INTERNATIONAL
URANIUM (USA)
CORPORATION

Independence Plaza, Suite 950 • 1050 Seventeenth Street • Denver, CO 80265 • 303 628 7798 (main) • 303 389 4125 (fax)

March 1, 2001

Certified Mail Z 141 553 864
Return Receipt Requested

Philip Ting, Chief
Fuel Cycle Licensing Branch
ADDRESSEE ONLY
U.S. Nuclear Regulatory Commission
Mail Stop T-8A33
Washington, D.C. 20555

Re: International Uranium (USA) Corporation
SUA-1358
Docket No. 40-8681
White Mesa Mill, Blanding, Utah
License Condition Number 9.5 – Surety

Dear Mr. Ting:

Pursuant to License Condition No. 9.5 of Source Materials License No. SUA-1358, Docket No. 40-8681, and appropriate revisions of 10 CFR Part 40, Appendix A, Criterion 9, please find enclosed an updated reclamation and decommissioning cost estimate in support of the Surety Bond on the White Mesa Mill.

The attached reclamation estimate is based on the plan approved by License Amendment 15, issued on July 15, 2000. The revised reclamation estimate and surety amount is $10,365,457, which is an increase from the current surety amount of $10,064,794. The attached estimate represents a total revision to Attachment C of Revision 3.0 to the approved July 2000 Reclamation Plan.

The revised estimate was based on updated quotes for equipment rental, labor rates, fuel, and subcontractor services. In addition, the estimate takes credit for reclamation work recently completed on a portion of the current tailing cells, and the installation of ancillary facilities projected to be used during final reclamation and decommissioning. A summary of the updated unit costs and the work credits is included with the revised estimate.

NMSS01Public

If you have any questions on the attached revised reclamation and decommissioning cost estimate, please feel free to contact me at the letterhead phone or address.

Very truly yours,

Ron F. Hochstein
President and Chief Executive Officer

RFH:smc

Attachments

cc: William von Till
David C. Frydenlund
Michelle R. Rehmann
William N. Deal
Ron E. Berg

International Uranium (USA) Corporation

WHITE MESA MILL - RECLAMATION COST ESTIMATE

Comparison of January 2001 Estimate to July 2000 Estimate

		January 2001 Estimate	July 2000 Estimate	Increase (Decrease)
Mill Decommissioning		**$1,530,031**	$ 1,505,167	$ 24,864
Cell 2		**$1,152,941**	$ 1,082,870	$ 70,071
Cell 3		**$1,624,184**	$ 1,565,444	$ 58,740
Cell 4A		**$127,165**	$ 120,128	$ 7,037
Cell 1		**$1,308,315**	$ 1,234,212	$ 74,103
Miscellaneous		**$1,913,204**	$ 1,939,480	$ (26,276)
Subtotal Direct Costs		**$7,655,840**	$7,447,301	$208,539
Profit Allowance	10.00%	**$765,584**	$744,730	$ 20,854
Contingency	15.00%	**$1,148,376**	$1,117,095	$ 31,281
Licensing & Bonding	2.00%	**$153,117**	$148,946	$ 4,171
Long Term Care Fund		**$642,541**	$606,721	$ 35,820
Total Reclamation		**$10,365,457**	$10,064,793	$ 300,664

ATTACHMENT C

COST ESTIMATES

FOR

RECLAMATION

OF

WHITE MESA FACILITIES

BLANDING, UTAH

PREPARED BY

INTERNATIONAL URANIUM (USA) CORP.

1050 17th STREET, SUITE 950

DENVER, COLORADO 80265

January 2001

International Uranium (USA) Corp.

Cost Estimates for Reclamation

Of

White Mesa Mill

Blanding, Utah

January 2001

Source Material License No. SUA-1358
Docket No. 40-8681

International Uranium (USA) Corp.

Cost Estimates for Reclamation of White Mesa Mill

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Summary of Changes in January 2001 Reclamation Cost Update

Unit Cost Factors

- Update Equipment rental, mobilization, and maintenance costs, **Butler Machinery Company**, January 25, 2001
- Update Labor costs, **"Utah General Decision No. 000009, November 10, 2000"**
- Update Fuel cost, #2 Red Diesel and 85 Octane Unleaded gas, **BCL Distributing Company**, Blanding, Utah, January 23, 2001
- Update Screen Plant rental costs, **Power Motive Corporation**, Denver, Colorado, January 23, 2001
- Update Trackhoe and Metal Shear rental costs, **Power Motive Corporation**, Denver, Colorado, January 23, 2001
- Update Crane rental costs, **Crane Services, Inc.**, Albuquerque, New Mexico, January 23, 2001
- Update Highway Truck rental costs, **Cosby Trucking, Inc.**, Blanding, Utah, January 24, 2001
- Escalate **Long Term Care Fund** by December 2000 CPI-U factor (174.0)

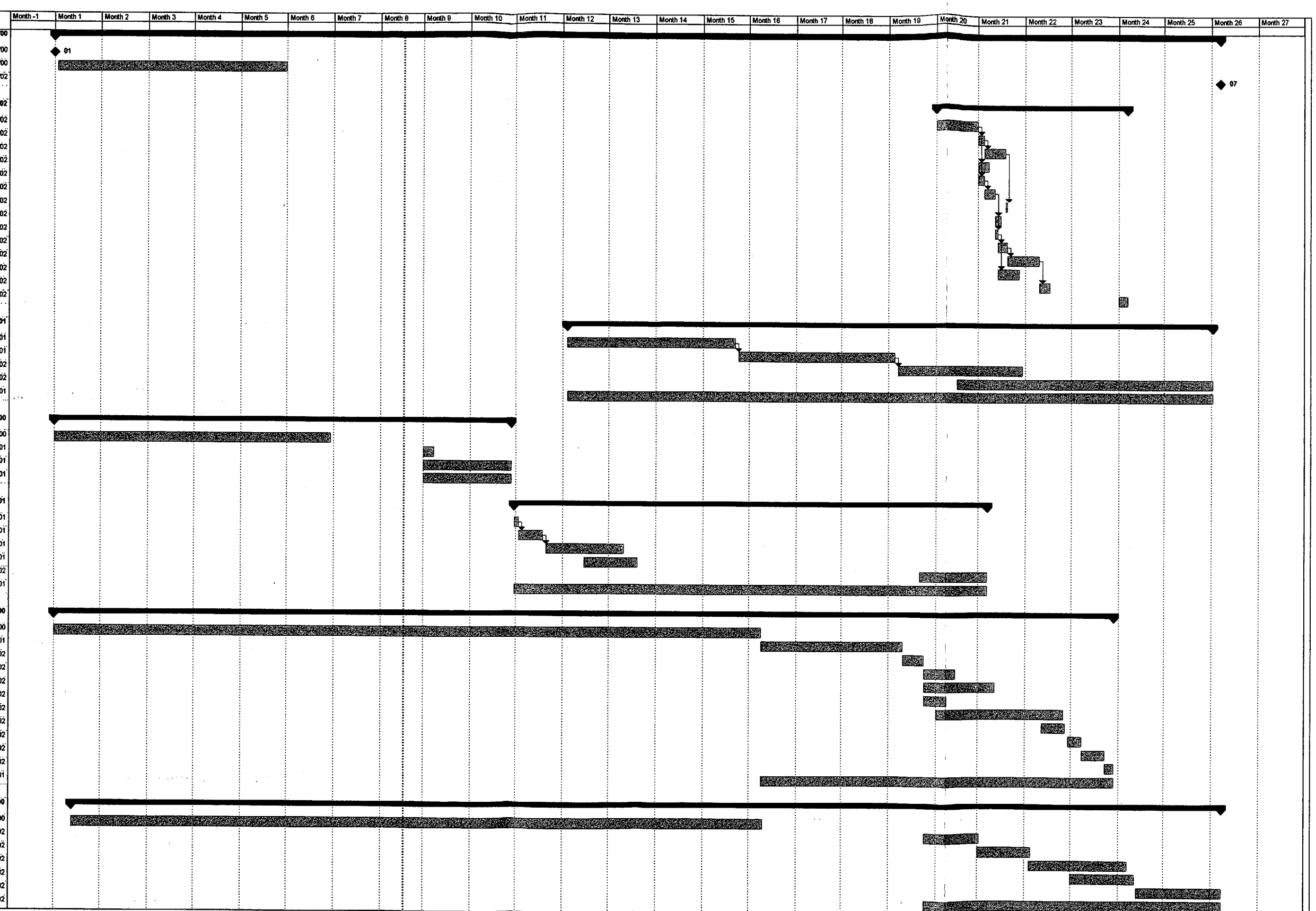
Plan Modifications

- Revised **Cell 3 Reclamation Cost** to reflect installation of **Platform Fill** completed since 1998. Area covered by **Platform Fill** increased from 25 acres to 34 acres based on aerial photograph of White Mesa Mill Site, June 21, 2000, and field observation from White Mesa Mill staff, January 2001.
- Revised cost of **Miscellaneous** items to reflect current installation of decontamination/wheel wash pad. Installation completed summer 1999.
- Revised **Mill Decommissioning** cost to reflect lower, more realistic, unit costs for concrete demolition of Office Building concrete.

WHITE MESA MILL RECLAMATION COST ESTIMATE
January 2001

		January 2001 Estimate
Mill Decommissioning		$1,530,031
Cell 2		$1,152,941
Cell 3		$1,624,184
Cell 4A		$127,165
Cell 1		$1,308,315
Miscellaneous		$1,913,204
Subtotal Direct Costs		$7,655,840
Profit Allowance	10.00%	$765,584
Contingency	15.00%	$1,148,376
Licensing & Bonding	2.00%	$153,117
Long Term Care Fund		$642,541
Total Reclamation		$10,365,457
Revised Bond Amount		$10,365,457

ID	Task Name	Duration	Start
1	**Project Startup**	550 days	Sat 07/01/00
2	Start Reclamation	0 days	Sat 07/01/00
3	Obtain Permit for Borrow Site Section 16	110 days	Mon 07/03/00
4	Reclamation Complete	0 days	Wed 08/07/02
5			
6	**Mill Decommissioning**	91 days	Fri 02/01/02
7	Mill Building Demolition	20 days	Fri 02/01/02
8	Ore Feed Demolition	2 days	Fri 03/01/02
9	SX Building Demolition	10 days	Tue 03/05/02
10	CCD Circuit Removal	5 days	Fri 03/01/02
11	Vanadium Oxidation Circuit Removal	2 days	Fri 03/01/02
12	Boiler Plant Demolition	5 days	Tue 03/05/02
13	Sample Plant Demolition	1 day	Tue 03/19/02
14	Misc. Tankage and Spare Parts	4 days	Tue 03/12/02
15	Cleanup Equipment Storage Area	2 days	Tue 03/12/02
16	Main Shop Warehouse Demolition	4 days	Thu 03/14/02
17	Mill Yard Decontamination	15 days	Wed 03/20/02
18	Ore Storage Pad Decontamination	10 days	Thu 03/14/02
19	Revegetate Mill Yard and Ore Pad	5 days	Wed 04/10/02
20	Remove Office Building	5 days	Sat 06/01/02
21			
22	**Wind Blown Contamination**	305 days	Mon 06/04/01
23	Scoping Survey	80 days	Mon 06/04/01
24	Characterization Survey	75 days	Mon 09/24/01
25	Windblown Cleanup	60 days	Mon 01/07/02
26	Final Status Survey	121 days	Fri 02/15/02
27	Quality Control	305 days	Mon 06/04/01
28			
29	**Reclamation of Cell 4A**	217 days	Sat 07/01/00
30	Dewatering	132 days	Sat 07/01/00
31	Remove Fencing	5 days	Thu 03/01/01
32	Remove Liner and Contaminated Materials	42 days	Thu 03/01/01
33	Quality Control	42 days	Thu 03/01/01
34			
35	**Reclamation of Cell 2**	223 days	Mon 04/30/01
36	Place Remainder of Bridging Lift	3 days	Mon 04/30/01
37	Place upper 12" Platform	12 days	Thu 05/03/01
38	Place Clay Layer (Radon Barrier)	37 days	Mon 05/21/01
39	Place Upper Random Fill (Frost Barrier)	25 days	Fri 06/15/01
40	Place Rock Armor	33 days	Mon 01/21/02
41	Quality Control	223 days	Mon 04/30/01
42			
43	**Reclamation of Cell 1-I**	499 days	Sat 07/01/00
44	Dewatering	465 edays	Sat 07/01/00
45	Crystal Removal	67 days	Tue 10/09/01
46	Contaminated Material Removal	10 days	Thu 01/10/02
47	Topsoil Application	15 days	Thu 01/24/02
48	Construct Outfall Channel	33 days	Thu 01/24/02
49	Installation of Clay Liner	11 days	Thu 01/24/02
50	Disposal of Mill Debris and Contaminated Soil	60 days	Fri 02/01/02
51	Place Lower Random Fill	11 days	Fri 04/12/02
52	Place Clay Layer (Radon Barrier)	7 days	Mon 04/29/02
53	Place Upper Random Fill (Frost Barrier)	11 days	Wed 05/08/02
54	Place Rock Armor	4 days	Thu 05/23/02
55	Quality Control	166 days	Tue 10/09/01
56			
57	**Reclamation of Cell 3**	542 days	Thu 07/13/00
58	Dewatering	325 days	Thu 07/13/00
59	Place Remainder of Bridging Lift	27 days	Thu 01/24/02
60	Place upper 12" Platform	25 days	Fri 03/01/02
61	Place Clay Layer (Radon Barrier)	47 days	Thu 04/04/02
62	Place Upper Random Fill (Frost Barrier)	31 days	Wed 05/01/02
63	Place Rock Armor	40 days	Thu 06/13/02
64	Quality Control	141 days	Thu 01/24/02



Project: White Mesa Mill Reclamation S
Date: Fri 02/16/01

Task | Progress | Summary | Rolled Up Split | Rolled Up Progress | Project Summary | Deadline
Split | Milestone | Rolled Up Task | Rolled Up Milestone | External Tasks | External Milestone

International Uranium (USA) Corporation
White Mesa Mill Reclamation
Revision 3.0 - July 2000 (updated January 2001)

MILL DECOMMISSIONING

Mill Building Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	720	$12,757
Mechanics	hrs	$13.86	640	$8,872
Laborers	hrs	$10.35	320	$3,311
Small Tools	hrs	$1.25	960	$1,200
Cat 769 Haul Truck	hrs	$66.18	640	$42,354
Truck Drivers	hrs	$12.74	640	$8,154
Cat 988 Loader	hrs	$104.70	160	$16,752
Cat 375 Excavator	hrs	$132.76	160	$21,241
PC-400 with Shears	hrs	$163.62	160	$26,179
65 Ton Crane	hrs	$62.80	160	$10,049
30 Ton Crane	hrs	$40.66	80	$3,253
Equipment Maintenance (Butler)	hrs	$10.56	1,360	$14,356
Concrete Removal	sf	$3.30	37,500	$123,750

Total Mill Building Demolition **$292,227**

Ore Feed Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	48	$850
Mechanics	hrs	$13.86	64	$887
Laborers	hrs	$10.35	32	$331
Small Tools	hrs	$1.25	96	$120
Cat 769 Haul Truck	hrs	$66.18	64	$4,235
Truck Drivers	hrs	$12.74	64	$815
Cat 988 Loader	hrs	$104.70	16	$1,675
Cat 375 Excavator	hrs	$132.76	16	$2,124
PC-400 with Shears	hrs	$163.62	16	$2,618
30 Ton Crane	hrs	$40.66		$0
Equipment Maintenance (Butler)	hrs	$10.56	112	$1,182

Total Ore Feed Demolition **$14,839**

SX Building Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	240	$4,252
Mechanics	hrs	$13.86	320	$4,436
Laborers	hrs	$10.35	160	$1,655
Small Tools	hrs	$1.25	480	$600
Cat 769 Haul Truck	hrs	$66.18	320	$21,177
Truck Drivers	hrs	$12.74	320	$4,077
Cat 988 Loader	hrs	$104.70	80	$8,376
Cat 375 Excavator	hrs	$132.76	80	$10,621
PC-400 with Shears	hrs	$163.62	80	$13,089
65 Ton Crane	hrs	$62.80		$0
30 Ton Crane	hrs	$40.66		$0
Equipment Maintenance (Butler)	hrs	$10.56	560	$5,911
Concrete Removal	sf	$3.30	55,970	$184,701

Total SX Building Demolition **$258,896**

CCD Circuit Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	195	$3,455
Mechanics	hrs	$13.86	120	$1,664
Laborers	hrs	$10.35	60	$621
Small Tools	hrs	$1.25	180	$225
Cat 769 Haul Truck	hrs	$66.18	120	$7,941
Truck Drivers	hrs	$12.74	120	$1,529
Cat 988 Loader	hrs	$104.70	30	$3,141
Cat 375 Excavator	hrs	$132.76	30	$3,983
PC-400 with Shears	hrs	$163.62	30	$4,909
65 Ton Crane	hrs	$62.80	30	$1,884
30 Ton Crane	hrs	$40.66	15	$610
Equipment Maintenance (Butler)	hrs	$10.56	315	$3,325
Concrete Removal	sf	$3.30	15,000	$49,500

Total CCD Circuit Removal **$82,786**

MILL DECOMMISSIONING

Sample Plant Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	24	$425
Mechanics	hrs	$13.86	32	$444
Laborers	hrs	$10.35	16	$166
Small Tools	hrs	$1.25	48	$60
Cat 769 Haul Truck	hrs	$66.18	32	$2,118
Truck Drivers	hrs	$12.74	32	$408
Cat 988 Loader	hrs	$104.70	8	$838
Cat 375 Excavator	hrs	$132.76	8	$1,062
PC-400 with Shears	hrs	$163.62	8	$1,309
30 Ton Crane	hrs	$40.66		$0
Equipment Maintenance (Butler)	hrs	$10.56	56	$591
Concrete Removal	sf	$3.30	4,200	$13,860

Total Sample Plant Removal **$21,279**

Boiler Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	120	$2,126
Mechanics	hrs	$13.86	160	$2,218
Laborers	hrs	$10.35	80	$828
Small Tools	hrs	$1.25	240	$300
Cat 769 Haul Truck	hrs	$66.18	160	$10,588
Truck Drivers	hrs	$12.74	160	$2,038
Cat 988 Loader	hrs	$104.70	40	$4,188
Cat 375 Excavator	hrs	$132.76	40	$5,310
PC-400 with Shears	hrs	$163.62	40	$6,545
65 Ton Crane	hrs	$62.80		$0
30 Ton Crane	hrs	$40.66		$0
Equipment Maintenance (Butler)	hrs	$10.56	280	$2,956
Concrete Removal	sf	$3.30	2,900	$9,570

Total Boiler Demolition **$46,667**

Vanadium Oxidation Circuit Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	48	$850
Mechanics	hrs	$13.86	64	$887
Laborers	hrs	$10.35	32	$331
Small Tools	hrs	$1.25	96	$120
Cat 769 Haul Truck	hrs	$66.18	64	$4,235
Truck Drivers	hrs	$12.74	64	$815
Cat 988 Loader	hrs	$104.70	16	$1,675
Cat 375 Excavator	hrs	$132.76	16	$2,124
PC-400 with Shears	hrs	$163.62	16	$2,618
65 Ton Crane	hrs	$62.80		$0
30 Ton Crane	hrs	$40.66		$0
Equipment Maintenance (Butler)	hrs	$10.56	112	$1,182
Concrete Removal	sf	$3.30	1,200	$3,960

Total Vanadium Oxidation Circuit Removal **$18,799**

Main Shop/Warehouse Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	96	$1,701
Mechanics	hrs	$13.86	128	$1,774
Laborers	hrs	$10.35	64	$662
Small Tools	hrs	$1.25	192	$240
Cat 769 Haul Truck	hrs	$66.18	128	$8,471
Truck Drivers	hrs	$12.74	128	$1,631
Cat 988 Loader	hrs	$104.70	32	$3,350
Cat 375 Excavator	hrs	$132.76	32	$4,248
PC-400 with Shears	hrs	$163.62	32	$5,236
Equipment Maintenance (Butler)	hrs	$10.56	224	$2,365
Concrete Removal	sf	$3.30	19,300	$63,690

Total Main Shop/Warehouse Demolition **$93,368**

MILL DECOMMISSIONING

Office Building Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	72	$1,276
Mechanics	hrs	$13.86	96	$1,331
Laborers	hrs	$10.35	48	$497
Small Tools	hrs	$1.25	144	$180
Cat 769 Haul Truck	hrs	$66.18	96	$6,353
Truck Drivers	hrs	$12.74	96	$1,223
Cat 988 Loader	hrs	$104.70	24	$2,513
Cat 375 Excavator	hrs	$132.76	24	$3,186
PC-400 with Shears	hrs	$163.62	24	$3,927
Equipment Maintenance (Butler)	hrs	$10.56	168	$1,773
Concrete Removal	sf	$1.25	12,100	$15,125

Total Office Building Demolition **$37,383**

Misc. Tankage & Spare Parts Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	24	$425
Mechanics	hrs	$13.86	32	$444
Laborers	hrs	$10.35	16	$166
Small Tools	hrs	$1.25	48	$60
Cat 769 Haul Truck	hrs	$66.18	32	$2,118
Truck Drivers	hrs	$12.74	32	$408
Cat 988 Loader	hrs	$104.70	8	$838
Cat 375 Excavator	hrs	$132.76	8	$1,062
PC-400 with Shears	hrs	$163.62	8	$1,309
Equipment Maintenance (Butler)	hrs	$10.56	56	$591
Concrete Removal	sf	$1.25		$0

Total Misc. Tankage & Spare Parts Removal **$7,419**

Mill Yard Decontamination

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	582	$10,312
Cat 637 Scraper	hrs	$154.47	257	$39,699
Cat 988 Loader	hrs	$104.70	65	$6,805
Cat D8N Dozer With Ripper	hrs	$74.64	65	$4,852
Cat D7 Dozer	hrs	$62.69	65	$4,075
Cat 651 Waterwagon	hrs	$79.92	65	$5,195
Cat 14G Motorgrader	hrs	$53.30	65	$3,465
Equipment Maintenance (Butler)	hrs	$10.56	582	$6,143

Total Mill Yard Decontamination **$80,545**

Ore Storage Pad Decontamination

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	429	$7,601
Cat 637 Scraper	hrs	$154.47	189	$29,195
Cat 988 Loader	hrs	$104.70	48	$5,026
Cat D8N Dozer With Ripper	hrs	$74.64	48	$3,583
Cat D7 Dozer	hrs	$62.69	48	$3,009
Cat 651 Waterwagon	hrs	$79.92	48	$3,836
Cat 14G Motorgrader	hrs	$53.30	48	$2,558
Equipment Maintenance (Butler)	hrs	$10.56	429	$4,528

Total Ore Storage Pad Decontamination **$59,336**

Equipment Storage Area Cleanup

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	154	$2,729
Cat 637 Scraper	hrs	$154.47	69	$10,658
Cat 988 Loader	hrs	$104.70	17	$1,780
Cat D8N Dozer With Ripper	hrs	$74.64	17	$1,269
Cat D7 Dozer	hrs	$62.69	17	$1,066
Cat 651 Waterwagon	hrs	$79.92	17	$1,359
Cat 14G Motorgrader	hrs	$53.30	17	$906
Equipment Maintenance (Butler)	hrs	$10.56	154	$1,626

Total Equipment Storage Area Cleanup **$21,392**

MILL DECOMMISSIONING

Revegetate Mill Yard & Ore Pad

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	231	$4,093
Cat 637 Scraper	hrs	$154.47	132	$20,390
Cat 988 Loader	hrs	$104.70	0	$0
Cat D8N Dozer With Ripper	hrs	$74.64	33	$2,463
Cat D7 Dozer	hrs	$62.69	33	$2,069
Cat 651 Waterwagon	hrs	$79.92		$0
Cat 14G Motorgrader	hrs	$53.30	33	$1,759
Equipment Maintenance (Butler)	hrs	$10.56	231	$2,438

Total Revegetate Mill Yard & Ore Pad **$33,212**

Total Demolition and Decontamination **$1,068,150**

CLEANUP OF WINDBLOWN CONTAMINATION

Scoping Survey

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Soil Samples	each	$50.00	100	$5,000
Survey Crew	hrs	$13.32	752	$10,018
Sample Crew	hrs	$13.32	1,312	$17,479

Total Scoping Survey **$32,497**

Characterization Survey

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Soil Samples	each	$50.00	472	$23,600
Sample Crew	hrs	$13.32	1,136	$15,134

Total Characterization Survey **$38,734**

Final Status Survey

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Soil Samples	each	$50.00	300	$15,000
Sample Crew	hrs	$13.32	3,552	$47,320

Total Final Status Survey **$62,320**

Windblown Cleanup

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	1,190	$21,084
Cat 637 Scraper	hrs	$154.47	680	$105,040
Cat D8N Dozer With Ripper	hrs	$74.64	170	$12,689
Cat D7 Dozer	hrs	$62.69	170	$10,657
Cat 14H Motorgrader	hrs	$53.30	170	$9,061
Soil Samples	each	$50.00	500	$25,000
Survey Crew	hrs	$13.32	163	$2,172
Sample Crew	hrs	$13.32	83	$1,106
Equipment Maintenance (Butler)	hrs	$10.56	1,190	$12,561

Total Windblown Cleanup **$199,370**

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	$62.00	2,080	**$128,960**

Total Quality Control **$128,960**

Total Cleanup Windblown Contamination **$461,881**

TOTAL MILL DECOMMISSIONING **$1,530,031**

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

IE/PROJECT ..... Date ..... Calc by ..... Sheet ..... of .....

MILL DECOMMISSIONING

1) REMOVAL OF CONTAMINATED MATERIALS FROM MILL YARD.

ASSUME:

- 18" (1.5 feet) WILL HAVE TO BE REMOVED
- AREA (FROM CAD) = 1,643,453 ft²
  = 37.8 ACRES

Therefore VOLUME MOVED = [1,643,453 × 1.5] ÷ 27 = 91,302 yd³

say **91,300 yd³**

$\frac{91,300 \text{ yd}}{355 \text{ yd/hr}}$ = **257 hours**

HAUL ROUTE #2

2) REMOVAL OF CONTAMINATED MATERIALS FROM ORE PAD

ASSUME:

- 18" WILL HAVE TO BE REMOVED
- AREA (from CAD) = 976,780 ft²
  = 22.4 ACRES.

Therefore VOLUME MOVED = [976,780 × 1.5] ÷ 27 = 54,265 yd³

say **54,300 yd³**

$\frac{54,300 \text{ yd}}{287 \text{ yd/hr}}$ = **189 hours**

HAUL ROUTE #3

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

E/PROJECT..... Date..... Calc by..... Sheet..... of.....

MILL DECOMMISSIONING

3) DEMOLITION EQUIPMENT
- KOMATSU PC400 (OR CAT EQUIVALENT) WITH La Bounty Shears (hydraulic)
- CAT 275L BACKHOE W/ GRAPPLES.
- 769C ROCK TRUCKS (4ea)
- 988 LOADER (1 ea)

4) DEMOLITION CREW.
- HEAVY EQUIPMENT OPERATORS - PC400, 275, 988
- DUST CONTROL - 2 - LABORERS
- MECHANICS - CUTTING UP OF DEBRIS TO REMOVE VOIDS 4
- TRUCK DRIVERS - 4 ea - 769D TRUCKS

5) TOOL & EXPENDABLE ALLOWANCE, COVERING THE FOLLOWING:
- SAFETY GEAR
- HAND TOOLS
- BOTTLED GASES & TORCHES.
- ALLOW 1.25 / MAN HOUR FOR ALL BUT H.E. OPERATORS + TRUCK DRIVERS

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

E/PROJECT..... Date..... Calc by..... Sheet..... of.....

MILL DECOMMISSIONING

6) DEMOLITION TIME ESTIMATES. (SHEAR & GRAPPLE)

• MILL BUILDING	20 days
• COARSE ORE	2 days
• SX BUILDING	10 days
• CCD, PLT, CLARIFIER	5 days
• SAMPLE PLANT	1 day
• BOILER	5 days
• Vanadium Oxidation	2 days
• SHOP / WAREHOUSE	4 days
• OFFICE BUILDING	3 days
• MISC TANKAGE & "NORTH FORTY"	4 days

7) FOUNDATION DEMOLITION

- ASSUME THAT MEANS 020-750-0440 OVER ENTIRE AREA OF STRUCTURE WILL SUFFICE @ $3.33/ft²
- AREAS ARE AS FOLLOWS. (FROM CAD)

	Area, ft²	Est $
MILL BUILDING	37,500	120,000
SX BUILDING	55,970	179,100
SHOP / WAREHOUSE	19,280	61,700
OFFICE	12,100	~~38,700~~ 15,125
SAMPLE PLANT	4,200	13,400
DIESEL SHOP	2050	6,600
BOILER	2900	9,300

- LABOR $2.75, EQUIP $.55

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

NE/PROJECT ..... Date ..... Calc by ..... Sheet ..... of .....

MILL DECOMMISSIONING

8) REVEGETATION

ASSUME ...

- MILL PAD AREA = 1,643,453 ft^2
- ORE PAD AREA = 976,780 ft^2
- PLACE 6"
- 637 ROUTE #4 APPROXIMATES HAUL

therefore $\left[\left[1{,}643{,}453 + 976{,}780\right] ft^2 * \frac{1}{2} ft\right] \div 27\ ft^3/yd^3 = 48{,}522\ yd^3$

say $\boxed{48{,}600\ yd^3}$

$\therefore \frac{48{,}600\ yd^3}{368\ yd^3/hr} = \boxed{132\ \text{"637" hours}}$

No. 5505 Engineer's Computation Pad
ALVIN

MILL DECOMMISSIONING

WIND BLOWN CONTAMINATION

1) Scoping Survey

- INITIAL SURVEY WILL BE CONDUCTED ON A AREA TO BE DETERMINED BUT for this estimate it is defined as an area approximated by a perimeter 1000 feet outside of the RESTRICTED AREA BOUNDRIES this is CONSERVATIVE SINCE WIND BLOWN CONTAMINATION WOULD most likely be found DOWNWIND of the SITE, which is on the East side of the restricted area

- AREA DETERMINED by CAD. = 38,728,000 ft^2

AREA Requiring WIND BLOWN SURVEY is

TOTAL AREA –	38,728,000 ft^2
CELL 4A	1,909,000 ft^2
Cell 3	3,234,000 ft^2
Cell 2	2,987,000 ft^2
Cell 1	2,576,000 ft^2
MILL YARD	1,643,000 ft^2
ORE STORAGE PAD	977,000 ft^2
	25,402,000 ft^2

- ASSUME PLACEMENT OF STANDARD NRC/EPA 10 x 10 meter grid (1076 ft^2
- ASSUME Scoping Survey Completed by Scanning WITH NR meter Held Close TO ground while traveling at ± 0.5 m/sec as per Guidance IN NUREG 5849.

- SURVEY CREW of 2 Capable of SETTING 500 grid points per Day

$$\frac{25,402,000\ ft^2}{1076\ ft^2} = 23,600 \text{ Grid POINTS}$$

$$\frac{23,600 \text{ POINTS}}{500 \text{ POINTS/DAY}} \cong 47 \text{ DAYS}$$

2 men x 8 hrs x 47 Days = **752 man hrs** – SURVEY

- SCANNING CREW CONSISTS of 2 men –

- Coverage 0.5 m/sec x 60 sec/min x 8 hrs/day = 14,400 m/day

ASSUME .8 eff. factor

14,400 m/day x .8 = 11,520 m/day

Wind blown Contamination - Scoping Survey

- ASSUME 30 meter Path for each 10 x 10 grid to Cover 10% of Surface area (PER NUREG 5549)

CREW CAN SCAN $\frac{11,520 \text{ m/day}}{30 \text{ m/grid}} = 384$ Grids/DAY

$\therefore \frac{23,600 \text{ Grids}}{384 \text{ Grids/day}} \cong 62$ Day TO Complete INITIAL Scan

62 Days x 2 man x 8 hrs/day = **992 man hrs**

- ASSUME MAP PRODUCTION + DATA Reduction take Scanning Crew AN ADDITIONAL 20 Days TO Complete

20 Days x 2 man x 8/hrs/day = **320 man Hrs**

TOTAL SCANNING Man hrs = **1312**

- Scoping Survey will require 100 Contaminated Soil Samples at a Cost of $ 50.00 /EACH (Unat + Ra 226)
- Samples Can be taken at Same time as Scanning takes place.

2) CHARACTERIZATION SURVEY -

Survey of areas identified as affected areas by Scoping Survey

- ASSUME:
  - 20% of AREA will require additional Sampling
  - Probing will be USE, 4 probe sites /grid (Beta/Gamma)
  - Soil Samples will be required on 10% of Grid Samples
    - Samples will be for Unat + Ra 226
    - Cost/Sample = $50 (LAB)

$\frac{25,402,000 \text{ ft}^2}{1076 \text{ ft}^2/\text{grid}} = 23,608$ Grids x .2 = 4722 Grids

- CREW CAN COVER 100 Grids /day probing
- CREW CAN take 25 SOIL Samples /day

Probing takes $\frac{4722 \text{ Grids}}{100 \text{ Grids/day}} \cong$ **47 Days**

47 x 2 x 8 = **752 hrs**

No. 5505 Engineer's Computation Pad
ALVIN

WINDBLOWN CONTAMINATION – SMALL-AREA BOTTOM SURVEY

Soil Sample are 10% of Probe grids

$4721 \times .10 = 472$ Soil Samples

$\frac{472 \text{ Samples}}{25 \text{ Samples/day}} \cong \boxed{19 \text{ days}} \times 8 \text{ hrs} \times 2 = \boxed{304 \text{ man hrs}}$

Map Preparation + Data Reduction take approx 5 days

$5 \text{ days} \times 2 \text{ mo} \times 8 \text{ hr} = \boxed{80 \text{ man hrs}}$

Total Hrs = $\boxed{1136 \text{ man hrs}}$

3) Reconstruction Control Survey

- Provided by QA/QC Contractor

4) Final Status Survey

- In order to gain Final Release, will require 4 Gamma Estimates per each 100 m² Grid Square in the Affected Area (20% of Area)
- 200 Random Soil Samples will be gathered from the Unaffected Areas (80% of Area)
- Will require 100 Confirmatory Samples for the Affected Area

Therefore

$25{,}402 \div 1076 \text{ ft}^2/100\text{m}^2$	=	23,607 Grids Total
$23{,}607 \times 0.20$	=	4,721 Grids Affected
$4{,}721 \times 4$	=	18,886 Gamma Estimates.

- Crew can take 100 Probe Samples/Day
  ∴ $18886 \div 100 = 188.8$ days say 190 days
- Crew can take 25 Soil Samples/Day
  ∴ $[200 + 100] \div 25 = 12$ days.
- Assume 20 additional Days for Data Reduction & Report Generation

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

NE/PROJECT ..... Date ..... Calc by ..... Sheet ..... of .....

MILL DECOMMISSIONING
WIND BLOWN CONTAMINATION (Cont)

5) CLEAN-UP.

- ASSUME 20% OF AREA SURVEYED REQUIRES CORRECTIVE ACTION
- 6" OF SOIL WILL BE STRIPPED

Therefore $25{,}402\ M^2 \times 0.20 \times 0.5\ ft = 2{,}540{,}000\ ft^3$

or $94{,}080\ yd^3$

say $\boxed{94{,}100\ yd^3}$

- AS IT IS NOT KNOWN WHAT AREAS MAY BE CONTAMINATED, ASSUME THE USE OF 637 HAUL ROUTE #6 TO BE CONSERVATIVE
- BECAUSE OF THE POTENTIAL FOR IRREGULAR & DISCONNECTED AREAS, EFFICIENCY WILL BE ONLY 50% OF REGULAR 637 EFFICIENCY.

Therefore $277\ yd^3/hr \times 0.50 = 138.5\ yd^3/hr$

say $\boxed{138\ yd^3/hr}$

Therefore $94{,}100\ yd^3 \div 138\ yd^3/hr = 681$ scraper hours

say $\boxed{680\ \text{hours}}$

RECLAMATION OF CELL 2

Obtain Permits for Clay Borrow Site - Section 16

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Permits & Licenses	ea	$10,000.00	5	**$50,000**

Total Obtain Permits for Clay Borrow Site - Section 16 **$50,000**

Place Remainder of Bridging (Platform) Lift

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	178	$3,154
Cat 627F Scraper	hrs	$154.47	78	$12,049
Cat 815C Compactor	hrs	$75.09	20	$1,502
Cat D8N Dozer With Ripper	hrs	$74.64	20	$1,493
Cat D7 Dozer	hrs	$62.69	20	$1,254
Cat 651 Waterwagon	hrs	$79.92	20	$1,598
Cat 14G Motorgrader	hrs	$53.30	20	$1,066
Equipment Maintenance (Butler)	hrs	$10.56	178	$1,879

Total Place Remainder of Bridging (Platform) Lift **$23,994**

Place Lower Random Fill (12")

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	902	$15,981
Cat 637 Scraper	hrs	$154.47	402	$62,097
Cat 825 Compactor	hrs	$75.09	100	$7,509
Cat D8N Dozer With Ripper	hrs	$74.64	100	$7,464
Cat D7 Dozer	hrs	$62.69	100	$6,269
Cat 651 Waterwagon	hrs	$79.92	100	$7,992
Cat 14G Motorgrader	hrs	$53.30	100	$5,330
Equipment Maintenance (Butler)	hrs	$10.56	902	$9,521

Total Place Lower Random Fill (12") **$122,164**

Clay Layer

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	1,690	$29,943
Cat 825 Compactor	hrs	$75.09	320	$24,029
Cat D8N Dozer With Ripper	hrs	$74.64	300	$22,393
Cat D7 Dozer	hrs	$62.69	0	$0
Cat 651 Waterwagon	hrs	$79.92	300	$23,976
Cat 14G Motorgrader	hrs	$53.30	320	$17,056
Cat 980 Loader	hrs	$70.32	300	$21,097
5000 Gallon Water Truck	hrs	$45.09	150	$6,764
Highway Trucks	hrs	$40.00	2,400	$96,000
Truck Drivers	hrs	$12.74	2,400	$30,577
Equipment Maintenance (Butler)	hrs	$10.56	4,090	$43,173

Total Place Clay Layer **$315,008**

RECLAMATION OF CELL 2

Upper Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	1,990	$35,258
Cat 637 Scraper	hrs	$154.47	796	$122,959
Cat 825 Compactor	hrs	$75.09	199	$14,943
Cat D8N Dozer With Ripper	hrs	$74.64	199	$14,854
Cat D7 Dozer	hrs	$62.69	199	$12,474
Cat 651 Waterwagon	hrs	$79.92	199	$15,904
Cat 14G Motorgrader	hrs	$53.30	199	$10,607
5000 Gallon Water Truck	hrs	$45.09	199	$8,973
Equipment Maintenance (Butler)	hrs	$10.56	1,990	$21,006

Total Place Upper Random Fill **$256,978**

Rock Armor

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	825	$14,617
Cat D7 Dozer	hrs	$62.69	275	$17,239
Cat 651 Waterwagon	hrs	$79.92	275	$21,978
Cat 14G Motorgrader	hrs	$53.30	275	$14,658
Rock Cost Delivered	CY	$3.66	66,200	$242,497
Equipment Maintenance (Butler)	hrs	$10.56	825	$8,709

Total Place Rock Armor **$319,697**

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	$62.00	1,050	**$65,100**

Total Quality Control **$65,100**

TOTAL RECLAMATION OF CELL 2 **$1,152,941**

No. 5505 Engineer's Computation Pad
ALVIN

Volume Calculations 2/10/99
Cell 2

1) Area of Cell 2 - 2,986,660 ft^2 = **68.56 acres**

2) Area of Cell 2 still open 2/10/99 (see Figure A)

1000 x 200 Approximate Area ≅ 200000 sf (4.6 acres)

3) Assumptions:

- Bridging layer is placed using random fill from piles west of Cell 2
- Cell will be graded to Design elevation utilizing finer materials in random fill stockpiles and from "Clay" stockpiles.
- Clay will be mined, blended & hauled from borrow site located in Section 16 - 4 miles south of the mill - using Belly dump trucks - Clay layer on top of Cell only, except on South Slope Cannot be Cell 3
- The upper 2 feet of Random fill will be placed utilizing the fine random fill and clay stockpiles
- Rock for side Armor, Top Armor and Toe aprons will come from an offsite gravel source 1 mile north of Blanding, Rock will be produced through screening, stockpiled and trucked to the site at the time of use. Belly dump trucks will dump gravel in windrows on the top and sides of the cell.

4) Bridging Layer (Random Fill) left to place

$$\frac{200{,}000\ ft^2 \times 3\ ft}{27\ ft^3/cy} = 22{,}222\ cy \rightarrow \boxed{23{,}000\ cy}$$

5) Bring lower random fill up to Design elevations

Assume Full Area of Cell x 1 foot thick

$$\frac{2{,}986{,}660\ ft^2 \times 1\ ft}{27\ ft^3/cy} = 110{,}617\ cy \rightarrow \boxed{110{,}700\ cy}$$

Volume Calculation Cell 2
(cont)

6) Placement of Clay Layer (1 foot Thick on Top of cell ONLY)

Full area of cell x 1ft thick

$$\frac{2{,}986{,}660\,ft^2 \times 1ft}{27\,ft^3/cy} = 110{,}617\,cy \rightarrow \boxed{110{,}700\,cy}$$

7) Upper Random Fill Volume – Top of Pile

Full area of cell x 2 ft Thick

$$\frac{2{,}986{,}660\,ft^2 \times 2ft}{27\,ft^3/cy} = 221{,}234\,cy \rightarrow \boxed{221{,}300\,cy}$$

8) Armor Protection – Top of Cell

Full area of cell x .5ft

$$\frac{2{,}986{,}660\,ft^2 \times .5\,ft}{27\,ft^3/cy} = 55{,}309\,cy - \boxed{55{,}400\,cy}$$

9) Cell 2 North Slope (Slope #1) Common with Cell 1

- Average height = 12 feet
- Length ≅ 2600 ft

a) Random Fill to Reduce Slope from 3:1 to 5:1

First Wedge

$$\left[\frac{12 \times 12 \times 5}{2} - \frac{12 \times 12 \times 3}{2}\right] \times 2600$$

$$= \frac{374{,}400\,ft^3}{27\,ft^3/cy} = 13{,}867\,cy$$

$$= \boxed{13{,}900\,cy}$$

Remaining Random Fill

$$\left[\frac{15 \times 15 \times 5}{2} - \frac{12 \times 12 \times 5}{2}\right] \times 2600$$

$$\frac{526{,}500\,ft^3}{27\,ft^3/cy} = \boxed{19{,}500\,cy}$$

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Volume Calculations Cell 2
(cont)

Total Random Fill N slope = $\boxed{33{,}400\ cy}$

b) Rock Armour 8" thick - (.67 ft)

$$\left[\frac{15.67 \times 15.67 \times 5}{2} - \frac{15 \times 15 \times 5}{2}\right] \times 2600 ft$$

$$\frac{132{,}957\ ft^3}{27\ ft^3/cy} = 4925\ cy \rightarrow \boxed{5000\ cy}$$

c) Toe Apron $\frac{2 \times 7 \times 2600}{27} = 1348\ cy \rightarrow \boxed{1400\ cy} - \boxed{6400\ cy}$

10) North slope common with mine yard

- Average height 1 ft
- Average Length 900 ft

a) Random Fill - Wedge - $\left[\frac{1 \times 1 \times 5}{2} - \frac{1 \times 1 \times 3}{2}\right] \times 900\ ft$

$$\frac{900\ ft^3}{27\ ft^3/cy} = 33\ cy \rightarrow \boxed{100\ cy}$$

Remaining Fill → Random $\left[\frac{4 \times 4 \times 5}{2} - \frac{1 \times 1 \times 5}{2}\right] \times 900\ ft$

$$\frac{33{,}750\ ft^3}{27\ ft^3/cy} = 1250\ cy$$

$$\rightarrow \boxed{1300\ cy}$$

Total Random Fill $\boxed{1{,}400\ cy}$

b) Rock Armour. 8" thick

$$\left[\frac{4.67 \times 4.67 \times 5}{2} - \frac{4 \times 4 \times 5}{2}\right] \times 900$$

$$\frac{13{,}070\ ft^3}{27\ ft^3} = 484\ cy$$

$\boxed{500\ cy}$

No Toe Apron No Fill

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Volume Calculation Cell 2 (Cont)

11) Cell 2 West Dike Slope # 3

- Average Height 2 ft
- Length 500 ft.

a) Random Fill

Wedge $\left[\frac{2\times2\times5}{2} - \frac{2\times2\times3}{2}\right] \times 500 = 2000\ ft^3$

$= 74\ cy \rightarrow \boxed{100\ cy}$

Remaining Random fill $\left[\frac{5\times5\times5}{2} - \frac{2\times2\times5}{2}\right] \times 500$

$= \frac{26{,}250\ ft^3}{27\ ft^3/cy} = 972\ cy \Rightarrow \boxed{1{,}000\ cy}$

Total $\boxed{1100\ cy}$

b) Rock Armor

$\left[\frac{5.67\times5.67\times5}{2} - \frac{.5\times5\times5}{2}\right] \times 500$

$= \frac{8936\ ft^3}{27\ ft^3} \cong 331\ cy \rightarrow \boxed{400\ cy}$

Toe Apron (?) → not required for slope 10' long – Drainage from cell goes south to Cell 3 and thru off of South slope of Cell 3

12) Cell 2 East Dike (Slope # 4)

- Average height 1 ft
- Length = 1,250 ft

a) Random Fill Wedge From # 10 $1\ ft^3/LF$

$1\ ft^3/LF \times 1250' = 1250\ ft^3$

$= 46\ cy \rightarrow \boxed{100\ cy}$

Remaining Random Fill – From #10 $37.5\ ft^3/LF$

$\frac{37.5\ ft^3/LF \times 1250\ LF}{27\ ft^3/cy} = 1736\ cy \rightarrow \boxed{1800\ cy}$

Total – Random Fill $\boxed{1900\ cy}$

Volume Calculation Cell 2
(cont)

12 (cont) Rock Armor 8" (.67') Thick

Using #10 14.52 ft³/LF Dice

$14.52^{cf/ft} \times 1250\ LF = 18{,}153\ ft^3$

$\frac{18{,}153\ ft^3}{27\ ft^3/cy} \Rightarrow 672\ cy \rightarrow \boxed{700\ cy}$

No Toe Apron →

13) South Slope Cell 2 Common with Cell 3

- Average Height 3 ft
- Length 3500 ft

a) Random Fill — Wedge → $\left[\frac{3\times3\times5}{2} - \frac{3\times3\times3}{2}\right] \times 3{,}500$

$= \frac{31{,}500\ ft^3}{27} = 1167\ cy$

$\rightarrow \boxed{1200\ cy}$

b) Clay Layer $\left[\frac{4\times4\times5}{2} - \frac{3\times3\times5}{2}\right] \times 3500$

$\frac{61250\ ft^3}{27} = 2268\ cy \rightarrow \boxed{2300\ cy}$

c) Random Fill (upper) $\left(\frac{6\times6\times5}{2} - \frac{4\times4\times5}{2}\right) \times 3500$

$\frac{175{,}000\ ft^3}{27} = 6481\ cy \rightarrow \boxed{6500\ cy}$

D.) Rock Armor -

$\left(\frac{6.67\times6.67\times5}{2} - \frac{6\times6\times5}{2}\right) \times 3500$

$\frac{74{,}278\ ft^3}{27} = 2751\ cy \rightarrow \boxed{2800\ cy}$

No Toe Apron -

No. 5505 Engineer's Computation Pad
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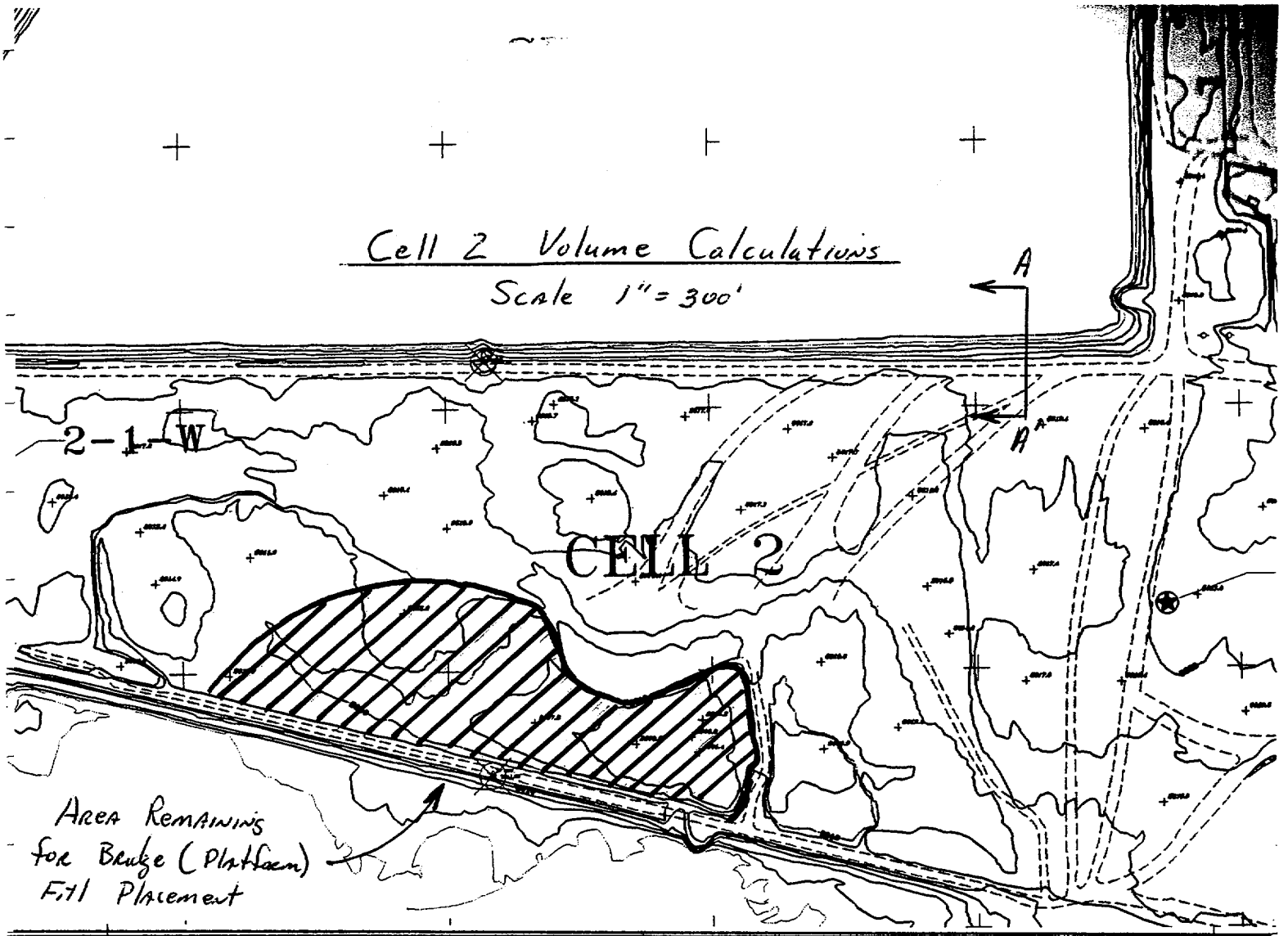
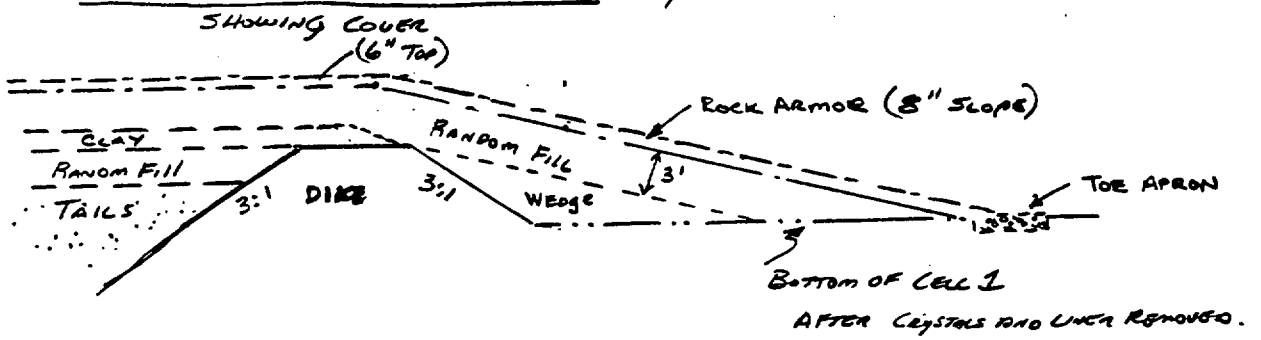
Cell 2 Volume Calculations

Scale 1" = 300'



SECTION A-A (NOT TO SCALE) TYPICAL SECTION THRU EXTERIOR DIKE



A

Area Modified for
Cell 1-I Disposal Area

A'

Volume Calculations
Cell 2

Volume Summary.

	Bridging Layer	Lower Random	Clay	Upper Random	Armor
Top of Cell	23,000	110,700	110,700	221,300	55,400
North (Slope #1)		13,900	—	19,500	6,400
North (Slope #2)		100	—	1,300	500
West (Slope #3)		100	—	1,000	400
East (Slope #4)		100	—	1,800	700
South (Slope 5)		1200	2,300	6,500	2800
Totals	23,000	126,100	113,000	251,400	66,200

No. 5505 Engineer's Computation Pad
ALVIN

PROJECT QUANTITIES

Cell Slopes

Slope No.		Height feet	Length feet	EXISTING DIKE "A" AREA	EXISTING DIKE "A" VOL (CY)	WEDGE "B" AREA	WEDGE "B" VOL (CY)	RANDOM FILL "C" AREA	RANDOM FILL "C" VOL (CY)	RANDOM FILL "D" AREA	RANDOM FILL "D" VOL (CY)	0.6667 RIPRAP "E" AREA	RIPRAP "E" VOL (CY)
1	**Cell 2 North dike**	12	2,600	216.0	20,800	144.0	13,867	62.5	6,019	140.0	13,481	51.7	4,976
2	**Cell 2 North Dike**	1	900	1.5	50	1.0	33	7.5	250	30.0	1,000	15.0	500
3	**Cell 2 West Dike**	2	500	6.0	111	4.0	74	12.5	231	40.0	741	18.3	340
4	**Cell 2 East Dike**	1	1,250	1.5	69	1.0	46	7.5	347	30.0	1,389	15.0	694
5	**Cell 2 South Dike**	3	3,500	0.0	0	9.0	1,167	17.5	2,269	50.0	6,481	30.7	3,976
	Cell 2 Slope Totals		6,150		21,031		15,187		9,116		23,093		10,485
6	**Cell 3 West Dike**	2	1,100	6.0	244	4.0	163	12.5	509	40.0	1,630	18.3	747
7	**Cell 3 South Dike**	16	1,750	384.0	24,889	256.0	16,593	82.5	5,347	180.0	11,667	65.0	4,213
8	**Cell 3 South Dike**	39	1,700	2,281.5	143,650	1,521.0	95,767	197.5	12,435	410.0	25,815	141.7	8,920
9	**Cell 3 East Dike**	6	800	54.0	1,600	36.0	1,067	32.5	963	80.0	2,370	31.7	938
	Cell 3 Slope Totals		5,350		170,383		113,589		19,255		41,481		14,819
	Total Material Requirements (CY)				191,414		128,776		28,370		64,574		25,304

NOTE:
Values shown in the "Area" column are the CROSS SECTIONAL AREA for the component in SQUARE FEET.
Values shown in the "Volume" column are the component's area x length converted to CUBIC YARDS.

CELL 2 RECLAMATION

CAT 637 RESOURCE REQUIREMENTS

	Volume	Route	Yds/Hr	%	Equip hrs
Cell 2 Bridging Lift					
Tailings Surface	23,000	5	296	100%	77.7
				TOTAL	**77.7**
Cell 2 Lower Random fill					
Tailings surface	110,700	5	296	67%	250.6
Tailings Surface	110,700	4	368	33%	99.3
Slope 1	13,900	5	296	100%	47.0
Slope 2	100	4	368	100%	0.3
Slope 3	100	5	296	100%	0.3
Slope 4	100	4	368	100%	0.3
Slope 5	1,200	5	296	100%	4.1
				TOTAL	**401.7**
Cell 2 Upper Random Fill					
Tailings surface	221,300	5	296	67%	500.9
Tailings Surface	221,300	4	368	33%	198.4
Slope 1	19,520	5	296	100%	65.9
Slope 2	1,300	4	368	100%	3.5
Slope 3	100	5	296	100%	0.3
Slope 4	1,800	4	368	100%	4.9
Slope 5	6,500	5	296	100%	22.0
				TOTAL	**796.0**
Cell 2 Rock Armour use Highway Trucks					

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

Clay Production

Haulage From Section 16

Haul Profile From Section 16 — Loaded

#	Segment Length	Grade		Loaded	Empty
1	2000'	4%	600 m.	1 min	.65
2	1800'	11%	540 m	1.8 min	1 min
3	4200'	1.8%	1260 m	1.4 min	1.2 min
4	5600'	0.5%	1600 m	1.6 min	1.5 min
5	5700'	1.4%	1710 m	1.75 min	1.68 min
6	5200'	0.8%	1560 m	1.5 min	1.48 min
	24,500'			9.05 min	7.43 min
					16.48 min

4.6 mile Trip Loaded
9.2 mile Round Trip

Clay = 2800#/cy Loose.

Fixed Times — Loading —
980' 7 cy Bucket 3 passes to load
.5 min/cycle = 1.5 minutes to load

1.5 minutes to load x 8 trucks = 12 minutes
Cycle is 18 minutes + 6 minutes to spread

Dump → using belly dumps → Continuous.

OFF ROAD application 22 cy/load

Cycle time = 18 minutes/truck
50 minute hr = 2.7 cycles/hr

22 cy/cycle x 2.7 cycle/hr x 8 trucks
= [illegible] cy/hr.

Cell 2 = 118,000 cy Clay = 27 hrs Loader + haulage + Dozer
(Dozer Rate 500 cy/hr / Say =)

141,000 Lcy = 297 hrs (8 trucks) Spreading + Compacting takes place at material hauled.
use 300 hrs

				Use Load Fore.
Trucks	237 x 8 =	1896 hrs		2376 hrs
Dozer	300 x 1 =	300 hrs		Excess hrs to strip OB + Rec
Loader	238 x 1 =	238 hrs		297 Say = 300
Grader	237 x 1 =	237 hrs		297 300 + 20
NN	238 x 1 =	238 hrs		297 300
Compactor				300 + 20

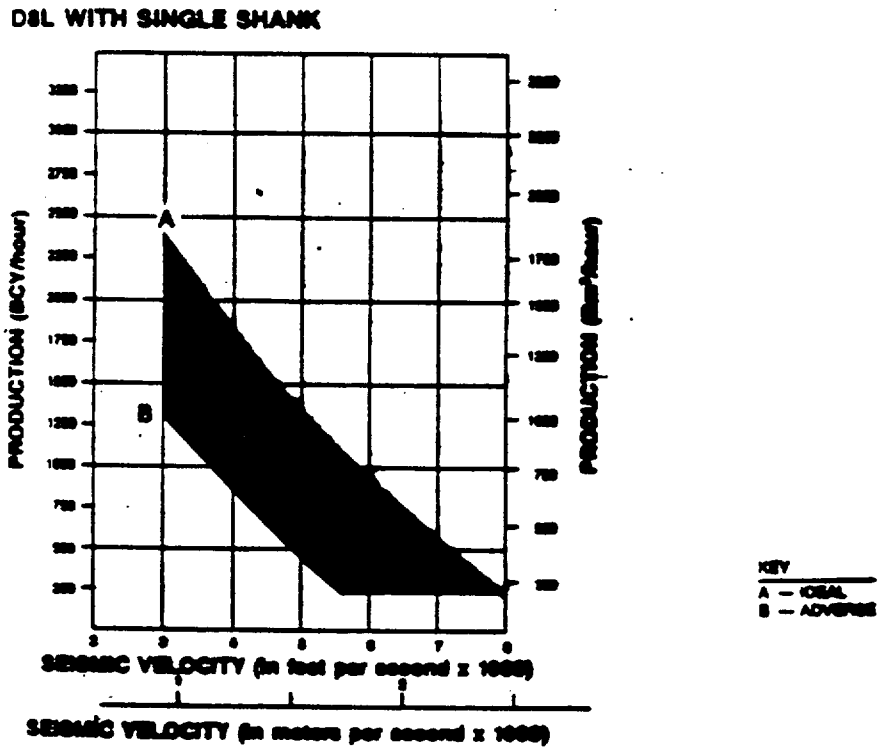
INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

E/PROJECT WHITE MESA MILL Date ..... Calc by ..... Sheet ..... of .....

CLAY PRODUCTION COSTS
— SECTION 16 SOURCE —

1). CLAY PRODUCTION

- CLAYS WILL BE RIPPED FROM SOURCE @ SECTION 16
- APPROX 400 VERTICAL FEET OF BRUSHY BASIN EXPOSURE
- FROM CAT HAND BOOK ...
  MAX SEISMIC VELOCITY OF CLAY ≅ 6000 ft/sec



- BASED ON THE ABOVE, D8 CAT SHOULD BE ABLE TO PRODUCE AT LEAST 250 BCY/HOUR WITH AN AVERAGE OF.

  500 BCY/HR

- WE WILL ASSUME THAT THE CAT IS UTILIZED EVERY DAY OF CLAY PRODUCTION FOR RIPPING AND OR DOZING/BLENDING/PREPARATION.

RECLAMATION OF CELL 3

Dewatering of Cell 3

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Dewatering of Cell 3	hrs	$0.48	62,400	**$30,000**

Total Dewatering of Cell 3 **$30,000**

Place Remainder of Bridging (Platform) Lift

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	1,582	$28,025
Cat 637 Scraper	hrs	$154.47	703	$108,593
Cat 825 Compactor	hrs	$75.09	176	$13,197
Cat D8N Dozer With Ripper	hrs	$74.64	176	$13,118
Cat D7 Dozer	hrs	$62.69	176	$11,017
Cat 651 Waterwagon	hrs	$79.92	176	$14,046
Cat 14G Motorgrader	hrs	$53.30	176	$9,368
Equipment Maintenance (Butler)	hrs	$10.56	1,582	$16,697

Total Place Remainder of Bridging (Platform) Lift **$214,061**

Place Lower Random Fill (12")

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	1,745	$30,913
Cat 637 Scraper	hrs	$154.47	775	$119,715
Cat 825 Compactor	hrs	$75.09	194	$14,549
Cat D8N Dozer With Ripper	hrs	$74.64	194	$14,481
Cat D7 Dozer	hrs	$62.69	194	$12,161
Cat 651 Waterwagon	hrs	$79.92	194	$15,504
Cat 14G Motorgrader	hrs	$53.30	194	$10,340
Equipment Maintenance (Butler)	hrs	$10.56	1,745	$18,417

Total Place Lower Random Fill (12") **$236,080**

Clay Layer

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	1,975	$34,993
Cat 637 Scraper	hrs	$154.47	0	$0
Cat 825 Compactor	hrs	$75.09	375	$28,158
Cat D8N Dozer With Ripper	hrs	$74.64	350	$26,125
Cat D7 Dozer	hrs	$62.69	0	$0
Cat 651 Waterwagon	hrs	$79.92	350	$27,972
Cat 14G Motorgrader	hrs	$53.30	375	$19,988
Cat 980 Loader	hrs	$70.32	350	$24,613
5000 Gallon Water Truck	hrs	$45.09	175	$7,891
Highway Trucks	hrs	$40.00	2,800	$112,000
Truck Drivers	hrs	$12.74	2,800	$35,674
Equipment Maintenance (Butler)	hrs	$10.56	4,775	$50,404

Total Place Clay Layer **$367,817**

RECLAMATION OF CELL 3

Upper Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	2,490	$44,117
Cat 637 Scraper	hrs	$154.47	996	$153,853
Cat 825 Compactor	hrs	$75.09	249	$18,697
Cat D8N Dozer With Ripper	hrs	$74.64	249	$18,586
Cat D7 Dozer	hrs	$62.69	249	$15,609
Cat 651 Waterwagon	hrs	$79.92	249	$19,900
Cat 14G Motorgrader	hrs	$53.30	249	$13,272
5000 Gallon Water Truck	hrs	$45.09	249	$11,228
Equipment Maintenance (Butler)	hrs	$10.56	2,490	$26,284

Total Place Upper Random Fill **$321,546**

Rock Armor

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	948	$16,796
Cat D7 Dozer	hrs	$62.69	316	$19,809
Cat 651 Waterwagon	hrs	$79.92	316	$25,254
Cat 14G Motorgrader	hrs	$53.30	316	$16,843
Rock Cost Delivered	CY	$3.66	76,110	$278,799
Equipment Maintenance (Butler)	hrs	$10.56	948	$10,007

Total Place Rock Armor **$367,508**

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	$62.00	1,406	**$87,172**

Total Quality Control **$87,172**

TOTAL RECLAMATION OF CELL 3 **$1,624,184**

2/16/87

Volume Calculations Cell 3

1) Area of Top of cell by CAD – 3,234,252 ft²

74.25 ACRES

2) Area of Bridging layer (lower Random) placed 1,481,000 ft²

34 ACRES

3) ASSUMPTIONS:

- Bridging Lift (random Fill) comes from random Fill stockpiles west of Cells – using haul Route #6.
- Stockpiles designated as "Clay" will be used for top 12" of lower random Fill
- Clay for the radon barrier will be mined, bladed, and hauled from Section 16 four miles South of the mill. 8" on slopes, 6" on Top + 2'x7' apron at bottom of South slopes
- 2 foot layer of upper random fill will come from three materials in random fill stockpiles and "Clay" stockpiles
- Rock Armor for top, side slopes, and toe aprons will come from same source as Cell 2 Rock Armor. → Gravel pit North of Blanding.
- Clay layer extends over only the Top of Cell NOT on Slopes.

4) Bridging layer left to place

$$\frac{(3{,}234{,}252\,ft^2 - 1{,}481{,}000\,ft^2) \times 3ft}{27\,ft^3/cy} = \quad cy$$

$$\frac{1{,}753{,}252 \times 3}{27} = 194{,}805 \text{ cy}$$

194,800 cy

5) Bring lower random fill up to design elevations (assume over total area for estimate, in reality parts of east end of pond is up to elevation already.)

$$\frac{3{,}234{,}252\,ft^2 \times 1ft}{27\,ft^3/cy} = 119{,}787\,cy \longrightarrow \boxed{119{,}800\ cy}$$

No. 5505 Engineer's Computation Pad
ALVIN

No. 5505 Engineer's Computation Pad
ALVIN

Volume Calculations Cell 3

6) Placement of Clay layer (for tack) over full area Top of Cell

$$\frac{3,234,252\ ft^2 \times 1ft}{27\ ft^3/cy} = 119,773\ cy \rightarrow \boxed{119,900\ cy}$$

[.8 load factor]

7) upper random fill volume over full area of Cell

$$\frac{3234,252\ ft^2 \times 2ft}{27\ ft^3/cy} = 239,574\ cy \rightarrow \boxed{239,600\ cy}$$

8) Armor protection - Top of cell 6" (.5ft)

$$\frac{3,234,252\ ft^2 \times .5\ ft}{27\ ft^3/cy} = 59,894\ cy \rightarrow \boxed{59,900\ cy}$$

9) Cell 3 West slope (Slope #6) 2 feet high, 1100 feet long

- No Clay on slopes
- Toe apron only at base of long slopes or where drainage off of the cells is directed
- Random fill wedge → No existing dike → so transition from top cover

$$\left(\frac{2 \times 2 \times 5}{2} \times 1100\ ft\right)/27 = 407\ cy \rightarrow \boxed{410\ cy}$$

- Random Fill

$$\left(\frac{5 \times 5 \times 5}{2} - \frac{2 \times 2 \times 5}{2}\right) \times 1100\ ft \rightarrow 57,750\ ft^3$$

$$\frac{57,750\ ft^3}{27\ ft^3/cy} = 2138\ cy \rightarrow \boxed{2,200\ cy}$$

- Rock Armor

$$\left(\frac{5.67 \times 5.67 \times 5}{2} - \frac{5 \times 5 \times 5}{2}\right) \times 1100 \rightarrow 19659\ ft^3$$

$$\frac{19,659\ ft^3}{27\ ft^3/cy} = 728\ cy \rightarrow \boxed{730\ cy}$$

No. 5505 Engineer's Computation Pad
ALVIN

Volume Calculation Cell 3

10) Cell 3 South Dike (West End) Slope #7

- 16 ft average height
- 1,750 feet Long

Random Fill Wedge → 3:1-5:1 Crossed →

$$\left[\frac{16 \times 16 \times 5}{2} - \frac{16 \times 16 \times 3}{2}\right] \times 1750\,ft \rightarrow 443{,}000\ ft^3$$

$$\frac{443{,}000\ ft^3}{27\ ft^3/cy} = 16{,}592\ cy \rightarrow \boxed{16{,}600\ cy}$$

Random fill - 1

$$\left[\frac{19 \times 19 \times 5}{2} - \frac{16 \times 16 \times 5}{2}\right] \times 1750 = 459{,}375\ ft^3$$

$$\frac{459{,}375\ ft^3}{27\ ft^3/cy} = 17{,}013\ cy \rightarrow \boxed{17{,}100\ cy}$$

Rock Armor — Slope → 8" thick

$$\left[\frac{19.67 \times 19.67 \times 5}{2} - \frac{19 \times 19 \times 5}{2}\right] \times 1750 \rightarrow$$

$$\frac{113{,}351\ ft^3}{27\ ft^3/cy} = 4198\ cy \rightarrow \boxed{4200\ cy}$$

Rock Apron at toe of slope

$$\frac{2'\ \text{thick} \times 7'\ \text{wide} \times 1750'\ \text{Long}}{27\ ft^3/cy} = 907\ cy \rightarrow \boxed{1000\ cy}$$

11) Cell 3 South Dike (East End Common with Cell 4A) Slope #5

- 39 ft average height
- 1700 ft Long

Toe Apron full length

Random Fill Wedge $\left[\frac{39 \times 39 \times 5}{2} - \frac{39 \times 39 \times 3}{2}\right] \times 1700\,ft \rightarrow 2{,}585{,}700\ ft^3$

$$\frac{2{,}585{,}700\ ft^3}{27\ ft^3/cy} = 95{,}766\ cy \rightarrow \boxed{95{,}800\ cy}$$

1521

Volume Calculations Cell 3 2/16/79

11) CONT

Upper Random Fill

$$\left[\frac{42\times42\times5}{2} - \frac{39\times39\times5}{2}\right]\times1700 \rightarrow 1{,}032{,}750\ ft^3$$

$$\frac{1{,}032{,}750\ ft^3}{27\ ft^3/cy} \rightarrow 38{,}250\ cy \rightarrow \boxed{38{,}300\ cy}$$

Rock Armor

$$\left[\frac{42.67\times42.67\times5}{2} - \frac{42\times42\times5}{2}\right]\times1700 \rightarrow 241{,}098\ ft^3$$

$$\frac{241{,}098\ ft^3}{27\ ft^3/cy} = 8930\ cy \rightarrow \boxed{8950\ cy}$$

Rock Toe Apron

$$\frac{2'\times7'\times1700\ ft}{27\ ft^3/cy} = 881\ cy \rightarrow \boxed{900\ cy}$$

Total Rock $\boxed{9850\ cy}$

12) Cell 3 East Slope

- Average height 4 feet
- 800 feet Long

Random Fill (No existing dike) $= \frac{4\times4\times5}{2}\times800 = 32{,}000\ ft^3$

$$\frac{32{,}000\ ft^3}{27\ ft^3/cy} = 1185\ cy \Rightarrow \boxed{1200\ cy}$$

Rock Armor $= \left(\frac{4.67\times4.67\times5}{27} - \frac{4\times4\times5}{2}\right)\times800 = 11{,}618\ ft^3$

$$\frac{11{,}618\ ft^3}{27\ ft^3/cy} \Rightarrow \boxed{430\ cy} \rightarrow$$

NO TOE APRON

Volume Calculation Cell 3

Volume Summary

	Bridge Layer	Lower Rock	Clay	Upper Random	Armor
Top of Cell	194,800	119,800	119,800	239,400	59,900
West Slope (#6)	—	410	—	2,200	730
South Dike (#7)	—	16,600	—	17,100	5,200
South Dike (#8)	—	95,800	—	38,300	9,850
East Slope (9)	—	—	—	1,200	430
Totals (cy)	194,800	232,610	119,800	298,200	76,110

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ALVIN

No. 5505 Engineer's Computation Pad
ALVIN

CELL 3 PRODUCTION
(USE SAME ASSUMPTION AS CELL 2)

CLAY

Clay Volume $= \frac{119{,}000 \text{ BCY}}{.8 \text{ swell factor}} = 149{,}750$ LCY

TRUCKING 475 LCY/hr — 8 TRUCKS + 1 LOADER

$\frac{149{,}750 \text{ LCY}}{475 \text{ LCY/hr}} \cong 316$ hr + 10% ⇒ use 350 hrs

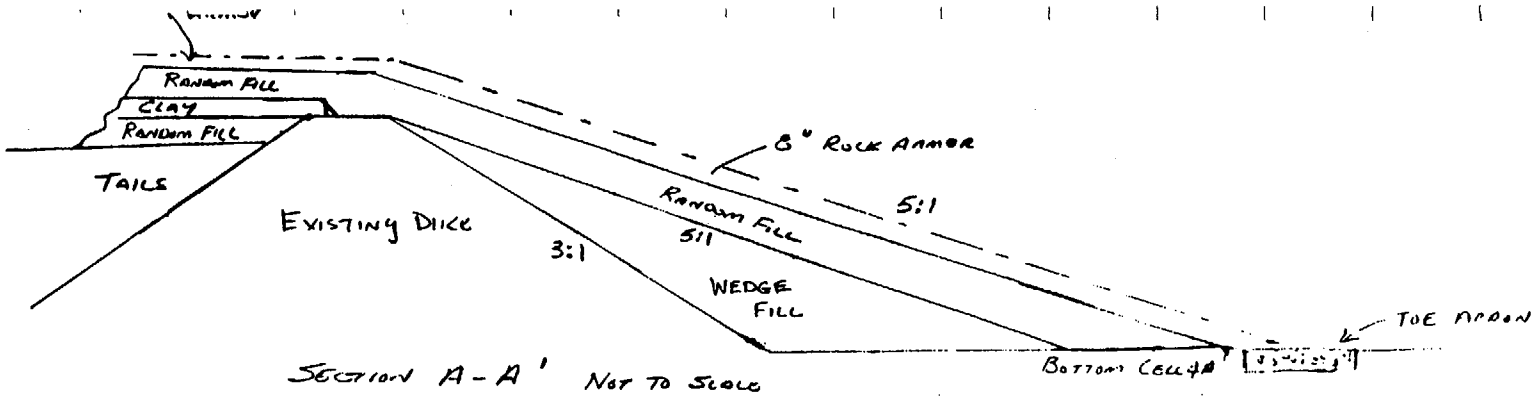
350 × 8 TRUCKS = **2800 hrs**

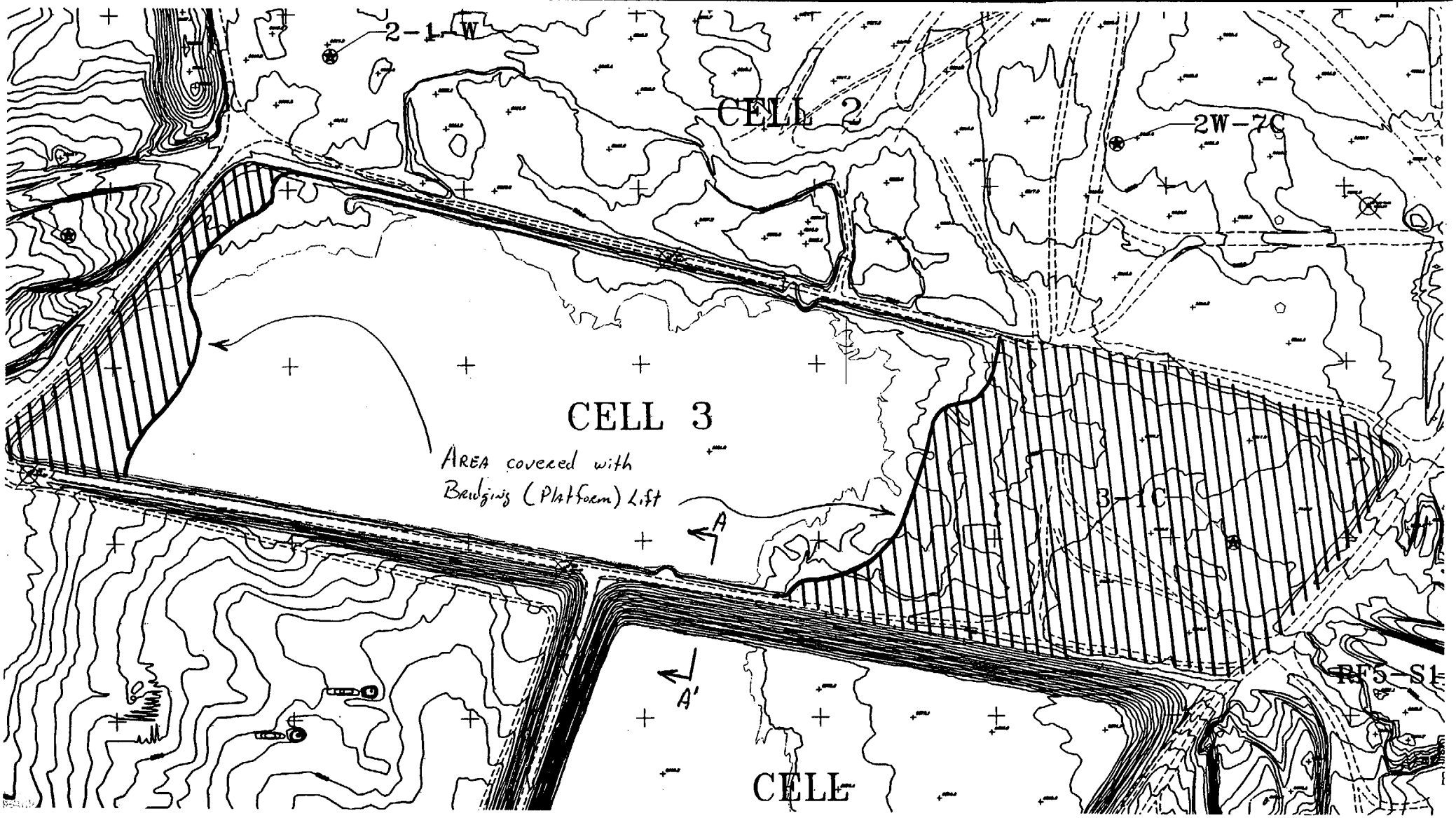
980 LOADER — 350 hrs
D8N DOZER W/RIPPER — 350 hrs
CAT 651 WW 350 hrs
CAT 825 COMPACTOR 375 hrs
CAT 14G GRADER 375 hrs
5000 GALLON WATER TRK 175 hrs

ROCK ARMOR

Rock Armor Volume = 76,110 CY — 38 cy/TRUCK × 8 TRUCKS

304 cy/hr — DELIVERED
Say 25% EXTRA TIME TO
FINISH SPREADING — 1
241 cy/hr → 316 hrs


Random Fill
Clay
Random Fill
Tails
Existing Dike
3:1
Random Fill
5:1
8" Rock Armor
5:1
Wedge Fill
Toe Apron
Bottom Cell #3
Section A-A' Not to Scale


2-1-W
CELL 2
2W-7C
CELL 3
Area covered with
Bridging (Platform) Lift
A
A'
3-1C
CELL

Calculation Sheet

Project: Reclam Plan Est. by: HRC Page 1 of ____ Date 01-24-01

Volume Calculations - Cell 3

1) Area of Top of Cell by CAP = 3,234,252 ft^2 | 74.25 AC.

2) Area of Bridging layer (platform fill) placed to date

34 acres from WMM Mill Staff = 1,481,040 ft^2

3) Platform Layer left to place:

$(3,234,252 - 1,481,040) \times 3.0$ ft. / 27 ft^3/yd^3 = 194,801 yd^3

CELL 3 RECLAMATION

CAT 637 RESOURCE REQUIREMENTS

	Volume	Route	Yds/Hr	%	Equip hrs
Cell 3 Bridging Lift					
Tailings Surface	194,800	6	277	100%	703.25
				TOTAL	703.25
Cell 3 Lower Random Fill					
Tailings surface	119,800	6	296	100%	404.7
Slope 6	410	6	296	100%	1.4
Slope 7	16,600	6	368	100%	45.1
Slope 8	95,800	6	296	100%	323.6
Slope 9	0	6	368	100%	0.0
				TOTAL	**774.9**
Cell 3 Upper Random fill					
Tailings surface	239,400	6	296	100%	808.8
Slope 6	2,200	6	296	100%	7.4
Slope 7	17,100	6	368	100%	46.5
Slope 8	38,300	6	296	100%	129.4
Slope 9	1,200	6	368	100%	3.3
				TOTAL	**995.3**
Cell 3 Rock Armour use Highway Trucks					

CELL 4A CLEANUP

Dewatering of Cell 4A

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Dewatering of Cell 4A	hrs	$0.48	11,500	**$5,529**

Total Dewatering of Cell 4A **$5,529**

Remove Fencing

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Cat 988 Loader	hrs	$104.70	40	$4,188
Equipment Operators	hrs	$17.72	40	$709
Equipment Maintenance (Butler)	hrs	$10.56	40	$422
Laborers	hrs	$10.35	160	$1,655

Total Remove Fencing **$6,974**

Remove Liner & Contaminated Material to Cell 3

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	303	$5,368
Cat 769 Truck	hrs	$66.18	606	$40,104
Truck Driver	hrs	$12.74	606	$7,721
Cat 988 Loader	hrs	$104.70	303	$31,724
Equipment Maintenance (Butler)	hrs	$10.56	909	$9,595

Total Remove Liner & Contaminated Material to Cell 3 **$94,512**

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	$62.00	325	$20,150

Total Quality Control **$20,150**

TOTAL CELL 4A CLEANUP **$127,165**

JE/PROJECT ..... Date ..... Calc by ..... Sheet ..... of .....

CELL 4A WORK

1) ASSUMPTIONS
- ANY XTALS ARE PICKED UP WITH LINER
- AVERAGE OF 1 FOOT UNDER LINER WILL GO TO CELL 3
- ALL DIKE MATERIAL IS UNCONTAMINATED & CAN BE UTILIZED FOR CELL 3 COVER, THEREFORE, NO COST IS PLACED AGAINST ITS REMOVAL
- AREA OF CELL FOR VOLUME ESTIMATES IS 1,909 M ft^2
- CRYSTALS ESTIMATED TO BE 6" THICK OVER ENTIRE AREA

Therefore

QUANTITY OF CONTAMINATED MATERIAL =

$$\left[1{,}909{,}000 \times \left[6/12 + 12/12\right]\right] \div 27\ ft^3/yd^3 = 106{,}055$$

say $\boxed{106{,}100\ yd^3}$

and

BASED ON HAUL ROUTE B PROFILE, EFFICIENCY = 175 yd^3/truck hour.

$106100\ yd^3 \div 175\ yd^3 =$ 606 TRUCK HAULS

= 303 FLEET HAULS (2 TRUCK

RECLAMATION OF CELL 1

Dewatering of Cell 1

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Dewatering of Cell 1	hrs	$0.48	62,400	**$30,000**

Total Dewatering of Cell 1 **$30,000**

Crystal Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	2,695	$47,749
Cat 769 Truck	hrs	$66.18	2,157	$142,745
Truck Drivers	hrs	$12.74	2,157	$27,481
Cat 988 Loader	hrs	$104.70	539	$56,433
Cat D8N Dozer With Ripper	hrs	$74.64	539	$40,232
Cat 375 Excavator	hrs	$132.76	539	$71,556
Cat 651 Waterwagon	hrs	$79.92	539	$43,076
Cat 14G Motorgrader	hrs	$53.30	539	$28,729
Equipment Maintenance (Butler)	hrs	$10.56	4,852	$51,217

Total Crystal Removal **$509,220**

Contaminated Materials Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	616	$10,914
Cat 637 Scraper	hrs	$154.47	308	$47,577
Cat D8N Dozer With Ripper	hrs	$74.64	77	$5,747
Cat 825C Compactor	hrs	$75.09	77	$5,782
Cat 651 Waterwagon	hrs	$79.92	77	$6,154
Cat 14G Motorgrader	hrs	$53.30	77	$4,104
Equipment Maintenance (Butler)	hrs	$10.56	616	$6,502

Total Contaminated Materials Removal **$86,781**

Topsoil Application

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	240	$4,252
Cat 637 Scraper	hrs	$154.47	120	$18,537
Cat D8N Dozer With Ripper	hrs	$74.64	40	$2,986
Cat 651 Waterwagon	hrs	$79.92	40	$3,197
Cat 14G Motorgrader	hrs	$53.30	40	$2,132
Equipment Maintenance (Butler)	hrs	$10.56	240	$2,533

Total Topsoil Application **$33,637**

RECLAMATION OF CELL1

Construct Channel

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	858	$15,202
Cat 637 Scraper	hrs	$154.47	272	$42,016
Cat 769 Truck	hrs	$66.18	450	$29,780
Truck Drivers	hrs	$12.74	450	$5,733
Cat 988 Loader	hrs	$104.70	150	$15,705
Drilling & Blasting Contractor	BCY	$1.50	89,100	$133,650
Cat 14G Motorgrader	hrs	$53.30	218	$11,620
Cat D8N Dozer With Ripper	hrs	$74.64	218	$16,272
Equipment Maintenance (Butler)	hrs	$10.56	1,308	$13,807

Total Construct Channel **$283,785**

Place Clay Liner

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	355	$6,290
Cat 637 Scraper	hrs	$154.47	0	$0
Cat 825 Compactor	hrs	$75.09	60	$4,505
Cat D8N Dozer With Ripper	hrs	$74.64	60	$4,479
Cat D7 Dozer	hrs	$62.69	0	$0
Cat 651 Waterwagon	hrs	$79.92	60	$4,795
Cat 980 Loader	hrs	$70.32	60	$4,219
5000 Gallon Water Truck	hrs	$45.09	30	$1,353
Highway Trucks	hrs	$40.00	435	$17,400
Truck Drivers	hrs	$12.74	435	$5,542
Cat 14G Motorgrader	hrs	$53.30	85	$4,531
Equipment Maintenance (Butler)	hrs	$10.56	1,580	$16,678

Total Place Clay Liner **$69,792**

Place Lower Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	602	$10,666
Cat 637 Scraper	hrs	$154.47	172	$26,569
Cat 825 Compactor	hrs	$75.09	86	$6,458
Cat D8N Dozer With Ripper	hrs	$74.64	86	$6,419
Cat D7 Dozer	hrs	$62.69	86	$5,391
Cat 651 Waterwagon	hrs	$79.92	86	$6,873
Cat 14G Motorgrader	hrs	$53.30	86	$4,584
Equipment Maintenance (Butler)	hrs	$10.56	602	$6,355

Total Place Lower Random Fill **$73,314**

RECLAMATION OF CELL1

Clay Cap

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	305	$5,404
Cat 637 Scraper	hrs	$154.47	0	$0
Cat 825 Compactor	hrs	$75.09	55	$4,130
Cat D8N Dozer With Ripper	hrs	$74.64	55	$4,105
Cat D7 Dozer	hrs	$62.69	0	$0
Cat 651 Waterwagon	hrs	$79.92	55	$4,396
Cat 14G Motorgrader	hrs	$53.30	55	$2,932
Cat 980 Loader	hrs	$70.32	55	$3,868
5000 Gallon Water Truck	hrs	$45.09	30	$1,353
Highway Trucks	hrs	$40.00	440	$17,600
Truck Drivers	hrs	$12.74	440	$5,606
Equipment Maintenance (Butler)	hrs	$10.56	305	$3,220

Total Place Clay Cap **$52,612**

Upper Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	688	$12,190
Cat 637 Scraper	hrs	$154.47	172	$26,569
Cat 825 Compactor	hrs	$75.09	86	$6,458
Cat D8N Dozer With Ripper	hrs	$74.64	86	$6,419
Cat D7 Dozer	hrs	$62.69	86	$5,391
Cat 651 Waterwagon	hrs	$79.92	86	$6,873
Cat 14G Motorgrader	hrs	$53.30	86	$4,584
5000 Gallon Water Truck	hrs	$45.09	86	$3,878
Equipment Maintenance (Butler)	hrs	$10.56	688	$7,262

Total Place Upper Random Fill **$79,624**

RECLAMATION OF CELL1

Rock Armor

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	90	$1,595
Cat D7 Dozer	hrs	$62.69	30	$1,881
Cat 651 Waterwagon	hrs	$79.92	30	$2,398
Cat 14G Motorgrader	hrs	$53.30	30	$1,599
Rock Cost Delivered	CY	$3.66	8,607	$31,528
Equipment Maintenance (Butler)	hrs	$10.56	90	$950

Total Place Rock Armor **$39,950**

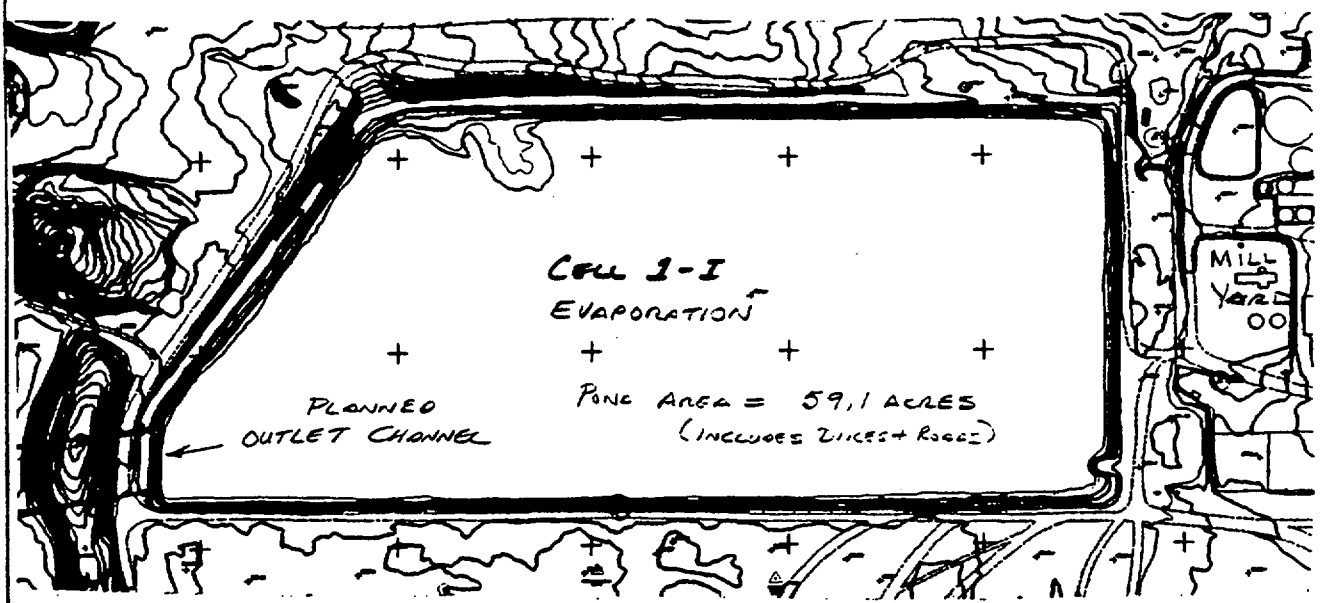
Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	$62.00	800	**$49,600**

Total Quality Control **$49,600**

TOTAL RECLAMATION OF CELL 1 **$1,308,315**

CELL 1 VOLUME CALCULATION



CELL 1 – SCALE 1" = 500'

1) CRYSTAL VOLUME + LINER COVER

- Crystal thickness based on historical elevation of top of Crystal Layer and areal mapping → Assume 3 ft thick
- Soil cover over PVC. Liner 1½' by design and as built's
- Liner Crystals and Soil Cover all picked up at same time.

AREA OF POND $\frac{2,575,703\ ft^2 \times (3\ ft + 1.5\ ft)}{27\ ft^2/cy} = 429,283\ cy$

→ **429,300 cy**

2) Volume of Contaminated material under Liner

- Assume for purposes of this estimate that 1 ft of contaminated material must be removed from under liner for whole cell

$\frac{2575,703\ ft^2 \times 1\ ft}{27\ ft^3/cy} = 95,396\ cy$ → **95,400 cy**

3) Time Required to haul Xyls + Liner Cover. Assuming the use of 4-769 trucks, a 275L Trackhoe; 988 Loader. Assume haul Route #1 for production (199 cy/hr/truck/hr)

$\frac{429,300\ cy}{199\ cy/hr} = 2157$ truck hrs — 539 hrs / truck

CELL 1 VOLUME CALCULATIONS

4) TIME REQUIRED TO REMOVE MATERIAL FROM UNDER LINER IN PLACE IN CELL #3 – USE HAUL ROUTE #2 – 4 SCRAPERS

$$\frac{95{,}500 \text{ cy}}{310 \text{ cy/hr/scraper}} = 308 \text{ scraper hours} \qquad 4 \text{ scrapers} = 77 \text{ hrs/unit.}$$

5) TOP SOIL VOLUMES → place 6" of top soil over area of

CELL 1 – $\frac{2{,}575{,}703 \text{ ft}^2 \times .5 \text{ ft}}{27 \text{ ft}^3/\text{cy}} \cong 47{,}698$ cy

→ 48,000 cy

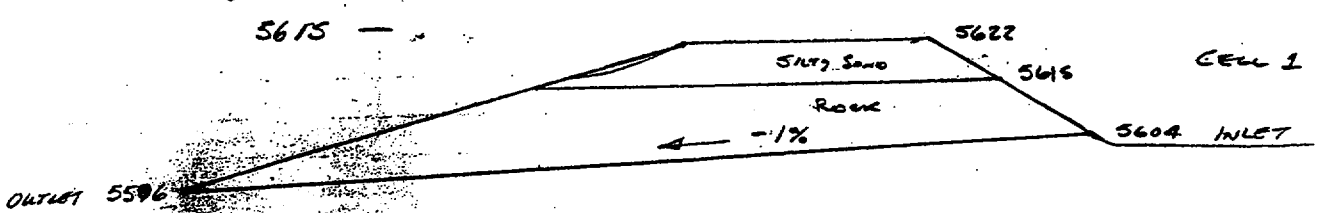
USE scraper fleet assume Route 1 → 310 cy/hr/scraper

$\frac{48{,}000 \text{ cy}}{310 \text{ cy/hr/scraper}} \Rightarrow$ 155 hrs using one scraper

if use 4 scrapers ≅ 40 hr/unit.

6) DISCHARGE CHANNEL VOLUME →

- CHANNEL WILL HAVE BASE WIDTH OF 150 ft – SIDE SLOPE 3:1
- CHANNEL FROM LINER will drop at .01 ft/ft (1%)
- ROCK ELEVATION BASED on Drill holes + CONSTRUCTION Report is at 5615 –

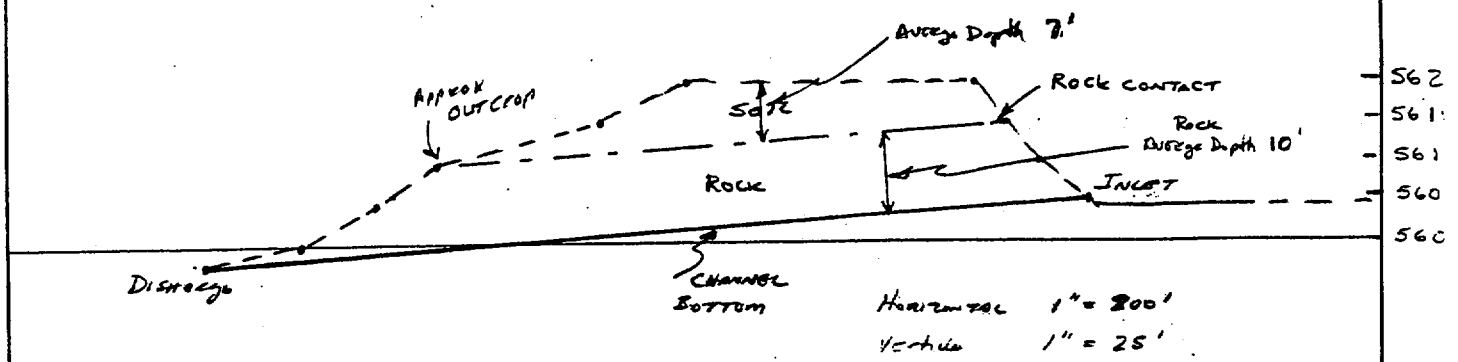


- Removed Fill and Top Soil stockpiles will be used in the RECLAMATION OF Cells 2 + 3 and the mill yard before discharge channel is built.

Cell 1 Volume Calculations

Outlet Channel Sections

Section A-A'



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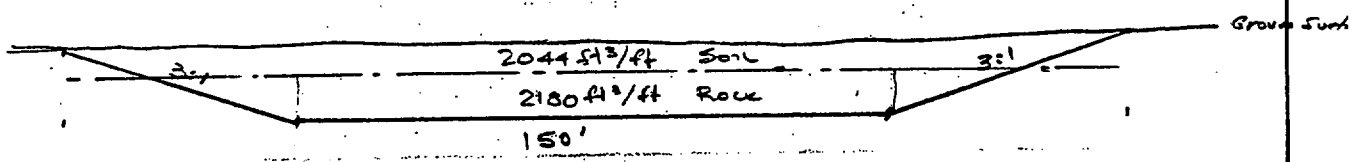


B-B' 1" = 50'

- Assume

  Rock = 81 cy/ft channel length
  Soil = 76 cy/ft channel length

  800 ft channel = 64,800 cy Rock
  60,800 cy Soil

- Use scrapers on soil removal

- Drill and blast rock use trucks to haul away
  Based on EFH's experience during construction – Rock does not rip
  Blasting is required.

- Assume Route 1 for trucks + scrapers.

  Trucks – 199 cy/truck/hr
  Scrapers – 310 cy/hr

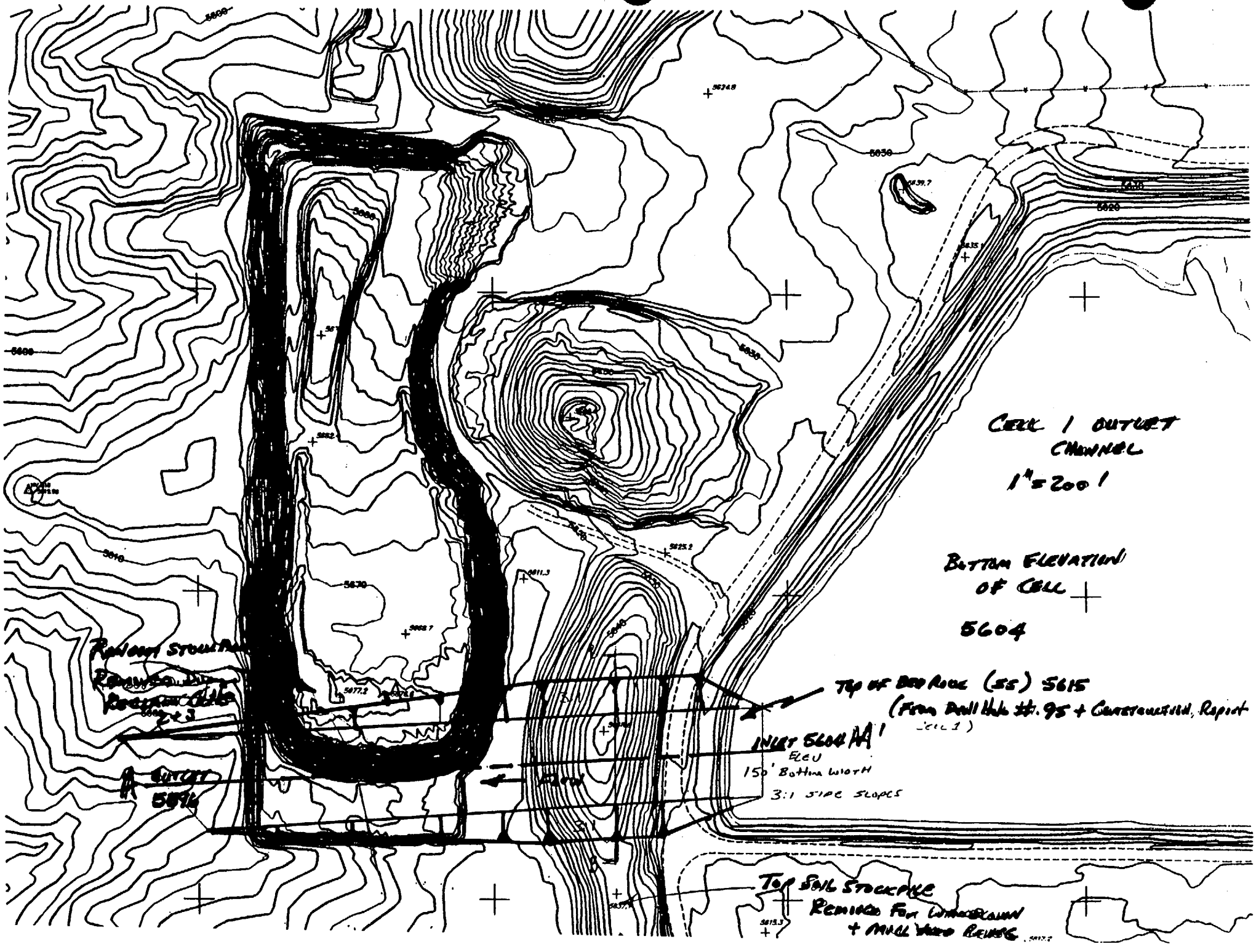
CHANNEL EXCAVATION (CONTINUED)

SOIL → $\frac{69,800 \text{ cy}}{310 \text{ cy/hr}}$ = 196 scraper hrs ⇒ 50 hr/individual scraper
4 scrapers

ROCK → $\frac{69,800 \text{ cy}}{199 \text{ cy/hr}}$ = 325 truck hrs → 2 trucks = 163 hrs/ea

Drilling + Blasting Rock → 10 ft average Depth → $1.50/cy
Based on Recent Contractor Quote

22-142 100 SHEETS
22-144 200 SHEETS
AMPAD


CELL 1 OUTLET CHANNEL
1" = 200'
BOTTOM ELEVATION OF CELL
5604
TOP OF BED ROCK (SS) 5615
(FROM DRILL HOLE #. 95 + CONFERENCE FIELD, REPORT CELL 1)
INLET 5604 A'
ELEV
150' BOTTOM WIDTH
3:1 SIDE SLOPES
TOP SOIL STOCKPILE
REMOVED FOR WINTERCROWN
+ MINE YARD REMOVE
5615.3

AMERICAN MINE SERV

BOB HEMBREE
(303) 389-4125

August 13, 1998

Via Fax:

Attn: Mark Kerr, KLG Associates, Inc.

Re: Drilling and Blasting Limestone, Mill Creek, Oklahoma

We are please to submit the following proposal to provide all equipment, labor and materials for the above referenced project as follows:

Description	Unit Price	Est. Quantity
Mobilization	$8,000.00	1
Drill and Blast Cuts >20' Deep	$ 1.35/CY	30,000 CY
Seismic Monitoring	$300.00/EA	2

General Clarifications:
> Layout and grade control by others
> Excavation by others
> Explosives storage on site
> Pricing assumes two 10 hour drilling shifts per day for 6 days per week
> If bonding is required add 1%
> Night working lights by others
> Pricing assumes dry hole conditions, add $.15 per CY if wet hole conditions are encountered
> Pricing is based on a minimum of 30,000 CY shot during a 10 day period

If you have any questions or need additional information, please feel free to contact me at 303.499.4770.

Sincerely,

C. B. Slatter, Project Manager

RECENT QUOTE FOR DRILL + BLAST USE $1.50 /CY

11808 Highway 93 • BOULDER, COLORADO 80303-9649 • USA
TELEPHONE: [303] 499-4770 • FAX: [303] 499-4774

Calculation / Work Sheet

Project: Rec. Plan Revision 3.0 by: _____ Page ____ of ____ Date 07-06-00

Revision to Topsoil Cost - Cell 1-I

5) Place 6" of Topsoil over open area of Cell 1-I

Total area of Cell 1 - w/ side slopes = 60 AC.

Area consumed by new disposal area =

$(175' + 100') \times 2{,}600 = 715{,}000\ ft^2 = 16.41$ AC.

use 16.-

Total area to be topsoiled = 60 - 16 = 44 acres

Total volume = $\frac{44 \times 43{,}560 \times 0.5\ ft}{27} = 35{,}493\ yd^3$

Use scraper fleet - assume route No. 1

310 yd^3 / hr / machine

$\frac{35{,}493\ yd^3}{310} = 114.5$ hr. use 3 machines

38.17 hr. —

use 40 hr. x 3

120 hr. Total

Calculation / Work Sheet

Page ____ of ____

Project: Rec. Plan Revision 3.0 by: ____ Date 07-06-00

Revision to Channel construction cost.

New channel width - 1,200 ft (was 800 ft)

- Assume Rock 81 cy / ft of channel length
  Soil 76 " " " " "

1100 ft 89,100 cy rock

83,600 cy soil

- use scrapers on soil removal
- Drill & Blast Rock - use trucks to haul

Based on EFN's experience during construction - Rock is not easily ripped - Blasting is required

- Assume Route 1 for Trucks and Scrapers.

Trucks 199 yd³ / truck / hr
Scrapers 310 " scraper / "

Rock - $\frac{89,100 \text{ yd}^3}{199}$ = 448 hr - 3 trucks - 150 hr. ea
450 hr.

Soil $\frac{83,600 \text{ yd}^3}{310}$ = 270 - 4 units = 67.5 = 68 hr ea
272 hr.

Support equipment - 150 hr. + 68 hr. = 218 hr.

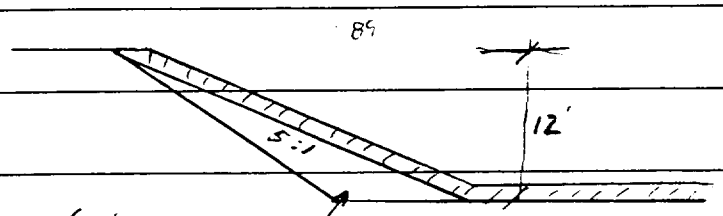
Calculation / Work Sheet

Page ____ of ____

Project: Rec. Plan Revision 3.0 by: _____ Date 07-06-00

Installation of Clay Liner in Cell 1-I

Clay liner - Average depth of Tailings - 18'



Slope reduction cost included w/ Cell 2

Slope length = (5)(18) = 90'

Horizontal length - 176

175 + 90 = 265 Total length = 266

265 - 89 = 176 266 ft

266 ft × 12" × 2600 ft = 691,600 ft³

25,615 yd³ liner

Clay production cost - from Cell 2 estimate

22 yd³ per cycle × 2.7 cycles/hr = 59.4 yd³ per hour/truck

Use 8 trucks = 475 yd³/hr.

$\frac{25,615 \text{ yd}^3}{475}$ = 54 hr. - use 60 hr

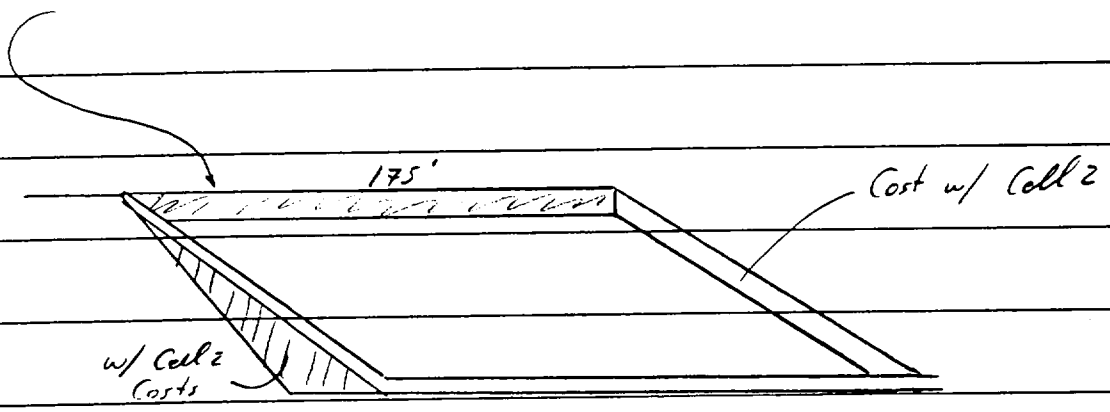
Calculation / Work Sheet

Project: Rec. Plan Revision 3.0 by: _____ Page ____ of ____ Date 07-06-00

Installation of lower Random Fill

North Slope lower Random Fill included with Cell 2 Cost (19,500 yd^3)

lower Random Fill on extention Area.



3' thick - 175' wide x 2600 ft

50,556 yd^3

Use Route 5 haulage - scrapers ≥ 296 yd^3/hr. = 171 hr.

use 174

use 2 scrapers - 87 hr. each

Calculation / Work Sheet

Project: Rec. Plan Revision 3.0 by: _____ Page ____ of ____ Date 07-06-00

Clay Cap - top and side slope

top - 175 ft

slope - 90 ft

265 ft x 1.0 ft thick x 2,600 ft

25,518 yd^3

Use same haulage factor for clay liner

22 yd^3 per truck cycle - x 2.7 cycles/hr -

59.4 yd^3 per hour/truck

8 trucks = 475 yd^3/hr = 53.7 hr - use 55

440 truck hr

55 other

Calculation / Work Sheet

Project: Rec. Plan Revision 3.0 by: NRC

Page ____ of ____

Date 07-06-00

Place Upper Random Fill

2'-0" lay over top and slope

Total width - 175' + 90' = 265 ft

265 x 2600 x 2'-0" = 1,378,000 ft³

= 51,037 yd³

Use Route 5 haulage - scrapers 296 yd³/hr = 172 hr.

use 2 scrapers = 86 hr.

Calculation / Work Sheet

Project: Rec. Plan Revision 3.0 by: JRR Page ____ of ____ Date 07-06-00

Installation of Rock Armor

Top of new area = 175' x 2600 ft

6" Thick 175 x 2600 x 0.5 = 227,500 ft^3

8,426 yd^3

Toe Apron on East and West sections

(175' x 7' x 2' Thick) x 2 = 4900 ft^3 = 182 yd^3

Upstream slope and toe apron running east-west included in Cell 2 Reclamation Costs

Total 8,607 yd^3

8,607 yd^3 – 38 yd^3 / truck 226.5 hr. – use 227

use 8 trucks 28.31 hr. – use 30

MISCELLANEOUS ITEMS

Equipment Mobilization

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Butler Machinery Mobilization	LS	$156,500.00	1	**$156,500**
Other Equipment Mobilization	LS	$2,500.00	1	**$2,500**

Total Equipment Mobilization **$159,000**

Office Facilities

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Run New Powerline	LS	$15,000.00	1	**$15,000**
Utilities for Offices	months	$1,000.00	36	**$36,000**

Total Temporary Office Facilities **$51,000**

Wheel Wash Facility

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Laborers	hrs	$10.35	8,320	**$86,084**
Construct Wheel Wash Facility	LS	$50,000.00	1	**$50,000**
	Facility constructed in 2000			($50,000)

Total Wheel Wash Facility **$86,084**

MANAGEMENT/SUPPORT

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Manager/Engineer	hrs	$48.69	6,240	**$303,826**
Radiation Safety Officer	hrs	$37.87	6,240	**$236,309**
Secretary	hrs	$15.55	6,240	**$97,055**
Clerk	hrs	$12.85	4,866	**$62,522**
Environmental Technician	hrs	$20.29	4,866	**$98,719**
Maintenance Foreman	hrs	$27.73	6,240	**$173,012**
Chemist	hrs	$22.65	2,080	**$47,121**
Security	hrs	$8.12	18,720	**$151,913**
Safety Engineer	hrs	$20.29	4,160	**$84,396**
Misc. Materials & Supplies	hrs	$36.45	6,240	**$227,448**
Health Physics Costs	hrs	$64.81	2,080	**$134,800**

Total Management/Support **$1,617,120**

TOTAL MISCELLANEOUS ITEMS **$1,913,204**

ROCK PRODUCTION COST

Assumptions:
Rock is obtained from gravel source north of Blanding, Utah. BLM Public pit
Rock is processed by screening only, no crushing is required, 1.25 CY of feed for 1 CY of product
Rock is produced and stockpiled at the site
Site is 7 road miles from the mill; 6 miles of which is paved public highway
Rock will be hauled in 22 CY bellydump trucks, contract haulers ($55.00/hr)
Rock will be dumped in windrows on Tailings Cells by trucks, spread by grader, and compacted by D7 Dozer
Trucks can average 30 MPH (1.75 rounds/hr)

	Product Required (CY)	Reject Factor	Material Feed to Plant (CY)	Plant Throughput (CY/hr)	Plant Operating Hours
Material fed to plant	146,000	25.0%	182,500	122	1,500

PRODUCTION OF RIPRAP

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	$17.72	2,340	$41,460
Laborer	hrs	$10.35	1,500	$15,520
Cat D8N Dozer With Ripper	hrs	$74.64	365	$27,245
Cat 980 Loader	hrs	$70.32	1,975	$138,888
Screening Plant w/conveyors*	hrs	$52.00	1,500	$78,000
Contract Highway Trucks - Bellydumps**	hrs	$55.00	3,800	$209,000
Equipment Maintenance (Butler)	hrs	$10.56	2,340	$24,701

Total Production of RipRap **$534,813**

RIPRAP COST PER CUBIC YARD DELIVERED **$3.66**

* Cost Quoted from Mr. Terry Berg, Power Motive Corporation, Denver, Colorado Jan. 23, 2001
'$9,150 per month, 176 hours per month

** Cost quoted from Dennis Cosby, Cosby Trucking, Inc., Blanding, Utah, Jan 24, 2001

Record Of Telephone Call

Project: Reclam. Est. Update by: HRR Page 1 of ____

Call to: Dennis Cosby - Cosby Trucking - Blanding, UT

Date: 01-24-01 (435) 678-2890

Subject: Highway Trucks - Rental, Rip Rap Haul

Notes:

Update highway truck rates -
Pit north of Blanding to White Mesa
Long-term - 6-8 month contract.
$55.00/hr.

Comments:

Old cost was $45.00 - may be able
to beat $55 w/ competitive bid

EQUIPMENT COSTS

WHITE MESA MILL RECLAMATION COST
HOURLY EQUIPMENT COSTS 1999 DOLLARS

Actual equipment rates quoted from Butler Machinery 6 month rental period
January 25, 2001

	Units	RATE MONTHLY	RATE HOURLY	MTCE EXPENDABLES	FUEL USAGE	FUEL @ $1.02	TOTAL COST	Mob/Demob per machine	Mob/Demob Totals	Operating Hrs per Month
637E Scraper	4	22,500	127.84	2.15	24.0	24.48	$154.47	$11,400.00	$45,600.00	704
D8R Dozer	1	11,400	64.77	1.20	8.5	8.67	$74.64	$7,800.00	$7,800.00	176
D7R Dozer	1	9,600	54.55	1.00	7.0	7.14	$62.69	$6,800.00	$6,800.00	176
825G Compactor	1	10,500	59.66	1.15	14.0	14.28	$75.09	$7,700.00	$7,700.00	176
980 G Loader	1	10,550	59.94	1.20	9.0	9.18	$70.32	$7,700.00	$7,700.00	176
988 F Loader	1	16,000	90.91	1.55	12.0	12.24	$104.70	$9,100.00	$9,100.00	176
769D Haul Truck	4	9,750	55.40	1.60	9.0	9.18	$66.18	$7,800.00	$31,200.00	704
375L Excavator	1	20,500	116.48	2.00	14.0	14.28	$132.76	$15,800.00	$15,800.00	176
651 Water Wagon	1	10,500	59.66	1.90	18.0	18.36	$79.92	$8,500.00	$8,500.00	176
5000 gal Water Truck	1	6,000	34.09	0.80	10.0	10.20	$45.09	$3,200.00	$3,200.00	176
14H/Ripper Motor Grader	1	8,200	46.59	1.10	5.5	5.61	$53.30	$5,900.00	$5,900.00	176
16H/Ripper Motor Grader	1	11,750	66.76	1.25	8.5	8.67	$76.68	$7,200.00	$7,200.00	176
									$156,500.00	3,168

Equipment Rental Rate Quoted by Power Motive, Denver, Colorado (01/23/2001) for PC400 Kamatsu Excavator with LaBounty MSD 70R Shear

PC-400 w Shear	22,950.00	130.40	18.94	14.0	14.28	$163.62	$2,500.00
Small tools allocation - Demolition - $1.25/mechanic labor hour for oxygen/acetylene, expendables						$1.25	
Total Equipment Mobilization							$159,000.00

	Monthly Maintenance Flat Rate	Planned Operating Hours/month	Availability Factor	Maintenance Cost per Operating Hour
Butler Equipment Maintenance Cost	$31,100.00	3,168	0.93	$10.56

Crane Rental Rates	RATE MONTHLY	RATE HOURLY	MTCE EXPENDABLES	FUEL USAGE	FUEL @ $1.02	TOTAL COST
65 ton Hydraulic Crane	8,000	45.45	2.05	15.0	15.30	$62.80
30 ton Hydraulic Crane	5,000	28.41	2.05	10.0	10.20	$40.66

Rental Rates updated from Crane Services, Inc. 01/23/2001

JANUARY 25, 2001

INTERNATIONAL URANIUM CORPORATION
ATTN: HAROLD ROBERTS
E-MAILED TO HRR91851@AOL.COM

DEAR HAROLD:

THANK YOU FOR THE INVITATION TO QUOTE INTERNATIONAL URANIUM CORPORATION (IRC) THE EQUIPMENT NEEDED FOR THEIR MINING PROJECT IN BLANDING, UTAH. BUTLER MACHINERY COMPANY (BUTLER) RESPECTFULLY SUBMITS OUR PROPOSAL FOR A MAINTAINED FLEET OF CATERPILLAR MACHINES.

LISTED ON ATTACHMENT A, YOU WILL FIND THE MODELS, QUANTITIES, MONTHLY RENTAL RATES, HOURS ALLOWED PER MONTH, EXCESS HOUR CHARGE, GUARANTEED NUMBER OF MONTHS RATES ARE BASED UPON, TOTAL FREIGHT CHARGES AND THE MAINTENANCE RATE PER HOUR FOR MATERIALS ONLY.

ALL RATES SHOWN ON ATTACHMENT A DO NOT INCLUDE ANY STATE, LOCAL, PROPERTY OR ANY OTHER TAXES THAT MAY BE APPLICABLE.

RATES ARE BASED UPON ELECTRIC HOUR METER READINGS WHICH ARE ATTACHED TO THE DASH OF EACH MACHINE. RATES ARE BASED ON 176 HOURS OF USE EACH MONTH. EXCESS HOUR CHARGES, IF ANY, WILL BE CALCULATED AND INVOICED AT THE END OF THE PROJECT. THERE WOULD BE NO CREDIT ISSUED FOR ANY HOURS UNDER THE ALLOWED DURING THE TERM OF THIS PROPOSAL. IF IRC ELECTS TO DOUBLE SHIFT MACHINES, THEN BUTLER WOULD INVOICE THOSE HOURS AT THE END OF EACH MONTH. (TO FIGURE THE DOUBLE SHIFT RATES, TAKE THE EXCESS HOUR RATE SHOWN ON ATTACHMENT A TIMES THE NUMBER OF HOURS).

RATES ARE BASED UPON A MINIMUM GUARANTEE OF 6 MONTHS AND A PACKAGE DEAL.

MAINTENANCE:
THE MAINTENANCE RATES PER HOUR LISTED ON ATTACHMENT A INCLUDES THE MATERIAL PART ITEMS ONLY, SUCH AS AIR, OIL, AND FUEL FILTERS, LUBRICANT OILS, GREASE, ANTI-FREEZE, BATTERIES, FAN BELTS, LIGHTS AND MAKE-UP OILS. BUTLER WOULD INVOICE IRC ACTUAL HOURS USED ON MACHINES AT THE END OF EACH MONTH.

OUR MONTHLY MAINTENANCE CHARGE WOULD BE $31,100.00, WHICH INCLUDES OUR LABOR, SPECIALIZED LUBE TRUCKS, SUPPORT VEHICLES AND EQUIPMENT, SPECIALIZED TOOLING, SCHEDULED OIL SAMPLING, PARTS TRAILERS AND

INVENTORIES, MILEAGE AND TRAVEL EXPENSE. BUTLER WILL PROVIDE TWO (2) FULL-TIME MAINTENANCE TECHNICIANS ON SITE FIFTY (50) HOURS PER WEEK ON A SCHEDULE TO BE DETERMINED, MONDAY THROUGH FRIDAY. IRC WOULD HAVE TO SCHEDULE THE MACHINES AVAILABLE FOR A TIME FRAME YET TO BE DETERMINED ADEQUATE FOR BUTLER MAINTENANCE PERSONNEL TO PERFORM THE REQUIRED MAINTENANCE. BUTLER WOULD INVOICE IRC FOR THE MONTHLY MAINTENANCE CHARGE AT THE BEGINNING OF EACH MONTH.

REPAIRS:

BUTLER WOULD BE RESPONSIBLE FOR ALL REPAIRS INCLUDING PARTS AND LABOR ON OUR MACHINES OTHER THAN FAILURES CAUSED BY DAMAGES OR MIS-USE. REPAIRS INCLUDE ITEMS AS MINOR AS STARTERS, ALTERNATORS, WATER PUMPS, HYDRAULIC HOSES, ETC. TO THE MAJOR ITEMS SUCH AS ENGINES, TRANSMISSIONS, DIFFERENTIALS, BRAKES, HYDRAULIC PUMPS AND CYLINDERS, ETC. IF TIME PERMITS AND IRC REQUESTS BUTLER'S TECHNICIAN TO PERFORM REPAIRS OR MAINTENANCE ON THEIR MACHINES, OUR HOURLY CHARGE WOULD BE $63.00 PER HOUR FOR STANDARD TIME, $81.00 PER HOUR FOR OVERTIME AND $95.00 PER HOUR FOR SUNDAYS AND HOLIDAYS PLUS MATERIALS.

FREIGHT:

FREIGHT CHARGES INCLUDE BOTH DELIVERY AND RETURN, ASSEMBLY, AND DISASSEMBLY OF EQUIPMENT.

IRC'S RESPONSIBILITIES INCLUDE:

OPERATORS. PROVIDE THE OPERATORS AS NEEDED TO OPERATE MACHINES AS STATED IN CATERPILLAR'S OPERATING GUIDE. BUTLER WILL PROVIDE, AT NO EXPENSE TO IRC, QUALIFIED TRAINING INSTRUCTORS FOR THE PURPOSES OF TRAINING OPERATORS. THIS TRAINING WOULD TAKE PLACE ON THE JOBSITE AT THE INITIAL START UP OF THE JOB AND WOULD INCLUDE CLASSROOM, WALK AROUND, AND IN IRON DEMONSTRATIONS.

FUEL. SUPPLY AND FILL ALL FUEL FOR EQUIPMENT INCLUDING BUTLER'S SERVICE VEHICLES.

DAMAGES. THIS INCLUDES GLASS BREAKAGE, BENT HANDRAILS, STEP LADDERS, FENDERS, ETC. BUTLER'S NORMAL POLICY FOR REPAIRING DAMAGES TO RENTAL MACHINES IS TO REPAIR THEM WHEN THE RENTAL PERIOD IS COMPLETED, HOWEVER, IF THE DAMAGED ITEM IS OF A SAFETY CONCERN, WE WOULD REPAIR THE DAMAGES AS SOON AS POSSIBLE AFTER THEY OCCURRED. AN ITEMIZED LIST OF THE PARTS AND LABOR REQUIRED WOULD BE PROVIDED TO IRC PRIOR TO STARTING THE REPAIR, AND INVOICED AT CURRENT LIST PRICES PLUS FREIGHT UPON COMPLETION.

UNDERCARRIAGE AND TIRES: IRC WOULD BE RESPONSIBLE FOR ALL TIRE WEAR INCLUDING TIRE DAMAGES ON THE MACHINES WITH AN ASTERISK LISTED ON ATTACHMENT A. EQUIPMENT WOULD HAVE TO BE RETURNED WITH SAME BRAND AND MODEL TIRES AS WHEN DELIVERED, OR PRORATED ACCORDINGLY BY PERCENTAGE OF TIRE WEAR AND CONDITION AT TERMINATION OF RENTAL PERIOD.

UPON DELIVERY OF MACHINES, A REPRESENTATIVE OF BUTLER, A

REPRESENTATIVE OF IRC AND A REPRESENTATIVE FROM AN INDEPENDENT TIRE DEALER OR MANUFACTURER WOULD JOINTLY VERIFY IN WRITING THE CONDITION, PERCENTAGE OF WEAR, AND TIRE VALUE. UPON TERMINATION OF RENTAL, WE WOULD AGAIN HAVE THE REPRESENTATIVES MENTIONED ABOVE DETERMINE THE CONDITION, PERCENTAGE OF WEAR, AND TIRE VALUES. ANY DIFFERENCES NOTED, WOULD THEN BE CHARGED OR CREDITED TO IRC INCLUDING BOTH MATERIALS AND LABOR.

UNDERCARRIAGE WEAR ON ALL TRACK TYPE MACHINES WOULD BE BUTLER'S EXPENSE.

GROUND ENGAGING TOOLS:

IRC WOULD BE RESPONSIBLE FOR ALL PARTS RELATING TO GROUND ENGAGING TOOLS (G.E.T.), I.E. CUTTING EDGES, RIPPER TIPS AND PROTECTORS, BUCKET TIPS AND ADAPTERS, EDGES BETWEEN ADAPTERS, WEAR PLATES ON BOTTOM OF BUCKETS AND ALL MOUNTING HARDWARE. BUTLER WOULD INSTALL THESE ITEMS ON AN AS NEEDED BASIS AT THE CURRENT CATERPILLAR LIST PRICE PLUS FREIGHT AT NO ADDITIONAL LABOR COSTS. ALL MACHINES WOULD BE DELIVERED WITH NEW G.E.T. ITEMS AND ARE TO BE RETURNED WITH NEW.

WE WISH TO THANK IRC AND YOU FOR GIVING US THE OPPORTUNITY TO PRESENT OUR PROPOSAL AND FOR ALL THE CONSIDERATION WE RECEIVE.

SINCERELY YOURS,

BUTLER MACHINERY COMPANY

JOEL NIKLE
RENTAL FLEET MANAGER

JN:jw

ENCLOSURE

CC: OSCAR SWENSON, RENTAL FLEET MARKETING MANAGER

ATTACHMENT A

INTERNATIONAL URANIUM CORPORATION

EQUIPMENT NEEDED FOR JOB IN BLANDING, UTAH

JANUARY 25, 2001

MODEL	QTY	MONTHLY RENTAL RATE	HOURS ALLOWED PER MONTH	EXCESS HOUR CHARGE	MINIMUM GUARANTEED NUMBER OF MONTHS RATE BASED UPON	TOTAL** FREIGHT CHARGES TO & FROM	MAINTENANCE RATE PER HOUR
*637E	4	$22,500	176 EA.	$70 EA.	6 EA.	$11,400 EA.	$2.15 EA.
D9R/RIPPER	1	14,000	176	45	6	9,100	1.50
D8R/RIPPER	1	11,400	176	36	6	7,800	1.20
D7R/RIPPER	1	9,600	176	30	6	6,800	1.00
825G	1	10,500	176	32	6	7,700	1.15
980G	1	10,550	176	34	6	7,700	1.20
*988F	1	16,000	176	51	6	9,100	1.55
*769D	4	9,750 EA.	176 EA.	30 EA.	6 EA.	7,800 EA.	1.60 EA.
375L	1	20,500	176	59	6	15,800	2.00
10,000 GALLON WATER WAGON	1	10,500	176	32	6	8,500	1.90
5,000 GALLON WATER WAGON	1	6,000	176	19	6	3,200	0.80
14H/RIPPER	1	8,200	176	26	6	5,900	1.10
16H/RIPPER	1	11,750	176	36	6	7,200	1.25

* PLUS TIRE WEAR

** INCLUDES ASSEMBLY AND DISASSEMBLY

637 SCRAPER EFFICIENCY

NOMINAL CAPACITY 31

HAUL ROUTE	TRAVEL TIME	FIXED TIME	EFFICIENCY	MINUTES PER TRIP	TRIPS/ HOUR	YARDS/ HOUR
1	3.90	1.20	85%	6.0	10.0	310
2	3.25	1.20	85%	5.2	11.5	355
3	4.30	1.20	85%	6.5	9.3	287
4	3.10	1.20	85%	5.1	11.9	368
5	4.15	1.20	85%	6.3	9.5	296
6	4.50	1.20	85%	6.7	8.9	277
7	3.75	1.20	85%	5.8	10.3	319

CAT 637 SCRAPER

TRAVEL TIMES FOR CAT 637 SCRAPERS

BASED ON PROJECTED HAUL ROUTES

Haul Segment	Distance Feet	Distance Meters	Rolling Risistance	Grade %	Ave Speed MPH	Time Min
1a	200	67	7.5	0.0	9.1	0.25
1b	500	167	5.0	0.0	12.6	0.45
1c	200	67	3.0	2.5	9.1	0.25
1d	1400	467	3.0	0.0	18.7	0.85
1e	250	83	3.0	0.0	9.5	0.30
1f	250	83	3.0	0.0	11.4	0.25
1g	1400	467	3.0	0.0	21.2	0.75
1h	200	67	3.0	(2.5)	11.4	0.20
1i	400	133	5.0	0.0	13.0	0.35
1j	200	67	7.5	0.0	9.1	0.25
						3.90
2a	200	67	7.5	0.0	9.1	0.25
2b	2150	717	3.0	(0.5)	22.2	1.10
2c	250	83	5.0	0.0	9.5	0.30
2d	250	83	5.0	0.0	11.4	0.25
2e	2250	750	3.0	+0.5	23.2	1.10
2f	200	67	7.5	0.0	9.1	0.25
						3.25
3a	250	83	7.5	0.0	8.1	0.35
3b	3300	1100	3.0	-0.5	23.4	1.60
3c	250	83	5.0	0.0	9.5	0.30
3d	250	83	5.0	0.0	11.4	0.25
3e	3300	1100	3.0	+0.5	25.0	1.50
3f	250	83	7.5	0.0	9.5	0.30
						4.30
4a	350	117	7.5	-3.5	11.4	0.35
4b	1450	483	3.0	0.0	19.4	0.85
4c	250	83	5.0	0.0	9.5	0.30
4d	250	83	5.0	0.0	11.4	0.25
4e	1700	567	3.0	0.0	22.7	0.85
4f	500	167	7.5	+3.5	11.4	0.50
						3.10

CAT 637 SCRAPER

Haul Segment	Distance Feet	Distance Meters	Rolling Risistance	Grade %	Ave Speed MPH	Time Min
5a	1400	467	7.5	-2.75	15.9	1.00
5b	1350	450	3.0	0.0	19.2	0.80
5c	250	83	5.0	0.0	9.5	0.30
5d	250	83	5.0	0.0	11.4	0.25
5e	2250	750	3.0	0.0	23.2	1.10
5f	700	233	7.5	+5.5	11.4	0.70
						4.15
6a	600	200	7.5	0.0	11.4	0.60
6b	900	300	3.0	-3.3	20.5	0.50
6c	1450	483	3.0	0.0	19.4	0.85
6d	400	133	5.0	0.0	11.4	0.40
6e	400	133	5.0	0.0	11.4	0.40
6f	1450	483	3.0	0.0	22.0	0.75
6g	900	300	3.0	+3.3	17.0	0.60
6h	450	150	7.5	0.0	12.8	0.40
						4.50
7a	750	250	7.5	-1.5	12.2	0.70
7b	1600	533	3.0	0.0	20.2	0.90
7c	350	117	5.0	0.0	11.4	0.35
7d	350	117	5.0	0.0	11.4	0.35
7e	1600	533	3.0	0.0	22.7	0.80
7f	750	250	7.5	+1.5	13.1	0.65
						3.75

769C TRUCK EFFICIENCY

NOMINAL CAPACITY 25

HAUL ROUTE	TRAVEL TIME	FIXED TIME	EFFICIENCY	MINUTES PER TRIP	TRIPS/ HOUR	YARDS/ HOUR
1	3.90	2.50	85%	7.5	8.0	199
2	3.05	2.50	85%	6.5	9.2	230
3	4.00	2.50	85%	7.6	7.8	196

TRAVEL TIMES FOR CAT 769C TRUCKS
BASED ON PROJECTED HAUL ROUTES

Haul Segment	Distance Feet	Distance Meters	Rolling Risistance	Grade %	Ave Speed MPH	Time Min
1a	200	67	7.5	0.0	7.6	0.30
1b	500	167	5.0	0.0	12.6	0.45
1c	200	67	3.0	2.5	9.1	0.25
1d	1400	467	3.0	0.0	18.7	0.85
1e	250	83	3.0	0.0	9.5	0.30
1f	250	83	3.0	0.0	11.4	0.25
1g	1400	467	3.0	0.0	22.7	0.70
1h	200	67	3.0	(2.5)	11.4	0.20
1i	400	133	5.0	0.0	13.0	0.35
1j	200	67	7.5	0.0	9.1	0.25
						3.90
2a	200	67	7.5	0.0	7.6	0.30
2b	2150	717	3.0	(0.5)	24.4	1.00
2c	250	83	5.0	0.0	9.5	0.30
2d	250	83	5.0	0.0	11.4	0.25
2e	2250	750	3.0	+0.5	26.9	0.95
2f	200	67	7.5	0.0	9.1	0.25
						3.05
3a	250	83	7.5	0.0	8.1	0.35
3b	3300	1100	3.0	-0.5	25.0	1.50
3c	250	83	5.0	0.0	9.5	0.30
3d	250	83	5.0	0.0	11.4	0.25
3e	3300	1100	3.0	+0.5	28.8	1.30
3f	250	83	7.5	0.0	9.5	0.30
						4.00
4a	350	117	7.5	-3.5	11.4	0.35
4b	1450	483	3.0	0.0	19.4	0.85
4c	250	83	5.0	0.0	9.5	0.30
4d	250	83	5.0	0.0	11.4	0.25
4e	1700	567	3.0	0.0	22.7	0.85
4f	500	167	7.5	+3.5	11.4	0.50
						3.10

CAT 769 TRUCKS

Haul Segment	Distance Feet	Distance Meters	Rolling Risistance	Grade %	Ave Speed MPH	Time Min
5a	1400	467	7.5	-2.75	15.9	1.00
5b	1350	450	3.0	0.0	19.2	0.80
5c	250	83	5.0	0.0	9.5	0.30
5d	250	83	5.0	0.0	11.4	0.25
5e	2250	750	3.0	0.0	23.2	1.10
5f	700	233	7.5	+5.5	11.4	0.70
						4.15
6a	600	200	7.5	0.0	11.4	0.60
6b	900	300	3.0	-3.3	20.5	0.50
6c	1450	483	3.0	0.0	19.4	0.85
6d	400	133	5.0	0.0	11.4	0.40
6e	400	133	5.0	0.0	11.4	0.40
6f	1450	483	3.0	0.0	22.0	0.75
6g	900	300	3.0	+3.3	17.0	0.60
6h	450	150	7.5	0.0	12.8	0.40
						4.50
7a	750	250	7.5	-1.5	12.2	0.70
7b	1600	533	3.0	0.0	20.2	0.90
7c	350	117	5.0	0.0	11.4	0.35
7d	350	117	5.0	0.0	11.4	0.35
7e	1600	533	3.0	0.0	22.7	0.80
7f	750	250	7.5	+1.5	13.1	0.65
						3.75

Record Of Telephone Call

Project: Tailings Est. Update by: H.R. Roberts Page 1 of ____

Call to: Carl Hunt - BCL Dist. Co.

Date: Jan 23, 2001

Subject: Fuel cost update

Notes: Called Carl to request update fuel cost for bulk delivery to White Mesa Mill.
Requested prices for off-road diesel and mid-grade unleaded.

Diesel - #2 Red $ 1.02 per gal.
Unleaded - 85 Oct. $ 1.3815 per gal.

Comments:

See fax confirmation

H. R. Roberts

BCL DISTRIBUTING CO.

J.C. HUNT

1261 SOUTH MAIN ✧ BLANDING, UT 84511
Phone (435) 678-3311 ✧ Fax (435) 678-2621
1-800-887-4174

facsimile transmittal

To: HAROLD ROBERTS Fax: 303 389-4126.

From: CARL HUNT Date: JAN. 22, 2001

Re: TRANSPORT FUEL PRICES Pages: 1

CC:

☐Urgent ☑For Review ☐Please Comment ☐Please Reply ☐Please Recycle

Notes: BULK FUEL PRICES F.O.B. BLANDING, UT W.M.M.

85 OCT. NL REG. $ 1.3815

#2 RED DIESEL $ 1.02

INCLUDES ALL APPLICABLE TAXES

Record Of Telephone Call

Page 1 of ____

Project: Reclam. Cost Update by: HRR

Call to: Terry Berg - Power Motive

Date: 01-23-01 (303) 355-5900

Subject: Update Screen + Shear/Trenchbox Cost

Notes: Update Costs for CEC Screen Plants

CEC S-IT 4x10 - $ 9,150 /mo

CEC S-IT 5x12 - $ 10,950/mo

PC 400 Komatsu Excavator w/ La Bounty MSD 70R Shear - $22,950 per mo.

(same rate - no change)

Comments:

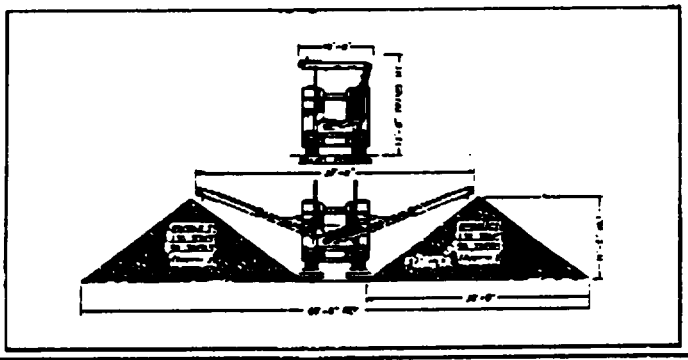
Use $ 9,150 / 176 hours = $51.99/hr.

= $52.00

Construction Equipment Co.

SCREEN-IT 4 X 10

2 of 7



TRANSPORT

Height: 13'6" Fifth Wheel Pull
Width: 10'0" Spring Suspension, air brakes
Length: 39' Lights, oil filled hubs

ENGINE

4 cylinder Deutz; 46 HP - Air Cooled
65 gallon fuel tank

OPTIONS

4 individual jacking legs
Shredder
Grizzly dump
Stacking Conveyors
Ball decks

HOPPER

5.5 cu. yard charging hopper
Height to load 12'3"
Side Loading width 12'0"

SCREEN

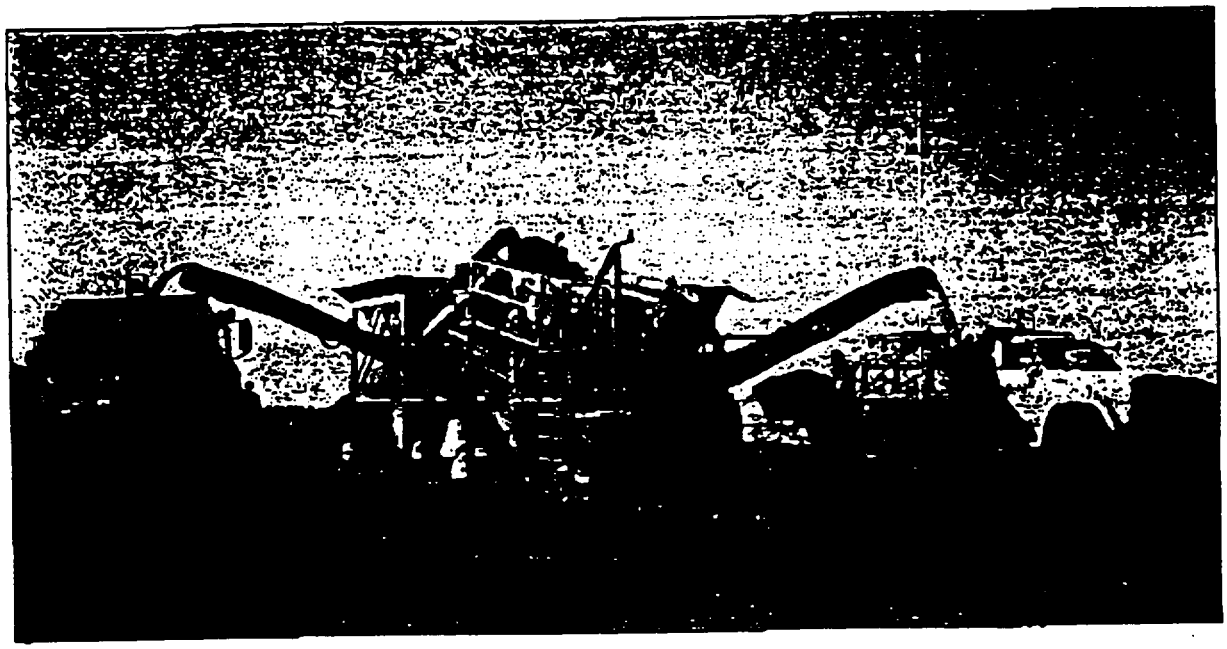
4 x 10; 2 Deck Screen
Hydraulic drive 5/8" Throw
Rubber Spring Suspension

CONVEYORS

36" wide feed conveyor
36" wide under screen conveyor
24" side discharge conveyor
24" rear discharge conveyor

Diesel Hydraulic-Self Contained
Portable and Easy to Set Up

3 of 7



High Production
Screens Sand and Gravel

Conveyors Can Load Directly Into Truck

Construction Equipment Co.
18650 S.W. Pacific Hwy
Tualatin, OR 97062
503-692-9000
Fax 503-692-6220

Area Dealer

POWER MOTIVE
5000 VASQUEZ BLVD.
DENVER, CO 80216
PHONE: (303) 355-5900
FAX: (303) 388-9325

CEC

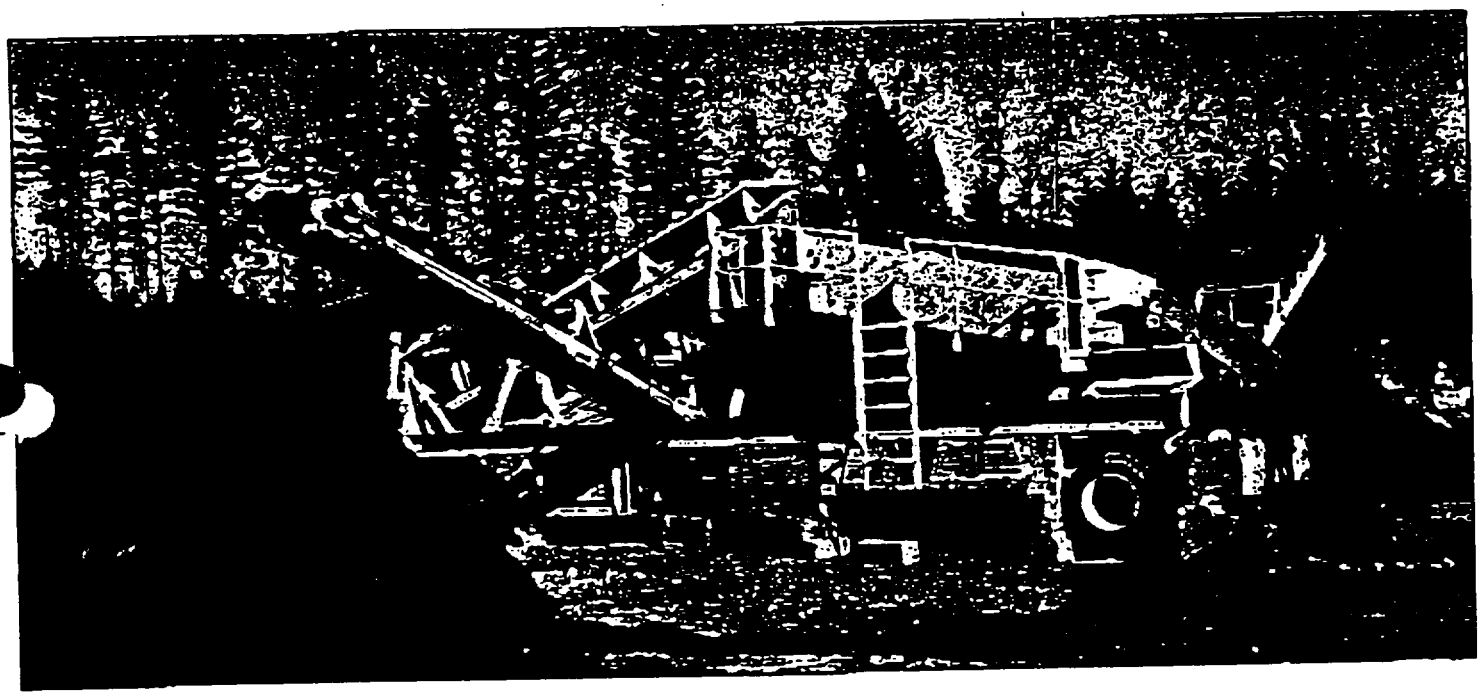
Construction Equipment Co.

SCREEN IT - Series II

Highly Portable - All Hydraulic Setup

Produces Three Different Products

4 of 7



SCREENS COMPOST 120-140 YARDS PER HOUR
SCREENS GRAVEL UP TO 600 TONS PER HOUR

SCREENS: **LOG YARD WASTE, COMPOST, BARK, TOP SOIL, SAND & GRAVEL, TRASH, C & D, STUMPS, CONCRETE, ROCK AND MANY RECYCLE MATERIALS**

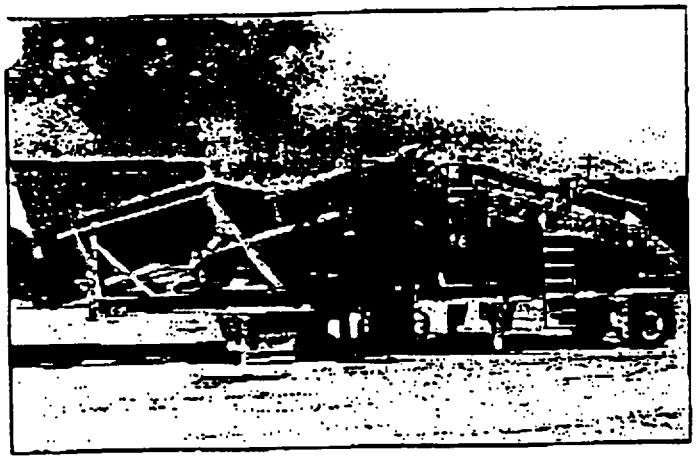
Patent #5234564

CEC

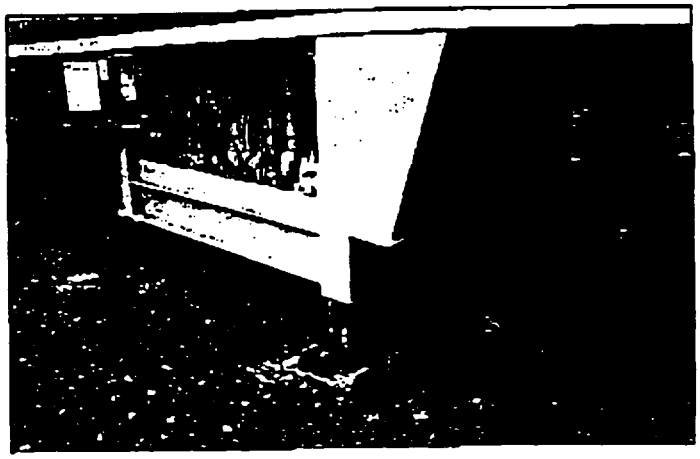
Construction Equipment Co.
P.O. Box 1271
Lake Grove, Oregon 97035
503-635-4427
Fax 503-635-7819

Area Dealer

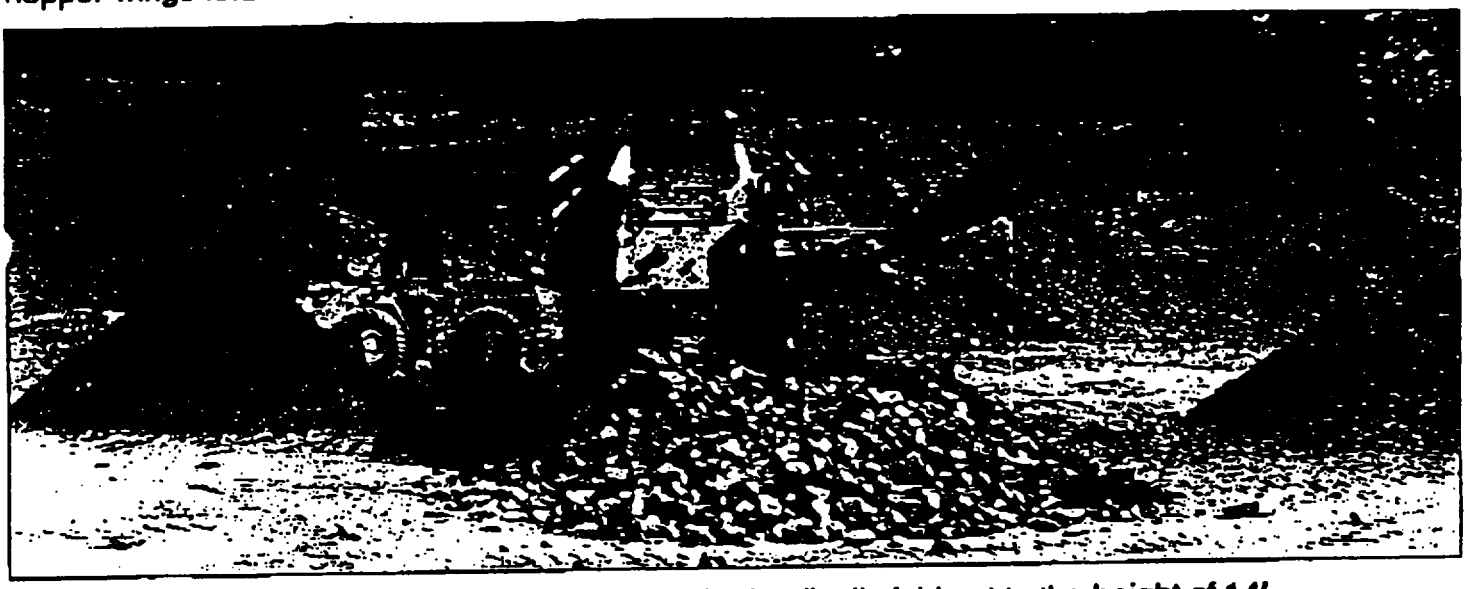
ALL HYDRAULIC FOLD AND SETUP



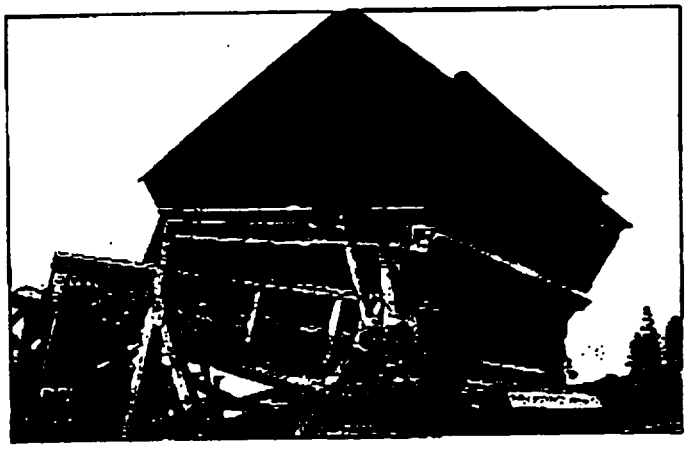
Travel position of the SCREEN IT in which feed conveyor and hopper hydraulically slide back and lower down to transportation height, while hopper wings fold in.



Hydraulic jacking legs are standard for cantelever style blocking, but four (4) individual jacking legs can be an option.



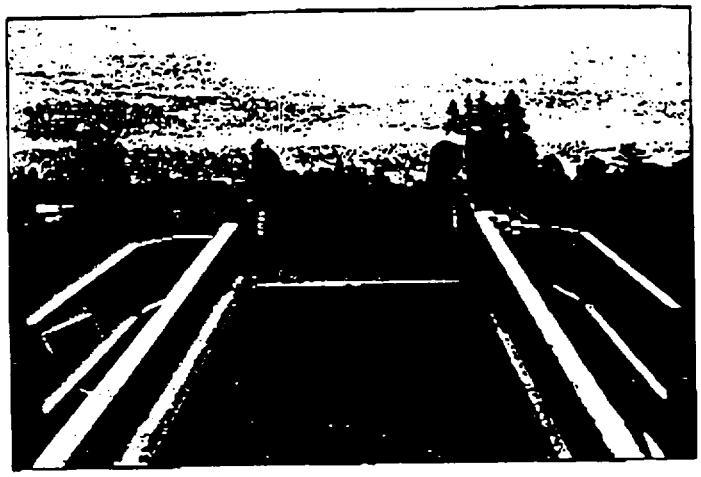
Side and rear discharge conveyors hydraulically fold out to the height of 14'.



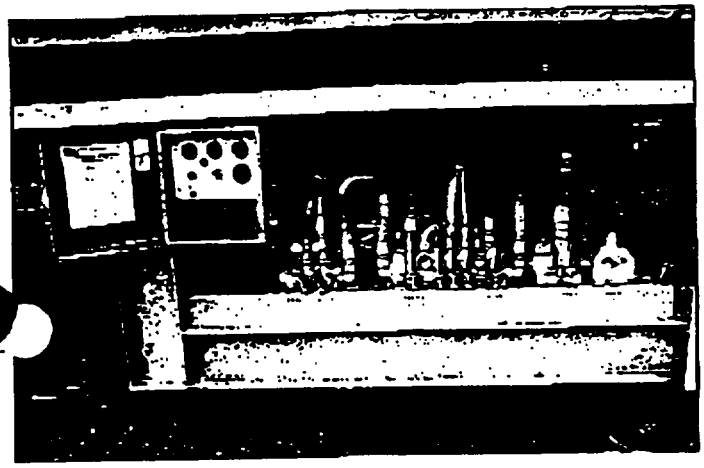
Feed conveyor moves up and forward hydraulically, while the hopper wing walls extend for operation.

Feed conveyor hydraulically moves back and down for transport.

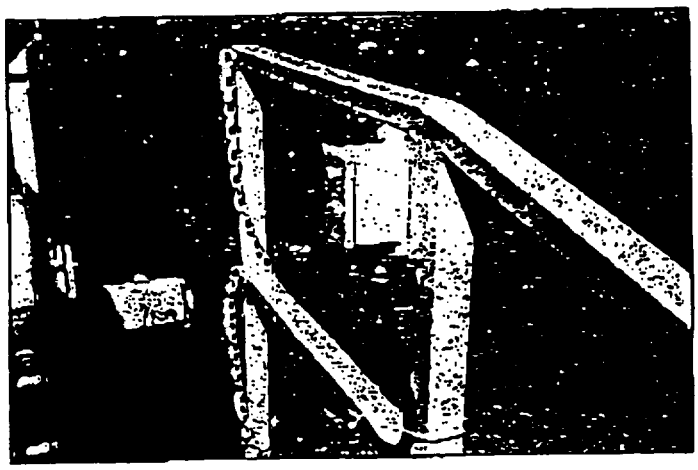
The charging hopper folds out to the width of 14' while in its working position.



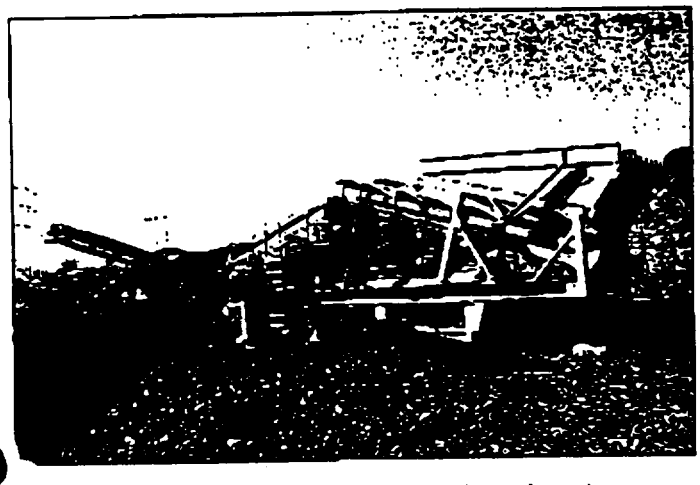
A 48" wide variable feed conveyor with 20" rubber lagged head pulley feeds a 5 x 12 2 Deck screen.



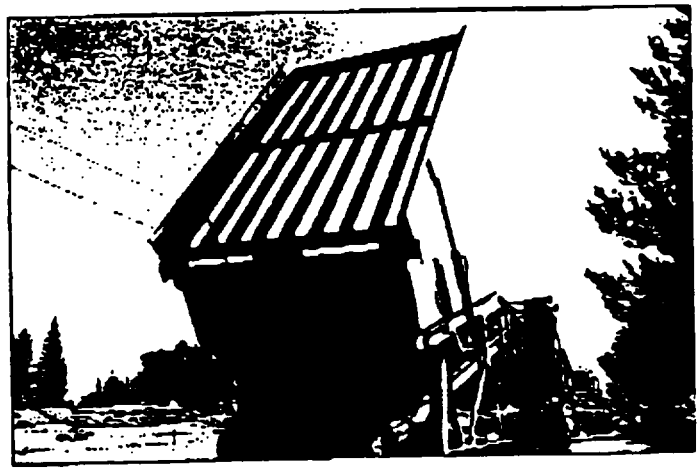
Control panel and hydraulic controls are all located in turnkey area. Powered by a Deutz 4 cylinder, 70 HP diesel engine.



Actuator switch to control speed of feed conveyor is located on the catwalk platform along with kill switch. Actuator switch also located at control panel.



. ne SCREEN IT has an optional 14 foot long by 8 foot wide hydraulic dumping grizzly. An operator controlled remote dumping system is also available.

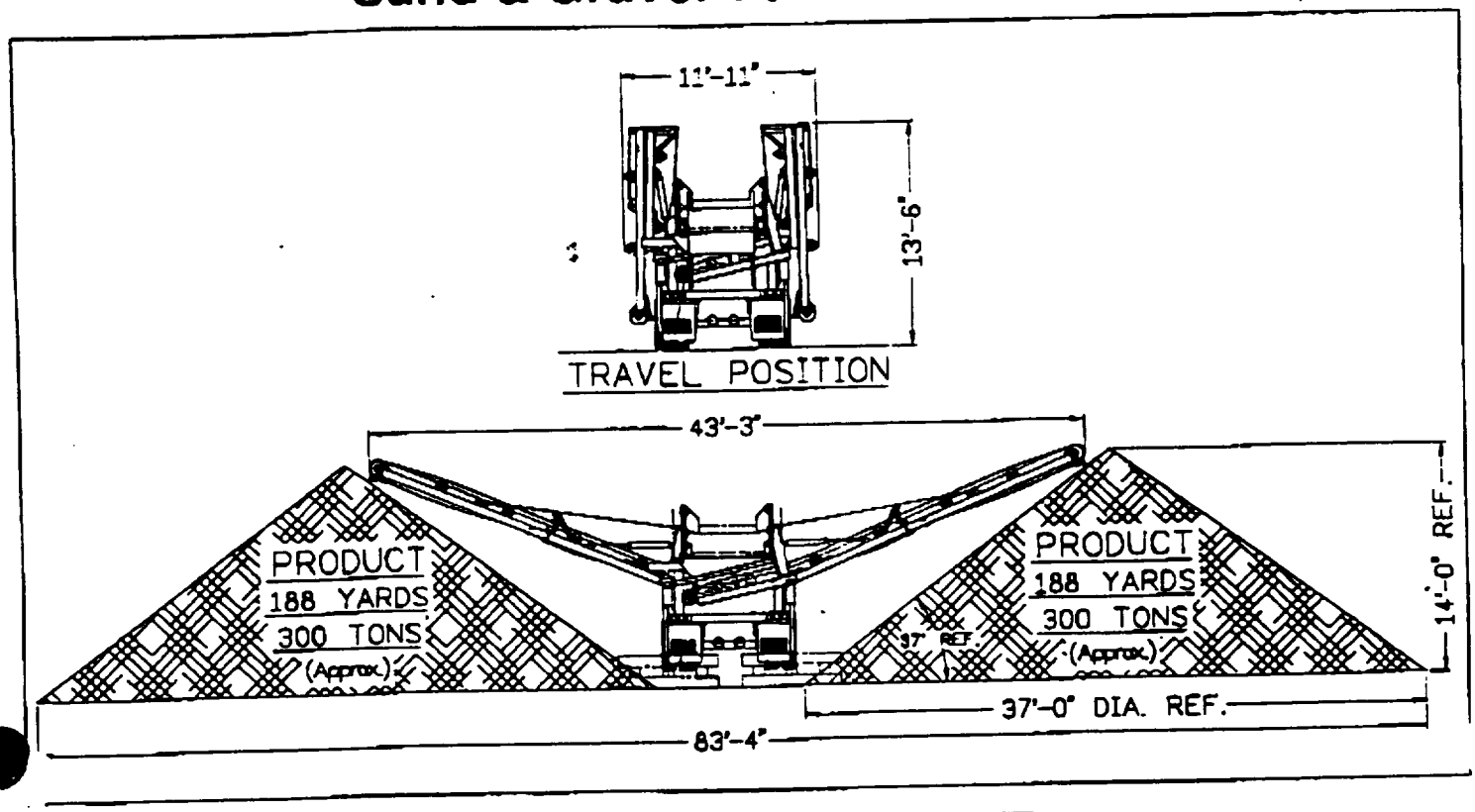


The optional grizzly dumps to the rear of the plant.

SCREENING,

Topsoil To 250 yds./hr.
Sand & Gravel To 600 Tons/hr.

7 of 7



HYDRAULIC DRIVE

TRANSPORT

Height:	13' 6"	Fifth wheel pull
Width:	11' 11"	Spring suspension, air brakes
Length:	43' 0"	Lights, oil filled hubs
Weight:	38,600	Transport speed 65 mph

ENGINE

4 cylinder Deutz
70 HP • Air Cooled
65 gallon fuel tank
110 gallon hydraulic tank

OPTIONS

4 individual jacking legs
Shredder
Grizzly Dump
Stacking conveyors
79 HP Turbo Diesel (Water Cooled)
98 HP Turbo Diesel (Air Cooled)

HOPPER

14.5 cu. yard charging hopper
Height to load 13' 6"
Width at rear 14' - Working position
Width at rear 8' - Travel position

SCREEN

5 x 12, 2 Deck with step deck
Hydraulic drive with 3/8" to 5/8" throw
Rubber spring suspension

CONVEYORS

48" wide feed conveyor 23' 10" long
42" wide under screen conveyor
30" side discharge conveyor 18' 4" long
30" rear discharge conveyor 18' 4" long

Record Of Telephone Call

Page 1 of ____

Project: Reclam. Cost Update by: HRR

Call to: Bob Waciuka - Cerve Services, Inc.

Date: 01-23-01 (505) 877-1100

Subject: Cerve Rental - Update Costs

Notes: Updated Cerve Rental Costs - 6 mo. Term

65 Ton Hyd. - $8000.00/mo.

30 Ton Hyd - $5000.00/mo.

Comments: See attached invoice for current rental to IUC.

CRANE SERVICE INC.
505 Murry Road SE
Albuquerque, NM 87105-0817
(505) 877-1100
Fax: (505) 877-6900

INVOICE

NOV 22 REC'D

SOLD TO:

INTERNATIONAL URANIUM CORPORAT
INDEPENDENCE PLAZA, SUITE 950
1050 17th STREET, ATTN: AP
DENVER, CO 80265

INVOICE NUMBER	DATE OF INVOICE
26508	November 20, 2000

SALESPERSON: GILBERT EAVES

JOB SITE:
BLANDING, UTAH
BLANDING, UT

CUSTOMER'S ORDER NO.: BL2843

Job: BB-1345 Customer: INT011

TERMS: DUE UPON RECEIPT

DATE	DESCRIPTION		UNIT PRICE	TOTAL
11/21/2000 12/20/2000	HT 65 Ton Crane - Bare Rental 5147	1.00 Months	$8,000.00	$8,000.00
		Total Invoice:		$8,000.00

1 1/2 % PER MONTH FINANCE CHARGE WILL BE ADDED TO ALL AMOUNTS OVER 30 DAYS, WHICH IS A ANNUAL % RATE OF 18 %. CUSTOMER AGREES TO PAY ALL COSTS OF COLLECTIONS, INCLUDING ATTORNEYS FEES.

To JFC Date 11/29
Approved JFC
Codes 02-7823-6192-381
01-0000-2450-802

8,480
<480>

1903

White - Original Yellow - Billing Pink - Customer Gold - Permanent

LABOR COSTS

Specified Wages
Heavy Construction

2000 Estimated Labor Rates**

Labor Classification	Base Rate	Mandated Fringe	Labor Burden (FICA, SUI, FUI, etc. 13.97%	Company Benefits (medical, life insure, etc) 21.28%	Fringe Costs	Labor Cost/HR
Boiler Makers	$19.60	$8.76	$2.74	no added cost	$11.50	$31.10
Millwrights	$20.82	$4.28	$2.91	$0.15	$7.34	$28.16
Ironworkers	$21.17	$7.21	$2.96	no added cost	$10.17	$31.34
Carpenters	$10.81		$1.51	$2.30	$3.81	$14.62
Cement Masons	$11.52		$1.61	$2.45	$4.06	$15.58
Electricians	$14.52	$2.71	$2.03	$0.38	$5.12	$19.64
Ironworkers - Reinforcing	$11.00		$1.54	$2.34	$3.88	$14.88
Laborers (including pipelayers)	$7.65	$1.60	$1.07	$0.03	$2.70	$10.35
Pipefitters	$12.60		$1.76	$2.68	$4.44	$17.04
POWER EQUIPMENT OPERATORS						
Backhoes	$10.00		$1.40	$2.13	$3.53	$13.53
Cranes	$10.43		$1.46	$2.22	$3.68	$14.11
Dozers	$13.10		$1.83	$2.79	$4.62	$17.72
Graders	$12.67		$1.77	$2.70	$4.47	$17.14
Loaders	$11.26		$1.57	$2.40	$3.97	$15.23
Scrapers	$10.00		$1.40	$2.13	$3.53	$13.53
Trackhoes	$10.00		$1.40	$2.13	$3.53	$13.53
Tractors	$9.42		$1.32	$2.00	$3.32	$12.74
TRUCK DRIVERS	$9.42		$1.32	$2.00	$3.32	$12.74

Note: base rates do not include FICA, worker comp, unemployment, or company benefits which increase the cost per hour

** Updated from General Decision UT980009 - Modification 0 - 2/13/98, Current Update UT000009, 4 pages, 11/10/2000

LABOR COSTS

Nonspecified Wages	Base Rate	Mandated Fringe	Labor Burden (FICA, SUI, FUI, etc.	Company Benefits (medical, life insure, etc)	Fringe Costs	Labor Cost/HR
Survey Crew Member	$9.85	$0.00	$1.38	$2.10	$3.47	$13.32
Sample Crew Member	$9.85	$0.00	$1.38	$2.10	$3.47	$13.32
Mechanic (Demolition)	$10.25	$0.00	$1.43	$2.18	$3.61	$13.86
Manager/Engineer	$36.00	$0.00	$5.03	$7.66	$12.69	$48.69
Radiation Safety Officer	$28.00	$0.00	$3.91	$5.96	$9.87	$37.87
Secretary	$11.50	$0.00	$1.61	$2.45	$4.05	$15.55
Clerk	$9.50	$0.00	$1.33	$2.02	$3.35	$12.85
Engineer	$28.00	$0.00	$3.91	$5.96	$9.87	$37.87
Environmental Technician	$15.00	$0.00	$2.10	$3.19	$5.29	$20.29
Safety Engineer	$15.00	$0.00	$2.10	$3.19	$5.29	$20.29
Maintenance Foreman	$20.50	$0.00	$2.86	$4.36	$7.23	$27.73
Security Personnel	$6.00	$0.00	$0.84	$1.28	$2.12	$8.12
Chemist	$16.75	$0.00	$2.34	$3.56	$5.90	$22.65

General Decision Number UT000009

Superseded General Decision No. UT990009

State: Utah

Construction Type:
HEAVY

County(ies):

BEAVER	IRON	SEVIER
CARBON	JUAB	UINTAH
DAGGETT	KANE	WASHINGTON
EMERY	PIUTE	WAYNE
GARFIELD	SAN JUAN	
GRAND	SAN PETE	

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	02/11/2000
1	08/04/2000
2	09/29/2000
3	11/13/2000

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COUNTY(ies):

BEAVER	IRON	SEVIER
CARBON	JUAB	UINTAH
DAGGETT	KANE	WASHINGTON
EMERY	PIUTE	WAYNE
GARFIELD	SAN JUAN	
GRAND	SAN PETE	

BOIL0182B 04/01/1996

	Rates	Fringes
BOILERMAKERS	19.60	8.76

CARP2834D 10/01/1998

	Rates	Fringes
MILLWRIGHTS	20.82	4.28

* IRON0027G 07/01/2000

	Rates	Fringes
IRONWORKERS:		
Structural	21.17	7.21

SUUT2007A 03/01/1988

	Rates	Fringes
CARPENTERS	10.81	
CEMENT MASONS	11.52	
ELECTRICIANS	14.52	2.71
IRONWORKERS:		
Reinforcing	11.00	
LABORERS (including pipelayers)	7.65	1.80
PIPEFITTERS	12.60	
POWER EQUIPMENT OPERATORS:		
Backhoes	10.00	
Cranes	10.43	
Dozers	13.10	
Graders	12.67	
Loaders	11.26	
Scrapers	10.00	
Trackhoes	10.00	
Tractors	9.42	
TRUCK DRIVERS	9.42	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment

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data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

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LONG TERM CARE CALCULATION

Long Term Care Calculation

Base Amount (Starting in Dec. 1978)	$250,000
CPI-U December, 1978	67.7
CPI-U December 2000	174.0

Adjusted Long Term Care = $250,000 x (CPI-U most recent / CPI-U Dec., 1978)

Adjusted Long Term Care	$642,541

Series Id: CUUR0000SA0,CUUS0000SA0

Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann Avg	Half1	Half2
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7	128.7	132.6
1991	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2	135.2	137.2
1992	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3	139.2	141.4
1993	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5	143.7	145.3
1994	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2	147.2	149.3
1995	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4	151.5	153.2
1996	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.6	156.9	155.8	157.9
1997	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2	161.6	161.5	161.3	160.5	159.9	161.2
1998	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0	162.3	163.7
1999	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6	165.4	167.8
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2	170.8(R)	

R : REVISED

Consumer Price Indexes Home Page

Data Home Page

BLS Home Page

Bureau of Labor Statistics
gibson_s@bls.gov