

DRAFT - CHECKLIST ENVIRONMENTAL ASSESSMENT - DRAFT

**COMPANY NAME:** Coronado Resources Ltd and Coronado Resources USA, LLC  
**Project:** Exploration Decline and Dewatering, and Water Pipeline Right-of-Way Application  
**PERMIT OR LICENSE** 00660  
**LOCATION:** sections 1 and 2: T2S R6W **County:** Madison  
**PROPERTY OWNERSHIP:**  Federal  State  Private  
**EA Number:** MT-050-07-EA-40 (for BLM)  
**Case File Number:** MTM-85835 (for BLM)

**TYPE AND PURPOSE OF ACTION:** Coronado Resources Ltd and Coronado Resources USA, LLC (Coronado) has conducted a two year exploration drilling program at the Broadway Victoria mine, a property that was mined for various periods from the 1860's to 1918, then again from 1935 to the shut down during World War II in 1941, and most recently from 1949 to the early 1950's. There are extensive underground workings at the Broadway Victoria with a maximum depth of 1,100', as well as three small open pits. An old mill on the property was operated during the productive period but is now in a state of decay. There are two sulfide and one oxide tailing impoundments on the property that have been partially reclaimed by Coronado. All of these facilities are on patented (private) mining claims.

In October of 2006 Coronado began driving a 700' 15% decline (an underground tunnel sloping downward from the portal) to access oxide ore and to reach a drilling station from which they would drill to further define the ore body. The static ground water level is 77' below the portal, therefore, they expect to reach water in about 500 horizontal feet. To proceed with the exploration project and to further develop the mine, the mine must be dewatered. Coronado is seeking approval from the Dept. of Environmental Quality (DEQ) to discharge mine water into ground water. The DEQ may grant approval for this proposal under the Exploration License under authority of the Metal Mine Reclamation Act as found in 82-2-331 and 82-4-332, MCA.

The proposal is to pump water from a dewatering well, developed above the portal, convey this water in a 6" polyethylene pipe laid on the surface of the ground, approximately 1 mile downgradient, across 4,440 feet of federal land managed by the Bureau of Land Management (BLM), to land owned by Coronado, and to discharge this water into percolation ponds, excavated to a depth of approximately 15' into alluvial gravels. It is anticipated that dewatering would begin at a rate of up to 800 gallons per minute (gpm) to dewater the underground and continue at a rate of about 300 gpm to maintain the dewatered level. A percolation pond area of about 7,200 sq. ft. (i.e. 72' X 100') would be required to achieve the required dewatering rate. The ponds would be sloped to allow for egress in the event that man or animal fell into the ponds.

The BLM's role in the project proposal is that Coronado must obtain approval from the BLM to cross the approximately 1/2 mile of federal land located primarily in the E 1/2 of section 2: T2S R6W with the 6" pipeline. Coronado has applied to the BLM under the authority of the Federal Land Policy and Management Act of 1976, as amended, for a right-of-way for the construction, maintenance, and eventual termination of a black, six-inch high density polyethylene (HDPE) pipeline to carry water from its dewatering operation on private lands across BLM lands to the above-mentioned percolation ponds to be located on the company's private lands. The proposed right-of-way would be 10 feet wide (five feet each side of centerline), approximately 4,440 feet long, and located on BLM lands in Lots 2,3,8, SW1/4NE1/4, Sec:2 T2S, R6W, PMM. A small Cat would be used to pull the pipeline into place, but the applicant indicates that no blading or similar surface disturbance would be necessary. Stakes would be placed along the pipeline at key points to keep it from moving. The applicant indicates that no pressure relief valves or other ancillary facilities would be needed along the proposed pipeline right-of-way. The surface pipeline would remain in place for the estimated two- to five -year life of the project. This pipeline right-of-way proposal is in conformance with the BLM's Dillon Resource Management Plan completed in February of 2006. Right-of-Way applications filed for access roads and an overhead 7.2kV electric distribution line to serve the mine site by Coronado Resources and Vigilante Electric Cooperative, Inc. respectively, are not being analyzed in this joint DEQ/BLM document, but instead will be analyzed in a separate NEPA document prepared solely by the BLM

**Reclamation Plan:** At closure, the pipe would be removed. The percolation ponds would be backfilled. The monitoring wells would be plugged and abandoned. The portal would be secured with a locked steel gate. All disturbed ground would be seeded with a native grass seed mix.

N = Not present or No Impact will occur.  
Y = Impacts may occur (explain under Potential Impacts).

## IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?</p>	<p>[N] The exploration decline would remove approximately 3,700 cubic yards of waste rock. This would be predominantly from a skarn deposit and would be disposed of in the old American pit at the mine site. Ore would be hauled for processing to the mill at Golden Sunlight near Whitehall. In the unlikely event that the proposed water pipeline broke or was punctured due to vandalism or other reasons, there would be the possibility of some soil erosion occurring in the vicinity of the puncture or break. The pipeline would need frequent inspections to check for any problem areas.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>[Y] The town of Silver Star is approximately ½ mile down gradient of the water disposal site. Protection of domestic wells in the community is the primary regulatory concern.</p> <p>Coronado may obtain approval to discharge mine water into ground water under an Exploration License provided that the water is of good quality, that is, that the human health standards published by the DEQ are not exceeded. It is anticipated that the water that would be discharged into the alluvial gravels of Tom Benton gulch would migrate down the gulch towards the Jefferson alluvium and eventually mix with the water in the Jefferson alluvium.</p> <p>Water samples have been taken from the underground workings, from an office well above the mine site, and from the dewatering well. These samples have been analyzed for a complete metal scan and nitrates and have been found to be of good quality, with all of the parameters well below the human health standard. Lead was reported as exceeded the human health standard on an earlier sample from the dewatering well, reported as 0.14 parts per million (ppm) against the standard of 0.015 ppm. This result was not duplicated. It is presumed that the sample was contaminated during collection and it was not properly filtered prior to analyses. The well has since been sampled twice more, by Coronado and by the DEQ. A summary of water sampling results is appended to this EA.</p> <p>Samples have also been taken from eight domestic wells at seven residences in Silver Star to establish a baseline. Results from these samples indicate that arsenic, lead and other metals are present in the ground water, but that the levels are below the human health standard.</p> <p>The DEQ would require sampling of the discharge water on a monthly basis for the following elements detected in the baseline monitoring: pH, SC, sulfate, nitrate, arsenic, cadmium, copper, iron, lead, manganese, selenium, uranium, and zinc. In response to concerns about the usual 30 day turn around for water samples from the laboratory, the DEQ will also require daily monitoring of Electrical Conductivity (EC) and pH, to detect any changes in water chemistry as the mine is dewatered. EC and pH values would be recorded daily to establish a correlation between these values and potential contaminant values. Changes in EC and pH values would serve to indicate a change in water chemistry that might warrant additional sampling or a cessation of dewatering until new lab results return showing acceptable levels of metals in the water.</p> <p>The DEQ will require installation of 4 or 5 monitoring wells downgradient of the percolation ponds and upgradient of the town of Silver Star. A deep well will be completed at the first water bearing strata. This will be sampled monthly for the elements detected in the baseline monitoring. Three or four shallow wells will be</p>

## IMPACTS ON THE PHYSICAL ENVIRONMENT

	<p>completed in alluvial gravels to monitor for the presence of water that may flow in these gravels from the percolation ponds. If water rises into these well, they will be sampled on the same monthly schedule as the deep well.</p> <p>The volume of water to be disposed is not known. Based on records from previous mining in the Broadway Victoria, an initial discharge rate of 800 gpm is expected. Following initial dewatering, a discharge rate of approximately 300 gpm would maintain the dewatered condition in the mine.</p> <p>Public comments during the meeting in Silver Star indicated that Tom Benton gulch flows at least once a year in response to intense storms. If these flows overwhelm the percolation ponds, water discharge would cease until the storm passed and the ground dried enough to allow disposal to resume.</p>
<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[N] Hauling ore from the 10,000 T bulk sample, and for subsequent production mining, if the mine proceeds with production, would require about 15 truck trips per day from the mine, up and down the two existing roads from Silver Star. This would generate some road dust as is common on gravel roads. There are no residences along these roads outside of Silver Star, so dust nuisance to the public would be minimal. The DEQ has no authority to regulate dust on public roads in any event.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?</p>	<p>[N] Tom Benton gulch has been overgrazed historically and is in a degraded range condition, dominated by blue grama and prickly pear. Ground disturbance caused by excavation of the percolation pits, drilling of monitoring wells and placement of the pipe would be minimal and would be reseeded at closure. No threatened, endangered, or sensitive plants were observed along the proposed pipeline route. Coronado would be operating under a Madison County approved noxious weed control plan in order to minimize the introduction of weeds to the project area and to treat existing weeds in the area such as leafy spurge and spotted knapweed.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] The proposed construction and filling of the percolation ponds could provide some wildlife habitat depending on their size, variation in water levels, and how long they are used. As dry as the surrounding habitat is and with the proximity to the Jefferson River corridor, providing a large open water source could attract some wildlife use – particularly from waterfowl.</p>
<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>[N] The project area does not occur in a wetland or a riparian zone. No floodplains would be affected by the project. The proposal would not affect any federally listed threatened or endangered species, or species of special concern.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] The Broadway Victoria mill is located above the mine site and near the office facilities. The building may no longer be structurally sound. Most of the milling equipment has been removed through the years. However, there is no plan to disturb this structure. A BLM archaeologist inspected the proposed pipeline right-of-way, and no historical, archaeological, or paleontological resources were observed within or immediately adjacent to the proposed right-of-way.</p>
<p>8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>[N] Some public comments were received regarding the visual impact of the power line which is to provide electricity to the mine. Some power poles are already in place on the preexisting right of way from earlier operations. DEQ has no regulatory authority over this power line. The Dillon RMP classifies BLM lands in the project area as predominantly Visual Resource Management Class IV which allows for change which dominates but is mitigated. The proposed water pipeline would be consistent with this VRM classification. Due to factors such as distance and topographic/vegetative screening, the vast majority of the pipeline would not be expected to be seen from the</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
	nearby town of Silver Star.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	[N] Dewatering the mine would have no negative effect on the quantity of water available for domestic wells in Silver Star.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] No BLM Areas of Critical Environmental Concern (ACECs) exist in the project area or would be affected by the proposal.

<b>IMPACTS ON THE HUMAN POPULATION</b>	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] The discharge water and the monitoring wells would be sampled monthly for the metals that were detected during baseline sampling. Discharge water would be monitored daily for variations in EC and pH at the discharge pipe, which would provide early warning that the chemical composition of the water is changing as dewatering proceeds. The dewatering would be shut down if any of the metals present exceed the human health standard. No hazardous or solid wastes would be involved with the proposed pipeline right-of-way.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] Exploration, bulk sampling, and possible eventual production mining would bring an existing mine back into production. No prime or unique farmlands would be impacted by the proposal.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[Y] An estimated 50 new jobs would be created if the mine goes into production. At this time there are 6 men working at the mine and a contractor has been hired for specific tasks.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[Y] The project would create an unknown increase in tax revenue to the State and County.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] There would be 15 haul truck trips per day added from the mine to Whitehall and an unknown number of trips of pickups and personal vehicles by miners and other employees of the mine. This would not be a discernable increase of traffic on Highway 55. It would be an increase of traffic on the two gravel roads that access the mine from Silver Star.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] Management decisions for BLM lands in the project area are guided by the Dillon Resource Management Plan (RMP) of February 2006. Coronado Resources is currently operating under a Madison County approved noxious weed control plan.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] Some of the folks who live in Silver Star walk Tom Benton gulch for recreation. This activity would not be restricted. The south road that accesses the mine is used by ranchers and local people to access public land west of the mine. This access would not be curtailed, but may occasionally be slowed, when haul trucks are on the road. No designated units of the Wild and Scenic Rivers System, Wilderness System, or Wilderness Study Areas exist in the project area or would be affected by the proposal.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] It is anticipated that most employees would be from Madison County and surrounding counties and already reside in the area.

<b>IMPACTS ON THE HUMAN POPULATION</b>	
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] Silver Star has traditionally been a mining area, this project would continue an economic activity that has been active periodically for over a hundred years.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] Environmental Justice – the proposal would not be expected to disproportionately affect minority or low income populations. Native American Religious Concerns – there would be no known impacts to these concerns.
21. PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[Y]
22. PRIVATE PROPERTY IMPACTS: Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	[N]
23. PRIVATE PROPERTY IMPACTS: Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.	[N/A]
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

25. Alternatives Considered:

No Action: Under the Metal Mine Reclamation Act, 82-4-301 et seq., MCA, the DEQ does not have the option to deny the proposal to discharge to groundwater, provided that State Water Quality standards are not violated. If the discharge water were to exceed water quality standards, the discharge may not be approved or allowed to continue. In that event, Coronado would have the option of treating the water before discharge. If the water could not be successfully treated, the discharge could not be allowed and the project would be stopped.

If the BLM denied the pipeline right of way, Coronado would have the option of seeking approval to discharge into Cherry Creek drainage. Gravels in Cherry Creek are not as deep as in Tom Benton Gulch and may not percolate as well.

Approval:

Approval with modification: The following stipulations would be added to this License in response to concerns identified during the public meeting in Silver Star:

1. Daily monitoring of EC and pH of the discharge water would be required to provide an alert of a possible change in water chemistry.
2. Selected domestic wells nearest the discharge location, and those wells serving the public, were sampled to establish a baseline.
3. No blading or other surface disturbance would be permitted in association with the water pipeline right-of-way.
4. No disturbance to any existing structures, buildings or mining features associated with the historic Broadway/Victoria Mine would be allowed.
5. Prior to the construction of the water pipeline, Coronado Resources would need to submit a plan for monitoring the water pipeline for leaks/breaks and have that plan approved by the authorized officer.

26. **Public Involvement:** There was a joint public meeting of the BLM and DEQ held in Silver Star on November 29, 2006. An estimated 50 people were in attendance, many of whom offered comments. Additional comments were received until Dec. 14, 2006. Three written comments were received. The issue of water quality and quantity appears to be the primary concern of those persons offering comments. Prior to the public meeting, a press release was sent to area media points of contact. The release briefly described the proposal, offered information about the upcoming meeting, and was carried by local area newspapers. A copy of the release was also sent to local units of government, adjacent land owners, and other potentially interested parties. In addition, a copy of the release was posted in the local Silver Star Post Office.
27. **Other Governmental Agencies with Jurisdiction:** The BLM is evaluating a request from Coronado Resources for use of two existing roads for ore hauling and a request from Vigilante Electric for the construction of a 7.2kV overhead distribution line to serve the mine operation.
28. **Magnitude and Significance of Potential Impacts:** There would be no significant impacts associated with this proposal.
29. **Cumulative Effects:** None other than those mentioned above dealing with use of the existing roads and the 7.2 kV distribution line should rights-of-way for these facilities be approved.
30. **Agencies and Persons Consulted:** See also the Public Involvement section above.

Madison County Commissioners  
 Beaverhead County Commissioners  
 Representatives for Senators Burns and Baucus  
 Montana Department of Transportation  
 Montana Fish, Wildlife and Parks  
 Mine Safety and Health Administration  
 Town of Silver Star  
 Town of Dillon  
 Coronado Resources  
 Beaverhead-Deerlodge National Forest  
 R.J. MacDonald Co.- Adjacent Landowner  
 Vision Mining Corp.- Adjacent Landowner  
 Hal and Beth Morgan – Adjacent Landowner  
 Lloyd and Ann Harkins – Adjacent Landowner  
 Dwight A. & Edie M. Graham, and Debra J. Sobrepena – Adjacent Landowner  
 Pearl W. Edwards; Lois W. Hartse – Adjacent Landowner  
 Nelson Spring Creek Ranch – Adjacent Landowner

**Recommendation for Further Environmental Analysis:**

EIS     More Detailed EA     No Further Analysis

**EA Checklist Prepared By:** Pete Strazdas - DEQ SMES and Exploration Program Supervisor  
 Wayne Jepsom - DEQ Hydrologist  
 Jeff Daugherty – BLM Dillon Field Office Realty Specialist  
 Mark Sant – BLM Dillon Field Office Archaeologist  
 Jim Roscoe – BLM Dillon Field Office Wildlife Biologist

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Signature

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Date