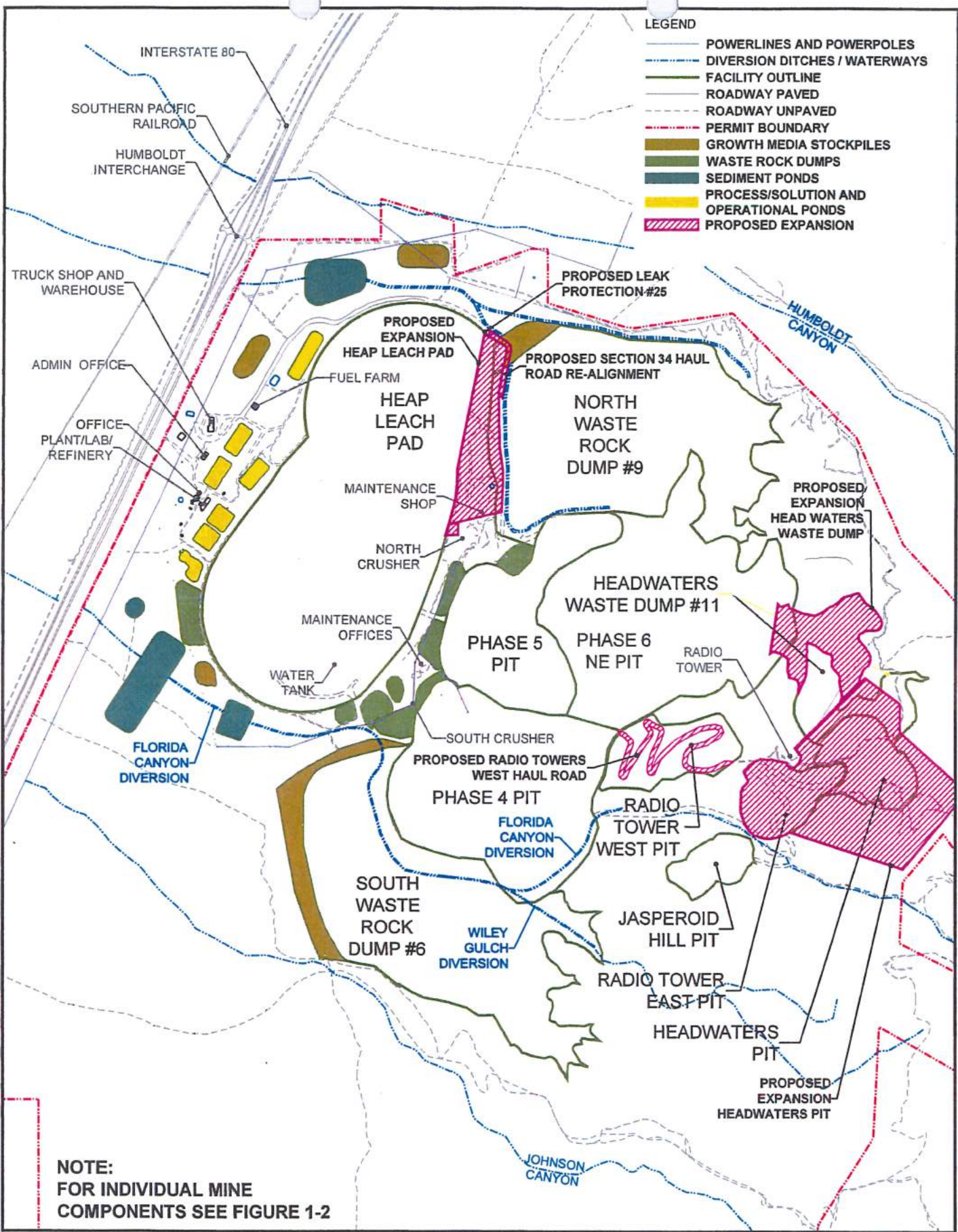


FIGURE 2-1
SURFACE OWNERSHIP AND STATUS

DATE:	MAY 2004
PROJECT:	209108
TASK NUMBER:	1



**FIGURE 2-2
PROPOSED MINE FACILITIES**

DATE:	MAY 2004
PROJECT:	209108
TASK NUMBER:	1

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This attachment contains information that may be exempt from Freedom of Information Act Requests.

Please consult the appropriate federal agency to obtain this information.

APPENDIX B:
HISTORIC PROPERTY TREATMENT PLAN

This attachment contains information that may be exempt from Freedom of Information Act Requests.

Please consult the appropriate federal agency to obtain this information.