

GRANTS PROJECT  
Unit Costs

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**UNIT COSTS**

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**--Fuel--**

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	unit cost	units
Diesel	1.18	\$/gal
Gasoline	1.48	\$/gal

**--Water Analysis--**

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	unit cost	units
A-LIST	61	\$/sample
B-LIST	176	\$/sample
C-LIST	36	\$/sample
D-LIST	296	\$/sample
E-LIST	61	\$/sample
F-LIST	146	\$/sample
G-LIST	66	\$/sample
H-LIST	76	\$/sample
I-LIST	71	\$/sample
COLUMN TESTS	136	\$/sample

**--Vegetation Analysis--**

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	unit cost	units
	45.00	\$/sample

**--Soil Analysis--**

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	unit cost	units
	21.00	\$/sample

**--Utilities--**

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	unit cost	units
Electric	0.07	\$/KWH
Natural Gas	0.58	\$/CCF

**--Driller Costs--**

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	unit cost	units
New Tailings Well	3,400.00	\$/well
New Alluvial Well	3,100.00	\$/well
New U. Chinle Well	7,300.00	\$/well

(6) Unit Costs

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New M. Chinle Well	7,300.00	\$/well
New L. Chinle Well	7,300.00	\$/well
Develop Tailings Well	400.00	\$/well
Develop Alluvial Well	550.00	\$/well
Develop U. Chinle Well	700.00	\$/well
Develop M. Chinle Well	700.00	\$/well
Develop L. Chinle Well	700.00	\$/well
Abandon Tailings Well	640.00	\$/well
Abandon Alluvial Well	750.00	\$/well
Abandon Perched Alluvial Well	350.00	\$/well
Abandon U. Chinle Well	1,300.00	\$/well
Abandon M. Chinle Well	1,300.00	\$/well
Abandon L. Chinle Well	1,300.00	\$/well
Abandon San Andres Well	3,000.00	\$/well
Abandon Sumps	500.00	\$/sump

**-- Tailings Collection Parts and Supplies--**

	unit cost	units
Collection Wellheads	500.00	\$/wellhead
2" Valves	200.00	\$/valve
3/4", 5/8", 1" Meters	50.00	\$/meter
Submersible Pumps	350.00	\$/pump
Vacuum Pumps	500.00	\$/pump

**-- Tailings Sumps Parts and Supplies--**

	unit cost	units
Collection Plumbing	500.00	\$/wellhead
2", 3" Valves	200.00	\$/valve
3/4", 5/8", 1" Meters	50.00	\$/meter
Submersible Pumps	290.00	\$/pump

**-- Tailings Injection Parts and Supplies--**

	unit cost	units
Injection Wellheads	300.00	\$/wellhead
2" Valves	200.00	\$/valve
3/4", 5/8", 1" Meters	50.00	\$/meter

**-- Alluvial/Chinle Collection Parts and Supplies--**

	unit cost	units
Collection Wellheads	1,000.00	\$/wellhead
2" Valves	200.00	\$/valve
3/4", 5/8", 1" Meters	50.00	\$/meter
Submersible Pumps	2,100.00	\$/pump

(6) Unit Costs

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GRANTS PROJECT  
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**-- San Andres Collection Parts and Supplies--**

	unit cost	units
Collection Wellheads	1,500.00	\$/wellhead
6" Valves	450.00	\$/valve
6" Meters	2,000.00	\$/meter
Submersible Pumps	5,000.00	\$/pump

**-- Alluvial/Chinle Injection Parts and Supplies--**

	unit cost	units
Injection Wellheads	350.00	\$/wellhead
2" Valves	200.00	\$/valve
3/4", 5/8", 1" Meters	50.00	\$/meter

**-- Irrigation Parts and Supplies--**

	unit cost	units
Collection Wellheads	1,000.00	\$/wellhead
2", 3" Valves	200.00	\$/valve
6", 10", 12" Valves	600.00	\$/valve
2", 3" Meters	500.00	\$/meter
6", 10", 12" Meters	3,000.00	\$/meter
Submersible Pumps	3,500.00	\$/pump
Alfalfa	2.55	\$/lb
Millet	0.40	\$/lb
Oats-mixture	0.90	\$/lb
Fertilizer	0.15	\$/lb

**-- R.O. Plant Parts and Supplies--**

	unit cost	units
Pumps	5,000.00	\$/pump
Valves	4,000.00	\$/valve
Meters	4,000.00	\$/meter
Filters	10.32	\$/filter
Membranes	683.00	\$/membrane
Sand Filter Media	8,000.00	L.S.
Air Diffuser	2,000.00	L.S.
Caustic Soda	0.14	\$/lb
Sulfuric Acid	0.080	\$/lb
Anti-Scalent	21.50	\$/gal
Citric Acid	20.00	\$/gal
Test Reagents	0.00	\$/?
Lime	0.06	\$/lb
Muriatic Acid	3.78	\$/gal

GRANTS PROJECT  
Unit Costs

**-- Evaporation Parts and Supplies--**

	unit cost	units
Pumps	5,000.00	\$/pump
Valves	1,000.00	\$/valve
Meters	2,000.00	\$/meter
Copper Sulfate	0.94	\$/lb
Citric Acid	20.00	\$/gal
Spray Nozzles	10.00	\$/nozzle

**-- In-situ Biotesting Parts and Supplies--**

	unit cost	units
Pumps	2,100.00	\$/pump
Valves	200.00	\$/valve
Meters	50.00	\$/meter
Molasses	1.00	\$/gal
Phosphorous Source	1.00	\$/lb
Carbon Source	0.00114	\$/lb

**-- Monitoring Parts and Supplies--**

	unit cost	units
Bioassay Sample Bottles	10.00	\$/bottle
TLD Badges	5.00	\$/badge
Bioassay Samples	235.00	\$/sample
TLD Badges Analysis	50.00	\$/badge
High Vol Samples	235.00	\$/sample
Radon Cups	20.00	\$/cup
Radon Cup Analysis	70.00	\$/sample
High Vol Filters	268.00	\$/pack

GRANTS PROJECT  
Electrical Meter 453180401

!!!!!!!!!!!!!!DO NOT CHANGE RED VALUES IN THIS SHEET. CHANGE ONLY THE YEARLY GPM VALUES!!!!!!!!!!!!!!

**Electrical Meter 453180401 KWH Breakout**

	Unit Cost	Pressure Factor	Yearly GPM										
			2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Alluvial Collection	469	1	325	365	335	315	325	580	580	520	520	0	0
Toe Drains / Sumps	469	0.36	50	30	30	0	0	0	0	0	0	0	0
Tailings Collection	469	0.36	30	60	30	70	60	0	0	0	0	0	0
Evaporation System	469	1	3300	3300	4000	3300	3300	3300	3300	3300	3300	1650	0
No. 2 Well	469	2	564	564	564	564	564	564	100	100	100	100	100

	Calculated KWH usage										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Alluvial Collection	152425	171185	157115	147735	152425	272020	272020	243880	243880	0	0
Toe Drains / Sumps	8442	5065.2	5065.2	0	0	0	0	0	0	0	0
Tailings Collection	5065.2	10130.4	5065.2	11818.8	10130.4	0	0	0	0	0	0
Evaporation System	1547700	1547700	1876000	1547700	1547700	1547700	1547700	1547700	1547700	773850	0
No. 2 Well	529032	529032	529032	529032	529032	529032	93800	93800	93800	93800	93800
-	2242664.2	2263112.6	2572277.4	2236285.8	2239287.4	2348752	1913520	1885380	1885380	867650	93800

GRANTS PROJECT  
Long-Term Maintenance  
Surveillance Fee

**LONG-TERM MAINTENANCE & SURVEILLANCE FEE**

NRC Long Term Maintenance and Surveillance Fee

\$250,000 Fee in 1978 Dollars

Most current CPI Index for Current Year = 185.2  
CPI Index for November, 1978 = 67.4  
Difference in Indices = 117.8

CPI Factor = 1.747774

Fee in March, Current year dollars = \$686,944

**GRANTS PROJECT**  
Physical Reclamation Costs  
2004 Dollars

**SUMMARY ESTIMATE**  
**HOMESTAKE MINING COMPANY OF CALIFORNIA**  
**GRANTS PROJECT MILLING COMPLEX**  
**CEBOLA COUNTY NEAR MILAN, NM**

CPI Calculations to convert the 2003 unit cost \$ to current year \$  
Most Current CPI Value 185.2  
Jan 2003 CPI Value 181.7  
**0.019262521**

Item No.	Description	Unit	Quantity	Unit Cost (Current Year \$)	Total Cost (\$)
<b>1.0</b>	<b>FACILITY DECOMMISSIONING</b> Mill Decommissioning & Demolition		Complete		\$0
<b>2.0</b>	<b>GROUND WATER RESTORATION</b>				
2.1	Groundwater Restoration (Operations & Monitoring)	YR			\$0
2.2	RO Treatment Plant Operation	YR			\$0
2.3	Well Abandonment	EA			\$0
	<b>Groundwater Restoration Subtotal</b>				<b>\$0</b>
<b>3.0</b>	<b>INTERIM STABILIZATION OF TAILINGS</b> Interim Cover Maintenance				
		(Included in ongoing gw restoration operations costs)			
<b>4.0</b>	<b>TAILING IMPOUNDMENT AREA RESTORATION</b>				
<b>4.1</b>	<b>Large Tailings Pile Closure</b>				
4.1.1	Settlement Monitoring				
4.1.2	Borrow Area Investigation	Acre	400	128.94	\$51,575
4.1.3	Clear & Grub Borrow Areas	Acre	240	1,223.12	\$293,548
4.1.4	Radon Barrier material: haul & placement	CY	770,000	4.28	\$3,296,295
4.1.5	Rock Cover material: haul & placement	CY	87,000	4.38	\$381,306
4.1.6	Construction QA/QC	Month	7	56,059.44	\$392,416
4.1.7	Revegetation of Borrow Areas	Acre	240	1,426.97	\$342,472
	<b>Large Tailings Pile Closure Subtotal</b>				<b>\$4,757,612</b>
<b>4.2</b>	<b>Pond Closure</b>				
4.2.1	Dewatering and/or Water Treatment (allowance)	LS	1	50,963.13	\$50,963
4.2.2	Removal of sediment - placement in EP1	CY	80,000	3.87	\$309,856
4.2.3	Removal of liners, & piping - placement in EP1	SY	86,000	0.92	\$78,891
4.2.4	Excavate underlying impacted soil	CY	37,500	3.06	\$114,667
4.2.5	Remove/regrade earthen berms	CY	122,000	1.02	\$124,350
4.2.6	Confirmation Sampling	Acre	25	815.41	\$20,385
4.2.7	Import Fill placement & grading	CY	50,000	2.96	\$147,793
4.2.8	Revegetation	Acre	25	1,426.97	\$35,674
	<b>Pond Closure Subtotal</b>				<b>\$882,579</b>
<b>4.3</b>	<b>Small Tailing Pile Closure</b>				
4.3.1	Clear & Grub Borrow Areas	Acre	105	1,223.12	\$128,427
4.3.2	Prep and grade of tailings pile surface	CY	170,000	1.99	\$337,886
4.3.3	Radon Barrier material: haul & placement	CY	340,000	4.43	\$1,507,489
4.3.4	Rock Cover material: haul & placement				
	Top of Impoundment	CY	32,000	4.48	\$143,512
	Impoundment side slopes	CY	28,000	6.37	\$178,371
4.3.5	Construction QA/QC	Month	4.5	56,059.44	\$252,267
4.3.6	Revegetation of Borrow Areas	Acre	105	1,426.97	\$149,832
	<b>Small Tailing Pile Closure</b>				<b>\$2,697,784</b>
<b>5.0</b>	<b>RADIOLOGICAL SURVEY AND ENVIRONMENTAL MONITORING</b>				
	Radon Flux Measurements on Tailing Piles (post-closure)	LS	1	39,751.24	\$39,751
<b>6.0</b>	<b>DEMOLITION OF REMAINING FACILITIES</b>				
<b>6.1</b>	<b>RO Plant Demolition</b>				
6.1.1	Demolition of plant - placement in EP1	LS	1	140,148.60	\$140,149
6.1.2	Backfill/regrade demolition area	CY	1,500	3.06	\$4,587
6.1.3	Revegetation	Acre	2.5	1,426.97	\$3,567
	<b>RO Plant Demolition Subtotal</b>				<b>\$148,303</b>

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**CEBOLA COUNTY NEAR MILAN, NM**

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<b>6.2</b>	<b>Office/Shop Area Demolition</b> (office-truck shop, warehouse bldg, & rel. bldg in admin compound)				
6.2.1	Demolition of buildings	LS	1	71,348.38	\$71,348
6.2.2	Demolition of Water Tanks	EA	2	15,288.94	\$30,578
6.2.3	Removal of yard gravel - placement in EP1	CY	4,000	3.57	\$14,270
6.2.4	Backfill/regrade demolition area	CY	1,500	3.06	\$4,587
6.2.5	Revegetation	Acre	5	1,426.97	\$7,135
	<b>Office/Shop Area Demolition Subtotal</b>				<b>\$127,917</b>
<b>7.0</b>	<b>PROJECT MGMNT - CONSULTING/ENGINEERING SUPPORT</b>				
<b>7.1</b>	<b>Large Tailings Pile Closure</b>				
7.1.1	Final Design & Contract Document Prep	LS	1	36,693.45	\$36,693
7.1.2	Proj Management & Construction Oversight	Month	7	38,731.98	\$271,124
7.1.3	Prepare Completion Report	LS	1	36,693.45	\$36,693
	<b>LTP Project Management Subtotal</b>				<b>\$344,511</b>
<b>7.2</b>	<b>Final Closure &amp; Demolition (RO plant, ponds, STP)</b>				
7.2.1	Final Design & Contract Document Prep	LS	1	44,032.14	\$44,032
7.2.2	Proj Management & Construction Oversight	Month	8.5	38,731.98	\$329,222
7.2.3	Prepare Completion Report	LS	1	44,032.14	\$44,032
	<b>STP Project Management Subtotal</b>				<b>\$417,286</b>
<b>7.3</b>	<b>Shop Area Demolition</b>				
7.3.1	Final Design & Contract Document Prep	LS	1	4,892.46	\$4,892
7.3.2	Proj Management & Construction Oversight	Month	0.5	38,731.98	\$19,366
7.3.3	Prepare Completion Report	LS	1	4,892.46	\$4,892
	<b>Shop Area Project Management Subtotal</b>				<b>\$29,151</b>
<b>TOTAL</b>					<b>\$9,444,894</b>