APPENDIX B

PAYMENT REQUESTS

Contracto_ Invoice Paym_nt Approval

11/25/09 Log Eval EIS

This document must be attached to the specified invoice before payment can be made.

AMOUNT BEING APPROVED FOR PAYMENT MUST AGREE WITH THE TOTAL ON THE ATTACHED INVOICE.
If there are questioned costs being withheld for payment, the Contractor must authorize any invoice adjustments.

ONTRACTOR: O'Keefe Drilling Company, Inc INVOICE NO.: 41000611232009

ONTRACT/TASK NO.: 410006 Start Date: 09/08/2009 Exp. Date: 10/31/2009

URPOSE OF PAYMENT: Contract 410006 Final Payment Request $262,757.50 Less 1% Tax Withholding of $2,627.58 = $260,129.92 paid to contractor.

Payment Line Description	Org Unit	Amount	P/F
4019 Final Payment	474019	$ 260,129.92	
ate Withholding 1%	474019	$ 2,627.58	
tached Invoice is approved for payment in the amount of:		$ 262,757.50	Partial/Final

mments: Contract 410006 Final Payment Request $262,757.50 Less 1% Tax Withholding of $2,627.5

PROJECT OFFICER SHALL COMPLETE THE FOLLOWING:	Yes	No
HE MONTHLY REPORT AND THE MONTHLY INVOICE ARE CONSISTENT IN THE OURS BILLED AND THE SERVICES PERFORMED. All aspects of the invoice and monthly report conform with the Project Officer's first hand knowledge of what occurred and sufficient progress has been made by the contractor to upport this payment.)	✓	
HE SUPPORTING DOCUMENTATION MATCHES THE BILLING. Documentation is required to attain the level of confidence you feel comfortable with to tablish the billing is true and reasonable for the services you are receiving. cumentation must be in accordance with department policy and contract terms.)	✓	
HE BILLING MATCHES THE CONTRACT/TASK ORDER		
Were goods purchased and/or services rendered on or after the effective starting date of e task order/contract?	✓	
Were the goods/services received prior to the expiration date of the task order/contract?	✓	
Are the overhead rates (indirect costs) charged on the invoice the same as those approved the task order/contract?	✓	
Have the subcontractors been approved to work on the task order/contract? (In some ses this means the subcontract must be approved.)	N/A	
Are the costs and fees billed correct? (Do the labor rates, equipment rental rates, leage rates, per diem rates, etc. agree with the approved rates in the contract? Are thematical calculations correct?)	✓	
Are the amounts for costs and/or fees within the task order limitations?	✓	
Is the invoice certified correct and signed in accordance with the contract?	✓	

OJECT OFFICER: VWoo 11/25/2009 **Approved:** _____ **Date:** 11/25/09

OGRAM MANAGER: PA 11/26/09 **Approved:** Sandra Allen **Date:** 11-25-09
C. Wooley

E APPROVAL SIGNATURES MUST BE:
SIGNED IN INK.
REQUIRES TWO(2) FULL SIGNATURES WITH DATES TO BE PROCESSED BY SSN. The Preparer of this form shall be the Project Officer. The second signatory must have a payment authorization signature card on file with SSB.
If the Project Officer is also the Program Manager or Bureau Chief - SIGN TWICE.

RECEIVED
DEC 21 2009

Montana Department of REVENUE

Clear Form

MONTANA
CGR-2
Rev. 6/06

Contractors Gross Receipts
Gross Receipts Withholding Return

1.	Contract Awarded by: Agency [X] Prime Contractor [ ]			
	Federal Identification Number (FEIN): 81-0302402-06			
	Name: MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY			
	Address: PO BOX 200901			
	City: HELENA	State: MT	Zip Code: 59620-0901	
2.	Contract Awarded to: Prime Contractor [X] Sub-Contractor [ ]			
	Federal Identification Number (FEIN): 81-0298188			
	Name: O'Keefe Drilling Company, Inc.			
	Address: 2000 Four Mile Road, PO Box 3810			
	City: Butte	State: MT	Zip Code 59701	
3.	Government Issued Contract Number			410006
4.	Contract Award Date			09 / 04 /20 09
5.	Month and year increment payment earned			Oct /20 09
6.	Gross amount due Prime contractor or sub-contractor at the time of this report			$ 262,757.50
7.	Amount Withheld (1% of line 6) (If payment made to prime contractor from awarding agency, remittance must accompany this report)			$ 2,627.58
8.	Net amount paid Prime contractor or sub-contractor at the time of this report			$ 260,129.92
9.	Check proper box for type of return being filed:			
	[X] Remittance attached for credit to prime contractor's account			
	[ ] Sub-Contractor allocation, authorization to transfer credit to sub-contractor. Failure of prime contractor to file a distribution report within thirty (30) days of payment will result in a 10% penalty. Date payment made to sub-contractor			/____/20___
10.	Description of work to be performed: To construct and test groundwater pumping wells which will be used to dewater mine tailings at the McLaren Tailings Reclamation Project			
11.	Location of work to be performed (be specific): McLaren Tailings abandoned mine site located east of Cooke City in Park County			

The agency or contractor must, in accordance with Section 15-5-206, Montana Code Annotated, withhold one percent (1%) of incremental payments due the contractor or sub-contractor. Amounts withheld from a prime contractor must be forwarded with this report to the Department of Revenue. Amounts withheld from sub-contractors must be reported on this form so that proper allocation of credit can be made from prime contractor's account to the sub-contractor.

Return Submitted by	Agency [X] Prime Contractor [ ] Sub-Contractor [ ]	
Award Authorization Preparer's Signature:	Virginia A. Wooley	
Preparer's Title: Financial Specialist		Date: 11/25/09
Phone: 406-841-5008		Fax: 406-841-5050

Mail this return to:
Department of Revenue, P.O. Box 5835, Helena, MT 59604-5835

DEQ PAYMENT REQUEST

PAYMENT REQUEST NO. 1 PAYMENT PERIOD: 8/26/09 through 10/26/09

PROJECT NAME: McLaren Tailings Abandoned Mine Site Pumping Well Installation, Development, and testing

NAME OF THE CONTRACTOR: O'KEEFE DRILLING

ADDRESS OF THE CONTRACTOR: P.O. Box 3810 Butte, Montana 59701

PAYMENT SUMMARY INFORMATION

DATE	PAYMENT REQUEST #	EARNED	RETAINAGE WITHHELD*	RETAINAGE RELEASED	GROSS PAYMENT	TAX 1%	NET PAYMENT
11/23/2009	1	$262,757.50	$ -		$ 262,757.50	$ 2,627.58	$ 260,129.92
			$ -		$ -	$ -	$ -
			$ -		$ -	$ -	$ -
			$ -		$ -	$ -	$ -
	FINAL REQUEST			$ -	$ -	$ -	$ -
TOTAL TO DATE		$ 262,757.50	$ -	$ -	$ 262,757.50	$ 2,627.58	$ 260,129.92

DATE	CONTRACT PRICE SUMMARY	
9/8/09	Original Contract Price	$ 282,310.00
11/25/09	CO # 1	(19,552.50)
CONTRACT PRICE TO DATE		$ ~~282,310.00~~ $ 262,757.50

MISCELLANEOUS INFORMATION	
TOTAL UNCOMPLETED TO DATE	$-0- ~~19,552.50~~
PERCENT COMPLETE TO DATE	100% ~~93.07%~~

*RETAINAGE WITHHELD IS 5% PLUS $1,000

LIGHTLY SHADED AREAS ARE AUTOMATICALLY CALCULATED

CURRENT PAYMENT REQUEST	
EARNED	$262,757.50
RETAINAGE WITHHELD	$ -
RETAINAGE RELEASED	$ -
GROSS PAYMENT	$ 262,757.50
TAX (1%)	$ 2,627.58
NET PAYMENT	$ 260,129.92

REQUESTED BY: CONTRACTOR:

SIGNATURE: Jaclyn Gipp

DATE: November 23, 2009

RECOMMENDED BY: ENGINEER: Joseph S McElroy

COMPANY: Pioneer Technical Services, Inc

DATE: 11-23-09

APPROVED BY: OWNER: MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SIGNATURE: Tamara Olsen

DATE: 11-25-09

P.O. BOX 3810 BUTTE, MT 59701 (406) 494-3310 Fax (406) 494-3301

PROGRESS REPORT

REQUEST NO.: 1 DATE PREPARED: 11/23/09
BILLING PERIOD: 8/26/2009 to: 10/26/09
PROJECT: McLaren Tailings Abandoned Mine Site CONTRACT NO.: 410006
CUSTOMER: Department of Environmental Quality

			CONTRACT AMOUNTS			PROGRESS STATUS						
Pay Item No.	ITEM DESCRIPTION	UNIT	EST. QNTY	UNIT BID PRICE	TOTAL COST	THIS PERIOD Quantity	THIS PERIOD Cost	PREVIOUS PERIODS Quantity	PREVIOUS PERIODS Cost	TOTAL TO DATE Quantity	TOTAL TO DATE Cost	% Comp.
	BASE BID SCHEDULE*											
obilization, Demobilization, Bonding, and Insurance												
	Mobilization, Demobilization, Bonding, and Insurance	LS	1	$27,500.00	$27,500.00	1.00	$27,500.00		$0.00	1.00	$27,500.00	100%
e Access												
.	Site Preparation	LS	1	$1,500.00	$1,500.00	1.00	$1,500.00		$0.00	1.00	$1,500.00	100%
mp Well Installation												
.	Drill and Install 18 8-inch Pumping Wells	LF	880	$210.00	$184,800.00	855.00	$179,550.00		$0.00	855.00	$179,550.00	97%
.	Drill and Abandon Borehole	LF	235	$110.00	$25,850.00	92.0	$10,120.00		$0.00	92.00	$10,120.00	39%
C.	Install Snow Post	EA	18	$250.00	$4,500.00	17.0	$4,250.00		$0.00	17.000	$4,250.00	94%
velop Pumping Wells												
	Develop Pumping Wells	HR	72	$265.00	$19,080.00	68.0	$18,020.00		$0.00	68.00	$18,020.00	94%
p-Drawdown Test Pumping Well												
	Step-Drawdown Test Pumping Wells	HR	72	$265.00	$19,080.00	77.50	$20,537.50		$0.00	77.500	$20,537.50	108%
NGE ORDERS												
0	Re-Stocking fee of Screen	LF	20	$ 64.00	$1,280.00	20.00	$1,280.00		$0.00	20.00	$1,280.00	100%
							$0.00		$0.00	0.00	$0.00	#DIV/0!
							$0.00		$0.00	0.00	$0.00	#DIV/0!
							$0.00		$0.00	0.00	$0.00	#DIV/0!
	TOTAL CONTRACT AMOUNT				$283,590.00		$262,757.50		$0.00		$262,757.50	**92.65%**

PIONEER
TECHNICAL SERVICES, INC.

P.O Box 3445, Butte, MT 59702
www.pioneer-technical.com

November 23, 2009

Tom Henderson
Montana Department of Environmental Quality
Mine Waste Clean Up Bureau
P.O. Box 200901
Helena, MT 59620-0901

Re: Revised Pay Request No. 1 for the McLaren Tailings Abandoned Mine Site Pumping Well Installation, Development, and Testing Project

Dear Tom:

Please find enclosed one copy of the revised Pay Request No.1 for approval and payment to O'Keefe Drilling Company, Inc. If you have questions or need further information please contact me at 497-8041 or 490-0807.

Sincerely,

Joseph S. McElroy

Joseph S. McElroy P.E.
Project Manager

Enclosure

cc: Dan O'Keefe, O'Keefe Drilling Company, Inc.

HELENA
201 East Broadway, Suite C
Helena, MT 59601
Phone (406) 457-8252

BUTTE
63 1/2 West Broadway
Butte, MT 59701
Phone (406) 782-5177

ANACONDA
307 East Park Street, Suite 421
Anaconda, MT 59711
Phone (406) 563-9371

CHANGE ORDER

ORDER NO. 1

PROJECT TITLE: McLaren Tailings Abandoned Mine Site Pumping Well Installation, Development, and Testing Project

DEQ Contract No. 410006

CONTRACT DATE: August 26, 2009

OWNER: Montana Department of Environmental Quality / Mine Waste Cleanup Bureau

CONTRACTOR: O'Keefe Drilling Company, Inc.

Change Orders must include an itemized cost breakdown. You shall comply with the following changes
From the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
1.	Contractor will be compensated for restocking 20 linear feet of stainless steel screen that was not utilized on the project. It was specified that 1B well would be installed, however site conditions on the south side of the site did not allow for the installation of one well.	$1,280.00					$1,280.00
2.	Contractor will not be compensated for 25 linear feet under Bid Item 3a Drill and Install 1B, 8-inch Pumping wells. The decrease in the contract amount will be 25 linear feet at a rate of $210.00 per linear foot for a total of $5,250.00.					($5,250.00)	($5,250.00)
3.	Contractor will not be compensated for 143 linear feet under Bid Item 3b Drill and Abandon Borehole. The decrease in the contract amount will be 143 linear feet at a rate of $110.00 per linear foot for a total of $15,730.00.					($15,730.00)	($15,730.00)
4.	Contractor will not be compensated for 1 snow post under Bid Item 3c Install Snow Post. The decrease in the contract amount will be 1 snow post at a rate of $250.00 per snow post for a total of $250.00.					($250.00)	($250.00)
5.	Contractor will not be compensated for 4 hour of well development under Bid Item 4 – Develop Pumping Wells. The decrease in the contract amount will be 4 hours at a rate of $266.00 per hour for a total of $1,060.00.					($1,060.00)	($1,060.00)

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bonds or Bonds is hereby increased by $ 0 (100 percent of the Change Order amount) and the penalty of the applicable Labor and Material Bond or Bonds is hereby increased by $ 0 (100 percent of the Change Order amount).

COUNTERSIGNED BY MONTANA RESIDENT AGENT

SURETY

By: _____
Seal

Recommended by: _____ 11-25-09
Engineer — Date

Accepted by: Jaclyn Gipp 11-25-09
Contractor — Date

Approved by: _____ 11-30-09
Owner — Date

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APPENDIX C

DAILY FIELD NOTES

APPENDIX C-1

DAILY FIELD NOTES

McLaren Tailings Project

September 10, 2009

0700 Weather Clear, Cool (31° F)

Meet O'Keefe Crew & Bob Smith owner BearClaw Construction,

Larry
~~Doug~~ Dustin } O'Keefe Drilling
Jeremy

0715

Have Tailgate safety meeting

Bob will bring radio for comm with National Park Ambulance and Emergency response. Cody, Wyoming nearest hospital

0800 Preparing drill pad and water containment at Well CH5 with CAT 287C track mounted skid steer loader

O'Keefe does not have hose to run development water to old large sump. Will develop diversion to prevent any discharge to Soda Butte Creek (SBC)

0815 Northwest Pipe Delivers Pipe

(2)

Pipe is in 21' lengths, 8" ID
8 5/8 OD
Well screen 22' 8" total length
including bottom seal
2.5' from bottom to coarse
screen section (.05") approx
Photo Rig set on C1-5
1

Equipment on site
Drill - Foremost DR-24 HD
Water Truck - Western Star 4 ax
Skid Steer - CAT 287C
Backhoe - Deere 35D
Pump Truck & Sullair 185 cfm comp.
One Ton

Photos casing shoe
drill bit & reamer 4.2'

0940 Start Drilling
Add fine granular bentonite
around outside casing

0-14.5' Brown slghly damp Sand & gravel
Hard drilling at 14.5' bgs. Gray angular rock fragments
Casing to 14.5' bgs
Drill to 16.5' still getting dry gray rock fragments.
Add second piece drill steel w/o Casing. Very hard drilling - still in rock
1050 Still drilling rock, dry
1800 psi down pressure
will plug and abandon hole
Add 1½ bags granular fine bentonite followed by 3 bags 3/8" hole plug after pulling drill rods
Pull 8" casing & shoe
Stem hole above bedrock with cuttings to 8 feet from surface
then add bentonite granules to 1' bgs
Fill last 1' with soil

Log 0-7 Sand with silt SP
Photo 7-14 Sand & Gravel SP-GP
14-26.5' bedrock, fine grained crystalline rock, Strong reaction to HCl. Limestone/Dolomite

④

1130 Move to CI-4
1145 Start drilling
0-7 Silt sand SM damp
7-14 Sand with silt & gravel moist cohesive balls of silt
14-14.5 Hard drilling, drill chatter ? cobbles, damp cuttings
Chips becoming angular - ? bedrock.
Photo drilling bedrock CI-4
1205 Depth 19' bgs - still in rock will wait 15 minutes and check for water.
Photo of cuttings CI-4
1220 Turn air on run bit to bottom no water will PE A
Pull rods & casing. Bottom 8' casing are wet
Plug & abandon hole
1250 Move to CI-1 to complete before power pole installation scheduled for Friday 9/11/09.
Photo setup CI-1
1335 Begin drilling

0-5' Dry, sand SW
5'-10' Damp sand & gravel SP-GP
10-14' Damp gravel with sand
14' Bedrock
14-21 Variable colored dolomite
Varies from tan to gray to blue gray
dry. TD 21'
1403 Stop drilling check with
Mike B. Will move to C1-3
Photo Sample C1-1
1415 Truck load of pipe arrives
1430 Pulling rods & pipe out of C1-1
Bob Smith unloading pipe
1450 Setting up on C1-3
1505 Start drilling
0-15' damp coarse sand & gravel SP-GP
15' silt layer, damp - <1 Ft thick
15-19 Wet sand & gravel GP-SP
adding casing & rod
1538 resume drilling producing water
Bedrock at ~~20~~ 22' bgs, no longer
producing water. There was a
small build up of water during the
time required to add casing.

(6)

Stopped casing advance and will drill open hole for 3 feet. Bedrock cuttings are dry. Hole not making water. Driller estimates that above bedrock contact well would produce 1-2 gpm. Will plug and abandon hole TD 25'

Photo cuttings C1-3

1634 Static WL 13.8' bgs. Bottom of casing 15.6' bgs

1700 Move equipment to A1

1705 Offsite

O'Keefe Standby 45 min

4, 20 ft lengths screen onsite

36, 20 ft lengths 8" steel casing

Wells C1-5, C1-4, C1-3 & C1-1 drilled all plugged & abandoned

1730 Called Mike B. discussed well completion options. Will try to complete 2 or more wells on S. side with 10' screen ~~no more than~~ at least 10' bgs

Leave open with casing if in doubt.

Will Goldberg 9/10/09

September 11, 2009

0700 Short safety meeting. Will drill & try to complete A-1. Same operational procedure as yesterday

0735 Start drilling.

0-8 Sand and gravel, damp SP-GP

8-19 Silty sand moist, slightly cohesive SM

0745 Adding casing.

0800 Resume drilling - making water

15-20' Sand & fine gravel

20' Bedrock

Drill steel casing into bedrock to approx 23' bgs. Will drill bedrock open hole TO at least 33' bgs and install screen

0915 Go to town to call office

0940 Return to site - Drill down-electrical Problem

1015 Resume drilling - produce water for approx 30 sec

1030 Depth 33' bgs Producing small amount of water from bedrock <1/2 gpm

(8)

1035 Ken with Beartooth Alliance on site

1047 Install well screen

2 Photos screen going into hole

Kpac gaskets hang up on casing at surface. Will push screen down with drill rods and hold on bottom while casing is pulled back

~~Casing~~ Screen pushed down to 32' bgs

Pull casing up and cut off ~~15 8 feet of casing. 1 9 Feet stickup 17 7 removed~~.

2 photos A-1 cuttings

Producing water with air from drill, diminishing with time.

Estimate 3 gpm after 10 minutes

1130 Tom Henderson, John Roerth and host of others onsite to tour repository area

Calculation of bottom of steel casing removed 8 1 feet of 21' bottom piece & left 1.9' stickup. 11 Feet casing in ground

Screen 32 - 22 8 = 9 2 Top Screen

Top steel 11 ft bgs

1155 Setting up on C3-10
1208 Check WL A-1 10.95 -1.90
9.05 ft bgs
1240 Setting up pump truck & surge block equipment. Heaving difficulty getting rubber ring into well screen
0-10 Gravelly sand SP- damp
10-18 Gravelly sand SP-GP becoming moist at 17'
1300 Surge block operating at A-1 Produced water approx 3 gal/min and the compressor hose cut on well casing
C3-10 Bedrock at 25' dry cuttings above bedrock moist but no water after shut down & restart after adding casing
1400 TD 32' bgs Limestone/Dolomite
18-25 Gravelly sand, moist SP-GP
25-32 Lt gy Dolomitic Limestone
Photo C3-10 cutting
1430 Surge block A1 water still turbid

(10)

Pull casing back and cut 8' off
21' length and leave 1' stickup
Bottom casing 11 feet bgs

1454 Bucket check A-1 4gpm
water clear in appearance
Check with meter NTU 155
Photo - surge blocking A-1

1510 Drill & Water truck moved to C1-2
0-16' predominantly silt
16'-18' Bedrock?
will add short piece of casing

1605 Check flow in A-1. Approx 3GPM
Becomes quite turbid anytime
well is surged
Will move to C3-10

C1-2
0-12 Silt, brown, damp ML
12-16 silty sand with some gravel
SM; moist then wet at end
18-25 Dolomitic gray limestone, dry

1640 Stop drilling for the day
Delivery 7 pieces 22' 8" screen
1 piece 20' 1" screen

1700 Offsite Will Goldberg 4n109

September 12, 2009

0700 Onsite Weather clear & cool 32°F

resume drilling on C1-2

WLA-1 9.62' below Top casing 7.76gs

Well C1-2 had water in hole when drilling started. Depth hole was 26' at start of day. Continuing to make <1gpm estimate at 32' ? Is water from bedrock or seepage down from alluvium. Bedrock 16'

Casing set to 23'. Drill down to 32', Hole dries up-

Hole C3-10 water level appox 16' bgs

Set wellscreen in C1-2, pull casing leaving 12' casing in the ground to try to seal of fine loose silt.

Well C3-2 air development yields less than 1gpm by drillers estimate

C3-10 Bucket check 8-9 gpm

Turbidity 15.3

930 Start drill A-2

0-5' Silty sand SM dry

5-16 Sand with some silt & gravel SP moist

16-28 Silt, moist, slightly cohesive ML

28-32 Sand & gravel, wet

32-38 Bedrock, greenish gray, moist

(12)

0950 Check WL C1-2 138 ft below top casing with 2c feet stick up 11c feet bgs
2 Photos A2 cuttings
~~A-2 Bedrock 22.5 bgs~~

1040 Check Turbidity C3-10 11.2 NTU producing 10 GPM

A-2 Install 22 '8" length well screen pull casing back to leave 16' casing in ground with 2' stickup

1130 Surge blocking C1-2

1140 Setting up drill on A-3
0-14 Silty soil some wood chips & twigs ML moist
14-19 Sand & gravel SP-GP
19' Bedrock
Bottom of casing at 17' not making any water

C1-2 development. Producing large amounts of fine sand & silt after 1 hr of surge blocking followed by air and surge blocking again
After 2½ hrs producing 1½ gpm turbid water

Drill A-3 to 33' in gray to dark gray dolomitic Ls
Pull drill rods and try to install well screen; hole has caved at bottom of casing. Will drill out cave and add more casing. Bottom of casing was at 17' bgs
Photo A-3 cuttings
Note: Retake photo of cuttings from C1-2. Labels were wrong

1415 Check turbidity C1-2 1.07 NTU after 2hr 45min development Producing 1½ gpm
Install well screen in A-3. Bottom screen at 32' bgs. Pull steel casing back, Bottom casing at 12' bgs

1445 Photo rig developing A-3 Lots of water
1530 Move drill to C3-8
1540 Surge blocking A-3
1650 Stand Drilling
0-5 Sandy silt, brown, dry ML
5-14 Silty sand, brown damp SM
14-19 Gravel & cobble, rig chatter GP with sand gray/moist

1710 offsite
WC

(14)

Sept. 13, 2009
Weather, clear, cool, frost 29°F

0645 Onsite
Check WL in C3-B dry to 19' bgs
Well A-3 6-7 gpm
Resume drilling on C3-B 19' bgs
19-25' silty sand with gravel SM
25-39 Sand and gravel with silt SP-GP
moist at 25' wet from 30-39
Shut off air and will check WL
Approx WL based on wet cuttings on drill rods 15Ft bgs
Turn air on clean out hole - produce water
Will set well screen
2 Photos cuttings ~~C3~~ C3-B
Install well screen To 37' bgs
Pull casing Bottom casing 17' bgs
Visitor Ivan Tyson Park Service Road maintenance supervisor
Develop C3-B with rig. Producing water
0900 Check A-3 Development after 3½ hrs
Flow 12 gpm
Turbidity 12.3 Still producing silt

0935 Move to C3-7
0945 Building sump & containment berm
1010 Start drilling
photo sump
0-9 sand and gravel
9-20 gravel & cobbles from 9-20 based on drill chatter and inspection cuttings in sump. Cuttings damp but no water

1035 Developing A-2 Hole silted in to ~~33~~ 33' from bottom at 38' producing silt

20-23 Fine grained silt & sand
23-24 Gravel & cobbles
24-39 Primarily fine grained set silt & sand with clay
36-39 estimated interval - wet gray to light tan clay. No visible pyrite with hand lens. Cohesive ML-CL
Shut down for 10 minutes and produce water when restart

(16)

Check WL C3-8 21' bgs Will deepen C3-7 to 47'. C3-7 surface elevation approx 2' higher than C3-8 based on Brunton clinometer

Drill down to 47', All fine silt sand & silt until bottom 1ft was gravel

Install screen & pull 20' of casing. Bottom casing 27' bgs Due proximity to SBC will not develop with drill rig

1300 Well A-2 producing 3.5 gpm water still cloudy

1320 Standby while expanding pad for C3-6

1410 Setup on C3-6. Setup is 5' higher than C3-7

Developed A-2 for 4 hours, water still cloudy. Move to C3-8

C3-6

0-4 Pad fill

4-6 rock chips grinding up cobbles dry

6-8 silt, wet ML

8-19 Sand with some gravel, dry, to damp, light brown. Primarily fine to medium sand

Photo cuttings 4'-19' bgs

19-25 Gravel sandy, subrounded to subangular damp GP

25-35 Coarse gravel to medium gravel with sand. Gravel subangular Produce some water with casing at 34' bgs GP

35-43 Primarily gravel - hard to sample making some water

43' bgs hit clay layer

Stop for day

Photo excavator with thumb controlling discharge hose

1700 Offsite

1720 Call Mike & leave mss to call

Will Stelling 9/13/09

(18)

September 14, 2009

0640 Arrive on site, Weather cloudy mild 43°, Thunder shower last night around 8:00PM

0700 Crew onsite
Check WL C3-7 24 approx, oily
C3-6 21.8 bgs
Will set well screen in C3-6 at approximately 43' bgs and pull back casing to 23' bgs
Photo preparing to install screen
No erosion or sediment transport from site as result of last nights rain
Set screen at 43 bgs
pull back 20' casing exposing 20' screen. Bottom screen 42'
Top Screen 19'

0810 check flow C3-8 10 gpm

1000 start developing C3-6

Check Water Levels (Below Top Casing

A-1	9.84	(1.82)
A-2	8.85	(1.56)
A-3	8.57	(1.75)
C1-2	13.46	(1.82)
C3-10	19.30	(1.80)
C3-8	23.18	(1.80)
C3-7		
C3-6		
C3-5		

(20)

1025 Start drilling C3-5
0-5 Fill gravel & cobble
5-8 Silt, brown, dry
8-10 gray silt, moist, some fine pyrite? ML
10-15 sand and gravel SP-GP
15 16 Large boulder
16-19 Sand, well graded, damp brown SP
19-25 Sand, fine grained, brown damp SP
25-28 Sand gravelly, brown damp SP-GP
28-37 Gravel, sandy, damp, brown GP
37-40 Grand, sandy, moist GP, some silt
Adding 10' length casing
1115 Asplund contracting on site
40-42 Making water when drilling returns
Gravel, sub angular, wet
42-45 Coarse gravel, well rounded to sub rounded, wet
Photo coarse gravel
Note: may have gone thru 1-2 ft gator clay at 40'-41' per driller not visible in cuttings. Cuttings ok gravel, but brief period of no returns
45-50 gravel, fine, wet subangular to subrounded

9/14/2009

photo tailings 6-8

photo mud pit with gravel fines

Screen installed in C3-5 to 50' bgs
pulled back 20' casing. Bottom casing
30' bgs

1320 Check turbidity C3-6 65.3 NTU
developing since 1000

1350 Mike Bordwin takes over log book
MOB DRILL RIG TO C3-4

1405 Start drilling C3-4

0-2 TOPSOIL

2-8 DARK GREY SILTY MATERIAL w/
MICA AND/OR PYRITE - TAILINGS?

8-~~12~~ 12 SANDY SILT, LIGHT BROWN

~~15~~ 12-~~18~~ 15 SANDY GRAVEL

15-25 " " WITH SILT

25-30 " " WITH SILT & CLAY

30-35 " " FAIRLY CLEAN

35-43 SILTY GRAVEL w/-

45-47 VERY UNCONSOLIDATED PUSHED
CASING DOWN EASILY

47-52 GRAVEL w/ FINES

52-55 MORE FINES & WATER, ~1-5GPM START
VERY FAST DRILLING ~15 GPM FINISH

(22)

9-14-09

~~MW3 9-15-09~~

1500 SET SCREEN, BOTTOM AT 49'
WITH CASING SET AT 55'
WHEN PULLING THE CASING BACK, DRILLER
PUSHED DOWN ON THE SCREEN, DROPS DOWN
TO 51', WILL PULL CASING BACK TO 31'
AND CUT OFF 80-31'-2=27'
DUSTIN STARTED DEVELOPING C3-7
1600 BUCKET GAUGE C3-7
5 GALLONS IN 40 SECONDS (7.5GPM)
1700 STOP DEVELOPING C3-7
1710 SET IN ON C3-9
1720 WELD ON CASING RING BIT
1727 START DRILLING
PHOTO 566 CARBIDE CASING RING BIT
1745 HANG IT UP FOR THE NIGHT

(23)

9/15/09

CB-9 DRILLING LOG

0-10 SILTY GRAVEL

10-12 WOOD DEBRIS

12-18 SILTY SAND w/ MINOR CLAY

~~1945 HAND AUGER~~ MB

-CONTINUED ON 9/16/2009

18-25 SANDY GRAVEL

25-38 SILTY GRAVEL w/ CLAY, ROUND TO ½"

38-51 GRAVEL w/ MINOR SILT, ROUNDED UP TO 1½", WET

51-59 BEDROCK - SAME AS WITH OTHER WELLS ALONG SOUTH SIDE. FRACTURE AT 55' WITH SIGNIFICANT WATER AND SEMI-ROUNDED GRAVELS SET AT 59'

CASING STOPS AT 52'

SCREEN AT 59'8"

PULL BACK TO 19'8"

CASING AT 52

-25

32

109

(24) 9/15/09

~~9/16/2009~~ MS McKenzie Trailer

0545 O'Keefe out to site to start / Continue development on C3-7

0640 O'Keefe on-site

0645 Burdum on-site, Bear Clan

0710 Henderson on-site

O'Keefe drills down second flight of casing, wet at the bottom

0800 TURBIDITY READING ON C3-7 OUT OF RANGES (>1,000)

0930 TURBIDITY READING C3-7 OUT OF RANGE

CALIBRATION CHECK

STANDARD	READING
20	17.9
100	~~123~~ 101
800	767

READ C3-7 629 NTU AFTER SETTLING OUT OF RANGE WIRE SHAKEN

0845 FIRST 20' OF CASING FOR C3-9

0900 START DEVELOPING C3-5

0910 LAST RUN ON TO MUSH SCREEN

PHOTO 657, 658, 659 CUTTINGS FROM C3-9

0940 BLOW ON HOLE - BEST PRODUCTION YET

1000 STOP BLOWING ON C3-9

Check Water Levels (Below Top Casing)

LOCATION	SWL		TD	TIME
C3-8	22.87'	(2')		0732
~~C3-2~~ C1-2 MW3	14.06'			0850
A-3	8.655'			0852
A-2	8.93'			0855
A-1	9.86'			0857
C3-7	27.95'	(1.94)	42.3'	1352
C3-6	32.66'	(1.61)	40.7'	1400
C3-5	31.89'		51.78	1412

(26) 9/15/09

~~9/15/09~~ MWS

1000 SCREEN ON SITE.

1010 BUCKET GAUGE C3-5

20 SECONDS FOR 5 GALLONS

1030 RIG (DUAL RK ROTARY) MOB'S TO C3-3.

PHOTO 570, 571 HOOK HOSE ON TO CYCLONE.

PHOTO 572 CLEAR PAD FOR C3-4 BEARCLAW 1 HOUR

1100 START DRILLING C3-3

FIRST CASING 21'

SECOND " 20'

1150 CYCLONE AND HOSE PLUGGED UP WITH SILTY GRAVEL W/ MINOR CLAY.

1230 DRILL TO 57', ~~BLOW ON HOLE~~ MWS

1255 BUCKET TEST C3-5

5 GALLONS IN 20 SECONDS

1300 TURBIDITY 83.4 / 93.9 NTU

STANDARDS	NTU (METER)
20	19.5
100	98.5
800	

1305 SET SCREEN IN C3-3 AT 57'

NO HEAVING.

1315 BLOW ON WELL C3-3, LARRY ESTIMATES 30-40 G.P.M. STOPPED

1320 STOPPED BLOWING ON C3-3, GETTING

C3-3

	0 - 5.0	silty sand, some wood debris
	5.0 - 7.5	sandy silt
	7.5 - 9	red-stained silty gravel with v. minor clay. Waste rock
	9 - 12	silty sand w/ 20% gravel
	12 - 15	gravel, lt. purple, angular Boulder?
	15 - 22 ~~20~~ MW	silty ~~gravel~~ sand, lt. tan, minor red staining
(S1)	22 - 39	silty gravel w/ minor clay, reddish brown, damp.
(S2)	39 - 47	clean gravels, wetter, minor silt
(S3)	47 - 57	larger gravels, sandy gravel, wetter

(S1), (S2), (S3) GRAB SAMPLES OF 3 UNITS WITHIN THE SCREEN

BENTONITE

(28)

9/15/09

1320 (Covid) CLOSE TO CREEK.

1335 BREAK DOWN AND MOB TO C3-2

1410 SET UP OVER C3-2. ELECTRICAL ISSUES WITH THE DRILL RIG

- PUMP TRUCK STARTS SURGING ON C3-4

1440 C3-2 START DRILLING. FIRST FLIGHT 21'

1500 SECOND FLIGHT 20'

1515 PUMP OUT C3-4

1535 THIRD FLIGHT 20'

GROUND WATER ON START UP, FALLS OFF

1550 LARRY BLOWS OUT HOLE (NO SCREEN) FOR FIVE MINUTES, ESTIMATES 5 TO 10 GALLONS PER MINUTE. WILL SET SCREEN AT 56.5 (BOTTOM OF HOLE)

- PUMPING TRUCK NEEDS REPAIRS.

1600 PULL ROD OUT OF HOLE. THIS HOLE WILL NEED MORE DEVELOPMENT THAN C3-3.

PHOTO 576 574 578 CUTTINGS FROM SCREEN SECTION OF C3-2

PHOTO 579 CUTTINGS FROM 0 TO 57' C3-2.

1010 PUMP TRUCK STARTS SURGING AND BLOWING

9/15/2009

C3-2

0-2 SILTY SAND WITH PYRITE, MED GRAY (WASTE ROCK)

2-16 SILTY SAND, REDDISH BROWN W/ PYRITE (WASTE ROCK)

16-18 SILTY SAND, LIGHT TAN W/ MICA FLAKES OR PYRITE, MINOR WASTE ROCK

18-22 SILTY SAND REDDISH TAN W/ MICA OR PYRITE, (WASTE ROCK). DAMP AT 20', LIKELY INFLUENCED BY THE CREEK

22-25 SILTY SAND, LT. BROWN

25-40 SILTY GRAVEL 60% GRAVEL, 1/8" - 3/4" WITH V. FINE SILT MATRIX, 30% SAND

40-56.6' SILTY GRAVELS, LT. BROWN. WATER ~~HAS~~ WAS LESS SILT, WATER AT 40'

40-45' GRAVEL W/ MINOR SILT, ANGULAR TO SEMI ROUNDED

45-51 SILTY GRAVEL, ANGULAR

51-56.5 SILTY GRAVEL, SMALLER (1/4" - 1/2") GRAVEL, ANGULAR TO SUB-ANGULAR

BOTTOM AT 57.4', WILL PULL BACK TO 37', SCREEN SETTLED RIGHT ON THE BOTTOM OF THE HOLE.

BENTONITE: III

(30)

9/15/09

16 15 PHOTO 503 CUTTINGS FROM C3-3, ONE ROW PER CASING FLIGHT, 1ST FLIGHT IS ON TOP OF PHOTO, PROGRESSING IN DEPTH FROM LEFT TO RIGHT

1635 TEST C3-4 AFTER 1.5 HRS 5 GALLONS IN 15 SECONDS = 20 GPM

PHOTO 504 O'NEILS NORTH JACKS BETWEEN CREEK AND RIG SETTLED APPROXIMATELY 2' ADDED ROCK AND RE-SET. DID NOT BLOW ON HOLE BECAUSE WATER WOULD LIKELY GET INTO THIS INSTABILITY AND INCREASE THE SETTLING. PUMP TRUCK WILL WORK ON THIS WELL 100% FOR DEVELOPMENT

1700 DUAL AIR ROTARY SET UP ON C3-1

1730 OFFSITE

CB-1

0-2 LARGE BOULDER

2-4 DARK GRAY TAILINGS, NO FLAKES

4-12 SILTY SAND TO SILTY GRAVEL WASTE ROCK, REDDISH BROWN TO GRAY-BROWN

12-16 SANDY GRAVEL, ONE BOULDER, WET

16-18 SILTY, SANDY GRAVEL

18-21 SILTY SAND AND GRAVEL, WASTE ROCK

21-25 CLEAN GRAVEL, MINOR WATER

25-39 SILTY GRAVEL, LT. BROWN, DAMP WITH NO WATER

39-44 ANGULAR GRAVEL W/ MINOR SAND AND SILT, WATER

44-47 SAND AND GRAVEL, WATER

47-54 ROUNDED GRAVELS, MINOR SILT, EASY DRILLING, MORE WATER

54-57 SEMI-ROUNDED SAND AND GRAVEL, CLEAN, LOTS OF WATER

COMMENTS: LARGE ESTIMATED ~1000 GPM WITH AIR AND NO SCREEN

BENTONITE

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9/16/04 McLaren Tailings

~~0700 MJS~~

0630 SEND DAILY REPORT FROM MONDAY, TUESDAY

0645 DRILLERS ON SITE

0700 MIKE B. ON SITE

WEATHER: 41°F, MOSTLY CLEAR, SUN IS NOT UP YET, LIGHT BREEZE FROM THE EAST

0710 START DRILLING AT C3-1

FIRST CASING 22'

0745 TEST C3-4 TURBIDITY

5 GALLONS IN 16 SECONDS

62.0 NTU

CALIBRATION	NTU
20	22.4
100	102

0750 DUSTIN TURNS OFF AIR, MOVE TO C3-3

0755 2nd CASING - 20' LENGTH

0820 3rd CASING - 20' MINOR WATER ZONE FROM 21-25, DECIDED TO GO ONE MORE CASING LENGTH.

0900 SET SCREEN ON C3-1, PULL CASING

PHOTOS 582 583 584, 585 CUTTINGS FROM C3-1 SCREEN SECTION

PHOTO 586 CUTTINGS FROM C3-1, FLIGHTS PROGRESS FROM LEFT TO RIGHT, TOP TO BOTTOM.

C2-1

0-3	SANDY SILT W/ MINOR ORGANICS,
~~3-5~~	~~MB~~ LT BROWN
3-5	SANDY SILT, LT. BROWN, MINOR
	GRAVEL 20% GRAVEL, 20% SAND, 60% SILT
5-7	SANDY SILT, MINOR BIOTITE (2%)
	30% SAND, ~70% SILT
7-9	SANDY SILT, LT. BROWN. 20% SAND,
	80% SILT
9-11	SANDY SILT W/ MINOR MICA, GOLD
	COLORED (2%) 20% SAND, SEMI ANGULAR,
	FINE SILT (80%)
11-13	SILTY SAND ~~SAND + SILT~~ W/ MINOR GRAVEL (~~10~~ 5%) NMB
	NMB
	SEMI-ROUNDED GRAVEL, 50% SAND, 45% SILT
13-15	SILTY SAND W/ MINOR GRAVEL (10%)
	SEMI ROUNDED GRAVEL, GRAYISH BROWN
	SILT (45%) AND SAND (50%)
15-~~17~~ 17	GRAVELLY, SILTY SAND W/ MINOR TRACINGS (5%)
	ANY PYRITE FLAKES 20% GRAVEL, 50% SAND
	30% SILT
17-20	SANDY GRAVEL, BROWN
20-22	SILTY SAND W/ MINOR GRAVEL (10% SEMI-
	ROUNDED) AND MINOR CLAY (2%) 30% SILT ~~SAND~~ NMB
	& 60% SAND, DAMP
22-24	SILTY SAND W/ MINOR GRAVEL (15% SEMI-
	ROUNDED) AND MINOR CLAY (<2%), DAMP

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9/16/09

0930 AT C3-1, DUE TO PROXIMITY OF CREEK, WILL NOT DEVELOP WITH TOP DRILL RIG WILL BE DEVELOPED 100% BY PUMP TRUCK.

0945 PHOTO 587 INSTALLATION OF SILT FENCE

PHOTO 588, 589 DRILL RIG ON DIKE

0950 DRILL PAD VERY SOFT, WILL USE TREES TO BRACE RIG.

1000 BUCKET GAUGE C3-3

5 GALLONS IN 15 SECONDS = 20 GPM

TURBIDITY READING 38.5/29.5 C3-3

CALIBRATION	NTU
20	21.1
100	100

WITH 2 HOURS COMPLETED, DUSTIN WICK SURGE AND PUMP FOR 45 MINUTES AND PUMP FOR 15, WITH ANOTHER TURBIDITY READING AT 1115

1045 START DRILLING C2-1

FIRST CASING 23'

SECOND CASING 20'

THIRD CASING 20'

FORTH CASING 20'

1245 TURBIDITY C3-3 46.6 NTU

CZ-1 (Contid)

24-26	SILTY SANDY GRAVEL W/ MINOR ORGANICS (2%), DK. BRN. 30% SILT, 20% SAND, 50% GRAVEL, SEMI-ROUNDED, DAMP
26-29	SILTY SAND AND GRAVEL, DK BROWN, DAMP SEMI-ROUNDED GRAVEL, 30%, SILT, 30%, SAND, 40%
29-30	SILTY SAND W/ MINOR GRAVEL, LT. BROWN, DAMP
30-32	WATER W/ SILTY SAND, MINOR GRAVEL. DK BROWN.
32-34	ANGULAR GRAVEL W/ MINOR FINES, DK. GRAY, WET. LIKELY BASE OF DIKE
34-36	SEMI-ANGULAR/ SEMI ROUNDED GRAVEL LIKELY BASE OF DIKE WET
36-38	ROUNDED GRAVEL 1" MINUS, WET LIKELY BASE OF DIKE
38-40	SANDY GRAVEL, NATIVE, WET
40-63	ANGULAR TO SEMI-ROUNDED SAND AND GRAVEL WITH MINOR SILT (<2%), SIGNIFICANT WATER
63-72.5	BEDROCK, DARK BLUISH GRAY, NO FIZZ W/ HCl ON LARGER PIECES. VERY SIMILAR TO BEDROCK AT OTHER LOCATIONS. MINOR FIZZ WITH SMALLER PIECES.

COMMENTS: LARGE INDICATED PRODUCTIVITY AT APPROXIMATELY 75 GPM.

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9/16/2009

1255 PHOTO 590 INSTALLED SILT FENCE

1315 DUSTIN WAS PULLING OUT THE SURGE BLOCK ON C3-3 AND PULLED OUT THE SCREEN. IN TALKING WITH LARRY, THERE IS NOTHING TO BE DONE EXCEPT PULL THE SCREEN AND RE-SET WITH THE RIG. I INDICATED I WOULD LIKE THIS TO BE COMPLETED BEFORE MOVING TO C2-2 AND C2-3

1320 IN SETTING SCREEN FOR C2-1, INSTRUCTED LARRY TO DRILL IN TO BEDROCK AND SET SCREEN AT 73ft B.G.S.

1330 LEANE FOR LUNCH W/ TOM MENDENHALL

1420 BACK FROM LUNCH.

- DUSTIN HAS MOVED TO C3-2 AT 1310.
- LARRY HAS DRILLED AND SET THE SCREEN, T.D. IS APPROX. 72.5'. TO PREVENT SILTY SAND AT 30-32' FROM COMING INTO THE SCREEN, WILL ONLY PULL BACK 39' OF CASING, INSTEAD OF 40'

PHOTOS 591 592 593 594 C2-1 CUTTINGS

PHOTOS 595 ALL C2-1 CUTTINGS. 2ND STEM IS IN THE MIDDLE, THIRD STEM IS ON THE LEFT, FOURTH STEM IS ON THE RIGHT

9/16/2009

LOCATION	SWL	TD	TIME
MBMG-6	16.16'	17.25'	1430
A-1	9.97'	30.7'	1603

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9/16/2009

PHOTO 596 O'KEEFE DRILL RIG, DE-MOBING FROM CZ-1.

PHOTO 597 BIOBOIL FROM CZ-1.

1505 O'KEEFE MOB BACK TO C3-3 TO RE-SET SCREEN. WILL RE-SET IN OPEN HOLE, WELD ON 20' OF CASING AND ~~RE-SET AND~~ DRILL DOWN 20' W/ CASING AND DRILL BIT TO CLEAN OUT HOLE. CAREY HAD TAGGED THE BOTTOM OF THE HOLE, AND WAS AT 37', COMPLETELY CAVED IN.

1640 BLOW ON SCREEN TO CLEAR OUT SAND AT THE BOTTOM (APPROX. 1 FT), FINAL SCREEN DEPTH IS 56.5', MAY SETTLE A LITTLE MORE WHEN REMOVING BACK CASING.

1700 AFTER PULLING BACK CASING, SCREEN IS SITTING AT 56'4"

1710 TAG OUT C3-3

1715 TURBIDITY @ C3-2 AFTER 3 HOURS DEVELOPMENT: 99.6 NTU

1810 TURBIDITY @ C3-2 AFTER 4 HOURS DEVELOPMENT: 232 NTU/209 NTU

CALIBRATION	NTU
0	20.9
100	98.9

1830 OFF SITE MW

9/17/2009

0615 SEND IN DAILY REPORT

0650 ON SITE, UNLOCK GATE, PUT ON PPE

0655 OKEEFE ON SITE

0705 DECAL AIR ROTARY SET UP OVER C2-2

WEATHER: 40 DEGREES, CLEAR, BREEZE FROM THE EAST

0730 START DEVELOPING C3-1

0735 START DRILLING C2-2

FIRST CASING - 20'

SECOND " 20'

THIRD "

FOURTH "

0820 SCREEN MEASUREMENTS

BOTTOM SCREEN

TOTAL LENGTH: 20.27'

BOTTOM PLATE: 0.04'

BOTTOM TO FIRST SLOT 0.15'

TOP COLLAR: 0.13'

TOP SCREEN

BOTTOM COLLAR = 0.13'

TOTAL LENGTH 22.7'

K-PACKER 0.5'

0930 TURBIDITY MEASUREMENT C3-1: 20.8 NTU

(CALIBRATION)	NTU
20	20.8
100	99.5

(40)

9/17/2004

1015 CASING ON C2-2 BROKE OFF APPROX. 3' UNDER GROUND, WILL DIG DOWN TO TAG AND RE-WELD

1030 TURBIDITY ON C3-1: 4.22 DUSTIN WILL STOP DEVELOPING AFTER 3 HOURS AND GO BACK TO C3-3

1145 START DEVELOPING/RE-DEVELOPING C3-3

1230 WELDER ON SECOND SET OF CASING FOR C2-2 TO TRY AND EXTRACT THE CASING

1305 STEEL CASING ON C2-2 CAME FREE OF THE BEDROCK, HAVE PULLED OUT ALMOST 20', WILL PULL BACK TO 34' B.G.S TO EXPOSE ~~70~~ 70 HWS ~~68~~-34 = ~~36~~ 36' HWS OF SCREEN

1320 START BLOWING ON C2-2

PHOTO 602 CUTTINGS FROM C2-2

PHOTOS 603, 604 WELDING ON CASING FOR C2-2

PHOTO 605 CLAMP MARKS FROM DUAL AUGER RIG

PHOTO 606 WELD

PHOTO 607 BLOWING ON C2-2

1340 STOP BLOWING ON C2-2

1400 SET UP ON C2-3

C2-2 9/17/09

0-2 SILTY SAND, LT. BROWN, VERY SIMILAR TO OTHER SAND ONS SITES 35% SILT, <65% SAND, V. FINE, MINOR CLAY

2-32 TAILINGS, OR CASE, HIGH CLAY CONTENT ROLLS TO 1/8 TO 1/16", VERY STICKY

32-40 GRAVEL, ROUNDED TO SEMI ROUNDED, 2" MINUS. NO WATER, GRAVELS ARE COVERED W/ TAILINGS, PERHAPS FROM DRILL RIG, HOWEVER W/ NO EVIDENT WATER, MAY BE FROM 32'

40-~~60~~ 62' ROUNDED TO SEMI-ANGULAR SANDS AND GRAVELS, SIGNIFICANT WATER GRAVELS TO 2" MINUS

62'-70'4" (703) BEDROCK, BLUISH GREY METAMORPHOSED ARGILLITE, AS WITH OTHER BEDROCK WELLS. SOME WATER

SCREEN COMPLETED FROM 303' TO 703', WITH TOP OF K-PACKER AT 270' AND BOTTOM OF STEEL CASING AT 303'

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9/17/2009

1415 TURBIDITY ON C3-3, AFTER 2 5 HRS OF DEVELOPMENT: 30.7.
- BECAUSE WE CAN GET C3-4 DONE TODAY AND THERE WAS SOME AIR DEVELOPMENT ALREADY, AND THIS WELL WAS PREVIOUSLY DEVELOPED FOR 4 HOURS AND REACHED BETWEEN 29.5 AND 46.6 NTU.

1420 DUAL AIR ROTARY STARTS DRILLING C2-3
FIRST CASING: 20'
SECOND " : 20'
THIRD CASING: 20'
FOURTH CASING: 20'

1450 PHOTO 608, 609, 610 CUTTINGS FROM SCREENED SECTION OF C2-2
PHOTO 611 ALL CUTTINGS 4TH CASING IS ON THE LEFT, AS FOLLOWS

CASING	4	1	2	3
1ST ROW:	60-62'	0-2'	20-32'	40-50'
2ND ROW:	62-70'	2-20	32-40'	50-60'

1455 O'KEEFE WELDING ON THIRD CASING
1520 START DEVELOPING C2-2
1545 O'KEEFE DRILLS 4TH CASING FOR C2-3
1550 WILL DRILL TO 80' WITH ANOTHER SHORT SECTION OF CASING. (4.8'). TOTAL DEPTH OF WELL IS APPROXIMATELY 79'

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WATER LEVELS 9/17/09

LOCATION	SWL	TD	TIME
C1-2	14.07	30.82	0715
A-3	8.84	31.85	0720
A-2	9.09	37.88	0727
A-1	9.98	–	0729
C3-2	21.67 (2.1)	59.3	1145
C3-1	18.49 (2.5)	?	1245

↳ CAN'T GET PAST THE SCREEN WITH WATER LEVEL METER.

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1610 PHOTO 612, 613, 614 CUTTINGS FROM C2-3

PHOTO 615 ALL CUTTINGS FROM C2-3

CASING	5	4	3	2	1
ROW 1	78-79'	P613 60-70'	P 616 40-48'	20-40	0-20'
" 2	P614	70-78'	48-55'		
" 3			P612 55-60'		

PHOTO 616 40-48'

1625 SET FIRST SECTION OF SCREEN FOR C2-3

1630 CASING COUNT

	LENGTH	#
WHOLE CASING	20	2
SCREEN	20	1
PIECES, PARTS 22', 14', 22, 19		15

1.5, 2.5, 7, 7.5, 3, 7.5, 3.5, 1.9, 16.7'

1640 FLOW TEST C3-9

1645 COMPLETION OF C2-3

1700 ROD AND SCREEN HEADED UP INTO CASING APPROXIMATELY 20'

1745 TURBIDITY AT C3-9: 7.49

CALIBRATION	NTU
2	20.0
100	99.9

1945 OFFSITE

J. L. DARLING CORP. TACOMA, WA 98424-1017 www.RiteintheRain.com No. 302

~~C3-1~~ MW3 C2-3

0-2 SILTY SAND, LT BROWN, VERY UNIFORM WITH MINOR SEMI-ROUNDED GRAVEL (15%)

2-20 DARK GRAY TUFFACEOUS W/ PYRITE FLAKES

20-48 SILTY GRAVEL W/ MINOR CLAY (2%) FINES ROLL TO 1/16". GRAVEL IS SEMI-ANGULAR TO ANGULAR, SILT IS MEDIUM BROWN BOTTOM 5' (35-40') OF 2ND CASING IS WET, WITH NO WATER COMING OUT OF CYCLONE. WATER DID COME OUT OF TOP OF CASING (MINOR).

48-~~60~~ 79 MW3 CLEAN SANDY GRAVEL, SEMI ROUNDED, W/ MINOR SILT (2%) SAND (25%) GRAVEL (<75%) SOME WATER

DRILLERS WILL SET SCREEN FROM 39' TO 79', STARTING IN THE FIRST WET MATERIAL FROM 35-40', AND ENDING RIGHT AT BEDROCK

TOP OF K-PACKER IS ~~47.8~~ MW3 37'4"

~~BOTTOM OF SCREEN 80' MW3~~

~~WILL TAKE OUT 40' OF CASING~~ 39' MW3 MW3

TOP OF SCREEN 18.5
BOTTOM OF SCREEN 58.5
BENTONITE 1

BOTTOM OF CASING 40'

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9/22/09

0515 Leave Butte

0930 Arrive at Rooke City, on site @ McLaren Tailings

Weather: Clear, slight breeze from the South

0930-1020 Tailgate meeting, expectations for the week, safety

SAFETY: tailings

tailings water

large quantities of pumped water

EXPECTATIONS

- SAMPLES AT FINAL PUMPING RATE
- ½ HOUR RECOVERY
- ALTERNATE WELLS
- 4 TRANSDUCERS

1025 Set up new transducers, CHAMBERLAIN ON C1-4

1040 DEPLOY TRANSDUCERS IN C1-3 AND C2-3

1120 START PUMPING C1-4, PUMP IS ~0.5' OFF OF BOTTOM OF WELL

— 1ST PUMP RATE - SEE NEXT PAGE

STICK-UP: 1.8

1" PVC: 0.94

PUMP LENGTH: 2.1'

PUMP TYPE: ½ HP SINGLE PHASE 10GPM FLINT & WALLY

9/22/2009

	SWL (ft)	TIME	STICKUP (ft)
(A-1) C1-4	10.55	1026	
(A-2) C1-3	9.64	1040	
C2-3	19.03	1049	
C1-3 (A-2)	9.71	1456	
C1-4 (A-1)			
C1-1 (prev. C1-2)	14.30'	16:56	1.8'
- SWL while pumping C1-2@ 12 gpm			
C1-3 (prev A-2)	9.74'	1659	1.6'
- SWL while pumping C1-2@ 12 gpm			
C2-3	19.06'	17:06:30	
- SWL while pumping C1-2@ 12 gpm			
PZ-25	13.55'	17:13:00	
PZ-20	15.22'	17:14:30	

WHILE PUMPING C1-2 @ 12 GPM

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9/22/05

C1-4 (C-370)

- LENGTH OF DROP PIPE:
- DIA. OF DROP PIPE: 1"
- STICKUP OF DROP PIPE TO ELBOW: 1', 7
- TYPE OF DISCHARGE HOSE: 2" FLAT w/ QUICK-CONNECT

1310 CONTINUE DEVELOPING C3-9

FIELD PARAMETER CALIBRATION

	STD	READ
pH	4.01	4.01
	7.00	7.00
	10.01	10.01
TURBIDITY	20	19.8
	100	101
	800	753

SLP 96.4

MW3 ~~SLP~~ 99.1 E-23

C1-4 FIELD PARAMETERS 1415

pH ~~8.07~~ MW3 7.98

SC 332 µS/cm

Temp 9.7°C

D.O. 6.27 mg/L

Turb 17.0 NTU

1435 SHUT PUMP DOWN @ C1-4

1505 PULL PUMP @ C1-4, MOB TO C1-2

1515 TURBIDITY @ C3-9: 13.4

SWL: CAN'T GET BY SCREEN

DISCHARGE: >40gpm (estimated)

TOTAL DEVELOPMENT TIME: 4 HRS.

4/22/09

C1-4 (A-1)

STOPWATCH TIMES	SUCL	RATES (GPM)	TIME/SCALE
0:00	11.55	0	
5:30	12.60	~1.5	
8:00	12.74	CHANGED RATES (↑)	
10:00	12.93	3.1	1:38
12:30	13.35		
18:00	13.72		
21:30	13.91		
25:00	14.02		
28:00	14.13		
35:00	14.21		
44:00	14.41		
50:00	14.61		
53:00	14.92		
60:00	14.86*	5 GPM	
1:02:00		5.5 GAL	55 SEC
1:03:00	16.91'		
1:30:30	28.5'		
1:40:00	30.5'	TO PUMP BACK OFF TO 4 GPM	
1:44	30.13'	3.75	1:20
2:13	30.19'		
2:29	30.26'		
3:10	30.28'		2:25

* TOOK OFF FLEX HOSE FOR FLOW MEASUREMENT

(50)

9/22/2009

1545 SHUT DOWN DEVELOPMENT AT C3-9
AND MOVE TO C2-1 (ON DIKE)

1605 SETUP AT ~~C1-2~~ MW C1-2 (PREV. A-3)
DEVELOPMENT RATE 12 GPM ON 9/13/09
HEIGHT OF 1" PVC ABOVE M.P.: 0.76'
STICKUP FROM M.P (NORTH SIDE): ~~0.76~~ MW 1.9'
PUMP LENGTH: 2.9'
PUMP TYPE: 1HP 30 GPM FRANKLIN ELECTRIC
DROP PIPE LENGTH:
" " DIA: 1"
DISCHARGE HOSE: 2" FLAT
DROP PIPE ABOVE M.P. 1.6'

1722 PHOTO 618 PUMP TRUCK SET UP ON
C1-2 (PREVIOUSLY A-3)
PHOTO 619 DEVELOPMENT TRUCK SET
UP ON C2-1

1740 START DEVELOPING ~~C2-3~~ MW C2-1

1830 FIELD PARAMETERS
pH 7.86
Temp (from pH) 6.9°C
S.C. 323 µS/cm
D.O. 8.41
Turbidity 1.47 NTU
LAB SAMPLE TIME 1840
" " I.D. C1-2-20090922

1855 STOP PUMP AT C1-2

9/22/09

C1-4 (CONT)

TIME (STOPWATCH)	SWL (FT)	FLOW (GPM)	5 GAL. TIME
3:45:00	13.67'	Ø	

MAX SUSTAINABLE FLOW RATE IS ~3.75 GPM

C1-2 (A-3)

TIME	SWL	FLOW (GPM)	
15 43 (-20:00)	10.16	Ø	
15 52 START			
~~15~~ MW3	11.87	~~31.19 sec~~	
		~~26 sec~~	
15 48 (-15:00)	~~12.32~~ MW3	9.0	33.51 sec
15 49 (-14:00)	12.32		
0:00 (STOPWATCH)			
01:00 ~~:00~~ MW3	12.42		
10:00:~~00~~	12.52		
20:00:~~00~~	12.50		
30:00:~~00~~	12.40 (?)		
37:00:~~00~~	12.42		
45:00:~~00~~ MW3	12.23		36.37 sec
46:30			25.45 sec
49:30	13.02		
51:00	13.25		
1:00:00	13.41		
1:17:00	13.43		
1:48:00	13.51		27 sec
~~1:50:00~~ MW3 1:50:00	~~30.62~~ MW3	20 GPM	15 sec

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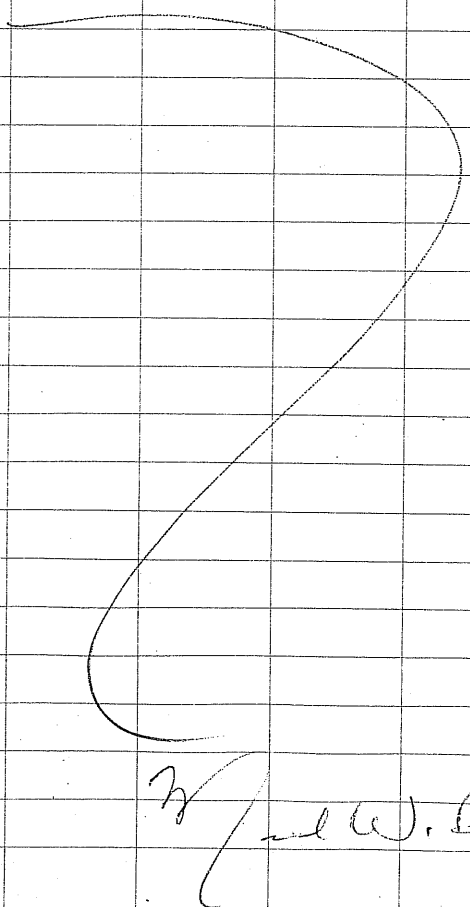
1900 SHUT DOWN DEVELOPMENT @ C2-1

1910 WILL GOLDBERG ON SITE

1925 HOLE CATS, OFFSITE

1935 CALL JOE MCELROY, DAILY PHONE CALL

2055 FINISH CONSTRUCTION DAILY LOG



C1-2 (CONT)

TIME	SWL	FLOW	SIGNAL TIME
1:53:30	17.59	20 GPM	
1:55:00	18.15	L TOO HIGH	
2:00:00	20.32		
2:05:00	22.95		
2:09:00	24.95		
2:20:30	30.62	⌐ TOO HIGH	
2:32:30	25.07	15 GPM	20 SEC
2:38:00		11.5 GPM	26 SEC
2:40:00	24.50	11.5	
2:47:00	15.41	"	~~24 SEC~~ MVS
2:50:00		"	26 SEC
2:53:00	15.37	"	

MAX SUSTAINABLE FLOW RATE IS 11.5 GPM

(54)

9/23/05 McLaren Tailings 32° 72°

0615 E-mail DAILY LOG FROM 9/22

0650 UNLOCK GATE, DO SITE, DOWNLOAD AND ~~EMB~~ MOVE TRANSDUCER FROM C1-3 TO C1-2

0710 O'KEEFE ON SITE, PULL PUMP FROM C1-2 AND MOVE TO C1-3

0715 WILL GOLDBERG ON SITE

0720 ROCKY MTN. ON SITE, MOVED ALL EQUIPMENT TO NORTH SIDE OF CREEK

0750 C1-3 IS 38' DEEP (32' TO BEDROCK) O'KEEFE WILL PUT ON 40' OF 1" DROP PIPE AND 10 GPM (½ HP) PUMP

0800 SET TRANSDUCER IN C1-2, START DOWNLOADING C2-1 (CONTINUE)

0805 READY TO GO ON C1-3

SETUP

0812 START MP ON C1-3

1000 TURBIDITY ON ~~C1-3~~ AND C2-1: 65.2 NTU

CALIBRATION	NTU
20	20.3
100	99.0
800	750

1030 SETUP AT C1-3

1" DROP PIPE ABOVE MP: 4.8'

DROP PIPE DIAMETER: 1"

DROP PIPE LENGTH:

DISCHARGE HOSE: 2" FLAT

(55)

9/22/09 SWLs

LOCATION	SWL (ft)	TIME
C1-3	9.87	0730
C1-2	9.58	0755
C1-3		
C1-2	9.62	1628

9/23/09 (Cont'd)

1" SCH. PVC ABOVE MP: 1.49'

PUMP LENGTH: 2.1'

PUMP TYPE: 0.5 HP 1Ø 10GPM FLINT & WALLY

1105 FIELD PARAMETERS

pH: 8.02

Temp (From pH Meter):

S.C.: 2878 µS/cm

D.O.: 8.30 mg/L

Turbidity: 55.3

LAB SAMPLE TIME: 1110

" " I.D. C1-3-20090923

pH CALIBRATION

STD	READING
4.01	4.01
7.00	7.00
10.01	10.01
SLP	97.0

1245 SET UP ON C1-1

1" DROP PIPE ABOVE M.P.: 1.6'

1251 START PUMPING C1-1

SETUP OF C1-1 (CONT'D)

DROP PIPE LENGTH:

DISCHARGE HOSE: 2" FLAT

SWL 5.27 11.55

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C1-3	SWL	GPM	SGWL
0:00		3.4	1:27
0:04 ~~:00~~ MB	14.61	"	
0:06 ~~:00 MB~~	15.39	"	
0:13:00	16.87	"	
0:19:00	16.88	"	
0:36:00	17.28	"	
0:52:00	17.26 (P)	?	
1:13:00	17.06 (P)	3.0	1:39
1:20:00		6.1	0:49
1:44:00	29.45	"	
2:14:00	37.93	5.3	0:57
2:20:00		4.3	~~1:09 MB~~ 1:10
2:22:00	35.16		
2:30:00	32.31		
3:11:30	~~21.42 MB~~ 30.12'		
3:16:00			1:09
3:17:00	PUMP OFF		

MAX SUSTAINABLE FLOW RATE IS 4.3 GPM

(58)

9/23/2009 (Cont'd)

1305 SETUP OF C1-1 (Cont'd)

1" SWL PVC ABOVE MP: 0.54'

PUMP LENGTH: 2.1'

PUMP TYPE: 0.5 HP 10 10 GPM FLINT & WALLY

1540 FIELD PARAMETERS

pH: 7.50

Temp (from pH): 15.2°C

S.C. 419 µS/cm

D.O. 6.36 mg/L

Turbidity: 4.21 NTU

LAB SAMPLE TIME: 1545

" " I.D: C1-1-20090923

1552 START PUMPING C1-1

1603 1553 PULL PUMP. BECAUSE C1-1 IS SUCH A POOR PRODUCER, TAKES LOTS OF TIME

TO PULL THIS PUMP AS FOR 30 MINUTES

1612 SET UP ON C3-8

1622 DOWNLOAD TRANSDUCER DATA FROM C1-2

FOR C1-1 AND C1-3.

1640 SET TRANSDUCER IN C3-9

SWL: 22.11'

TRANSDUCER: 11.11

1654 START PUMP

C1-1

TIME	SWL (ft)	FLOW (GPM)	TIME FOR 5 GALLONS
12:48:00 (TIME)	14.85	Ø	~~6:53 MIN~~
00:09:00 (STOPWATCH)	15.66	0.73	6:53 min
00:12:00	16.05	"	
~~00:16:00 MIN~~			
00:29:00	17.80	"	
00:48:00	19.53	"	
00:53:30	20.14	"	
1:35:00	23.32	"	
1:48:00	24.36	"	
2:00:00	25.33		7:40
2:02:00 ↑ FLOW			4:30 min
2:04:00	26.32		
2:06:00	27.00		
2:09:00	27.72		
~2:25 (MARK)	30.23	AT PUMP	
2:35:00	30.17		9:53
2:41:00	30.13		
3:00:30	27.94		
3:07:00	26.40		
3:33:00		(-0.54)	

MAX SUSTAINABLE FLOW < 0.75 GPM. THIS WELL APPEARS TO BEHAVE SIMILARLY AS P00-01 WITH THIS RAPID DECREASE IN FLOW.

(60)

9/23/2008

1700 PUMP SETUP AT C3-8

DROP PIPE (1") HEIGHT ABOVE M.P: 3.8'

" " LENGTH: 40'

DISCHARGE HOSE: 2" FLAT

1" SWL PORT HEIGHT ABOVE M.P: 0.67'

PUMP LENGTH: 2.1'

PUMP TYPE: 0.5 HP 1Ø 10GPM FLINT & WALLY

PUMP FROM BOTTOM: 4 3/8" (0.4')

1845 PHOTO 620 OKEEFE SET UP ON C3-8;

TRANSDUCER ON C3-9, CONNECTED POWER.

WORK ON THIS BACKGROUND.

1855 TURN OFF PUMP AT 2:01 HRS

1856 SWITCH TO LARGER PUMP AT 2HRS ON C3-9.

NEW PUMP SETUP.

DROP PIPE (2") LENGTH: 34.9'

" " HEIGHT ABOVE M.P.:

DISCHARGE HOSE: 2" FLAT

1" SWL PORT HEIGHT ABOVE M.P.:

PUMP LENGTH (INCL. CHECK VALVE): 3.4'

PUMP TYPE: 1.0 HP 1Ø 30GPM FRANKLIN ELECTRIC

PUMP DIST FROM BOTTOM: 0.5'

1915 RESET LARGER PUMP

1930 RESET STAFF GAGE AT UPPER CROSSING

READING: 1.641'

19 START LARGER PUMP

C3-8

TIME	SWL (ft)	FLOW (GPM)	TIME FOR 5 GALLONS
1654 (TIME)	25.24	Ø	NA
1655 "	PUMP ON	8.4	35:57 sec
0:02:00	25.51	"	
0:03:00	25.52	"	
0:04:00	25.49	"	
0:08:00	25.43	"	
0:10:00	25.42	"	
0:17:00	25.41	"	
0:26:00	25.40	"	
0:37:00	25.44	"	
0:48:00	25.41	"	
0:52:00	25.45	"	
0:55:00	✓ FLOW	8.8	33:92 sec
0:56:00	↑ FLOW	14.9	20.13 sec
0:58:00	25.64	"	
1:05:00	25.60		
1:17:00	25.58		
1:25:00	✓ FLOW	15	20 sec
1:26:00	↑ FLOW	(MAX) 15.5	19.3 sec
1:28:00	25.62	"	
1:39:00	25.62	"	
2:04:00	25.61	SWITCH PUMPS	
2:37:30	RESTART	50 gpm	6 SEC
2:40:00	25.77		

(62)

9/23/2009 (CONTD)

2000 FIELD PARAMETERS @ B-8

pH: 7.72

Temp (from pH):

S.C. 285.9 µS/cm

D.O. 5.16 mg/L

Turbidity: 5.57

LAB SAMPLE TIME: 2020

" " I.D. CB-8-20090923

2009 INCREASE FLOW, DROPS STATIC

WATER LEVEL BUT NO NOTICEABLE

CHANGE TO BUBBLY GARGING

2033 SHUT DOWN PUMP

2045 OFFSITE

2050 CALL JOE MCILROY W/ DAILY PUMPING

REPORT

2115 SEND DAILY CONSTRUCTION REPORT

9/23/2009

C3-8 (CONT'D)	SWL(ft)	RATE(gpm	TIME FOR 5 GALLONS
2:43:00	25.82	50	
2:45:00	25.91	"	
2:49:00	25.94	"	
~~2:53:00 PM3~~			
3:03:00	25.92	"	
3:10:00	25.97	"	
3:15:00	↑ FLOW		
3:16:00	26.20'	50 (P)	6 SEC
3:22:00	26.21'	"	
3:29:00	26.27'	"	
3:37:00	26.28'	"	
3:38:00	SHUT DOWN PUMP		

(69)

9/24/2005 Mo. Leven Tailings

0650 O'Keefe on site

0700 Pioneer (Will G, Mike B.) on site

Weather: Clear, 32°F. Wind (breeze) from the east.

Toolbox Meeting: Have C3-10 with ½ horse pump, 1" Discharge line, water overhead working conditions, Lone Hollows

0705 O'Keefe set up on C3-8 to pull pump

0735 " " " " C3-10 to set pump

0750 Read staff gage in S.C.: 1.65'

0810 Test pump C3-10 w/ ½ horse motor, only draws down 1' at Isco. Switch to 1 H.P. w/ 2" discharge and flow meter

0905 Restart large pump at 43 GPM.

Set up:

Drop pipe length: 30.0'

" " height above M.P.: 2.5'

Discharge hose: 2" plat

1" SWL port above M.P.: 0.34' → 0.31'

Pump length (incl. check valve): 3.4'

Pump type: 1.0 HP 1¢ 30 GPM Franklin Electric

Pump distance from bottom: 0.5'

Flow meter/totalizer: Neptune Auto Hasn

Gate valve: 2" Nibco T-113

1208 No juice, move to C3-1

1215 Steve Malkovich on site

(65)

9/24/2009

C3-40

TIME	SWL	RATE (GPM)	TIME FOR 5 GALLONS
0904 (0:00 TIME)	20.77	0	0
0905		43	
0:05:00 (STOPWATCH)	22.73'		
0:07:00	22.72'		
0:15:00	22.87'	45	
0:22:00	22.87'	45	
0:30:00	22.91'	46	
1:05:00	22.96'		
1:06:00	↑ FLOW	44	
1:23:00	22.99'		
1:30:00	23.08'	44	
1:32:00	STOP PUMP		
1:33:00	STICKUP CHANGED TO 0.31' (FROM 0.34')		
2:18:00	20.63		
2:19:00	START PUMP, NO JUICE.		
2:42:00	MWS		

1230 SETUP ON C3-1

DROP PIPE LENGTH (4" DIA.): 400'

" " ~~DIA~~ STICK UP ABOVE M.P.: 1.3'

DISCHARGE PIPE: 4" SCHEDULE 40 PVC

1" SWL PORT DEPTH ABOVE M.P.: 0.32

PUMP LENGTH, INCLUDING CHECK VALVE: ~~5'8"~~ 7'0"

PUMP TYPE: BERKELY, 3" DISCHARGE, 3" CHECK VALVE

MOTOR: FRANKLIN ELECTRIC 3Φ 1140 RPM 5 HP

BOTTOM OF PUMP INTAKE: 2.3'

1350 PIPE IS LAID OUT ON C3-1, WIRING UP TO CONTACTOR, NOSS FLOW METER AND STOP COCK FOR SAMPLING. DISCHARGE HOSE EXTENDS SOUTH ACROSS ROAD.

1505 PUMPING SETUP, C3-1, CONT'D

FLOW METER: FUJI ELECTRIC PORTAFLOW SERIAL # 426823

DISTANCE PUMP IS ABOVE BOTTOM:

PHOTO 621, 622: PUMPING SETUP ON C3-1, INCLUDING 3Φ GEN SET

1510 MARK AND STEVE SET UP ON C2-2 FOR DEVELOPMENT

1540 STEVE STARTS DEVELOPING C2-2

1550 MARK MOVES OVER TO SET UP C3-7

1555 WELL MOVES TRANSDUCER FROM C3-4 TO C3-6.

9/24/2008

C3-1

TIME	SWL	FLOW (GPM)	FREQUENCY
14:50:00	19.54'		
14:53:07/0:00	START PUMP	80	57.66 HZ
0:04:00	21.88		
0:05:00	21.92		
0:06:00	21.96		
0:07:00	21.99		
0:09:00	21.99	80	
0:45:00	22.13		
0:53:00	22.18	80	
0:57:00	22.26	80	
1:00:00	22.63	80	
1:01:00	↑ FLOW ⊗	80 MAX	
1:16:00	22.36	(FAULT ON FLOW INCREASE)	
1:20:00	22.47		
1:22:00	RESTART UFD TO RUN TO 120 HZ,		
	STOP PUMP MOMENTARILY.		
1:30:00	RESTART	92	
1:43:00	22.72	92	68.93
1:51:00	22.80	92	
1:55:00	22.81	92	
2:20:00	22.88	92	
2:42:00	22.89		
2:44:00	STOP PUMP TO SWAP TO 20HP 3Ø 250 GPM PUMP.		

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1753 START PUMP AT C3-7

1805 GO BACK TO DEVELOPING TRUCK, ASK STEVE

~~1855~~ MWB TO BLOW OUT C2-2 WHILE LOOKING HIS TRUCK TO SWAP 5HP FOR 30HP AIRMP IN C3-1

1854 INCREASE FLOW AT C3-7 TO 27 GPM

1858 TOTALIZER IS WORKING AGAIN

1925 TURBIDITY ON C2-2 = 550 NTU

CALIBRATION	READING
20	20.8
100	97.6
800	757

1935 RESTART C3-1 WITH LARGER PUMP

1948 STOP DEVELOPMENT ON C2-2

TURBIDITY = 32.6 NTU

2045 FIELD PARAMETERS C3-7

pH: 7.69

Temp (from pH): 6.2°C

S.C. 2941.41 µS/cm

D.O.: 5.25 mg/L

Turbidity: 411 NTU

LAB SAMPLE TIME: 2050

" " I.D.: C3-7-20090424

~~2102~~ 2054 STOP PUMPING ON C3-7

2100 Offsite — MWD

9/24/2004

WATER LEVELS

LOCATION	SWL	TIME
C-3-8	24.62'	0805
C-3-9	22.19'	0803
C-3-10	20.77	0807

(70)

9/24/2009

1552 FLOW INCREASE AT CB-1 NO FLOW INCREASE

1555 FAULT, FLOW MOMENTARILY 8 2005, TAKE FLOW BACK TO 80 GPM, WHICH IS APPARENTLY THE MAXIMUM FOR THIS PUMP.

1615 STOP PUMP AT CB-1 TO RUN AT HIGHER H2 RATE

1635 RESTART PUMP AT HIGH PUMPING RATE OF 92 GPM AND LOSE 20 MINUTES OF PUMPING TIME ~~AB~~

1645 PHOTO 623: DEVELOPMENT ON CB-2, STEVE MALKOVICH (NO VEST AS PER DRILLER'S EXEMPTION)

1735 STOP PUMP AT ~~CB~~-1 TO COSTART CB-2

1740 MOVE OVER TO CB-2

PUMP SETUP

DROP PIPE LENGTH: 40.0' OF 2" SCH. 40 PVC

" " STICKUP ABOVE M.P.: 1.7'

DISCHARGE PIPE: 2" FLAT HOSE

1" SWL PORT HEIGHT ABOVE M.P.: 0.46

PUMP LENGTH (INCL. CHECK VALVE): 3.4'

PUMP TYPE: 1.0 HP 10 30 GPM FRANKLIN ELECTRIC

PUMP DISTANCE FROM BOTTOM: 0.5'

FLOW METER/TOTALIZER: NEPTUNE AUTO HEAD

GATE VALVE: NIBCO T-113

9/24/2009

C3-7

TIME	BWL	FLOW	TIME FOR 5 GALLONS
1752	29.32'	Ø	Ø
1753/0:00	START PUMP		
0:02:00	32.45	~20 GPM	14.56 SECONDS
0:06:00	32.32		
0:09:00	MW3		
0:10:00	32.25		
0:54:00	32.15		
1:00:00	✓ FLOW 32.28		16 SECONDS
1:06:00	↑ FLOW		8 SECONDS
	↓ FLOW	30 GPM	10 SECONDS
1:02:00	32.59'	27 GPM	NEPTUNE
1:06:00	32.63'		
2:05:00	32.50'		
2:07:00	↑ RATE	43 GPM	"
2:10:00	33.14	"	
2:15:00	32.92	"	
2:43:00	32.85		
2:54:00	32.87	43GPM	"
3:00:00	32.90	43	
3:01:00/2054	PUMP OFF		

9/24/09

C3-1 (Contd)

1937 RESTART PUMP ½ HOUR LEFT

NO FLOW - POSTPONE UNTIL TOMORROW

(74)

9/25/2002 McLaren Turbines

0700 On-Site for Toolbox Meeting

Mark Richards

Steve Mulhovick

Will Goldberg

Mike Bond

Discussed plan of attack today. Mark will go over and try to get the 5HP box to work, then Mark & Steve will set up the developer rig on CB-7, and then Mark will try to get the 250 GPM pump to work. Meanwhile, Will Goldberg will take a round of water levels for the entire site.

0715 Download pressure data from CB-3.

0815 Mark and Steve are set up on CB-10

0817 START PUMPING ON CB-10

0835 STATIC GAGE READING: 1.65

0840 PUMP SET AT CB-10 (SEE BELOW)

0846 INCREASE FLOW AT CB-10 & PUMP IS MAX AT 74 GPM

0855 PUMP SET AT CB-10

DRAW PIPE LENGTH:

" " STICKUP ABOVE M.P.: 0.8'

DISCHARGE PIPE: 2" FLAT HOSE

1" SWIVEL PORT ABOVE M.P.: 0.50'

PUMP LENGTH (INCL. CHECK VALVE): 5.2'

PUMP TYPE: 5HP 1Ø 135 GPM REW

9/25/2024

C3-10

TIME	SWL	FLOW	
0815	20.84'	Ø	
0819/0:00	START PUMP	82	NEPTUNE
0:09:00			
~~0:06:00~~ MB	27.32'	"	
0:10:00	27.27'	"	
0:15:00	27.26'	"	
0:28:00	27.37'	78	
0:30:00	↓ FLOW	79 GPM MAX	
0:35:00			
1:26:00	27.26'		
1:30:00	27.29'		
1:31:00/0948	STOP PUMPS, THIS REPRESENTS 3 TOTAL HOURS OF PUMPING		
1020	20.57'	Ø	(+0.50' FOR M.P.)
1133	20.49'	~~98~~	

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9/25/2009

0850 PUMP SETUP AT C3-10 (CONT) EST 77 GPM.

PUMP TYPE: 5.0 HP 1Ø FSD

PUMP DISTANCE FROM BOTTOM:

FLOW METER/TOTALIZER: NEPTUNE AMCO HERSH

GATE VALVE: NIBCO T-113

0852 WELL GOLDBERG OFF SITE

0905 DOWNLOAD TRANSDUCER AT C2-3, SAVE DATA AND MOVE TO C2-2 FOR DEVELOPMENT OF C2-3. WHILE DOWNLOADING DATA DID NOT NOTICE ANY EFFECT FROM PUMPING 79 GPM AT C3-10 HOWEVER PUMPING FROM C3-1 AND C3-9 IS EVIDENT IN THE DATA FROM YESTERDAY.

-STATIC WATER LEVEL, C2-3: 19.52

-TRANSDUCER READING: 31.36

0920 2ND PUMP TRUCK HAS WINCH ISSUES, WILL NOT DEVELOP C2-3 AT THIS TIME. PLACED TRANSDUCER BACK IN C2-3.

-STATIC WATER LEVEL: 19.54'

-TRANSDUCER READING: 31.46'

0930 TRANSDUCER DATA (SOIL DATA) IS DECREASING SLIGHTLY AT C2-3 AND IS LIKELY THE EFFECT OF PROGRAMMED C3-10 (SEE EARLIER COMMENT AT 0905).

9/25/2009

C3-5

TIME	SWL (ft)	FLOW (GPM)	
11:48	33.52'	Ø	
11:55/0:00	START PUMP		
~~11:00~~ 00:02:00	33.74'		27 SECONDS/5 GAL
00:03:00	33.7#'		
00:04:00	↑ FLOW	47 GPM	NEPTUNE
0:05:00	↓ FLOW		
0:30:00	34.80'		
0:45:00	34.79'		
1:26:00	35.36		
1:27:00	↑ FLOW	64 GPM	
1:30:00	36.29		
1:30:30	36.28		
1:31:00	36.31		
1:31:30	36.29		
1:32:00	36.29		
2:10:00	35.89'	65 GPM	
2:12:00	↑ FLOW	97 GPM	
2:14:30	38.84		
2:15:00	38.91		
2:15:30	38.93		
2:16:00	38.98		
2:20:00	39.12		

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0945 FIELD PARAMETERS C3-10

pH: 7.78

Temp (from pH): 7.2°C

SC: 269.4 µS/cm

DO: 9.39 mg/L

Turbidity: 1.11

LAB SAMPLE TIME: 0950

" " ID: C3-10-20070925

CALIBRATION - TURBIDITY

	STANDARD	READING (NTU)
TURBIDITY	20	20.5
	100	99.2
	800	754
pH	4.01	4.01
	7.00	7.00
	10.01	10.01

SLP: 96.7

1015 PULL PUMP FROM C3-10, SET UP ON C3-5

PUMPING SYSTEM

DROP PIPE LENGTH: 50' (12")

" " STICKUP ABOVE M.P.: 4.3'

DISCHARGE PIPE: 2" FLAT HOSE

1" SWL PORT ABOVE M.P.: 0.45'

PUMP LENGTH (TWO CHECK VALVES): 5.2'

PUMP TYPE: 5HP 1¢ 135 GPM FLOWS FRW

9/25/2009

~~SOIL~~ MW3 C3-5 (CONT'D)

TIME ~~LOCATION~~ MW3	SWL (FT)	~~TIME~~ MW3 FLOW (GPM)
2:32:00	39.16'	99 GPM
2:48:00	39.22'	99 GPM
3:06:00	39.20	98 GPM
3:07:30	START PUMP OFF	
3:08:00	34.77	Ø
3:08:30	34.45'	"
3:09:00	34.36'	
3:09:30	34.35'	
3:10:00	34.31'	
3:11:00	34.20	
3:15:00	34.09	
3:20:00	34.09	
3:30:00/1526	34.00	Ø

MAX PUMPING RATE FROM C3-5 IS 99 GPM, AT WHICH POINT THE PUMP WAS RUNNING ALL OUT.

(80)

9/25/2009

C3-5 PUMP SETUP CONT

PUMP DISTANCE FROM BOTTOM: 0.5'

FLOW MASTER/TOTALIZER: NEPTUNE RMTO H6SN

GATE VALVE: NIBCO T-113

GENERATOR: 1Ø Miller Bobcat 250

12:45 C3-1 IS SETUP W/ THE LARGER PUMP

SETUP AT C3-1

PROS PIPE 4" DIA PVC SCH-40

" " LENGTH: 50'

" " STICKUP: ~~2.4' AMB~~ 1.3'

DISCHARGE PIPE: 4" SCH 40 FLAT HOSE

1" SWL ABOVE M.P. : 0.46'

PUMP LENGTH (INCLUDING CHECK VALVE):

PUMP TYPE: 20 HP 3Ø 250 GPM

PUMP DISTANCE FROM BOTTOM: 0.5'

FLOW MASTER/TOTALIZER: FUJI ELECTRIC PORTAFLOW

FLOW CONTROL: VFD, AC Tech MC Series

Intelligent Drive

GENERATOR: 3Ø INTERSTATE POWER SYSTEMS, ~~WEC INDUSTRIAL 4700~~, MJB 30KW, SERIAL NO 100226

13:33 BACK TO C3-5 TO INCREASE FLOW

13:38 " " C3-1 FOR SAMPLE AND FIELD PARAMETERS

9/25/2009

C3-1

TIME	SWL	FLOW (GPM)	
12:49	20.08	∅	
12:54/0:00	START PUMP	20?	36.94 Hz
0:02:00	26.16	"	
0:03:00	26.48		
0:07:00	26.73		
0:08:00	26.93		
0:09:00	26.94		
0:10:00	26.79	(INCREASED SENSITIVITY ON RELAY)	
0:15:00	MWB		
0:20:00	27.04	20?	
0:40:00	27.06		
0:45:00	27.22	20?	
0:49:00	(FLOW AND SWL = DOWN)		
0:50:00	23.03		
0:50:30	22.00		
0:51:00	21.53		
0:51:30	21.30		
0:52:00	21.16		
0:52:30	21.00		
0:53:00	20.93		
0:53:30	20.82		
0:54:00	20.82		

(B-2)

9/25/2009

1335 FIELD PARAMETERS

pH: 7.69

Temp (from pH): 7.6°C

SC: 392 µS/cm

DO: 5.72 mg/L

TURBIDITY: 11.1 NTU

LAB SAMPLE TIME: 1740

LAB SAMPLE I.D: C3-1-20090925

1343 SHUT PUMP OFF AT C3-1

1405 BACK TO C3-5 FOR FLOW INCREASE

1427 PHOTO 626, 627 CHANGED (SUB TO OKEEFE) SETUP ON C3-5 AND C3-3

1445 FIELD PARAMETERS FOR C3-5

pH: 7.62

Temp (from pH): 6.8°C

SC.: 340 µS/cm

D.O. 5.46 mg/L

TURBIDITY: 11.2 NTU

LAB SAMPLE TIME: 1450

LAB SAMPLE I.D: C3-5-20090925

1503 SHUT PUMP OFF AT C3-5

TOTAL FLOW READING: 134400 GALLONS

1505 MARK AND STEVE MOVING PUMP SETUP FROM C3-1 TO C3-3

1525 MARK AND STEVE ~~MOVING~~ STOP WORK ON C3-3 AND MOVE PUMP FROM C3-5 TO C3-6, PUMP WILL NOT BE MOVED UNTIL 0.5 HR RECOVERY IS COMPLETE

9/25/01

C3-1 (CONT'D)

TIME	SWL	FLOW
0:54:30	20.72	10
0:55:00	20.69	
~~0:56:00~~ MWB		
0:57:00	20.61	
0:58:00	20.58	
0:59:00	20.55	
1:00:00	20.51	
1:05:00	20.41	
2:40:00	19.75 (plus 0.46' = 20.21')	

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9/25/2002

1526 FINISH 0.5 HR RECOVERY PERIOD AT C3-5

1540 PUMP SETUP AT C3-3

DROP PIPE, 4" DIA., PVC SCH.40

" " LENGTH: 50.0'

" " STICKUP: 1.3'

DISCHARGE PIPE: 4" SCH.40 PVC, 4" FLAT HOSE, WHITE HOSE

1" SWL ABOVE M.P. HEIGHT: 0.32'

PUMP LENGTH (INCL. CHECK VALVE):

PUMP TYPE: 7.5 HP 3ϕ 250 GPM

PUMP DISTANCE FROM BOTTOM:

FLOW METER/TOTALIZER: FUJI ELECTRIC PORTAFLOW

FLOW CONTROL: VFD, AC Tech, MC Series Intellidrive

D-TOUCH

GENERATOR: 3ϕ INTERSTATE POWER SYSTEMS, 30KW, SERIAL NO. 10020B

1545 MOVE TRANSDUCER FROM C3-6 TO C3-5

SWL C3-5 34.27'

TRANSDUCER READING: 9.34'

1600 PUT TRANSDUCER IN C3-5, SET UP FILE AS "C3-5, OBS C3-6 AND C3-4"

SWL C3-5: 33.23'

TRANSDUCER READING: 16.69'

55

9/25/08

C3-6

TIME	SWL	FLOW	TIME PER 5 GAL
1632	34.90		
1633	0:00	START PUMP, FLOW TOO HIGH, CAVITATING	
~~0:02:00~~		FLOW METER NOT WORKING	
0:04:07	36.25		41 SECONDS
0:05:00	36.15	(RECOVERING)	
0:07:09	36.04	"	
0:15:00	36.15	(DRAWING DOWN)	
0:25:00	36.05		
0:45:00	36.12		
1:01:00		OPEN FLOW 1/4 TURN	
1:02:30	37.11		27 SECONDS
1:06:00	37.23	PUMP STOPS PUMPING	
1:09:00		OUT OF FUSE, SUSPEND TEST	
1:10:00	35.64		
1:29:00		PAUSE STOP WATCH, 20 MIN 26.85 SECONDS	
		TURN ON PUMP	
1:37:30	37.25		
2:10:00	37.15		
3:20:00		SHUT DOWN PUMPS	

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9/25/2009

1605 MARK AND STAKE SETTING UP ON C3-6

1610 IN LOOKING AT THE TRANSDUCER SETUP ON C3-6, IT LOOKS LIKE THE TRANSDUCER SETTLED INTO THE WELL, LIKELY CAUSING APPROXIMATELY 0.3' IN WATER LEVEL INCREASE AT SOME POINT IN TIME.

1630 SETUP AT C3-6

DROP PIPE: 2" DIA PVC SCH 40

" " LENGTH: 350'

" " STICK-UP ABOVE M.P: 0.8'

DISCHARGE PIPE: 2" FLAT HOSE

1" SWIVEL PORT HEIGHT ABOVE M.P: 0.48'

PUMP LENGTH (INCLUDING CHECK VALVE): 5.2'

PUMP TYPE: 5HP 1ø 135 GPM FLOW

PUMP DISTANCE FROM BOTTOM: 1.2'

FLOW MSTER/TOTALIZER - NEPTUNE AUTO H65N

GATE VALVE: NIBCO T-113

GENERATOR: 1 ~~BOBCAT~~ HP MILLER BOBCAT 250

1635 MARK AND STAKE BACK ON C3-B SETUP

1650 STAFF GAGE, UPPER: 1.65'

PITOT 628, 629 CHAMBERLAIN PUMP (SUB TO O'KEEFFE DRILLING) SETUP ON C3-6, PUMPING AT 7 GPM FOR FIRST HOUR

1720 START PUMP AT C3-3, 100 GPM

1733 INCREASE FLOW AT C3-6

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9/25/2009 C3-3

Time	SWL (ft)	FLOW (GPM)	Hz
1720	26.87'	∅	
1722 / 0:00:00		100	
0:04:00	27.98'		
0:04:30	27.95' (RECOVERING)		
0:05:00	27.96'		
0:05:30	28.02'		
0:06:00	27.97'		
0:06:30	27.96'		
0:07:00	27.98'		
0:08:00	28.02'		
0:09:00	27.97'		
0:10:00	28.01'		
0:30:00	28.08'		
0:40:00	28.11'	100	
1:02:30	28.15'	100	
1:03:30	↑ FLOW	200	38.47 Hz
1:08:00	29.65		
1:08:30	29.68		
1:09:00	29.69		
1:12:00	29.78		
1:17:00	29.85		
1:24:00	29.92		
1:43:00	30.07		

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2009/09/25

1742 OUT OF GAS AT C3-6, SUSPENDED TEST
1:08 THROUGH.

1744 BACK TO C3-3

1813 TURN PUMP BACK ON AT C3-6

1826 INCREASE FLOW AT C3-3 TO 200 LPM

1841 CHECK ON C3-6, WATER IS LIKELY AT THE TOP OF THE INTAKE SCREEN, INCREASING FLOW AT C3-3 HAS DRAWN IT DOWN BELOW THE INTAKE

1850 MEASURE SWL'S AT OTHER LOCATIONS

1950 FIELD PARAMETERS AT C3-6
pH: 7.65
Temp (From pH): 8.9°C
SC: 310 µS/cm
DO: 7.44 mg/L
Turbidity: 69.7 NTU
LAB SAMPLE TIME: 1955
" " I.D.: C3-6-20090925

2010 FIELD PARAMETERS AT C3-3
pH: 7.65
Temp (From pH): 5.2°C
S.C. 374 µS/cm
D.O. 6.45 mg/L
Turbidity: 3.37
LAB SAMPLE TIME: 2015
" " I.D.: C3-3-20090925

9/25/2013

C3-3 (CONT'D)

TIME	SWL (FT)	FLOW (GPM)	FREQUENCY (HZ)
1:53:00	30.12'	200	
2:00:00	30.20'	200	
2:01:00	↑ FLOW	272	
2:05:00	32.34'		
~~2:05:30~~ MW3	~~32~~		
2:06:00	32.46'		
2:06:30	32.50'		
2:07:00	32.54'		
2:07:30	32.56'		
2:08:00	32.60'		
2:09:00	32.64'		
2:10:00	32.80		
2:11:00	32.93		
2:12:00	33.03		
2:13:00	33.10		
2:14:00	33.19		
2:15:00	33.25		
~~2:20:00~~ MW3			
2:51:00	34.03		
3:04:00	34.15	270	
3:05:00	SLOW RUN	STOP FLOW	
~~3:05:30~~	28.80		
3:06:00	28.98		

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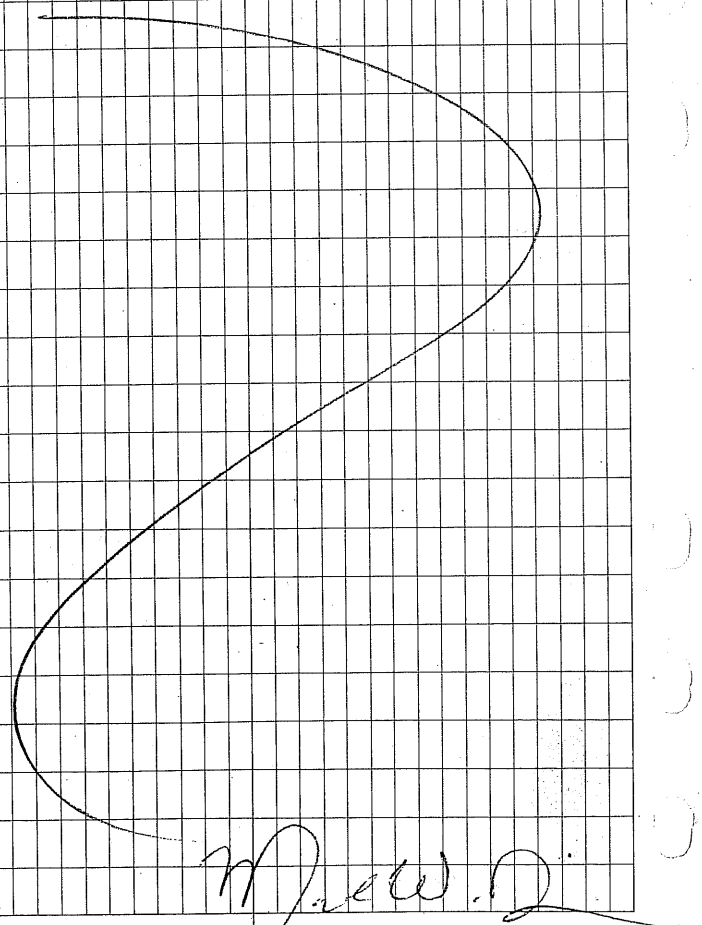
9/25/2009

20-27 SLOW AND STOP PUMP ATC3-3

2100 LOCK GATE, OFF SITE

2115 CALL JOE MAZUREK, DAILY PHONE CALL

1000 SEND IN DAILY CONSTRUCTION REPORT



9/25/2007

C3-3

TIME	SWL
3:06:30	28.36
3:07:00	28.28
3:07:30	28.17
3:08:00	28.16
3:09:00	28.02
3:10:00	28.01
3:15:30	27.92
3:20:00	27.82
3:30:00	27.60

Q2

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9/25/2009

SWL

LOCATION	SWL	TIME
C3-4	30.34'	1852:00
"	30.36'	1903:00
C3-2	23.77'	1909:00
C3-1	21.17'	1911:00
C3-2	23.76'	1913:00

(94)

9/26/2002 McLean Tailings

0700 On-Site, unlock gate, Okieffe on-site
Mark Richards
Steve MALKOWICH
Mike BOURDEAU

0705 DAILY ~~TOOL BOX~~ MEETING, TALK ABOUT ORDER OF WORK FOR TODAY. WILL LIKELY SET UP SMALL RIG ON C3-4, LARGE RIG ON C3-2, THEN TAKE LARGE ~~RIG~~ TO C3-9 AND START DEVELOPING C2-3,

0725 O'KEEFFE DOWS AT C3-6, MOVES OVER TO C3-4

0730 ROUND OF WATER LEVELS

~~0755 MOVE TRT MW3~~

0800 TALK OVER SEQUENCING OF PUMPING

0812 START PUMPING C3-4

0850 WEATHER: SUNNY, CLEAR, LOW OF 31, FORECASTED HIGH OF . NO BREEZE. SMOKY

0855 STAFFGAGE, WSEL = 1.65'

0900 SETUP AT C3-4

DROP PIPE: 2" DIA SCH 40 PVC
" " LENGTH: 45.0'
" " DTGW UP ABOVE M.P: 0.9
DISCHARGE PIPE: 2" FLAT HOSE
1" SUCK PORT HEIGHT ABOVE M.P: 0.46'

9/24/2009

LOCATION	SWL (ft)	TIME
C3-8	24.97'	0733
C3-9	22.49'	0732
C3-10	20.45'	0737
C1-1	14.54'	0741
C1-2	9.89'	0742
C1-3	10.17'	0745
C1-4	11.40'	0747

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9/26/2009

SETUP AT C3-4 (CONT'D)

PUMP LENGTH INCLUDING CHECK VALVE: 52'

PUMP TYPE: 5HP 1Ø 135 GPM FPW

PUMP DISTANCE FROM BOTTOM: 0.7'

FLOW METER/TOTALIZER: NEPTUNE AMTO HGSN

GATE VALVE: NIBCO T-113

GENERATOR: 1Ø MILLER BOBCAT 250

1038 START PUMPING ON C3-9

1044 RE-START " " "

PUMP SETUP AT C3-9

DROP PIPE, 4" DIA. PVC SCH 40

" " LENGTH: 500'

" " STICKUP: 1.3'

DISCHARGE PIPE: 4" SCH 40 PVC, 4" FLEX HOSE, NEW FLEX

1" SWG ABOVE M.P. HEIGHT: ~~1.3'~~ MW3 0.32'

PUMP LENGTH (INCL. CHECK VALVE): 7.7'

PUMP TYPE: 3Ø 20 HP 250 GPM

PUMP DISTANCE FROM BOTTOM: ~~3.9'~~ MW3 4.3'

FLOW METER/TOTALIZER: FUJI ELECTRIC ROTAFLOW

FLOW CONTROL: UFO MC SERIES INTELLIGENT ORIUS

GENERATOR: 3Ø INTERSTATE POWER SYSTEMS 3 KW SERIAL # 100028

9/26/2006

C3-4

TIME	SWL	FLOW	TIME FROM CHG.
0911	30.00	Ø	
0912:00	~~30.70~~ MP3	START PUMP	
0:01:00	30.70	60	↓ FLOW
0:02:00	30.56		↓ FLOW
0:03:00	30.35		
0:04:00	30.30		↑ FLOW
0:05:00	30.40		
0:06:00	30.45		
0:07:00	30.40	30	
0:08:00	30.42		
0:25:00	30.32	25	
0:30:00	30.45		
0:37:00	30.42		
0:57:00	30.37	26	
1:00:00	30.45		
1:01:00	↑ FLOW	48	
1:02:00	30.61		
1:03:00	30.68		
1:04:00	30.68		
1:05:00	30.71		
~~1:15:00~~ MP3			
1:32:00	30.62		

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9/26/2009

1105 BACK TO C3-4 FOR SAMPLING AND FIELD PARAMETERS

CALIBRATE pH, TURBIDITY

	STANDARD	READING	SLP: 96.1
pH	4.01	4.01	
	7.00	7.00	
	10.01	10.01	
TURBIDITY	STD (NTU)	NTU	
	20	20.5	
	100	97.5	
	800	750	

1125 FIELD PARAMETERS, C3-4

pH: 7.83

Temp (from pH): 7.6°C

SC: 326 µS/cm

DO: 6.55 mg/L

Turbidity: 0.93 NTU

LAB SAMPLE TIME: 1133

" " I.D.: C3-4-20090926

1135 START PUMP OFF AT C3-4

1155 PUMP REMOVED FROM C3-4, 10 MINUTES EARLY, BY CHAMBERLAIN.

1210 MOVE TRANSDUCER FROM C3-5 TO C3-3

SWL AT C3-3: 33.80

TRANSDUCER READING AT C3-5: 16.21'

9/26/2009

C3-4 (Cont'd)

TIME	SWL (ft)	FLOW (gpm)
1:38:00		ø
1:55:00	PUMP STARTED AGAIN, -17 MINUTES	
2:00:00	30.58'	48
2:16:00	30.72	
2:17:00	↑ FLOW	99
2:17:30	31.17'	
2:18:00	~~31.13~~ MWS 31.16	
2:18:30	31.16'	
2:19:00	31.18'	
2:19:30	31.18'	
2:20:00	31.19	99
2:55:00	31.37	99
3:20:00	31.40	99
3:23:00	SHUT OFF PUMP	
3:23:30	30.56'	ø
3:24:00	30.50'	
3:24:30	30.47'	
3:25:00	30.44	
3:25:30	30.43	
3:26:00	30.43	
3:27:00	30.38	
3:28:00	30.39	

(100)

9/26/2009

~~1352~~ MWB MOVE TRANSDUCER TO C3-3

1230 SWL AT C3-3: 26.99'

TRANSDUCER READING AT C3-3: 23.02'

~~1345~~ MWB

1255 START PUMP AT C3-2, 58.1' TD

PUMPING SETUP $-\frac{54.3}{3.8}$

DROP PIPE: 2" SCH 40 PVC

" " LENGTH: 52.0'

" " STICKUP ABOVE M.P.: 0.9'

DISCHARGE PIPE: 2" FLAT HOSE AND NOZZLE

1" SWL PORT HEIGHT ABOVE M.P.: 0.47'

PUMP LENGTH, INCLUDING CHECK VALVE: 3.2'

PUMP TYPE: 5HP 1Ø 135 GPM ~~FSW~~ MWB

PUMP DISTANCE FROM BOTTOM: 3.8'

FLOW METER/TOTALIZER: NEPTUNE; AUTO HOSE

GATE VALVE - NIBCO T-113

GENERATOR: 1Ø MILLER BOBCAT 250

1340 C3-9 FIELD PARAMETERS AND SAMPLE

pH: 7.86

Temp (FROM pH PROBE): 7.6°C

SC: 298.6

D.O.: 7.71

Turbidity: 6.18 NTU

LAB SAMPLE TIME: 1345

" " I.D.: C3-9-20090926

9/26/09

C3-4 (Cont'd)

TIME	SWL (ft)	FLOW (GPM)
3:29:00	30.42	⊗
3:32:00	30.42	
3:50:00	29.90 (+0.32' = 30.22')	

MAXIMUM FLOW ACHIEVED AT C3-4 WAS 99 GPM WITH THE PUMP GOING AT FULL CAPACITY

(102)

9/26/2009

1402 INCREASE FLOW AT C3-2

1405 MARK AND STAKE BREAK DOWN AT C3-2 PUMP WILL NOT BE MOVED UNTIL 1420, SET UP AT C2-2.

1520 DOWNLOAD DATA FROM TRANSDUCER IN C2-3. AND MOVE TO C2-1.

SWL IN C2-3: 20.27'

TRANSDUCER READING IN C2-3: 30.53'

1535 MOVE TRANSDUCER TO C2-1

SWL IN C2-1: 21.93'

TRANSDUCER READING IN C2-1: 28.78'

1540 MARK AND STAKE ARE READY TO START AT C2-2.

1550 START PUMP ON C2-2

1610 SAMPLE AND FIELD PARAMETERS C3-2

pH: 7.41

Temp (from pH meter): 10.0°C

S.C: 520 µS/cm

D.O: 11.48 mg/L

Turbidity: 47.3 NTU

LAB SAMPLE TIME: 1615

" " I.D: C3-2-20090926

1615 TURN PUMP OFF AT ~~C2-1~~ MW3 C3-2 10.21-05

1635 MARK AND STAKE MOVE SMALL RIG BACK TO C2-3 AND SET UP FOR DISCHARGE

9/26/2023

C3-9

TIME	SWL	FLOW	FREQUENCY (HZ)
1037	22.84'	Ø	
1038 / 0:00	START PUMP		
0:02:00	23.60'		
0:02:30	23.23 (RECOVERING)		
0:03:00	22.92	Ø	
0:06:00	RESTART PUMP	100	26.75
0:07:00	29.37		
0:07:30	30.20		
0:08:00	30.80		
0:08:30	31.11		
0:09:00	31.23		
0:09:30	31.43		
0:10:00	31.46		
0:11:00	31.51		
0:12:00	31.52		
0:13:00	31.53		
0:14:00	31.58		
0:15:00	31.57		
0:26:00	31.68		
1:08:00	31.59	100	
1:10:00	↑ FLOW	190	42.37
1:16:00	40.33		

(104)

9/26/2004

1635 C2-2 PUMP SETUP. C2-2 IS 71.2' T.O. FROM M.P.

DROP PIPE, 4" O.A., SCH40 PVC

" " LENGTH: 65.0'

" " STICKUP: 1.6'

DISCHARGE PIPE: 4" SCH. 40 PVC, 4" FLAT HOSE

1" SWL PORT HEIGHT ABOVE M.P.: 0.3'

PUMP LENGTH (INCLUDING CHECK VALVE): 7.2'

PUMP TYPE: 3 & 2 H.P. 250 GPM

PUMP DISTANCE FROM BOTTOM: 0.7'

FLOW METER/TOTALIZER: FUJI ELECTRIC PORTAFLOW

FLOW CONTROL: VFD, AC TECH, MC SERIES, INSTRUCTION MANUAL

DRIVE

GENERATOR: 3 & 2 INTERSTATE POWER SYSTEMS BOOK

SERIAL # 1000228

1650 MARK AND STEVE START DEVELOPING C2-3

1652 INCREASE FLOW AT C2-2 TO 200 GPM

1752 INCREASE FLOW AT C2-2 TO 300 GPM

1800 MARK IS WORKING WITH A SHOVEL TO KEEP THE FLOWS FROM C2-2 AND C2-3 ON THE SOUTH SIDE OF THE CENTRAL ROAD.

1805 DOWNLOAD DATA FROM TRANSDUCERS IN ~~P2-025~~, P2-020 MWS

SWL IN P2-020 19.41'

TRANSDUCER IN P2-020 19.42'

LOTS OF WATER AROUND THESE TWO PIEZO-METERS

9/26/2008

C3-9 (CONT'D)

TIME	SWL (ft)	FLOW (GPM)	FREQUENCY (HZ)
1:16:32	40.35'	190	42.37
1:17:00	40.32'		
1:17:30	40.34'		
1:18:00	40.31'		
1:19:00	40.32'		
1:20:00	40.35'		
2:06:00	40.37'	186	
2:07:00	↑ FLOW ⊗ PUMP CAVITATES, BACK		
~~2:~~ MB	TO 186 GPM		42.37
2:40:00	40.60'		
3:07:00	40.27'		
3:08:00	SLOW AND SHUT DOWN PUMP		
3:09:00	27.62'	⊘	
3:09:37	27.16'		
3:10:00	26.58'		
3:10:30	24.99		
3:11:00	24.21'		
3:11:30	24.01'		
3:12:00	23.99'		
3:12:30	23.94'		
3:13:00	23.90'		
3:13:30	23.87		

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9/26/2009

1805 FROM THE STEP DRAWDOWN TESTS. IT ((CONT)) IS LIKELY THAT RECHARGE IS EFFECTING THE DRAWDOWN IN THE PIEZOMETERS

1815 DOWNLOAD AND RESTART TRANSDUCER IN PZ-02S

SWL IN PZ-02S:

TRANSDUCER READING IN PZ-02S:

LOST SIGNAL & NEED TO WAIT UNTIL CZ-2 IS DONE PUMPING.

1850 CZ-2 FIELD PARAMETERS AND SAMPLES

pH: 7.31

Temp (from pH meter): 7.7°C

S.C.: 870 µS/cm

D.O. 7.06 mg/L

Turbidity: 4.72

LAB SAMPLE TIME: 1855

" " I.D.: CZ-2-20090926

1857 PUMP OFF AT CZ-2, MARKING TOP MARKER WATER

1930 DOWNLOAD DATA FROM PZ-02D, ~~AND RE-RUNS~~ SAVE AND RE-START

1935 LOWER STAFF GAGE 0.60', LOTS OF FERRICRETE IN THE CHANNEL.

PHOTO 630: LOWER STAFF GAGE AFTER SCRAPING OFF FERRICRETE.

9/26/2009

CB-9 (control)

Time	Sink	Plug
3:15:00	23.88'	∅
3:16:00	23.86'	
3:17:00	23.85'	
3:18:00	23.83'	
3:19:00	23.84	
3:20:00	23.83'	

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9/26/2007

1945 DOWNLOAD DATA FROM PZ-025

SAL IN PZ-025: 14.52'

TRANSDUCER READING: 13.83'

1952 DOWNLOAD DATA FROM BAROMETRIC COMPENSATION

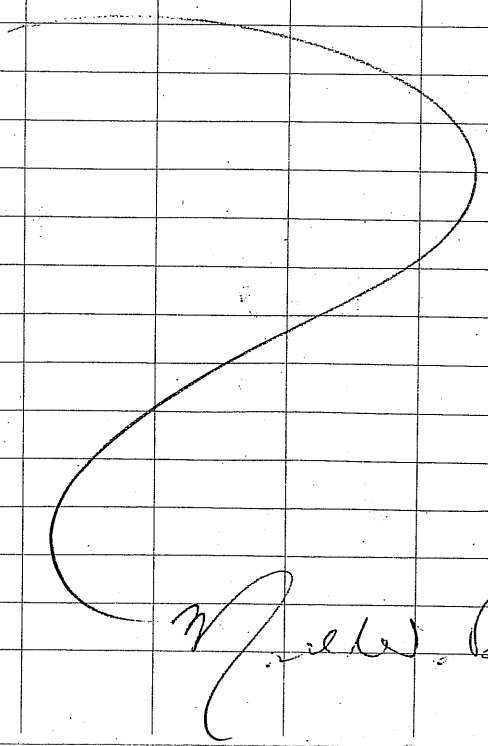
2002 RESTART TRANSDUCER IN PZ-025

2005 CHAMBERLAIN PUMP OFF SITE

2015 MIKE BOLDEN OFF-SITE.

2020 CALL JOE MCELROY FOR REPORT.

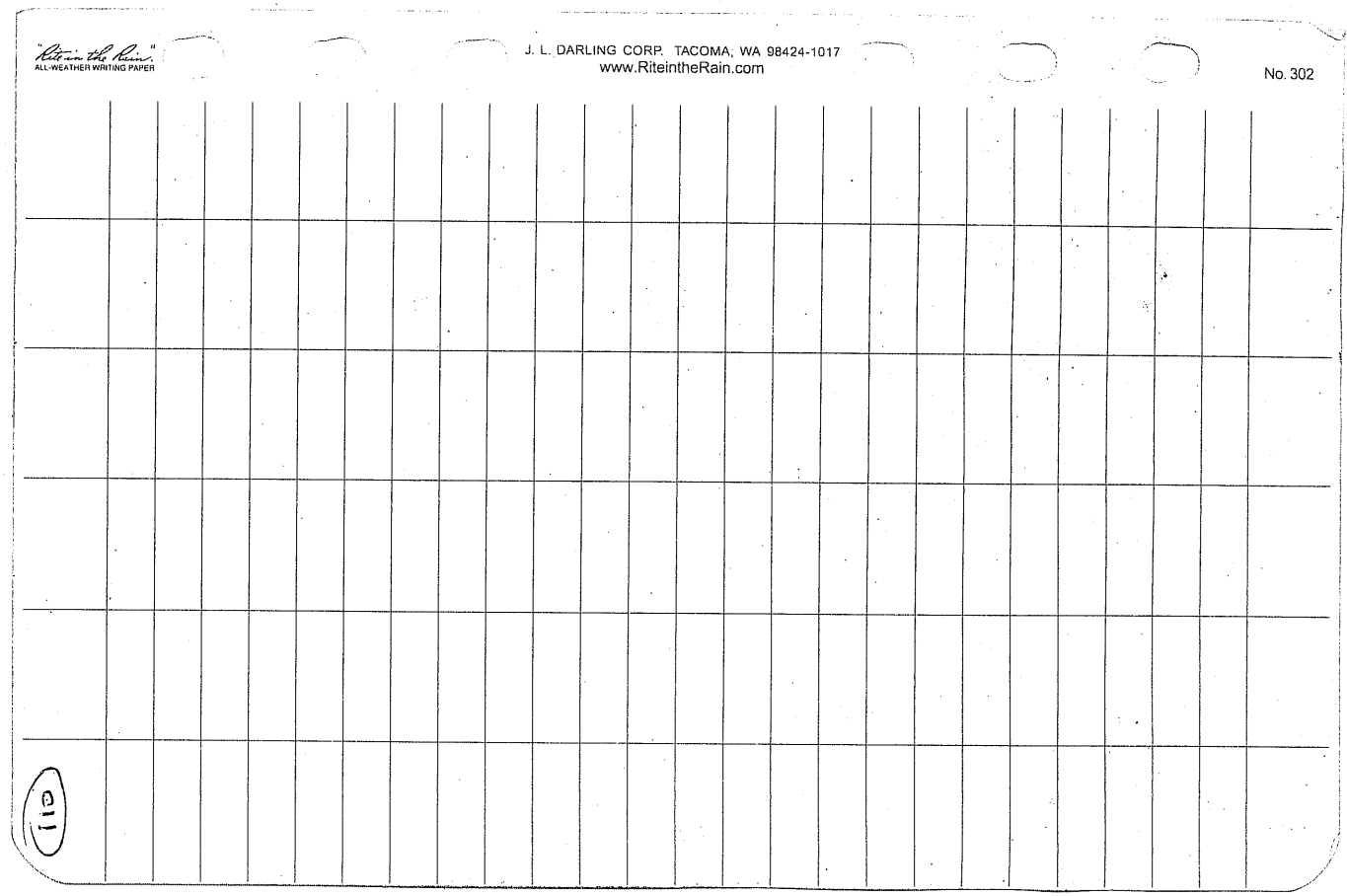
2030 SEND DAILY CONSTRUCTION LOG.



9/26/2008

C3-2

TIME	SWL (ft)	FLOW (GPM)
1254	23.67'	
1255/0:00:00	PUMP ON	
0:01:00	25.15	
0:01:30	25.70	
0:02:00	25.42	
0:03:00	24.10	
0:03:30	23.78	
0:04:30	27.11	
0:05:00	27.70	
0:05:30	27.24	
0:07:30	26.13'	39 ~~40~~ MP3
0:09:00	26.14	
0:16:30	26.16	39
0:26:30	26.14	36
1:11:30	26.16	37
~~MAXIMUM FLOW RATE IS 186 GPM AFTER~~		
~~WATER PUMP BEGINS TO CAVITATE MP3~~		
1:14:00	↑ FLOW	64
1:17:00	28.73'	
1:17:30	28.85'	
1:18:00	28.82	
1:19:00	28.82	


"Rite in the Rain"
ALL-WEATHER WRITING PAPER
J. L. DARLING CORP. TACOMA, WA 98424-1017
www.RiteintheRain.com
No. 302

(11)

9/26/2009

C3-2 (Cont'd)

TIME	SWK (FT)	FLOW (GPH)
2:06:00	29.03	64
2:07:00	↑ FLOW	87
2:07:30	32.98'	
2:08:00	33.73'	
2:08:30	34.29'	
2:09:00	34.58'	
2:09:30	34.77'	
2:10:00	34.89'	
2:11:00	35.14'	
2:12:00	35.38'	
2:13:00	35.48'	
2:14:00	35.65'	
2:15:00	35.62'	
2:16:00	35.75'	
2:17:00	35.79'	
2:18:00	35.94'	87
2:20:00	35.83'	
3:05:00	36.20'	93
3:20:00	TURN PUMP OFF	
3:34:30	24.51'	0
3:35:30	24.51'	
4:12:00	24.42 (+0.47) = 24.89' (DRAWDOWN FROM	

(C2-2)

"Rite in the Rain"
ALL-WEATHER WRITING PAPER

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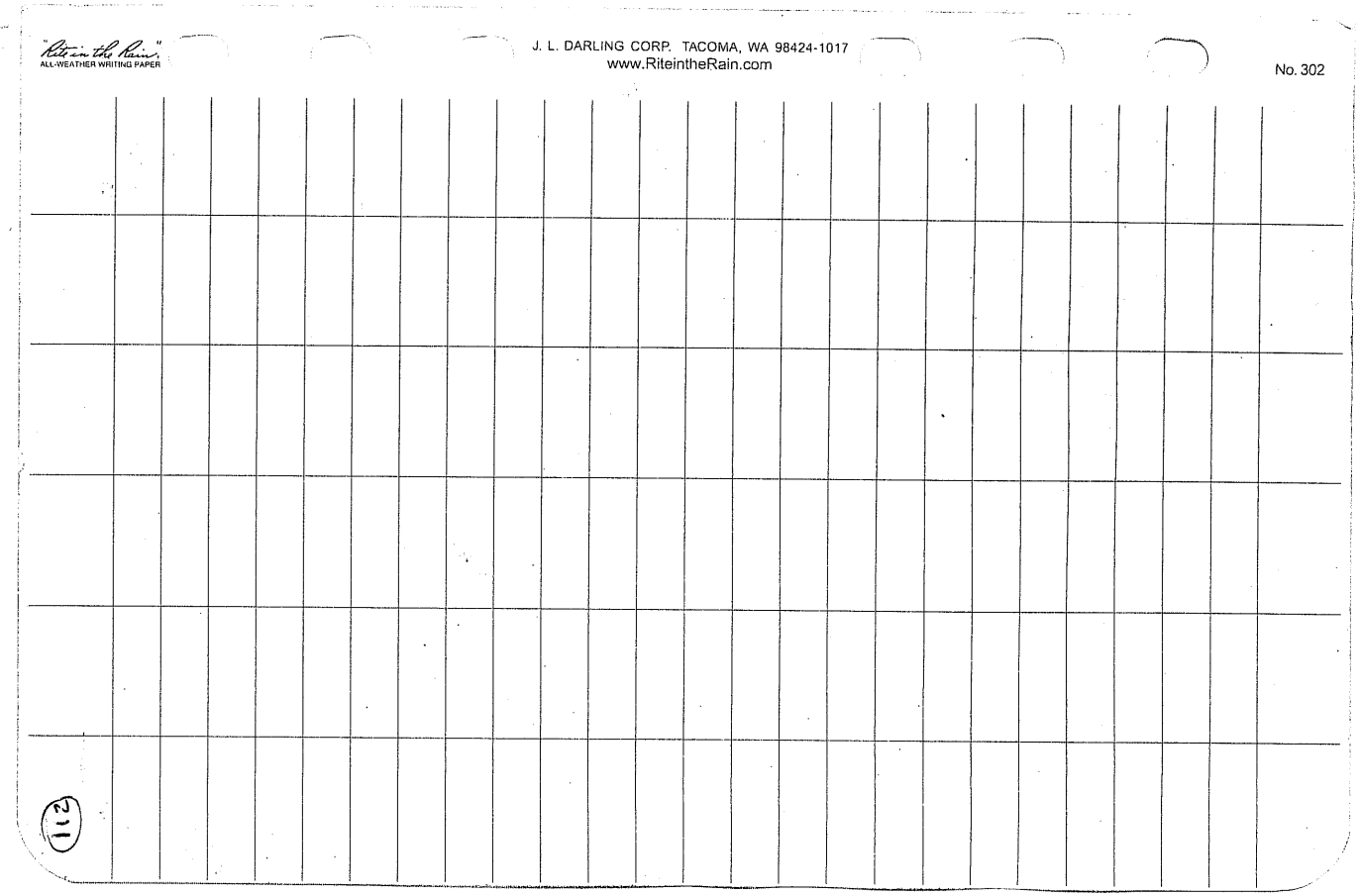
www.RiteintheRain.com

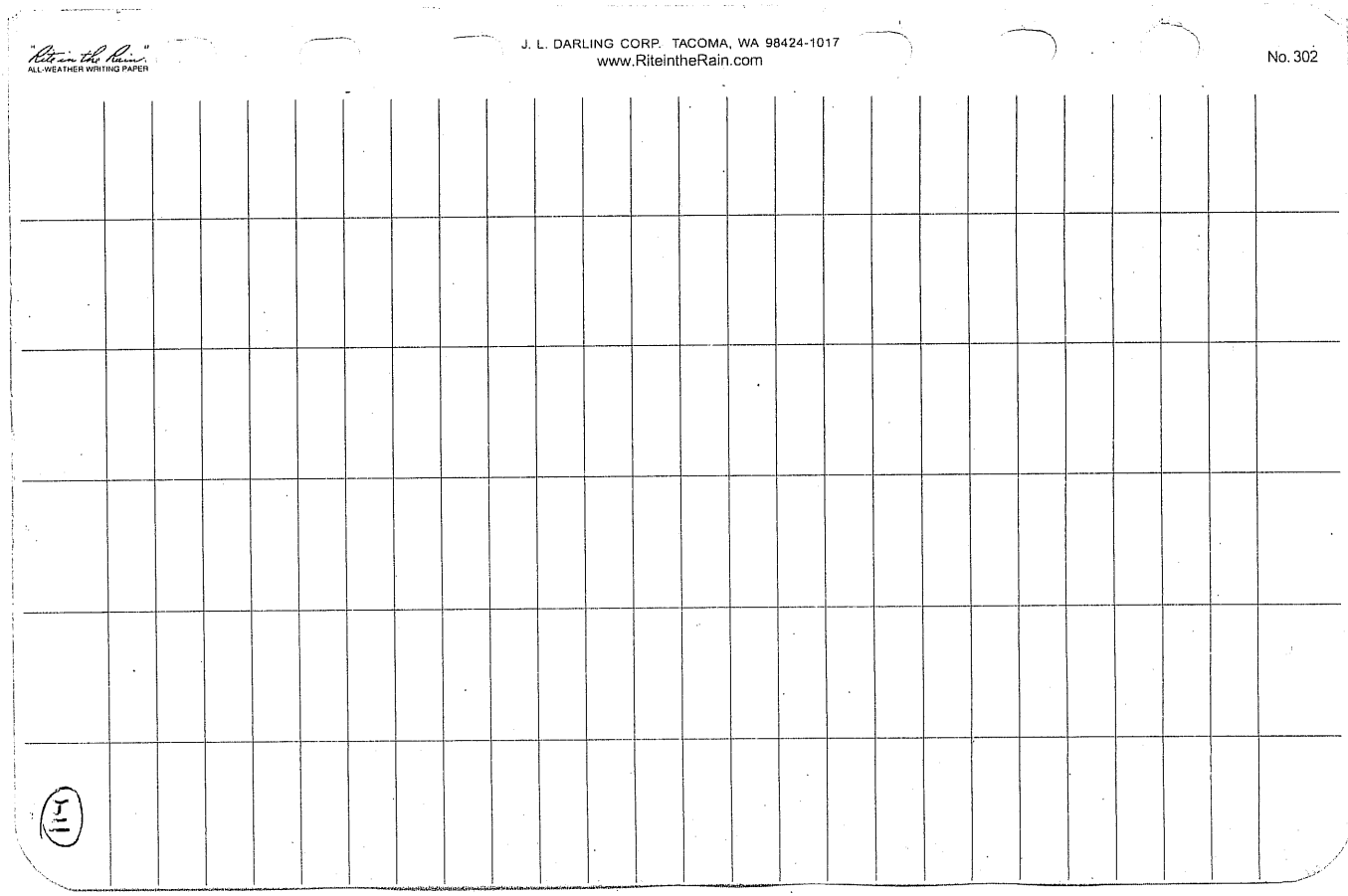
No. 302



~~9/24/2009~~ MW3 9/24/2009

C2-2

TIME	STAGE (ft)	FLOW (GPM)	FREQUENCY (HZ)
1547	18.93'	0	
1557/0:00	START PUMP	100	24.89
0:02:30	24.89'		
0:03:00	24.97'		
0:03:30	25.02'		
0:04:00	25.02'		
0:05:00	25.04'		
0:32:30	25.11'	100	
0:43:00	25.09'		
0:53:00	25.14'	100	
1:03:00	25.12'		
1:04:03	# FLOW	200	39.00
1:05:30	32.95'		
1:06:00	33.12'		
1:06:30	33.17'		
1:07:00	33.20'		
1:08:00	33.30'		
1:09:00	33.39'		
1:10:00	33.48'		
1:11:00	33.54'		
1:12:00	33.57'		
1:15:00	33.66'		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No. 302

~~9/29/2004~~ MNB 9/26/2004

C2-2 (C...BL)

TIME	SWL (FT)	FLOW (GPM)	HZ	TIME	SWL (FT)	FLOW (GPM)	HZ
1:51:00	34.08'	200	39.00				
2:00:00	34.28						
2:01:00	↑ FLOW	300	56.94				
2:04:30	44.44'						
2:05.30	40.34'						
2:06:00	40.35'						
2:06:30	40.34'						
2:40:00	? TO MAX						
	SIDE FLOW						
3:00:00	PUMP OFF						
3:07:00	20.18						
3:07:30	20.08						
3:08:00	20.02						
3:08:30	19.97						
3:09:00	19.95'						
3:09:30	19.93'						
3:10:00	19.88'						

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9/27/2009 McLaren Tailings

0700 Pioneer, O'Keefe on-site, walk gate

0705-0720 Tailgate meeting, discuss plan for the day. After inspecting the pond above the culvert, it appears there is minimal storage on site for water, so perhaps the step tests will be abbreviated to one hour, with a sample at the end of the hour. In addition, will continue development of C2-3, with just under two hours remaining.

0740 REMOVE TRANSDUCER FROM C2-1, O'KEEFE SETTING UP ON C2-1. DOWNLOAD AND SAVE TRANSDUCER DATA, SET UP TO REDEPLOY IN C2-2

0750 O'KEEFE WILL SET UP THE 250 GPM PUMP IN C2-1 AND ROUTE THE WATER ACROSS THE ROAD. MARK WILL MONITOR WATER LEVELS AT THE UPSTREAM END OF THE CULVERT.

PHOTO 631: RETAINING STRUCTURE LOCATED JUST UPSTREAM OF THE CULVERT. STILL MOSTLY FULL AFTER SITTING FOR ~~THE~~ NIGHT.

0815 TRANSDUCER SET IN C2-2 AND STARTED

SWL IN C2-2: 18.47' FROM M.P.

TRANSDUCER READING IN C2-2: 32.33'

0820 STAIC WATER LEVEL, STAFF GAGE IN SEEP: 0.62'

PHOTO 632: SEEP STAFF GAGE.

9/27/2009

C2-1

TIME	SWL(ft)	FLOW	HZ	TIME	SWL(ft)	FLOW	HZ
0848	22.12'	Ø	Ø	1:05:00	22.63	Ø	Ø
0850/0:00:00	START PUMP			1:05:30	22.62		
0:08:00		50	21.42	1:06:00	22.59		
0:10:30	25.60'			1:07:00	22.55		
0:11:00	25.58'			1:08:00	-		
0:20:00	25.69'			1:09:00	-		
0:21:00	↑ FLOW	75	23.76'	1:10:00	-		
0:22:00	27.51			1:11:00	22.57		
0:22:30	27.56			1:16:00	22.40		
0:23:00	27.59			2:00:00	22.25		
0:23:30	27.62						
0:24:00	27.69						
0:24:30	27.65						
0:37:00	27.90						
0:40:00	27.85'						
0:41:00	↑ FLOW	100	26.07				
0:43:00	29.90						
0:60:00	30.60						
1:01:00	STOP PUMP						
1:01:30	23.70	Ø	Ø				
1:04:00	22.76						
1:04:30	22.70						

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9/27/09

0835 STAFF GAGE READING IN S.B.C. 1.65'
LOCATED ABOVE CREEK CROSSING

0850 START PUMP AT C2-1

0900 START (CONTINUOUS) DEVELOPING C2-3

0935 CALIBRATE PH AND TURBIDITY

	CALIBRATION	READINGS
pH	4.01	4.01
	7.00	7.00
	10.01	10.01 SLP97.3
Turbidity	20	20.7 NTU
	100	99.8
	800	759

0940 C2-1 SAMPLE AND FIELD PARAMETERS
pH: 7.82
Temp (from pH probe): 6.0°C
S.C.: 552
D.O: 5.31 mg/L
Turbidity: 199
LAB SAMPLE TIME: 0945
LAB SAMPLE I.D.: C2-1-20090927

0950 PUMP OFF AT C2-1

0958 STAFF GAGE IN SSSP: 0.62' NO OBSERVED EFFECT AFTER PUMP HAS BEEN OFF FOR 8 MINUTES

1000 PHOTO 633: PUMPING SETUP AT C2-1
PUMPING FOR AN HOUR FILLED AVAILABLE WATER STORAGE IN THE AREA AROUND C2-1

9/27/2009

C2-3

TIME	SWL (ft)	FLOW (GPM)	FREQUENCY (HZ)
1215	20.94	0	
12:16 / 0:00:00	START PUMP	50	14.7z
0:05:00	~~21.10~~ MUD LOW FLOW		
0:09:00	23.10'	50	14.78
0:09:30	23.07'	"	
0:10:00	23.02'	"	(RECOVERING)
0:13:30	23.00'		
0:20:00	23.03'	50	
0:21:00	↑ FLOW	100	24.83
0:22:00	25.64'		
0:22:30	25.88'		
0:23:00	25.98'		
0:23:30	26.12'		
0:24:00	26.10'		
0:24:30	26.13'		
0:25:00	26.11'		
0:30:00	26.25'	100	
0:40:00	26.35'	100	
0:41:00	↑ FLOW	200	37.4
0:43:30	31.39'		
0:44:00	31.58'		
0:49:30	31.63'		

(120)

9/27/2009

1052 PULL PUMP FROM C2-1, MOVE IT TO C2-3.
IN THIS MANNER THERE WILL ONLY BE ONE PUMP
TO DECON INSTEAD OF 2.

1100 TURBIDITY AT C2-3 FOLLOWING 4 HOURS OF
DEVELOPMENT: 150 NTU / 122 NTU AFTER
FIVE MINUTES OF BLOWING ON THE WELL

1115 SHUT OFF AIR COMPRESSOR AT C2-3. BEFORE IT
WAS SHUT OFF, STEVE CRIMPED THE HOSE AND LET
THE WATER COME OUT THE TOP OF THE WELL AS
ESTIMATED ZERO PRODUCTIVITY AT ~100 GPM.

1140 SET UP TRUCK OVER C2-3 AND SET UP PUMP.

C2-3 PUMPING SETUP (TD: 58.2')

DROP PIPE, 4" DIA. SCH. 40 PVC
" " LENGTH: 45.0'
" " STICKUP: 0.7'

DISCHARGE PIPE: 4" DIA. SCH 40 PVC AND 4" FLAT
HOSE

1" SWL PORT HEIGHT ABOVE M.P.: 0.47

PUMP LENGTH, INCLUDING CHECK VALVE: 7.2'

PUMP TYPE: 3 & 20 H.P. 250 G.P.M w/ FRANKLIN
ELECTRIC MOTOR

PUMP INTAKE SCREEN HEIGHT FROM PUMP BOTTOM:

PUMP DISTANCE FROM BOTTOM: 6.7'

FLOW METER/TOTALIZER: FUJI ELECTRIC DELTA FLOW
W/ 20' OF SCH. 40 PVC 4" DIA PIPE

45.0
+ 7.2
52.2
- 0.7
51.5'

58.2
- 51.5
6.7

9/27/2009

C2-3 (CONT)

TIME	SWL (ft)	FLOW (GPM)	FREQUENCY (HZ)
0:45:00	31.71		
0:45:30	31.76		
0:46:00	31.80		
0:46:30	31.84		
0:47:00	31.92		
0:47:30	31.92		
0:48:00	31.92		
0:50:00	32.34		
0:51:00	↑ FLOW	290	59.16
0:53:30	~42.62 TOO MUCH WATER COMING INTO THE SYSTEM		
0:57:00	TOO MUCH FLOW @ 80		23.77
1:00:00	↓ FLOW FOR SANDING		
1:06:00	REDUCE FLOW AND TURN OFF	80	
1:07:00	22.32	Ø	Ø
1:07:30	21.87		
1:08:00	21.70		
1:08:30	21.61		
1:09:00	21.53		
1:09:30	21.50		
1:10:00	21.47		
1:11:00	21.43		
1:12:00	21.40		

(122)

9/27/2009

60 + 7.2 + 0.7 = 66.5

70.4 − 60.5 = 3.9

1140 C2-3 PUMPING SETUP (CONT'D)

FLOW CONTROL: VFD, AC TECH, MC SERIES, INTELLIGENT DRIVE

GENERATOR: 3 ϕ INTERSTATE POWER SYSTEMS SERIAL # 100028

1200 C2-1 PUMPING SETUP (SEE 0850 hrs, 9/27/2009)

DROP PIPE: 4" DIA. SCH 40 PVC

" " LENGTH: 60.0'

" " STICKUP ABOVE M.P.: 0.7'

C2-1 T.D.: 70.4'

DISCHARGE PIPE: 4" SCH. 40 PVC AND 4" FLAT HOSE

1" SWL PORT HEIGHT ABOVE M.P.: 0.76'

PUMP LENGTH, INCLUDING CHECK VALVE: 7.2'

PUMP TYPE: 3 ϕ 20 H.P. 250 G.P.M. W/ FRANKLIN ELECTRIC MOTOR

PUMP DISTANCE FROM BOTTOM: 3.9'

FLOW METER/TOTALIZER: FUJI ELECTRIC PORTAFLOW W/ 20' OF SCH. 40 PVC PIPE

FLOW CONTROL: VFD, AC TECH, MC SERIES, INTELLIGENT DRIVE

GENERATOR: 3 ϕ INTERSTATE POWER SYSTEMS SERIAL # 100028

1215 ~~START~~ MJB PUMPING TEST ~~SET UP~~ MJB IN PROG

TO GO AT C2-3

1216 START PUMP AT C2-3

No.

9/27/2009

C2-3

TIME	SWL (ft)	FLOW
1:13:00	21.37'	Ø
1:14:00	21.35'	
1:15:00	21.34'	
1:30:00	21.23'	

(124)

9/27/2009

1230 PHOTO 634 PUMPING SETUP AT C2-3

1245 PHOTO 635 SEDIMENT FROM C2-3 SETTLING OUT FAIRLY QUICKLY.

1305 C2-3 SAMPLE AND FIELD PARAMETERS
pH: 6.73
Temp (from pH meter): 7.2
S.C.: 1901
D.O. 2.69 mg/L
Turbidity: 161
LAB SAMPLE TIME: 1310
LAB SAMPLE I.D.: C2-3-20090927

1322 TURN OFF PUMP AT C2-3

1348 PULL PUMP AT C2-3

1350 INSPECT RUNOFF FROM PUMPING. SOME WATER HAS MADE IT DOWN THE ROAD, U. MINOR WATER MAKING IT TO THE CULVERT
PHOTO 636, 637 WATER ACCUMULATING JUST ABOVE THE CULVERT ON THE SOUTH-WEST CORNER OF THE SITE

1425 STAFF GAGE AT SEEP: 0.62'

1435 DOWNLOAD AND SAVE DATA FROM C2-2 LEVELOGGER, FILE NAME:
"10440795-C2-2_START_0800_ON_20090927_10V."
SWL READING IN C2-2: 18.61
TRANSDUCER READING IN C2.2: 13.18'

9/27/2004

1450 DOWNLOAD AND SAVE DATA FROM PZ-025, RE-SET TO READ ONCE EVERY 30 MINUTES. IN ADDITION I LEFT THE DIRECT READ CABLES ON THE TRANSDUCER.

1455 DOWNLOAD DATA FROM BAROLOGGER, BAROMETRIC DATA. RE-SET TO RECORD ONCE EVERY 30 MINUTES

1500 RE-SET TRANSDUCER IN PZ-023
SWL READING:- 14.22'
TRANSDUCER READING:- 14.22

1505 DOWNLOAD AND SAVE DATA FROM PZ-020, RE-SET TO READ ONCE EVERY 30 MINUTES. DIRECT READ CABLES IS IN THE CASING

1530 CHAMBERLAIN OFF-SITE

1545 PUMP 638 WATER FROM CP-3 WITH IRON OXIDE COLOR.

1615 COMPLETE DAILY CONSTRUCTION LOG AND TABLE OF WELL DATA.

1620 OFFSITE. CHAMBERLAINS PUMP TRUCK AND TRAILER IS STILL ONSITE, WELL HEAD OFFSITE TO BE SECURED AND LOCK GATE

APPENDIX C-2

DAILY CONSTRUCTION LOGS

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: September 10, 2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: **O'Keefe Drilling, Inc.**

WEATHER; Clear with cool morning and warm afternoon

TEMPERATURE	
MINIMUM	MAXIMUM
31	73

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_X_/ NO /___/ YES

24 HOUR PRECIPITION	
INCHES	ENDING
0.00	1800

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
	1	2	3

RIVER STAGE	
FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Bear Claw Construction	1. 1 2. 3. 4. 5.

List the major items of equipment idle or working.
Working: Foremost DR-24HD Drill, Western Star Water Truck with drill steel and pipe, I Ton Dodge pickup, Cat 287 skid steer loader with forks and bucket and Deere excavator
Idle: Pump truck and Cat 185 cfm compressor standby
Note: Cat skid steer and Deere excavator owned and operated by Bear Claw Construction (Bob Smith) under contract to O'Keefe Drilling

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

O'Keefe Drilling responsible for drilling, completing and developing dewatering wells.

Bear Claw Construction provides support to prepare drill pads by leveling area as necessary, removal of trees and unloading and onsite transport of pipe and well screen.

Reason for no work: Construct and develop dewatering wells in preparation for treatment and removal of McLaren Tailings

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Drilled holes C1-5, C1-4, C1-3 and C1-1. Due to absence of water plugged and abandoned all 4 holes. Total depth drilled 91.5 feet.

FILE NAME

MATERIALS DELIVERED TO SITE:
O'Keefe brought four 20-foot pieces of v-wire stainless steel well screen. Total length of well screen is 22.67 including top seal and 2-feet of small slots. Northwest Pipe delivered six 21-foot lengths of 8-inch ID steel pipe at 8:00 am. Trucking company delivered thirty lengths of 20-foot 8 inch ID steel pipe at 2:00pm.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
None

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Samples of drill cutting visually examined and photographed.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
None

CONTROVERSIAL MATTERS IN DETAIL:
None

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
None

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer*

Will complete wells with top of well screen 10 or more feet below the ground surface even if little or no water detected during drilling per instructions from Mike Borduin.

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
No Visitors

SAFETY: *(Include any infractions of approved safety)* .
Conducted pre job safety meeting

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	September 10, 2009	JSM	9/17/09

Spotting Drill on Well C1-5

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: September 11, 2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: **O'Keefe Drilling, Inc.**

WEATHER: Mild, clear, dry.

TEMPERATURE

MINIMUM	MAXIMUM
32	69

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_X_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0.00	1800

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
	1	2	3

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Bear Claw Construction	1. 1 2. 3. 4. 5.

List the major items of equipment idle or working.
Working: Foremost DR-24HD Drill, Western Star Water Truck with drill steel and pipe, 1 Ton Dodge pickup, Pump truck and Cat 185 cfm compressor, and Cat 287 skid steer loader with forks and bucket
Idle: Deere excavator
Note: Cat skid steer and Deere excavator owned and operated by Bear Claw Construction (Bob Smith) under contract to O'Keefe Drilling

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

O'Keefe Drilling responsible for drilling, completing and developing dewatering wells.

Bear Claw Construction provides support to prepare drill pads by leveling area as necessary, removal of trees and unloading and onsite transport of pipe and well screen.

Reason for no work: Construct and develop dewatering wells in preparation for treatment and removal of McLaren Tailings

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Drilled and completed holes A-1, C3-10 and drilled 26-feet in C1-2. Developed well A-1 for 4-hors by surge blocking and compressed air.

45 minutes of drill rig down time for electrical short. Cause undetermined.

FILE NAME

MATERIALS DELIVERED TO SITE:
O'Keefe delivered six 20-foot pieces of v-wire stainless steel well screen and one set of screen for 40-foot completions at 2:00 pm.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
None

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Samples of drill cutting visually examined and photographed.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
None

CONTROVERSIAL MATTERS IN DETAIL:
None

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
None

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer*

Will complete wells with top of well screen 10 or more feet below the ground surface even if little or no water detected during drilling.

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
Tom Henderson and John Koerth visited site briefly.

Park Service, Forest Service, and representatives of the Bear Tooth Alliance and other groups visited the repository area from approximately 11:30 am to 2:00pm.

SAFETY: *(Include any infractions of approved safety)* .
Conducted short tailgate safety meeting.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	September 11, 2009	JSM	9/18/09

Drill Cuttings Well A-1

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: September 12, 2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: **O'Keefe Drilling, Inc.**

WEATHER: Mild, clear .

TEMPERATURE

MINIMUM	MAXIMUM
31	65

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_X_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0.00	1800

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
	1	2	3

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Bear Claw Construction	1. 1 2. 3. 4. 5.

List the major items of equipment idle or working.

Working: Foremost DR-24HD Drill, Western Star Water Truck with drill steel and pipe, 1 Ton Dodge pickup, Pump truck and Cat 185 cfm compressor, Deere excavator and Cat 287 skid steer loader with forks and bucket

Idle:

Note: Cat skid steer and Deere excavator owned and operated by Bear Claw Construction (Bob Smith) under contract to O'Keefe Drilling

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:

WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

O'Keefe Drilling responsible for drilling, completing and developing dewatering wells.

Bear Claw Construction provides support to prepare drill pads by leveling area as necessary, removal of trees and unloading and onsite transport of pipe and well screen.

Reason for no work: Construct and develop dewatering wells in preparation for treatment and removal of McLaren Tailings

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.

Drilled and completed holes C1-2, A-2 and A-3. Developed well C3-10 and C1-2 for 4-hors by surge blocking and compressed air.

FILE NAME

MATERIALS DELIVERED TO SITE:

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Field Turbidity measurements after approximately 4 hours of development
C3-10 11.2 NTU
C1-2 1.07 NTU

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Samples of drill cuttings visually examined and photographed.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
None

CONTROVERSIAL MATTERS IN DETAIL:
None

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
None

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer*

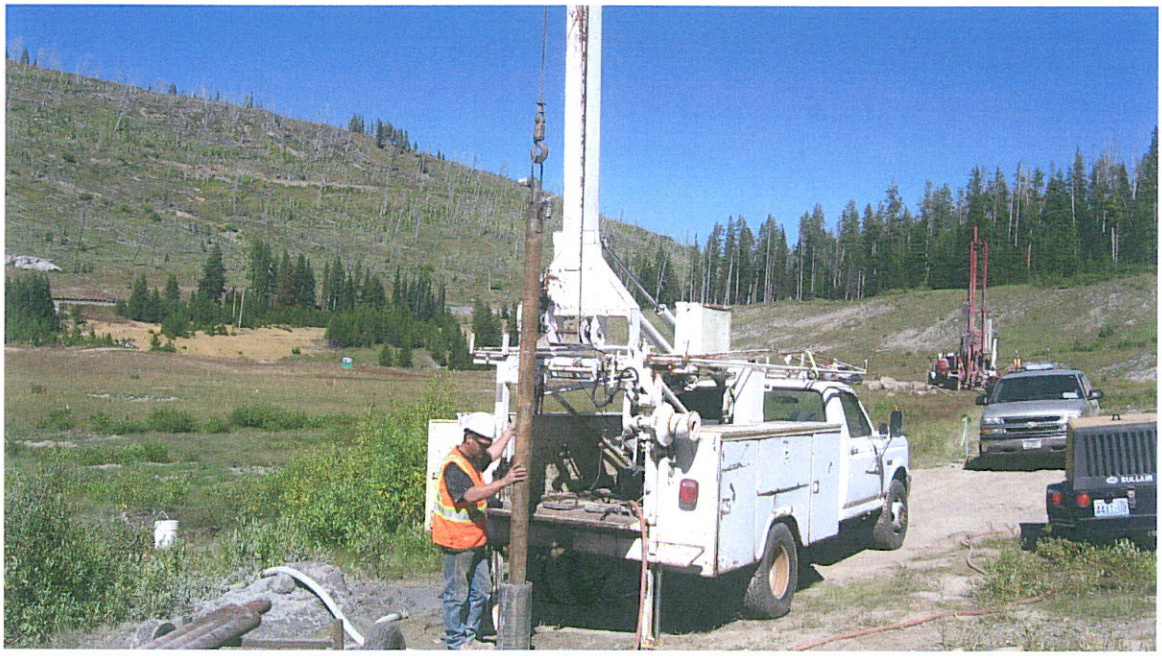
None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
No Visitors

SAFETY: *(Include any infractions of approved safety).*

OVERSIGHT SIGNATURE	DATE:	PROJECT MANAGER INTIALS	DATE
	September 12, 2009	JSM	9/18/09

Surge blocking well A-1



Undocumented Visitor

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: September 13, 2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: **O'Keefe Drilling, Inc.**

WEATHER: Mild, partly cloudy

TEMPERATURE	
MINIMUM	MAXIMUM
29	64

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_X_/ NO /___/ YES

24 HOUR PRECIPITION	
INCHES	ENDING
0.00	1800

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
	1	2	3

RIVER STAGE	
FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Bear Claw Construction	1. 1 2. 3. 4. 5.

List the major items of equipment idle or working.
Working: Foremost DR-24HD Drill, Western Star Water Truck with drill steel and pipe, 1 Ton Dodge pickup, Pump truck and Cat 185 cfm compressor, Deere excavator and Cat 287 skid steer loader with forks and bucket
Idle:
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

O'Keefe Drilling responsible for drilling, completing and developing dewatering wells.

Bear Claw Construction provides support to prepare drill pads by leveling area as necessary, removal of trees and unloading and onsite transport of pipe and well screen.

Reason for no work: Construct and develop dewatering wells in preparation for treatment and removal of McLaren Tailings

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Drilled and completed holes C3-8, C3-7 and drilled C3-6 to 43-feet. Developed wells A-3 and A-2 for 4-hors by surge blocking and compressed air.

Will probably need more well screen by Tuesday the 15th. Informed O'Keefe driller and left voice message for Mike Borduin.

FILE NAME

MATERIALS DELIVERED TO SITE:

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Samples of drill cuttings visually examined and photographed.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
None

CONTROVERSIAL MATTERS IN DETAIL:
None

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
None

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer*

None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
Ivan Tyson, National Park Service Road Maintenance Supervisor for highway from Silver Gate Entrance to top of the pass stopped to visit with Bob Smith and I gave him a short tour of the drilling operation. He was a former driller and interested in the rig.

Asplund construction walked a Deere excavator onto the site and parked it near the location of the buried power line.

SAFETY: *(Include any infractions of approved safety).*

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	September 13, 2009	JSM	9/18/09

Controlling discharge line with excavator bucket at well C3-6

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: September 14, 2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: **O'Keefe Drilling, Inc.**

WEATHER: Mild, partly cloudy. Thunder shower Sunday evening around 8:30pm

TEMPERATURE

MINIMUM	MAXIMUM
41	63

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_X_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0.10 estimate	1800

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
	1	2	3

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Bear Claw Construction	1. 1 2. 3. 4. 5.

List the major items of equipment idle or working.
Working: Foremost DR-24HD Drill, Western Star Water Truck with drill steel and pipe, 1 Ton Dodge pickup, Pump truck and Cat 185 cfm compressor, Deere excavator and Cat 287 skid steer loader with forks and bucket
Idle:
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

O'Keefe Drilling responsible for drilling, completing and developing dewatering wells.

Bear Claw Construction provides support to prepare drill pads by leveling area as necessary, removal of trees and unloading and onsite transport of pipe and well screen.

Reason for no work: Construct and develop dewatering wells in preparation for treatment and removal of McLaren Tailings

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Drilled and completed holes C3-6, C3-5 and C3-4 and drilled to 19-feet in C3-9. Developed wells C3-8 and C3-6 for 4-hours by surge blocking and compressed air and moved to C3-7 and began developing.

Will need more well screen by mid day Tuesday the 15th. Screen was reportedly leaving Butte at 7 or 8 am on Tuesday.

FILE NAME

MATERIALS DELIVERED TO SITE:

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Samples of drill cuttings visually examined and photographed.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
None

CONTROVERSIAL MATTERS IN DETAIL:
None

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
None

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer*

None

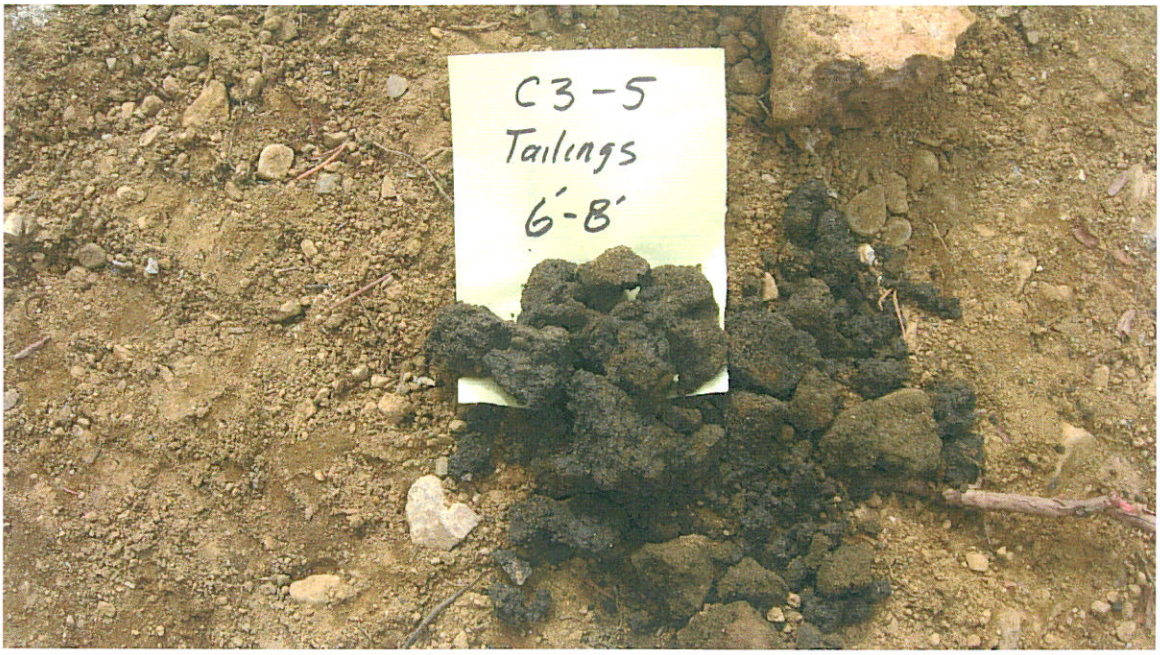
REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
Asplund Construction dug trench for power line. Arrived 11:15am and departed 12:30pm

Mike Borduin arrived 12:30pm
Tom Henderson arrived approximately 3:00pm
Marty Bennett arrived approximately 5pm

SAFETY: *(Include any infractions of approved safety).*

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	September 14, 2009	JSM	9/18/09

Tailings in embankment along Soda Butte Creek



DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 2

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/15/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: O'Keefe Drilling
Bear Claw Construction (sub to O'Keefe)

WEATHER: Mostly Sunny

TEMPERATURE

MINIMUM	MAXIMUM
Low 40's	High 70's

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
3	2	3	8

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. O'Keefe Drilling, Inc.	1. 4
2. Bear Claw Construction, Inc.	2. 1
3. DEQ	3. 1
4. Pioneer Technical Services Inc.	4. 2
	5.

List the major items of equipment idle or working.
Working: Drill Rig, support truck, pump truck, screen truck (O,Keefe), Mini-excavator, Bobcat (Bear Claw).
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractord by letter above*

Work performed on 9/15/2009 includes:
(1) Completion of C3-9 and drilling of C3-2 and C3-3.
(2) Set up on C3-1.
(3) Site leveling, water channeling (Bear Claw).
(4) Complete development on C3-6 from yesterday, Complete development of C3-5, 1.5 hours of development at C3-4.
(5)

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Minor delays with the Dual Air Rotary rig and pump truck. On the dual air rotary rig, a persistent short is interfering with some of the controls on the back of the rig. Total delay did not exceed ½ hour. For the pump truck, the cable on the development tool came out of the crimping sleeve, causing the development tool to fall into the well. The tool did not fall completely into the well as the 2" aluminum quick connect (projecting out at 90 degrees from the top of the development head) caught on the top of the 8 inch casing and limited the fall into the well. Total delay time was approximately ½ hour. Following these two delays, work progressing as expected.

FILE NAME

MATERIALS DELIVERED TO SITE:
Remainder of screen arrived today at 10 am, one hour ahead of schedule, along with approximately 450 feet of silt fence and staking materials.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Well logs completed.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Turbidity testing completed after 4 hours of development for C3-5 and C3-7.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Instructed Larry of O'Keefe to complete C3-3 and C3-2 to 57' and C3-9 to 59' and set screen.

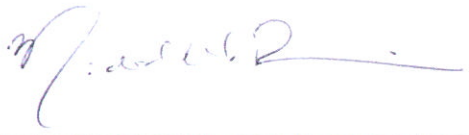
CONTROVERSIAL MATTERS IN DETAIL:
Installation of silt fence and staking to occur tomorrow morning at 8. Tom Henderson of DEQ talked with Bear Claw Construction about separating out site prep hours from silt fence and general site assistance hours.

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
Tom Henderson and Marty Bennett on site all day. Larry's wife (of O'Keefe) delivered screen to the site and remained within the delivery truck for the remainder of the day.

SAFETY: *(Include any infractions of approved safety* .Working with O'Keefe do develop a better way for the workers to connect the end of the discharge hose from the Dual Air Rotary rig to the cyclone. The end of the hose is very heavy to lift to the top of the cyclone, and a ladder is really not suitable for the loose surface conditions prevalent on site.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/15/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Attaching discharge hose to cyclone (see safety section).

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 2

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/16/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: O'Keefe Drilling
Bear Claw Construction (sub to O'Keefe)

WEATHER: Mostly Sunny

TEMPERATURE

MINIMUM	MAXIMUM
Low 40's	High 70's

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
3	2	3	8

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. O'Keefe Drilling, Inc.	1. 4
2. Bear Claw Construction, Inc.	2. 1
3. DEQ	3. 1
4. Pioneer Technical Services Inc.	4. 2
	5.

List the major items of equipment idle or working.
Working: Drill Rig, support truck, pump truck, screen truck (O,Keefe), Mini-excavator, Bobcat (Bear Claw).
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractord by letter above*

Work performed on 9/16/2009 includes:
(1) Completion of C3-1 and C3-1, re-setting screen in C3-3.
(2) Set up on C2-2.
(3) Silt Fence (Bear Claw).
(4) Complete development on C3-4 and C3-2.
(5)

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Significant delay with the pump truck. Upon completing development of C3-3, operator pulled development apparatus out of the hole and brought the 20' section of screen with it. The screen could not be pushed back down as the whole hole had caved from 57 to 57 feet b.g.s. The dual air rotary rig was required to set up on the hole again, drill down, and set the screen. Due to the slightly different completion, the screen was set at 56'4" instead of 57'. Total delay today was approximately ½ hours for pump truck (likely more tomorrow as pump truck will have to re-develop C3-3) and 4 hours for dual air rotary rig.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Well logs completed.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Turbidity testing completed after 4 hours of development for C3-2 and C3-4.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Instructed Larry of O'Keefe to complete C3-1 to 57' and C2-1 to 73'.

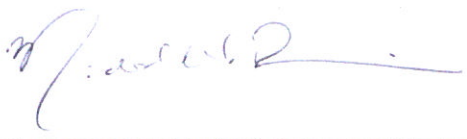
CONTROVERSIAL MATTERS IN DETAIL:
Installation of silt fence completed today between 8 and 2, with interruptions for Bear Claw to help O'Keefe.

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
Marty Bennett and Tom Henderson off sit at approximately 2pm and 3pm, respectively.

SAFETY: *(Include any infractions of approved safety* .Cable on the water truck is frayed, have requested that O'Keefe repair the cable tomorrow during any available time.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/16/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Installation of silt fence by Bear Claw Construction.

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 4

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/17/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: O'Keefe Drilling
Bear Claw Construction (sub to O'Keefe)

WEATHER: Mostly Sunny

TEMPERATURE

MINIMUM	MAXIMUM
40	78

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
1	2	2	6

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. O'Keefe Drilling, Inc.	1. 3
2. Bear Claw Construction, Inc.	2. 1
3. Chamberlain Pump	3. 1
4. Pioneer Technical Services Inc.	4. 1
	5.

List the major items of equipment idle or working.
Working: Drill Rig, support truck, 2 pump trucks, (O'Keefe), Mini-excavator, Bobcat (Bear Claw).
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed on 9/17/2009 includes:
(1) Completion of C2-2 and C2-3.
(2) Driller support (Bear Claw).
(3) Complete re-development of C3-3, Develop C3-1, start C3-9.
(4) Outline work for next week with Chamberlain Pump (Ed Cosens).

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Significant delays with the Dual Auger Rig. Upon pulling back steel casing on C2-2, top weld broke. Fortunately, this weld was located approximately 2 feet b.g.s and the drillers were able to re-connect and complete the well. On the next well, C2-3, while pulling back steel casing on C2-3, the whole heaved and pushed the screen and four sections of 4" dia. drill rod up approximately 21.5'. The drillers were not actively holding the screen in place, instead were relying on the weight of the drill rod to hold the screen down. In an attempt to extract the screen, re-drill the hole, and re-set the screen, O'Keefe made several attempts to remove the screen. After several failed attempts, totaling approximately two hours, Larry was directed to complete the well by further withdrawing the casing by pushing down on the screen and pulling up with the table, exposing approximately 18.5' of the screen. Total delay today was approximately 4 hours for dual air rotary rig and a loss of 21.5' of C2-2.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Well logs completed.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Turbidity testing completed after 4 hours of development for C3-1 and C3-3, and partial completion of C3-9.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Instructed Larry of O'Keefe to complete C2-2 to 70'4" and C2-3 to 80'(later set at 58.5, see well log and "delays", above).

CONTROVERSIAL MATTERS IN DETAIL:

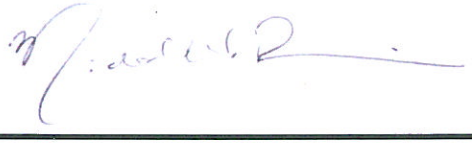
INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
C2-3 has been installed to a shallower elevation due to heaving sands.

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
O'Keefe, Bear Claw, and Pioneer packed up and offsite at 1945. O'Keefe and Pioneer to MOB offsite tomorrow morning, Bear Claw to return in morning to collect steel casing scrap and deliver to landfill.

Pioneer and Chamberlain Pump to return to site Tuesday A.M. for continuation of development and 3-hour step-drawdown testing.

SAFETY: *(Include any infractions of approved safety* .Main discussions today included long work hours at the end of a long shift, how to safely reconnect to steel casing below the surface, and how to extract the screen from C2-3.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/17/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Re-attachment of steel casing by O'Keefe drilling.

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 5

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/22/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: O'Keefe Drilling (i.e Chamberlain Pump)

WEATHER: Sunny

TEMPERATURE

MINIMUM	MAXIMUM
38	77

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
2	1	1	4

RIVER STAGE

FEET	TIME

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Chamberlain Pump 2. Pioneer Technical Services Inc.	1. 2 2. 2 3. 4. 5.

List the major items of equipment idle or working.
Working: 2 pump trucks, (Chamberlain).
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed on 9/22/2009 includes:
(1) Pumping of C1-2 (formerly A-3) at 4 gpm max and C1-4 (formerly (A-1) at 11 gpm max.
(2) Completed development of C3-9 and start C2-1.
(3) Meet with Will Goldberg on work for tomorrow.

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
None

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Water levels recorded manually and with transducers.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Field parameters and samples taken for C1-2 and C1-4.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Directed contractor as to appropriate pumping rates for C1-2 and C1-4 and order of progression for work (i.e. perimeter wells first).

CONTROVERSIAL MATTERS IN DETAIL:

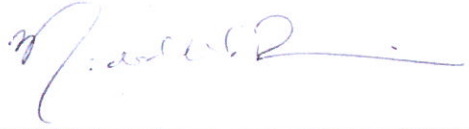
INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*

Rocky Mtn. on-site completing power line installation. Have installed all poles to future building and have replaced one of three poles over by the west bridge site. Will Goldberg to resume oversight of Rocky Mtn. on 9-23-2009.

SAFETY: *(Include any infractions of approved safety* .Main discussions today included tailings, impacted waters, and discharge of water creating hazardous site conditions.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/22/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Pumping of C1-2 by O'Keefe drilling (Chamberlain pump). Note new power poles in background.

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 6

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/23/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: O'Keefe Drilling (i.e Chamberlain Pump)

WEATHER: Sunny

TEMPERATURE

MINIMUM	MAXIMUM
31	71

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
2	1	1	4

RIVER STAGE

FEET	TIME
1.64'	1930

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Chamberlain Pump	1. 2
2. Pioneer Technical Services Inc.	2. 2
3. Asplundh	3. ?
4. Rocky Mtn.	4. ?
	5.

List the major items of equipment idle or working.
Working: 2 pump trucks, (Chamberlain), backhoe, powerline trucks (Asplundh, Rocky Mtn.)
Note: Will Goldberg conducting oversight for Asplundh, Rocky Mtn.

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed on 9/23/2009 includes:

(1) Pumping of C1-3 (formerly A-2) at 4.3 gpm max, C1-1 (formerly (C1-2) at 0.6 gpm max, and C3-8 at 50 gpm (could likely go more).
(2) Completed development of C2-1 and set up portion of C2-2.
(3) Will Goldberg on-site for oversight of powerline installation and step-drawdown testing.

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Dustin was not available today and will not be back to work until Monday. Steve Malkovich will be on site tomorrow (Thursday) at noon and will bring the second pumping truck back to the site.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Water levels recorded manually and with transducers.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Field parameters and lab samples taken for C1-3, C1-1, and C3-8.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Directed contractor as to appropriate pumping rates for C1-3, C1-1, and C3-8.

CONTROVERSIAL MATTERS IN DETAIL:
None

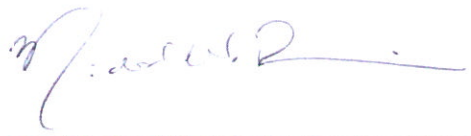
INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
None

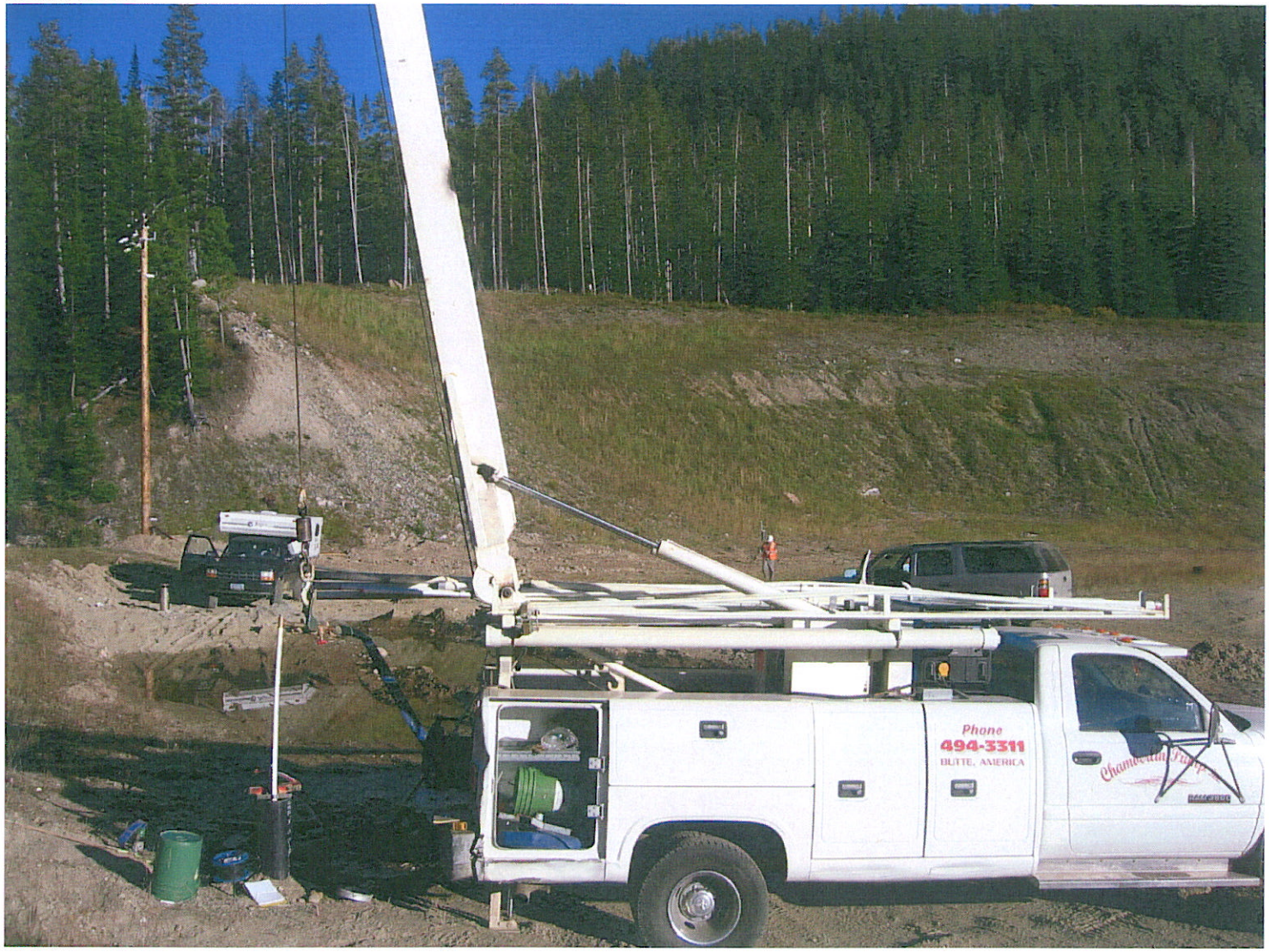
REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*

Rocky Mtn. on-site completing power line installation. Have installed all poles to future building and have replaced one of three poles over by the west bridge site. Will Goldberg to resume oversight of Rocky Mtn. on 9-23-2009.

SAFETY: *(Include any infractions of approved safety* .Main discussions today included tailings, impacted waters, discharge of water creating hazardous site conditions, and long working hours/working after the sun goes down.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/23/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Pumping of C3-8 by O'Keefe drilling (Chamberlain pump). Note new power pole in background and covered trench.



DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 7

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/24/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: O'Keefe Drilling (sub to Chamberlain Pump)

WEATHER: Sunny

TEMPERATURE

MINIMUM	MAXIMUM
32	70

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
2	2	0	4

RIVER STAGE

FEET	TIME
1.65'	0750

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Chamberlain Pump	1. 2
2. Pioneer Technical Services Inc.	2. 2
3. Asplundh	3. ?
4. Rocky Mtn.	4. ?
	5.

List the major items of equipment idle or working.
Working: 2 pump trucks, 3-phase generator trailer, RC pipe trailer (Chamberlain), backhoe, powerline trucks (Asplundh, Rocky Mtn.)
Note: Will Goldberg conducting oversight for Asplundh, Rocky Mtn.

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed includes:
(1) Partial pumping of C3-10 and C3-1, and 3 hours pumping C3-7 at 43 gpm max.
(2) Completed development of C2-2.
(3) Will Goldberg on-site for oversight of powerline installation and step-drawdown testing.

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
Steve Malkovich on site at 12:15 with second pumping truck, finishing well development at C2-2.
Set up on C3-10, rated at 8-10 gpm with air development, made in excess of 45 gpm. Upon switching to 5HP pump, Mark of Chamberlain Pump discovered the 5HP fuse box was faulty. Work was stopped on C3-10 to set up 3-phase generator on C3-1 and start developing C2-2.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Water levels recorded manually and with transducers.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Field parameters and lab samples taken for C3-7 Turbidity taken for C2-2.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Directed contractor as to appropriate pumping rates for C3-10, C3-1, and C3-7.

CONTROVERSIAL MATTERS IN DETAIL:
None

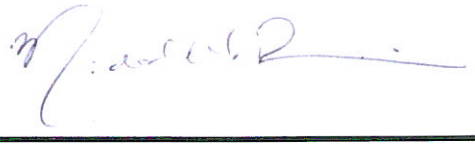
INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*

Rocky Mtn. on-site completing power line installation. Will Goldberg overseeing Rocky Mtn..
As per Will Goldberg: Rocky Mtn. off-site until Tuesday. Transformers have not arrived, and likely won't get hung at this time. Still need to pull wire across creek, one of the cross-arms on one of the previous poles was bad and will need to be replaced, this was likely a result of a fire at some previous point. Will energize the wires to the site next week to verify functionality. Disconnects will be pulled on the north side of S.B.C.

SAFETY: *(Include any infractions of approved safety* .Main discussions today included overhead working conditions with pump truck, water and mud hazards from the pumped water, long working hours/working after the sun goes down, and electrical safety with generators, pumps, etc.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/24/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Pumping of C3-1 by Chamberlain pump with 3 phase setup and 4-inch discharge line. Pumping rate at time of photo: 80 gpm. Note sampling port and digital flow meter.

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 7

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/25/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: Chamberlain Pump (sub to O'Keefe Drilling)

WEATHER: Sunny

TEMPERATURE

MINIMUM	MAXIMUM
32	74

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
2	2	0	4

RIVER STAGE

FEET	TIME
1.65'	0830

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Chamberlain Pump	1. 2
2. Pioneer Technical Services Inc.	2. 2
3. Asplundh	3. 0
4. Rocky Mtn.	4. 0
	5.

List the major items of equipment idle or working.
Working: 2 pump trucks, 3-phase generator trailer, RC pipe trailer (Chamberlain)l 1 line truck and 1 backhoe (Rocky Mtn)
Note: Will Goldberg to depart back to Butte today.

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed includes:

(1) Finish pumping of C3-10 (79 gpm max) and C3-1 (200 gpm max), complete C3-5 (99 gpm max), C3-3 (270 gpm max) and C3-6 (10 gpm max).

(2) Set up to develop C2-3.

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
On site 0700 for tailgate meeting, Mark Richards, Steve Malkovich, Will Goldberg, Mike Borduin. Will Goldberg back to Butte at 0850 hrs.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Water levels recorded manually and with transducers.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Field parameters and lab samples taken for C3-10, C3-1, C3-5, C3-6, and C3-3

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Directed contractor as to appropriate pumping rates for C3-10, C3-1, C3-5, C3-6, and C3-3

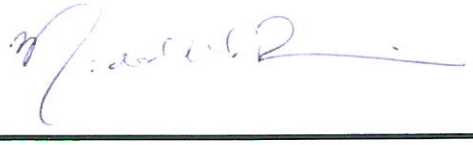
CONTROVERSIAL MATTERS IN DETAIL:
None

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*
None

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*

SAFETY: *(Include any infractions of approved safety* .Main discussions today included cold weather/warm weather swing, water and mud hazards from the pumped water, long working hours/working after the sun goes down, and electrical safety with generators, pumps, etc.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/25/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Pumping of C3-5 by Chamberlain pump with single phase setup, 5HP pump, 2-inch discharge line and totalizer. Setup of totalizer was improved for the next well so that the pipe sloped slightly upwards just after the totalizer (instead of downwards). Note setup of C3-3 in the right portion of the photo.

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 8

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/26/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: Chamberlain Pump (sub to O'Keefe Drilling)

WEATHER: Sunny and smoky

TEMPERATURE

MINIMUM	MAXIMUM
31	76

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
1	2	0	3

RIVER STAGE

FEET	TIME
1.65'	0855

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Chamberlain Pump	1. 2
2. Pioneer Technical Services Inc.	2. 1
3. Asplundh	3. 0
4. Rocky Mtn.	4. 0
	5.

List the major items of equipment idle or working.
Working: 2 pump trucks, 3-phase generator trailer, RC pipe trailer, air compressor (Chamberlain)l 1 line truck and 1 backhoe (Rocky Mtn)
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed includes:
(1) Complete pumping of C3-4 , C3-9, C3-2, and C2-2.
(2) Partial development of C2-3.

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
On site 0700 for tailgate meeting, Mark Richards, Steve Malkovich, Mike Borduin.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Water levels recorded manually and with transducers.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Field parameters and lab samples taken for C3-4 , C3-9, C3-2, and C2-2.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Directed contractor as to appropriate pumping rates for C3-4 , C3-9, C3-2, and C2-2.

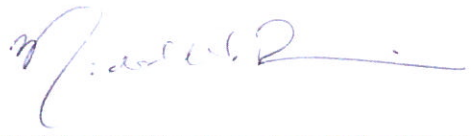
CONTROVERSIAL MATTERS IN DETAIL:
Pumping is making too much water to keep up with, need to consider either larger impoundment or piping water to the existing settling pond. Chamberlain does not have enough materials to do the later. Water is not infiltrating into the channel below the culvert sufficiently and operations may need to be suspended until additional piping can be obtained to pipe the water into the settling pond.

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*

SAFETY: *(Include any infractions of approved safety* .Main discussions today included sequencing of work, cold weather/warm weather swing, water and mud hazards from the pumped water, electrical safety with generators, pumps, and moose traffic. The site is getting very wet now from all of the pumping, and caution while driving around the southern half of the site is utmost.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/26/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Photograph of the staff gage below the dike – barely readable, note water at 0.60' with no crud line. I did not read this before the C2-2 pumping test, but from the crud line, the water level may have been drawn down approximately 0.02', however this is pure speculation. If pumping continues on C2-1 tomorrow, I will get a before and after reading.

DAILY LOG OF CONSTRUCTION – ACTIVITIES

REPORT NUMBER 9

TO: TOM HENDERSON – MINE WASTE CLEANUP BUREAU

DATE: 9/27/2009

PROJECT: MCLAREN TAILINGS ABANDONED MINE SITE COOKE CITY, MONTANA

CONTRACT NUMBER: 407053

CONTRACTOR: Chamberlain Pump (sub to O'Keefe Drilling)

WEATHER: Sunny and windy

TEMPERATURE

MINIMUM	MAXIMUM
35	68

HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? /_x_/ NO /___/ YES

24 HOUR PRECIPITION

INCHES	ENDING
0	

NUMBER OF CONTRACTOR'S EMPLOYEES

SUPERVISORY	OPERATORS	LABORERS	TOTAL
1	2	0	3

RIVER STAGE

FEET	TIME
1.65'	0835

SUBCONTRACTORS ON SITE

COMPANY NAME	TOTAL EMPLOYEES
1. Chamberlain Pump	1. 2
2. Pioneer Technical Services Inc.	2. 1
3. Asplundh	3. 0
4. Rocky Mtn.	4. 0
	5.

List the major items of equipment idle or working.
Working: 2 pump trucks, 3-phase generator trailer, RC pipe trailer, air compressor (Chamberlain)l 1 line truck and 1 backhoe (Rocky Mtn)
Note:

CONTRACTORS/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY:
WORK PERFORMED TODAY: (*Indicate location and description of work performed. Refer to work performed by the prime contractor and/or subcontractor by letter above*

Work performed includes:
(1) Complete pumping of C2-1 and C2-3.
(2) Completed development of C2-3.

Reason for no work:

Information on progress of work, causes for delays and extent of delays, Plant, material, etc.
On site 0700 for tailgate meeting, Mark Richards, Steve Malkovich, Mike Borduin.

FILE NAME

MATERIALS DELIVERED TO SITE:
None.

INSPECTIONS AND TEST, DEFICIENCIES OBSERVED, ACTION TAKEN AND CORRECTIVE ACTION OF CONTRACTOR.
INCLUDE COMMENT PERTAINING TO CONTRATORS ACTIVITIES
Water levels recorded manually and with transducers.

SAMPLES COLLECTED: *(Type, Sample ID, Results)*
Field parameters and lab samples taken for C2-1 and C2-3.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR: *(Include names, reaction and remarks)*
Directed contractor as to appropriate pumping rates for C2-1 and C2-3.

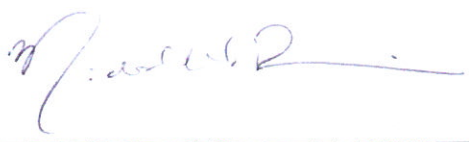
CONTROVERSIAL MATTERS IN DETAIL:
Because the step-drawdown tests were making too much water to keep up with, the length of the step tests were reduced to one hour, mostly to facilitate the sizing of pumps and to collect a sample. Both C2-1 and C2-3 have a fair amount of turbidity and may benefit from some overpumping. C2-3 in particular appears to have noticeable iron (see photo) and a specific conductivity that is significantly higher (1901 µS/cm) than other locations (next highest is C2-2 at 870 µS/cm, typical range is 270 to 420, with two wells in the 500 µS/cm range, C3-2 and C2-1).

INFORMATION, INSTRUCTION OR ACTION OR DISAGREEMENTS:
N/A

DESIGN MODIFICATIONS: *(Include description of modification, reason for modification and was it approved by Engineer)*

REMARKS: *(Include visitors to project and miscellaneous remarks pertinent to work)*
During pumping of C2-1, no noticeable change was observed in the water level reading at the bottom of the dike, however duration of pumping was abbreviated to one hour (see above). At this same location, the water level from yesterday (0.60') was lower than today (0.62') and is perhaps the effect of pumping C2-2 for three hours.

SAFETY: *(Include any infractions of approved safety* .Main discussions today included driving on site with large quantities of water and also dealing with the water from wells that are likely above standards.

OVERSIGHT SIGNATURE	DATE	PROJECT MANAGER INTIALS	DATE
	9/27/2009	JSM	

INSERT DAILY PHOTO WITH CAPTION: Iron colored water from C2-3 with 1901 µS/cm specific conductivity. Sample taken 1305 on 09/27/2009m photo taken at 1545 the same day (iron coloration is not visible until approximately 15 minutes after sample is taken).