

MAP NO.: 105 K 6
ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092737
MINING DISTRICT: Whitehorse
TYPE OF WORK: Road Construction

REPORT FILED UNDER: Curragh Resources Incorporated

DATE PERFORMED: 1 March - 31 December, 1988 DATE FILED: 14 July, 1989

LOCATION: LAT.: 62 22'N AREA: Faro
 LONG.: 133 30'W VALUE \$:

CLAIM NAME & NO.: BILL 16-24 (85598-85606); LO 5-6 (94122-3); FARO 64, 253-255 (92352, 94128, 92141-2); QUE 6 FR (Y10566); GAL 261 (YA8153); RR1-2 (YA86414-5)

WORK DONE BY: J.C. Nyberg

WORK DONE FOR: Curragh Resources Inc.

DATE TO GOOD STANDING:

REMARKS: #34 FARO

A 16 km haul road was constructed to connect the Faro mill to the Vangorda Plateau lead-zinc deposits using inert waste rock (phyllite and calc-silicate) from the Faro pit. The last 7 km has a core of glacial till derived from overburden covering the Vangorda and Grum orebodies.



A
REPORT
on
HAUL ROAD CONSTRUCTION
on

CLAIMS: Bill 16, 18, 20, 22, 24,
Faro 64, 253, 254, 255,
L.O. 5, 6,
RR 1,2,
Que 6 Fr, and
Gal 261

CLAIM SHEET 105-K6
WHITEHORSE MINING DISTRICT

May 15, 1989

J. C. Nyberg, R.E.T.
Curragh Resources Inc.

092737

Table of Contents

	Page
INTRODUCTION.....	1
DESIGN.....	2
CONSTRUCTION & COSTS.....	5

List of Tables

TABLE 1: Haul Road Design Criteria.....	2
TABLE 2: Major Culvert Design Summary.....	4
TABLE 3a: Haul Road Construction Costs.....	5
TABLE 3b: South Fork Rose Creek Crossing Costs.....	6
TABLE 4: Haul Road Construction Costs on Claims....	7

List of Figures

FIGURE 1: Haul Road Location Plan	
FIGURES 2: Vangorda Plateau Haul Road Plan & Profile	
2.18 Station 0+000 to Station 2+975	
2.19 Station 2+975 to Station 6+115	
2.20 Station 6+115 to Station 9+280	
2.21 Station 9+280 to Station 12+440	
2.22 station 12+440 to Station 16+212.8	
Figure 3: Typical Cross Section of Haul Road	
Figure 4: Cross Section of South Fork Rose Creek Crossing	
Figure 5: Haul Road Relative to Claims	

VANGORDA PLATEAU HAUL ROAD

INTRODUCTION

Development of additional ore reserves in the Vangorda Plateau area to extend the life of the Faro mine requires a means of transporting the ore from the Vangorda Plateau to the mill at the Faro minesite. Several alternative systems to transport the ore to the mill were examined. The selected option is the use of off-road large size trucks in a manner similar to the operation of the existing mine. This option requires construction of a haul road from the new development site to the existing plant site. The location of the haul road is shown in Figure 1.

DESIGN

The selected route has a south facing slope which will minimize winter operating problems related to ice build-up on the driving surface. The vertical and horizontal alignments are presented in Figures 2.18 to 2.22.

Table 1: Haul Road Design Criteria

Design Speed	55 km/hr
Width of Finished Road Top	24 metres
Sideslopes:	
Overburden	2:1 (H:V)
Waste Rock	1.5:1 (H:V)
Maximum Grade	7 %
Stopping Distance	60 metres
K (sag vertical curve)	30
K (crest vertical curve)	55
Horizontal Radius	5,000 m
Traffic Operation	Left hand drive

The haul road is constructed primarily from locally available fill materials. The first 9 kilometres of the road is constructed of waste rock from the mine consisting of non-acid generating phyllite and calc-silicate. The last 7 kilometres consists of a glacial till core covered with waste rock from the Faro pit. The till material is obtained from a borrow pit developed at the Vangorda Plateau. A 0.5 metre thick gravel surface of calc-silicate and calcareous phyllite will be placed above the subgrade level. A typical section through the haul road is shown in Figure 3.

The haul road crosses a number of streams which are tributary to Rose creek and Vangorda Creek. Based on the width of the road, the design loads, and the height from the stream bed to roadway elevation, corrugated metal pipe culverts were selected as the crossing structure. The design criterion for the stream crossings was based on the 25-year flood event with no provisions for fish passage. Design discharges calculated by Stanley Associates Engineering Ltd. were based on a 1980 report by Hydrocon Engineering. The appropriate culvert sizes were determined by application of Mannings equations. A section of the crossing at the south fork of Rose Creek is shown in Figure 4.

TABLE 2: MAJOR CULVERT DESIGN SUMMARY

Stream Name	Station	Catchment Area (km ²)	Design Discharge* (m ³ /sec)	Return Period (years)	Headwater at Inlet** (m)	Pipe Diameter (mm)
Reservoir Creek	5+450	7.6	3.4 (6.10)	25	1.8 (4.0)	600***
Gun Range Creek	7+460	3.4	1.8 (3.75)	25	1.2 (4.0)	1200
Unnamed	8+610	1.9	0.83 (1.9)	25	1.0 (2.3)	900
South Fork, Rose Creek	10+250	24.9	7.5 (23.0)	25	1.8 (0.9)	1400,1600
AEX Creek	11+950	3.3	1.32 (2.9)	25	1.2 (4.0)	900
South Fork, AEX Creek	12+370	2.7	1.4 (3.10)	25	1.2 (4.0)	900

* Peak discharge in brackets based on Hydrocon Engineering.

** Headwater Depth in brackets based on Hydrocon Engineering.

*** For overflow control only; main crossing is a rock drain.

CONSTRUCTION & COSTS

Construction of the haul road began in October, 1986. To the end of February, 1988, kilometre 0 to kilometre 2.5 were completed. From March 1, 1988 to December 31, 1988, kilometre 2.5 to kilometre 7.2, and kilometre 12.0 to kilometre 13.8 were constructed. Fourteen culverts were installed, including the south fork of Rose Creek, in preparation for the haul road crossings.

The costs of construction of the haul road from kilometre 2.5 to kilometre 7.2, and kilometre 12.0 to kilometre 13.8 (excluding culverts installation costs of \$166,694) are shown in Table 3a. The costs of the culverts installation at the crossing for the south fork of Rose Creek are shown in Table 3b.

TABLE 3a: HAUL ROAD CONSTRUCTION COSTS (excluding culverts)

(March 1 - December 31, 1988)

<u>Category</u>	<u>Costs</u>
Labor (other than equipment operating costs)	\$35,091
Materials/supplies	\$4,640
Fuel (other than equipment operating costs)	\$21,977
Contractors	\$10,155
<u>Equipment Operating Costs</u>	<u>\$1,487,675</u>
Total	\$1,559,538

TABLE 3b: CULVERT INSTALLATION COSTS, SOUTH FORK ROSE CREEK

(September 1 - 30, 1988)

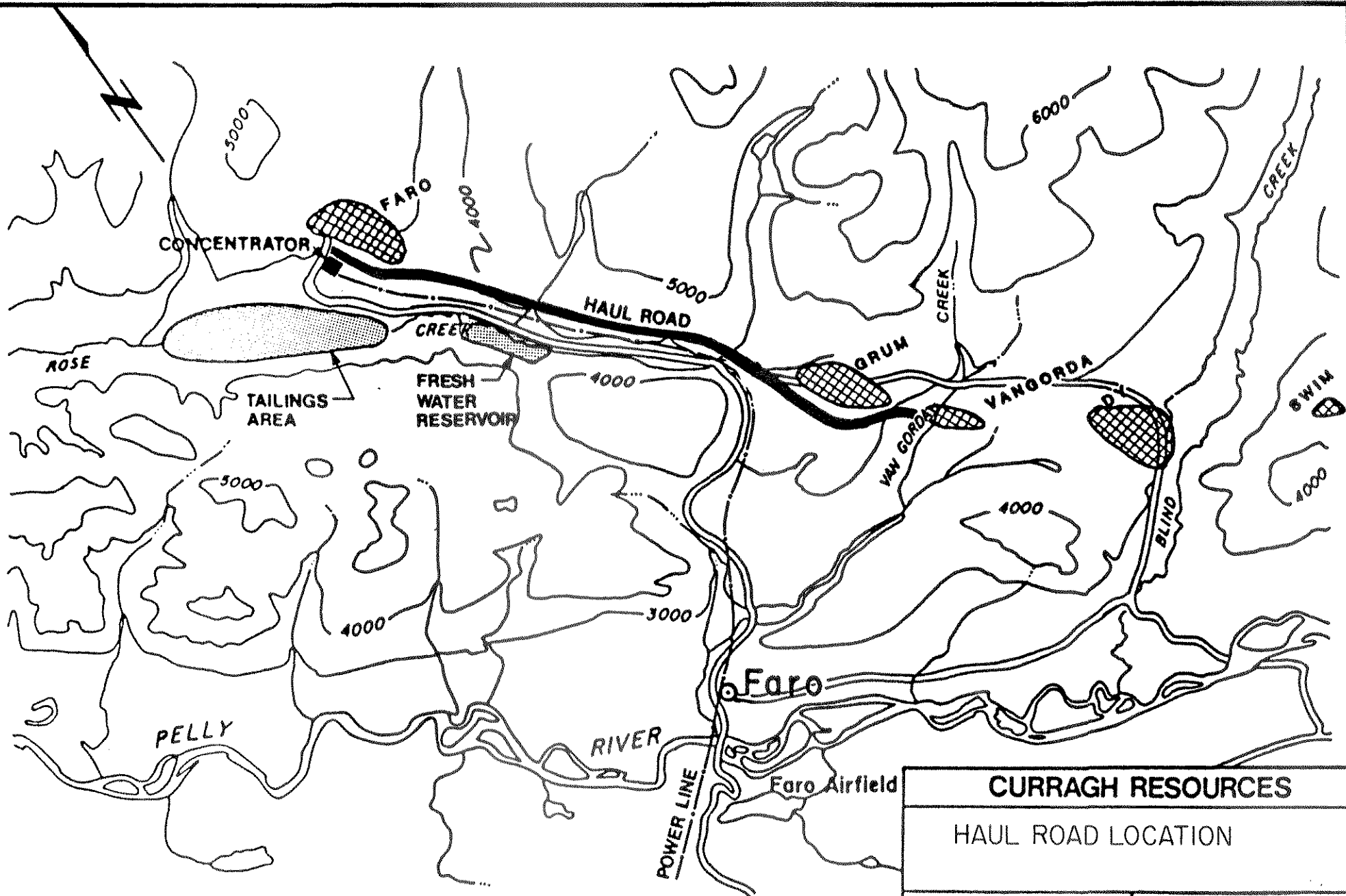
<u>Category</u>	<u>Costs</u>
Pipes	\$41,300
Access	\$5,000
<u>Installation</u>	<u>\$27,967</u>
Total	\$74,267

Construction of the haul road over kilometres 12.0 to 13.8 is on Mineral Leases, so the associated costs were not used to file assessment work. Only a portion of the costs of constructing kilometres 2.5 to 7.2, and the south fork Rose Creek crossing was required in filing assessment work to update claims in the Faro area to 1994. Refer to Table 4 for details. (The location of the haul road relative to the claims is shown in Figure 5.)

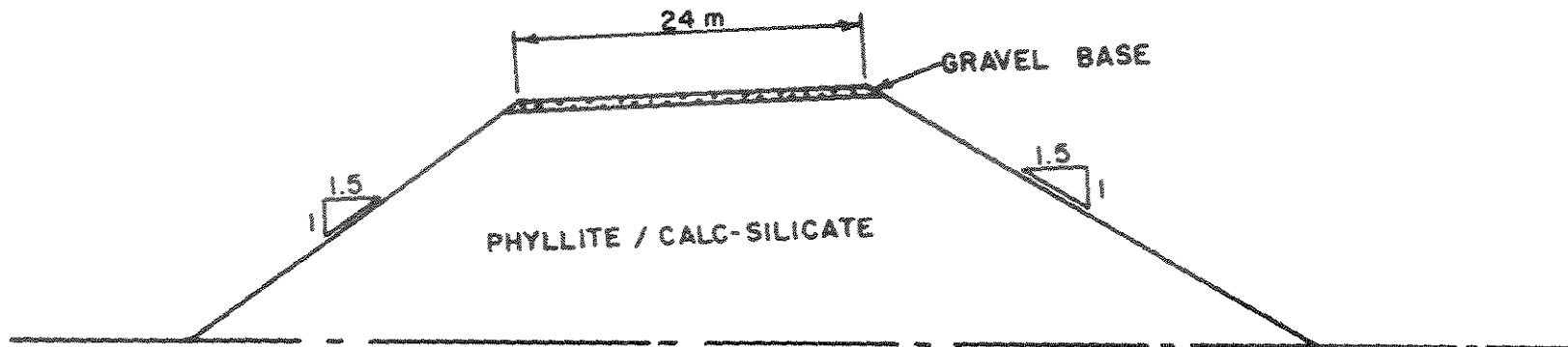
TABLE 4: HAUL ROAD CONSTRUCTION & COSTS FILED AS ASSESSMENT

WORK ON CLAIMS (portion of kilometres 2.5 to 7.2, and south fork Rose Creek crossing)

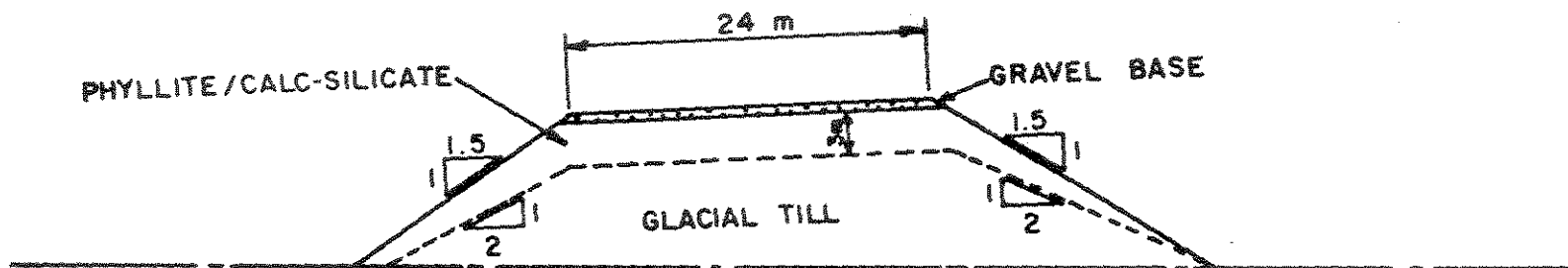
Claim Name	Grant	Length (KM)	Construction Cost	Years Filed For
Bill 16	85598	0.4	\$102,226	90
Bill 18	85600	0.4	\$98,312	177
Bill 20	85602	0.4	\$102,226	0
Bill 22	85604	0.4	\$102,226	0
Bill 24	85606	0.2	\$54,764	0
LO 5	94122	0.2	\$43,811	0
LO 6	94123	0.2	\$51,113	0
Faro 64	92352	0.4	\$92,529	575
Faro 253	94128	0.4	\$98,575	286
Faro 254	94141	0.3	\$65,717	0
Faro 255	94142	0.1	\$29,207	0
Que 6 Fr	Y10566	0.1	\$14,604	16
Gal 261	YA8153	0.4	\$105,877	287
RR1	YA86414	0.5	\$109,528	405
RR2	YA86414	0.2	\$43,811	190
SUBTOTAL		4.7	\$1,114,526	2,026
TIE 10	85728	culverts	\$74,267	426
TOTAL			\$1,188,793	2,452



CURRAGH RESOURCES	
HAUL ROAD LOCATION	
M.T.S. 109 & TAY RIVER	FIGURE : I



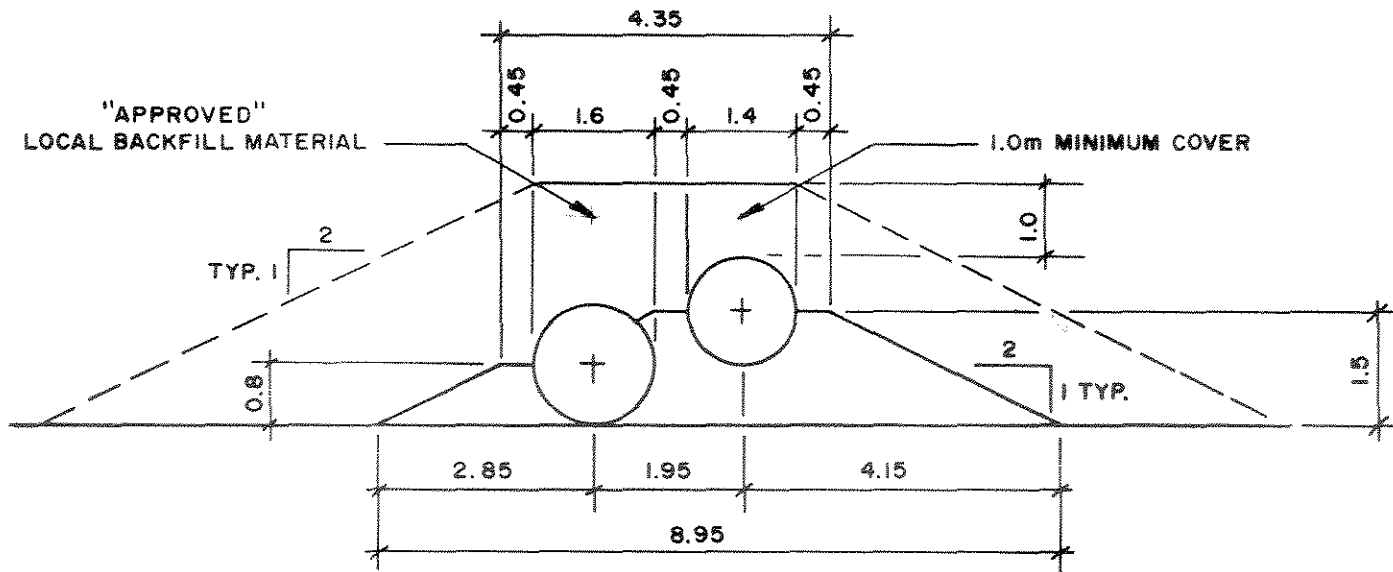
TYPICAL ROAD SECTION
STATION 0+000 to 10+000



TYPICAL ROAD SECTION
STATION 10+000 to 16+000

TYPICAL HAUL ROAD SECTIONS	CURRAGH RESOURCES INC.	
	1:500	FIGURE 3

CMP #15 - ROSE CREEK



GRANDULAR BACKFILL TO SPRINGLINE OF CULVERT
126 m INSTALLED AT 5.29% GRADE

NOTE: ALL DIMENTIONS ARE IN METRES

CROSS SECTION OF SOUTH FORK ROSE CREEK CROSSING	CURRAGH RESOURCES INC.	
	SCALE 1:100	FIGURE : 4

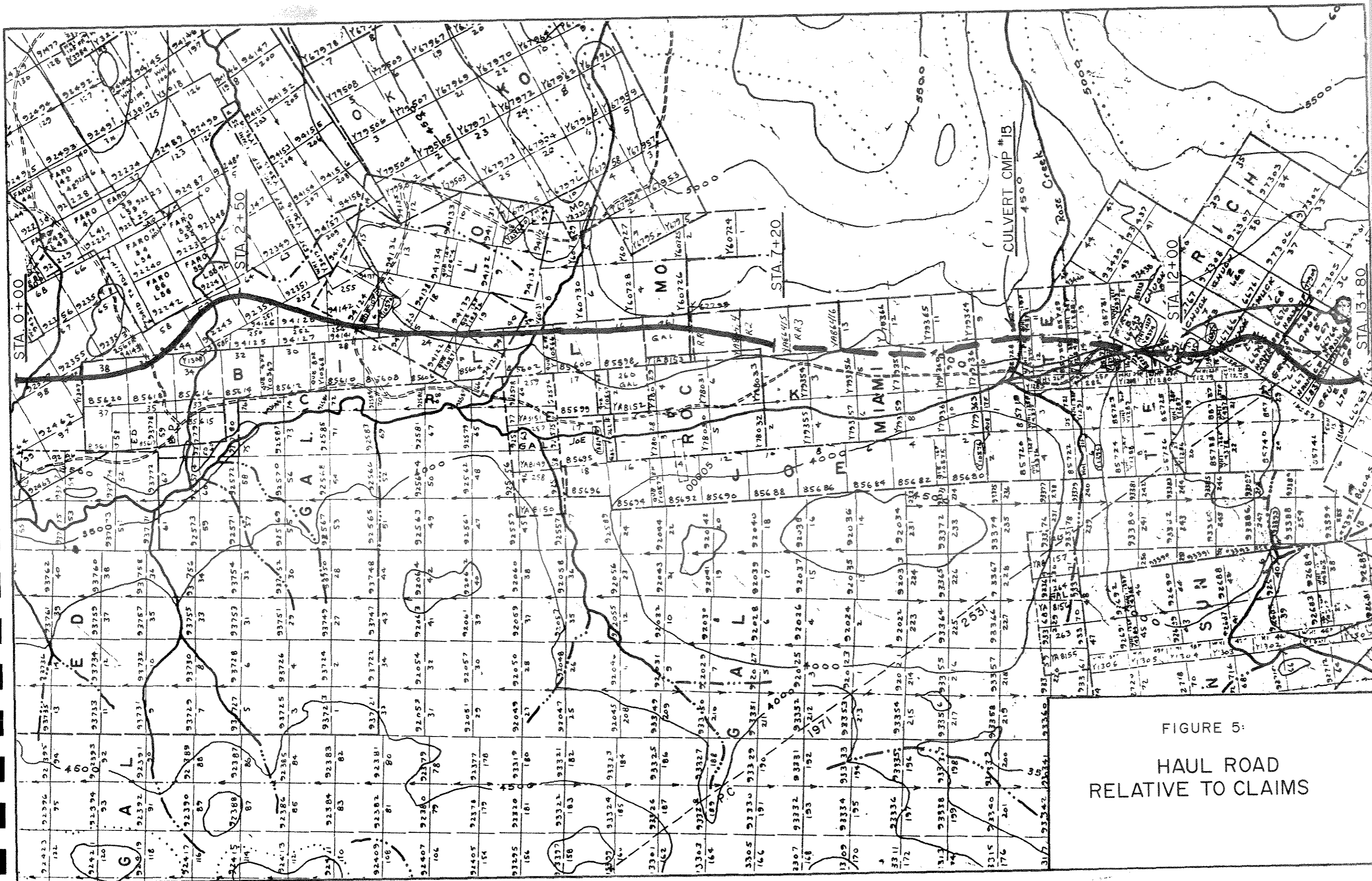
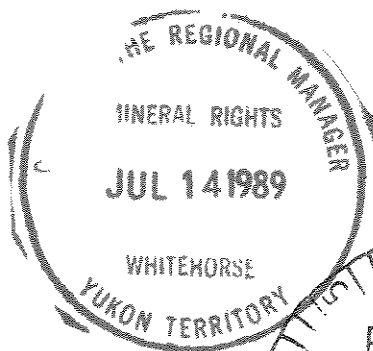


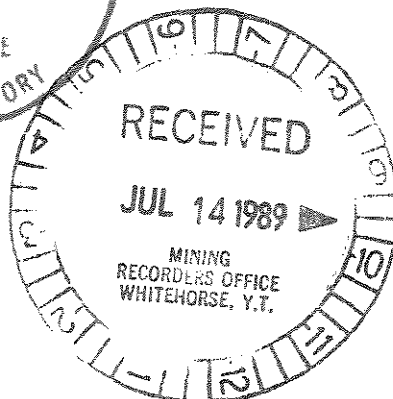
FIGURE 5:
HAUL ROAD
RELATIVE TO CLAIMS



Curragh
Resources Inc.



117 Industrial Rd.
Whitehorse, Yukon Y1A 2T8
Tel: (403) 668-3578
Telex: 036 8359



1989 06 30

Whitehorse Mining Recorder
Room 201, Federal Building
Whitehorse, Y.T.
Y1A 2B5

Dear Ms. Burkhard:

Enclosed are 2 copies of a report on the haul road construction for
assessment work filed in March, 1989.

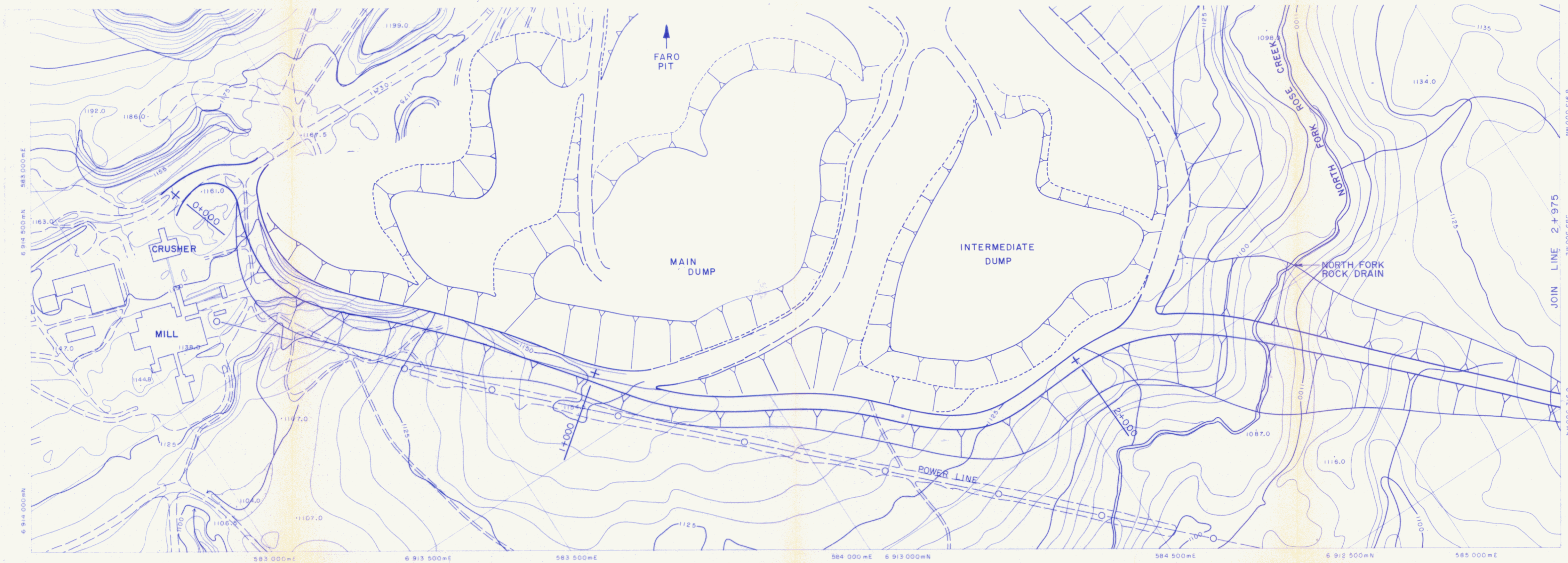
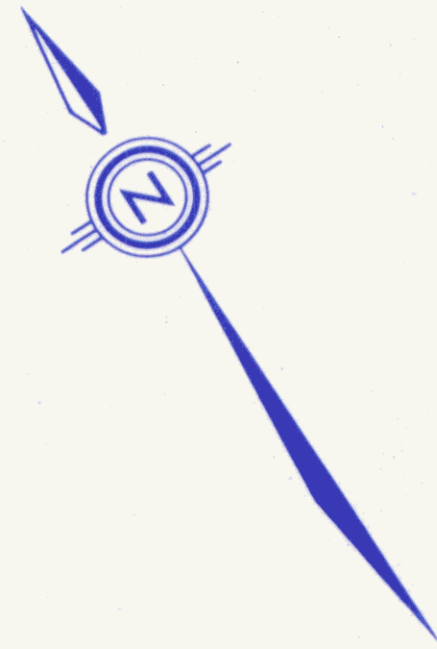
Yours truly,

CURRAGH RESOURCES INC.

Janet Nyberg
Exploration Coordinator

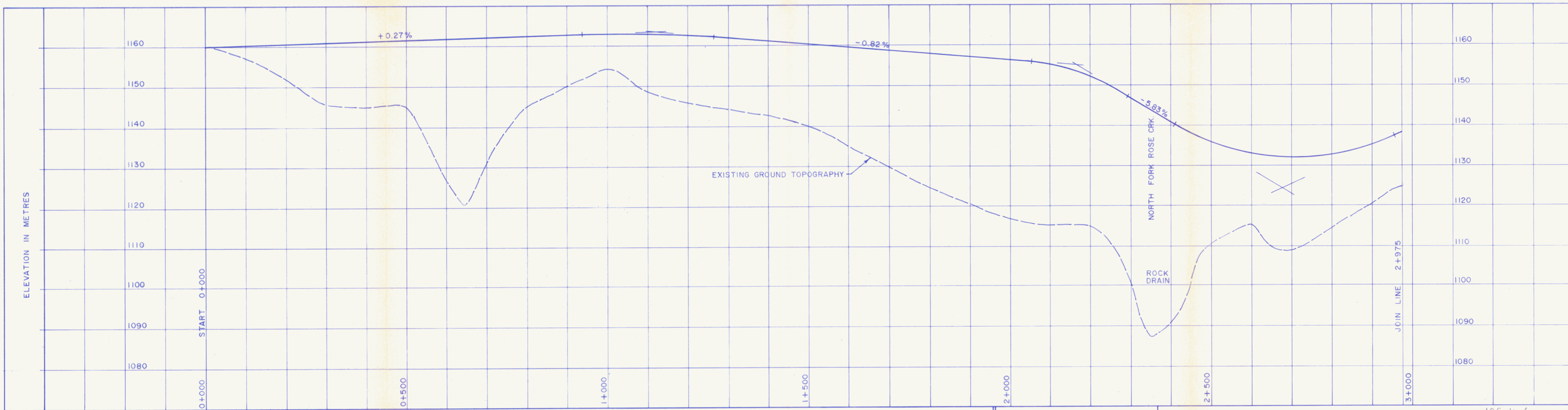
Enclosure

092737

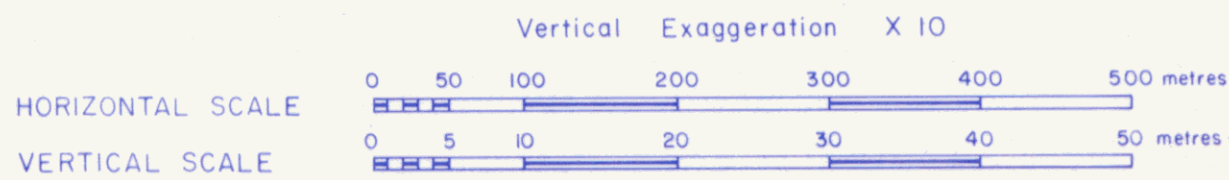


PLAN VIEW

092737



ROAD PROFILE ALONG CENTRE-LINE IN METRES



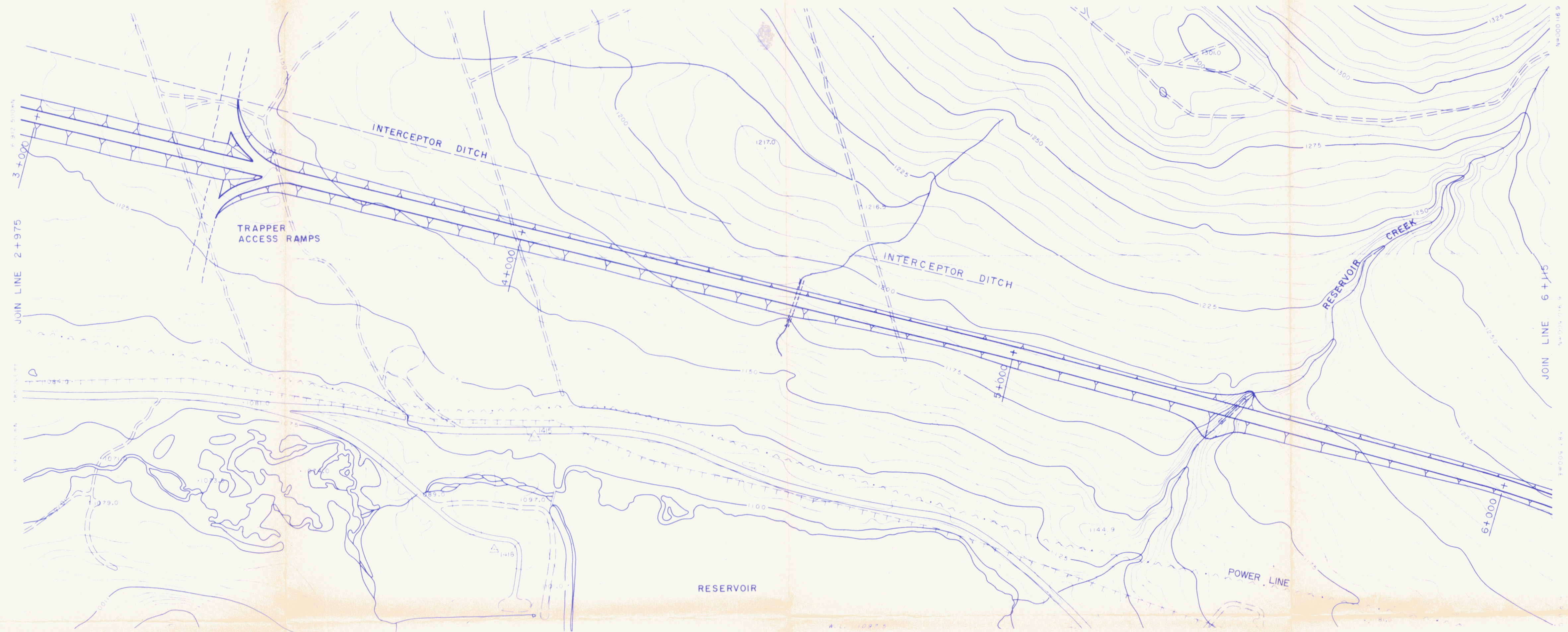
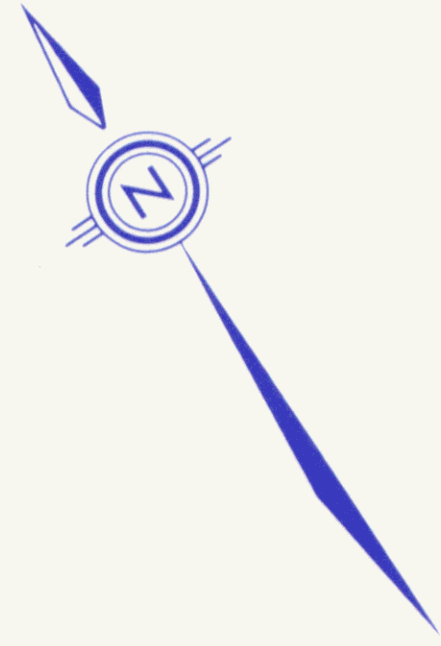
VANGORDA PLATEAU HAUL ROAD
PLAN & PROFILE

STATION 0+000 to STATION 2+975

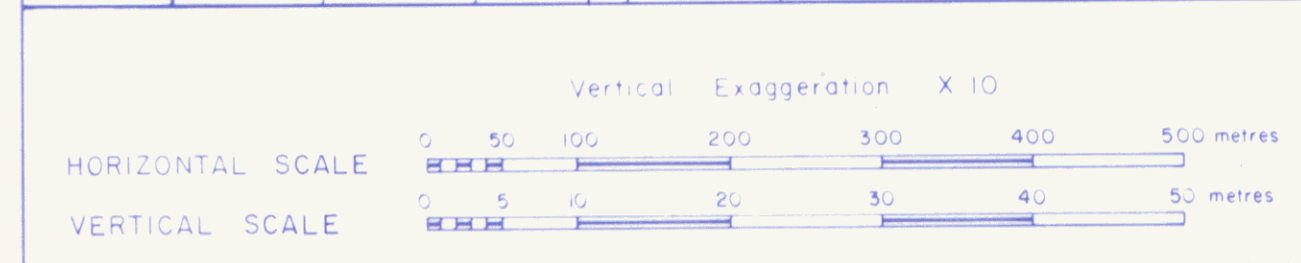
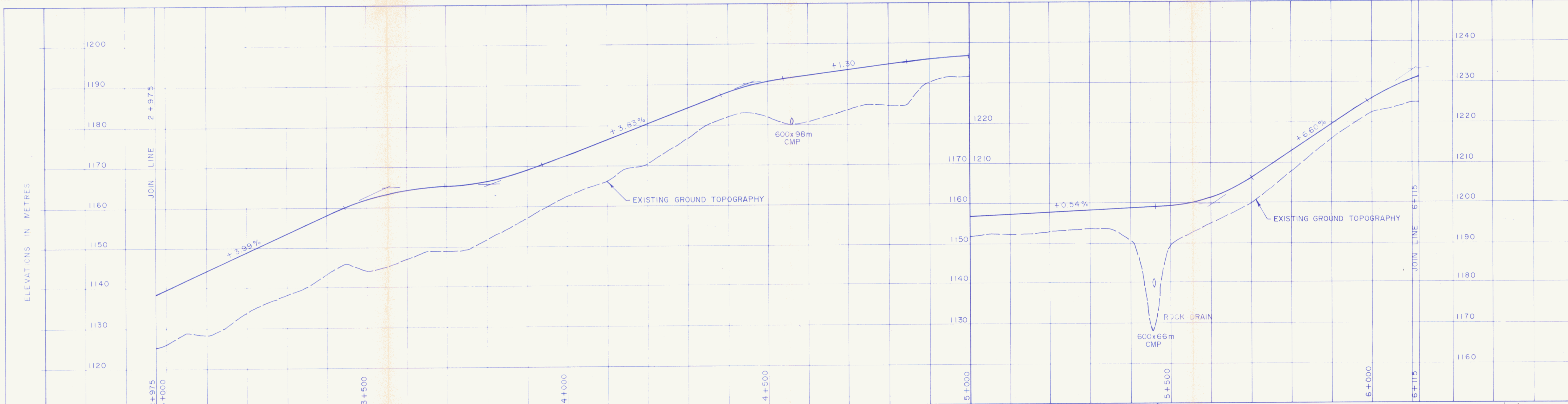
FIGURE 2.18

105 k 6

107



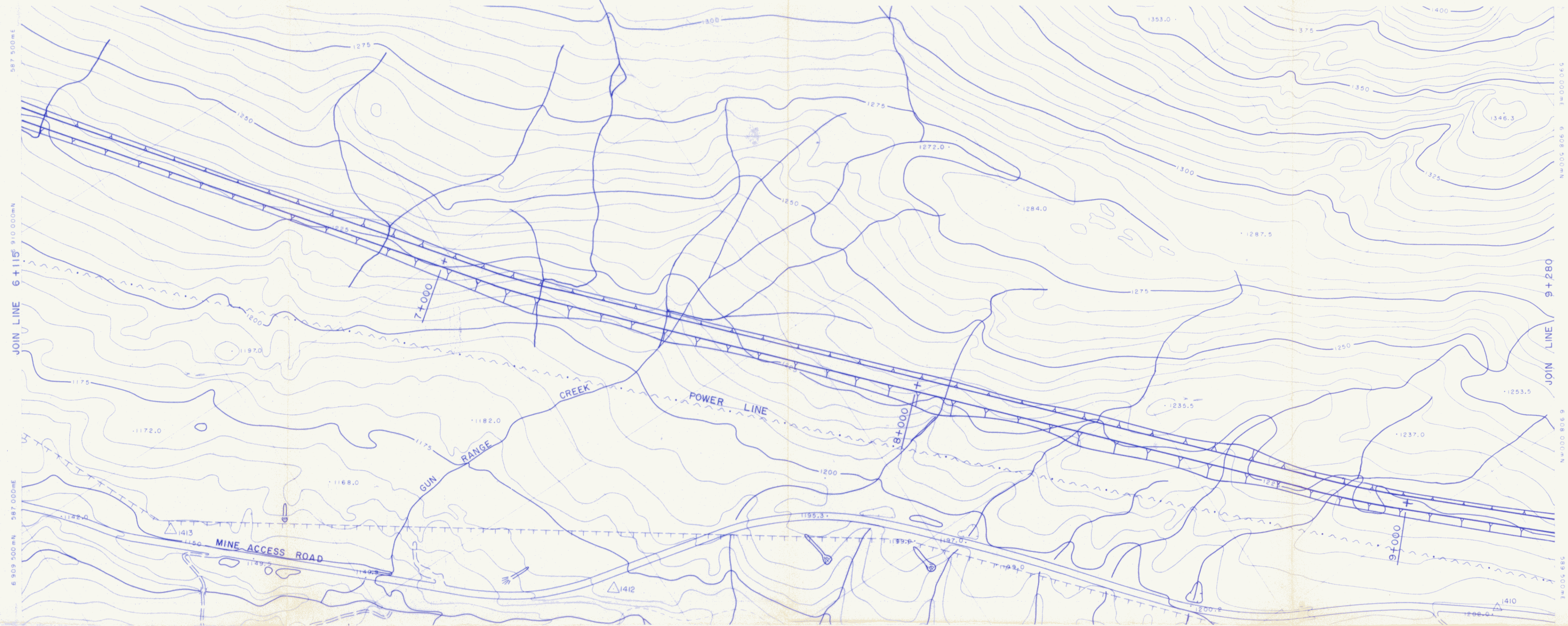
092737



VANGORDA PLATEAU HAUL ROAD
PLAN & PROFILE

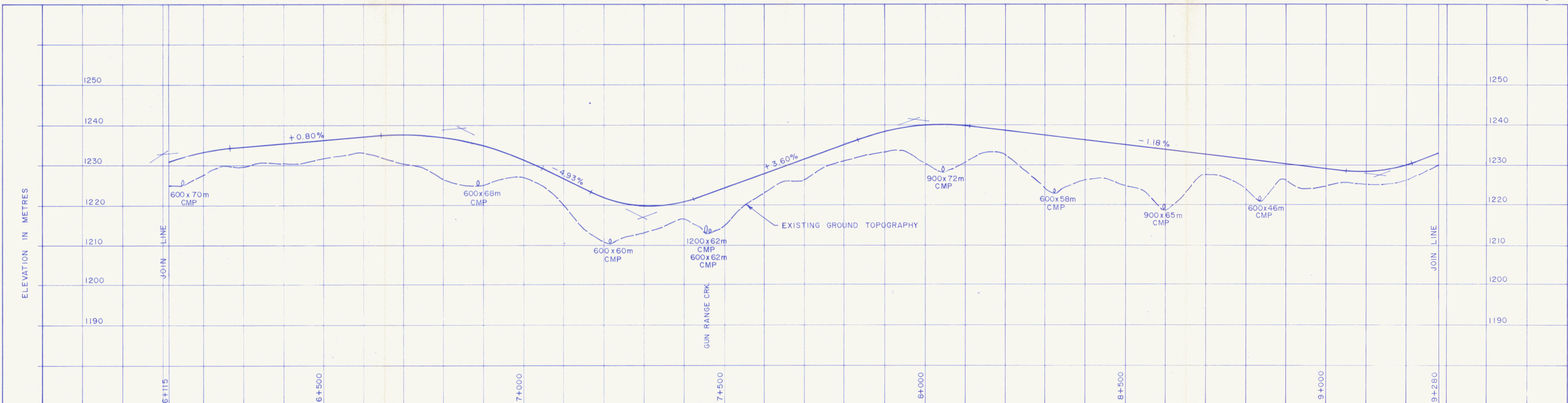
STATION 2+975 to STATION 6+115 FIGURE 2.19

105 k 6
108

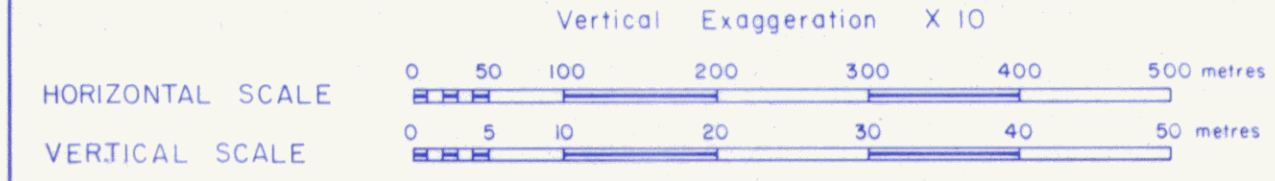


PLAN VIEW

092737



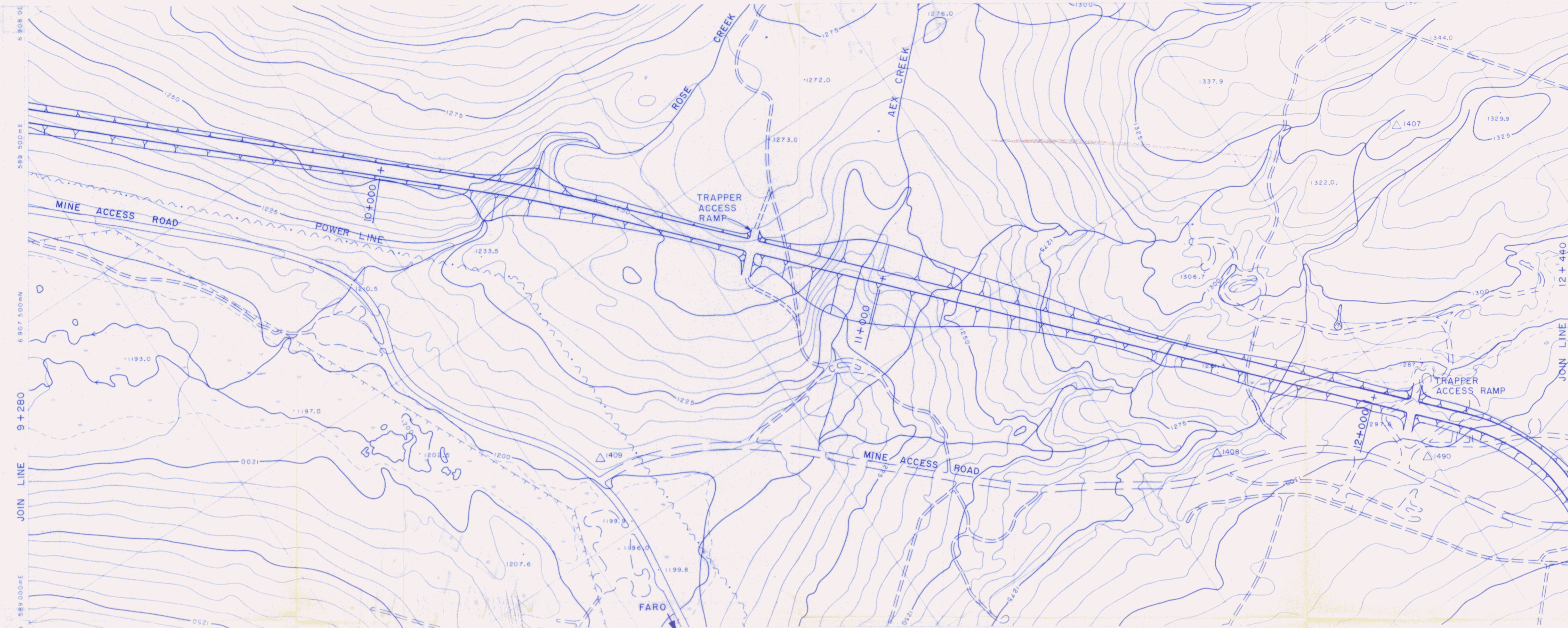
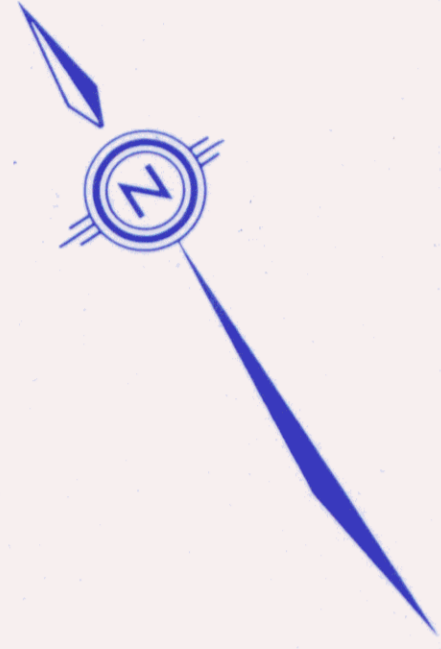
ROAD PROFILE ALONG CENTRE-LINE IN METRES



VANGORDA PLATEAU HAUL ROAD
PLAN & PROFILE

STATION 6+115 to STATION 9+280
FIGURE 2.20

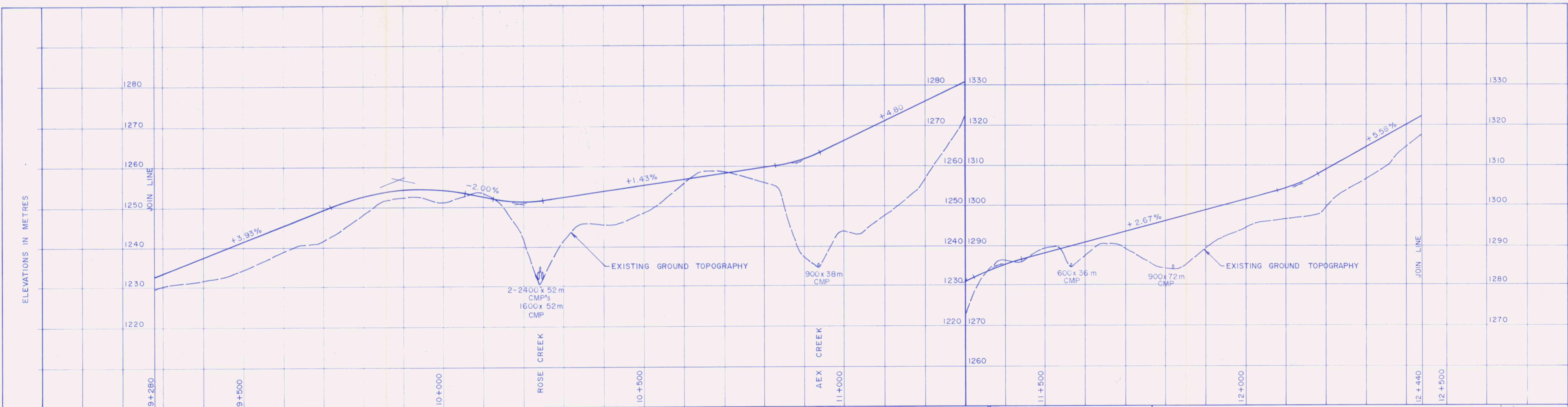
105 K 6
109



Scale 0 50 100 200 300 400 500 metres

PLAN VIEW

092731



ROAD PROFILE ALONG CENTRE-LINE IN METRES

Vertical Exaggeration X 10
 HORIZONTAL SCALE 0 50 100 200 300 400 500 metres
 VERTICAL SCALE 0 5 10 20 30 40 50 metres



Carragh Resources Inc.

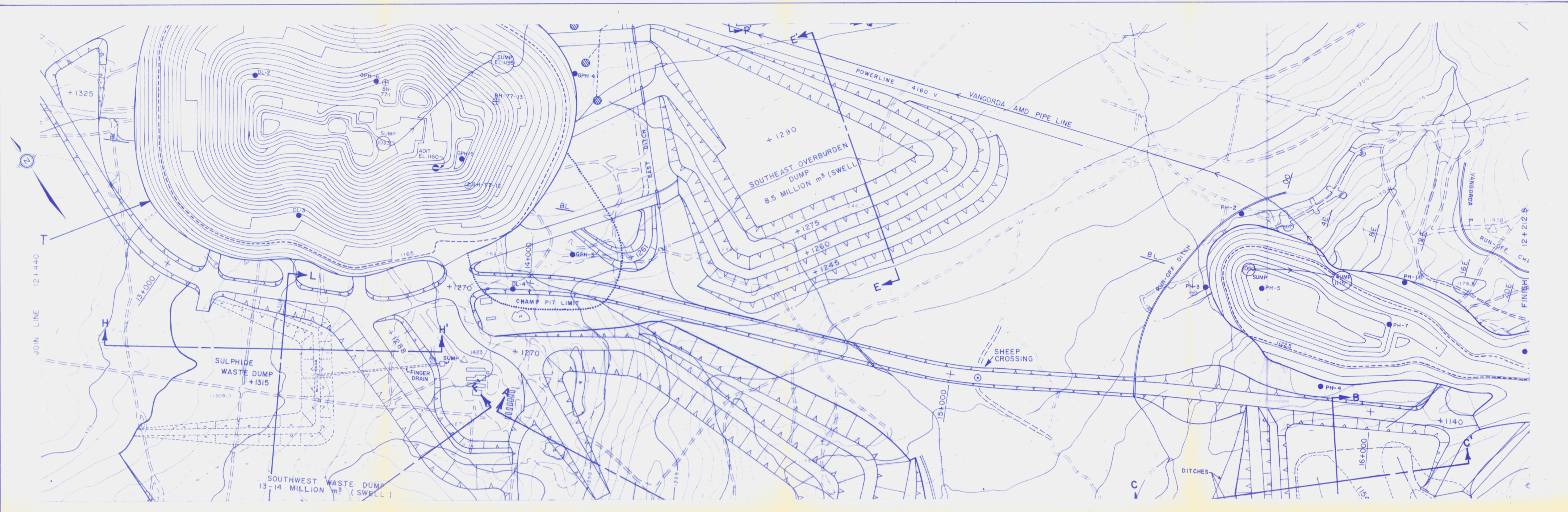
VANGORDA PLATEAU HAUL ROAD
 PLAN & PROFILE

STATION 9+280 to STATION 12+440

FIGURE 2.21

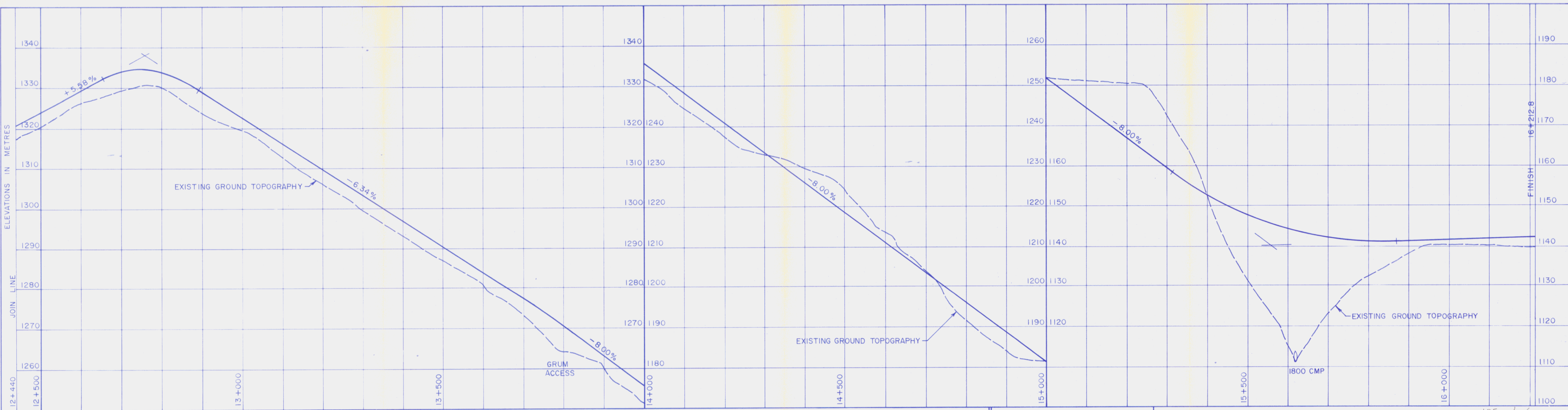
105 k 6

110

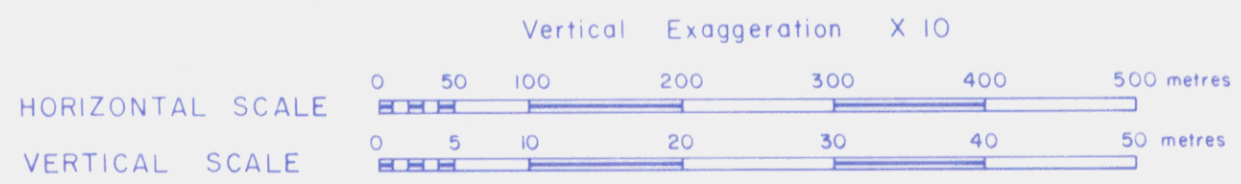


PLAN VIEW

092737



ROAD PROFILE ALONG CENTRE-LINE IN METRES



VANGORDA PLATEAU HAUL ROAD
PLAN & PROFILE

STATION 12+440 to STATION 16+212.8 105 K6
111
FIGURE 2.22