

**DIVIDE**  
**SITE #40**  
**MINFILE# 105m 001ay**

**1. LOCATION AND ACCESS**

The Divide site is located on the south side of Keno Hill, between Hope and Faith Gulches, approximately 1.5km southwest of Caribou Hill. Access is by a 5km trail (possibly suitable for 4x4 vehicles) that leaves the Lightning Creek Road near the mouth of Hope Gulch. The approximate UTM co-ordinates for Zone 'A' are 7 089 800m N and 492 300m E, for Zone 'B' are 7 089 700m N and 492 750m E, and for Zone 'C' are 7 089 900m N and 493 700m E (Latitude: 63° 57' 15" N and Longitude: 135° 09' 16" W)

**2. SITE PHYSIOGRAPHY**

The area is located at an elevation of roughly 5300ft (1620m) on a flat to gently rolling plateau to the south of Caribou Hill and Monument Hill. Surface runoff from the site either flows into Hope Gulch or into Faith Gulch. Surface runoff from the stripped areas in the northwest (Zone 'A') flow westward into Hope Gulch, a tributary of Lightning Creek. Surface runoff from the stripped areas in the southeast (Zones 'B' and 'C') flow eastward into Faith Gulch, which eventually joins the Keno Ladue River system. The plateau is above treeline and the vegetation is predominately moss and grasses.

**3. GEOLOGY AND MINERALIZATION**

The bulldozer trenching was examined in three areas, which for this report will be classified as zones 'A', 'B' and 'C'.

- (1) Zone 'A': At the northeast end of zone, four trenches exposed a vein fault, over a 90m strike length. The vein fault, from 0.3m to 1.0m in width, generally had quartz and weak oxidized siderite. No metallic mineralization was seen. The wallrock for the vein fault is Earn Group quartz sericite chlorite and carbonaceous phyllite.
- (2) Zone 'B': At the northeast end of the zone, four trenches exposed a vein fault, 0.2m to 1.0m wide, over a 200m strike length. The vein fault had either quartz or oxidized siderite and quartz gangue. Wallrock for this zone is the same as Zone 'A'. No metallic mineralization was seen..
- (3) Zone 'C': This long and wide trench has greenstone at the uphill end. Below the greenstone near bedrock float of dark gray Keno Hill Quartzite is seen. No bedrock or float vein fault material was seen.

Bedrock for the Divide trenches is the Earn Group, a quartz-sericite-chlorite phyllite and subordinate carbonaceous phyllite. The phyllites contain up to 3% disseminated and transported limonite along the foliation

and fractures. The veins exposed in some of the trenches are up to a meter wide, generally less than 0.3m and are either quartz with minor oxidized manganiferous siderite or predominately oxidized siderite. No sulphides were observed. The large trench to the southeast (zone 'C') had greenstone and dark carbonaceous Keno Hill Quartzite.

#### 4. **SITE HISTORY**

Extensive stripping and bulldozer trenching in the area was undertaken prior to 1962.

#### 5. **MINE DEVELOPMENT**

The area has been extensively stripped and trenched. No ore was processed at the site and no tailings were encountered. There is no wastewater treatment facility at the site.

##### 5.1 **Mine Openings and Excavations (photo 40-1)**

Bulldozer trenches were examined in three areas, which for this report are referred to as Zones 'A', 'B' and 'C'. Zone 'B' is sub-parallel and approximately 300m south of Zone 'A'. Zone 'C', consisting of a single trench, is located approximately 600m east of Zone 'B'. A total of 17 trenches were observed.

##### **Zone 'A'**

There are 9 trenches in zone 'A' all aligned roughly northwest-southeast. The westernmost trench is roughly 100m east of the headwaters to Hope Gulch. The trenches are about 2m in width, 1 to 2.5m in depth and range from 8m to 53m in length. The wallrock in most of the trenches in this zone is phyllite with quartz veining and localized siderite. Minor oxidation staining was observed in the exposed veins. One trench was in overburden. A water sample (Site 40-Divide-trench) was collected from ponded water in trench A3.

##### **Zone 'B' (photo 40-2, 40-3)**

There are 13 trenches in zone 'B'. The trenches vary in width from 1 to 4m, in height from 1 to 2.5m and in length from 8 to 100m. All of the trenches were excavated in phyllite containing minor amounts of siderite and quartz veining. Trenches B7 to B10 had ponded water at the bottom.

##### **Zone 'C'**

There is one large trench in zone 'C'. It measures 100m in length, 20m wide and 1 to 3m deep.

##### 5.2 **Waste Rock Disposal Areas**

There are small piles of waste rock comprised of overburden and some bedrock that are deposited to the sides and ends of the trenches. Most of the piles are overgrown with grasses. A sample (Divide-Waste Rock-Sept.14/99) of the wallrock in trench B6 was collected for analysis.

## 6. MINE SITE INFRASTRUCTURE

There is one building and some scattered fuel drums in the area. No mine site infrastructure such as electrical equipment, rail or trestle was observed.

### 6.1 Building 40A (photo 40-3)

There is a small wood frame building with a corrugated tin roof located near zone 'A' and roughly 250m east of the headwaters to Hope Gulch. The building has a large wooden cross attached to the top of the roof.

Dimensions (L x W x H): 6m x 6m x 8m

Location: [map/describe]

Paint: none observed

Asbestos: none observed

Foundation: none

Non-Hazardous Contents: none observed

Hazardous Contents: none observed

### 6.2 Fuel Storage

There were 6 empty fuel drums encountered around Building 40A. One capped 45-gallon drum approximately one quarter full of diesel was encountered in trench B10.

## 7. SOLID WASTE DUMPS

There were no solid waste dumps observed at this site.

## 8. POTENTIAL CONTAMINANTS OF CONCERN

There were no hazardous products encountered at this site. Potential contaminants of concern include any metals washing from the trench walls or waste rock piles.

## 9. WATER QUALITY

Two water samples were collected for analysis. One sample (Site 40-Divide-Trench-Divide) was collected from some ponded water at the bottom of trench A4. The field pH was 7.4 and the conductivity was 10 $\mu$ S/cm. A second sample (Hope-WS-1-13/09/99) was collected from Hope Gulch, 150m downstream from the western edge of Zone 'A' trenching. The field pH was 7.3 and the conductivity was 40 $\mu$ S/cm.

10. **RECLAMATION**

Almost all of the trenches are at least partially overgrown with grasses and moss.

11. **REFERENCES AND PERSONAL COMMUNICATIONS**

Minfile #105M 001ay

**ATTACHMENT 2: 1999 DIVIDE WATER SAMPLES**

**LABORATORY RESULTS**

Sample Number	Detection Limit	Units	Site 40-Divide Trench - Divide - 14/09/99	Hope-WS-1 - 13/09/99
<b>Site Description</b>			Collected from some ponded water at the bottom of trench A4.	Collected from Hope Gulch, 150m downstream of the western edge of Zone 'A' trenching.
pH (field)	N/A	pH	7.4	7.3
Conductivity (field)	N/A	µS/cm	10	40
pH (Lab)	0.01	pH	6.69	7.72
Conductivity (Lab)	0.01	µS/cm	53	240
Total Alkalinity	5	mg CaCO3/L	14	43
Chloride	0.25	mg/L	<0.25	<0.25
Hardness (CaCO3 equiv)	5	mg/L	22.7	109
Nitrate-N	0.05	mg/L	0.06	0.16
Nitrite-N	0.003	mg/L	<0.003	<0.003
Sulphate	0.5	mg/L	12.6	68.6
Total Dissolved Solids	5	mg/L	27	152
<b>Analysis by ICP-USN</b>				
Aluminum	0.0008	mg/L	0.0158	0.0176
Antimony	0.005	mg/L	<0.005	<0.005
Arsenic	0.01	mg/L	<0.01	<0.01
Barium	0.00004	mg/L	0.104	0.0455
Beryllium	0.00001	mg/L	<0.00001	<0.00001
Bismuth	0.0004	mg/L	<0.0004	<0.0004
Boron	0.002	mg/L	<0.002	<0.002
Cadmium	0.00006	mg/L	0.00012	0.0038
Calcium	0.002	mg/L	1.28	33.2
Chromium	0.00006	mg/L	<0.00006	0.00029
Cobalt	0.00003	mg/L	<0.00003	<0.00003
Copper	0.00003	mg/L	<0.00003	0.0016
Iron	0.00001	mg/L	0.026	0.005
Lead	0.0003	mg/L	0.0009	0.0021
Lithium	0.001	mg/L	<0.001	0.005
Magnesium	0.0005	mg/L	0.596	5.65
Manganese	0.00002	mg/L	0.00497	0.00072
Mercury	0.0001	mg/L	<0.0001	<0.0001
Molybdenum	0.00007	mg/L	<0.00007	0.00028
Nickel	0.00001	mg/L	<0.00001	0.0473
Phosphorus	0.03	mg/L	<0.03	<0.03
Potassium	0.4	mg/L	<0.4	<0.4
Selenium	0.004	mg/L	<0.004	<0.004
Silicon	0.004	mg/L	2.72	2.31
Silver	0.00005	mg/L	<0.00005	<0.00005
Sodium	0.004	mg/L	0.7	0.8
Strontium	0.00002	mg/L	0.0152	0.103
Sulphur	0.008	mg/L	1.49	22.3
Thallium	0.001	mg/L	<0.001	<0.001
Titanium	0.00002	mg/L	0.00029	<0.00002
Vanadium	0.00003	mg/L	<0.00003	<0.00003
Zinc	0.0002	mg/L	0.007	0.25
<b>Analysis by Hydride AA</b>				
Arsenic	0.0002	mg/L	0.0068	0.0051
Selenium	0.0001	mg/L	<0.0001	0.0002

**ATTACHMENT 2: 1999 DIVIDE WASTE ROCK  
LABORATORY RESULTS**

Site Number	Detection Limit	Units	Divide - Waste Rock - Sept 14/99
Sample Description			Sample collected from trench B6
Paste pH (field)	N/A	pH	-
Conductivity (field)	N/A	µS/cm	-
<b>pH in Saturated Paste</b>			
pH	0.1	pH	5.7
<b>pH in Soil (1:2 water)</b>			
pH	0.01	pH	6.2
<b>ICP Semi-Trace Scan</b>			
Aluminum	5	µg/g	4550
Antimony	2	µg/g	2700
Arsenic	2	µg/g	4490
Barium	0.05	µg/g	579
Beryllium	0.1	µg/g	<0.1
Bismuth	5	µg/g	<5
Cadmium	0.1	µg/g	217
Calcium	5	µg/g	61
Chromium	0.5	µg/g	10.3
Cobalt	0.1	µg/g	3.2
Copper	0.5	µg/g	1280
Iron	1	µg/g	300000
Lead	1	µg/g	30700
Lithium	0.5	µg/g	1.7
Magnesium	1	µg/g	232
Manganese	0.5	µg/g	40000
Mercury	0.01	µg/g	3.7
Molybdenum	1	µg/g	8
Nickel	1	µg/g	7.5
Phosphorus	5	µg/g	1400
Potassium	20	µg/g	1070
Selenium	2	µg/g	<2
Silicon	5	µg/g	38
Silver	0.5	µg/g	270
Sodium	5	µg/g	107
Strontium	1	µg/g	<1
Sulphur	10	µg/g	320
Thorium	1	µg/g	20
Tin	1	µg/g	<1
Titanium	0.2	µg/g	15.5
Uranium	5	µg/g	<5
Vanadium	1	µg/g	12
Zinc	0.5	µg/g	9960
Zirconium	0.1	µg/g	12.8

**ATTACHMENT 2: 1999 DIVIDE WASTE ROCK LABORATORY RESULTS  
MODIFIED SOBEK METHOD ACID-BASE ACCOUNTING TEST**

SAMPLE	SITE DESCRIPTION	PASTE pH	S(T) %	S(SO4) %	AP	NP	NET NP	NP/AP
Divide - Waste Rock - Sept.14/99	Sample collected from trench B6	6.3	0.11	0.10	0.3	0.2	-0.1	0.8

AP = ACID POTENTIAL IN TONNES CaCO<sub>3</sub> EQUIVALENT PER 1000 TONNES OF MATERIAL.

NP = NEUTRALIZATION POTENTIAL IN TONNES CaCO<sub>3</sub> EQUIVALENT PER 1000 TONNES OF MATERIAL.

NET NP = NET NEUTRALIZATION POTENTIAL = TONNES CaCO<sub>3</sub> EQUIVALENT PER 1000 TONNES OF MATERIAL.

NOTE: WHEN S(T) AND/OR S(SO<sub>4</sub>) IS REPORTED AS <0.01, IT IS ASSUMED TO BE ZERO FOR THE AP CALCULATION.

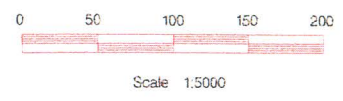
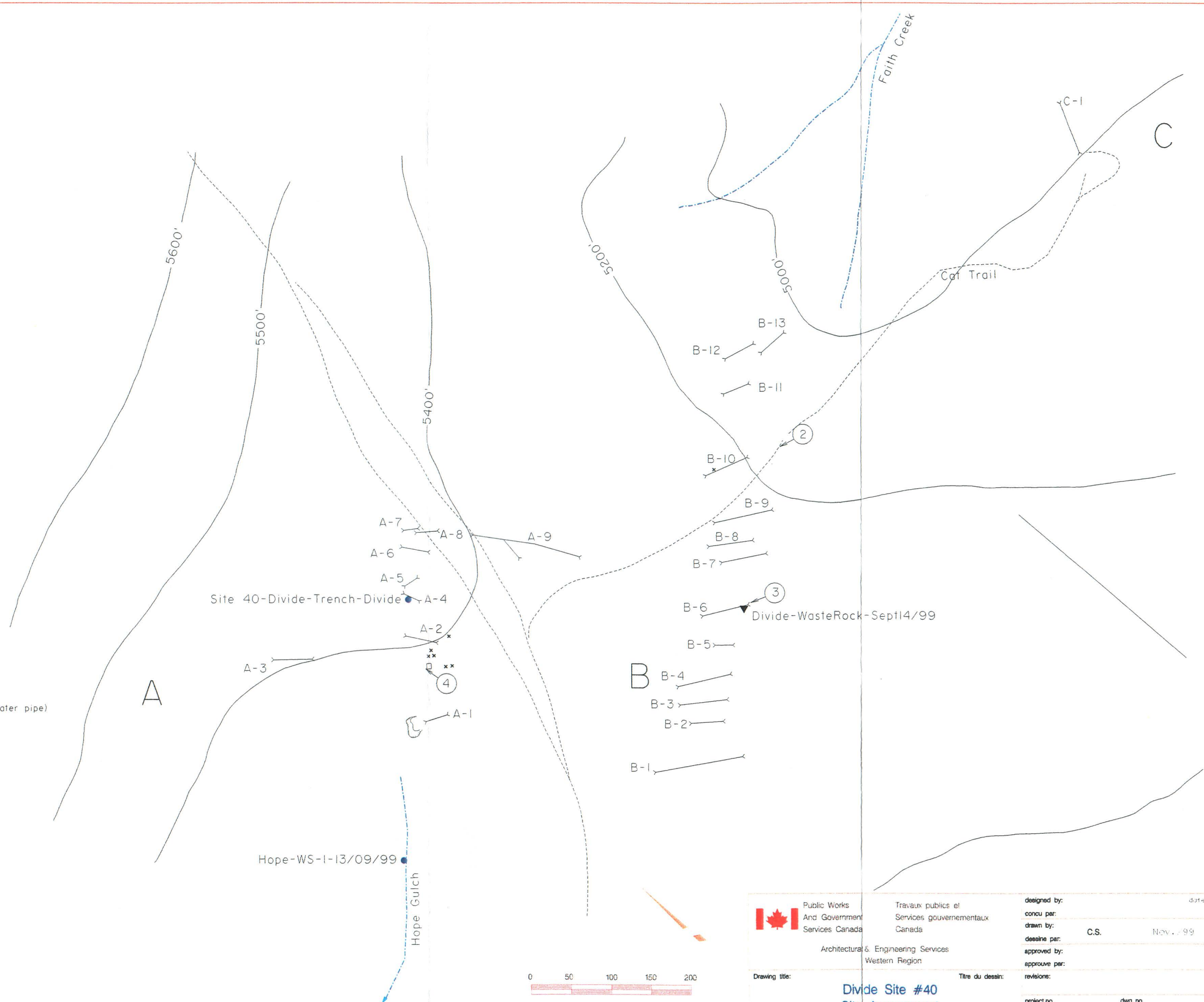
N/D = NO DUPLICATE ASSAY. CALCULATIONS ARE BASED ON ASSAY RESULTS OF THE INITIAL SAMPLE.

RE = REPLICATE.

NOTE - A HIGH LEVEL OF SOLUBLE METALS (ESPECIALLY IRON) WERE OBSERVED IN MANY SAMPLES DURING THE ABA TITRATIONS.

SAMPLES WITH A NEGATIVE NET NP SHOULD BE TESTED FOR MOBILE METALS USING STANDARD SHAKE FLASK EXTRACTION TESTS.

- 22A Building (22A: building site present reference#)  
Indicates Asbestos Material
- 22A Collapsed Building
- ↘ Adit
- ✂ Collapsed Adit
- Shaft
- Collapsed/Backfilled Shaft
- ⬭ Mine Rock Dump
- ⬭ Bedrock Open Pit
- ⬭ Trench
- ⬭ Stripped Overburden Stockpile
- ⬭ Stripped / Disturbed Area
- Outcrop Boundary
- ⬭ Highway
- ⬭ Road (gravel, 2 wheel drive)
- ⬭ Road (gravel, 4X4 accessible)
- ⬭ Road (inaccessible)
- ⬭ Trail
- ⬭ Culvert
- ◆ 24501-01 1999 Soil Sample (this study)
- ◇ Pre 1999 Soil Sample (other sources)
- ▲ 25WR04-01 1999 Waste Rock Sample (this study)
- △ Pre 1999 Waste Rock Sample (other sources)
- W0-12-06 1999 Water Sample
- Pre 1999 Water Sample
- ⚡ Tension Cracks
- ⚡ Mass Movement (note: for Forms; BelleKeno)
- ⚡ Groundwater Seep
- ⚡ Surface Water Flow (Stream, Creek, River)
- ⚡ Lake
- ⚡ Settling Pond / Water Treatment Pond
- ⚡ Tailings Dam / Tailings Pond / Mill Tails
- ⚡ Ponded Water / Trench
- ⚡ Barrels
- ⚡ Abandoned Equipment (compressors, ore cars, rails, air and water pipe)
- ⚡ Mine Rails / Trestle
- ⚡ Collapsed Trestle
- ⚡ Solid Waste Disposal Site
- ⚡ Area of Soil Contamination
- \* (6) Transformer Location (number of transformer in brackets)
- ⚡ Power Line
- ⚡ Power Line Collapsed
- ⚡ Aerial Transmission Towers
- ⑤ Photo Site (arrow shows view direction)
- △ GPS Survey Location
- ⬭ Former Building Site (Elsa)



CAD FILE: SITE40.DGN

Public Works And Government Services Canada	Travaux publics et Services gouvernementaux Canada	designed by:	
		conçu par:	
Architecture & Engineering Services Western Region		drawn by:	C.S.
		dessiné par:	Nov. / 99
Drawing title: <b>Divide Site #40 Site Assessment</b> Yukon Territory	Titre du dessin: 	approved by:	
		approuvé par:	
		revisions:	
		project no. no. du projet:	125-12.01
		dwg. no. dessin no.:	1 of 1



Photo 40-1 : Divide. View to southeast of trench areas. B (background) and C (foreground) at Divide. Note Building 40A in bottom right. (Azimuth 120°)



Photo 40-2 : Divide. Trench B10: note ponded water and partially full barrel. (Azimuth 290°)



Photo 40-3 : Divide. Trench b6; site of rock sample Divide-Waste Rock - Sept.14/94.  
Note building 40A in center background. (Azimuth ~130 °)



Photo 40-4 : Divide. View of Building 40A. (Azimuth ~050 °)