An Assessment of Abandoned Mines in Northern Saskatchewan

March, 2001

Prepared for:

Saskatchewan Environment and Resource Management

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Prepared By:

(KHS) Environmental Management Group Ltd.
108 Main St., Box 189
Domremy, Saskatchewan
CANADA
S0K 1G0
Phone: (306) 423-6100
Fax: (306) 423-6104
E-Mail: emg@sk.sympatico.ca

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Executive Summary

The Abandoned Mines Assessment Program was implemented by Saskatchewan Environment and Resource Management through funding provided by the Province of Saskatchewan's Centenary Fund. The program has proposed the inspection of abandoned mine sites in northern Saskatchewan in order to identify and rank public safety risks and potential impacts that the sites may be having on the surrounding environment.

Exploration excavations, test mining and production mining has been taking place in northern Saskatchewan since early in the last century so it is not surprising that the Abandoned Mines Assessment Program has identified 67 sites that require investigation and potentially audits. It should be noted that some of the identified sites initially may not be abandoned and/or may have been decommissioned by the owner/operator. Of the 67 sites identified, 41 are located in the Uranium City area, 6 in the La Ronge area and 20 in the Creighton area.

The majority of these properties were abandoned in the late 1950s or early 1960s - a time when environmental protection, decommissioning and reclamation requirements did not exist. As a result, at many of the sites, little or no reclamation or decommissioning took place at the cessation of mining activities.

Since it was not possible to conduct effective audits of all 67 sites in the fall of 2000, it was necessary to prioritize which sites should be inspected in the first year's activities. This was completed using a criteria that combined the ease of access to the sites and the potential risk posed by each. Based on this prioritization, a total of 27 abandoned mine sites were inspected and an assessment completed on each one as to the risks posed to public safety and the environment.

The work on each site consisted of conducting a detailed inspection and the preparation of a report on current condition. The inspection included all aspects of the mine itself and of the surrounding area. This included such things as locating and examining the current condition of any adits, shafts or raises, inspecting any debris and/or old buildings that may still exist, and photographing the site. Other activities included collecting water samples (when discharge was evident) and conducting a survey of the gamma radiation levels at any of the sites where uranium was mined in the past.

The risk posed by each site was assessed by the following steps:

- a detailed audit was conducted of each site using the template provided;
- during the audit, each risk to public safety and/or to the environment was identified, recorded and assigned a risk value of between 1 and 6 (with 6 representing the highest risk);
- after completing the entire site audit, all category risk values were added to produce the overall site risk value.
- the overall site risk value for each site was then used to rank each abandoned site. This allowed for a comparison of all sites audited in the fall of 2000.

This report has been prepared to present the results of the audits and assessments, to provide recommendations on required rehabilitation and to provide a prioritized list, based on level of risk posed, of those sites requiring rehabilitation. The following table provides a summary of the results. The site posing the highest combined risk is listed as Number 1 while the site posing the least risk is Number 27.

During the course of the 2000 field site audit activities, two large, remote waste disposal sites were also located. Due to the type of waste material present and the close proximity of the dumps to abandoned mine sites, it was decided that an assessment of the sites was warranted within the program. The assessment of the environmental and public safety risk posed by these two waste

disposal areas has been included in this report.

Ranking of Sites Investigated in 2000

Ranking	Site	Total
1	Anglo-Rouyn (28)	35.1
2	Western Nuclear (29)	28.1
3	Lake Cinch/Cenex (8) & (9) *	25
4	Nesbitt-Labine, Eagle Mine (16)	24.5
5	Waste Disposal Area 2 (27)	23
6	Consolidated (6)	22.5
7	Nesbitt-Labine, ABC Mine (14) & (15) *	19.4
8	Cayzor (5)	19
9	Uranium Ridge (25)	17.5
10	Pitch-Ore (18)	17.2
11	Black Bay (4)	17
12	Rix-Athabasca., Zone 62 (20)	16.7
13	Rix-Athabasca, Smitty Mine (19)	16.5
14	Meta (11)	16.4
15	Rix-Athabasca., Leonard Mine (21)	16.3
16	Lorado (10)	15.6
17	St. Michaels (23)	15.3
18	National Ex., Keiller Adit (12)	14.7
19	National Ex, Pat Claims (13)	13
20	Amax Athabasca (1)	12.4
21	Waste Disposal Area 1 (26)	10.4
22	Nisto Mines Ltd. (17)	9.4
23	Rix-Athabasca, No. 10 Adit (22)	8.4
24	Eldorado, Eagle Mine (7)	7.9
25	Strike Lake. (24)	6.5
26	Amax Athabasca (2)	6.3
27	Amax Athabasca (3)	4

* Although two sites are identified as separate, the close proximity of the sites required that they be assessed as a single site.

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2000 ASSESSMENTS REPORT

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1.0 BACKGROUND

Exploration excavations, test mining and production mining has been taking place in northern Saskatchewan since early in the last century. The majority of these properties were abandoned in the late 1950s or early 1960s at a time when decommissioning and reclamation requirements did not exist and, as result, little or no reclamation or decommissioning of the sites took place at the cessation of activities.

In the 1980s, Saskatchewan Environment and Public Safety, the predecessor of the present Saskatchewan Environment and Resource Management (SERM), established the Abandoned Mines Program. Through funding provided for this program, many abandoned mine sites in Saskatchewan were inspected, conditions detailed and some decommissioning work completed. However, due to a withdrawal of funding, the program was suspended in the early 1990s. The result was that detailed inspections were not carried out on a number of sites in northern Saskatchewan.

In order to complete this important work, a proposal to establish the Abandoned Mines Assessment Program was approved under the Province of Saskatchewan's Centenary Fund in July, 2000. The Centenary Fund, announced in Saskatchewan's 2000-01 budget, was established to leave a legacy of Saskatchewan's Centennial for future generations. Leading up to the Saskatchewan centennial celebrations in 2005, the Government of Saskatchewan is funding projects that will address specific infrastructure needs related to heritage properties, parks, highways, environmental clean-up, education, housing and municipal infrastructure.

2.0 INTRODUCTION

In August 2000, (KHS) Environmental Management Group Ltd. was retained by Saskatchewan Environment and Resource Management (SERM) to conduct an evaluation of abandoned mines in northern Saskatchewan in order to assess the environmental and public safety risks posed by the sites in their present condition.

Each abandoned mine was assessed based on two criteria - the public health and safety risks associated with the facilities; and, the risk posed by the site to the surrounding environment and local ecosystem health. To accomplish this, a detailed audit was conducted of each site and an assessment made of the risk associated with existing conditions.

A detailed audit of 27 abandoned mine sites and 2 waste disposal sites located in northern Saskatchewan was conducted in October 2000. Based on the information obtained from the audit an assessment of each site was completed. This report has been prepared to present the results of these audits, the associated assessments, to provide recommendations on required rehabilitation and to provide a prioritized list, based on level of risk posed, of those sites requiring rehabilitation.

3.0 DEVELOPMENT OF ASSESSMENT CRITERIA

By necessity, the assessment of risk posed by abandoned mine sites in northern Saskatchewan is somewhat subjective in nature and depends to a significant extent, on the experience and knowledge of the individuals conducting the audit.

In order to remove as much of the subjectivity as possible from this assessment of risk, (KHS) EMG Ltd. researched and developed a set of assessment criteria and a scoring system that would allow an effective assessment of each abandoned site in northern Saskatchewan. Past corporate

experience as well as assessment methods currently being employed in other jurisdictions (i.e. Ontario and West Virginia) were reviewed and incorporated in the development of criteria applicable to northern sites in this province.

3.1 The Audit

The following is a list of areas that were assessed during each site audit. It is not intended to be a hard and fast check list, but rather to serve as a guide. Each site differed somewhat depending on the type of mining which took place, when and how the mine was operated and what activities (*eg.* high grade mining, salvage, vandalism, etc.) have taken place since the site was abandoned.

Site (General Information)

- Specific location (UTM and GPS)
- Research existing records
- Type of mine (uranium, gold, base metal, etc.)
- Type of operation (mining only, mining and milling, high grading)
- Period of operations (estimate if necessary)
- Current accessibility of the site (road, trail, by water, etc.)
- Surrounding environment [proximity to streams, rivers, lakes, muskeg, site drainage, other ecosystem features (forested, specially designated areas, etc.)]

Raises and/or Adits

- Type of mine (underground *v.* open pit)(adit *v.* raise)
- Evidence of flooding of underground workings or pit
- Evidence of surface subsidence (slumping)
- Head frame
  - existing
  - evidence of existence
- Open holes. ***(Do Not Enter** - unless fully qualified and equipped to assess stability and other risks)*
  - adit and/or raise
  - dimensions
  - specific location
  - ease of access
  - general condition/stability

- presence of any liquid discharges from opening at the time of assessment (sample if evident)
- assess risk to wildlife and to public safety

- Sealed or closed holes
  - adit and/or raise
  - dimensions
  - specific location
  - type of closure (waste rock, concrete slab)
  - stability of closure method
  - assessment of permanence of closure method
  - any liquid discharges from opening at the time of assessment
  - assess risk to wildlife and to public safety
- Open Pit
  - approximate dimensions
  - specific location
  - access and escape for wildlife
  - stability of pit walls
  - any ponding of liquid within pit (sample if evident)
  - assess risk to wildlife and to public safety

Mine De-watering Activities

- Evidence or history of such activity
- Location(s) of discharge
- Sample if possible
- Assess risk to local ecosystem health.

Waste Rock Disposal Area

- Estimate extent (surface area and slope of piles)
- Assess stability
- Summarize geology of waste rock (if possible)
- Assess potential of AMD (acid mine drainage) generation
- Conduct preliminary gamma survey and record results
- Assess the extent of natural vegetation encroachment
- Assess risk to local ecosystem health

Tailings Disposal Area

- Estimate extent (surface area and slope of tailings)
- Estimate depth of tailings
- Type of tailings containment
- Extent of tailings containment

- Stability of tailings containment
- Physical lay of the tailings surface
- Conduct preliminary gamma survey and record results
- Chemistry of tailings (type of mine) (collect sample)
- Evidence of acid generating tailings
- Surface runoff (evidence of runoff, location of surface runoff discharge, receiving environment of tailings surface runoff)
- Evidence of wind erosion of tailings (extent and location)
- Assess risk to local ecosystem health

Additional Containment Works
(dykes, weirs, etc)

- Estimate extent (surface area and slope of containment works)
- Estimate volume of material used in construction of containment works
- Assess stability of containment works
- Assess type and volume of material within containment works
- Assess risk of containment failure
- Assess risk to local ecosystem health

Drill Holes

- List locations
- Dry or wet holes (If discharging liquid - collect sample)

Drill Core (Storage)

- List location
- Estimate volume
- Method of storage
- Condition of storage

Waste Disposal Sites
(Industrial, domestic and/or chemical - Check the bush)

- Location
- Extent and volume
- Type and volume estimates of material

Buildings

- List building(s) still in existence or remnants of building(s) still in evidence
- Estimate size

- Type of construction (wood, metal, presence of asbestos insulation, siding or roofing)
- State/condition of structures
- Contents
- Stability of structure
- Risk to health and safety
- Risk to wildlife

Residual Chemicals on Site

- Type
- Volume
- Type of container
- Containment structure if any
- Assess risk to local ecosystem health

Scrap Materials

- Iron
- Equipment
- Spent chemical and/or product barrels, etc.
- Concrete foundations, floors, anchors, etc.
- Estimate total volume of scrap as well as estimated weight of larger pieces

3.2 Field Inspection Report Forms

A field report form, based on the information presented, was developed and used during each site audit. This was done in order to ensure that each site audit recorded sufficiently detailed information to allow for an effective comparison of all the sites and of the risks posed by each.

A sample of a completed field report form is included as Appendix 1.

3.3 Risk Assessment Scoring

In an effort to further reduce the subjectivity of the assessment, in each category a numerical

"score" of the public safety and environmental risk for each of the listed elements was established. This was done in order to account for the fact that some categories pose a more significant risk than others. For example, unsafe buildings pose more of a public safety risk than do most scrap materials and generally, tailings pose more of an environmental risk than does waste rock.

Similarly, it must also be recognized that each element within a particular category may pose a different level of risk depending of the character of that element at a particular site. For example, acid generating waste rock presents more of an environmental risk than benign waste rock and therefore will receive a higher total risk value. Such variations must be taken into consideration when assessing the overall risk posed by a particular site or when the risks associated with a particular site is compared to those of other sites.

Table 1 presents a description of the scoring level assigned in each category.

The total risk posed by each site was then assessed by completing the following steps:

1. A detailed audit was conducted of each site using the template provided.
2. During the audit, each risk to public safety and/or to the environment was identified, recorded and assigned a risk value of between 1 and 6 (with 6 representing the highest risk).
3. After completing the entire site audit, all category risk values were added to produce the overall site risk value.
4. The overall site risk value for each site was used to rank each abandoned site which allowed for a comparison of all sites audited in the fall of 2000.

It should be noted that in some categories the risk value ranges from 0 to 3 while in others the risk value ranges from 0 to 6. This variation is necessary as some categories pose a higher overall risk than others and this difference must be accounted for. A risk value of 0 indicates that no risk was identified.

In instances where there was more than one item in each category (i.e., two adits at the same site) each item was assessed individually. The two were then combined and assessed/reviewed to arrive at a total risk value for the item.

By following these steps, those site posing the most significant risk to public safety and to the environment will receive a higher site score than those posing less of a risk.

The assessment and scoring system allows for a maximum score of 50 for an individual site with the minimum score approaching zero.

3.4 Sensitivity Test

The sensitivity of the assessment and scoring system was tested by completing an audit and assessment of two sites that have been fully decommissioned. These sites, the Eldorado - Eagle Mine and the Nisto Mine, scored 7.9 and 10.1 respectively which was in the lowest 95 percentile of the sites ranked in 2000.

A further test of the sensitivity was conducted by completing a scoring of the abandoned Gunnar Mine site. This was accomplished by using information from a previous inspection and audit completed on that site by staff of (KHS) Environmental Management Group. The Gunnar site was awarded a score of 49.5 (as expected) and would therefore have been the highest scoring site had it been a part of this assessment.

In addition, throughout the process of assigning scores to particular sites, the authors continually reviewed the character of similar sites and evaluated the position of each site ranking in relation to other sites.

4.0 INVENTORY OF SITES

In conjunction with the development of the assessment criteria, an inventory of abandoned sites in the Shield Ecoregion and identification of the significant characteristics of each site was prepared. The initial list of abandoned sites provided by SERM was comprehensive and provided specific details on the majority of the former uranium mines sites and a number of gold and base metal sites. Additional literature searches and other investigations identified additional potential sites, particularly on the east side of the province in the Creighton area.

In total, 67 former mine sites in northern Saskatchewan were identified as requiring further research and potentially requiring site audits. The 67 sites included 41 sites in the Uranium City area, 6 in the La Ronge area and 20 in the Creighton area. (Table 2 and Table 3 provide a listing of all sites identified..)

It should be noted that some of the identified sites may not be abandoned and/or may have been decommissioned by the owner/operator.

5.0 2000 AUDITS

Past experience has shown that the natural encroachment of vegetation at abandoned mine sites in northern Saskatchewan often obscure features and characteristics that must be fully investigated in order to allow for an effective and accurate site audit and assessment. For this reason, there are only two windows of opportunity to complete comprehensive site audits - the early spring, when the leaf cover has yet to fully develop and late fall, after the leaf cover has fallen and before a significant snowfall obscures the details of the site.

Since it was not possible to conduct an effective audit of all 67 sites in the fall of 2000, it was necessary to prioritize which sites should be inspected in the fall of 2000. In consultation with

SERM the sites for inclusion in the 2000 field investigations were identified and an audit and assessment of each was conducted.

5.1 Sites Completed in 2000

Based on this prioritization a total of 27 abandoned mine sites were inspected and assessments conducted on each during 2000. These sites are listed in Table 4 with the general locations illustrated on Figure 1 and Figure 2. Map 126B from a report entitled *Uranium Deposits of the Athabasca Region* (Saskatchewan Energy and Mines, 1969) provides a more detailed illustration of the majority of the sites located on the north shore of Lake Athabasca and is reproduced as Appendix 2.

During the course of the 2000 field activity, two large, remote waste disposal sites were located north of the Cayzor and Lorado mine sites. Due to their close proximity to these sites and the type of waste material present, it was decided that an assessment of the sites was warranted. The assessment of the environmental and public safety risk posed by these two site is included within this report.

5.2 Remaining Sites

Table 9 provides a summary of the sites that were identified during the development of the inventory but were not inspected or assessed. It is anticipated that these site will be assessed in Year 2 and 3 of the Abandoned Mines Assessment Program.

Again, it should be noted that some of the identified sites may not be abandoned and/or may have been decommissioned by the owner/operator. Additional research will confirm the "status" of all sites.

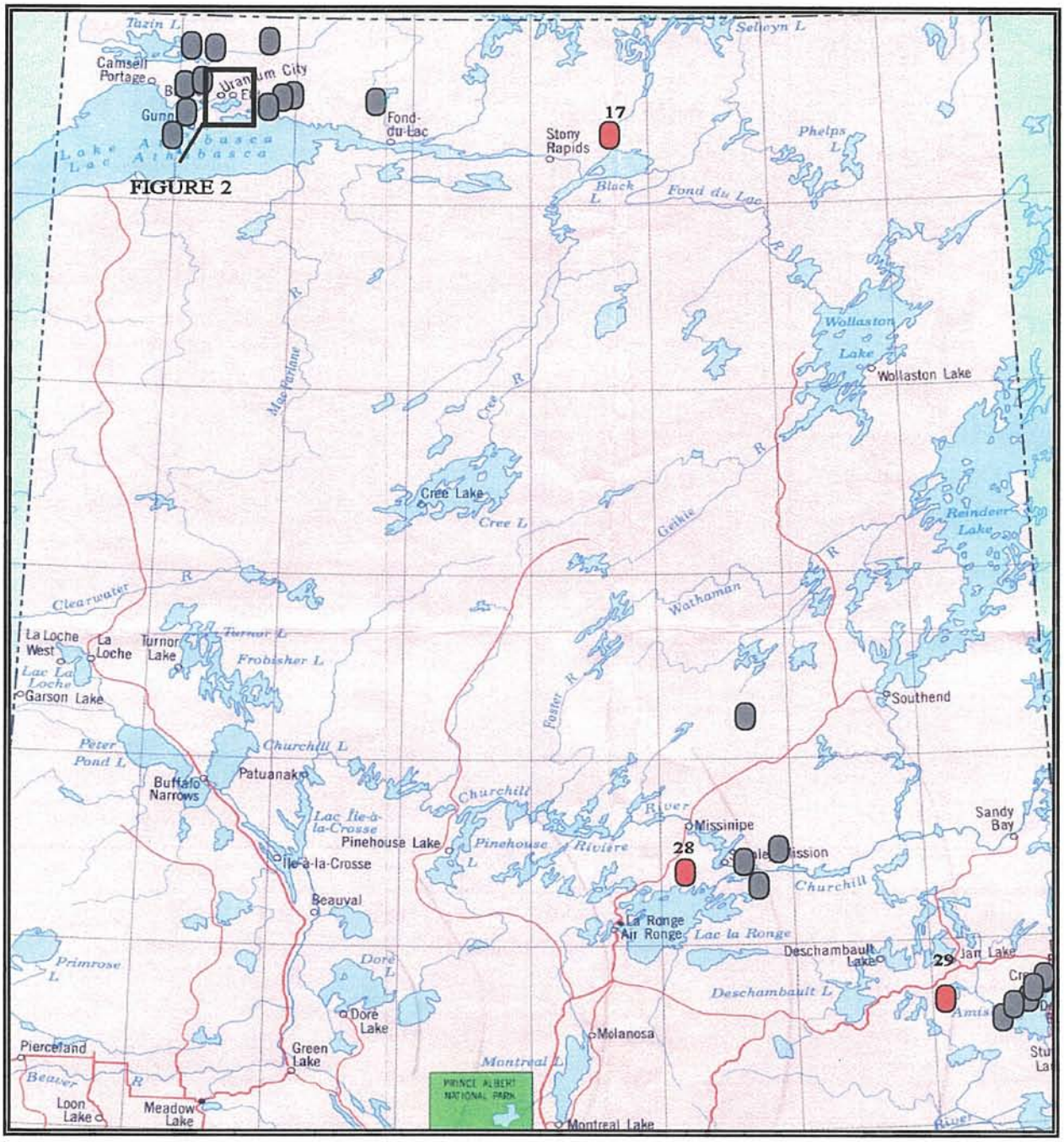

Figure 1

ABANDONED MINES ASSESSMENTS

Mine Sites Inspected - 2000 -

Mine Sites To be Inspected -

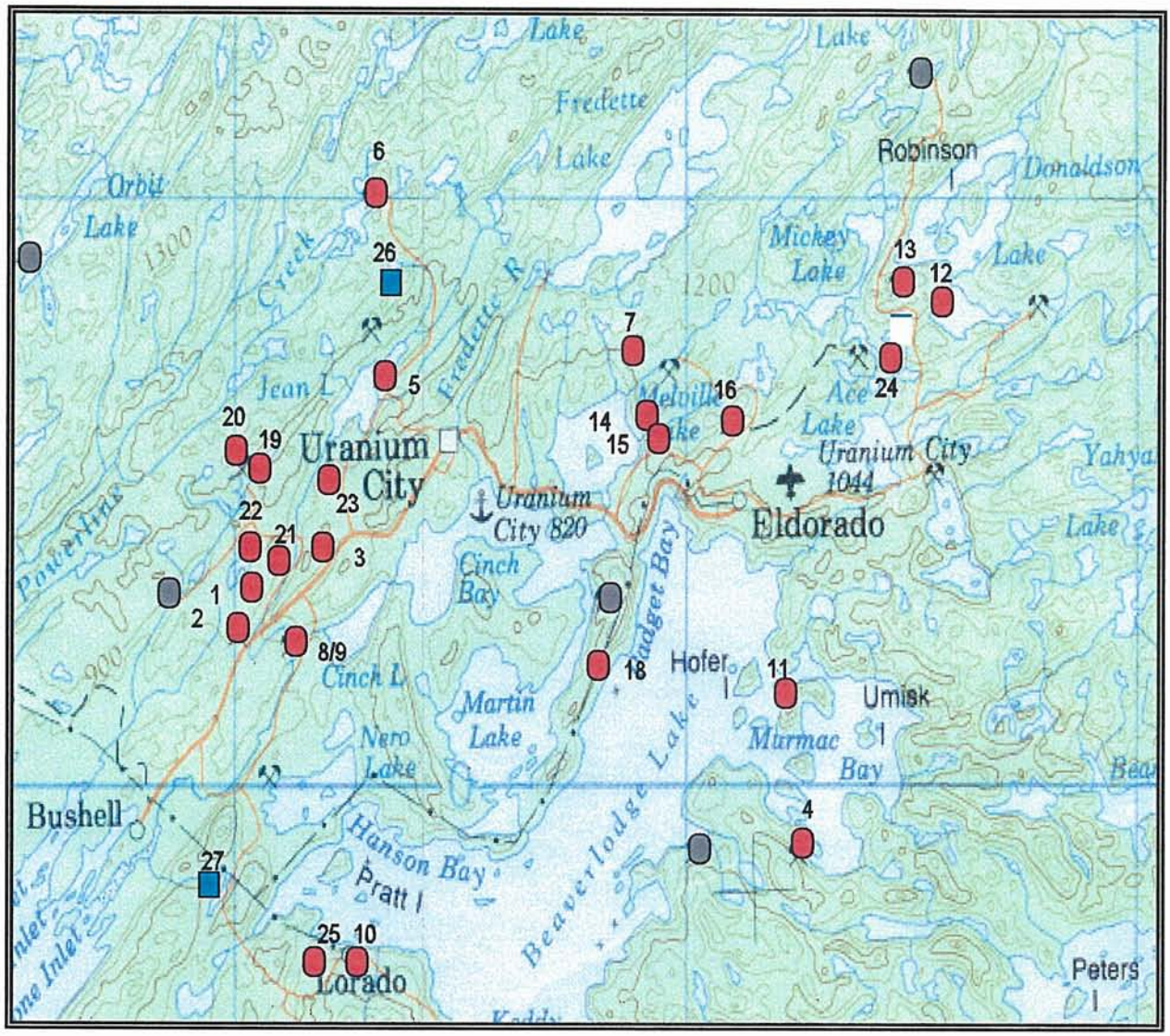

Figure 2

ABANDONED MINES - URANIUM CITY AREA

Mine Sites Inspected - 2000 -

Waste Sites Inspected - 2000 -

Mine Sites To be Inspected -

6.0 SITE AUDITS

All site audits were conducted during October 2000 by (KHS) Environmental Management Group Ltd. staff, Don Hovdebo (Domremy, Saskatchewan), Dale Kristoff (Domremy, Saskatchewan) and Dennis Boneleye (of Black Lake, Saskatchewan).

During the inspection of each site in the Uranium City area local participation was encouraged and resulted in Athabasca Environmental Quality Committee member, J. (Sonny) Lepine participating in the audits of two sites. In addition, on a separate occasion, Uranium City, Grade 11 student, Bernadette Knox accompanied (KHS) EMG staff on the audit and sample collection at five other sites.

Once access to each site was achieved, a comprehensive audit was conducted which included detailed notes and measurements being recorded on the field inspection report forms provided.

At each site, latitude and longitude data was collected on all shafts, raises, and/or adits located on the site using a Garmin, Model GPS 38.

Extensive photographs of distinguishing features (including all shafts, raises , and/or adits) were taken at most sites using a Kodak DC 260 digital camera and downloaded to a HP laptop computer at the end of each day. A complete file of all pictures taken at each site was provided to Saskatchewan Environment and Resource Management.

A gamma survey was also conducted at each site using a Automess 6150 AD6 Gamma Metre manufactured by Automess GmbH. The meter was calibrated on August 31, 2000 and all gamma measurements were taken at 1 m (waist) height. The metre was used continually during all aspects of the audit of each site by using the audio alarm. When the audio alarm frequency increased above the background expected for the area, the levels and location was noted. In addition, the gamma level was measured and recorded at shafts, adits and in a grid over the entire waste rock

area of each site. All gamma measurements are reported on the site maps which are included in each site summary presented in Section II of this report.

At those sites where water was flowing out of mine works or ponded within those workings, a water sample was collected. In each case, field parameters of pH, conductivity and temperature were measured using an Oakton pH/Conductivity/ ^{0}C meter (pH/Con. 10 Series), Model 35630-00 metre. The meter was calibrated each morning before use. Calibration methods were those prescribed by the manufacturer.

Water samples were collected in containers supplied by the Saskatchewan Research Council and preserved immediately. Preservation methods used were those specified by the analytical laboratory for the analysis being requested. Samples were then shipped to the Saskatchewan Research Council for analysis. The data from this analysis is included in the site summary section of this report and reproduced in Appendix 3.

Samples of tailings and of potentially contaminated soils were collected using a shovel, with the sampled material being placed in a new, 1 litre wide mouth plastic jar which was then sealed with a new cap. These samples were also shipped to the Saskatchewan Research Council for analysis. The data from the analysis of each sample is included in the site summaries in Section II.

7.0 SCORING

After completing all of the site audits, each aspect of the site was assigned a score based on risk to both public safety and the environment. The results of both the public safety and the environmental risk are reported separately in Table 5 and Table 6.

The results of this scoring were then calculated to arrive at an overall score for each site. The combined assessment score for each site is reported in Table 7.

8.0 REHABILITATION RECOMMENDATION

A rehabilitation recommendation has been included in each of the separate site summary. The recommendation is based on the field audit observations and measurements, and on the assessment of risk posed by the various conditions observed at each site.

9.0 RANKING

Table 8 provides a list of all sites investigated in 2000. The sites have been ranked based on the public safety and environmental risk posed by each with the highest combined risk being scored as 1 and the site posing the least risk as number 27.

It should be noted that in two instances (the Lake Cinch/Cenex sites and the Nesbitt-Labine ABC Mine Site 1/Site 2) the close proximity of the workings, waste rock, etc. required that the two sites be assessed as one.

10.0 REFERENCES

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Saskatchewan; Saskatchewan Energy and Mines Web Page: www.gov.sk.ca/enermine/geomine/geostart.htm

Table 1 Scoring Summary

Public Safety Scoring

Accessibility
- 1 = boat, snow machine or float plane.
- 2 = access consists of a long walk through an unmarked or overgrown road (> 500 m)
- 3 = drive and short walk (< 500 m)
- 4 = drive directly to site and openings

Closure Method
- 0 = sealed with concrete; in excellent condition
- 1 = sealed with concrete; deteriorating condition
- 2 = sealed with rock or steel grate; no slumping or access through grate
- 3 = covered with rock, steel grate or debris; slumping or grate with openings (< 1 m^2)
- 4 = covered with rock, grate or debris; large opening (> 1 m^2)
- 5 = no closure and easily recognizable
- 6 = no closure and blind opening

Waste Rock Stability
- 0 = no waste rock detected
- 1 = no steep slopes
- 2 = steep slopes (< 5 m in height)
- 3 = steep slopes (> 5 m in height)

Gamma Survey
- Weighted average readings

Buildings and Foundations
- 0 = no buildings or foundations
- 1 = foundations only; good condition; level to ground
- 2 = foundation deteriorating; above ground level
- 3 = foundations and buildings; deteriorated; falling debris hazard; fall height hazard

Scrap Material
- 0 = no scrap material
- 1 = small amount; no pile;
- 2 = moderate amount; small pile (< 2 m in diameter)
- 3 = large amount; pile (> 2 m in diameter)

Additional Public Safety Risks
- A ranking of 0 to 3 can be assigned depending on any special circumstances that may warrant an additional public safety concern. These must be judged on a site specific basis and will be described as needed.

Environmental Risk Scoring

Accumulated Water
- 0 = no water on site
- 1 = small amount; ephemeral
- 2 = small amount; ponded
- 3 = large amount; ponded

Liquid Discharge
- 0 = no discharge
- 1 = ephemeral discharge
- 2 = small persistent discharge
- 3 = large persistent discharge

Waste Rock Character
- 1 = average gamma reading < 2.00 μS/h /low acid generating potential
- 2 = average gamma reading > 2.00 μS/h /medium acid generating potential
- 3 = average gamma reading > 2.00 μS/h /high acid generating potential

Waste Rock Location
- 0 = no hazard
- 1 = hazard near body of water
- 2 = hazard; runoff into body of water
- 3 = hazard; in body of water

Scrap Material
- 0 = no hazard
- 1 = low threat of contamination (example: bag of cement)
- 2 = moderate threat of contamination (example: empty chemical containers, product drums)
- 3 = high threat of contamination (example: mill fines)

Risks to Wildlife
- 0 = no hazard
- 1 = possible hazard due to gamma readings, habitat, etc.
- 2 = hazard; elevated gamma readings, habitat, etc.
- 3 = ponded water, residual chemicals, habitat, etc.

Additional Hazards to Environment
- A ranking of 0 to 3 can be placed here depending on any special circumstances that may warrant an additional environmental concern. These must be judged on a site specific basis and will be described as needed.

Table 2
Inventory of Identified Sites - Uranium City Area

Amax Athabasca Uranium Mines Ltd. - Showing No. 50-CC1-61
Amax Athabasca Uranium Mines Ltd. - Showing No. 49-CC1-11
Amax Athabasca Uranium Mines Ltd. - Showing No. 50-CC1-39
Baska Uranium Mines Limited
Beaverlodge Uranium Mines Ltd.
Black Bay Uranium Mines Ltd.
Caba Uranium Mines Ltd.
Cayzor Athabasca Mines Ltd..
Consolidate Beta Gamma Mines Ltd.
Consolidate Beta Gamma Mines Ltd./North Shore Uranium Developers - Tena Claims
Cenex Mines Ltd.
Consolidated Nicholsom Mines Ltd.
Don Henry Mines Ltd.
*Gunnar Mines Ltd.
Gulch Mines Ltd.
Harrison R.J. Mines Ltd.
Homer Yellowknife Mines Ltd.
Jesko Uranium Mines Ltd.
Lake Cinch Mines Ltd.
Lorado Uranium Mines Ltd. (Mine Site)
*Lorado Uranium Mines Ltd. (Mill Site)
Meta Uranium Mines Ltd.
National Exploration Ltd. - Keiller Adit
National Explorations Ltd. - Pat Claim, C Zone
Nesbitt-Labine Uranium Mines Ltd. - ABC Mine (Site 1)
Nesbitt-Labine Uranium Mines Ltd. - ABC Mine (Site 2)
Nesbitt-Labine Uranium Mines Ltd. - Eagle Mine
Nesbitt Mining and Explorations Limited
New Mylamaque Explorations Ltd.
Nisto Mines Limited
Pitch-Ore Uranium Mines Ltd.
Pitch-Ore Uranium Mines Ltd. - Orb Claims
Rix-Athabasca Uranium Mines Ltd. - Smitty Mine
Rix-Athabasca Uranium Mines Ltd. - Zone 62
Rix-Athabasca Uranium Mines Ltd. - Leonard Mine.
Rix-Athabasca Uranium Mines Ltd. - No. 10 Adit
Rix Athabasca Uranium Mines Ltd. - No. 7 Adit
St Michael Mines Ltd.
Strike Uranium Mines Ltd.
Territorial Uranium Mines Ltd.
Uranium Ridges Mines Ltd.

* The Province of Saskatchewan is negotiating a cost sharing agreement with Natural Resources Canada for the rehabilitation of these sites. The sites are currently inspected by SERM on an annual basis.

Note: Some of the identified sites may not be abandoned and/or may have been decommissioned by the owner/operator. Additional research will confirm the "status" of all sites.

Table 3
Inventory of Identified Sites - La Ronge & Creighton Area

La Ronge Area

Anglo-Rouyn Mines Ltd.
Jahala (Lee) Lake Uranium Mines Limited
La Ronge Uranium Mines Limited
Pitching Lake
Preview Lake Mine
Rottenstone Mine

Creighton Area

Ace Deposit
Amisk (Beaver) Gold Mine
Amisk Syndicate Mine
Beaver Mine
Birch Lake Mine
Coronation Mine
Flexar Mine
Graham Mine
Hannay (Bessie Island) Deposit
Henning Maloney Mine
Lucky Strike Mine
Mandy Mine/Phantom Lake
Newcor Mine
Prince Albert Mine
Schist Lake Mine
Sonora Deposit
Star Occurrence
Vista (Bootleg) Mine
Waverly Island Occurrence
Western Nuclear Mines Ltd.

Note: Some of the identified sites may not be abandoned and/or may have been decommissioned by the owner/operator. Additional research will confirm the "status" of all sites.

Table 4
2000 Assessments Completed

- Amax Athabasca Uranium Mines Ltd. - Showing No. 50-CC1-61
- Amax Athabasca Uranium Mines Ltd. - Showing No. 49-CC1-11
- Amax Athabasca Uranium Mines Ltd. - Showing No. 50-CC1-39
- Black Bay Uranium Mines Ltd.
- Cayzor Athabasca Mines Limited.
- Consolidate Beta Gamma Mines Limited
- *Eldorado Nuclear Ltd.- Eagle Mine
- Lake Cinch Mines Ltd.
- Cenex Mines Ltd.
- Lorado Uranium Mines Ltd. (Mine Site)
- Meta Uranium Mines Ltd.
- National Exploration Ltd. - Keiller Adit
- National Explorations Ltd. - Pat Claim, C Zone
- Nesbitt-Labine Uranium Mines Ltd. - ABC Mine (Site 1)
- Nesbitt-Labine Uranium Mines Ltd. - ABC Mine (Site 2)
- Nesbitt-Labine Uranium Mines Ltd. - Eagle Mine
- Nisto Mines Limited
- Pitch-Ore Uranium Mines Ltd.
- Rix-Athabasca Uranium Mines Ltd. - Smitty Mine
- Rix-Athabasca Uranium Mines Ltd. - Zone 62
- Rix Athabasca Uranium Mines Ltd. - Leonard Mine
- Rix Athabasca Uranium Mines Ltd. - No. 10 Adit
- St Michael Mines Ltd.
- Strike Uranium Mines Ltd.
- Uranium Ridges Mines Ltd.
- Waste Disposal Site #1 - Cayzor Area
- Waste Disposal Site #2 - Lorado Mill Area
- Anglo-Rouyn Mines Ltd
- Western Nuclear Mines Ltd.

* The decommissioned Eldorado Nuclear Ltd. - Eagle Mine site was assessed as part of the sensitivity analysis.

Table 5 Public Safety Assessment Summary

Public Safety	Accessibility 1 - 4	Mine Closure 1 - 6	Waste Rock Stability 1 - 3	Gamma Survey	Buildings / Foundations 1 - 3	Scrap Material 1 - 3	Additional Public Safety Risks	Total
Amax Athabasca (1)	3	2	1	1.4	0	1	1 - trenching	9.4
Amax Athabasca (2)	4	1	0	0.3	0	1	0	6.3
Amax Athabasca (3)	3	0	0	1	0	0	0	4
Black Bay (4)	1	6	2	2	0	0	2 - stability	13
Cayzor (5)	2	3	2	3	2	2	1 - ore chute	15
Consolidated (6)	2	5	2	0.5	2	2	0	13.5
Eldorado, Eagle Mine (7)	4	0	1	0.9	0	0	0	5.9
Lake Cinch/Cenex (8) & (9) *	4	4	2	3	2	1	2 - tank	18
Lorado (10)	4	1	2	0.6	2	1	0	10.6
Meta (11)	1	5	1	2.4	1	1	0	11.4
National Ex., Keiller Adit (12)	1	5	1	0.7	0	1	0	8.7
National ex., Pat Claim (13)	2	2	3	1	1	1	0	10
Nesbitt-Labine., ABC Mine (14) & (15) *	4	4	1	0.4	1	2	0	12.4
Nesbitt-Labine., Eagle Mine (16)	4	3.5	2	3	2	2	1 - ore storage	17.5
Nisto Mines Ltd. (17)	1	0	1	0.4	1	1	0	4.4
Pitch-Ore (18)	3	5	1	1.2	1	0	0	11.2
Rix-Athabasca, Smitty Mine (19)	2	3	2	2.5	2	2	0	13.5
Rix-Athabasca., Zone 62 (20)	2	4.5	1	1.2	1	1	1 - collar roof	11.7
Rix-Athabasca., Leonard Mine (21)	3	3.3	1	1	1	1	1 - raise	11.3
Rix-Athabasca, No. 10 Adit (22)	4	0	1	0.4	0	1	0	6.4
St. Michaels (23)	2	2	2	0.3	2	3	0	11.3
Strike Lake. (24)	4	1	1	0.5	0	0	0	6.5
Uranium Ridge (25)	4	4	1	0.5	0	2	0	11.5
Waste Disposal Area 1 (26)	2	-	1	0.4	-	2	0	5.4
Waste Disposal Area 2 (27)	4	-	2	5	-	3	0	14
Anglo-Rouyn (28)	4	6	2	0.1	3	2	3 -	20.1
Western Nuclear (29)	4	0	1	0.1	1	2	3 - residuals	11.1

* Although two sites are identified as separate, the close proximity of the sites required that they be assessed as a single site.

Table 6 Environmental Assessment Summary

Environment	Accumulated Water 1 - 3	Liquid Discharges 1 - 3	Waste Rock Character 1 - 3	Waste Rock Location 1 - 3	Tailings Character 1 - 5	Location re: Environment 1 -3	Scrap Material 1 - 3	Risks to Wildlife 1 -3	Additional Environmental Risk	Total
Amax Athabasca (1)	0	0	1	2	0	0	0	0	0	3
Amax Athabasca (2)	0	0	0	0	0	0	0	0	0	0
Amax Athabasca (3)	0	0	0	0	0	0	0	0	0	0
Black Bay (4)	0	0	1	1	0	0	0	2	0	4
Cayzor (5)	0	0	1	2	0	0	0	1	0	4
Consolidated (6)	1	2	1	1	0	0	2	2	0	9
Eldorado, Eagle Mine (7)	0	0	1	1	0	0	0	0	0	2
Lake Cinch/Cenex (8) & (9) *	0	0	1	2	0	0	0	2	2 - River	7
Lorado (10)	1	2	1	1	0	0	0	0	0	5
Meta (11)	0	0	1	2	0	0	0	2	0	5
National Ex., Keiller Adit (12)	1	0	1	1	0	0	1	2	0	6
National Ex, Pat Claims (13)	0	0	1	1	0	0	1	0	0	3
Nesbitt-Labine., ABC Mine (14) & (15) *	2	1	1	2	0	0	0	1	0	7
Nesbitt-Labine., Eagle Mine (16)	1	3	1	1	0	0	1	0	0	7
Nisto Mines Ltd. (17)	1	1	1	1	0	0	1	0	0	5
Pitch-Ore (18)	1	1	1	1	0	0	0	2	0	6
Rix-Athabasca, Smitty Mine (19)	0	0	1	1	0	0	0	1	0	3
Rix-Athabasca., Zone 62 (20)	1	1	1	1	0	0	0	1	0	5
Rix-Athabasca., Leonard Mine (21)	0	0	1	2	0	0	0	2	0	5
Rix-Athabasca, No. 10 Adit (22)	0	0	1	1	0	0	0	0	0	2
St. Michaels (23)	0	0	1	1	0	0	1	1	0	4
Strike Lake. (24)	0	0	0	0	0	0	0	0	0	0

Environment	Accumulated Water 1 - 3	Liquid Discharges 1 - 3	Waste Rock Character 1 - 3	Waste Rock Location 1 - 3	Tailings Character 1 - 5	Location re: Environment 1 -3	Scrap Material 1 - 3	Risks to Wildlife 1 -3	Additional Environmental Risk	Total
Uranium Ridge (25)	0	0	1	1	0	0	2	2	0	**6**
Waste Disposal Area 1 (26)	1	1	-	-	-	-	2	1	0	**5**
Waste Disposal Area 2 (27)	1	2	-	-	-	-	3	3	0	**9**
Anglo-Rouyn (28)	3	1	1	1	3	2	2	2	0	**15**
Western Nuclear (29)	3	3	1	0	4	3	2	1	0	**17**

* Although two sites are identified as separate, the close proximity of the sites required that they be assessed as a single site.

Table 6 Environmental Assessment Summary Con't.

Table 7 Combined Assessment Score

Site	Public Safety Score	Environmental Score	Total Score
Amax Athabasca (1)	9.4	3	12.4
Amax Athabasca (2)	6.3	0	6.3
Amax Athabasca (3)	4	0	4
Black Bay (4)	13	4	17
Cayzor (5)	15	4	19
Consolidated (6)	13.5	9	22.5
Eldorado, Eagle Mine (7)	5.9	2	7.9
Lake Cinch (8) & (9) *	18	7	25
Lorado (10)	10.6	5	15.6
Meta (11)	11.4	5	16.4
National Ex., Keiller Adit (12)	8.7	6	14.7
National Ex, Pat Claims (13)	10	3	13
Nesbitt-Labine., ABC Mine (14) & (15) *	12.4	7	19.4
Nesbitt-Labine., Eagle Mine (16)	17.5	7	24.5
Nisto Mines Ltd. (17)	4.4	5	9.4
Pitch-Ore (18)	11.2	6	17.2
Rix-Athabasca, Smitty Mine (19)	13.5	3	16.5
Rix-Athabasca., Zone 62 (20)	11.7	5	16.7
Rix-Athabasca., Leonard Mine (21)	11.3	5	16.3
Rix-Athabasca, No. 10 Adit (22)	6.4	2	8.4
St. Michaels (23)	11.3	4	15.3
Strike Lake. (24)	6.5	0	6.5
Uranium Ridge (25)	11.5	6	17.5
Waste Disposal Area 1 (26)	5.4	5	10.4
Waste Disposal Area 2 (27)	14	9	23
Anglo-Rouyn (28)	20.1	15	35.1
Western Nuclear (29)	11.1	17	28.1

* Although two sites are identified as separate, the close proximity of the sites required that they be assessed as a single site.

Table 8 Assessment Ranking

Ranking	Site	Total
1	Anglo-Rouyn (28)	35.1
2	Western Nuclear (29)	28.1
3	Lake Cinch/Cenex (8) & (9) *	25
4	Nesbitt-Labine, Eagle Mine (16)	24.5
5	Waste Disposal Area 2 (27)	23
6	Consolidated (6)	22.5
7	Nesbitt-Labine, ABC Mine (14) & (15) *	19.4
8	Cayzor (5)	19
9	Uranium Ridge (25)	17.5
10	Pitch-Ore (18)	17.2
11	Black Bay (4)	17
12	Rix-Athabasca., Zone 62 (20)	16.7
13	Rix-Athabasca, Smitty Mine (19)	16.5
14	Meta (11)	16.4
15	Rix-Athabasca., Leonard Mine (21)	16.3
16	Lorado (10)	15.6
17	St. Michaels (23)	15.3
18	National Ex., Keiller Adit (12)	14.7
19	National Ex, Pat Claims (13)	13
20	Amax Athabasca (1)	12.4
21	Waste Disposal Area 1 (26)	10.4
22	Nisto Mines Ltd. (17)	9.4
23	Rix-Athabasca, No. 10 Adit (22)	8.4
24	Eldorado, Eagle Mine (7)	7.9
25	Strike Lake. (24)	6.5
26	Amax Athabasca (2)	6.3
27	Amax Athabasca (3)	4

* Although two sites are identified as separate, the close proximity of the sites required that they be assessed as a single site.

Table 9
Sites Not Assessed in 2000

Uranium City Area

Baska Uranium Mines Limited
Beaverlodge Uranium Mines Limited
Caba Uranium Mines Limited
Consolidated Beta Gamma Mines Limited/Northshore Uranium Developers - Tena Claim
Consolidated Nicholson Mines Limited
Don Henry Mines Limited
*Gunnar Mining Ltd.
Gulch Mines Limited
Harrison R. J.
Homer Yellowknife Mines Limited
Jesko Uranium Mines Limited
*Lorado Mines Ltd. (Mill Site)
Nesbitt Mining and Explorations Limited
New Mylamaque Explorations Limited
Pitch-Ore Uranium Mines Limited - Orb Claims
Rix-Athabasca Uranium Mines Ltd. - No.7
Territorial Uranium Mines Limited

La Ronge Area

Jahala (Lee) Lake Uranium Mines Limited
La Ronge Uranium Mines Limited
Pitching Lake
Preview Lake Mine
Rottenstone Mine

Creighton Area

Ace Deposit
Amisk (Beaver) Gold Mine
Amisk Syndicate Mine
Beaver Mine
Birch Lake Mine
Coronation Mine
Flexar Mine
Graham Mine
Hannay (Bessie Island) Deposit
Henning Maloney Mine
Lucky Strike Mine
Mandy Mine/Phantom Lake
Newcor Mine
Prince Albert Mine
Schist Lake Mine
Sonora Deposit
Star Occurrence
Vista (Bootleg) Mine
Waverly Island Occurrence

* The Province of Saskatchewan is negotiating a cost sharing agreement with Natural Resources Canada for the rehabilitation of these sites. The sites are currently inspected by SERM on an annual basis.

Note: Some of the identified sites may not be abandoned and/or may have been decommissioned by the owner/operator. Additional research will confirm the "status" of all sites.

SECTION 2

Site Summaries

SECTION II - SITE SUMMARIES

TABLE OF CONTENTS

1 AMAX ATHABASCA URANIUM MINES LTD.

[Site #22 (Highgrade Site #9)]

Mineral Property #1416:
(formerly: ML 5157; TIK claim No. 5; CC1 Concession)

Showing name:
Uranium Occurrence P-13-20 or
Uranium Occurrence 50-CC1-61 or
Hnilica Adit

1.1 LOCATION

Map:	126B (C5)
Latitude:	N59° 32' 59"
Longitude:	W108° 41' 21"
NTS:	74N-10-SE
UTM :	Zone 12; NAD 1927
UTM :	Northing 660330
UTM :	Easting 630628
Location:	Approximately 75 m west of Rix road across the Crackingstone River. (see Map). South of Bertha Lake.
Accessibility:	The site is accessed by a short drive along the Rix road (approximately 500 m from the junction with the U City-Bushell road). The site then must be reached by walking approximately 75 m to the west across the Crackingstone River. Beaver activity has resulted in significant flooding of the River making it difficult to access the site Most of the area between the road and the adit entrance was flooded at the time of inspection.

1.2 GEOLOGY

The showing lies within a northeast-trending sequence of amphibolites, quartz-sericite-chlorite schists, and granites. The showing consists of a fault striking North 60° West and dipping 65° South West and filled with quartz and red, mud-like gouge. Pitchblende occurs as veinlets and disseminated veins throughout the fault zone which returns high uranium values.

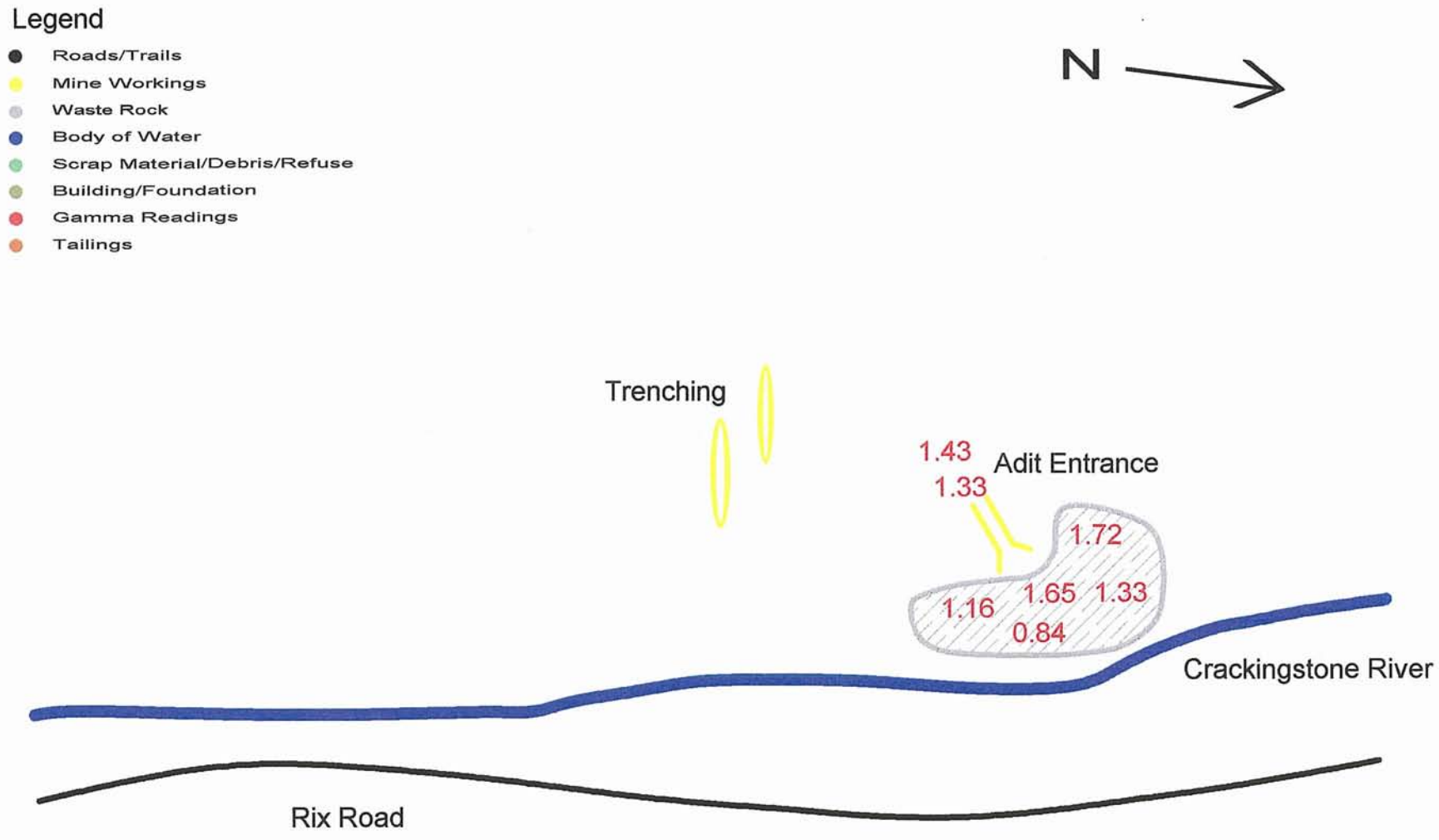
Drill holes completed in 1949 returned a best intersection of 0.23% U_3O_8 (triuranium octoxide) (0.20% U) over 1.5 ft (0.46 m). In 1959, over 300 tons (304 800 kg) of ore grading better than 1% U_3O_8 were extracted from the main vein. Further exploration was carried out in 1976 on the area which was renamed the P-13-20 Occurrence. Detailed mapping indicates the showing to consist of three narrow pitchblende veins which transact alternating bands of fine to medium-grained amphibolite and coarse-grained granite. The main vein was noted in 1949 but two subsidiary veins trending 064°/23° North West a 075°/subvertical were exposed in trenches completed in 1975. Four drill holes totalling 777 ft (236.8 m) were completed. EB-74 and 76 tested the main vein at depth. EB-74 encountered no significant radioactivity. EB-76 intersected high-grade uranium mineralization averaging 0.79% U_3O_8 (0.67% U) over 3 feet (0.9 m) at a depth of 100 feet (30.5 m) and 0.97% U_3O_8 (0.83% U) over 1 foot (0.30 m) at 106 ft. (32.3 m) The mineralization occurs in brecciated sections of sheared amphibolite (chlorite schist) and granite. Two other holes, EB-75 and EB-77, were completed to test the subsidiary veins. EB-75 intersected low grade mineralization of 0.12% U_3O_8 (0.10% U) over 2 ft (0.6 m) at 39 ft (11.9 m) depth; EB-77 contained a narrow section of ore-grade material which assayed 0.20% U_3O_8 (0.17% U) over 2 ft (0.6 m) at 93 ft (28.3 m) depth. This last mineralization was associated with a section of brecciated granite (Saskatchewan Energy and Mines, 1991).

1.3 MINE HISTORY

The showing was located by Amax Athabasca Uranium Mines Ltd. in 1949 while they were investigating their CC1 Concession (AF 74N10-0065). The showing was tested by eight short diamond drill holes spaced at 25 ft (7.6 m) intervals. In 1955, Amax geologically mapped the concession (AF 74N10-0075). A 60 ft (18.3 m) adit was driven into the hillside in 1959 and part of the zone above the adit level was mined.

Approximately 300 tons (304 800 kg) of ore was extracted from the main vein using the Hnilica adit. In 1968, the showing area was within TK claim No. 5. R. Harrison completed a geological review of the property (AF 74N10-0398). In 1976, Eldorado Nuclear Ltd., who held the area as their mineral lease 5158, completed four diamond drill holes in the area (AF 74N10-0489) to test the showing at depth and along subsidiary veins. Three of the holes intersected minor radioactivity but the intersections were not

1. Amax Athabasca Uranium Mines Ltd.



significant enough to warrant further exploration. No further exploration has been reported on the area. (Saskatchewan Energy and Mines,1991).

1.4 GENERAL DESCRIPTION

The site covers a relatively small area of approximately 25 m^2 and is located within 2 m of the shore of the Crackingstone River.

1.5 HISTORY OF PREVIOUS INSPECTIONS

The site was inspected by Mueller in 1979. At that time, the adit entrance remained open although covered with a steel plate and some waste rock. Despite this, the workings of the mine were fully accessible at that time.

1.6 2000 INSPECTION

The inspection was completed on October 17, 2000 by (KHS) Environmental Management Group Ltd.

There was no evidence of any other recent visitation.

1.6.1 Mine Workings

Amax Athabasca Uranium Mines Ltd. Site #22 consists of an adit (N 59° 32.942'; W 108° 41.116') driven into the hillside approximately 25 m from the shore of the Crackingstone River. The entrance has been blasted closed creating a trench partially filled with broken rock. The trench is approximately 10 m long, 2 m wide, with a varying depth. It is showing early signs of slumping and the stability is questionable.

There are 3 additional trenches located approximately 10 m above and to the south-east of the adit entrance.

1.6.2 Waste Rock

A relatively small amount of waste rock remains on site. It extends from the adit entrance to within approximately 2 m of the Crackingstone River.

The physical stability of the waste rock was good.

Natural encroachment of vegetation on the waste rock and in other disturbed areas of the site consists primarily of a sparse covering of small (< 2 m high) willow species.

A gamma survey of the waste rock was conducted with measurements ranging from 0.84 to 1.72 μSv/hr.(see Site Map 1)

1.6.3. Buildings

No buildings or foundations were located in the vicinity of the mine site.

1.6.4 Debris/Rubble

Very little debris could be located at the site. A small amount of metal debris including some, tin cans, and small pieces of scrap metal was found.

1.6.5 Site Sampling (Water, tailings, etc.)

No sampling was conducted during the inspection.

1.7 RISK ASSESSMENT RANKING

Public Safety Assessment	9.4 / 24
Environmental Assessment	3.0 / 26
Combined Total Assessment	12.4 / 50
RANKING	20 of 27

1.8 REHABILITATION RECOMMENDATION

The adit entrance is showing early signs of slumping. There appears to be no immediate hazard, however the trench caused by blasting the adit entrance shut is likely to become a hazard in time due to the slumping and instability of the closure method.

2 AMAX ATHABASCA URANIUM MINES LIMITED - Showing 49-CC1-11

No Photo Available

Site #55 - Gravel Pit Area

Mineral Property #1427:
(formerly: AMAX claims; CC1 Concession; CC Concession)

Showing Name:
Amax Athabasca Uranium Showing 49-CC1-11 or Ross Zone, Amax Athabasca Uranium Showing 49-CC1-10

2.1 LOCATION

Map:	126B (C5)
Latitude:	N59° 32' 30"
Longitude:	W108° 41' 50"
NTS :	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6602418
UTM	Easting: 630204
Location:	The Amax Athabasca site is located approximately 50 m west of the junction between Uranium road and an access road to a gravel quarry.
Accessibility:	Access can be gained from walking west from the area that is currently used as a gravel quarry.

2.2 GEOLOGY

The showing is located 0.38 miles (0.6 km) west of Guts Lake or 0.9 mile (1.5 km) west of the Lake Cinch Mine shaft. The zone consists of 3 mineralized parallel faults that strike 280°-285°.

The three parallel mineralized faults that comprise 49-CC1-11 showing, or the Ross Zone, are clean cut and wall rocks are brecciated only in the vicinity of branching fractures. Shallow warps and drag-folds in branching fractures indicate left-hand movement along the main fracture in Zone No. 1. Vein material consists of quartz, calcite, chlorite and hematite accompanied by lesser amounts of pitchblende, pyrite and chalcopyrite. The presence of galena is reported.

The fractures are exposed for a strike length of about 140 ft (42.7 m); to the west they feather out and disappear but to the east the veins pass under drift.

The area is underlain by a conformable sequence of well bedded, slaty amphibolite, quartzite and granite which trends 040°-050° and dips 40°-65° north west.

Trenching of Showing No. 49-CC1-10 revealed a mylonite-breccia zone trending 285° which has patches of intense deep red alteration with fine grained pitchblende. This zone was traced for 150 ft (45.7 m).

The area is underlain by granitized amphibolite striking 035° and dipping 30°-50°SE. (Saskatchewan Energy and Mines, 1991)

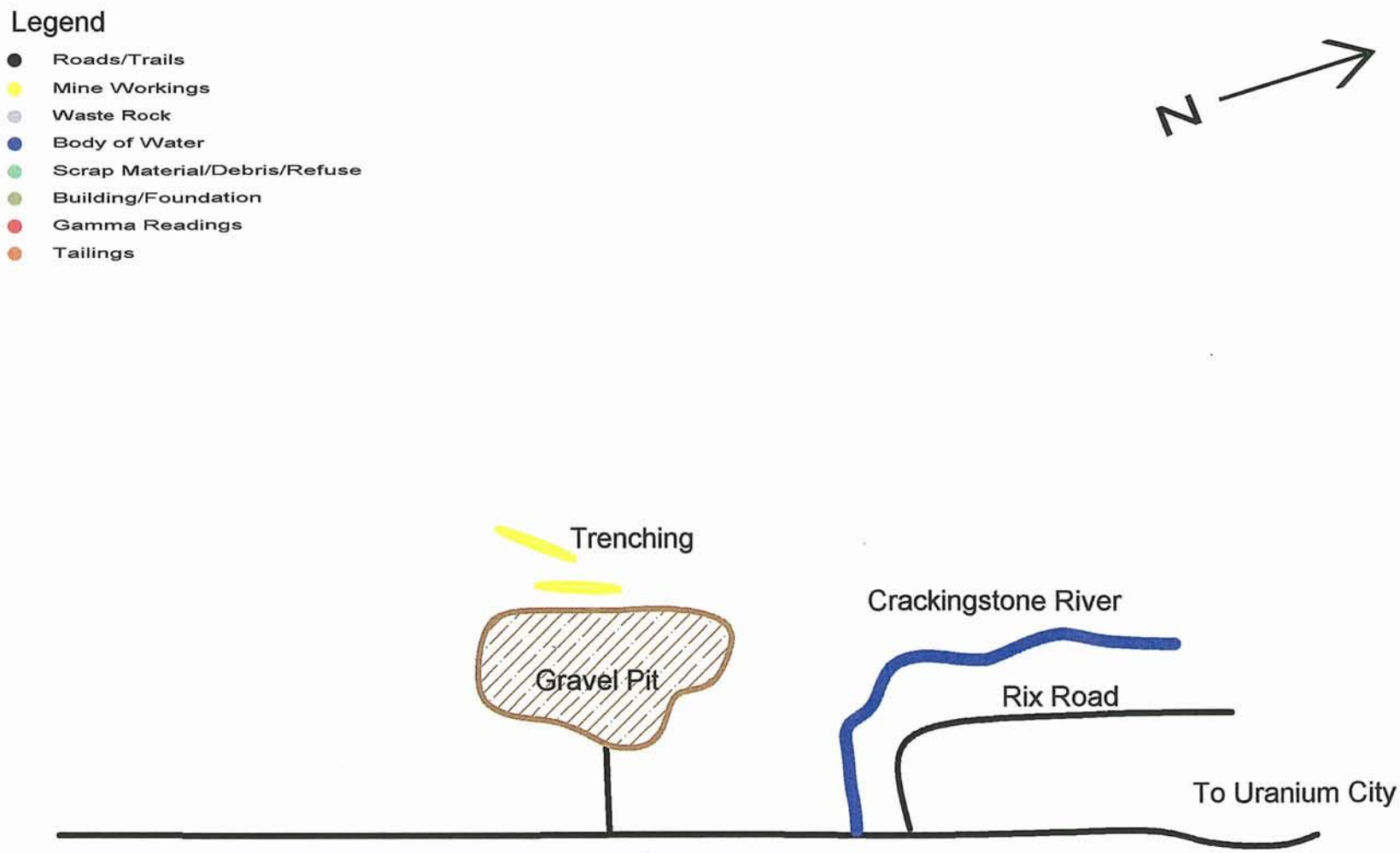
2.3 MINE HISTORY

The 49-CC1-11 showing was found by Amax Athabasca Uranium Mines in 1949 during geological and radiometric surveys of the CC1 Concession and consists of 3 mineralized, parallel faults that strike north 75°- 80° west. Sampling was completed in 1950-51.

In 1951 five shallow x-ray holes aggregating 388 ft (118 m) were put down to intersect the zones at depths ranging from 20 to 45 ft (6.1-13.7 m), but no significant radioactivity was encountered in any of the holes. The disappearance of well mineralized veins at a shallow depth is difficult to account for.

In 1953, Amax Athabasca Uranium Mines Ltd. completed 3 holes on it's AMAX claims to test showing 49-CC1-11 (AF 74N10-0436). No good values were intersected in drillholes RV-132 to 134.

2. Amax Athabasca Uranium Mines Ltd.



In 1955, Amax geologically mapped the concession (AF 74N10-0075).

Some highgrading was carried out in 1959 by M. Filgas and H.E. Olsen. Between 15 and 20 tons (15 240 - 20 321 kg) of rock were broken and 5 tons of this graded 2.0% U_3O_8. Excluding the amount already removed, zones 1 and 2 contain approximately 60 tons (60 960 kg) of ore per vertical foot grading 0.58% U_3O_8 (Saskatchewan Energy and Mines; 1991).

2..4 GENERAL DESCRIPTION

The site is extremely difficult to locate as there is very little indication that any mining took place in the area due to the ruggedness of the natural topography and the more recent activities of a gravel quarry.

2.5 HISTORY OF PREVIOUS INSPECTIONS

No history of previous inspections could be found.

2.6 2000 INSPECTION

The inspection was completed on October 13, 2000 by (KHS) Environmental Management Group Ltd.

2.6.1 Mine Workings

Small indications of trenching and possibly high grading were found.

2.6.2 Waste Rock

There is broken rock scattered around the area. None of it could be identified as a specific waste rock piles from the mining activities that occurred in the area. Gravel quarrying occurs throughout the area making it difficult to distinguish the difference between past and present work.

A gamma survey of the area was conducted. No values above background averages were found.

2.6.3 Buildings

There are no buildings or foundations in the area.

2.6.4 Debris/Rubble

Debris in the area is minimal.

2.6.5 Site Sampling

No sampling occurred at the site.

2.7 RISK ASSESSMENT RANKING

Public Safety Assessment	6.3 / 24
Environmental Assessment	0.0 / 26
Combined Total Assessment	6.3 / 50
RANKING	26 of 27

2.8 REHABILITATION RECOMMENDATION

There are no mine related hazards to public safety or the environment at this site.

3 AMAX ATHABASCA URANIUM MINES LIMITED - Site #57

No Photo
Available

Site #57

Mineral Property #1415:
(formerly: CC1 Concession; CC Concession)

Showing name:
Showing 50-CC1-39, '23' Zone Uranium Showing

3.1 LOCATION.

Map: 126B (C7)

Latitude: N59° 33' 35"
Longitude: W108° 40' 15"

NTS : 74N-10-SE

UTM Zone 12; NAD 1927
UTM Northing: 6604480
UTM Easting: 631625

Location: The site is located approximately 35 m off the east side of Rix road approximately 25 m south of its junction with the road leading to St. Michael's Mine. (See Map).

Accessibility: The site is accessible by vehicle via the very overgrown Rix road. It is then a short walk (approximately 35m) to the east.

3.2 GEOLOGY

50-CC1-39, which consists of pitchblende, largely altered to secondary uranium minerals, and occurring as a thin coating to fracture faces. Wall rocks are hematized and are weakly radioactive for several inches from the fractures. The best mineralization fracture has an exposed strike length of approximately 50 ft (15.2 m).

The most promising series of showings corresponds to the Leonard Series and are now referred to as the '23 Zone'. The northern extension of this zone corresponds to the above showings. In 1975, four diamond drillholes (EB-55, 57, 58 and 59) were completed across the '23 Zone'. Each hole intersected an average 11 ft (3.4 m) of overburden. All holes intersected an intensely chloritized, porphyroclastic, brecciated mafic gneiss that is part of the Cayzor Unit. The first 3 holes contained some weakly radioactive intersections (Saskatchewan Energy and Mines Web Page,1991).

3.3 MINE HISTORY

Showing 50-CC1-39 located in 1950 by Amax Athabasca Uranium Mines Ltd. The main fracture was high graded by J. LaFrance and about 60 tons (60 960 kg) of mineralized rock were broken in 1959. Some of this was marginal in grade but the remainder assayed from 0.35 to 0.4% U_3O_8 (triuranium octoxide).

In 1975, Early Bird Mines Ltd. optioned the property to Eldorado Nuclear Ltd. Eldorado completed 4 diamond drillholes (AF 74N10-0465) but nothing interesting was intersected. No further work has been received (Saskatchewan Energy and Mines,1991).

3.4 GENERAL DESCRIPTION

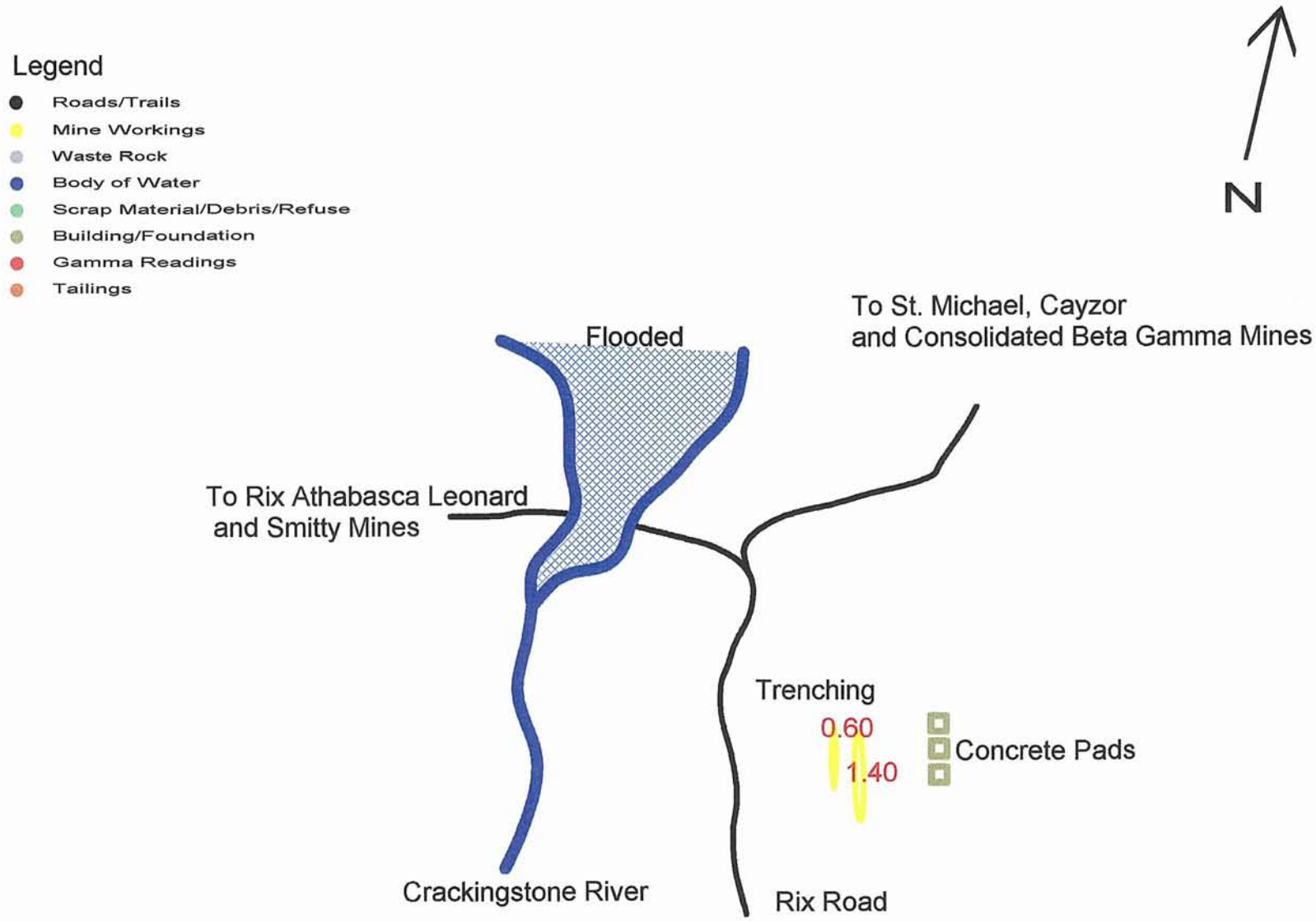
The site covers a small area of approximately 100 m^2.

There was no evidence of recent visitation.

3.5 HISTORY OF PREVIOUS INSPECTIONS

Research located no previous inspections of the area.

3. Amax Athabasca Uranium Mines Ltd.



3.6 2000 INSPECTION

The inspection was completed on October 15, 2000 by (KHS)Environmental Management Group Ltd.

3.6.1 Mine Workings

The site consists of some minor trenching in the area. None of these trenches are of a significant size.

3.6.2 Waste Rock

Since there appears to have been very little activity at the site, there is very little signs of waste rock.

A gamma survey of the area was conducted with measurements ranging from 0.60 to 1.40 μSv/hr.(see Site Map 3)

3.6.3 Buildings

There are no buildings or foundations associated with the site.

3.6.4 Debris/Rubble

There is a small amount of debris at the site consisting of some tin cans, barrels, and steel piping.

3.6.5 Site Sampling

No sampling was completed at the site.

3.7 RISK ASSESSMENT RANKING

Public Safety Assessment	4.0 / 24
Environmental Assessment	0.0 / 26
Combined Total Assessment	4.0 / 50
RANKING	27 of 27

3.8 REHABILITATION RECOMMENDATION

There are no mine related hazards to the public or environment at this mine site.

4 BLACK BAY URANIUM MINES LTD.

[Site #24 - Murmac Bay Area]

Mineral Property #1296:
(was: CBS 1133; ML 5183; CBS 357; CAL No. 24; GRETTA 22, 31)

Showing name:
Black Bay Uranium Mine A {or Powder Zone}, B, and C Zones

4.1 LOCATION

Map: 126B (C7)

Latitude:	N59° 30' 25"
Longitude:	W108° 28' 50"
NTS	74N-09-SW
UTM	Zone 12; NAD 1927
UTM	Northing 6598997
UTM	Easting 642598
Location:	Approximately 6.5 km. south of the Eldorado town site on the southwest shore of Murmac Bay, Beaverlodge Lake (see map).
Accessibility:	Access can be gained from Eldorado by boat or by snowmobile in the winter.

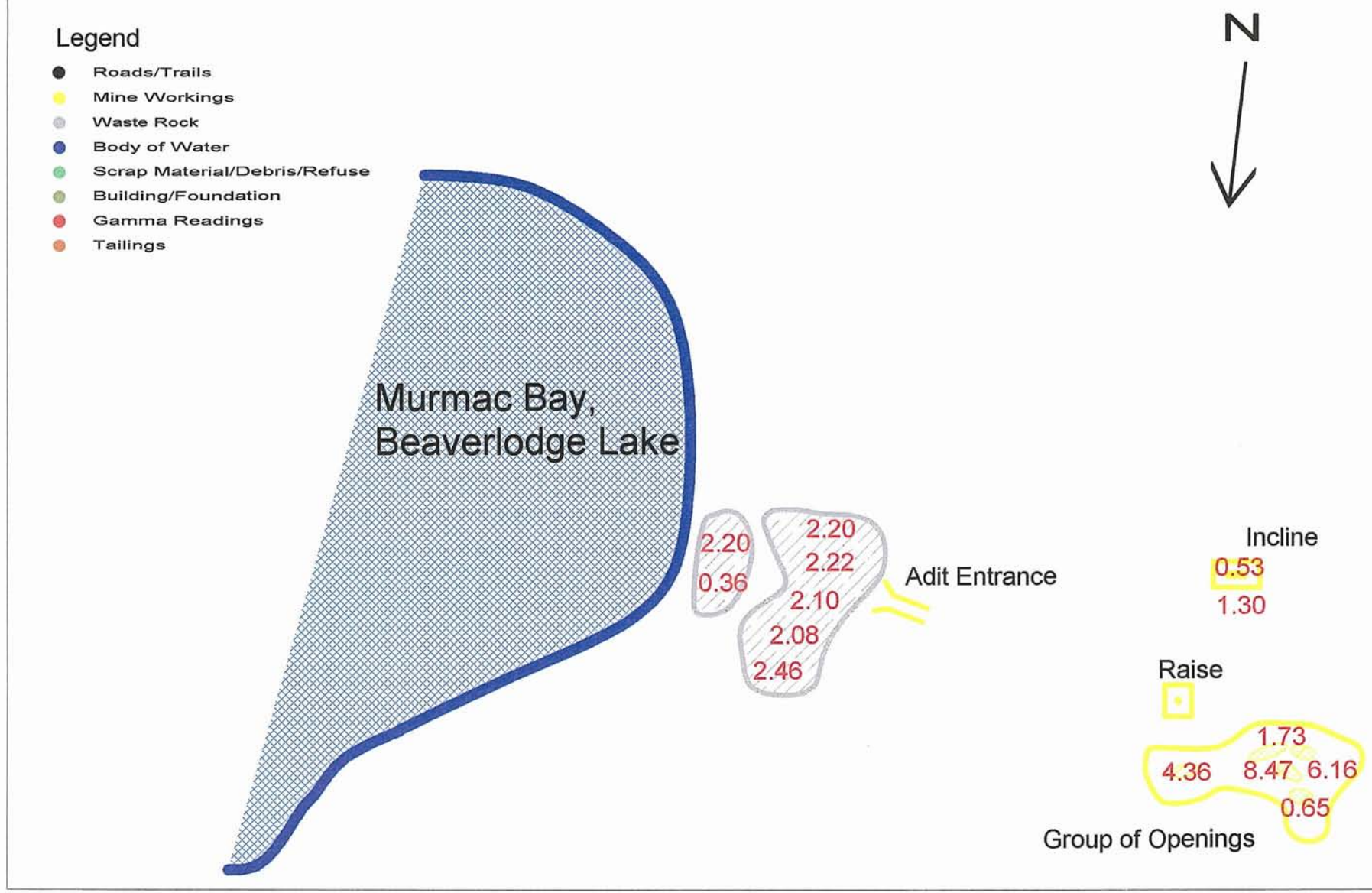
4.2 GEOLOGY

The showing is located approximately 500 ft (152 m) inland from the west shore of the southerly most part of Murmac Bay. The area of the showing is underlain by a northwest-trending unit of quartzite overlain by amphibolite. The contact between the rock units dips southwest at 30° and is sheared and drag folded. Tension fractures, largely restricted to drag folds in the quartzite within 30 ft (9.1 m) of the contact, are filled with hematite and graphite accompanied by lesser amounts of pitchblende. The showing consists of several small ore shoots which are distributed in quartzite adjacent to the contact for a strike length of 500 ft (152.4 m) and a down dip distance of 2400 ft (731.5 m). Three main shoots, named the A, B and C zones were located. The A zone, or the Powder Zone, extends a length of 45 ft (13.7 m) and width of 3 ft (0.9 m) and grades 0.47% U_3O_8 (triuranium octoxide). Zone B extends 75 ft (22.9 m) over a width of 4.8 ft (1.5 m) and grades 0.72% U_3O_8 and Zone C extends 20 ft (6.1 m) over 15 ft (4.6 m) and grades 0.91% U_3O_8. It has been reported that by the end of 1958, 1375 tons of ore grading 0.17% U_3O_8 had been shipped to the Lorado mill and in early 1960 a further 0.333 tons (1 397 000 kg) were shipped (Saskatchewan Energy and Mines,1991).

4.3 MINE HISTORY

The showing area was first mapped in 1935 by Alcock of the Geological Survey of Canada. The results were published in GSC Memoir No. 196. The area was again mapped by the GSC between 1948 and 1949 (see Memoir 296). The surface showings (A or Powder Zone, B Zone, C Zone) were discovered in 1953 by Black Bay Uranium Ltd. and after surface trenching and diamond drilling had been carried out an adit was driven to explore the main zones. Between 1953 and 1954, Black Bay Uranium Mines completed detailed geological mapping. This work located four radioactive anomalies in the southwest corner of GRETTA claim No. 31 and the C-2 zone was located on GRETTA claim No. 22. These anomalous areas were trenched and the sinking of an exploration adit commenced. (AF 74N07-0025 folder 1). In 1955, the adit was advanced 600 feet and 3 underground drillholes (S-6, 13 and 17) were completed from the adit level and from a sub-level 70 ft (21.3 m) above the adit on GRETTA claim No. 22 (AF 74N07-0025 folder 2). Most of the ore above the adit was stoped and stock-piled. Edoran Oil completed mapping, drilling and prospecting on the adjoining CAL claims. In mid 1956, an inclined winze was sunk from the adit to explore the zone to a vertical depth of about 500 ft (152.4 m) (AF 74N07-0025 folder 3). Ore was removed from the area from 1958-60 and shipped to the Lorado custom mill. By 1967, the mine area was covered by CBS 357. Between 1967 and 1968, Industrial Oil and Gas completed 6 drillholes in the general area (AF 74N09-0178). In the same year, Majestic Mines Ltd. completed a historic work review of the property (AF 74N09-0234). By 1974, the showing was covered by CBS 1133. W. Simpson completed geological mapping, spectrometer surveys and stripping and trenching (AF 74N08-0105). In 1975, Simpson completed further mapping, prospecting, trenching and a scintillometer survey

4. Black Bay Uranium Mines Ltd.



southeast of the showing area (AF 74N08-0107). By 1991, the Black Bay Uramium Mine adit was within single claim S-99341. Mr. S. Loutitt completed reconnaissance geological mapping of the area and sampled the existing pits, trenches and the adit tip piles (AF 74N08-0143). The samples were analysed for Au, Pt and Pd. The assay results were quite low (Saskatchewan Energy and Mines; 1991).

4.4 GENERAL DESCRIPTION

The shoreline at the site consists of a small amount of waste rock deposited in the water on the shore of Beaverlodge Lake. The adit is directly inland from this rock with the rest of the workings further up the slope past the adit entrance. Overall the mine site covers an area of approximately 0.5 km by 0.25 km.

There was no evidence of recent visitation.

4.5 HISTORY OF PREVIOUS INSPECTIONS

An inspection was completed by Mueller in 1977. He found that there was very little debris on site. There was a relatively large amount of waste rock. The adit entrance was opened but was collapsed approximately 60 ft. back from the entrance. There were several areas approximately 100 ft. from the adit entrance that had been mined to the surface. These areas were fenced but the fence was collapsed at the time his inspection. The area was well vegetated.

In 1989, Saskatchewan Environmental and Public Safety (Mines Pollution Control Branch) undertook the Abandoned Mines Remedial Action Program. Remedial work involved securing fencing around two raises and one trench, as well as securing a steel grate in front of an adit to restrict access. Danger signs were attached to the fencing and grate warning of the hazard within the enclosed areas.

4.6 2000 INSPECTION

The inspection was completed on October 15, 2000 by (KHS) Environmental Management Group Ltd. accompanied by local Environmental Quality Committee, Sonny Lepine.

4.6.1 Mine Workings

The underground workings of the mine consist of an adit approximately 100 m from the shore of Beaverlodge Lake. The adit has been closed with waste rock and appeared stable at the time of the inspection.

No liquid discharges were observed on the site and there was no evidence of previous discharge.

Along with the adit there are several areas where mining from underground has broken through to the surface or where trenching has mined through to the adit. These areas are concentrated approximately 50 meters up the slope from the adit entrance at GPS - N59° 30.280'; W108° 28.984'.

This entire area covers approximately 30 by 30 m and is extremely unstable and hazardous consisting of seven separate openings or slumps.

A chain link fence has been erected around the majority of the openings but it is in disrepair.

4.6.2. Waste Rock

There is a large amount of waste rock scattered throughout the area. It has been used to build roads and a loading area on the shore of the lake.

The waste rock is stable and very well vegetated.

A gamma survey of the waste rock was conducted with measurements ranging from 0.36 to 8.47 μSv/hr.(see Site Map 4)

4.6.3 Buildings

There were no buildings or foundations that were associated with the mine site.

4.6.4 Debris/Rubble

Debris in the area is limited, consisting of a few small pieces of metal, etc. which are generally hidden by the vegetation.

4.6.5 Site Sampling (Water, Tailings, etc.)

No sampling was done at the site.

4.7 RISK ASSESSMENT RANKING

Public Safety Assessment	13.0 / 24
Environmental Assessment	4.0 / 26
Combined Total Assessment	17.0 / 50
RANKING	11 of 27

The area should be considered an immediate hazard to humans and to wildlife. All the openings to the northwest of the adit entrance can be considered a hazard because of the number, size and instability. In addition, relatively high gamma levels in some areas contribute to the overall safety risks posed by the site.

The risk to humans is mitigated somewhat by the difficulty in accessing the site.

4.8 REHABILITATION RECOMMENDATION

The area up the slope from the adit entrance should be considered a hazard. The maze of openings, steep slopes, and unstable nature of the crown pillar rock make the entire area a hazard to the public and wildlife.

Filling or collapsing the holes by blasting would be the most effective method of

addressing the issues posed by the site.

5 CAYZOR ATHABASCA MINES LTD.

Site #25 - Jean Lake Area

Mineral Property #1404:
(formerly: AZO 4FR; DD2 Concession)

Showing name:
Cayzor Uranium Mine ("17" Ore Shoot)

5.1 LOCATION

Map 126B (B5)

Latitude:	59° 34' 55"
Longitude:	108° 38' 25"
NTS	74N-10-SE
UTM	UTM Zone 12; NAD 1927
UTM	Northing: 6607014
UTM	Easting: 633264

Location: The mine site is located approximately 2.5 km north west of Uranium City on the mid-east shore of Jean Lake.

Accessibility: Accessibility to the site can be obtained by two separate routes. The first was a direct road from Uranium City, however beaver activity and consequent flooding it makes it impossible to access the mine site from this direction by either vehicle or foot.

As a result access from the site can only be gained by travelling up from the south on a trail that branches off the Rix Athabasca road and passes

through the St. Michael's site. The first 2.5 km of this trail can be accessed by vehicle, however the remainder of the distance, (approximately 1.5 km) is overgrown and not accessible by vehicle..

5.2 GEOLOGY

An east-trending zone of faults and fractures, underlying Jean Lake and probably branching from the Leonard Fault, transects the country rocks. On the first level of the mine, the zone consists of two main fracture sets striking north west and north east respectively and from an acute grid pattern but below the first level, fractures are more sinuous and form a mesh-like vein pattern. Ore occurs in altered fault zones filled with chlorite, kaolin, and mud-like gouge particularly where wall rocks are rich in chlorite, and the best mineralization is where branch faults coalesce. Individual ore shoots range from a few feet to 300 feet (91.4 m) in length and are as much as 10 feet (3.0 m) wide. They appear to be restricted to an area 2,000 feet (609.6 m) long by 600 feet (182.8 m) wide and to a vertical depth of 800 feet (243.8 m).

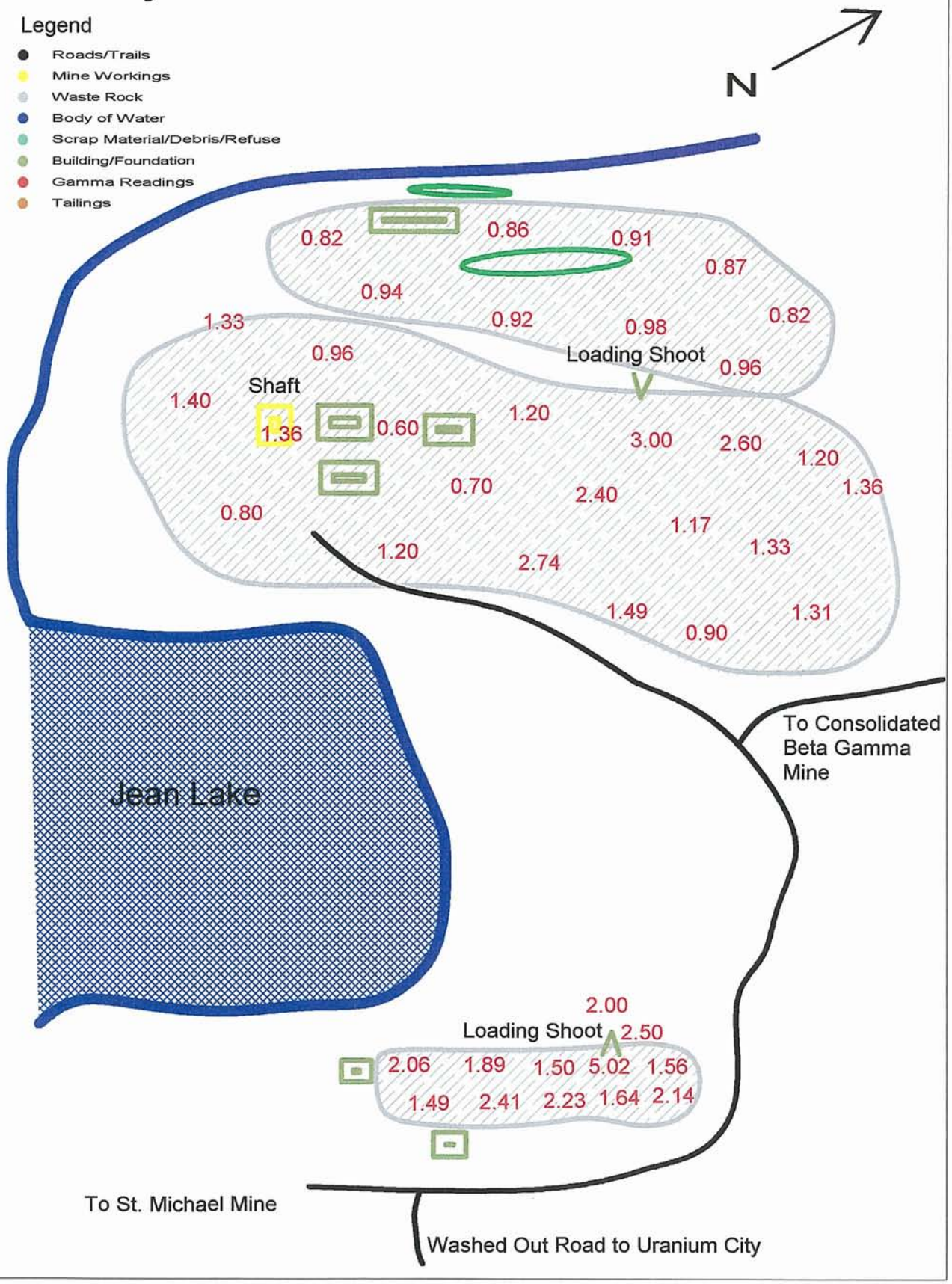
Pitchblende, accompanied by minor amounts of thucholite, occurs in sooty, massive, and colloform habit as veinlets, blebs, and cement around breccia fragments. Carbonate veinlets within the faults also carry pitchblende. Galena is common in the wall rocks and is densely concentrated near pitchblende veins. Pronounced red alteration of wall rocks is only common in the immediate vicinity of pitchblende and radioactive carbonate veins.

The area is underlain by a north east-trending sequence of quartz-feldspar-chlorite schist and gneiss with minor meta-argillite and quartzite dips from vertical to 35° south east. It is underlain by granitized amphibolite and overlain by metasomatic granite (Saskatchewan Energy and Mines, 1991).

5.3 MINE HISTORY

On the north east side of Jean Lake, 1.25 miles north west of Uranium City, is located the Cayzor Mine. It is owned by Cayzor Athabasca Mines Ltd. (now New Cayzor Athabasca Mines Ltd.). The area was originally covered by Azor Mines Ltd. DD2 Concession in 1950-51. During this time Azor drilled 13 diamond drill holes to the E of the mine site and conducted an airborne scintillometer survey over the area. In 1953-54 Cayzor Athabasca Mines Ltd. purchased a group of 16 claims from Azor Mines Ltd, and during this time period carried out an extensive diamond drill program to investigate the ground under Jean Lake and the swampy ground along its north east shore, for a possible extension of the known showings at the present mine site. Several high-grade fractures were intersected; further drilling proved some continuity which warranted the sinking of a shaft. In November 1954 a three-compartment shaft was commenced. The shaft was

5. Cayzor Athabasca Mines Ltd.



eventually sunk in excess of 900 feet (274.3 m), with levels established at 170, 320, 445, 570, and 675 feet (52, 97.5, 135.6, 173.7, and 205.7 m). No lateral work was done on the sixth level at 900 feet (274.3 m).

Ore shipments to the Lorado Mill began in May 1957 at 150 tons/day and in September of that year reserves were reported to be 208,000 tons of ore at an average grade of 0.33% U_3O_8. Thereafter, daily tonnages of shipped ore became variable because of the erratic nature of the ore zones in the upper levels of the mine and by 1959 had dropped to between 50 to 100 tons/day. Operations were halted in March 1960 due to contract sales by the custom mill. By the following month the mine was closed.

During the life of the mine the most productive part of the ore zone was the '17' shoot. At the time of closure, the main shoot had been completely mined out between the first and fourth levels and a small amount of stoping and exploratory raising had been done between the fourth and fifth levels. It is thought that about 10,000 tons of ore remain above the fifth level but the potential below this level is not known exactly (Saskatchewan Energy and Mines,1991).

5.4 GENERAL DESCRIPTION

The site covers a relatively large area of approximately 1 - 1.5 km^2. There was no evidence of recent visitation, although it appears that there was activity at the site before the road that came directly from Uranium City was washed out as there is garbage and debris from within the last five years.

5.5 HISTORY OF PREVIOUS INSPECTION

The site was inspected in 1976 by Mueller. When this inspection took place the road directly from Uranium City was accessible. At the time, there was a large amount of debris in the area. The headframe was standing and in a stable condition. The area was re-vegetated but most of the waste rock did not support vegetation. Both the shaft and a ventilation raise were secure with a concrete cover.

5.6 2000 INSPECTION

The inspection was completed on October 14, 2000 by (KHS) Environmental Management Group Ltd..

5.6.1 Mine Workings

The workings of the mine consists of a shaft and a ventilation raise.

This ventilation raise is located approximately 150 m south east from the main shaft area and is sealed with waste rock . The stability of the closure is good and there were no liquid discharges or evidence of previous flooding.

The main shaft (N 59° 34.758'; W 108° 39.466') is also sealed. The shaft area is approximately 4 by 5 m and is sealed by concrete, rock and lumber. The stability of the closure must be considered suspect. It is in poor condition and the stability of closure is in question, making it unpredictable. There were no liquid discharges at the time of inspection, nor was there evidence of previous flooding. The remains of the headframe consist of a pile of rubble composed primarily of rotting lumber and steel debris.

5.6.2 Waste Rock

Waste rock covers a large area of the mine site. It makes up all the roads in the area and covers approximately 15-20 hectares. Generally the waste rock appears shallow and relatively stable. The waste rock also comprises a portion of the shoreline of a lake at the south east section of the site.

The entire site has a limited of vegetation covering the waste rock and a significant area is

barren and has no vegetation.

A gamma survey of the waste rock was conducted with measurements ranged from 0.70 to 5.02 μSv/hr.(see Site Map 5).

5.6.3 Buildings

There are 6 concrete foundations throughout the site. Four are located within 50 m of the main shaft, while another 2 foundations are located on the south east corner of the site None of the associated buildings remain standing and consist primarily of piles of lumber and scrap metal debris..

All foundations are in relatively stable condition condition.

5.6.4 Debris/Rubble

There is a large amount of debris throughout the area. It is suspected that before the access road was washed out people used the area to dump refuse. There is also a large amount of debris that can be associated with the mine activities. This includes rail tracks, barrels, a steel generator, ore buckets and cars. Some off this debris has been pushed down a slope towards the lake on the north east end of the site.

5.6.5 Site Sampling (Water, tailings, etc.)

No sampling was completed in the area.

5.7 RISK ASSESSMENT RANKING

Public Safety Assessment	15 / 24
Environmental Assessment	4.0 / 26
Combined Total Assessment	19 / 50
RANKING	8 of 27

5.8 REHABILITATION RECOMMENDATION

The area presents no immediate hazards at the present time. The raise closure is in good condition, however, the shaft closure is in question. The closure is over 30 years old and is deteriorating and therefore should be rehabilitated.

The site does require a major clean up effort as the amount of debris and litter in the area is significant.

6 CONSOLIDATED BETA GAMMA MINES LTD.

Site #26 - Bellegarde Lake area

Mineral Property #1394:
(formerly: VEN claims 1 to 3; DD Concession; CHUM claims)

Showing name:
Beta Gamma Uranium Mine {Zones 1 and 2}

6.1 LOCATION

Map	126B (A5)
Latitude:	N59° 36' 31"
Longitude:	W108° 38' 23"
NTS:	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6609984
UTM	Easting: 633189

Location: The Beta Gamma Mine is located approximately 3 miles (4.8 km) north-northwest of Uranium City the north eastern tip of Bellegarde Lake..

Accessibility: Access to the site via the road leaving the north west end of Uranium City is not possible. As a result of beaver activities the road is flooded and washed out.

Alternatively, access to the site can be gained from the south road that branches off of the Rix Road. The same road leads to St. Michael's, Cayzor and eventually to the Consolidated Beta Gamma mine site.

The road is severely overgrown and, as a result, the only way to access

these mines is by walking. Consolidated Beta Gamma mine is approximately 5 km north of the Cayzor mine. Walking to the mine is difficult because of the overgrown road and the difficulty of the terrain.

6.2 GEOLOGY

The area of the showing is underlain by a strike shear zone trending 075° and dipping 80° south, known as the Heron Shear. It cuts garnetiferous quartz-rich gneisses. Numerous thin diabase sills occur in the hanging wall and pegmatite is abundant in the footwall. Brecciated diabase and gneiss in the hanging wall are cemented with calcite. Pitchblende, pyrite and chalcopyrite are disseminated in the matrix of the breccia and the wallrocks are reddened.

On the surface, the No. 1 Zone is south of the mine shaft. It strikes parallel to the enclosing formations (which strike 070°) and dips steeply south. The zone is very narrow and occurs along the contact between red granitic layered gneiss to the north and garnetiferous quartz-rich granite gneiss to the south. The zone was estimated to grade 0.38% U_3O_8 across 3.5 ft (1.1 m) for a length of 400 ft (122 m), but the best mineralized shoot found underground only graded 0.13% U_3O_8 across 3 ft (0.91 m) for a length of 22 ft (6.7 m).

The No. 2 Zone is about 150 ft (45.7 m) north of the shaft and has a strike and dip similar to the No. 1 Zone. The No. 2 Zone is entirely within garnetiferous, quartz-rich granitic gneiss. Only scattered radioactivity could be found at this zone. The pitchblende in both cases occurs along fractures subparallel with mafic-rich bands in the gneiss and near mafic sills or dykes (Saskatchewan Energy and Mines, 1991).

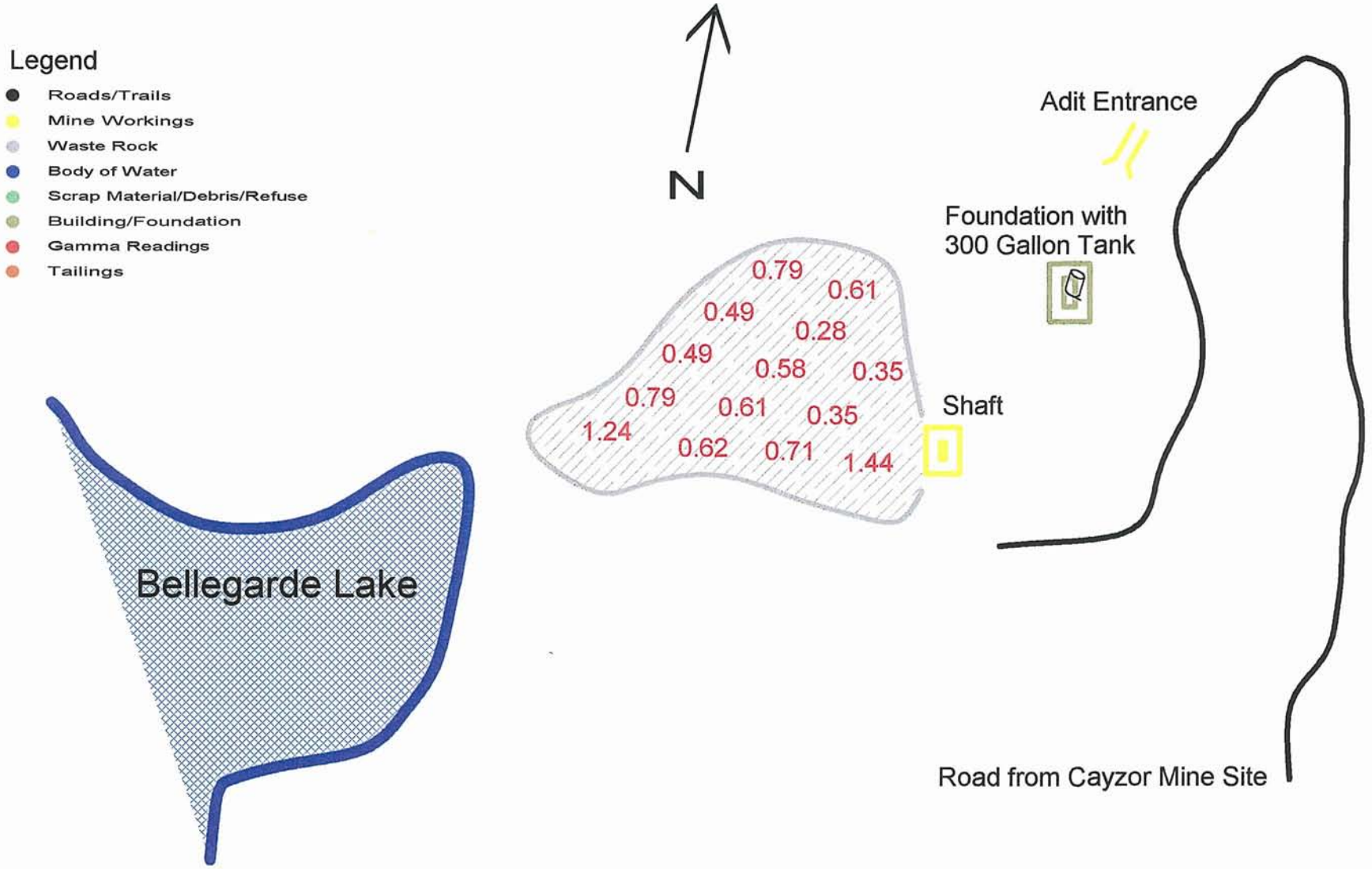
6.3 MINE HISTORY

The ground was originally staked in 1948 by R.C. Heron as the CHUM group of claims. These claims initially covered part of a fault or shear zone known as the Heron Shear. In 1949-51 trenching was done.

In 1952, Beta Gamma Mines Ltd. (renamed Consolidated Beta Gamma Mines Ltd. in 1956) acquired the claims. They did prospecting on the claims and revealed 8 radioactive zones. The No. 1 zone on the Heron Shear was tested to a vertical depth of 60 ft (18.3 m) by drill holes spaced 100 ft (30.5 m) apart. At the same, time two holes were drilled into the No. 2 zone.

In 1953, further drilling was carried out and the results indicated further work was

6. Consolidated Beta Gamma Mines Ltd.



warranted. A 3-compartment shaft was collared between the Zones No. 1 and No. 2. Underground exploration was halted in March 1954 after the shaft had been sunk to 154 ft (46.9 m) with 596 ft (181.7 m) of lateral development work on the 134 ft (40.8 m) level.

In April 1955, the workings were reopened and 569 ft (173.4 m) of lateral work was completed on the first level, two raises were driven into the No. 1 zone and 6 underground drill holes were put down. When insufficient ore reserves were outlined by this work the operation was closed in July 1955.

In 1956 Mogar Mines acquired the property and carried out a scintillometer survey, as well as some diamond drilling; the results were not encouraging. In 1958-59 the mine area was high graded by S. Carstens In 1958-59, the mine was under disposition VEN claims No. 1 to 3. Lavant Mines Ltd. highgraded the mine area (AF 74N10-0161). About 50 tons of ore assaying 0.22% U_3O_8, obtained from the ore dump, 50 tons or ore averaging 0.77% U_3O_8 from a small inclined adit on the No. 2 zone and about 300 tons of marginal-grade ore from the No. 1 zone were shipped to the Lorado Custom mill. (Saskatchewan Energy and Mines,1991)

6.4 GENERAL DESCRIPTION

The site covers a relatively small area (approximately 200 m^2).

There was no signs of recent visitation in the area.

6.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed an investigation of the site in 1976. The headframe was still standing, all of the mine buildings were collapsed and there was a moderate amount of debris in the area.

The area was primarily re-vegetated except for the waste rock pile.

6.6 2000 INSPECTION

The inspection was completed on October 14, 2000 by (KHS) Environmental Management Group Ltd.

6.6.1 Mine Workings

The main shaft (N 59°36.465'; W 108° 38.270') is approximately 3 by 4 m. It is open with various debris pushed into it. The remnants of the headframe, ore bucket and skip were pushed into the shaft in an unsuccessful attempt to seal the opening. The opening could be accessed easily, and the nature of the debris in the opening represent a danger. The shaft is flooded, but there was no discharge of liquid at the time of inspection. There was evidence of previous discharge, therefore it should be considered ephemeral.

The adit (N 59° 36.522'; W 108° 38.215') is located approximately 65 m north of the shaft. It is a 1.5 by 2 m opening. It is in poor condition and was flooded at the time of inspection. There was no liquid discharge at the time of inspection but there was evidence of previous flooding,

6.6.2 Waste Rock

There is a large amount of waste rock on site. This rock is scattered throughout the site however the bulk of the waste rock is concentrated in one large pile near the shaft. The pile has steep sides and should not be considered stable.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.28 to 1.44 μSv/hr.(see Site Map 6)

Vegetation is well established on the majority of the site with the one exception being the area of waste rock immediately in front of the shaft.

6.6.3 Buildings

No concrete foundations were found at the site, however, some wooden debris in the area

could possibly be the remnants of buildings.

6.6.4 Debris/Rubble

There is a limited amount of debris in the area. There is one 300 gallon tank located near the shaft along with some miscellaneous steel and wooden debris, rail tracks, and 2 ore buckets.

6.6.5 Site Sampling

As it was judged dangerous to attempt to sample either the raise or the adit, no samples were collected at either location.

6.7 RISK ASSESSMENT RANKING

Public Safety Assessment	13.5 / 24
Environmental Assessment	9.0 / 26
Combined Total Assessment	22.5 / 50
RANKING	6 of 27

6.8 REHABILITATION RECOMMENDATION

The shaft is a hazard due to its present condition. Debris, waste rock, old timbers and steel have been used in an attempt to seal this opening. The area is unstable and is a hazard. The underground workings appear to be completely flooded to surface and flows to surface are a realistic possibility, however at the time of inspection no flows were observed. It is likely that such flows would immediately dissipate into the waste rock in the area..

The adit should must also be considered dangerous as no closure appears to have taken place and the workings are accessible to humans and to wildlife.

It is recommended that the shaft be securely sealed with a concrete cap with a suitable drain system to allow for liquid discharge.

The adit should be sealed using waste rock from the site. Effort must be made to deposit waste rock far enough into the adit to prevent slumping in the future.

Before sealing the adit and the shaft, all waste material should be placed either in the adit or down the shaft.

7 ELDORADO NUCLEAR LIMITED - EAGLE MINE

Site #28 - Eagle Mine Mineral Property #1360
(Eagle Shaft - Eagle 7 Claims)

Showing name:
Eagle Uranium Mine {Spur, Lost Mine, Conglomerate, and Edie Veins or Zones}

7.1 LOCATION

Map: 126B (B7)

Latitude:	N 59° 35' 00"
Longitude:	W 108° 31' 30"
NTS :	74N-10-SE
UTM:	UTM Zone 12; NAD 1927
UTM	Northing: 6607406
UTM	Easting: 639766

Location: Eldorado Nuclear Limited - Eagle Mine is located approximately 3 km northwest of Uranium City. The Eagle Mine is 175 m south of Shaft Lake and about 1 km NE of Melville Lake. The site is approximately 1.5 km beyond the Nesbitt Labine - Eagle Mine (see map).

Accessibility: Access can be gained easily by vehicle on the road that runs from the Eldorado - Uranium City road and passes through the ABC and Nesbitt Labine - Eagle Mine.

7.2 GEOLOGY

Pitchblende occurs in a series of sub-parallel veins and shears within and east-trending area 2,000 feet (609.6 m) long and about 400 feet (121.9 m) wide. A few of the veins are well mineralized particularly where parent fractures coalesce and where wall rocks are argillaceous, but the veins generally are short, narrow and too small to be of economic value. Pitchblende occurs as colloform and massive veinlets and as disseminated grains, accompanied by calcite, chlorite and minor amounts of sulphides.

The mine-area is underlain by a north east-trending sequence of metasomatic granite that contains numerous bands and inclusions of intensely chloritized, silicified and hematized meta-argillaceous rocks and a few narrow bands of quartzite. A narrow, NE-trending strip of conglomerate of the Martin Formation overlies the basement rocks just N of the mine shaft.

The bedrock is cut by four north east-striking zones that converge to the south west. From the south east to north west they are the Lost Mine, Conglomerate, Spur, and Edie zones and are inferred to be faults from surface criteria although they have not been positively identified as such underground and in drill hole core.

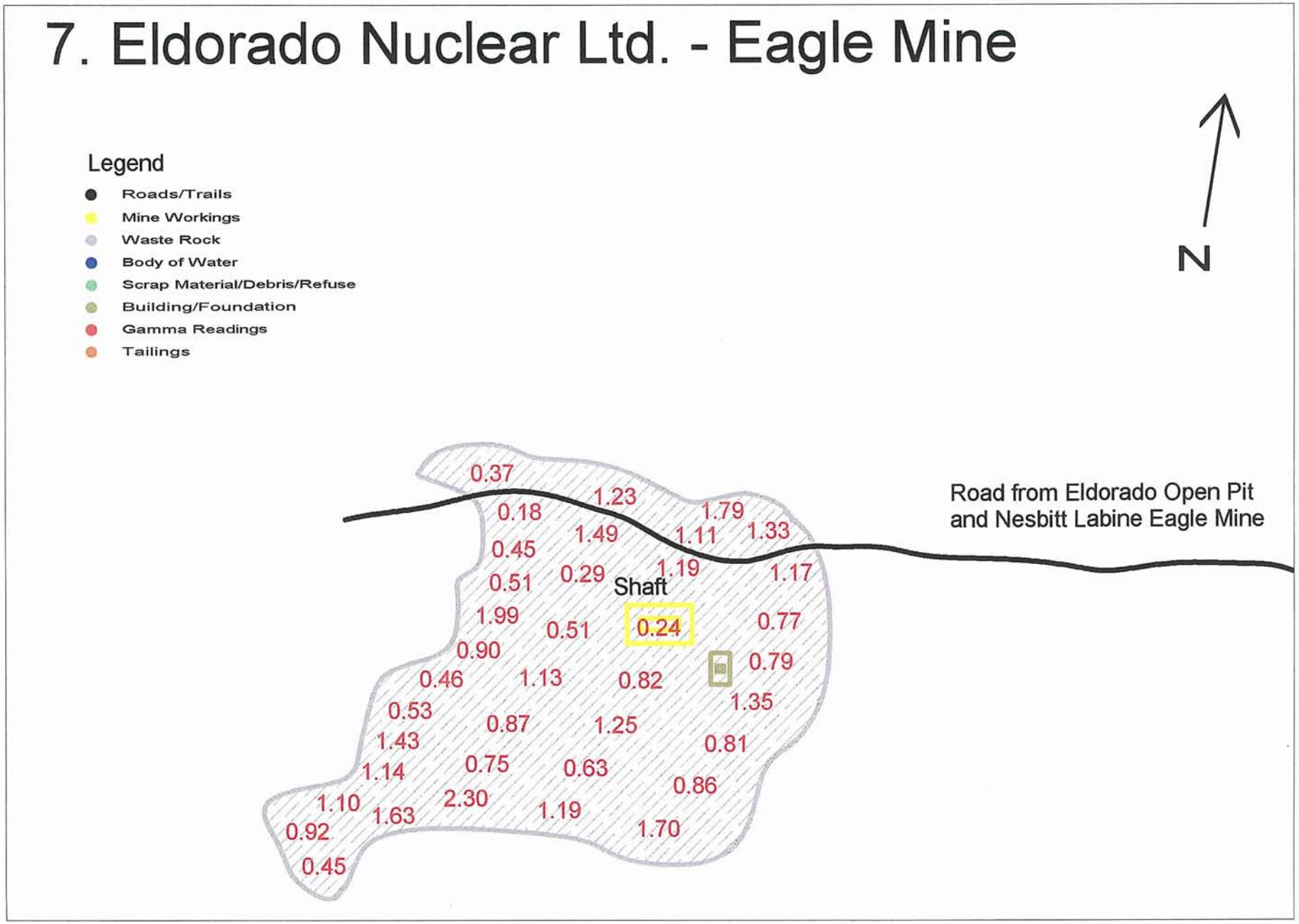
The two most important zones are the Spur and the Lost Mine zones. The Spur Zone, which strikes north 70° east, dips south east, is up to 18 inches (0.45 m) wide vein system which consists of a series of small fractures containing carbonate, quartz, chlorite, stringers of pitchblende and minor amounts of pyrite, chalcopyrite, bornite, covellite, and galena. The Spur Vein is hosted within highly hematized and metasomatically granitized Donaldson Lake gneisses.

The Lost Mine Vein is located 1,000 feet (304.8 m)southeast of the Spur Zone. It strikes north 80° east and dips vertically to steeply south east. It is up to 8 feet (2.4 m) wide, containing fractures mineralized in much the same way as described for the Spur Zone. The Lost Vein consists of massive vitreous pitchblende, drusy butryoidal pitchblende (as coatings on quartz crystals), occasional euhedral pitchblende cubes, and bands of colloform pitchblende within a strong quartz±calcite-filled fracture system which cuts highly hematized Donaldson Lake gneisses which have been re-worked by metasomatic granitization. The vein occurs on the flat-lying north limb of the Donaldson Lake anticline (Saskatchewan Energy and Mines, 1993).

7.3 MINE HISTORY

The property was owned by Eldorado Mining and Refining Ltd. Uranium mineralization was discovered on this property in 1947. In 1948-49 a few showings were trenched and two, the Spur Zone and the Lost Mine Zone, were drilled extensively. After about 22,000

7. Eldorado Nuclear Ltd. - Eagle Mine



feet (6 705 m) of surface diamond drilling over about 2,999 feet (914.1 m), a shaft was started in early 1950 and sunk to a depth of 300 feet (91.4 m)with lateral development on the 150-foot (45.8 m) and 275-foot (83.8 m) levels. Most of the underground exploration was concentrated within the area of the Lost Mine Vein with a lesser amount of work in the vicinity of the Spur Zone, the two zones which were so heavily drilled on the surface. By the end of 1950, about 3,800 feet (1 158.3 m) of lateral work and 8,000 feet (2 438.4 m) of underground diamond drilling had been completed, mainly on the 150-foot (45.7 m) level. Early in 1951 the headframe was destroyed and work was suspended on the property.

A total 103,408 tonnes of ore, which was shipped to the Lorado Mill, returned 223,574 kg U_3O_8 (Saskatchewan Energy and Mines, 1993).

Reclamation of the site has occurred over several periods beginning in 1982 and continuing in 1983 and 1985. Re-capping of the Eagle Shaft was completed in 2000.

7.4 GENERAL DESCRIPTION

The site covers a relatively small area of approximately 0.25 km^2.

7.5 HISTORY OF PREVIOUS INSPECTION

The site is inspected annually by SERM.

7.6 2000 INSPECTION

The inspection was completed on October 14, 2000 by (KHS) Environmental Management Group Ltd.

7.6.1 Mine Workings

The mine consisted of a single shaft. The shaft cap is approximately 3.4 m by 6.5 m and is in excellent condition. A drain from the top of the cap showed no signs of discharge or evidence of previous flooding. The stability and condition of the closure is excellent.

There is a least one concrete foundation associated with shaft.

7.6.2 Waste Rock

There is an extensive amount of waste rock on the site which has been graded and sloped

at some time in the past. The waste rock is stable.

There is very little vegetation cover on the rock perhaps due, in large part to recent activities.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.18 to 2.30 μSv/hr.(see Site Map 7)

7.6.3 Buildings

All remnants of buildings that may have existed have been decommissioned with only the foundation of one building associated with the mine shaft remaining. This foundation presents no environment or safety risk.

7.6.4 Debris/Rubble

There is no significant scrap material on site with the exception of a limited amount of material such as bolts, small pieces of piping, etc.

7.6.5 Site Sampling (Water, tailings, etc.)

No sampling was completed at the site.

7.7 RISK ASSESSMENT RANKING

Public Safety Assessment	5.9 / 24
Environmental Assessment	2.0 / 26
Combined Total Assessment	7.9 / 50
RANKING	24 of 27

7.8 REHABILITATION RECOMMENDATION

None - The site has been decommissioned.

8 LAKE CINCH MINES LTD
9 CENEX MINES LTD

Site #35 and 36 - Cinch Lake Area

Mineral Property #1425a:
(formerly: CC1 Concession; CC Concession)

Showing Name:
Cinch Lake Uranium Mine or Cenex Lake Uranium Mine {20 Ore Zone, Breccia Zone, Shear Zone, River or Cenex or Main Zone}, 'B' U Showing

8/9.1 LOCATION

Map: 126B (C5)

Latitude: N59° 32' 35"
Longitude: W108° 40' 05"

NTS : 74N-10-SE

UTM: Zone 12; NAD 1927
UTM Northing: 6602630
UTM Easting: 631847

Location: The Lake Cinch Mine is located approximately 2.5 km south of Uranium City and 700 m west and south of Cinch Lake along the Crackingstone River.

Accessibility: Access to the site is easily gained by vehicle via a road that turns east off of Uranium Road - Bushell road. It is a short drive (1.2 km) from the turn off to the mine site. A wooden bridge that must be crossed to access the site is deteriorating and caution must be used when crossing with a vehicle.

8/9.2 GEOLOGY

The highest grade ore is in a band of mylonite, from 2 to 10 feet (0.61 to 3 m) wide, associated with the Main Ore Fault, a local NE-trending fault located approximately 900 feet (274.3 m) south east of Guts Lake. On the second level of the mine (-500 feet) the ore is limited to a shoot extending along the Main Ore Fault from 45 to 365 feet (13.7 to 111.3 m) north east of the junction with the north east-trending Crackingstone River Fault. From this level it extends upwards for 135 feet (41.1 m) and downwards for an undetermined distance. Pitchblende, usually accompanied by calcite and chlorite, is disseminated through the mylonite in fine feathery grains and rims to breccia fragments. Hematite is finely disseminated throughout the ore zone and is densely concentrated near pitchblende. Pyrite, chalcopyrite, specular hematite, and rutile occur locally.

Ore also occurs in steeply dipping north west-striking tension faults connecting the Main Ore Fault and Crackingstone River Fault. Breccia and fracture zones along the subsidiary faults are cemented or veined with calcite, hematite, and pitchblende. Individual shoots of ore range from 1 to 7 feet (0.3 to 2.1 m) in width and from 50 to 250 feet (15.2 to 76.2 m) in length.

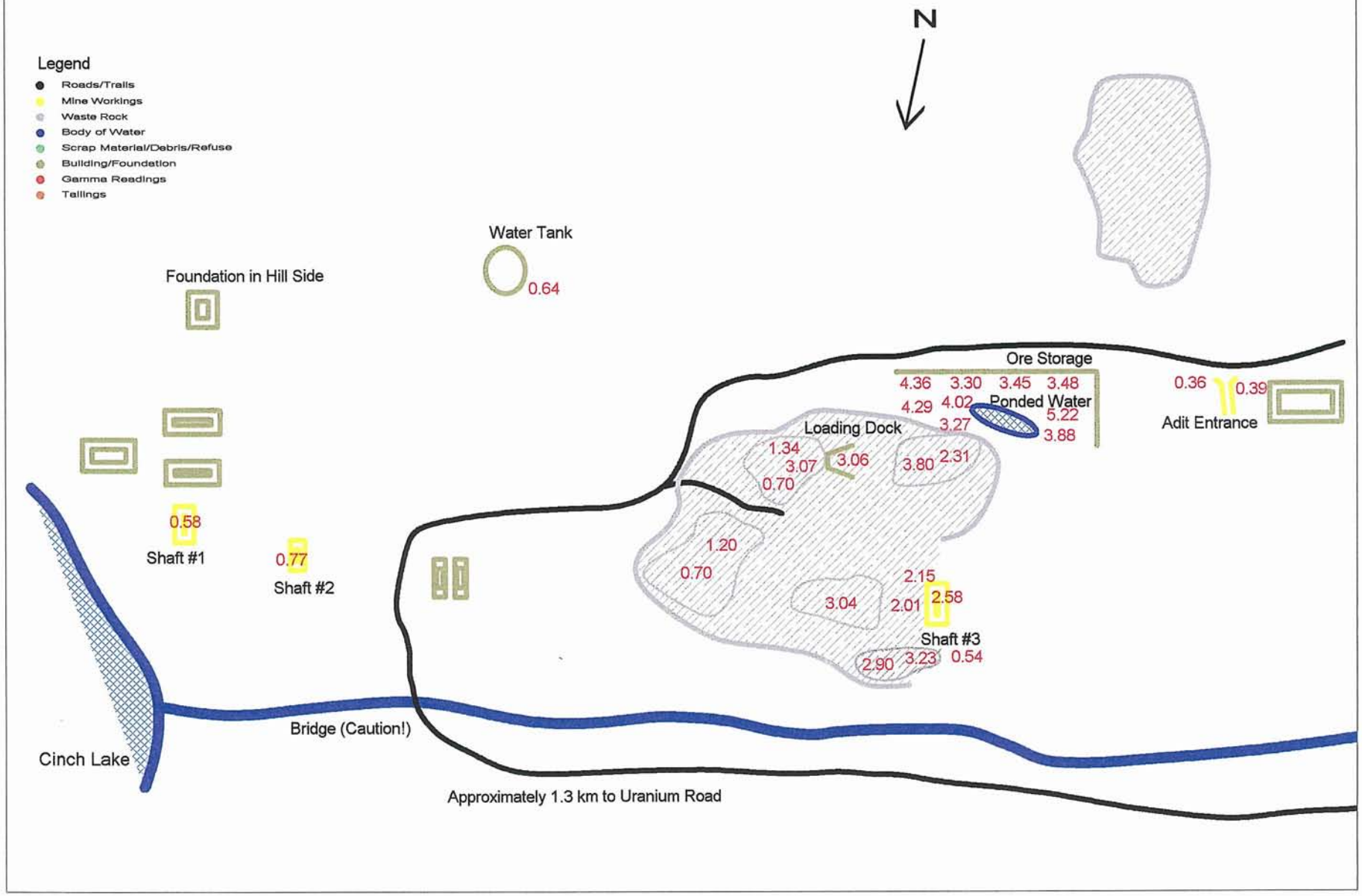
Because of the convergence of the Crackingstone and Main Ore Faults, the tension faults are not present below the fifth level (-875 feet) and as the Crackingstone Fault appears to be barren in the mine-area, the chances of finding ore below level 5 is poor. The area underlying the mine site is one of mylonitized and brecciated quartz-rich gneisses containing minor amounts of granite, amphibolite and hornblende-feldspar gneiss and schist. The area is contained in a wedge between the Crackingstone River Fault and the Main Ore Faults, and is known locally as the Cayzor Unit, belonging to the Tazin Formation in age.

The River Zone is on the hanging-wall side of the Crackingstone Fault, about 1,200 feet (365 m) west of the shaft. The major portion of this deposit is not connected to the mine workings. Pitchblende-bearing veins occur in both north east and north west-trending fractures and one small ore shoot (made up of two main veins) was outlined. The area underlying the River Zone is the same geologically as that underlying the Cinch Lake Mine.

The 'B' showing, located between the mine and the River Zone, consists of short narrow chlorite fractures trending north east and north west which contain hematite and pitchblende. The fracture zone is intermittently radioactive for 600 feet (182.9 m). The area is underlain by a NE-striking contact zone between chloritic gneiss and mylonitized quartz-feldspar gneiss. The best assay is a trench sample that gave 1.36% U_3O_8 across 4.8 feet (1.5 m).

The Lake Cinch Extension Drilling zone area is underlain by a north east-trending

8 and 9. Lake Cinch Mines Ltd. and Cenex Mines Ltd.



sequence of mylonitized and brecciated paragneiss enclosing a strike fault, believed to be the offset extension of the Main Ore Fault of the Cinch Lake Mine. The Cinch extension Zone, which is located approximately 600 feet (182.8 m) west of the River Zone, gave a best assay of 0.3% U_3O_8 across 5 feet (1.5m). Mineralization is spotty and has poor continuity.

The ore-bearing structures of the Cenex Mine consist of a series of sub-zones which were named the Breccia Zone, the Shear Zone, and the above-described River Zone (also called the main orebody). The Breccia Zone consists of a 70° south-plunging curved tabular unit which is 1 to 5 m thick. The ore is hosted within a series of brecciated mylonitic and ultramylonitic, leucocratic quartzofeldspathic gneisses (Unit 3) and a mylonite chlorite-sericite-quartz-graphite schist (Unit 4). The Breccia Zone pinches out above mine level 2.

The Shear Zone, which is hosted within the same rock types as the Breccia Zone, strikes northeast and dips 70° south east. The Shear Zone consists of an undulating series of graphite-covered shears which are spaced 3 to 7 cm apart.

The 20 Ore Zone consists of mineralized areas around the 20 Zone Fault - a splay off the River Zone fault. The wedge-shaped zone, which is connected to thee River Zone at its southeast end, consists of numerous mineralized carbonate veins and mineralized adjacent wallrock in the foot wall of the 20 Zone Fault. The ore grade of this zone varies from 0.1% to 0.5% U_3O_8. The ore which comprises this zone is of three types. The shear zone style of ore, which is regarded as the oldest ore, is restricted to the Shear Zone and small portions of the River Zone and the 20 Zone. The ore consists of fine disseminations of uraniuerous titanite fine pitchblende grains yellow secondary uranium minerals along foliation planes. The second generation ore, called breccia style ore, is found in the River Zone and locally in the 20 Zone. This style of mineralization, which accounts for 75% of the production, consists of pitchblende grains, uraniferous titanite veinlets secondary uranium minerals which are present throughout the brick-red mylonite and ultramylonite fragments in the breccia and as a finely disseminated pitchbelnde-calcite-hematite in the breccia groundmass. The youngest generation of ore, or vein style ore is found in the 20 Zone, the uppermost level of the River Zone and in portions of the 16 Vein consists of disseminations of uranium minerals plus local colloform pitchblende which is hosted in carbonate veins which infill shears in the wallrock.

In 1976, the ore reserves of the deposit were given as 300,000 tons grading 0.2% U_3O_8 (after 39% dilution) to the 1000 foot level in the Cinch Mine and to the 300 foot level in the River Zone. The Lethbridge Zone, which is located just west of the River Zone, contains 15,000 tons at 8.4 lb/ton U_3O_8 in the 03 Zone below the 300 foot level (Northern Miner 11/11/76, 03/02/77 and 06/09/79)(Saskatchewan Energy and Mines, 1991)

8/9.3 MINE HISTORY

8/9.3.1 Lake Cinch Mine

The Lake Cinch Mine begins a series of 4 showings occurring along a straight line between Cinch Lake and Guts Lake. The showings are spaced over equal intervals along a distance of 1,800 feet (548.6 m). The Cinch Lake Mine and 'River Zone' will be described first.

The property covering the mine was first staked in 1948 for C. Swenson, who sold it in 1950 to Cinch Lake Uranium Mines Ltd. From 1951-53 the property was examined in detail by the Mining Corporation of Canada Ltd., and 65 diamond drill holes for a total footage of 13,752 feet (4 191.6 m) were drilled over a few small highgrade showings outlined just south of the Crackingstone River. In October 1954, Cinch Lake Uranium Mines Ltd., was re-organized to Lake Cinch Mines Ltd. and controlled by Violamac Mines Ltd., and by late 1955 an additional 22,500 feet (6 858 m) of diamond drilling in 65 holes were done by Lake Cinch on the main radioactive zones. Results warranted the sinking of a vertical production shaft. The shaft was started in late 1955 and sunk to a depth of 548 feet (167 m). Two levels were established. Shipments to the Lorado Mill commenced in May 1957. In 1958 the shaft was deepened to 867 feet (264.2 m) and again in 1959 to 1,096 feet (334 m). By then four new levels had been established and lateral development on all six levels had been completed. 26 March 1960 the production stopped and in May 1960 the mine was closed. 125,205 tons of ore had been shipped which produced 661,257 lbs. U_3O_8. At the time of closure, proven reserves were reported to be 32,473 tons at an average grade of 0.196% U_3O_8 and 150,000 tons probable, averaging 0.23% U_3O_8.

The ground covering the River Zone was restaked in 1965 and acquired by Enex Mines in 1966 when additional diamond drilling was done. This resulted in outlining two main veins in this zone, which is situated 1,200 feet (365.8 m) due west of the Cinch Lake Mine site. The major portion of this deposit is not connected to the mine workings. In 1969 the Enex group merged with Lake Cinch Mines under the name Gardex Mines for the purpose of developing the two properties jointly and using the Lake Cinch shaft. In July 1974, Eldorado purchased the property from Gardex and carried out an exploratory drill program over the next 15 months. Eldorado optioned these properties to New Joburke, who took the option in 1976, and through its wholly owned subsidiary, Mining Corporation of Canada (1964) Ltd.

8/9.3.2 Cenex Mines Ltd.

In August, 1977 New Joburke changed its name to Cenex Ltd. Proven, probable and possible ore reserves calculated from the results of the exploratory drill program which Eldorado conducted in 1975-76 plus the reserves left in the Cinch Mine, amounts to 300,000 tons containing approximately 1,200,000 lbs. U_3O_8 of which 600,000 lbs. are classified as 'fast pay', ie: readily accessible at shallow depth on the Enex property. The

calculation is made to a depth of 300 feet (91.4 m) on the Enex property and to 1,000 feet (304.8 m) on the Lake Cinch property. The tonnage and grade on the Enex property has been calculated by Eldorado.

The River Zone was only examined underground on the first level of the mine during the operations of the Cinch Lake Mine.

Between the Cinch Mine and the River zone occurs a minor showing of pitchblende also found by Lake Cinch Mines Ltd. It is called the 'B' Showing. It has been trenched and diamond drilled by Lake Cinch Mines Ltd. between 1955 and 1956.

In 1978, Cenex Ltd purchased the properties. A 2,500 m spiral decline was driven to 375' vertical depth on the 03 zone (1,500' west of the shaft) and between 1978 and 1979, an ore sorter was installed and approximately 2,000 lbs. of ore a week was trucked to the Eldorado mill. In February 1979, a fire distroyed the powerhouse. Working capital became short and Cenex was placed in receivership. Mining ceased in October of 1979. During the period of production, the Cinch or Cenex Mine produced 712,375 Lbs of U3O8 and the 03 and 04 Zones - or the Lethbridge Zone - produced 855,429 lbs U3O8 (482,000 lbs of concentrates).

In 1980, A. Frame Contracting purchased the minesite and stockpiled ore (Saskatchewan Energy and Mines Web Page; Mineral Index; Revised 1991).

8/9.4 GENERAL DESCRIPTION

The mine site covers a large area (approximately 1.5 km^2). The site covers two primary zones where mining activity took place; the main zone and the river zone. The two sites were assessed as a single site because of their close proximity to each other.

The site is easily accessible and evidence of recent visitation is apparent.

Because of the continuity of the various properties and the complex histories and ownership structures, the sites were assessed together.

8/9.5 HISTORY OF PREVIOUS INSPECTION

In 1989 Saskatchewan Environmental and Public Safety (Mines Pollution Control Branch) undertook the Abandoned Mines Remedial Action Program. Remedial work was completed and funded by A. Frame Contracting Limited who held the mineral lease to the area and involved filling three shafts with crushed rock and removing an abandoned pump house located on Guts Lake.

Related documents also references remedial work completed adjacent to the Lake Cinch Mine operation when Early Bird Mines Limited is identified as controlling this site. The work involved covering three shafts with steel gratings and waste rock. A review indicates that these three shafts and the three shafts referred to in the Lake Cinch operations are the same.

8/9.6 2000 INSPECTION

The inspection was completed on October 12, 2000 by (KHS) Environmental Management Group Ltd.

8/9.6.1 Mine Workings

The mine workings consisted of an adit and three different shaft openings.

The adit entrance is located south west of shaft #3 and is sealed with waste rock. The closure is in excellent condition and stability is good. There was no liquid discharge and no evidence of previous flooding. There are several concrete foundations associated with the adit.

The most easterly shaft which will be referred to as Shaft #1 is approximately 60 m southeast of the bridge at the entrance of the site. The opening is approximately 4 by 4 m and has a grate with waste rock piled on it. The closure method is relatively stable although some initial slumping was observed. There was no liquid discharge at the time of inspection and no evidence of previous flooding. There are concrete foundations associated with Shaft 1.

Shaft #2 which is approximately 10 m west of Shaft #1 is slightly larger. It is approximately 5.5 by 5.5 m in size and is also sealed with a grate and waste rock. Shaft #2 is in extremely poor condition and shows extensive signs of slumping. There was no liquid discharge or evidence of previous flooding from Shaft #2.

Shaft #3 is located approximately 500 m due west of Shaft #2. A road leads to this shaft from the area around Shaft #1 and #2. Shaft #3 is approximately 4 by 4 m in size also

covered with a steel grate and waste rock. The shaft shows signs of early slumping but is in reasonably good condition. There was no liquid discharge at the time of inspection or any evidence of previous flooding. This opening also has concrete foundations in the vicinity.

8/9.6.2 Waste Rock

The site has extensive areas of waste rock. The stability of the waste rock is good, with the majority being shallow and used for roads.

There is little vegetation on large amounts of the waste rock, limited mostly to a number of small willows and alders.

There are also three small ore piles associated with shaft #3. These piles are steep sided but relatively small.

Gamma survey of the site resulted in readings that ranged from background to as high as 5 μS/hr. The later were restricted to small areas that are considered to be the ore piles from past sorting.

8/9.6.3 Buildings

There are numerous concrete foundations throughout the site. The concrete is in good condition and the rubble from the once standing buildings has been cleaned up. There was one wooden structure east of a large water tank that was still standing.

8/9.6.4 Debris/Rubble

The debris is limited in the area. There was some barrels and other metal debris in the

area. It appears that the debris from the site was put among the waste rock in a large pile south of Shaft #3.

The primary concern associated with debris on the site would have to be the large water tank on the south end of the site.

The tank is approximately 9.5 m in diameter and 7 m high and is currently precariously standing on 45 gallon drums. Some of the drums have collapsed and the obvious lean to the tank is a concern.

8/9.6.5 Site Sampling

No sampling was completed at the site.

8/9.7 RISK ASSESSMENT RANKING

Public Safety Assessment	18 / 24
Environmental Assessment	7.0 / 26
Combined Total Assessment	25.0 / 50
RANKING	3 of 27

8/9.8 REHABILITATION RECOMMENDATION

There are several public safety concerns with the site.

The primary concern should be with the method in which the shafts have been closed. All three are showing signs of slumping to a varying degree. The method of closure also contributes to the uncertainty as the rate of collapse (slumping) will, in all likelihood, accelerate due to natural precipitation inflows and the rusting and weakening of the steel

grates currently supporting the waste rock piled on top.

All three shafts should have the current cover removed and each should be replaced with a concrete cap.

The large tank at the south end of the site is also a public safety hazard. The tank is resting on several 45 gallon drums, some of which support no weight due to the leaning of the tank. There are also several drums that show signs of collapsing under the weight of the tank. The lean of the tank suggests that the tank could fall over at anytime and it should be removed as soon as possible.

The building foundations pose no safety or environmental risks.

Consideration must be given to the rehabilitation of the ore piles that remain on site. The preferred option would be to deposit the material into the shaft before the concrete cap recommended above is installed.

This site is easily accessible from Uranium City and the tank and shaft closures are of serious concern.

10 LORADO URANIUM MINES LIMITED

Site #37 - Hansen Bay, Beaverlodge Lake

Mineral Property #1228:
(formerly: S-103635 and S-103636; ALCO claims)

Showing Name:
Lorado Uranium Mine, Pyrite Zone

10.1 LOCATION

Map:	126B (D5)
Latitude:	N59° 29' 32"
Longitude:	W108° 40' 06"
NTS	74N-07-NE
UTM	Zone 12; NAD 1927
UTM	Northing: 6596971
UTM	Easting: 632030

Location: Lorado mine site is located approximately 2.5 km south of Hansen Bay, Beaverlodge Lake. It is approximately 10 km south of Uranium City. The shaft area is located on a hill overlooking Beaverlodge Lake, while the living quarters are directly south of this.

Accessibility: The mine site and living area are easily accessible via a good road that turns east off of Uranium City - Bushell road.

10.2 GEOLOGY

The mine area is underlain by a north east-trending sequence of altered and contorted meta-argillite containing abundant chlorite and graphite in places. The sequence dips 55° south east and is underlain by sheared graphite-pyrite schist and overlain by quartzite.

The main ore zone is in the crest of a flat plunging monoclined fold in contorted graphitic schist, and extends from the first level to below the second level of the mine as a horse-shoe shaped synclinal body plunging gently north-eastward. A similar structural setting on the fourth and fifth levels is host to a number of small ore shoots. On the footwall side of the main ore zone, a large mass of pyritized graphitic rock, as much as 100 feet (30.5 m) wide, was outlined by drilling for a strike length of 700 feet (213.4 m) and to a depth of 3 levels with the limits undefined. The pyrite in this mass was mined for a time to provide a source of elemental sulphur for acid production at the Lorado Plant.

Much of the pitchblende in the ore is associated with bands of heavily disseminated pyrite and chalcopyrite. Minor amounts of borite, chalcocite, and metalic hematite are intergrown with the chalcopyrite. The paragenetic sequence established from polished sections suggest that at least some of the pitchblende was emplaced before the introduction of sulphides and hematite. A marked feature of the ore zone is the absence of hematite in the wall rocks (Saskatchewan Energy and Mines,1997).

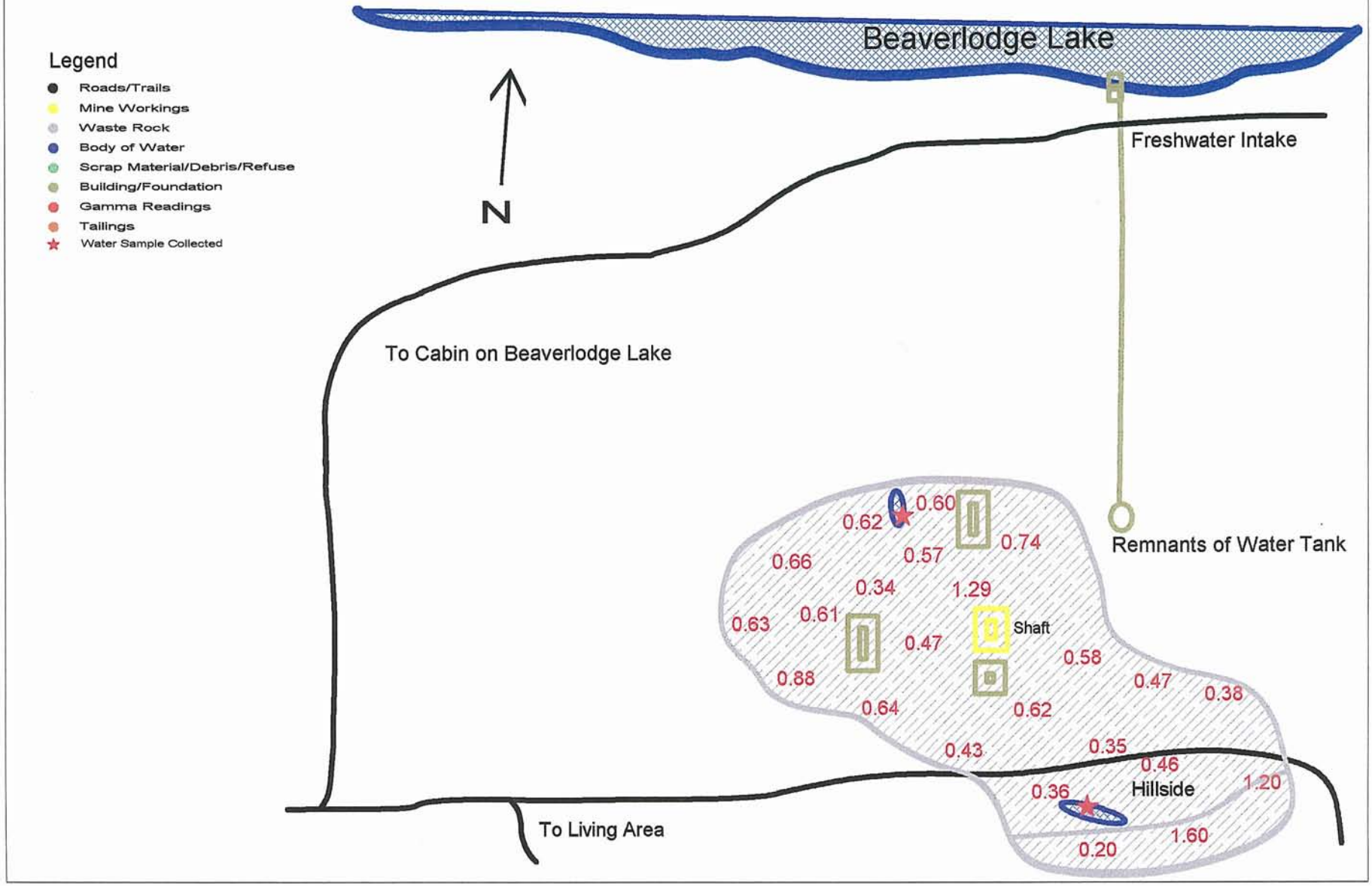
10.3 MINE HISTORY

The ALCO Group of 7 claims was acquired by Lorado Uranium Ltd. in 1953 after several showings had been outlined by diamond drilling by the previous owners. To develop these showings further, a shaft was started in 1954, which reached 700 ft. (213.4 m)', with levels at 216, 361, 499 and 600 feet (65.8, 110.0, 152.1, and 182.8 m) below the shaft collar and sub levels at 116, 216, and 266 foot (35.3, 65.8 and 81.0 m) horizons. A treatment plant for the ore was completed in 1957 with a rating of 500 tons/day. Production was later increased to 800 tons/day.

In 1954, the ore reserves of the Pyrite Zone were given as 3,000,000 tons grading 26% pyrite to the 500 foot (152.4 m) level (GSC Deposits Not Being Mined In 1989). In 1956 ore reserves at the Lorado Mine were stated to be 150,000 tons but by 1959 reserves had decreased considerably because of the inability to trace mineralized zones in the deeper levels of the mine. Some encouragement was obtained during 1959, however and reserves had been built up to 20,000 tons.

Between 1957 and 1960, a shaft with 4 levels was sunk and mining and milling was conducted. 95,000 tons grading 0.19% U_3O_8 was milled. The mill reached an 800 tpd capacity.

10. Lorado Uranium Mines Ltd.



In 1960, the Main Zone mineable reserves were given as 19,335 tons grading 0.18% U_3O_8 plus 202,893 probable tons grading 0.175% U_3O_8 (GSC Deposits Not Being Mined In 1989). On the 26 March, 1960 Eldorado Mining and Refining purchased the mine. Later in 1960, the mine closed in 1960 owing to contract sales by the parent company.

On September 6, 1991, Rod Dubnick staked the showing as S-103635 and S-103636. In 1993, Rod completed diamond prospecting on S-103635 south of the showing (see SMDI 1229). In 1994 Rod completed prospecting and rock sampling on S-103636 in an effort to locate kimberlitic rocks (AF 74N07-0331). S-103635 lapsed on 1 February, 1995 and S-103636 lapsed on 1 February, 1997 (Saskatchewan Energy and Mines, 1997).

10.4 GENERAL DESCRIPTION

The mine site is divided into two areas; the shaft area and living area.

10.5 HISTORY OF PREVIOUS INSPECTIONS

An inspection was completed by Mueller in 1976. Mueller found that some buildings including the living quarters, heating buildings, and other buildings were in a decrepit condition but still standing. The mine had two buildings standing while the remaining were burnt and pushed into a pile near the shaft opening. There was considerable amount of debris in both areas. The debris covering the shaft opening appeared stable at the time, but it is not known if there is a cement cap over the shaft opening. Vegetation was well established except in the shaft area.

10.6 2000 INSPECTION.

The inspection was completed on October 14, 2000 by (KHS) Environmental Management Group Ltd.

10.6.1 Mine Workings

The Lorado mine consists of a single shaft at N59° 29.489'; W108° 39.898'. The shaft is located in the middle of the cleared waste rock area. The shaft opening is approximately 5 by 5 m and is sealed with waste rock. The condition of the waste rock sealing the shaft

is good and remains stable. There was no liquid discharge at the time of inspection and no evidence of previous flooding. The winch and headframe foundations remain in the vicinity of the shaft opening.

Along with the shaft there appears to be some excavating into the hillside south of the shaft. The bottom of the pit is at shaft level while the south side extends to a height of approximately 5 m. The south wall is in poor condition and shows signs of slumping and rock slides. The pit supports no significant vegetation.

10.6.2 Waste Rock

There is a large amount of waste rock throughout the area. It has been used for foundations and road construction. The rock is generally stable and supports a sparse vegetation cover of small birch, willows, and conifers.

The local topography and location of the waste rock indicate that all runoff from the waste rock is fed to a muskeg below the mine site to the north. From this area all water flows through two culverts into Beaverlodge Lake.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.20 to 1.60 μSv/hr.(see Site Map 10)

10.6.3 Buildings

There are two foundations associated with the shaft. These foundations are in good condition and pose little risk.

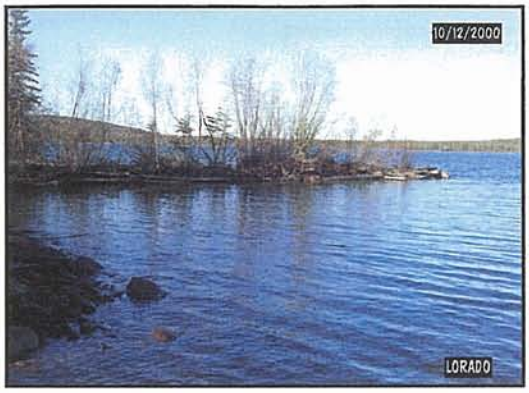
There are numerous other foundations in the living area which also pose little risk.

10.6.4 Debris/Rubble

Overall, the debris in the shaft area is limited. There is a pile of rubble on the hill to the

east of the shaft that appears to be the remnants of an old water tower. Otherwise the debris is limited to small amounts of scrap material and some old wooden water lines.

From the remnants of the water tower, the remains of the fresh water line are found all the way to Beaverlodge Lake.



The fresh water intake weir remains in Beaverlodge Lake. The weir was constructed of rock and concrete however the only rubble remaining from the actual pump house is two steel doors and some wooden structural materials.

The living area appears to have been cleaned up at some point since the last inspection. There are no buildings standing and a large portion of the rubble from these building has been removed. There remains some scrap material and debris but this has been obscured by the vegetation in the area.

10.6.5 Site Sampling (Water, tailings, etc.)

Because it was evident that all runoff from the waste rock and half pit area was directed toward one area, a water samples was taken from a small flow north of the waste rock and shaft. The sampling was completed by (KHS) Environment accompanied by a local Uranium City grade 11 student, Bernadette Knox.

Field measurement taken at the time of the sample collection were as follows:

Flowing Water (< 1 L/min): immediately north of shaft.

Temperature: 3.3 °C
Conductivity: 336 μS/cm
pH: 2.99

All samples were immediately preserved in a manner prescribed by the analytical laboratory and shipped to the Saskatchewan Research Council for analysis.

There is no historic data for comparison of water samples collected at the Lorado Mine Site. 2000 sampling data indicates that cadmium, chromium, copper, iron, nickel, and zinc exceed the Saskatchewan Surface Water Quality Objectives (SSWQO) for the Protection of Aquatic Life and Wildlife. Aluminum, iron, manganese, nickel, uranium, and zinc exceed the SSWQO for the Protection of Water for Livestock Watering (see Table 10.1).

10.7 RISK ASSESSMENT RANKING

Public Safety Assessment	10.6 / 24
Environmental Assessment	5.0 / 26
Combined Total Assessment	15.6 / 50
RANKING	16 of 27

10.8 REHABILITATION RECOMMENDATION

The site does not pose any immediate public or environmental hazards. Although water quality results are above Saskatchewan Surface Water Quality Objectives for the Protection of Aquatic Life the limited about of discharge from the site must travel approximately 1 km through a large muskeg before it enters the lake.

Table 10.1

Constituent (mg/L unless specified)	Lorado Uranium Mines Limited (mg/L unless specified)	SSWQO for the Protection of Aquatic Life and Wildlife	SSWQO for the Protection of Use of Water for Livestock Watering
Aluminum	100		5.0
Arsenic (total)	0.001	0.05	0.5
Barium (total)	<0.001	1.0	
Beryllium (total)	0.010		0.1
Boron (total)	0.059		5.0
Calcium	69		
Cadmium (total)	0.003	0.001	0.02
Cobalt	0.23		1.0
Chromium (total)	0.062	0.020	1.0
Copper (total)	0.19	0.01	1.0 -cattle
Iron (total)	93	1.0	
Lead (total)	<0.002	0.02	0.1
Lead - 210 (Bq/L)	0.05		
Magnesium	130		
Manganese (total)	4.8		
Molybdenum (total)	0.002		0.5
Nickel (total)	0.89	0.025 mg/L - hardness $\leq$ 100mg/L($CaCO_3$)	1.0
Phosphorus	0.25		
Polonium - 210 (Bq/L)	0.009		
Potassium	<0.2		
Radium - 226 (Bq/L)	0.03		
Silicon (soluble)	33		
Silver (total)	<0.001	0.01	
Sodium	3.4		
Strontium	0.12		
Titanium	<0.001		
Uranium (total)	0.258		0.2
Vanadium (total)	<0.001		0.1
Zinc (total)	1.1	0.05	
Zirconium	0.005		

11 META URANIUM MINES LTD.

Site #38 - Umisk Island, Beaverlodge Lake

Mineral Property #1298:
(formerly: TAR claims; BEAVER claim No. 4)

Showing Name:
Melma Lake Uranium Mines Adit

11.1 LOCATION

Map:	126B (C7)
Latitude:	N59° 31' 50"
Longitude:	W108° 28' 50"
NTS :	74N-09-SW
UTM	Zone 12; NAD 1927
UTM	Northing: 6601625
UTM	Easting: 642498
Location:	Meta Uranium Mine is located on the west shore of Umisk Island, Beaverlodge Lake. It is approximately 1.5 km from the Eldorado townsite.
Accessibility:	Access is by boat from the Eldorado townsite. It is easily recognizable from the water.

11.2 GEOLOGY

The area of the showing is underlain by conglomerate of the Martin Formation unconformably overlying a south-plunging syncline in altered basement quartzite of the Tazin Formation.

Numerous echelon fractures occur in the conglomerate and underlying quartzite adjacent to the unconformity. The fractures are filled with carbonate and hematite accompanied by minor amounts of pitchblende. In most places, particularly in the conglomerate, fractures are too widely spaced to form ore shoots (Saskatchewan Energy and Mines, 2000).

11.3 MINE HISTORY

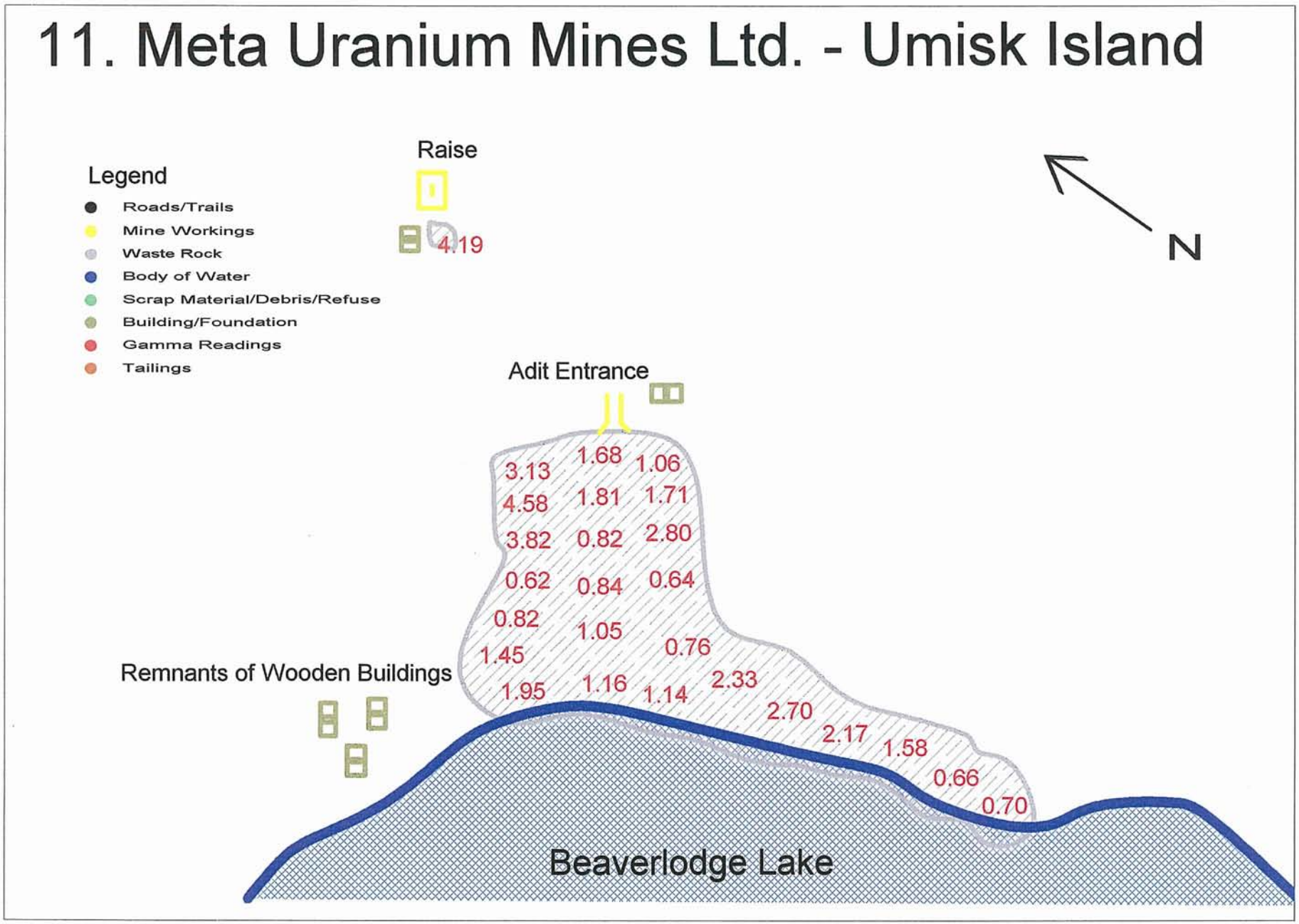
In 1946, the showing area was covered by BEAVER claim No. 4 held by Eldorado Mining and Refining Ltd. Between 1946 and 1947, Eldorado completed prospecting, geiger surveys, stripping and trenching on the BEAVER 1 to 4 claims (AF 74N09-0294).

The TAR Group of Claims, covering Umisk Island, was acquired by Meta Uranium Mines Ltd. in 1953 after a small amount of surface exploration by the previous owners had yielded inconclusive results. By August 1953, the company had completed about 7,000 ft (2133.6 m) of diamond drilling and an adit was driven to further explore zones of interest outlined by drilling.

During 1954, 57 drillholes totalling 15,186 ft (4629 m) were completed from the adit level and gave sufficiently encouraging results to warrant sinking a prospect shaft, which was sunk from the adit level to a depth of 377 ft (115 m) and lateral work of 650 ft (198 m) and raising was carried out on the 350 ft (107 m) level. On this level, 2 small ore shoots in quartzite were outlined and estimated to contain 4,000 tons of ore grading an average 0.21% U_3O_8. Operations were suspended in November 1955.

In spring 1994, Greater Lenora Resource Corporation staked the showing as S-102824. In 1997, they flew an airborne EM, magnetic, and spectrometer survey over the property (AF 74N-0007)(Saskatchewan Energy and Mines Web Page, 2000).

11. Meta Uranium Mines Ltd. - Umisk Island



11.4 GENERAL DESCRIPTION

The mine site does not cover a large area, but most of the development was near the shoreline, therefore rock and debris are easily seen from the water. This makes the mine site easily identifiable to any person going in by boat. There was evidence of recent visitations in the form of litter and fire pits. There is a public picnic area on the island that is frequented by local residents.

11.5 HISTORY OF PREVIOUS INSPECTIONS

An inspection was completed by Mueller in 1977. At that time there was one building standing at the shaft level and a concrete foundation near the adit entrance. The site also contained a few iron rails and ore cars. The adit entrance was covered with a heavy plank door and reinforced with steel rails. The shaft opening was also sealed with a heavy plank but this was rotting away and collapsing at the time of inspection. Vegetation was well established in the area. There was a small flow of water from the adit entrance at the time of his inspection.

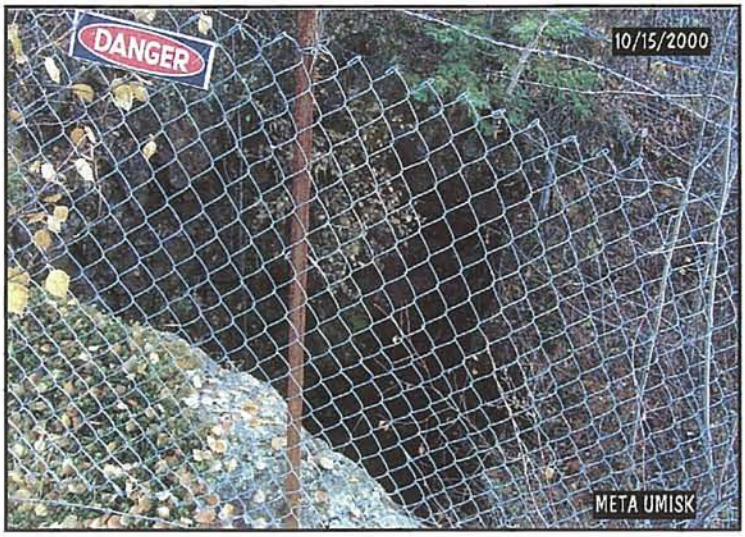
In 1989 Saskatchewan Environmental and Public Safety (Mines Pollution Control Branch) undertook the Abandoned Mines Remedial Action Program. Remedial work at the Meta Uranium Mines Limited site involved securing fencing around an open raise to restrict access. Danger signs were attached to the fence warning of the hazard within the fenced area.

11.6 2000 INSPECTION

The inspection was completed on October 15, 2000 by (KHS) Environmental Management Group Ltd. accompanying by Sonny Lepine, the local member of the Environmental Quality Committee.

11.6.1 Mine Workings

The adit which is approximately 15 m from the shore of Beaverlodge lake is sealed with steel fencing. The stability and condition of the closure is not good as access to the workings is easily attained. There is a concrete foundation associated with the adit that does not pose any risk. There are no remains of debris from the building. There was no liquid discharge at the time of inspection but evidence of an ephemeral flow was present.



The raise is approximately 20 m up the slope from the adit entrance to the northeast at N 59° 31.809'; W 108° 29.051'. The entrance is approximately 4 by 3 m and remains open. There is a fence around the raise, however, the hole showed signs of slumping and the fence may collapse standing if the sides continue to fall inward. There was no liquid discharge or signs of previous flooding from the raise entrance.

There is also a pile of wooden rubble immediately down the slope of the entrance that probably represents the remains of the hoist building.

11.6.2 Waste Rock

There is a relatively large amount of waste rock on the site. A 42 m long stretch along the shoreline as well as a loading area into the water are easily recognizable from the water. The stability of the waste rock is good. It supports sparse vegetation.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.62 to 4.58 μSv/hr.(see Site Map 11)

11.6.3 Buildings

There are several small wooden building foundations to the north, along the shoreline.

There is also some rubble and debris associated with these but it is hidden by vegetation.

11.6.4 Debris/Rubble

There is some debris associated with the foundation as stated earlier, as well as some rails leading from the adit entrance to the shore along the waste rock. There is also a couple of ore cars among the waste rock and numerous small pieces of metal debris.

11.6.5 Site Sampling (Water, tailings, etc.)

No sampling was completed at the site.

11.7 RISK ASSESSMENT RANKING

Public Safety Assessment	11.4 / 24
Environmental Assessment	5.0 / 26
Combined Total Assessment	16.4 / 50
RANKING	14 of 27

11.8 REHABILITATION RECOMMENDATION

The raise and the adit entrance do pose a hazard to public safety. Although they have been fenced, both the openings and the fences are in poor condition. In addition, evidence of slumping and rock falls is of some concern.

The best method of closure would be to pore a concrete cap on the raise and to fill the adit in with waste rock. However, this may be difficult and expensive as the site can only be accessed by boat in the summer and over ice in the winter.

Another option would be to secure both opening with secure steel grates that cannot be easily removed.

12 NATIONAL EXPLORATIONS LIMITED - KEILLER ADIT

Site #40 - Keiller Adit - Donaldson Lake Area

Mineral Property #1307:
(formerly: PAT 1 to 9 claims)

The Keiller adit was operated in conjunction with the Pat claims.

12.1 LOCATION

Map: 126B (B8)

Latitude:	N 59°35.442'
Longitude:	W 108° 25.124'
NTS	74N-09-SW
UTM	Zone 12; NAD 1927
UTM	Northing: 6608954
UTM	Easting: 645472

Location: The Keiller adit is approximately 1.5 km north of the National Explorations camp along the shore of Foot Bay, Donaldson Lake. It is located approximately 1 km east of the Pat claims or 'C' zone

Accessibility: Access to the adit can be gained by boat from the National Exploration camp or by walking along the shore of Foot Bay, Donaldson Lake. The National Explorations camp can be easily accessed by vehicle.

12.2 GEOLOGY

This showing was initially named the Pat Group C Showing. The mine area is underlain by foliated impure quartzite, granitized in part, and containing conformable bands of paragneiss and amphibolite. The rocks strike north 55° east and dip about 70° south east.

Two east-trending shear zones, from 12 to 40 ft (3.7 to 12.2 m) apart, dip 30° south and are connected by steeply dipping tension faults. The shear zones and faults are filled with brecciated and mylonitized gneiss, cemented with calcite, graphite, chlorite and clay gouge. Pyrite is widely disseminated throughout the breccia zones and chalcopyrite, partly replaced by sooty chalcocite, with galena occuring locally. Thucolite has been identified in one specimen of 'typical ore'. Pitchblende occurs as finely disseminated grains in breccia fragments and in the cementing material, particularly calcite.

Most of the rocks in the ore-bearing area of the mine are reddened by finely disseminated hematite, mainly in the feldspar grains. In the immediate vicinity of ore bearing fractures, intense hematization has obliterated original textures of the host rocks (Saskatchewan Energy and Mines,1999).

12.3 MINE HISTORY

An east-trending, flat lying shear, about 2,500 ft (762 m) east of the orebody was explored underground by an adit in 1957, referred to as the Keiller Adit by the company. Only erratic mineralization was encountered (Saskatchewan Energy and Mines,1999).

12.4 GENERAL DESCRIPTION

The site is very small; covering an area of approximately 25 m^2.

There was no evidence of recent visitation.

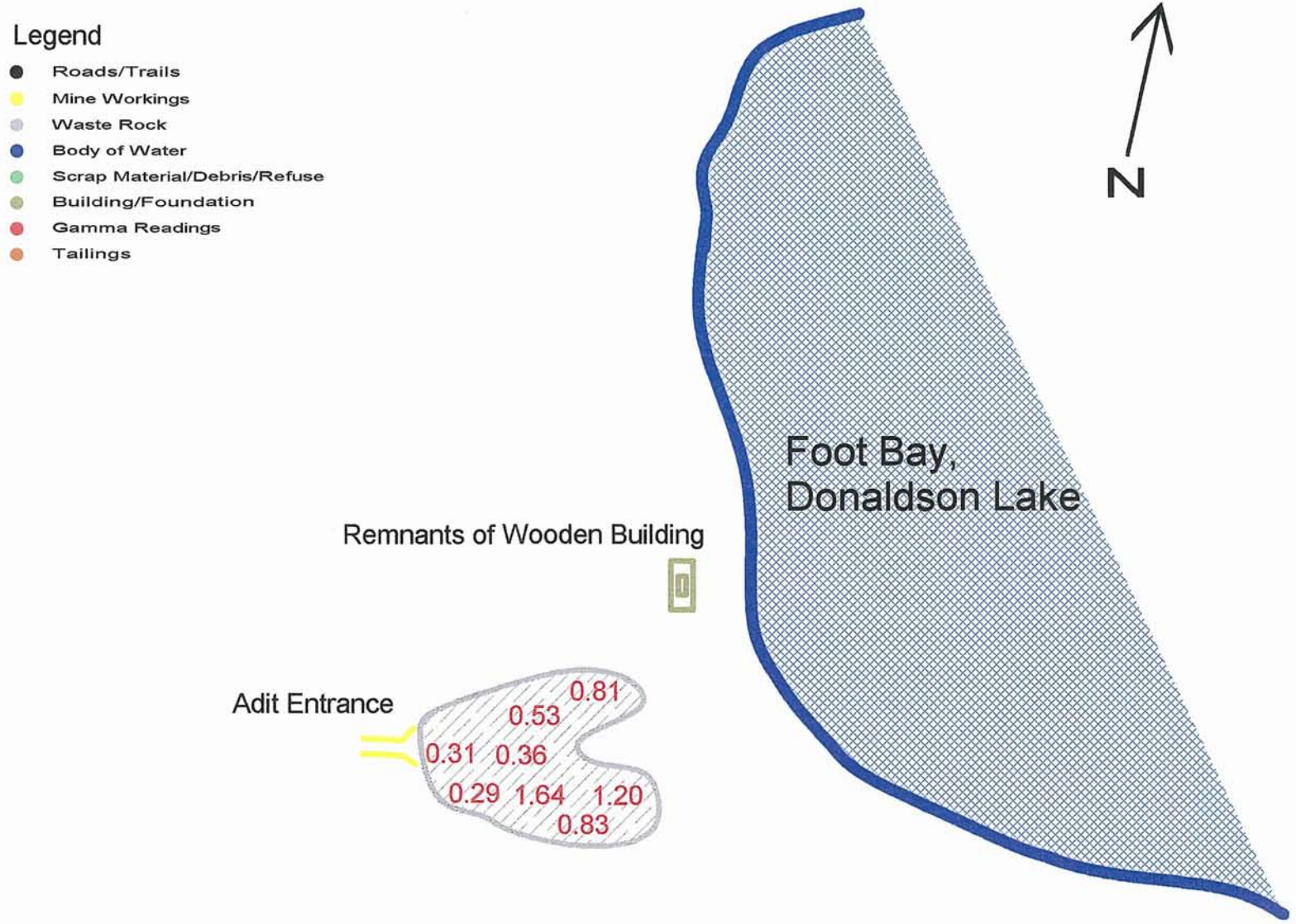
12.5 HISTORY OF PREVIOUS INSPECTION

No documentation was found with regards to previous inspections.

12.6 2000 INSPECTION

The inspection was completed on October 16, 2000 by (KHS) Environmental

12. National Explorations Ltd. - Keiller Adit



Management Group Ltd.

12.6.1 Mine Workings

The mine workings consist of a single adit driven into the hillside approximately 15 m from the shore of Donaldson Lake. The entrance is approximately 4 by 4 m and is sealed with a steel grate. The stability and condition of the closure is not adequate as access to the workings is possible for wildlife and humans. There were no support buildings evident in the area.

There was also no liquid discharge at the time of inspection and no evidence of previous flooding.

12.6.2 Waste Rock

There is a small amount of waste rock on site - an area approximately 20 by 4 m. All waste rock is located in front of the adit entrance, extending to within 20 m of the lake itself.

The rock is stable and is well vegetated.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.31 to 1.64 μSv/hr.(see Site Map 12)

12.6.3 Buildings

There is one 2 by 2 m wooden foundation which has totally collapsed near the north end of the waste rock pile. It is approximately a that has totally collapsed.

12.6.4 Debris/Rubble

There is a small amount of debris consisting of two sets of rails and a single ore car located in the immediate area of the adit entrance.

12.6.5 Site Sampling (Water, tailings, etc.)

No sampling was conducted at the site.

12.7 RISK ASSESSMENT RANKING

Public Safety Assessment	8.7 / 24
Environmental Assessment	6.0 / 26
Combined Total Assessment	14.7 / 50
RANKING	18 of 27

Access to the underground workings is possible by wildlife and humans.

The site is remote and difficult to access.

12.8 REHABILITATION RECOMMENDATION

The site can not be considered a priority for rehabilitation because of the difficult access. However, the adit entrance does pose a hazard to public safety and wildlife as access to the workings is easily made. Although the adit has been restricted, the method used is in poor condition. In addition, evidence of slumping and rock falls is of some concern.

The best method of closure would be to fill the adit in with waste rock. However, this may be difficult and expensive as the site can only be accessed by boat in the summer and over ice in the winter.

Another option would be to secure the opening with a more secure steel grate - one which cannot be easily removed.

13 NATIONAL EXPLORATIONS LTD. - PAT CLAIMS

Site # 39 - Pat Claims and 'C' Zone - Donaldson Lake area

Mineral Property #1307:
(formerly: PAT 1 to 9 claims)

Showing Name:
National Explorations Uranium Mine {C and C2 Ore Shoots} or PAT Group C Showing

13.1 LOCATION

Map: 126B (B8)

Latitude: N59° 35' 43"
Longitude: W108° 25' 23"

NTS : 74N-09-SW

UTM Zone 12; NAD 1927
UTM Northing: 6608954
UTM Easting: 645470

Location: The mine site is approximately 20 km east of Uranium City. It lies approximately 1 km from the western shore of Foot Bay, Donaldson Lake.

Accessibility: Access is gained from driving from Uranium City to the old National Exploration camp. From the old camp, an extremely overgrown road leads north to the mine site. This road, which is approximately 1.5 km long can only be travelled by foot.

13.2 GEOLOGY

This showing was intitially named the Pat Group C Showing. The mine area is underlain by foliated impure quartzite, granitized in part, and containing conformable bands of paragneiss and amphibolite. The rocks strike north 55° east and dip about 70° south east.

Two east-trending shear zones, from 12 to 40 ft (3.7 to 12.2 m) apart, dip 30° south and are connected by steeply dipping tension faults. The shear zones and faults are filled with brecciated and mylonitized gneiss, cemented with calcite, graphite, chlorite and clay gouge. Pyrite is widely disseminated throughout the breccia zones and chalcopyrite, partly replaced by sooty chalcocite, with galena occur locally. Thucolite has been identified in one specimen of 'typical ore'. Pitchblende occurs as finely disseminated grains in breccia fragments and in the cementing material, particularly calcite.

Most of the rocks in the ore-bearing area of the mine are reddened by finely disseminated hematite, mainly in the feldspar grains. In the immediate vicinity of ore bearing fractures, intense hematization has obliterated original textures of the host rocks (Saskatchewan Energy and Mines, 1999).

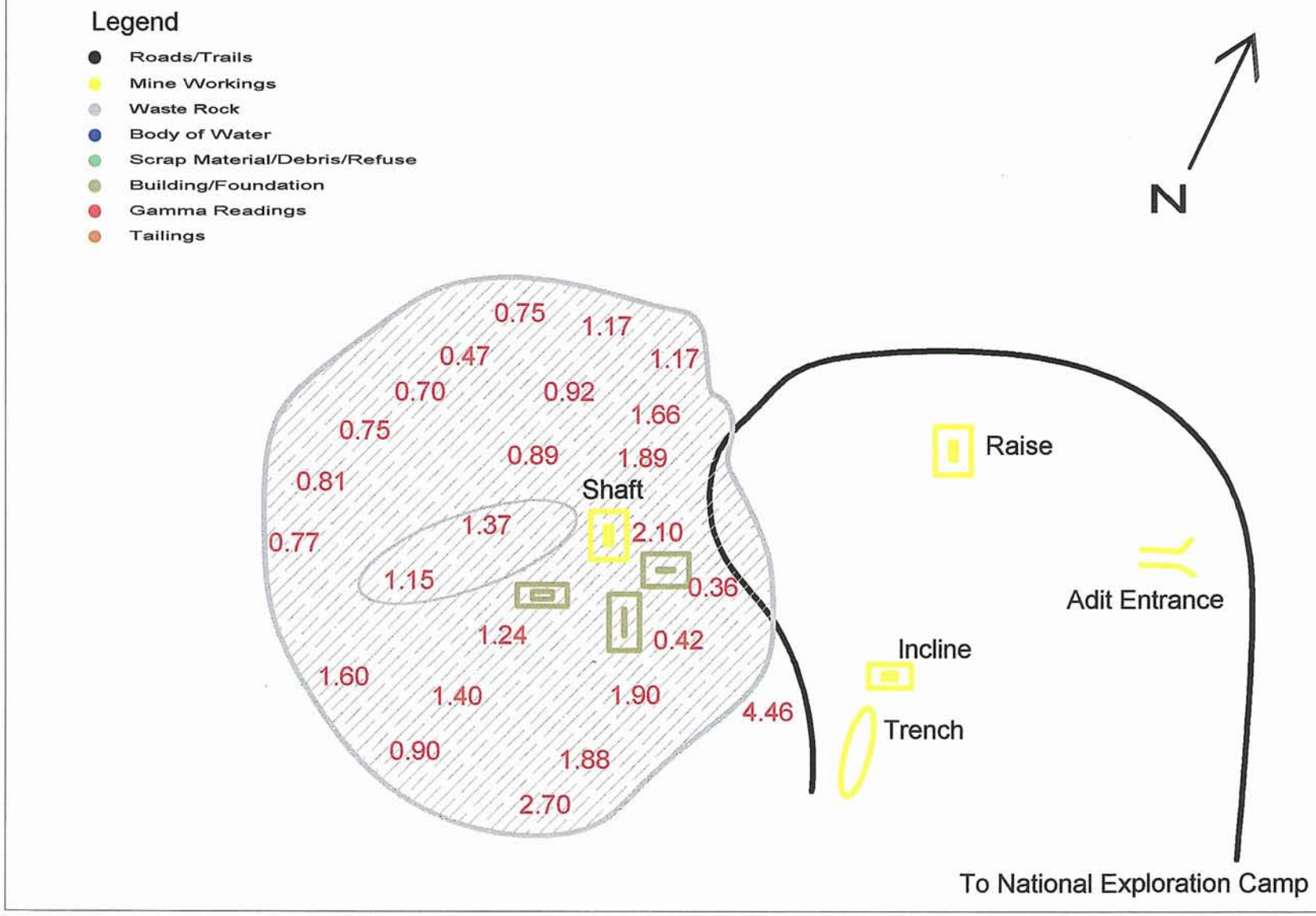
13.3 MINE HISTORY

The company acquired the PAT group of claims (1-9), located at the southwest end of Donaldson Lake, in 1951 and initial surface exploration resulted in the discovery of over 30 radioactive showings. Most were trenched and sampled, and many of them returned high uranium values (AF 74O07-0038). The best of these, the 'C' showing, was examined in 1952 by an inclined prospecting shaft sunk 165 ft (50.3 m) to a vertical depth of 40 ft (12.2 m) below ground level. This outlined sufficient ore to warrant the sinking of a 3 compartment production shaft and in 1954, a vertical shaft was sunk to a depth of 360 ft (109.7 m) with levels established at 100 ft (30 m), 200 ft (60 m), and 300 ft (91 m) levels.

Ore shipments to Eldorado began in 1956 and continued sporadically at about 50 tons a day from 1956-57. A contract to ship ore to the Lorado mill was reported in 1957 and shipments resumed in June. In 1957, a supplementary contract was let to ship 25 tons per day to the Eldorado plant as well as the 50 tons per day to the Lorado Mill. These shipments continued intermittently until October '58 when the mine was closed due to depletion of ore. It is probable that a total of 25,000 tons of ore were shipped during the mine's operation.

The 2 main orebodies are in the C and C2 shear zones and best mineralization is encountered where the shears merge and where the wall rocks are granitic or diopside bearing. About 10 smaller highgrade orebodies occur in tension fractures joining the C

13. National Exploration Ltd. - Pat Claims



and C2 zones. Individual oreshoots range from 1 to 4 ft (0.3 -1.2 m) in width and are as much as 120 ft (36.6 m) in length. In 1957 ore reserves were quoted as follows:

C Zone:	5,937 tons at 0.47% U3O8
C2 Zone:	14,696 tons at 0.63% U3O8
other Zones:	7,062 tons at 0.82% U3O8

(Saskatchewan Energy and Mines, 1999)

13.4 GENERAL DESCRIPTION

The mine site covers a relatively small area; approximately 0.25 km^2 and is separate from the National Exploration personnel camp.

There was no signs of recent visitation.

13.5 HISTORY OF PREVIOUS INSPECTION

Mueller completed as inspection in 1977. At that time access could be gained by vehicle to the mine site from the National Explorations personnel. There was an assortment of debris throughout the area. A large waste rock pile remained. The main shaft was cemented over and in good shape. The inclined shaft was sealed with waste rock. The raise to the northwest was covered with timbers and surrounded by a single strand fence. The last opening below the raise was also sealed with timber and rock had been blasted covering the opening. Vegetation was well established throughout the site except for the large waste rock pile.

13.6 2000 INSPECTION

The inspection was completed on October 16, 2000 by (KHS) Environmental Management Group Ltd.

13.6.1 Mine Workings

The underground workings consisted of a main vertical shaft, an inclined shaft, a raise, and an adit.

The shaft is located near the east end of the mine site. The shaft is approximately 5 by 5 m and is sealed with concrete. The concrete is thin and evidence of rotting is apparent. The cap is deteriorating and is not in good condition. There is several concrete foundations associated with the shaft. There was no liquid discharge at the time of inspection and no evidence of previous flooding.

The raise is located up the slope from the shaft approximately 100 m to the northeast (N 59° 35.495'; W 108° 26.057'). The size of the opening is approximately 2 by 3 m. The opening is securely sealed with rock and is in stable condition. There was no liquid discharge and no evidence of previous flooding.

The inclined shaft is approximately 50 m south of the raise and approximately 100 m east of the main shaft. The opening is sealed with blasted rock and appears to be stable. It is difficult to estimate the size of the opening because the blasting has created a trench, where the entrance has collapsed. The opening appears to be stable and in relatively good condition. There was no liquid discharge at the time of inspection and no evidence of previous flooding.

The final opening is approximately 25 m to the east of the raise. This opening is the first opening discovered when entering the mine site from the road. It is on the opposite slope of the main shaft. It has also been blasted making it difficult to estimate the size of the opening. It is sealed and in good condition. There was no liquid discharge at the time of inspection and no evidence of previous flooding was observed. There was no buildings or foundations associated with the opening.

13.6.2 Waste Rock

There is a large amount of waste rock in the area. It has been used for roads and foundations. The majority of the rock is in a pile approximately 10 m high and 50 m in diameter immediately beside the main shaft. It is steep and unstable. All of the waste rock other than the large pile supports a vigorous vegetation cover when compared to other sites in the region.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.36 to 2.70 μSv/hr.(see Site Map 13)

13.6.3 Buildings

There are a few foundations remaining primarily near the main shaft. These foundations are clean of debris and are in stable condition.

13.6.4 Debris/Rubble

There is some debris in the area in the form of scrap metal, wooden debris, and other miscellaneous rubble. It appears that the majority of the debris has been pushed down the main shaft or is among the large pile of waste rock near the main shaft.

13.6.5 Site Sampling (Water, tailings, etc.)

No samples were taken at the mine site.

13.7 RISK ASSESSMENT RANKING

Public Safety Assessment	10 / 24
Environmental Assessment	3 / 26
Combined Total Assessment	13.0 / 50
RANKING	19 of 27

13.8 REHABILITATION RECOMMENDATION

There is no immediate hazards to the public or environment at this site. However, the stability of the shaft closure method will continue to degrade. The remoteness of the site and the difficulty in accessing it place it low on the list of priorities for rehabilitation.

Generally the site could be improved if heavy equipment were employed to level and contour waste rock and bury both the shaft cover and the debris in the area. A rehabilitation of the shaft cover should be completed before placing waste rock over it.

14/15 NESBITT-LABINE URANIUM MINES LTD. - ABC Mine

Site # 41 & 42 - Melville Lake Area

Mineral Property #1359:
(formerly: ML 5149; CBS 226; ABC claims)

Showing Name:
ABC Uranium Mine

14/15.1 LOCATION

Map:	126B (B6)
Latitude:	N59° 34' 15"
Longitude:	W108° 32' 20"
NTS :	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6605985
UTM	Easting: 639034
Location:	The ABC mine site is located on the east shore of Melville Lake, approximately 3.5 km east of Uranium City.
Accessibility:	Access is gained easily on a very good road which initiates from the Eldorado - Uranium City road. The site is approximately 1.9 km from the initial turnoff.

14/15.2 GEOLOGY

The showing area is underlain by the north 40° west striking and 40° south west dipping fault. This fault separates Martin Formation siltstones and arkoses in the hanging wall (to the west) from A northeast-trending sequence of meta-argillites, chlorite-epidote rocks, meat-quartzites, and granites in the footwall (to the east).

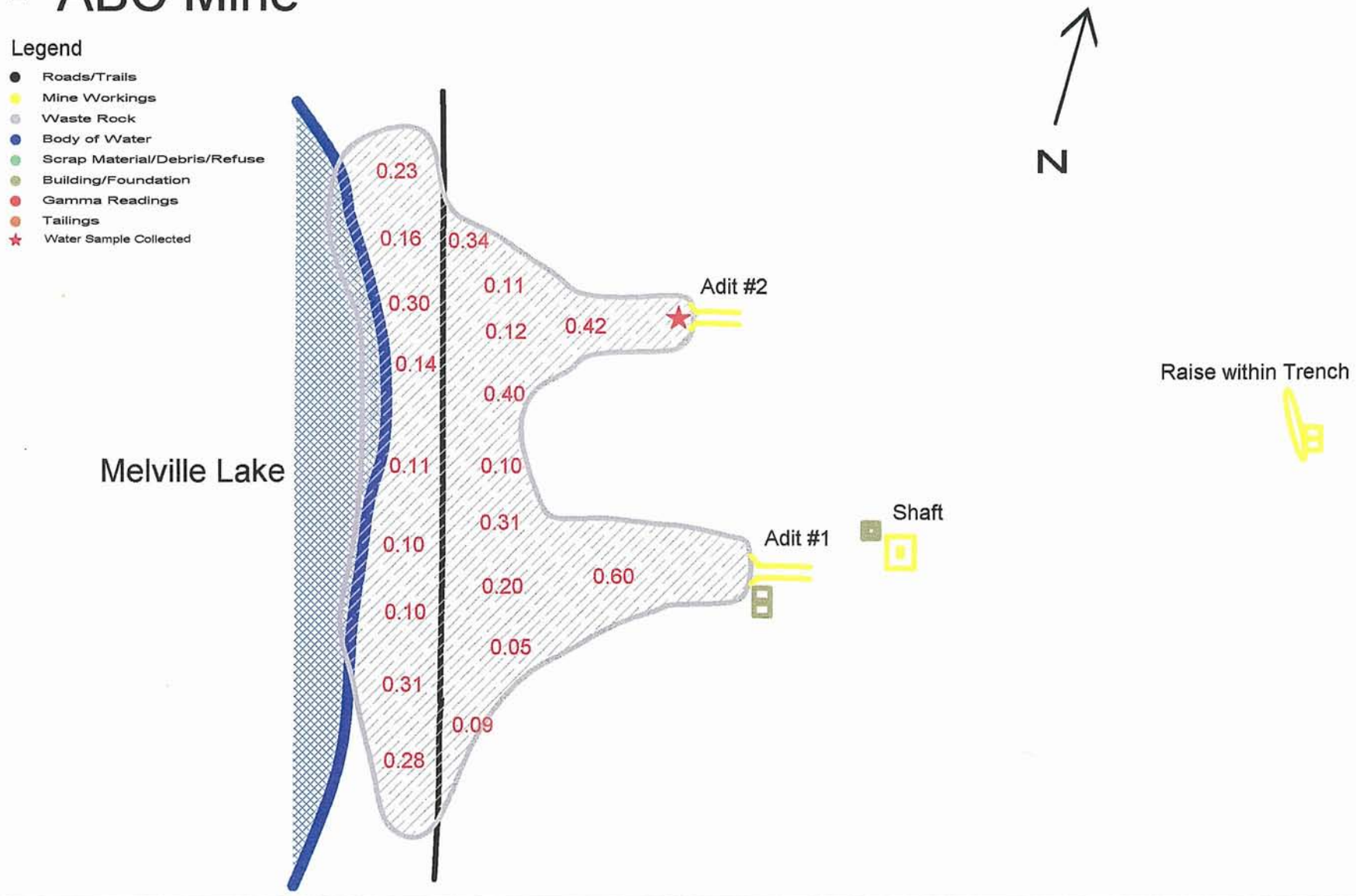
The main showing on surface is in a NE-trending sheared contact between quartzite and granite in the immediate footwall of the ABC fault. The sheared contact and associated branching fractures are filled with hematite accompanied by lesser amounts of pitchblende, pyrite, chalcopyrite, galena, quartz, chlorite and calcite, forming a small ore shoot 80 feet (24.4 m) long with an average width of 3.5 feet (1.1 m).

The main radioactive zone located underground is on the third level where a sheared contact between brecciated granite and chlorite-epidote rock, striking north and dipping 80° west in the footwall of the ABC Fault, is erratically mineralized for a strike length of about 300 feet (91.4 m). The widest section graded 0.17% across 10 feet (3.0 m). The structure occurs on the fourth and fifth levels but is not significantly radioactive although wall rocks are strongly hematized (Saskatchewan Energy and Mines, 1991).

14/15.3 MINE HISTORY

Nesbitt Labine Uranium Mines Ltd., which owned the ABC prospect, amalgamated with Gunnar Mines Ltd, in November 1960. The ABC mine site is 2.5 miles (4 km) due east of Uranium City on the west shore of Melville Lake. The ABC group of 9 claims was acquired by Nesbitt Labine Uranium Mines Ltd. in 1950. Prospecting revealed four interesting radioactive zones, the main one of which was traced for 800 feet (243.8 m) above strike on surface. In 1952 an adit was driven 950 feet (289.6 m) from the west shore of Melville Lake to investigate the main zone, as well as the other zones of radioactivity in the vicinity of the ABC Fault previously explored by trenching and diamond drilling. In 1953, the ABC Fault was examined by drifting, crosscutting, raising, and from a sub-level at the 103-foot (31.4 m) horizon. No economic deposits were found at a depth greater than 30 feet (9.1 m) from the surface. In 1954 a new zone was discovered in the footwall of the ABC Fault by diamond drilling from the adit level to a depth of about 500 feet (152.4 m) below the adit level. To investigate this further, an internal shaft was begun in late 1955 and was sunk to a depth of 798 feet (243.2 m) in early 1956, with levels at 149, 300, 455, 519, and 702 feet (45.4, 91.4, 138.7, 158.2, and 213.9 m). During 1956 over 7,000 feet (2 133.6 m) of lateral work and about 24,000 feet (7 315.2 m) of diamond drilling (underground) were done, but results did not reveal an orebody, and whole operation closed down at the end of the year. In 1959 the main surface showing was high graded by W. Lietz, when 70 tons of extremely high grade ore were shipped to the Eldorado mill.

14 and 15. Nesbitt - Labine Uranium Mines Ltd. - ABC Mine



By 1967, the minesite was under Eldorado CBS 226 (later ML 5149). In 1967, Eldorado detail mapped and prospected the property (AF 74N10-0216). All old showings were re-examined.

On March 16, 1987, SMDC staked the mine site as S-97900. In 1988, Eldor Resources Ltd. completed prospecting and sampling along the ABC fault as part of a Au-Pt exploration program (AF 74N10-0526). Two samples, which were taken at the minesite, returned minimal values. The claim was allowed to lapse September 1, 1991 (Saskatchewan Energy and Mines, 1991).

14/15.4 GENERAL DESCRIPTION

The site consists of two areas: Site #41 and Site #42. Site #41 is the primary mine site while Site #42 is much smaller and difficult to access. Both are located near the shores of Melville Lake.

There was evidence of recent visitation in the form of litter, small fire pits, and vehicle tracks.

14/15.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed an inspection in 1976. To summerize his inspection; there was a small amount of debris in the area, consisting of a small boiler and some steel piping. The shaft and one adit was covered with some welded steel piping. The piping was broken away on both closures making access to the openings possible. The second adit was covered with waste rock but was opened by the municipality excavating rock for road building. The fourth opening; a raise in the bottom of a trench was partially covered with waste rock. The area was well vegetated except were there was quarrying of waste rock for road building.

In 1989 Saskatchewan Environmental and Public Safety (Mines Pollution Control Branch) undertook the Abandoned Mines Remedial Action Program. Remedial work involved sealing the adit with crushed rock at a slope of 4:1.

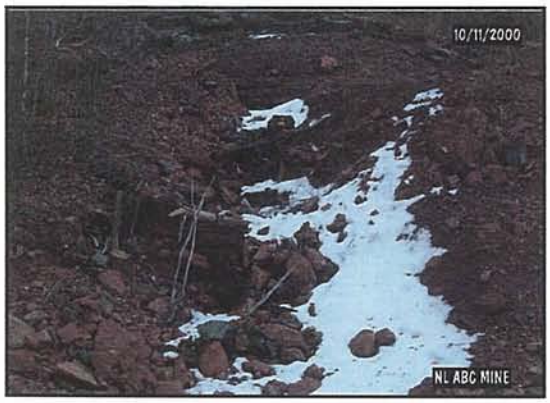
14/15.6 2000 INSPECTION.

The inspection was completed on October 11, 2000 by (KHS) Environmental Management Group Ltd.

14/15.6.1 Mine Workings

Site #41; the main area of the ABC mine consists of two adits and a shaft. Site #42 consists of a large trench and a raise opening in the bottom of the trench.

The primary mine site is located near the shore of Melville Lake. Adit #1 is the southerly most adit. This adit is the first opening that is reached when approaching the mine site on the road . It is sealed with waste rock which has opened up revealing a steel piping grate. The grate has collapsed leaving an opening approximately 0.25 by 2 m. There is obvious slumping of the adit entrance making the underground workings accessible. There was no liquid discharges at the time of the inspection and no evidence of previous flooding.



Adit #2 is located approximately 35 m north of adit #1. This adit entrance also appears to have been sealed with waste rock. The rock has been washed away and at the time of inspection there was a small amount of liquid discharging from the adit entrance which immediately disappears into the waste rock approximately 10 m from the adit opening.

The opening is approximately 1 by 1.5 m. The stability of the rock that was used in an attempt to seal the adit is unstable and is in poor condition. There is also evidence that there have been several previous attempts to seal that adit entrance. The flooding within the adit appears to eventually wash the rock away leaving the adit entrance open.

The final opening at Site #41 is the shaft located approximately 20 m immediately above adit #1. The shaft opening is 5.5 by 2.2 m and is sealed with a steel piping grate that is anchored into the bedrock around the opening. The stability and condition of the closure are good and there is no evidence of slumping or liquid discharge. There is a collapsed wooden building near the shaft opening.

Site #42 is located approximately 300 m northeast of the shaft directly up the slope. It consists of a large trench approximately 15 m long, 2 m wide, and 2 m deep. At the bottom of the trench is a opening that is approximately 0.75 by 0.75 m in size. The trench shows signs of slumping and the overall stability of the area is poor.

14/15.6.2 Waste Rock

There is a significant amount of waste rock in the area of the two adits. The majority of the rock makes up the road leading into and within the mine site itself. The rock also has been deposited in such a manner as to now make up a significant beachhead in Melville Lake. The accumulation of waste rock near the shore is approximately 2-4 m wide and approximately 300 m long.

There is a pipe through the waste rock immediately in front of adit #2 that appears to be a drain for the area that would lead into Melville Lake.

There is a minimal amount of vegetation encroachment in the area.

A gamma survey of the waste rock was conducted with measurements ranging from 0.10 to 0.60 μSv/hr.(see Site Map 14/15)

14/15.6.3 Buildings

There is a small collapse building near the shaft as well as a 10 by 9 m concrete foundation near the entrance to adit 1. The wooden foundation had a tar paper siding that appears to contain asbestos. A sample was taken for identification.

14/15.6.4 Debris/Rubble

There is a small amount of debris north of adit #2 that consists of some steel pipes, concrete pieces, hoses, etc. In addition the remains of an old boiler with asbestos insulation also remains on site.

14/15.6.5 Site Sampling

A sample of the siding from the collapsed wooden structure near the shaft was taken and identified as containing asbestos.

A water sample was also collected from a small discharge from the entrance of adit #2.

The sample was collected by (KHS) Environmental Management Group Limited employees accompanying by Bernadette Knox a Uranium City, Grade 11 student.

Water Sample - immediately in front of adit #2:

Temperature: 0.9 °C
Conductivity: 816 μS/cm
pH: 6.99

The samples were immediately preserved in the manner prescribed by the analytical laboratory and shipped to the Saskatchewan Research Council for analysis.

There is no historic data for comparison of water samples collected at the Nesbitt - Labine ABC Mine. 2000 sampling data indicates that all parameters either meet the Saskatchewan Surface Water Quality Objectives for the Protection of Aquatic Life or are below detection levels.

14/15.7 RISK ASSESSMENT RANKING

Public Safety Assessment	12.4 / 24
Environmental Assessment	7.0 / 26
Combined Total Assessment	19.4 / 50
RANKING	7 of 27

14/15.8 REHABILITATION RECOMMENDATION

At the time of inspection, the open raise identified approximately 300 m above the adit 1 entrance was marked with flagging tape however the opening does remain open and poses a risk to wildlife and human safety. The remote location of the area mitigates somewhat

the danger to humans as access is difficult.

Both adits are showing signs of slumping and the general degradation of previous closure attempts and allow for entry into the workings with little or no effort.

Both adits require some rehabilitation however, any work must take into consideration water build up with in the adit. Previous attempts to permanently close adit #2 have failed because the eventual build up of water behind the waste rock erodes the material, causing slumping and a re-opening of the adit.

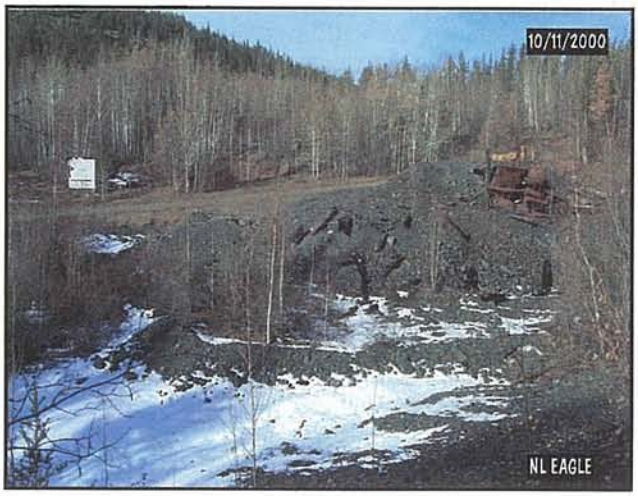
Consideration should be given to sealing this adit with a concrete bulkhead which contains at least two drains at different levels.

Adit #1 should be re-excavated and waste rock placed within the hole in order to prevent slumping and it's eventual re-opening.

Table 14.1

Constituent (mg/L unless specified)	Nesbitt - Labine ABC Mine	SSWQO for the Protection of Aquatic Life and Wildlife	SSWQO for the Protection of Use of Water for Livestock Watering
Aluminum	<0.005		5.0
Arsenic (total)	<0.0005 ug/L	0.05	0.5
Barium (total)	0.19	1.0	
Beryllium (total)	<0.001		0.1
Boron (total)	0.31		5.0
Calcium	61		
Cadmium (total)	<0.001	0.001	0.02
Cobalt	<0.001		1.0
Chromium (total)	<0.001	0.020	1.0
Copper (total)	0.003	0.01	1.0 -cattle
Iron (total)	0.50	1.0	
Lead (total)	<0.002	0.02	0.1
Lead - 210 (Bq/L)	0.08		
Magnesium	29		
Manganese (total)	0.061		
Molybdenum (total)	0.044		0.5
Nickel (total)	<0.001	0.025 mg/L hardness $\leq$ 100mg/L($CaCO_3$)	1.0
Phosphorus	<0.01		
Polonium - 210 (Bq/L)	0.06		
Potassium	4.2		
Radium - 226 (Bq/L)	0.16		
Silicon (soluble)	4.8		
Silver (total)	<0.001	0.01	
Sodium	30		
Strontium	1.1		
Titanium	<0.001		
Uranium (total)	0.133		0.2
Vanadium (total)	<0.001		0.1
Zinc (total)	<0.005	0.05	
Zirconium	<0.001		

16 NESBITT - LABINE URANIUM MINES LIMITED - EAGLE MINE



Site #43 - Eagle-Ace Mine

Mineral Property #1306:
(formerly: S-99367; JAM-MAJ claims; BV claim 5; ZZ Concession)

Showing Name:
Eagle-Ace Uranium Mine {Zones 1 to 3}, Reilley Zone

16.1 LOCATION

Map: 126B (B7)

Latitude: N59° 34' 30"
Longitude: W108° 29' 15"

NTS : 74N-09-SW

UTM: Zone 12; NAD 1927
UTM Northing: 6606558
UTM Easting: 641918

Location: Eagle mine site is located on the south shore of Eagle Lake approximately 2.5 km northwest of the Eldorado town site. The mine is approximately 700 ft (213 m) south of Eagle Lake.

Accessibility: Access to the site is via a very good road leading from the Eldorado town site. The road is in very good condition.

16.2 GEOLOGY

The Ace-Eagle Mine area is underlain by a northeast-trending sequence of argillite, chlorite-epidote rock, quartzite, chert, granite, and quartz-feldspar gneiss.

The dominant fold is an anticline, the axis of which plunges 35°-30° north east and lies parallel to, and about 300' (91.5 m) east of, the Eagle fault. The axis of a complimentary syncline occurs about 200 ft (61 m) to the east. West of the Eagle fault the rocks dip mainly to the northwest and most of the minor folds plunge to the southwest. The rocks are cut by three major strike faults which are gently sinuous and strike a few degrees more to the north than the fold axis. Movement along the faults appears to have been mainly left hand. The strike faults are connected by a ladder work of northwest-trending cross faults and fractures that exhibit right hand movement.

Most of the northwest-trending fractures are mineralized with calcite, quartz, hematite, and pyrite. Pitchblende occurs as small veinlets and grains in the vein material accompanied by minor amounts of chalcopyrite, bornite, covellite and galena. There is a report of native tin.

On the surface the fractures can be grouped into 3 main zones. Zone 1 has several, closely spaced cross fractures that are combined to a band of cherty quartzite. Zone 2 has 8 short cross fractures in slaty argillite in the footwall side of the Eagle fault. The best mineralized fracture ranges 1 ft to 3 ft (0.3-0.9 m) in width and is strongly radioactive along its total strike length of about 50 feet (15 m). The vein was high graded in 1958 when approximately 40 tons to maximum depth of 6 feet (1.8 m) were removed.

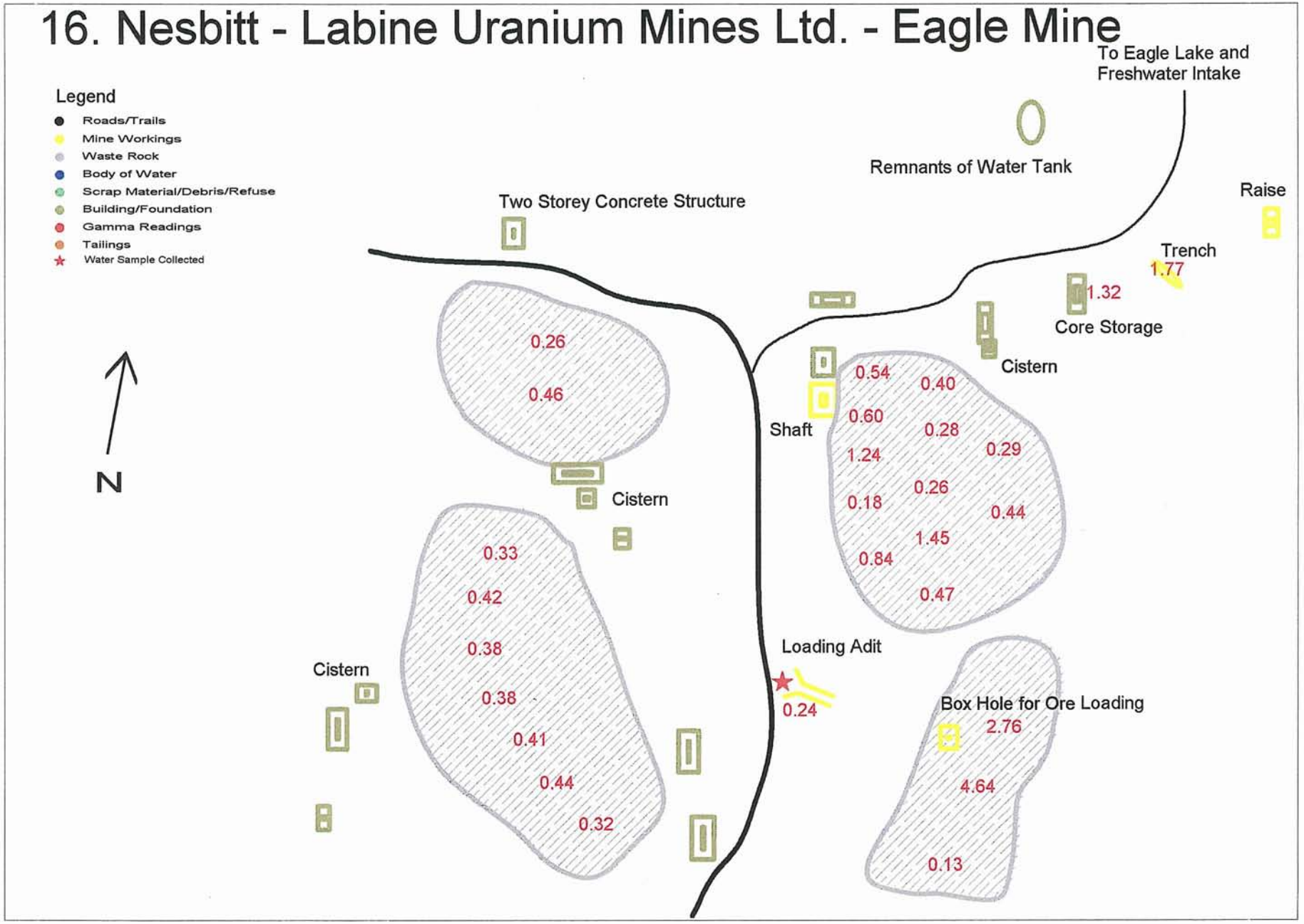
Zone 3 is composed of three long fractures and several short fractures that trend northwest across a folded sequence of massive argillite and chlorite-epidote rock. Only short lengths of the fractures are markedly radioactive and these mainly occur where the fractures cut crests of the folds in the country rocks. The high grade parts of two of the veins were mined in 1958-59 when a total of 150 tons of rock was extracted (Saskatchewan Energy and Mines, 2000).

16.3 HISTORY OF MINE

The Eagle-Ace Mine consists of the main shaft area and zones 1, 2, and 3 deposits which are herein described. These deposits are of the vein type with carbonate filling.

In late 1950, Nesbitt Labine Uranium Mines was formed to explore the JAM and MAJ claims where prospecting in previous years had resulted in the discovery of numerous radioactive showings. Diamond drilling gave encouraging results and in November 1951, a vertical shaft was begun. Initially, it was sunk to 300 feet (91 m) with levels at 150 ft

16. Nesbitt - Labine Uranium Mines Ltd. - Eagle Mine



(45.7 m) and 275 ft (83.8 m). Underground development on these areas continued during 1952-53 and in the following year the shaft was deepened to 638 ft (194.5 m) and levels were established at 425 ft (129.5 m) and 575 ft (175.3 m). During this period of underground exploration, ore was stockpiled and in July 1954, an adit was driven near to the shaft to provide for a loading passage. Surface facilities were established for a stockpile of 10,000 tons. Ore shipments to the Eldorado Mill started in Sept. 1954 at the rate of about 110 tons per day, but decreased to about 50 tons the following year. By mid-1955, underground development had failed to maintain ore reserves and, as ore shoots were largely mined out, the underground operation was terminated. Shipments of ore continued until most of the stock pile had been removed. Annual ore shipments were reported as follows: 8,423 tons grading 0.1465 U_3O_8 in 1954, and 7175 tons grading 0.244% U_3O_8 in 1955.

In 1955, the showing was covered by BV claim no. 5. Arabee Oil and Gas Co. Ltd. completed reconnaissance geological mapping and ground scintillometer surveys (AF 74N09-0087).

In 1958-59 the property was leased to E. Otto, H. Hemmerich,and C. Bevan for highgrading purposes. Ore remaining in the dump was hand cobbed and upgraded with ore from some of the rich surface veins in the shaft area. During this period, 260 tons of ore were shipped; 200 tons of this graded better than 1% U3O8, and the rest was divided among several small shipments that graded from 0.64% U3O8 to 13.0 % U3O8.

Most of the underground development in the mine occurred southwest of the shaft in the vicinity of zones 1 and 2 and disclosed several radioactive fractures in the slaty argillite, referred to as the Reilly Zone, between the first and third levels. The best ore shoot was found on the third level where a fracture zone 100 ft (30 m) long graded 0.5% U3O8 across the width of the drift. No ore was located below the third level.

On March 29, 1987, Rod Dubnick staked the Eagle-Ace shaft area as S-99367. In July of 1987, Dubnick completed geological mapping, prospecting and rock sampling in the shaft area (AF 74N09-0299). No significant precious metal values were returned. On September 1, 1990, S-99367 was allowed to lapse. In 1997, Greater Lenora Resource Corporation flew a helicopter-borne EM, magnetic, and spectrometer survey over the showing (AF 74N-0007)(Saskatchewan Energy and Mines, 2000).

16.4 GENERAL DESCRIPTION

The site covers a relatively large area and can be separated into four smaller areas: the main shaft, raise, loading adit and storage area, and fresh water intake.

There was evidence of recent visitation in the form of fresh vehicle tracks, pop cans, litter,

etc.

16.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed an inspection in 1977. At this time the main shaft was cemented over with a small opening through which the workings could be accessed. The headframe was still standing. The raise also had a cement cover but it was cracked and deteriorated to the point that it was not effective. The loading adit entrance was covered with a heavy steel screen, while the opening above was blocked with waste rock. There was a large amount of debris and waste rock in the area. The site was well vegetated, hiding most of the debris.

In 1989 Saskatchewan Environmental and Public Safety (Mines Pollution Control Branch) undertook the Abandoned Mines Remedial Action Program. Remedial work involved grading rock into the adit at a slope of 4:1. The headframe above the shaft was intentionally burned down in October, 1989 and the open shaft was covered with waste rock in the spring of 1990.

16.6 2000 INSPECTION

The inspection was completed on October 11, 2000 by (KHS) Environmental Management Group Ltd..

16.6.1 Mine Workings

The mine consists of three openings that are of concern. The main shaft (N 59° 34.460'; W 108° 29.521') is sealed with waste rock and the burnt remains of the headframe. The overall condition of the closure is good, but there is some evidence of slumping at the shaft and some immediately north of the shaft pile. There are two cement foundations associated with the headframe that are in stable condition, with a small amount of debris near them.

The raise is approximately 120 m northeast of the shaft, up the slope. The raise is immediately above a trench and the cap is in poor condition. The cement cap is badly deteriorated and cracked to the point that access could be easily obtained. The hole itself is approximately 1.5 by 1.5 m and is filled with debris. The debris gives the impression that the raise is not deep. There were no buildings associated with the raise, there was no liquid discharge at the time of inspection and no evidence of previous flooding.

The adit is approximately 50 m south of the shaft. It is sealed with waste rock and the condition of the entrance is good. There are no support buildings near the entrance. There was no liquid discharge at the time of inspection but pooled water immediately in front of the adit entrance suggests that there is water coming out of the adit entrance. The stability of the waste rock is good.

Immediately above the adit entrance there is a storage/loading area. It appears that this area was used for storage, while a hole to the adit below was used for loading. Trucks backed into the adit and they were loaded from above. A wooden retaining wall was used and this is getting very unstable. It is deteriorating to the point that the rock that it is holding up will come down.

There also was evidence of slumping near the wall where the entrance to the adit was located.

16.6.2 Waste Rock

There is an extensive amount of waste rock in the area, with it primarily being located on the south side of the road that leads into the mine site. Waste rock was used extensively for site contouring, building foundations and road construction. The largest pile is on the south side of the road and is approximately 2.5 m high; 95 m in length; and 10 m wide. Overall the stability of the waste rock is good and there is a low potential for AMD. The area is well vegetated with exception to 2 or 3 small areas that do not support any vegetation of any kind.

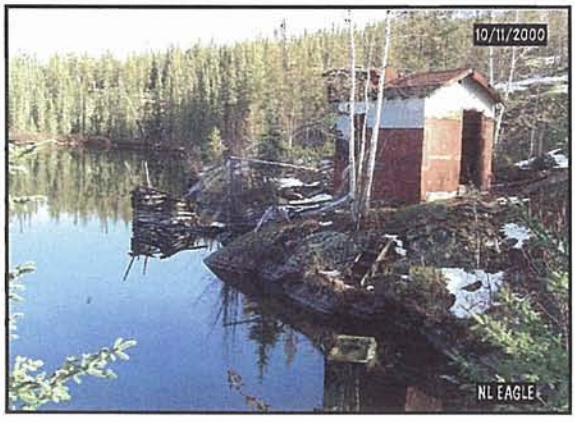
A gamma survey of the waste rock was conducted with measurements ranging from 0.18 to 4.64 μSv/hr.(see Site Map 16)

16.6.3 Buildings

There are numerous buildings and foundations throughout the mine site. They are primarily on the south side of the road. They range in size from approximately 5 m^2 to as large as 18 m by 8 m. They are primarily constructed of wood and are fallen down or appear to be on the brink of falling over. There is a two-storey cement construction building located at the northwest end of the site. It is in good condition except for the stairs leading to the entrance.

Some of the wooden buildings have a siding on them that appears to be an asbestos/tar paper. A sample was taken to obtain a positive identification.

Approximately 200 m directly north of the shaft, located on the top of the hill is a water storage facility. The tank appears to been wooden and has either fallen over or been burned. There are several concrete footings that are covered with rotting lumber. Beneath this is a hole approximately 2 m deep that has filled with water.



There is a freshwater intake located approximately 500 m northeast of the mine site. There is a support building remaining and debris and remnants of the intake in the water.

16.6.4 Debris/Rubble

There is a large amount of debris in the area.

It is primarily on the south side of the road, with a lesser amount on the north side. There are the remains of buildings, wooden debris, scrap metal, and litter of all sort in the area.

16.6.5 Additional Containment Works

There are three separate cisterns on the south side of the road that are a concern. They are all very similar in that they are approximately 2 by 2 m and approximately 3 m deep. They are capped with concrete but the caps are cracked and deteriorated to the extent that access into the cisterns is a concern. They all contain water up to within 1 m from the top.

There are drill holes scattered throughout the site with a drill core storage area located approximately 25 m northeast of the shaft. There is a foundation and numerous cores scattered throughout a 6 by 6 m area. Method of storage appears to be by racks, but they are disintegrated.

16.6.6 Site Sampling (Water, tailings, etc.)

A water sample was collected from the pooled water immediately in front of the loading adit.

The sample was collected by (KHS) Environmental Management Group Limited accompanying by a local grade 11 student from Uranium City, Bernadette Knox.

The following field measurements were made a the time the sample was collected:

Temperature: 1.2 °C
Conductivity: 509 μS/cm
pH: 6.39

The samples were preserved in the manner prescribed by the analytical laboratory and shipped to the Saskatchewan Research Council for analysis. Results are presented.

There is no historic data for comparison of water samples collected at the Nesbitt - Labine Eagle Mine. Recent sampling data indicates that with the exception of uranium and copper, all parameters are below the Saskatchewan Surface Water Quality Objectives for the Protection of Aquatic Life. Copper is at a level equal to the SSWQO for the Protection of Aquatic Life while the uranium levels exceed the Saskatchewan Surface Water Quality

Objectives for Livestock Watering.

At the time of sampling, the ponded water from which the sample was collected travelled a short distance (100m) overland before seeping into the surrounding soil. As a result the elevated uranium level are not significantly increasing the environmental risk posed by the site.

The source of the water appeared to be from a recent snowfall that was melting and travelling across the ore storage area and becoming contaminated. As the ore storage area is recommended for rehabilitation, attention should be paid to contouring the area to minimize contaminating the runoff.

16.7 RISK ASSESSMENT RANKING

Public Safety Assessment	17.5 / 24
Environmental Assessment	7.0 / 26
Combined Total Assessment	24.5 / 50
RANKING	4 of 27

16.8 REHABILITATION RECOMMENDATION

Significant rehabilitation work is required at this site. This should include, but not necessarily be limited to:

- Removal of the fresh water intake building and associated rubble.
- Removing the debris associated with the fresh water storage tank
- Resealing the raise with a secure concrete cap.
- Removing the cores.
- Sealing the slumping in the ore storage area.
- Contouring the ore storage area and covering areas of relatively high gamma levels.
- Re-contouring the shaft closure.
- The removal and burying of rubble and debris.
- The levelling of a number of concrete support structures, cisterns and building foundations.
- General site clean up.

Table 16.1

Constituent (mg/L unless specified)	Nesbitt - Labine Eagle Mine	SSWQO for the Protection of Aquatic Life and Wildlife	SSWQO for the Protection of Use of Water for Livestock Watering
Aluminum	0.14		5.0
Arsenic (total)	0.0007	0.05	0.5
Barium (total)	0.034	1.0	
Beryllium (total)	<0.001		0.1
Boron (total)	0.013		5.0
Calcium	70		
Cadmium (total)	<0.001	0.001	0.02
Cobalt	<0.001		1.0
Chromium (total)	0.001	0.020	1.0
Copper (total)	0.010	0.01	1.0 -cattle
Iron (total)	0.45	1.0	
Lead (total)	<0.002	0.02	0.1
Lead - 210 (Bq/L)	0.20		
Magnesium	4.6		
Manganese (total)	0.074		
Molybdenum (total)	0.002		0.5
Nickel (total)	<0.001	0.025 mg/L hardness $\leq$ 100mg/L($CaCO_3$)	1.0
Phosphorus	0.06		
Polonium - 210 (Bq/L)	0.02		
Potassium	0.8		
Radium - 226 (Bq/L)	0.15		
Silicon (soluble)	3.6		
Silver (total)	<0.001	0.01	
Sodium	1.5		
Strontium	0.14		
Titanium	0.002		
Uranium (total)	2. 850		0.2
Vanadium (total)	<0.001		0.1
Zinc (total)	0.012	0.05	
Zirconium	<0.001		

17 NISTO MINES LIMITED

Site #37 - Black Lake

Mineral Property #1621:
(formerly: MPP 1064; SMDC Permit No.2; CBS 266 and 298)

Showing Name:
Nisto Uranium Mine Adit (Zones 1 to 8 and A to J) or North Uranium Showing, South Uranium Showing

17.1 LOCATION

Map:	126A (B5)
Latitude:	N59° 12' 37"
Longitude:	W105° 26' 40"
NTS	74P-03-NW
UTM	Zone 13; NAD 1927
UTM	Northing: 6563343
UTM	Easting: 474621

Location: The Nisto Uranium Mine Showings, which were later called the North and South Showings, are located across from Fir Island on the northwest shore of Black Lake.

Accessibility: Access to the site is gained by a 5 km boat ride from the community of Black Lake.

17.2 GEOLOGY

The main mine area is underlain by an east- to northeast-trending sequence of paragneisses and meta-gabbro and amphibolite sills in the hanging-wall side of the Black Lake fault - a north 40° east/50°to 70° north west-trending thrust which emplaces basement (hanging wall) over sandstones (foot wall).

In the immediate showing area, three sets of fractures occur within a 2,500 foot (762 m)area by 500 foot (152.4 m) area on the hanging-wall side of the left lateral reverse Black Lake fault. The best mineralized fractures dip steeply and strike north 40° east, parallel to the main fault. Weaker mineralization is associated with vertical fractures striking northwest and steeply dipping, east-striking fractures. Most of the fractures have widths of an inch to six inches, and a few shear zones are up to 2 feet (0.6 m) wide. Some of the fractures and shear zones are short, but several are more than 100 feet (30.5 m) long, and one has been traced over a strike length of 600 feet (182.9 m).

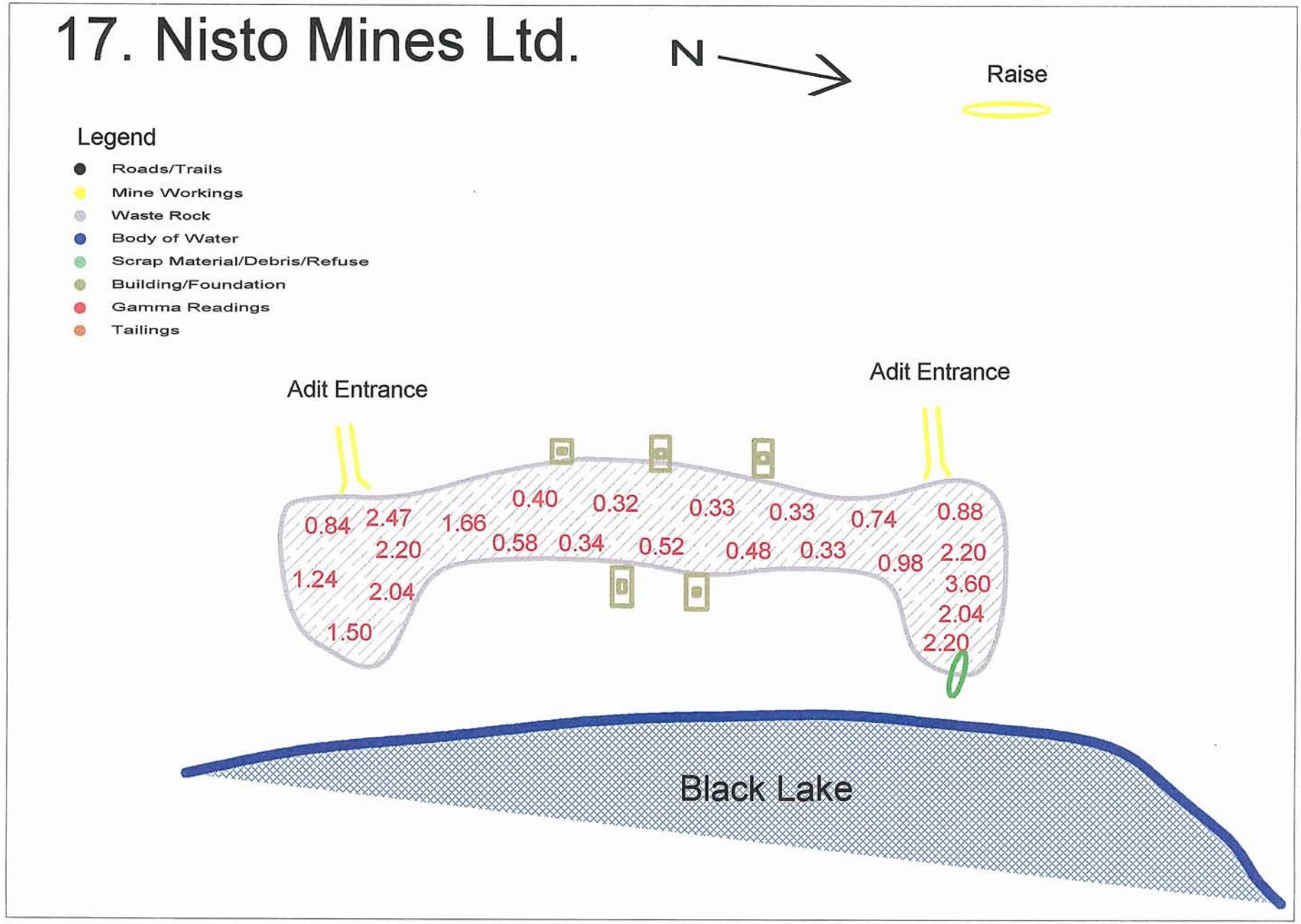
Eight principle zones of radioactivity and 10 zones of weaker rardioactivity have been located. Most of the zones contain several mineralized fractures or shear zones. Some of the zones parallel each other and others are branching. The pitchblende and secondary yellow uranium mineralization plus pyrite, galena, chalcopyrite, and possibly stibnite occurs in a series of quartz and quartz-calcite veins within fractures in highly hematized mylonitic metasediments and within bleached and chlorite altered amphibolites.

When the company went underground, the results were not as encouraging. Most of the work was completed in the northeast adit. Zones 1 and 2 were found to be even more erratically mineralized than they were on the surface. The best mineralized intersections encountered were a 30 foot length of Zone 1 which graded 0.3% U_3O_8 over 2.5 feet (0.76 m). A fourteen foot length of zone 2 assayed 0.8% U_3O_8 across 2.5 feet (0.76 m).

NOTE: The North Showing, which was accessed by the northeast or #2 adit, includes zones 1, 2, 3, 4, 5, A, F, and J. The South Showing, which was accessed by the southwest or #1 adit, includes zones 6, 7, 8, B, C, D, E, G, H, and I. The two adits are approximately 198.1 m (650 ft) apart.

The 1980, a small showing was discovered on the shore of Black Lake 5 km (3.1 miles) southwest of the Nisto Deposit. The showing or anomaly 164-2533 consists of pitchblende and minor pyrite and secondary uranium mineralization within a fracture which cuts mafic gneiss. The mineralization, which is identical to that at the Nisto Deposit, pinches, swells, and is locally cut off over the exposed 3 to 4 m strike length. Scintillometer readings exceeded 100,000 cps (Saskatchewan Energy and Mines, 1993).

17. Nisto Mines Ltd.



17.3 MINE HISTORY

The Nisto Mine Showings were discovered in 1948 by Tobey and Albrecht, who were granted a concession extending 12 miles along the northwest shore of Black Lake, across from Fir Island. In the following year the property was acquired by Transcontinental Resources Ltd.. A subsidiary company called Nisto Mines Ltd. was formed shortly afterwards to explore the property. After prospecting, geological reconnaissance surveying, geigering and surface trenching had outlined numerous radioactive fractures, 51 diamond drill holes were put down in 1949 mainly from the ice on Black Lake and from points close to the lakeshore. This work gave inconclusive results and in September 1950, two adits were driven from the shore of the lake to investigate the zones underground. By June 1951, when operations were suspended, over 1700 feet (518.2 m) of lateral work had been completed along with a raise driven 148 feet (45.1 m) and 29 underground diamond drill holes. In the summer of 1953 a further 4,000 feet (1 219 m)of diamond drilling was done, but results were not encouraging and interest in the property lapsed. In 1959 the property was leased to Haymac Mines for high grading. Ore shoots accessible from the north east adit were mined and it is reported that from July to September 1959, 500 tons of ore were shipped to the Lorado mill. One individual shipment of 106 tons graded 1.6% U_3O_8. In 1966 Mokta Canada Ltd. did an airborne scintilometer survey and a geological and ground scintillometer survey over CBS 266 and 298. This work located a radioactive anomaly 1.5 miles (2.4 km) southwest, also on the northwest shore of Black Lake, which was named the South Showing. In turn, the Nisto Deposit was named the North Showing.

In l968 Amok Ltd. drilled 1 diamond drill hole for 493 feet to test the exact depth of the unconformity between the Tazin paragneiss and Athabasca Sandstone formations at the footwall of the Nisto fault. It was drilled in the North Showing (Nisto Showings) area, from the lake shore at a bearing of 306° and at a dip of 69°. The unconformity was intersected at 460 feet (140.2 m), with no radioactivity found in the hole or in the core.

By 1977, the showing was covered by SMDC Permit No. 2 (later MPP 1064). In 1978, Eldorado Nuclear Limited and SMDC completed an airborne INPUT and magnetic survey which covered the showing (AF 74P04-0022). In 1979, the partnership geologically mapped Fir Island and the Nisto Penninsula and completed drill hole BL-1 on the south shore of Black Lake south of Fir Island (AF 74P04-0024). No significant mineralization was intersected.

In 1980, MaxMin, magnetic, gravity, and VLF-EM surveys and drill holes NS-1 and NS-2 were completed on the Nisto Channel to further explore the trace of the Black Lake Fault (AF 74P04-0025). No significant values were intersected. In the same year, a regional geochemical survey, an airborne spectrometer survey, structural mapping and prospecting and a gravity survey were completed over the showing (AF 74P04-0026). This work resulted in the discovery of the insitu mineralization at anomaly 164-2533 (Saskatchewan Energy and Mines, 1993).

17.4 GENERAL DESCRIPTION

The site covers a moderate area of approximately 200 m². There is evidence of recent visitation; the site was decommissioned in the summer of 1999.

17.5 HISTORY OF PREVIOUS INSPECTIONS

The site was rehabilitated in 1997. A detailed report on that activitiy is available from the Black Lake First Nations.

17.6 2000 INSPECTION

The site was inspected on September 12, 2000 by (KHS) Environmental Management Group Limited.

17.6.1 Mine Workings

The western most adit was and continues to be completely sealed with rock.

The most easterly of the two adit was sealed with a concrete bulkhead which contains two drains for water.

The raise has been sealed with a concrete cap.

17.6.2 Waste Rock

There is a limited amount of waste rock at the site which is in a stable condition.

A gamma survey of the waste rock was conducted with measurements ranging from 0.32 to 3.6 μSv/hr.(see Site Map 17)

17.6.3 Buildings

No buildings or foundation are in evidence at the site, however there are the remains of dugouts which were used as living quarters for the miners.

17.6.4 Debris/Rubble

A small amount of debris remains at the site including two ore carts as well as a limited amount of scrap steel.

17.6.5 Site Sampling

No samples were collected from this site.

17.7 RISK ASSESSMENT RANKING

Public Safety Assessment	4.4 / 24
Environmental Assessment	5.0 / 26
Combined Total Assessment	9.4 / 50
RANKING	22 of 27

17.8 REHABILITATION RECOMMENDATION

The site has been decommissioned and all closures were stable at the time of inspection.

18 PITCH - ORE URANIUM MINES LTD.

Site #13 - Martin Lake area

Mineral Property #1362:
(formerly: ML 5188; CBS 422)

Showing Name:
Pitch-Ore Uranium Mine

18.1 LOCATION

Map:	126B (C6)
Latitude:	N59° 32' 20"
Longitude:	W108° 33' 15"
NTS	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6602398
UTM	Easting: 638302

Location: The Pitch-Ore adit #1 is located on the west shore of Beaverlodge Lake approximately 2 km south of the Eldorado highway.

Accessibility: Access to adit #1 is via a very rough road that turns off the Eldorado highway. It is an access road for the powerline. Adit #2 and the raise can only be access by foot from the entrance of adit #1.

18.2 GEOLOGY

The Pitch-Ore uranium mine is located between the west shore of Beaverlodge Lake and the east shore of Martin Lake approximately 0.5 mile (0.8 km) south southeast of the Martin Lake or No. 1 adit.

The mine area is underlain by NE-striking, north west-dipping interlayered basalts and Martin Formation meta-arkoses. This sequence of rocks is cut by a branching, blocky fault system that strikes north 10° west and dips 65° north west. The deposit is located on the "adit limb" of the Martin Lake syncline.

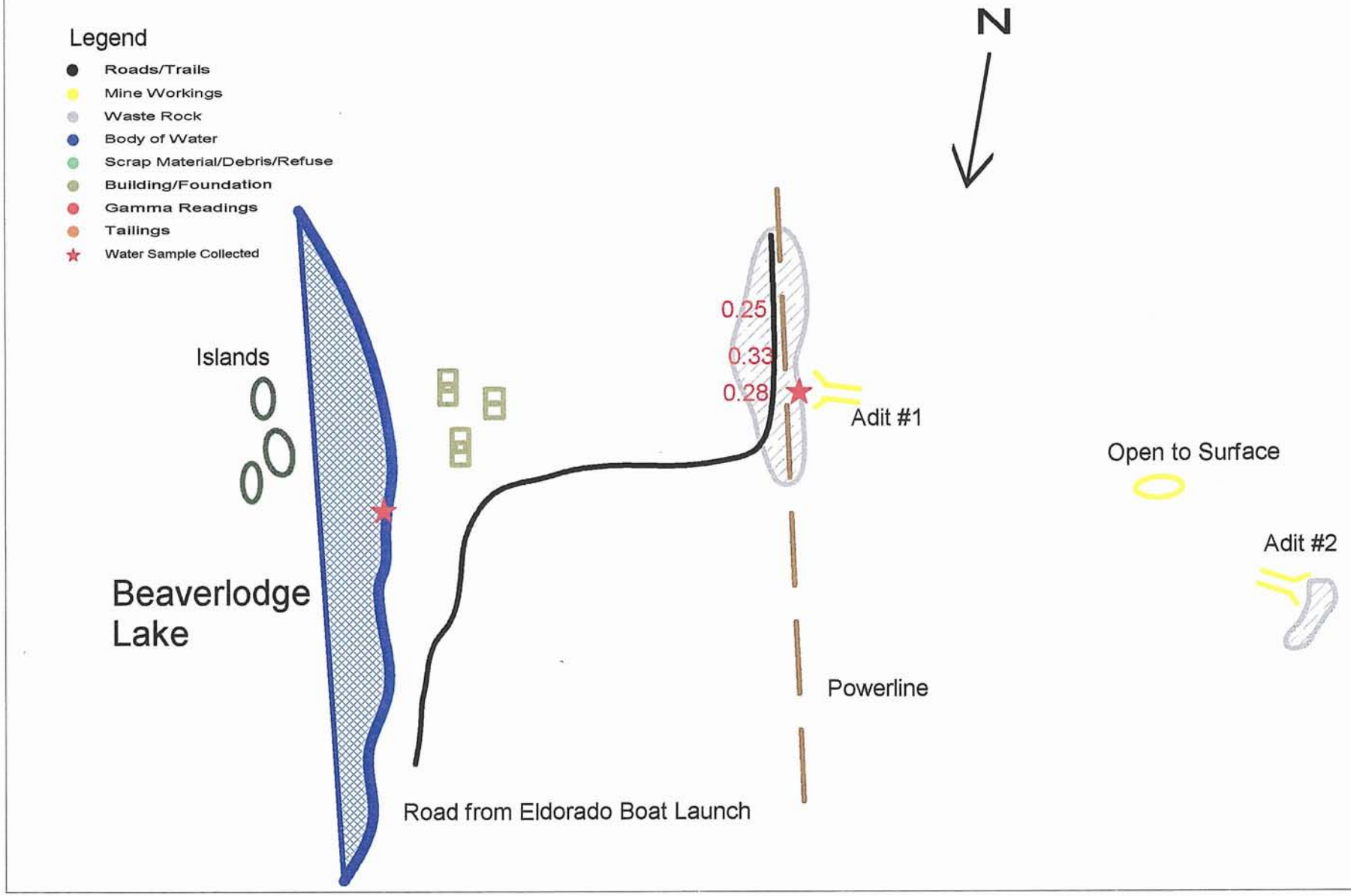
Pitchblende mineralization occurs as massive and colloform veinlets and stringers in calcite veins and fault breccia cemented with calcite, and also as finely disseminated grains in fault gouge and red-altered wall rocks of basalt. Small amounts of pyrite, chalcopyrite, clausthalite (PbSe), covellite, and bornite are present in the veins associated with pitchblende. The mine closure may have resulted from the ore being too finely disseminated for economic recovery (Saskatchewan Energy and Mines, 1991).

18.3 MINE HISTORY

Approximately 0.5 mile (0.8 km) south south-east of the original Martin Lake Adit (ie: adit no.1) occurs Pitch-Ore Mine. The property was acquired in 1950 by Pitch-Ore Uranium Mines Ltd. In 1951-52 it was prospected and explored. Many trenches were dug, and 6,000 feet of diamond drilling in 34 holes over 1,000 feet (304.8 m) were drilled by the end of 1952 along the No. 1 mineralized zone (the most promising zone). The holes along this zone gave high geiger-probe results. Moreover, bulk samples from the surface veins gave encouraging assay results: five bulk samples each of 75 lbs., assayed from .155% - .25% U_3O_8 and a 300 lb. sample assayed .4% U_3O_8. Therefore, in late 1952 an adit was begun 100 feet (30.5 m) above the west shore of Beaverlodge Lake, and by the end of the following year about 1,200 feet (365.8 m) of lateral development had been carried out as well as about 3,500 feet of underground drilling. This work, according to the company, indicated a possible reserve of 16,500 tons of ore grading an average of 0.1% U_3O_8, but in 1954 work was stopped and may have been prompted by adverse reports on the metallurgical properties of the ore which indicated that much of the pitchblende was too finely disseminated for economic recovery. The property was highgraded in 1959 by Dudar and Sadoway who did a small amount of stoping at the north end of the zone and deepened one of the surface trenches. As far as it is known less than 30 tons of ore were broken and none was shipped.

In 1968, the deposit was within CBS 422. F. Lieber completed a scintillometer survey over

18. Pitch - Ore Uranium Mines Ltd.



the claim block (AF 74N10-0337). No new showings were located.

In 1969, Albex Minerals Ltd. completed 2 diamond drillholes south of the adit portal, on the shore of Beaverlodge Lake to further investigate the possible extention of the mineralized zone. Nothing was found of economic value in the two holes.

Between 1978 and 1979, a scintillometer survey and shallow drilling was completed on the deposit and the data from 1952 drillholes was re-interpreted (Saskatchewan Energy and Mines, 1991).

18. 4 GENERAL DESCRIPTION

The mine site covers a relatively small area however the surface works are spread out. There is a large distance between the two adits and the raise in between. There was no evidence of recent visitation at adit #2 and the raise. The only evidence of recent visitation near adit #1 is that it is in close proximity to a powerline and the access road.

18.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed an inspection in 1976. At the time of his inspection, all of the buildings near the shore of Beaverlodge Lake were collapsed and scavenged. There was very little debris at the sites, waste rock outside of adit #1 formed the powerline road. Adit #1 had a door sealing it that had been torn off, adit #2 was collapsed and overgrown. The raise to surface was also open. The area was well vegetated.

In 1989 Saskatchewan Environmental and Public Safety (Mines Pollution Control Branch) undertook the Abandoned Mines Remedial Action Program. Remedial work involved sealing the adit with crushed rock at an approximate slope of 4:1.

18.6 2000 INSPECTION

The inspection was completed on October 16, 2000 by (KHS) Environmental Management Group Ltd.

18.6.1 Mine Workings

Adit #1 is immediately west of the powerline approximately 5 m from powerline clearing. The entrance is approximately 3 by 2 m in size and is partially sealed with waste rock. The stability is poor and there is obvious slumping leaving a small 0.25 by 0.50 m opening. There are no buildings in the immediate area of the adit entrance. A small amount of liquid was discharging form the entrance that ran on surface for approximately 5 m then disappeared into the waste rock.

An open raise is located approximately 750 m northwest of the adit #1 entrance. The opening is approximately 4 by 3 m in size and presents and immediate danger to anyone walking in the area.

Adit #2 is located approximately 200 m further northwest from the open raise. The adit opening is facing towards Martin Lake on the opposite slope of adit #1. The dimensions of the entrance could not be determined because of the nature of closure. The entrance has been blasted closed leaving a trench and pile of broken rock. The closure appears to be relatively unstable and is in poor condition. There is evidence of slumping of the side walls. The area is very well vegetated making the entrance difficult to locate.

18.6.2 Waste Rock

Waste rock is restricted to an accumulation immediately in front of adit #1. The rock makes up a section of the powerline road and leads toward the water. The stability of the pile is good and it is well vegetated.

A gamma survey of the waste rock was conducted with measurements ranging from 0.25

to 0.33 μSv/hr.(see Site Map 18)

18.6.3 Buildings

There are the remnants of some buildings near the water directly below the entrance of adit #1. They are difficult to locate due to the overgrown nature of the area.

18.6.4 Debris/Rubble

There is very little scrap material in the area other than the remnants of five steel drums.

18.6.5 Site Sampling

A water sample was collected from the small discharge from the entrance of adit #1 by (KHS) Environmental Management Group Ltd . Accompanying them was Bernadette Knox a Uranium City grade 11 student.

Water Sample - immediately in front of adit:

Temperature: 1.0 °C
Conductivity: 655 μS/cm
pH: 6.64

The sample was immediately preserved in the manner prescribed by the analytical laboratory and shipped to the Saskatchewan Research Council for analysis. Results are reported.

There is no historic data for comparison of water samples collected at the Pitch-Ore mine site. 2000 sampling data indicates that, with the exception of uranium, the discharge from the adit was below the Saskatchewan Surface Water Quality Objectives (SSWQO) for the Protection of Aquatic Life (see Table 18.1). Uranium concentrations exceed the SSWQO for Use of Water for Livestock Watering, however, as the site is not associateed with a water body, the flows from the adit are small and all the water seeps into the area immediately in front of the adit, the environmental risk of this discharge are considered minimal.

18.7 RISK ASSESSMENT RANKING

Public Safety Assessment	11.2 / 24
Environmental Assessment	6.0 / 26
Combined Total Assessment	17.2 / 50
RANKING	10 of 27

18.8 REHABILITATION RECOMMENDATION

The adit immediately under the powerline was showing early signs of slumping with a hole approximately 0.25 by 0.50 m in size. The waste rock currently sealing the adit should be removed and redeposited within the adit to prevent slumping in the future. Additional waste rock is available on site.

The raise located northeast of the adit entrance is also a public safety concern. The hole is difficult to locate due to it being partially hidden by the natural vegetation in the area, this makes it a greater risk to the public. The optimum closure method is to cap the raise with a concrete cap tied to bedrock.

The adit facing Martin Lake is not the primary concern for public safety due to the nature of the closure and the difficulty in accessibility.

Table 18.1

Constituent (mg/L unless specified)	Pitch-Ore	SSWQO for the Protection of Aquatic Life and Wildlife	SSWQO for the Protection of Use of Water for Livestock Watering
Aluminum	<0.005		5.0
Arsenic (total)	0.0037	0.05	0.5
Barium (total)	0.23	1.0	
Beryllium (total)	<0.001		0.1
Boron (total)	0.029		5.0
Calcium	87		
Cadmium (total)	<0.001	0.001	0.02
Cobalt	<0.001		1.0
Chromium (total)	<0.001	0.020	1.0
Copper (total)	0.004	0.01	1.0 -cattle
Iron (total)	0.039	1.0	
Lead (total)	<0.002	0.02	0.1
Lead - 210 (Bq/L)	0.06		
Magnesium	18		
Manganese (total)	<0.001		
Molybdenum (total)	0.001		0.5
Nickel (total)	0.001	0.025 mg/L hardness $\leq$ 100mg/L($CaCO_3$)	1.0
Phosphorus	<0.01		
Polonium - 210 (Bq/L)	0.01		
Potassium	2.3		
Radium - 226 (Bq/L)	0.22		
Silicon (soluble)	4.4		
Silver (total)	<0.001	0.01	
Sodium	4.2		
Strontium	0.42		
Titanium	<0.001		
Uranium (total)	0.439		0.2
Vanadium (total)	<0.001		0.1
Zinc (total)	<0.005	0.05	
Zirconium	<0.001		

19 RIX-ATHABASCA URANIUM MINES LIMITED - SMITTY MINE

Smitty Mine - Site #45

Mineral Property #1413:
(formerly: CB claim 1-JOE claim 6; BOOM claims; DD1 Concession)

Showing Name:
Smitty Uranium Mine or Smitty U Showing or Rix U Showing No. 27, Boom Lake Showing Adit or '62 Zone, West U Zone (extension of the 62 Zone)

19.1 LOCATION

Map	126B (B5)
Latitude:	N59° 34' 08"
Longitude:	W108° 41' 29"
NTS :	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6605459
UTM	Easting: 630428

Location: The Rix-Athabasca Smitty mine is located approximately 6 km southwest of Uranium City. It is located on the east shore of a small lake known as Emu Lake. It is approximately 1.5 km northwest of Rix-Athabasca Uranium Mines Limited Leonard Mine.

Accessibility: Access is gained by walking from the junction of Rix Road and the road that leads north to St. Michaels Mine. Beaver activity and subsequent flooding have made the road impassable from this point. The site is approximately 1.5 km past the Leonard Mine and is accessed via an extremely overgrown road which is difficult to located due to the dense vegetation.

19.2 GEOLOGY

The Smitty Deposit, also known as the Rix No. 27 Showing or Smitty Showing, is an irregular shaped body of disseminated pitchblende within the breccia mylonite zone and has a strike length of 500 feet (152.4 m), a maximum width of 15 feet (4.6 m) and plunges gently south west for a plunge length of about 1,000 feet (304.8 m). Pitchblende, accompanied by pyrite, chalcopyrite, sphalerite, and galena occurs mainly in the matrix of the breccia and does not show any spatial relationship to the later fault.

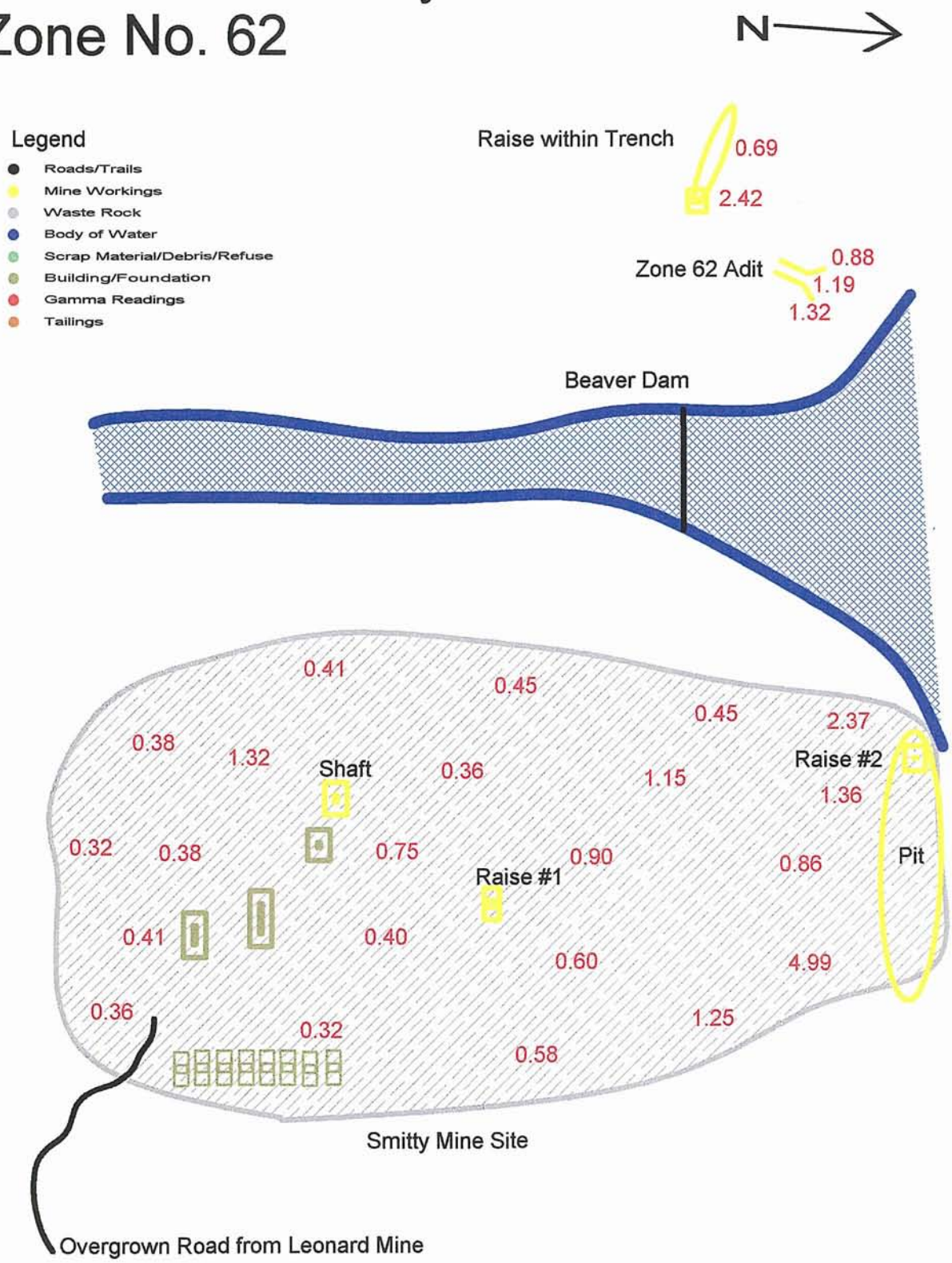
The mine area is underlain by a north east-trending, steeply dipping sequence of mainly chlorite-bearing granitic layered gneisses, with narrow bands of amphibolite and hornblende-feldspar gneiss, and a few layers of quartzitic layered gneiss. All were once sedimentary and tuffaceous rocks. They belong to the unit known locally as the Rix Unit of the Tazin Series. They are all various shades of red due to disseminated hematite powder. In and near the ore zones they are coloured dark red and contain fine carbonates. The gneisses enclose the Boom Fault, a wide zone of faults and shears, which are conformable with the foliation in the country rock. A breccia-mylonite zone enclosing a later fault, the Smitty Fault, branches from the Boom structure on a bearing of 130° and dips 40° south (Saskatchewan Energy and Mines,1991).

19.3 MINE HISTORY

Between Emu and Boom Lakes, along the north east-trending Boom Lake fault, occurs Rix Athabasca Uranium Mines Ltd. Smitty Mine, and 0.25 miles (0.4 km) north north west of the mine occurs the '62' ore zone. In 1950 Rix Athabasca Uranium Mines Ltd. discovered 167 radioactive occurrences on the DD1 Concession, during an initial prospecting and radiometric surveying program. Of these 167 occurrences, 50 were considered worthy of further work. Three of these, the Smitty or Rix No. 27 Showing, including the No. 62 Zone (AF 74N10-0086), the Leonard Showing and Rix No.10 Zone, and the Rix No. 7 Showing were eventually explored underground.

The Smitty Showing and 62 ore zone were investigated by trenching and several diamond drill holes totalling several thousand feet, in 1950-51. This work warranted the sinking of a shaft in late 1952, and two levels were established on the 125-foot (38.1 m) and 250-foot (76.5 m) horizons. In 1953, sufficient ore had been outlined to warrant production. A contract to ship ore to the Eldorado Mill was negotiated, and when Rix began shipment of ore at the rate of 100 tons a day in April 1954, it became the first privately owned Canadian uranium producer. In 1955 the '62' zone was developed from the second level of the mine and in the following year the shaft was deepened a further 260 feet (79.2 m) and two levels were established at 375 feet (114.3 m) and 512 feet (156.1 m) below the collar. In 1957 it was deepened to 760 feet (231.6 m) to include three more

19 and 20. Rix - Athabasca Uranium Mines Ltd. - Smitty Mine and Zone No. 62



levels, making a total of 7 levels. By the end of the year, ore containing 600,000 lbs. U_3O_8 had been shipped. During 1958 and 1959 a further 76,000 tons of ore were shipped and the mine was closed in 1960 after depletion of the ore. It is reported that the average grade of the ore is slightly greater than 0.20% U_3O_8. The assessment work submitted for this period is as follows:

1951-53: shaft geology, surface drillholes (AF 74N10-0121)
1953-59: shaft area mapping, surface mine plans (AF 74N10-0112)
1952-59: 1st level and above: 9 drillholes (AF 74N10-0113)
1952-59: 2nd level: 17 drillholes, level plans (AF 74N10-0114)
1956-59: 3rd level: 9 drillholes, level plans (AF 74N10-0115)
1956-59: 4th level: drillholes, level plans (AF 74N10-0116)
1958-59: 5th level: 5 drillholes, level geology (AF 74N10-0117)
1959: 6th level: drillholes, level plans (AF 74N10-0118)
1959: surface drillhole logs and drill plan (AF 74N10-0119,-0120)

In 1967 Tobe Mines Ltd. did an evaluation report on the Rix property, along with a geological scintillometer survey and assaying of samples to determine if the mine was worth reopening (AF 74N10-0333). The reserves they calculated plus the work they had done on the property influenced their decision to leave the mine until world prices for uranium rose. From 1967-69, seven diamond drill holes were put down over the area surrounding Emu Lake by a private consulting firm. The intersections encountered in these holes were not as high as those made closer to the mine site by Rix in the mid 1950's. Thus, the ore body does not seem to extend so far to the south west at the depths reached by this drilling (Saskatchewan Energy and Mines,1991).

19.4 GENERAL DESCRIPTION

The Smitty mine and Zone 62 were inspected as separate sites. The Smitty Mine covers a large area of approximately 1.5 km². There was no evidence of recent visitation, and it is suspected that there has not been any due to the difficulty in locating the road and the flooding due to beaver activity.

19.5 HISTORY OF PREVIOUS

Mueller completed an inspection in 1976. At the time of his inspection access to the site could be gained by vehicle on a "quite good" road. The was a large amount of debris at the site including; rusted equipment, rails, tanks, tank stands, hoist parts, and burnt building debris.

The shaft was covered with some iron rails and debris, and the raise was open completely. A raise to the north was also open.

Vegetation was well established in the area.

19.6 2000 INSPECTION

The inspection was completed on October 13, 2000 by (KHS) Environmental Management Group Ltd.

19.6.1 Mine Workings

The main shaft is located near the centre of the mine site (N 59° 33.978'; W 108° 41.446'). It is approximately 5 by 5 m in size and is partially open. The opening has been filled in with timbers, rock, and other miscellaneous debris. The stability of the closure is poor, as is the overall condition of the shaft area. There is obvious signs of slumping around the opening. There was no liquid discharge at the time of the inspection and no evidence of previous flooding. There is also a concrete foundation and the remnants of a building in the immediate area of the opening.

The ventilation raise is located approximately 75 m to the northeast. Global positioning satellite reading of the raise opening was N 59° 33.960' and W 108° 41.386'. The opening is approximately 2 by 3 m in size and is tentatively sealed with a steel grate. The stability of the closure is poor and the overall condition of the opening is not acceptable. The grate that is covering the opening is relatively stable for the time being but should be considered temporary at best. There was no liquid discharge at the time of inspection and no evidence of previous flooding.

The final opening at the Smitty mine site is a raise (N 59° 33.983'; W 108° 41.454') approximately 100 m to the north of the main shaft. The opening is approximately 0.75 by 0.75 m in size and it has been sealed with waste rock. There was no liquid discharge at the time of inspection, but there was definite evidence of previous flooding. There was no support building in the area but the opening had a wooden ladder protruding from it.

A small pit (N 59° 33.983'; W 108° 41.454') located on the north end of the mine site near raise #2 was also identified. The pit is approximately 20 by 75 m in size. The depth of the pit could not be identified because it is completely flooded. The north wall of the pit is the steepest and shows evidence of slumping and rock falls. No support buildings were identified in the area.

There are extensive drill holes in the area, none of which were discharging any liquid at the time of inspection.

19.2 Waste Rock.

The is a significant amount of waste rock in the area. The rock has been used extensively for road construction and building foundations. The main quantity of waste rock is in the area of the main shaft.

A gamma survey of the waste rock was conducted with measurements ranging from 0.32 to 2.37 μSv/hr.(see Site Map 19)

19.3 Debris /Rubble

The debris in the area is extensive and wide ranging - Primarily consisting of scrap metal of all types, wooden debris, piping, hoses, concrete, etc.

There is also evidence of small pieces of asbestos/tar paper siding scattered around the site. These are id

entical to those found on other building at other sites that have been inspected.

On the southeast corner of the mine site, immediately as you enter on the road there are several concrete tank foundations approximately 10 m apart over an area of approximately 100 m. Two signs; one on each end of the foundations signs were located which read "Danger Sulfuric Acid" however no evidence of the tank was found on the site.

19.4 Site Sampling

There was no sampling completed at this location.

19.7 RISK ASSESSMENT RANKING

Public Safety Assessment	13.5 / 24
Environmental Assessment	3.0 / 26
Combined Total Assessment	16.5 / 50
RANKING	13 of 27

19.8 REHABILITATION RECOMMENDATION

Significant rehabilitation work is required at this site. This should include, but not necessarily be limited to:

- Resealing the shaft and raise with a secure concrete caps.
- Contouring the waste rock and covering areas of relatively high gamma levels.
- The removal and burying of rubble and debris.
- The levelling of a number of concrete support structures and building foundations.
- General site clean up.

20 RIX-ATHABASCA URANIUM MINES LIMITED - Zone 62

Site #46 - Highgrade Site #39

Mineral Property #1413

Showing Name:
Boom Lake Showing Adit or '62 Zone, West U Zone (extension of the 62 Zone).

20.1 LOCATION

Map: 126(B) (B5)

Latitude: N59°34'50"
Longitude: W108°42'05"

NTS : 74N-10-SE

UTM Zone 12; NAD 1927

Location: The Zone 62 adit is located approximately 500 m north-northeast of the Smitty Mine site.

Accessibility: The Zone 62 adit can only be accessed by foot from the Smitty Mine site (see Site 19). Although the site are separated by less than 1 km the area between has been flooded due to beaver activity making it difficult to access.

20.2 GEOLOGY

Finely disseminated pitchblende with pyrite in siliceous gangue forma an ore zone 80 feet (24.4 m) long and 4 feet (1.2 m) wide in the footwall of the '62' Fault structure. The orebody plunges south to south west at 35° for a plunge length of 1,000 feet (304.8 m).

The '62' Ore Zone is controlled by the '62' Fault, which is probably the faulted north west extension of the Smitty Fault. The '62' Fault branches north west the Boom Fault at a point 450 feet (137.2 m) north east of the junction of the Boom and Smitty Faults.

The zone is underlain by a sequence of granitic layered gneisses and amphibolite, and hornblende-feldspar gneiss of the Tazin Series.

In 1966, S. Loutitt discovered mineralization approximately 1,600 feet (487.7 m) west and slightly north of the 62 Zone. This occurrence, which is believed to be the northwest extension of the 62 Zone, was named the "West Zone" (Lat 59°34'17" Long 108°42'00"). The northeast-trending zone is hosted by the fault that extends between Jeff and Muskeg Lakes. Grab from 3 trenches assayed 0.87, 0.40 and 0.39% U_3O_8 (Saskatchewan Energy and Mines,1991).

20.3 MINE HISTORY

The history of exploration is the same as the Smitty Mine.

By 1967, the '62 Zone was within Joe claim No. 6. Between 1967 and 1968, S. Lotittt completed 6 drillholes approximately 1,600 ft.(487.7 m) west of the '62 Zone (AF74N10-0328). This drilling intersected mineralization named the "West Zone". The zone, which crosses the boundary between JOE 4 and JOE 5 claims, was trenched and mapped (Saskatchewan Energy and Mines,1991).

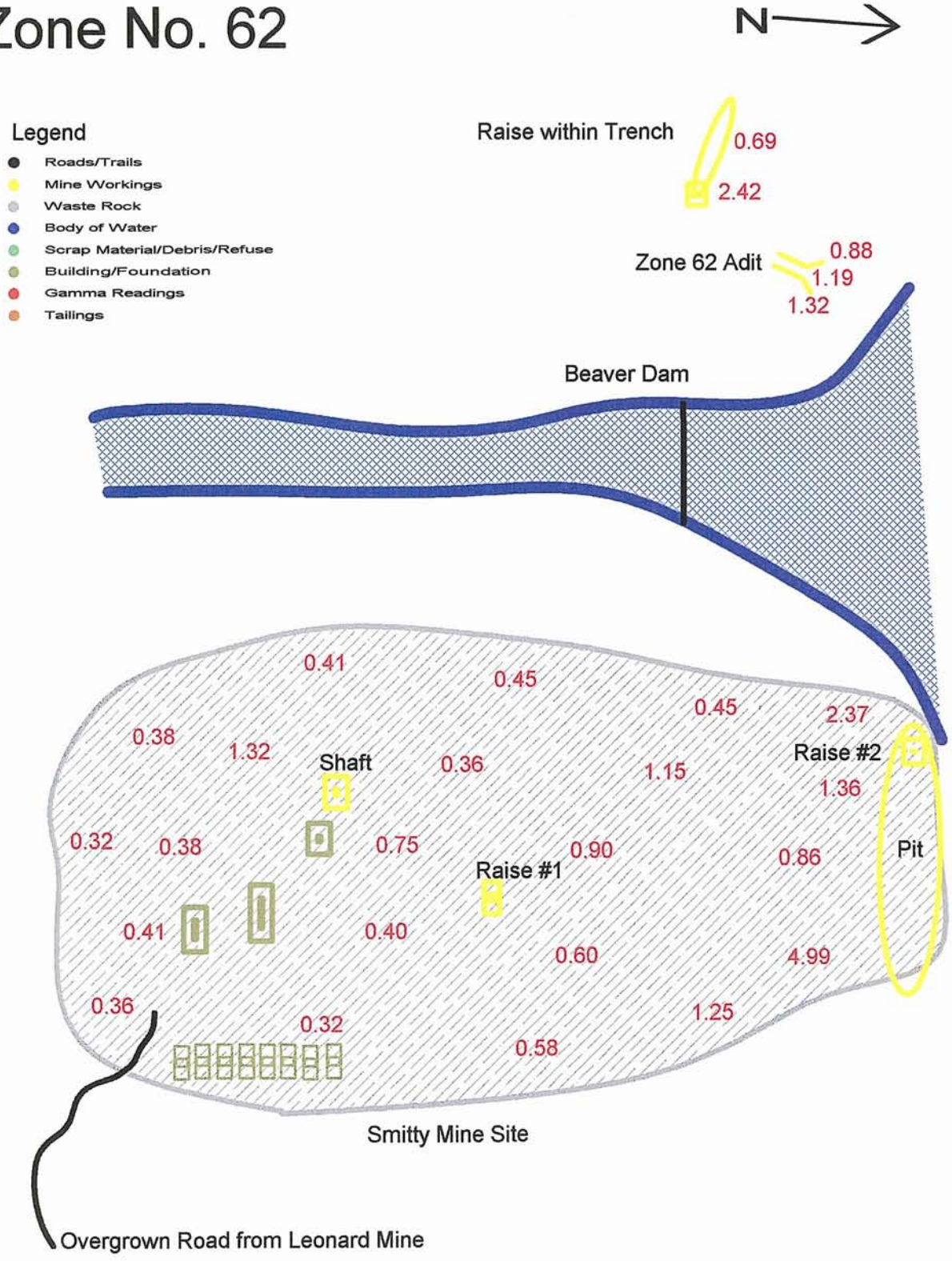
20.4 GENERAL DESCRIPTION

The Zone 62 site covers a small area of approximately 50 m² and there was no signs of recent visitation.

20.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller inspected Zone 62 at the same time as the Smitty mine in 1976. At that time, some debris consisting of a few iron tracks, a concrete fuel tank stand and some small diameter piping was located near the adit entrance. The adit entrance itself was supported

19 and 20. Rix - Athabasca Uranium Mines Ltd. - Smitty Mine and Zone No. 62



by a cement arch and had been sealed with wooden planks leaving a small opening where access could be gained. In addition, some logs had been put into the raise in an attempt to seal the opening. The raise and adit had liquid discharges at the time of his initial inspection although when he returned to the area two weeks later, the flows from the adit and raise had ceased. Vegetation was re-established in the area.

20.6 2000 INSPECTION

The inspection was completed on October 13, 2000 by (KHS) Environmental Management Group Ltd.

20.61 Mine Workings

Zone 62 consists of an adit and a raise. The adit (N 59° 34.790' and W 108° 41.484) has a cement collar support, with the entrance approximately 2 by 3 m in size. The entrance was sealed with debris (a large ore cart) and boulders, and was in a stable condition. There was a liquid discharge and evidence of previous flooding was observed at the time of inspection.

The raise is located approximately 100 m north-northeast (N 59° 34.128' and W 108° 41.512') of the adit entrance. The opening is approximately 4 m wide and 6 m in length. There was definite evidence of slumping and rock falls; these boulders have precariously sealed the opening.

The condition of the area must be characterized as extremely unstable.

20.6.2 Waste Rock

An area of waste rock approximately 5 m by 10 m is located immediately in front of the adit entrance. Waste rock was also used for constructing roads and flat working areas. The stability of the pile is good and supports a small amount of vegetation.

A gamma survey of the waste rock was conducted with measurements ranging from 0.69 to 2.42 μSv/hr.(see Site Map 20).

20.6.3 Buildings

There was no buildings or foundations located in the area.

20.6.4 Debris/Rubble

The limited amount of debris associated with the site consists of the ore cart and a small amount of additional steel associated with the closure of the adit.

20.6.5 Site Sampling

No sampling was completed at the site.

20.7 RISK ASSESSMENT RANKING

Public Safety Assessment	11.7 / 24
Environmental Assessment	5.0 / 26
Combined Total Assessment	16.7 / 50
RANKING	12 of 27

20.8 REHABILITATION RECOMMENDATION

Both the adit entrance and the raise require some rehabilitation.

At the time of inspection, the open raise identified above the adit entrance posed a risk to wildlife and human safety. The raise will require a significant amount of blasting as there is very little material in the area that could be used as fill to close the hole.

The adit collar itself is a thin layer of concrete which appears to be cracking. If it should collapse, it will allow easy access to the mine workings. The adit should be either blasted or re-excavated and waste rock placed within the hole in order to prevent slumping and it's eventual re-opening.

21 RIX-ATHABASCA URANIUM MINES LTD. - Leonard Mine

Site #47

Mineral Property #1414:
(formerly: CH claim No. 1; DD1 Concession)

Showing Name:
Leonard Uranium Mine

21.1 LOCATION

Map:	126B (B5)
Latitude:	N59° 33' 40"
Longitude:	W108° 40' 30"
NTS:	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6604626
UTM	Easting: 631384

Location: The Rix-Leonard Mine is located approximately 5 km southeast from Uranium City, and approximately 0.25 km north east of the north east end of Bertha Lake.

Accessibility: Access to the mine site is in part by vehicle with the remaining completed on foot. Vehicle accessibility can be gained up to the junction of Rix Road and the road that leads north to St. Michael's Mine. From this point, due to beaver activity and subsequent flooding, the road has been washed out

and access is gained by walking. It is approximately 300 m from the junction of the two roads to the Leonard Mine, most of this area is flooded making access difficult. Once across the flooded area the mine site is approximately 100 m south of the road.

21.2 GEOLOGY

The formations trend north east and dip steeply east. Seven sub-parallel tight, tension faults transect the country rock and join the major structures. The deposit is of the vein type. Pitchblende, accompanied by galena, chalcopyrite, and pyrite occur in carbonate veins along the faults. It also is coating breccia fragments within the wall-rock of the tensin faults. Sampling of the best mineralized vein on surface revealed a 150-foot (45.7 m)length which averaged 0.38% U_3O_8 across 5.4 feet and a 130-foot length which graded 0.51% U3O8 across 2.2 feet (0.67 m), separated by 73 feet (22.3 m) of vein material which fell below ore grade. Underground exploration disclosed several pods of ore erratically distributed within the faults to a vertical depth of abut 400 feet (121.9 m). Invariably, richest mineralization is where faults cut contacts between amphibolite and granite. Characteristic red alteration of wall rocks is common around radioactive veins.

The mine site is underlain by a north east-trending body of amphibolite, locally called the Jean Lake amphibolite, containing several sills of alaskite granite, forming a prominent ridge between the Leonard and '201' fault structures. All rocks belong to the Tazin Series of paragneisses.

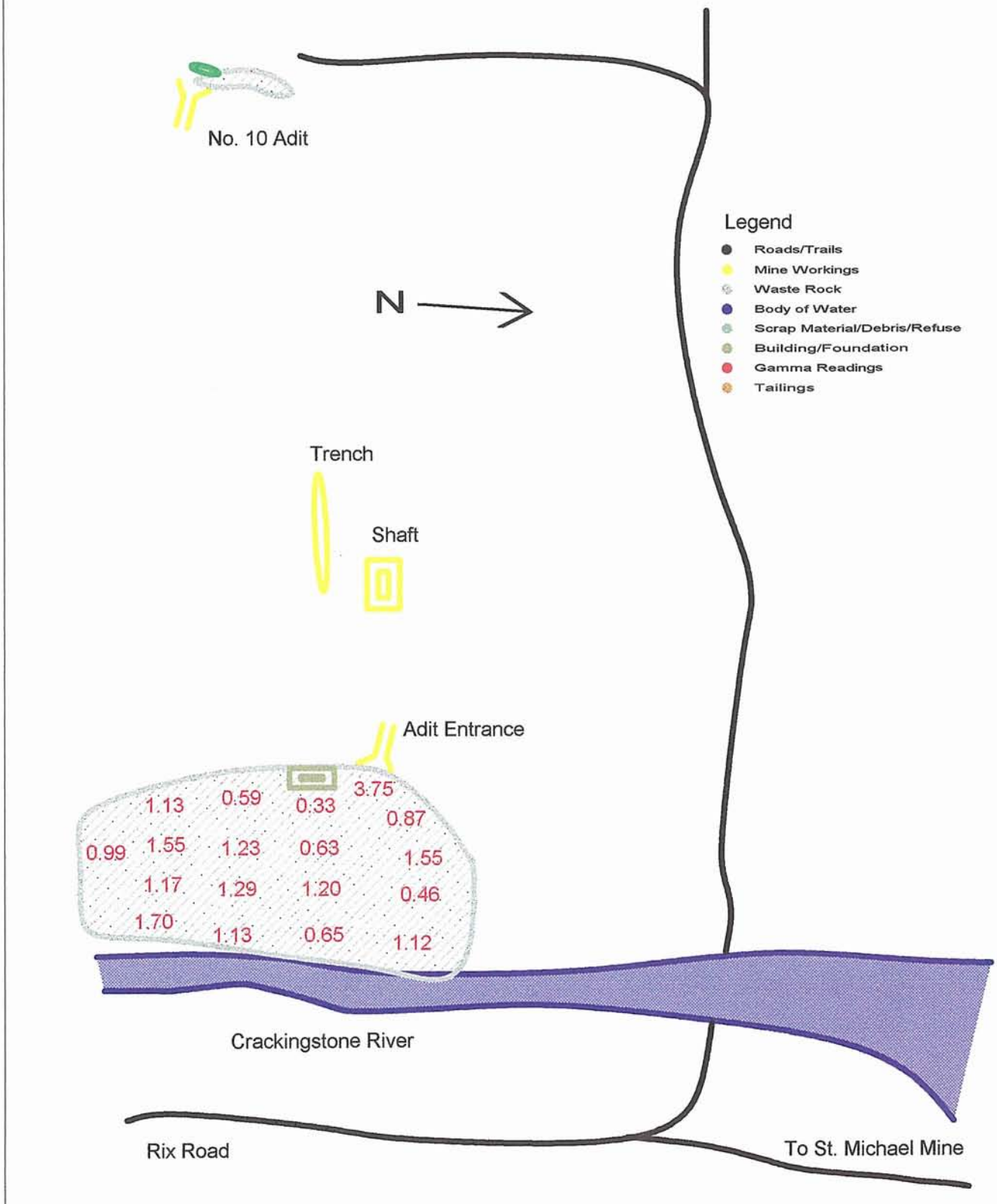
Approximately 1,000 feet (304.8 m) to the south west of the main mine workings, Rix Athabasca drove the No. 10 adit to explore the W part of one of the tension faults. No ore of any appreciable value was found in the west part of the fault. The adit is underlain by granitic layered gneiss containing minor granite and pegmatite dykes and sills (Saskatchewan Energy and Mines, 1991).

21.3 MINE HISTORY

In 1950 Rix Athabasca Uranium Mines Ltd. found 167 radioactive occurrences on the DD1 Concession during radiometric and geological surveys conducted over the concession. Fifty of these showings were considered worthy of further work. Three of these; the Smitty, Leonard, and No. 7 showings were eventually explored underground.

The Leonard deposit was first explored underground in 1951 by a 381-foot (116.1 m) adit driven along the largest vein (AF 74N10-0124) but work was suspended when attention shifted to the Smitty deposit in the following year, due to encouraging high-grade

21 and 22. Rix - Athabasca Uranium Mines Ltd. - Leonard and Zone No.10 Adit



intersectons made by diamond drilling on the Smitty Showing. Renewed interest was shown in 1955 and a small but very high grade ore shoot was mined above the adit level. This work warranted further expansion of the adit, and in 1956 the adit was widened and an internal shaft was sunk with lateral development on the 125-foot (38.1 m)and 250-foot (76.2 m) levels. In 1959, the shaft was deepened to 872 feet (265.8 m) and two more levels were added. As a result of an agreement with the Eldorado Mill shipments of ore to the Eldorado Mill commenced in March 1958 and continued until 1960 when the ore zone became depleted. It is believed that about 50,000 tons of ore grading 0.2% U3O8 and better were removed from the deposit.

In 1951-59 Rix Athabasca drilled many holes, totalling thousands of feet, across a 1 mile long, 500 feet wide zone covering an E-W-trending fault zone known as the '201' fault zone, located immediately N of the Leonard adit. This zone is believed to be the N controlling fracture of the ore zone in the Leonard Mine. A summary of the assessment work completed by Rix Athabasca for this period is as follows:

1951: Leonard No. 1 zone and adit: 8 diamond drill holes, adit and drift plans (74N10-0103)
1952 to 1953: 4 drillholes in "Leonard Valley" area (AF 74N10-0104)
1957-1959: mine plans, surface & underground drilling, 201 zone (74N10-0098)
1957-1960: 1st level: geology, 20 drillholes (AF 74N10-0099)
1957-1960: 2nd level: 61 drillholes, 206 zone (AF 74N10-0100)
1959-1960: 3rd level: 12 drillholes (AF 74N10-0101)
1959-1960: 4th level: 12 drillholes (AF 74N10-0102)

In 1959, Rix Athabasca mapped the BOOM 10 Fr and RIX 11Fr (AF 74N10-00105). By 1963, the adit was covered by CH claim No. 1 (S-81592).

In 1966 Mokta, a french owned company, drilled at least 20 diamond drill holes and 2 deeper ones over the western part of the '201' fault zone.

In 1968-69 Amok, another french owned subsidiary company, drilled at least 20 diamond drill holes over the entire zone which Rix Athabasca had drilled in the 1950's. The drilling activity completed in the 1960's did not reveal any extensions of ore zones found in the mine, and no further underground development was warranted at the time (Saskatchewan Energy and Mines Web, 1991).

21.4 GENERAL DESCRIPTION

The Leonard mine site consists of two distinct areas; the main adit and the shaft and trench (Site #47).

There was no evidence of recent visitation; due in large measure to the difficulty in accessing the site because of flooding.

21.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed a site inspection in 1976. At the time of inspection the road was not flooded or overgrown and the adit could be easily accessed by vehicle. There was not a great amount of litter on the site with the exception of several steel scrapers, an ore skip, and some steel piping and cable.

The adit entrance was sealed with some lumber. The shaft was partially enclosed in a building and there was no attempt to seal the shaft or the trench.

Vegetation was well established except for the waste rock near the adit entrance.

21.6 2000 INSPECTION

The inspection was completed on October 13, 2000 by (KHS) Environmental Management Group Ltd..

21.6.1 Mine Workings

The adit is located on the east side of the slope approximately 100 m from the road (N 59° 33.473'; W 108° 40.578'). The dimensions of the adit entrance are approximately 4 by 3 m and it is sealed with waste rock. The stability and condition of the closure is fair to good, but there are signs of early slumping near the top of the waste rock pile covering the adit. There is a concrete foundation immediately to the south of the adit entrance. The concrete is deteriorating with portions cracked and broken apart.

The shaft and trench are approximately 100 m above the adit entrance (N 59° 33.494'; W 108° 40.592'). The shaft opening is approximately 9.6 by 7 m in size and is collared by concrete. The opening consists of two shafts that come together at the surface. The opening is sealed with a drill rod grate and metal screening; all tied to the concrete collar. The grate is in good condition along with the concrete collar. There was no liquid discharge at the time of inspection

and there was no evidence of previous flooding.

The trench which is located immediately to the south of the shaft opening also has a similar type of grate covering it. The trench is approximately 24 m long, 1 m wide, and up to 7 m deep. The grate has deteriorated somewhat and there are openings in several places where access to the workings can be accomplished. The trench did have water in it at the time of inspection, although due to safety concerns it was not sampled during the inspection. There are no explicit signs of slumping in the area of the trench walls.

21.6.2 Waste Rock

Waste rock at the Leonard Mine is limited to the vicinity of the adit entrance. An area approximately 100 m by 20 m by 3 m was noted. Due to flooding as a result of the recent beaver activity, water extends to the toe of the waste rock. The area is extremely flat and stable. The area around the mine is extremely well vegetated except for the waste rock that has a few small birch, alders, and willows near the edge.

A gamma survey of the waste rock was conducted with measurements ranging from 0.33 to 1.70 μSv/hr.(see Site Map 21/22)

21.6.3 Buildings

The only foundation located is the one near the adit entrance. It is approximately 16 by 9.6 m in size and is in poor condition. There is very little evidence of the building that it once supported.

21.6.4 Debris/Rubble

There is a small amount of debris and scrap material in the area with it primarily being among the waste rock pile. The debris includes; an ore bucket, rails, ore skip, and an assortment of small metal piping.

21.6.5 Site Sampling

No sampling was completed at the location.

21.7 RISK ASSESSMENT RANKING

Leonard Mine

Public Safety Assessment	11.3 / 24
Environmental Assessment	5.0 / 26
Combined Total Assessment	16.3 / 50
RANKING	15 of 27

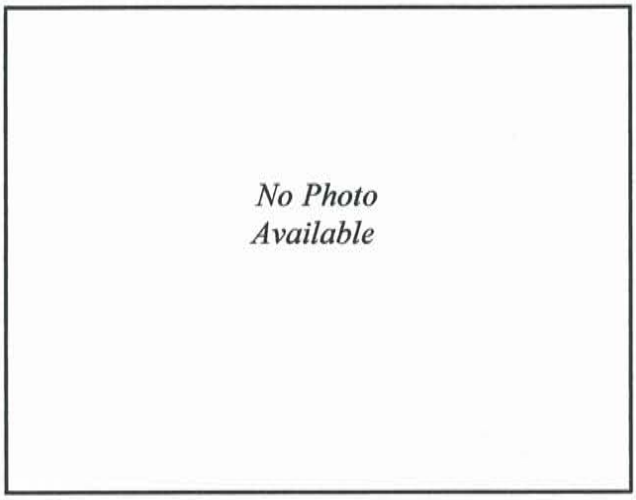
21.8 REHABILITATION RECOMMENDATION

The Leonard Adit should be re-excavated and waste rock placed within the adit to ensure that slumping does not occur in the future.

The Leonard shaft and trench do pose a safety risk. The closure methods are not entirely secure. At the time of inspection the shaft closure was secure, while the trench closure showed signs of deteriorating. The closure methods would not prevent a persistent explorer from accessing the workings.

The site is not easily accessible due to the flooding, however this could change.

22 RIX-ATHABASCA URANIUM MINES LTD. - No. 10 Adit



Site #49

Mineral Property #1414:
(formerly: CH claim No. 1; DD1 Concession)

Showing Name:
Rix Athabasca No. 10 Adit

22.1 LOCATION

Map:	126B (B5)
Latitude:	N59° 33' 40"
Longitude:	W108° 40' 30"
NTS:	74N-10-SE
UTM	Zone 12; NAD 1927
UTM	Northing: 6604626
UTM	Easting: 631384

Location: The Rix-Leonard Mine is located approximately 5 km southeast from Uranium City, and approximately 0.25 km north east of the north east end of Bertha Lake. The No. 10 adit is approximately 1 km north of the Leonard Mine.

Accessibility: Access to the mine site is in part by vehicle with the remaining completed on foot. Vehicle accessibility can be gained up to the junction of Rix Road and the road that leads north to St. Michael's Mine. From this point, due to beaver activity and subsequent flooding, the road has been washed out and access is gained by walking. It is approximately 100 m from the

junction of the two roads to the Leonard Mine, most of this area is flooded making access difficult. Once across the flooded area the Leonard mine site is approximately 500m south of the road on the second access (the first travels to the Leonard Mine).

22.2 GEOLOGY

The formations trend north east and dip steeply east. Seven sub-parallel tight, tension faults transect the country rock and join the major structures. The deposit is of the vein type. Pitchblende, accompanied by galena, chalcopyrite, and pyrite occur in carbonate veins along the faults. It also is coating breccia fragments within the wall-rock of the tensin faults. Sampling of the best mineralized vein on surface revealed a 150-foot (45.7 m)length which averaged 0.38% U_3O_8 across 5.4 feet and a 130-foot length which graded 0.51% U3O8 across 2.2 feet (0.67 m), separated by 73 feet (22.3 m) of vein material which fell below ore grade. Underground exploration disclosed several pods of ore erratically distributed within the faults to a vertical depth of abut 400 feet (121.9 m). Invariably, richest mineralization is where faults cut contacts between amphibolite and granite. Characteristic red alteration of wall rocks is common around radioactive veins.

The mine site is underlain by a north east-trending body of amphibolite, locally called the Jean Lake amphibolite, containing several sills of alaskite granite, forming a prominent ridge between the Leonard and '201' fault structures. All rocks belong to the Tazin Series of paragneisses.

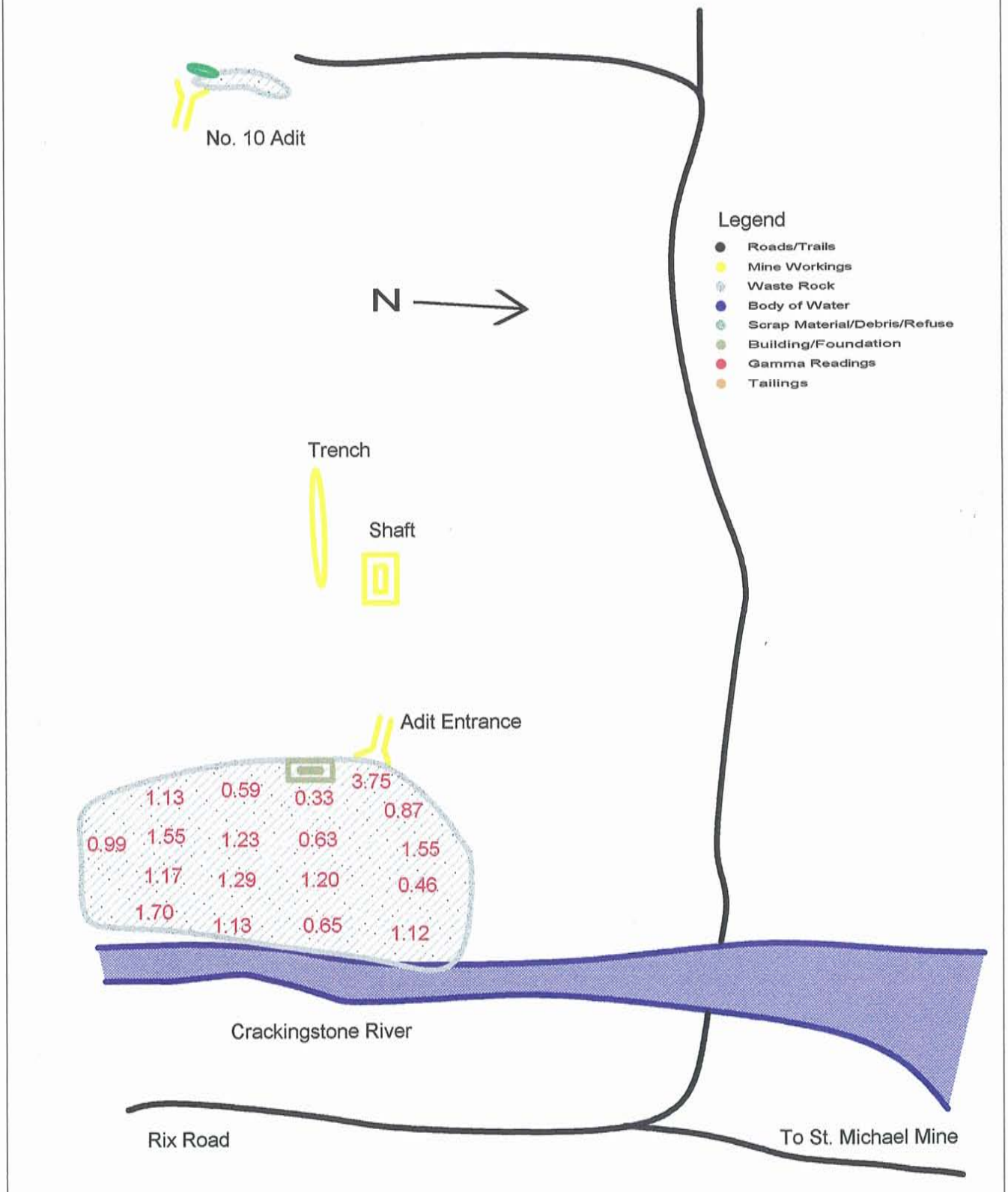
Approximately 1,000 feet (304.8 m) to the south west of the main mine workings, Rix Athabasca drove the No. 10 adit to explore the W part of one of the tension faults. No ore of any appreciable value was found in the west part of the fault. The adit is underlain by granitic layered gneiss containing minor granite and pegmatite dykes and sills (Saskatchewan Energy and Mines, 1991).

22.3 MINE HISTORY

In 1950 Rix Athabasca Uranium Mines Ltd. found 167 radioactive occurrences on the DD1 Concession during radiometric and geological surveys conducted over the concession. Fifty of these showings were considered worthy of further work. Three of these; the Smitty, Leonard, and No. 7 showings were eventually explored underground.

In 1959, Rix Athabasca mapped the BOOM 10 Fr and RIX 11Fr (AF 74N10-00105). By 1963, the adit was covered by CH claim No. 1 (S-81592).

21 and 22. Rix - Athabasca Uranium Mines Ltd. - Leonard and Zone No.10 Adit



In 1966 Mokta, a french owned company, drilled at least 20 diamond drill holes and 2 deeper ones over the western part of the '201' fault zone.

In 1968-69 Amok, another french owned subsidiary company, drilled at least 20 diamond drill holes over the entire zone which Rix Athabasca had drilled in the 1950's. The drilling activity completed in the 1960's did not reveal any extensions of ore zones found in the mine, and no further underground development was warranted at the time (Saskatchewan Energy and Mines Web, 1991).

22.4 GENERAL DESCRIPTION

The No. 10 adit is locate approximately 1000 m north of the Leonard adit.

There was no evidence of recent visitation; due in large measure to the difficulty in accessing the site because of flooding.

22.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed a site inspection in 1976.

Vegetation was well established except for the waste rock near the adit entrance.

22.6 2000 INSPECTION

The inspection was completed on October 13, 2000 by (KHS) Environmental Management Group Ltd..

22.6.1 Mine Workings

The adit is on the opposite slope of the Leonard adit. The adit entrance is sealed and extremely overgrown. There was no evidence of slumping, liquid discharge, or previous flooding.

22.6.2 Waste Rock

Little if any waste rock is located at or near the adit entrance.

22.6.3 Buildings

NO evidence was found of any buildings.

22.6.4 Debris/Rubble

There is a small amount of debris and scrap material in the area., limited essentially to the remains of a fuel stand and three drill rods.

22.6.5 Site Sampling

No sampling was completed at the location.

22.7 RISK ASSESSMENT RANKING

Public Safety Assessment	6.4 / 24
Environmental Assessment	2.0 / 26
Combined Total Assessment	8.4 / 50
RANKING	23 of 27

22.8 REHABILITATION RECOMMENDATION

The No. 10 adit entrance does not pose any risk to public safety.

23 ST. MICHAEL MINES LIMITED

Site #50 - Highgrade Site #12

Mineral Property #1409

Showing Name:
St. Michael Uranium Mine

23.1 LOCATION

Map: 126B (B5)

Latitude: N59° 34' 10"
Longitude: W108° 39' 50"

NTS : 74N-10-SE

UTM Zone 12; NAD 1927
UTM Northing: 6605576
UTM Easting: 631980

Location: The St. Michael Mine site is located approximately 1 km west of Uranium City. The deposit is located approximately 0.4 km south of the southwest end of Jean Lake.

Accessibility: Access can only be gained from the south entrance by walking on an overgrown road leading north from Rix road. There was a direct route

from Uranium City but this road was flooded and washed out at the time of inspection.

23.2 GEOLOGY

The mineralization is in a wide east-trending zone of joint-type fractures and shears. It is probable that the zone branches from the Leonard Fault. The zone dips steeply south and a band of brecciated rock in the hanging-wall is cemented with calcite, chlorite and mud-like gouge. Pitchblende occurs as veinlets and small grains in the matrix of the breccia. At least five ore shoots were outlined within an area 800 ft by 600 ft (244 x 183 m). The largest of these is about 50 ft (15.2 m) long and 4 ft (1.2 m) wide. These ore shoots are distributed along tight fractures, or grouped in closely spaced, short,tight fractures. They consist of pods and veins of pitchblende.

The area is underlain by a northeast-trending sequence of quartz- feldspar-chlorite-sericite schist and gneiss, cut by a wide east-trending zone of joint-type fractures and shears, some of which are occupied by diabase dykes.

Diamond drilling was completed over the radioactive zones and 33 intersections returned an average value of 0.4% U_3O_8 over 1.55 ft (0.47 m)(Saskatchewan Energy and Mines, 1988).

23.3 MINE HISTORY

Between 1952 and 1953, the showing area was covered by Lodge Bay Uranium Mines RAZ 5 FR. Lodge Bay mapped the property (AF 74N10-0155).

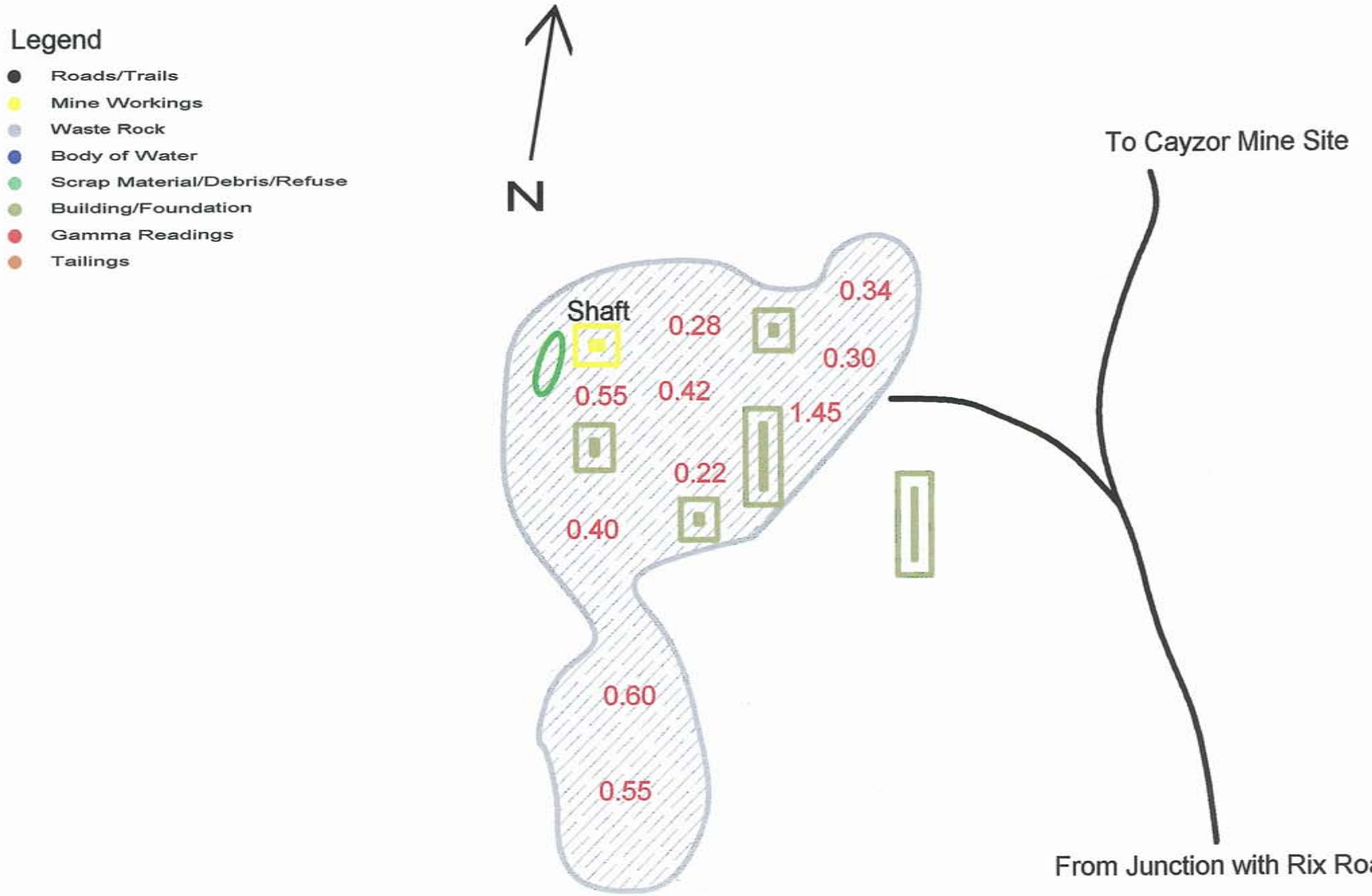
In December 1954, St. Michael Uranium Mines Ltd. acquired ownership of a small group of 7 claims on which previous work by Lodge Uranium Mines had outlined four radioactive zones. Prospecting by trenching and surface diamond drilling done by St. Michael Mines during the period 1954-55 obtained several encouraging results.

Because of this a shaft was sunk in 1955 and completed in early 1956 to a depth of 420 ft (128 m) with stations cut at 229 and 354 ft (69.8 and 107.9 m) below the collar.

During most of 1956, 7,000 ft (213.4 m) of lateral development in the form of drifting and cross-cutting was done equally between the two levels to assess the values obtained from the surface drilling. Late in 1956, due to insufficient ore reserves, the operation was closed.

Late in 1958, St. Michael Uranium Mines Ltd. became incorporated by Cadamet Mines Ltd. The following year E. Amendolayine obtained a lease on the property for high

23. St. Michael Uranium Mines Ltd.



grading purposes. The stockpile was sorted and about 250 tons of ore grading 0.15% U3O8 were shipped to the mill (Saskatchewan Energy and Mines Web Page; Mineral Index; 1988).

23.4 GENERAL DESCRIPTION

The mine site covers a relatively small area, approximately 150 m².

There was no evidence of recent visitation.

23.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller inspected St. Michael Mine site in 1976. At the time of his inspection access could be gained from the road leading west from Uranium City. There was a small amount of waste rock in the area. The headframe was standing but was in poor condition. There was a large amount of litter primarily in the form of dismantled buildings. The shaft was cemented over and the area was well vegetated, even on the waste rock.

23.6 2000 INSPECTION

The inspection was completed on October 14, 2000 by (KHS) Environmental Management Group Ltd..

23.6.1 Mine Workings

St. Michael Mine consists of a single shaft (N 59° 34. 119' and W 108° 39.585'). The shaft is approximately 5 x 4 m in size and has been sealed with concrete with a wooden frame composed of 12" x 12" (0.3 x.3 m) timbers. The timbers are showing signs of deteriorating but the overall condition of the cap is relatively good. There was no liquid discharge at the time of inspection and no evidence of previous flooding.

Remnant of the burnt headframe surround the area of the sealed shaft and include an ore and man skip and other assorted scrap steel.

23.6.2 Waste Rock

Waste rock is spread throughout the area with the largest proportion in the area around the shaft. The waste rock is stable but has relatively steep sides. Vegetation, including birch and small conifers are scattered throughout the waste rock.

A gamma survey of the waste rock was conducted with measurements ranging from 0.22 to 1.45 μSv/hr.(see Site Map 23)

23.6.3 Buildings

There are five concrete foundations throughout the area. Four of the five foundations are level with the ground while the fifth is a concrete basement. The concrete is deteriorating,

23.6.4 Debris/Rubble

There is a relatively large amount of debris on the site which is concentrated in the vicinity of the shaft. It appears to be the remnants of the headframe and support building. Other scrap material in the area includes remnants of other buildings, tracks, ore carts, barrels, piping, cables, and various scrap metal materials.

23.6.5 Site Sampling

No sampling was completed at this site.

23.7 RISK ASSESSMENT RANKING

Public Safety Assessment	11.3 / 24
Environmental Assessment	4.0 / 26
Combined Total Assessment	15.3 / 50
RANKING	17 of 27

23.8 REHABILITATION RECOMMENDATION

The primary issue with this site is the amount of debris near the shaft and the one basement foundation.

If rehabilitation activities were taking place in the area and hydraulic equipment were available, the site could be improved by spending a day burying material and levelling the waste rock.

24 STRIKE LAKE URANIUM MINES LIMITED

Site #51 - Strike lake Area

Mineral Property #1288:
(formerly: S-99368; EO-MH claims; STRIKE claim group)

Showing Name:
STRIKE Claims Exploration Adit or Strike Uranium Zone No. 7

24.1 LOCATION.

Map	126B
Latitude:	N59° 34' 45"
Longitude:	W108° 26' 15"
NTS :	74N-09-SW
UTM	Zone 12; NAD 1927
UTM	Northing: 6607129
UTM	Easting: 644724
Location:	The Strike Uranium Mine adit is located on the north shore of Strike Lake, approximately 1 km north of Ace Lake, and approximately 5 km from the Eldorado town site.
Accessibility:	Access is easily gained via a very good road from the Eldorado town site.

24.2 GEOLOGY.

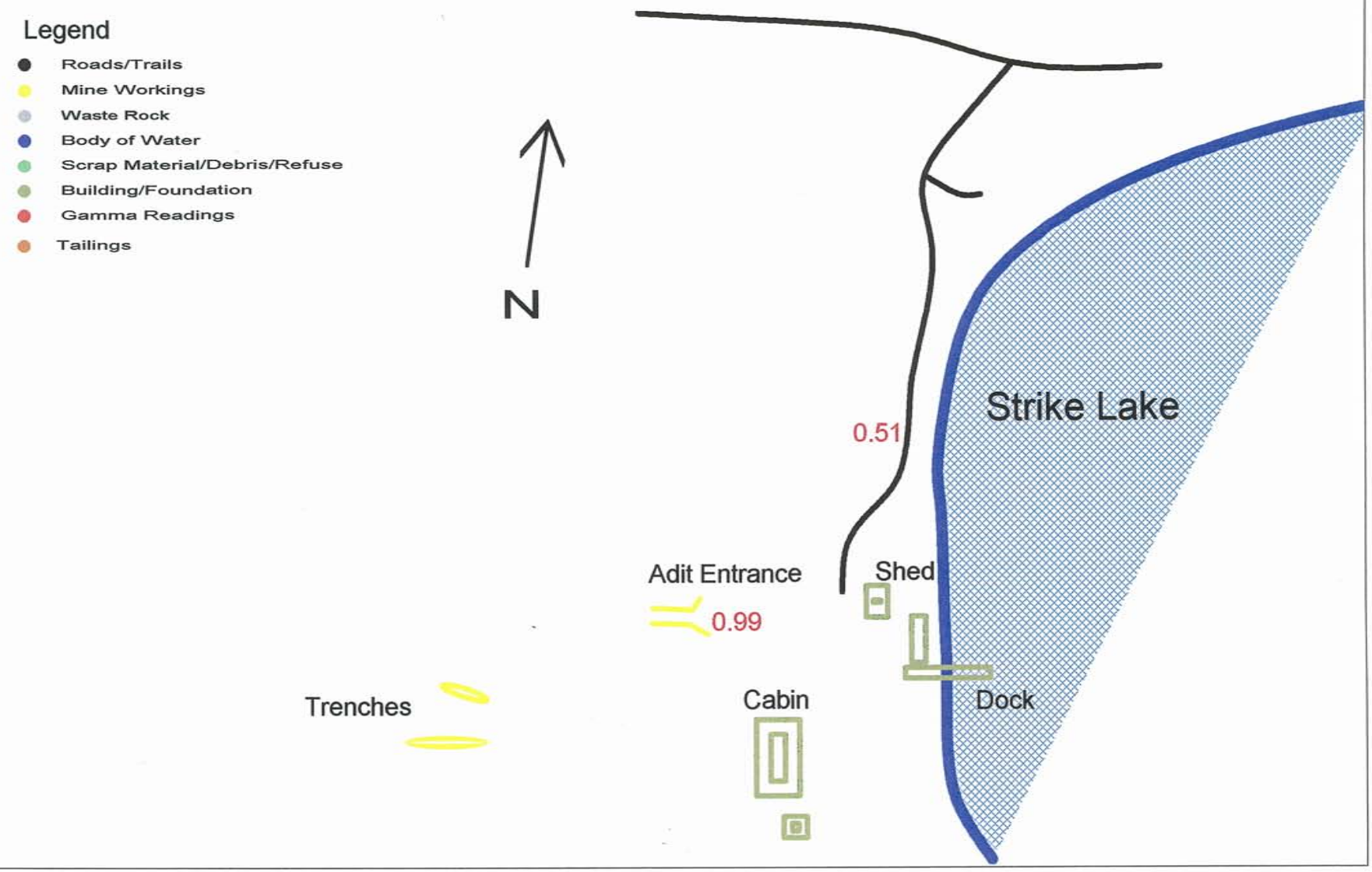
The Strike Uranium Adit (Zone no. 7) area is underlain by a bedrock consisting of a NE-trending, tightly folded sequence of amphibolite, quartzite, and chlorite. Sericite rocks of the Tazin series, that exhibit varying degrees of granitization and most of the quartzites are relatively unaltered whereas the amphibolite is unvariably granitized and in part, has been replaced by granite. The chlorite-sericite schist may be interbedded with the quartzite in places.

The bedrock is cut by numerous west north west trending radioactive fracture some of which are mineralized by pitchblende, while others are filled with diabase. Diamond drilling indicated that an east-trending fault extends the length of Strike Lake and probably most of the north west-trending fractures exposed near the shore of this lake branch from this structure. Most of these radioactive fractures are short and discontinuous and range in width from a fraction of an inch to several feet. They are lagely filled with quartz and calcite accompanied in places by pyrite and epidote. Pitchblende disseminated grains, or thin fracture coatings, and as small veins and massive pods. Wall rocks variably heavily iron stained. The main zone, No.7, consists of 4 parallel fractures in granitized amphibolite that strikes north 20°-50° west and have been traced from the shore of the lakes NW-wards for about 200 feet (60.9 m). All of the fractures thin and disappear to the north west but probably extend to the south east under Strike Lake. Four diamond drill holes were put down to test the fractures at a vertical depth of 100 feet (30.5 m) and radioactive vein material was intersected in each hole. To further evaluate these veins in Zone 7 an adit was driven from near the shore of the lake and intersected the veins at a vertical depth of 40 feet (12.2 m), about 160 feet (48.8 m) from the portal. Short drifts were driven both to the north west and the south east along the veins. The best mineralization was found in the two westerly fractures which was estimated to grade 0.25-0.3% across 1.2 feet (0.37 m) for an aggregate length of 80 feet (24.4 m). Several other north west-trending fractures in the mine area are mineralized but are too narrow to be of economic interest. Two of these fractures contain pitchblende in quartz veins accompanied by clusters of garnet (Saskatchewan Energy and Mines, 1992).

24.3 MINE HISTORY

The STRIKE Group, located about a half mile NE of Ace Lake consists of 4 claims surrounding Strike Lake. These claims were acquired by Strike Uranium Mines Ltd. in 1950 and during the initial exploration program 18 radioactive fractures were discovered on the north and south shores of Strike Lake. Several of these were tested by diamond drilling and trenching in 1952-53. In 1953 Zone 7 (the main zone) was explored by an adit, driven north west from the north shore of Strike Lake. In 1954, often work on the adit had halted, the property was acquired by New Imperial Mines Ltd. and several holes were drilled to test a topographic lineament extending along Strike Lake. In 1955 Rock

24. Strike Uranium Mines Ltd.



Hill Uranium Ltd did some trenching and scintillometer survey. In 1969 about 60 tons of ore was shipped to Lorado custom mill from the Strike adit and surface showings nearby.

By 1966, the land between Teapot and Strike Lakes was covered by Mokta claims EO 1-10 and MH 12-23. In this year, Mokta flew an airborne radiometric survey and completed ground examination of the 15 anomalies (AF 74N09-0182). Zones 32 and 33 registered 4,000 cps and zone 5 (33 zone) registered 32,000 cps.

In 1978, the T-15 trench was blasted and sampled. Sample SL-RP-203 returned 0.505% U3O8 (AF 74N09-0278).

On April 4, 1987, Rod Dubnick staked the Strike adit area as S-99368. In July 1987, R. Dubnick completed mapping, prospecting and rock sampling in the adit area (AF 74N09-0299). No significant precious metal assays were returned. On September 1, 1990, S-99368 was allowed to lapse (Saskatchewan Energy and Mines,1992).

24.4 GENERAL DESCRIPTION

The mine site covers a small area, a cabin owned by Rod Atton is approximately 25 m from the adit entrance. Mr. Atton lives here year round making the site his home.

24.5 HISTORY OF PREVIOUS INSPECTIONS

Mueller completed an inspection in 1976. The cabin was considered a summer residence, the adit entrance was open, and the site was free of debris. There was not a lot of vegetation in the area.

24.6 2000 INSPECTION

The inspection was completed on October 16, 2000 by (KHS) Environmental Management Group Ltd..

24.6.1 Mine Workings

The mine consists of a single adit approximately 3 by 2 m driven into the hillside approximately 25 m from the cabin. The entrance has a door that is not locked. The overall condition of the adit entrance is good. The cabin owner is presently using it for storage in the winter and cold storage in the summer. There was no liquid discharge or evidence of previous flooding.

There is also some minor trenching on the hillside approximately 30 m up from the adit entrance.

24.6.2 Waste Rock

There is a moderate amount of waste rock in the area. It has been used for road construction to the site and there is rock scattered in the vicinity of the cabin and shore as well as to the east of the road as you enter the site. The waste rock is very stable and supports vegetation. The activities of the cabin owner limit the vegetation around the adit entrance, the roadway, and a small area to the east of the road.

A gamma survey of the waste rock was conducted with measurements ranging from ranged from 0.51 to 0.99 μSv/hr.(see Site Map 1)

24.6.3 Buildings

There were no buildings found in the area that could be associated with the mining activity. The cabin and a small shed are being maintained.

24.6.4 Debris/Rubble

The is very little debris in the area, and any that was observed appeared could not be attributed to the mine.

24.6.5 Site Sampling

No sampling was completed at the site.

24.7 RISK ASSESSMENT RANKING

Public Safety Assessment	6.5 / 24
Environmental Assessment	0.0 / 26
Combined Total Assessment	6.5 / 50
RANKING	25 of 27

24.8 REHABILITATION RECOMMENDATION

There is very little rehabilitation needed at the Strike Lake Mine site. The cabin owner, Rod Atton, utilizes the adit as a year round cold storage. Gamma readings are low and the adit entrance appears to be stable and in good condition.

25 URANIUM RIDGES MINES LIMITED

Site #52 - Pitchie Claims

Mineral Property #1229:
(formerly: S-103635; PITCHE claims)

Showing Name:
PITCHIE Uranium Zone 1 - south extension of Lorado Deposit

25.1 LOCATION

Map:	126B (D5)
Latitude:	N59° 29' 20"
Longitude:	W108° 40' 35"
NTS :	74N-07-NE
UTM	Zone 12; NAD 1927
UTM	Northing: 6596584
UTM	Easting: 631587

Location: Uranium Ridge Mine is located approximately 1.25 km south of Hanson Bay, Beaverlodge Lake. It is approximately 1 km west of the Lorado Mine and approximately 200 m north of the main road leading to Lorado Mine.

Accessibility: Access is easily gained by driving directly to the adit entrance.

25.2 GEOLOGY

The PITCHE Group, on which the showing occurs, is underlain by graphite schist which contains zones of interbedded granite, and granitized metasediments and quartzites. Most of the occurrences are confined to the unit of graphite schist that occupies much of the southern portion of the property. Pitchblende occurs mainly as vein deposits in both the northeast and northwest-trending fractures in the graphite schist and interbedded quartzites.

The main occurrence, Zone No. 1, is approximately 2800 ft (853.4 m) west-southwest of the Lorado Mine. Seven other minor zones occur in an area extending in a southwest-northeast direction around Zone #1. The main zone occupies a narrow shear zone striking 345° and dipping steeply east and was traced on surface for a strike length of 300 ft (91.4 m). The vein material is banded with pyrite on both walls and bands rich in pitchblende, nolanite (iron vanadate), and pyrite constitute the centre of the vein. Other minerals noted are chalcopyrite, specular hematite, quartz and chlorite (Saskatchewan Energy and Mines, 1996).

25.3 MINE HISTORY

The PITCHE group of 12 claims, bounded on the east by the Lorado property, was staked in 1950 and optioned to Uranium Mines Ltd. in 1951. During the year the company carried out geological mapping and radiometric surveys and completed 20 diamond drillholes totalling 2299 ft (700.7 m). The results were inconclusive and the option was dropped.

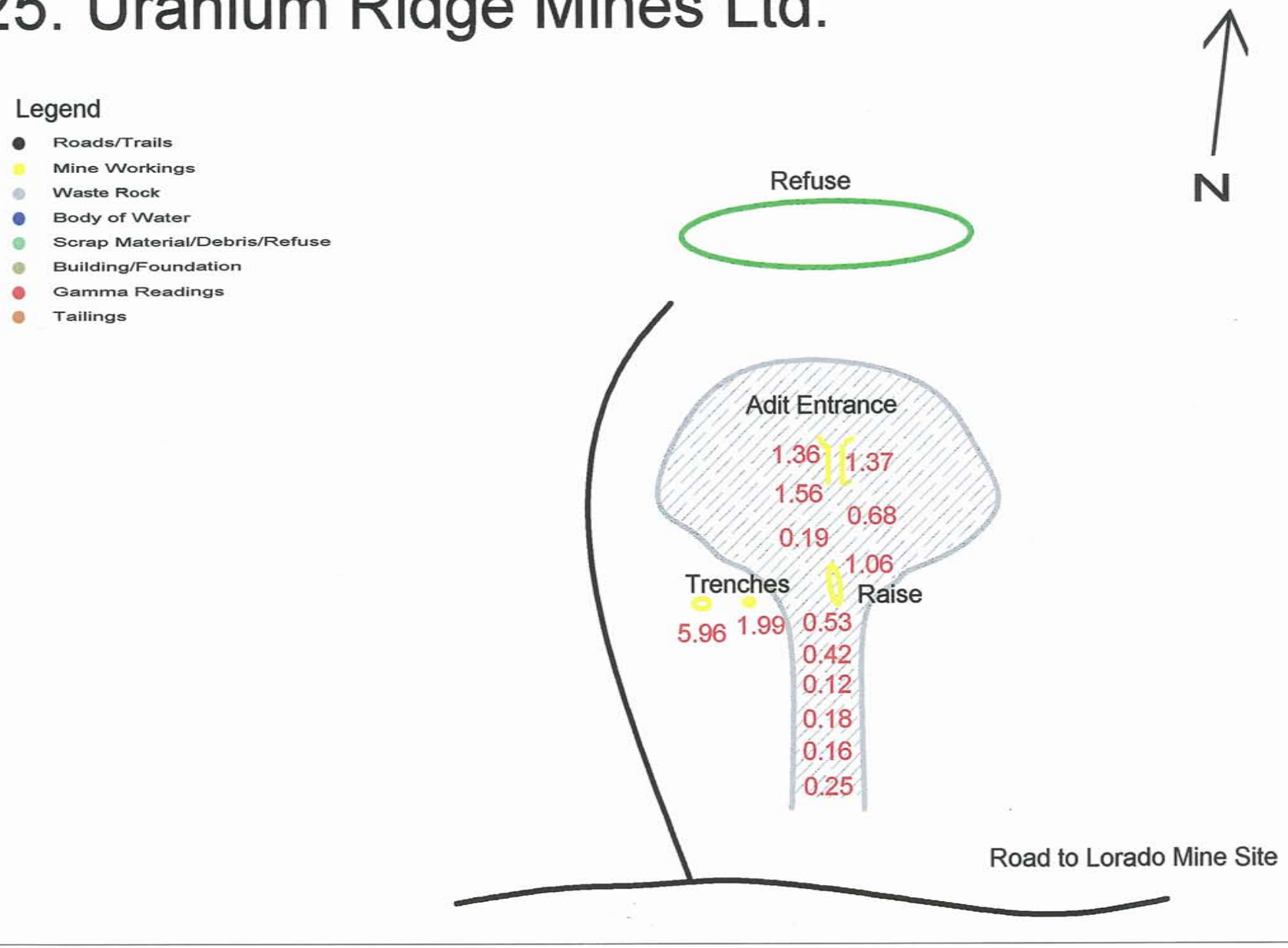
In 1952 the property was optioned to Consolidated Mining and Smelting Company of Canada Ltd. who carried out further geological mapping and sampling but later dropped the option.

In 1954 interest in the showing was re-activated and the claims were purchased by Uranium Ridge Mines Limited. The company examined the #1 zone by a deep trench for a strike length of 300 ft (91.4 m) and did a limited amount of surface work on the other showings. The showing was believed to be the extension of the Lorado South Zone.

From October 1954 to October 1955, 74 holes totalling 22,000 ft (6705.6 m) were drilled. Most of these holes were put down in the vicinity of the No. 1 zone and the Lorado extension zone.

In the following year the Lorado extension zone was explored from the first level of the Lorado mine by 700 ft (213.4 m) of lateral work and 4399 ft (1340.8 m) of diamond drilling. This work failed to disclose adequate ore reserves and interest in the property

25. Uranium Ridge Mines Ltd.



lapsed.

In 1978, the property was leased to Hoymark Mines for highgrading and 1225 tons of ore was shipped by the following summer. The underground operation returned 350 tons grading 0.53% U_3O_8 and 175 tons grading 0.75% U_3O_8. 700 tons of ore were obtained by sorting stockpiles of development ore.

On 6 September, 1991, Rod Dubnick staked the showing area as S-103635. In 1993, he completed prospecting and rock sampling of the property in an effort to locate kimberlitic outcrops (AF 74N07-0330). No kimberlite was located and the claim was allowed to lapse on 1 February, 1995 (Saskatchewan Energy and Mines Web Page; Mineral Index; Revised 1996).

25.4 GENERAL DESCRIPTION

The mine site covers an area of approximately 0.25 km². There is evidence of recent visitation in the form of domestic garbage and debris deposited in front of the adit.

25.5 HISTORY OF PREVIOUS INSPECTION

Mueller completed an inspection in 1976. The area was relatively free of debris and there was little vegetation in the area. The adit entrance and raise had been blasted and covered with waste rock/glacial till from the area, the result was a large trench from the adit entrance to the raise.

25.6 2000 INSPECTION

The inspection was completed on October 12, 2000 by (KHS) Environmental Management Group Ltd..

25..6.1Mine Workings

The mine consists of an adit (N 59° 29.359' and W 108° 40.819) near the base of the slope and a raise to ground surface approximately 25 m up the slope from the adit

entrance. The adit, which was blasted and covered with waste rock, is showings signs of slumping and the stability of the closure is poor. At the time of the inspection there was an opening (approximately 0.5 by 0.5 m in size) and evidence that wildlife was occupying the adit. There was no liquid discharge at the time of the inspection, however there was evidence of previous flooding.

The raise is located approximately 25 m from the adit entrance. The opening has also been

sealed with waste rock and blasted to form a trench down the slope to the adit entrance. At the time of inspection a 1.5 by 1 m hole which provides direct access to the workings was observed. The condition of the raise is extremely poor and there is extensive slumping around the hole. There was no liquid discharge at the time of inspection and there was no evidence of previous flooding.

No support buildings were located in the area of the site.

Evidence of trenching was observed on the top of the hill in which the raise was located. Two small trenches, approximately 1 by 2 m and 0.5 by 0.75 m, were located.

25.6.2 Waste Rock

There is a moderate amount of waste rock at the site. The main location of the waste rock extends approximately 50 m in front of the adit entrance and is relatively flat. The area is stable and vegetation is scarce.

A gamma survey of the waste rock was conducted with measurements ranging from 0.12 to 5.96 μSv/hr.(see Site Map 25)

25.6.3 Buildings

There was no evidence of buildings or foundations in the area.

25.6.4 Debris/Rubble

There is a small amount of mine related debris located on the top of the hill above the adit and raise, including some steel debris and the remnants of machinery.

The majority of the debris at the site is located immediately in front of the adit entrance and was deposited after the mine operations ceased. The amount of domestic debris is extensive and ranges from washing machines to chairs and snowmobile helmets.

25.6.5 Site Sampling

There was no sampling completed at the site.

25.7 RISK ASSESSMENT RANKING

Public Safety Assessment	11.5 / 24
Environmental Assessment	6.0 / 26
Combined Total Assessment	17.5 / 50
RANKING	9 of 27

25.8 REHABILITATION RECOMMENDATION

At the time of inspection, the raise identified approximately 25 m up slope from the adit entrance was marked with flagging tape, however the opening poses a risk to wildlife and human safety. The risk associated with the opening is not in any way mitigated by access because the site is readily accessible by vehicle and shows signs of very recent visitation.

The adit shows signs of slumping and the general degradation of previous closure methods allows for relatively easy entry to the workings of the mine, if desired.

Both areas of the site require some rehabilitation.

The adit should be re-excavated and waste rock placed within the hole in order to prevent slumping and it's eventual re-opening.

The raise should be filled with waste rock or till material which is readily available at the site. In addition, the accumulated debris in front of the adit should be disposed of either in the adit before it is re-sealed or at another appropriate location.

26 WASTE DISPOSAL SITE #1 - CAYZOR MINE AREA

26.1 LOCATION

Map	(Approximately) 126B (B5)
Latitude:	N59° 35.058'
Longitude:	W108° 37.491'
NTS	74N-10-SE
UTM	UTM Zone 12; NAD 1927
UTM	Northing: 6607014
UTM	Easting: 633264

Location: The waste disposal site is located approximately 20 m west of the overgrown road that leads to Consolidated Beta Gamma Mine. The site is approximately 1.0 km north of the Cayzor site.

Access: Access to the site can be obtained from the south road that leaves the Cayzor Mine site and travels to the Consolidated Beta-Gamma Site. The road is very overgrown and not accessible by vehicle in its present

condition.

26.2 GEOLOGY

Not applicable.

26.3 HISTORY

Based on the type of materials found and the close proximity to the Cayzor mine site it is assumed that this was a disposal area for domestic wastes from the Cayzor Mine.

26.4 GENERAL DESCRIPTION

The area is an old refuse dump site that appears to have been used during mining operations.

26.5 HISTORY OF PREVIOUS INSPECTIONS

No history on the site could be located.

26.6 2000 INSPECTION

The inspection was completed on October 12, 2000 by (KHS) Environmental Management Group Ltd..

The was no evidence of recent visitation at the site.

26.6.1 Mine Workings

Not applicable.

26.6.2 Waste Rock

None apparent.

26.6.3 Buildings.

None apparent

26.6.4 Debris/Rubble

The area is approximately 15 by 30 m in size. The rubble appears to a maximum of approximately 1 m deep. The area consists of an assortment of scrap metal and other domestic materials (tin cans, etc. and small automotive parts).

26.6.5 Site Sampling

Gamma levels were similar to those of the surrounding undisturbed area.

26.7 RISK ASSESSMENT RANKING

Public Safety Assessment	5.4 / 24
Environmental Assessment	5.0 / 26
Combined Total Assessment	10.4 / 50
RANKING	21 of 27

26.8 REHABILITATION RECOMMENDATION

The area does not have any significant public or environmental hazard, although it is an unsightly area.

Any rehabilitation activity at the Cayzor site should include the clean up of this area by burial of the debris.

27 WASTE DISPOSAL SITE #2 - LORADO MILL AREA

27.1 LOCATION

Map:	126B (D5)
Latitude:	N 59° 30.319'
Longitude:	W 108° 42.215'
NTS	74N-07-NE
UTM	Zone 12; NAD 1927

Location: The site is located approximately 1.5 km beyond the Lorado mill site on the road to the Lorado mine. The site is found approximately 20 m south of the intersection between the Lorado mill road and the powerline - approximately 10 m off the west side of the road.

Access: The site is easily accessed by vehicle on the road that travels from the Lorado mill site to the Lorado Mine site.

27.2 GEOLOGY

Not applicable.

27.3 SITE HISTORY

Based on an observation of materials within the site it appears to have been created during the operation or decommissioning of the Lorado mill. This is based on the fact that most of the material appears to be that which would have been generated by a milling operations.

27.4 GENERAL DESCRIPTION

The site is located approximately 10 m to the west of the road and the majority of the material is concentrated in an area approximately 45 m long and 20 m wide.

27.5 HISTORY OF PREVIOUS INSPECTION

No history on the site could be located.

27.6 2000 INSPECTION

The inspection was completed on October 12, 2000 by (KHS) Environmental Management Group Ltd..

The was no evidence of recent visitation at the site.

27.6.1 Mine Workings

Not applicable.

27.6.2 Waste Rock

None apparent.

27.6.3 Buildings.

None apparent.

27.6.4 Debris/Rubble

The site appears to be a waste disposal area used during either the operation or the decommissioning of the Lorado mill. The area is approximately 45 m long by 20 m wide. The refuse is piled approximately 1 to 2 m high and consists of various debris and scrap metal; ore barrels, piping, machinery, etc. There are residual fines or chemicals in a number of barrels.

Gamma levels measured within the waste disposal site ranged from background (0.07 - 0.23 μS/hr) to 5.56 μS/hr.

27.7 RISK ASSESSMENT RANKING

Public Safety Assessment	14 / 24
Environmental Assessment	9.0 / 26
Combined Total Assessment	23.0 / 50
RANKING	5 of 27

27.8 REHABILITATION RECOMMENDATION

There are relatively high gamma levels in a number of areas of the dump.

There is a large amount of debris and the piles of rubble/debris are not physically stable pile.

Careful consideration must be given to the manner in which, and the location at which, this material is disposed of.

28 ANGLO-ROUYN MINES LIMITED

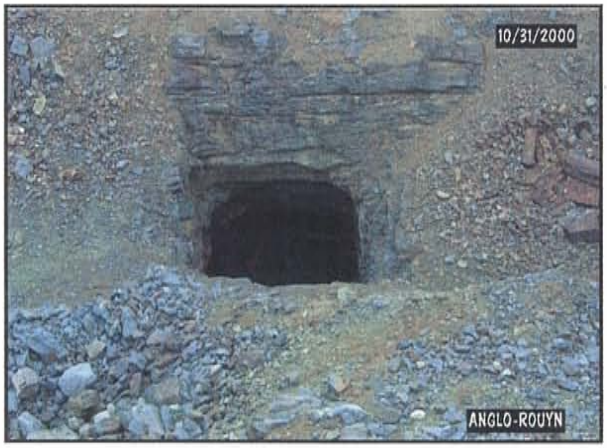
Waden Bay, Lac La Ronge

Mineral Property #0732

CBS 7244, S-101772 (ML 5090; 5002 + 5088; CU-AG-AH-MOORE-PIPE Claims)

Showing Name: Anglo Rouyn Mine (Open Pit Orebody A, Orebodies B and C) or Moose Point Cu-Zn Showin

28.1 LOCATION



Latitude:	N55° 17' 38"
Longitude:	W105° 00' 15"
NTS :	73P-06-SE
UTM	Zone 13; NAD 1927
UTM	Northing: 6127281
UTM	Easting: 499735

Location: The Anglo-Rouyn Mine is approximately 35 km north of La Ronge. It is located on the north shore of Waden Bay, Lac La Ronge. The Anglo Rouyn Mine property is located just north of Ore Bay on the Williams Peninsula at the northern end of Lac La Ronge.

Accessibility: The site is accessed via turning off of Highway 102 to Stanley Mission, then turning right immediately after crossing the Lynx Creek. The site is approximately 6.1 km after the turn.

28.2 GEOLOGY

The mine property is underlain by northeast-trending, north dipping, mafic to mafelsic metasedimentary gneisses and tuff-derived supracrustals (to the south) and the sheared Jepson Lake granodiorite (to the north). The main mineralized zone occurs in metasediments and tuffs 25 to 30 m from the hanging wall granodiorite contact. Further to the southwest an irregular granite plug with numerous narrow pegmatite, granodiorite, and diorite dykes and sills occurs. The mine horizon extends 20 km northeast to Rob Lake.

The main orebody or A lens, which outcrops east of A Lake, can be split into four zones, the largest being 6 km long, 60 m deep and 15 m thick, which occur as en echelon (Zones 1, 3 and 4) and subparallel (Zones 1 and 2). The mineralization has been traced 8 km to the southwest and to Crescent Lake 8 km to the northeast. The A orebody plunges gently to the southwest.

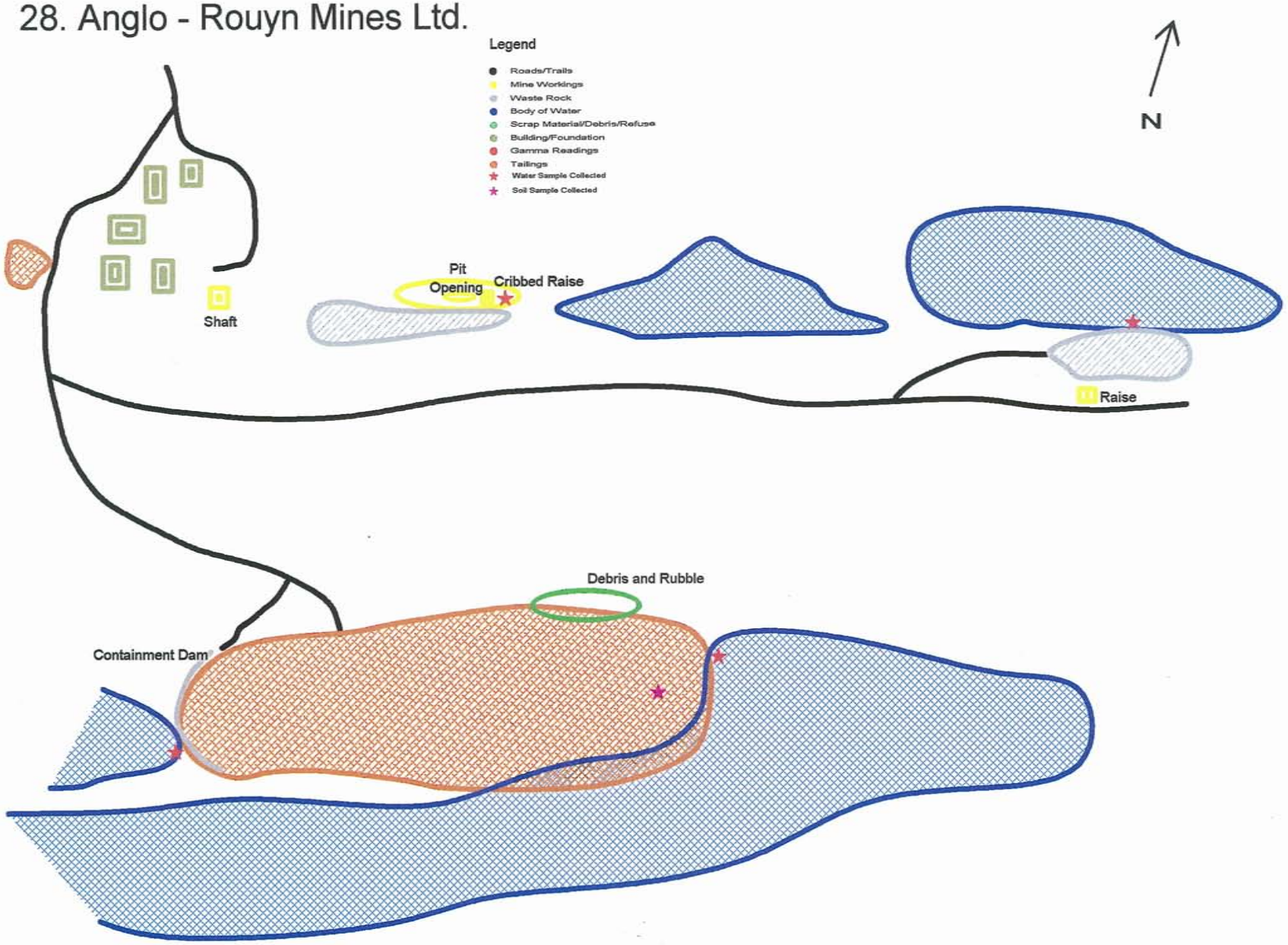
Iron sulphides occur as abundant veins and veinlets proximal to the ore zones' as a pyrite-rich halo. Sabina (1972) noted malachite, azurite, goethite, titanite, native copper, and chalcocite in accessory amounts in the deposit; molybdenite was also noted. The ore consists mainly of chalcopyrite with some pyrrhotite and pyrite with minor gold and silver values. The sulphides occurred as grains and in massive form in stringers and quartz veins. Magnetite, galena, sphalerite and pentlandite occurred in lesser amounts; cobalt values were also reported.

At the end of 1956, total indicated reserves were estimated to be 2,445,000 tons grading 1.95% Cu with low values of gold and cobalt. At the time of construction of the mine and mill, reserves had been upgraded to 2,000,000 tons at 2.4% Cu and 0.018 oz./ton Au. A small open pit, dug over the A zone to supplement underground ore, supplied 102,000 tons grading 1.72% Cu. Another open pit, this one over the C zone, supplied 317,000 tons of ore.

The 'B' orebody does not outcrop, but lies under "B" Lake approximately 600 m northeast of the 'A' open pit. This orebody was mined using a drift run from the level 2 in the mine. The orebody is 180 m long and 45 m deep. The orebody is flat to gently southwest plunging.

The 'C' orebody, which outcrops at the 'C' Lake open pit, is located about 2,400 m east of the main shaft. The 'C' ore was mined using a decline from the main mine. The orebody is about 425 m long, 60 to 75 m deep and plunges gently to the northeast. (Saskatchewan Energy and Mines, 1999).

28. Anglo - Rouyn Mines Ltd.



28.3 MINE HISTORY

The Cu showing on Moose Point was noted in 1909 by W. McInnes of the G.S.C. In 1915, Richard and Gordon Hall in 1915 staked the first eleven claims over the showing. In 1919 the claims were transferred to the Lac la Ronge Mining and Development Company Ltd. In 1928, the Consolidated Mining and Smelting Company of Canada Ltd. optioned the ARMISTICE-ALLIES-LIBERTY-PEACE-DREADNOUGHT claims. In 1929 trenching and drilling of 12 holes on an extensive gossan zone was reported (AF 73P07-0122). The option was dropped in 1929 and the claims were allowed to lapse in 1950-51. The property was restaked in 1951-53 as the WADEN, A.G., CU, AH, MOORE and PIPE Groups; the claims were optioned by Anglo-Rouyn Mines Ltd. and later acquired by the company.

The property was enclosed by Mineral Lease 5002 on June 6, 1962. In 1963, 144 claims adjoining the existing mineral lease were staked and were amalgamated under ML 5088. Exploration work was carried out by Rio Algom Mines Ltd. In 1964 approval was granted for a 6.5 mile road connecting the property with the La Ronge highway and Anglo-Rouyn decided to operate a mine on the property at a production rate of 900 tons per day, the product to be shipped to Flin Flon by truck for smelting.

In 1964 the La Ronge Mineral Syndicate drilled one hole on the FLO No. 4 claim 0.4 miles northwest of the Anglo Rouyn ore zone in an attempt to intersect the ore bearing horizon. Continuous pyrite, possibly the halo of the ore zone, was intersected in the 2400 to 2050 core interval. Assays gave 0.16 oz./ton Ag, 0.01 to 0.04 oz./ton Au and 0.06% Cu.

In 1964-65 a further 33 holes were drilled on the Anglo Rouyn property (AF 73P07-0099). In 1965 construction of the mining and milling plants began, the old shaft was dewatered and deepened and lateral development was begun. The mill was completed in 1966 and the firstshipment of concentrates was made in February. In 1965, a small open pit was developed on the A zone to supplement the ore taken from underground. Between 1965 and 1967 the A Lake pit produced 102,000 tons of ore averaging 1.72% Cu. Between 1969 and 1970 when the pit bottom intersected the upper underground mine level. In May 1969, a pit was completed 1.5 km to the northeast at C Lake. This pit produced a total of 317,000 tons of ore. Between 1969-70, a 600 m long decline was driven southwest from the lowest mine level (level 5) to access additional ore at the southwest extension of the A zone. A further decline was driven from C Lake to the east. This decline became operational in 1970. In 1971, ore came from the A and B zones by shrinkage mining and from the C Zone using trackless equipment. The Anglo-Rouyn mine horizon was mined over a strike length of approximately 3.5 km (AF 73P06-0136).

Milling began in January 1966 and ceased in 1972. During this 7 year period, a total of 62,227,107 pounds Cu, 309,600 ounces Ag and 67,652 ounces Au were produced from

1,892,800 tons of milled ore. At the time of closure, W. Pearson estimated there were left unmined (pillars) an additional 184,554 tons of ore that graded 1.74% Cu (AF 73P06-0113).

In 1970, ML 5002 and 5088 were consolidated into ML 5090. In 1973, Anglo Rouyn Mines, the sole mine owner, amalgamated to form Canadian Memorial Services Ltd. In 1975, the company changed its name to Arbor Capital Resources Inc. and applied to surrended ML 5090 in 1976. On 1 November, 1983 ML 5090 lapsed following satisfactory cleanup and removal of buildings and mine equipment from the site by the owner.
The area around ML 5090 was staked as CBS 7409 on 6 September, 1983 by Rockspan Resources Ltd and ML 5090 was staked as CBS 7244 on 1 November, 1983 by Kristo Gold Incorporated.

Noranda Exploration Company Ltd. completed diamond drilling (9 holes), geological mapping, soil sampling, sampling of old core and ground magnetic surveys over CBS 7244 (AF 73P06-0100). Noranda then dropped the option.

Durama Enterprises completed a ground EM and magnetic survey on CBS 7409 in 1985-86 (AF 73P06-0099, 0103, 0109, 0111) and airborne VLF-EM and magnetic surveys (AF 73P06-0099) in 1987. Lake sediment sampling and ground VLF-EM and magnetic surveys were also completed in 1986 (AF 73P06-0107).

A joint venture agreement between Golden Dragon Resources Ltd., Rockspan Resources and Richard Davidson completed prospecting, geological mapping and soil sampling in 1987 (AF 73P07-0010). In 1987, Durama completed prospecting, soil sampling and ground HLEM on CBS 8946 (AF 73P07-0253). In 1986, Durama had completed ground VLF-EM and magnetic surveys over the tailings pond area and sampled the tailings pond (AF 73P07-0241). The portion of the tailings pond covered by Durama Enterprises CBS 8946 was re-covered by S-101772 when the claim was reduced. Between 1987 and 1988, Durama completed 14 wacker till holes and 13 sonic drill holes to sample the tailings (AF 73P07-0305).

Between 1988 and 1989, Tusk Resources Inc. and Kristo Gold Inc. completed geological mapping, prospecting and ground geophysical surveys. The program identified a previously unknown likely western extension of the Anglo Rouyn orebody (AF 73P07-0286). In 1990, Kristo Gold and Trimark Resources optioned the property and completed geological mapping, prospecting, stripping, trenching and sampling on the minesite grid (AF 73P07-0306).

On October 13, 1992, Kristo Gold commenced operating a pilot plant to extract gold from the mine tailings pond. 4,300 tons of tailings were processed and reduced to 25 pounds of superconcentrates, 21 tons of concentrates, and 61 tons of middlings. The

superconcentrates assayed 35% Au and 25% Ag. A 122.878 oz gold bar and a 97.5 oz silver bar was produced from the superconcentrates. Significant magnetite in then tailings interfered with the recovery of precious and base metals.

On September 10, 1995, Kristo Gold Inc. submitted an environmental assessment review to reprocess the mine tailings. The reserves for the sampled portion of the tailings, calculated based on a specific gravity of 2.47, are given as 1,619,628 short tons grading 0.0161 oz/ton Au, 0.0575 oz/ton Ag, and 0.15% Cu. The total in-situ reserves, based on processing 1.3 million tons of tailings, were reported to be 26,076 oz Au, 93,129 oz Ag, and 5,354,938 lbs Cu. Mining of only those tailings within the property boundaries which could be accessed by a Neuman dredge is proposed. The recovered tailings would be screened then concentrated with magnetic and gravity (Krebs D10LB cyclones) separation. Final cone tailings would be disposed of in the underground workings and open pit. Magnetite product would be stored for possible sale. Approximately 75% of the old tailings would be removed from the floors of lakes currently containing tailings. Concentrated ore would be trucked to an existing mill for processing (Saskatchewan Energy and Mines Web Page; Mineral Index; Revised 1999).

28.4 GENERAL DESCRIPTION

The mine site covers a large area of approximately 1.25 km^2. There was evidence of recent visitation in the form of litter and vehicle tracks.

The mine was a primary copper producer with gold and silver being secondary minerals.

The operation consisted of both mining and milling operations.

28.5 HISTORY OF PREVIOUS INSPECTION

In 1989 Saskatchewan Environment and Public Safety (Mines Pollution Control Branch) released a paper on Abandoned Mines with Tailings. A composite tailings sample were collected on August 25, 1988 as well as a water sample from the southeast corner of the tailings area.

The mill had been completely dismantled, with only the concrete foundations remaining. The main shaft and vent raises had been sealed with concrete. The open pit was a hazard and the raise and breakthrough remained open. The fence that had been erected had since disappeared.

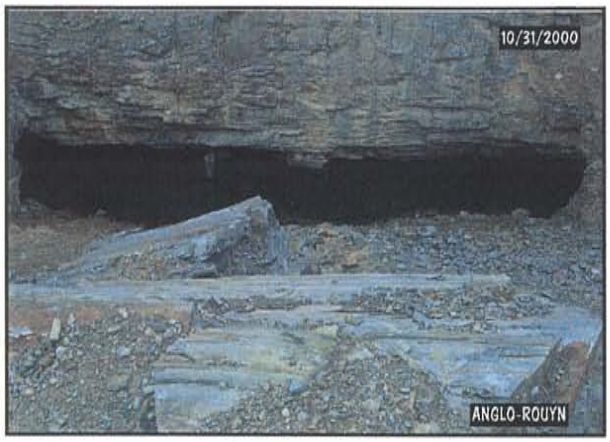
The site was also inspected in the summer of 2000 by representatives of Saskatchewan Environment and Resource Management. The site has had no environmental remedial work done to it and has remained in the same condition.

28.6 2000 INSPECTION

The site was inspected by (KHS) Environmental Management Group Limited on October 31, 2000.

28.6.1 Mine Workings

The mine workings are separated into three areas. The first or 'A' zone being the primary zone of activity. The main shaft and open pit are located within this zone. The main shaft (N 55° 17.673'; W 105° 00.276') is sealed with concrete and is in stable condition. There was no liquid discharge at the time of inspection and there was no evidence of previous flooding.



The open pit is approximately 75 m to the north east of the shaft/mill area. The pit is approximately 150 m long, 30 m wide, and 25 m deep. The walls of the pit are unstable and in very poor condition. The walls, primarily the south wall have been undercut making them steep. There is evidence of rock slides and slumping. The pit is flooded with no vegetation growing within the pit or on the walls.
There ares two openings at the bottom of the pit; one is a cribbed vent raise approximately 3 by 3 m in size, the other is a breakthrough to surface.

This opening is approximately 10 by 4 m in size. The openings are flooded.

The 'C' zone is located approximately 1000 m northeast of the pit. Excavating from the lake level into the side of the slope. In addition, an incline and raise are located within this zone.

The raise is located above the lake to the south approximately 35 m. The closure is stable and in good condition. There was no liquid discharge at the time of inspection and no evidence of previous flooding.

The incline appears to have been completely covered with waste rock. The pit consists of excavating into the side of the slope to the south. The walls are stable and a large amount of waste rock has been piled in the area.

The 'B' zone was mined from the main shaft with no above ground workings reported.

28.6.2 Waste Rock

Waste rock is scattered throughout the area. It has been used for road construction in all areas of the mine site. The primary pile is at the 'C' zone where it is piled approximately 10 m in height. The pit at this zone appears to have been filled using waste rock.

28.6.3 Buildings

There are numerous concrete foundations within the mill area. They are in stable condition but are showing signs of deteriorating. There are several that are relatively high (approximately 5 m) that could pose a hazard. There are also two structures that have arch ways that could become hazardous as the condition of the concrete deteriorates.

28.6.4 Debris/Rubble

There is an assortment of debris throughout the area. The primary waste disposal area is located at the north end of the tailings area along the slope to the west. The area is approximately 20 by 30 m in size and consists of abandoned vehicles, scrap metal and glass of all types.

28.6.5 Tailings Management Area

There are tailings in two areas of the Anglo-Rouyn Site. The small area immediately south of the mill was used during the testing phase by Kristo Gold Inc. operations (1995). It is approximately 20 by 40 m in size and is restricted to a natural depression. There is no vegetation growing within these tailings. boundary.

The main tailings disposal area is approximately 500 m to the south of the mill site. The area is poorly vegetated and approximately 500 by 200 m in size. There is a waste rock containment dam along the south boundary. It is in stable condition, although evidence of seeping is apparent immediately south of the dam. The tailings area is showing signs of wind and water erosion.

2.26.8 Site Sampling

Tailings samples were collected and sent to Saskatchewan Research Council for analysis. Results have not been included because the sample was lost during transportation, however the tailings were generally characterized by SERM in in 1988 and the results are summarized in Table 28.1.

Based on these results it was concluded that the tailings are not acid generating and most metals are at low concentrations with the exception of copper which is elevated in the tailings which is to be expected when the type of mining is considered..

Water samples were collected in a previous field visit completed in the summer of 2000 by Saskatchewan Environment and Resource Management.

Recent (2000) water quality values for all parameters have remained consistent with historic data (1981 and 1988). Copper is the only parameter that exceeded Specific Surface Water Quality Objectives for the Protection of Aquatic Life and Wildlife at the pond surrounding the tailings area and from the water near the waste rock pile. Samples collected from the lake near the waste rock pile at the 'C' zone (0.029 mg/L) in the year 2000 exceed the objective value. A sample collected from the northeast pond within the tailings area (0.011 mg/L), as well historic data (0.013 mg/L) collected in 1981 are close to the objective value (see Table 28.2).

28.7 RISK ASSESSMENT RANKING

Public Safety Assessment	20.1 / 24
Environmental Assessment	15.0 / 26
Combined Total Assessment	35.1 / 50
RANKING	1 of 27

28.8 REHABILITATION RECOMMENDATION

The primary hazard to public safety is the open pit. The walls are unstable, steep and in some instances undercut making them a safety hazard. Escape from the breakthrough to the surface would be virtually impossible due to the steep and sometimes undercut side slope. The flooding in the pit is also a safety concern.

The concrete foundations also pose a public safety hazard. Some of the foundations are as high as 5 m and pose a hazard to a person climbing on them. There are two archways built out of concrete which were used for loading. As the concrete deteriorates further, the possibility of pieces of the structure falling will become an issue.

There is some evidence of seepage from the south tailings containment dam, however, based on water quality results, the surrounding water bodies are not being significantly

impacted at the present time.

It is recommended that a detailed site assessment be conducted to determine the most appropriate method of reducing the safety hazards associated with the pit (i.e contouring, back filling, etc.). Such an assessment is also required to determine what remedial actions and activities are required with regard to the waste rock piles and tailings area.

However, based on this preliminary assessment, significant rehabilitation work is required at this site. This should include, but not necessarily be limited to:

- Removal of the concrete foundation etc., rubble and debris and disposal in the pit;
- Stabilizing the pit and pit walls to reduce the safety hazard;
- Re-contour waste rock piles as required;
- Develop and implement a detailed decommissioning plan for the tailings area and associated containment structures as required; and,
- General site clean up.

Table 28.2 Tailings

Constituent (ppm unless specified)	Anglo Rouyn Historic(1988) Tailings (Composite)	Anglo Rouyn Historic (1988) Tailings #2554	Anglo Rouyn Historic (1988) Tailings #2557
Acid Producing (g CaCO3/kg)	12.5 (kg H2SO4/tonne)		
Barium	189	12	14
Beryllium	2		
Cadmium	2	1	1
Chromium	391	47	42
Cobalt	56	19	20
Copper	1400	77	37
Lead	2	9	5
Molybdenum	41	77	37
Nickel	71	35	56
Strontium	276	15	16
Sulfur (%)	0.41		
Vanadium	176	60	63
Zinc	89	37	41
Zirconium	73		

Table 28.2 Water Sampling Results

Constituent (mg/L unless specified)	Anglo Rouyn (18/06/81) (Pond SW of Tailings Area))	Anglo Rouyn (25/08/88) (Pond SW of Tailings Area))	Anglo Rouyn (Pond NE of Tailings Area)	Anglo Rouyn (Pond SW of Tailings Area)	Anglo Rouyn (Lake at Waste Rock)	SSWQO Protection of Aquatic Life and Wildlife	SSWQO Protection of Livestock Watering
Total Ammonia			0.07	0.05		0.06 - 2.06	
Aluminum	0.52	0.016	<0.005	<0.005	0.39		5.0
Arsenic (total)	0.0011	0.0005	<0.0005	0.0008	<0.0005	0.05	0.5
Barium (total)	0.017	0.008	0.018	0.017	0.011	1.0	
Beryllium (total)		<0.001	<0.001	<0.001	<0.001		0.1
Boron (total)		<0.05	0.025	0.014	0.004		5.0
Calcium	50	42	56	55	20		
Cadmium (total)	<0.0005	<0.001	<0.001	<0.001	<0.001	0.001	0.02
Chloride (total)	5	1.1	1	1			
Cobalt	<0.001	<0.001	<0.001	<0.001	0.009		1.0
Chromium (total)		<0.001	<0.001	<0.001	<0.001	0.020	1.0
Copper (total)	0.013	0.004	0.011	0.002	0.029	0.01	1.0 -cattle
Iron (total)	0.065	0.024	0.37	0.039	0.45	1.0	
Lead (total)		<0.005	<0.002	<0.002	<0.002	0.02	0.1
Magnesium	<1.0	4	8.1	6.1	2.0		
Manganese (total)	0.022	0.008	0.058	0.039	0.062		
Molybdenum (total)	0.006	<0.005	<0.001	<0.001	<0.001		0.5
Nickel (total)	0.006	0.007	0.003	<0.001	0.015	0.025mg/Lhardness ≤ 100mg/L(CaCO3)	1.0
pH	7.8	8.39	7.65	7.81			
Phosphorus		<0.05	0.06	<0.01	<0.01		
Potassium	5	4.9	12	6.2	1.3		
Silicon (soluble)		<0.2	1.8	0.63	3.6		
Silver (total)		<0.001	<0.001	<0.001	<0.001	0.01	
Sodium	11	11	20	13	1.9		
Specific conductivity (uS/cm)	330	309	451	394			
Strontium			0.14	0.13	0.045		
Sulphate (total)	45	52	90	79			1000
Titanium		<0.001	<0.001	<0.001	0.002		
Total Suspended Solids	1	1	9	4			
Total Hardness		121	173	162			
Vanadium (total)	<0.01	0.01	<0.001	<0.001	<0.001		0.1
Zinc (total)	0.007	0.007	0.031	0.008	0.025	0.05	
Zirconium		0.0001	<0.001	<0.001	<0.001		

29 WESTERN NUCLEAR MINES LTD.

Mineral Property #0209:
(formerly: PAR-VIC claim group; PAR claim group)

Showing Name:
Western Nuclear Cu-Zn-Pb Mine or Hanson Lake Mine or Parrex Syndicate Trust 3 Showing

29.1 LOCATION

Latitude:	N54° 40' 30"
Longitude:	W102° 50' 58"
NTS :	63L-10-NW
UTM	Zone 13; NAD 1927
UTM	Northing: 6060535
UTM	Easting: 638672

Location: The Western Nuclear Mine is located on the shore of Hanson Lake, south of Bertrum Bay, approximately 60 km west of Creighton.

Accessibility: Access is gained via a 10 km drive south, off of the Hanson Lake road.

29.2 GEOLOGY

The deposit forms a ribbon-like nearly vertical orebody that subcrops on the lake bottom, dips steeply and plunges 12° norht over a strike length of 1500 ft (550 m), a width of from 0 to 30 ft (0 to 9.1 m) and a depth of 164 to 393.7 ft (50 to 120 m). The deposit consists of a series of massive sulphide lenses (2 to 3 m thick) and overlying sulphide 'stringer zones' (3 to 5 m thick).

The deposit mineralization consists of pyrite, pyrrhotite, sphalerite, galena and chalcopyrite. The individual massive sulphide lenses, that comprise the deposit, are formed by massive, fine-grained sphalerite and galena with associated minor amounts of pyrite, pyrrhotite, chalcopyrite, argentite, and tetrahedrite. The 'stringer zone' is formed by disseminations and irregular cross-cutting veinlets of the above mentioned sulphides. The gangue minerals include sericite, fuchsite, biotite, chlorite and garnet.

In 1957, The orebody, which is made up of a series of individual lenses, contained an estimated 125,000 tons grading 12.66% Zn, 8.17% Pb, 0.64% Cu, 3.03 oz./ ton Ag, 0.018 oz./ ton Au and minor Cd.

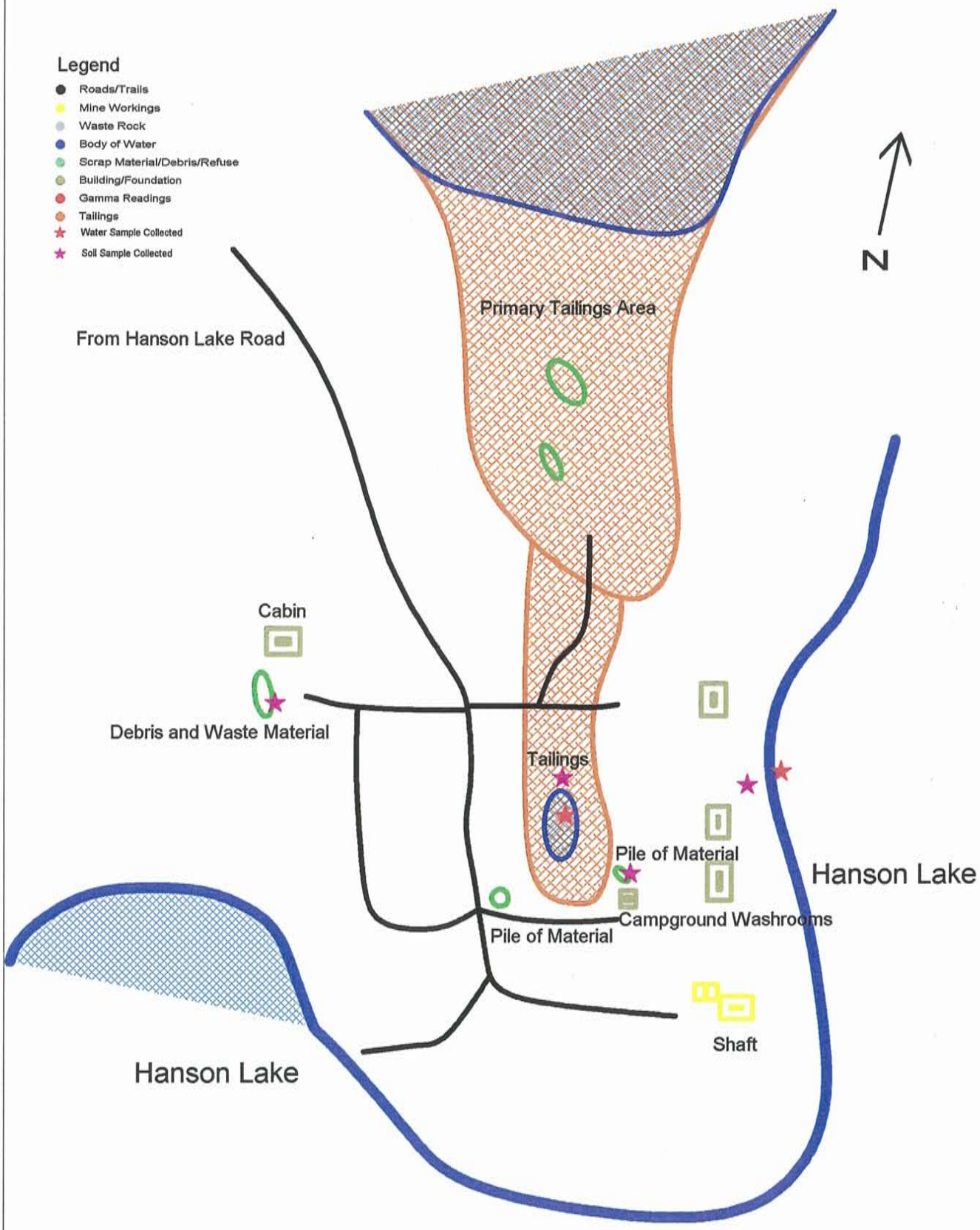
In 1965, the deposit strike length had been increased to 1475 ft (449.6 m) indicated reserves were 293,000 tons with mineable reserves 253,000 tons grading 0.031 oz./ ton Au, 4.47 oz./ ton Ag, 0.61% Cu, 8.08% Pb, and 11.42% Zn to a depth of 600 ft (182.8 m) over an average mining width of 7.5 ft (2.3 m) (Saskatchewan Energy and Mines, 2000).

29.3 MINE HISTORY

During 1956-57, 1200 claims were obtained by Parrex Mining Syndicate (Trust) near the southwest shore of Hanson Lake through staking. These included most of the ground formerly held by Hudson Bay Exploration and Development Co. Ltd. Initial exploration consisted of an airborne magnetic and electromagnetic survey of the ground not covered by previous ground geophysical work carried out in 1953 by Hudson Bay. Several conductive zones outlined by the airborne geophysical survey were checked by ground geophysical work and diamond drilling was carried out on a zone beneath Hanson Lake about 600 ft east of the shore between Bertrum and McIlvenna Bay. All except 18 claims (the PAR group) of the original property were allowed to lapse. In December 1957, the PAR group was acquired by Hanson Mines Ltd. These holdings were further augmented in 1959 by the staking of an additional 53 claims in the area which were known as the VIC group.

Early in 1965, Share Mines and Oils Ltd. purchased the property from Hanson Mines Limited and undertook a diamond drill program to confirm reserves previously outlined. The program was successful in lengthening the orebody to 1475 feet and increasing the

29. Western Nuclear Mines Ltd.



reserves to the figures given above.

In October 1965 Share announced that an agreement had been reached with Western Nuclear Inc. for financing required to bring the property into production. Through this agreement Western Nuclear would acquire a 50% interest in the PAR group. Late in 1965, a 6.5 mile access road was completed to the property from the Hanson Lake Highway and the collar of the shaft completed. Actual shaft sinking operations began in May, 1966 and by the end of September, the shaft had been completed to a depth of 672 feet. The shaft was located on the mainland about 600 feet to the west of the projection of the ore zone.

Shipments of Cu-Zn and Pb-Zn concentrates to Flin Flon for processing began June 5, 1967. Results of the first months of operation were disappointing and milling was suspended in December of 1967. Underground development continued. In June 1968 milling and concentration shipment resumed. Operations continued until July 1969. At this time, all work ceased due to exhaustion of ore.

In 1983, Saskatchewan Mining Development Corporation (SMDC) completed an airborne INPUT and magnetic survey that covered the showing area (AF 63L10-0092).

In 1984, Cameco optioned the property from Share Mines and Oils Ltd. and Western Nuclear Mines. Cameco geologically mapped and prospected the property and completed soil and rock sampling. The option was dropped in 1987. In 1986, SMDC flew an INPUT amd magnetic survey that covered the showing (AF 63L10-0101).

On 14 April 2000, Bell Resources Corporation announced that they had acquired an 85% interest in the property which covers the mine site (Saskatchewan Energy and Mines Web Page; Mineral Index; Revised 2000).

29.4 GENERAL DESCRIPTION

The mine site is now a provincial campground. The mill area and old foundations are used as part of the campground. There has been recent remediation of the mill foundations.

29.5 HISTORY OF PREVIOUS INSPECTIONS

In 1989 Saskatchewan Environment and Public Safety (Mines Pollution Control Branch) released a paper on Abandoned Mines with Tailings. The Western Nuclear Mines Limited Mine was inspected and the results provided in the report. At that time, the mill buildings

and equipment had been removed with the concrete foundations remaining. The shaft had been sealed at the area was being used as a camper parking area serviced by Parks, Recreation and Culture. There was little evidence of garbage, refuse or equipment on the site.

The tailings area was barren of vegetation and some equipment was located at the south end.

Tailings and water samples were collected on two separate occasions. Tailings from the south end were sampled on June 10, 1988 at surface, 0.15 m, 0.5 m, and 1.0 m depths. Water samples were collected from the north end in October of 1988 and the south end was sampled on June 10, 1988. A water sample was also collected from Bertrum Bay, Hanson Lake on October 14, 1988 from the shoreline.

Demolition and covering of the concrete foundations from the mill was completed in the summer of 2000.

29.6 2000 INSPECTION

The inspection was completed on October 26, 2000 by (KHS) Environmental Management Group Limited.

29.6.1 Mine Workings

A single shaft located at the southeast end of the mine site. The shaft is located approximately 10 m from the waters edge and approximately 4 m south of the main mill area. The shaft is sealed with concrete and is in good condition. There was no liquid discharge at the time of inspection.

The raise was located directly south of the mill site approximately 8 m from the lakeshore. It is sealed with a concrete cap and in good condition, with a drain pipe exiting the concrete closure. There was no evidence of previous discharge. The closure is approximately 4.3 by 3 m in size. There is an additional concrete foundation immediately beside the shaft closure. It is unknown what the purpose of the foundation is.

29.6.2 Waste Rock

There is waste rock scattered throughout the area with no primary dumping area evident. Vegetation is well established throughout the area, except where the recent mill foundation work was completed as well as on the main tailings area, north of the mill site.

29.6.3 Buildings

There are no buildings associated with the mine activity remaining at the site. There are several concrete foundations remaining at the mill area. These are in good condition and are used as part of the campground. There is also a bathroom facilities located at the site as part of the campground. There is also a private cabin on the west end of the site.

29.6.3 Debris/Rubble

There is very little debris around the mill area. Approximately 200 m northwest of the mill area there is some debris including, mill fines, ore skip, freshwater intake, and various scrap metal.

There are also two substantial debris/rubble piles among the main tailings area.

29.6.4 Tailings Disposal Area

The tailings disposal area begins immediately west of the mill foundations and continues to the north for approximately 1 100 meters. However the extent of the tailings area is very difficult to estimate because of vegetation cover on the south end and water cover on the

north end. The primary tailings disposal area is located approximately 500 m to the north of the mill site.

29.6.5 Site Sampling

Water samples were taken from the ponded water immediately west of the mill area, from Hanson Lake immediately east of the mill area, and from the pond north of the primary tailings area.

Water Sample - ponded water in tailings area west of mill area:

Temperature: 7.5 °C
Conductivity: 680 μS/cm
pH: 6.70

Water Sample - Hanson Lake east of the mill area:

Temperature: 5.4 °C
Conductivity: 193 μS/cm
pH: 7.07

The 2000 water quality values in the isolated pond on the southern portion of the tailings area were relatively consistent with the samples collected in 1988 from the tailings pond. Although the sample location are not identical comparison of the two have been made.

As in June, 1988 samples, the concentrations of arsenic, cadmium, copper and lead were above Saskatchewan Surface Water Quality Objectives for the Protection of Aquatic Life and Wildlife in 2000. The 2000 data for zinc indicates that the sample collected from the ponded water within the tailings area exceeds the values for SSWQO for the Protection of Aquatic Life and Wildlife and SSWQO for use in Livestock Watering. This value is significantly greater than historic data (1988). (See Table 29.1)

Samples collected in Bertrum Bay (1988) and in Hanson Lake immediately offshore from the site (2000) show that the waters of the lake have not been impacted.

Soil samples were also taken from the area immediately west of the mill foundations, a pile of material near the washrooms, the east side of the covered mill foundations near Hanson lake, and from the primary tailings area north of the mill site.

Comparing historic data (1988) to recent data (2000) there are several considerations that should be noted. Barium, beryllium, chromium, and vanadium have declined while most

other parameters have remained relatively constant. Copper and zinc values from the tailings sample, as well as the berm sample collected near Hanson Lake are higher than the historic data (Copper: 259 ppm to 2 700 and 3 800 ug/g; Zinc: 2 970 ppm to 43 200 and 29 700 ug/g) . In addition, there has also been a increase in lead values for tailings from 9 200 ppm (1988) to 21 200 ug/g (2000). (see Table 29.2)

Based on the results from both the 1988 and 2000 investigations, it can be concluded that the tailings are acid generating and select metal concentrations are elevated.

Additional detailed water and tailings sampling should be conducted as part of the development of the recommended detailed decommissioning plan.

29.7 RISK ASSESSMENT RANKING

Public Safety Assessment	11.1 / 24
Environmental Assessment	17 / 26
Combined Total Assessment	28.1 / 50
RANKING	2 of 27

29.8 REHABILITATION RECOMMENDATION

Three significant areas of the site require immediate rehabilitation.

The first are requiring rehabilitation is the tailing management area in general as it has not been decommissioned and is showing significant signs of water and wind erosion with little containment on the southern perimeter.

The second area that requires immediate rehabilitation is the area sampled between the former mill site and the shore of Hanson Lake, which as the analytical results show has been contaminated at some point in the past.

The third area is the pile of fines material approximately 200 m northwest of the mill area near the cabin.

With regards to the last two, it is recommended that both areas be excavated and the material placed within the primary tailings management area.

However, a detailed decommissioning plan should be developed and implemented to address both the tailings management area and the containment structures associated with it. In order to develop the decommissioning plan, a more detailed assessment of the site is required.

Table 29.1 Water

Constituent (mg/L unless specified)	Western Nuclear (10//06//88)	Western Nuclear (14/10//88)	Western Nuclear (tailings ponded water) 2000	Hanson Lake Offshore from Western Nuclear 2000	SSWQO for the Protection of Aquatic Life and Wildlife	SSWQO Water for Livestock Watering
Total Ammonia	0.08		0.09	0.06	0.06 - 2.06	
Aluminum	0.3	0.076	<0.005	<0.005		5.0
Arsenic (total)	0.338	0.160	0.064	0.0017	0.05	0.5
Barium (total)	0.028	0.024	0.028	0.024	1.0	
Beryllium (total)	<0.001	<0.001	<0.001	<0.001		0.1
Boron (total)	<0.05	<0.05	0.004	0.007		5.0
Calcium	34	38	60	16		
Cadmium (total)	0.007	<0.001	0.007	<0.001	0.001	0.02
Chloride (total)			2	1.0		
Cobalt	0.002	<0.001	0.006	<0.001		1.0
Chromium (total)		<0.001	<0.001	<0.001	0.020	1.0
Copper (total)	0.019	0.001	0.050	<0.001	0.01	1.0 -cattle
Iron (total)	1.5	0.086	0.99	0.21	1.0	
Lead (total)	0.25	<0.005	0.055	<0.002	0.02	0.1
Lead - 210 (Bq/L)		<0.04	<0.04			
Magnesium	18	19	34	10		
Manganese (total)	0.027	0.012	0.82	0.014		
Molybdenum (total)	<0.005	0.009	<0.001	<0.001		0.5
Nickel (total)	0.004	0.004	0.010	<0.001	0.025 mg/L hardness > 100mg/L(CaCO3)	1.0
pH	8.2	8.23	7.57	7.92		
Phosphorus	0.14	0.08	0.01	<0.01		
Radium - 226 (Bq/L)		<0.005	0.01			
Silicon (soluble)	<0.2	<0.2	4.3	0.10		
Silver (total)	<0.001	<0.001	<0.001	<0.001	0.01	
Sodium			9.6	3.2		
Specific conductivity (uS/cm)	374	415	550	169		
Strontium			0.18	0.051		

Constituent (mg/L unless specified)	Western Nuclear (10//06//88)	Western Nuclear (14/10//88)	Western Nuclear (tailings ponded water) 2000	Hanson Lake Offshore from Western Nuclear 2000	SSWQO for the Protection of Aquatic Life and Wildlife	SSWQO Water for Livestock Watering
Sulphate (total)	52	74	160	1.7		1000
Total Suspended Solids	1.1	4	6	<1		
Total Hardness		173	289	81		
Uranium (total)		<0.0005	<0.0005			0.2
Vanadium (total)	<0.01	<0.01	<0.001	<0.001		0.1
Zinc (total)	0.2	0.07	8.8	0.028	0.05	
Zirconium	<0.001	<0.001	0.001	<0.001		

Table 29.1 Water (con,t)

Table 29.2 Tailings

Constituent (ug/g unless specified)	Western Nuclear Historic 1988 (tailings) (ppm)	Western Nuclear 2000 (Pile #1)	Western Nuclear 2000 Debris Pile	Western Nuclear 2000 Tailings	Western Nuclear 2000 Berm
Acid Neutralizing (g CaCO3/kg)		2.3	<0.5	10.9	0.7
Acid Producing (g CaCO3/kg)	183.3 (kg H2SO4/tonne)	<0.5	25.4	50.4	134
Aluminum		5 000	14 500	20 000	10 300
Arsenic	860	11	7 300	7 400	30 100
Barium	537	26	130	70	8.2
Beryllium	1	<0.5	<0.5	0.6	<0.5
Boron		<1	<1	<1	<1
Calcium		1 600	1 600	5 100	930
Cadmium	9	<0.5	7.5	50	43
Chromium	345	26	110	78	240
Cobalt	10	2.3	5.2	10	12
Copper	259	7.7	540	2 700	3 800
Iron		6 900	48 200	27 100	74 900
Lead	9 200	18	8 500	21 200	15 200
Magnesium		1 500	10 800	13 300	8 500
Manganese		71	620	520	490
Molybdenum	5	1.1	2.0	2.0	5.4
Nickel	66	8.4	28	49	140
Phosphorus		480	580	250	190
Potassium		670	9 300	5 700	3 500
Silver		<0.5	29	55	72
Sodium		210	460	700	200
Strontium	44	6.6	19	41	7.6
Sulfate (%) acid soluble		0.009	2.93	5.18	4.30
Sufide		<100	8 100	16 100	42 800
Sulfur (%)	5.99	0.01	1.79	3.34	5.71
Titanium		260	600	57	68
Vanadium	105	10	42	19	21
Zinc	2 970	12	4 400	43 200	29 700
Zirconium	85	307	17	4.3	2.6

APPENDIX 1

SAMPLE
COMPLETED FIELD REPORT FORM

Site Name	Anglo-Rouyn			Map # 73P/06
Site Location	GPS (MILL) N55°17.673', W 105° 00.276'		UTM ZONE 13 NORTHING: 6127281 EASTING: 499735	
Operator	RIO Algom Mines Ltd. / Anglo-Rouyn Mines Ltd.			
Date of Site Audit	10/31/00			
Date of Operations	1966 to 1972			
Type of Mine	1° Mineral Copper		2° Minerals Gold, Silver	
Type of Operation	Mining High Grading	Mining & Concentrate	Mining & Milling ✓	Trenching Other
Current Accessibility of Site	1 Difficult (Float plane)	2	3	4 ✓ Easily accessible. (Road)
Evidence of Recent Visitation	Yes - litter, vehicle tracks			
Surrounding Environment	- turn off Highway #102 to Stanley Mission (#915) - first right after crossing Lynx Creek - 6.1 km to mine site - enter mill area - north east corner of site			
Background Gamma Levels				
Mining Methods	Underground ✓	Open Pit ✓	Trenching ✓	

Underground

	~~Adit~~ PIT (RAISE AND OPENING)	Raise	~~Decline~~ SHAFT
Number	'A' ZONE	'C' ZONE	'A' ZONE
Specific Location of Each Hole	SEE MAP		
Dimensions of each hole	PIT: 150L X 30WX 25m D RAISE: 3X3m OPENING: 10 X4m	3X3m	4X4m
Open or Sealed (DO NOT enter!!)	OPEN	SEALED	SEALED
Type of Closure (concrete, waste rock)		CONCRETE	CONCRETE
Stability of Closure Method		GOOD	GOOD
General Condition	POOR	GOOD	GOOD
Liquid discharges at time of audit	No	No	No Sample if safe to do so.
Evidence of Previous Flooding/Discharge	OPENINGS FLOODED	No	No
Evidence Of Slumping	ROCK SLIDES	No	No
Support Buildings (Headframe, etc.)			
Additional Comments	INCLINE AT 'C' ZONE COVERED WITH WASTE ROCK ?		

Risk to Environment	1 - SHAFT & 'C' ZONE RAISE (Low Risk)	2	3 - PIT (High Risk)
Risk to Wildlife	1 - SHAFT & 'C' ZONE RAISE (Low Risk)	2	3 - PIT (High Risk)
Risk to Public Safety	1 - SHAFT & 'C' ZONE RAISE (Low Risk)	2	3 - PIT (High Risk)

Open Pit

Number	2	
Specific Location of Pit(s)	≈ 75m NORTH EAST OF MILL AREA 'A' ZONE PIT	≈ 1000m TO NORTH EAST FROM 'A' ZONE PIT 'C' ZONE PIT (N55° 18.135' W 104° 58.348')
Dimensions of Pit(s)	150m LONG X 30m W X 25m DEEP	25m LONG X 25m WIDE X 10m DEEP
Stability of Pit Walls	POOR	ACCEPTABLE
General Condition	UNDERCUTTING WOULD MAKE ESCAPE DIFFICULT	GOOD: EXCAVATED HILLSIDE.
Liquid Accumulated in Pit	YES	NO Sample if safe to do so.
Evidence of Previous Flooding/Discharge	YES	NO
Evidence Of Slumping	YES - ROCK SLIDES	NO
Support Buildings	NO	NONE
Extent and Type of Natural Vegetation Encroachment	NONE	NONE
Additional Comments	'C' ZONE PIT FILLED WITH WASTE ROCK. + POSSIBLE DECLINE BURIED 'A' ZONE PIT - VERY UNSAFE	

Risk to Environment	1 (Low Risk)	2	3 (High Risk) ✓
Risk to Wildlife	1 (Low Risk)	2	3 (High Risk) ✓
Risk to Public Safety	1 (Low Risk)	2	3 (High Risk) ✓

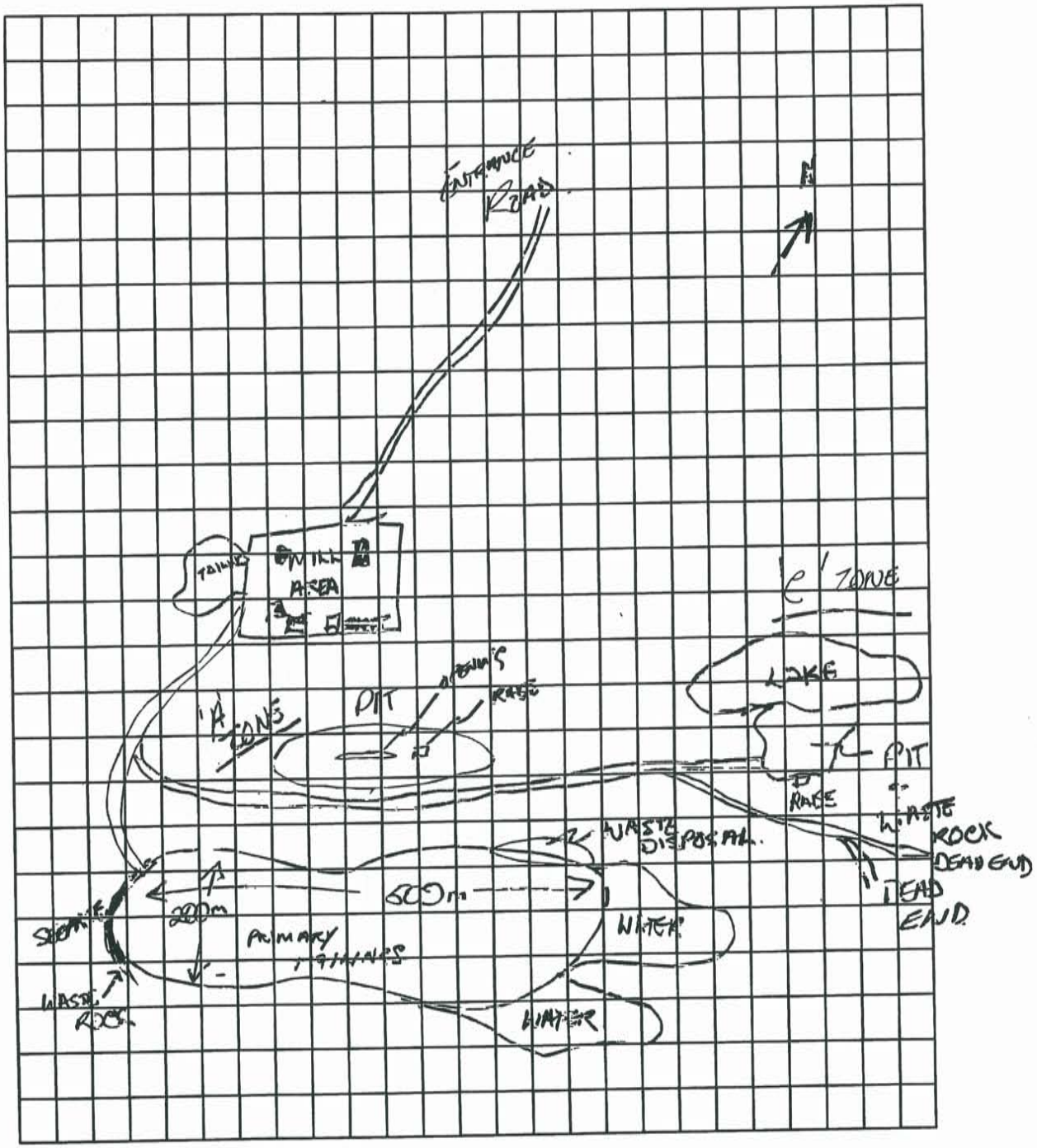
Waste Rock Disposal	'C' ZONE - PILE PRIMARY PILE.		
Estimate Extent	SCATTERED THROUGHOUT.		
Estimate Volume	'C' ZONE APPROX. 10m HIGH		
Stability of Pile	'C' ZONE - GOOD		
Summarize Geology if Possible			
Assess potential for AMD			
Gamma Survey Results			
Extent and Type of Natural Vegetation Encroachment	VERY LITTLE VEGETATION		
Additional Comments	- EXTENSIVE ROAD CONSTRUCTION		
Risk to Environment	1 (Low Risk) ✓	2	3 (High Risk)
Risk to Wildlife	1 (Low Risk) ✓	2	3 (High Risk)
Risk to Public Safety	1 (Low Risk) ✓	2	3 (High Risk)

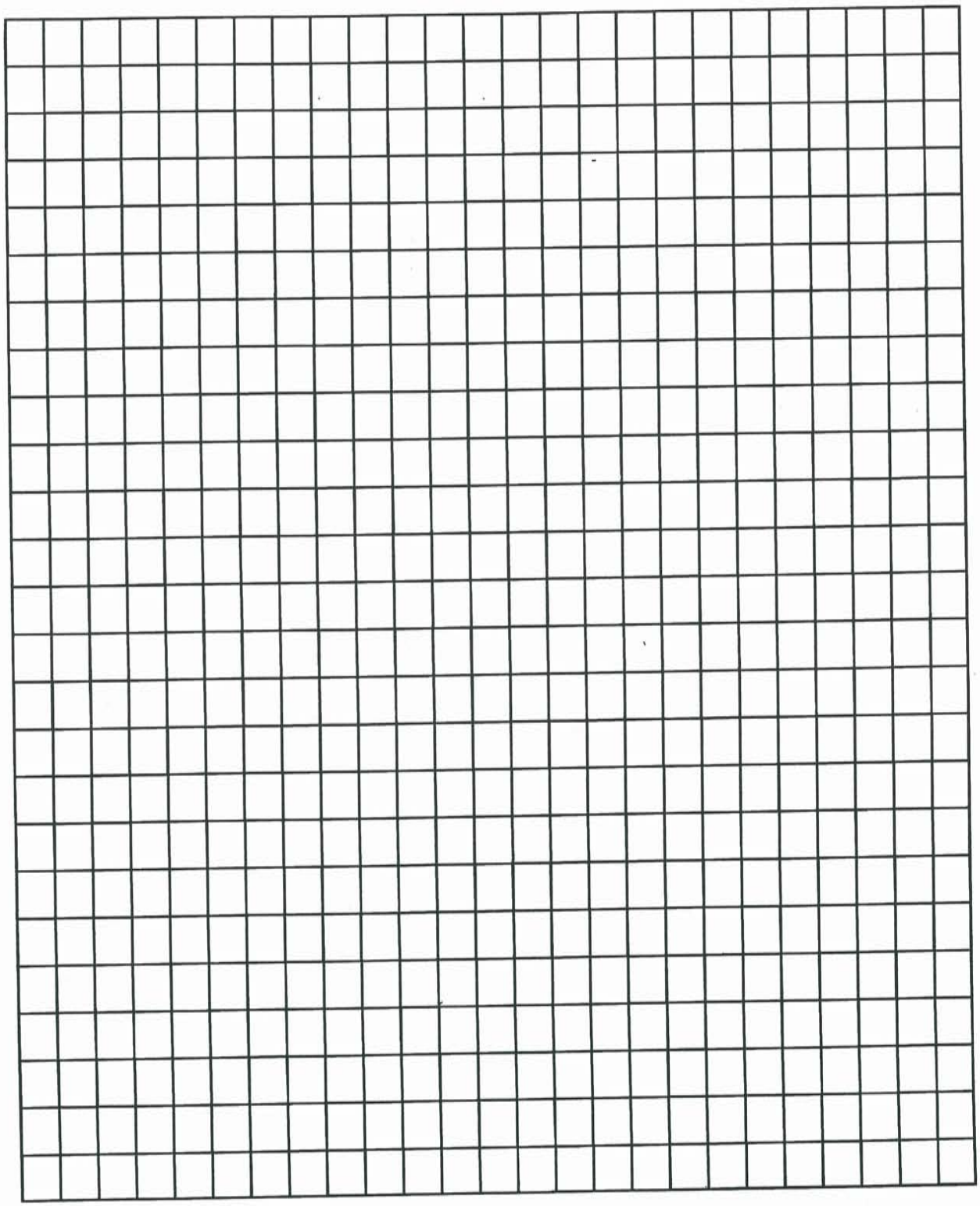
Tailings Disposal Area	- 3 SAMPLES COLLECTED		
Estimate Extent	MIN AREA 20X40m	PRIMARY: 500 x 200m.	
Estimate Depth			
Estimate Volume			
Type of Containment Structures	NATURAL DEPRESSION WASTE ROCK BERM ON SOUTH END OF PRIMARY		
Stability of Containment Structures	STABLE		
Summarize Tailings Chemistry if Possible	- SRC RESULTS	- SAMPLE TAKEN FROM NORTH END	
Assess potential for Acid Generation	- SRC RESULTS		
Gamma Survey Results			
Evidence of Wind/Water Erosion of Tailings	WIND & WATER EROSION EVIDENT		
Extent and Type of Natural Vegetation Encroachment	VERY LITTLE - SOME GRASSES, WILLOW, & LARGER TREES ALONG BOUNDARY		
Risk to Environment	1 (Low Risk)	2	3 (High Risk) ✓
Risk to Wildlife	1 (Low Risk)	2	3 (High Risk) ✓
Risk to Public Safety	1 (Low Risk)	2	3 (High Risk) ✓

Additional Containment Works			
Type	- WASTE ROCK DAM ALONG SOUTH END IS IN		
Extent	RELATIVELY STABLE CONDITION BUT APPEARS TO BE		
Condition	SEEPAGE IMMEDIATELY TO THE SOUTH		
Drill Holes			
Location(s)			
Dry or discharging liquid			
Drill Core Storage		*Gamma Survey*	
Location(s)			
Estimate extent and volume			
Method of Storage			
General Condition			
Waste Disposal Sites			
Location	- NORTH END OF TAILINGS AREA - ALONG HILLSIDE		
Estimate extent and volume	20 m X 30 m - LARGE AMOUNT OF DEBRIS CARS TO TIN CANS		
General condition	STABLE		
Risk to Environment	**1** (Low Risk)	**2** ✓	**3** (High Risk)
Risk to Wildlife	**1** (Low Risk)	**2** ✓	**3** (High Risk)
Risk to Public Safety	**1** (Low Risk)	**2** ✓	**3** (High Risk)

Buildings	- FOUNDATIONS ONLY		
List Buildings still in Evidence			
Estimate Size			
Type of Construction			
Condition of Structures	- STARTING TO DETERIORATE		
Evidence of Asbestos in Construction			
Contents			
Electrical Transformers	(Date transformers if possible)		
Fluorescent light fixtures	(Ballast may contain PCBs)		
Stability			
Risk to Environment	1 (Low Risk) ✓	2	3 (High Risk)
Risk to Wildlife	1 (Low Risk) ✓	2	3 (High Risk)
Risk to Public Safety	1 (Low Risk)	2 ✓	3 (High Risk)
Additional Comments	- NUMEROUS FOUNDATIONS IN MILL AREA.		
	O.K. BUT MAY DETERIORATE IN TIME CAUSING		
	A CONCERN. SOME ARE ≈ 3m HIGH		
	COULD ALSO BE A CONCERN.		

Scrap Material	WASTE DISPOSAL SITE.		
Type	- VARIOUS		
Amount	- 30m WIDE UP SLOPE OF 20 m		
Risk to Environment	**1** (Low Risk)	**2**	**3** (High Risk)
Risk to Wildlife	**1** (Low Risk)	**2**	**3** (High Risk)
Risk to Public Safety	**1** (Low Risk)	**2**	**3** (High Risk)
Residual Chemicals on Site			
List type			
Volume of each			
Type of storage			
Type of containment if any			
Risk to Environment	**1** (Low Risk)	**2**	**3** (High Risk)
Risk to Wildlife	**1** (Low Risk)	**2**	**3** (High Risk)
Risk to Public Safety	**1** (Low Risk)	**2**	**3** (High Risk)
Mine Dewatering			
Locate if possible			
Additional Comments			

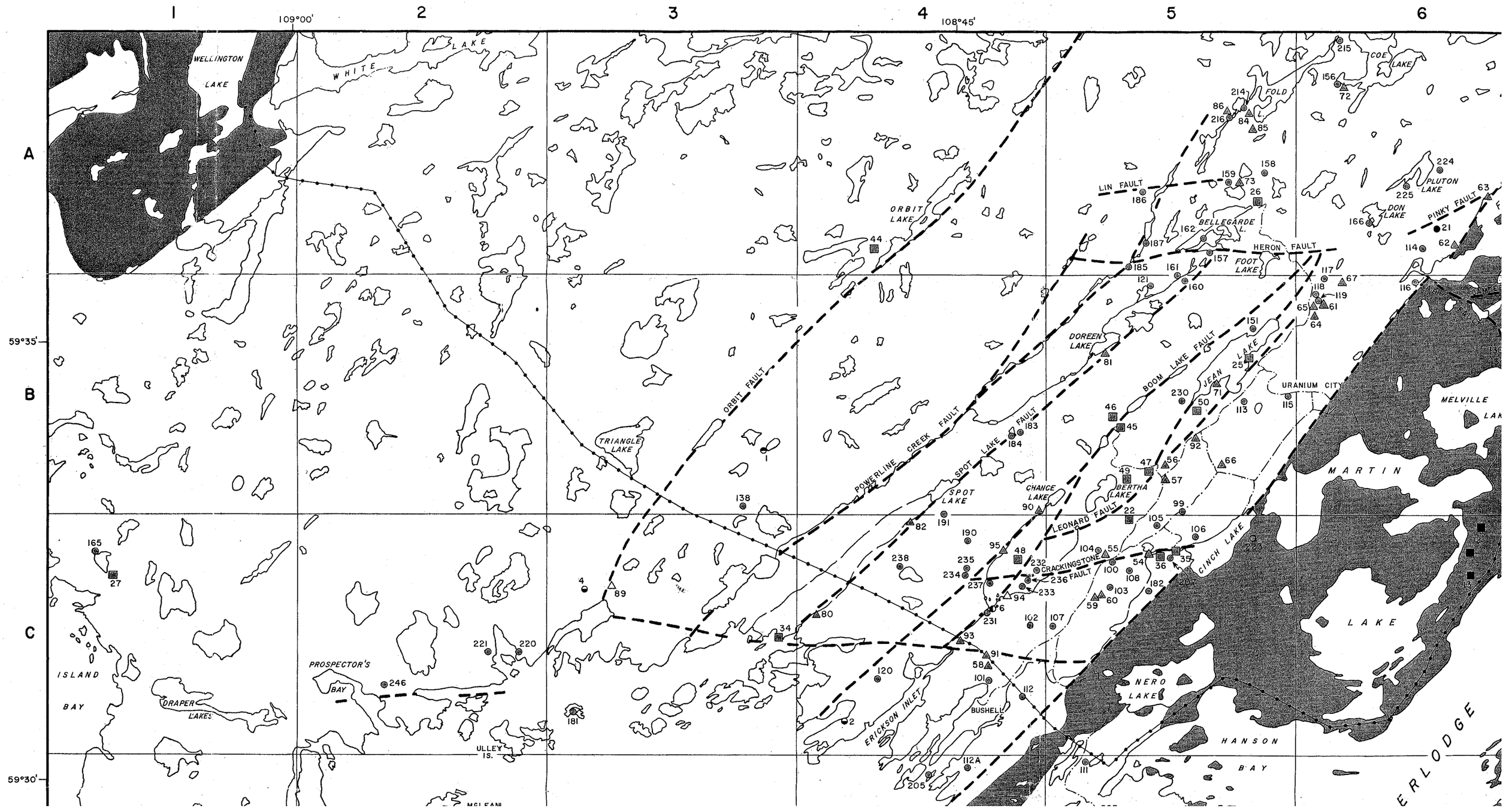

ENTRANCE ROAD
N
TAILINGS
SWITCH AREA
'C' ZONE
LAKE
'A' ZONE
PIT
PIT
RAISE
WASTE ROCK
DEAD END
WASTE DISPOSAL
500m
200m
PRIMARY SIGNALS
WATER
WASTE ROCK



APPENDIX 2

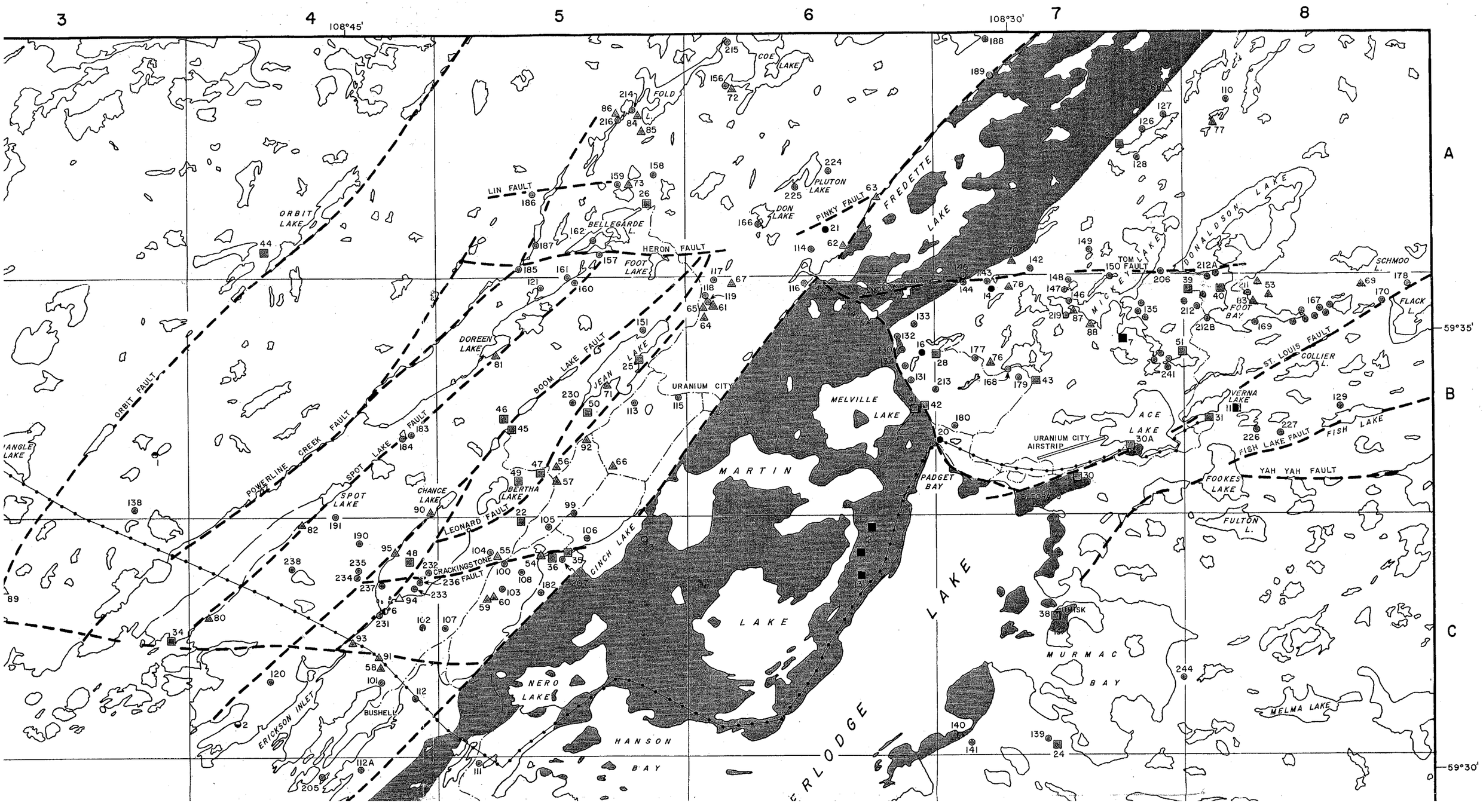
Map 126B

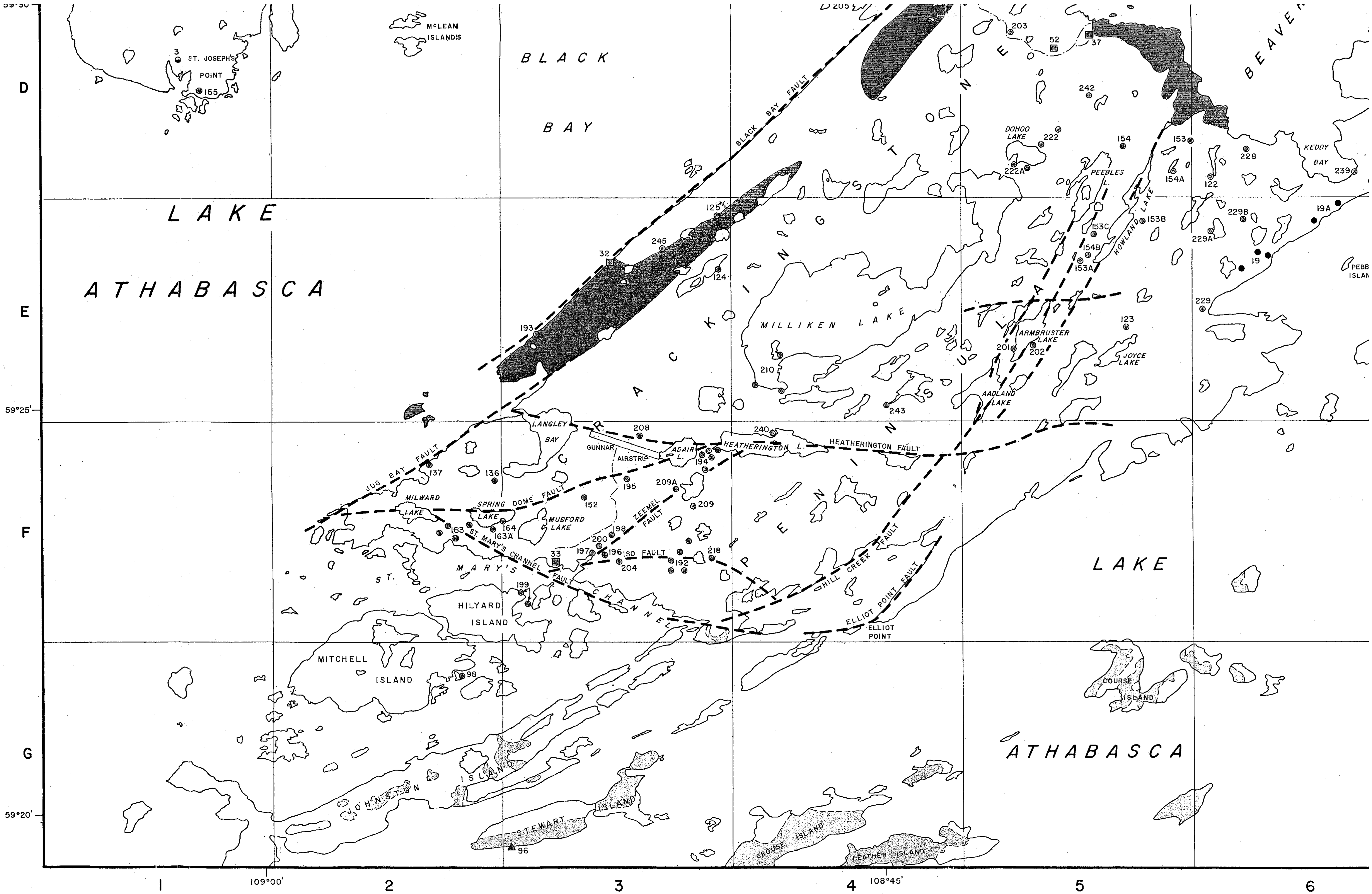
PROVINCE OF SASKATCHEWAN
DEPARTMENT OF MINERAL RESOURCES
GEOLOGICAL SCIENCES BRANCH
PRECAMBRIAN GEOLOGY DIVISION
1969



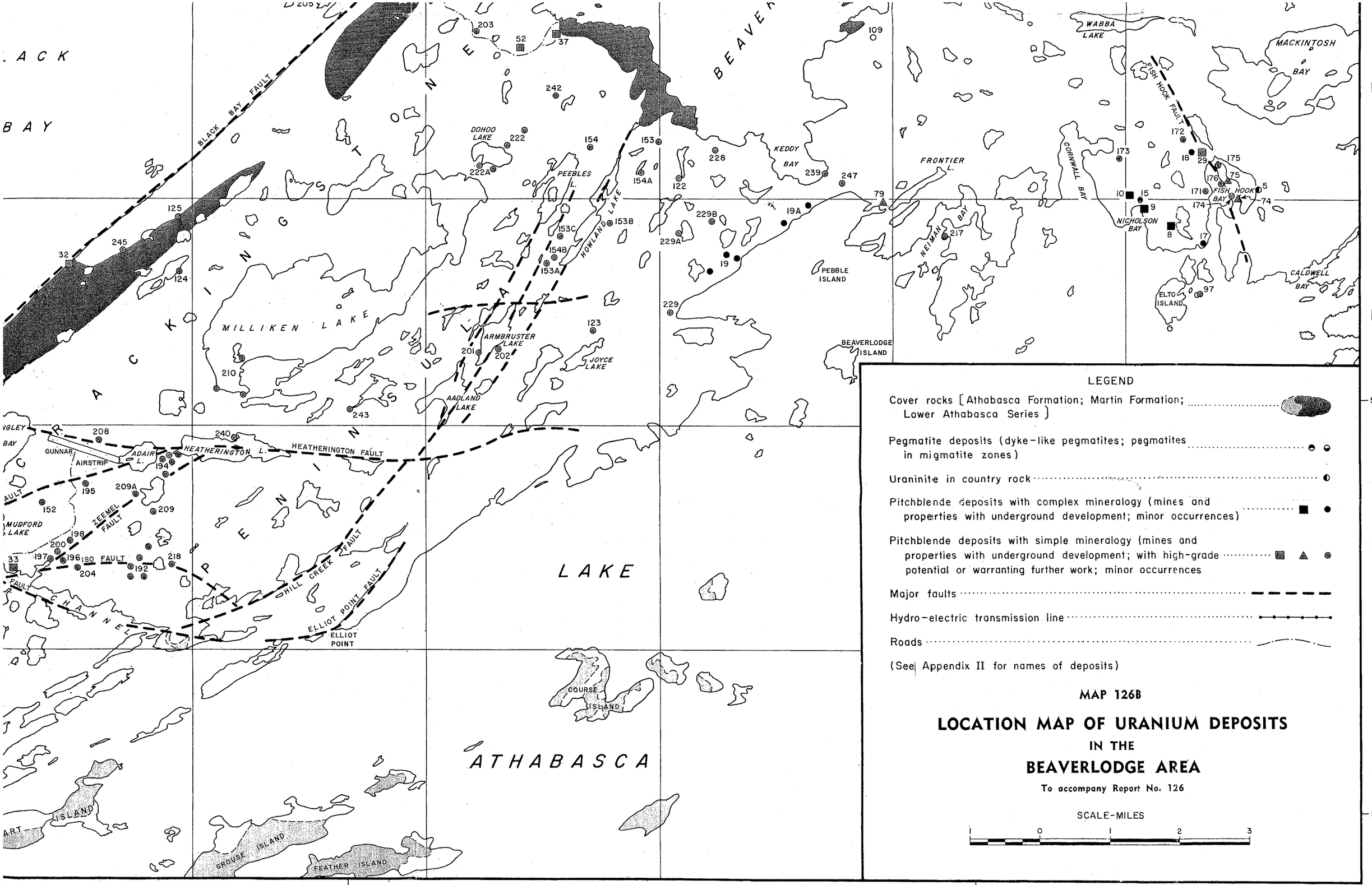
PROVINCE OF SASKATCHEWAN
DEPARTMENT OF MINERAL RESOURCES
GEOLOGICAL SCIENCES BRANCH
PRECAMBRIAN GEOLOGY DIVISION
1969

MAP 126 B
LOCATION MAP OF URANIUM DEPOSITS IN THE BEAVERLODGE AREA





LAKE ATHABASCA
BLACK BAY
McLEAN ISLANDS
ST. JOSEPH'S POINT
BLACK BAY FAULT
BEAVER
STONE
CRACKINGSTONE PENINSULA
MILLIKEN LAKE
DOHOO LAKE
PEEBLES L.
HOWLAND LAKE
KEDDY BAY
ULA
ARMBRUSTER LAKE
JOYCE LAKE
AADLAND LAKE
LANGLEY BAY
GUNNAR AIRSTRIP
ADAIR L.
HEATHERINGTON L.
HEATHERINGTON FAULT
JUG BAY FAULT
MILWARD LAKE
SPRING DOME FAULT
LAKE
MUDFORD LAKE
ZEEMEL FAULT
ST. MARY'S CHANNEL FAULT
ST. MARY'S CHANNEL
150 FAULT
HILL CREEK FAULT
ELLIOT POINT FAULT
ELLIOT POINT
HILYARD ISLAND
MITCHELL ISLAND
JOHNSTON ISLAND
STEWART ISLAND
GROUSE ISLAND
FEATHER ISLAND
COURSE ISLAND
LAKE ATHABASCA
D
E
F
G
59°25'
59°20'
1
109°00'
2
3
4
108°45'
5
6



LEGEND

Cover rocks [Athabasca Formation; Martin Formation; Lower Athabasca Series]

Pegmatite deposits (dyke-like pegmatites; pegmatites in migmatite zones)

Uraninite in country rock

Pitchblende deposits with complex mineralogy (mines and properties with underground development; minor occurrences)

Pitchblende deposits with simple mineralogy (mines and properties with underground development; with high-grade potential or warranting further work; minor occurrences

Major faults

Hydro-electric transmission line

Roads

(See Appendix II for names of deposits)

MAP 126B

LOCATION MAP OF URANIUM DEPOSITS IN THE BEAVERLODGE AREA

To accompany Report No. 126

SCALE-MILES

1 0 1 2 3

APPENDIX 3

Sampling Data

SRC Group: 2000-4958

SRC ANALYTICAL

422 Downey Road
Saskatoon, Saskatchewan S7N 4N1
(306) 933-6932 1-800-240-8808

15-Nov-00 11:58

Saskatchewan Environment & Resources Management
Box 5000
1328 Mistasinihk Place
La Ronge, Saskatchewan S0J 1L0
Attn: Richard Snider

Date Samples Received: 23-Oct-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
21823 18-10-00 00:00 LORADO URANIUM MINES 2000500352 *WATER*

ANALYTE	UNITS	ESQUA#	21823
INORGANICS			
Boron	mg/L	05451P	0.059
Phosphorus	mg/L	15451P	0.25
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	100
Arsenic	ug/L	33006P	1.0
Barium	mg/L	56451P	<0.001
Beryllium	mg/L	04451P	0.010
Calcium	mg/L	20451P	69
Cadmium	mg/L	48451P	0.003
Cobalt	mg/L	27451P	0.23
Chromium	mg/L	24451P	0.062
Copper	mg/L	29451P	0.19
Iron	mg/L	26451P	93
Potassium	mg/L	19451P	<0.2
Magnesium	mg/L	12451P	130
Manganese	mg/L	25451P	4.8
Molybdenum	mg/L	42451P	0.002
Sodium	mg/L	11451P	3.4
Nickel	mg/L	28451P	0.89
Lead	mg/L	82451P	<0.002
Silicon, soluble	mg/L	14451P	33
Strontium	mg/L	38451P	0.12
Titanium	mg/L	22451P	<0.001
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	1.1
Zirconium	mg/L	40451P	0.005
RADIONUCLIDES			
Lead-210	Bq/L	82510P	0.05
Polonium-210	Bq/L	84510P	0.009
Radium-226	Bq/L	no-val	0.03
Uranium	ug/L	92115P	258

SRC Group: 2000-4958

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 15-Nov-00 11:58

Date Samples Received: 23-Oct-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
21826 18-10-00 00:00 ABC MINE 2000500349 *WATER*

ANALYTE	UNITS	ESQUA#	21826
INORGANICS			
Boron	mg/L	05451P	0.31
Phosphorus	mg/L	15451P	<0.01
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	<0.005
Arsenic	ug/L	33006P	<0.5
Barium	mg/L	56451P	0.19
Beryllium	mg/L	04451P	<0.001
Calcium	mg/L	20451P	61
Cadmium	mg/L	48451P	<0.001
Cobalt	mg/L	27451P	<0.001
Chromium	mg/L	24451P	<0.001
Copper	mg/L	29451P	0.003
Iron	mg/L	26451P	0.50
Potassium	mg/L	19451P	4.2
Magnesium	mg/L	12451P	29
Manganese	mg/L	25451P	0.061
Molybdenum	mg/L	42451P	0.044
Sodium	mg/L	11451P	30
Nickel	mg/L	28451P	<0.001
Lead	mg/L	82451P	<0.002
Silicon, soluble	mg/L	14451P	4.8
Strontium	mg/L	38451P	1.1
Titanium	mg/L	22451P	<0.001
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	<0.005
Zirconium	mg/L	40451P	<0.001
RADIONUCLIDES			
Lead-210	Bq/L	82510P	0.08
Polonium-210	Bq/L	84510P	0.06
Radium-226	Bq/L	no-val	0.16
Uranium	ug/L	92115P	133

"<": not detected at level stated above.

SRC Group: 2000-4958

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 15-Nov-00 11:58

Date Samples Received: 23-Oct-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
21824 18-10-00 00:00 NESBITT - LABINE EAGLE MINE 2000500351 *WATER*

ANALYTE	UNITS	ESQUA#	21824
INORGANICS			
Boron	mg/L	05451P	0.013
Phosphorus	mg/L	15451P	0.06
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	0.14
Arsenic	ug/L	33006P	0.7
Barium	mg/L	56451P	0.034
Beryllium	mg/L	04451P	<0.001
Calcium	mg/L	20451P	70
Cadmium	mg/L	48451P	<0.001
Cobalt	mg/L	27451P	<0.001
Chromium	mg/L	24451P	0.001
Copper	mg/L	29451P	0.010
Iron	mg/L	26451P	0.45
Potassium	mg/L	19451P	0.8
Magnesium	mg/L	12451P	4.6
Manganese	mg/L	25451P	0.074
Molybdenum	mg/L	42451P	0.002
Sodium	mg/L	11451P	1.5
Nickel	mg/L	28451P	<0.001
Lead	mg/L	82451P	<0.002
Silicon, soluble	mg/L	14451P	3.6
Strontium	mg/L	38451P	0.14
Titanium	mg/L	22451P	0.002
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	0.012
Zirconium	mg/L	40451P	<0.001
RADIONUCLIDES			
Lead-210	Bq/L	82510P	0.20
Polonium-210	Bq/L	84510P	0.02
Radium-226	Bq/L	no-val	0.15
Uranium	ug/L	92115P	2850

"<": not detected at level stated above.

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 15-Nov-00 11:58

Date Samples Received: 23-Oct-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
21827 18-10-00 00:00 [redacted] 2000500348 *WATER* PITCH-ORE

ANALYTE	UNITS	ESQUA#	21827
INORGANICS			
Boron	mg/L	05451P	0.029
Phosphorus	mg/L	15451P	<0.01
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	<0.005
Arsenic	ug/L	33006P	3.7
Barium	mg/L	56451P	0.23
Beryllium	mg/L	04451P	<0.001
Calcium	mg/L	20451P	87
Cadmium	mg/L	48451P	<0.001
Cobalt	mg/L	27451P	<0.001
Chromium	mg/L	24451P	<0.001
Copper	mg/L	29451P	0.004
Iron	mg/L	26451P	0.039
Potassium	mg/L	19451P	2.3
Magnesium	mg/L	12451P	18
Manganese	mg/L	25451P	<0.001
Molybdenum	mg/L	42451P	0.001
Sodium	mg/L	11451P	4.2
Nickel	mg/L	28451P	0.001
Lead	mg/L	82451P	<0.002
Silicon, soluble	mg/L	14451P	4.4
Strontium	mg/L	38451P	0.42
Titanium	mg/L	22451P	<0.001
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	<0.005
Zirconium	mg/L	40451P	<0.001
RADIONUCLIDES			
Lead-210	Bq/L	82510P	0.06
Polonium-210	Bq/L	84510P	0.01
Radium-226	Bq/L	no-val	0.22
Uranium	ug/L	92115P	439

"<": not detected at level stated above.

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 01-Sep-00 08:44

SAMPLE	CLIENT DESCRIPTION	
15794	11-08-00 13:30 ANGLO ROUYN (ABANDONED MINE SITE) POND NE OF TAIL	*WATER*
15795	11-08-00 13:30 ANGLO ROUYN (ABANDONED MINE SITE) POND SW OF TAIL	*WATER*

ANALYTE	UNITS	ESQUA#	15794	15795
INORGANICS				
Chloride	mg/L	17213	1	1
Sulfate	mg/L	16447	90	79
Total hardness	mg/L	10602	173	162
Ammonia as nitrogen	mg/L	07557P	0.07	0.05
Un-ionized ammonia-N	mg/L	07570	Not Reported	Not Reported
Boron	mg/L	05451P	0.025	0.014
Phosphorus	mg/L	15451P	0.06	<0.01
Silver	mg/L	47451P	<0.001	<0.001
Aluminum	mg/L	13451P	<0.005	<0.005
Arsenic	ug/L	33006P	<0.5	0.8
Barium	mg/L	56451P	0.018	0.017
Beryllium	mg/L	04451P	<0.001	<0.001
Calcium	mg/L	20451P	56	55
Cadmium	mg/L	48451P	<0.001	<0.001
Cobalt	mg/L	27451P	<0.001	<0.001
Chromium	mg/L	24451P	<0.001	<0.001
Copper	mg/L	29451P	0.011	0.002
Iron	mg/L	26451P	0.37	0.039
Potassium	mg/L	19451P	12	6.2
Magnesium	mg/L	12451P	8.1	6.1
Manganese	mg/L	25451P	0.058	0.039
Molybdenum	mg/L	42451P	<0.001	<0.001
Sodium	mg/L	11451P	20	13
Nickel	mg/L	28451P	0.003	<0.001
Lead	mg/L	82451P	<0.002	<0.002
Silicon, soluble	mg/L	14451P	1.8	0.63
Strontium	mg/L	38451P	0.14	0.13
Titanium	mg/L	22451P	<0.001	<0.001
Vanadium	mg/L	23451P	<0.001	<0.001
Zinc	mg/L	30451P	0.031	0.008
Zirconium	mg/L	40451P	<0.001	<0.001
Total suspended solids	mg/L	10406	9	4
Specific conductivity	uS/cm	02041	451	394
pH	pH units	10301	7.65	7.81

"<": not detected at level stated above.

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 01-Sep-00 08:43

Date Samples Received: 17-Aug-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
15793 11-08-00 12:00 ANGLO ROUYN (ABANDONED MINE SITE) LAKE @ WASTE RO *WATER*

ANALYTE	UNITS	ESQUA#	15793
INORGANICS			
Boron	mg/L	05451P	0.004
Phosphorus	mg/L	15451P	<0.01
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	0.39
Arsenic	ug/L	33006P	<0.5
Barium	mg/L	56451P	0.011
Beryllium	mg/L	04451P	<0.001
Calcium	mg/L	20451P	20
Cadmium	mg/L	48451P	<0.001
Cobalt	mg/L	27451P	0.009
Chromium	mg/L	24451P	<0.001
Copper	mg/L	29451P	0.029
Iron	mg/L	26451P	0.45
Potassium	mg/L	19451P	1.3
Magnesium	mg/L	12451P	2.0
Manganese	mg/L	25451P	0.062
Molybdenum	mg/L	42451P	<0.001
Sodium	mg/L	11451P	1.9
Nickel	mg/L	28451P	0.015
Lead	mg/L	82451P	<0.002
Silicon, soluble	mg/L	14451P	3.6
Strontium	mg/L	38451P	0.045
Titanium	mg/L	22451P	0.002
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	0.025
Zirconium	mg/L	40451P	<0.001

"<": not detected at level stated above.

SRC Group: 2000-5114

SRC ANALYTICAL

422 Downey Road
Saskatoon, Saskatchewan S7N 4N1
(306) 933-6932 1-800-240-8808

Saskatchewan Environment & Resources Management 16-Nov-00 09:59
Box 5000
1328 Mistasinihk Place
La Ronge, Saskatchewan S0J 1L0
Attn: Richard Snider

Date Samples Received: 27-Oct-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
22585 26-10-00 15:00 WESTERN NUCLEAR TAILINGS PONDING *WATER*

ANALYTE	UNITS	ESQUA#	22585
INORGANICS			
Chloride	mg/L	17213	2
Sulfate	mg/L	16447	160
Total hardness	mg/L	10602	289
Ammonia as nitrogen	mg/L	07557P	0.09
Boron	mg/L	05451P	0.004
Phosphorus	mg/L	15451P	0.01
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	<0.005
Arsenic	ug/L	33452P	64
Barium	mg/L	56451P	0.028
Beryllium	mg/L	04451P	<0.001
Calcium	mg/L	20451P	60
Cadmium	mg/L	48451P	0.007
Cobalt	mg/L	27451P	0.006
Chromium	mg/L	24451P	<0.001
Copper	mg/L	29451P	0.050
Iron	mg/L	26451P	0.99
Potassium	mg/L	19451P	7.5
Magnesium	mg/L	12451P	34
Manganese	mg/L	25451P	0.82
Molybdenum	mg/L	42451P	<0.001
Sodium	mg/L	11451P	9.6
Nickel	mg/L	28451P	0.010
Lead	mg/L	82451P	0.055
Silicon, soluble	mg/L	14451P	4.3
Strontium	mg/L	38451P	0.18
Titanium	mg/L	22451P	<0.001
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	8.8
Zirconium	mg/L	40451P	0.001

SRC Group: 2000-5114

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 16-Nov-00 09:59

Date Samples Received: 27-Oct-00 Client P.O.:

ANALYTE	UNITS	ESQUA#	22585
Total suspended solids	mg/L	10406	6
Specific conductivity	uS/cm	02041	550
pH	pH units	10301	7.57
RADIONUCLIDES			
Lead-210	Bq/L	82510P	<0.04
Radium-226	Bq/L	no-val	0.01
Uranium	ug/L	92115P	<0.5

"<": not detected at level stated above.

SRC Group: 2000-5114

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 16-Nov-00 09:59

Date Samples Received: 27-Oct-00 Client P.O.:

SAMPLE CLIENT DESCRIPTION
22586 26-10-00 15:10 HANSON LAKE OFFSHORE (0.25M) FROM WESTERN NUCLEAR *WATER*

ANALYTE	UNITS	ESQUA#	22586
INORGANICS			
Chloride	mg/L	17209	1.0
Sulfate	mg/L	16309	1.7
Total hardness	mg/L	10602	81
Ammonia as nitrogen	mg/L	07557P	0.06
Boron	mg/L	05451P	0.007
Phosphorus	mg/L	15451P	<0.01
Silver	mg/L	47451P	<0.001
Aluminum	mg/L	13451P	<0.005
Arsenic	ug/L	33006P	1.7
Barium	mg/L	56451P	0.024
Beryllium	mg/L	04451P	<0.001
Calcium	mg/L	20451P	16
Cadmium	mg/L	48451P	<0.001
Cobalt	mg/L	27451P	<0.001
Chromium	mg/L	24451P	<0.001
Copper	mg/L	29451P	<0.001
Iron	mg/L	26451P	0.21
Potassium	mg/L	19451P	1.5
Magnesium	mg/L	12451P	10
Manganese	mg/L	25451P	0.014
Molybdenum	mg/L	42451P	<0.001
Sodium	mg/L	11451P	3.2
Nickel	mg/L	28451P	<0.001
Lead	mg/L	82451P	<0.002
Silicon, soluble	mg/L	14451P	0.10
Strontium	mg/L	38451P	0.051
Titanium	mg/L	22451P	<0.001
Vanadium	mg/L	23451P	<0.001
Zinc	mg/L	30451P	0.028
Zirconium	mg/L	40451P	<0.001
Total suspended solids	mg/L	10406	<1
Specific conductivity	uS/cm	02041	169
pH	pH units	10301	7.92

"<": not detected at level stated above.

SRC Group: 2000-5088

RUSH

SRC ANALYTICAL

Saskatchewan Environment & Resources Management 01-Nov-00 16:18

ANALYTE	UNITS	ESQUA#	22480	22481	22482
Net Acid Generation	g CaCO3/kg	no-val	-2.3	25.4	39.5
pH, paste	pH units	10350	6.39	2.45	5.89

SAMPLE CLIENT DESCRIPTION
22483 26-10-00 13:20 WESTERN NUCLEAR BERM *SOIL*

ANALYTE	UNITS	ESQUA#	22483
INORGANICS			
Sulfur	%	16002	5.71
Sulfate, acid soluble	%	16312	4.30
Boron	ug/g	05751	<1
Phosphorus	ug/g	15751	190
Sulfide	ug/g	16116	42800
Silver	ug/g	47751	72
Aluminum	ug/g	13751	10300
Arsenic	ug/g	33751	30100
Barium	ug/g	56751	8.2
Beryllium	ug/g	04751	<0.5
Calcium	ug/g	20751	930
Cadmium	ug/g	48751	43
Cobalt	ug/g	27751	12
Chromium	ug/g	24751	240
Copper	ug/g	29751	3800
Iron	ug/g	26751	74900
Potassium	ug/g	19751	3500
Magnesium	ug/g	12751	8500
Manganese	ug/g	25751	490
Molybdenum	ug/g	42751	5.4
Sodium	ug/g	11751	200
Nickel	ug/g	28751	140
Lead	ug/g	82751	15200
Strontium	ug/g	38751	7.6
Titanium	ug/g	22751	68
Vanadium	ug/g	23751	21
Zinc	ug/g	30751	29700
Zirconium	ug/g	40751	2.6
Acid Neutralizing	g CaCO3/kg	16117	0.7
Acid Producing	g CaCO3/kg	16118	134
Net Acid Generation	g CaCO3/kg	no-val	133
pH, paste	pH units	10350	2.70

"<": not detected at level stated above.
Sulfur determination was subcontracted to SRC Geochemistry Laboratory.

SRC ANALYTICAL
422 Downey Road
Saskatoon, Saskatchewan S7N 4N1
(306) 933-6932 1-800-240-8808

Saskatchewan Environment & Resources Management 01-Nov-00 16:18
Box 5000
1328 Mistasinihk Place
La Ronge, Saskatchewan S0J 1L0
Attn: Richard Snider

Date Samples Received: 27-Oct-00 Client P.O.:

SAMPLE	CLIENT DESCRIPTION
22480	26-10-00 14:30 WESTERN NUCLEAR PILE #1 *SOIL*
22481	26-10-00 16:00 WESTERN NUCLEAR DEBRIS PILE *SOIL*
22482	26-10-00 13:50 WESTERN NUCLEAR TAILING POND *SOIL*

ANALYTE	UNITS	ESQUA#	22480	22481	22482
INORGANICS					
Sulfur	%	16002	0.01	1.79	3.34
Sulfate, acid soluble	%	16312	0.009	2.93	5.18
Boron	ug/g	05751	<1	<1	<1
Phosphorus	ug/g	15751	480	580	250
Sulfide	ug/g	16116	<100	8100	16100
Silver	ug/g	47751	<0.5	29	55
Aluminum	ug/g	13751	5000	14500	20000
Arsenic	ug/g	33751	11	7300	7400
Barium	ug/g	56751	26	130	70
Beryllium	ug/g	04751	<0.5	<0.5	0.6
Calcium	ug/g	20751	1600	1600	5100
Cadmium	ug/g	48751	<0.5	7.5	50
Cobalt	ug/g	27751	2.3	5.2	10
Chromium	ug/g	24751	26	110	78
Copper	ug/g	29751	7.7	540	2700
Iron	ug/g	26751	6900	48200	27100
Potassium	ug/g	19751	670	9300	5700
Magnesium	ug/g	12751	1500	10800	13300
Manganese	ug/g	25751	71	620	520
Molybdenum	ug/g	42751	1.1	2.0	2.0
Sodium	ug/g	11751	210	460	700
Nickel	ug/g	28751	8.4	28	49
Lead	ug/g	82751	18	8500	21200
Strontium	ug/g	38751	6.6	19	41
Titanium	ug/g	22751	260	600	57
Vanadium	ug/g	23751	10	42	19
Zinc	ug/g	30751	12	4400	43200
Zirconium	ug/g	40751	3.7	17	4.3
Acid Neutralizing	g CaCO3/kg	16117	2.3	<0.5	10.9
Acid Producing	g CaCO3/kg	16118	<0.5	25.4	50.4