



Newmont Mining Corporation
Cripple Creek & Victor Gold Mining Company
100 N 3rd St
P.O. Box 191
Victor, CO 80860

www.newmont.com

June 13, 2018

SENT CERTIFIED RETURN RECEIPT REQUESTED
7017 2400 0000 4077 8845

Mr. Timothy Cazier, P.E.
Environmental Protection Specialist
Colorado Department of Natural Resources
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, Colorado 80203

Re: DRMS Permit No. M-1980-244; Cripple Creek & Victor Gold Mining Company (CC&V); Cresson Project; High Grade Mill Cleaner Concentrate Circuit Construction Completion Notification

Dear Mr. Cazier:

Newmont USA Limited - Cripple Creek & Victor Gold Mining Company (CC&V) hereby submits this notification to the Division of Reclamation, Mining and Safety (Division) regarding the completion of the cleaner concentrate circuit at the High Grade Mill (HGM). The civil construction phase of the project is complete, the final tie in will take place during the next planned maintenance shut down. CC&V anticipates that the cleaner concentrate circuit will be operational by mid-July. Attached to this notice are the final process flow diagrams (PFD) for the HGM (attachment 1). Depending on the quality of the cleaner concentrate produced by the new configuration depicted in the attached PFDs, CC&V may open the valves and bring the regrind circuit back online to produce a higher quality concentrate.

Should you require further information please do not hesitate to contact Tyler O'Donnell via phone or email at 719.689.4056 and Tyler.O'Donnell@newmont.com or myself at 719.689.4055 and Meg.Burt@newmont.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Meg Burt", is written over a faint, larger signature.

Meg Burt
Senior Environmental Manager
Cripple Creek & Victor Gold Mining Co

MB/tvo

Attachments: 1

cc: T. Cazier – DRMS

Attachment 1: High Grade Mill Process Flow Diagram



	Samuel Engineering <i>We Provide Solutions</i>	
8450 E. Crescent Parkway, Suite 200 Greenwood Village, CO 80111		Phone: 303.714.4840 Fax: 303.714.4800
TITLE HIGH GRADE MILL GRINDING AREA COMMINUTION/GRAVITY SEPARATION CIRCUIT PROCESS FLOW DIAGRAM		
FOR CC&V		VICTOR, CO.
DWG. SIZE	SCALE NONE	JOB NO 17168
		DRAWING NO 10-647-01
		REV 4



SE Samuel Engineering
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Greenwood Village, CO 80111 Fax: 303.714.4800

FOR CC&V				VICTOR, CO	
DWG SIZE D	SCALE NONE	JOB NO 17168	DRAWING NO 10-647-02	REV 5	

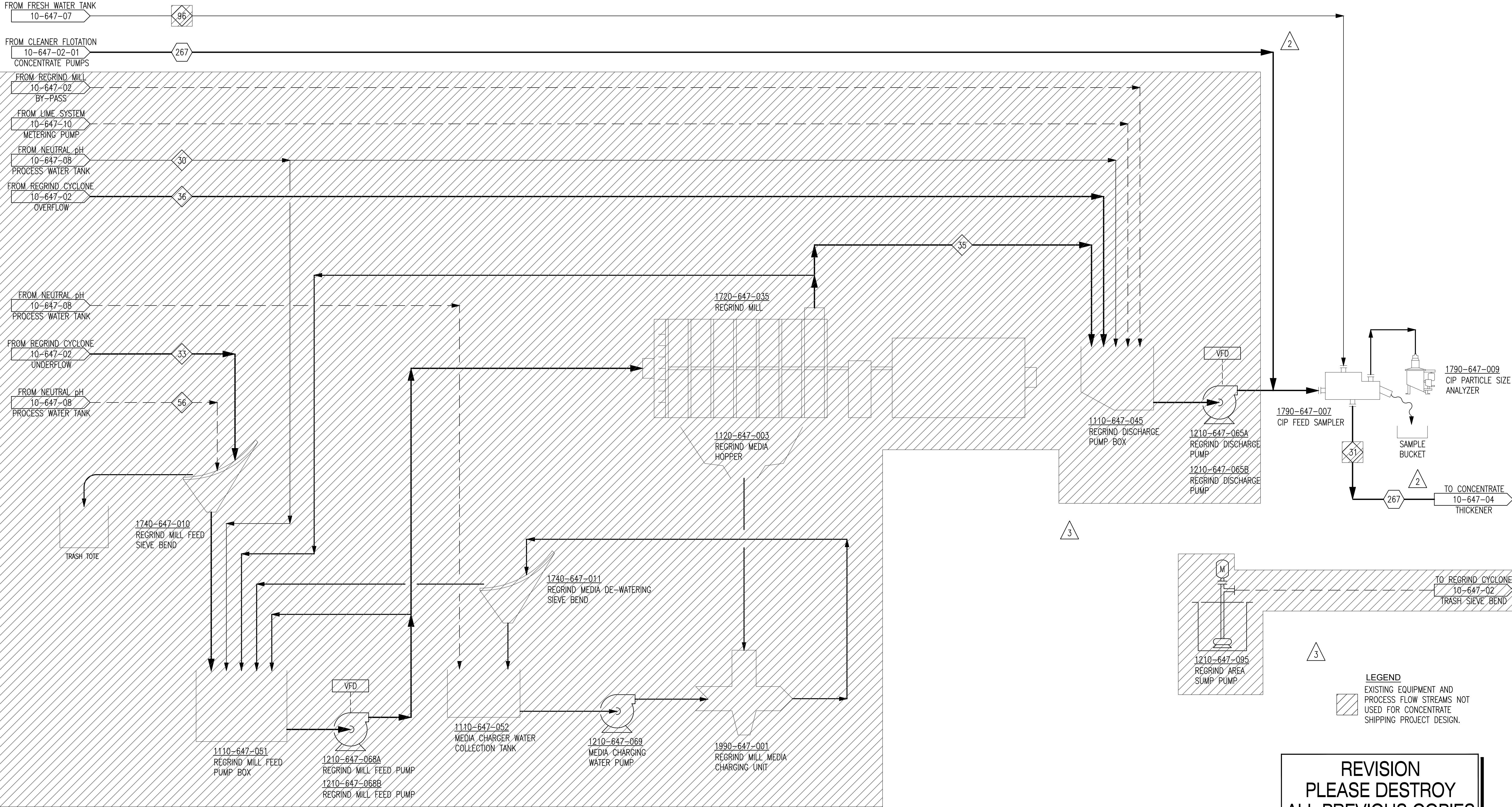
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10/03/13 07:20
Filename: 10-647-03.dwg Arc: 7

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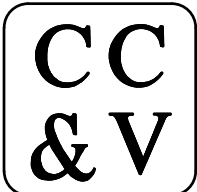
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2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA		10-647-20 THRU 10-647-23	MATERIAL BALANCE SHEETS	10/02/2013	10	1	CLIENT	REVISION	CHECKED BY	TR	06/22/2012
3	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA				10/18/2011	3	F	CC&V	REVIEW & COMMENT	ENGINEER	DL	08/08/2010
4	ISSUED FOR DESIGN	10/12/2017	JP	KA				02/03/2012	4	G	CC&V	STATUS	LEAD ENGINEER		
5								02/13/2012	5	H	CC&V	PERMIT			
6								06/11/2012	6	J	CC&V	REVIEW & COMMENT			
7								07/23/2012	7	K	CC&V	HAZOP REVIEW	PROJECT ENL	DB	06/23/2012
8								08/30/2012	8	L	CC&V	STATUS	PROJECT MSR	AH	06/23/2012



CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL



Samuel Engineering
We Provide Solutions
8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111
Phone: 303.714.4840
Fax: 303.714.4800

TITLE HIGH GRADE MILL REGRIND AREA REGRIND CIRCUIT PROCESS FLOW DIAGRAM									
FOR CC&V VICTOR, CO.									
DWG SIZE D	SCALE NONE	JOB NO 17168	DRAWING NO 10-647-03						
									REV 4

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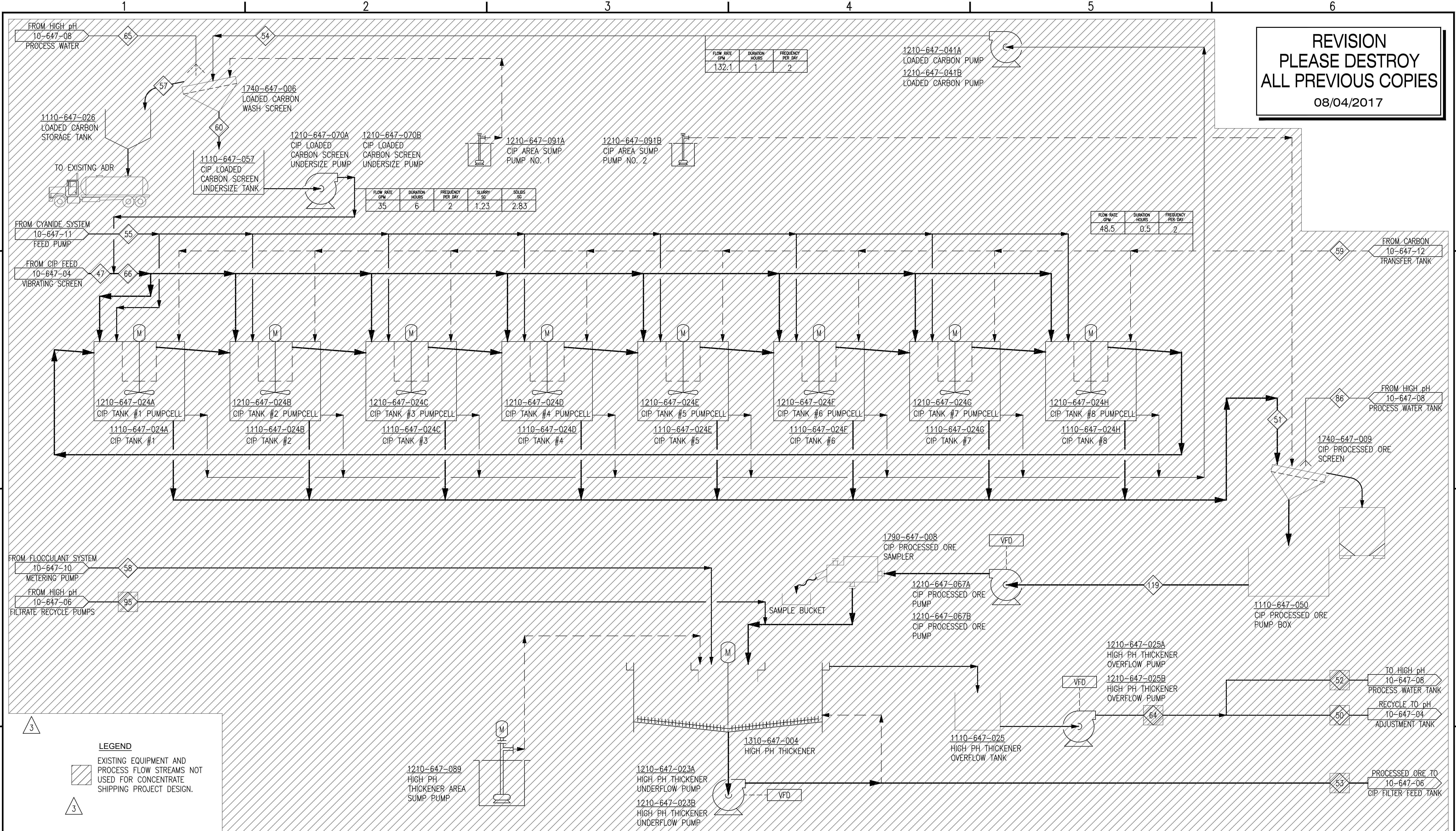
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Filename: 10-647-05.DWG Arc: 8 Rev: 1

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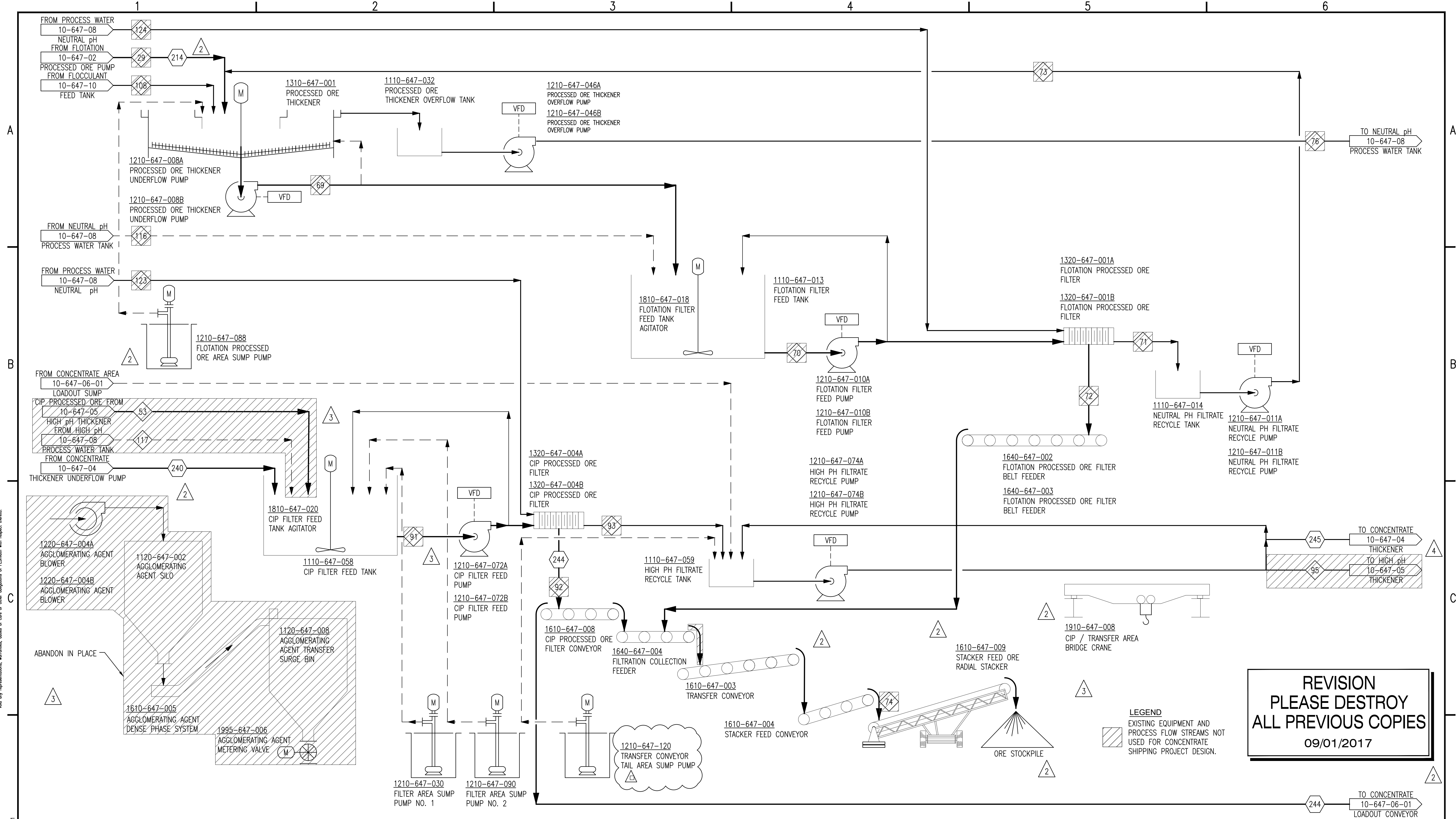
CC & V

CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL

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Greenwood Village, CO 80111
Phone: 303.714.4840
Fax: 303.714.4800

TITLE
HIGH GRADE MILL
CIP AREA
CONCENTRATE RECOVERY
PROCESS FLOW DIAGRAM

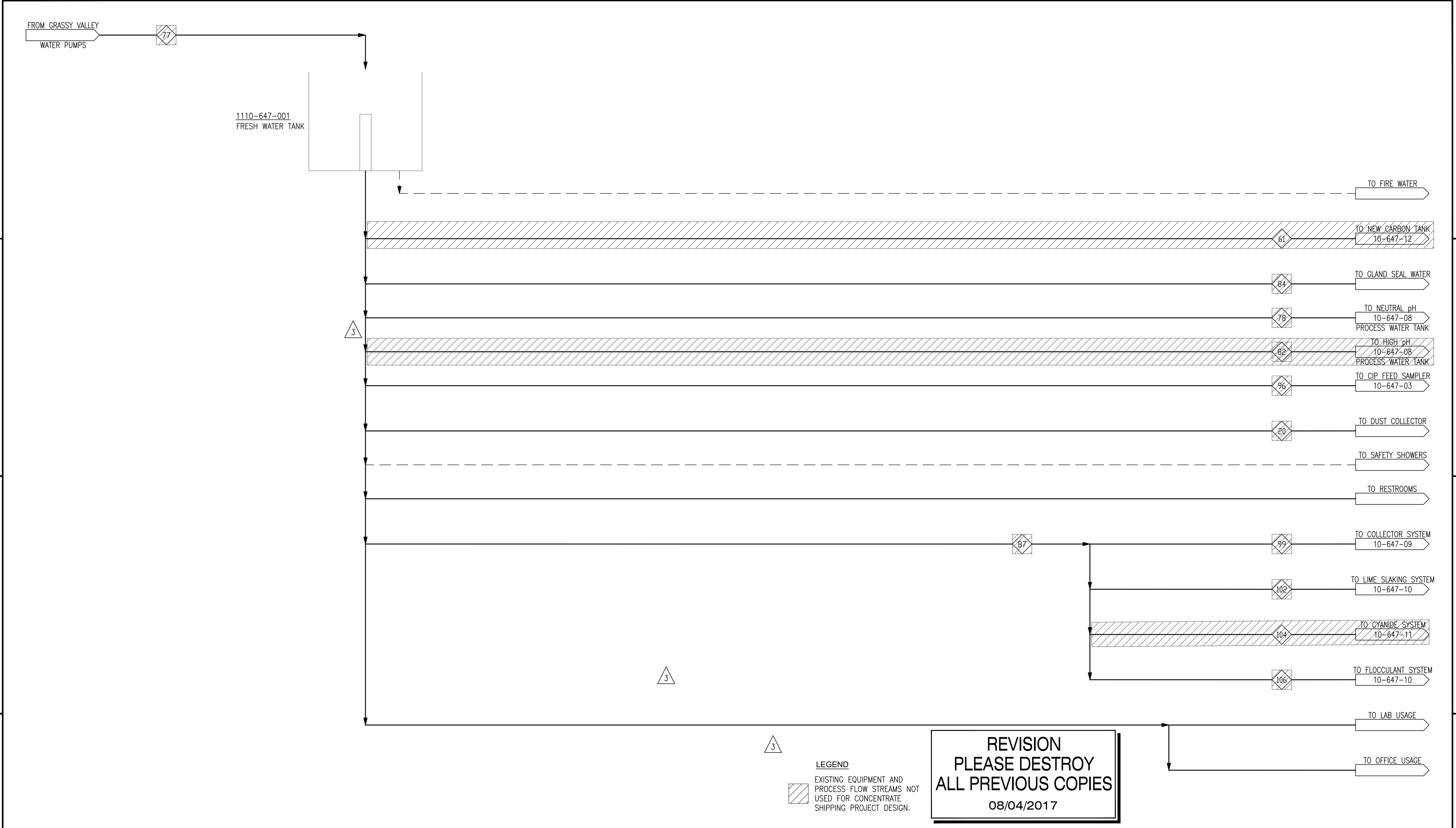
FOR CC&V
DWG SIZE D
SCALE NONE
JOB NO 17168
DRAWING NO 10-647-05
VICTOR, CO.
REV 4



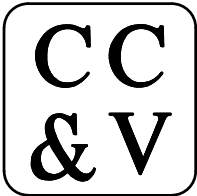
CC &V CRIPPLE CREEK & VICTOR GOLD MINING COMPANY HIGH GRADE MILL	SE Samuel Engineering We Provide Solutions 8450 E. Crescent Parkway, Suite 200 Greenwood Village, CO 80111 Phone: 303.714.4840 Fax: 303.714.4800				
	TITLE HIGH GRADE MILL PROCESSED ORE AREA CONCENTRATE RECOVERY PROCESS FLOW DIAGRAM				
	FOR CC&V				VICTOR, CO.
DWG SIZE D	SCALE NONE	JOB NO 17168	DRAWING NO 10-647-06	REV 5	

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Filename: 10-647-07.dwg Arc: 8 Rev: 1



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1	REVISED ENGINEERING RECORD INFORMATION	10/02/2013	PLCM	GG		11-647-46 THRU 11-647-49	WATER DISTRIBUTION PIPING & INSTRUMENTATION DIAGRAMS	10/02/2013	9	1	CLIENT	REVISION	DRAWN	PLCM	08/17/2011
2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA		10-647-20 THRU 10-647-23	MATERIAL BALANCE SHEETS	10/18/2011	2	B	CC&V	REVIEW & COMMENT	CHECKED BY	TR	06/22/2012
3	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA				02/3/2012	3	C	CC&V	STATUS	ENGINEER	AN	08/01/2011
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								06/11/2012	5	E	CC&V	REVIEW & COMMENT			
								07/23/2012	6	F	CC&V	HAZOP REVIEW			
								08/30/2012	7	G	CC&V	STATUS	PROJECT ENG.	DB	06/22/2012
								02/25/2013	8	O	CLIENT	CONSTRUCTION	PROJECT MGR.	AH	06/22/2012
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CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL

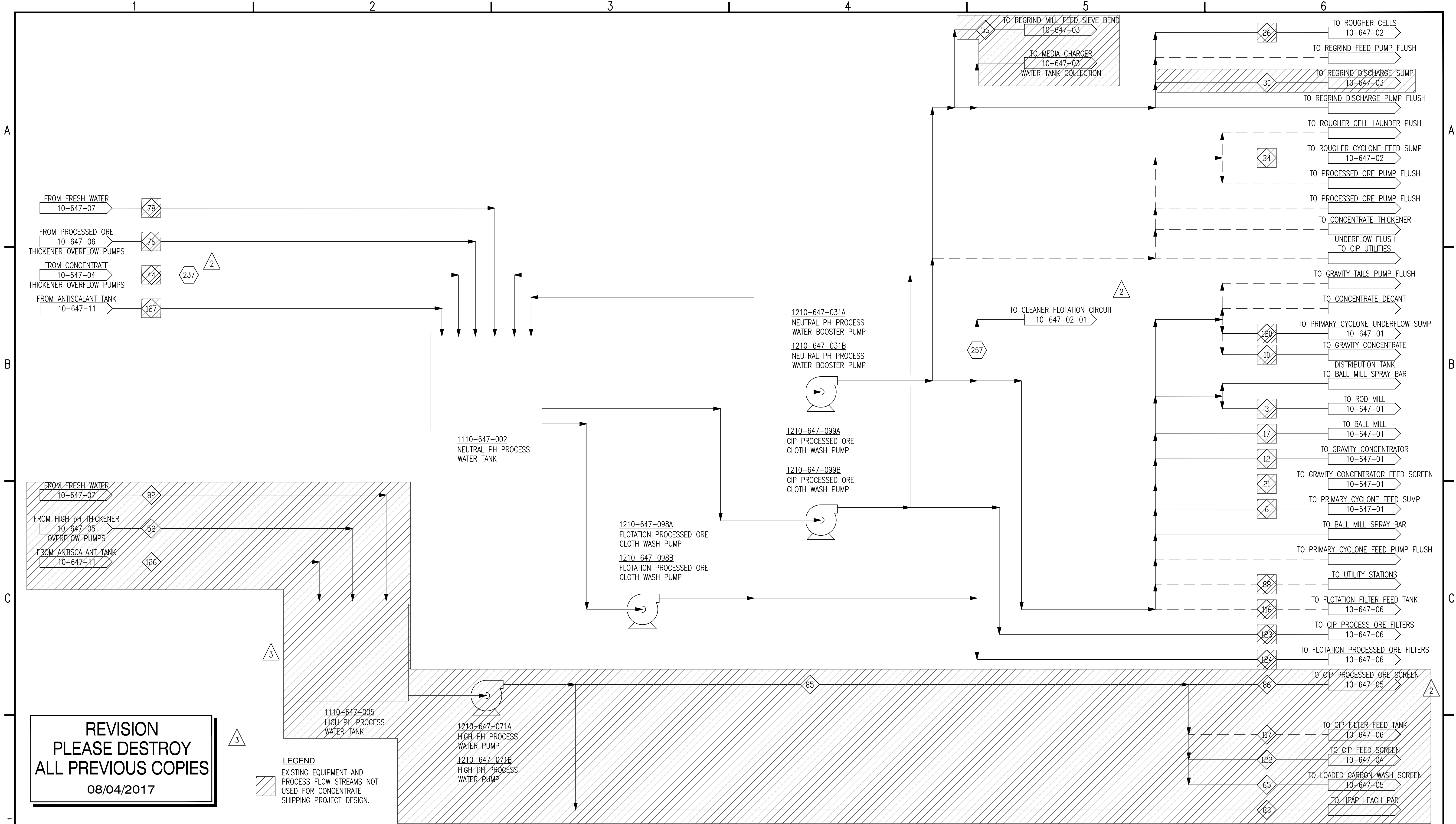


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We Provide Solutions
8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111
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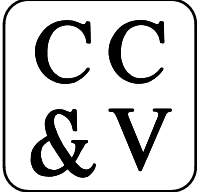
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FOR CC&V										VICTOR, CO.									
DWG SIZE		SCALE		JOB NO		DRAWING NO				REV									
D		NONE		17168		10-647-07				4									

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10/08/13 0942
Filename: 10-647-06.DWG Arc: 8 Rev: 1



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2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA		10-647-20 THRU 10-647-23	MATERIAL BALANCE SHEETS	10/17/2011	2	B	CC&V	REVIEW & COMMENT	TR	06/22/2012	
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GOLD MINING COMPANY
HIGH GRADE MILL

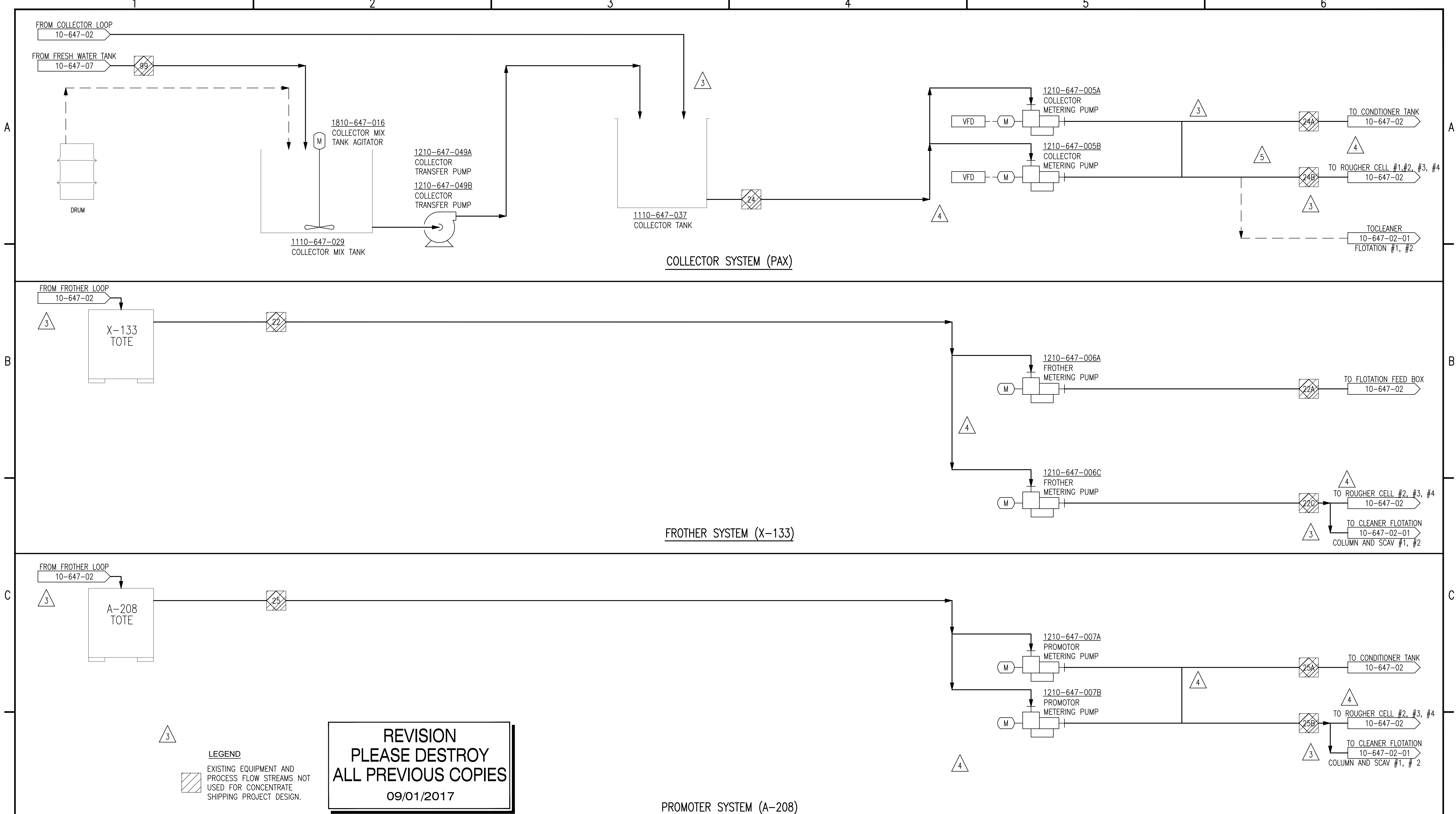


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Phone: 303.714.4840
Fax: 303.714.4800

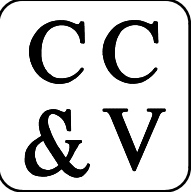
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FOR CC&V VICTOR, CO.									
DWG SIZE D	SCALE NONE	JOB NO 17168	DRAWING NO 10-647-08						
									REV 4

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Filename: 10-647-09.dwg Arc: 7



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1	REVISED ENGINEERING RECORD INFORMATION	10/02/2013	PLCM	GG		11-647-50 & 11-647-51	COLLECTOR SYSTEM PIPING & INSTRUMENTATION DIAGRAMS	10/02/2013	9	1	CLIENT	REVISION	DRAWN	PLCM	08/09/2011
2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA		11-647-52	FROTHER SYSTEM PIPING & INSTRUMENTATION DIAGRAM	10/18/2011	2	B	CC&V	REVIEW & COMMENT	CHECKED BY	TR	06/22/2012
3	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA		11-647-53	PROMOTER SYSTEM PIPING & INSTRUMENTATION DIAGRAM	02/03/2012	3	C	CC&V	STATUS	ENGINEER	AN	08/01/2011
4	REVISED ISSUED FOR APPROVAL	08/10/2017	JP	TH		10-647-20 THRU 10-647-23	MATERIAL BALANCE SHEETS	02/13/2012	4	D	CC&V	PERMIT	LEAD ENGINEER		
5	ISSUED FOR DESIGN	09/01/2017	JRJ	TH				06/11/2012	5	E	CC&V	REVIEW & COMMENT			
6	ISSUED FOR DESIGN	10/12/2017	JP	KA				07/23/2012	6	F	CC&V	HAZOP REVIEW			
								08/30/2012	7	G	CC&V	STATUS			
								02/25/2013	8	O	CLIENT	CONSTRUCTION			
													PROJECT ENG.	DB	06/22/2012
													PROJECT MGR.	AH	06/22/2012
													CLIENT		



CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL



8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111

Phone: 303.714.4840
Fax: 303.714.4800

TITLE
HIGH GRADE MILL
REAGENTS AREA
COLLECTOR, FROTHER & PROMOTER
PROCESS FLOW DIAGRAM

FOR CC&V VICTOR, CO.
DWG SIZE D SCALE NONE JOB NO 17168 DRAWING NO 10-647-09 REV 6

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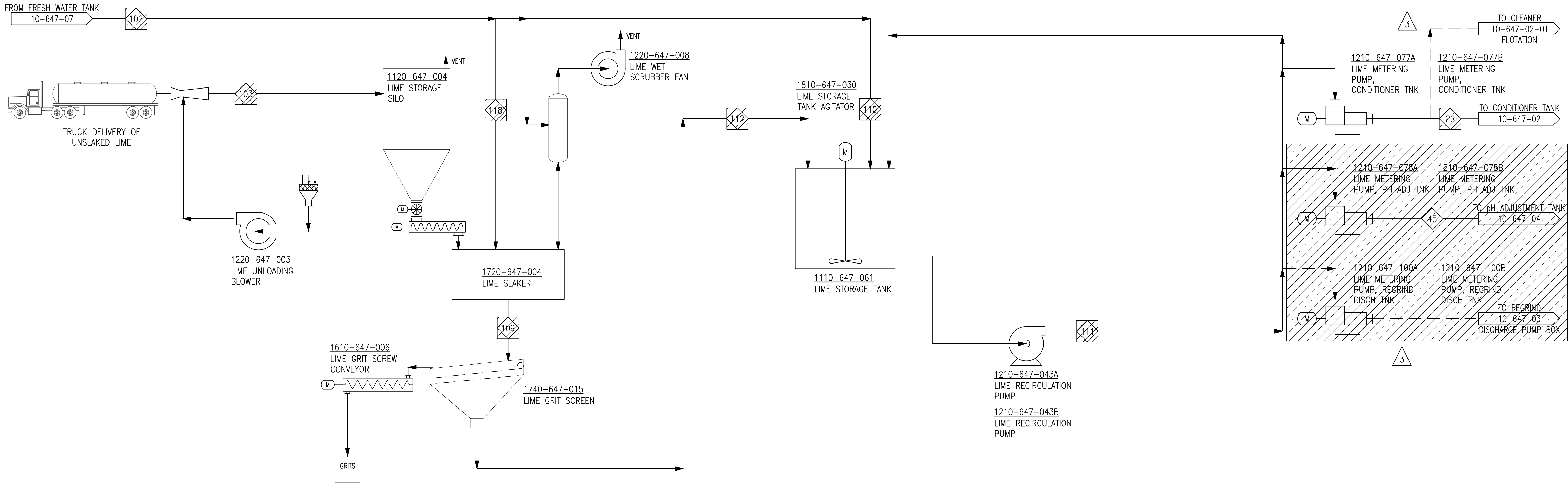
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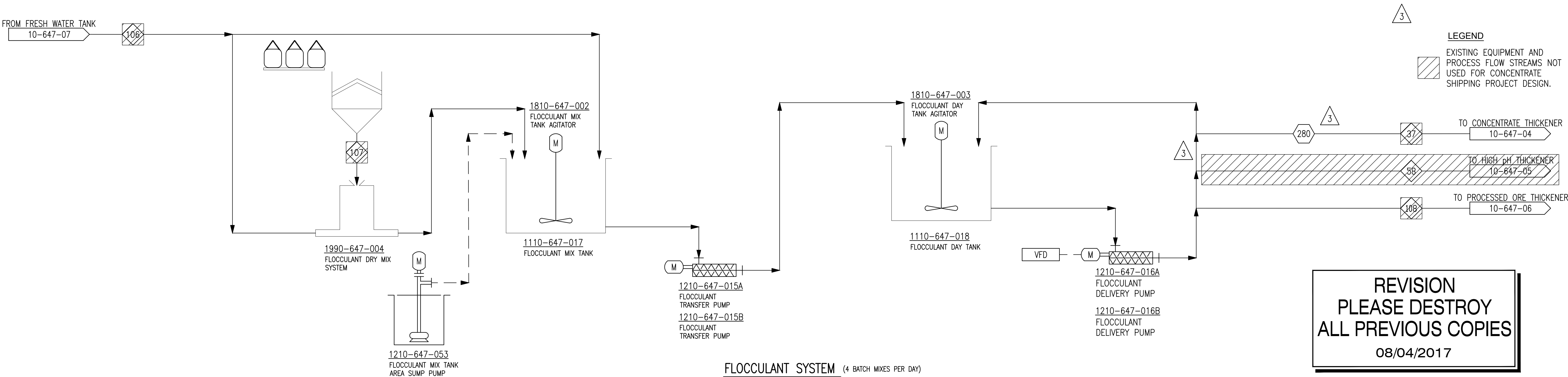
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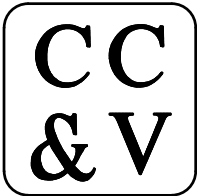
LIME SLAKING SYSTEM



FLOCCULANT SYSTEM (4 BATCH MIXES PER DAY)

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REVISIONS						REFERENCE DRAWINGS		ISSUE RECORD					ENGR RECORD		
NO	DESCRIPTION	DATE	BY	CHK	APP	DRAWING NO	TITLE	DATE	ISS	REV	TO	FOR	BY	DATE	
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2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA		11-647-57 THRU 11-647-59	FLOCCULANT SYSTEM PIPING & INSTRUMENTATION DIAGRAMS	10/18/2011	2	B	CC&V	REVIEW & COMMENT	TR	06/22/2012	
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5								06/11/2012	5	E	CC&V	REVIEW & COMMENT			
6								07/23/2012	6	F	CC&V	HAZOP REVIEW			
7								08/30/2012	7	G	CC&V	STATUS	DB	06/22/2012	
8								02/25/2013	8	O	CLIENT	CONSTRUCTION	AH	06/22/2012	



CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL

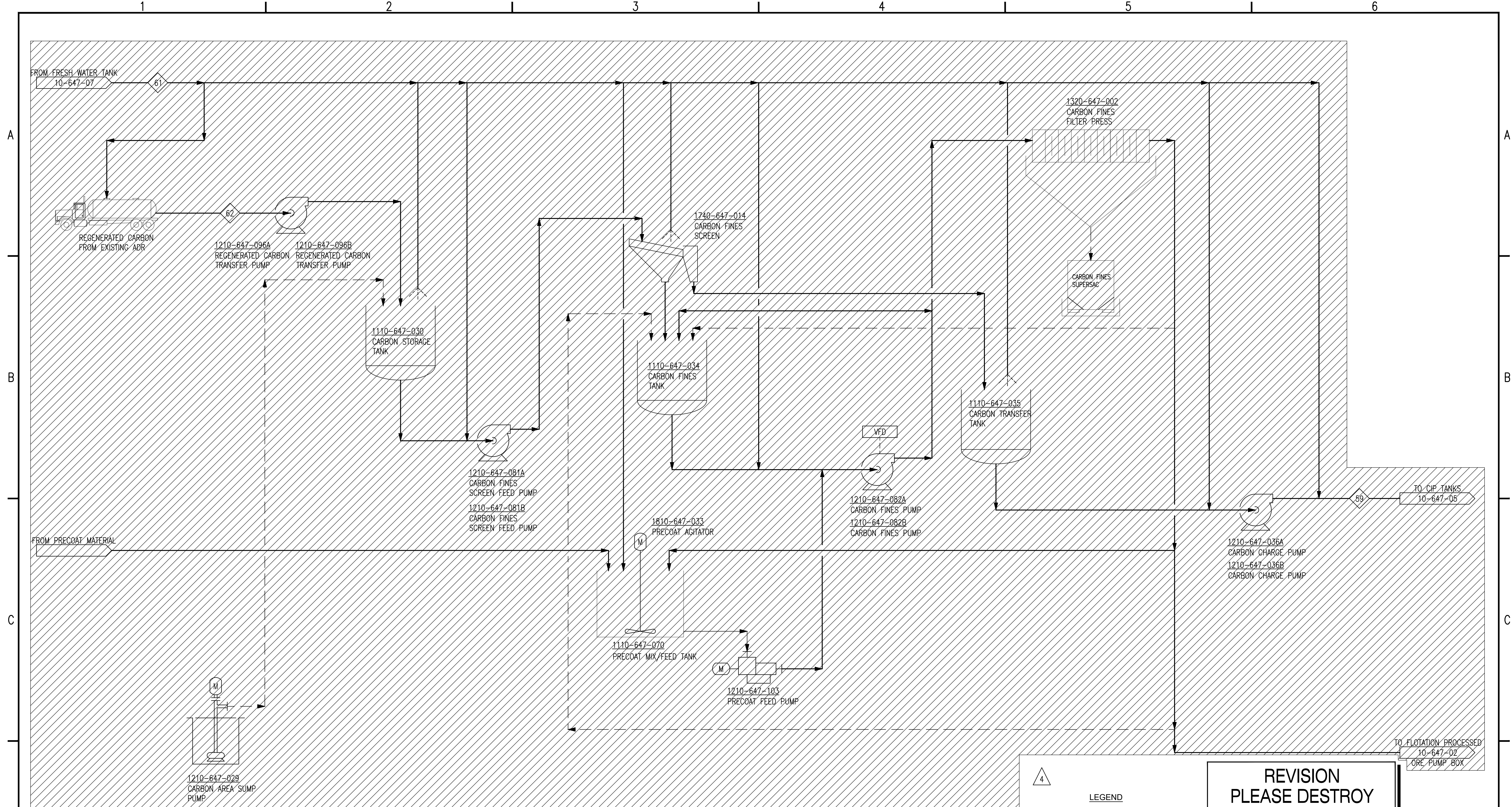


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Fax: 303.714.4800

TITLE					VICTOR, CO.	
HIGH GRADE MILL REAGENTS AREA LIME SLAKING & FLOCCULANT PROCESS FLOW DIAGRAM					REV	4
FOR CC&V	DWG SIZE	SCALE	JOB NO	DRAWING NO	10-647-10	
D	NONE		17168			

10/03/13 08:29
Filename: 10-647-12.dwg Arc: 5
PLOT: 2



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1	REVISED AS NOTED	09/09/2013	PLCM	GG		11-647-65 THRU 11-647-69	CARBON CIRCUIT PIPING & INSTRUMENTATION DIAGRAMS	02/03/2012	1	A	CC&V	STATUS	PLCM	11/18/2011	
2	REVISED ENGINEERING RECORD INFORMATION	10/02/2013	PLCM	GG		10-647-20 THRU 10-647-23	MATERIAL BALANCE SHEETS	02/13/2012	2	B	CC&V	PERMIT	TR	06/22/2012	
3	REVISED BY SAMUEL ENGINEERING	7/7/2017	JRJ	KA				06/11/2012	3	C	CC&V	REVIEW & COMMENT	AN	06/22/2012	
4	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA				07/23/2012	4	D	CC&V	HAZOP REVIEW			
5	ISSUED FOR DESIGN	10/12/2017	JP	KA				08/30/2012	5	E	CC&V	STATUS			
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								10/02/2013	8	2	CLIENT	REVISION	AH	06/23/2012	

CC
&V

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HIGH GRADE MILL



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We Provide Solutions
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Greenwood Village, CO 80111 Fax: 303.714.4800

TITLE
**HIGH GRADE MILL
REAGENTS AREA
CARBON CIRCUIT
PROCESS FLOW DIAGRAM**

FOR CC&V VICTOR, CO.
DWG SIZE SCALE JOB NO DRAWING NO REV
D NONE 17168 10-647-12 5

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10/03/13 08:31
Filename: 10-647-20.dwg Arc: 7

Stream No. (PFD) Description Stream Properties		1	2	3	4	5	6	7	8	8A	8B	9	10	11	12	13	14	15	16	17	18
		10-647-01	10-647-01	10-647-08	10-647-01	10-647-01	10-647-08	10-647-01	10-647-01	10-647-01	10-647-01	10-647-01	10-647-08	10-647-01	10-647-08	10-647-01	10-647-01	10-647-01	10-647-08	10-647-08	10-647-01
		Stockpile Feed	Fresh Ore To Rod Mill	Process Water To Rod Mill Dilution Water	Rod Mill Discharge	Ball Mill Discharge	Sump Dilution Water	Primary Cyclone Feed	Primary Cyclone Underflow	Primary Cyclone U/Row By-Pass To Ball Mill	Primary Cyclone U/Row To Gravity Concentrator	Primary Cyclone Overflow	Gravity Concentrator Distributor Process Water	Gravity Concentrator Screen Undersize	Gravity Circuit Fluidization Water	Gravity Concentrate	Gravity Concentrator Processed Ore	Gravity Screen Oversize	Dilution water for Gravity Screen Oversize Transport	Ball Mill Flush Water	Gravity Concentrate Decant Water Recycle
Solids flowrate	stph	333.67	275.00	0.00	275.00	687.27	0.00	962.27	687.33	343.67	343.67	274.93	0.00	326.48	0.00	0.07	326.42	17.18	0.00	0.00	0.00
Solution flowrate	stph	15.72	12.96	116.30	129.41	399.98	341.23	870.62	294.57	147.29	147.29	576.05	0.00	183.14	67.24	0.60	249.78	1.91	1.00	0.00	0.59
Total stream	stph	349.39	287.96	116.30	404.41	1087.24	341.23	1832.89	981.90	490.95	490.95	850.98	0.00	509.63	67.24	0.67	576.20	19.09	1.00	0.00	0.59
Total stream flowrate	gpm	565.74	466.27	465.37	932.23	2636.12	1365.38	4933.73	2214.46	1107.23	1107.23	2719.27	0.00	1224.81	269.05	2.51	1491.35	33.53	4.00	0.00	2.38
% Solids	%	95.50	95.50	0.00	68.00	63.21	0.00	52.50	70.00	70.00	70.00	32.31	0.00	64.06	0.00	10.00	56.65	90.00	0.00	0.00	0.00
Stream SG		2.47	2.47	1.00	1.73	1.65	1.00	1.48	1.77	1.77	1.77	1.25	0.00	1.66	1.00	1.06	1.54	2.27	1.00	0.00	1.00
Solids SG		2.65	2.65	0.00	2.65	2.65	0.00	2.65	2.65	2.65	2.65	2.65	0.00	2.65	0.00	2.66	2.65	2.65	0.00	0.00	0.00
Solution SG		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Au	Oz/st	0.13	0.13	0.00	0.13	0.10	0.00	0.11	0.11	0.11	0.11	0.11	0.00	0.11	0.00	79.01	0.09	0.11	0.00	0.00	0.00
Reagents/Utilities (lb/h):																					
NaCN	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lime	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaOH	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAX	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-208	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
X-133	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Air (Gas)	scfm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Stream No. (PFD) Description Stream Properties		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
		10-647-01	10-647-08	10-647-08	10-647-09	10-647-10	10-647-09	10-647-09	10-647-08	10-647-02	10-647-02	10-647-02	10-647-08	10-647-03	10-647-02	10-647-02	10-647-08	10-647-03	10-647-02	10-647-10	10-647-04
		Gravity Concentrate	Dust Suppression	Gravity Screen Spray Water	Frother (X-133)	Conditioner (Lime)	Collector (PAX)	Promoter (A-208)	Concentrate Launder Dilution Water	Flotation Cell Air	Rougher Flotation Concentrate	Rougher Flotation Tailings	Regrind Discharge Sump Dilution Water	Concentrate Thickener Feed	Regrind Cyclone Feed	Regrind Cyclone Underflow	Regrind Cyclone Feed Sump	Isamil Discharge	Regrind Cyclone Overflow	Flocculant	Concentrate Thickener Underflow
Solids flowrate	stph	0.07	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	30.24	244.69	0.00	30.24	30.24	21.49	0.00	21.49	8.75	0.00	30.24
Solution flowrate	stph	0.01	0.15	15.19	0.00	1.40	0.10	0.00	45.36	0.00	90.73	532.18	0.00	90.73	90.73	21.49	0.00	21.49	69.24	0.54	20.16
Total stream	stph	0.07	0.15	15.19	0.00	1.65	0.11	0.01	45.36	4.47	120.97	776.87	0.00	120.97	120.97	42.98	0.00	42.98	77.99	0.54	50.40
Total stream flowrate	gpm	0.13	0.60	60.77	0.01	5.90	0.43	0.04	181.51	0.00	403.63	2503.14	0.00	403.63	403.63	114.85	0.00	114.85	288.78	2.15	121.27
% Solids	%	90.00	0.00	0.00	0.00	15.00	10.00	0.00	0.00	0.00	25.00	31.50	0.00	25.00	25.00	50.00	0.00	50.00	11.22	0.25	60.00
Stream SG		2.28	1.00	1.00	1.11	1.12	0.99	1.15	1.00	0.00	1.20	1.24	0.00	1.20	1.20	1.50	0.00	1.50	1.08	1.00	1.66
Solids SG		2.66	0.00	0.00	0.00	3.31	0.00	0.00	0.00	0.00	2.98	2.62	0.00	2.98	2.98	2.98	0.00	2.98	2.98	0.00	2.98
Solution SG		1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Au	Oz/st	79.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.03	0.00	0.71	0.71	0.71	0.00	0.71	0.71	0.00	0.71
Reagents/Utilities (lb/h):																					
NaCN	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lime	lb/h	0.00	0.00	0.00	0.00	493.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaOH	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAX	lb/h	0.00	0.00	0.00	0.00	0.00	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-208	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	20.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
X-133	lb/h	0.00	0.00	0.00	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Air (Gas)	scfm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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REVISIONS						REFERENCE DRAWINGS		ISSUE RECORD					ENGR RECORD		
NO	DESCRIPTION	DATE	BY	CHK	APP	DRAWING NO	TITLE	DATE	ISS	REV	TO	FOR		BY	DATE
1	REVISED ENGINEERING RECORD INFORMATION	10/02/2013	PLCM	GG		10-647-01 THRU 10-647-12	PROCESS FLOW DIAGRAMS	07/23/2012	9	L	CC&V	HAZOP REVIEW	DRAWN	PLCM	04/29/2011
2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA				08/30/2012	10	M	CC&V	STATUS	CHECKED BY	TR	06/22/2012
3	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA				02/25/2013	11	O	CLIENT	CONSTRUCTION	ENGINEER	AN	04/29/2011
4	ISSUED FOR DESIGN	10/12/2017	JP	KA				10/02/2013	12	I	CLIENT	REVISION	LEAD ENGINEER		
5								10/18/2011	5	G	CC&V	REVIEW & COMMENT			
6								02/03/2012	6	H	CC&V	STATUS			
7								02/13/2012	7	J	CC&V	PERMIT	PROJECT ENL.	DB	06/23/2012
8								06/11/2012	8	K	CC&V	REVIEW & COMMENT	PROJECT MSR.	AH	06/23/2012

CC
&
V

CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL

SE Samuel Engineering
We Provide Solutions

8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111
Phone: 303.714.4840
Fax: 303.714.4800

TITLE
HIGH GRADE MILL
GRINDING AREA AND FLOTATION AREA
COMMUNITION CIRCUIT AND FLOTATION CIRCUIT
MATERIAL BALANCE SHEET

FOR CC&V VICTOR, CO.
DWG SIZE D SCALE NONE JOB NO 17168 DRAWING NO 10-647-20 REV 4

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10/03/13 08:36
Filename: 10-647-21.dwg Arc: 7

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Stream No. (PFD) Description			62	64	65	68	69	70	71	72	73	74	76	77	78	79	80	81
			10-647-12	10-647-05	10-647-08	10-647-04	10-647-06	10-647-06	10-647-06	10-647-06	10-647-06	10-647-06	10-647-06	10-647-07	10-647-07	10-647-08	10-647-08	10-647-08
Stream Properties			Regenerated Carbon	High pH Thickener Overflow	Loaded Carbon Screen Wash Water	Compressed Air for CIP Tanks	Flotation Processed Ore Thickener Underflow	Flotation Processed Ore Filter Feed	Flotation Processed Ore Filter Filtrate	Flotation Processed Ore Filter Cake	Flotation Processed Ore Filter Filtrate Recycle To Processed Ore Thickener	Agglomerated Ore To Leach Pad	Flotation Processed Ore Thickener Overflow	Fresh Water	Make Up Water for Neutral pH Process Water Tank	Neutral pH Process Water To Mill Circuit	Neutral pH Process Water To Regrind	Neutral pH Process Water To Gravity
Solids flowrate	stph		0.00	0.00	0.00	0.00	244.69	244.69	0.00	244.69	0.00	280.43	0.00	0.00	0.00	0.00	0.00	0.00
Solution flowrate	stph		0.02	66.37	1.56	0.00	163.13	163.13	216.21	53.71	216.21	65.78	590.15	52.38	0.10	703.83	0.00	0.00
Total stream	stph		0.17	66.37	1.56	0.00	407.82	407.82	216.21	298.40	216.21	346.21	590.15	52.38	0.10	703.83	0.00	0.00
Total stream flowrate	gpm		0.37	265.56	6.25	0.00	1026.44	1026.44	865.14	588.64	865.14	684.50	2361.35	209.59	0.40	2816.25	0.00	0.00
% Solids	%		89.97	0.00	0.00	0.00	60.00	60.00	0.00	82.00	0.00	81.00	0.00	0.00	0.00	0.00	0.00	0.00
Stream SG			1.89	1.00	1.00	0.00	1.59	1.59	1.00	2.03	1.00	2.02	1.00	1.00	1.00	1.00	1.00	1.00
Solids SG			0.00	0.00	0.00	0.00	2.62	2.62	0.00	2.62	0.00	2.66	0.00	0.00	0.00	0.00	0.00	0.00
Solution SG			1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Au	Oz/st		0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Reagents/Utilities (lb/h):																		
NaCN	lb/h		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon	lb/h		312.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.15	0.00	0.00	0.00	0.00	0.00	0.00
Lime	lb/h		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaOH	lb/h		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAX	lb/h		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-208	lb/h		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
X-133	lb/h		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Air (Gas)	scfm		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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LEGEND

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REVISIONS						REFERENCE DRAWINGS		ISSUE RECORD					ENGR RECORD		
NO	DESCRIPTION	DATE	BY	CHK	APP	DRAWING NO	TITLE	DATE	ISS	REV	TO	FOR		BY	DATE
1	REVISED ENGINEERING RECORD INFORMATION	10/02/2013	PLCM	GG		10-647-01 THRU 10-647-12	PROCESS FLOW DIAGRAMS	10/02/2013	9	1	CLIENT	REVISION	DRAWN	PLCM	07/12/2011
2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA				10/18/2011	2	B	CC&V	REVIEW & COMMENT	CHECKED BY	TR	06/22/2012
3	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA				02/03/2012	3	C	CC&V	STATUS	ENGINEER	AN	06/22/2012
	ISSUED FOR DESIGN	20/12/2017	JP	KA				02/13/2012	4	D	CC&V	PERMIT	LEAD ENGINEER		
								06/11/2012	5	E	CC&V	REVIEW & COMMENT			
								07/23/2012	6	F	CC&V	HAZOP REVIEW			
								08/30/2012	7	G	CC&V	STATUS	PROJECT ENL.	DB	06/22/2012
								02/25/2013	8	O	CLIENT	CONSTRUCTION	PROJECT MSR.	AH	06/22/2012
													CLIENT		

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GOLD MINING COMPANY
HIGH GRADE MILL

SE Samuel Engineering
We Provide Solutions

8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111
Phone: 303.714.4840
Fax: 303.714.4800

TITLE
HIGH GRADE MILL
CIP AREA AND PROCESSED ORE AREA
CIP AND PROCESSED ORE CIRCUIT
MATERIAL BALANCE SHEET

FOR CC&V VICTOR, CO.
DWG SIZE D SCALE NONE JOB NO 17168 DRAWING NO 10-647-21 REV 4

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10/13/13 0840
Filename: 10-647-22.dwg Arc: 7

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Stream No. (PFD) Description			82	83	84	85	86	87	88	89	90	91	92	93	95	96	99
			10-647-07	10-647-08	10-647-07	10-647-08	10-647-08	10-647-07	10-647-08	10-647-06	10-647-08	10-647-06	10-647-06	10-647-06	10-647-06	10-647-07	10-647-07
Stream Properties			Make Up Water For High pH Process Water Tanks	High pH Water To Heap Leach Pad	Gland Seal Water	High pH Water Usage	Spray Water To CIP Processed Ore Screen	Water For Reagent Mixing	Utility Station Water	Agglomeration Agent	High pH Water For Agglomeration	Feed to CIP Processed Ore Filter	CIP Processed Ore Filter Cake	CIP Processed Ore Filter Filtrate	CIP Processed Ore Filter Filtrate to CIP Processed Ore Thickener	CIP Feed Sampler Spray Water	Collector Reagent Water Usage
			Solids flowrate	stph	0.00	0.00	0.00	0.00	0.00	5.50	0.00	30.24	30.24	0.00		0.00	0.00
			Solution flowrate	stph	0.00	24.26	42.49	17.94	10.95	3.49	0.00	24.74	6.64	31.53		0.00	0.10
			Total stream	stph	0.00	24.26	42.49	17.94	10.95	3.49	0.00	54.99	36.88	31.53	31.53	0.00	0.10
			Total stream flowrate	gpm	0.00	97.06	170.01	71.77	43.80	13.97	0.00	6.97	21.72	139.61	67.16	126.14	0.39
			% Solids	%	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	55.00	82.00	0.00	0.00	0.00
			Stream SG		0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.57	2.19	1.00	1.00	0.00	1.00
			Solids SG		0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.98	2.98	0.00	0.00	0.00	0.00
			Solution SG		0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
			Au	Oz/st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.00	0.00	0.00	0.00
Reagents/Utilities (lb/h):			NaCN	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Carbon	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.15	3.15	0.00	0.00	0.00	0.00
			Lime	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			NaOH	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			PAX	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			A-208	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			X-133	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Air (Gas)	scfm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Stream No. (PFD) Description			103	103	104	105	106	107	108	109	110	111	112	115	116	117	118	119	120
			10-647-07	10-647-10	10-647-07	10-647-11	10-647-07	10-647-10	10-647-10	10-647-10	10-647-10	10-647-10	10-647-10	10-647-11	10-647-08	10-647-08	10-647-10	10-647-05	10-647-08
Stream Properties			Fresh Water To Lime preparation	Pebble Lime Consumption	Cyanide Mixing Water	Cyanide Briquette Consumption	Flocculant Mixing Water Usage	Flocculant Consumption	Flocculant Addition to Processed Ore Thickener	Lime Slaker Discharge	Water Addition To Lime Storage Tank	Lime Slurry Header Feed	Lime Slaker Grit Screen Undersize	Caustic for pH Conditioning	Processed Ore Filter Feed Repulp Dilution Water	CIP Filter Dilution Water	Lime Slaker Dilution Water	CIP Processed Ore Screen Undersize	Neutral pH Water for Cyclone Underflow Pump Box Dilution
			Solids flowrate	stph	0.00	0.51	0.00	0.12	0.00	0.00	0.00	0.51	0.00	0.51	0.00	0.00	0.00	30.24	0.00
			Solution flowrate	stph	2.87	0.00	0.38	0.00	5.95	0.00	4.88	1.41	1.46	2.87	1.41	0.01	0.00	1.41	59.05
			Total stream	stph	2.87	0.51	0.38	0.12	5.95	0.01	4.89	1.92	1.46	3.37	1.92	0.01	0.00	1.41	89.29
			Total stream flowrate	gpm	11.47	0.61	1.51	0.30	23.82	0.07	19.57	6.26	5.83	12.08	6.26	0.04	0.00	5.64	276.87
			% Solids	%	0.00	100.00	0.00	100.00	0.00	100.00	0.25	26.40	0.00	15.00	26.40	25.00	0.00	0.00	33.87
			Stream SG		1.00	3.31	1.00	1.60	1.00	0.88	1.00	1.22	1.00	1.12	1.22	1.00	0.00	1.00	1.29
			Solids SG		0.00	3.31	0.00	1.60	0.00	0.00	0.00	3.31	0.00	3.31	0.00	0.00	0.00	2.98	0.00
			Solution SG		1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
			Au	Oz/st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00
Reagents/Utilities (lb/h):			NaCN	lb/h	0.00	0.00	0.00	237.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Carbon	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.15
			Lime	lb/h	0.00	1012.00	0.00	0.00	0.00	0.00	1012.00	0.00	1012.00	1012.00	0.00	0.00	0.00	0.00	0.00
			NaOH	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.16	0.00	0.00	0.00	0.00	0.00
			PAX	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			A-208	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			X-133	lb/h	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Air (Gas)	scfm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3

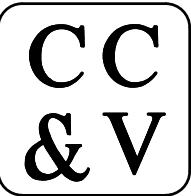
LEGEND



EXISTING EQUIPMENT AND
PROCESS FLOW STREAMS NOT
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SHIPPING PROJECT DESIGN.

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REVISIONS						REFERENCE DRAWINGS		ISSUE RECORD					ENGR RECORD		
NO	DESCRIPTION	DATE	BY	CHK	APP	DRAWING NO	TITLE	DATE	ISS	REV	TO	FOR		BY	DATE
1	REVISED ENGINEERING RECORD INFORMATION	10/02/2013	PLCM	GG		10-647-01 THRU 10-647-12	PROCESS FLOW DIAGRAMS	10/02/2013	9	1	CLIENT	REVISION	DRAWN	PLCM	08/04/2011
2	REVISED BY SAMUEL ENGINEERING	07/07/2017	JRJ	KA				10/18/11	2	B	CC&V	REVIEW & COMMENT	CHECKED BY	TR	06/22/2012
3	ISSUED FOR APPROVAL	08/04/2017	JRJ	KA				2/3/12	3	C	CC&V	STATUS	ENGINEER	AN	06/22/2012
4	ISSUED FOR DESIGN	10/12/2017	JP	KA				2/13/12	4	D	CC&V	PERMIT	LEAD ENGINEER		
5								6/11/12	5	E	CC&V	REVIEW & COMMENT			
6								07/23/2012	6	F	CC&V	HAZOP REVIEW			
7								08/30/2012	7	G	CC&V	STATUS	PROJECT ENL.	DB	06/22/2012
8								02/25/2013	8	O	CLIENT	CONSTRUCTION	PROJECT MGR.	AH	06/22/2012



CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL



8450 E. Crescent Parkway, Suite 200
Greenwood Village, CO 80111

Phone: 303.714.4840
Fax: 303.714.4800

TITLE HIGH GRADE MILL CIP AREA AND PROCESSED ORE AREA CIP AND PROCESSED ORE CIRCUIT MATERIAL BALANCE SHEET									
FOR CC&V VICTOR, CO.									
DWG SIZE D	SCALE NONE	JOB NO 17168	DRAWING NO 10-647-22						
									REV 4

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10/03/13 08:43
Filename: 10-647-23.dwg Arc: 4
P&ID: 1

OPTION 1 – 250TPH

Stream No. (PFD) Description Stream Properties		②12	②14	②16	②17	②37	②40	②44	②45	②57	②63	②66	②67	②69	②70	②80
		10-647-01	10-647-02	10-647-02-01	10-647-02-01	10-647-04	10-647-04	10-647-06	10-647-06	10-647-08	10-647-02-01	10-647-02-01	10-647-02-01	10-647-02	10-647-02	N/A
		Cyclone Overflow	Rougher Tails	Cleaner Column Con	Cleaner Column Tails	Concentrate Thickener O'Flow	Concentrate Thickener U'Flow	Concentrate Cake	CIP Filter Filtrate	Rougher Con Dilution	Cleaner Scavenger Tails	Cleaner Scavenger Con	Flotation Concentrate	Rougher Con Cells 1&2	Rougher Con Cells 3,4&5	Flocculant
Solids flowrate	stph	250.00	242.90	2.20	11.50		7.10	7.10			13.20	4.80	7.10	13.70	6.60	
Solution flowrate	stph	548.20	628.30	5.00	119.40	16.10	5.80	1.10	4.70	45.30	167.40	12.30	17.30	92.80	44.60	0.13
Total stream	stph	798.20	871.20	7.20	130.80	16.10	12.90	8.10	4.70	45.30	180.60	17.10	24.40	106.50	51.10	0.13
Total stream flowrate	gpm	2573.30	2885.60	21.90	494.70	64.30	31.20	12.20	19.00	181.30	689.70	55.30	77.10	390.10	187.40	0.50
% Solids	%	31.30	27.90	31.00	8.80		55.00	87.00			7.30	28.20	29.10	12.90	12.90	0.25
Stream SG		1.20	1.20	1.30	1.10	1.00	1.70	2.70	1.00	1.00	1.00	1.20	1.30	1.10	1.10	1.00
Solids SG		2.60	2.60	4.80	2.70		3.50	3.50			2.60	3.20	3.50	2.90	2.90	

OPTION 1 – 275TPH

Stream No. (PFD) Description Stream Properties		②12	②14	②16	②17	②37	②40	②44	②45	②57	②63	②66	②67	②69	②70	②80
		10-647-01	10-647-02	10-647-02-01	10-647-02-01	10-647-04	10-647-04	10-647-06	10-647-06	10-647-08	10-647-02-01	10-647-02-01	10-647-02-01	10-647-02	10-647-02	N/A
		Cyclone Overflow	Rougher Tails	Cleaner Column Con	Cleaner Column Tails	Concentrate Thickener O'Flow	Concentrate Thickener U'Flow	Concentrate Cake	CIP Filter Filtrate	Rougher Con Dilution	Cleaner Scavenger Tails	Cleaner Scavenger Con	Flotation Concentrate	Rougher Con Cells 1&2	Rougher Con Cells 3,4&5	Flocculant
Solids flowrate	stph	275.00	267.20	2.50	12.60		7.80	7.80		0.00	14.50	5.30	7.80	15.10	7.20	
Solution flowrate	stph	603.00	691.10	5.40	131.30	17.50	6.40	1.20	5.20	49.80	184.10	13.40	18.80	102.00	49.00	0.13
Total stream	stph	878.00	958.30	7.90	143.90	17.50	14.20	9.00	5.20	49.80	198.60	18.70	26.60	117.10	56.30	0.13
Total stream flowrate	gpm	2830.70	3174.10	23.60	544.20	70.00	34.30	13.40	20.90	199.40	758.60	60.40	84.00	429.10	206.10	0.50
% Solids	%	31.30	27.90	31.40	8.80		55.00	87.00			7.30	28.40	29.30	12.90	12.90	0.25
Stream SG		1.20	1.20	1.30	1.10	1.00	1.70	2.70	1.00	1.00	1.00	1.20	1.30	1.10	1.10	1.00
Solids SG		2.60	2.60	4.80	2.70		3.50	3.50			2.60	3.20	3.50	2.90	2.90	

OPTION 2 – 275TPH

Stream No. (PFD) Description Stream Properties		②12	②14	②16	②17	②37	②40	②44	②45	②57	②63	②66	②67	②69	②70	②80
		10-647-01	10-647-02	10-647-02-01	10-647-02-01	10-647-04	10-647-04	10-647-06	10-647-06	10-647-08	10-647-02-01	10-647-02-01	10-647-02-01	10-647-02	10-647-02	N/A
		Cyclone Overflow	Rougher Tails	Cleaner Column Con	Cleaner Column Tails	Concentrate Thickener O'Flow	Concentrate Thickener U'Flow	Concentrate Cake	CIP Filter Filtrate	Rougher Con Dilution	Cleaner Scavenger Tails	Cleaner Scavenger Con	Flotation Concentrate	Rougher Con Cells 1&2	Rougher Con Cells 3,4&5	Flocculant
Solids flowrate	stph	275.00	266.40	3.60	18.60		8.60	8.60			13.60	5.00	8.60	22.30		
Solution flowrate	stph	603.00	689.40	7.50	193.80	18.70	7.10	1.30	5.80	49.50	182.10	12.60	20.10	150.70		0.13
Total stream	stph	878.00	955.80	11.10	212.40	18.70	15.70	9.90	5.80	49.50	195.80	18.70	28.80	173.00		0.13
Total stream flowrate	gpm	2830.70	3166.30	33.10	803.10	74.80	38.30	15.20	23.10	198.10	749.60	57.50	90.50	634.00		0.50
% Solids	%	31.30	27.90	32.80	8.80		55.00	87.00			7.00	28.30	30.00	12.90		0.25
Stream SG		1.20	1.20	1.30	1.10	1.00	1.60	2.60	1.00	1.00	1.00	1.20	1.30	1.10		1.00
Solids SG		2.60	2.60	4.70	2.70		3.40	3.40			2.60	2.90	3.40	2.90		

OPTION 3 (BYPASS) – 275TPH

Stream No. (PFD) Description Stream Properties		②12	②14	②37	②40	②44	②45	②67	②80
		10-647-01	10-647-02	10-647-04	10-647-04	10-647-06	10-647-06	10-647-02-01	N/A
		Cyclone Overflow	Rougher Tails	Concentrate Thickener O'Flow	Concentrate Thickener U'Flow	Concentrate Cake	CIP Filter Filtrate	Flotation Concentrate	Flocculant
Solids flowrate	stph	275.00	253.80		21.20	21.20		21.20	
Solution flowrate	stph	603.00	511.80	136.40	17.30	4.70	12.70	141.20	0.40
Total stream	stph	878.00	765.60	136.40	38.50	25.90	12.70	162.40	0.40
Total stream flowrate	gpm	2832.30	2436.80	545.90	99.80	49.10	50.80	595.50	1.50
% Solids	%	31.30	33.10		55.00	82.00		13.10	0.30
Stream SG		1.20	1.30	1.00	1.50	2.10	1.00	1.10	1.00
Solids SG		2.60	2.60		2.80	2.80		2.80	

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REVISIONS						REFERENCE DRAWINGS		ISSUE RECORD					ENGR RECORD		
NO	DESCRIPTION	DATE	BY	CHK	APP	DRAWING NO	TITLE	DATE	ISS	REV	TO	FOR		BY	DATE
0	ISSUED FOR DESIGN	09/01/2017	JRJ	KA		10-647-01 THRU 10-647-12	PROCESS FLOW DIAGRAMS						DRAWN	PLCM	11/18/2011
1	ISSUED FOR DESIGN	10/12/2017	JP	KA									CHECKED BY	TR	06/22/2012
													ENGINEER	AN	06/22/2012
													LEAD ENGINEER		

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10/03/13 08:43
Filename: 10-647-23.dwg Acc: 4 Rev: 1

REVISIONS						REFERENCE DRAWINGS		ISSUE RECORD					ENGR RECORD		
NO	DESCRIPTION	DATE	BY	CHK	APP	DRAWING NO	TITLE	DATE	ISS	REV	TO	FOR		BY	DATE
0	ISSUED FOR CONSTRUCTION	05/29/2018	SKJ	DL		10-647-01 THRU 10-647-12	PROCESS FLOW DIAGRAMS						DESIGN	SKJ	05/29/2018
													CHECKED BY	DL	05/29/2018
													LEAD ENGINEER		
													PROJECT ENG.		
													PROJECT MGR.		
													CLIENT		

CE22x34 Continued from project(s):

OPTION 1 - 250TPH - Recycle

Stream Properties		Stream No. (PFD)	212	214	216	217	237	240	244	245	257	263	266	267	269	270
		Description	10-647-01	10-647-02	10-647-02-01	10-647-02-01	10-647-04	10-647-04	10-647-06	10-647-06	10-647-08	10-647-02-01	10-647-02-01	10-647-02-01	10-647-02	10-647-02
			Cyclone Overflow	Rougher Tails	Cleaner Column Con	Cleaner Column Tails	Concentrate Thickener O'Flow	Concentrate Thickener U'Flow	Concentrate Cake	CIP Filter Filtrate	Rougher Con Dilution	Cleaner Scavenger Tails	Cleaner Scavenger Con	Flotation Concentrate	Rougher Con Cells 1&2	Rougher Con Cells 3,4&5
Solids Flowrate		stph	249.99	246.13	3.86	14.17		3.86	3.86			16.71	6.12	3.86	18.02	8.66
Solution Flowrate		stph	548.22	638.95	7.86	128.47	7.14	3.15	0.58	2.58	46.58	179.20	15.27	7.86	135.32	65.01
Total Stream		stph	798.21	885.08	11.71	142.63	7.14	7.01	4.43	2.58	46.58	195.91	21.39	11.71	153.35	73.66
Total Stream Flowrate		gpm	2573.33	2933.27	34.51	534.84	28.56	15.70	5.39	10.32	186.39	742.28	68.15	34.51	565.35	271.59
% Solids		%	31.32	27.81	32.93	9.93		55.00	87.00			8.53	28.60	32.93	11.75	11.75
Stream SG			1.24	1.21	1.36	1.07	1.00	1.78	3.29	1.00	1.00	1.05	1.25	1.36	1.08	1.08
Solids SG			2.63	2.61	5.00	2.72		5.00	5.00		2.61	2.64	3.47	5.00	3.01	3.01

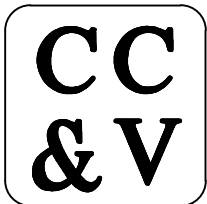
OPTION 1 - 275TPH - Recycle

Stream Properties		Stream No. (PFD)	212	214	216	217	237	240	244	245	257	263	266	267	269	270
		Description	10-647-01	10-647-02	10-647-02-01	10-647-02-01	10-647-04	10-647-04	10-647-06	10-647-06	10-647-08	10-647-02-01	10-647-02-01	10-647-02-01	10-647-02	10-647-02
			Cyclone Overflow	Rougher Tails	Cleaner Column Con	Cleaner Column Tails	Concentrate Thickener O'Flow	Concentrate Thickener U'Flow	Concentrate Cake	CIP Filter Filtrate	Rougher Con Dilution	Cleaner Thckener Tails	Cleaner Scavenger Con	Flotation Concentrate	Rougher Con Cells 1&2	Rougher Con Cells 3,4&5
Solids Flowrate		stph	274.99	270.75	4.24	15.58		4.24	4.24			18.38	6.73	4.24	19.82	9.52
Solution Flowrate		stph	603.04	702.74	8.54	141.25	7.77	3.47	0.63	2.84	51.24	197.02	16.70	8.54	148.79	71.48
Total Stream		stph	878.03	973.49	12.78	156.83	7.77	7.71	4.88	2.84	51.24	215.40	23.43	12.78	168.61	81.00
Total Stream Flowrate		gpm	2830.66	3226.20	37.56	588.05	31.07	17.27	5.92	11.35	205.02	816.11	74.56	37.56	621.61	298.61
% Solids		%	31.32	27.81	33.18	9.94		55.00	87.00			8.53	28.72	33.18	11.76	11.76
Stream SG			1.24	1.21	1.36	1.07	1.00	1.78	3.29	1.00	1.00	1.05	1.25	1.36	1.08	1.08
Solids SG			2.63	2.61	5.00	2.72		5.00	5.00			2.64	3.47	5.00	3.01	3.01

OPTION 2 - 275TPH - Recycle

Stream Properties		Stream No. (PFD)	212	214	216	217	237	240	244	245	257	263	266	267	269	270
		Description	10-647-01	10-647-02	10-647-02-01	10-647-02-01	10-647-04	10-647-04	10-647-06	10-647-06	10-647-08	10-647-02-01	10-647-02-01	10-647-02-01	10-647-02	10-647-02
			Cyclone Overflow	Rougher Tails	Cleaner Column Con	Cleaner Column Tails	Concentrate Thickener O'Flow	Concentrate Thckener U'Flow	Concentrate Cake	CIP Filter Filtrate	Rougher Con Dilution	Cleaner Scavenger Tails	Cleaner Scavenger Con	Flotation Concentrate	Rougher Con Cells 1&2	Rougher Con Cells 3,4&5
Solids Flowrate		stph	274.99	270.22	4.77	24.32		4.77	4.77			17.80	6.52	4.77	29.09	
Solution Flowrate		stph	603.04	701.59	9.48	210.89	8.63	3.90	0.71	3.19	51.03	195.69	16.21	9.48	219.38	
Total Stream		stph	878.03	971.81	14.25	235.21	8.63	8.67	5.48	3.19	51.03	213.49	22.73	14.25	248.47	
Total Stream Flowrate		gpm	2830.66	3220.87	42.05	880.12	34.52	19.73	6.97	12.77	204.19	810.16	73.96	42.05	918.17	
% Solids		%	31.32	27.81	33.47	10.34		55.00	87.00			8.34	28.68	33.47	11.71	
Stream SG			1.24	1.21	1.35	1.07	1.00	1.76	3.14	1.00	1.00	1.05	1.23	1.35	1.08	
Solids SG			2.63	2.61	4.63	2.68		4.63	4.63			2.62	2.86	4.63	2.88	

FOR CONSTRUCTION
05/29/2018



CRIPPLE CREEK & VICTOR
GOLD MINING COMPANY
HIGH GRADE MILL

amec foster wheeler
AMEC FOSTER WHEELER USA CORPORATION
SALT LAKE CITY, UTAH



TITLE					
HIGH GRADE MILL SCAVENGER CELL RECIRCULATION MATERIAL BALANCE SHEET					
FOR CC&V VICTOR, CO.					
DWG SIZE D	SCALE NONE	JOB NO 107802	DRAWING NO 10-647-25	REV 0	