PROJECT SUMMARY

FLOODPLAIN SURVEY AT QUESNEL

Project # 89 12 F027

Requested by: Special Projects Section
Mr. R.W. Nichols

Survey Dates:	Personnel:	Vehicles:
July 11-Aug 1, 1989	M. Pronk J. Duncan, B. Brazier, R. Barclay T. Stewart	EV90119 EV0339 EV0995

Field Time: 116 man/days
Office Time: 162 man/days

The crew left Victoria on July 11, and arrived in Quesnel later that evening.

Accommodations for the crew were at the Fountain Motel in Quesnel.

The field survey was carried out under favourable conditions with temperatures ranging to mid-30° C.

Launched riverboat (Alumaweld) on right bank Fraser River near intersection of Ristson and Rolph Streets in West Quesnel, midway between Xs 8 and XS9.

1. The Field Survey Included:

   a) Baker Creek - 23 cross sections, thalweg, 1 bridge site
   b) Quesnel River-33 cross sections, thalweg, 4 bridge sites
   c) Fraser River-28 cross sections, thalweg, 2 bridge sites
   d) Established 20 bench marks and 6 temporary bench marks in the Quesnel area.

2. Survey data:

   a) Horizontal control was established by E.D.M. traverse using a total station theodolite.
   b) Vertical control was established by differential levelling for bench marks, temporary bench marks and some of the reference bolts at cross sections.
   Reciprocal trigonometic levelling using the total station theodolite for the remaining cross section reference bolts.

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2. Survey Data (continued)

   c) Cross section topography was collected using a total station theodolite on Quesnel and Fraser Rivers, and on Baker Creek using a semi-total station.
   d) Subaqueous depths were established by an echo sounding depth recorder on Quesnel and Fraser Rivers.
   e) Cross sections referenced with bolts.

3. Datum:

   a) Horizontal control is based on Post 80H2822, established in 1980 by Scoobie and Associates.
   b) Coordinates are U.T.M Zone 10, Central Meridian 123 NAD 27.
   c) Bearings are derived from a solar observation.
   d) Vertical control is based on Geodetic Survey of Canada Bench Marks 700-J, 702-J, 82C-248, 82C-249, 82C-250, 82C-252, 82C-253, 82C-254, 82C-293, and Water Survey of Canada BM 12 at Gauge 08KE016, as listed in Survey Control Data Bank Search, dated April 3, 1989.
   d) Elevations are in metres and referred to Canadian Geodetic Datum.

4. Field Books:

   Survey data is recorded on disc labelled 2522 D and in Field Book 2522 F.

5. Reference Points Established

   a) 20 Bench Marks 89HAW036-89HAW055
   b) 6 Temporary Bench Marks TBM 4396-4397, 4400, 4487-4489.

6. Drawing/Maps:

   a) 2 Uncontrolled mosaics (Scale 1:10000), Dwg. No. 90-3-1 and 90-3-2.
   b) 9 B.C.G.S. Maps (Scale 1:5000), Mapping Project Nos. 81-028T, reduced to half size.

   These drawings/maps show locations of cross sections, bench marks, temporary bench marks and gauges.

7. A copy of completed data (3 volumes) was sent to Special Projects Section, the contents of which are as follows:

   Volume 1 - Quesnel River
   Volume 2 - Fraser River
   Volume 3 - Baker Creek

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3 VOLUMES

LIST OF CONTENTS

VOLUME 1 OF 3 - BAKER CREEK XS 1-23

1. Drawings/Maps
   a) 2 Uncontrolled mosaics (scale 1:10000)-showing locations of cross sections, bench marks, temporary bench marks and gauges. Drwg. Nos. 90-3-1 and 90-3-2 (File Pouch)

   b) Work sheets of 9 topographic maps (attached) at scale 1:5000, Mapping Project No. 81-028T. These worksheets are marked with the location of cross sections, thalwegs, bench marks and gauges.

RIVER	MAP SHEET	CROSS SECTION	MICROFILM NEGATIVE NUMBER
Quesnel	93B.098.4.1	XS 1 - XS 10	272608
	93B.098.4.3	XS 11 - XS 25, XS 33	272609
	93G.008.2.1	XS 25 - XS 32	272612
Fraser	93B.098.2.3	XS 1 - XS 4	272605
	93B.098.1.4	XS 5	272604
	93B.098.3.2	XS 5 - XS 13	272606
	93B.098.4.1	XS 9 - XS 13	272608
	93B.098.4.3	XS 14 - XS 16	272609
	93B.098.3.4	XS 14 - XS 19	272607
	93G.008.1.2	XS 20 - XS 24	272610
	93G.008.1.4	XS 25 - XS 28	272611
Baker	93B.098.3.2	XS 1 - XS 6	272606
	93B.098.3.4	XS 7 - XS 23	272607

* NOTE: Special Projects Section issued the work sheets. Surveys Section to keep 1/2 size print and 105 mm microfilm negatives.

2. Floor elevations at West Park Mall at Baker Creek and highwater elevations: 2 on Quesnel River, 2 Fraser River

3. Water Survey of Canada Gauge description for Station 08K016 on Baker Creek site location in 1973 and relocated in 1984.

4. Listing of Thalweg Profile Data and Plot H1:10000 V1:200

5. Listing of Cross Section G.R. Data for HEC-2

6. Listing of Cross Section Profile Data and Plot H1:500 V1:100 Cross Section Photographs (left, right banks, upstream, downstream views)

7. Bridge Drawings, Plotted at H1:500 V1:500
   a) Marsh Drive Bridge at XS 4 and 5

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LIST OF CONTENTS (Continued)

VOLUME 2 OF 3 - QUESNEL RIVER XS 1-33

1. Listing of Thalweg Profile Data and Plot H1:20000 V1:200
2. Listing of Cross Section G.R. Data for HEC-2
3. Listing of Cross Section Profile Data and Plot H1:2000 V1:200
4. Cross Section Photographs (left, right banks, upstream, downstream views)
5. Bridge Drawings, Plotted at H1:500 V1:500
   a) B.C.R. Bridge at XS 3 and 4
   b) Johnston Bridge at XS 8 and 9
   c) Hwy 97 Bridge at XS 14 and 15
   d) B.C.R. Bridge at XS 18 and 19

VOLUME 3 - FRASER RIVER XS 1-28

1. Water Survey of Canada Gauge Description for Station 08KE002 on Fraser River at XS 11 left bank.
2. Listing of Thalweg Profile Data and Plot H1:20000 V1:200
3. Listing of Cross Section G.R. Data for HEC-2
4. Listing of Cross Section Profile Data and Plot H1:2000 V1:200
5. Cross Section Photographs (left, right banks, upstream, downstream views)
6. Bridge Drawings Plotted at H1:500 V1:500
   a) New Highway (Moffat) Bridge to West Quesnel at XS 11 and 12.
   b) Old Highway Bridge to West Quesnel at XS 14 and 15