-m/001/039

State of Utah

GOVERNOR'S OFFICE OF PLANNING AND BUDGET
Resource Development Coordinating Committee

Michael O. Leavitt
Governor
Brad T. Barber
State Planning Coordinator
James L. Dykmann
Committee Chairman
John A. Harja
Executive Director

116 State Capitol Building
Salt Lake City, Utah 84114
(801) 538-1027
Fax: (801) 538-1547

UTAH CENTENNIAL 1896-1996

May 2, 1997

RECEIVED
MAY 08 1997
DIV. OF OIL, GAS & MINING

D. Wayne Hedberg
Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

SUBJECT: Centurion Mines Corporation, OK Mine, M/001/039
State Identification Number: UT970325-030

Dear Mr. Hedberg:

The Resource Development Coordinating Committee (RDCC), representing the State of Utah, has reviewed this proposal. The Division of Wildlife Resources comments:

We earlier provided this information to Centurion Mines before it became an RDCC agenda item.

1. The area around the mine site is High Priority Pronghorn Antelope Yearling Habitat and has occasional use by Mule Deer and Elk (only a few recorded sightings). Other wildlife species observed near the site include golden eagle, bald eagle, raven, kestrel, ferruginous hawk, kit fox and Great Basin rattlesnake (see attachment 1). A golden eagle nest is located on the high wall of the existing mine pit, but its use history is unknown.

2. We recommend the golden eagle nest be surveyed to document use, along with any new areas of land disturbance planned for the initial mine development. Should any nests be found active, we recommend initial construction not occur until after mid-August, to ensure nesting raptors are protected.

3. All power poles and electrical lines should be raptor proofed by following "Suggested Practices for Raptor Protection on Power Lines", Raptor Research Report No. 4, Raptor Research Foundation , Inc., 1981.

4. The indicated fenced area should provide adequate protection to prevent extensive use by wildlife. We recommend a minimum of six feet of chain link fencing be used to provide protection.

5. The UDWR is extremely interested in providing wildlife water sources outside the fenced in area. As has been discussed with you by our biologists, a pipeline that would provide 3 or 4 watering sites over a several mile area would be excellent mitigation/enhancement for disturbance caused by the mine. We would like to see the initial water development at least 100 yards from the mine fence, with the other developments spaced out from the mine. The developments would need to provide ground level water access with escape ramps to facilitate use by small birds, mammals and reptiles. All developments would require livestock-proof fences and be available from May through October each year. Our biologist could help with development designs to provide yearlong water and site locations.

6. The UDWR feels that providing netting over the solution ponds will not be necessary at this time. However, because the potential does exist to create problems with birds (particularly migrating waterfowl), the solution ponds may need to be netted in the future if mortalities occur. The UDWR requests a monthly report be provided to our Cedar City office describing any wildlife problems/mortalities resulting from mine operations. This need not be detailed unless problems are encountered, at which time new mitigation strategies will need to be explored.

7. All disturbed areas will need to be revegetated at time of mine closure. Any removed top soil should be stock piled and saved for revegetation efforts. Please find attached a revegetation plant list with planting suggestions for valuable wildlife plants adapted for this area.

If you have any questions please call Stan Beckstrom, Biologist, or Bruce Bonebrake, Regional Habitat Manager, at our Cedar City office (801-586-2455).

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Utah State Clearinghouse at the above address or call Carolyn Wright at (801) 538-1535 or John Harja at (801) 538-1559.

Sincerely,

Brad T. Barber
State Planning Coordinator

BTB/ar

M/001/039

BEFORE THE

BOARD OF OIL, GAS & MINING

DEPARTMENT OF NATURAL RESOURCES

STATE OF UTAH

IN THE MATTER OF THE FORM AND AMOUNT OF THE SURETY FOR THE OK MINE IN BEAVER COUNTY, UTAH OPERATED BY CENTURION MINES CORPORATION	FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER APPROVING FORM AND AMOUNT OF THE SURETY Cause No. M/001/039 (Matter Noticed by the Board 4/23/97 as Agenda Item No. 1, but moved without objection by consent to the end of said Agenda)

Pursuant to notice, the above matter came on for hearing before the Board of Oil, Gas & Mining (the "Board") at its regularly scheduled hearing held at 3 Triad Center, 355 West North Temple, 5th Floor Board Hearing Room, Salt Lake City, Utah on April 23, 1997. Members of the Board present at the hearing included Chairperson Dave D. Lauriski and members Stephanie Cartwright, Jay L. Christensen, Thomas B. Faddies, Wayne Allen Mashburn and Raymond Murray. Board member Elise L. Erler was present, but she recused herself and took no part

in hearing or deciding this matter. Representatives of Centurion Mines Corporation, 331 South Rio Grande Street, Suite 201, Salt Lake City, UT 84110 (the "Operator") present at the hearing included Mr. Rick Havenstrite, Vice President of Operations. Counsel to the Operator was Thomas W. Bachtell. Utah Division of Oil, Gas & Mining ("Division") Permit Supervisor D. Wayne Hedberg and Division Senior Reclamation Specialist Thomas Munson testified as witnesses for the Division. Assistant Attorney General Patrick J. O'Hara acted as counsel to the Board. Assistant Attorney General Daniel G. Moquin acted as counsel to the Division.

Having duly considered the form and amount of the proposed surety, and all of the information provided to the Board at the hearing, the Board rules as follows:

FINDINGS OF FACT

1. The Utah Division of Oil, Gas and Mining (the "Division"), by and through staff members Mary Ann Wright, D. Wayne Hedberg and Thomas Munson, recommended that the Board approve a reclamation surety for Phase I (i.e., 128 acres) of the Operator's OK Mine (the "Mine"), in the form of a $550,000 certificate of deposit in the name of the Division issued by First Security Bank, all as set forth in that certain letter dated April 9, 1997 to the Board from the

Division, and the supplemental attachments thereto, which documents are attached hereto and hereby incorporated by reference collectively as Exhibit A (the "Recommendation").

2. As set forth in the Recommendation, in consultation with the Operator, the Division had, prior to the hearing, determined that the cost to reclaim the 128 acre portion of the Mine which is covered by Phase I of the Operator's notice of intention to mine will be $550,000 escalated to 2002 dollars, based on site-specific calculations reflecting the Division's cost to reclaim Phase I of the Mine.

3. Except as noted below, all of the facts sets forth in the Recommendation are hereby incorporated by reference and are hereby expressly adopted by the Board as the Board's own factual findings.

4. On April 22, 1997, prior to the hearing, the Division, through Ms. Wright, Mr. Hedberg and Mr. Munson, sent a supplemental letter to the Board to correct certain material typographical errors in the "Executive Summary" and draft Reclamation Contract within the Recommendation, and to attach a map of Phase I; that April 22, 1997 letter is attached hereto as Exhibit B and is hereby incorporated by reference (the "Staff Update").

5. To correct the aforesaid typographical errors, the Board hereby

adopts and incorporates the Staff Update as a finding of the Board as a supplemental revision to the original Recommendation.

6. First Security Bank is a federally-chartered bank authorized to do business in Utah and the United States.

7. To assist the Division and the Board in monitoring compliance with this Order, the Operator is able to provide the Division with appropriately certified surveys (aerial, g.p.s., etc.), and disturbed area maps that accurately reflect the actual affected areas, at least once each year with its year end Annual Report. The surveys and maps shall be stamped and prepared under the direct supervision of a registered professional engineer or registered land surveyor.

CONCLUSIONS OF LAW

1. The Board has the authority under Utah Code Ann. Sec. 40-8-7(e) (1953, as amended) and Utah Administrative Code R647-4-113.4 to determine the form and amount of the reclamation surety for the above-captioned mining operation.

2. The Board has the power, under Utah Administrative Code R647-4-113.4.12, to accept as a reclamation surety a First Security Bank certificate of deposit payable to the Division in the form and amount attached to the Recommendation and Staff Update.

3. A First Security Bank certificate of deposit payable to the Division in the exact amount of $550,000 issued and subject to the conditions stated in that certain April 8, 1997 draft letter to First Security Bank jointly from the Division and the Operator (see copy attached as part of the Recommendation and Staff Update) is a form and amount of reclamation surety acceptable to the Board in this matter.

4. Pursuant to Utah Administrative Code R647-5-101 and Utah Code Ann. §63-46b-5, the Board has considered and decided this matter arising under Utah Administrative Code R647-4-113 (i.e., form and amount of a mine reclamation surety) as an informal adjudication.

5. This Findings of Fact, Conclusion of Law and Order ("Order") is based on the facts appearing in the Division's files and the facts presented in evidence at the above-described hearing, and constitutes the signed written order stating the Board's decision and the reasons for the decision, all as required by the Administrative Procedures Act, Utah Code Ann. § 63-46b-5(i) and Utah Administrative Code R647-5-106.11.11 and -106.11.12.

6. Notice re Administrative and Judicial Review: As required by Utah Code Ann. § 63-46b-5(i)(iii) & (iv) and Utah Administrative Code R647-5-106.11.12 and -106.11.13, the Board hereby notifies all parties in interest that they

have the right to seek judicial review of this final Board Order in this informal adjudication by filing a complaint with the appropriate District Court within 30 days after the date that this Order issued. Utah Code Ann. § 63-46b-14(3)(a) and -15. As an optional alternative to seeking immediate judicial review, and not as a prerequisite to seeking judicial review, the Board also hereby notifies parties that they may elect to request that the Board reconsider this Order, which constitutes a final agency action of the Board. Utah Code Ann. § 63-46b-13, entitled, "Agency review - Reconsideration," states:

> "(1) (a) Within 20 days after the date that an order is issued for which review by the agency or by a superior agency under Section 63-46b-12 is unavailable, and if the order would otherwise constitute final agency action, any party may file a written request for reconsideration with the agency, stating the specific grounds upon which relief is requested.
> (b) Unless otherwise provided by statute, the filing of the request is not a prerequisite for seeking judicial review of the order.
> (2) The request for reconsideration shall be filed with the agency and one copy shall be sent by mail to each party by the person making the request.
> (3) (a) The agency head, or a person designated for that purpose, shall issue a written order granting the request or denying the request.
> (b) If the agency head or the person designated for that purpose does not issue an order within 20 days after the filing of the request, the request for reconsideration shall be considered to be denied."

Id. The Board also hereby notifies the parties that Utah Administrative Code R641-110-100, which is part of a group of Board rules entitled, "Rehearing and Modification of Existing Orders," states:

"Any person affected by a final order or decision of the Board may file a petition for rehearing. Unless otherwise provided, a petition for rehearing must be filed no later than the 10th day of the month following the date of signing of the final order or decision for which the rehearing is sought. A copy of such petition will be served on each other party to the proceeding no later than the 15th day of that month."

Id. See Utah Administrative Code R641-110-200 for the required contents of a Petition for Rehearing. If there is any conflict between the deadline in Utah Code Ann. § 63-46b-13 (1953, as amended) and the deadline in Utah Administrative Code R641-110-100 for moving to rehear this matter, the Board hereby rules that the later of the two deadlines shall be available to any party moving to rehear this matter. If the Board later denies a timely petition for rehearing, the party may still seek judicial review of the Order by perfecting a timely appeal with the appropriate District Court within 30 days after the date the Board issues its ruling of denial (i.e., actual date of denial or date of denial deemed by law).

ORDER

Based on the foregoing Findings of Fact and Conclusions of Law, IT IS HEREBY ORDERED:

The Operator shall, prior to commencing mining operations, provide the Division, and the Division shall accept from the Operator as a suitable reclamation surety, a First Security Bank certificate of deposit in the form attached

to the Recommendation, payable to the Division, to apply to the 128 acres (Phase I of the Mine) described in the Recommendation and Staff Update. The certificate of deposit shall be made payable to the Division in the exact amount of $550,000, and shall be subject to the terms and conditions set forth in that certain draft April 8, 1997 letter (see copy attached to the Recommendation) to First Security Bank jointly from the Division and the Operator. If the Operator fails to provide said surety to the Division by no later than December 31, 1997, the Operator will need to come back to the Board at a de novo hearing to re-request approval as to the form and amount of the surety. Also, the Operator may not engage in any mining activity outside the 128 acres (Phase I) as described more particularly in the corrected legal description and map included as part of the Recommendation and Staff Update, without first coming back to the Board to request approval as to the form and amount of the surety on any such additional acreage. To assure compliance with this Order, the Operator shall provide the Division with appropriately certified surveys (aerial, g.p.s., etc.), and disturbed area maps that accurately reflect the actual affected areas, at least once each year with its year end Annual Report. The surveys and maps shall be stamped and prepared under the direct supervision of a registered professional engineer or registered land surveyor.

ISSUED this 7 day of May, 1997.

BOARD OF OIL, GAS & MINING

By _____
Dave D. Lauriski
Its Chairperson

CERTIFICATE OF SERVICE

I hereby certify that, on the 8 day of May, 1997, I mailed, postage prepaid, a true and correct copy of the foregoing FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER APPROVING FORM AND AMOUNT OF THE SURETY to the following:

Centurion Mining Corporation
Attn: Rick Havenstrite
Vice-President of Operations
331 South Rio Grande Street, Suite 201
Salt Lake City, UT 84101

Thomas W. Bachtell, Esq..
Pruitt, Gushee & Bachtell
Attorney for Centurion Mining Corp.
Suite 1850 Beneficial Life Tower
Salt Lake City, UT 84111-1495

I further certify that I caused copies of same to be hand-delivered on said date to:

Mr. James W. Carter
Director
Division of Oil, Gas & Mining
Department of Natural Resources, State of Utah
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Mr. D. Wayne Hedberg
Permit Supervisor
Division of Oil, Gas & Mining
Department of Natural Resources, State of Utah
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Mr. Lowell P. Braxton
Deputy Director
Division of Oil, Gas & Mining
Department of Natural Resources, State of Utah
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Mr. Thomas Munson
Senior Reclamation Specialist
Division of Oil, Gas & Mining
Department of Natural Resources, State of Utah
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Patrick J. O'Hara, Esq.
Assistant Attorney General, State of Utah
Attorney for the Board of O, G, M
1594 West North Temple, Suite 300
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Salt Lake City, UT 84114-0855

Daniel G. Moquin, Esq.
Assistant Attorney General, State of Utah
Attorney for the Division of O, G & M
1594 West North Temple, Suite 300
Box 140855
Salt Lake City, UT 84114-0855

Ms. Mary Ann Wright
Associate Director--Mining
Division of Oil, Gas & Mining
Department of Natural Resources, State of Utah
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Christine Allred
Christine Allred
Secretary to the Board

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

April 9, 1997

TO: Board of Oil, Gas and Mining

THRU: Mary Ann Wright, Associate Director

THRU: D. Wayne Hedberg, Permit Supervisor

FROM: Tom Munson, Senior Reclamation Specialist

RE: Request for Board Approval, Amount and Form of Reclamation Surety, Centurion Mines Corporation, OK Mine, M/001/039, Beaver County, Utah

The Division seeks Board approvals of the amount and form of reclamation surety to be provided by Centurion Mines Corporation for the OK Mine, located in Beaver County, Utah. The form of surety will be a Certificate of Deposit, with First Security Bank of Utah for the amount of $550,000. This amount is the reclamation surety calculated for the disturbance associated with Phase I.

Centurion Mines Corporation plans to initiate their large mining operation by May 2, 1997. At that time the Reclamation Surety will be in place for Phase I. The mining operation will be a phased operation and the subsequent phases, Phase II and III, will be bonded separately and approved at such time as they chose to initiate those phases.

Attached for your review are copies of the following documents:

1. Summary checklist
2. Executive Summary
3. Location Map
4. Reclamation surety estimate
5. Reclamation Contract (Form MR-RC)
6. Certificate of Deposit - (Attachment B)

Thank you for your time and consideration of this request.

Attachments
o:\board\m001039.brd

EXHIBIT
A

DOGM MINERALS PROGRAM

Checklist for Board Approval
of
FORM AND AMOUNT OF SURETY

Prepared April 9, 1997

Company Name Centurion Mines Corporation
Mine Name OK Mine
File No. M/001/039

Items	Provided Yes	Provided No	Remarks
Executive Summary	X		
Location Map	X		
Reclamation Bond Estimate	X		
Signed Reclamation Contract	X		
Signed Power of Attorney/ Affidavit of Qualification		X	N/A
Bond/Reclamation Surety	X		Executed Certificate of Deposit to be in place prior to operating beyond the current 5 acre small mine notice (@May 2, 1997).
Surety Sign Off (Other State/Federal Agencies)		X	N/A
RDCC contacted	X		

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EXECUTIVE SUMMARY

Prepared January 8, 1997
Updated April 9, 1997

Mine Name: OK Mine
Operator: Centurion Mines Corporation
331 South Rio Grande Street - Suite 201
Salt Lake City, Utah 84110

Telephone: (801) 534-1120
Contact Person: Rick Havenstrite

I.D. No.: M/001/039
County: Beaver
New/Existing: New
Mineral Ownership: Fee
Surface Ownership: Fee
Lease No.(s): N/A
Permit Term: Life of Mine

Life of Mine: 10 years +

Legal Description: South ½ of Section 6 and North ½ of Section 7, Township 27 South, Range 11 West, SLB&M, Beaver County, Utah

Mineral(s) to be Mined: Copper produced from the following oxide copper minerals - azurite, malachite and tenorite

Acres to be Disturbed: 275 acres for Phases I, II & III, (Phase I = 128 acres)

Present Land Use: Hunting, grazing, rock collecting, off-road vehicles

Postmining Land Use: Grazing and recreation

Variances from Reclamation Standards (Rule R647) Granted: **R647-4-111-7-highwalls; 111.9 - dams and impoundments; 111-12-topsoil redistribution (pit walls); and 111-13- Revegetation (pit walls).**
(1) pit highwalls will be allowed to remain at angles steeper than 45 degrees. Backfilling or otherwise flattening the pit walls at the end of mining would have the effect of making the remaining ore uneconomic for future mining. The current pit walls are stable at approximately 60 degrees and have been for 25 years.
2) dams & impoundments: A small impoundment of less than several hundred square feet will be left based on the following facts. It will have a reduced drainage area following reclamation. The embankment will be stabilized with coarse rock to prevent failure. It will also provide some riparian habitat and limited water for wildlife following reclamation. It is not considered large enough to constitute a hazard and will remain an overall benefit to an arid environment.
3) topsoil redistribution and revegetation: It is not practical to regrade or revegetate pit walls. The pit walls will be left at approximately 55 degrees. The walls will be solid rock. Based on the condition of the current pit, it is highly unlikely that vegetation can be established on these walls.

Soils and Geology

Soil Description: Soils are all derived from decomposed granite with varied amounts of silt, sand and rocks. Soil depths in the mine and dump areas are typically less than 5 feet and are underlain by bedrock. In the area of the pad, soils contain a higher degree of silt and sand and the depth to bedrock is 5 to 20 feet typically.

pH: 8.1 - 8.3

Special Handling Problems: None

Geology Description: The project is located in low foothills and the top of a gently southernly sloping alluvial fan. The entire area is underlain by a massive igneous (granite) intrusion. A nearly vertical fault zone cut the granitic formation and this fault was later mineralized with copper minerals such as azurite, malachite, and tenorite. The relatively homogenous granitic rock formation extends at least 3 miles in every direction.

Hydrology

Ground Water Description: There have been hundreds of holes drilled in the vicinity of the project. The holes drilled in the vicinity of the pit, 400 feet below the bottom of the pit, were dry. Other holes drilled within the vicinity of the project encountered minor amounts of brackish water. Only several holes encountered any significant water and these holes were located next to one of the two main drainages coming from the hills above the project. Hole MD-1 was drilled in the vicinity of the pad to a depth of 705 feet and encountered negligible water. Hole MW-1, southwest side of the pad, encountered good water and is down gradient of the pad and is to remain a monitoring well.

Surface Water Description: There are no streams or springs within 5 miles of the operation. A major wash exists to the west of the project which collects surface runoff from a large area to the west and north of the project. This wash is ephemeral and will not be disturbed. It and only experiences flows during extremely intense storms.

Water Monitoring Plan: Groundwater will be monitored for 8 consecutive months prior to the commencement of operation and semi-annually thereafter. Two current groundwater monitoring wells have been located immediately down gradient (south) of the proposed heap leach pad and processing ponds area.

Ecology

Vegetation Type(s); Dominant Species: Big sagebrush, rabbitbrush, squirreltail grass, indian ricegrass

Percent Surrounding Vegetative Cover: 21%

Wildlife Concerns: Only concern are the antelope. Centurion intends to construct a six foot high chain link fence around the heap leach pad and processing plant area. In addition, a water trough will be placed and maintained outside the fenced area.

Surface Facilities: Heap leach pad, SX/EW (solvent extraction/electrowinning) process plant, office building, mine shop.

Mining and Reclamation Plan Summary:

During Operations: The mining operation will consist of three phases as follows: *Phase I* - construction of a fully lined (57 acre) heap leach pad, a (2 acre) solvent extraction/electro-winning(SX/EW) processing plant, and the re-mining and leaching of 2 million tons of (previously mined) stockpiled copper ore surrounding the old O.K. Pit. The SX/EW process produces a copper sulfate electrolyte which is pumped into

electro-winning cells where 99.998% pure copper is electroplated onto stainless steel sheets. The copper ore is leached with a dilute sulfuric acid solution. *Phase II* - strip mining new ore by widening and deepening the existing O.K. pit. Overburden to ore stripping ratio is approximately 1:1. Run of mine ore will be stacked on the heap and leached. *Phase III* - development of the new eastern extension of the ore zone (Mary I pit). This pit will merge into the eastern side of the O.K. pit. All environmental permits will be in place prior to initiation of operations. Reclamation bonding of this operation will occur in phases. Approval of each phase will remain contingent on adequate permitting and bonding for each phase. All process water will be contained in a fully engineered facility and all environmental controls will be in place prior to initiating leaching operations. Approximately 10 million tons of ore and 10 million tons of waste material will be produced. Variances were granted to topsoiling and reseeding requirements for inaccessible and unsafe pit benches and highwalls. Variances were granted to allow pit highwalls to remain at angles steeper than 45 degrees, and to allow the pits to impound water following mining.

After Operations: The heap will be rinsed with fresh water rinsate to comply with final effluent standards set by the State Division of Water Quality. Solution in ponds will be allowed to evaporate. Remaining sludge will be tested for metals and subjected to meteoric mobility analyses. All remaining hazardous material from these ponds will be disposed of at an appropriately licensed facility. Pond liners will be folded or dozed into the pond bottoms and covered with 5-10 feet of fill. All dump slopes and heap leach pad slopes will be graded to 3H:1V, and covered with one foot of topsoil and re-vegetated. Monitoring wells will be plugged according to state requirements. A water well will remain to provide a long-term source of water for local wildlife. The processing facilities will be demolished and removed or buried onsite. Exposed concrete foundations will be broken up and buried. The process facilities area will be graded to blend with the adjacent topography and re-vegetated. All non-hazardous or non-toxic materials will be buried. Any remaining hazardous or toxic materials will be disposed of according to federal and state regulations. Approximately one foot of topsoil will be replaced on all disturbed, non-pit areas that originally had topsoil. These areas will be roughened, terraced and reseeded with the approved seedmix to allow postmining use by livestock and wildlife.

Surety

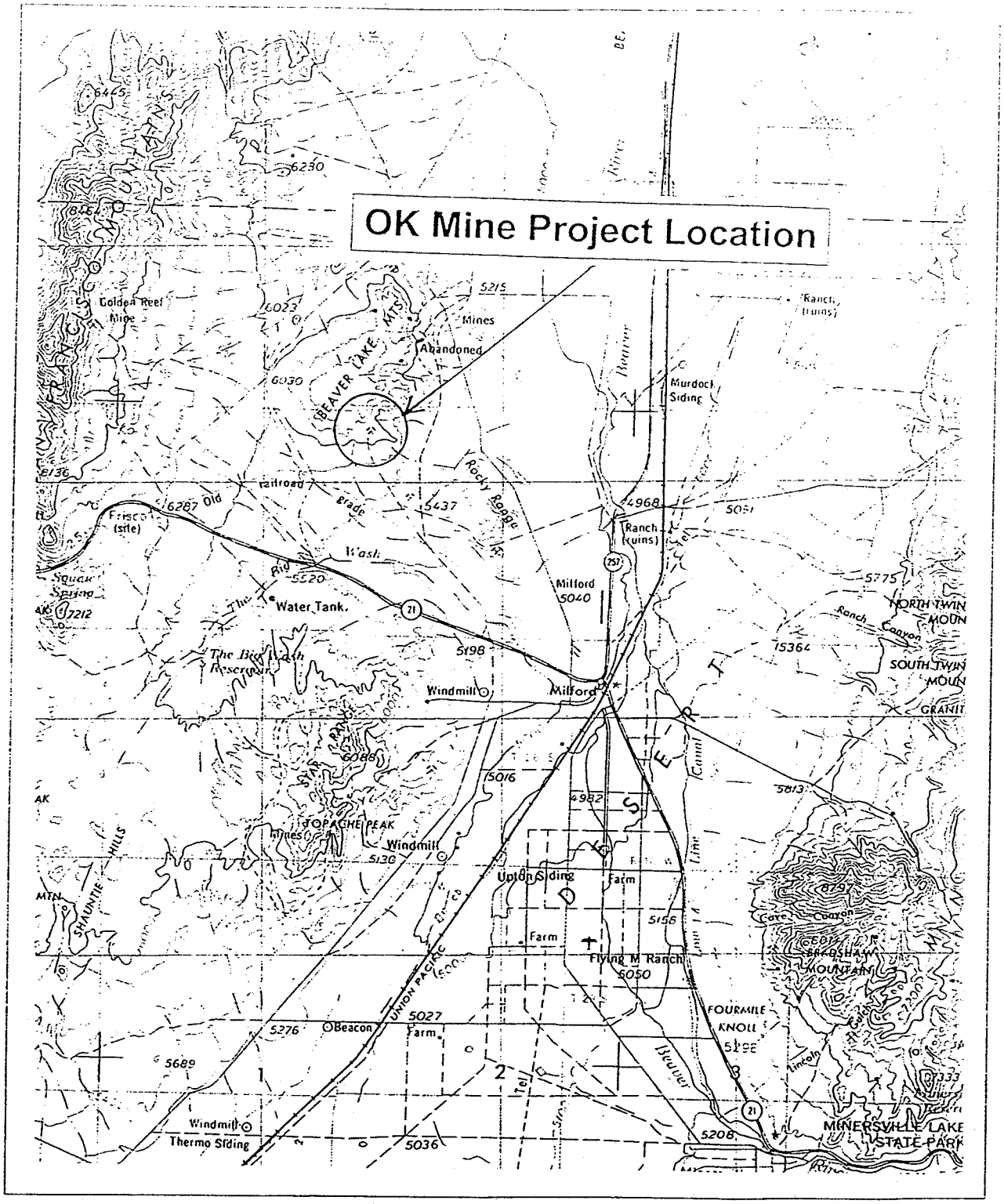
Amount: $550,000
Form: Certificate of Deposit - First Security Bank of Utah
Renewable Term: 5 years (2002)

jb
M001039.exc

CENTURION MINES CORPORATION

331 SOUTH RIO GRANDE STREET, SUITE 201 P.O. BOX 2365 SALT LAKE CITY, UTAH 84110 801-534-1120
FAX: 801-534-1120

December 1996



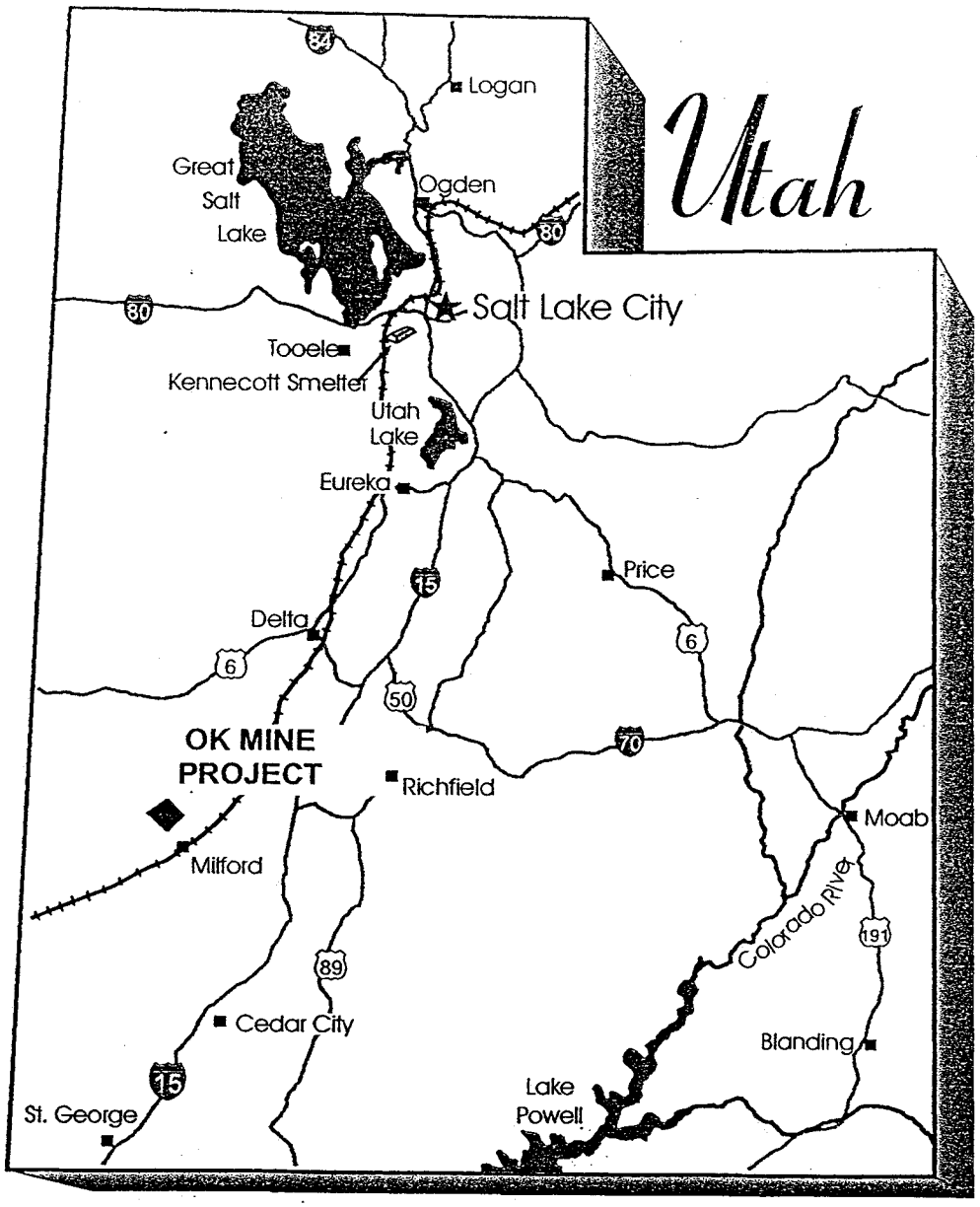
OK Mine Project Location Map

Scale 1:125,000
(approximately 1 inch equals 2 miles)

Fig. 2

CENTURION MINES CORPORATION

331 SOUTH RIO GRANDE STREET, SUITE 201 P.O. BOX 2365 SALT LAKE CITY, UTAH 84110 801-534-1120
FAX: 801-534-1120



LARGE MINE PERMIT APPLICATION
OK MINE BEAVER COUNTY, UTAH
AUGUST 1996

RECLAMATION ESTIMATE
Centurion Mines Corporation
OK Mine - Phase 1 ONLY
M/001/039
Prepared by Utah State Division of Oil, Gas & Mining

last revision 03/21/97
filename M01-39.WB2 page "phase 1"
Beaver County

Details of Final Reclamation

-This estimate is a revised version of the Centurion estimate included in the Jan. 7, 1997 submission
-This estimate is for reclamation costs for Phase 1 disturbances only!
-20% of the total ore on the heap is assumed to require rinsing with water & lime at the time of final recl
-Heap slopes at working angle sof 2.5h:1v will be graded to 3h:1v, topsoiled & seeded
-Dump slopes at the angle of repose will be graded to 3h:1v, topsoiled & seeded
-Solutions in the ponds will be evaoprated & remaining sludges analyzed & disposed of appropriately
-All structures & facilities will be demolished & removed; asphalt & concrete debris buried onsite
-Improved pre-existing roads will be reclaimed to a 15 foot width
-Road reclamation will included regrading, ripping, topsoiling & seeding
-All disturbances except pit highwalls will receive one foot of topsoil
-Pit bottoms & their access roads will receive topsoil & be seeded
-Pit highwalls will be allowed to remain at angles steeper than 45 degrees; no topsoil or seeding
-Proposed total disturbance for Phases 1-3 of the OK Mine = 275.00 acres
-Estimated total disturbed area for Phase 1 - OK Mine = acres
*-Total disturbed area to be reclaimed = **128.00 acres***

Activity	Quantity	Units	$/unit	$	notes
Mobilization				636	(1)
Regrading				22,193	(1)
Removal of structures				42,950	(1)
Topsoil replacement				170,065	(1)
Contour scarification				9,256	(1)
Seed & planting				15,169	(1)
Revegetation monitoring (none in Phase 1)				0	(1)
Project supervision				13,368	(1)
subtotal				**273,637**	
Leach Pad - 53 Acres					
Rinse Heap - assumed rinsing 20% of total ore using the volume & rate shown below					
ASSUMPTIONS: 1.25lb lime per ton of ore; 120 gal water per ton ore; apply water at 1,000 gpm					
	tons ore	gal h2o/tn	h20 gpm	#days	#months
	2,000,000	120	1000	166.7	5.6
lime (1.25 lbs/ton)x($0.025/lb)x(10M ton)x(20%)		2,000,000	ton	0.031	62,500	(2)
generator rental		6	month	830	4,980	(3)
generator fuel, oil, maintenance		6	month	5,868	35,208	(4)
pump rental & maintenance		6	month	1,230	7,380	(5)
rinse supervisor		24	weeks	856	20,544	(2)
rinse laborers	2	6	month	2,588	31,056	(2)
miscellaneous supplies/piping/vehicles, etc.		6	month	1,000	6,000	(6)
subtotal for heap rinse & evaporation					**167,668**	
			Subtotal		441,305	
			10% Contingency		44,131	
			Subtotal		$485,436	
		Escalate for 5 years at 2.52% per yr			64,326	
			Total		$549,762	
	Rounded surety amount in yr 2002-$				**$550,000**	
Average cost per disturbed acre =	$4,297				**PHASE 1**	

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Average cost per disturbed acre =	$4,297	PHASE 1

JK Mine
M/001/039
notes

Beaver County

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page phase 1

(1)	taken from summary of reclamation cost page in Centurion estimate
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(1)	taken from summary of reclamation cost page in Centurion estimate
(2)	unit cost used in previous estimate M/037/088
(3)	Rental Rate Blue Book, 60KW, 107 hp, diesel generator, monthly rental
(4)	Rental Rate Blue Book, 60KW, 107 hp, diesel generator, monthly operating cost
(5)	Means Heavy Construction Cost Data 1997, 152-430-3180, 6"D x8"S, 60 hp pump
(2)	unit cost used in previous estimate M/037/088
(2)	unit cost used in previous estimate M/037/088
(6)	DOGM estimate