P.01

TRANSACTION REPORT

JAN-16-97 THU 03:32 PM

SEND(M)

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-16	03:31 PM	5386016	57"	1	SEND	(M) OK	031	

TOTAL 57S PAGES: 1

Summo U

Post-it® Fax Note 7671	Date 1/16 # of pages ▶ 1
To Lynn Jackson	From Wayne Hedberg
Co./Dept. BLM-MOAB	Co. DOGM
Phone #	Phone # 801-538-5286
Fax # 801-259-2106	Fax # 801-359-3940

A joint agency meeting was conducted in Salt Lake City on January 16, 1997 involving ... on of members of the Bureau of I ... on Oil, Gas and Mining. The p ... ect. requirements to allow us to ... tion The following items were a bond estimate:

Post-it® Fax Note 7671	Date 1/16/97 # of pages ▶ 1
To Terry McParland	From Wayne Hedberg
Co./Dept. BLM-Minerals	Co. DOGM
Phone #	Phone #
Fax # 539-4200	Fax # 359-3940

1. Plugging/reclamatio ... es area wells, 6 down ... 96-7. Assume 500 ft dep ... ojected number of pit dew ... reclamation costs ... and the cost to backfill ... ited mobilization cost ...

Post-it® Fax Note 7671	Date 1/16/97 # of pages ▶ 1
To Pat Gochnour	From Wayne Hedberg
Co./Dept. Gochnour & Assoc.	Co. DOGM
Phone # -	Phone # (801) 538-5286
Fax # (303) 721-9298	Fax # (801) 359-3940

2. Cost for constructing ... 2" of soil - bottom to top).

Post-it® Fax Note 7671	Date 1/16 # of pages ▶ 1
To Dennis Frederick	From Wayne Hedberg
Co./Dept. DWQ	Co. DOGM
Phone # * List sent to Summo	Phone # 538-5286
Fax # 538-6016	Fax # 359-3940

TRANSACTION REPORT

P.01

JAN-16-97 THU 03:30 PM

SEND(M)

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-16	03:28 PM	13037219298	46"	1	SEND	(M) OK	030	
			TOTAL			46S PAGES: 1		

Remaining Bond Estimate Concerns
Summo USA Corporation - Lisbon Valley Copper Project
M/037/088
(Prepared January 16, 1997)

A joint agency meeting was conducted in Salt Lake City on January 15, 1997 involving staff members of the Bureau of Land Management, the Division of Water Quality, and the Division of Oil, Gas and Mining. The purpose of the meeting was to discuss final closure and reclamation requirements to allow us to determine a final bond amount and finalize the EIS for this project. The following items were agreed upon as necessary line items to be included in the reclamation bond estimate:

1. Plugging/reclamation costs for approximately 11 monitoring wells (5 process facilities area wells, 6 downgradient pit wells) plus the two existing wells 94MW4 and MW96-7. Assume 500 ft depth for process area wells, assume 1200 ft depth for pit wells. Projected number of pit dewatering wells remaining upon mine closure and the associated reclamation costs must also be provided. Include average well depth and diameter, and the cost to backfill all holes with cement from bottom to top. Also include anticipated mobilization cost for drilling rig to close holes.

2. Cost for constructing final heap cap design (12" of clay, 24" of crushed rock, and 12" of soil - bottom to top).

TRANSACTION REPORT

P.01

JAN-16-97 THU 03:18 PM

SEND(M)

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-16	03:16 PM	18012592106	1'14"	1	SEND	(M) OK	029	
			TOTAL			1M 14S PAGES: 1		

Remaining Bond Estimate Concerns
Summo USA Corporation - Lisbon Valley Copper Project
M/037/088
(Prepared January 16, 1997)

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TRANSACTION REPORT

P.01

JAN-16-97 THU 03:15 PM

SEND(M)

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-16	03:14 PM	5394200	56"	1	SEND	(M) OK	028	

TOTAL 56S PAGES: 1

Remaining Bond Estimate Concerns
Summo USA Corporation - Lisbon Valley Copper Project
M/037/088
(Prepared January 16, 1997)

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2. Cost for constructing final heap cap design (12" of clay, 24" of crushed rock, and 12" of soil - bottom to top).

3. Describe the proposed methodology for handling residual leach pad rinsate water following final draindown of heaps. Estimate the volume to be handled and calculate cost of disposing of same (eg., evaporation, pump/treat and discharge, land apply, etc.).

4. Describe the sequencing for the final rinsing of the heap. How much of the heap will still need to be rinsed upon mine closure (25%, 50%, more??)? How many pore volumes of water will be needed to effectively neutralize same? If chemical neutralizing agents are anticipated include these costs as well. Provide cost estimates based upon the projected final rinsing plan. Assume a minimum to 2 pore volumes.

5. Calculate continued well monitoring costs for a minimum of 5 years following closure of the mine. This will involve a minimum of the 11 monitoring wells (see #1 above) at a sampling frequency of twice per year. Estimate an average analytical cost of $500/sample.
(eg., 11wells X 2 samples/yr. X 5 yrs. X $500/sample = @$55,000).

6. Add a line item to the bond estimate to account for analytical testing and disposal costs for the residual process pond sludges. Assignment of anticipated costs for this item will be deferred to a later date when more detailed information becomes available.

Based on our meeting January 15, 1997 the following bonding issue need to be addressed:

1. The rinsing cost of the heap leach is low. Based on the array information available to the State and BLM, the heap leach pad mining sequence is not clear. Summo needs to provide a clear description of the leaching and rinsing sequence and the cost of rinsing the heap leach pad needs to be re-evaluated.

2. The disposal and volume of the water remaining after rinsing is not complete ~~is not~~ addressed. The proposed disposal method and associated cost should be added as a line item to the bond calculation.

3. The number of dewatering wells, diameter, and depth that will have to be reclaimed at the end of mine life must be added to the bond calculation.

4. Based on discussions with the State, we anticipate 5 leach pad monitoring wells and 6 post mining pit groundwater monitoring wells. These holes, in addition to existing wells 94MW4 and MW96-7, will need to be reclaimed. A cost estimate line items needs to be added to the bond calculation. Assume the leach pad monitoring wells would be 500 feet in depth and the pit monitoring wells 1200 feet in depth.

5. In consolation with the State, we have determined that the heap leach cover will be: (top to bottom) 12 inches of soil, 24 inches of crushed rock, and 12 inches of clay.

Based on the present information provided to us, we have assumed these requirements base on a reasonable worst case scenario.

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Wayne Hedberg	From Jerry McPolard
Co.	Co.
Dept.	Phone #
Fax #	Fax #

BLM's assessment

DRAFT

DESCRIPTION	QTY	UNIT	SUB/CONT	SUBTOTAL	PECENT FEDERAL	SUBTOTAL	AMOUNT ALLOWED
Waste Dump A–190 Acres							
Area of Top	456,444.0	SY					
Area of Slope	462,680.0	SY					
Scarify Top (Flat) Area	456,444.0	SY	$0.20	$91,289			
12 Inches Soil on Top of Dump	152,148.0	CY	$1.25	$190,185			
12 Inches Soil on Slope	154,227.0	CY	$1.25	$192,784			
Seed Entire Surface	190.0	Acres	$174.00	$33,060			
				$507,318	57.00%	$289,171	$289,171
Waste Dump B–94 Acres							
Area of Top	197,222.0	SY					
Area of Slope	258,240.0	SY					
Scarify Top (Flat) Area	197,222.0	SY	$0.20	$39,444			
12 Inches Soil on Top of Dump	65,741.0	CY	$1.25	$82,176			
12 Inches Soil on Slope	86,080.0	CY	$1.25	$107,600			
Seed Entire Surface	94.0	Acres	$174.00	$16,356			
				$245,577	0.00%	$0	$0
Waste Dump C –120 Acres							
Area of Top	344,222.0	SY					
Area of Slope	238,633.0	SY					
Scarify Top (Flat) Area	344,222.0	SY	$0.20	$68,844			
12 Inches Soil on Top of Dump	114,741.0	CY	$1.25	$143,426			
12 Inches Soil on Slope	79,544.0	CY	$1.25	$99,430			
Seed Entire Surface	120.0	Acres	$174.00	$20,880			
				$332,581	100.00%	$332,581	$332,581
Leach Pad–254 Acres							
Rinse Heap Leach Area 1 Year	1.0	YR		$20,095			
Area of Top	788,556.0	SY					
Area of Slope	441,653.0	SY					
12 Inches Clay Cap on Top	262,852.0	CY	$2.50	$657,130			
12 Inches Clay Cap on Slope	147,218.0	CY	$2.50	$368,045			
36 Inches Crushed Rock on Top	262,852.0	CY	$2.50	$1,971,390			
36 Inches Crushed Rock on Slope	147,218.0	CY	$2.50	$1,104,135			
12 Inches Soil on Top	262,852.0	CY	$1.25	$328,565			
12 Inches Soil on Slope	147,218.0	CY	$1.25	$184,023			
Seed Entire Surface	254.0	Arces	$174.00	$44,196			
				$4,677,579	21.00%	$982,291	$982,291
					Subtotal	$1,604,043	
Pond Area–11 Arces							
Raffinate Pond-12 Inches Soil	4,852.0	CY	$1.25	$6,065			
PLS Pond–12 Inches Soil	4,852.0	CY	$1.25	$6,065			
Water Runoff Pond–12 Inches Soil	8,229.0	CY	$1.25	$10,286			
Seed 3 Pond Areas	11.0	Acres	$174.00	$1,914			
				$24,330	0.00%	$0	$0

DRAFT

DESCRIPTION	QTY	UNIT	SUB/CONT	SUBTOTAL	PECENT FEDERAL	SUBTOTAL	AMOUNT ALLOWED
Plant & Cursher Area--25.5 Acres							
Apply 12 Inches Soil	41,080.0	CY	$1.25	$51,350			
Seed Entire Area	25.5	Acre	$174.00	$4,437			$0
				$55,787	90.00%	$50,208	
Haul Roads--40 Acres							
Scarify	192,889.0	SY	$0.20	$38,578			
Contour	64,296.0	CY	$1.25	$80,370			
Apply 12 Inches Soil	67,511.0	CY	$1.25	$84,389			
Seed Entire Area	40.0	Acre	$174.00	$6,960			
				$210,297	64.00%	$134,590	$80,000
Power Line Corridor--64 Acre							
Power Co. Requested Power Line	64.0	Acres	$0.00	$0	70.00%	$0	$0
Remain Open							
Reseed Soil Stockpile Areas--40 Acres							
Reseed 40 Acres	40.0	Acres	$174.00	$6,960	46.00%	$3,202	$3,202
Fences&Berms Around Open Pits							
Fence Around Sentinel Pit 1	5,620.0	LF	$3.02	$16,972	100.00%	$16,972	$16,972
Fence Around Sentinel Pit 2	2,140.0	LF	$3.02	$6,463	100.00%	$6,463	$6,463
Fence Around Centennial Pit	8,980.0	LF	$3.02	$27,120	77.00%	$20,882	$20,882
Fence Around GTO Pit	7,410.0	LF	$3.02	$22,378	0.00%	$0	$0
Cost of Berms not Shown							
Surface Drainage Diversion Ditches							
Leach Pad Area	7,473.0	CY	$1.25	$9,341	21.00%	$1,962	$1,962
Plant Area	1,595.0	CY	$1.25	$1,994	90.00%	$1,794	$1,794
Crusher Area	1,810.0	CY	$1.25	$2,263	90.00%	$2,036	$2,036
Dump Areas	13,668.0	CY	$1.25	$17,085	57.00%	$9,738	$9,738
					Subtotal	$247,848	

DRAFT

DESCRIPTION	QTY	UNIT	SUB/CONT	SUBTOTAL	PECENT FEDERAL	SUBTOTAL	AMOUNT ALLOWED
Direct Costs							
Mobilization and Demobilization	1.0	Lot		$35,000	100.00%	$35,000	$35,000
Leach Pad and Waste Dumps	1.0	Lot		$1,604,043	100.00%	$1,604,043	$1,604,043
Misc. Surface Areas	1.0	Lot		$247,848	100.00%	$247,848	$247,848
Total Direct Cost							$1,886,891
Indirect Cost							
Plant Dismantling	1.0	Lot		$450,000	100.00%	$450,000	$450,000
Engineering (5% of Total Direct Cost)	1.0	Lot		$94,345	100.00%	$94,345	$94,345
Owner's Cost	1.0	Lot		$124,468	100.00%	$124,468	$124,468
Construction Management	1.0	Lot		$124,468	100.00%	$124,468	$124,468
SC Administrative Fee (18%)	1.0	Lot		$339,640	100.00%	$339,640	$339,640
Total Direct Cost							$1,132,921
			Total Allowable Cost				$3,019,812
			Inflation Adjusted 5 years @2.58				$3,429,994

DRAFT

Estimate Using Rounding Rules and Caps

Used Actual Cost				
Waste Dump A--190 Acres	$289,171			$289,200
Waste Dump B--94 Acres	$0			$0
Waste Dump C--120 Acres	$332,581			$332,600
Leach Pad--120 Acres	$982,291			$982,300
Pond Area--11 Acres	$0			$0
Plant and Crusher Area--25.5 Acres	$50,208			$50,200
Fences and Berms	$44,317			$44,300
Surface Drainage Diversion Ditches				
Leach Area	$1,962			$2,000
Plant Area	$1,794			$1,800
Cusher Area	$2,036			$2,000
Dump Area	$9,738			$9,700
Acre Limitation of $2000				
Haul Roads--40 Acres	$134,590	$3,365	$80,000	$80,000
Power Line Corridor--64 Acres	$0	$0	$0	$0
Reseed Soil stockpile Area--18 Acres	$3,202	$178	$3,202	$3,200
Direct Cost				
Mobilization & Demobilization	$35,000			$35,000
Leach Pad & Waste Dumps	$1,604,043			$1,604,100
Misc. Surface Areas	$247,848			$247,800
Total of Direct Cost	$1,886,891			$1,886,900
Indirect Cost				
Plant Dismantling	$450,000			$450,000
Engineering 5% of Total Direct Cost	$94,345			$94,300
Owners Cost	$124,468			$124,500
Construction Cost	$124,468			$124,500
SC Administrative Fee (18%)	$339,640			$339,600
Total Direct Cost	$1,132,921			$1,132,900
Total Allowable Costs				$3,019,800
Inflation Adjusted 5 yr. @ 2.58%				$3,429,981
Total Costs Rounded				$3,430,000

(DWQ)	DOGM (Summo Bond proposal)	DEIS
12" soil	12" soil	12" soil
24" crushed rx.	12" crushed ls.	48" crushed rx.
12" clay	12" clay	
leached ore	leached ore	leached ore

uran, selen, arsenic + molyb (pit lake chemistry is a concern)
(gross alpha + beta)

GW permit conditions:
conceptual closure plan due before summo can begin (pond or pad construction) mine schedule, cap design, etc. (and a BAT monitoring plan)
proposed final closure plan due 180 days prior to end of 5 yr. (initial) permit term.

Storm Water permits requirements:
requires Poll Prev. Plan (not required to be submitted up front)
- haven't applied for yet by summo (once applied for, they're covered) ??

DOGM Received from SUMMO
Jan 3rd

M/037/058

1

FILENAME: [SUMLVRC2.XLW]RECLAIM 1 REV 4
PROJECT: SUMMO CORP., LISBON VALLEY COPPER
DESCRIPTION:RECLAMATION COSTS
DATE: 03-Jan-97

THE WINTERS CO
TUCSON, ARIZONA
CAPITAL COST ESTIMATE

10:45 AM

	DESCRIPTION	QTY	UNIT	LABOR HR PER UNIT	UNIT COSTS MATL	#REF! LABOR	RENTAL EQUIPMENT	SUB/CONT	EXTENDED COSTS MATERIAL	LABOR	RENTAL	SUBTOTAL	TOTAL
1	RECLAMATION OF WASTE DUMPS												
2													
3	WASTE DUMP "A"--190 ACRES												
4	AREA OF TOP	456,444	SY										
5	AREA OF SLOPE	462,680	SY										
6	SCARIFY TOP (FLAT) AREA	456,444	SY					0.20				91,289	
7	12 INCHES SOIL ON TOP OF DUMP	152,148	CY					1.25				190,185	
8	12 INCHES SOIL ON SLOPE	154,227	CY					1.25				192,783	
9	SEED ENTIRE SURFACE	190	ACRE					174				33,088	
10	TOTAL--WASTE DUMP "A" RECLAMATION												507,346
11													
12	WASTE DUMP "B"--94 ACRES												
13	AREA OF TOP	197,222	SY										
14	AREA OF SLOPE	258,240	SY										
15	SCARIFY TOP (FLAT) AREA	197,222	SY					0.20				39,444	
16	12 INCHES SOIL ON TOP OF DUMP	65,741	CY					1.25				82,176	
17	12 INCHES SOIL ON SLOPE	86,080	CY					1.25				107,600	
18	SEED ENTIRE SURFACE	94	ACRE					174				16,397	
19	TOTAL--WASTE DUMP "B" RECLAMATION												245,617
20													
21	WASTE DUMP "C"--120 ACRES												
22	AREA OF TOP	344,222	SY										
23	AREA OF SLOPE	238,633	SY										
24	SCARIFY TOP (FLAT) AREA	344,222	SY					0.20				68,844	
25	12 INCHES SOIL ON TOP OF DUMP	114,741	CY					1.25				143,426	
26	12 INCHES SOIL ON SLOPE	79,544	CY					1.25				99,430	
27	SEED ENTIRE SURFACE	120	ACRE					174				20,983	
28	TOTAL--WASTE DUMP "C" RECLAMATION												332,684
29													
30	LEACH PAD--254 ACRES												
31	RINSE HEAP LEACH AREA 1 YEAR	1	YR					20,095				20,095	
32	AREA OF TOP	788,556	SY										
33	AREA OF SLOPE	441,653	SY										
34	12" CLAY CAP ON TOP	262,852	CY					2.50				657,130	
35	12" CLAY CAP ON SLOPE	147,218	CY					2.50				368,044	
36	12" CRUSHED ROCK ON TOP (limestone?)	262,852	CY					2.50				657,130	
37	12" CRUSHED ROCK ON SLOPE	147,218	CY					2.50				368,044	
38	12 INCHES SOIL ON TOP	262,852	CY					1.25				328,565	
39	12 INCHES SOIL ON SLOPE	147,218	CY					1.25				184,022	
40	SEED ENTIRE SURFACE	254	ACRE					174				44,288	
41	TOTAL--LEACH PAD RECLAMATION												2,627,318
42													
43													
44													
45													
46													
47													
48													
49	TOTAL												$3,712,960
50	PROFIT						PROFIT @	0%					
51	TOTAL INCLUDING PROFIT												$3,712,960

FILENAME: RECC2.XLS REV 4
PROJECT: SUMMO CORP., LISBON VALLEY COPPER
DESCRIPTION:RECLAMATION COSTS
DATE: 03-Jan-97

THE WINTERS CO
TUCSON, ARIZONA
CAPITAL COST ESTIMATE

10:45 AM

	DESCRIPTION	QTY	UNIT	LABOR HR PER UNIT	UNIT COSTS UNIT MATL	#REF! LABOR	RENTAL EQUIPMENT	SUB/CONT	EXTENDED COSTS MATERIAL	LABOR	RENTAL	SUBTOTAL	TOTAL
1	RECLAMATION OF MISCELLANEOUS AREAS												
2													
3	POND AREA--11 ACRES												
4	RAFFINATE POND--12 INCHES SOIL	4,852	CY					1.25				6,065	
5	PLS POND--12 INCHES SOIL	4,852	CY					1.25				6,065	
6	WATER RUNOFF POND--12 INCHES SOIL	8,229	CY					1.25				10,286	
7	SEED 3 POND AREAS	11	ACRE					174				1,937	
8	TOTAL--POND AREA RECLAMATION												24,353
9													
10	PLANT & CRUSHER AREA--25.5 ACRES												
11	APPLY 12 INCHES SOIL	41,080	CY					1.25				51,350	
12	SEED ENTIRE AREA	25.5	ACRE					174				4,438	
13	TOTAL--PLANT AREA RECLAMATION												55,788
14													
15	HAUL ROADS--40 ACRES												
16	SCARIFY	192,889	SY					0.20				38,578	
17	CONTOUR	64,296	CY					1.25				80,370	
18	APPLY 12 INCHES SOIL	67,511	CY					1.25				84,389	
19	SEED ENTIRE AREA	40	ACRE					174				6,944	
20	TOTAL--HAUL ROAD RECLAMATION												210,281
21													
22	POWER LINE CORRIDOR--64 ACRES*												
23	*NOTE--POWER CO. HAS REQUESTED THE POWER	64	ACRE					N/C					
24	LINE REMAIN OPEN.												
25													
26													
27	RESEED SOIL STOCKPILE AREAS--40 ACRES												
28	RESEED 40 ACRES	40	AC					174				6,936	
29	TOTAL--RESEED SOIL STOCKPILE AREAS												6,936
30													
31	FENCES & BERMS* AROUND OPEN PITS												
32	FENCE AROUND SENTINEL PIT 1	5,620	LF					3.02				16,972	
33	FENCE AROUND SENTINEL PIT 2	2,140	LF					3.02				6,463	
34	FENCE AROUND CENTENNIAL PIT	8,980	LF					3.02				27,120	
35	FENCE AROUND GTO PIT	7,410	LF					3.02				22,378	
36	TOTAL--PIT FENCES												72,933
37	*NOTE--COST FOR BERMS IS NOT SHOWN, AS THESE WILL												
38	BE BUILT DURING PLANT CONSTRUCTION PHASE.												
39	FENCING MATERIAL WILL BE RECYCLED FROM THE												
40	LEACH PAD AREA.												
41													
42	SURFACE DRAINAGE DIVERSION DITCHES*												
43	LEACH PAD AREA	7,473	CY					1.25				9,341	
44	PLANT AREA	1,595	CY					1.25				1,993	
45	CRUSHER AREA	1,810	CY					1.25				2,263	
46	DUMP AREAS	13,668	CY					1.25				17,085	
47	TOTAL--DRAINAGE DIVERSION DITCHES												30,682
48	*WORK IS FOR REMOVING DIVERSION SEDIMENT STRUCTURES.												
49													
50	TOTAL												$400,970
51	PROFIT						PROFIT @	0%					
52	TOTAL INCLUDING PROFIT												$400,970

FILENAME: SUMRECC.XLS REV 4

PROJECT: SUMMO CORP., LISBON VALLEY COPPER

DESCRIPTION:SUMMARY OF RECLAMATION COSTS

DATE: 03-Jan-97

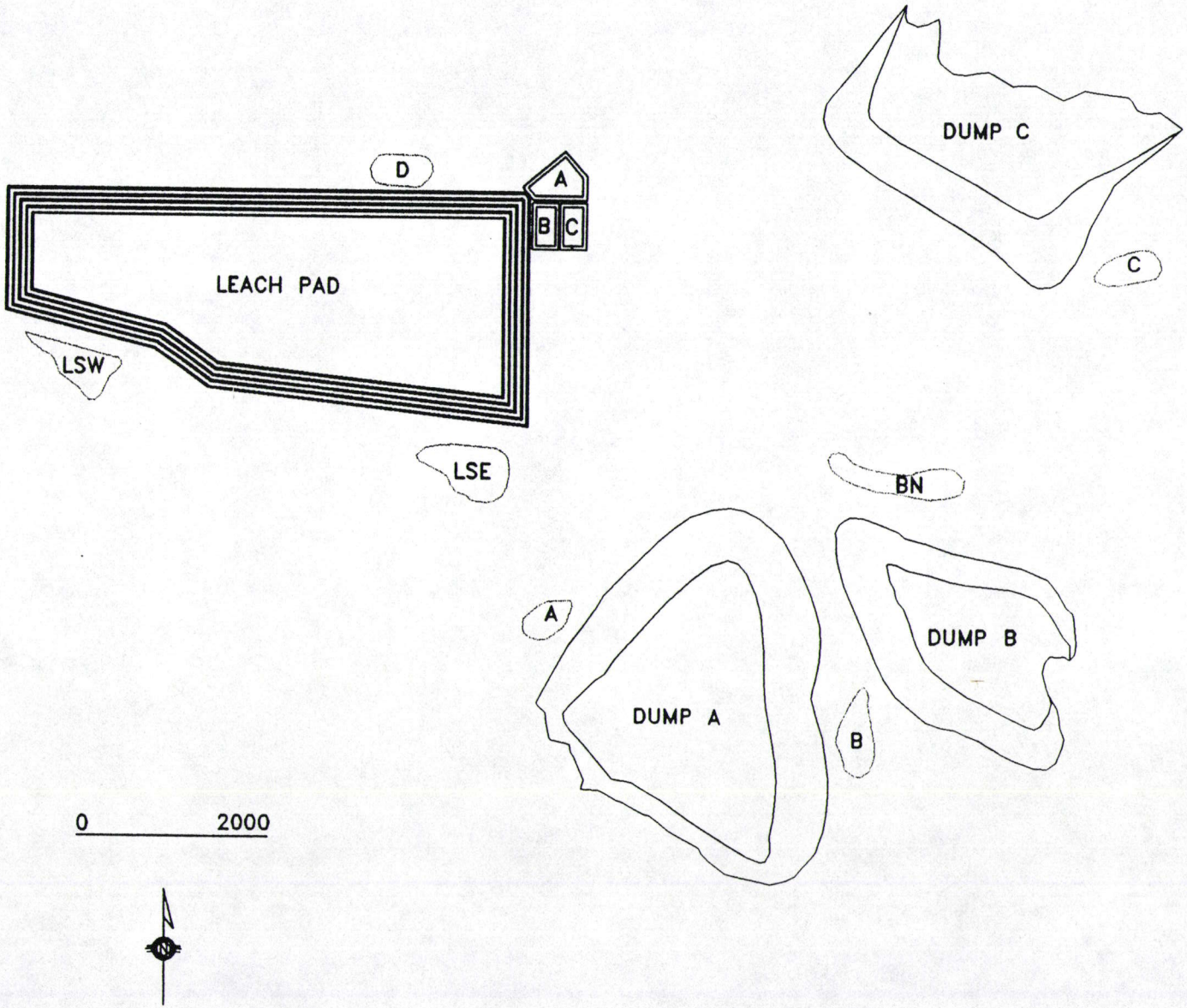
THE WINTERS CO
TUCSON, ARIZONA
CAPITAL COST ESTIMATE

10:45 AM

Remarks
SUMMARY OF RECLAMATION COSTS FOR LISBON VALLEY

UNIT LABOR: US $/HR	LABOR HOURS THIS PAGE	SUBTOTALS:	EXTENDED COSTS MATERIAL	LABOR	RENTAL	SUBCONT	TOTAL
							6,213,225

	DESCRIPTION	QTY	UNIT	LABOR HR PER UNIT	UNIT COSTS MATL	LABOR	RENTAL EQUIPMENT	SUB/CONT	EXTENDED COSTS MATERIAL	LABOR	RENTAL	SUBCONT	TOTAL
1	**DIRECT COSTS**												
2													
3	**MOBILIZATION AND DEMOBILIZATION**	1	LOT										35,000
4													
5	**LEACH PAD AND WASTE DUMPS**	1	LOT										3,712,960
6													
7	**MISC. SURFACE AREAS**	1	LOT										400,970
8													
9	**TOTAL DIRECT COSTS**												4,148,930
10													
11													
12	**INDIRECT COSTS**												
13													
14	**PLANT DISMANTLING***	1	LOT										450,000
15	*ASSUMES NO SALVAGE VALUE. DISMANTLING INVOLVES REMOVAL OF ABOVE GROUND STRUCTURES												
16	AND THE BREAKING UP AND BURIAL OF CONCRETE FOUNDATIONS.												
17													
18	**ENGINEERING**	1	LOT										207,447
19													
20	**OWNER'S COST***	1	LOT										124,468
21	*OWNERS COST INCLUDES MAINTENANCE OF RECLAMATION BONDS AND THREE YEARS OF												
22	WATER QUALITY MONITORING AND REVEGETATION MONITORING.												
23													
24	**CONSTRUCTION MANAGEMENT**	1	LOT										124,468
25													
26	**CONTINGENCY (10% OF TOTAL DIRECT COSTS)**	1	LOT										414,893
27													
28	**TOTAL INDIRECT COSTS**												1,321,275
29													
30													
31	**UNADJUSTED TOTAL COSTS**												5,470,205
32													
33													
34	**TOTAL COST WITH ESCALATION @ 2.58%/YEAR**	1	LOT										6,213,225
35	**FOR 5 YEARS**												
36													
37	TOTAL												
38							PROFIT @	0%					$6,213,225
39	TOTAL INCLUDING ADJUSTMENTS												$6,213,225



THE WINTERS COMPANY
TUCSON, ARIZONA

SUMMO MINERALS
LISBON VALLEY COPPER PROJECT

ESTIMATED AREA CALCULATIONS
REVISION 2

PLOT DATE	12/16/96	COMPILED BY	
DRAWN BY	K. OCHOA	FIGURE NUMBER	

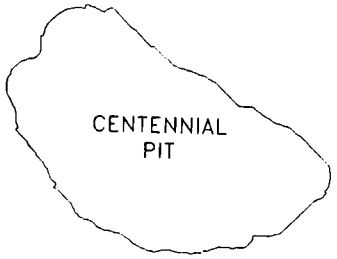
SUMMO MINERALS
ESTIMATED AREA CALCULATIONS
Revision 2

AREA	SURFACE AREA OF OBJECT (AUTOCAD) (SQ FT)	PLAN SURFACE AREA OF SIDE SLOPES (SQ FT)	SLOPE AREA FACTOR	ESTIMATED TRUE SLOPED AREA (SQ FT)	TOTAL RECLAIMABLE SURFACE (SQ FT)	DEPTH OF TOPSOIL COVER (FT)	TOTAL TOPSOIL NEEDED (CU FT)	TOTAL TOPSOIL NEEDED (CU YDS)
WASTE DUMP								
A	4,108,000	3,870,000	1.076	4,164,000	8,272,000	1	8,272,000	306,000
B	1,775,000	2,160,000	1.076	2,324,000	4,099,000	1	4,099,000	152,000
C	3,098,000	1,996,000	1.076	2,148,000	5,246,000	1	5,246,000	194,000
LEACH PAD	7,097,000	3,549,000	1.12	3,975,000	11,072,000	1	11,072,000	410,000
POND	BASE AREA							
A	222,186				178,000	1	178,000	7,000
B	131,000				97,000	1	97,000	4,000
C	131,000				97,000	1	97,000	4,000
TOPSOIL PILES	FOOT AREA							
A	146,000				146,000	1	146,000	5,000
B	252,000				252,000	1	252,000	9,000
BN	322,000				322,000	1	322,000	12,000
LSE	367,000				367,000	1	367,000	14,000
LSW	278,000				278,000	1	278,000	10,000
C	180,000				180,000	1	180,000	7,000
D	189,000				189,000	1	189,000	7,000
TOTAL	**18,107,186**	**11,575,000**		**12,611,000**	**30,795,000**		**30,795,000**	**1,141,000**

SENTINEL PIT 1:
PERIMETER: 5621.3 FT
AREA: 1,254,667.8 FT

SENTINEL PIT 2:
PERIMETER: 2142.8 FT
AREA: 274,973.6 FT

CENTENNIAL PIT:
PERIMETER: 8980.1 FT
AREA: 4,660,682.4 FT



2000 FT

GTO PIT:
PERIMETER: 7413.3 FT
AREA: 2,604,992.5 FT

THE WINTERS COMPANY
TUCSON, ARIZONA

SUMMO MINERALS
LISBON VALLEY PROJECT

PIT PERIMETERS

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500 ft (LV holes + 4") @ 6" dia.
1200 ft (pit wells)

mobilize Arsenic + Selenium ? (alkaline environment) may be cause for concern (if present) * Moly ?

Remaining Bonding Issues :

94 MW4 MW96-7 (a+b) exist now

1000' deep

✓(1) reclaim plugging of monitoring wells (pits + process area wells) & # of dewatering wells around pit?? (at end of mining) (# drill holes, diam, depth, + location) give us cost estimate for same now

✓(2) leach cap design change (12"/24"/12" clay) soil rk

✓(3) residual leach pad rinsate water disposal methodology? evaporate it or what

✓(4) costs for rinsing leap (2 pore volumes over @ 50% total pad area?) we'll guess $2 mia
*How are they going to sequence the rinsing

✓(5) monitoring costs @ $500/sample for all wells left at closure for 5 yrs (min) @ 11 wells × 2/yr. × 5 yrs. × $500/sample = $55,000

✓(6) residual sludge material in process ponds (what is it, how much + how disposed of? Assessment of costs for same?) (test costs + disposal costs)

lump sum?? or just drop it for now (Tony not comfortable with it.)

SUMMO/joint agency
Meeting necessary?
w/Summo
List of additional requirements

Centennial
Sentinal #1
GTO
} at least 2 each Navajo monitoring wells ← * BLM may require in FEIS because it seems prudent at this point in time due to uncertainty of possible impacts to Navajo

Pit hole monitoring also will likely be required.