

# **TIZRA CREEK RECONNAISSANCE REPORT**

Patrick Roach  
Contaminants Division  
Department of Indian and Northern Affairs  
345-300 Main Street  
Whitehorse, Yukon  
Y1A 2B5

June 2001

Tizra Creek Reconnaissance Report.....1

## TABLE OF CONTENTS

BACKGROUND .....2  
SURVEY RESULTS .....2  
KEROSENE .....5  
CONCLUSIONS.....5  
SUMMARY .....5

## TABLE OF FIGURES

MAP 1: LOCATION OF ABANDONED EXPLORATION CAMP .....3  
MAP 2: SITE MAP OF CAMP .....4  
PHOTO A: SITE 1 - 75 EMPTY BARRELS AND ONE FULL BARREL..... 6  
PHOTO B: SITE 2 - 10 EMPTY BARRELS.....6  
PHOTO C: SITE 3 - 25 EMPTY BARRELS.....7  
PHOTO D: SITE 4 - A SINGLE BARREL AND PLYWOOD SHEETING.....7

## **BACKGROUND**

Residents from Old Crow, Yukon reported a large number of barrels or oil drums at the confluence of Tizra Creek and the Porcupine River (Map 1). This location lies south of Whitefish Lake within the Vun Tut Gwitch'in fee simple lands. The residents feared the barrels may have contained chemical contaminants and subsequently reported the potential environmental hazard to DIAND Renewable Resource Regional Management Officer Todd Pilgrim. Pilgrim, in turn contacted Contaminants Scientist, Pat Roach.

Little was known about the location's previous land use however the time of operation, based on the type of barrel used, was estimated to have fallen before 1972.

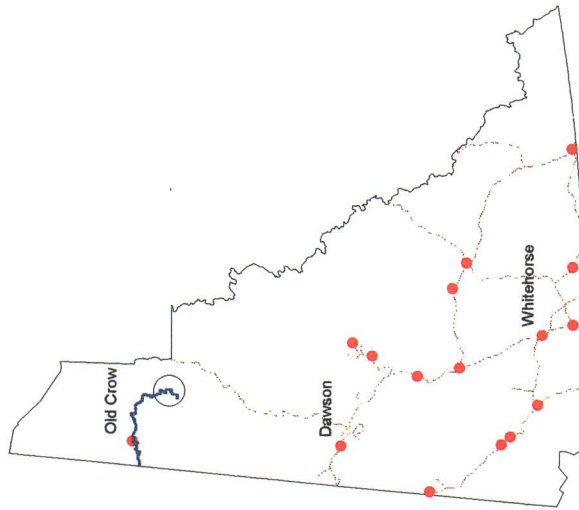
On June 13<sup>th</sup>, 2001, Mr. Roach completed a reconnaissance, investigating the contents of the barrels, surveying the site to assess any potential environmental hazards.

## **SURVEY RESULTS**

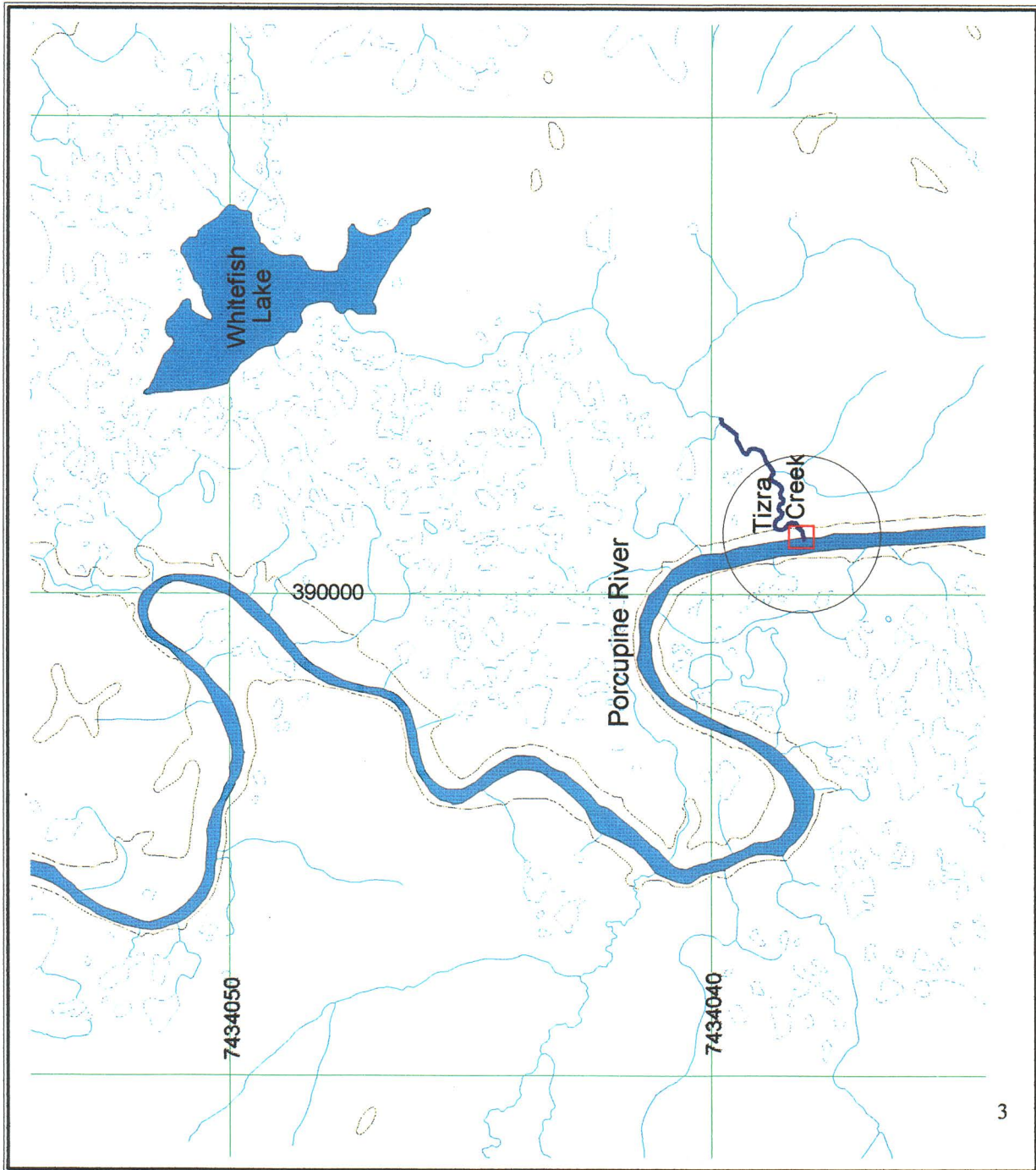
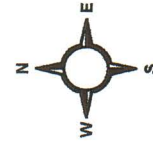
One hundred and eleven 45 gallon barrels were found at four different sites within what is likely an abandoned exploration camp (Map 2). The barrels are of the heavy steel type used in the 1960's and all except one were found empty. Each of the barrels is stamped with "Canoe River Explorations", presumably the exploration company or owners/operators of the site. These same operators may have been undertaking some work in the Cache Creek area as Cache Creek was once named Canoe River.

The full barrel was found amongst 75 empty barrels on the north side of Tizra Creek; Site 1 (Photo A). The fuel of the empty barrels had likely been used and the barrel discarded and stockpiled. These barrels had contained kerosene that had been used as stove oil. The full barrel was left in an unopened condition for the plastic screw cap seals were still in place.

At the second site, ten more empty barrels were found (Photo B). They were thought to have contained either stove oil or hydraulic fluid. At the third site, twenty-five more barrels lay empty (Photo C). Plywood sheeting and a single barrel standing upright were found at Site 4 (Photo D). On the north bank of the creek were the remains of a refuse pile. A juice can, pickle jar and a few other food type containers remained.



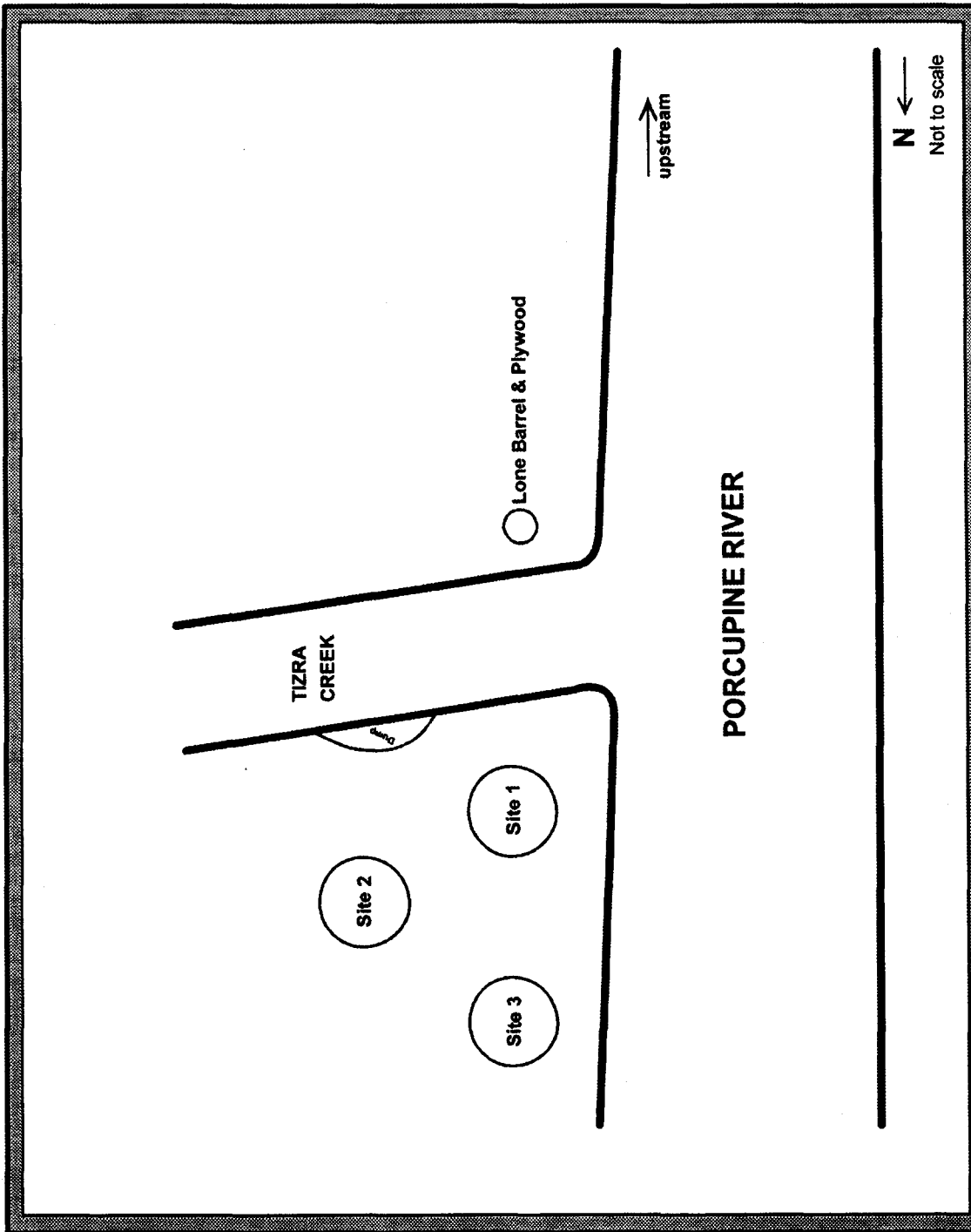
Location of camp  
in the Yukon



Map1 : Location of Abandoned Exploration Camp

**Table 1: Site Contents**

<i>LOCATION</i>	<i>CONTENTS</i>	<i>SITE DESCRIPTION</i>
Site 1	75 empty barrels of stove oil 1 full barrel of stove oil	North side of creek close to shore of Porcupine River
Site 2	10 empty barrels of stove oil or hydraulic fluid	North of refuse pile
Site 3	25 empty barrels of jet fuel (JP4)	East of Porcupine River, north of Site 1
Site 4	Single upright empty barrel	South side of creek



**Map 2 : Site Map of Camp**

## **KEROSENE**

The full barrel found contained kerosene, a hydrocarbon with 10-16 carbons per molecule. Kerosene is a flammable, mobile, oily yellowish brown liquid that is refined from crude petroleum. It has a characteristic odour, insoluble in water and miscible with other petroleum products.

Kerosene is most commonly used as a fuel burned to provide heat or light. (It has also been used as a reagent in both cosmetics and insecticides.) If kerosene is burned in poor ventilation conditions, toxic levels of carbon monoxide may be released. Inhalation of high concentrations may produce drowsiness, coma and possibly death.

## **CONCLUSIONS**

There was no sign of spillage on the site leading to the conclusion that the barrels flammable contents had been consumed and the barrels themselves placed in a pile. Because of the area is somewhat swampy and easier to work on if frozen in the winter, coupled with the presence of empty barrels of stove oil which would be used for heating and cooking, likely this camp operated only in the winter. As there was little debris or refuse in place, the garbage produced on site was probably burned in situ.

## **SUMMARY**

The site represents a small contamination risk with the single 45-gallon barrel of stove oil. The other barrels are intact and deteriorating slowly due to the local climate.

As the site is within the Vun Tut G'wichin settlement lands the ultimate fate of materials on the site rests with the First Nation. Rotary wing flight time to the site from Eagle Plains is twenty minutes, and the drums weigh approximately 45 kg, so removal by air is costly but possible. As an alternative, the community of Old Crow may want to recover the stove oil and use the barrels. All barrels sent to disposal fall within the Yukon Hazardous Materials Regulations and the cost of transportation and disposal would be significant.

The burned trash dump does not represent an environmental risk.



PHOTO A: Site 1 - 75 empty barrels and one full barrel



PHOTO B: Site 2 - 10 empty barrels



PHOTO C: Site 3 - 25 empty barrels



PHOTO D: Site 4 - a single barrel and plywood