DOGM RECEIVED DEC. 20, 1993

DRAFT

RECLAMATION COST ESTIMATE

GENEVA STEEL PLAN OF OPERATIONS
UTU-71132

TOTAL COST ESTIMATE

This estimate is based on reclamation on public land only. It is assuming recontouring of two waste dumps totaling 41.01 acres from approximately a 34 to 23 degree slope, ripping and recontouring of 0.6 acres of haul road, spreading topsoil over the recontoured areas and revegetating.

Recontouring Waste Dumps & Haul Road:		
Assume:	237,866 cubic yards (Geneva estimate):	
	237,866 cy x 1 hr/435 cy = 547 hours	
	547 hrs x 183.41 $/hr =	$100,325.27
Hauling Top Soil From Ant Pile to Waste Dumps:		
Assume:	28,949 cubic yards (Geneva estimate):	
	28,949 cy x 1hr/171 cy = 169 hours	
	169 hours x 236.95 $/hr =	40,044.55
Spreading Top Soil:		
Assume:	28,949 cubic yards	
	28,949 cy x 1hr/350 cy = 83 hours	
	83 hours x 183.41 $/hr =	15,223.03
Rip Haul Road:		
Assume:	0.6 acres at $295/acre =	177.00
Drill and Seed Waste Dumps and Road:		
Assume:	Seed mix at $20/acre for 41.61 acres =	832.20
	Drill at $25/hr for 40 hours =	1,000.00
	80% reseed =	1,466.72
Mobilization:		
Assume:	$60/hr x 4 hrs x 3 equip. =	720.00
RECLAMATION SUB-TOTAL		159,788.77
Additional Costs:		
Administrative Fee - 18% =		28,761.98
Supervision at $15/hr for 160 hours =		2,400.00
SUB-TOTAL 1993 DOLLARS =		190,950.75
Escalation for 5 years at 1.42% =		2,711.50
TOTAL IN 1998 DOLLARS =		193,662.25

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RECLAMATION COST ESTIMATE

GENEVA STEEL PLAN OF OPERATIONS
UTU-71132

Recontouring (General format and info. derived from DOGM)

ASSUME:
-CAT D8N dozer, 285hp, U-blade, track type
-Information form CAT Performance Handbook, edition 23
-Operator: Average, correction factor = 0.75
-Material: loose stockpile, correction factor = 1.20
-Slot dozing: factor = 1.20
-Visibility: excellent, factor = 1.00
-Job efficiency: 50 min/hr., factor = 0.83
-Direct Drive Trans: factor = 0.80
-Material Weight: 2700 lb/cy, factor = 0.87
-Grade: -20%, factor = 1.4
-Average push distance: 200 feet

-Uncorrected maximum production: 500 cy/hr
-Factors from above: 0.75, 1.20, 1.20, 1.00, 0.83, 0.80, 0.87, 1.4
-Overall correction factor: 0.87
-ESTIMATED PRODUCTION(Max prod x correction factor): 435 cy/hr

From rental rate blue book 4/93:

	Equip	Operator	
Hourly Cost, D8N, U-blade	115.00	27.10	
Regional Factor	1.05	1.05	
Subtotals	120.75	28.46	
Subtotal Equipment/Operating Cost			149.21($/hr)

From Means Site Work Cost Data 1993:

Crew B-10B, 1-Equip Operator(med)	34.20
COST PER HOUR	183.41($/hr)

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UTU-71132

Spreading (General format and info. derived from DOGM)
ASSUME:
-CAT D8N dozer, 285hp, U-blade, track type
-Information form CAT Performance Handbook, edition 23
-Operator: Average, correction factor = 0.75
-Material: loose stockpile, correction factor = 1.20
-Slot dozing: factor = 1.20
-Visibility: excellent, factor = 1.00
-Job efficiency: 50 min/hr., factor = 0.83
-Direct Drive Trans: factor = 0.80
-Material Weight: 1600 lb/cy, factor = 0.70
-Grade: -20%, factor = 1.4
-Average push distance: 200 feet

-Uncorrected maximum production: 500 cy/hr
-Factors from above: 0.75, 1.20, 1.20, 1.00, 0.83, 0.80, 0.70, 1.4
-Overall correction factor: 0.70
-ESTIMATED PRODUCTION(Max prod x correction factor): 350 cy/hr

From rental rate blue book 4/93:

	Equip	Operator	
Hourly Cost, D8N, U-blade	115.00	27.10	
Regional Factor	1.05	1.05	
Subtotals	120.75	28.46	
Subtotal Equipment/Operating Cost			149.21($/hr)

From Means Site Work Cost Data 1993:

Crew B-10B, 1-Equip Operator(med) 34.20

COST PER HOUR 183.41($/hr)

27.14 FUTURE MT. LION
12.52 MT LION
39.66 TOTAL
1.21
40.87
0.14
41.01

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RECLAMATION COST ESTIMATE

GENEVA STEEL PLAN OF OPERATIONS
UTU-71132

TOTAL COST ESTIMATE

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Assume:	28,949 cubic yards (Geneva estimate):	
	28,949 cy x 1hr/171 cy = 169 hours	
	169 hours x 236.95 $/hr =	40,044.55

⇒ $1.38/cy

Spreading Top Soil:

Assume:	28,949 cubic yards	
	28,949 cy x 1hr/350 cy = 83 hours	
	83 hours x 183.41 $/hr =	15,223.03

⇒ 0.53/cy

Rip Haul Road:

Assume:	0.6 acres at $295/acre =	177.00

⇒ D9N AT ~0.80 MPH OR 70.4 FT/MIN 1 MPH = (88 FT/MIN)

Drill and Seed Waste Dumps and Road:

Assume:	Seed mix at $20/acre for 41.61 acres =	832.20
	Drill at $25/hr for 40 hours =	1,000.00
	80% reseed =	1,466.72

1.04 ACRE/HR

Mobilization:

Assume:	$60/hr x 4 hrs x 3 equip. =	720.00

DOZER, TRUCK, LOADER OR DOZER, SCRAPER, DOZER?

RECLAMATION SUB-TOTAL	159,788.77

Additional Costs:

Administrative Fee - 18% =	28,761.98
Supervision at $15/hr for 160 hours =	2,400.00
Contingency - 10% =	15,978.88
SUB-TOTAL 1993 DOLLARS =	206,929.63
Escalation for 5 years at 1.42% =	2,938.40
TOTAL IN 1998 DOLLARS =	209,868.03

DENVER OFFICE

ADDED

⇒ $5,117/ACRE

- WHAT ABOUT REGRADING & SEEDING OF ANT HILL AREA?
- SUPERVISION FOR 160 HRS; PROJECT WOULD BE IN STEPS (1) RECONTOURING (2) HAULING SOIL (3) SPREAD SOIL (4) RIP ROAD (4) SEED AREAS
- NO MULCH?

GENEVA'S $169,000

GENEVA STEEL

P.O. BOX 2500
PROVO, UTAH 84603

TELEPHONE: (801) 227-9000
FAX: (801) 227-9090

DOGM RECEIVED
DEC. 20, 1993

DEPT. OF THE INTERIOR
RECEIVED
NOV 16 1993
Bureau of Land Management
Beaver River Resource Area

November 15, 1993

Attention: Gina Pack
Resource Area Geologist
Beaver River Resource Area
Cedar City District
Bureau of Land Management
Department of the Interior
365 South Main
Cedar City, Utah 84720

Dear Gina:

Enclosed are the calculations of the Reclamation Survey for the Plan of Operations submitted to your office on our iron mines. Included is a map identifying reclamation areas and acreage. Also included is a summary table showing a breakdown of costs.

As you probably know, this area is currently covered by an existing State permit which is in turn covered by an Interim Surety Bond issued by the State of Utah. The Interim Board will be replaced by a permanent bonding mechanism pending approval of Geneva's Amended Reclamation Permit currently being evaluated by the State (approval is suppose to be completed by December 31, 1993). The proposed surety amount under the State permit is in excess of $500,000. It is assumed that whatever amount is finally approved would be well in excess of the amount determined for the area covered under the Plan of Operation.

By way of note, the areas identified in the Plan of Operation are the areas projected for disturbance during the next five years. The State of Utah reviews their permits every five years and has indicated that this is the preferred time period for long-term mine reclamation determinations. Of course, Geneva understands that disturbance of any area not included in the Plan of Operation would require amendment, whether it occurred before or after the five year State review period.

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If you have any questions about these documents, please contact Jerry Grover, Environmental Engineer, at (801) 227-9461.

Sincerely,

JR Starley

J.R. Starley
Chief Engineer-Environment

cc: Max Sorenson w/o enclosures
Jerry Grover w/enclosures
Roy Benson w/enclosures

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500 feet

SECTION G-G' CONT. ON SHT. 6

KEY

INDICATOR

- CURRENT MT. LION DUMP
- FUTURE MT. LION DUMP
- PRE-FLPMA DISTURBANCE

TOPOGRAPHIC CROSS-SECTION

E E'

BY	DATE	REVISIONS	NO.
LB	6/6/95	MODIFY BLM AREAS	2
LB	6/5/95	MINOR MODIFICATIONS	1

DRAWN IN AUTOCAD REL. 11
NO MANUAL REVISIONS ALLOWED

REF: AIR PHOTOGRAPHY BY AERO-GRAPHICS INC. 6/91
REF: DRAWING NO IM-101-4 X-SECTIONS G-G', H-H', J-J'

GENEVA STEEL — ENGINEERING DEPARTMENT

IRON MINES
SW CEDAR CITY, UTAH
FIVE YEAR MINE/RECLAMATION PLAN
CONTOUR INTERVAL: 10'

DRAWN BY 3/27/92 — KS PATTEN
DESIGN CHECKED
DESIGN ENG. — DATE
SAFETY CHECK
SEN. SUP. DESIGN ENG. — DATE

SHT 6 OF 6

IM-0100-3b

REV. 1

BLM Reclamation Calculation Table

BLM Reclamation Cost Summary

Area	Acres	RG	Cu. yard	Cost ($0.44/yd3)	TS	Cu. yds	Haul Cost* ($)	Sprd Cost ($17.13/Mft2)	Seed	Seed Cost ($/acre)	Cost**	Total Cost
Current Mt. Lion Dump - Dump top, slopes, and level areas	13.12	23°	6,933	3,063.42	4"	7,056	1,964.36	9,789.92	1	30.80	6,153.46	20971.16
Future Mt. Lion Dump - Dump top, slopes, and level areas	27.14	23°	230,933	102,035.58	6"	21,893	6,122.71	25,819.65	2	91.00	14,362.86	148340.80
Pre-FLPMA - Slopes	1.35	No	-	-		-	-	-		-	-	0.00
Subtotals:	41.61		237,867	105,099.01		28,949	8,087.07	35,609.57			20,516.32	169,311.96

*Seed mix: 1 - C.F.&I./USX
2 - New Area

**Cost includes price of seed plus $10.06/Mft2 for drilling.

Haul Cost Table

Area	Acres	TS	Acres	Cubic yards	Anthill Ave Dist(ft)	Ave % Grade	Loaded Eff. grade (%)	Unloaded Eff. grade (%)	Load/ Unload Time (min	Loaded Travel Time (min)	Unloaded Travel Time (min)	Cycle time Scraper (min)	Cycles/hr 50 min/hr	Yd3/hr	Time (hr)	Haul Cost* ($)
Current Mt. Lion Dump - Dump top, slopes, and level areas	13.12	4"	13.12	7,056	2750	6.1	8.4	-3.8	1.7	2.6	1.4	5.7	8.7	302.4	23.3	1,964.36
Future Mt. Lion Dump - Dump top, slopes, and level areas	27.14	6"	27.14	21,893	2800	5.7	8	-3.4	1.7	2.6	1.4	5.7	8.7	301.1	72.7	6,12[illegible].71
Pre-FLPMA - Slopes	1.35	No	-	-		-	-	-	-			-	-	-		
Subtotals:	41.61		40.26	28,949												8,087.07

COVER SHEET SAYS $236.95/HR

Load of 69 cy per cycle?

$84/hr.

BLM Reclamation Calculation Notes

Regrade (RG)

Regrade to 23° as per letter dated May 25, 1993. Cross-sections H-H' and J-J' on drawing IM-101-4 were overlaid with a 23° line and the area of cross-section to be cut was determined by AutoCadd to be 156 ft^2 for the current Mtn. Lion Dump and 3464 ft^2 for the future Mtn. Lion Dump. The length of dump crest to be cut was estimated to be 1200 ft for the current dump and 1800 ft for the future dump, respectively. Regrade volumes were:

Volume = cross-sectional cut × length.

$$\text{Volume (Current Dump)} = 156\ ft^2 \times 1200\ ft \times \frac{1\ yd^3}{27\ ft^3} = 6{,}933\ yd^3$$

$$\text{Volume (Future Dump)} = 3464\ ft^2 \times 1800\ ft \times \frac{1\ yd^3}{27\ ft^3} = 230{,}933\ yd^3$$

\$0.44/yd^3 from Means Cost Catalog

Top Soil (TS)

Acreage was determined by AutoCadd.

Volume = Acreage × depth

$$\text{Volume (Current Dump)} = 13.12\ \text{acres} \times \frac{43{,}560\ ft^2}{\text{acre}} \times \left(\frac{4}{12}\ ft\right) \times \frac{1\ yd^3}{27\ ft^3} = 7056\ yd^3$$

$$\text{Volume (Future Dump)} = 27.14\ \text{acres} \times \frac{43{,}560\ ft^2}{1\ \text{acre}} \times \left(\frac{6}{12}\ ft\right) \times \frac{1\ yd^3}{27\ ft^3} = 21{,}893\ yd^3$$

MEANS '93 (029-200-204-3920) 4" DEEP

Haul Cost as shown in bottom table, as per Cat Performance Book.

Spread cost was \$17.13 / 1000 ft^2 from Means Cost Book, for 4 inch deep
\$21.84 for 6 inch deep
(029-200-204-3850) 6" DEEP

$$\text{Cost (Current Dump)} = 13.12\ \text{acres} \times \frac{43{,}560\ ft^2}{} \times \frac{\$17.13}{} = \$9{,}789.92$$

BLM Reclamation Calculation Notes (cont.)

MEANS '93 (029-200-204-3850) SPREADING TOPSOIL 6" DEEP

Top Soil (Cont.)

$/1000SF ⇒ 9.90 LABOR + 34.50 EQUIP = $44.40/MSF 6" DEEP

INCLUDE O&P [(9.90)(1.52)+(34.50)(1.10)] = 53.00 × (0.881) = $46.69/1000SF

$$\text{Cost (Future Dump)} = 27.14 \text{ acres} \times \frac{43{,}560 \text{ ft}^2}{1 \text{ acre}} \times \frac{\$21.84}{1000 \text{ ft}^2} = \$25{,}819.65$$

MEANS '93 (029-300-308-5300) TRACTOR SPREADER INCLUDING O&P, EXCLUDING SEED COST $9.17/1000SF ⇒ $399/ACRE × 0.881 = $352/ACRE

Seed

Seed prices from Granite Seed Company. — $30.80/acre and $91.00/acre

Cost of seeding — $10.06/1000 ft² from Means Cost Catalog.

$436/ACRE

$$\text{Cost (Current Dump)} = 13.12 \text{ acres} \times \left(\frac{\$30.80}{\text{acre}} + \frac{\$10.06}{1000 \text{ ft}^2} \times \frac{43{,}560 \text{ ft}^2}{\text{acre}}\right) = \$6{,}153.46$$

SEED COST SEEDING

$$\text{Cost (Future Dump)} = 27.14 \text{ acres} \times \left(\frac{\$91.00}{\text{acre}} + \frac{\$10.06}{1000 \text{ ft}^2} \times \frac{43{,}560 \text{ ft}^2}{\text{acre}}\right) = \$14{,}362.86$$

Haul Costs

Distances and grades were taken from AutoCad. Other values were from the Catapillar Performance Handbook, Edition 21.