

NOTE:

1. PRECIPITATION INCLUDES SNOW AND RAINFALL.

BAFFINLAND IRON MINES CORPORATION

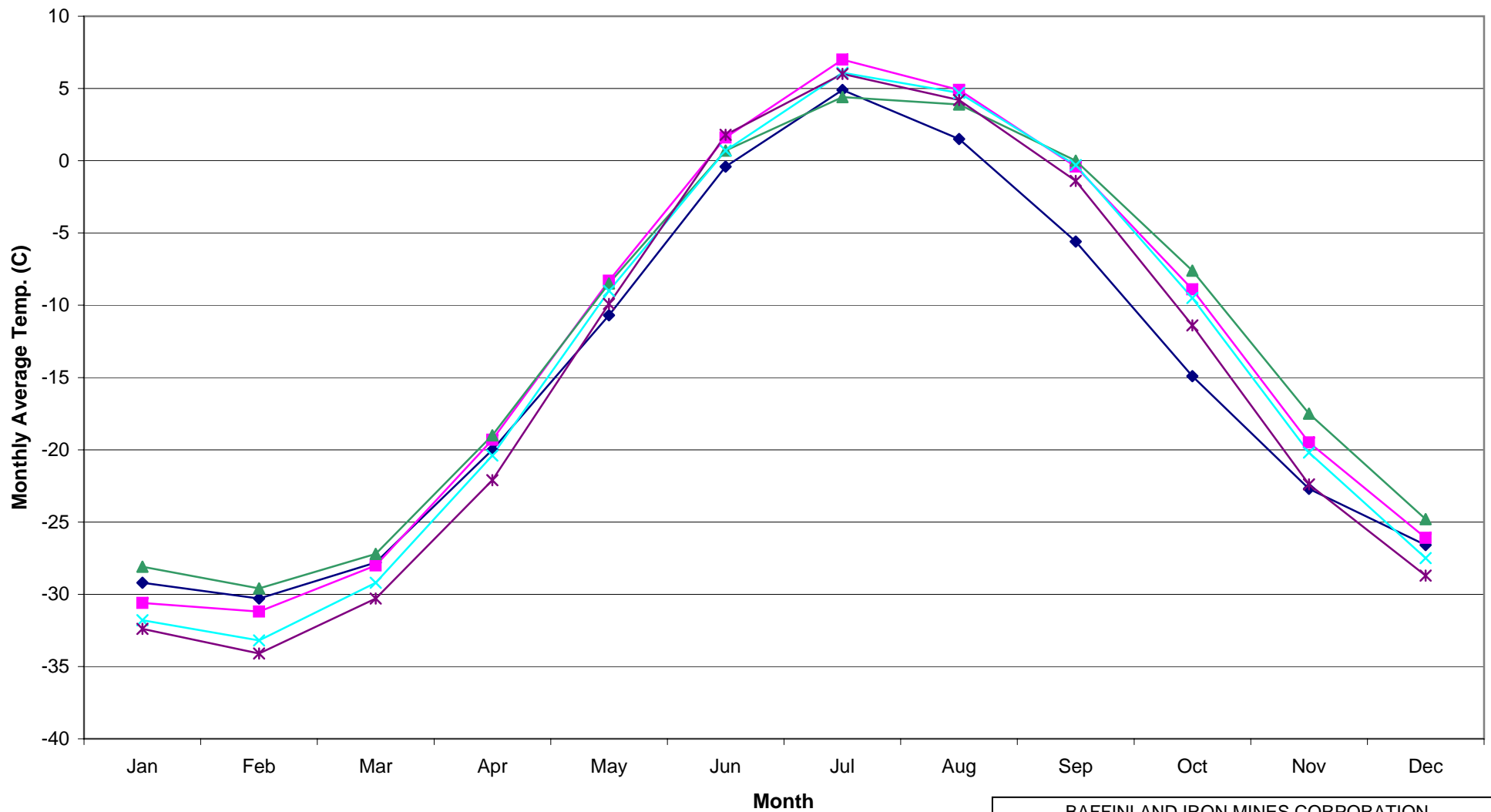
MARY RIVER PROJECT

**REGIONAL CLIMATE STATIONS
AVERAGE MONTHLY PRECIPITATION
CLIMATE NORMALS 1971 - 2000**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-00181/11REF NO.
8**FIGURE 2.2**REV.
0

0	05JAN'08	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**REGIONAL CLIMATE STATIONS
AVERAGE MONTHLY TEMPERATURE
CLIMATE NORMALS 1971 - 2000**

Knight Piésold
CONSULTING

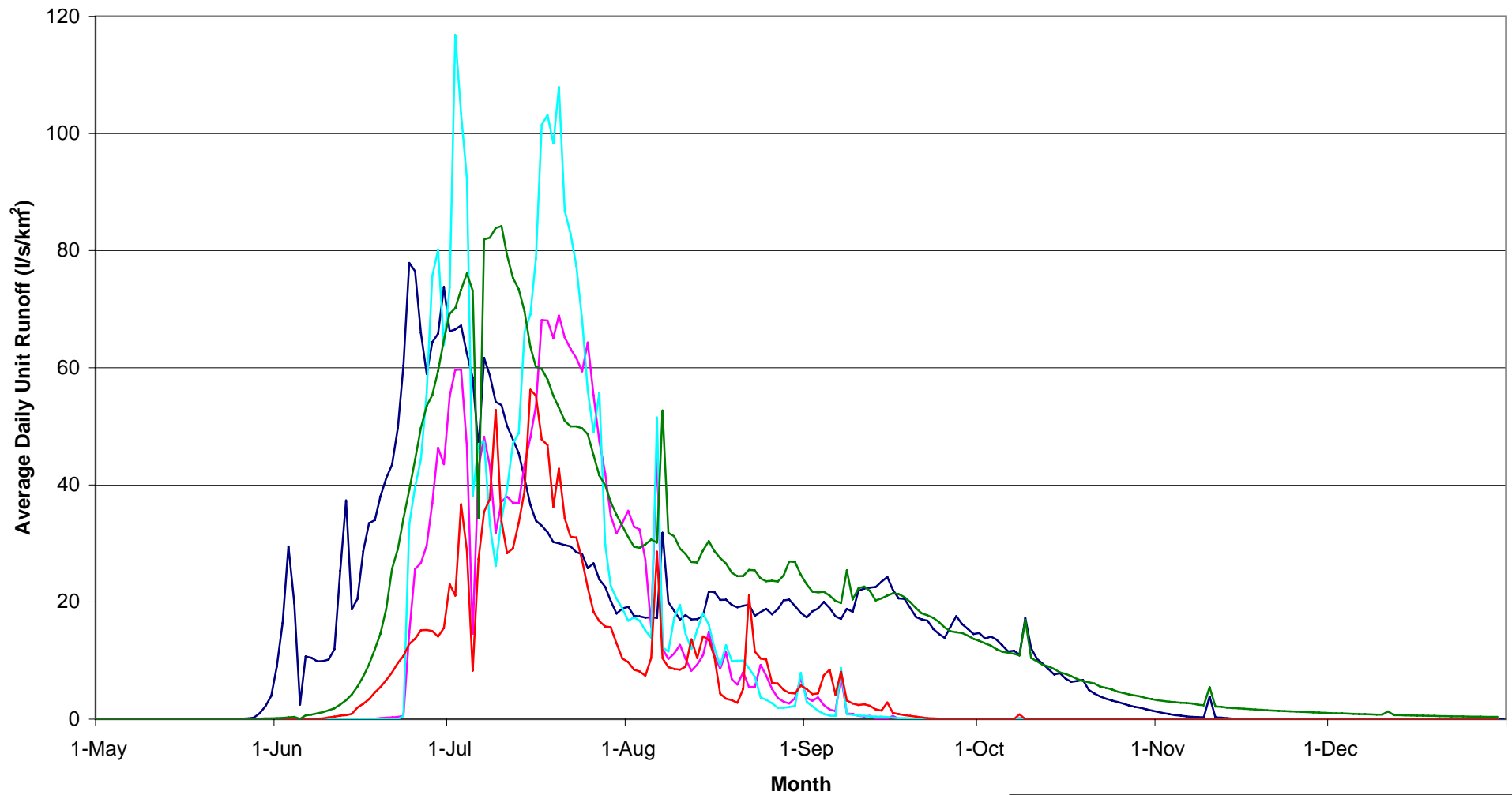
PROJECT / ASSIGNMENT NO.
NB102-00181/11

REF NO.
8

FIGURE 2.3

REV.
0

0	05JAN'08	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTES:

1. DRAINAGE AREA IS UNAVAILABLE FOR THE SOPER RIVER (10UJ001) WSC GAUGE.
2. DAILY UNIT RUNOFF AVERAGES INCLUDE DATA FROM 1970 TO 2007.

BAFFINLAND IRON MINES CORPORATION

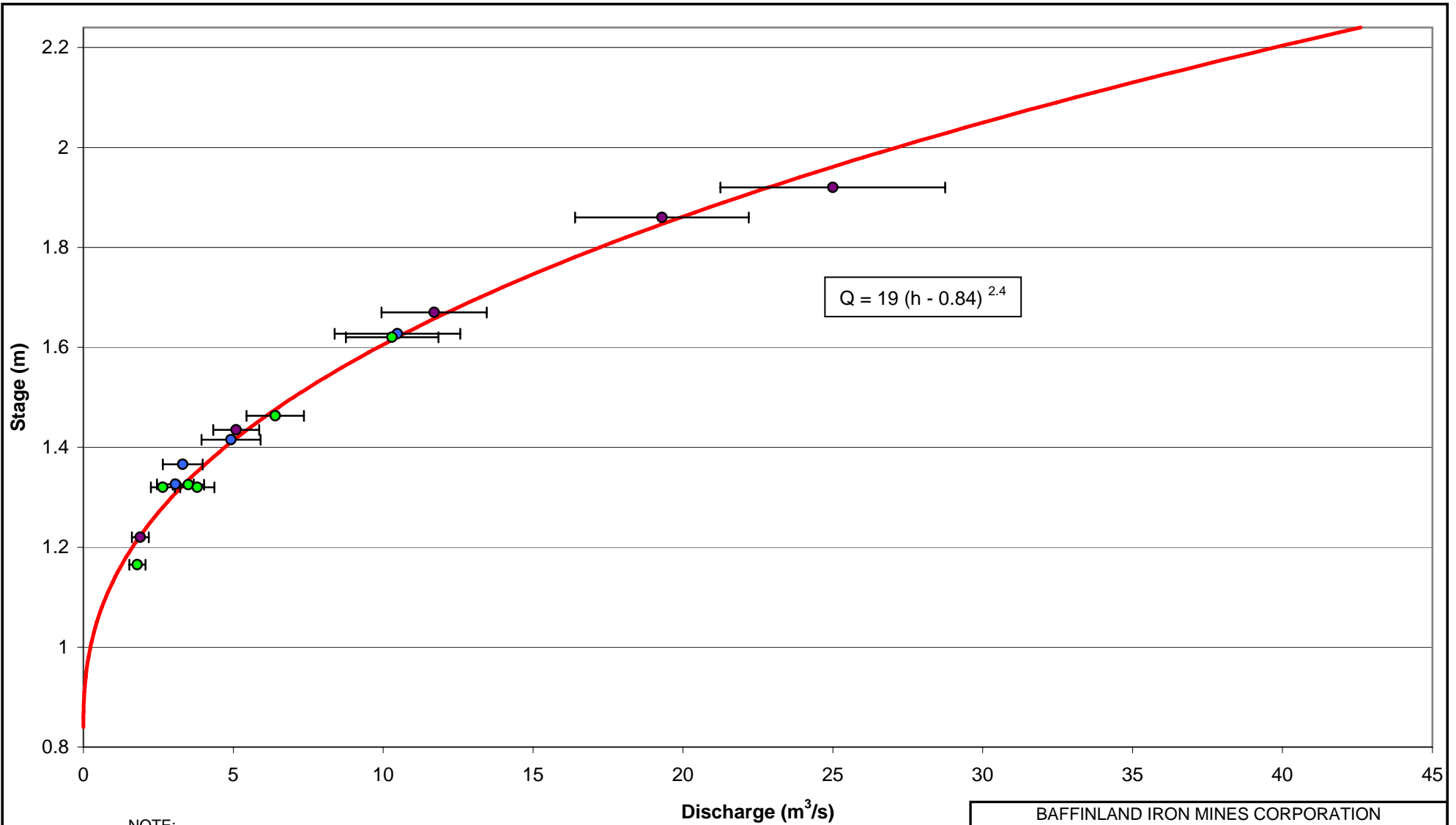
MARY RIVER PROJECT

**REGIONAL STREAMFLOW STATIONS
LONG-TERM AVERAGE DAILY UNIT RUNOFF**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-00181/11REF NO.
8**FIGURE 2.4**REV.
0

0	05JAN'08	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

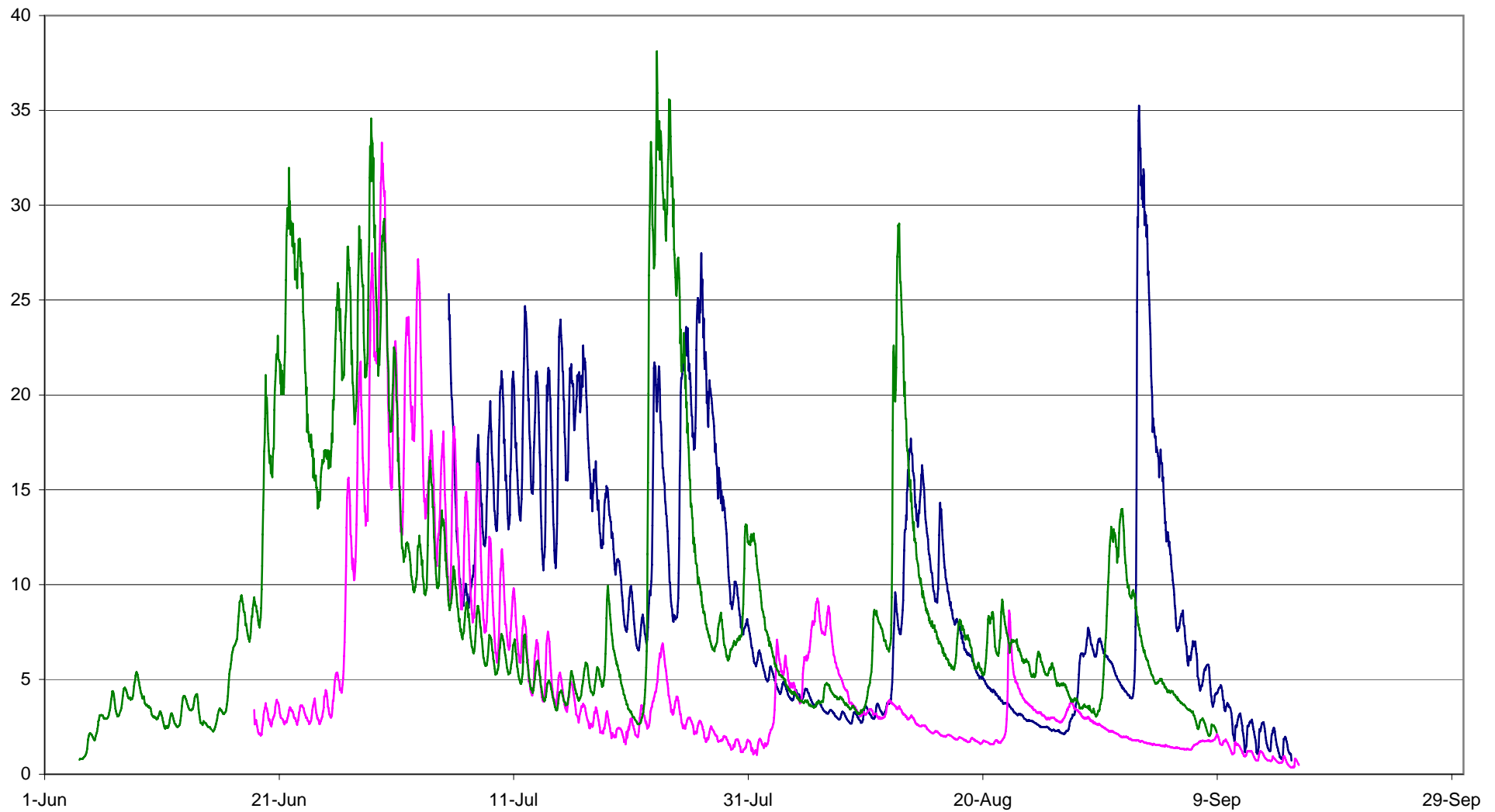


NOTE:

1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (2.24 m)

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

BAFFINLAND IRON MINES CORPORATION		
MARY RIVER PROJECT		
H1 - NORTHERN CONTROL SITE RATING CURVE		
<i>Knight Piésold</i> CONSULTING	PROJECT / ASSIGNMENT NO. NB102-181/11	REF NO. 8
	FIGURE 3.1	
		REV. 0



BAFFINLAND IRON MINES CORPORATION

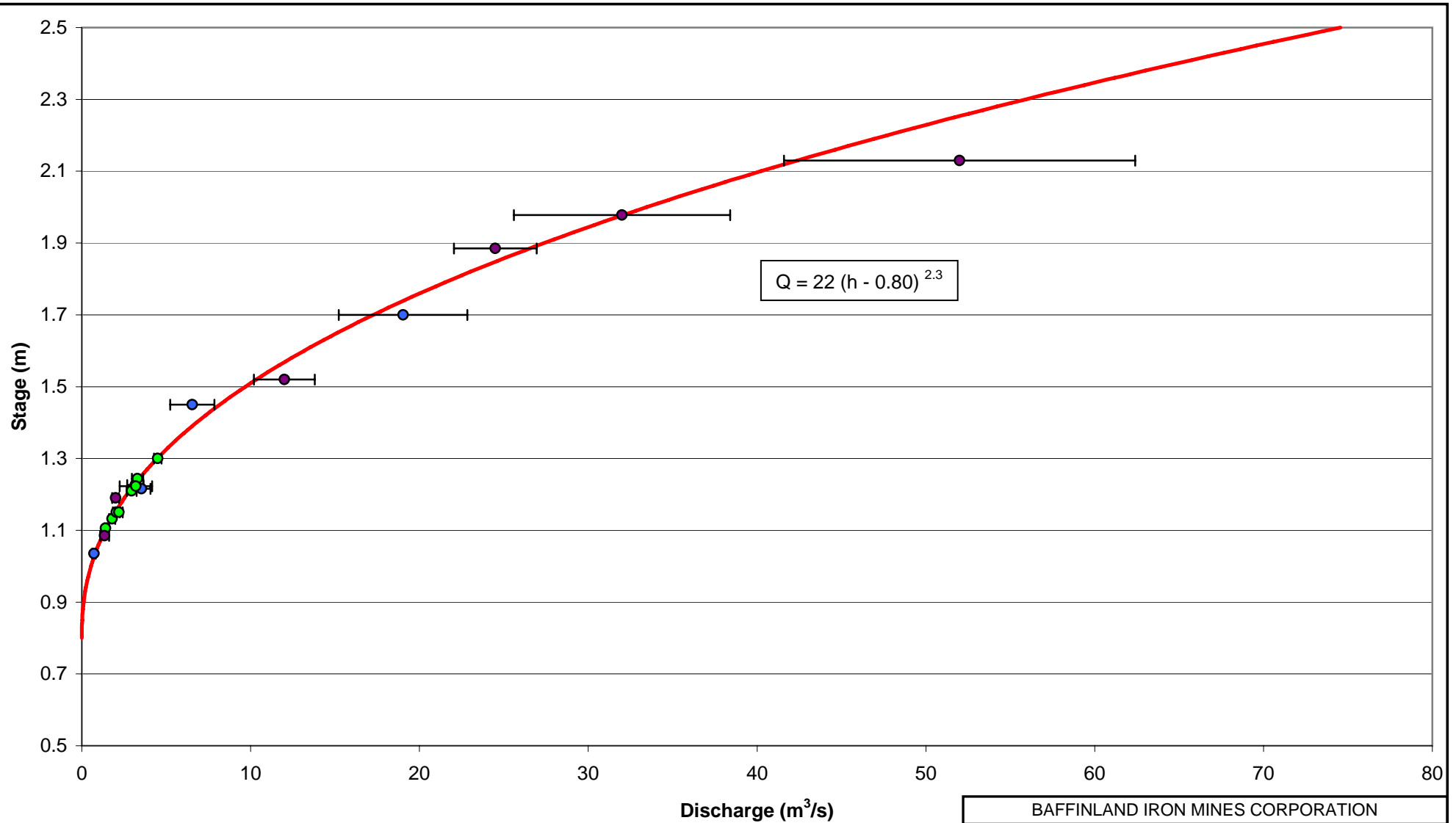
MARY RIVER PROJECT

H1 - NORTHERN CONTROL STATION MEASURED STREAMFLOW HYDROGRAPHS

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.2**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (2.49 m)

- Rating Curve
- 2006 Measurements
- 2007 Measurements
- 2008 Measurements

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

H2 - TOM RIVER RATING CURVE

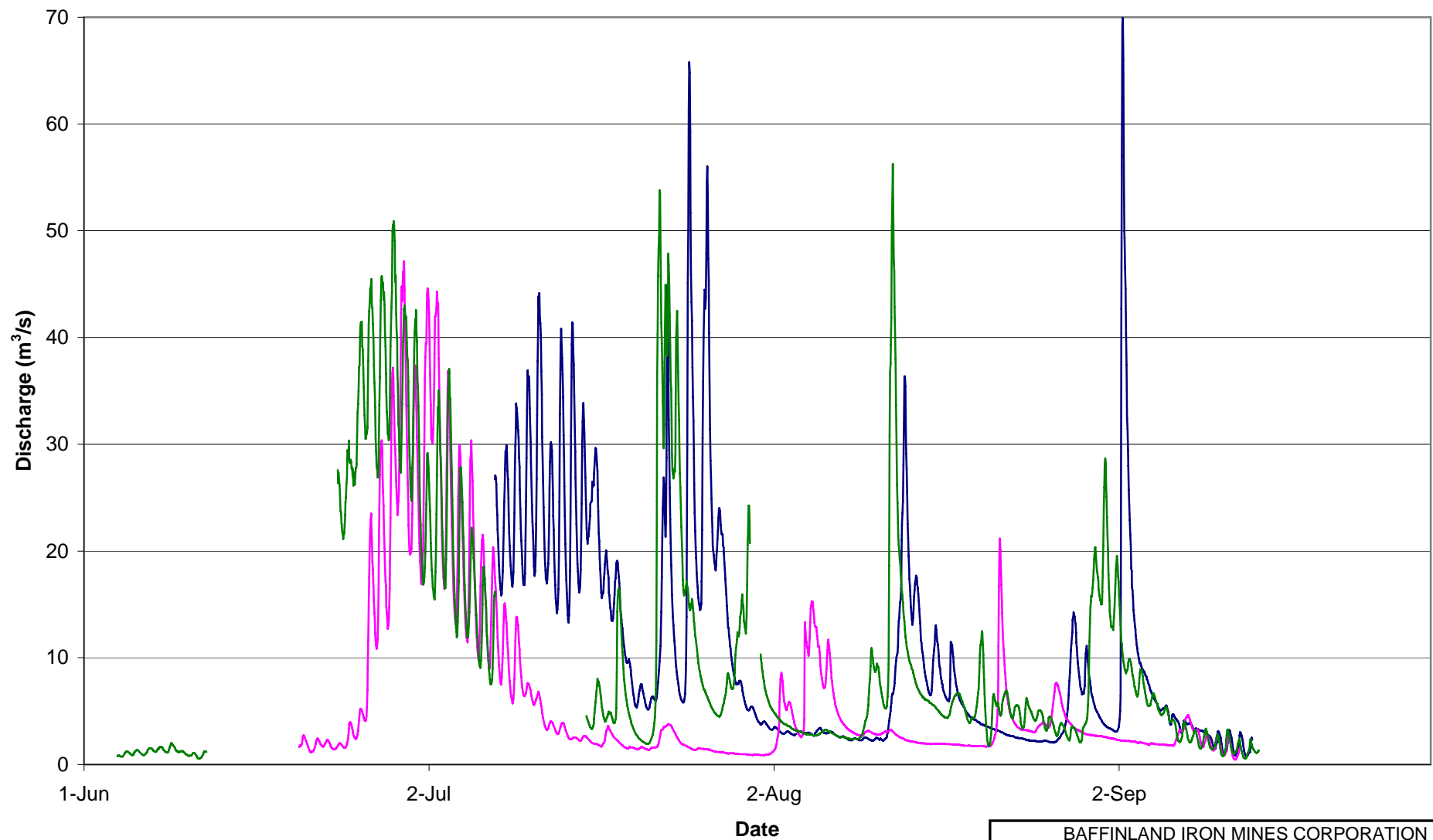
Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8

FIGURE 3.3

REV.
0

0	19JAN/09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1. GAPS IN 2008 DATA DUE TO GAUGE DAMAGE ON JUNE 11, 2008 (RE-INSTALLED ON JUNE 23, 2008) AND LOGGER MALFUNCTION.

BAFFINLAND IRON MINES CORPORATION

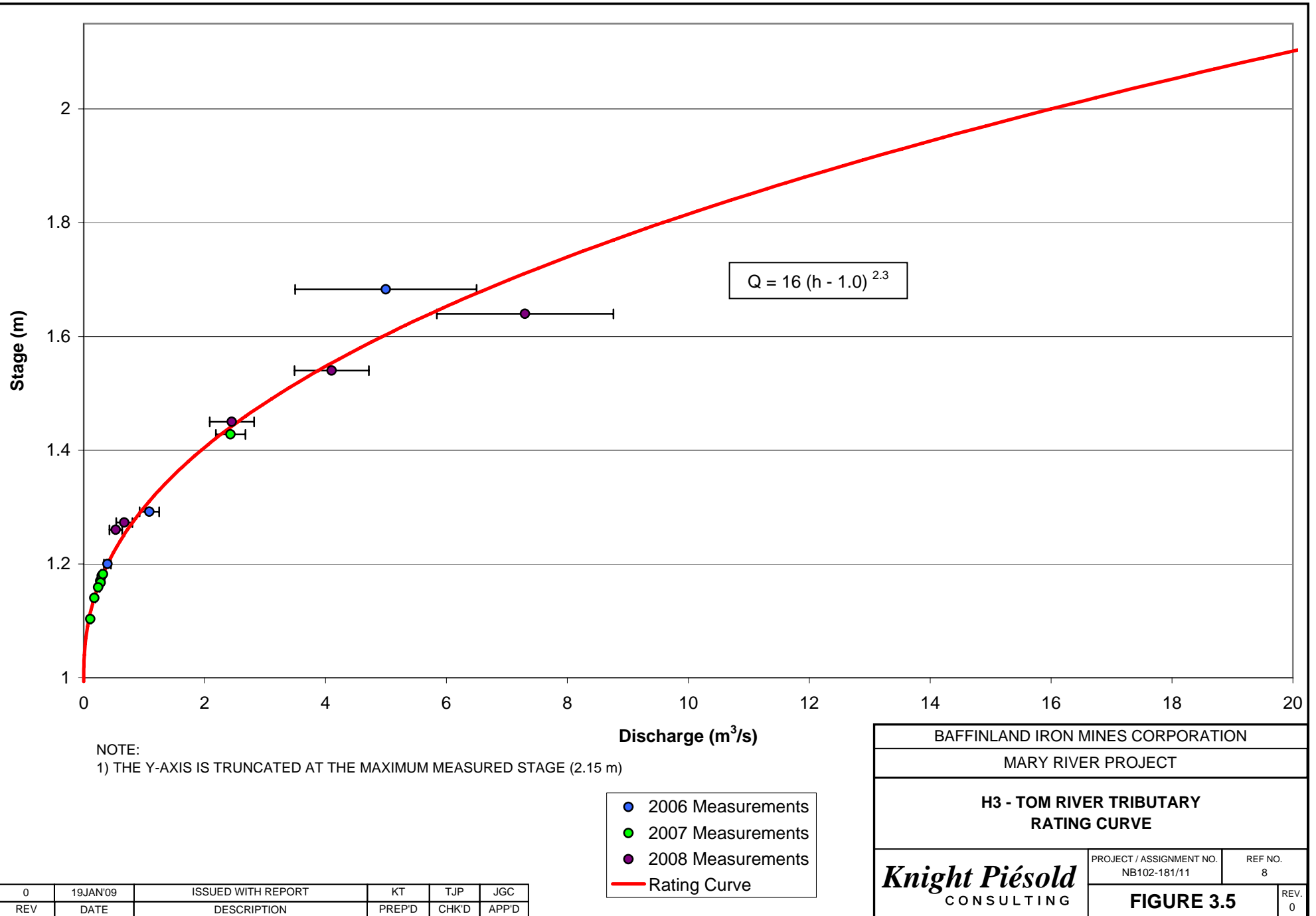
MARY RIVER PROJECT

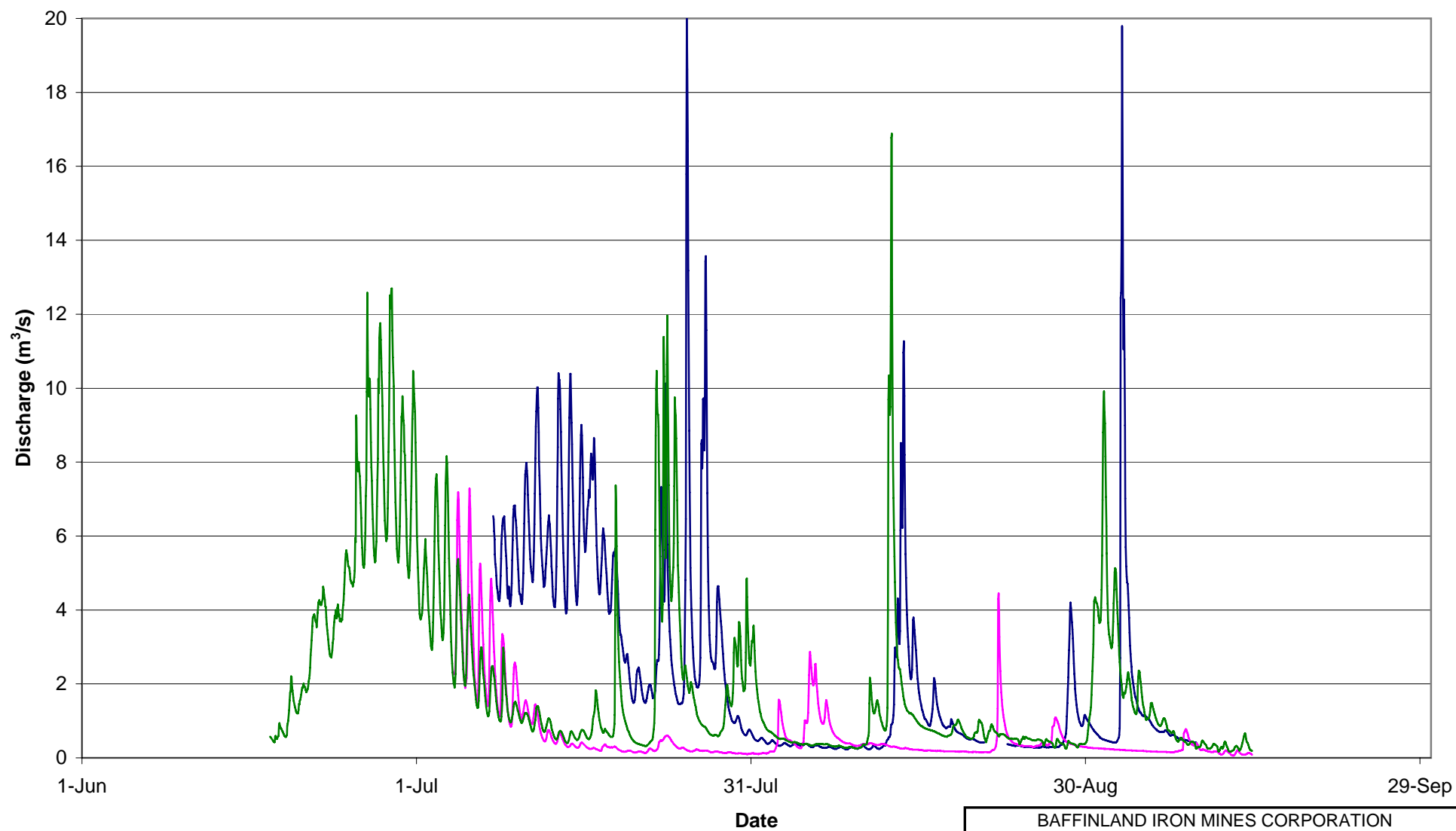
H2 - TOM RIVER
MEASURED STREAMFLOW HYDROGRAPHS

Knight Piésold
 CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.4**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D





— 2006 — 2007 — 2008

BAFFINLAND IRON MINES CORPORATION

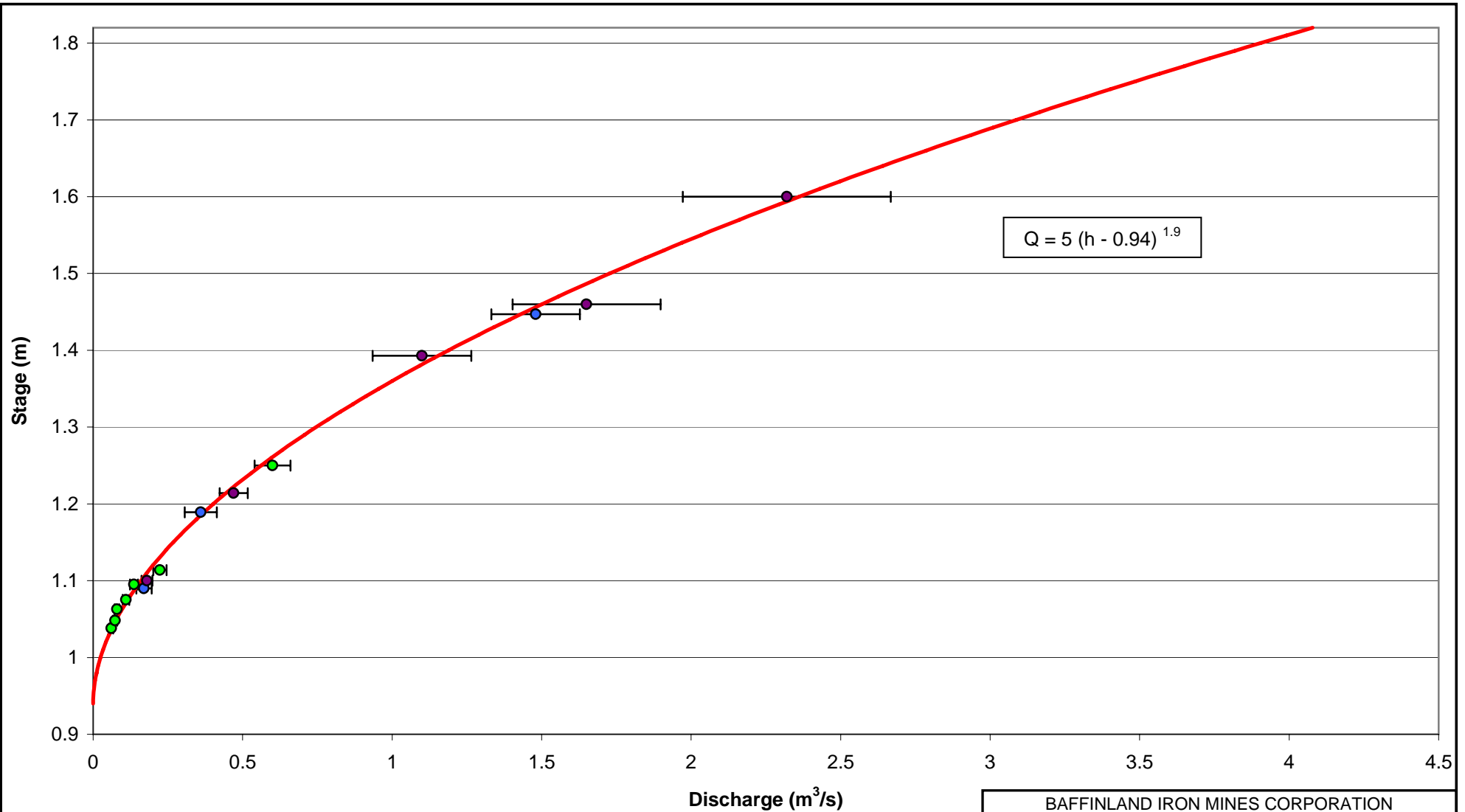
MARY RIVER PROJECT

**H3 - TOM RIVER TRIBUTARY
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.6**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (1.82 m)

- 2006 Measurements
- 2007 Measurements
- 2008 Measurements
- Rating Curve

BAFFINLAND IRON MINES CORPORATION

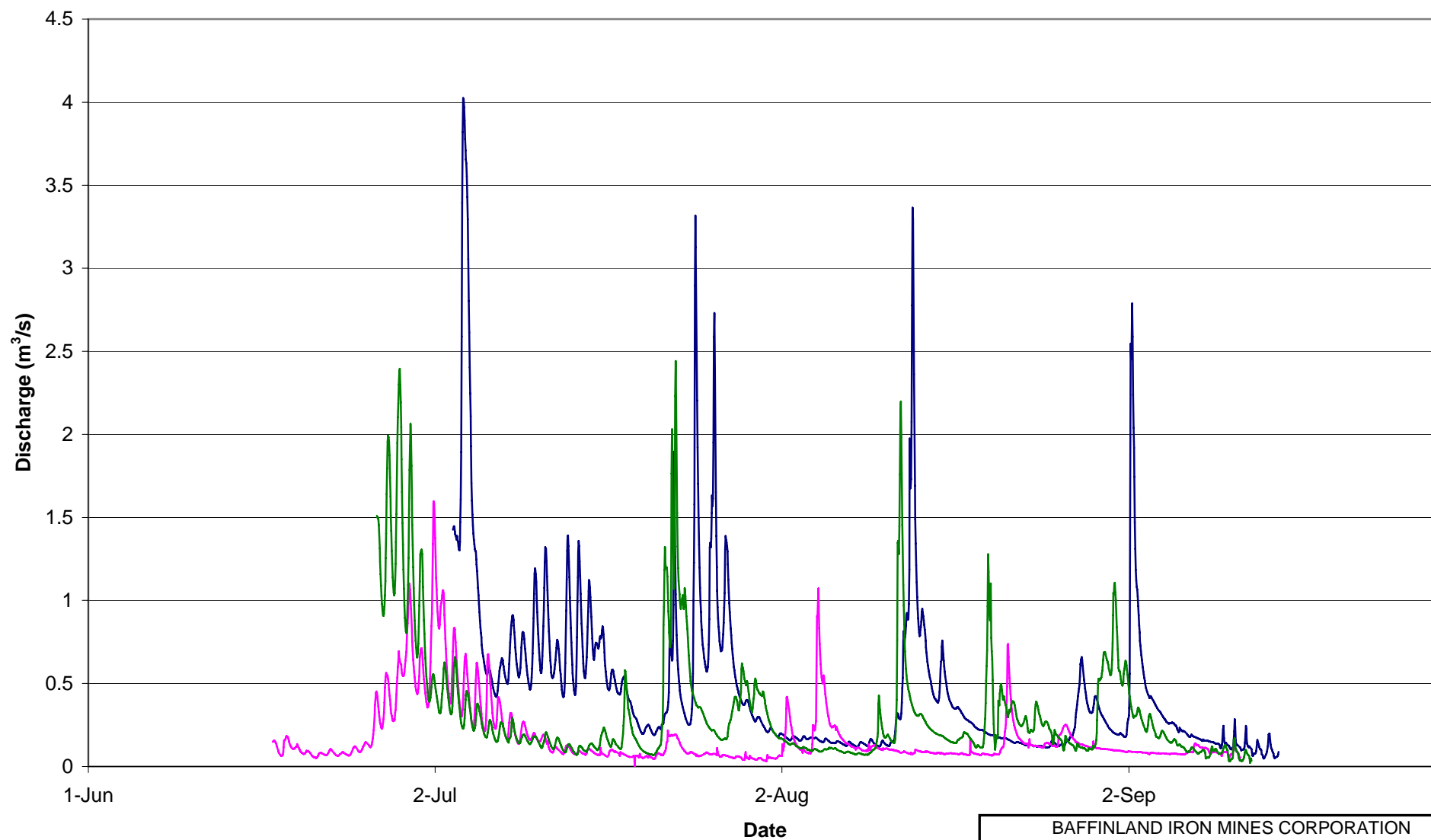
MARY RIVER PROJECT

H4 - CAMP LAKE TRIBUTARY RATING CURVE

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF. NO.
8**FIGURE 3.7**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



BAFFINLAND IRON MINES CORPORATION

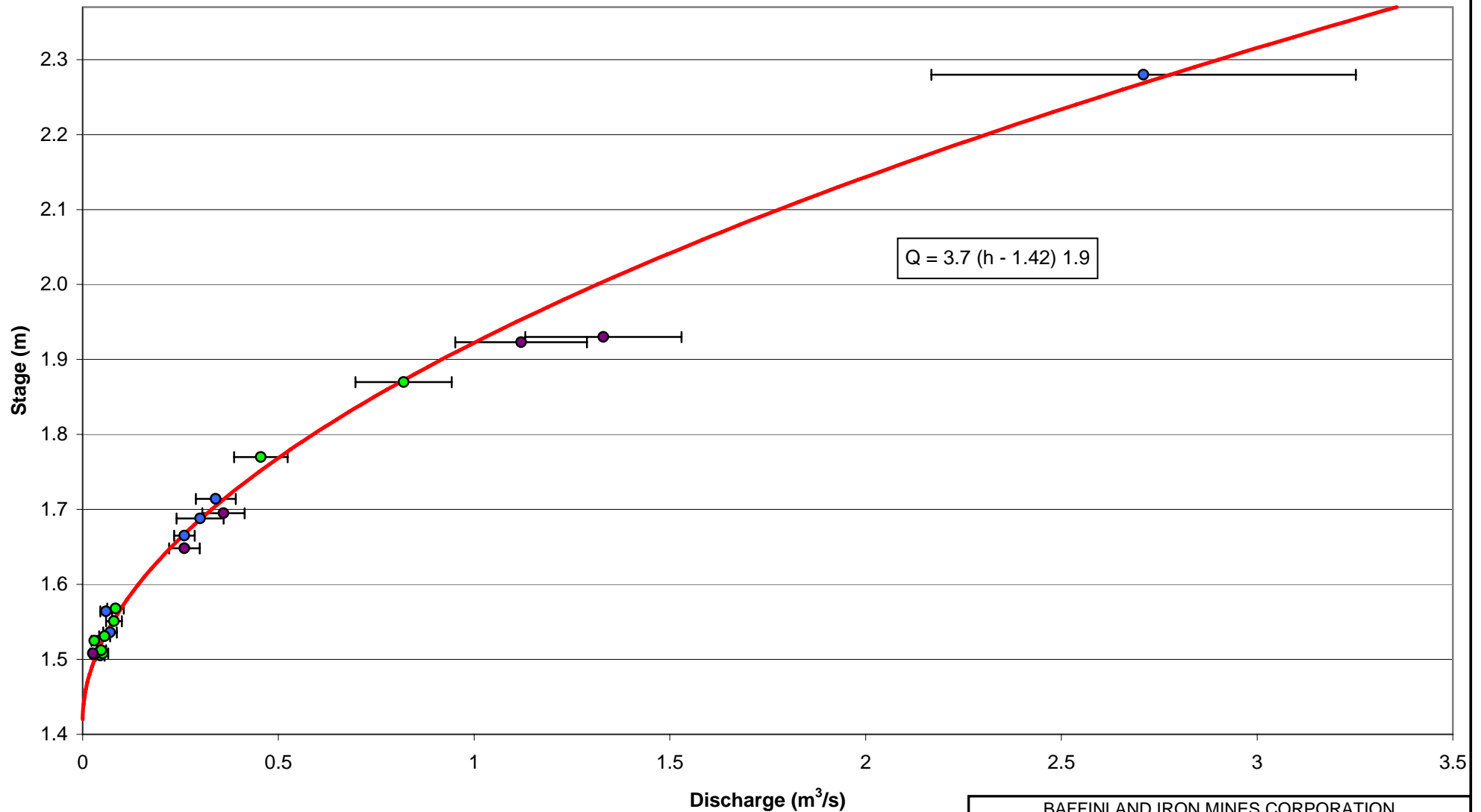
MARY RIVER PROJECT

H4 - CAMP LAKE TRIBUTARY MEASURED STREAMFLOW HYDROGRAPH

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.8**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (2.37 m)

- 2006 Measurements
- 2007 Measurements
- 2008 Measurements
- Rating Curve

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

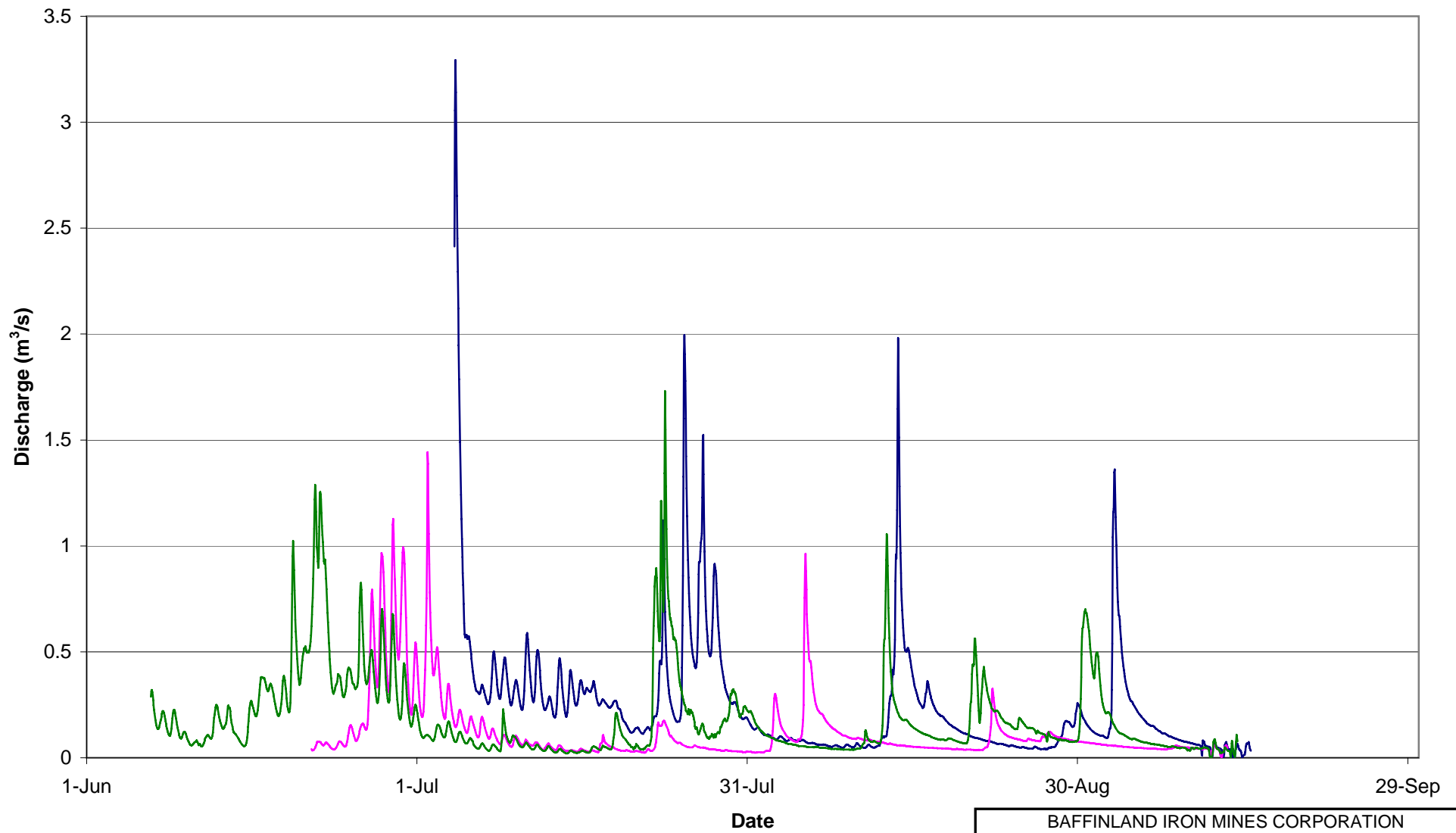
H5 - NORTH OF CAMP RATING CURVE

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8

FIGURE 3.9

REV.
0



BAFFINLAND IRON MINES CORPORATION

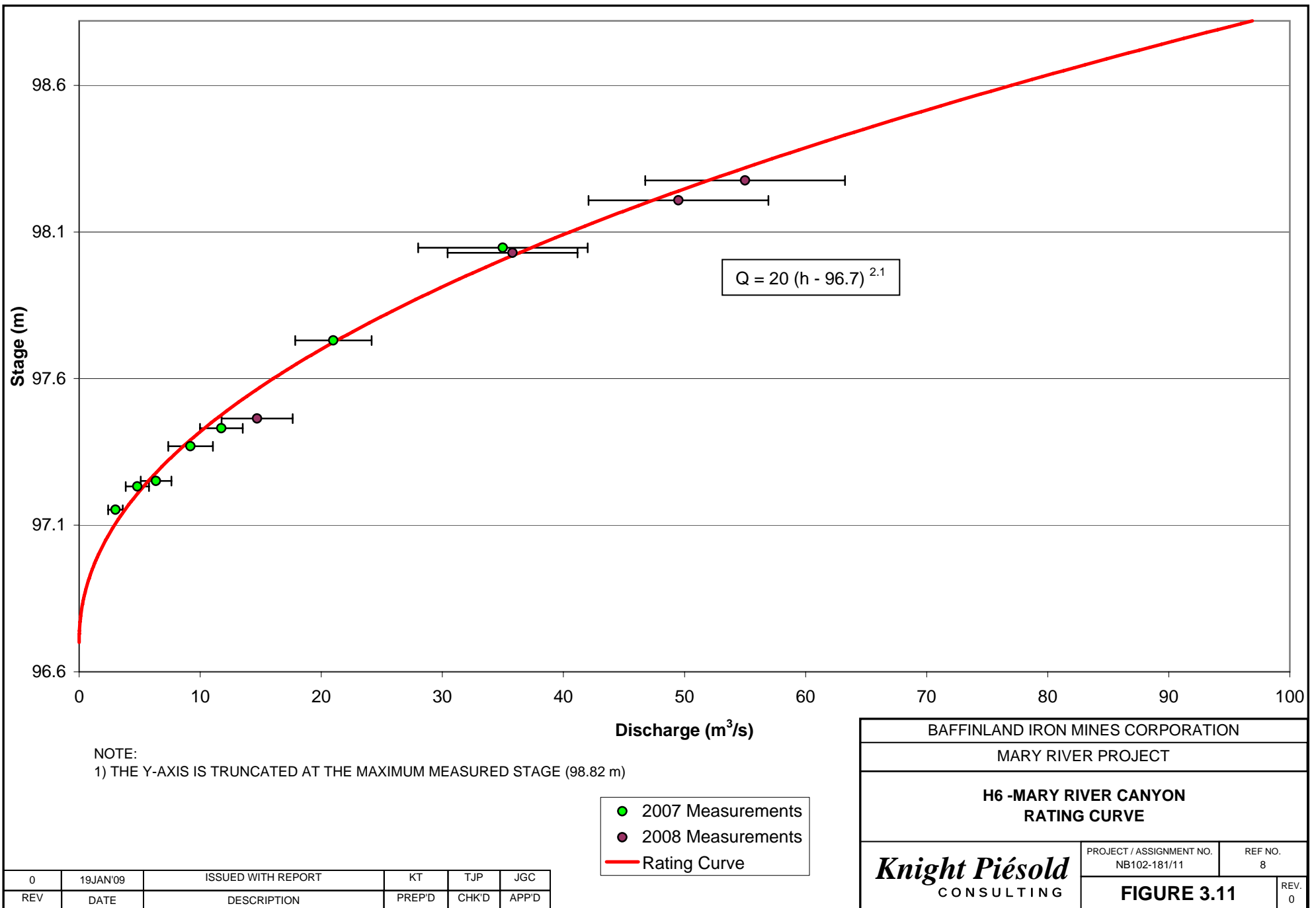
MARY RIVER PROJECT

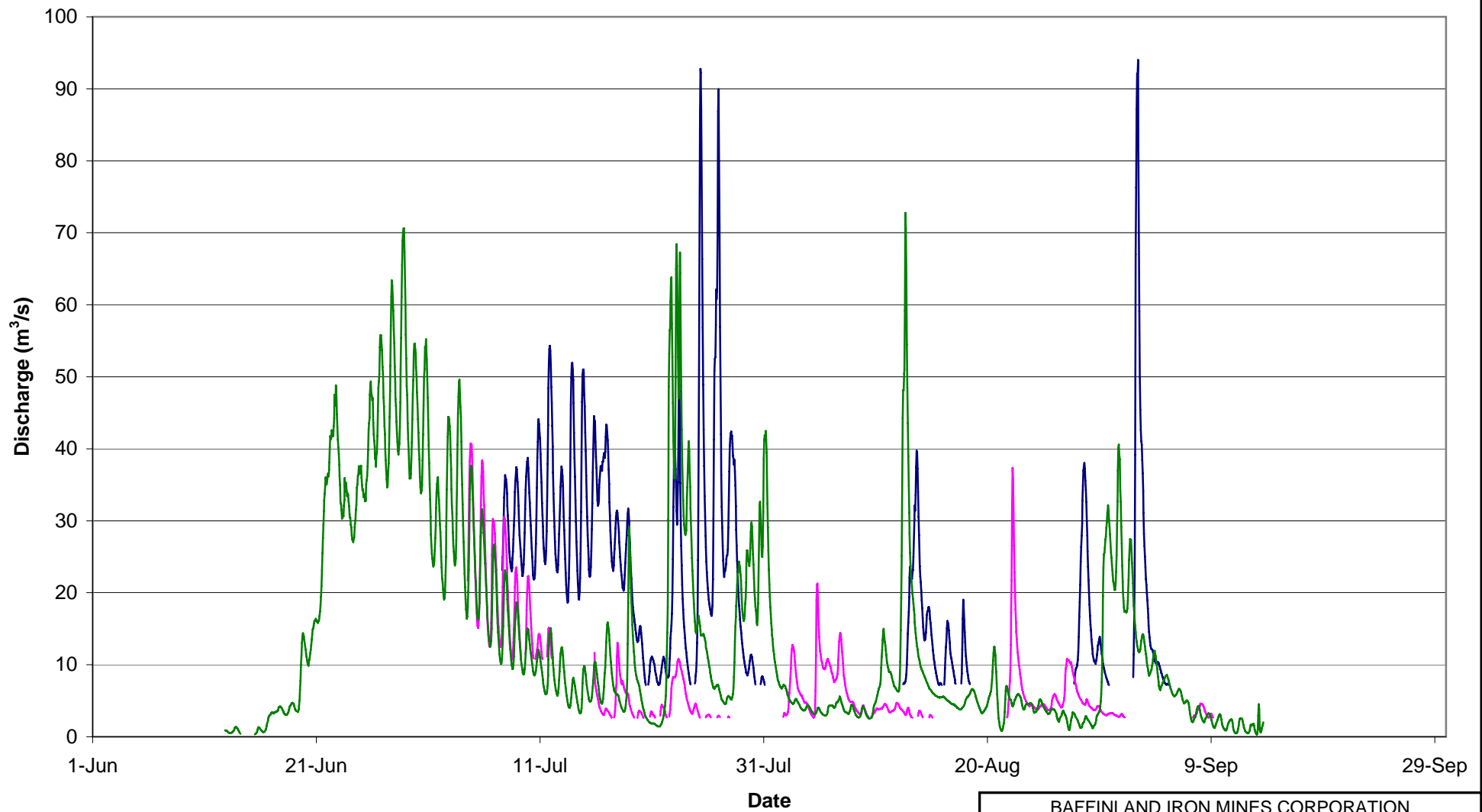
**H5 - NORTH OF CAMP
MEASURED STREAMFLOW HYDROGRAPH**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.10**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D





NOTE:

1. PERIODS OF LOW STAGE/FLOW WERE NOT RECORDED IN 2006 AND 2007 AS A RESULT OF GAUGE PLACEMENT. IN 2008 THE GAUGE WAS LOWERED AND NO GAPS WERE RECORDED.

BAFFINLAND IRON MINES CORPORATION

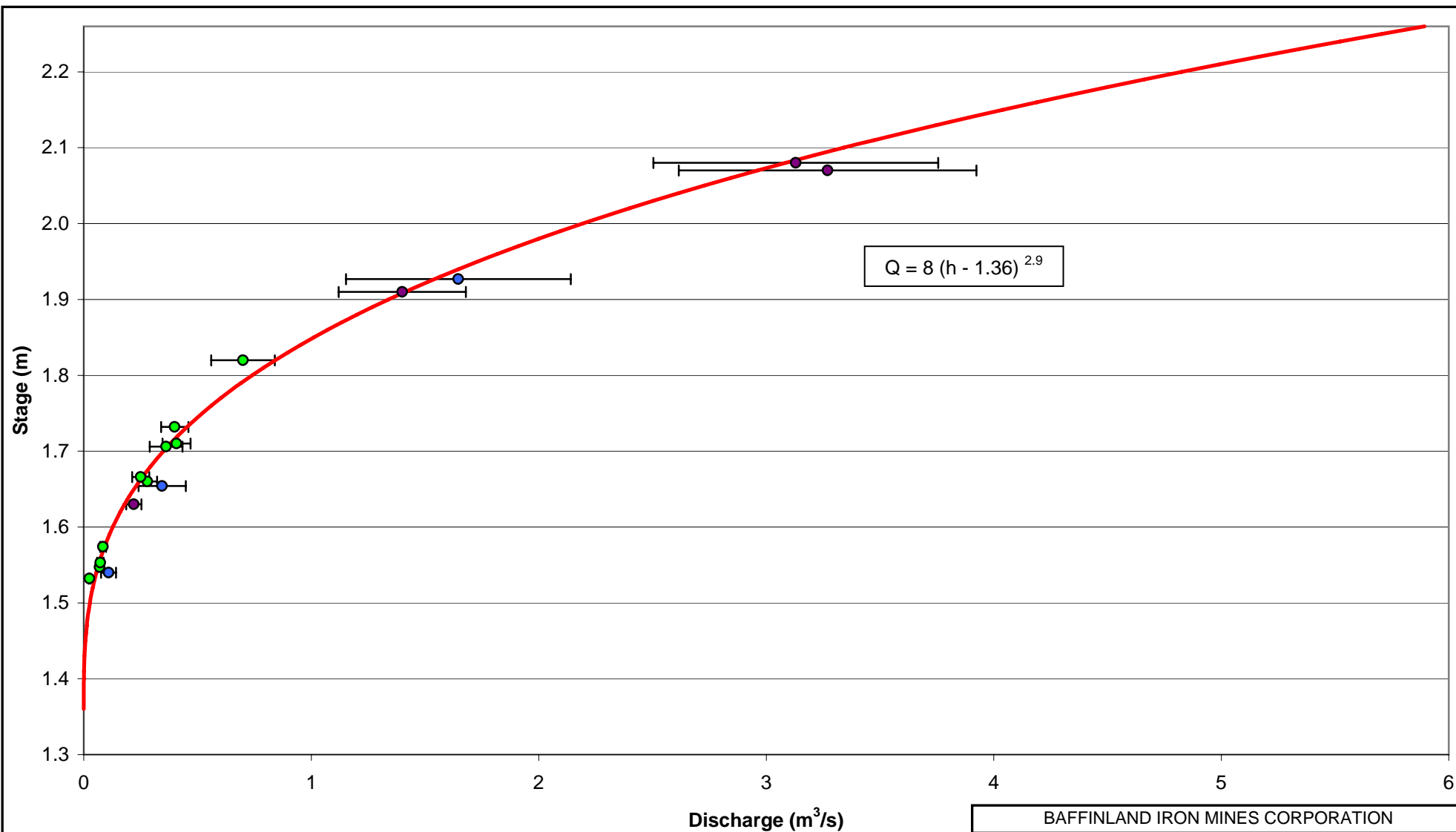
MARY RIVER PROJECT

**H6 - MARY RIVER
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.12**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:
1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (2.26 m)

● 2006 Measurements
 ● 2007 Measurements
 ● 2008 Measurements
 — Rating Curve

BAFFINLAND IRON MINES CORPORATION

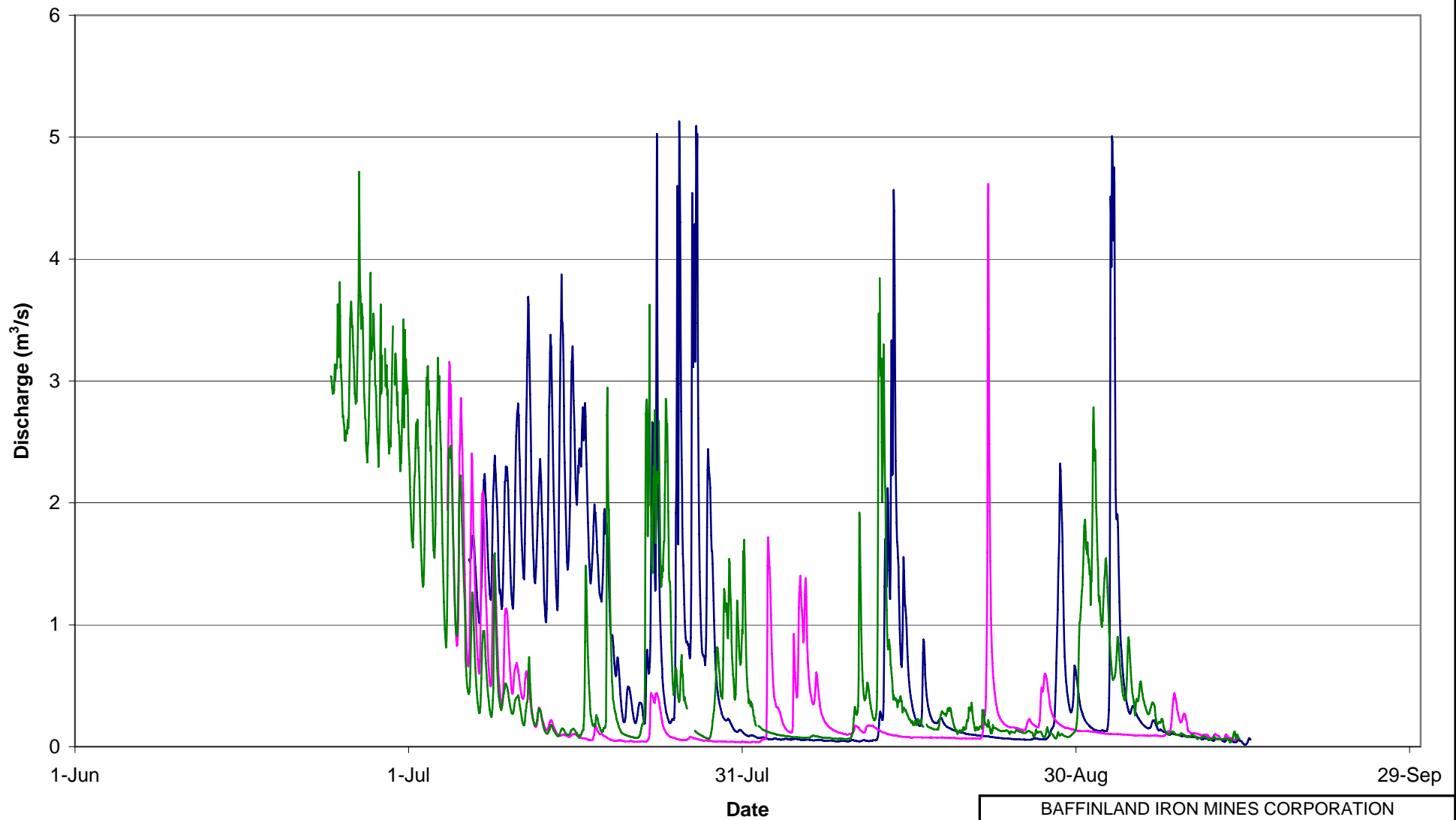
MARY RIVER PROJECT

H7 - MARY RIVER TRIBUTARY RATING CURVE

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.13**REV.
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1) PORTIONS OF THE FRESHETS ARE MISSING DUE TO PERSISTING ICE AND SNOW EFFECTS ON THE CHANNEL CONTROL SECTION

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

H7 - MARY RIVER MEASURED STREAMFLOW HYDROGRAPHS

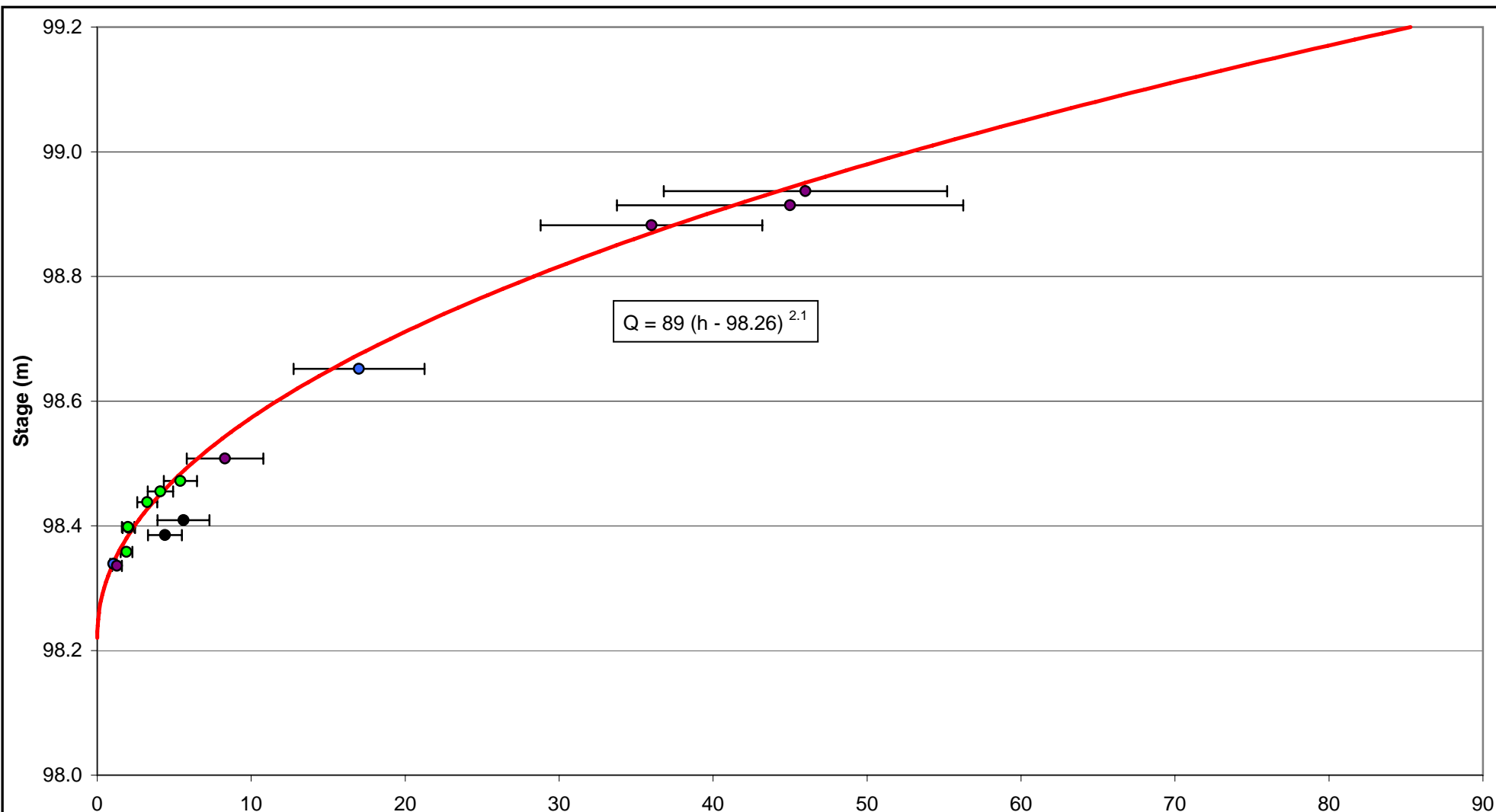
Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8

FIGURE 3.14

REV.
0

0	26NOV'08	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

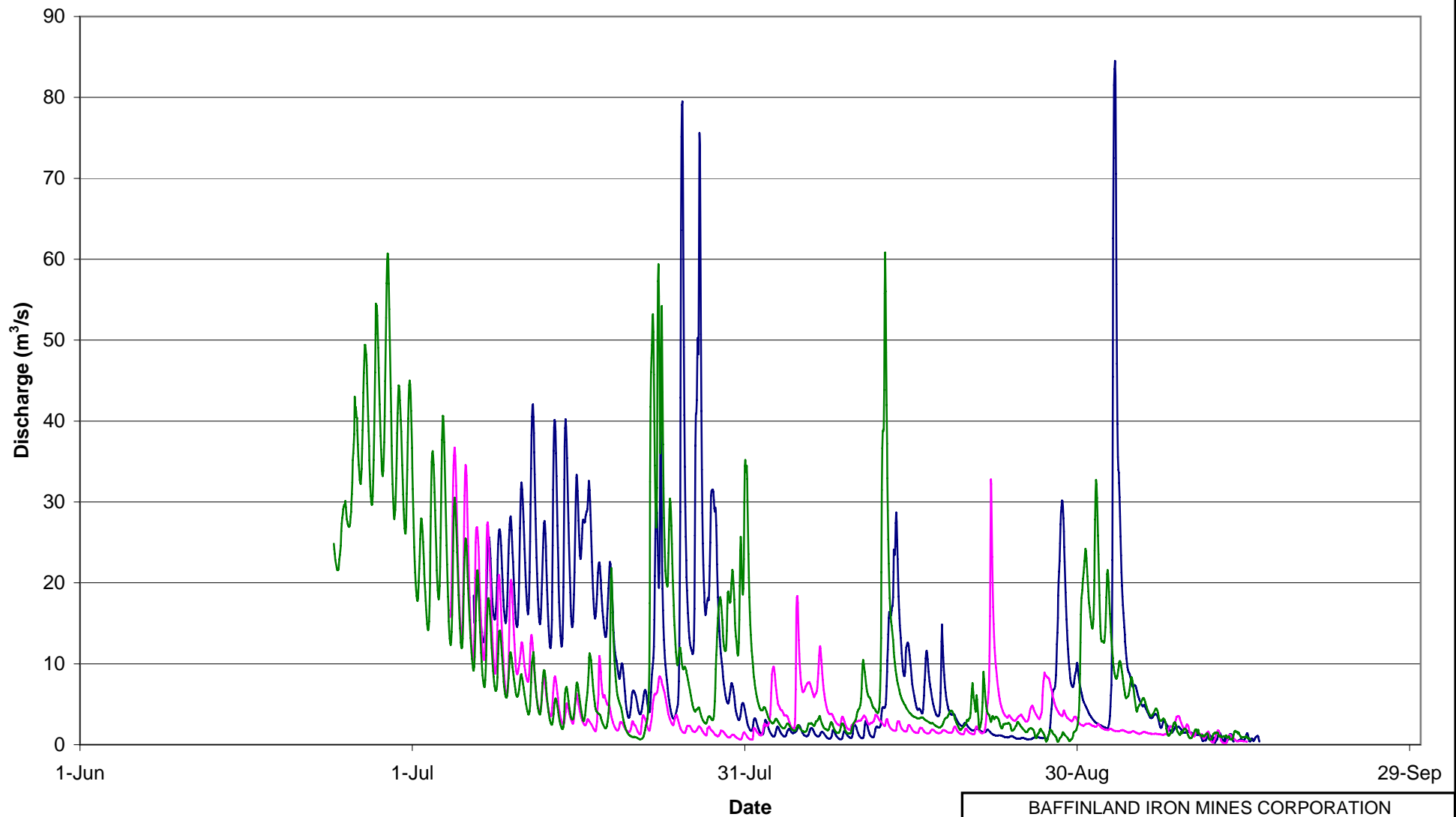
1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (99.24 m)

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

H8 - UPPER MARY RIVER
RATING CURVE**Knight Piésold**
CONSULTINGPROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.15**REV.
0



NOTE:

1) PORTIONS OF THE FRESHETS ARE MISSING AS A RESULT OF PERSISTANT ICE AT THE GAUGE LOCATION

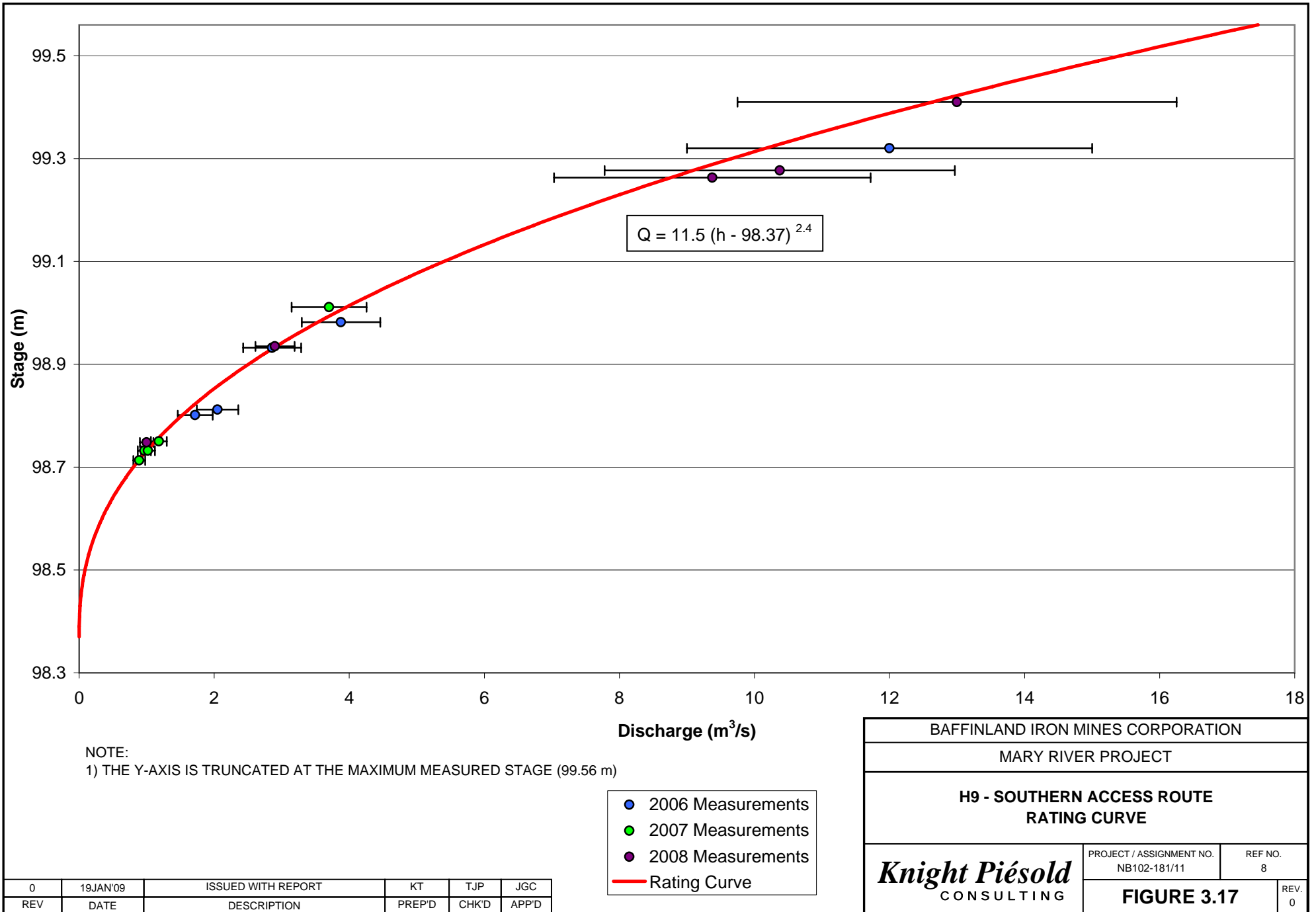
BAFFINLAND IRON MINES CORPORATION

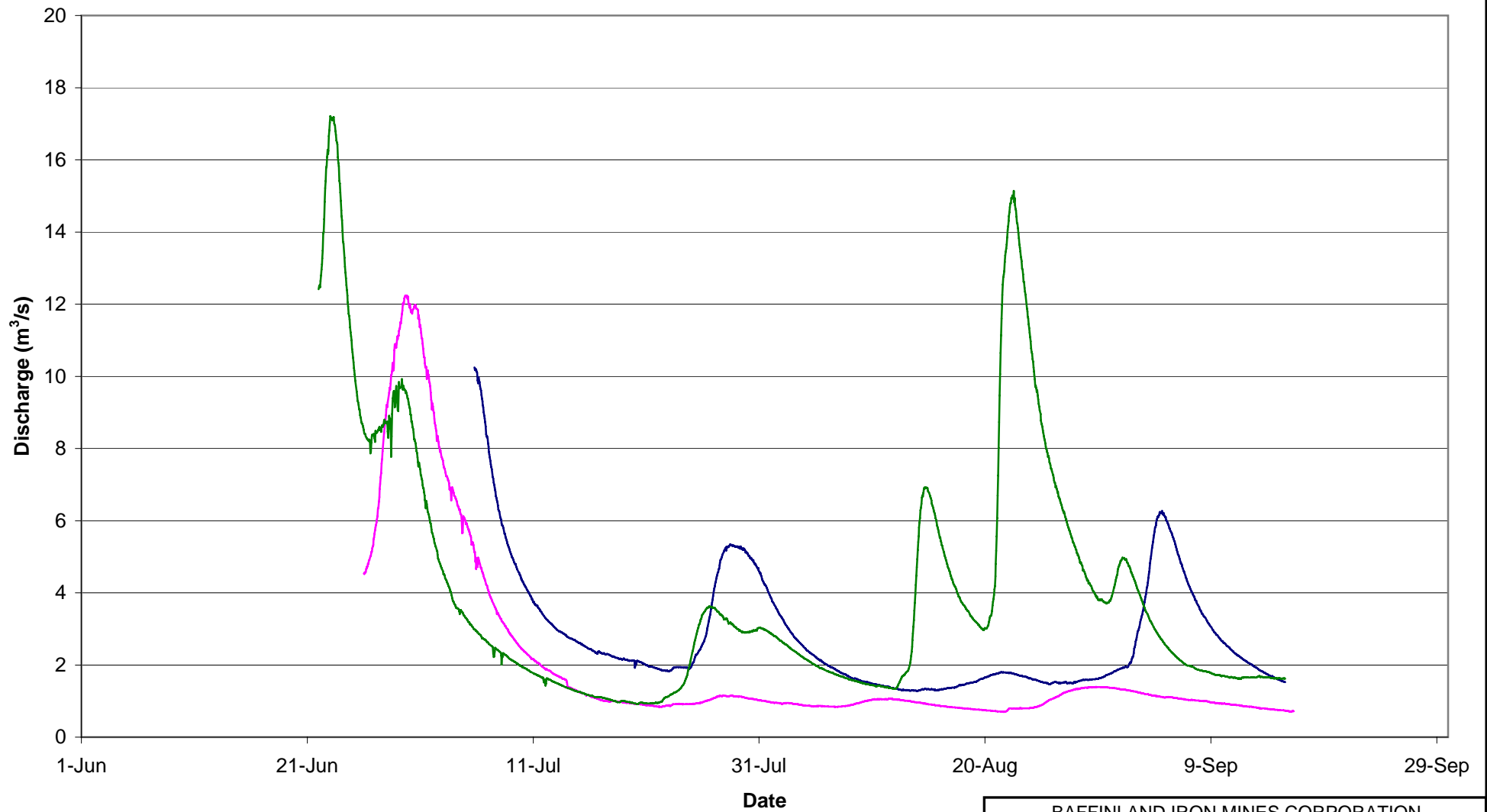
MARY RIVER PROJECT

H8 - UPPER MARY RIVER MEASURED STREAMFLOW HYDROGRAPHS

Knight Piésold
CONSULTING
P/A NO.
NB102-181/11REF NO.
8
FIGURE 3.16
REV
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D





BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**H9 - SOUTHERN ACCESS ROUTE
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

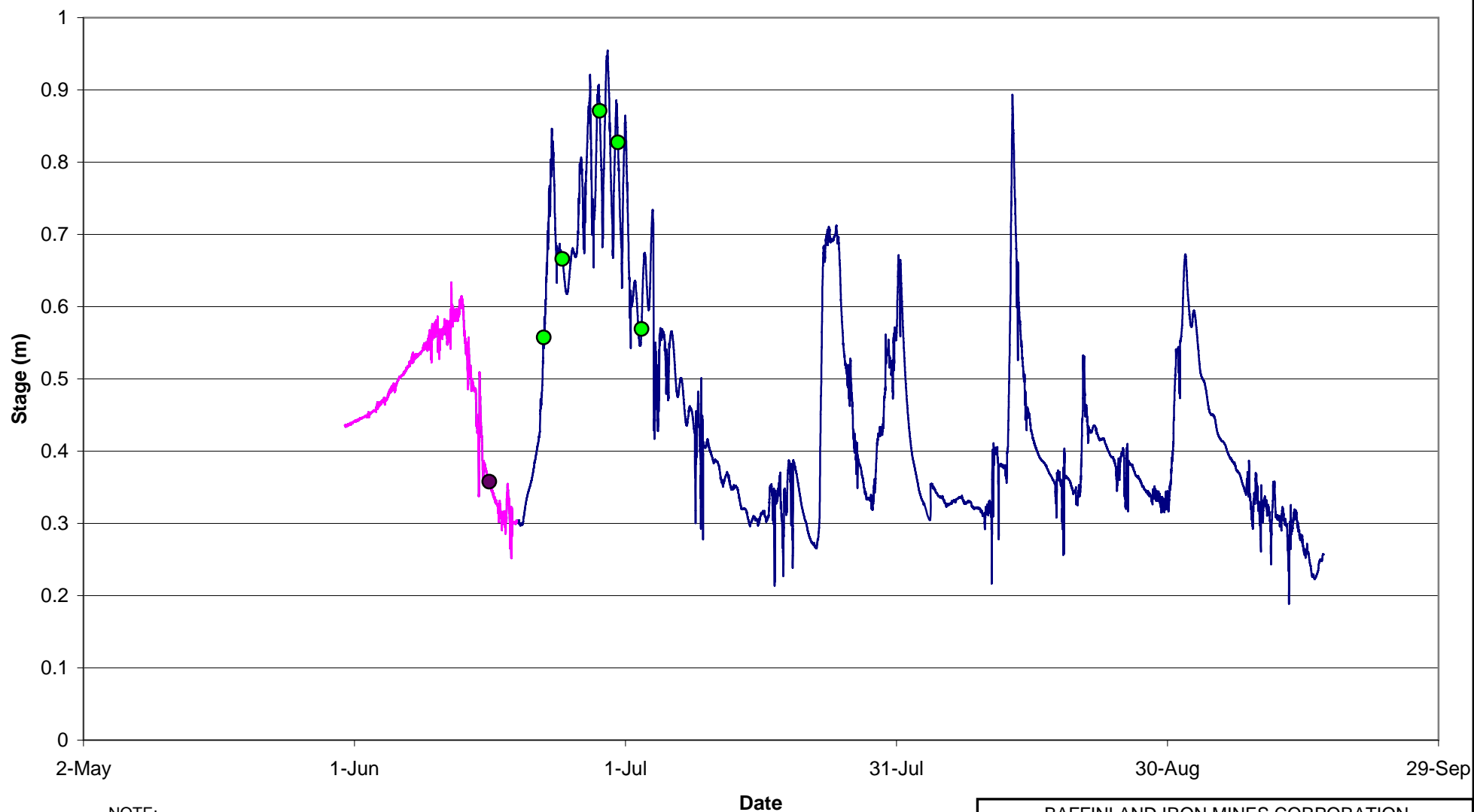
P/A NO.
NB102-181/11

REF NO.
8

FIGURE 3.18

REV
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1. H10 IS BACKWATERED BY MARY RIVER AT HIGH FLOWS.

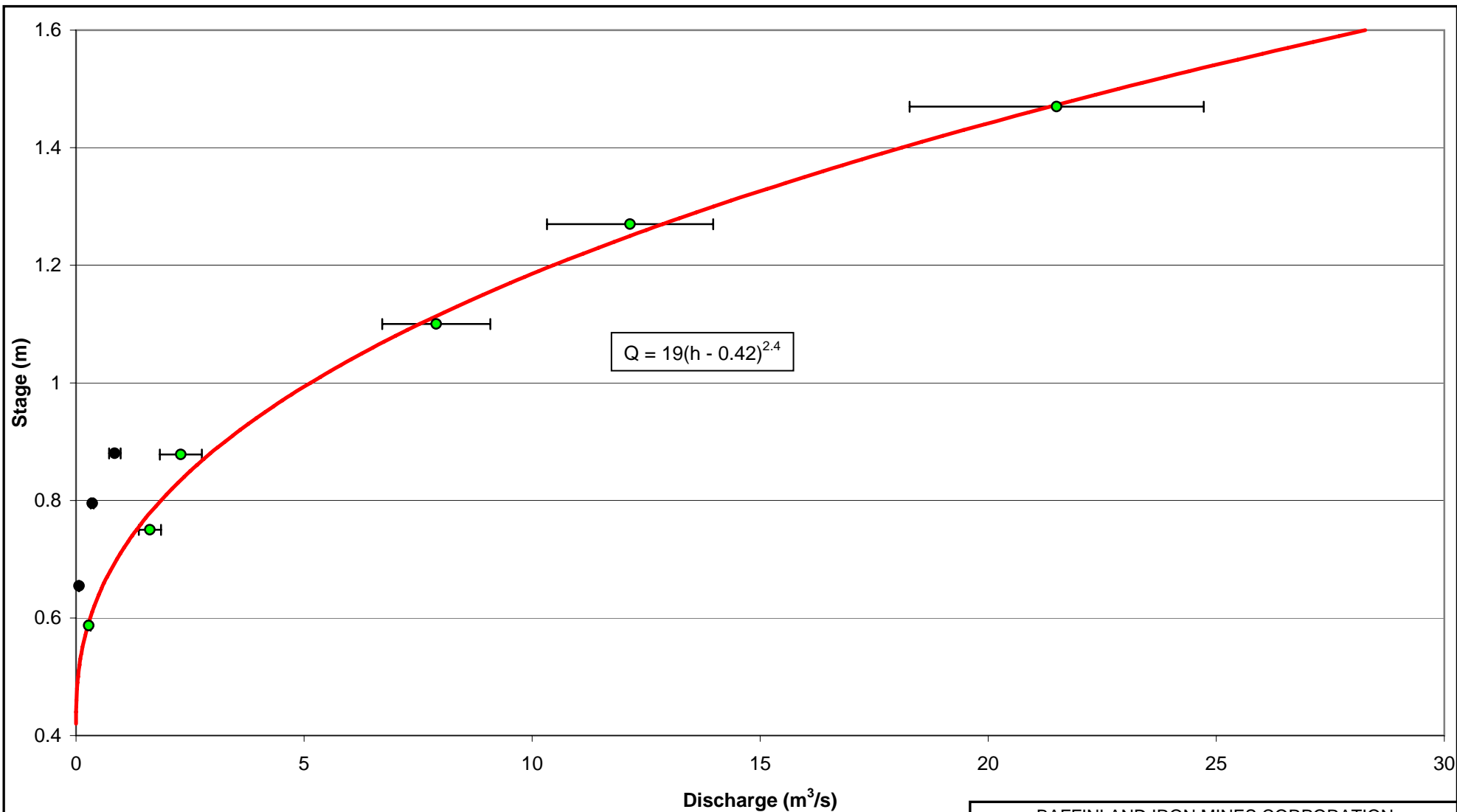
- Measured Stage
- Stage Effected by Iced Control
- Q Measurements
- Flow Observations

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

H10 - SHEARDOWN LAKE
STAGE RECORD***Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.19**REV
0

0	19JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1. DUE TO ICE AT THE CONTROL SECTION ICE AFFECTED STAGE MEASUREMENTS ARE BACKWATERED.
2. MAXIMUM Y-AXIS VALUE IS EQUAL TO THE MAXIMUM RECORDED STAGE

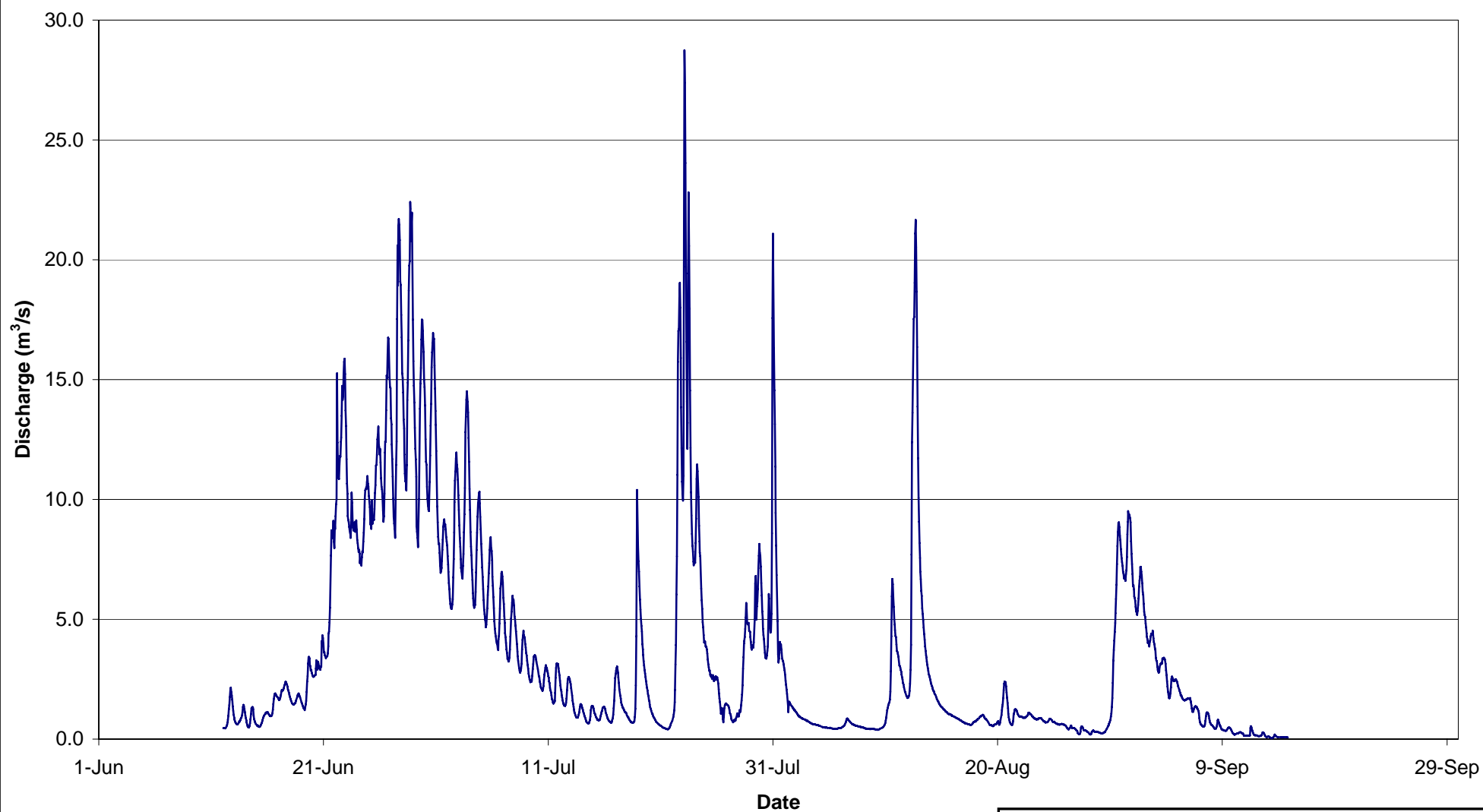
- Measured Discharge
- Ice Affected Measurements
- Rating Curve

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

BR11
RATING CURVE***Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.20**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



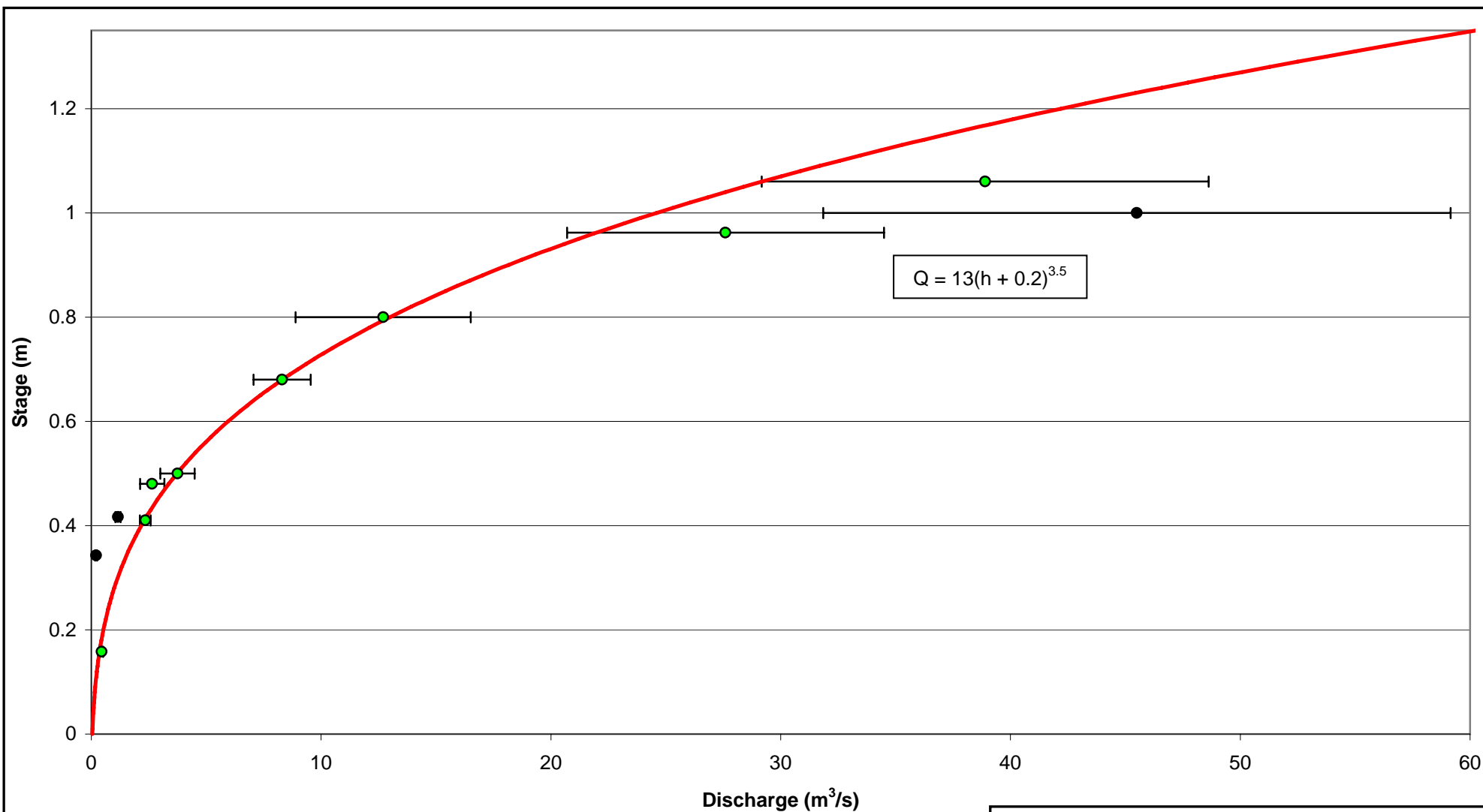
— 2008

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

BR11
MEASURED STREAMFLOW HYDROGRAPH***Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.21**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTES:

1. LOW FLOW ANOMOLOUS MEASUREMENTS ARE ICE AFFECTED BY ICE CONSTRICTING THE CHANNEL AND ARTIFICIALLY ELEVATING THE STAGE.
2. NOTES SUGGEST THAT ALL OF THE HIGH FLOW MEASUREMENTS ARE OVERESTIMATED
3. THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (1.35 m)

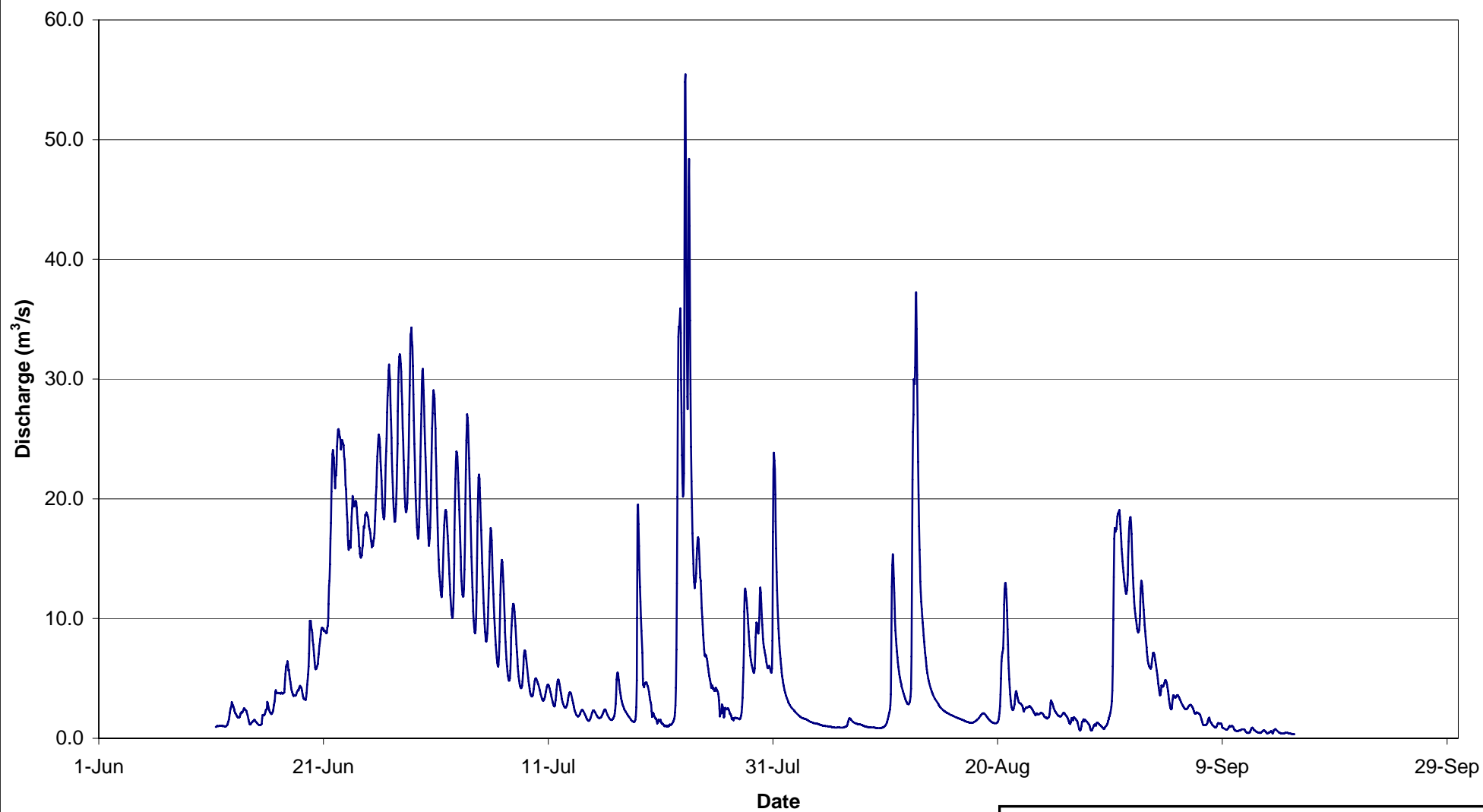
- Measured Discharge
- Anomalous Measurements
- Rating Curve

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**BR25
RATING CURVE**
Knight Piésold
CONSULTING
P/A NO.
NB102-181/11REF NO.
8**FIGURE 3.22**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



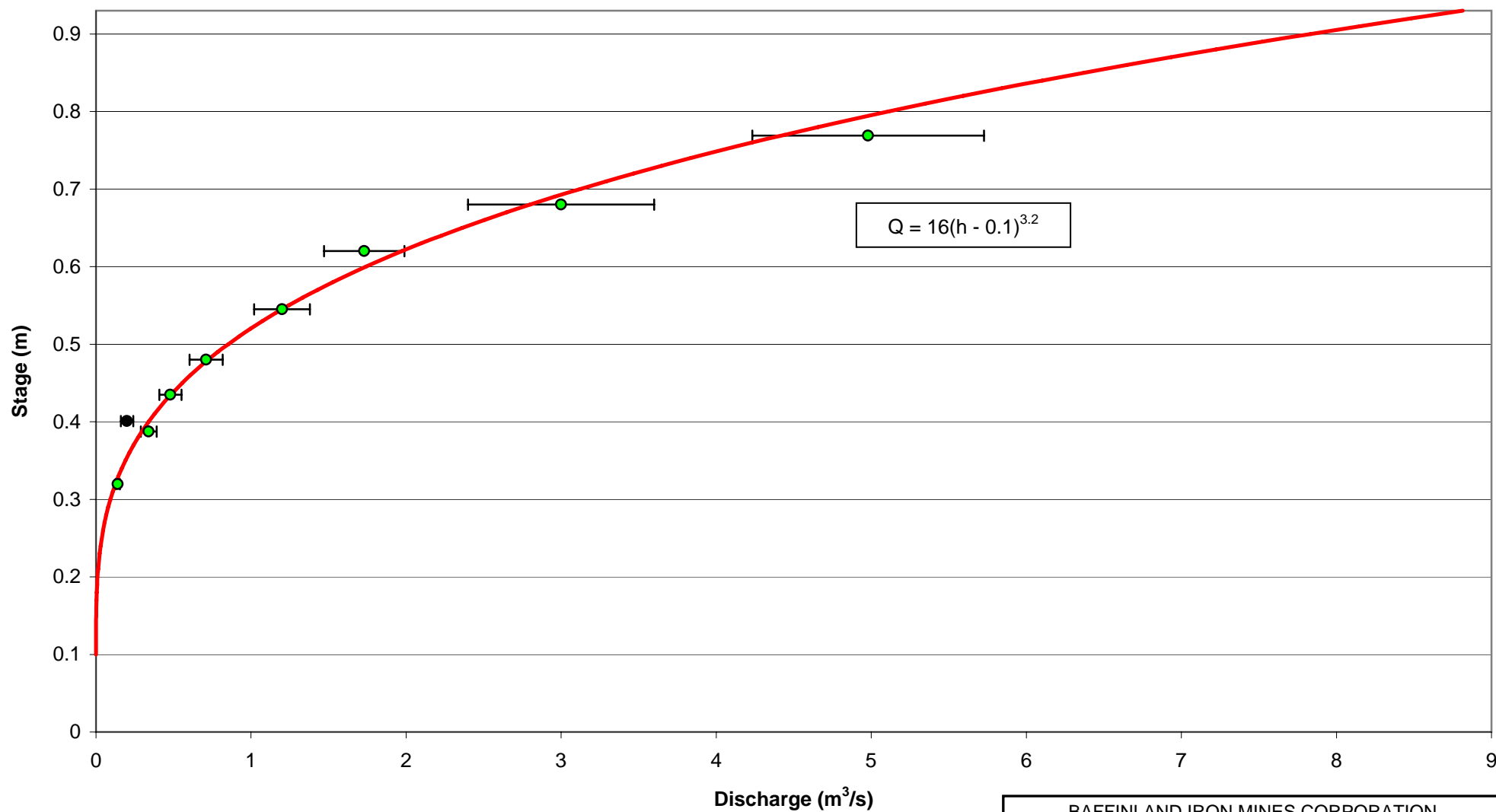
— 2008

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**BR25
MEASURED STREAMFLOW HYDROGRAPH*****Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.23**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



● Measured Discharge
 ● Anomalous Measurement
 — Rating Curve

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**BR96-2
RATING CURVE**

Knight Piésold
CONSULTING

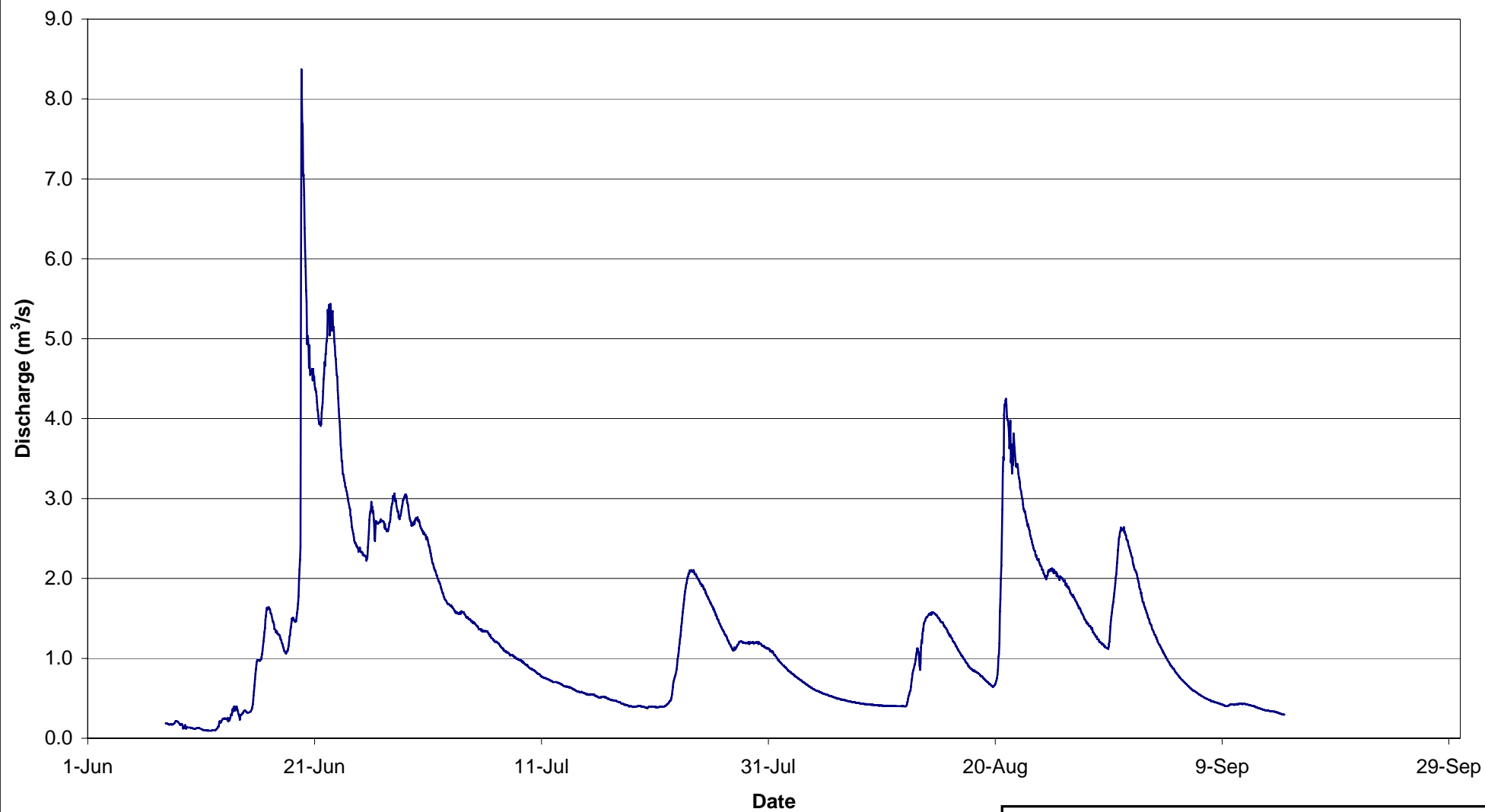
P/A NO.
NB102-181/11

REF NO.
8

FIGURE 3.24

REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



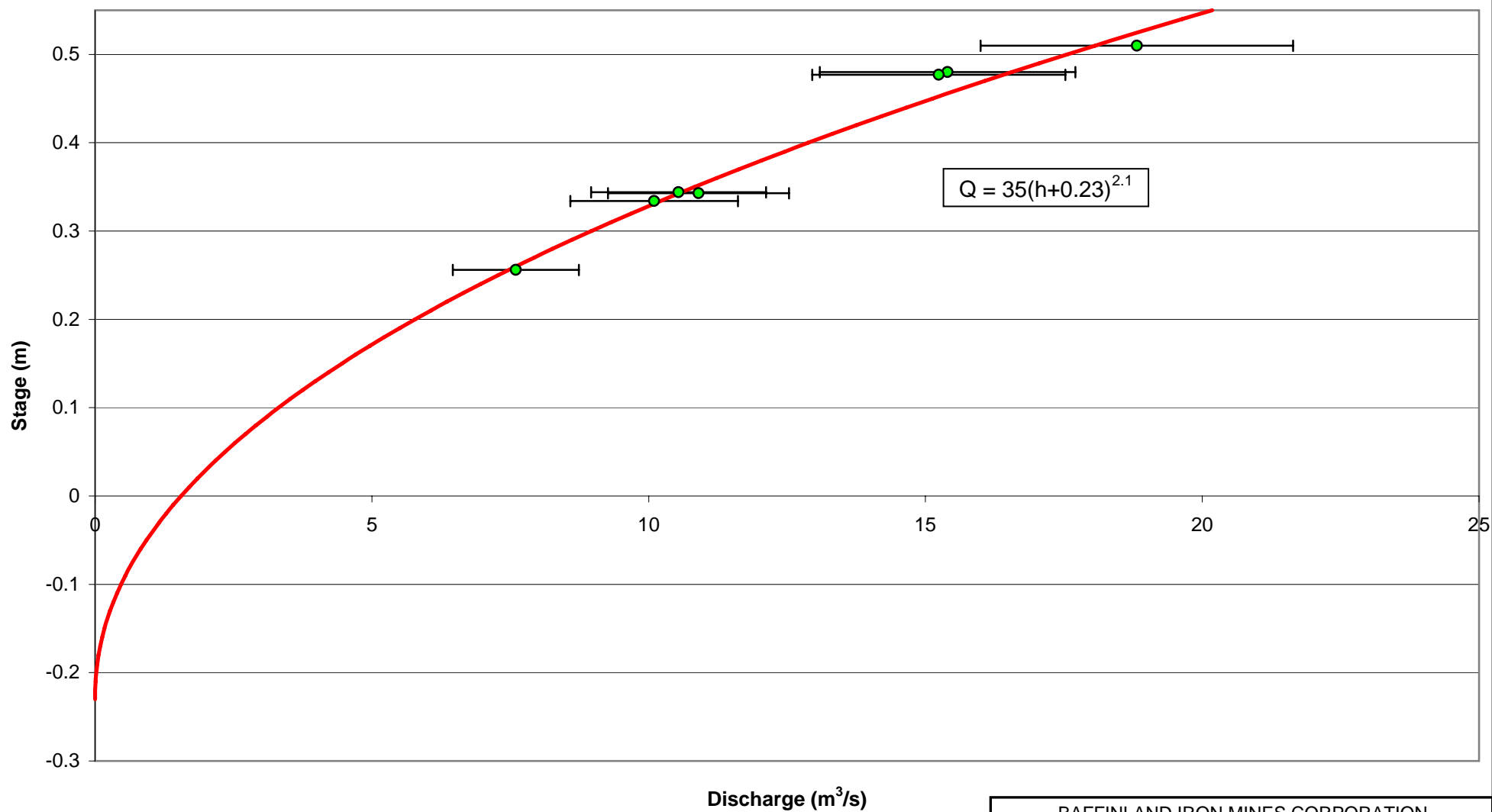
— 2008

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

BR96-2
MEASURED STREAMFLOW HYDROGRAPH***Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.25**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1) THE Y-AXIS IS TRUNCATED AT THE MAXIMUM MEASURED STAGE (0.55 m)

● Measured Discharge

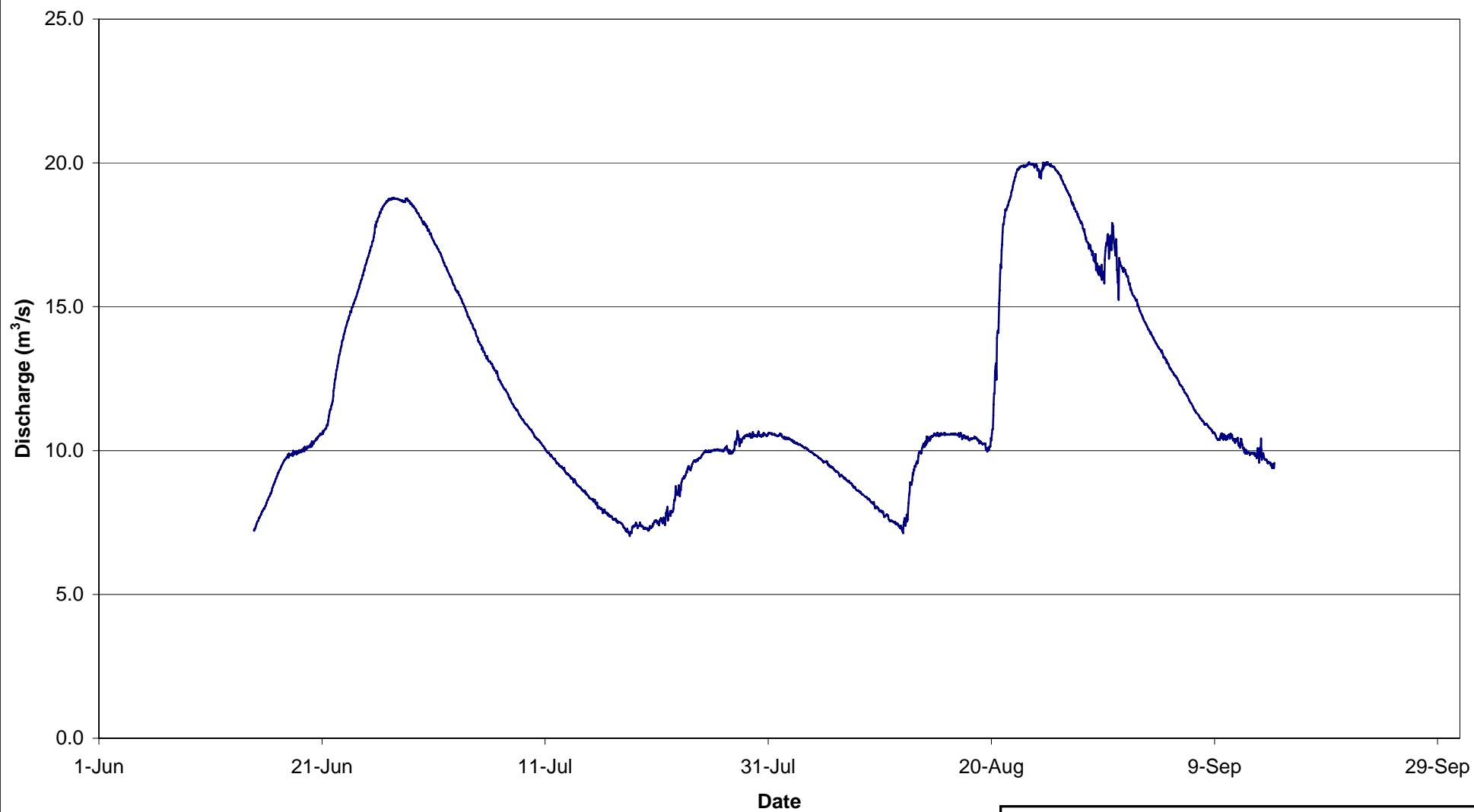
— Rating Curve

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

BR137
RATING CURVE***Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.26**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

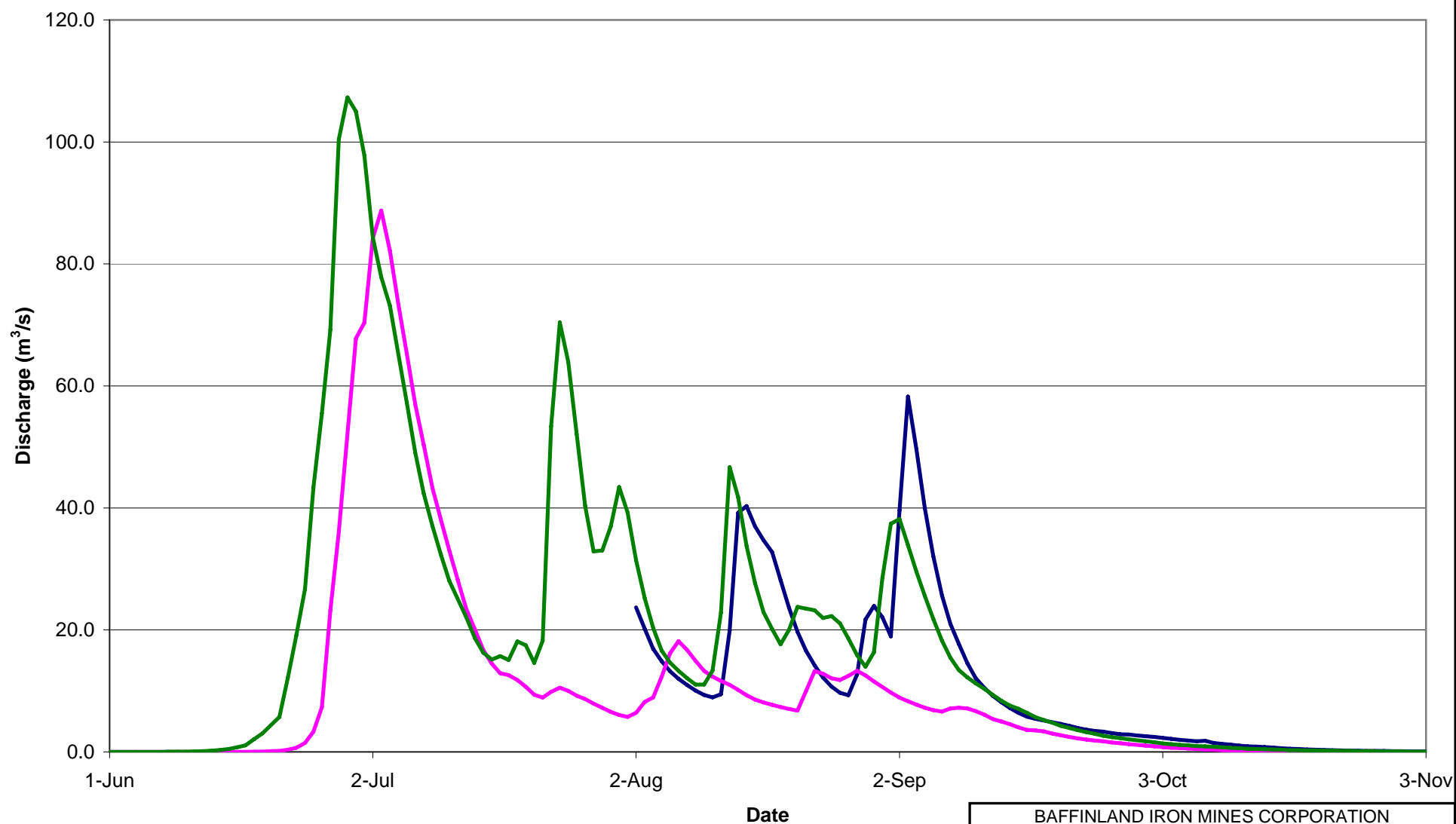


BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**BR137
MEASURED STREAMFLOW HYDROGRAPH*****Knight Piésold***
CONSULTINGP/A NO.
NB102-181/11REF NO.
8**FIGURE 3.27**REV
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



BAFFINLAND IRON MINES CORPORATION

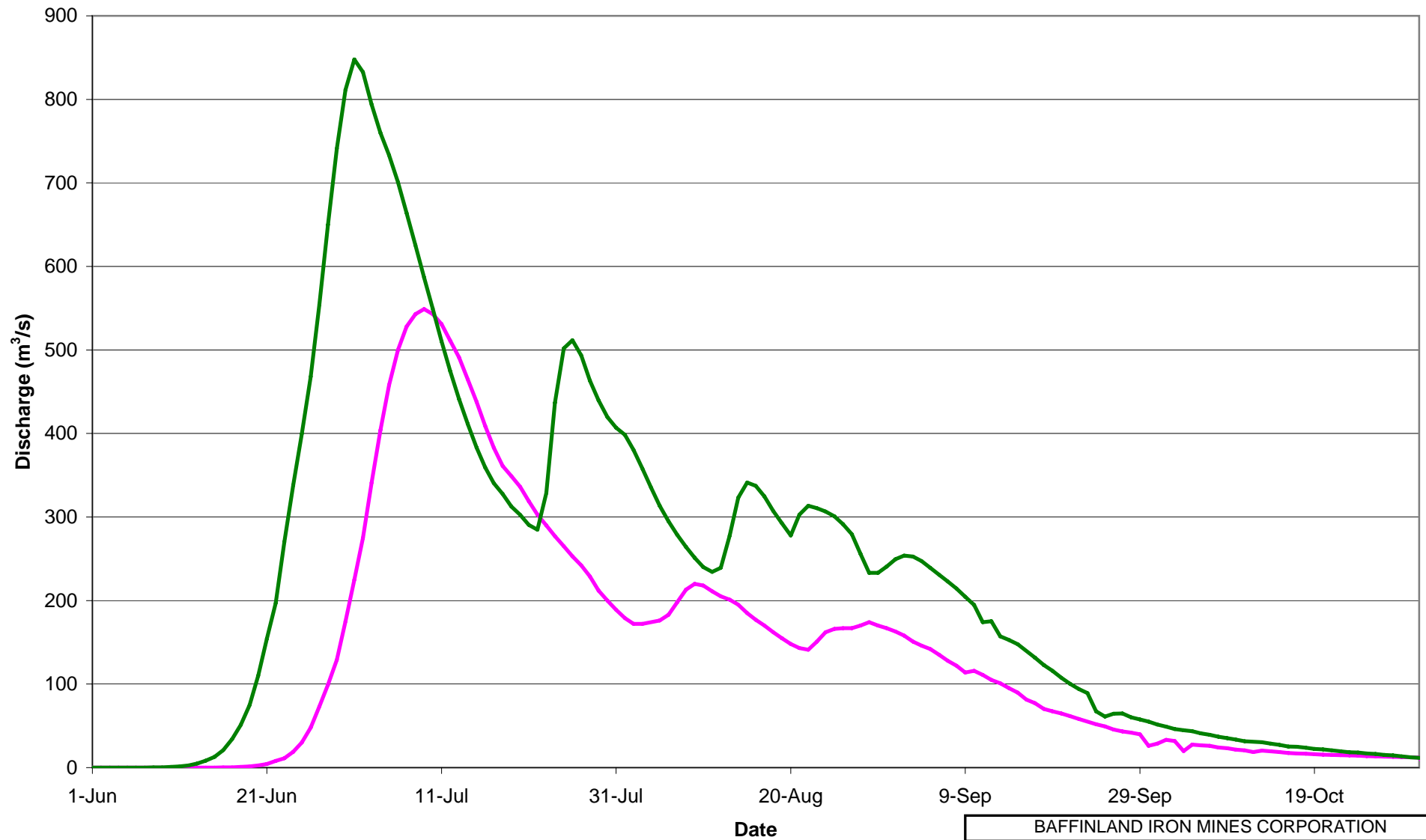
MARY RIVER PROJECT

**MARY LAKE OUTLET WSC GAUGE
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.28**REV.
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**RAVN RIVER WSC GAUGE
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

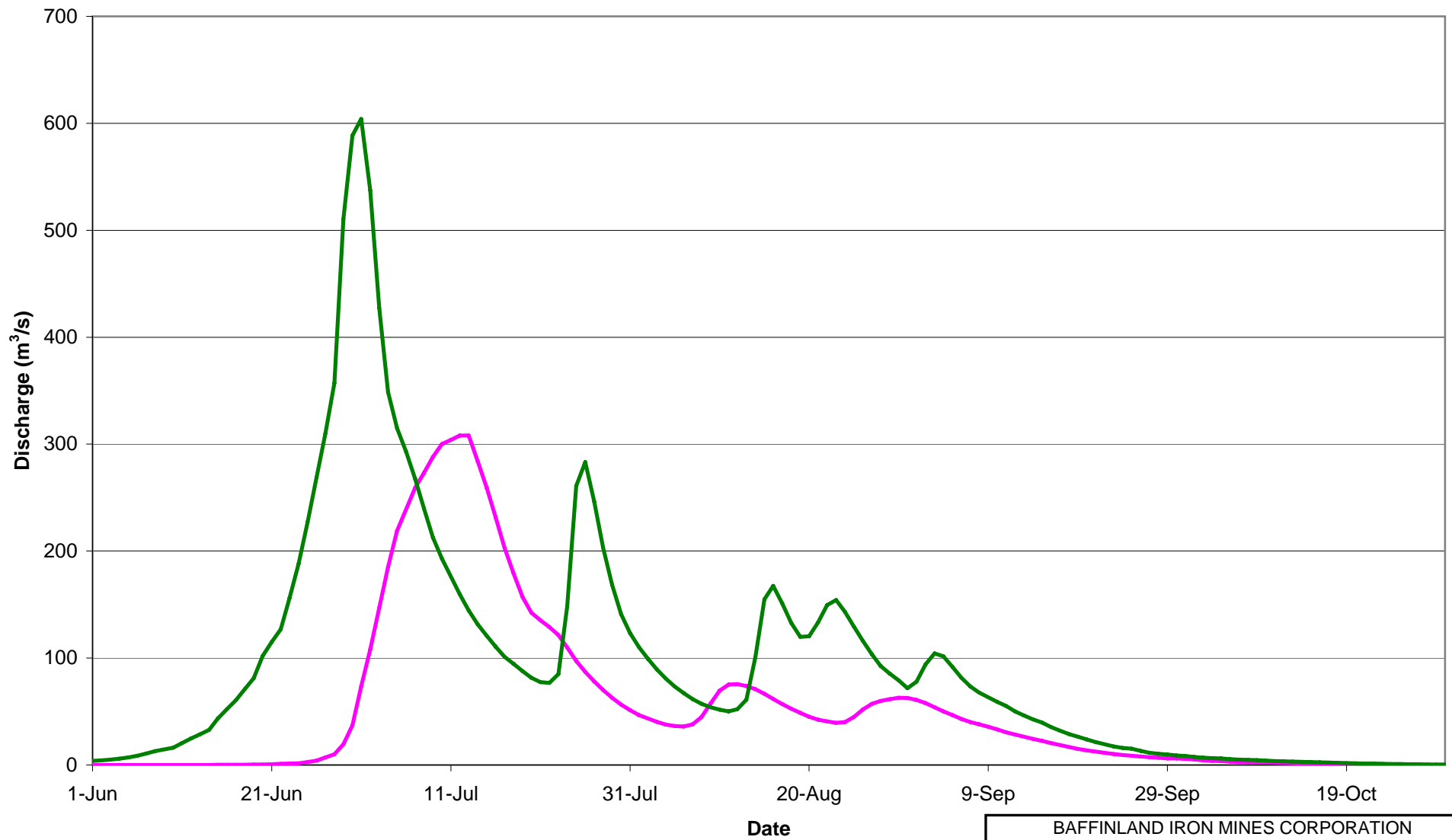
PROJECT / ASSIGNMENT NO.
NB102-181/11

REF NO.
8

FIGURE 3.29

REV.
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



— 2007 — 2008

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**ROWLEY RIVER WSC GAUGE
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

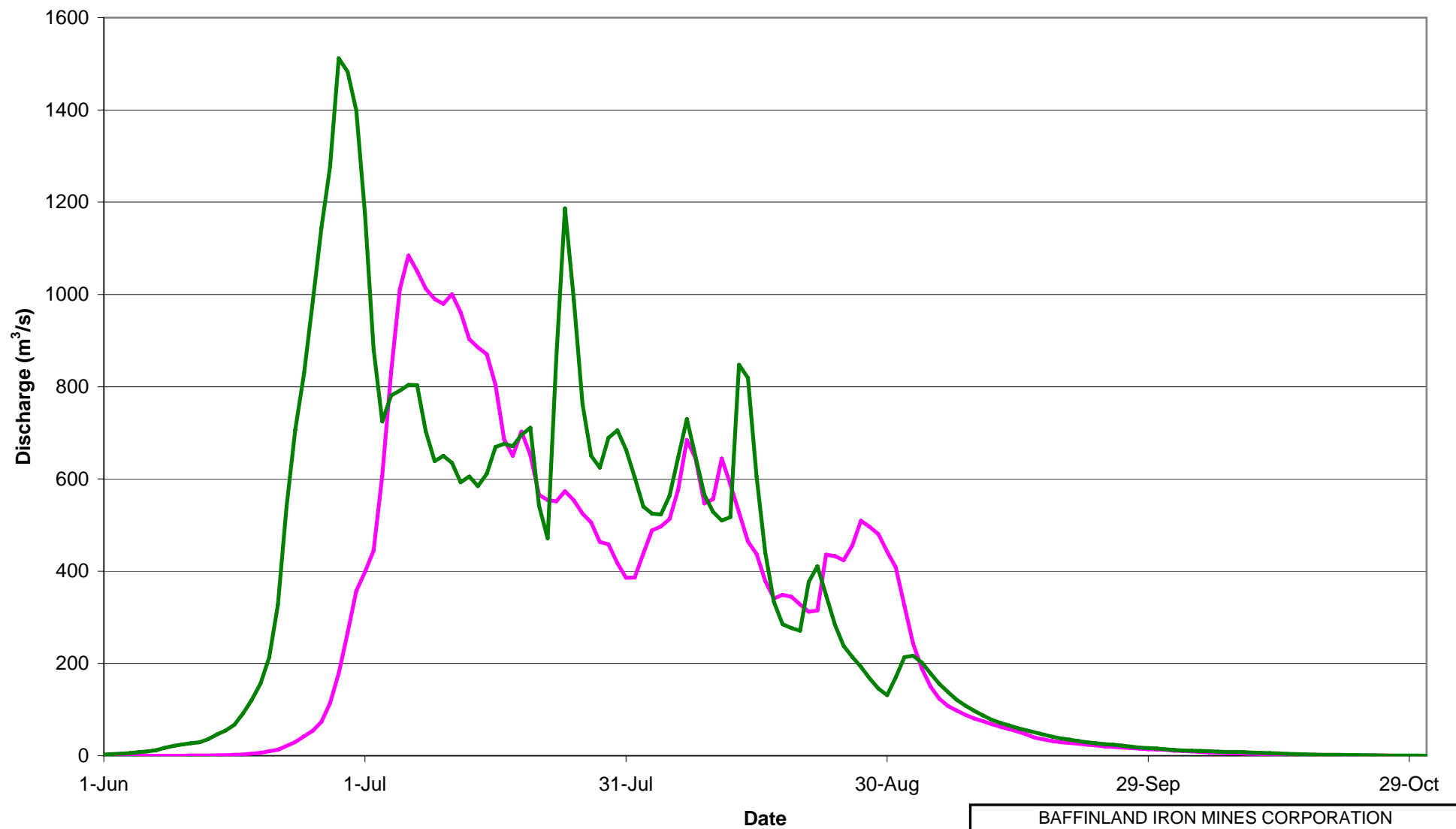
PROJECT / ASSIGNMENT NO.
NB102-181/11

REF NO.
8

FIGURE 3.30

REV.
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



BAFFINLAND IRON MINES CORPORATION

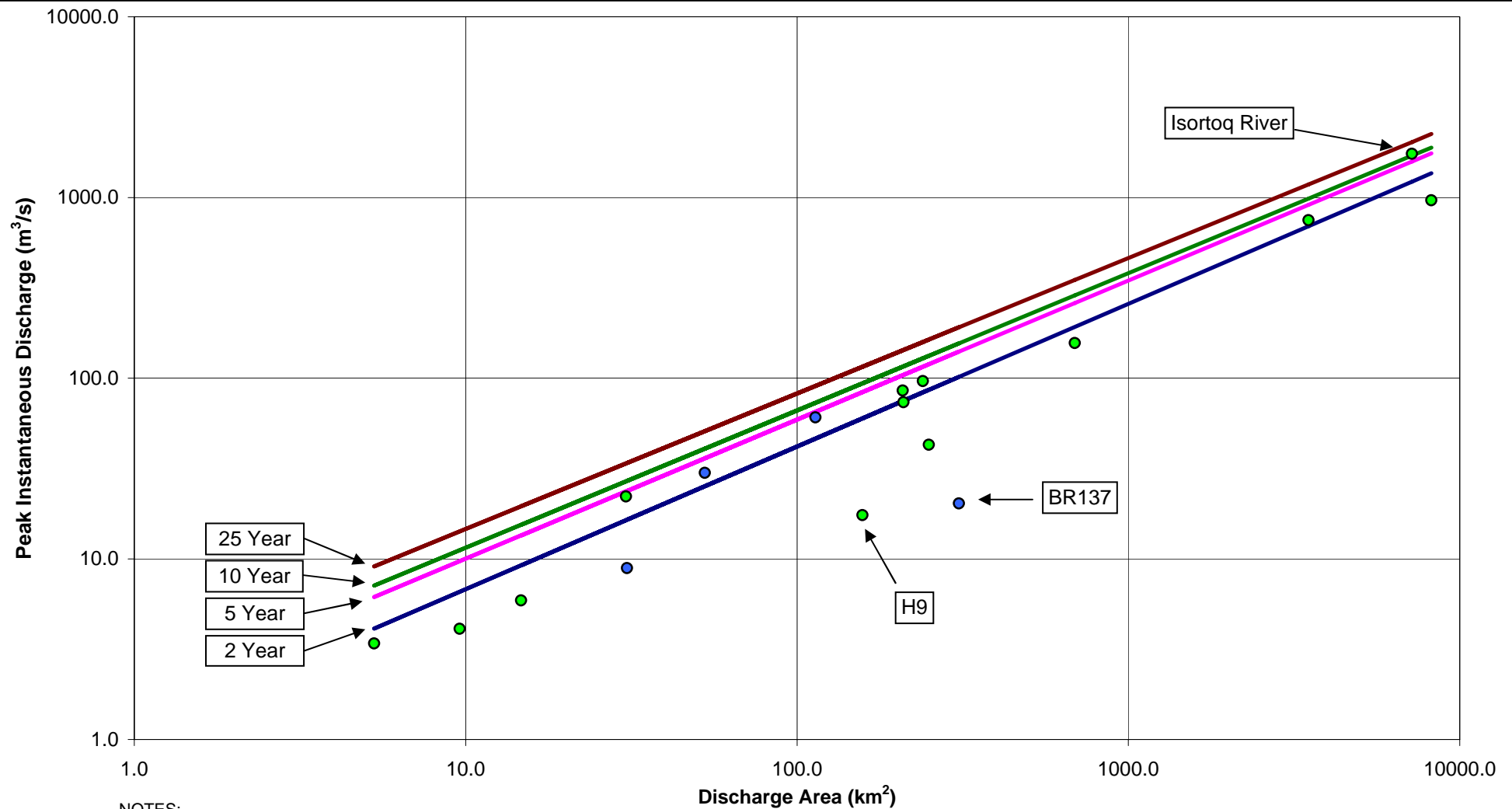
MARY RIVER PROJECT

**ISORTOQ RIVER WSC GAUGE
MEASURED STREAMFLOW HYDROGRAPHS**

Knight Piésold
CONSULTING

PROJECT / ASSIGNMENT NO.
NB102-181/11REF NO.
8**FIGURE 3.31**REV.
0

0	19JAN'09	ISSUED WITH REPORT	JM	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTES:

1. RETURN PERIOD ENVELOPES ARE ESTIMATED FROM REGIONAL WSC GAUGING STATIONS.
2. BR137 AND H9 STATIONS HAVE SIGNIFICANT LAKE COVERAGE IN THEIR WATERSHEDS. LAKES SERVE TO DAMPEN PEAK FLOWS.

- Stations with 1 year of record
- Stations with more than 1 year of record

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

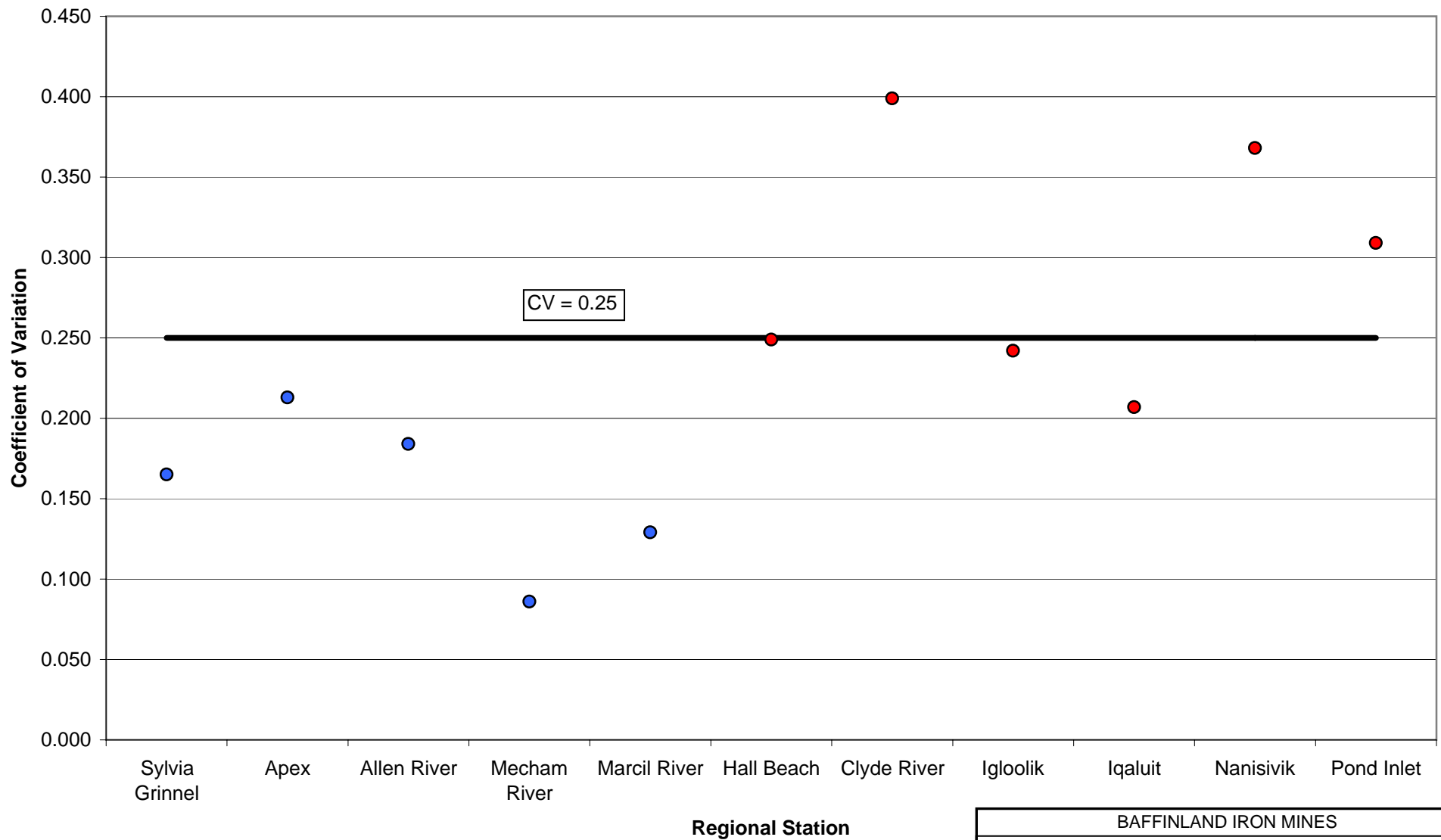
COMPARISON OF MEASURED AND ESTIMATED PEAK INSTANTANEOUS FLOWS

Knight Piésold
 CONSULTING
P/A NO.
NB102-181/11REF NO.
8

FIGURE 5.1

REV
0

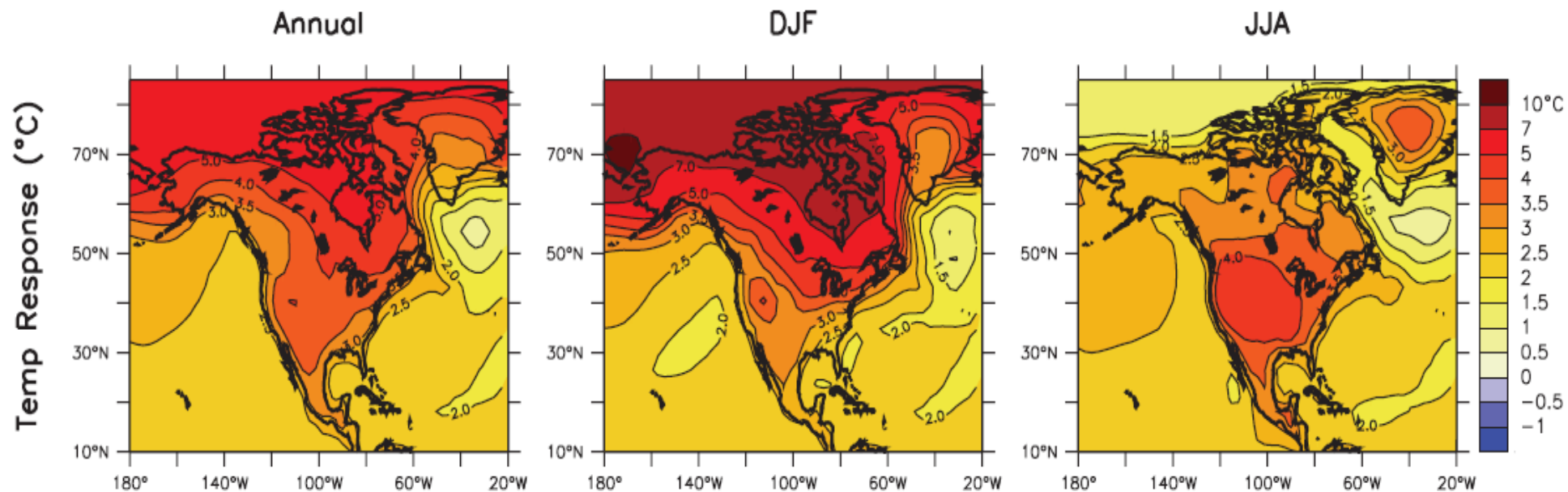
0	08JAN'09	ISSUED WITH REPORT	JM	KT	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



- Meteorology Stations
- Hydrology Stations

BAFFINLAND IRON MINES		
MARY RIVER PROJECT		
REGIONAL COEFFICIENT OF VARIATION ANALYSIS		
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	FIGURE 6.1	
		REV. 0

0	05JAN'08	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTES:

- 1) FIGURES WERE DEVELOPED BY AVERAGING THE RESULTS OF 21 DIFFERENT CLIMATE MODELS OPERATING UNDER THE A1B SCENARIO
- 2) SOURCE: CHRISTENSON ET AL. - SEE REPORT REFERENCES SECTION

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MARY RIVER PROJECT

**PREDICTED CHANGES IN NORTH AMERICAN
TEMPERATURE FROM 1980-1999 TO 2080-2099**

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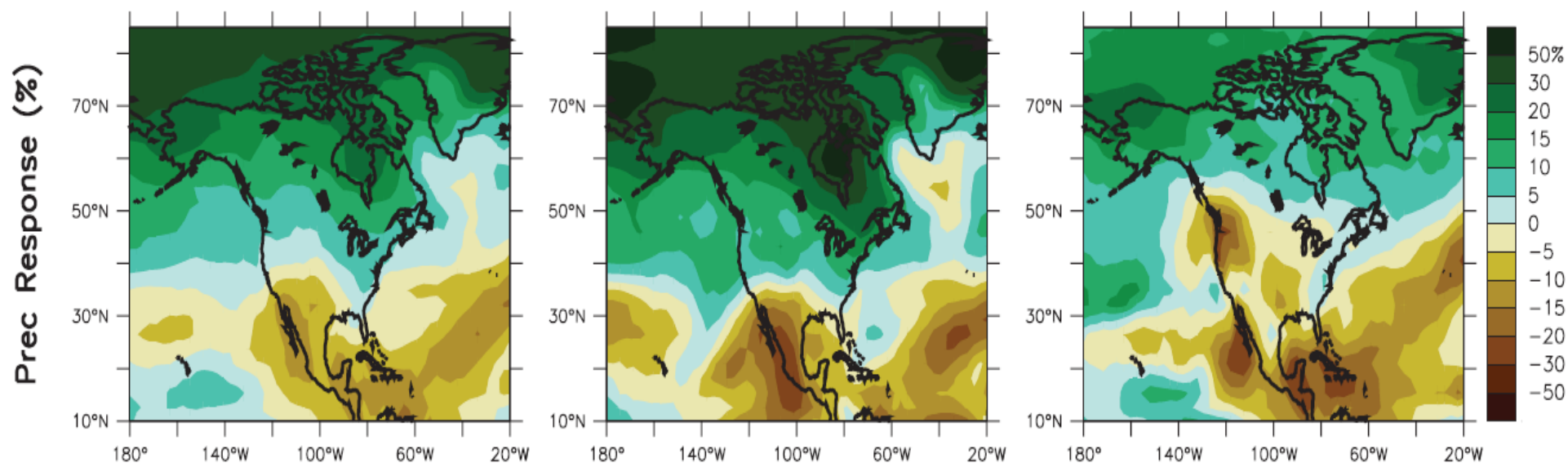
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8

FIGURE 8.1

REV
0

0	14JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTES:

- 1) FIGURES WERE DEVELOPED BY AVERAGING THE RESULTS OF 21 DIFFERENT CLIMATE MODELS OPERATING UNDER THE A1B SCENARIO
- 2) SOURCE: CHRISTENSON ET AL. - SEE REPORT REFERENCES SECTION

BAFFINLAND IRON MINES

MARY RIVER PROJECT

**PREDICTED CHANGES IN NORTH AMERICAN
PRECIPITATION FROM 1980-1999 TO 2080-2099**

Knight Piésold
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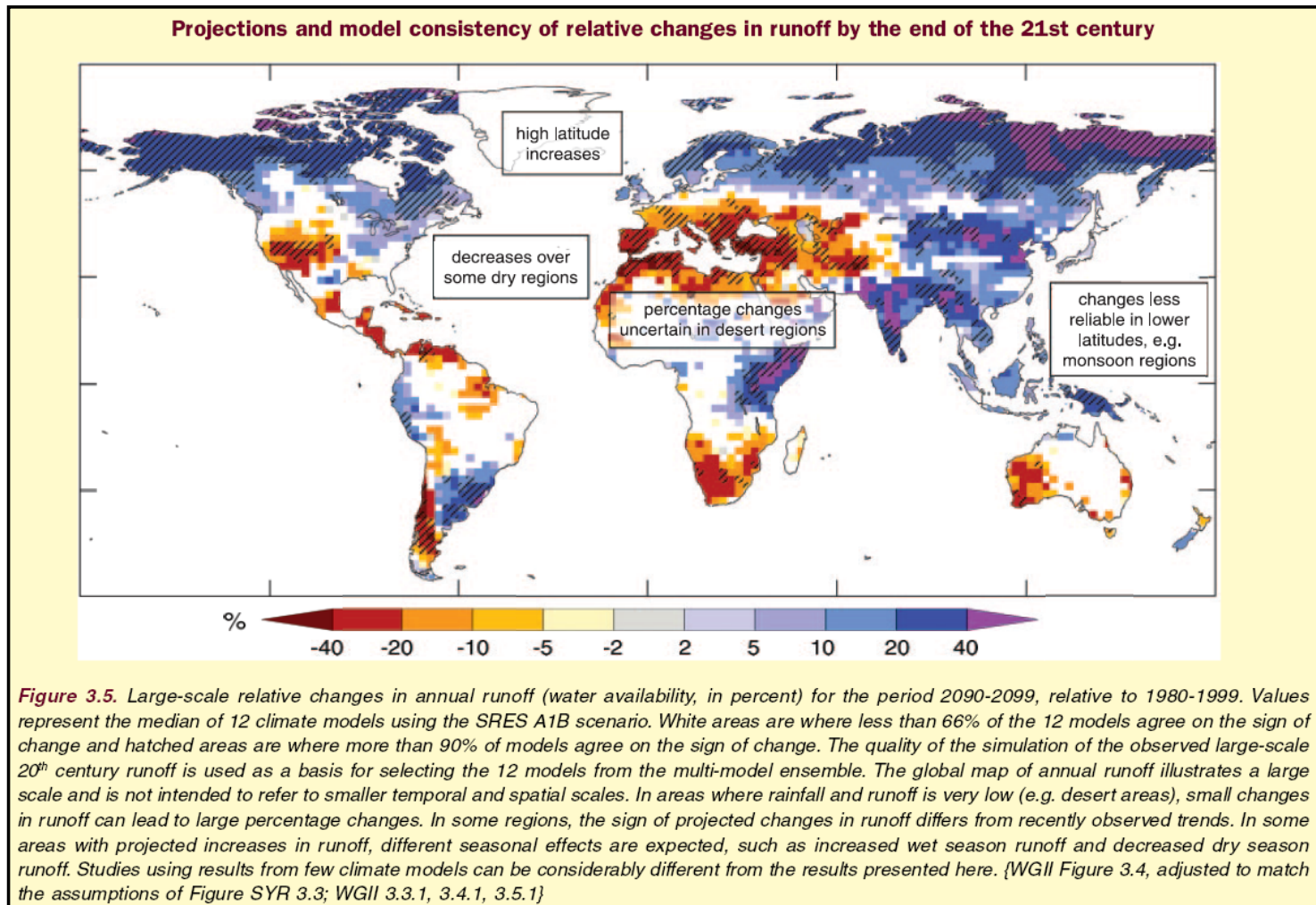
P/A NO.
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8

FIGURE 8.2

REV
0

0	14JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

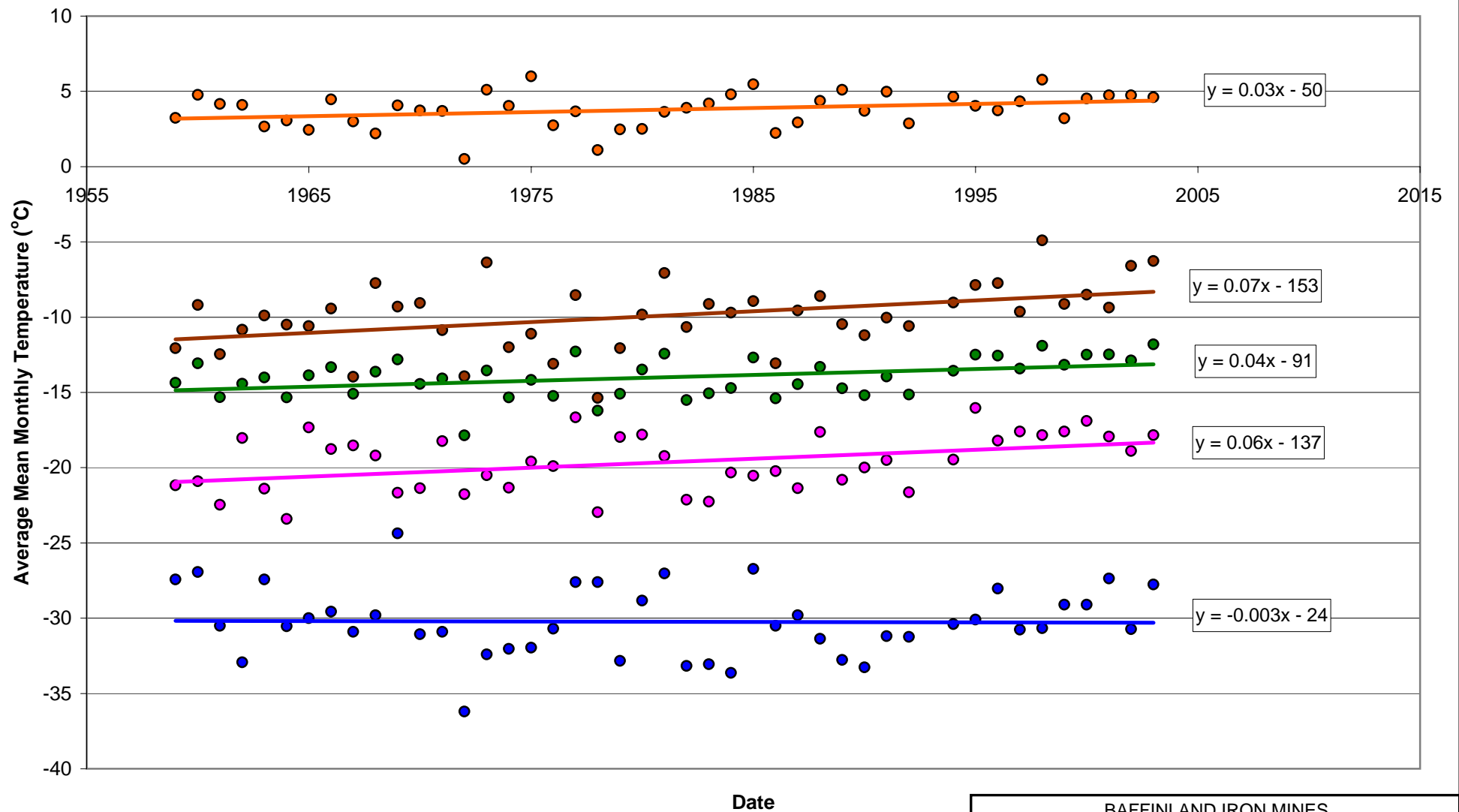


NOTES:

- 1) FIGURES WERE DEVELOPED BY AVERAGING THE RESULTS OF 21 DIFFERENT CLIMATE MODELS OPERATING UNDER THE A1B SCENARIO
- 2) SOURCE: BERSTEIN ET AL. - SEE REPORT REFERENCES SECTION

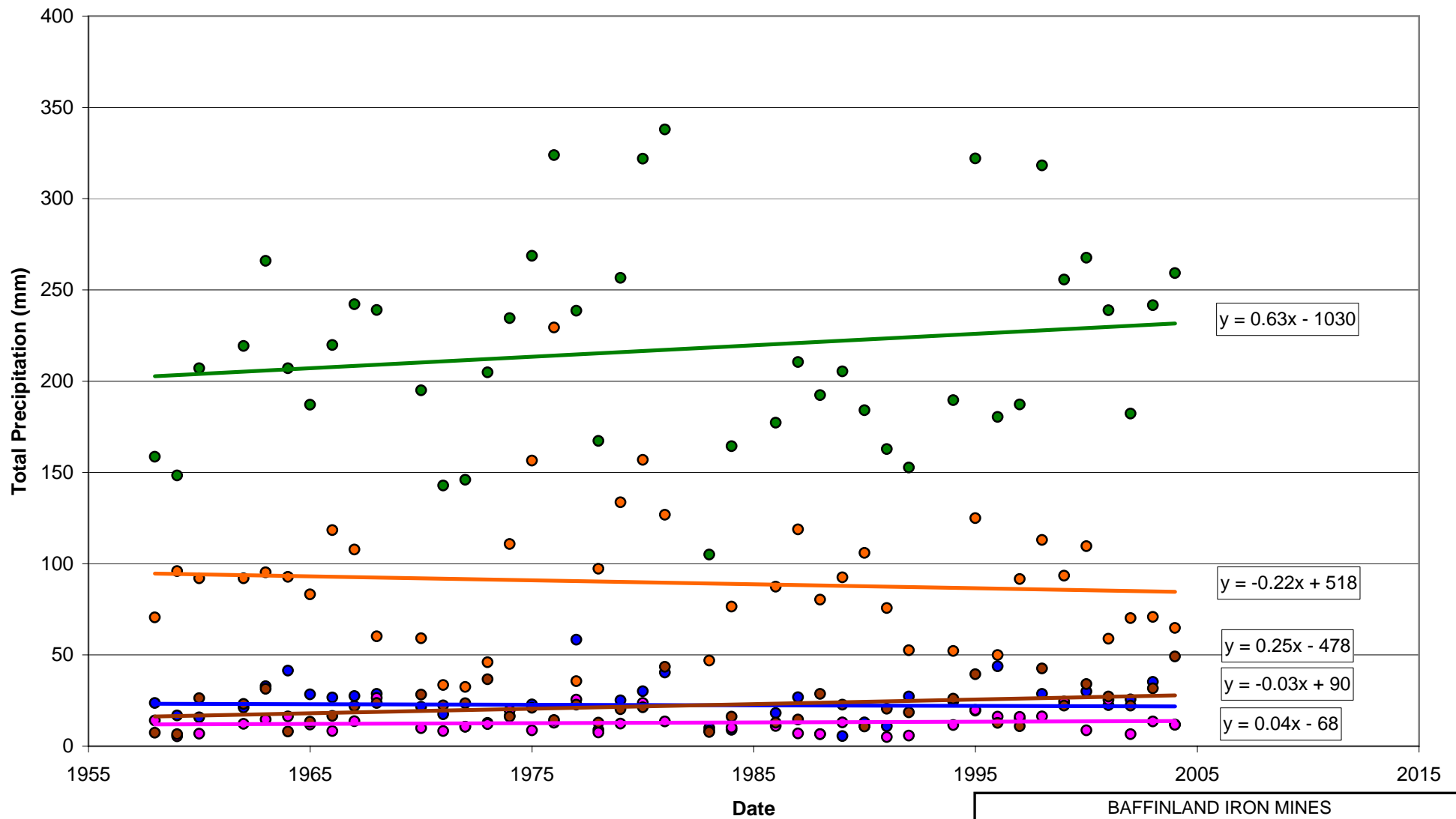
0	14JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

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MARY RIVER PROJECT		
PREDICTED CHANGES IN WORLD RUNOFF FROM 1980-1999 TO 2090-2099		
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	FIGURE 8.3	
		REV 0



0	14JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

BAFFINLAND IRON MINES		
MARY RIVER PROJECT		
HALL BEACH TEMPERATURE TRENDS (1959-2003)		
	P/A NO. NB102-181/11	REF NO. 8
	FIGURE 8.4	
		REV 0



BAFFINLAND IRON MINES

MARY RIVER PROJECT

HALL BEACH PRECIPITATION TRENDS (1958-2004)

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FIGURE 8.5

REV
0

0	14JAN'09	ISSUED WITH REPORT	KT	TJP	JGC
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D