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			File Code: Date:	1950/2810 August 25, 2014

DECISION MEMORANDUM: Sunnyside Project (2810-030503-POO-2011-003)

USDA Forest Service Coronado National Forest Sierra Vista Ranger District Santa Cruz County, Arizona Sections 5 and 6, Township 28 South, Range 16 East Gila and Salt River Meridian

PROPOSED ACTION

Regal Resources, Inc. (USA) (Proponent) has submitted a Plan of Operations (POO) for the Sunnyside Project for mineral exploration drilling on the Coronado National Forest (CNF). The project is proposed on the Sierra Vista Ranger District (SRVD) in Santa Cruz County, Arizona, about seven miles south of the town of Patagonia (see Figure 1). The project area legal location is Sec. 5 & 6, T 28S, R 16E Gila and Salt River meridian. Total proposed surface disturbance for the project is estimated at 0.4 acres including repair of existing roads and construction of drill pads and sumps. The entire project is expected to last less than one year.

Regal proposes to develop six temporary drill sites (labeled A through F, see Figure 2). Drilling operations are to collect core samples at various depths to assess potential copper mineralization. Samples will be transported offsite for analysis and testing. Operations may run continuously up to 24 hours per day, seven days per week.

Regal employees and contractors would access the project area from the town of Patagonia by way of Harshaw Road, a Santa Cruz County road that is designated as National Forest System Road (NFSR) 49 and 58. Access within the project area would be via NFSRs 812 and 4685 (see Figure 2).

Sites A through D would occupy an area 15 feet wide by 90 feet long and would be located adjacent to or on NFSR 4685 to minimize ground disturbance. Minimal road maintenance (e.g., grading) within the existing prism of NFSR 4685 would be completed as needed, and brush and limbs would be removed where necessary to facilitate the passage of the drill rig and water truck. During operations at site A, a temporary Forest road closure will be in place near site B to protect public safety for about two months. The closure would restrict public vehicular access on about 0.4 mile near the dead end of NFSR 4685.

Sites E and F would be about 50 feet by 75 feet in area and would occur along an existing nonsystem road that branches off of NFSR 812. This 0.2 mile long non-system road will require minimal road maintenance for access. During drilling operations, a temporary gate will be installed for public safety at the intersection of the temporary road intersection with NFSR 812 (Figure 2).

All down-hole drilling fluids, which will consist primarily of bentonite and water, will comply with Arizona Department of Water Resources requirements. A sump approximately 4 feet deep by 20 feet long by 3 feet wide would be excavated and used at each drill site to collect used drilling fluids,.

Up to two drill rigs at a time, a reverse circulation (RC) rig and a diamond core rig, may be in the project area. The RC rig may be used for shallow initial drilling (up to about 1500 feet). Only one hole will be open at a time. After site preparation and mobilization of the drill rig, water truck and service truck, project-related traffic from Patagonia to the sites would include one roundtrip per day by each of the drilling crews. Other traffic may include the project manager and occasional travel by other company representatives and service trucks, as needed. Up to 12,500 gallons of water per day would be hauled from a commercial vendor in a 6000-gallon capacity water truck; water would be stored in two 12,000-gallon holding tanks in the project area.

All drill sites will be inspected by Forest Service personnel before, during, and after the proposed operations to monitor compliance with operating guidelines.

Reclamation would be accomplished in two phases. The first phase would be ongoing and concurrent with operations. This would involve the removal of all supplies and non-native materials in addition to sealing of the drill holes before the drill rig leaves each site. Each bore hole will be sealed in accordance with Arizona Department of Water Resources well-abandonment procedures found in Arizona Administrative Code R-12-15-816. These regulations require the licensed drilling contractor to seal the bore hole at a level above the uppermost aquifer using bentonite drilling mud and cuttings or cement grout of sufficient volume, density and viscosity to prevent fluid communication below the water table. The contractor must also install a cement grout plug that extends from two feet below the land surface to a minimum of 20 feet below the land surface. Sumps would be allowed to dry before final reclamation.

During the second phase or final reclamation, all equipment and materials would be removed from the site, disturbed areas would be restored to their original contours, and the temporary access road to sites E and F would be reclaimed to Forest Service standards. Stockpiled topsoil will be replaced and seeding of disturbed areas with a Forest approved seed mixture of plant species would follow, as necessary.

DECISION AND RATIONALE

Regal's proposed activities are pursuant to the Mining Law of 1872, as amended. The Forest Service is required by regulation to respond to a proposed plan of operations to conduct operations pursuant to the Mining Law of 1872, as amended.

Under 36 CFR 228.5, the Forest Service must determine whether to approve the Plan of Operations submitted by Regal as proposed, or to require changes or additions deemed necessary to meet the requirements of the regulations for environmental protection. The purpose of the proposed action and the associated review documented herein is to determine if changes or addition to the Plan of Operations are required in order to meet the environmental protection requirements set forth in 36 CFR 228.8.

It is my decision to approve the Proponent's implementation of the Sunnyside Project for drilling exploration at up to 6 drill site locations including the design features listed below. Rational for this approval includes the consideration of extraordinary circumstances below. Operations approved by this decision will be in compliance with the rules and regulations for operations on National Forest System lands (36 CFR 228, Subpart A). All operations will be conducted so as, where feasible, minimize adverse environmental impacts on National Forest System surface resources (36 CFR 228.8). Approval of this Plan of Operations is consistent with 36 CFR 228.5.

CONSIDERATION OF EXTRAORDINARY CIRCUMSTANCES

This action may be categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA). The applicable category of actions is identified in agency procedures as 36 CFR 220.6(e)(8): "Short-term (1 year or less) mineral, energy, or geophysical investigations and their incidental support activities that may require cross-country travel by vehicles and equipment, construction of less than 1 mile of low-standard road, or use and minor repair of existing roads."

This CE is appropriate because there are no extraordinary circumstances related to the proposed action (FSH 1909.15, Sec. 31.2). I have considered the resource conditions listed in the Forest Service NEPA regulations at 36 CFR 220.6(b) as outlined below.

Wildlife, water, and cultural resource conditions have the potential to be affected. However, I have determined that these effects will be minor to none, based on the small project extent and existing site disturbance. I took into account resource conditions identified in agency procedures that should be considered in determining whether extraordinary circumstances might exist:

a. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species. There are no proposed, threatened, or endangered species, designated or proposed critical habitat, or Forest Service, Region 3, sensitive species that will be affected by project implementation. A Biological Assessment and Biological Evaluation (BA and BE) have been completed for botanical and wildlife species. The CNF sent a letter to the United States Fish and Wildlife Service (FWS) on May 22nd, 2014, requesting concurrence on the CNF determination that the Project "may affect, not likely to adversely affect" listed species in accordance with Section 7 of the Endangered Species Act (ESA). The FWS, on August 11, 2014, concurred with this determination.

b. *Floodplains, wetlands, or municipal watersheds.* The proposed drilling activity will not take place in a wetland. There will be no adverse effects to wetlands. The proposed drilling activity may take place in a floodplain. However, no adverse effects are anticipated for floodplains because the activities are temporary in nature, no stream or floodplain modifications are proposed, and the implementation of the design features listed below would minimize or eliminate any adverse effects.

Presently, the POO describes the supply water as a "commercially available source." Location of the source was not disclosed. The ground disturbing activities of exploration drilling are located in the upper Alum Gulch watershed. The adjacent watershed, Harshaw Creek, contains the access road to the project site. The Harshaw Creek watershed has been proposed to be designated as a municipal supply watershed for the Town of Patagonia. If project water is commercially purchased from a supplier within the Harshaw Creek watershed or upper Sonoita Creek, the Town of Patagonia municipal supply may be affected. Due to the relatively limited duration and scale of the project, quantitative scientific studies have not been performed by the Forest Service regarding the water supply for the project and the possible effects to the town.

Since the location of the water supply is unknown, the water supply of the Town of Patagonia may be totally unaffected as the supply source may be drawn from an entirely different groundwater basin.

- c. Congressionally designated areas, such as wilderness, wilderness study areas, or *national recreation areas*. The project will not occur within or affect any congressionally designated areas.
- d. Inventoried roadless areas. The project will not occur within or affect inventoried roadless areas.
- e. *Research natural areas.* The project will not occur within or affect inventoried research natural areas.
- f. *Native American and Alaska Native religious or cultural sites.* There are no known Native American or Alaska Native religious or cultural sites within the project area.
- g. Archeological sites, or historic properties or areas. The proposed project will have no adverse effect (36 CFR 800.5(b)) to archeological sites, historic properties or areas. The Forest has completed compliance with Section 106 of the National Historical Preservation Act of 1966, as amended. The Forest has consulted with the Arizona State Historic Preservation Office, which has concurred (June 26, 2013) that no historic properties would be affected by the Sunnyside Project.

Based upon these determinations, I conclude that the operations are limited in context and intensity (40 CFR 1508.27), and this action is expected to produce little or no individual cumulative environmental effects, to either biological or physical components of the human

environment. My conclusion is based on a review of the record that shows thorough analysis using the best available science.

PUBLIC INVOLVEMENT

This project has been listed on the Coronado National Forest Schedule of Proposed Actions (SOPA) since July, 2011. The SOPA was provided to individuals, organizations, and agencies that have asked to be notified of proposed actions on the Coronado National Forest. The SOPA is also posted on the Coronado National Forest website, http://www.fs.usda.gov/coronado.

The proposal was described to the public, tribes, and other agencies for comment during scoping from November 2nd, 2011 through December 2nd, 2011, and again from July 16th, 2013 to August 15th, 2013. Letters soliciting comments were sent to approximately 370 individuals, organizations, and government entities on July 13, 2013 and a Legal Notice was published in the *Sierra Vista Herald*, on July 16, 2013.

Seventy-eight comments were received during the 2013 30-day scoping period. These comments were considered, along with prior comments, during analyses.

DESIGN FEATURES

Specific design features are designed to minimize the project's effects to the environment and are part of the proposed action. Specific design features will include:

Administrative

- The operator will establish a reclamation bond or acceptable surety as a guarantee of faithful performance with the terms and conditions identified for the reclamation requirements (36 CFR 228.13). Bond calculations will be based on local wage and equipment rates. Bonds will be updated as necessary throughout the life of the project to reflect the actual cost of reclamation.
- 2. If the design or location of this project changes in ways that differ from the approved POO, the project work will stop, and the Coronado National Forest Project Administrator will be notified immediately. The new information will be evaluated prior to the recommencement of work, and additional NEPA analyses may be required.
- 3. The operator will contact the Forest Service once operations have been completed to schedule a visit to the site as a final inspection of the operations.

Invasive Species

4. All equipment used in ground disturbing activities will be cleaned of soil and plant parts prior to entering National Forest System land and before beginning work on the project in order to prevent introduction or translocation of weed species. Vehicles will have a thorough visual inspection of tires, tracks, and underbody to ensure the vehicle is completely cleaned of all residue and soil. Equipment will be cleaned when moving between weed infested areas within the project site. If during drilling operations invasive weeds are found at the site, equipment will be washed prior to relocation to other drill sites. The operator will coordinate with Forest Service personnel to ensure that inspections are performed.

5. New invasive non-native plant infestations at the drill pads or on access roads where ground disturbance occurred during the project will be eradicated by the proponent. The proponent will conduct a pre-work survey to document in writing the presence or absence of non-native invasive plants. The Forest will determine that the pre-work survey is adequate, and will inspect and make the final determination that new infestations have been eradicated. This final determination will be made no sooner than 3 years following the completion of the project.

Roads/Engineering

- All drilling will comply with the State of Arizona Department of Water Resources Title 12, Chapter 15, statutes and rules governing well construction standards and licensing of well drillers (ADWR 2011).
- 7. Ground disturbance will be minimized through careful equipment operation and will be restricted to the minimum amount necessary for drill rig access.
- 8. All drill sites will be enclosed with high-visibility fencing concurrent with pad construction and until reclamation is completed to protect public safety. Berms, fencing, signs and barricades, as appropriate, will be installed where drilling is proposed on existing roads. Sumps will be located outside of the road surface where possible.
- 9. Repair of existing roads at stream crossings will include low-water crossings designed to allow vehicles to cross safely without producing a damming effect in the stream channel.
- 10. Repair of existing roads where slopes are greater than 15% will include rolling earthen berms approximately 200 feet apart to deflect precipitation runoff and prevent flow concentration on the road bed. All road specifications will be in compliance with Forest Service road maintenance standards.
- 11. Drill sites may include silt fencing or waddles around the sump to contain material in the event of a heavy rain. Berms measuring 12 to 24 inches in height may be constructed around sumps to help contain drilling fluids.
- 12. Improvement of existing roads and drill pad and sump construction will be reviewed by Forest Service personnel to ensure that roads are maintained to Forest Service standards and that all design features are implemented.
- 13. Reclamation of drill pads and sumps will be recontoured to match pre-project grades Stockpiled vegetation, if available, or mulch or straw will be spread over the bare soil

areas at each site to slow soil erosion. Soils will be de-compacted to Forest Service standards if severe compaction occurs.

- 14. The temporary non-system road will be reclaimed to pre-project condition as soon as possible after completion of drilling operations. The road will be decompacted, recontoured, and reseeded with CNF-approved seed mix, drainage structures (e.g. waterbars, rolling dips, etc.) will be installed, and access will be blocked with berms and boulders to Forest Service specifications.
- 15. All project-related materials and trash, including flagging, fencing, stakes, sample bags, and other items, must be removed from the site after project completion.

Hydrology

- 16. Sediment and stormwater controls will be installed before initiating surface-disturbing activities, to the extent practicable. Forest Service personnel and the operator will routinely inspect sites to verify that erosion and stormwater controls are implemented and functioning as designed and are appropriately maintained. Corrective actions will be implemented without delay when failures are discovered to prevent pollutant discharge to nearby water bodies.
- 17. During pad and sump construct the top 4-6 inches of topsoil will be removed and stockpiled onsite and replaced during reclamation of the sites.
- 18. Stockpiles of soil, excavated material, and drill cuttings will be located outside of swales or ephemeral stream channels to prevent soil erosion into channels during rain events. A tarp or other protective cover will be used to aid in preventing erosion.
- 19. Sumps will be located on stable areas of drill pads, to the extent practicable, and will be located away from natural watercourses, riparian areas, wetlands, floodplains, and areas of shallow groundwater wherever practicable.
- 20. Suitable measures (which may include polymer liners, berms, straw waddles, or silt fences) will be used to ensure full containment of drilling fluids and prevent contamination of groundwater, and to minimize surface waters and groundwater from entering open pits where sumps must be placed in a sensitive location or in porous material. Sumps will be designed to contain all anticipated drilling muds, cuttings, fracture fluids, and precipitation while maintaining a suitable amount of freeboard to avoid or minimize overtopping.
- 21. Drilling fluids will not be allowed to discharge outside of the drill pad. If disposal becomes necessary, (i.e. Artesian conditions) controls will be put in place as to not discharge onto National Forest System lands and disposal will be in compliance with the Clean Water Act and Safe Drinking Water Act, with appropriate approvals from the State and or EPA as appropriate.

- 22. All exploration-related wastes, including drilling fluids, and processed water, will be handled and stored properly to minimize the risk of groundwater and surface water contamination and to meet State and Federal requirements.
- 23. Artesian conditions are known to exist in the project area; therefore, in closing any drill holes that have artesian flow, the operator must be in accordance with State of Arizona rules regarding closure of artesian wells or boreholes, R12-15-812 Special Aquifer Conditions. These conditions are outlined as follows:
 - a. The well casing shall extend into the confining formation immediately overlying the artesian aquifer and shall be grouted from a minimum of ten feet into the confining formation to the land surface to prevent surface leakage into and subsurface leakage from the artesian aquifer.
 - b. If leaks occur adjacent to the well or around the well casing, within 30 days the well shall be completed with the seals, packers, or casing and grouting necessary to eliminate such leakage or the well shall be abandoned according to R12-15-816.
 - c. If the well flows at land surface, the well shall be equipped with a control valve, or suitable alternative means of completely controlling the flow, which must be available for inspection at the well site at all times.
- 24. In all water-bearing geologic units containing mineralized or polluted water as indicated by available data, the borehole shall be cased and grouted so that contamination of the overlying or underlying groundwater zones will not occur.
- 25. The operator will develop a transportation spill response plan prior to approval of the plan of operations that describes the petroleum products or other hazardous materials or chemicals that will be used in the operations, including the routes, amount and frequency of shipments, and containers and vehicles used. This plan will also include the procedures, equipment, and qualified personnel that would be used to respond to a spill.
- 26. The operator will store re-fueling equipment over 30 feet from any stream channel. Absorbent pads or other medium (e.g. Visqueen or similar) will be placed under all stationary or parked equipment not in active use that contain oils or hazardous chemicals to prevent any fluid leaks from infiltrating into the soil.
- 27. If feasible, the operator will remove any leaking equipment that contains oils or hazardous chemicals from NFS lands for repair. Or provide spill mitigation to prevent contamination of forest soils (see Design Criteria #18).
- 28. Toilet facilities will be setback a suitable distance from streams or water bodies or other sensitive areas to avoid releases of pollutants in floods or other emergencies.
- 29. The operator will provide receptacles for trash in areas that are convenient to workers. Receptacles will be placed in locations away from streams and water bodies. Trash will be collected on a regular schedule to prevent the receptacles from overflowing. Trash will be disposed of at properly designed and operated municipal, county, or state authorized

sanitary landfills or waste recycling sites where groundwater and surface water are adequately protected.

Hazardous Materials

- 30. Ensure that all employees involved in the use, storage, transportation, and disposal of hazardous materials receive proper training.
- 31. Manage the use, storage, discharge, or disposal of pollutants and hazardous or toxic substances generated in compliance with applicable regulations and requirements.
- 32. Prior to POO approval, prepare and submit a certified Spill Prevention Control and Countermeasure (SPCC) Plan if required by 40 CFR 112.
- 33. Implement the containment features or countermeasures called for in the SPCC.
- 34. Plan to ensure that spilled hazardous materials are contained and do not reach groundwater or surface water. For example, any visible oil will be removed from the surface of the sump after cessation of drilling and completion of operations.
- 35. Ensure that cleanup of spills and leaking tanks is completed in compliance with Federal, State, and local regulations and requirements.
- 36. Respond to hazardous materials releases or spills using the established site-specific contingency plan for incidental releases and the Emergency Response Plan for larger releases.
- 37. State law requires that each facility operator notify the Arizona Department of Environmental Quality's (ADEQ) Emergency Response Unit within 24 hours of any oil spill.
- 38. Disclose to the CNF and all downstream water users, such as municipal drinking water providers and fish hatcheries, if a spill enters surface waters or has the potential to enter groundwater.
- 39. Ensure that hazardous spill kits are adequately stocked with necessary supplies and are maintained in accessible locations.
- 40. Monitor drill pad locations for 3 years following project completion to ensure settlement or excessive erosion is not occurring in the reclaimed areas. Repair of any improper settlement or erosion control measures will be the responsibility of the operator.

Wildlife

41. Drilling operations will not occur from March 1st to August 31st to avoid potential disturbance to the Mexican Spotted Owl (MSO) during its breeding season.

42. Existing small vegetation (grasses and forbs) displaced from each drill site during excavation will be stockpiled for later use as mulch during site reclamation. Agaves will be carefully removed by qualified personnel and replanted.

Visual Resources

43. If possible, the proponent will not remove trees or branches from the southeastern side of the proposed non-system access in order to preserve visual integrity.

Vegetation

44. The operator shall avoid removal of agaves wherever possible. Wherever agaves cannot be avoided during construction activities, they shall be carefully removed by qualified personnel and replanted.

Heritage Resources

- 45. If the design or location of this project changes, or if additional archaeological resources are located during project implementation, the project work will stop, and the CNF Project Administrator and CNF Forest Archeologist will be notified immediately. The new information will be evaluated prior to the recommencement of work.
- 46. The operator will contact the Forest Service once operations have been completed to schedule a visit to the site as a final inspection of the operations.

Fire Prevention

47. The operator will develop and submit a Fire Prevention Plan in coordination with the Coronado National Forest prior to approval of the POO.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

National Forest Management Act

As required by the National Forest Management Act, this decision is consist with direction given in the Coronado National Forest Land and Resource Management Plan (1986, as amended).

Endangered Species Act

This decision is consistent with the ESA. A Biological Assessment and Biological Evaluation were completed for the project on May 8, 2014, and determined "may affect, not likely to adversely affect" for jaguar, ocelot, lesser Long-nosed bat, and Mexican spotted owl, and "No Effect" for other federally listed Threatened and Endangered (T and E) species and for species proposed for federal listing as T or E. For species listed as sensitive species by the Regional Forester, it will have no impact, or may impact individuals or habitat, but will not contribute to a trend toward federal listing or cause a loss of viability.

National Historic Preservation Act

The project has been reviewed by the Forest Archaeologist and it has been determined on April 9th, 2013, that no historic properties are present within the project area, and thus the project will have no adverse effect to any known or listed historic properties. Arizona State Historic Preservation Officer (SHPO) concurred with this finding on June 26th, 2013. It will proceed with the condition that if areas of general impact or intense impact change or become more extensive, or if heritage resources are discovered within the project area, the Forest Archaeologist will be immediately contacted for additional project review prior to implementation of those changes.

Compliance with Forest Plan and Clean Water Act

The proposed action would protect water quality and meet the resource standards and objectives described by the CNF Forest Plan by implementing Design Features as described above. This combination of water quality protection measures would also make the proposed action consistent with Federal and state laws and requirements imposed for the protection of the environment, including compliance with the requirements of the Federal Water Pollution Control Act as amended by the Clean Water Act, 33 U.S.C. §1251.

ADMINISTRATIVE REVIEW OR APPEAL

On January 17, 2014, the President signed into law the Consolidated Appropriations Act of 2014 (Pub. L. No. 113-76). Section 431 of that Act directs that the 1992 and 2012 legislation establishing the 36 CFR 215 (post-decisional appeals) and 36 CFR 218 (pre-decisional objections) processes "shall not apply to any project or activity implementing a land and resource management plan ... that is categorically excludedunder the National Environmental Policy Act [NEPA]." On February 7, 2014, the President signed into law the Agricultural Act of 2014 (Farm Bill) (Pub. L. No. 113-79). Section 8006 of the 2014 Farm Bill repealed the Appeals Reform Act (ARA) (Pub. L. No. 102-381). The ARA's implementing regulation was 36 CFR 215. The 2014 Farm Bill also directs that the pre-decisional objection process established in the Consolidated Appropriation Act of 2012 shall not be applicable to categorically excluded projects or activities.

As a result of these two statutes, the Forest Service will no longer offer notice, comment and appeal opportunities pursuant to 36 CFR 215 for categorically excluded projects and this decision is not subject to objections pursuant to 36 CFR 218.

This decision involves a written instrument to use or occupy National Forest System Lands and is subject to appeal under 36 CFR 214. The permittee will be informed of this decision and their appeal rights under those regulations.

IMPLEMENTATION DATE

This project may be implemented upon:

• The receipt of the signature of the operator in Section VIII of the Plan of Operation indicating that they have reviewed and agree to comply with all conditions including the

required mitigations. The operator will submit in writing the incorporation of the mitigations as part of their POO.

- The receipt of an acceptable reclamation bond security (36 CFR 228.13).
- Approval of the operating plan by the District Ranger, the authorized office with whom authority to approve operating plans has been delegated (36 CFR 228.3 (e)).
- Receipt and approval of a spill response plan.

POINT OF CONTACT

For further information concerning this decision, contact: Patrick Morton, Geologist, Coronado National Forest, 300 W. Congress St., Tucson, AZ 85701, 520-388-8348, pmorton@fs.fed.us.

Sincerely,

MARK J. RUGGIERO District Ranger

Attachments: Figure 1: Project Area Figure 2: Project Plan Map

cc: Patrick T Morton



