

**Sä Dena Hes**  
**2002 Annual Report**  
**Yukon Production Licence QML - 0004**



Prepared by



April 2003

# TABLE OF CONTENTS

<b>Section</b>	<b>Page</b>
1.0 Summary .....	1
2.0 Production Data .....	1
2.1 Ore & Waste Mined.....	1
2.2 Head Grades Processed.....	1
2.3 Concentrate Production .....	1
2.4 Stockpiles .....	1
3.0 Forecast Mine Life .....	1
4.0 Backfill Placed Underground.....	2
5.0 Mine Plans .....	2
6.0 Reclamation .....	2
6.1 Reclamation Plan.....	2
6.2 Revegetation Studies.....	2
7.0 Solid Waste Disposal.....	2
7.1 Solid Waste Disposal & Recycling.....	2
7.2 Inventory of Wastes Placed in the Landfill.....	3
8.0 Wildlife Observations .....	3
9.0 Production Plans For 2003.....	3

## Appendices

- Appendix A - Memorandum Regarding Sä Dena Hes Resources December 31, 2002
- Appendix B - Results Summary of Phase II Revegetation Test Program - 2002
- Appendix C - Listing of 2002 Wildlife Sightings At the Mine Site

## **1.0 SUMMARY**

A Joint Venture consisting of Teck Cominco Ltd. (25%), Teck Cominco Metals Ltd. (25%), and Pan-Pacific Metal Mining Corporation (50%) (a wholly owned subsidiary of Korea Zinc) formed the Sä Dena Hes Operating Corporation which purchased the Sä Dena Hes Mine from Coopers and Lybrand Ltd. the appointed Court Receiver, in March 1994. Teck Cominco Ltd. operates the mine under an Agreement with the Joint Venture Partners. Full-time security and property management is provided by Teck Cominco Ltd. through on-site personnel. The mine operation continued to be maintained on a 'Temporary Closure' basis throughout 2002. In 2001 Sä Dena Hes was granted a Yukon Quartz Mining Production Licence QML-0004 ('Production Licence'). This report is submitted in compliance with Section 13 of the Production Licence.

## **2.0 PRODUCTION DATA**

The mine was under 'Temporary Closure' status throughout 2002.

### **2.1 Ore & Waste Mined**

Ore Produced .....	0 tonnes
Waste Produced .....	0 tonnes

### **2.2 Head Grades Processed**

Zinc Grade .....	N. A.
Lead Grade.....	N. A.

### **2.3 Concentrate Production**

Zinc Concentrate .....	0 tonnes
Lead Concentrate .....	0 tonnes

### **2.4 Stockpiles**

Ore Stockpiles .....	0 tonnes
----------------------	----------

## **3.0 FORECAST MINE LIFE**

Expected mine life would be approximately 4 years based on current resources. The Mineral Resources are as follows (Appendix A – Memorandum from WP Armstrong to Bruce Donald Re: Sa Dena Hes Resources December 31, 2002):

### **Mineral Resources**

Indicated .....	2,190,000 tonnes
Zinc .....	10.4%
Lead .....	2.6%
Silver .....	45 g/ton

#### **4.0 Backfill Placed Underground**

There was no backfill placed underground during 2002.

#### **5.0 MINE PLANS**

Mine plans and sections were submitted with the Production Licence 2001 Annual Report. They are not being resubmitted as there have been no changes to the plans in 2002.

#### **6.0 RECLAMATION**

The site was in Temporary Closure throughout the year awaiting return of economic metal prices. Site reclamation activities were related to study activity.

##### **6.1 Reclamation Plan**

During 2001, the CEAA screening of the "Sä Dena Hes Mine Detailed Decommissioning & Reclamation Plan – February 2000" ('Reclamation Plan') was completed. The Production Licence requires the Plan to be up dated prior to the end of 2005 during Temporary Closure or within two years of resumption of production. This requirement is consistent with requirements of the Type A Water Licence for the site (QZ99-045).

##### **6.2 Revegetation Studies**

The Reclamation Plan proposed Revegetation studies in Section 3.6 of the report. The Production Licence requires that the testing proposed in Section 3.6 and 3.6.2.1 be conducted.

In 2000, the initial work related to Revegetation was initiated to obtain basic information for use in designing the revegetation test work. In 2001, revegetation studies as proposed in the Reclamation Plan were initiated and the information related to this work was reported in the Production Licence 2001 Annual Report. In 2002 progress monitoring of the vegetation program was continued by Access Consulting Group and results contained in their report 'Results Summary of Phase II Revegetation Test Program – 2002 are attached (Appendix B).

#### **7.0 Solid Waste Disposal**

##### **7.1 Solid Waste Disposal & Recycling**

The site is in Temporary Closure with one person living on-site. All putrescible waste has been stored in animal proof containers prior to disposal. The site generates waste oil from onsite power generation and mobile equipment. During Temporary Closure the quantity of used oil generated is limited. The oil is held in storage containers on site pending proper disposal and/or recycling offsite.

### **7.2 Inventory of Wastes Placed in the Landfill**

There were no wastes placed into the landfill in 2002. Putrescible wastes from the caretaker taken to the local municipal landfill on a regular basis.

### **8.0 Wildlife Observations**

The Production Licence requires that sightings of wildlife at the mine site are reported on an annual basis. The caretaker who resides at the site records wildlife sightings in a log book retained at the site and a summary of this information has been compiled and is attached in Appendix C.

### **9.0 Production Plans for 2003**

The mine was in Temporary Closure throughout 2002. Metals prices continued at extremely depressed levels throughout 2002 with no change at year end. Unless there is a substantial increase in metals prices in 2003, there are no plans to resume production in 2003.

Teck Cominco Ltd. remains committed to re-open and operate the mine once metals prices return to economic levels.

-----  
Bruce J. Donald, P. Eng. (B.C.)  
Reclamation Manager,  
Environment and Corporate Affairs  
Teck Cominco Ltd.

# **APPENDIX A**

## **MEMORANDUM REGARDING**

### **Sä DENA HES RESOURCES**

**DECEMBER 31, 2002**

Teck Cominco Limited  
Evaluations  
#600 - 200 Burrard Street  
Vancouver, B.C. V6C 3L9

**teckcominco**

## MEMORANDUM

**Memo To:** Bruce Donald

**Date:** March 4, 2003

**From:** W P Armstrong

**Re:** Sa Dena Hes Resources December 31, 2002

---

### Sa Dena Hes

#### Indicated Resources

Ore Body	Tonnes	%Zn	%Pb	g/t Ag
Burnick	1,170,000	10.4	0.6	40
Jewel Box	630,000	9.9	5.9	45
Attila	<u>390,000</u>	<u>11.5</u>	<u>3.1</u>	<u>60</u>
<b>Total</b>	<b>2,190,000</b>	<b>10.4</b>	<b>2.6</b>	<b>45</b>

This property was acquired from Curragh Inc. in 1994. Resources are contained in three ore zones Attila, Burnick and Jewel Box. Curragh had operated the mine until 1992 and prior to closure had mined 726,758 tonnes grading 11.7% Zn, 7.2% Pb from the Jewel Box ore body. Resources are based on an 8% Pb plus Zn cut-off. Estimates for individual ore zones have been completed over a seven year period. The Attila resource was calculated by Curragh in 1992 and confirmed by Cominco in 1995. The Burnick resource was calculated by Cominco in November 1995 following the completion of 5900 metres of drilling and development of a preliminary mine plan. The Jewel Box resources were recalculated by Cominco in 2001.



W.P. Armstrong, P Eng. British Columbia, Qualified Person

# **APPENDIX B**

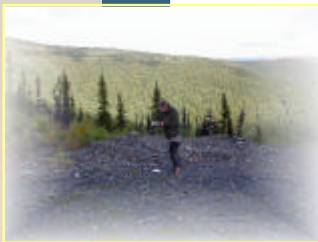
## **RESULTS SUMMARY OF PHASE II REVEGETATION TEST PROGRAM 2002**



**SÄ DENA HES MINE  
LAND RECLAMATION AND REVEGETATION PLAN**

***RESULTS SUMMARY OF  
Phase II Revegetation Test Program - 2002***

---



**Prepared for:**

**Teck Cominco Ltd.**  
#600-200 Burrard Street  
Vancouver, B.C.  
V6C 3L9

January 2003

**Prepared by:**



A Registered Tradename for Access Mining Consultants Ltd.  
[www.accessconsulting.ca](http://www.accessconsulting.ca)

### Table of Contents

1.0	Introduction .....	1
2.0	Phase II Objectives .....	2
3.0	Methodology .....	4
3.1	General.....	4
3.2	Test Plot Observations .....	4
4.0	Results & Discussion.....	4
4.1	Seed Test Plots .....	4
4.2	Shrub Test Plots.....	6
5.0	Conclusions .....	10
6.0	Recommendations .....	10
7.0	References.....	12

### List of Figures

Figure 1	General Project Location Map.....	3
Figure 2	Test Plot Locations – Mine Access Road.....	8
Figure 3	Test Plot Locations – Mine Site / Tailings Area .....	9

### List of Tables

Table 1	Cover at Sa Dena Hes Mine Revegetation Test Plots - 2002 .....	5
---------	--	---

### List of Appendices

Appendix A	Additional 2002 Site Photos
------------	-----------------------------

## 1.0 INTRODUCTION

In February 2000, Cominco submitted a Detailed Decommissioning & Reclamation Plan (the “DDRP”) for the Sä Dena Hes mine to the Yukon Territory Water Board. As part of the DDRP, a land reclamation and revegetation plan and test program was proposed with the overall goal of preparing the site for closure so that revegetation efforts would return the site to a state that existed prior to mining activities.

Figure 1 shows the general location of the mine in the Yukon.

The primary objectives of the revegetation test program are to:

- Determine seed mixtures that will provide short-term soil stability while allowing the natural invasion of local plant species;
- Determine fertilizer applications optimal for sustaining the healthy growth of seeded species without inhibiting colonization by indigenous plant species;
- Investigate methods of encouraging natural plant succession on reclaimed surfaces; and
- Determine potential success rates of revegetation at test plots on different areas of the mine site, in particular the tailings management facility.

The revegetation and reclamation program for the site is being undertaken in phases, with the results of the initial program used to further define subsequent phases. The DDRP outlined a program of additional data collection and test work in order to support the overall revegetation and reclamation components of the DDRP. The program included:

### Phase I:

- Completing an inventory of soils around the site necessary to provide revegetative soil covers for various mine site components;
- Nutrient testing of available soils; and
- Establish initial shrub propagation trials.

### Phase II:

- Establish test plots of practical revegetation seed mixtures and document; and
- Conduct baseline metal uptake testing of local plants.

The Phase I program, conducted in 2000, completed some of the tasks identified above, specifically, the soils inventory, and nutrient testing. Test plots for shrub propagation trials were also established at two locations on the property at that time, however, recommendations resulting from the Phase I program detailed further efforts that would be required to successfully implement the DDRP and to complete the remaining revegetation test program tasks listed above. Results from the Phase I program are presented in a report prepared by Access Mining Consultants in 2001 (AMCL, 2001).

## **2.0 PHASE II OBJECTIVES**

The Phase II program was initiated in the fall of 2001. The objectives of the Phase II program were to continue the reclamation and revegetation activities identified in the DDRP. As mentioned in Section 1.0, the objectives were to:

- Establish test plots of practical revegetation seed mixtures and document; and
- Conduct baseline metal uptake testing of local plants.

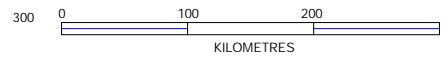
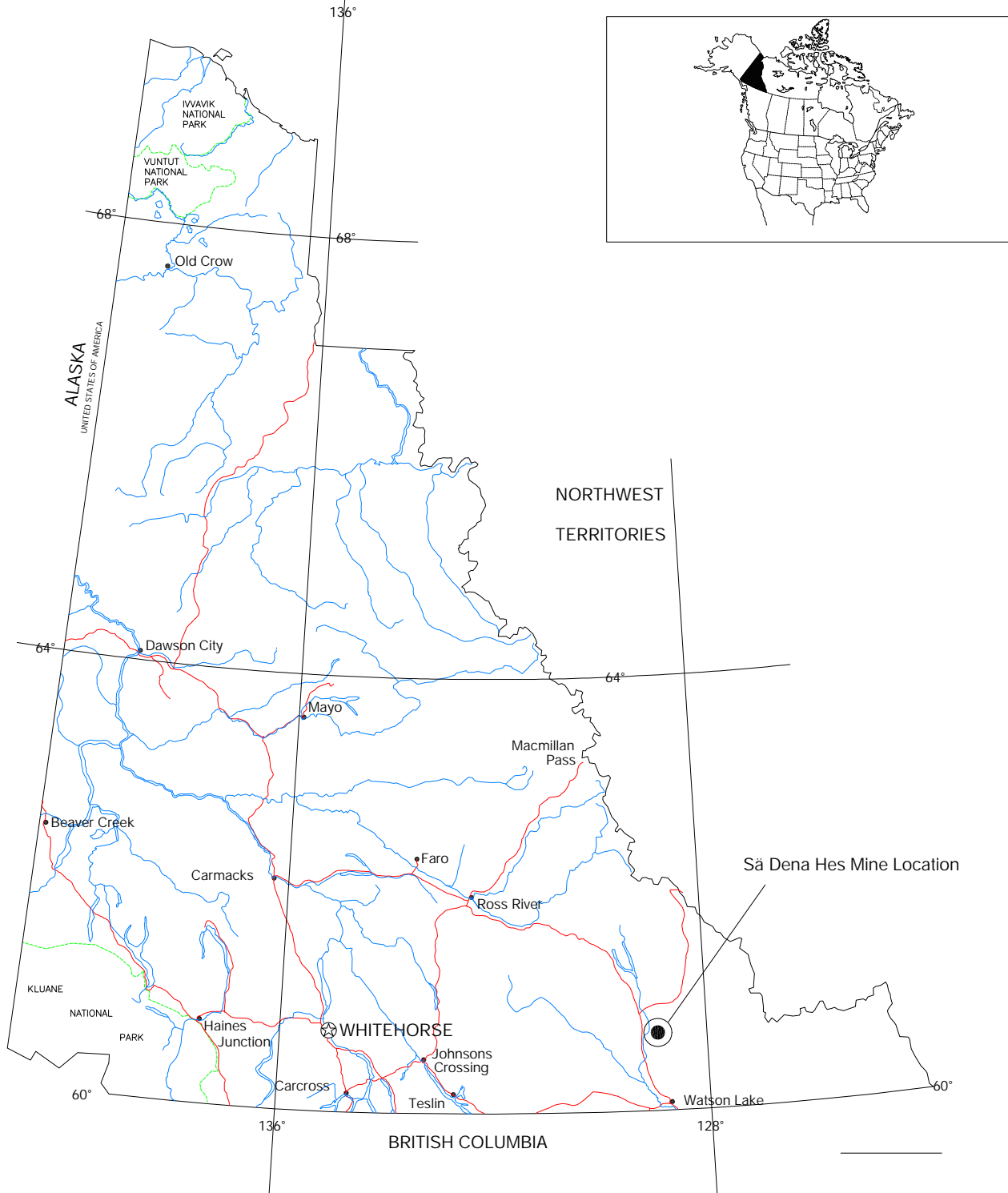
Access Consulting Group and Stu Withers prepared a report in early 2002 describing the activities, methodology, and results of the work conducted in 2001 during the second phase of the program (AMCL, 2001). It included a description of the new seed/shrub test plot establishments made on site, and the results of monitoring of the shrub test plots established in 2000. A comparison of metal concentrations in plant tissues around the mine site has not yet been completed.

This report represents a summary of work conducted in 2002 to continue with the Phase II program initiated in 2001. This work was focused specifically on objective monitoring of the revegetation test plots established on site in 2001 and 2000. The specific objectives for 2002 were to:

- Examine the test plots for vegetative growth;
- Assess the application rates of seed and fertilizer;
- Provide recommendations for future action.

The following report sections outline and describe the 2002 monitoring methodology and results and also provide discussion of the results and some recommendations for consideration. Figure 1, below, depicts the general location of the project within the Yukon.

# Yukon Territory



Lambert Conformal Conic Projection  
with Standard Parallels at 49°N and 77°N

- *Populated Settlements*
- ☆ *Territorial Capital*



TeckCominco Ltd. Sä Dena Hes Mine  
Land Reclamation & Revegetation Plan:  
2002 Test Program Summary Report



General Location Map (Map of Yukon)

DRAWN BY: JEA	CHECKED BY: TR
DATE: 09-02-2002	SCALE 1: 6 000 000

Figure 1

### **3.0 METHODOLOGY**

#### **3.1 GENERAL**

Rob McIntyre and Stu Withers visited the Sa Dena Hes mine site in late august 2002 (August 28 - 29) to complete the annual monitoring exercise. All of the revegetation test plots established in 2000 and 2001 were inspected and observations recorded. The results of these observations are presented in the following section.

#### **3.2 TEST PLOT OBSERVATIONS**

During this survey, the success of the revegetation efforts was measured by visually estimating the % vegetative cover at each plot. This was done by estimating the percentage of the ground covered by the seeded vegetation. Although species were identified where possible, determining the species composition could not be carried out because most of the seeded grasses had not yet flowered (native perennial grasses often do not flower until the second growing season).

Details of both the seed and shrub establishment can be found in the 2000 and 2001 summary reports for this project (Access Consulting Group 2001 and 2002). For convenience, this information has been included here in Appendix A.

### **4.0 RESULTS & DISCUSSION**

Figures 3 and 4 show the locations of the various test plot sites. Selected photographs are presented in Appendix A.

#### **4.1 SEED TEST PLOTS**

The following table provides a summary of the observations made with respect to cover estimates at each test plot during the 2002 inspection:

**Table 1 Cover at Sa Dena Hes Mine Revegetation Test Plots - 2002**

	Estimated Cover Plot 1	Estimated Cover Plot 2	Estimated Cover Plot 3	Estimated Cover Plot 4
<b>Km 20.6 Main Access Road</b>	15%	15%	15%	0%
<b>Adjacent to Landfill</b>	30%	20%	5%	0%
<b>Jewel Box Haul Road Near Treeline</b>	20%	5%	10%	0%
<b>TMF with 200 mm Soil</b>	10%	3%	3%	0%
<b>TMF with 300 mm Soil</b>	10%	5%	2%	0%
<b>TMF with 500 mm Rock &amp; 300 mm Soil</b>	20%	15%	5%	0%

At all sites, the estimated cover was highest in the plot that was treated with a full application of seed and a full application of fertilizer (fertilizer application: 120 kg / ha, 24% nitrogen, 24% phosphorus, 24% potassium). The low vegetative cover on all plots suggests that a higher seeding rate may be required for this seed mix, although a second year of monitoring would be required to confirm this. Additional fertilizing may also be beneficial. It should be noted that below normal rainfall was reported for this area in May and June 2002. This is the critical season for the germination and early growth of these native species.

In order to correlate the results of the revegetation test plot success, automatic climate data gathering equipment (rainfall, relative humidity, and temperature) was installed on site during the summer of 2002. The details of this installation and the results to date have been reported under separate cover. To date, not enough site-specific data has been collected to correlate with vegetative growth.

The vegetative cover was found to be densest in small depressions on each plot. This could be the result of the higher moisture retention occurring in these depressions and/or seed being concentrated (from initial broadcasting, wind, and/or water movement) in the depressions prior to germination. These observations, of what are termed 'microclimate effects', most often occur

at sites of revegetation on side slopes where seed movement is more easily facilitated, and have been previously characterized and documented at other hard rock mine operations in the Yukon by C. Mougeot (1996). At the test site located at km 22 of the main access road, growth was noted in depressions found down-slope from the plot, suggesting that seed was washed down-slope prior to germination.

Of the three test sites on the Tailings Management Facility (TMF), the one with 500 mm of rock capped with 300 mm of soil had a higher vegetative cover. This site was slightly more sheltered from the wind than the other two test sites established on the TMF and this factor may be attributable to the greater cover seen here.

An estimated cover of about 15% was noted at the test plot seeded with only violet wheatgrass (the 0.1 ha plot established at the landfill site). The cover on this plot was very uneven, suggesting that ungerminated seed may have been washed downslope, fertilizer and/or seed had not been distributed evenly, or that soil nutrient conditions varied throughout the plot.

As the native perennials, which have been planted on the test plots, do not often flower until the second growing season after planting, the identification of all species was not possible. In August 2002, violet wheatgrass appeared to be the dominant species at all sites. Other grass species observed with flowering heads included ticklegrass and glaucous bluegrass. The seeded legumes did not appear to have done well. This may have been the result of the paucity of moisture in late May and June.

A discussion of the results of the seed test plot success to date is presented in Section 5.0, below.

#### 4.2 SHRUB TEST PLOTS

The willow cutting test plots established in the fall of 2000 were inspected during the 2002 revegetation trials. These two 2m X 2m plots included:

Site	Species	Number of Plants
Access Road km 15.9	<i>Salix arbusculoides</i> (little-tree willow)	20
	<i>Salix bebbiana</i> (Bebb's willow)	20

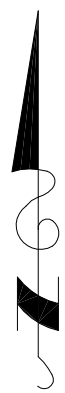
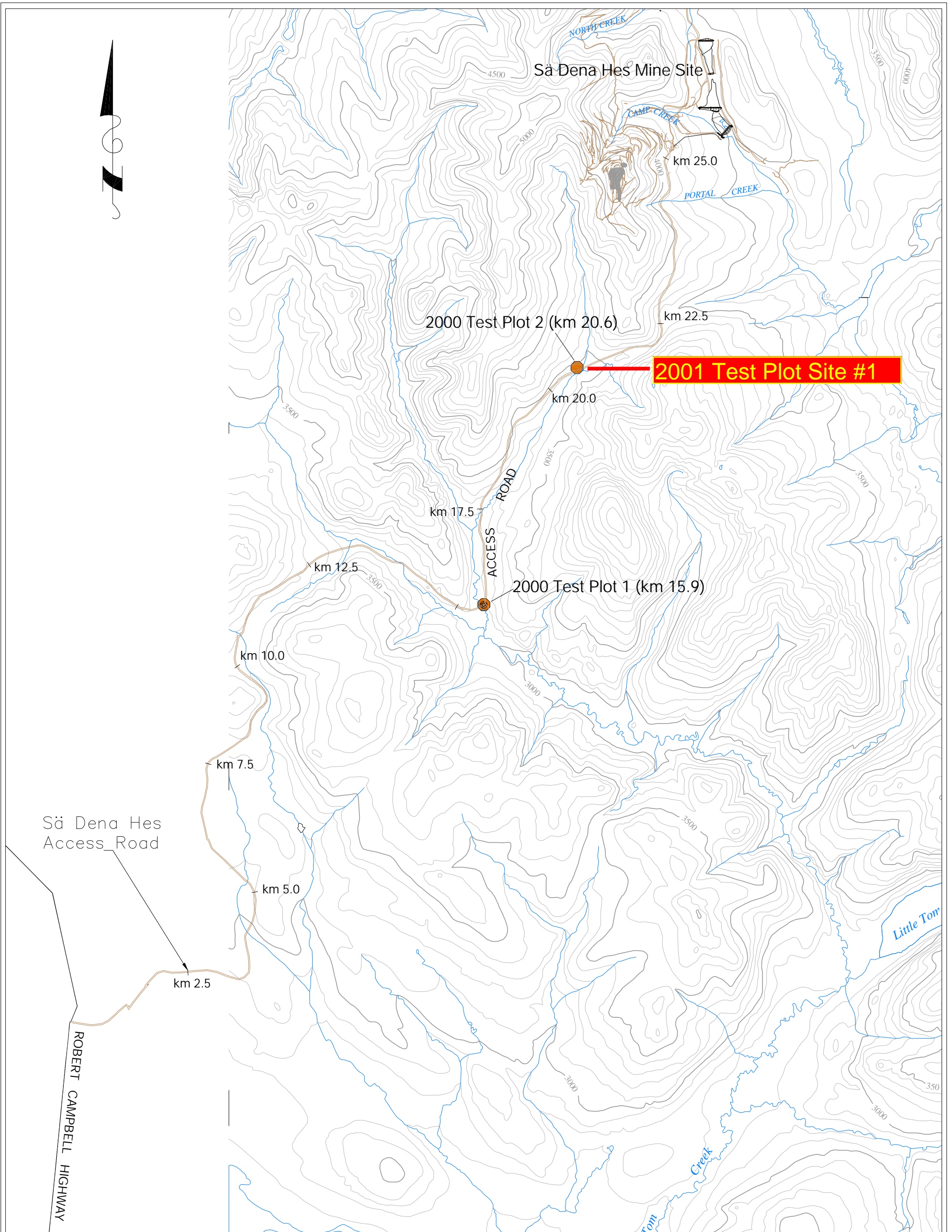
Access Road km 20.6	<i>Salix arbusculoides</i> (little-tree willow)	20
	<i>Salix glauca</i> (blue-green willow)	20

During the 2001 survey, the success of the willow cutting trials was not easily determined because of the lateness of the season. Most of the leaves had already fallen from the newly established plants. It estimated that the survival rates were greater than 50% at both sites.

During the 2002 inspection (late August), the leaves had not yet fallen from the test plot shrubs. The following observations were made at that time:

<b>Site</b>	<b>Number of Surviving Plants</b>
Access Road km 15.9	31 (mortalities believed to be primarily <i>Salix glauca</i> )
Access Road km 20.6	26 (mortalities believed to be primarily <i>Salix bebbiana</i> )

Although the survival rates of these shrubs are quite high, the growth rate at both sites is low. This probably results from the compacted, well-drained nature of the coarse textured substrate. Willows that are naturally colonizing areas adjacent to the test plots also have slow growth rates. Decompaction of the soil at these sites would undoubtedly hasten plant growth. It is notable that conifers (alpine fir and white spruce) appear to be quite successful in colonizing these compacted soils.



**2001 Test Plot Site #1**

CONTOUR INTERVAL 100 FEET 0 600 1200 1800 2400 3000 NOTE  
BASE TOPOGRAPHY FROM NORTH AMERICAN DATUM 1983  
ALL SURFACE FACILITIES AND BOUNDARIES HAVE BEEN  
ADJUSTED FROM NAD 1927

- Legend:**
- Access Road
  - Watercourse
  - Test plot area



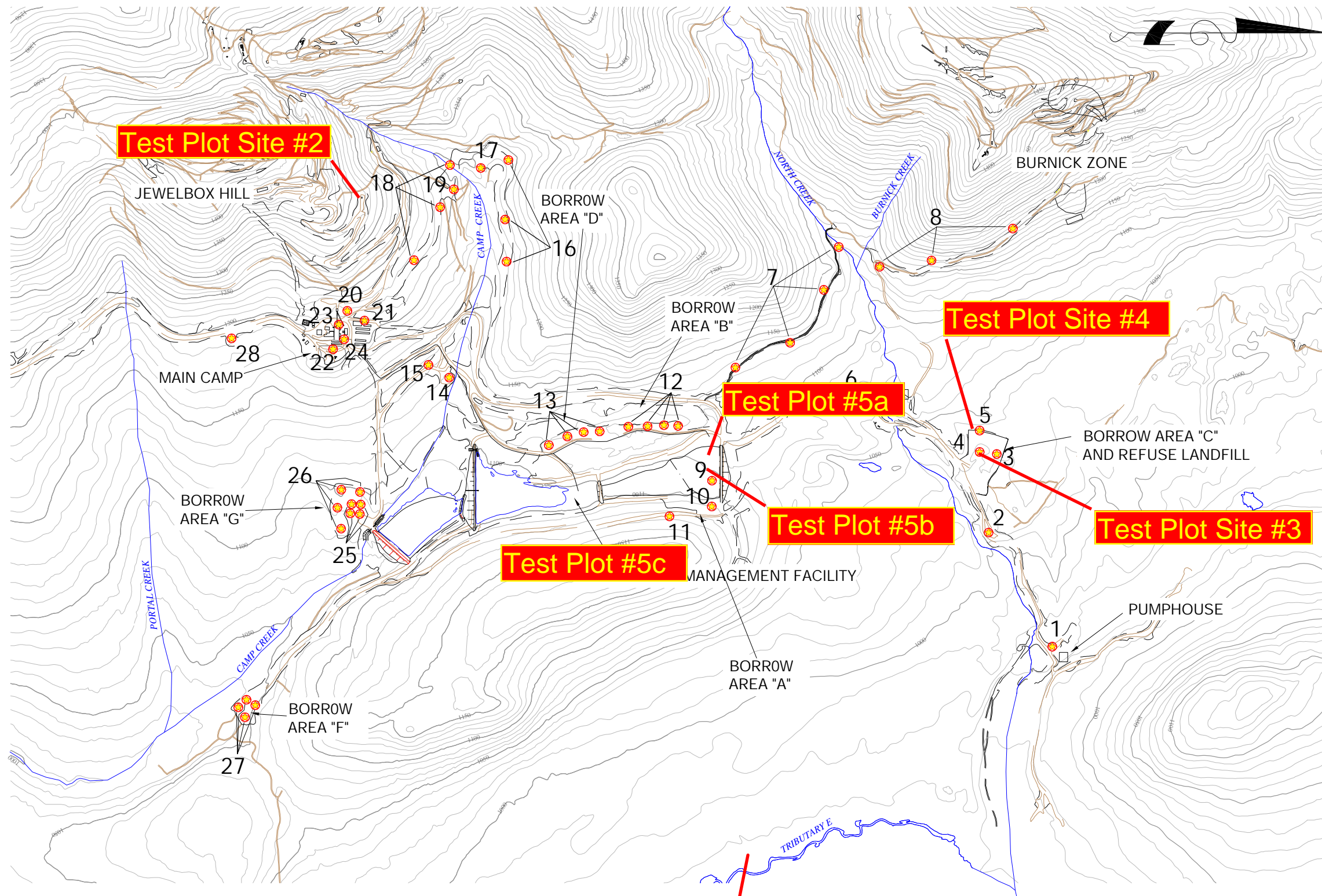
Teck Cominco Ltd. Sä Dena Hes Mine Land Reclamation & Revegetation Plan:  
2002 Revegetation Test Program

Figure 2: Test Plot Locations - Mine Access Road







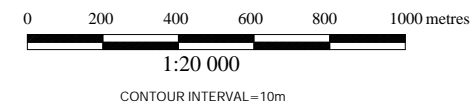
Drawn By: JEA	Checked By: TR
Date: 09-02-2002	Project Number: COM-01

File: D:\Project\cominco\sdh\Revegprgm\Fig5.dwg /layout1



Legend:

-  Soil Sample Location (2000)
-  Watercourse
-  Road within cleared area
-  Topography



**NOTE**  
 BASE TOPOGRAPHY FROM NORTH AMERICAN DATUM 1983  
 ALL SURFACE FACILITIES AND BOUNDARIES HAVE BEEN  
 ADJUSTED FROM NAD 1927

Figure 3:  
 Test Plot Locations - Mine Site / Tailings Area

Drawn By: JEA

Checked By: TR

Project Number: COM-01

Date: 07-02-2002



## **5.0 CONCLUSIONS**

In general, slow growth has been observed at the test plots established in 2001. There are, however, several factors that are responsible for this situation. The seed mixture used at the site is a mixture of plant species native to the region. Generally speaking native species do not green up as quickly as agronomic species and their density is not as great on certain soils (this works to facilitate invasion by subsequent pioneering species and leads to later successional stages of forest growth; grasses to shrubs, shrubs to trees, etc.)

The inhibition of forest successional stages is exemplified at Sa Dena Hes by the lack of willow or other shrub invasion of the areas that were seeded with agronomic species in 1992 by the previous mine owners (e.g. around the freshwater pumphouse). While these agronomic mixtures grow quickly, provide relatively immediate soil stability in certain applications, and are dense, they don't easily allow for later forest succession and may not be as hearty as the native species in the long-term. Teck Cominco's test revegetation project at Sa Dena Hes is based on the development of long-term strategies that foster natural succession.

During the 2002 monitoring, it was noted that much of the previously disturbed land at the Sa Dena Hes Mine property was revegetating naturally. Native shrubs, forbs, and grasses appeared to be germinating on most disturbed sites. Alpine fir and white spruce have been particularly successful in colonizing these areas. These observations support the recommendations of the DDRP (Cominco, 2000) where it was stated that the preferred method of revegetating disturbed areas of the mine site (except the TMF) would include only recontouring and scarification.

It appears that microclimate effects (moisture concentration and elevated seed retention in seed plot depressions) may be playing a part in the more successful germination of the seeded vegetation species at some locations. The positive benefits of these effects, particularly moisture concentration and seed retention in depressions, can be recreated by scarification of the ground surface at the time of closure.

## **6.0 RECOMMENDATIONS**

6.1 It appears that the soil on the test plots remains nutrient-poor. Of the four test plot protocols (except the control plot - no fertilizer/seed), test Plot 1 appears to be the most successful. While Test Plot 1 plant growth was relatively successful, this success should

be characterized as modest and can be considered at this time to be the base case for what should be expected from active revegetation efforts for the site. It is recommended, therefore, that as a result of the low coverage noted at these sites in 2002, additional treatment be applied to the test plots 2 and 3 at each location. These modified protocols will allow for increased application of seed and fertilizer at the following rates:

- Test Plot 2: 50 kg seed/ha with fertilizer application of 180 kg/ha at 24-24-24
- Test Plot 3: 75 kg seed/ha with fertilizer application of 240 kg/ha at 24-24-24

Three options are considered for selecting a revised seed mix and include:

- 1) Use the same seed mix as used in 2001 (reseed in the spring of 2003)
- 2) Use a new seed mix based on the preliminary 2002 monitoring results (reseed in the spring of 2003)
- 3) Use a new seed mix based on the more conclusive results of the 2003 monitoring results (reseed in the fall of 2003 or spring of 2004)

For the TMF plots it is recommended to add 5 kg/ha creeping red fescue (*Festuca rubra*) or Kentucky bluegrass (*Poa pratensis*), and 2 kg/ha alsike clover (*Trifolium hybridum*) to the mix. These are commonly used agronomic species that would hasten the “greening up” of the plots.

The sites where the additional seeding effort should most appropriately be concentrated include the test plots at the TMF.

- 6.2 A second year of monitoring is required to ascertain which species are growing at the test sites. As noted earlier, two growing seasons are required before some of these perennial grasses set seed. This year 2 monitoring should take place in the late summer of 2003.
- 6.3 If the vegetative cover is still observed to be low at the time of the second monitoring (in late summer 2003), a further application of seed may be required. This subsequent application of seed should include only the seed species that are observed to have germinated, along with the possible addition of other legume species.

## 7.0 REFERENCES

Access Mining Consultants Ltd., 2002. *Results Summary of Sä Dena Hes Mine Phase II Revegetation Test Program - 2002*. Prepared for TeckCominco Ltd.

Access Mining Consultants Ltd., 2001. *Land Reclamation and Revegetation Plan Preliminary Test Program Summary Report - 2000*. Prepared for Cominco Ltd.

Cominco Ltd., 2000. *Sä Dena Hes Mine Detailed Decommissioning and Reclamation Plan*. Prepared by Access Mining Consultants Ltd. and SRK Ltd.

Mougeot, C., 1996. *Natural Land Reclamation For Mineral Exploration Properties and Placer Mines in the Yukon*. Prepared Exploration and Geological Services Division, Mineral Resources Directorate, Department of Indian Affairs and Northern Development, Government of Canada.



Sä Dena Hes Mine

Land Reclamation and Revegetation Plan

Results Summary of

*Phase II Revegetation Test Program - 2002*

---

***Appendix A***

**Additional 2002 Revegetation**

**Test Program Photos**

---



Evidence of Gullying/Rutting and Little Revegetation



Natural Revegetation of Coniferous Tree Species (white spruce) Access Road Fill Slope



Adjacent to landfill - plot 1 in left background



Zoom - Adjacent to landfill - plot 1



Adjacent to landfill – plot 1 in left foreground



Adjacent to landfill - plot 1 (primarily violet wheatgrass)



Adjacent to landfill – plot 2



Adjacent to landfill – violet wheatgrass plot



Adjacent to landfill – violet wheatgrass plot



TMF with 200 mm soil – plot 1 (primarily violet wheatgrass)



**TMF with 300 mm soil – plot 1**



**TMF with 200 mm soil – black currant transplant**



TMF with 500 mm rock and 300 mm soil – plot 1 in foreground



TMF with 500 mm rock and 300 mm soil – plot 1 in left foreground



**TMF with 500 mm rock and 300 mm soil – plot 2 in left foreground**



**TMF with 500 mm rock and 300 mm soil – plot 3 in right foreground**

**Appendix A - Summary of Sä Dena Hes Mine Phase II Revegetation Test Program - 2002**



Jewel Box haul road – plot 1 in right foreground



Jewel Box haul road – plot 1 in left background



**Km 22 main access road – plot 1 in right foreground**



**Km 22 main access road – plot 1**



Km 22 main access road – plot 1 in centre background



Km 22 main access road – willow cutting test plot



**Km 22 main access road – grass seed germinating in depression downhill from test plots**



**Km 22 main access road – willow cutting test plot**

# **APPENDIX C**

## **LISTING OF 2002 WILDLIFE SIGHTINGS AT THE MINE SITE**

## SA DENA HES MINE SITE - WILDLIFE SIGHTINGS - 2002

### ARCTIC LOONS

30-Aug-02 Been in the area for a week or so. Usually 2 but there were 6 today  
03-Sep-02 2 At Reclaim Pond

### BLACK BEAR

21-May-02 1 On access road between the mine site and the highway  
23-May-02 1 On access road between the mine site and the highway  
24-May-02 1 At Km 1 of the mine access road  
24-May-02 1 At Km 16 of the mine access road. Bear was shot by hunters in the spring.  
26-May-02 1 At Reclaim Pond on site  
27-May-02 1 On access road between the mine site and the highway  
19-Jul-02 1 At Km 9 on mine access road  
11-Aug-02 1 Near trapper's cabin  
25-Aug-02 1 Near Reclaim Pond  
03-Sep-02 1 In berry patch near site office  
13-Sep-02 4 Sow and 3 cubs on the side of Gribbler Ridge

### GEESE

25-Aug-02 Flock flying overhead of the site  
29-Aug-02 20 Flew over North Dam

### GROUSE

21-Jun-02 4 At top of mountain

### MOOSE

18-Jan-02 8 Various locations along mine access road between the site and the highway  
19-Jun-02 2 Cow and calf at Reclaim Pond  
09-Jul-02 1 Cow at Reclaim Pond  
21-Jul-02 1 Bull at Km 1 of the mine access road  
26-Jul-02 2 Cow and calf while doing quarterly water samples  
25-Aug-02 2 Cow and calf at back of Reclaim Dam  
09-Sep-02 3 On top of Gribbler Ridge  
31-Dec-02 3 Cow and 2 calves at Km 5 on mine access road

### OSPREY

21-Jul-02 2 At Reclaim Pond  
17-Aug-02 2 At Reclaim Pond  
25-Aug-02 2 At Reclaim Pond  
29-Aug-02 2 Around ponds on site

### OTTER

13-Dec-02 1 Saw tracks on mine access road

### PORCUPINE

Jun-02 4 On main access road and top of mountain  
Jun-02 1 At top of mountain

### WOLF

01-Nov-02 1 Didn't see wolf but saw fresh tracks at the site  
22-Nov-02 1 On mine access road - halfway between the site and highway  
25-Nov-02 1 At Km 12 on the mine access road  
15-Dec-02 1 Large wolf at Km 22 of mine access road