



COLORADO OPERATIONS

Henderson Mine and Mill P.O. Box 68 Empire, CO 80438 Phone (303) 569-3221 Fax (303) 569-2830

January 8, 2016

Certified Mail Tracking: 7015 0640 0007 5449 4820

Mr. Peter Hays Environmental Protection Specialist 1313 Sherman Street, Room 215 Denver, CO 80203



RECEIVED

JAN 152016

DIVISION OF RECLAMATION MINING AND SAFETY

Re: Climax Molybdenum Company, Henderson Mill, Permit No. M-1977-342 Technical Revision No. 25, Ute Park Wellfield Project, Phase II

Dear Mr. Hays,

Climax Molybdenum Company (CMC) is hereby submitting the final drawings for the approved extraction wells (MLEX-2 & MLEX-3) and appurtenant structures. Please find enclosed with this letter a record set of drawings for piping, associated electrical drawings and certification statements provided by the Engineers of Record, AJAX, Clear Creek Associates, Henderson and Henderson.

If you have any additional questions, concerns or require more information regarding this project, please feel free to contact me at (720) 942-3518 or Miguel Hamarat at (720) 942-3255.

Regards,

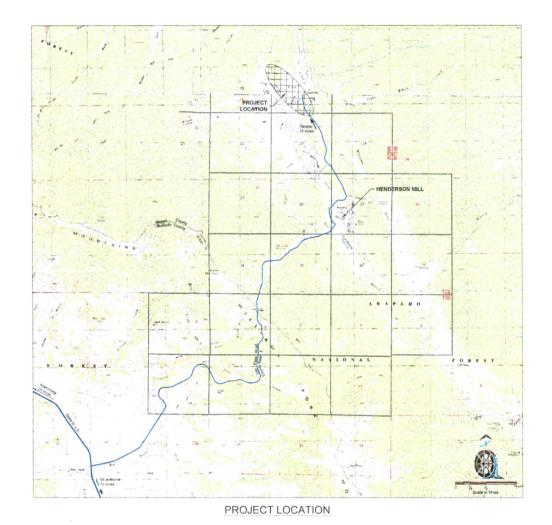
Tim Haynes

Sr. Environmental Engineer Freeport-McMoRan Copper & Gold Climax Molybdenum Company Henderson Mill

Henderson Mill 19302 County Road 3 Parshall, CO 80468 720-942-3518

tim haynes@fmi.com

CC: M. Hamarat (CMC), email



Henderson 1 Dam Extraction Well Pro ect See □ ater Well Collection Pi eline - Phase II

for

Climax Molybdenum Comlany Henderson Mill

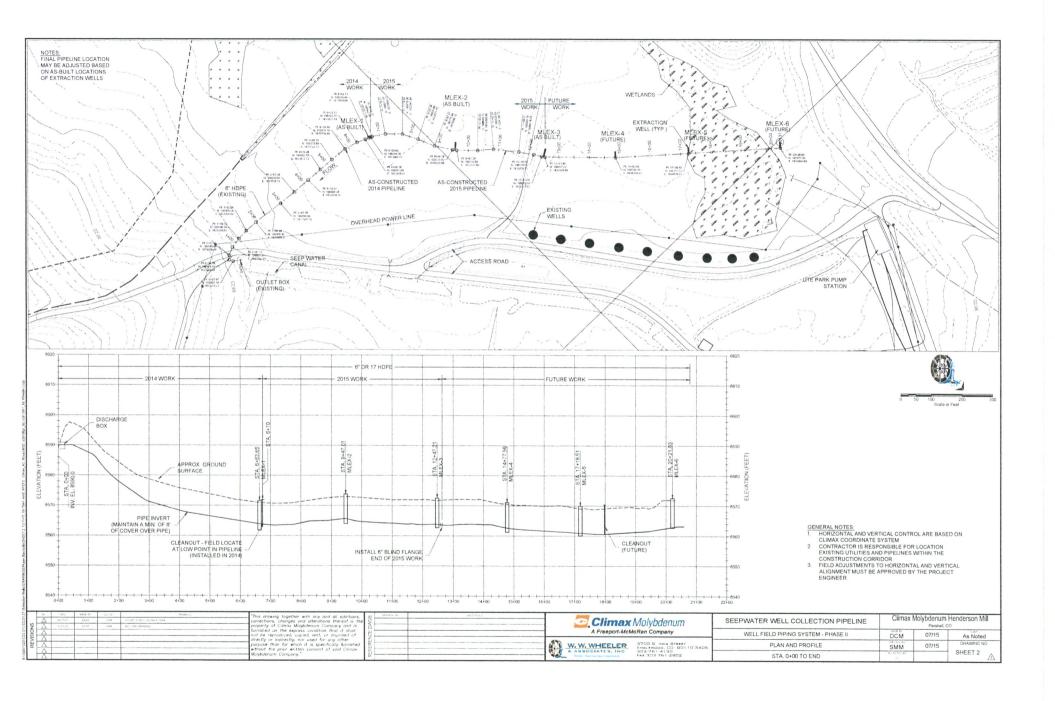
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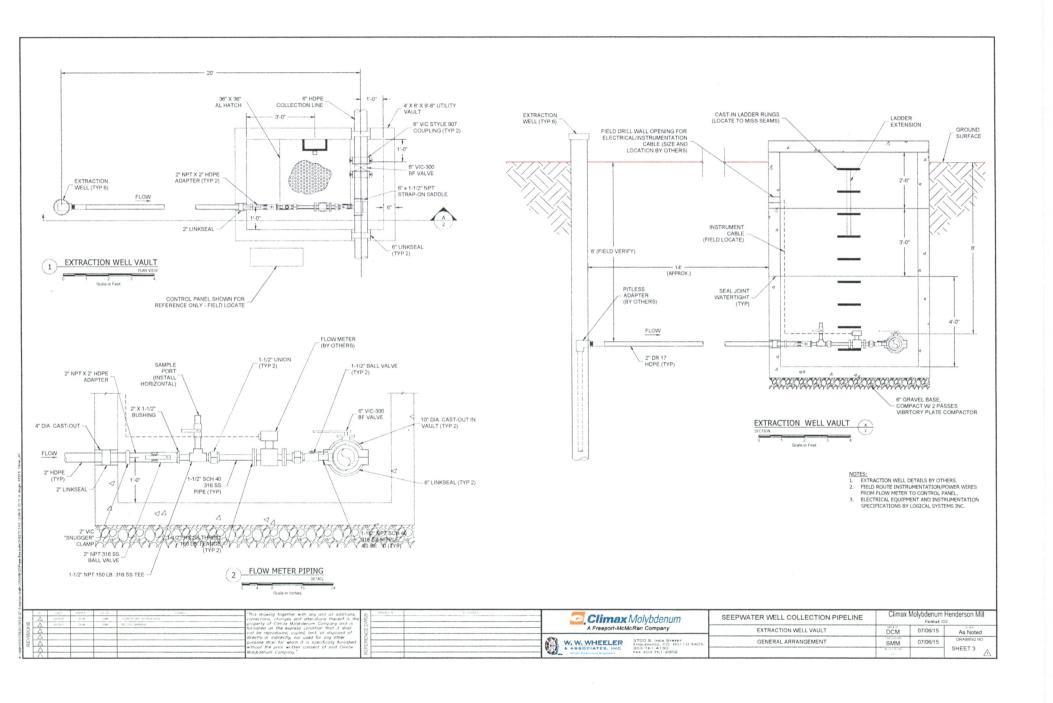
W. W. Wheeler and Associates, Inc.

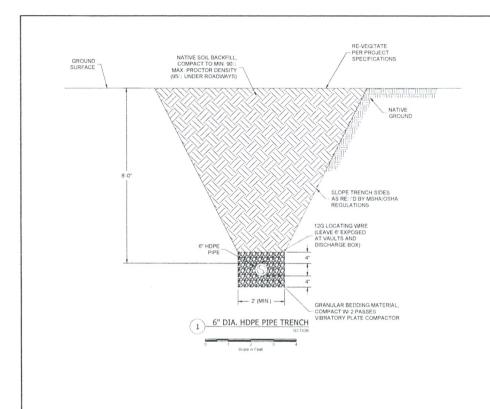
DRAWING NO.	DRAWING DESCRIPTION	REV. NO
	GENERAL	
SHEET 1 COVE	R SHEET AND DRAWING INDEX	1
SHEET 2 WELL	FIELD PIPING SYSTEM - PLAN AND PROFILE	1
	CIVIL	
SHEET 3 EXTR	ACTION WELL VAULT - GENERAL ARRANGEMENT	1
SHEET 4 WELL	FIELD PIPING - TRENCH SECTION AND MISC DETAILS	1
SHEET 5 MATE	RIAL LIST	1

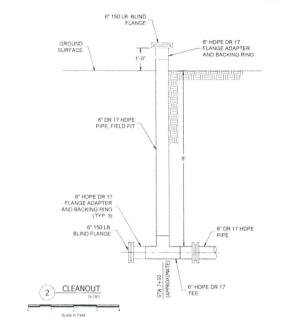
THE INFORMATION PROVIDED IN THESE "AS CONSTRUCTED DRAWMOS CONTAINS INFORMATION PROVIDED, IN PART, BY OTHERS. W. W. WHEELER AND ASSOC. IS NOT RESPONSIBLE FOR THE ACCURACY OF THIS INFORMATION.

SI	n = 000	ARE 14	CED O	O DY	MANNED FLORE FOR CASTROLION BECOMP PRANTING	"This drawing together with any and all additions, corrections, changes and alterations thereof is the property of Climax Molybdenum Company and is	SWGS	NII SILO	HEISOM		Molybdenum	SEEPWATER WELL COLLECTION PIPELINE	Climax I	Molybdenum H	Henderson Mill
SION	Δ					furnished on the express condition that it shall not be reproduced, copied, lent, or disposed of	E C			 A Freeport-McM	oRan Company	PROJECT COVER SHEET	DCM	07/15	As Noted
REVI						directly or indirectly, nor used for any other purpose than for which it is specifically furnished without the prior written consent of said Climax	E E			W. W. WHEELER	3700 S. INGA STREET ENGLEWOOD, CO BOILD-3405	GENERAL LOCATION MAP	SMM	07/15	DRAWING NO
R 11300	\wedge					Malybdenum Company "	#			& ASSOCIATES, INC	303-761-4130 FAX 303-761-2802	AND DRAWING INDEX	ACCEPTION		SHEET 1









- NOTES:

 1. FIELD LOCATE CLEANOUTS AT STA 6+70 (EXISTING) AND AT ANY LOW POINT IN THE LINE.

 2. BLIND FLANGE ONLY USED AT END OF COLLECTION LINE BETWEEN PROJECT PHASES: CONTINUE 6' HOPE TO LAST WELL.

٦	162	LATE	MACKEY	QL: Br	MINAN.	*This drawing together with any and all additions.
-	A	20/25/15	DOM	5184	ISSUEDEDIC MISSING HOW	corrections, changes and alterations thereof is the
2	Δ	11/13/15	DCM	5884		property of Climax Moiybdenum Company and is
2	Δ					furnished on the express condition that it shall not be reproduced, copied, lent, or disposed of
3	Δ					directly or indirectly, nor used for any other
4	Δ					purpose than for which it is specifically furnished
	Δ					without the prior written consent of said Climax Molybdenum Company."
	Λ					Marybaenum Company

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	Molybdenum HoRan Company	SEEPWATER WE
. W. WHEELER	3700 S. INCA STREET ENSLEWIGG, CO. BOILD-3405	TRI
Water Weavertes & represent	303-761-4130 FAX 303-761-2802	AND

	SEEPWATER WELL COLLECTION PIPELINE	Climax	Molybdenum Parshall, C	Henderson Mill
	PIPELINE	DCM	07/02/15	As Noted
3405	TRENCH SECTION	SMM	07/02/15	DRAWING NO
	AND MISC. DETAILS	ACCEPTODAY		SHEET 4

*PIPING ITEMS AND QUANTITIES PROVIDED BY HENDERSON

NOTES:

- 1. EXTRACTION WELLS AND ASSOCIATED EQUIPMENT BY OTHERS.
- THIS MATERIAL LIST DOES NOT INCLUDE ALL ITEMS. SMALL ITEMS SUCH AS BOLTS, NUTS, GASKETS, ETC. MAY NOT BE INCLUDED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL PARTS REQUIRED TO COMPLETE THE PROJECT.
- ELECTRICAL EQUIPMENT, SUCH AS FLOW METERS, OUTLETS, CONTROL PANELS, CONDUIT, WIRING, ETC. ARE NOT INCLUDED ON THIS LIST AND ARE PROVIDED ON THE ELECTRICAL DRAWINGS.
- 4. SUBMIT MATERIAL CUT SHEETS AND VAULT SHOP DRAWINGS TO PROJECT ENGINEER FOR APPROVAL BEFORE PURCHASING.

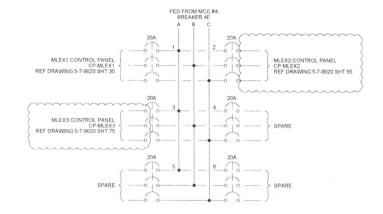
S	107 CA 007	0E M	DOM DOM	SMM SMM	M MARG ESTABLISH CARSTERN THAN RECORD GRANTEN	"This drawing together with any and all additions, corrections, changes and attentions thereof is the property of Climax Molybdenum Company and is	15	(EA/State)	N (10/A)			Molybdenum	SEEPWATER WELL COLLECTION PIPELINE	Olimba ii	Molybdenum F Parshall, CO	lenderson Mill
ISION	<u> </u>		-			furnished on the express condition that it shall not be reproduced, copied, lent, or disposed of	NCE				A Freeport-McM	oRan Company	EXTRACTION WELL VAULT	DCM	05/28/14	As Noted
REV	<u> </u>					directly or indirectly, nor used for any other purpose than for which it is specifically furnished without the prior written consent of soid Climax	ER.			1	W. W. WHEELER	3700 S. INGA STREET ENGLEWOOD, CO. BOLLO-3405	MATERIALS	SMM	06/8/14	DRAWING NO
	2					Molybdenum Company."	F.			1	4 ABSOCIATES, INC	303-761-4130 FAX 303-761-2802		W. GMIDE		SHEET 5



EXTRACTION WELLFIELD PHASE II ELECTRICAL DRAWINGS DRAWING #5-7-9020

DWG. NO.	REFERENCE DRAWINGS	DESCRIPTION OF REVISION	DATE	BY A	APP BY			ENGR: CA	AW 01/20/2014	4 LIENDERSON OPERATIONS	HEND	DERSON MI	II
<u> </u>	V	↑ ISSUE FOR CONSTRUCTION	08/15/14	CW	SR			DRAWN BY: CA	AW 01/22/2014	HENDERSON OPERATIONS		S & WATER SI	
,	V	√ MLEX1 AS BUILT	01/05/15	CW	SW			CHECKED BY:		Climax Molybdenum			
	V	N PHASE II ISSUED FOR BID	05/04/15	SMS	SMS			APPROVED BY:		A Freenort-McMoRen Company		CTION WELLFI	ELD
	V	N PHASE II ISSUE FOR CONSTRUCTION	05/26/15	SMS	SMS			APPROVED BY:		EMPIRE / PARSHALL, COLORADO	CC	OVER SHEET	
	V	A)				SCALE:	AS SHOWN	SAFETY APP BY:		303 569-3221	5-7-9020	SHT 0 OF 78	REV. /3

	PANEL DESIGNATION:	POW	ER D	ANEI	PP-206	5Δ				-		-			
	PANEL LOCATION:			D DROP	POLE 206	iA					TAGE		70		
	FED FROM:										HASE				
	MOUNTING										WIRE:	4			
	ENCLOSURE:										TYPE				
		TOP EN	ITRY							MAIN R					
	INTERRUPTING RATING (AIC)	10kA								MCB R	ATING:	100A			_
CKT. NO.	DESCRIPTION	LOAD TYPE	AMP	POLE	А		В		(POLE	AMP	LOAD TYPE	DESCRIPTION	CKT. NO.
1	MLEX 1 CONTROL PANEL CP-MLEX1	С	20A	3	2181	1331	2181	2181	1331	2181	3	20A	С	MLEX 2 CONTROL PANEL CP-MLEX2	2
3	MLEX 3 CONTROL PANEL CP-MLEX3	С	20A	3	2181	0	1331	0	2181	0	3	20A	С	SPARE - FUTURE WELL	4
5	SPARE	С	20A	3	0	0	0	0	0	0	3	20A	С	SPARE	6
			TOTA	L LOAD:	5693	VA	5693	VA	5693	VA				<u> </u>	
													A	DDITIONAL PANEL INFORMATION	
	TOTAL CONNECTED LOAD:		17079	VA					(0		PANE	L TYPE		
	TOTAL CONTINUOUS LOAD:		5693	VA					(D	BR	EAKER	TYPES		
	TOTAL INTERMITTENT LOAD:		0	VA					(0					
	TOTAL PANEL LOAD:		7116.3	VA					(D					
	TOTAL PANEL AMPS:		8.6	A					(D					



(1	POWER	PANEL	P	P-2	06/
		SCAL	E	1'-0"	= 1'-

-			THE RESERVE AND ADDRESS OF THE PERSON.	-										
3. NO.	REFERENCE DRAWINGS	DESCRIPTION OF REVISION	DATE	DI	APP BY			ENGR:	CAW 0	4/10/14	HENDERSON OBERATIONS	HEND	ERSON MIL	LL
	/	ISSUE FOR CONSTRUCTION	09/02/14	CAW	SR			DRAWN BY:	CAW 0	4/10/14	HENDERSON OPERATIONS	TAILING	C & MATED CI	TEC
	/	AS BUILT	01/05/15	CW	SW			CHECKED BY:			Climay Molyhdanum			
	V	PHASE II ISSUE FOR BID	05/04/15	SMS	SMS			APPROVED BY:			manufa			
	V	↑ PHASE II ISSUE FOR CONSTRUCTION	5/26/15	SMS	SMS			APPROVED BY:			EMPIRE / PARSHALL COLORADO	PP-206A	PANEL SCHED	JULE
		\wedge				SCALE: AS	SHOWN	SAFETY APP BY:			303-569-3221	5-7-9019	SHT 1 OF 1	REV.
	NO.	NO REFERENCE DRAWINGS	. NO REFERENCE DRAWINGS DESCRIPTION OF REVISION A ISSUE FOR CONSTRUCTION A SBUILT PHASE II ISSUE FOR BID PHASE II ISSUE FOR CONSTRUCTION	SISUE FOR CONSTRUCTION	ISSUE FOR CONSTRUCTION	SISUE FOR CONSTRUCTION	ISSUE FOR CONSTRUCTION	ISSUE FOR CONSTRUCTION	SISUE FOR CONSTRUCTION	SISUE FOR CONSTRUCTION 0902/14 CAW SR DRAWN BY CAW CA	ISSUE FOR CONSTRUCTION 09/02/14 CAW SR DRAWN BY CAW 04/10/14	SISUE FOR CONSTRUCTION	SISUE FOR CONSTRUCTION	SISUE FOR CONSTRUCTION

WELLFIELD ELECTRICAL SHEET INDEX

SHEET	DESCRIPTION
0	COVER SHEET
1	DRAWING INDEX
2	ELECTRICAL & CONTROLS STANDARD SYMBOLS
3	ELECTRICAL & CONTROLS LEGEND SHEET
4	WELLFIELD GENERAL BILL OF MATERIALS
5	(INTENTIONALLY BLANK)
6	(INTENTIONALLY BLANK)
7	PANEL LEGEND SHEET
8	(INTENTIONALLY BLANK)
9	(INTENTIONALLY BLANK)
10	WELLFIELD SITE DETAIL
11	MI EXT VAULT DETAIL
12	(INTENTIONALLY BLANK)
13	(INTENTIONALLY BLANK)
14	(INTENTIONALLY BLANK)
15	POLE 206A POWER ONE-LINE
16	(INTENTIONALLY BLANK)
17	(INTENTIONALLY BLANK)
18	PANEL SCHEDULE PP-206A
19	(INTENTIONALLY BLANK)
20	(INTENTIONALLY BLANK)
21	POLE 206A CONDUIT ONE-LINE
	(INTENTIONALLY BLANK)
22	
23	POLE 206A CONDUIT SCHEDULE (INTENTIONALLY BLANK)
24	(INTENTIONALLY BLANK)
26	MLEX1 CR1000 (SHT 1 OF 2)
27	MLEX1 CR1000 (SHT 2 OF 2)
28	(INTENTIONALLY BLANK)
29	(INTENTIONALLY BLANK)
30	MLEX1 GEOTECH PANEL LAYOUT
31	MLEX1 GEOTECH SUBPANEL LAYOUT
32	MLEX1 GEOTECH BILL OF MATERIALS
33	(INTENTIONALLY BLANK)
34	(INTENTIONALLY BLANK)
35	MLEX1 GEOTECH 480VAC DISTRIBUTION
36	MLEX1 GEOTECH 120VAC DISTRIBUTION
37	MLEX1 GEOTECH DISCRETE INPUT
38	MLEX1 GEOTECH DISCRETE OUTPUT
39	(INTENTIONALLY BLANK)
40	(INTENTIONALLY BLANK)
41	(INTENTIONALLY BLANK)
42	(INTENTIONALLY BLANK)
43	MLEX 2 VAULT DETAIL
44	(INTENTIONALLY BLANK)
45	(INTENTIONALLY BLANK)
46	MLEX2 CR1000 (SHT 1 OF 2)
47	MLEX2 CR1000 (SHT 2 OF 2)

SHEET	DESCRIPTION
48	(INTENTIONALLY BLANK)
49	(INTENTIONALLY BLANK)
50	MLEX2 PANEL LAYOUT
51	MLEX2 TERMINAL LAYOUT
52	MLEX2 BILL OF MATERIALS
53	(INTENTIONALLY BLANK)
54	(INTENTIONALLY BLANK)
55	MLEX2 480VAC DISTRIBUTION
56	MLEX2 120VAC DISTRIBUTION
57	MLEX2 DISCRETE INPUT
58	MLEX2 DISCRETE OUTPUT
59	(INTENTIONALLY BLANK)
60	(INTENTIONALLY BLANK)
61	(INTENTIONALLY BLANK)
62	(INTENTIONALLY BLANK)
63	MLEX3 VAULT DETAIL
64	(INTENTIONALLY BLANK)
65	(INTENTIONALLY BLANK)
66	MLEX3 CR1000 (SHT 1 OF 2)
67	MLEX3 CR1000 (SHT 2 OF 2)
68	(INTENTIONALLY BLANK)
69	(INTENTIONALLY BLANK)
70	MLEX3 PANEL LAYOUT
71	MLEX3 TERMINAL LAYOUT
72	MLEX3 BILL OF MATERIALS
73	(INTENTIONALLY BLANK)
74	(INTENTIONALLY BLANK)
75	MLEX3 480VAC DISTRIBUTION
76	MLEX3 120VAC DISTRIBUTION
77	MLEX3 DISCRETE INPUT
78	MLEX3 DISCRETE OUTPUT

DWG. NO.	REFERENCE DRAWINGS		DESCRIPTION OF REVISION	DATE	BY	APP BY			ENGR:	CAW	01/20/2014
		Δ	ISSUE FOR CONSTRUCTION	08/15/14	CW	SR			DRAWN BY:	CAW	01/22/2014
		Δ	MLEX1 AS BUILT	01/05/15	CW	SW			CHECKED BY:		
		Δ	PHASE II ISSUE FOR BID	05/04/15	SMS	SMS			APPROVED BY:		
		Δ	PHASE II ISSUE FOR CONSTRUCTION	05/26/15	SMS	SMS			APPROVED BY:		
		⅓					SCALE	AS SHOWN	SAFETY APP BY:		

HENDERSON OPERATIONS
Climax Molybdenum
A Freeport-McMoRan Company
EMPIRE / PARSHALL, COLORADO 303-569-3221

HEND	ERS	SC	N	MIL	L	
TAILINGS	3 & V	VA	TER	R SIT	ES	
EXTRAC	MOIT	IV	VEL	LFIE	LD	
SH	EET	IN	DE	X		
5-7-9020	SHT	1	OF		BEV/	1

SCHEMATIC SYMBOLS

										SCALE		S SHOWN	APPROVED SAFETY APP	
													CHECKED B APPROVED	BY:
	ENERGE DRAN		Λ	PHASE II ISSUE FOR BID			05/04/15	SMS	757 51				DRAWN BY:	JLA/LSI
o T	REFERENCE DRAW	WINGS		DESCRIPTION OF REVISION	.,	SEED OF LITTORY FOR OUT IS EMERGIZED	DATE	BY	APP BY				ENGR	JLA/LSI
	-0-50-	- DISCONNECT SWITCH			-010-	- TIME DELAY SWITCH NORMALLY CLOSED WITH TIME DELAY OPENS AFTER COIL IS ENERGIZED				П	- HORN			
	-0-0-	- SWTCH NORMALLY OPEN - SWTCH NORMALLY CLOSED			-040	- TEMPERATURE SWITCH CLOSES ON RISING TEMPERATURE				hummi	- TRANSF	ORMER, DU	AL SECONDAF	RY
	-0.10-	- EMERGENCY STOP PUSHBUTTON			-050-	- TEMPERATURE SWITCH OPENS ON RISING TEMPERATURE				لسكسا				
	-0 0-	NORMALLY OPEN			-050-	- TEMPERATURE SWITCH NORMALLY OPEN				lun	- TRANSFO	DKMER		
	-0.1.0-	NORMALLY CLOSED - MOMENTARY CONTACT PUSHBUTTON			-050-	- TEMPERATURE SWITCH NORMALLY CLOSED				لسأ	- TRANSF	DI IED		
	A1 A2	- MOMENTARY CONTACT PUSHBUTTON			-0-6-	- DIFFERENTIAL PRESSURE SWITCH NORMALLY OPEN CLOSES ON INCREASING DIFFERENTIAL				Y	- ANTENN	4		
	-qCR D-	- CONTROL RELAY			-070-	- DIFFERENTIAL PRESSURE SWITCH NORMALLY CLOSED OPENS ON INCREASING DIFFERENTIAL				\Diamond	- ISOLATE	O GROUND		
	-c-	- CONTACTOR COIL, MOTOR STARTER COI PHOTOELECTRIC COIL, ETC.	L.		070	- PRESSURE SWITCH CLOSES ON RISING PRESSURE				<u>+</u>				
	-1/-	- NORMALLY CLOSED CONTACT			-010-	- PRESSURE SWITCH OPENS ON RISING PRESSURE					- LIGHTNIN		UR	
		- NORMALLY OPEN CONTACT			-0-0-	- PRESSURE SWITCH NORMALLY OPEN					- MUTLI-CI			
	CR1	- NORMALLY CLOSED CONTACT			-olo-	- PRESSURE SWITCH NORMALLY CLOSED				-/ V				
	CR1	- NORMALLY OPEN CONTACT			-040	- FLOAT SWITCH CLOSES ON RISING LEVEL				-125-	- GAPLESS	SURGE SI	IPPRESSOR	
	^^	- RESISTOR OR OTHER LOAD ELEMENT			0	- FLOAT SWITCH OPENS ON RISING LEVEL				-0\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	- RHEOST	AT		
	`	- DIODE - LIGHT EMITTING DIODE			0					OX OX	- 2 POSITIO	ON SELECT	OR SWITCH	
	\uparrow	DIODE			-0-0-	- FLOAT SWITCH NORMALLY OPEN				X00	31 00110	OLLEGI		
		- COOPING CAP			-010-	- FLOAT SWITCH NORMALLY CLOSED				H X000			OR SWITCH	
		- CAPACITOR			-010-	- FLOW SWITCH CLOSES ON INCREASING FLOW				OFF X000	- 4 POSITIO	ON SELECT	OR SWITCH	
	120VAC CB1 ——————————————————————————————————	- CIRCUIT BREAKER			-010-	- FLOW SWITCH OPENS ON INCREASING FLOW				-1(OR SNUBBER	
	120VAC CB1				-0-0-	- FLOW SWITCH NORMALLY OPEN				<	- THERMO	COUPLE		
	-0-6	- PUSH TO TEST			-010-	- FLOW SWITCH NORMALLY CLOSED					- RESISTIV	E THERMA	DEVICES	
		Y = YELLOW B = BLUE			3/2	- PROXIMITY SWITCH NORMALLY OPEN HELD CLOSED				Q V	- PILOT SC	LENOID		
		R = RED W = WHITE A = AMBER			ZS-103					0-4 0	- VACUUM VACUUM	SWITCH CI	OSES BY INC	REASING
	<u> </u>	- INDICATING LIGHT, COLOR AS SHOWN G = GREEN			3/2	- PROXIMITY SWTCH NORMALLY CLOSED HELD OPEN				-oto-	- VACUUM VACUUM	SWITCH OF	ENS BY INCR	EASING
	TB1 F1 ——————————————————————————————————	- DISCONNECTING FUSE WITH LOCATION, SIZE AND NUMBER			ZS-102					-0-0-	- VACUUM	SWITCH NO	RMALLY OPE	N
	TB1 F1				3 2	- PROXIMITY SWITCH NORMALLY OPEN				-oTo-	- VACUUM	SWITCH NO	RMALLY CLO	SED
	1A	- FUSE WITH LOCATION, SIZE AND NUMBER	?		ZS-101					-000-	- ROPE PU	LL SWITCH	NORMALLY O	PEN
	1	- CONSTRUCTION NOTE			3/22	- PROXIMITY SWITCH NORMALLY CLOSED				-000-	- ROPE PU	LL SWITCH	NORMALLY CI	LOSED
	\triangle	- GENERAL DRAWING NOTE			ZS-100					-010	- ALIGNME CLOSED	NT SWITCH	TO RIGHT NO	RMALLY
	N	- TERMINAL BLOCK			-0-0	- LIMIT SWITCH NORMALLY OPEN HELD CLOSED				-010-	CLOSED		TO LEFT NOR	
		- 3 CONDUCTOR SHIELDED WIRE			-050-	- LIMIT SWITCH NORMALLY CLOSED HELD OPEN				-08	- TORQUE			
		- SIGNAL WIRE, 2 CONDUCTOR, SHIELDED			-00-	- LIMIT SWITCH NORMALLY OPEN				-0,0	TIME DEL	AY SWITCH	NORMALLY C FTER COIL IS	PEN WITH ENERGIZED
		- WIRE REMOTE FROM OR EXTERNAL TO LOCATION			000	- LIMIT SWITCH NORMALLY CLOSED				-oto-	TIME DELA	Y CLOSES	AFTER COIL IS	SENERGIZED
		- WRE INTERSECTION POINT - WRE LOCAL TO PANEL OR LOCATION			0-0-	- 3-WAY SWTCH				-oto-	TIME DELA	Y CLOSES	AFTER COIL IS	SENERGIZED
					. 0						- TIME DEL	AY SWITCH	NORMALLY C	PEN WITH

DWG. NO. REFERENCE DRAWINGS



- TRANSMITTER

- ELECTRICAL QUICK CONNECT



- DRAWING REVISION NOTICE

	DATE	BY	APP BY			ENGR	JLA/LSI	12/05/14	LIENIE
	05/04/15	SMS				DRAWN BY:	JLA/LSI	12/05/14	HEN
						CHECKED BY:			
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						APPROVED B	Y:		
				SCALE	AS SHOWN	SAFETY APP 8	3Y:		

HENDERSON OPERATIONS	
Climax Molybdenum	
A Freeport-McMoRan Company	١
EMPIRE / PARSHALL, COLORADO 303-569-3221	H

	HENDERS	ON OPER	ATION
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	5.7.9020	SHT 2 OF	DEV

ABBREVIATIONS - GENERAL

A	- AMBER, AMPERE, ALARM
а	- AUXILIARY CONTACT, NO
AC	- ALTERNATING CURRENT
ACB	- AIR CURRENT BREAKER
ACT	- ACTUATOR
ACN	- AC NEUTRAL
ANN	- ANNUNCIATOR
AS	- AIR SUPPLY
ATM	- ATMOSPHERE
AWG	- AMERICAN STANDARD WIRE GAUGE
b	- AUXILIARY CONTACT, NC
BVM	- BATTERY VOLTAGE MONITOR
CPT	- CONTROL POWER TRANSFORMER
Ca	- AUXILIARY CONTACTOR, N.O.
Cb	- AUXILIARY CONTACTOR, N.C.
DC	- DIRECT CURRENT
DPDT	- DOUBLE POLE DOUBLE THROW
DS	- DISCONNECT SWITCH
EC	- EMPTY CONDUIT
EE	- WREWAY
EMT	- ELECTRICAL METALLIC TUBING
EP	- EXPLOSION PROOF
ESD	- EMERGENCY SHUTDOWN
ETM	- ELAPSED TIME METER
FC	- FAIL CLOSED
FH	- FUSED HOT
FLA	- FULL LOAD AMPS
FMC	- FLEXIBLE METAL CONDUIT
FO	- FIBER OPTIC
FVNR	- FULL VOLTAGE, NON-REVERSING
GFI	- GROUND FAULT INTERRUPTOR
GLS	- GEARED LIMIT SWITCH
GRC	- GALVANIZED, RIGID CONDUIT
H-O-A	- HAND/OFF/AUTO
H-O-R	- HAND/OFF/REMOTE
HP	- HORSEPOWER
Hz	- HERTZ (CYCLES/SEC.)
1/0	- INPUT/OUTPUT
ISB	- INSTRINSICALLY SAFE BARRIER
IT	- ISOLATED TRANSMITTER
J	- JUNCTION
JB	- JUNCTION BOX
KV	- KILOVOLT
KVA	- KILOVOLT AMPERE
KVAR	- KILOVAR
KW	- KILOWATT
KWH	- KILOWATT HOUR
mA	- MILLIAMPERE
Ma	- AUXILIARY STARTER CONTACT, N.O.

Mb	- AUXILIARY STARTER CONTACT, N.C.
MCC	- MOTOR CONTROL CENTER
MCM	- THOUSAND CIRCULAR MIL
MOV	- MOTOR OPERATED VALVE
MS	- MANUAL MOTOR STARTER
MSH	- MOTOR SPACE HEATER
mV	- MILLIVOLT
N	- NEUTRAL
NC	- NORMALLY CLOSED
NEC	- NATIONAL ELECTRICAL CODE
NO	- NORMALLY OPEN
OCB	- OIL CIRCUIT BREAKER
OL	- OVERLOAD
	- "PART OF"
PF	- POWER FACTOR
PLC	- PROGRAMMABLE LOGIC CONTROLLER
PT	- POTENTIAL TRANSFORMER
SH	- SPACE HEATER, SWITCHED HOT
	- SINGLE MODE (FOR FIBER OPTICS)
SP	- SINGLE POLE
	- SINGLE POLE DOUBLE THROW
SPST	- SINGLE POLE SINGLE THROW
ST	- SHUNT TRIP, ST FIBER CONNECTORS
SOL	- SOLENOID
	- SWITCH GEAR
Т	- THERMOSTAT, TIMER, OR TOTALIZER
TB	- TERMINAL BLOCK
TC	- THERMOCOUPLE
TD	- TIME DELAY RELAY
	- PLAN ELEVATION AT TOP OF CEMENT
TOG	- TOP OF FINISHED GRADE
TSP	- TWISTED, SHIELDED PAIR
UV	- UNDER VOLTAGE
UPS	- UNINTERRUPTABLE POWER SUPPLY
V	- VOLTS
VA	- VOLT AMPERE
VFD	- VARIABLE FREQUENCY DRIVE
VLS	- VALVE LIMIT SWITCH
VM	- VOLT METER
W	- WHITE OR WATTS
WH	- WATT HOUR METER
WP	- WEATHER PROOF
	- TRANSFORMER
2S1W	- TWO SPEED, SINGLE WINDING

	CROSS REFERENCII	NG LEGEND
TYPE	SYNTAX	EXAMPLE
TO SCHEMATICS	(XXYY), XX IS THE SHEET NUMBER WITHIN DRAWING NUMBER, YY IS THE RUNG NUMBER	(3249), SHEET 32 RUNG 49 WITHIN RESPECTIVE SHEET (10210), SHEET 102 RUNG 10 WITHIN RESPECTIVE SHEET
TO COMPONENT LAYOUTS	[XXYY], XX IS THE SHEET NUMBER OF THE COMPONENT LAYOUT, YY IS THE GRID LOCATION ON THE COMPONENT LAYOUT DRAWING	[1A3], SHEET 1 WITHIN THE GRID SQUARE A3 [10K5], SHEET 10 WITHIN THE GRID SQUARE K5
TO OTHER DRAWINGS	Z-Z-ZZZZ (XXYY), Z-Z-ZZZZ IS THE DRAWING NUMBER, XX IS THE SHEET NUMBER, YY IS THE RUNG NUMBER	120VAC NEUTRAL

NOTE: SHEET NUMBER XX CAN BE UP TO 4 CHARACTERS LONG.

AWG	COLOR	DESCRIPTION
#16	RED	120VAC HOT
#16	WHITE	120VAC NEUTRAL
#16	GREEN	GROUND
#16	YELLOW	FOREIGN VOLTAGE

NOTE: ALL 120VAC WRING SHALL BE #16 AWG TYPE MTW UNLESS OTHERWISE NOTED.

PANEL DC WIRING							
AWG	COLOR	DESCRIPTION					
#18	WHITE	TSP (+)					
#18	BLACK	TSP (-)					
#18	BLUE	+24VDC					
#18	WHITE/BLUE	24VDC COMMON					
#18	PURPLE	+12VDC					
#18	WHITE/PURPLE	12VDC COMMON					

NOTE: ALL DC WIRING SHALL BE #18 AWG TYPE MTW UNLESS OTHERWISE NOTED.

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DWG. NO	REFERENCE DRAWINGS		DESCRIPTION OF REVISION	DATE	BY	APP BY			ENGR:	JLAVLSI	12/05/13
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		$\sqrt{2}$					SCALE	AS SHOWN	SAFETY APP B	Υ:	



IENDERS	ON O	PERA	TIO	٧S
TAILINGS	S & WA	TER SIT	TES	
EXTRAC	TION V	VELLFIE	LD	
LEG	SEND S	HEET		
4-7-9020	SHT 3	OF	REV	$\overline{\Lambda}$

GENERAL BILL OF MATERIALS

PHASE II (MLEX 2 & MLEX3)

ITEM	QTY.	MANUFACTURER	PART NUMBER	DESCRIPTION	PROVIDED PARTS *
1	2		-	CONTROL PANEL (MLEX2 & MLEX3)	/
2	2	ROSEMOUNT	8705TSA015C1W0NAR05L1V1	8705 MAGNETIC FLOWMETER FLOWTUBE, PTFE, 316L SS, 2 MEASURE ELECTRODES, 1.5", SLIP ON RAISED FACE CARBON STEEL, ASME CLASS 150, SEALED WELDED HOUSING, NO SAFETY APPROVAL, POTTED JUNCTION BOX WITH 50" OF COMBO CABLE, 316L, SS LINING, COAL TAR PAINT	
3	2	ROSEMOUNT	8712ESR1A1NAM4	8712E MAGNETIC FLOWMETER TRANSMITTER, REVISION 3 ELECTRONICS, REMOTE MOUNT, AC POWER SUPPLY (90-250VAC), 4-20MA DIGITAL HART, 1/2-14 NPT CONDUIT ENTRIES, NO SAFETY APPROVAL, LOCAL OPERATOR INTERFACE	~
4	2	CAMPBELL SCIENTIFIC	28790-544	MODEL C\$451-L125-HA-29-\$N, PRESSURE TRANSDUCER \$DI-12/RS-232, \$S, 125' CABLE, HIGHER 0 05% ACCURACY, 0-29PSIG, STANDARD NOSE CONE	/
5	2	CAMPBELL SCIENTIFIC	25431	MODEL CS451-L125-HA-29-SN, SPLIT MESH CABLE GRIP, 0 18-0.25	/
6	2	CAMPBELL SCIENTIFIC	16130-27	MODEL CR1000-XT-SW-CC, MEASURE & CONTROL DATALOGGER, -55 TO +85C, STANDARD 3 YR WARRANTY, CALIBRATION CERT	/
7	2	CAMPBELL SCIENTIFIC	20598	CURS100, 100 OHM CURRENT SHUNT TERMINAL INPUT MODULE	/
8	2	CAMPBELL SCIENTIFIC	30576-2	MODEL RF401A-XT, 900MHZ SPREAD SPECTRUM RADIO, -40 TO +85C	/
9	2	CAMPBELL SCIENTIFIC	14291	MODEL RF401A-XT, FIELD POWER CABLE 12VDC PLUG TO PIGTAIL, 2	/
10	2	CAMPBELL SCIENTIFIC	14201	MODEL RF401A-XT, 900MHZ 9DBD YAGI ANTENA WITH TYPE N FEMALE & MOUNTING HARDWARE	/
11	2	CAMPBELL SCIENTIFIC	16112-8	MODEL COAXNTN-L25, ANTENNA CABLE RG8 WITH 2 TYPE N MALE CONNECTORS, 25' PER ANTENNA CABLE	/
12	2	CAMPBELL SCIENTIFIC	14462	MODEL COAXNTN-L25, SURGE SUPPRESSOR KIT FOR 900 OR 922MHZ RPSMA	/
13	2	CAMPBELL SCIENTIFIC	21212	MODEL COAXNTN-L25, BLACK COLD SHRINK TAPE, 10' LONG ROLL	/
14	2	CAMPBELL SCIENTIFIC	17252-16	MODEL PS100-SW, 12V POWER SUPPLY WITH CHARGING REGULATOR AND 7AH SEALED RECHARGEABLE BATTERY	/
15	2	CAMPBELL SCIENTIFIC	29796-1	MODEL 29798-US, POWER SUPPLY, 24VDC, 1 67A OUTPUT, 100-240VAC, 1A INPUT, 5' CABLE	/
16	2	CAMPBELL SCIENTIFIC	30708-67	MODEL ENC14/16-DC-NM, WEATHER-RESISTANT 14" X 16" ENCLOSURE, 2 CONDUITS FOR CABLES, NO ENCLOSURE MOUNTING	/
17	2	CAMPBELL SCIENTIFIC	6714	MODEL ENC14/16-DC-NM, DESICCANT 4 UNIT BAG (QTY 20)	/
18	2	CAMPBELL SCIENTIFIC	19332	MODEL ENC14/16-DC-NM, BULKHEAD ANTENNA CABLE INSTALLED IN ENCLOSURE TYPE N-TO-N, 17"	/

^{*} PARTS TO BE PROVIDED TO INSTALLER.

GENERAL NOTES:

PANEL SHALL BE FABRICATED PER UL508A

DWG. NO.	REFERENCE DRAWINGS		DESCRIPTION OF REVISION	DATE	BY	APP BY		T	ENGR:	CJM/GEO	10/03/14	Γ.
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	HENDERSON OPERATIONS
1	Climax Molybdenum
+	A Freeport-McMoRan Company
-	EMPIRE / PARSHALL, COLORADO 303-569-3221

	HENDERSON MILL	
	TAILINGS & WATER SITE	ES
	EXTRACTION WELLFIEL	D
	GENERAL BILL OF MATER	RIAL
_	5-7-9020 SHT 4 OF F	DEV/

	PANEL LEGEND		
PANEL SYMBOL	PANEL DESCRIPTION	PANEL LAYOUT	COMPONENT LAYOUT
11	CP-MLEX1 - PUMP CONTROL PANEL		
12	CP-ENV-MLEX1 - ENVIRONMENTAL CONTROL PANEL		
13	VAULT MLEX1		
14	WELL MLEX1		
21	CP-MLEX2 - PUMP CONTROL PANEL		
22	CP-ENV-MLEX2 - ENVIRONMENTAL CONTROL PANEL		
23	VAULT MLEX2		
24	WELL MLEX2		
31	CP-MLEX3 - PUMP CONTROL PANEL		
32	CP-ENV-MLEX3 - ENVIRONMENTAL CONTROL PANEL		
33	VAULT MLEX3		
34	WELL MLEX 3		
41	CP-MLEX4 - PUMP CONTROL PANEL		
42	CP-ENV-MLEX4 - ENVIRONMENTAL CONTROL PANEL		
43	VAULT MLEX4		
44	WELL MLEX4		
51	CP-MLEX5 - PUMP CONTROL PANEL		
52	CP-ENV-MLEX5 - ENVIRONMENTAL CONTROL PANEL		
53	VAULT MLEX5		
54	WELL MLEX5		
61	CP-MLEX6 - PUMP CONTROL PANEL		
62	CP-ENV-MLEX6 - ENVIRONMENTAL CONTROL PANEL		
63	VAULT MLEX6		
64	WELL MLEX6		
Pod	POWER POLE 206		
206A	DROP POLE 206A		

NOTES:

ALL BURIED CONDUIT TO BE TYPE SCHED 80. ELBOWS AND STUB UPS TO BE PVC COATED.

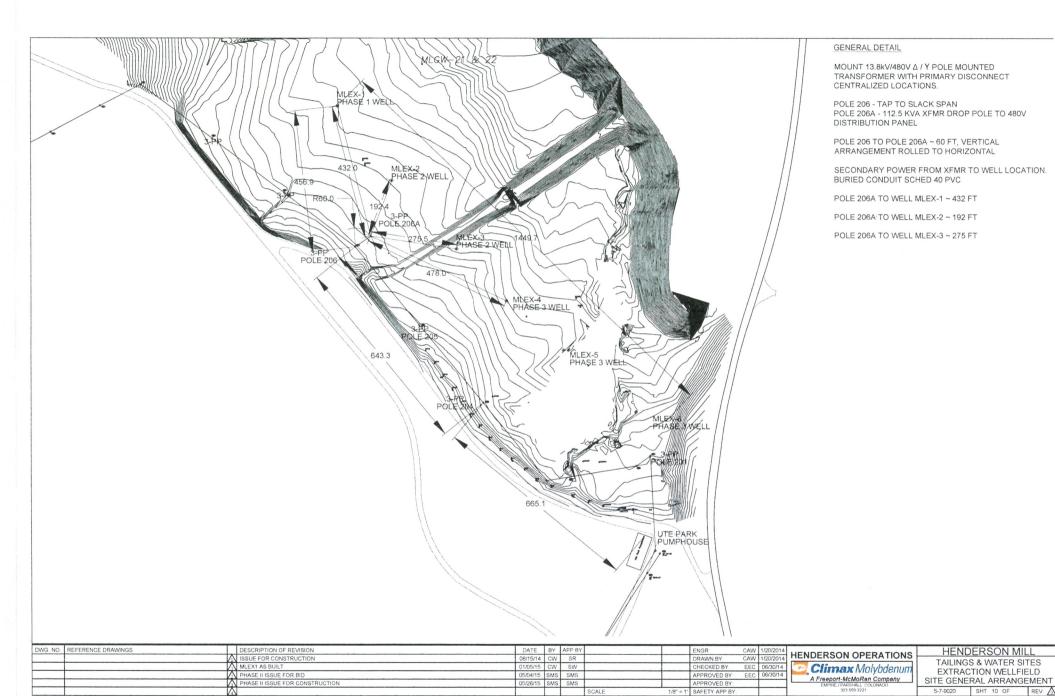
2 MINIMUM BURIAL DEPTH 30"

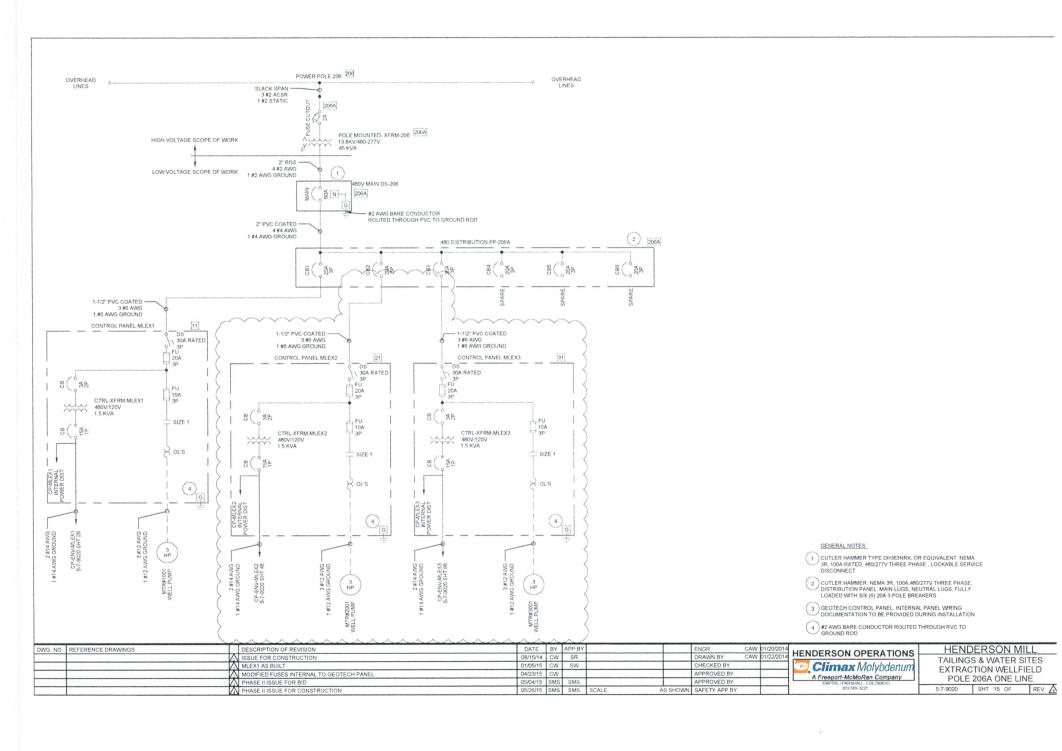
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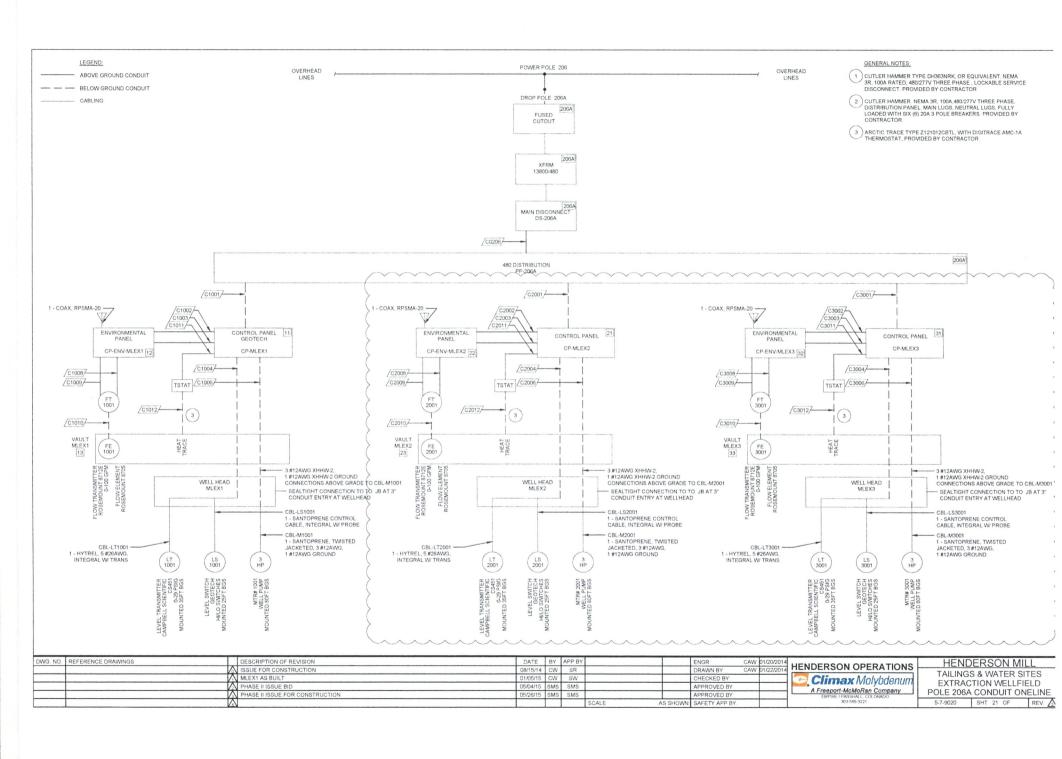
HENDERSON OPERATIONS	F
Climax Molybdenum	l
A Freeport-McMoRan Company	ı
EMPIRE / PARSHALL, COLORADO 303-509-3221	H

HENDERSON MILL
TAILINGS & WATER SITES
EXTRACTION WELLFIELD
PANEL LEGEND

5-7-9020 SHT 7 OF REV.







CONDUIT	SIZE	TYPE	CONDUIT SCHEDULE	PROVIDED
C0206	13.	PVC	3 #4 AWG XHHW-2 (BRN, ORG, YEL), 1 #4AWG GROUND XHHW-2 (GRN)	COMPANY
C1001	11/2	PVC	3 #6 AWG XHHW-2 (BRN, ORG, YEL), 1 #6AWG GROUND XHHW-2 (GRN)	
		COATED	2 #14 AWG XHHW-2 (RED, WHT), 1 #14 AWG GROUND XHHW-2 (GRN)	
C1002	1*	GRC	1 CAMPBELL SCIENTIFIC POWER CABLE 1 - SANTOPRENE CONTROL CABLE, INTEGRAL W/ LEVEL PROBE	×
C1003	1*	GRC	1 - 2 PAIR, TWISTED SHIELDED, 16 AWG	
C1004	1*	GRC	1 - SANTOPRENE CONTROL CABLE, INTEGRAL W/ LEVEL PROBE 1 - HYTREL, 5 #26AWG, INTEGRAL W/ TRANSMITTER	X
C1005				
C1006	1*	PVC COATED	3#10 AWG XHHW2 (BRN, ORG, YEL), 1 #10 AWG GROUND XHHW2 (GRN) SPLICE IN WELLHEAD JUNCTION BOX TO 1. SUBMERSIBLE PUMP CABLE, 600V, 4C#12AWG TWISTED JACKETED PAIGE ELECTRIC 72685P4-12 OR EQUIVALENT	x
C1007				
C1008	Х.	GRC	2 #14 AWG XHHW-2 (RED, WHT), 1 #14 AWG GROUND XHHW-2 (GRN)	
C1009	N.	GRC	1 - 2 PAIR, TWISTED SHIELDED, 16 AWG	
C1010	1*	PVC COATED	1 - EMERSON COMBO CABLE/CABLE GLAND (50FT)	×
C1011	1*	GRC	2 #12 AWG XHHW-2 (RED, WHT), 1 #12 AWG GROUND XHHW-2 (GRN)	
C1012	1*	PVC COATED	2 #12 AWG XHHW-2 (RED, WHT), 1 #12 AWG GROUND XHHW-2 (GRN)	
C2001	1 1 2 "	PVC COATED	3 #6 AWG XHHW-2 (BRN, ORG, YEL), 1 #6AWG GROUND XHHW-2 (GRN)	
C2002	1*	GRC	2 #14 AWG XHHW-2 (RED, WHT), 1 #14 AWG GROUND XHHW-2 (GRN) 1 CAMPBELL SCIENTIFIC POWER CABLE	
C2003	1*	GRC	1 - SANTOPRENE CONTROL CABLE, INTEGRAL W/ LEVEL PROBE 1 - 2 PAIR, TWISTED SHIELDED, 16 AWG	×
C2004	1*	GRC	1 - SANTOPRENE CONTROL CABLE, INTEGRAL W: LEVEL PROBE 1 - HYTREL, 5#26AWG, INTEGRAL W: TRANSMITTER	×
C2005				
C2006	1*	PVC COATED	3 #10 AWG XHHW-2 (BRN, ORG, YEL), 1 #10 AWG GROUND XHHW-2 (GRN) SPLICE IN WELLHEAD JUNCTION BOX TO 1 - SUBMERSIBLE PUMP CABLE, 600V, 4C/#12AWG TWISTED JACKETED PAIGE ELECTRIC 7266SP412 OR EQUIVALENT	×
C2007				
C2008	N.	GRC	2 #14 AWG XHHW-2 (RED, WHT), 1 #14 AWG GROUND XHHW-2 (GRN)	
C2009	Х.	GRC	1 - 2 PAIR, TWISTED SHIELDED, 16 AWG	
C2010	1*	PVC COATED	1 - EMERSON COMBO CABLE/CABLE GLAND (50FT)	Х
C2011	1*	GRC	2 #12 AWG XHHW-2 (RED, WHT), 1 #12 AWG GROUND XHHW-2 (GRN)	
C2012	1*	PVC COATED	2 #12 AWG XHHW-2 (RED, WHT), 1 #12 AWG GROUND XHHW-2 (GRN)	
C3001	1 1 2 **	PVC COATED	3 #6 AWG XHHW-2 (BRN, ORG, YEL), 1 #6AWG GROUND XHHW-2 (GRN)	
C3002	1*	GRC	2 #14 AWG XHHW-2 (RED, WHT), 1 #14 AWG GROUND XHHW-2 (GRN) 1 CAMPBELL SCIENTIFIC POWER CABLE	
C3003	1*	GRC	1 - SANTOPRENE CONTROL CABLE, INTEGRAL W/ LEVEL PROBE 1 - 2 PAIR, TWISTED SHIELDED, 16 AWG	Х
C3004	1*	GRC	1 - SANTOPRENE CONTROL CABLE, INTEGRAL W/ LEVEL PROBE 1 - HYTREL, 5 #26AWG, INTEGRAL W/ TRANSMITTER	X
C3005				
C3006	1*	PVC COATED	3 #10 AWG XHHW-2 (BRN, ORG, YEL), 1 #10 AWG GROUND XHHW-2 (GRN) SPLICE IN WELLHEAD JUNCTION BOX TO 1 - SUBMERSIBLE PUMP CABLE, 600V, 4C#12AWG TWISTED JACKETED	
			PAIGE ELECTRIC 7266SP4-12 OR EQUIVALENT	X

			CONDUIT SCHEDULE	
CONDUIT	SIZE	TYPE	FILL	PROVIDED BY COMPANY
C3007				
C3008	N.	GRC	2 #14 AWG XHHW-2 (RED, WHT), 1 #14 AWG GROUND XHHW-2 (GRN)	
C3009	Х.	GRC	1 - 2 PAIR, TWISTED SHIELDED, 16 AWG	
C3010	1*	PVC COATED	1 - EMERSON COMBO CABLE/CABLE GLAND (50FT)	×
C3011	1*	GRC	2 #12 AWG XHHW-2 (RED, WHT), 1 #12 AWG GROUND XHHW-2 (GRN)	
C3012	1*	PVC COATED	2 #12 AWG XHHW-2 (RED, WHT), 1 #12 AWG GROUND XHHW-2 (GRN)	

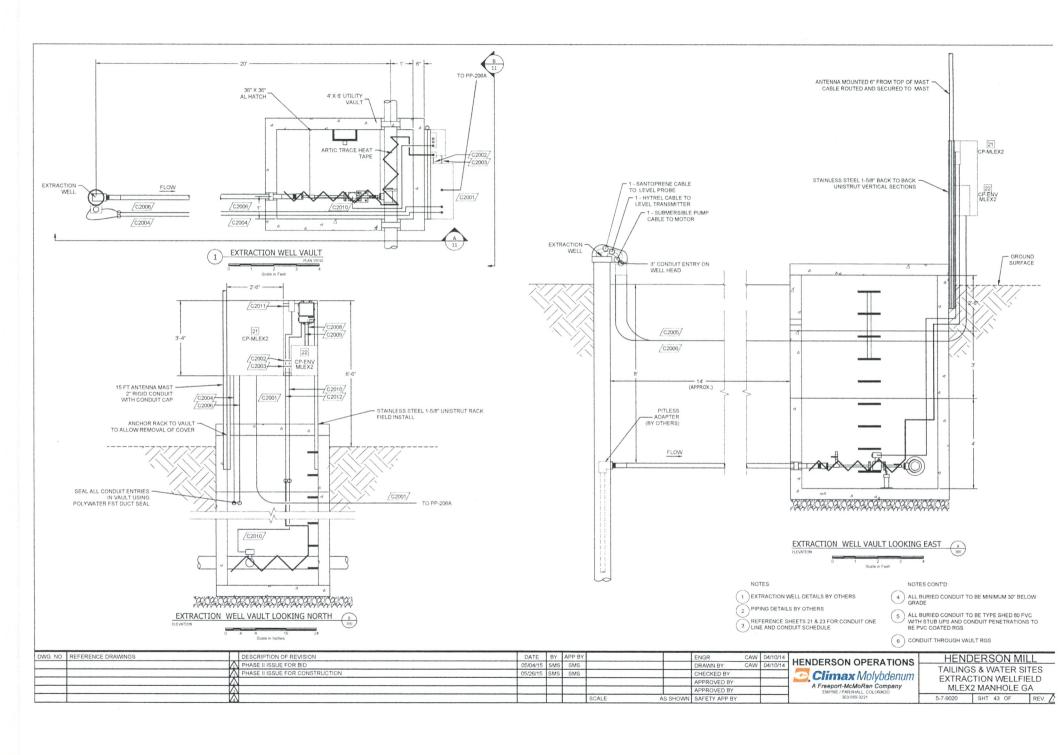
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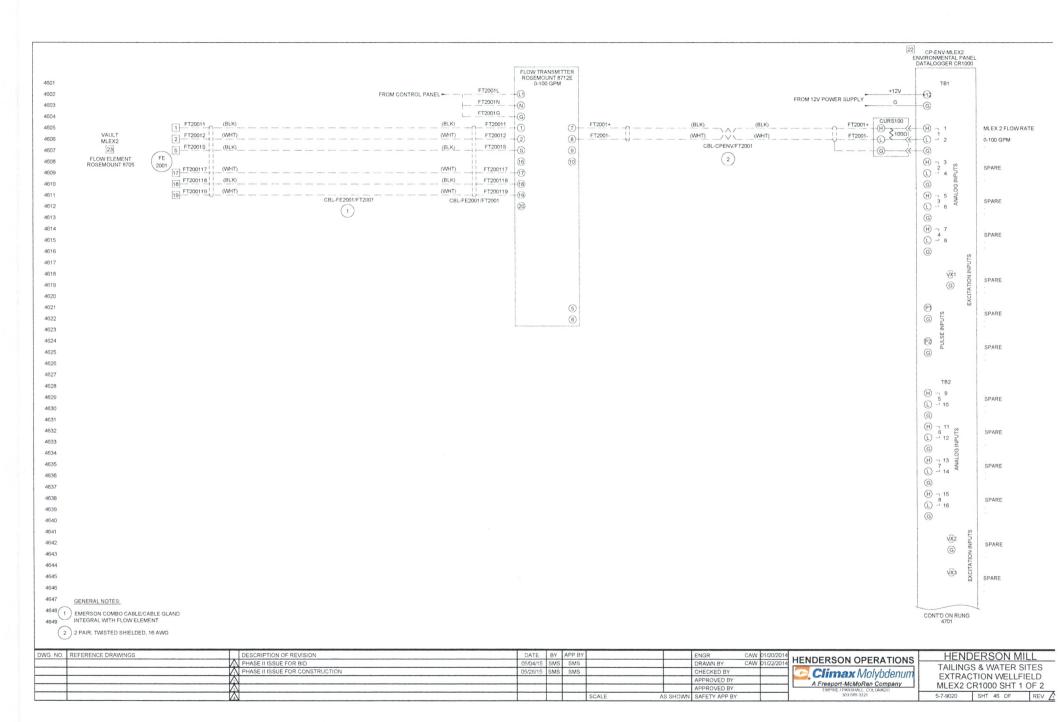
1 SPLICE SUBMERSIBLE PUMP CABLE. 800V, 4C#12AWG
TWISTED JACKETED PAIGE ELECTRIC 7268SP4-12 OR
EQUIVALENT, TO MOTOR LEADS USINOS SPLICE KIT,
CONNECTIONS BY PUMP INSTALLATION CONTRACTOR

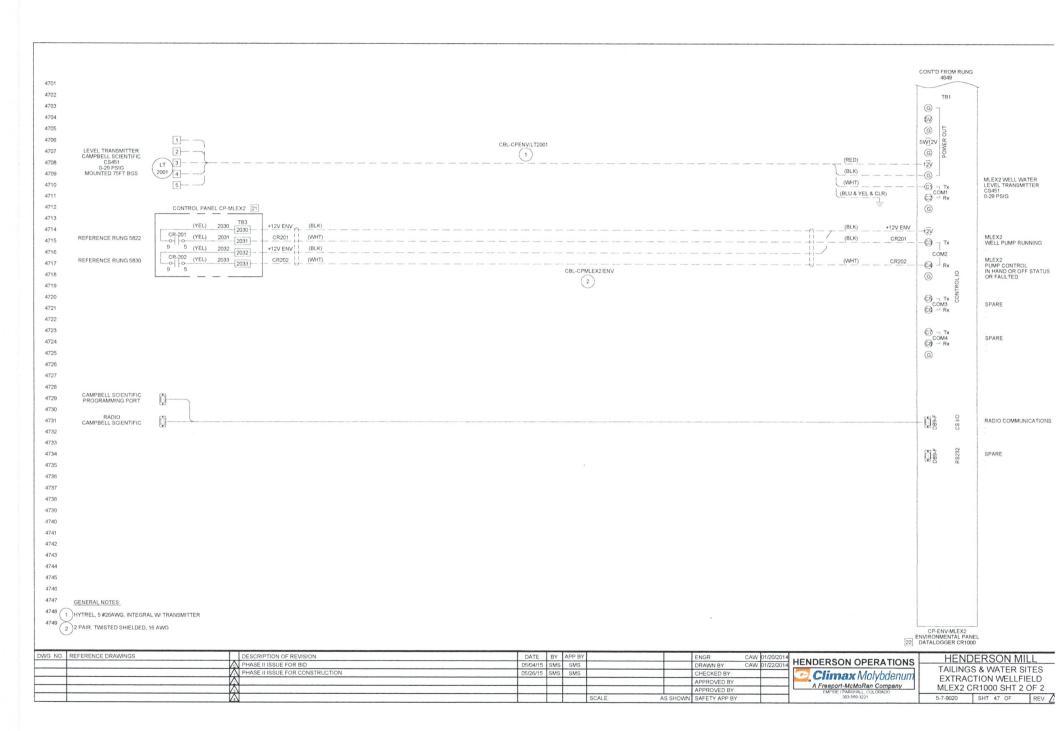
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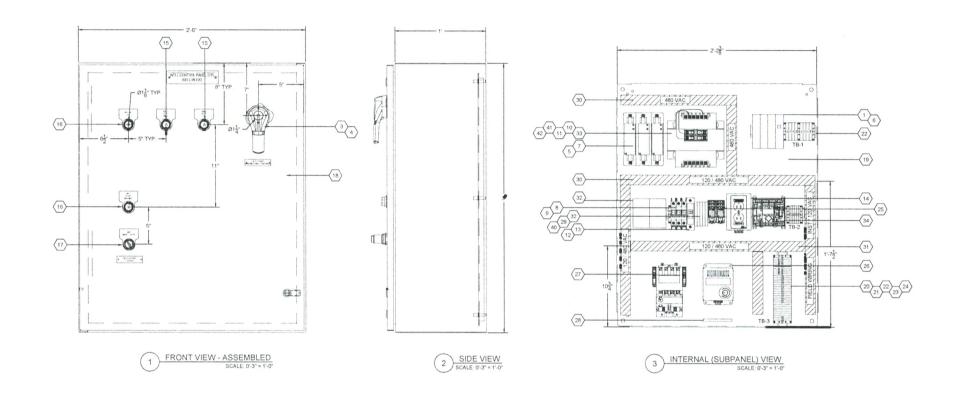
HENDERSON OPERATIONS
Climax Molybdenum
A Freeport-McMoRan Company
EMPIRE / PARSHALL, COLORADO 303-569-3221

	HENDERSON MILL								
ı	TAILINGS & WATER SITES								
١	EXTRACTION WELLFIELD								
	POLE 206A CONDUIT SCHEDULE								
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GENERAL NOTES:

1 PANEL SHALL BE FABRICATED PER UL508A

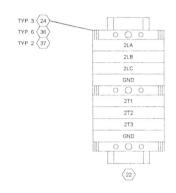
2 SEE SHEET 52 FOR BILL OF MATERIAL AND NAMEPLATE SCHEDULE

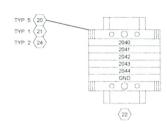
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	GEOTECH WELL PUMP MLEX1 CONTROL SYSTEM	PHASE II ISSUE FOR BID	05/04/15	SMS	SMS			DRAWN BY: 0	CJM/GEO	10/03/14	HENDERSON OPERATIONS		S & WATER SI	
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	V	A '	1					APPROVED B'	Y:		EMPIRE / PARSHALL, COLORADO	MLEX2	PANEL LAYOU	JUT
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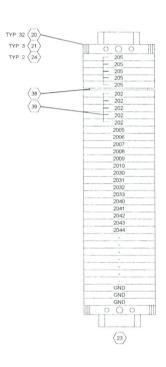
TERMINAL BLOCK LAYOUT (TB-1)

TERMINAL BLOCK LAYOUT (TB-2)

TERMINAL BLOCK LAYOUT (TB-3)







NOTES

1 PANEL SHALL BE FABRICATED PER UL508A

2 REFERENCE SHEET 52 FOR BILL OF MATERIALS AND NAMEPLATE SCHEDULE

1 POWER TERMINAL BLOCK LAYOUTS
SCALE: 1'-0" = 1'-0"

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HENDERS	ON OPERA	NOITA						
TAILINGS	S & WATER S	ITES						
EXTRAC	TION WELLF	ELD						
MLEX2 TERMINAL LAYOUT								
5-7-9020	SHT 51 OF	REV.						

ITEM	QTY.	MANUFACTURER	PART NUMBER	DESCRIPTION	PROVIDED PARTS
1	1	EATON	R9J3030FJ	MECHANICAL DISCONNECT, 30A, FUSED	
2	-	-		-	
3	1	EATON	PHB2N4XS	DOOR OPERATOR, PISTOL HANDLE, BLUE, NEMA4X, LONG 6" LENGTH HANDLE	
4	1	EATON	SF320PH10X10	SHAFT, TYPE G, LENGTH: 320MM/12 6 IN X 10MM THICKNESS	
5	1	BUSSMAN	R60030-3CR	FUSE HOLDER FOR R-FUSES - 30A RATED	
6	3	BUSSMAN	ECSR20	FUSE, 20A, CLASS J, 20A, 600V CURRENT LIMITING	
7	3	BUSSMAN	ECSR10	FUSE, 10A, CLASS R - RKF-10	
8	1	EATON	WMZT1C10	CIRCUIT BREAKER, RAIL MOUNT, 10A, 1 POLE, UL489	
9	2	EATON	VVMZT1C03	CIRCUIT BREAKER, RAIL MOUNT, 3A, 1 POLE, UL489	
10	2	BUSSMAN	LP-CC-7	FUSE 7A, CLASS CC, TIME DELAY, NON-INDICATING, DUAL ELEMENT	
11	1	BUSSMAN	FNM-30	FUSE 30A, TIME DELAY, 13/32" X 1-1/2"	
12	1	EATON	QCGFEP1015	CIRCUIT BREAKER, RAIL MOUNT, 15A, 1 POLE, GFCI	
13	1	EATON	QCDN	DIN-RAIL MOUNTING BRACKET FOR QCGF BREAKER	
14	1	PHOENIX CONTACT	5600461	RECEPTACLE, UL, RAIL MOUNTED, 15A	
15	2	EATON	10250T197LRP2A	AMBER (YELLOW) INDICATOR LIGHT; 120VAC LED, IED, 22MM	
16	2	EATON	10250T197LAP2A	RED INDICATOR LIGHT, 120 VAC LED, IEC, 22MM	
17	1	EATON	10250T22KB	THREE-POSITION SELECTOR SWITCH, 2 NO/1NC CONTACT, IEC, 22MM	
18	1	HOFFMAN	CSD363012	ENCLOSURE, NEMA 4, 36 X 30 X 12"	
19	1	HOFFMAN	CP3630	BACK PLATE FOR ABOVE 36X30 ENCLOSURE	
20	32	ALLEN-BRADLEY	1492-J4	FEED THROUGH TERMINAL BLOCK, GREY, SCREW CONNECTION, #12-26AWG	
21	4	ALLEN-BRADLEY	1492-JG4	FEED THROUGH GROUND TERMINAL BLOCK, #22-10AWG	
22	1	ALLEN-BRADLEY	1492-DR1	SYMMECTRICAL 3.5 X 7.5MM DIN RAIL	
23	1	ALLEN-BRADLEY	1492-DR6	SYMMECTRICAL 3.5 X 7.5MM DIN RAIL, ALUMINUM HI RISE	
24	7	ALLEN-BRADLEY	1492-EAJ35	END ANCHOR, 35MM	
25	2	FINDER	58.32.8.120.0060	CONTROL RELAY, DPDT, 120VAC COIL, PLUGIN, 12A CONTACT RATING, WITH BUILT IN VARISTOR	
26	1	HOFFMAN	DAH2001A	PANEL HEATER, FORCED AIR, THERMOSTATICALLY CONTROLLED, 200W, 120VAC	
27	1	EATON	AN19DN0A5E020	MOTOR STARTER, NEMA SIZE 1 120VAC COIL	1
28	1	SQUARE D	PK9GTA	SQUARE D LIGHTING PANELBOARD GROUND BAR	1
29	2	BUSSMAN	BK/GMA-3A	FUSE 3A, CARTRIDGE, 5X20MM, FAST ACTING	
30	AS REQ'D	PANDUIT	F1X3LG6	WRING DUCT, 1" X 3", NARROW SLOT, GRAY WITH COVER C1LG6	
31	AS REQ'D	PANDUIT	F2X3LG6	WIRING DUCT, 2" X 3", NARROW SLOT, GRAY WITH COVER C2LG6	
32	2	GEMS	16MA1A0	CONDUCTIVITY LEVEL CONTROLLER, SOLID STATE, PLUG IN, WITH 11 PIN BASE	
33	1	EATON	C1500E2AFB	TRANSFORMER, CONTROL POWER, 1.5KVA, 480-120VAC, FUSEABLE	
34	1	ALLEN-BRADLEY	1763-L16AWA	PLC PROCESSOR, (10) 120 VAC INPUTS/6 RELAY OUTPUTS, ETHERNET	-
35	4	ALLEN-BRADLEY	1492-H5	CONNECTIVITY SINGLE CIRCUIT FUSIBLE TERMINAL BLOCK WITH LED INDICATION	
36	6	ALLEN-BRADLEY	1492-J16	FEED THROUGH TERMINAL BLOCK, GREY, SCREW CONNECTION, #12-4AWG	-
37	2	ALLEN-BRADLEY	1492-JG10	FEED THROUGH GROUND TERMINAL BLOCK, #16-6AWG	-
38	1	ALLEN-BRADLEY	1492-EBJ16	PARTITION PLATE	+
39	1	ALLEN-BRADLEY	1492-CJJ6-10	SCREW CENTER JUMPER (10-POLE)	+
40	3	BUSSMAN	BK/GMA-2A	FUSE 2A, CARTRIDGE, 5X20MM, FAST ACTING	+
41	1	EATON	FSKFB	TRANSFORMER FINGER-SAFE PRIMARY FUSE BLOCK COVER	+
42	1	EATON	SECI	TRANSFORMER SECONDARY FUSE CLIP COVER FOR MODELS >500VA	+

MLEX2 CONTROL PANEL BILL OF MATERIALS/NAMEPLATE DETAILS

COLOR: WHITE W/ BLACK LETTERING SIZE: 1" TALL X 2" WIDE, ¾6" TALL LETTERS

POWER ON OFF HAND AUTO

WELL LEVEL LOW WELL LEVEL HIGH

WELL PUMP RUNNING

COLOR: WHITE W/ BLACK LETTERING SIZE: 1" TALL X 4" WIDE, Y₁₆" TALL LETTERS

MLEX2 PUMP MAIN DISCONNECT(20A FUSED)

> MLEX2 PUMP CONTROL

COLOR: WHITE W/ BLACK LETTERING SIZE. 1 5" TALL X 6" WIDE, ¾" TALL LETTERS

WELL CONTROL PANEL (CP)
WELL MLEX2

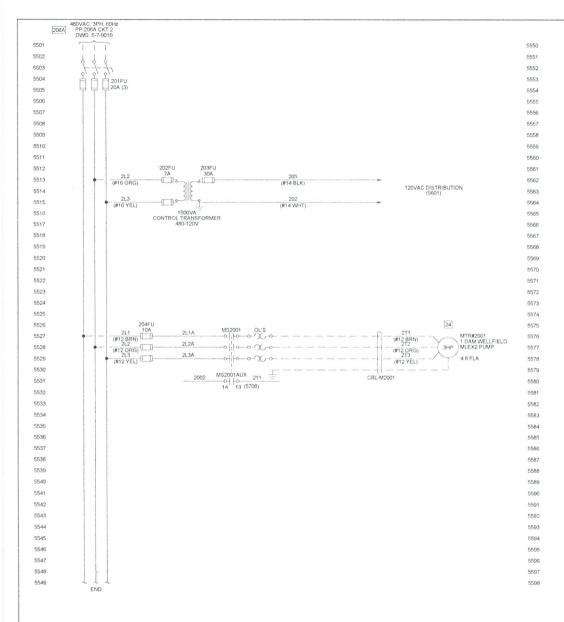
GENERAL NOTES:

1 PANEL SHALL BE FABRICATED PER UL508A

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١	A Freeport-McMoRan Company
ł	EMPIRE / PARSHALL, COLORADO 303 569-3221
	A Freeport-McMoRan Company EMPIRE / PARSHALL, COLORADO

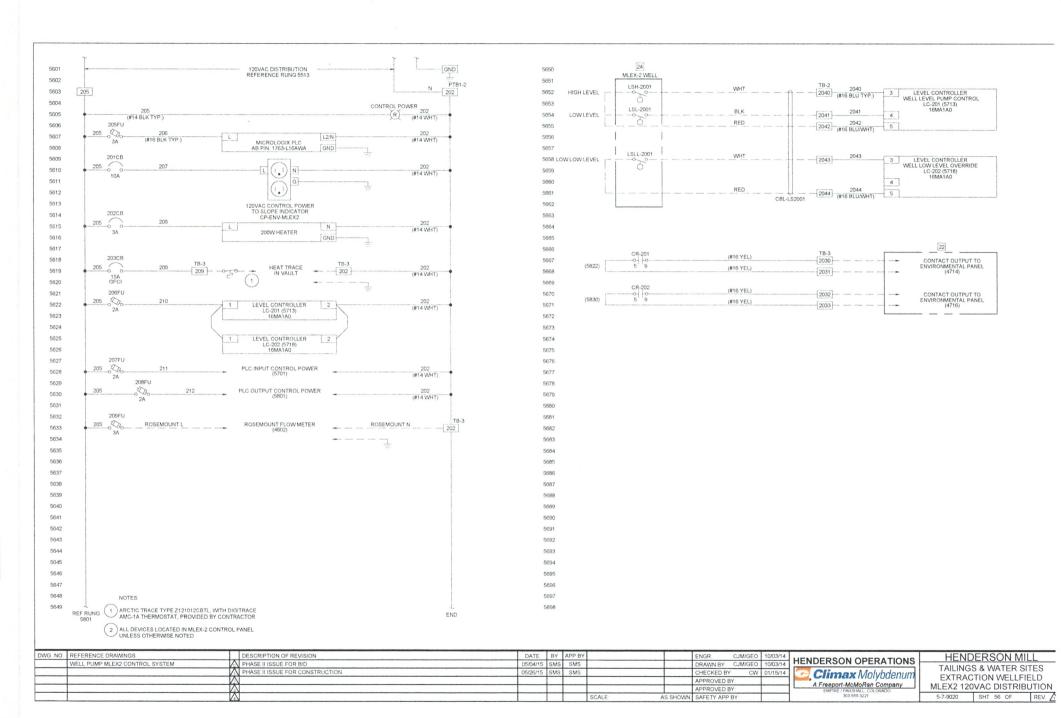
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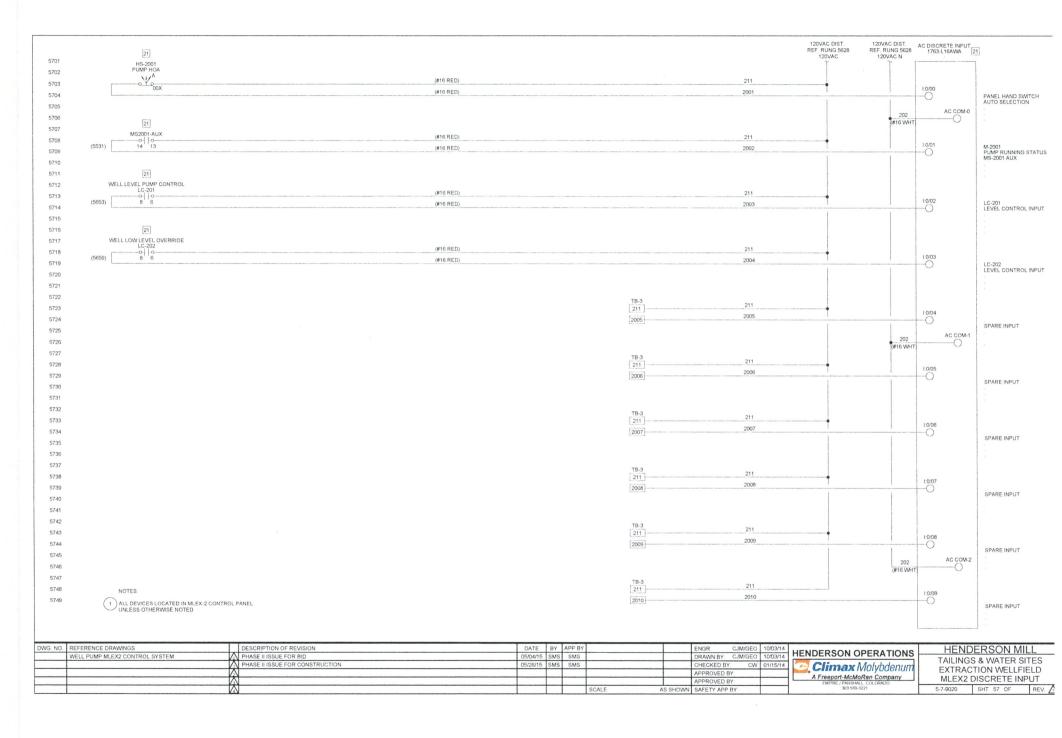


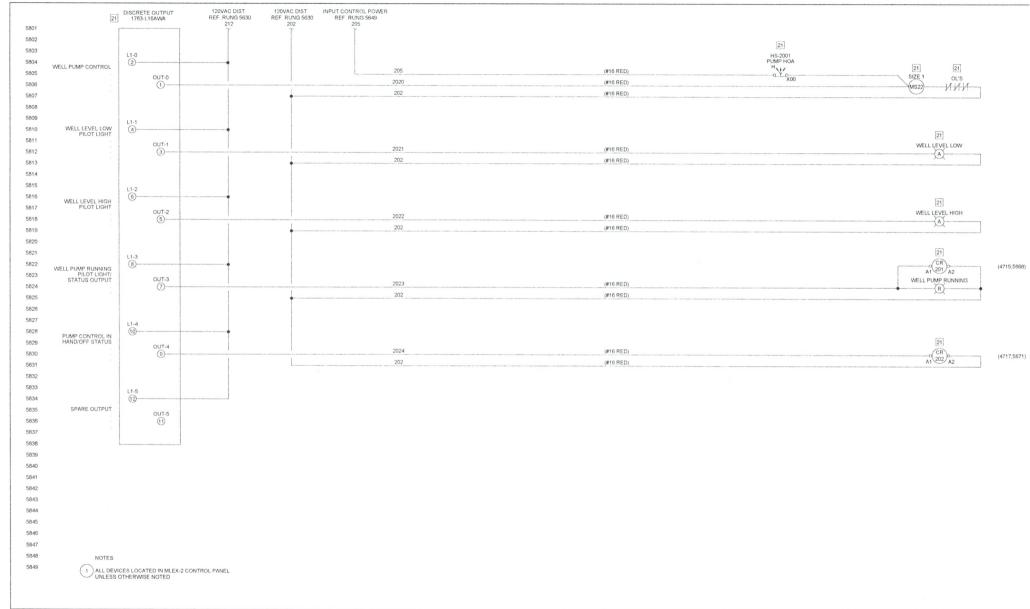
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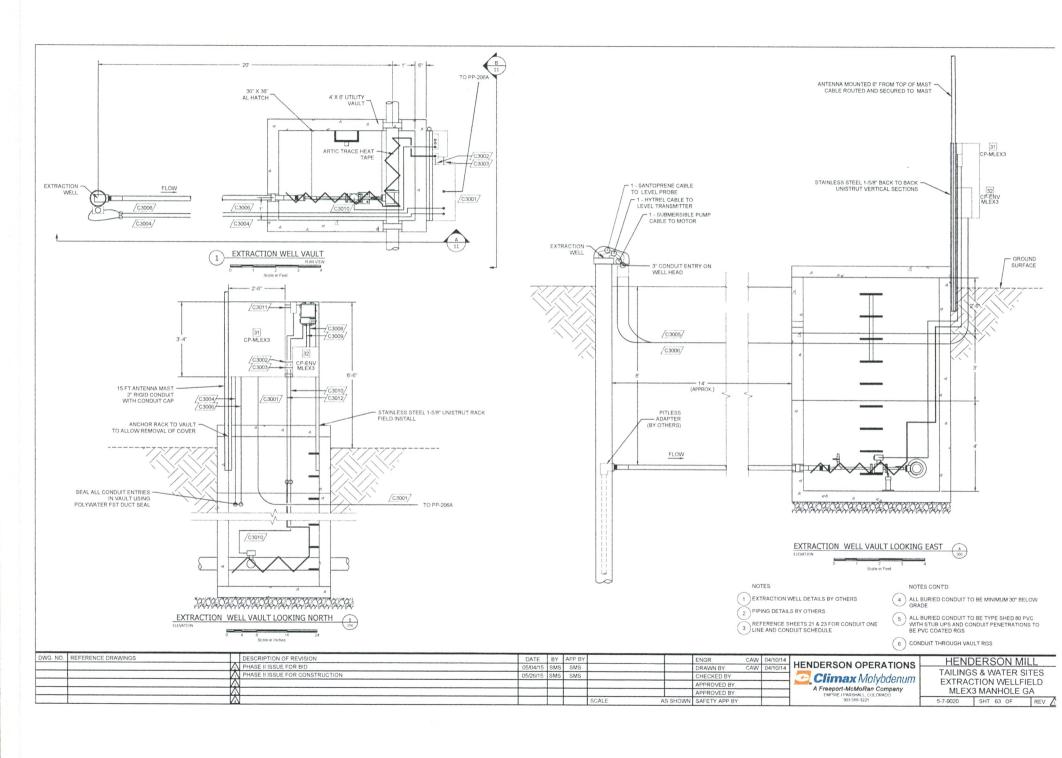
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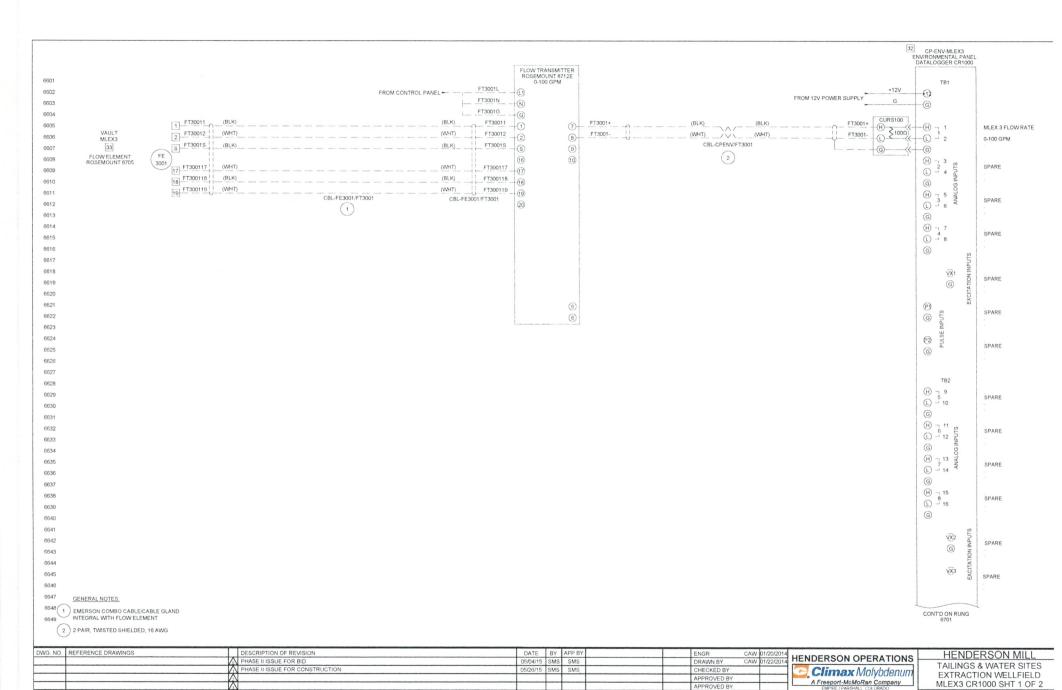






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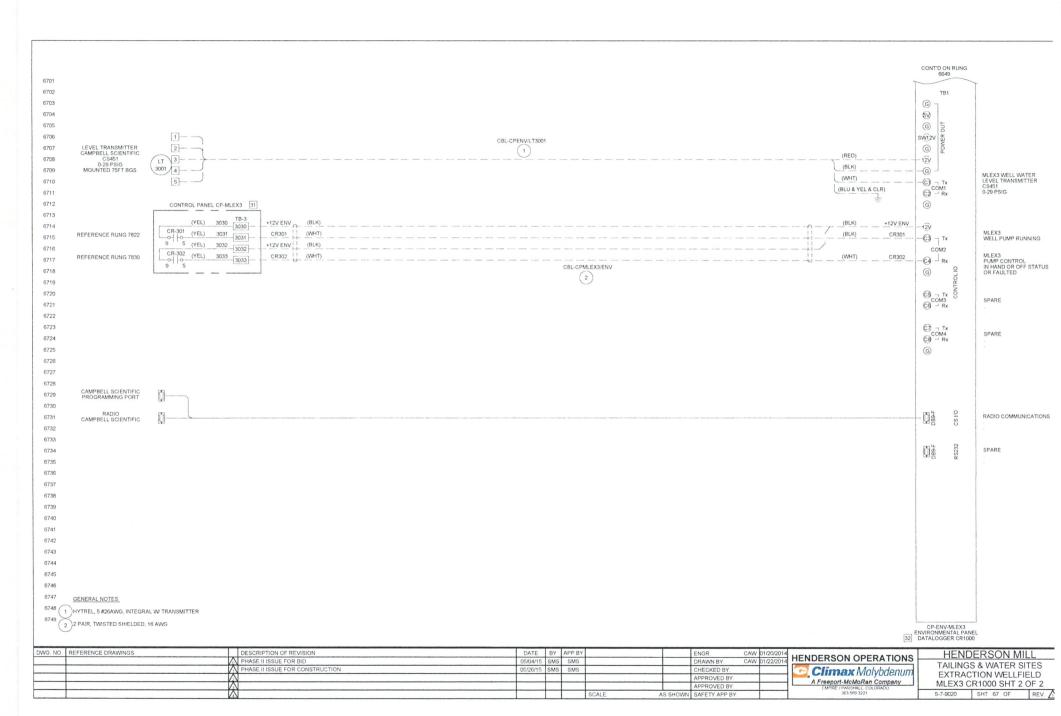


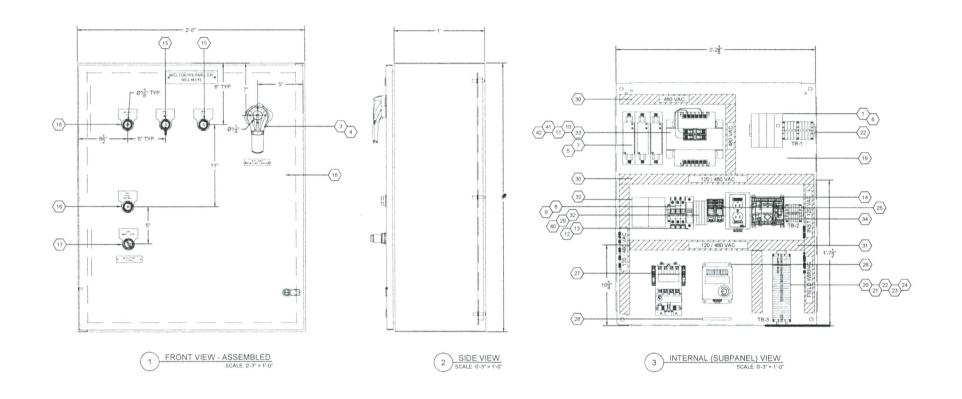


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GENERAL NOTES:

1 PANEL SHALL BE FABRICATED PER UL508A

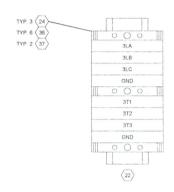
2 SEE SHEET 72 FOR BILL OF MATERIAL AND NAMEPLATE SCHEDULE

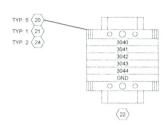
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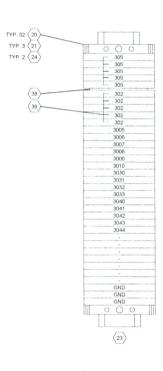
TERMINAL BLOCK LAYOUT (TB-1)

TERMINAL BLOCK LAYOUT (TB-2)

TERMINAL BLOCK LAYOUT (TB-3)







NOTE

1 PANEL SHALL BE FABRICATED PER UL508A

2 REFERENCE SHEET 72 FOR BILL OF MATERIALS AND NAMEPLATE SCHEDULE

1 POWER TERMINAL BLOCK LAYOUTS
SCALE: 1'-0" = 1'-0"

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١	HENDERS	ON OPERA	HONS							
١	TAILINGS & WATER SITES EXTRACTION WELLFIELD MLEX3 TERMINAL LAYOUT									
١										
	5-7-9020	SHT 71 OF	REV.							

PROVIDED ITEM QTY. MANUFACTURER PART NUMBER DESCRIPTION PARTS EATON MECHANICAL DISCONNECT, 30A, FUSED R9J3030FJ EATON PHB2N4XS DOOR OPERATOR, PISTOL HANDLE, BLUE, NEMA4X, LONG 6" LENGTH HANDLE FATON SF320PH10X10 SHAFT, TYPE G, LENGTH: 320MM/12.6 IN X 10MM THICKNESS BUSSMAN R60030-3CR FUSE HOLDER FOR R-FUSES - 30A RATED 3 BUSSMAN ECSR20 FUSE, 20A, CLASS J. 20A, 600V CURRENT LIMITING FUSE, 10A, CLASS R - RKF-10 BUSSMAN ECSR10 EATON CIRCUIT BREAKER, RAIL MOUNT, 10A, 1 POLE, UL489 WMZT1C10 EATON WMZT1C03 CIRCUIT BREAKER, RAIL MOUNT, 3A, 1 POLE, UL489 10 2 BUSSMAN LP-CC-7 FUSE 7A, CLASS CC, TIME DELAY, NON-INDICATING, DUAL ELEMENT 11 FUSE 30A TIME DELAY, 13/32" X 1-1/2" BUSSMAN FNM-30 12 FATON OCGEPP1015 CIRCUIT BREAKER RAIL MOUNT 15A 1 POLE GECL 13 EATON QCDN DIN-RAIL MOUNTING BRACKET FOR QCGF BREAKER 14 PHOENIX CONTACT RECEPTACLE, UL, RAIL MOUNTED, 15A 15 2 EATON 10250T197LRP2A AMBER (YELLOW) INDICATOR LIGHT; 120VAC LED, IED, 22MM 16 FATON 10250T197LAP2A RED INDICATOR LIGHT, 120 VAC LED, IEC, 22MM THREE-POSITION SELECTOR SWITCH: 2 NO/1NC CONTACT, IEC, 22MM 17 FATON 10250T22KB 18 HOFFMAN CSD363012 ENCLOSURE, NEMA 4, 36 X 30 X 12" CP3630 BACK PLATE FOR ABOVE 36X30 ENCLOSURE 20 32 ALLEN-BRADLEY 1492-J4 FEED THROUGH TERMINAL BLOCK, GREY, SCREW CONNECTION, #12-26AWG 21 ALLEN-BRADLEY 1492-JG4 FEED THROUGH GROUND TERMINAL BLOCK, #22-10AWG 22 ALLEN-BRADLEY 1492-DR1 SYMMECTRICAL 3.5 X 7.5MM DIN RAIL 23 ALLEN-BRADLEY 1492-DR6 SYMMECTRICAL 3.5 X.7.5MM DIN RAIL ALUMINUM HI RISE 24 ALLEN-BRADLEY END ANCHOR 35MM 1492-FA.135 CONTROL RELAY, DPDT, 120VAC COIL, PLUGIN, 12A CONTACT RATING, WITH 25 2 FINDER 58 32 8 120 0060 PANEL HEATER, FORCED AIR, THERMOSTATICALLY CONTROLLED, 200W. 26 HOFFMAN DAH2001A 27 FATON AN19DN0A5E020 MOTOR STARTER NEMA SIZE 1 120VAC COIL 28 SQUARE D PK9GTA SQUARE D LIGHTING PANELBOARD GROUND BAR 29 2 BUSSMAN BK/GMA-3A FUSE 3A, CARTRIDGE, 5X20MM, FAST ACTING 30 PANDUIT MRING DUCT, 1" X 3", NARROW SLOT, GRAY WITH COVER C1LG6 F1X3LG6 REQ'D WRING DUCT, 2" X 3", NARROW SLOT, GRAY WITH COVER C2LG6 PANDUIT F2X3LG6 32 2 GEMS 16MA1A0 CONDUCTIVITY LEVEL CONTROLLER, SOLID STATE, PLUG IN, WITH 11 PIN BASE 1 33 EATON C1500E2AFB TRANSFORMER, CONTROL POWER, 1 5KVA, 480-120VAC, FUSEABLE PLC PROCESSOR, (10) 120 VAC INPUTS/6 RELAY OUTPUTS, ETHERNET 34 ALLEN-BRADLEY 1763-L16AWA CONNECTIVITY 4 ALLEN-BRADLEY 1492-H5 SINGLE CIRCUIT FUSIBLE TERMINAL BLOCK WITH LED INDICATION ALLEN-BRADLEY 1492-J16 FEED THROUGH TERMINAL BLOCK, GREY, SCREW CONNECTION, #12-4AWG 37 2 ALLEN-BRADLEY 1492-JG10 FEED THROUGH GROUND TERMINAL BLOCK, #16-6AWG 38 ALLEN-BRADLEY 1492-FR H6 PARTITION PLATE 39 ALLEN-BRADLEY 1492-CJJ6-10 SCREW CENTER JUMPER (10-POLE) 40 BUSSMAN BK/GMA-2A FUSE 2A, CARTRIDGE, 5X20MM, FAST ACTING EATON FSKFB TRANSFORMER FINGER-SAFE PRIMARY FUSE BLOCK COVER 42 1 EATON SFCL TRANSFORMER SECONDARY FUSE CLIP COVER FOR MODELS >500VA

MLEX3 CONTROL PANEL BILL OF MATERIALS/NAMEPLATE DETAILS

COLOR: WHITE W/ BLACK LETTERING SIZE: 1" TALL X 2" WIDE, ¾6" TALL LETTERS

POWER ON OFF HAND AUTO

WELL LEVEL LOW WELL LEVEL HIGH

WELL PUMP RUNNING

COLOR: WHITE W/ BLACK LETTERING SIZE: 1" TALL X 4" WIDE, 7/6" TALL LETTERS

MLEX3 PUMP
MAIN DISCONNECT(20A FUSED)

MLEX3 PUMP CONTROL

COLOR: WHITE W/ BLACK LETTERING SIZE: 1.5" TALL X 6" WIDE, ¾" TALL LETTERS

WELL CONTROL PANEL (CP)
WELL MLEX3

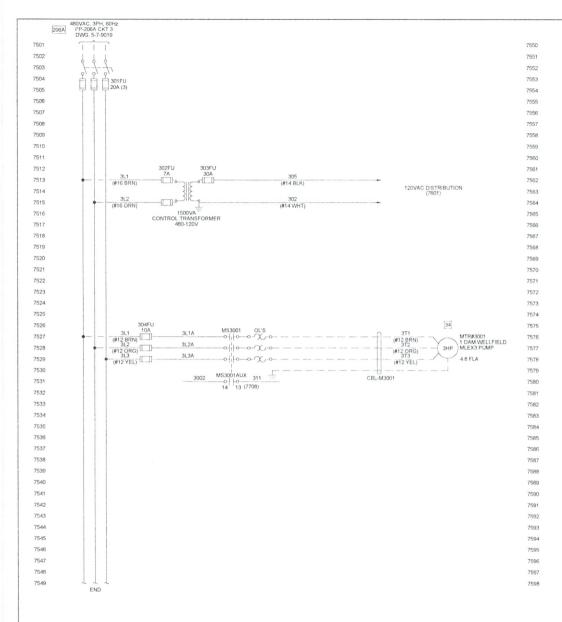
GENERAL NOTES:

1 PANEL SHALL BE FABRICATED PER UL508A

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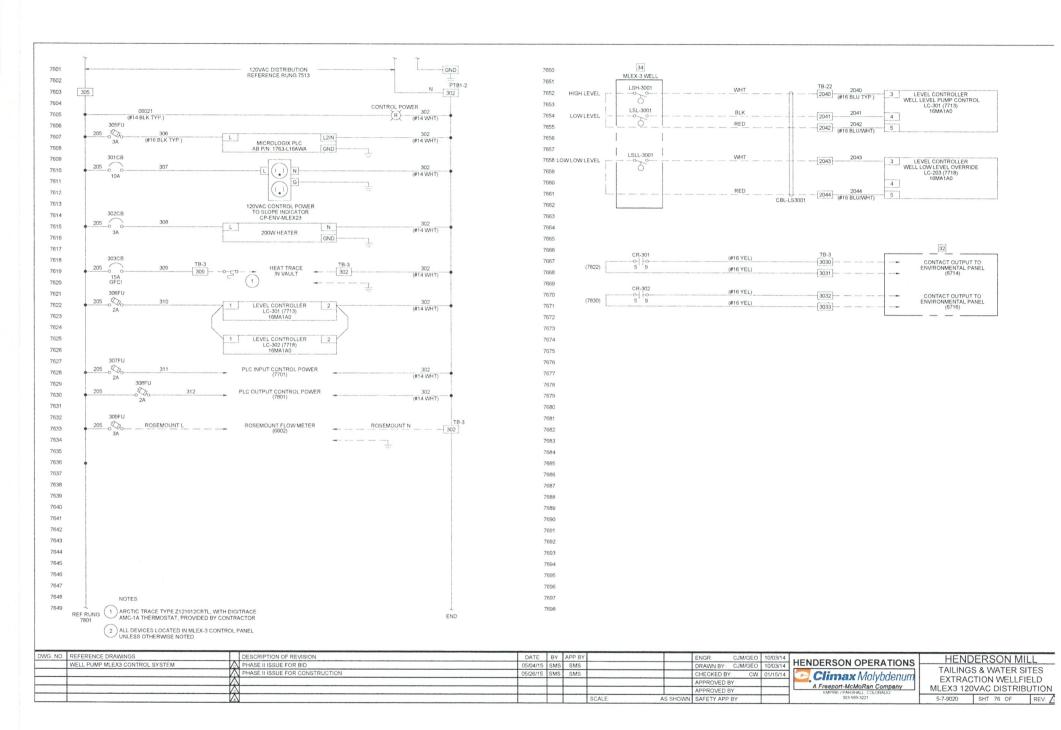
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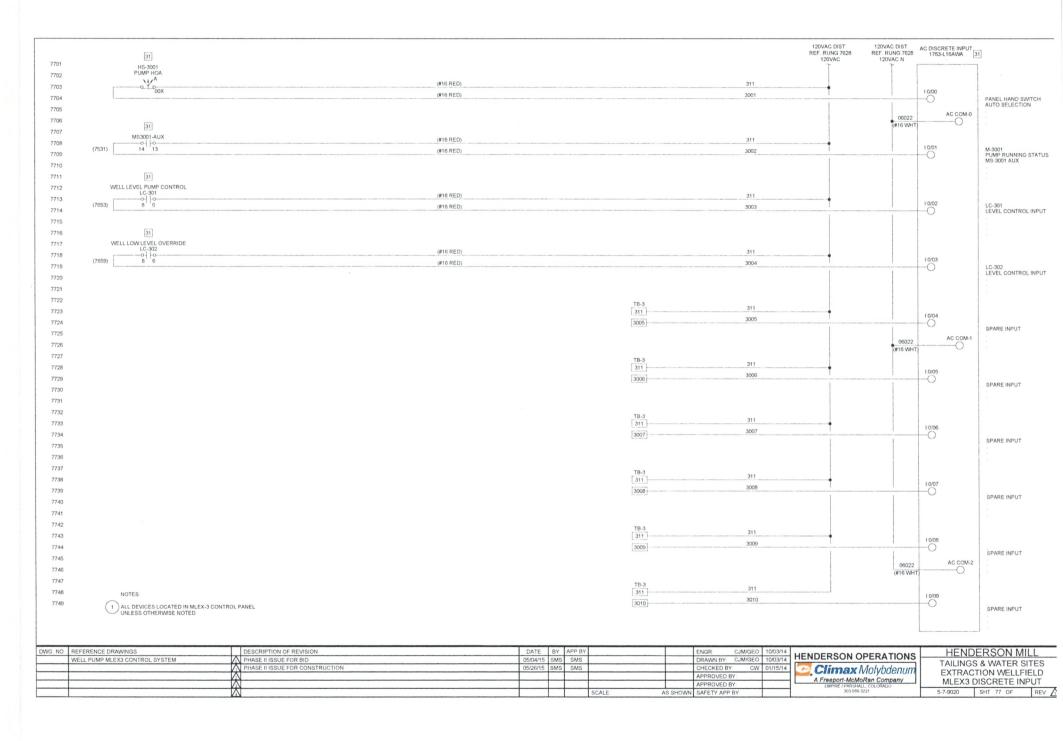


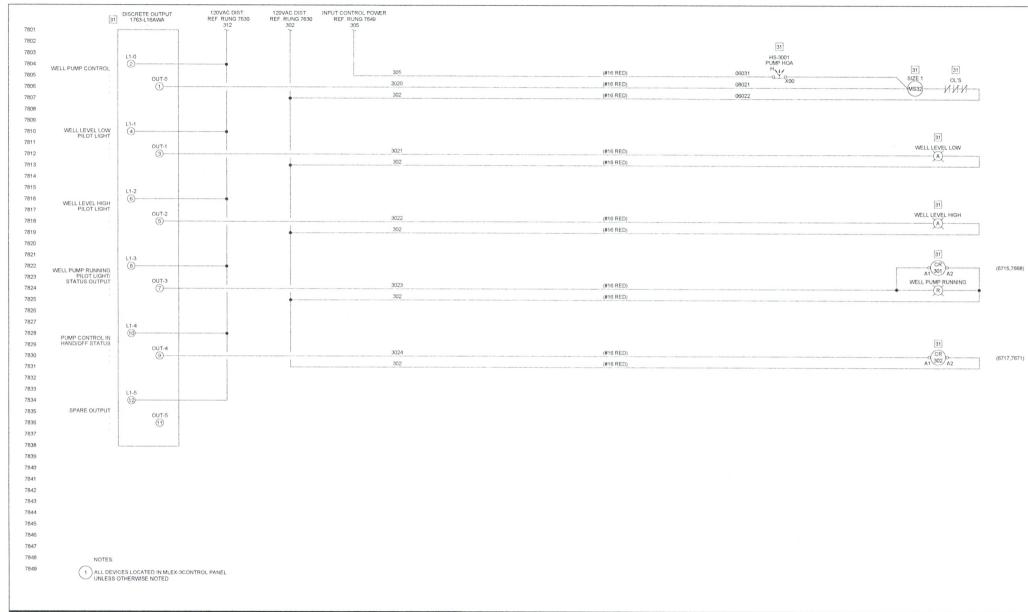
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December 10, 2015

Transmitted by E-mail

Mr. Timothy Haynes Climax Molybdenum Company – Henderson Operations P.O Box 68 Empire, Colorado 80438

Subject: Ute Park Extraction Wellfield - Phase II - Technical Revision 25 (TR-25) Certification, Henderson Mill, Permit No. M-1977-342

Dear Mr. Haynes:

AJAX Mountain Enterprises LLC (dba AJAX Ltd) and Clear Creek Associates PLC (Clear Creek) are submitting this letter certifying the installation of Phase II extraction and monitor wells, in accordance with the requirements of TR-25, dated April 29, 2015. Per TR-25, a new extraction wellfield is being installed east of the Henderson Mill Tailing Storage Facility (TSF) 1-Dam. The existing extraction wellfield permitted under TR-10 will eventually be replaced by this new wellfield as it is fully built-out over the next few years.

The construction of the wellfield is anticipated to be completed in three phases, as shown in Figure 1. This will allow for its effectiveness to be evaluated as the project progresses. The 2014 installation of the Phase I extraction well, MLEX-1, and monitor wells, MLGW-21 and MLGW-22 provided additional characterization of the Quaternary sediments aquifer, and this information was utilized to design the Phase II wells.

The Phase II extraction wells, MLEX-2 and MLEX-3, were installed in August 2015 and the wells were commissioned in November 2015 following completion of the associated piping, electrical, and instrumentation activities. MLEX-2 penetrated the base of the Quaternary sediments aquifer system at a depth of 63 feet and was screened from 23 to 63 feet. MLEX-3 penetrated the base of the Quaternary sediment aquifer at a depth of 56 feet. This well was screened from 26 to 56 feet. The extraction wells were completed with 8-inch stainless steel casing and well screens consisted of 0.06-inch stainless steel wire-wrap casing. As-Built drawings for MLEX-2 and MLEX-3 are included as Figures 2 and 3.

The extraction wells were developed by swabbing, bailing, and pumping. Following well development, eight-hour step-tests and 48-hour constant rate pump tests were performed on both wells. Testing indicated that MLEX-2 is generally efficient at pumping rates of up to 20 gallons per minute (gpm) while MLEX-3 is efficient at rates up to 30 gpm.

Downgradient deep/shallow well pair, MLGW-23/MLGW-24, were drilled to depths of 127.5 and 39 feet, respectively, with the base of the Quaternary sediment aquifer identified at 125 feet in MLGW-23. Both monitor wells were constructed with Schedule-80 PVC and 0.04 inch slotted PVC

screen. The monitor wells were screened from 105 to 125 feet bgs and 25 to 35 feet bgs for MLGW-23 and MLGW-24, respectively. As-Built drawings for the two monitor wells are included as Figures 4 and 5. These monitor wells are not considered an environmental protection facility (EPF); however, they will be used to monitor the effectiveness of the extraction wellfield.

The installation of the Phase II extraction and monitor wells meets the intent of the TR-25 submittal. The effectiveness and performance of the system will continue to be monitored and evaluated using the current monitoring well network. These data can be used to adapt or modify the system in future phases to maximize the capture of groundwater as was intended in the original design. Phase III may consist of two or three more extraction wells and will be scoped following performance monitoring of the Phase I and II wells. Please let us know if you have any additional questions.

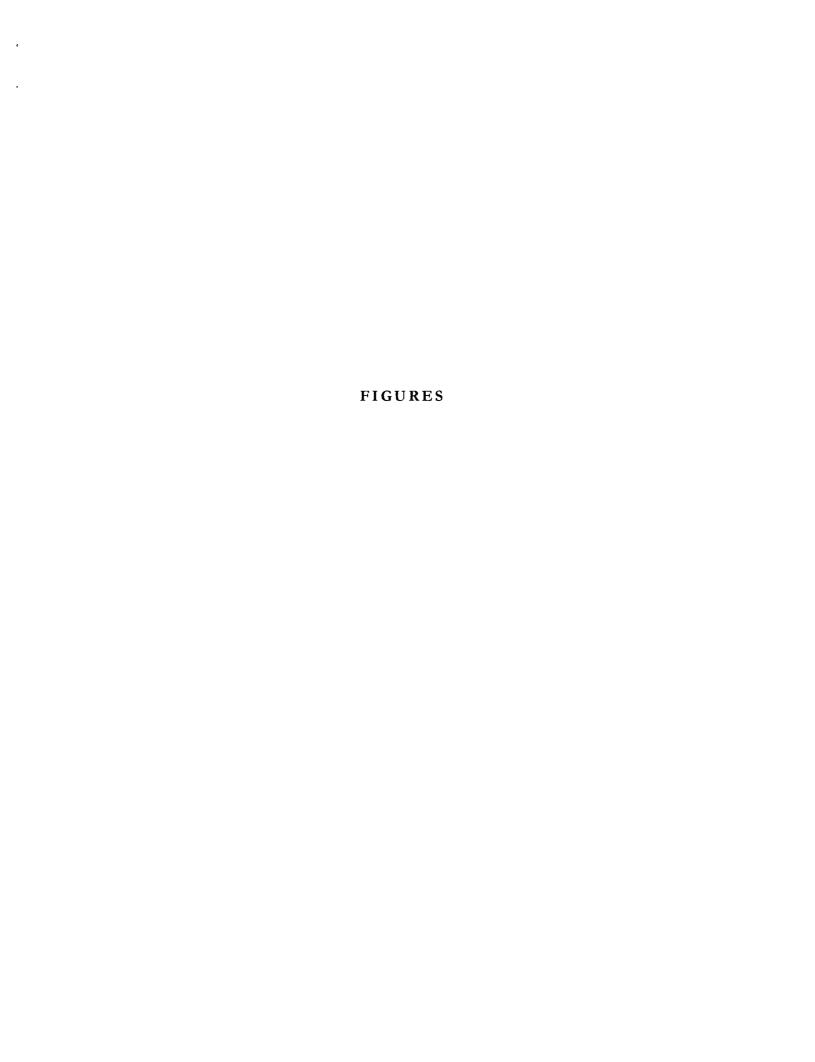
Sincerely,

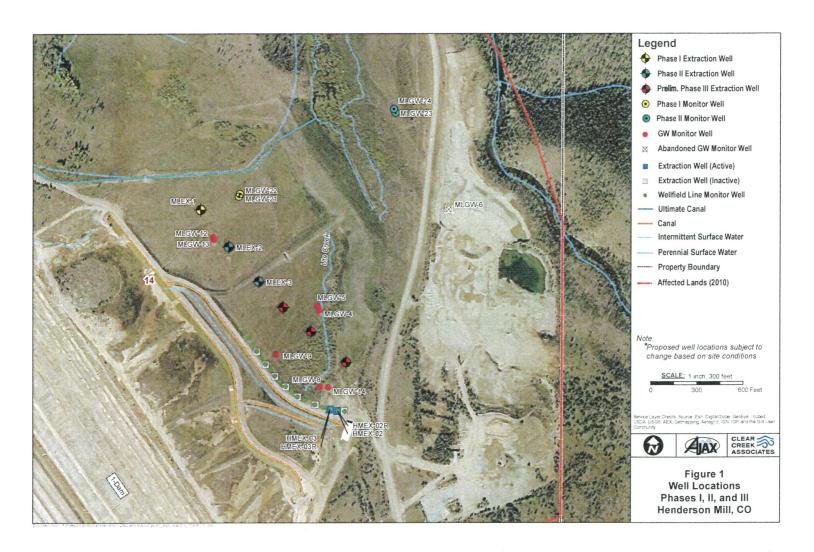
AJAX Mountain Enterprises LLC

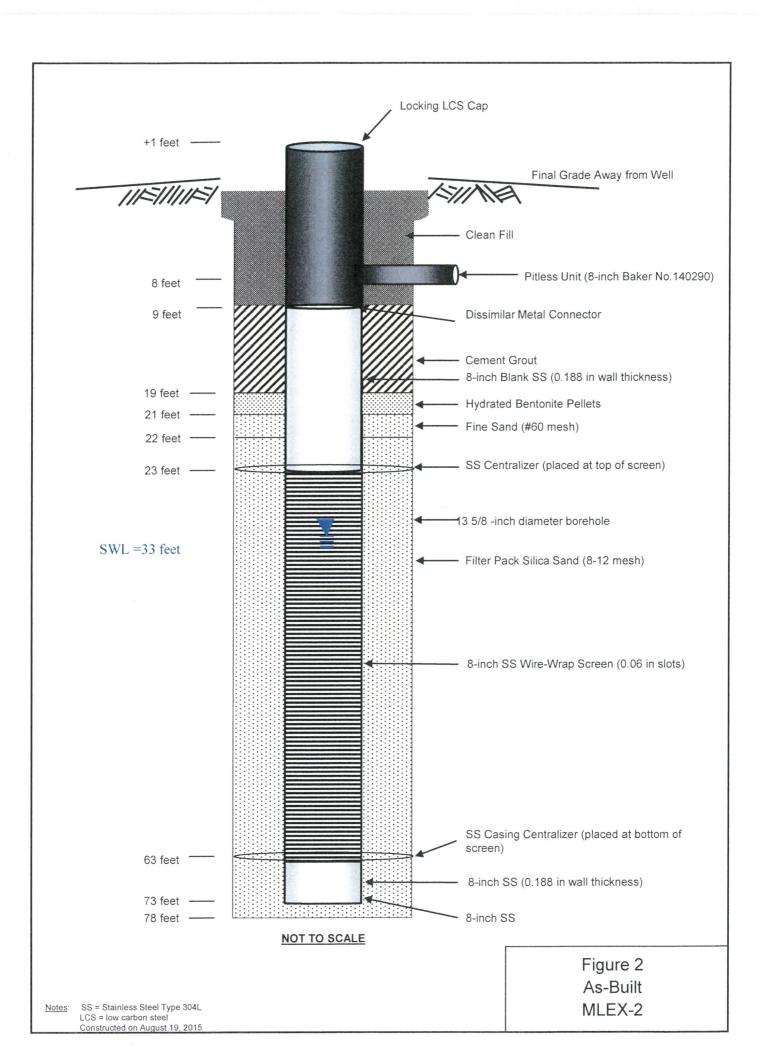
Leah Wolf Martin, PG Project Manager Clear Creek Associates, PLC

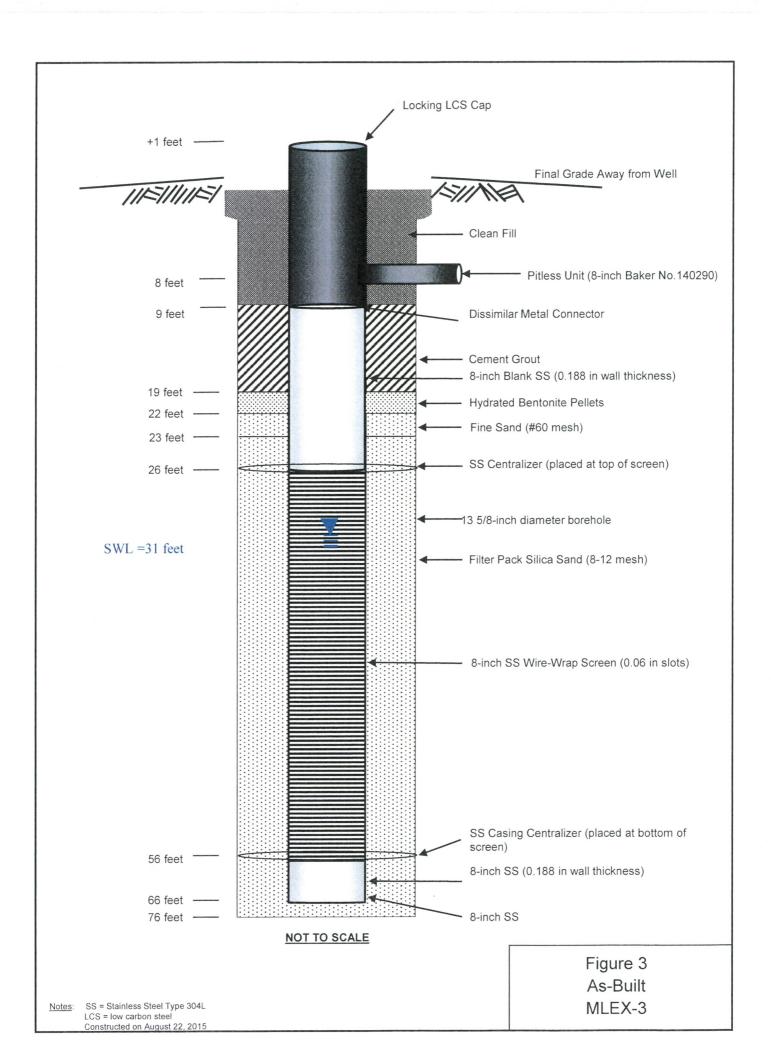
Michael Alter, RG

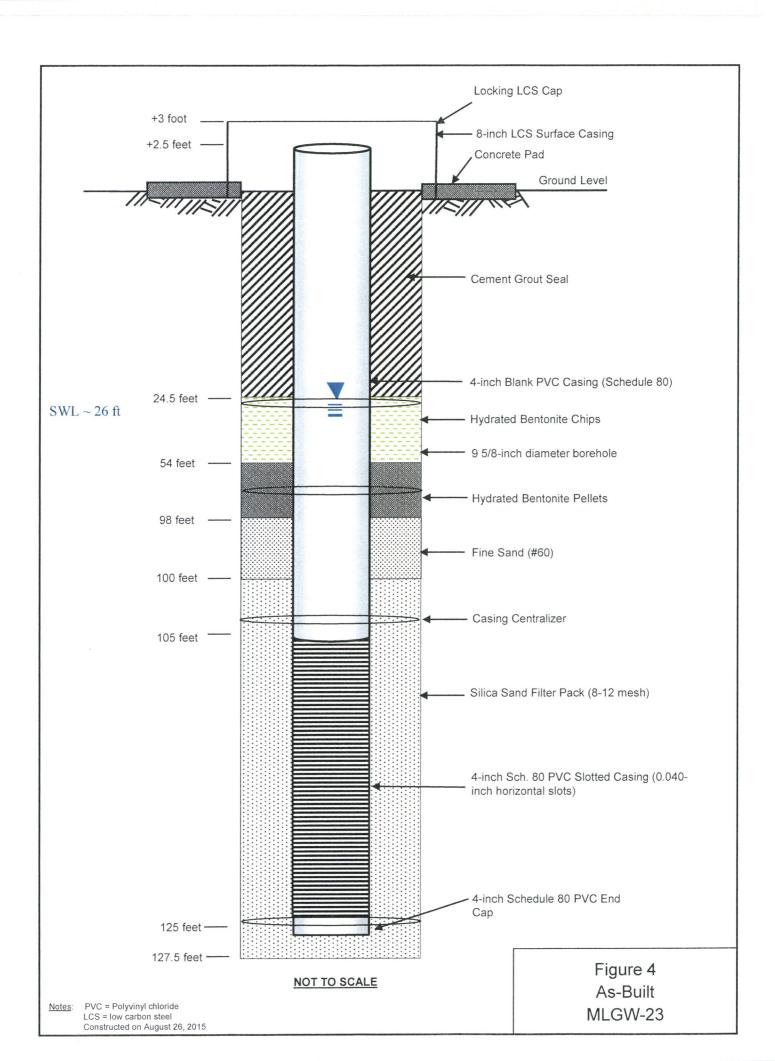
Principal Hydrogeologist

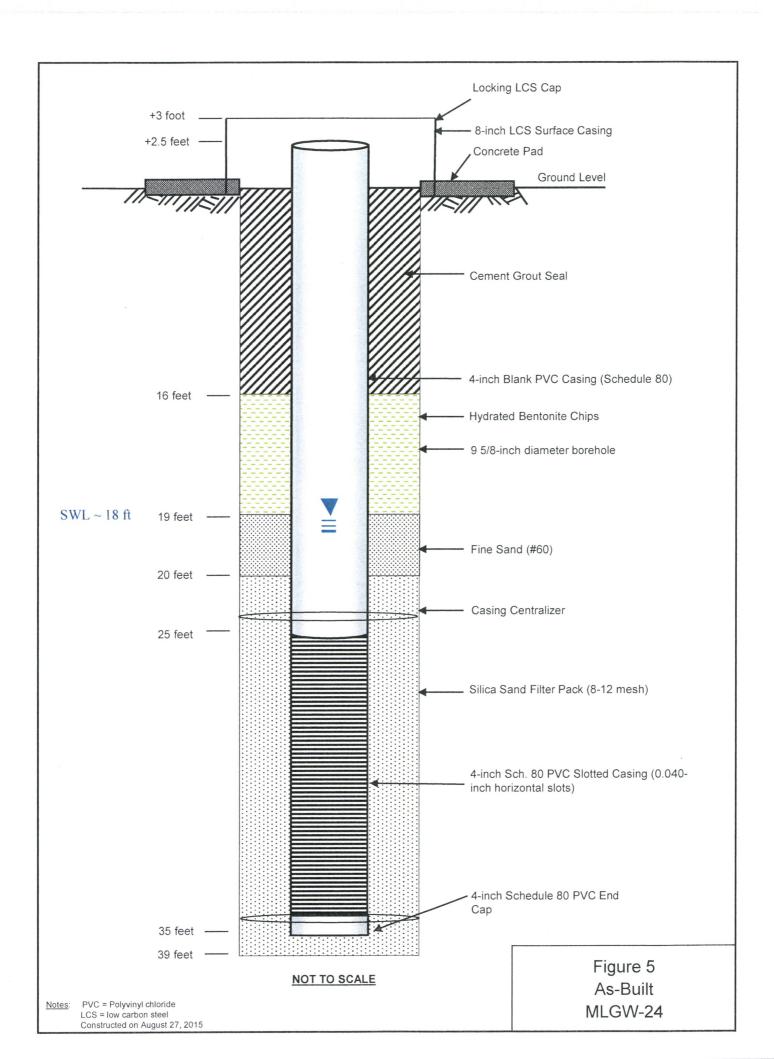












Environmental Protection Facility Certification

Henderson Mill - Permit No. M-1977-342

Technical Revision 25

Ute Park Extraction Wellfield Project - Phase II

The Ute Park Extraction Wellfield Project – Phase II was approved as Technical Revision No. 25 to Mill Permit No. M-1977-342 on April 25, 2015. This project is located at Climax Molybdenum Company's Henderson Mill in Grand County. The project involved the construction of two extraction wells and support infrastructure, including pipeline, vault, electrical power line, and instrumentation at locations downgradient from 1 Dam at the Mill.

The Henderson Mill and contractors have substantially completed the construction of the project and it has been tested and determined to be functional. The systems were designed and installed to meet applicable electrical codes and Henderson design requirements.

Modifications to the initial design have been reflected in the record drawings for MLEX-2 and MLEX-3.

FMI EIS group was responsible for the design coordination and implementation of the electrical systems. The project was completed in general conformance with the approved design as submitted to the Division of Reclamation, Mining, and Safety. The statement is based in part on information provided by others.

Scott Sandoval

Henderson MIII

12/10/15

Date

Environmental Protection Facility Certification

Henderson Mine - Permit No. M-1977-342

Technical Revision 25

Ute Park Extraction Wellfield Project -Phase II

The Ute Park Extraction Wellfield Project --Phase II was approved as Technical Revision No. 25 to Mine Permit No. M-1977-342 on May 11, 2015. This project is located at Climax Molybdenum Company's Henderson Mill in Grand County. The project involved the construction of two extraction wells and support infrastructure, including a pipeline, vaults, electrical power line, and instrumentation at a location downgradient from 1 Dam at the Mill. The undersigned was responsible for the design of the pipeline and measurement vaults.

The Henderson Mill and contractors have substantially completed the construction of the project and it has been tested and determined to be functional. Record Drawings of the project are attached. Also attached is a memorandum dated October 9, 2015, describing the results of the hydrostatic pressure test of the discharge pipeline.

Pursuant to Rule 7.3.2, the Professional Engineer that has signed and sealed below certifies that the project was completed in general conformance with the approved design as submitted to the Division of Reclamation, Mining, and Safety. This statement is based in part on information that has been provided by others.

Steven M. Maly, P.E. W. W. Wheeler and Associates, Inc.

Date

Nov. 23, 2015





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State of Colorado Div. of Reclamation, Mining & Safety 1313 Sherman Street, Rm 215 Denver, CO 80203 Attn: Mr. Peter Hays

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DIVISION OF RECLAMATION MINING & SAFETY

Environmental Protection Facility Certification

Henderson Mill - Permit No. M-1977-342

Technical Revision 25

Ute Park Extraction Wellfield Project - Phase II

The Ute Park Extraction Wellfield Project — Phase II was approved as Technical Revision No. 25 to Mill Permit No. M-1977-342 on April 25, 2015. This project is located at Climax Molybdenum Company's Henderson Mill in Grand County. The project involved the construction of two extraction wells and support infrastructure, including pipeline, vault, electrical power line, and instrumentation at locations downgradient from 1 Dam at the Mill.

The Henderson Mill and contractors have substantially completed the construction of the project and it has been tested and determined to be functional. The systems were designed and installed to meet applicable electrical codes and Henderson design requirements.

Modifications to the initial design have been reflected in the record drawings for MLEX-2 and MLEX-3.

FMI EIS group was responsible for the design coordination and implementation of the electrical systems. The project was completed in general conformance with the approved design as submitted to the Division of Reclamation, Mining, and Safety. The statement is based in part on information provided by others.

Scott Sandoval

Henderson MIII

12/10/15

Date