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To: Justin Stockwell, Lorax Environmental Services Ltd.
Cc:
From: Diane Lister
Date: September 30, 2011
RE: **Mount Nansen Closure: Synopsis of Field Work
Lorax Proposal J907-7 / YG Contract #C00010368**

Background and Objectives

In late August Lorax Environmental Services (Lorax) submitted Project Proposal #J907-7 outlining field work deemed at that time to be on a critical path due to time constraints, site access, and personnel availability. The intent of proposal J907-7 was to permit these priority tasks to proceed during September, with the less time-sensitive tasks being deferred to Lorax's overall project kick-off proposal (#J987-1, Oct. 5/11) or thereafter. Contract #C00010368 was subsequently issued by Assessment and Abandoned Mines (AAM).

Scope of field work as stipulated in Contract # C00010368 includes the following:

1. Water Sampling of seeps, ponds #2 and #3, and selected sites on dome Creek (*note – this should read Ponds #2 and #1*)
2. Sediment Sampling of Ponds #2 and #3 (*note – this should read Ponds #2 and #1*)
3. Huestis 4100' Adit reconnaissance
4. Mill building interior video/documentation
5. Collection of scrub birch seed for potential use in 2011/2012 trials
6. Reconnaissance-level review of zones to be revegetated to identify key aspects and issues
7. Identification and preliminary review of natural revegetation dynamics on existing disturbances in local area
8. Visit previous reclamation and revegetation sites on property (both trials and operational reclamation); note successes and challenges
9. Identification of site locales for future revegetation trials and research (with an eye to opportunities to establish certain trials in 2011, if feasible)
10. Additional fall seed collection as possible for potential use in 2011/2012 trials
11. Brief reconnaissance of roads, power lines, pipelines, Victoria Ck Well, and other misc infrastructure areas to improve understanding of closure requirements, and as possible verify the major assumptions used in preliminary costing work

Results and Observations:

Field work was carried out during one field visit at the Mount Nansen site from August 31 to September 1. Follow-up reporting and data/sample cataloguing occurred during the month of September. Work was carried out by Diane Lister of Altura Environmental Consulting (Altura).

1. General Conditions: work was carried out without incident. Weather was cool and dry during the site work. Graceland caretakers reported that the past several weeks had seen rain almost every day, and it was clearly observed that seep, pond and creek flow was elevated relative to that seen during Altura's July 2010 field work.
2. Seepage Flow Sketch Map through Mill Area: the abundance of seeps due to recent rainfall events made for good conditions to record flow paths down through the mill platform. Certain seeps of substantial flow, not observed during July 2010 mill characterization work, were observed in particular on the working platform immediately in front of the mill buildings on the lower platform. Figure 1 shows a field sketch map of observed flows and seeps.
3. Water Quality Sampling: See Table 3 and Figure 2 for sample locations; included 4 sites on Dome Creek between station DX and downstream of Pond #1, 5 seeps in the area of the mill, and Pond #1 (lower pond) and Pond #2 (middle pond). Samples were taken utilizing established site protocols and using prepared bottles and equipment provided by Exova laboratory. Results, given in Appendix A, have been briefly reviewed to ensure data adequacy, and in general appear similar to those of the 2010 mill characterization campaign (tabulated in Appendix E-2 of the report *Mount Nansen Mine Geochemical Assessment in Support of Closure Plan Options* [Lorax 2011a]). In the 2011 results, of note is the following:
 - Station "DX+100" on Dome Creek was previously identified in 2010 as a location of conductivity spike and flow increase (possibly a major influx of Huestis 4100' adit flow). On September 1 this same area was sampled on Dome Creek immediately upstream and downstream at stations denoted "DX+95" and "DX+105". Over this 8 to 10 m reach, dissolved zinc abruptly increases downstream from 0.004 mg/L to 2.03 mg/L with corresponding increases in electrical conductivity, total alkalinity and dissolved sulphate, among other parameters. Flows between these two stations were visually estimated to increase from 100 L/min to greater than 200 L/min. These increases in concentration and volume are consistent with a zinc and sulphate enriched inflow to Dome Creek between these two sample sites; this inflow is suspected to be originating from the historic Huestis 4100' adit.
 - Dissolved chloride levels at virtually all sites were below the 0.5 mg/L detection limit with the exception of Pond #2 and Dome Creek station D1 (1.6 and 4.7 mg/L respectively), potentially indicating a local influence from the immediate mill area.
4. Pond #1 Investigations: Mid-pond sediment cores from three sites in the lower Pond #1 area were taken with a hand auger to supplement the shoreline hand auger samples taken in 2010. Flotation tubes along with personal flotation devices, provided by EDI and Altura, were used to access the middle of the pond. The cores extracted with the auger from the centre of Pond #1 appear to be tailings slimes similar in composition to the shoreline sample collected in 2010. At the three mid-pond sites augered, the tailings range in approximate thickness from 60cm to greater than 80cm, while the single auger hole from 2010 at the shore of Pond#1 indicated at least 45cm of tailings (frozen ground encountered at 45cm depth). Three on-land auger sites up-gradient of the pond were completed and cores contained lenses of grey fines resembling tailings, along with a significant proportion of intercalated sand. Descriptions of the sediment

cores from the hand auger sites are provided in Table 4, and site locations are shown in Figure 3. In all, six auger core samples from the Pond #1 area were retained, sealed in plastic bags and placed in cold storage for subsequent elemental analysis (see Table 5 for sample listing). Suggested analyses are listed in the Recommendations section of this memorandum.

5. The mid-pond #2 was extremely full (estimated 1.5 to 2m depth of water) and there was no way to safely auger down to the sediments using hand auger equipment. Altura deems hand augering viable in water depths up to 0.6m. Obtaining sediment samples in deeper water bodies requires techniques beyond the scope of Altura's capabilities.
6. The vault and office area was inspected for maps related to location of the lower Huestis adit (denoted 4100' in circa 1979 photographs previously provided to Altura by Assessment and Abandoned Mines. Three relevant maps were located: 1) a circa 1985 geological map of Huestis 4100' adit by Archer Cathro found in a map drawer of the vault (Figure 4); 2) a 1998 "Mill Area As-Built" with pencil and ink annotations found on the wall in the former mill management office (see Figure 5); and 3) numerous older underground development maps from the 1960's and 1970. The first two aforementioned maps were photographed for future reference and left at site (on table in old engineering office) and are shown in Figures 4 and 5. Other documents of interest included a 1989 Environmental Update Report for the project by Norecol Environmental Consultants Ltd. found and left in the vault, which included 1987 water quality sampling data for several drainages in the area, along with a station location map.
7. Mill interior was documented with a walk-through video and selected photographs prior to a scheduled lock-up later in the fall. Photos and videos are intended to provide general information and not a systematic inventory of all interior aspects. Files have been provided to Lorax. One building on the lower mill level (believed to have housed the diesel generators until fall 2011) was not accessed and is reported to contain one air tank, two compressors, three generator fuel tanks and an electric control panel (Bruce Wheeler, pers. comm.).
8. Small quantities of seed sufficient for research purposes were collected from scrub birch (*Betula glandulosa*), willow (*Salix sp.*), and cotton grass (likely *Eriophorum brachyantherum* or *E. scheuchzeri*); refer to Table 6 for summary of locations, species, and potential research application. Spruce trees were surveyed for presence of ripe cones, but there appears to have been little or no cone production in 2011 (2010 was a very high-yield year).
9. Two potential sites for 2011 and 2012 reclamation trials were identified: (1) clearing southeast of mill area – former explosives magazine site, and 2) upper southeast rock pile near Brown McDade pit. A sketch map of potential sites will be forwarded to Lorax and AAM for review prior to any trial establishment.
10. Upon subsequent consideration, Tasks 6, 7, and 8 were deemed as non-critical path tasks for the September field work. These tasks can readily be incorporated as an early-season task in the 2012 field program without affecting overall project schedule.

External Resources Utilized: EDI Environmental Dynamics Inc. provided assistance with seep, pond, and stream water quality sampling around the mill area, as well as sediment coring in Pond #1. EDI's Meghan Marjanovic provided field assistance and Jane Bachman helped with organizing the collaborative field work. Flotation tubes along with personal flotation devices, provided by EDI and Altura, were used to access Pond #1. Two small pieces of old conveyor belt were used to support us during pond coring, and Ed Wheeler of Graceland cut the pieces for us as well as assisted in transporting the field gear to the lower pond.

Water quality samples were analysed by Exova, file numbers 1468314, 1467767. It is understood that Exova provides all water quality data files directly to AAM as part of the standing Client agreement, therefore reports have not been included in this memorandum.

Synopsis of Task Objectives and Outcomes

A summary comparison of the contract’s original objectives and outcomes is provided in Table 1. As noted in the table, the scope of the work was reduced by deferment of several tasks deemed non-essential to conduct during September. As a result, field work was accomplished in a single site visit, rather than the two originally envisaged.

Table 1. Synopsis of Contract #C00010368 Objectives and Outcomes

Original Objective per Contract #C00010368	Outcome with Respect to Original Objective	Other Explanatory Notes
1. Water Sampling of seeps, ponds #2 and #3, and selected sites on dome Creek (<i>note – this should read Ponds #2 and #1</i>)	Completed	
2. Sediment Sampling of Ponds #2 and #3 (<i>note – this should read Ponds #2 and #1</i>)	Partially Completed	Due extremely high water levels in Pond #2, sediment sampling could not be safely carried out using available hand auger equipment
3. Huestis 4100' Adit reconnaissance	Completed	
4. Mill building interior video/documentation	Completed	
5. Collection of scrub birch seed for potential use in 2011/2012 trials	Completed	
6. Reconnaissance-level review of zones to be revegetated to identify key aspects and issues	Not Carried Out	Upon subsequent consideration, deemed as non-critical path task for the September field work. Can readily be incorporated as an early-season task in the 2012 field program without affecting overall project schedule.
7. Identification and preliminary review of natural revegetation dynamics on existing disturbances in local area	Not Carried Out	Upon subsequent consideration, deemed as non-critical path task for the September field work. Can readily be incorporated as an early-season task in the 2012 field program without affecting overall project schedule.
8. Visit previous reclamation and revegetation sites on property (both trials and operational reclamation); note successes and challenge	Not Carried Out	Upon subsequent consideration, deemed as non-critical path task for the September field work. Can readily be incorporated as an early-season task in the 2012 field program without affecting overall project schedule.

Original Objective per Contract #C00010368	Outcome with Respect to Original Objective	Other Explanatory Notes
9. Identification of site locales for future revegetation trials and research (with an eye to opportunities to establish certain trials in 2011, if feasible)	Completed	
10. Additional fall seed collection as possible for potential use in 2011/2012 trials	Completed	
11. Brief reconnaissance of roads, power lines, pipelines, Victoria Ck Well, and other misc infrastructure areas to improve understanding of closure requirements, and as possible verify the major assumptions used in preliminary costing work	Not Carried Out	Responsibility for this portion of closure planning assigned to Norwest

Synopsis of Budget

A total of \$3,892.40 was invoiced under this contract, less than the \$8,848.80 maximum contract value.

Table 2. Budget Synopsis of Contract #C00010368

	Professional Hours Diane Lister	Meals	Personal Vehicle Use	Other Disbursements	Contingency 20%	Total
Original Estimate J907-7	\$ 6,110.00	\$ 344.00	\$ 720.00	\$ 200.00	\$ 1,474.80	\$ 8,848.80
Actual Invoiced Amount	\$ 3,315.00	\$ 183.60	\$ 353.80	\$ 40.00	-	\$ 3,892.40
<i>Variance</i>	<i>\$ 2,795.00</i>	<i>\$ 160.40</i>	<i>\$ 366.20</i>	<i>\$ 160.00</i>	<i>\$ 1,474.80</i>	<i>\$ 4,956.40</i>

Next Steps / Recommendations

The following work is recommended as specific follow-up to this field campaign:

1. Convert sketch map of mill area local seeps and flows into GIS or similar format
2. Carry out flow measurements immediately upstream and downstream of “DX+100” station to better refine the visual flow estimates (given seasonal considerations suggest with salt or other tracer)
3. More detailed analysis of water quality results
4. Compile sediment core information from Pond #1, and carry out elemental analysis on the six sediment core samples currently in cold storage. In consultation with Lorax, recommended analyses include acid-base accounting, total and inorganic carbon, and trace and ultra-trace ICP via aqua-regia digestion, with follow-up AA analyses on elements exceeding the method upper detection limits. Conduct sampling of Pond #2 during 2012 field season; hand augering is considered viable in water depths up to 0.6m. Obtaining sediment samples in deeper water bodies requires techniques beyond the scope of Altura’s capabilities.
5. Utilize collected seed in fall 2011 and during 2012 field season (direct seeding trials and trial-scale nursery propagation).

References

Lorax, 2011. *Mt. Nansen Mine, Geochemical Assessment in Support of Evaluating Closure Plan Options*. Prepared for Assessment and Abandoned Mines Branch, Department of Energy, Mines and Resources, Government of Yukon, 559 pp.

Table 3. Location and description of mill characterization water quality sample sites, September 1, 2011

Station	Easting (NAD 83 UTM 8V)	Northing (NAD 83 UTM 8V)	Elevation (masl)	Description
MS-S-01	387992	6881091	1188	Seep near piezometer MW09-16
MS-S-03	387872	6881120	1199	Seep from road shoulder north of Mill - potential seep from Huestis 4100' adit
MS-S-05	387860	6881090	1208	Seep, toe of fill west of clarifier/thickener
MS-S-06	387950	6881074	1195	Artesian seep, main mill level platform
MS-S-07	387988	6881069	1190	Base of slope, main mill level platform
Pond #1	388232	6880986	1167	Lowest pond below mill
Pond #2	388098	6881007	1180	Middle pond below mill
Dome D/S from Pond 1	388271	6880993	1154	Dome Creek, downstream of Pond #1
DX + 95	387830	6881132	1204	Dome Creek, a few metres above DX+100, "DX+095"
DX + 105	387830	6881132	1204	Dome Creek, a few metres below DX+100, "DX+105"
DX + 200	387935	6881126	1196	Dome Creek, just downstream of access trail crossing for old pipelines to tailings impoundment

Table 4. Location and description of sediment investigation sites from Pond #1 (Lower Pond) Area, September 1, 2011

Sample ID	Easting (NAD 83 UTM 8V)	Northing (NAD 83 UTM 8V)	Elevation (masl)	Description
Stn 0+00m	388204	6881001	1164	Section line upgradient of Pond #1 at 128°, overgrown with vegetation. Stn approximately 28m from edge of pond 0-25 cm: organics w/ sand lenses 25-40 cm: fine, grey-brown slimes (possibly tailings?) 40-70 cm: mixed dark sand, organics, trace silt
Stn 0+09m	388210	6880994	1164	Section line upgradient of Pond #1 at 128°, overgrown with vegetation. Stn approximately 19m from edge of pond 0-30 cm: mixes organics, sand 30-60 cm: fine tailings 60-70 cm: sandy lens
Stn 0+18m	388217	6880989	1164	Section line upgradient of Pond #1 at 128°, overgrown with vegetation. Stn approximately 10m from edge of pond 0-5cm: organics and sand 5-30 cm: beige sand with traces of rust-colour 30-45 cm: as per 5-30 cm 45-90 cm : Mixed sand and tailings? with trace organics.
Site 1	388231	6880979	1163	Site within water-covered area of Pond #1. Water depth 50 cm. 0-3 cm: organic lenses with some sand 3-15 cm: gritty grey, mixed sand with trace tailings 15-60 cm: grey tailings slimes 60-70 cm: sandy lens 70-80 cm: grey tailings slimes
Site 2	388222	6880976	1163	Site within water-covered area of Pond #1. Water depth 60 cm. 0-5 cm: organics and beige-coloured sand 5-10 cm: mixed sand and tailings slimes 10-75 cm: tailings slimes 75-85 cm: gritty sand with orange pebbles, approximately 20% tailings slimes
Site 3	388238	6880989	1163	Site within water-covered area of Pond #1. Water depth 30 cm. 0-20 cm Silty, black-coloured sediment with trace organics. 20-60 cm Grey tailings slimes. 60-80 cm: tan sand, could not auger further.

Table 5. Location and description of sediment samples from Pond #1 (Lower Pond) collected and stored for subsequent analysis – September 1, 2011

Sample ID	Easting (NAD 83 UTM 8V)	Northing (NAD 83 UTM 8V)	Elevation (masl)	Description
Pond #1 Stn 0+00m 25-40 cm	388204	6881001	1164	Section line upgradient of Pond #1 at az.128°, overgrown with vegetation. Fine, grey-brown slimes (possibly tailings?)
Pond #1 Stn 0+09m 30-90 cm	388210	6880994	1164	Section line upgradient of Pond #1 at az.128°, overgrown with vegetation. Fine tailings with 10 cm sandy lens 60-70cm.
Pond #1 Stn 0+18m 45-90 cm	388217	6880989	1164	Section line upgradient of Pond #1 at az.128°, overgrown with vegetation. Mixed sand and tailings? with trace organics.
Pond #1 Site 1 15-80 cm	388231	6880979	1163	Site within water-covered area of Pond #1. Predominantly grey tailings with occasional sandy lenses.
Pond #1 Site 3 0-20 cm	388238	6880989	1163	Site within water-covered area of Pond #1. Silty, black-coloured sediment with trace organics.
Pond #1 Site 3 20-60 cm	388238	6880989	1163	Site within water-covered area of Pond #1. Grey tailings slimes.

Table 6. Location and description of seed collection sites, September 1, 2011

Species	Easting (NAD 83 UTM 8V)	Northing (NAD 83 UTM 8V)	Elevation (masl)	Description (storage, recommended utilization)
Cotton Grass (likely <i>Eriophorum brachyantherum</i> or <i>E. scheuchzeri</i>)	388053	6881146	1188	Mill Area Stored in paper bags at approximately 12°C. Potential use in direct seeding trials in fall 2011 (if suitable moist areas available), and/or for fall sowing and propagation under nursery conditions.
Scrub Birch (<i>Betula glandulosa</i>)	388013	6881158	1191	Mill Area Stored in paper bags at approximately 12°C. Potential use in direct seeding trials in fall 2011 or spring 2012, and/or for 2012 sowing and propagation under nursery conditions.
Willow (<i>Salix sp.</i>)	387780	6881127	1212	Mill Area Stored in paper bags at approximately 12°C. Potential use in direct seeding trials in fall 2011.
Scrub Birch (<i>Betula glandulosa</i>)	389117	6881200	1203	Pit Area Stored in paper bags at approximately 12°C. Potential use in direct seeding trials in fall 2011 or spring 2012, and/or for 2012 sowing and propagation under nursery conditions.
Scrub Birch (<i>Betula glandulosa</i>)	389451	6880860	1121	Tailings Area Stored in paper bags at approximately 12°C. Potential use in direct seeding trials in fall 2011 or spring 2012, and/or for 2012 sowing and propagation under nursery conditions.

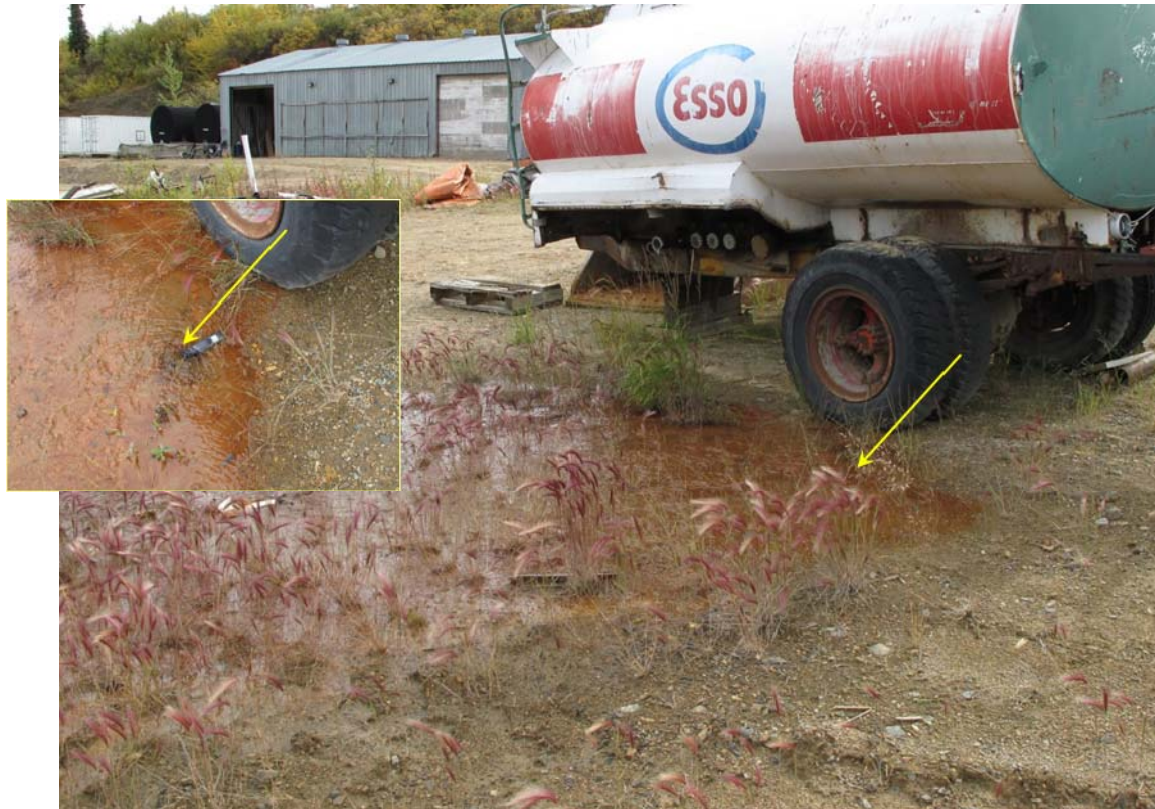


Photo 1. Artesian flow out of mill platform (seep MS-S-06, estimated at 40 L/min)



Photo 2. Sediment cores from a vegetated site up-gradient of Pond #1, showing tailings slimes and local sand within the lower intervals (the 3 right-most cores). Each core represents 15-20cm of sample depth.



Photo 3. Cotton grass (likely *Eriophorum brachyantherum* or *E. scheuchzeri*) seed collection site along pipeline access trail east of mill area.

Figure 1. Field sketch map of observed surface water flow and seep conditions in mill area, August 31, 2011.



Figure 2. Location of Mill Area Water Quality Sample Sites, September 1, 2011 (figure from Lorax, 2011)

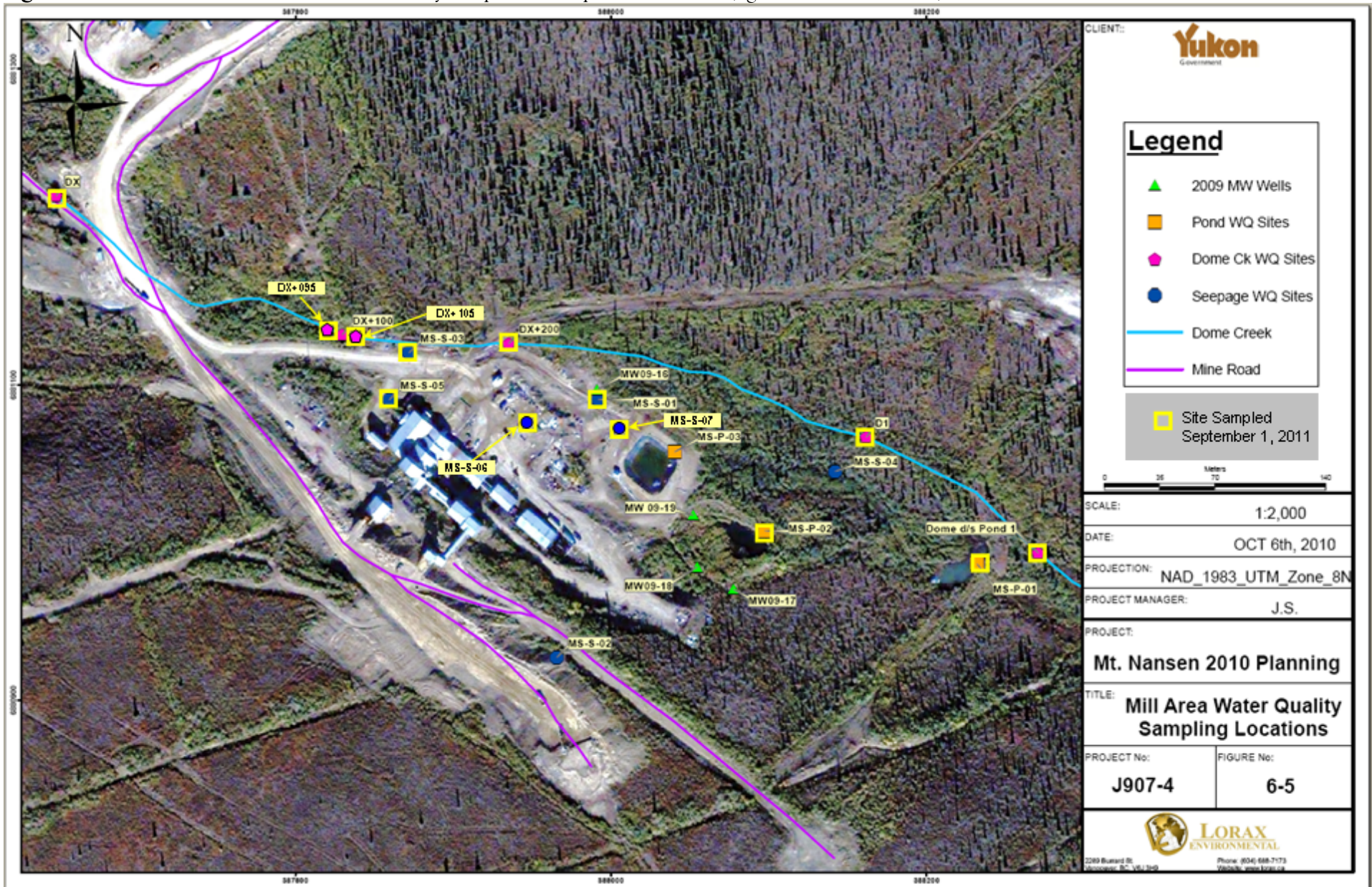


Figure 3. 2008 Photo Image Depicting Location of 2011 and 2010 Sediment Samples in the Area of Pond #1 (note that actual georeferenced image shows sample points shifted approximately 20m to the southeast).



Figure 4. Heustis 4100' Geology Map (based on Altura's site experience this map likely accompanied an Archer Cathro annual property report, c. 1985)

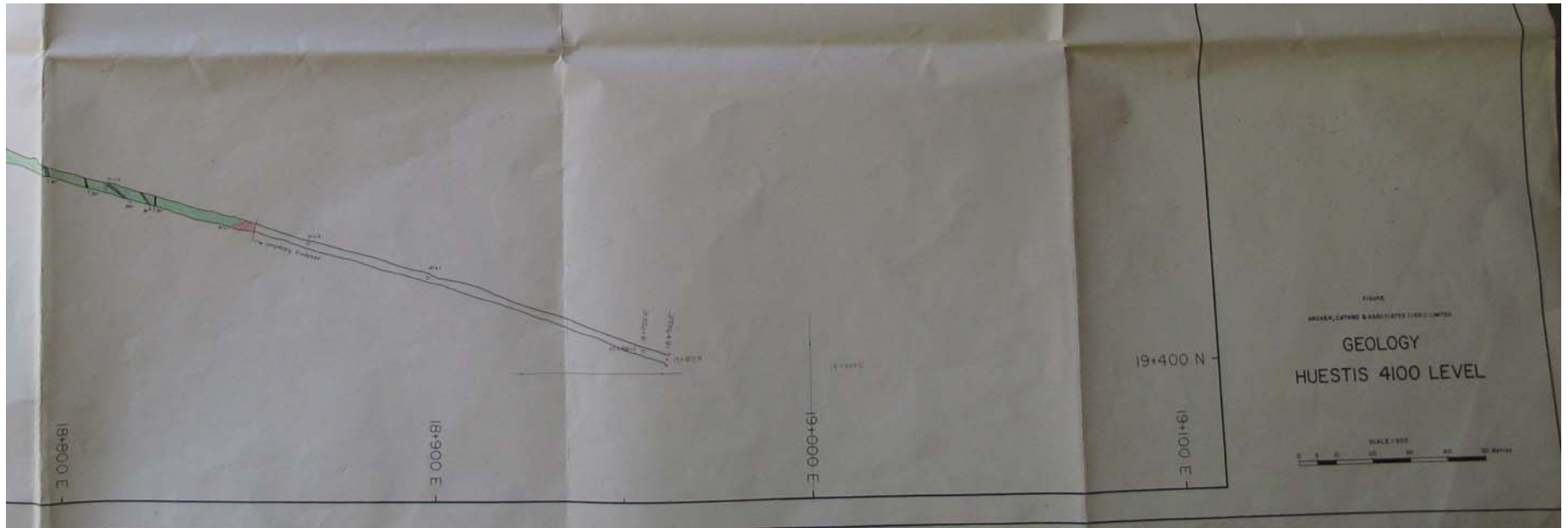


Figure 5. Mill Area As-Built Dated April, 1998, with supplemental annotations in pencil showing many key features in the area.



Appendix A. September 1, 2011 Water Quality Results – Mill Area and Adjacent Dome Creek Sites

Client Project PO		P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165	P00020165
Exova Report ID		1468314	1468314	1468314	1468314	1468314	1468314	1468314	1468314	1467767	1468314	1468314	1468314	1467767	1468314
Sampling Method		Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Sampling Company		EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI	EDI
Date Sampled		9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011	9/1/2011
Site ID		MS-S-01	MS-S-03	MS-S-05	MS-S-06	MS-S-07	Pond #1	Pond #2	DX	DX + 95	DX + 105	DX + 200	D1	Pond #1	
Parameter Name	Parameter Unit	Detection Limit													
Estimated Flow (Altura)	L/min	---	50	20	20	40	20	not applic	not applic	not obtnd	100	>200	>200	not obtnd	not obtnd
Ammonia - N	mg/L	0.01	<0.01	0.03	0.01	0.04	0.04	<0.01	<0.01	0.03	<0.01	0.04	0.02	<0.01	0.06
Aluminum	Dissolved mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050	0.009	0.013	<0.005	<0.005	<0.005	<0.005
Antimony	Dissolved mg/L	0.0002	<0.0002	0.0148	<0.0002	0.0117	0.0153	0.0031	<0.002	0.001	0.0007	0.0112	0.0107	0.0092	0.0139
Arsenic	Dissolved mg/L	0.0002	0.0202	0.0603	0.0186	0.170	0.066	0.011	0.006	0.002	0.0038	0.0444	0.0181	0.0083	0.0094
Barium	Dissolved mg/L	0.001	0.010	0.009	0.005	0.008	0.008	0.017	<0.01	0.042	0.041	0.011	0.011	0.016	0.016
Beryllium	Dissolved mg/L	0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.0004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004
Bismuth	Dissolved mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	Dissolved mg/L	0.004	0.22	<0.004	<0.004	0.008	0.007	0.102	0.11	<0.004	<0.004	<0.004	<0.004	<0.004	0.035
Cadmium	Dissolved mg/L	0.00001	0.0278	0.0125	0.00006	0.00025	0.00546	0.00007	<0.0001	<0.00001	0.00001	0.0108	0.00989	0.00626	0.00374
Chromium	Dissolved mg/L	0.0004	0.0008	0.0006	0.0009	0.0011	0.0009	0.0009	<0.004	0.0007	<0.004	0.0006	0.0006	0.0014	0.0006
Cobalt	Dissolved mg/L	0.00002	0.00032	0.00173	0.00022	0.00182	0.00166	0.00021	0.0003	0.00018	0.00018	0.00106	0.00097	0.00051	0.00045
Copper	Dissolved mg/L	0.001	0.007	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	Dissolved mg/L	0.0001	0.0084	<0.0001	<0.0001	<0.0001	0.0003	0.0003	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	Dissolved mg/L	0.001	0.012	0.011	0.019	0.018	0.016	0.013	<0.01	<0.001	<0.001	0.009	0.008	0.009	0.009
Molybdenum	Dissolved mg/L	0.0001	0.0001	0.0002	<0.0001	<0.0001	0.0001	0.0001	<0.001	<0.0001	<0.0001	0.0002	0.0001	0.0001	0.0002
Nickel	Dissolved mg/L	0.001	0.006	0.005	0.004	0.005	0.004	0.003	<0.01	0.001	0.001	0.004	0.004	0.003	0.004
Selenium	Dissolved mg/L	0.0006	<0.0006	<0.0006	0.0011	<0.0006	<0.0006	<0.0006	<0.006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silver	Dissolved mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00010	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Strontium	Dissolved mg/L	0.001	0.701	0.458	0.757	0.905	0.881	0.628	0.830	0.220	0.193	0.415	0.377	0.391	0.506
Sulfur	Dissolved mg/L	0.2	305	163	334	367	355	281	404	57.4	46.4	134	124	133	185
Thallium	Dissolved mg/L	0.00001	0.00028	0.00009	0.00033	0.00057	0.00061	<0.00001	<0.00010	<0.00001	<0.00001	0.00006	0.00005	0.00008	0.00002
Thorium	Dissolved mg/L	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Tin	Dissolved mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	Dissolved mg/L	0.0004	0.0121	0.0058	0.0134	0.0137	0.0134	0.0116	0.012	0.0022	0.0019	0.0052	0.0052	0.0045	0.0072
Uranium	Dissolved mg/L	0.0004	0.0037	0.0033	0.0053	0.0066	0.0064	0.003	0.005	<0.0004	<0.0004	0.0032	0.003	0.0032	0.0032
Vanadium	Dissolved mg/L	0.0001	0.0003	0.0003	0.0003	0.0004	0.0003	0.0003	<0.001	0.0004	0.0003	0.0003	0.0002	0.0004	0.0003
Zinc	Dissolved mg/L	0.001	4.55	2.47	0.004	0.531	0.517	0.007	<0.01	0.004	0.004	2.03	1.74	1.19	0.912
Zirconium	Dissolved mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mercury	Dissolved mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
pH	at 25 °C		7.00	7.07	7.08	7.11	7.98	8.04	7.79	7.59	7.99	7.16	7.63	7.98	8.01
Electrical Conductivity	µS/cm at 25	1	1690	1030	1850	1940	1950	1650	2030	480	401	979	975	983	1220
Calcium	Dissolved mg/L	0.1	316	192	347	369	354	217	311	78.4	65.5	163	167	168	199
Iron	Dissolved mg/L	0.005	0.007	0.521	0.015	1.6	0.196	0.02	<0.05	0.128	0.024	0.096	0.312	0.03	0.058
Magnesium	Dissolved mg/L	0.1	144	64.9	170	191	184	167	199	20.4	16.7	54.3	54.2	55.5	85.6
Manganese	Dissolved mg/L	0.001	0.029	1.45	0.108	1.39	1.23	<0.001	0.16	0.077	0.069	1.14	1.21	0.593	0.559
Phosphorus	Dissolved mg/L	0.01	<0.01	<0.01	0.01	0.01	0.01	<0.01	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium	Dissolved mg/L	0.1	6.1	3.8	5.6	6.1	5.8	8.4	6	4.3	3.4	3.4	3.8	3.8	4.2
Silicon	Dissolved mg/L	0.05	4.59	6.04	3.86	4.76	4.45	3.58	2.6	4.74	4.52	5.57	5.76	5.99	5.13
Sodium	Dissolved mg/L	0.1	7.8	4.7	6.7	7.9	7.4	8	9	4.1	3.1	4.3	4.7	5	5.6
Bicarbonate	mg/L	5	380	320	450	480	480	390	470	100	100	300	300	290	310
Carbonate	mg/L	6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Hydroxide	mg/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
P-Alkalinity	as CaCO3 mg/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
T-Alkalinity	as CaCO3 mg/L	5	308	264	368	396	395	321	385	98	90	248	245	237	258
Chloride	Dissolved mg/L	0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	4.7	<0.5
Nitrate - N	Dissolved mg/L	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite - N	Dissolved mg/L	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulfate (SO4)	Dissolved mg/L	0.6	916	489	1000	1100	1060	844	1210	172	139	402	374	398	554
Hardness	as CaCO3 mg/L	5	1380	746	1560	1710	1640	1230	1600	280	232	632	639	649	849
Total Dissolved	Calculated \mg/L	1	1590	929	1760	1920	1870	1450	1970	351	294	791	766	795	1020