

ANNEX IX: APPENDIX E

EKATI JAY AND PANDA GROUNDWATER QUALITY VERSUS DEPTH PLOTS

Table of Contents

E1 DISSOLVED METAL CONCENTRATIONS WITH DEPTH, PANDA PIT WESTBAY MULTI-LEVEL WELL, EKATI MINE, NORTHWEST TERRITORIES	1
E2 PHYSICAL TESTS, AND ANION AND NUTRIENT CONCENTRATIONS WITH DEPTH, PANDA PIT WESTBAY MULTI-LEVEL WELL, EKATI MINE, NORTHWEST TERRITORIES	16

Figures

Figure E1-1	Dissolved Aluminum Concentrations with Depth	1
Figure E1-2	Dissolved Arsenic Concentrations With Depth	2
Figure E1-3	Dissolved Antimony Concentrations with Depth	2
Figure E1-4	Dissolved Boron Concentrations with Depth	3
Figure E1-5	Dissolved Barium Concentrations with Depth.....	3
Figure E1-6	Dissolved Beryllium Concentrations with Depth	4
Figure E1-7	Dissolved Bismuth Concentrations with Depth	4
Figure E1-8	Dissolved Calcium Concentrations with Depth	5
Figure E1-9	Dissolved Cadmium Concentrations with Depth.....	5
Figure E1-10	Dissolved Cobalt Concentrations with Depth.....	6
Figure E1-11	Dissolved Chromium Concentrations with Depth	6
Figure E1-12	Dissolved Copper Concentrations with Depth	7
Figure E1-13	Dissolved Iron Concentrations with Depth	7
Figure E1-14	Dissolved Potassium Concentrations with Depth	8
Figure E1-15	Dissolved Magnesium Concentrations with Depth	8
Figure E1-16	Dissolved Manganese Concentrations with Depth	9
Figure E1-17	Dissolved Molybdenum Concentrations with Depth	9
Figure E1-18	Dissolved Sodium Concentrations with Depth.....	10
Figure E1-19	Dissolved Nickel Concentrations with Depth	10
Figure E1-20	Dissolved Lead Concentrations with Depth	11
Figure E1-21	Dissolved Selenium Concentrations with Depth	11
Figure E1-22	Dissolved Silver Concentrations with Depth	12
Figure E1-23	Dissolved Tin Concentrations with Depth	12
Figure E1-24	Dissolved Strontium Concentrations with Depth.....	13
Figure E1-25	Dissolved Titanium Concentrations with Depth	13
Figure E1-26	Dissolved Thallium Concentrations with Depth	14
Figure E1-27	Dissolved Uranium Concentrations with Depth	14
Figure E1-28	Dissolved Vanadium Concentrations with Depth.....	15
Figure E1-29	Dissolved Zinc Concentrations with Depth	15
Figure E2-1	Total Suspended Solids Concentrations with Depth.....	16
Figure E2-2	Conductivity Concentrations with Depth	17
Figure E2-3	Turbidity Concentrations with Depth	17

Figure E2-4	Total Dissolved Solids Concentrations with Depth	18
Figure E2-5	Total Hardness Concentrations with Depth	18
Figure E2-6	Sulphate Concentrations with Depth.....	19
Figure E2-7	Chloride Concentrations with Depth	19
Figure E2-8	Total Alkalinity Concentrations with Depth	20
Figure E2-9	Nitrate-N Concentrations with Depth	20
Figure E2-10	Nitrite-N Concentrations with Depth.....	21
Figure E2-11	Ammonia-N Concentrations with Depth.....	21
Figure E2-12	Total Dissolved Phosphorus Concentrations with Depth.....	22
Figure E2-13	Total Kjeldahl Nitrogen Concentrations with Depth	22

E1 DISSOLVED METAL CONCENTRATIONS WITH DEPTH, PANDA PIT WESTBAY MULTI-LEVEL WELL, EKATI MINE, NORTHWEST TERRITORIES

Notes: In this document, results below the detection limit are plotted as half the detection limit.

Data plotted derived from Excel spreadsheet supplied by Ekati titled "Panda Westbay Sampling well.xls."

mbgs = metres below ground surface; mg/L = milligrams per litre.

Figure E1-1 Dissolved Aluminum Concentrations with Depth

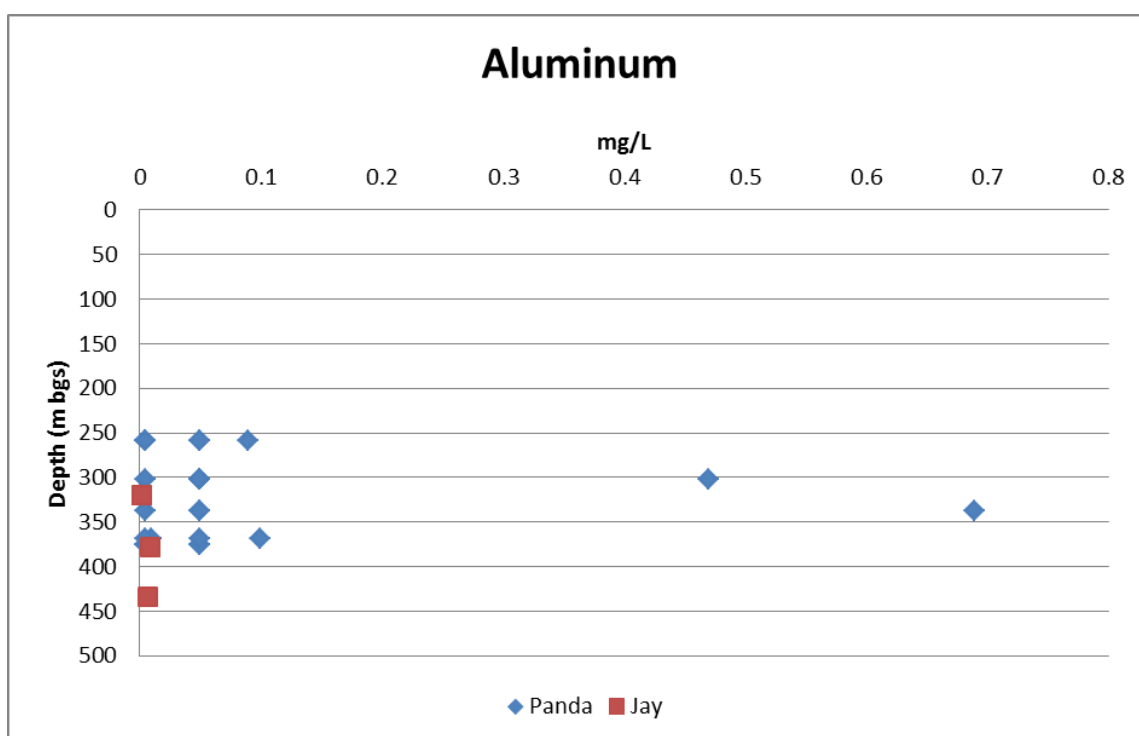


Figure E1-2 Dissolved Arsenic Concentrations With Depth

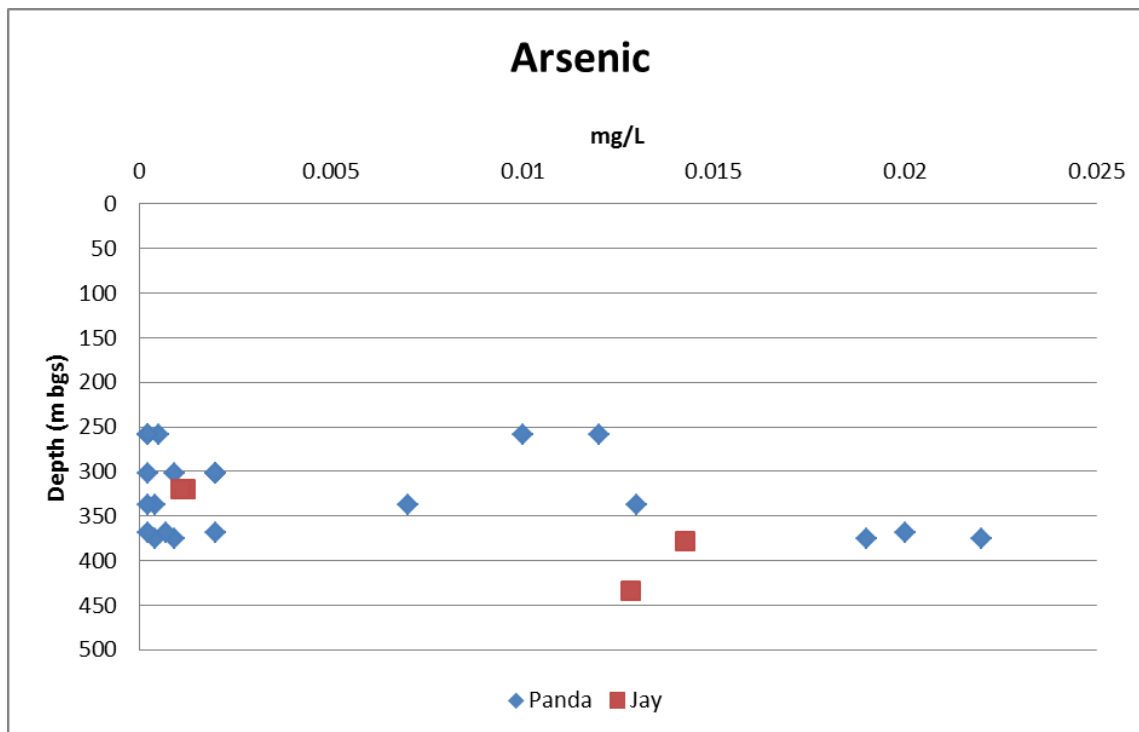


Figure E1-3 Dissolved Antimony Concentrations with Depth

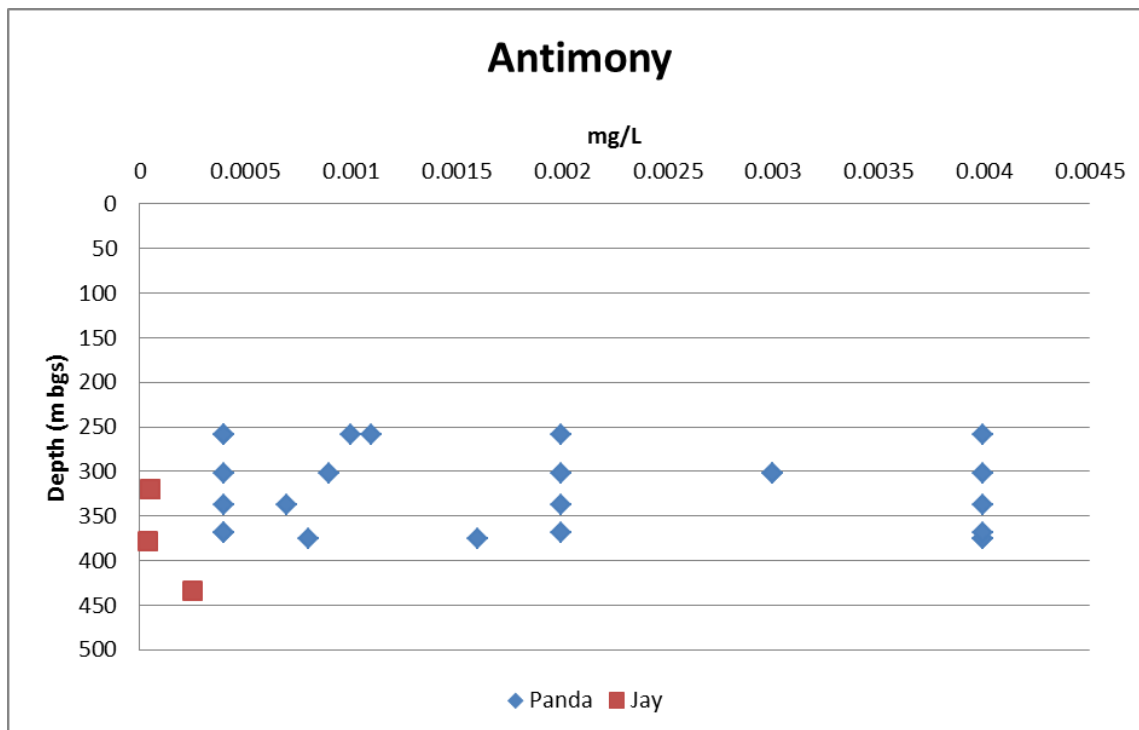


Figure E1-4 Dissolved Boron Concentrations with Depth

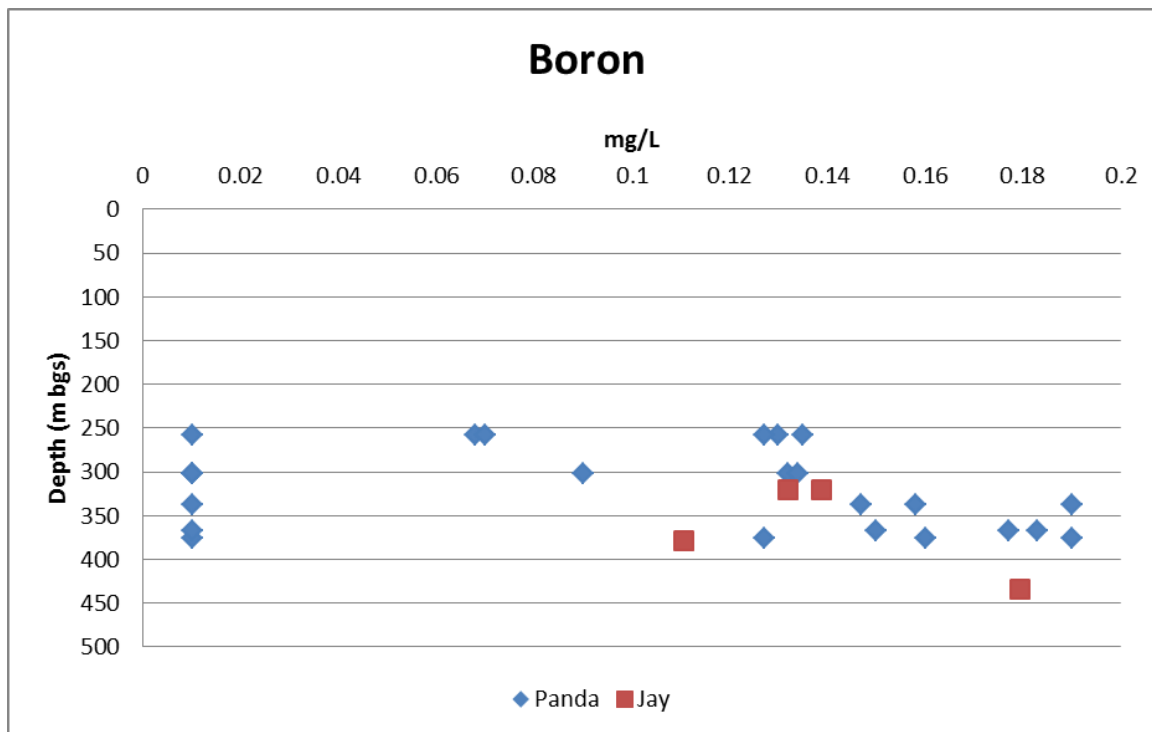


Figure E1-5 Dissolved Barium Concentrations with Depth

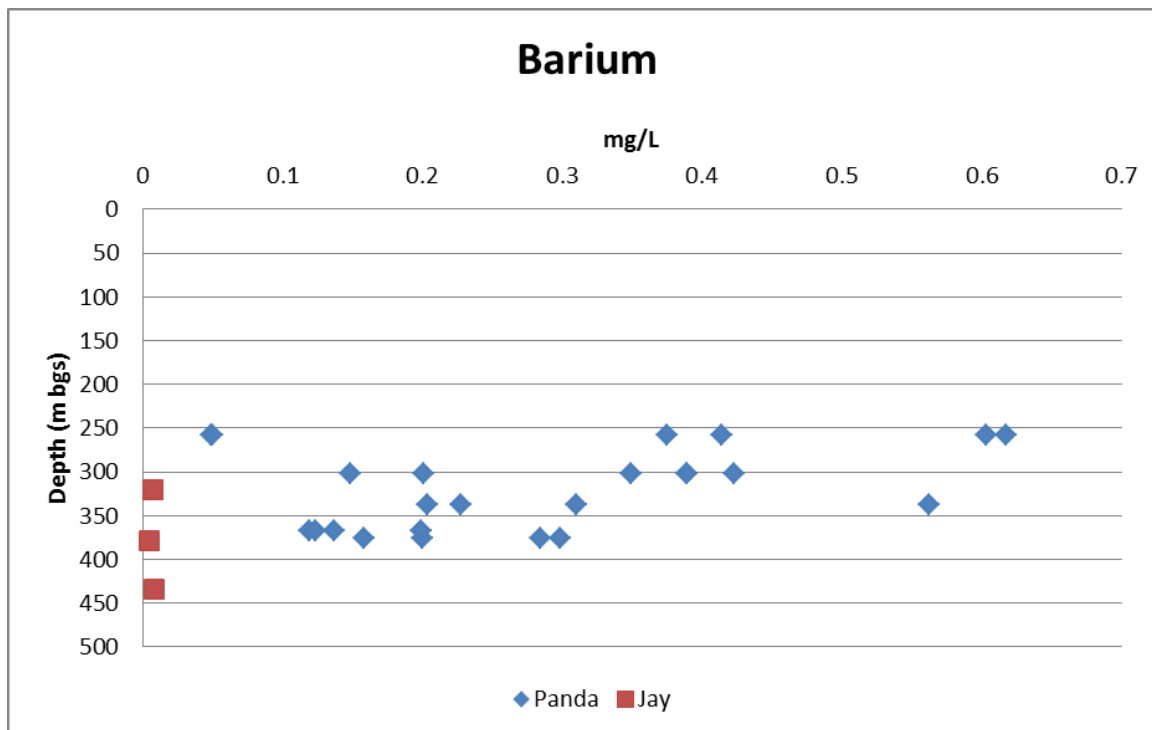


Figure E1-6 Dissolved Beryllium Concentrations with Depth

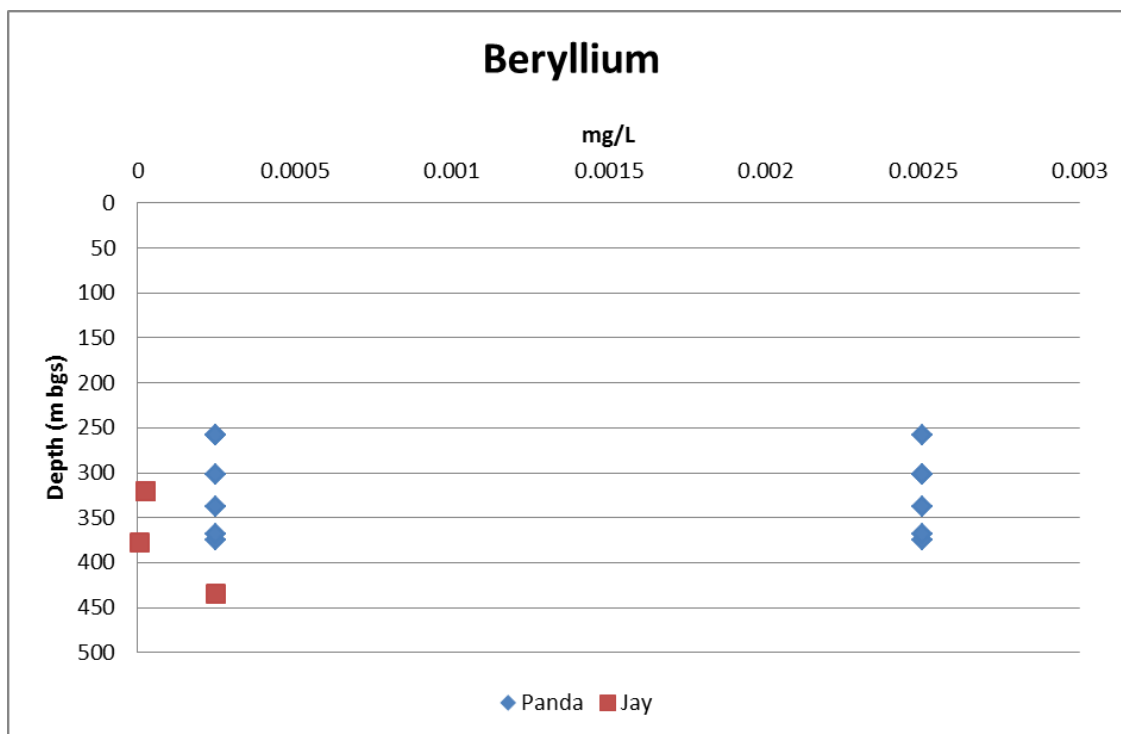


Figure E1-7 Dissolved Bismuth Concentrations with Depth

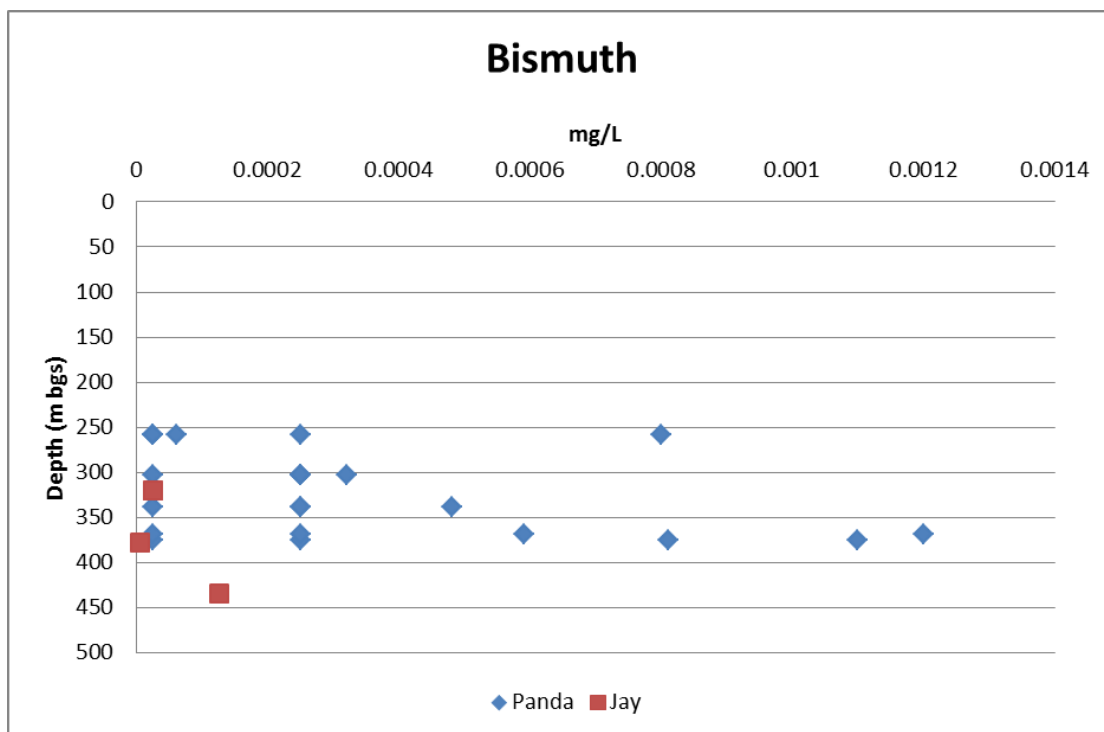


Figure E1-8 Dissolved Calcium Concentrations with Depth

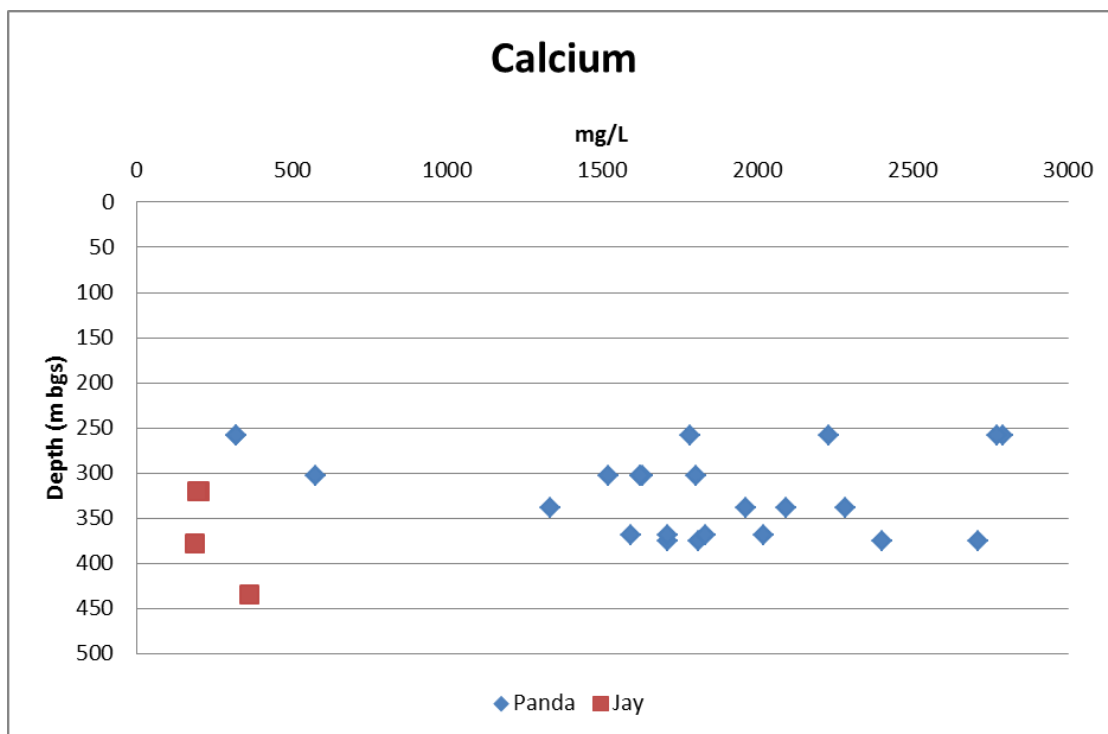


Figure E1-9 Dissolved Cadmium Concentrations with Depth

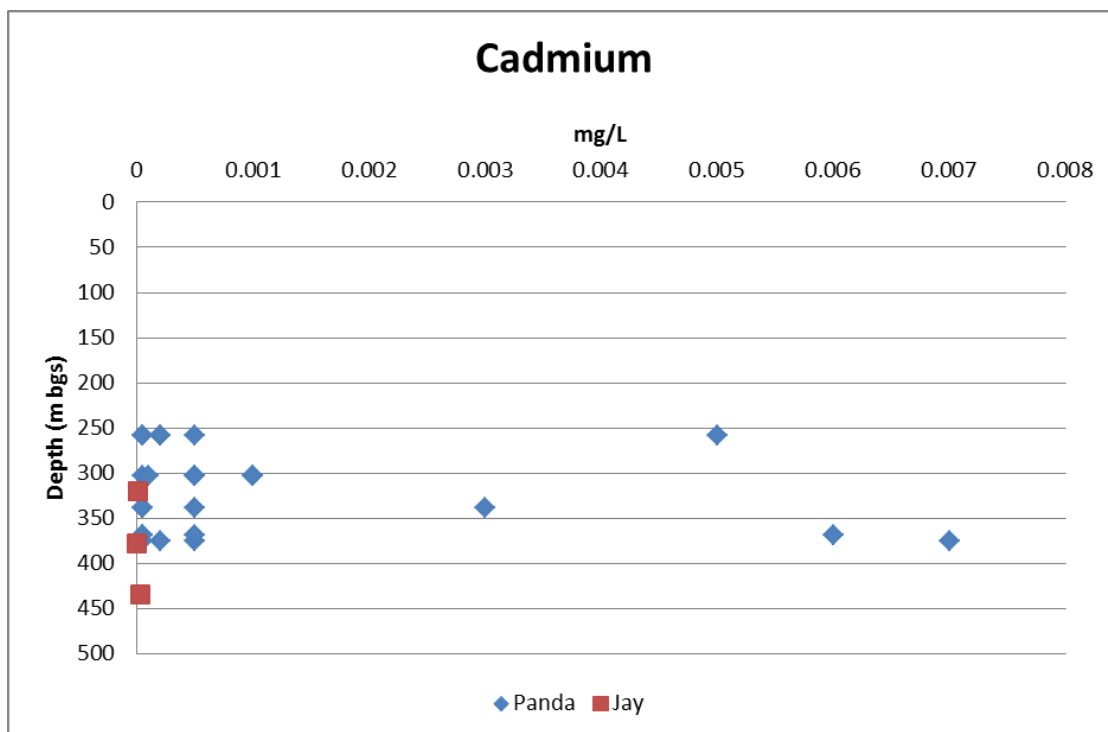


Figure E1-10 Dissolved Cobalt Concentrations with Depth

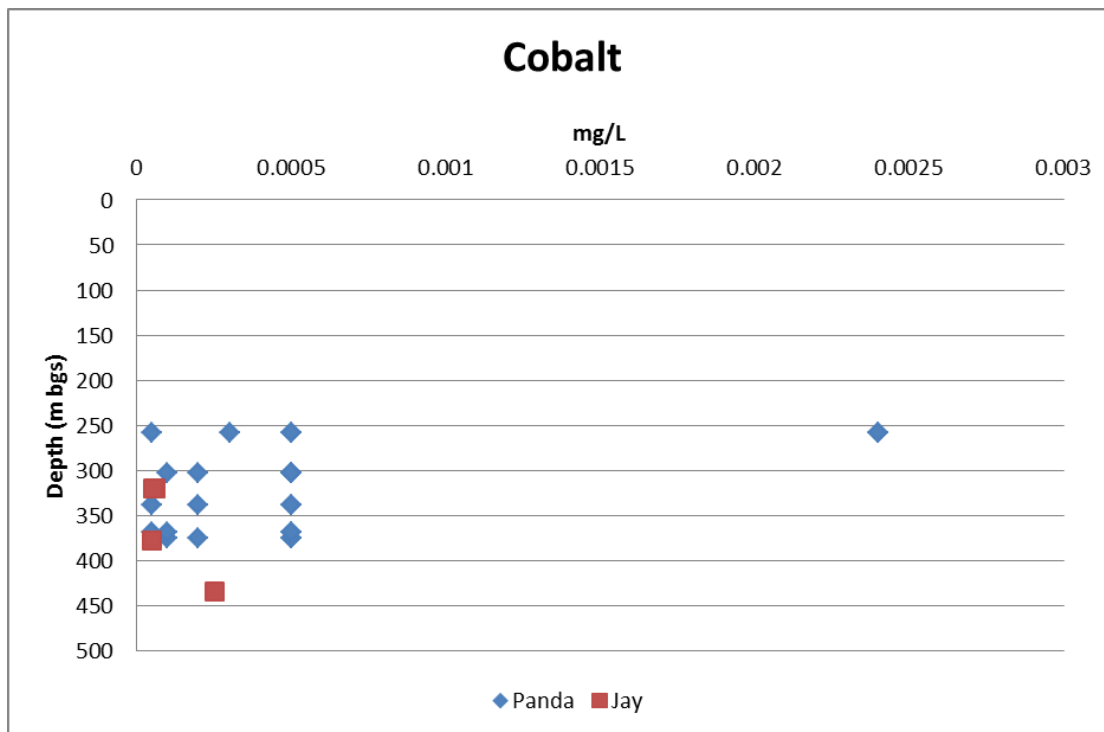


Figure E1-11 Dissolved Chromium Concentrations with Depth

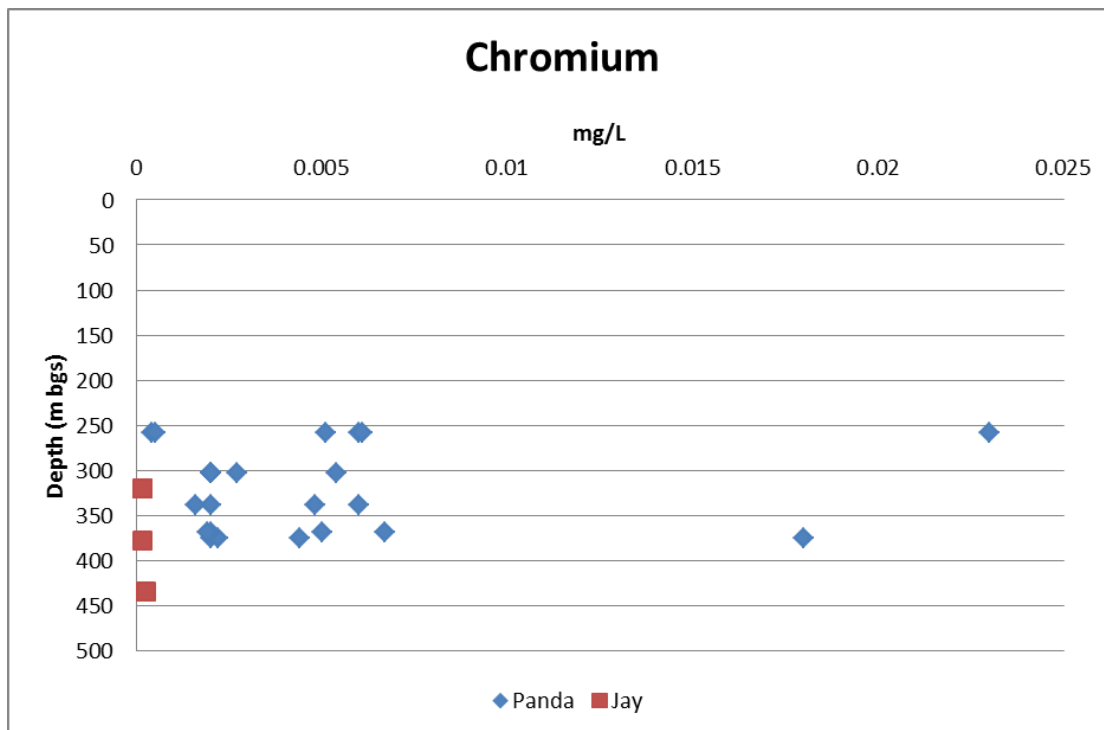


Figure E1-12 Dissolved Copper Concentrations with Depth

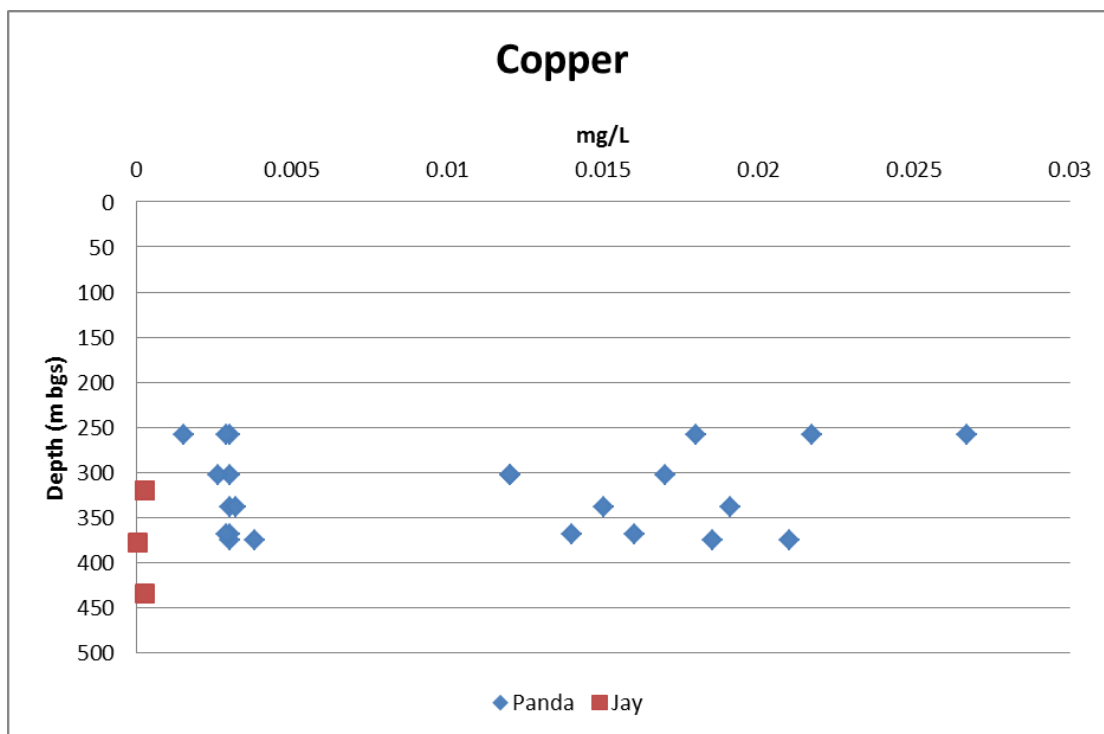


Figure E1-13 Dissolved Iron Concentrations with Depth

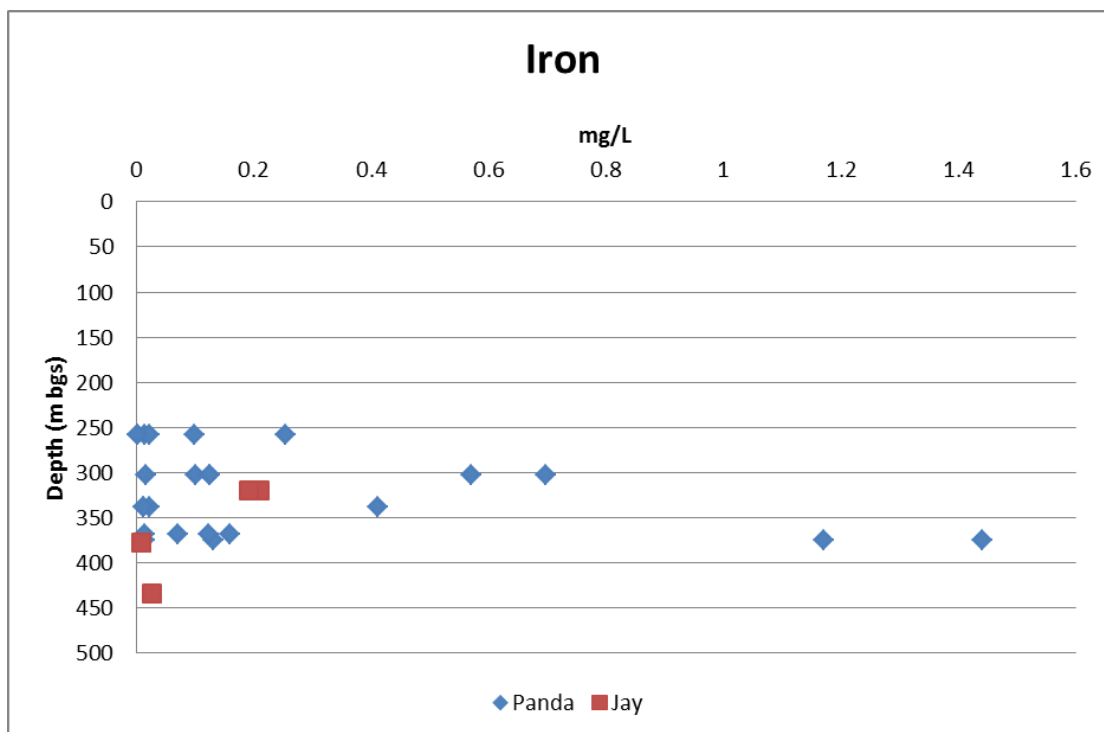


Figure E1-14 Dissolved Potassium Concentrations with Depth

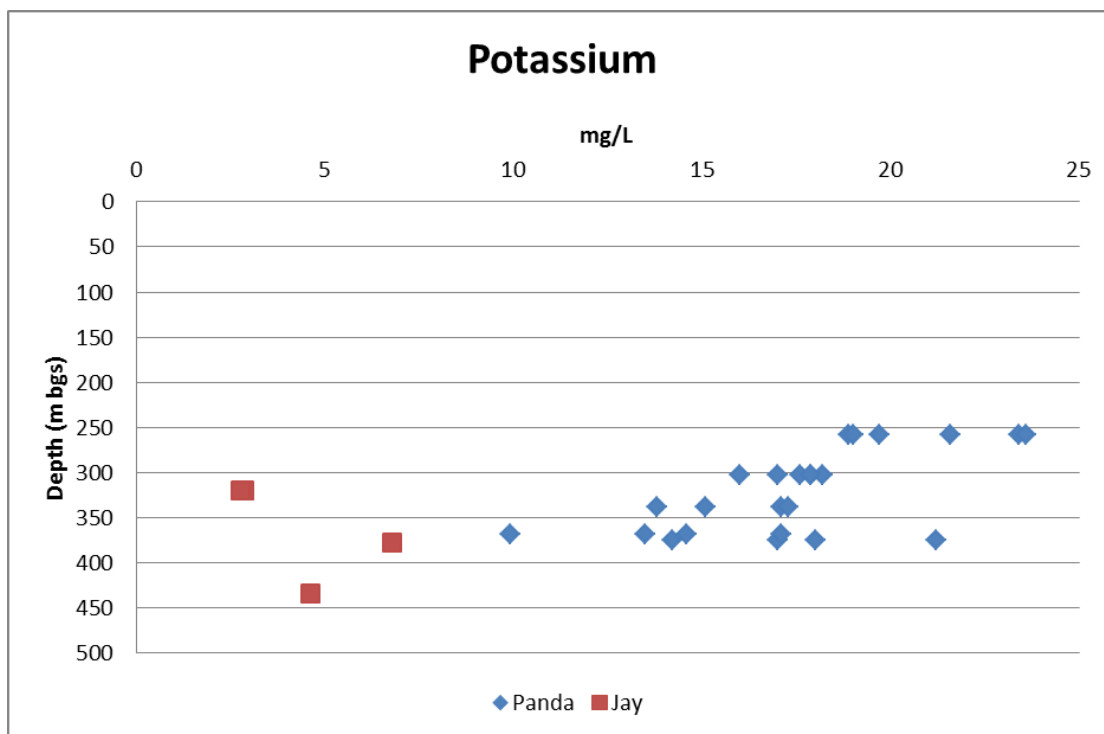


Figure E1-15 Dissolved Magnesium Concentrations with Depth

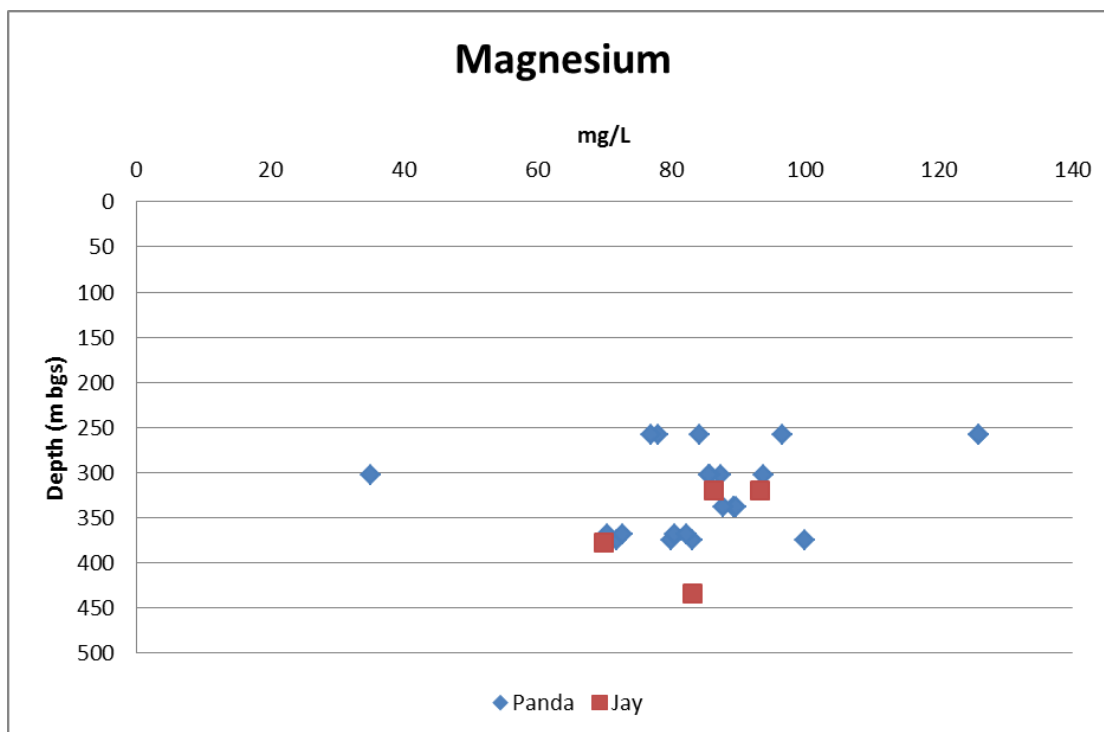


Figure E1-16 Dissolved Manganese Concentrations with Depth

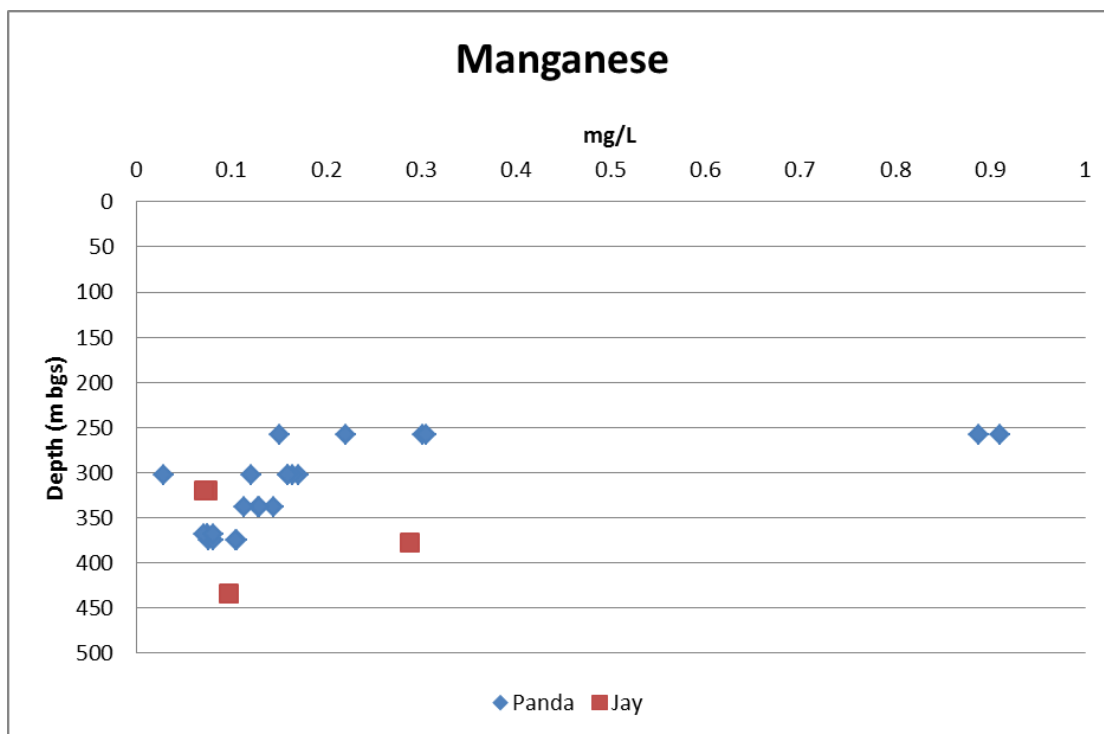


Figure E1-17 Dissolved Molybdenum Concentrations with Depth

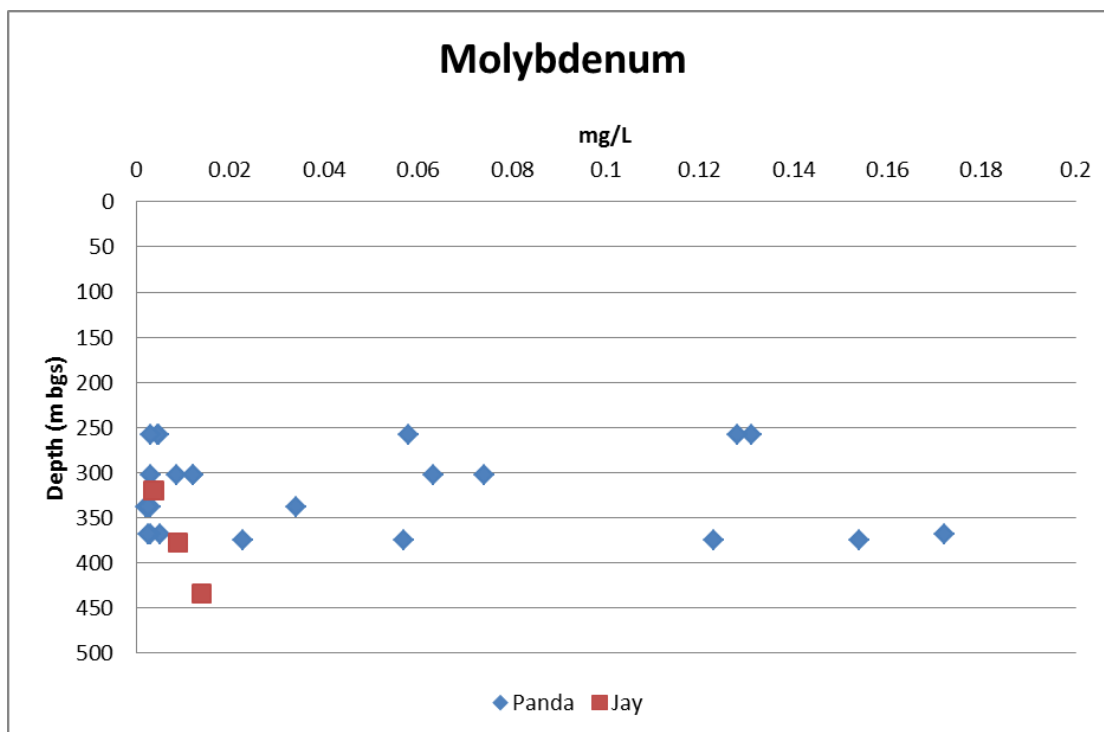


Figure E1-18 Dissolved Sodium Concentrations with Depth

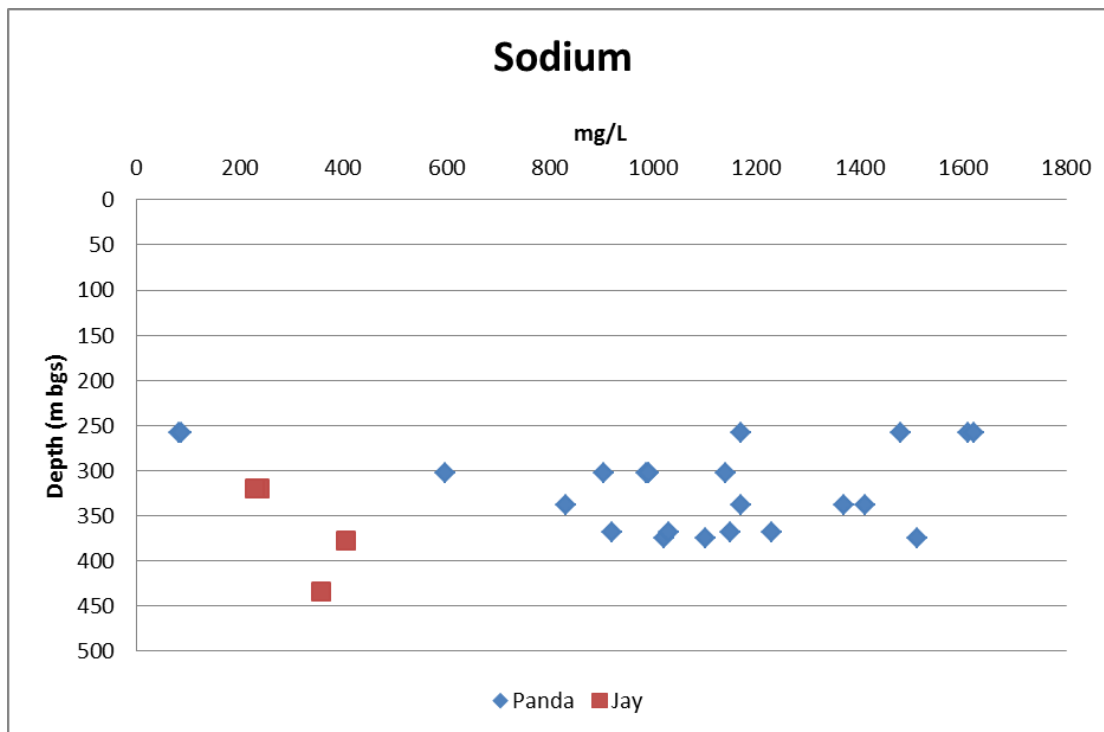


Figure E1-19 Dissolved Nickel Concentrations with Depth

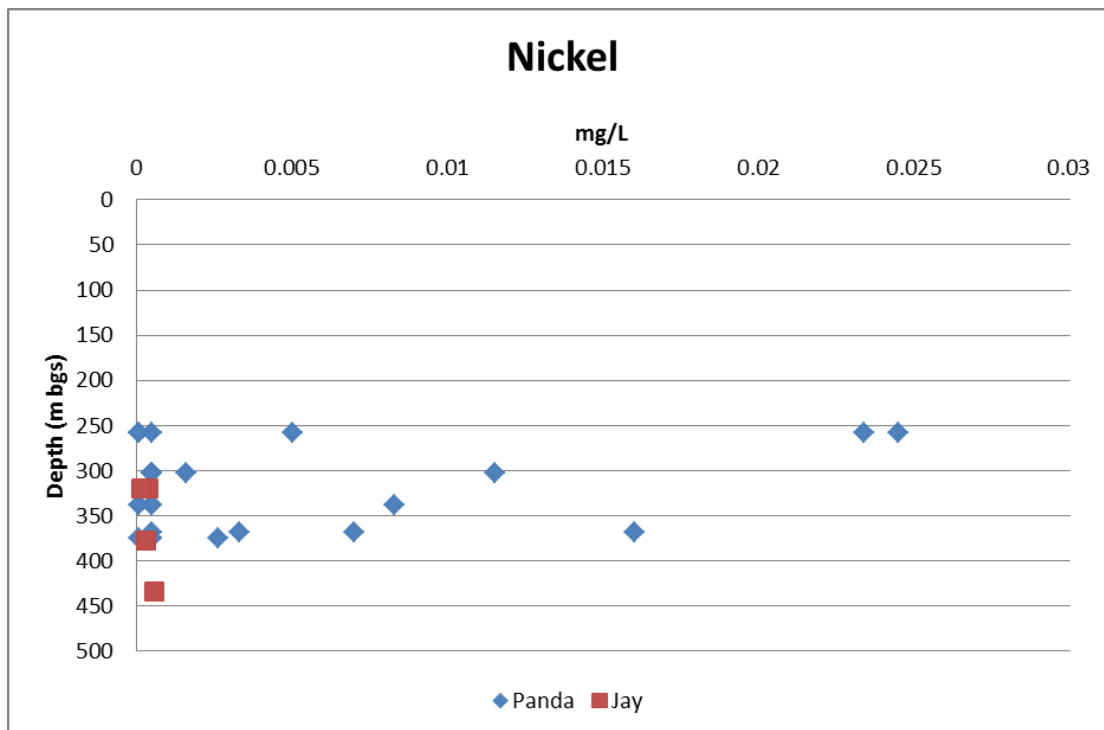


Figure E1-20 Dissolved Lead Concentrations with Depth

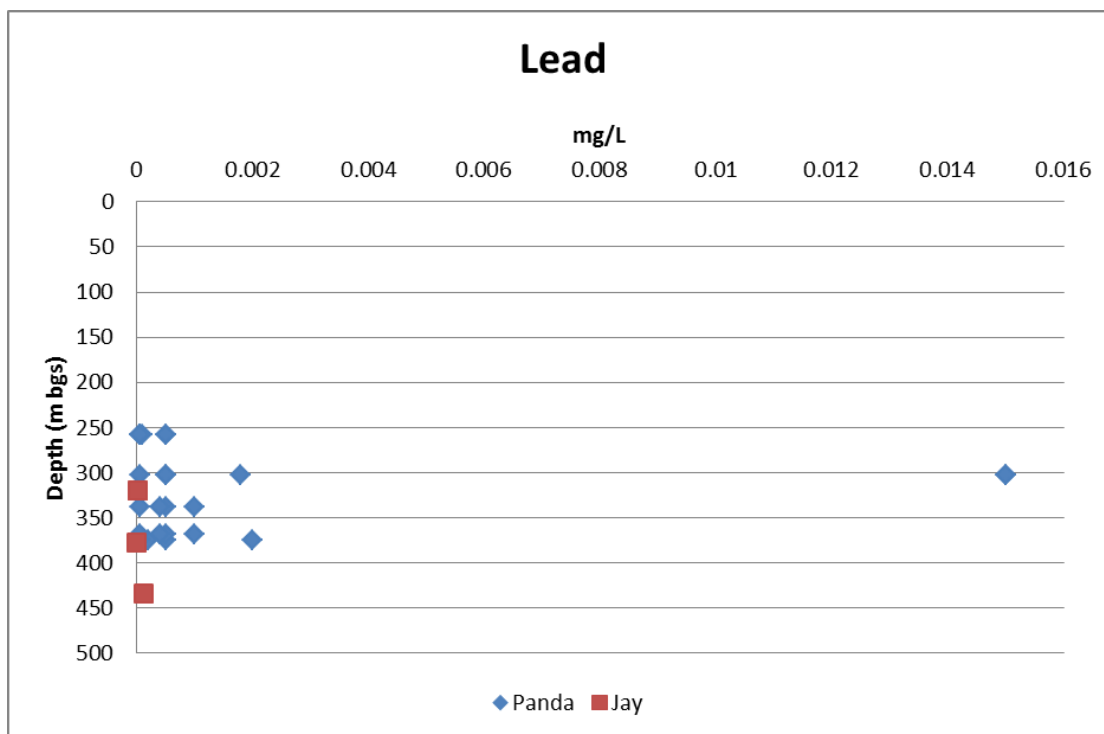


Figure E1-21 Dissolved Selenium Concentrations with Depth

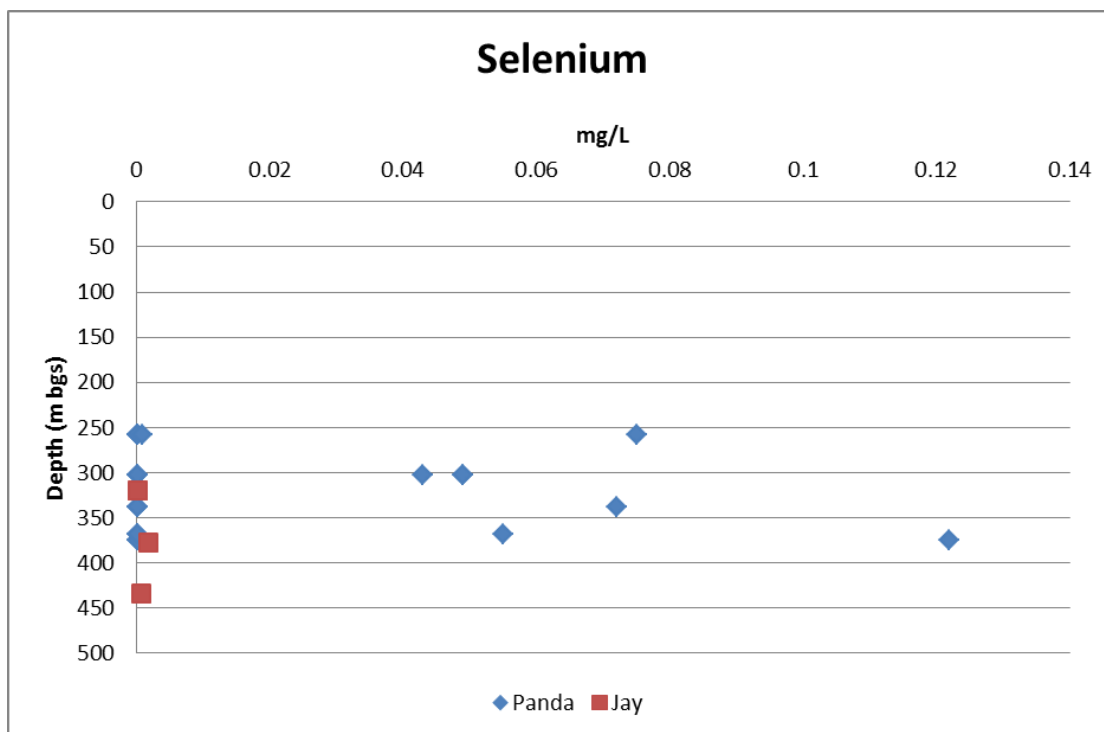


Figure E1-22 Dissolved Silver Concentrations with Depth

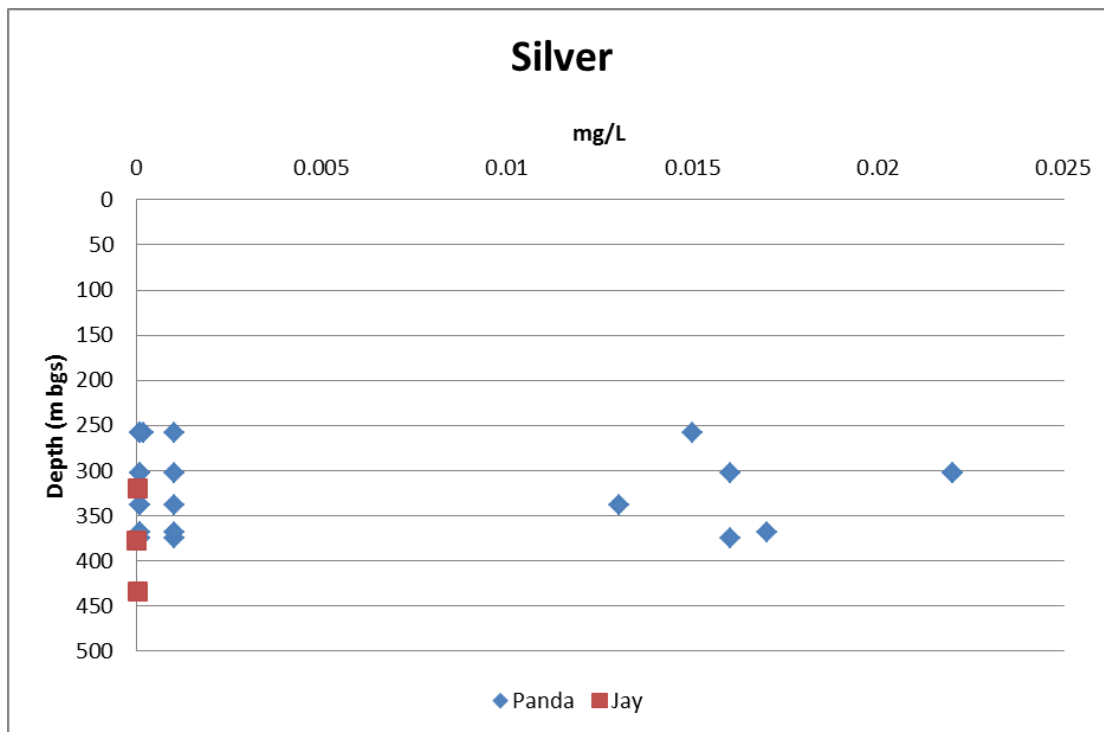


Figure E1-23 Dissolved Tin Concentrations with Depth

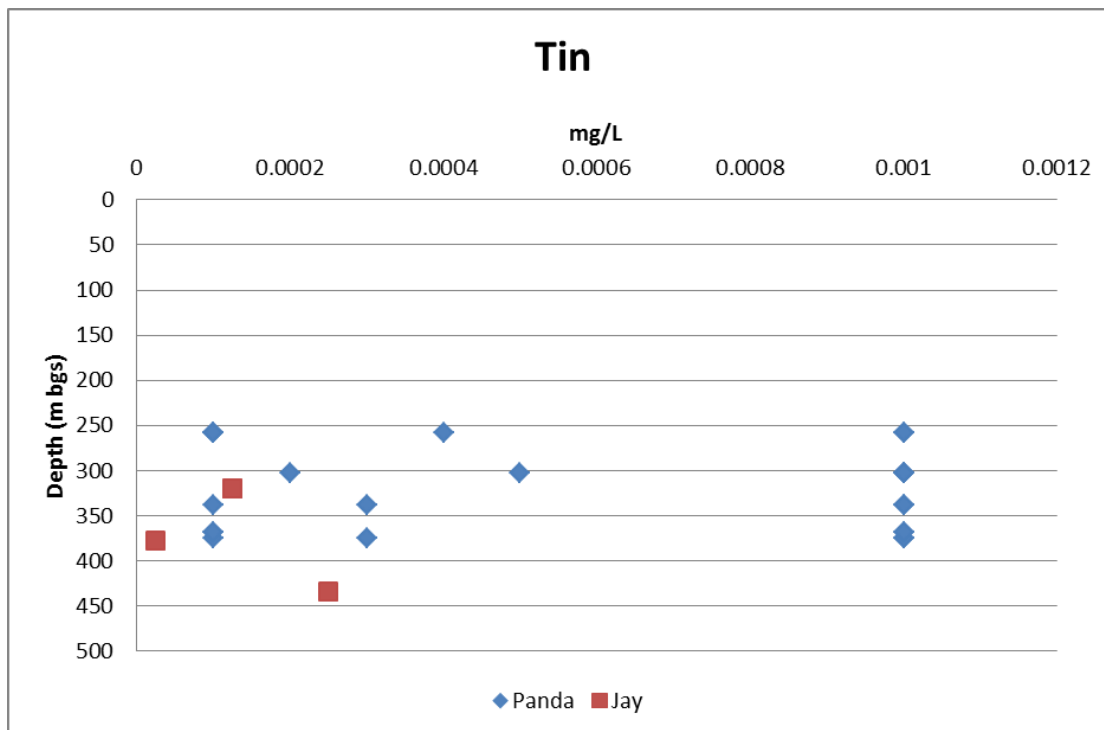


Figure E1-24 Dissolved Strontium Concentrations with Depth

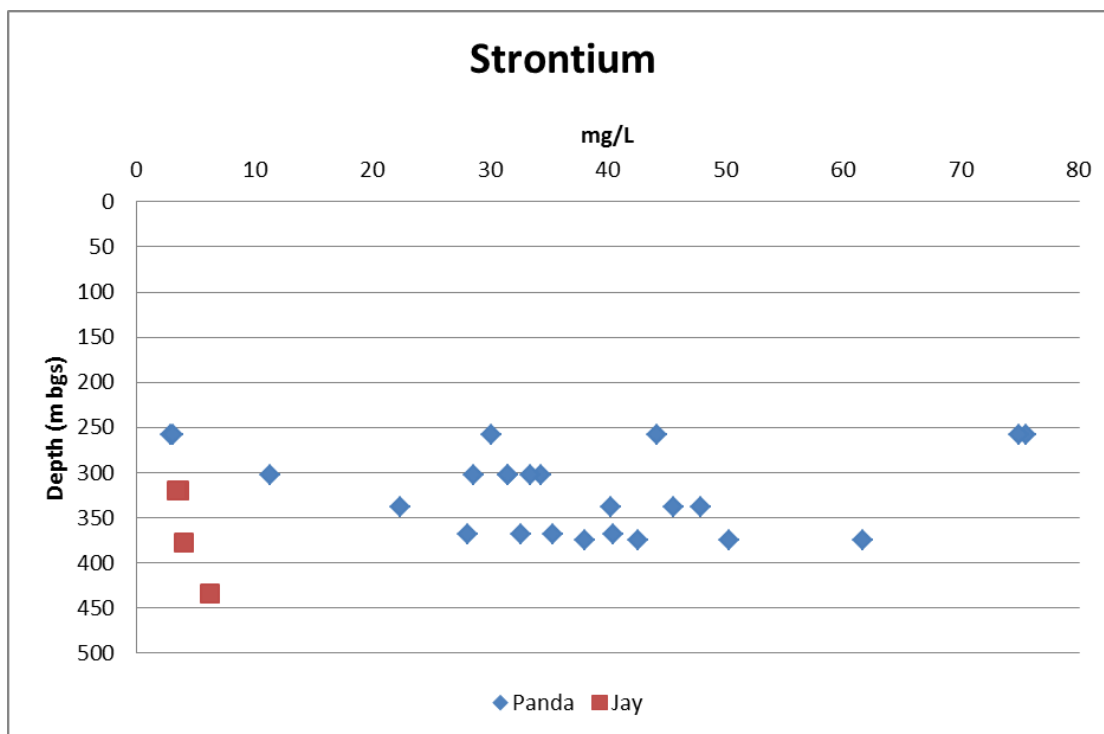


Figure E1-25 Dissolved Titanium Concentrations with Depth

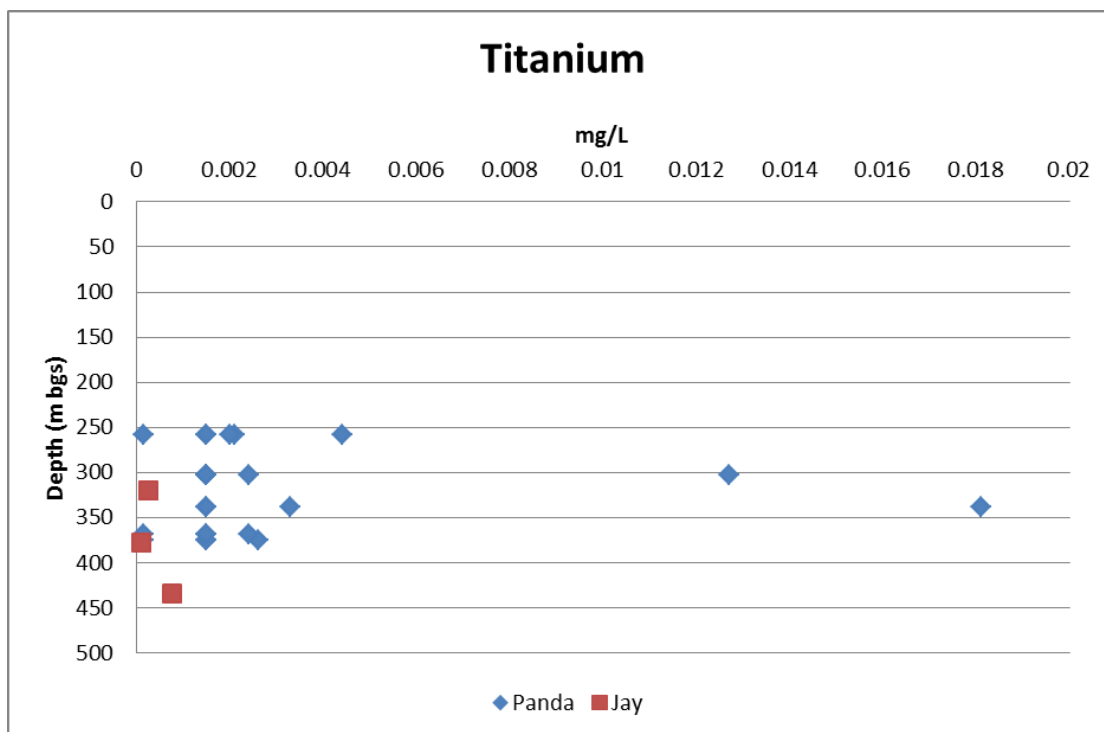


Figure E1-26 Dissolved Thallium Concentrations with Depth

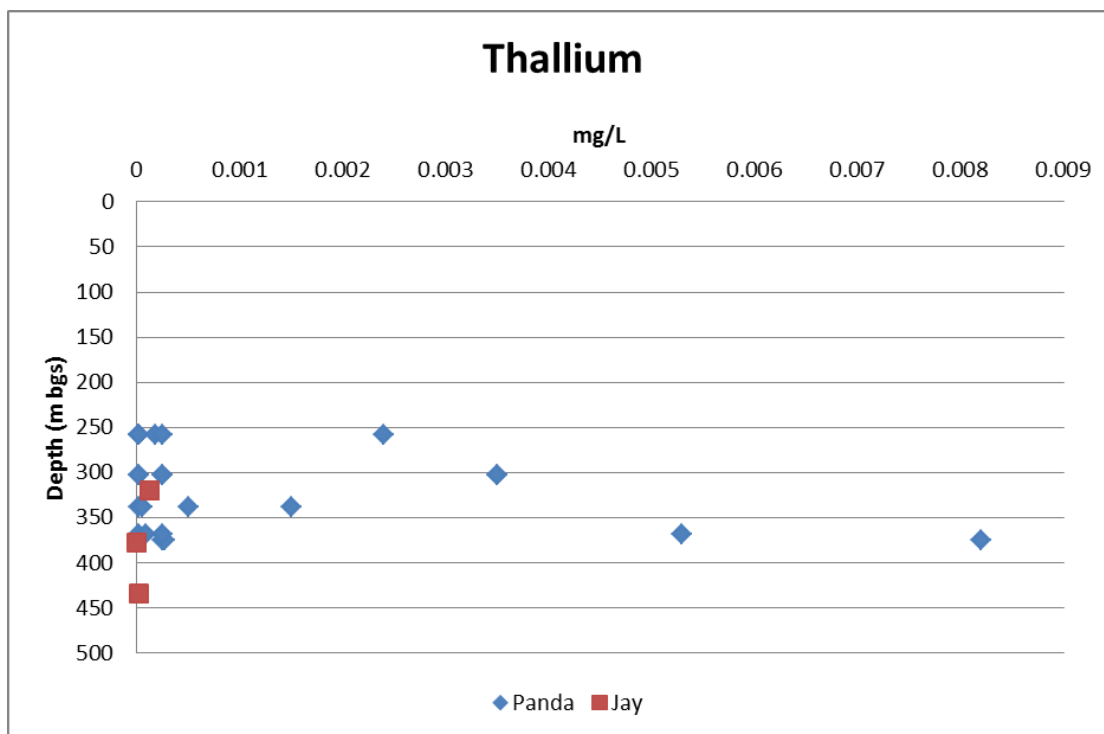
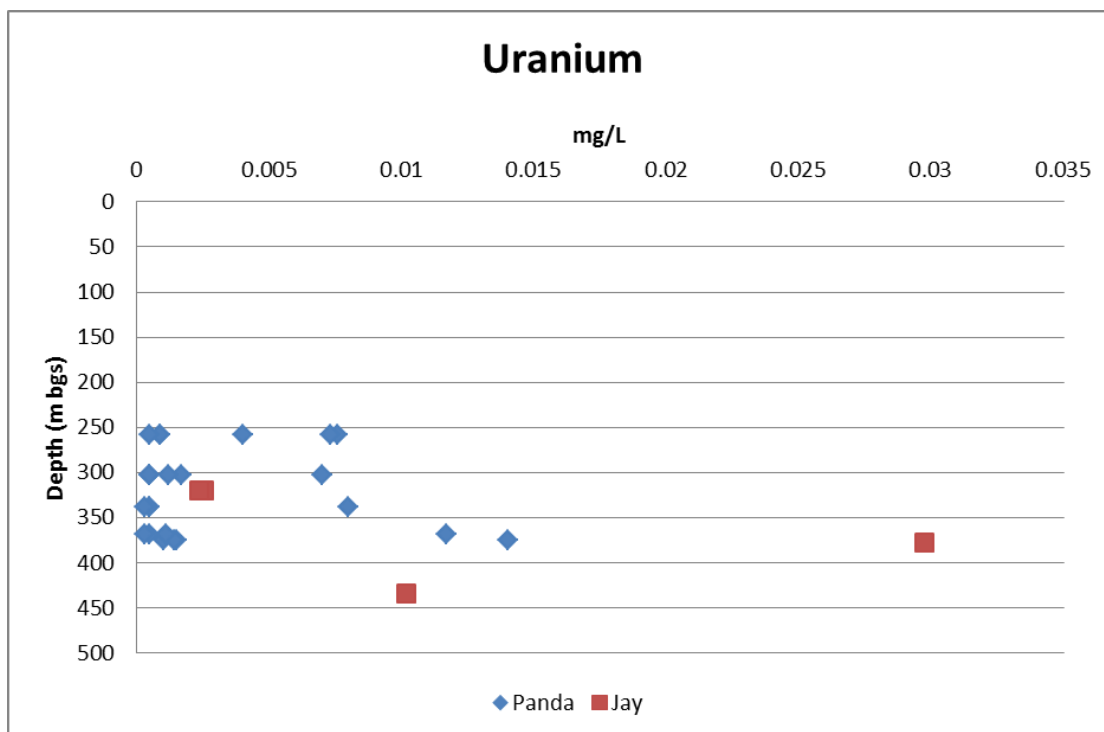


Figure E1-27 Dissolved Uranium Concentrations with Depth



Vanadium

This scatter plot displays Vanadium concentration in mg/L on the x-axis (ranging from 0 to 0.05) against Depth in meters below ground surface (m bgs) on the y-axis (ranging from 0 to 500). Data points are categorized by site: Panda (blue diamonds) and Jay (red squares). The Jay site has only one data point at approximately 435 m bgs with a concentration of 0.001 mg/L. The Panda site has multiple data points across various depths, with concentrations generally between 0.002 and 0.045 mg/L.

Depth (m bgs)	Site	Vanadium (mg/L)
260	Panda	0.003
260	Panda	0.007
260	Panda	0.008
300	Panda	0.001
300	Panda	0.015
300	Panda	0.021
330	Panda	0.032
330	Panda	0.045
360	Panda	0.001
360	Panda	0.002
360	Panda	0.003
360	Panda	0.007
360	Panda	0.021
360	Panda	0.036
360	Panda	0.040
360	Panda	0.045
435	Jay	0.001

Zinc

mg/L

Depth (m bgs)

◆ Panda ■ Jay

Depth (m bgs)	Zinc (mg/L) - Panda	Zinc (mg/L) - Jay
250	0.05, 0.08, 0.10, 0.12, 0.15, 0.18	
275	0.05, 0.08, 0.10, 0.12, 0.15, 0.18	
300	0.05, 0.08, 0.10, 0.12, 0.15, 0.18, 1.55	
325	0.05, 0.08, 0.10, 0.12, 0.15, 0.18	0.02
350	0.05, 0.08, 0.10, 0.12, 0.15, 0.18	0.02
375	0.05, 0.08, 0.10, 0.12, 0.15, 0.18	
400	0.05, 0.08, 0.10, 0.12, 0.15, 0.18	0.02
437		0.02

E2 PHYSICAL TESTS, AND ANION AND NUTRIENT CONCENTRATIONS WITH DEPTH, PANDA PIT WESTBAY MULTI-LEVEL WELL, EKATI MINE, NORTHWEST TERRITORIES

Notes: In this document, results below the detection limit are plotted as half the detection limit.

Data plotted derived from Excel spreadsheet supplied by Ekati titled "Panda Westbay Sampling well.xls."

mbgs = metres below ground surface; mg/L = milligrams per litre; $\mu\text{S}/\text{cm}$ = microsiemens per centimetre;

NTU = Nephelometric Turbidity Units; TDS = total dissolved solids; TSS = total suspended solids.

Figure E2-1 Total Suspended Solids Concentrations with Depth

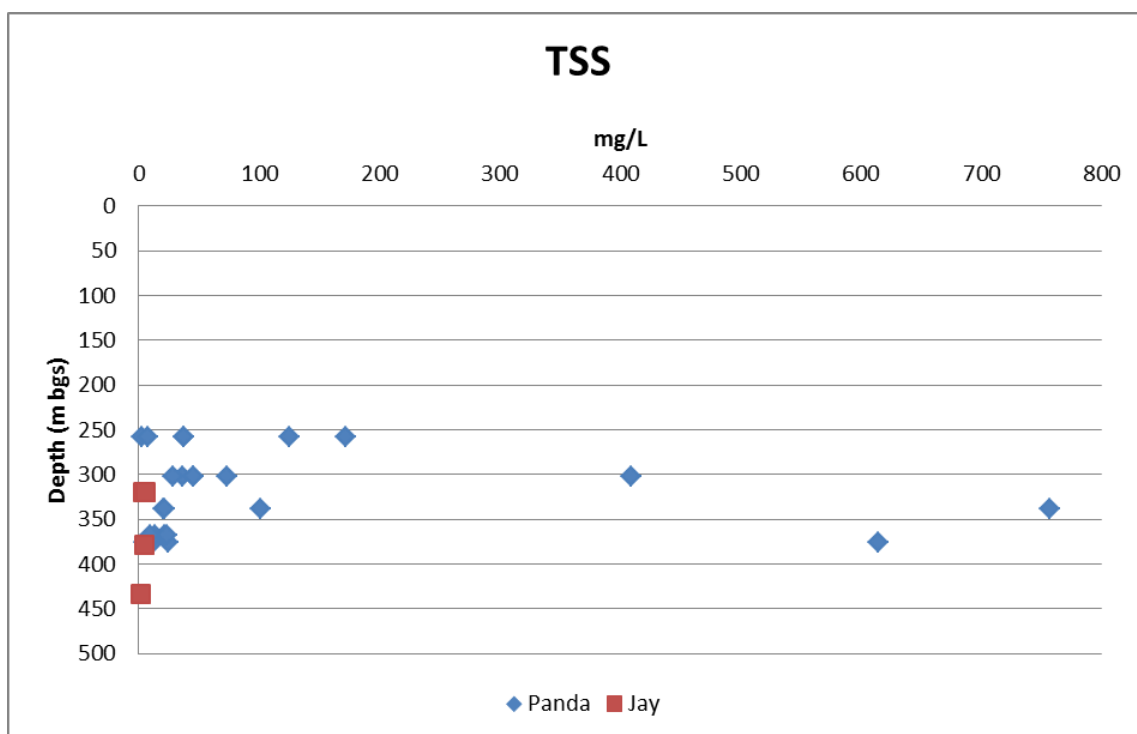


Figure E2-2 Conductivity Concentrations with Depth

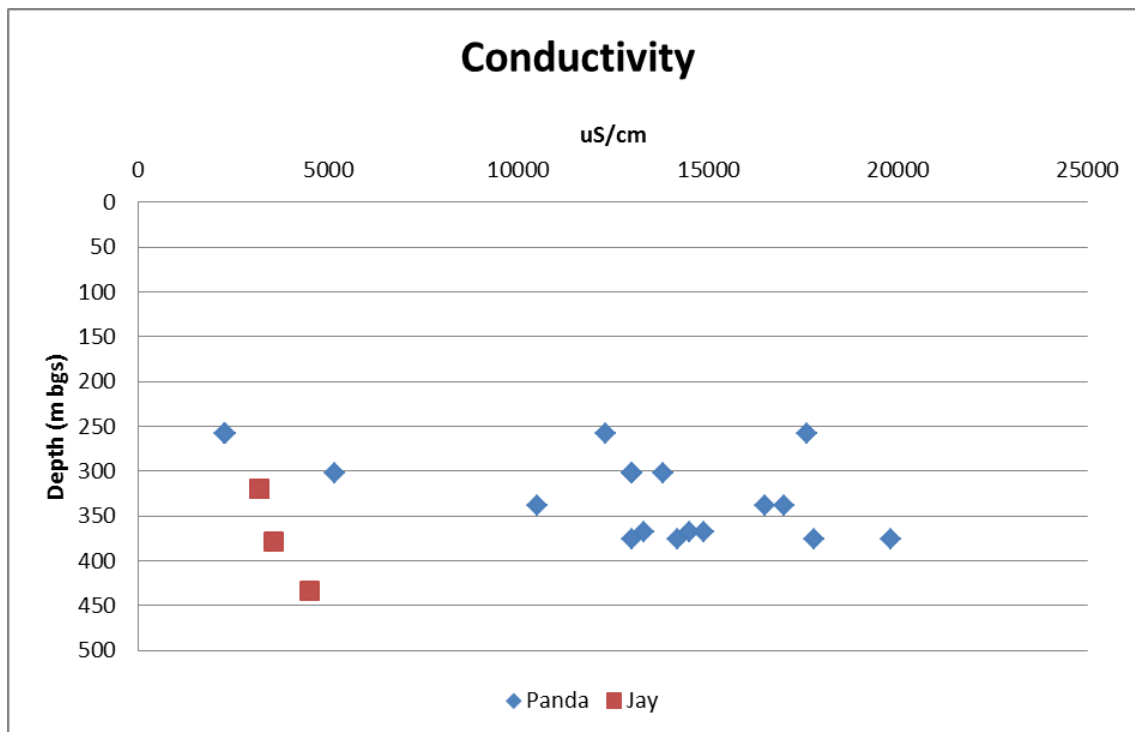


Figure E2-3 Turbidity Concentrations with Depth

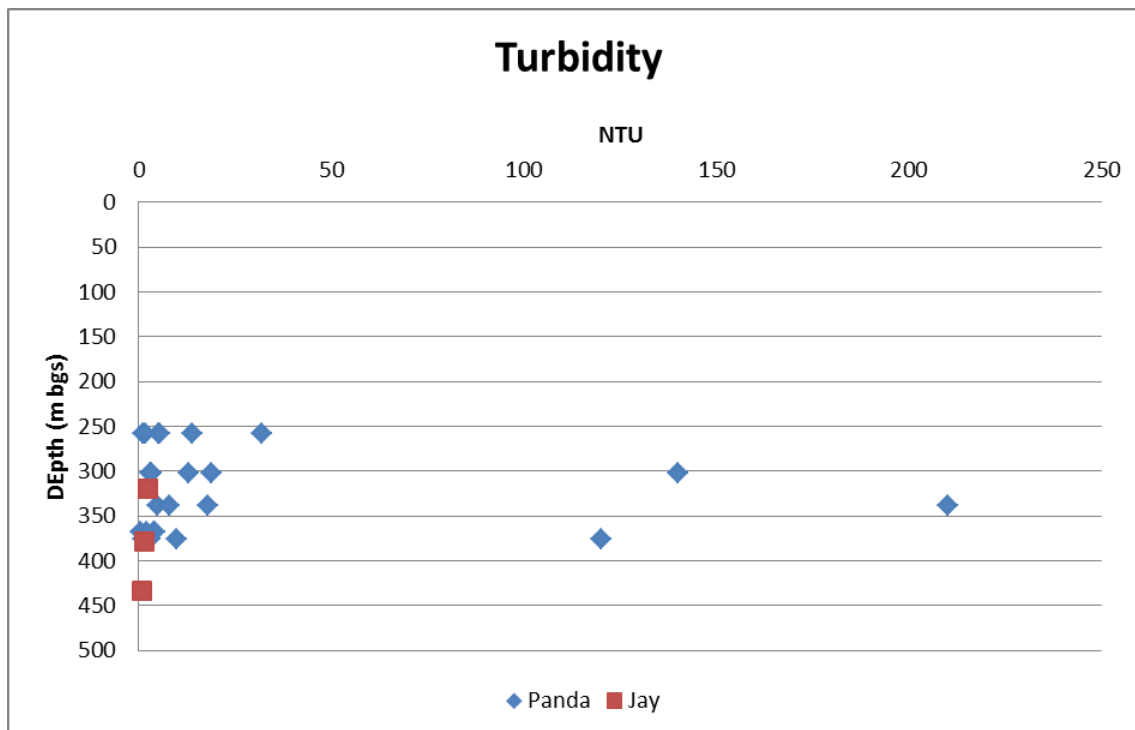


Figure E2-4 Total Dissolved Solids Concentrations with Depth

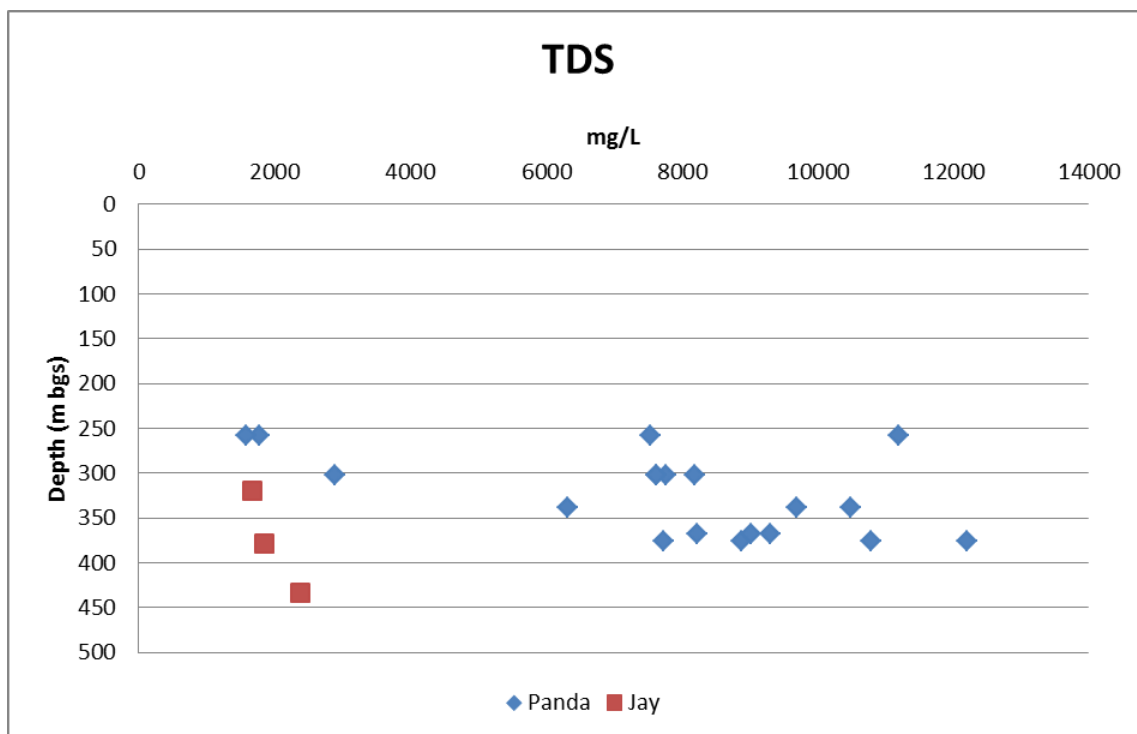


Figure E2-5 Total Hardness Concentrations with Depth

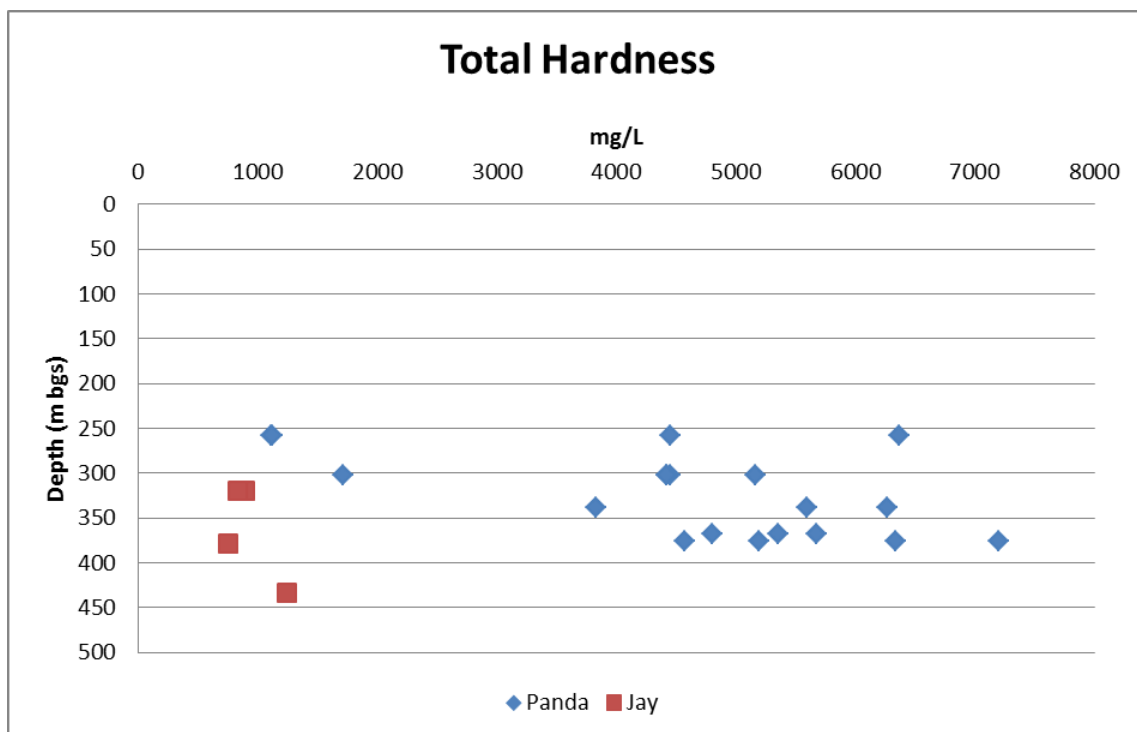


Figure E2-6 Sulphate Concentrations with Depth

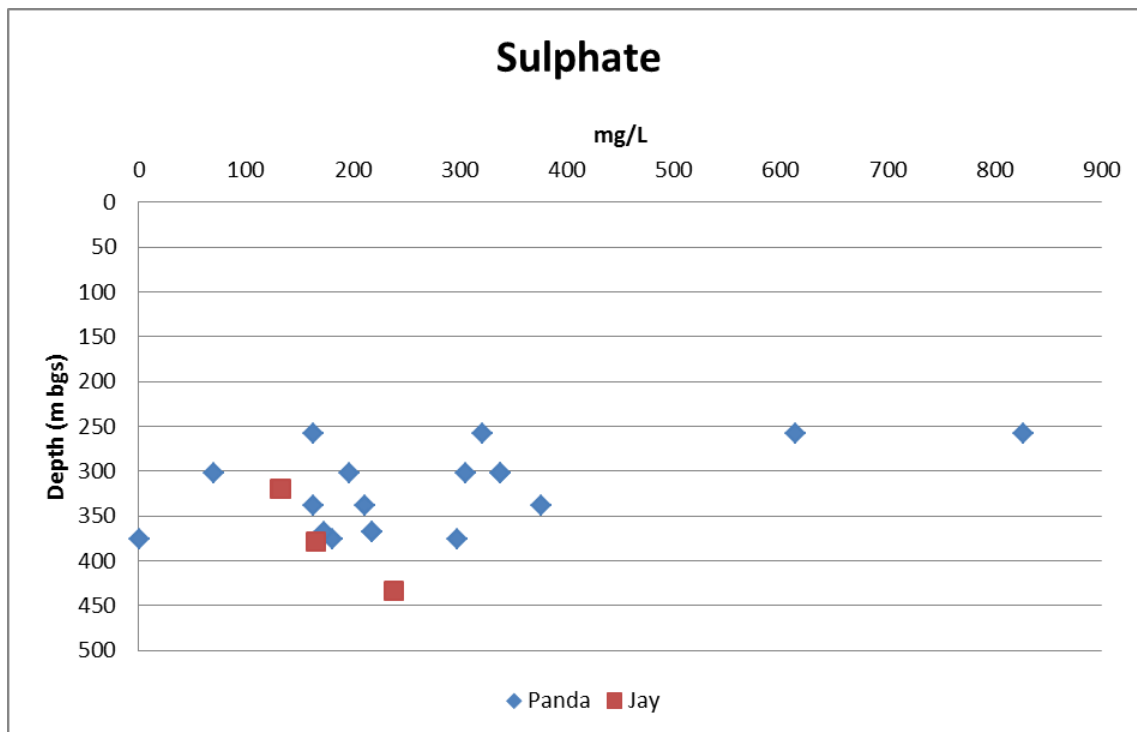


Figure E2-7 Chloride Concentrations with Depth

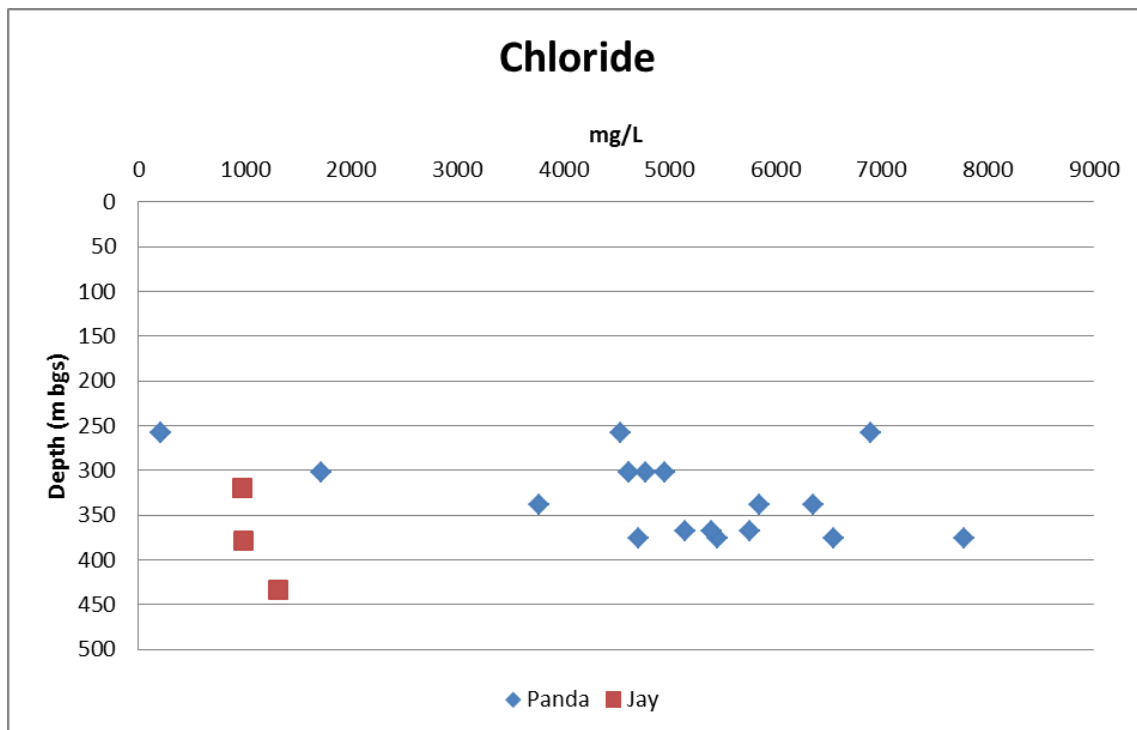


Figure E2-8 Total Alkalinity Concentrations with Depth

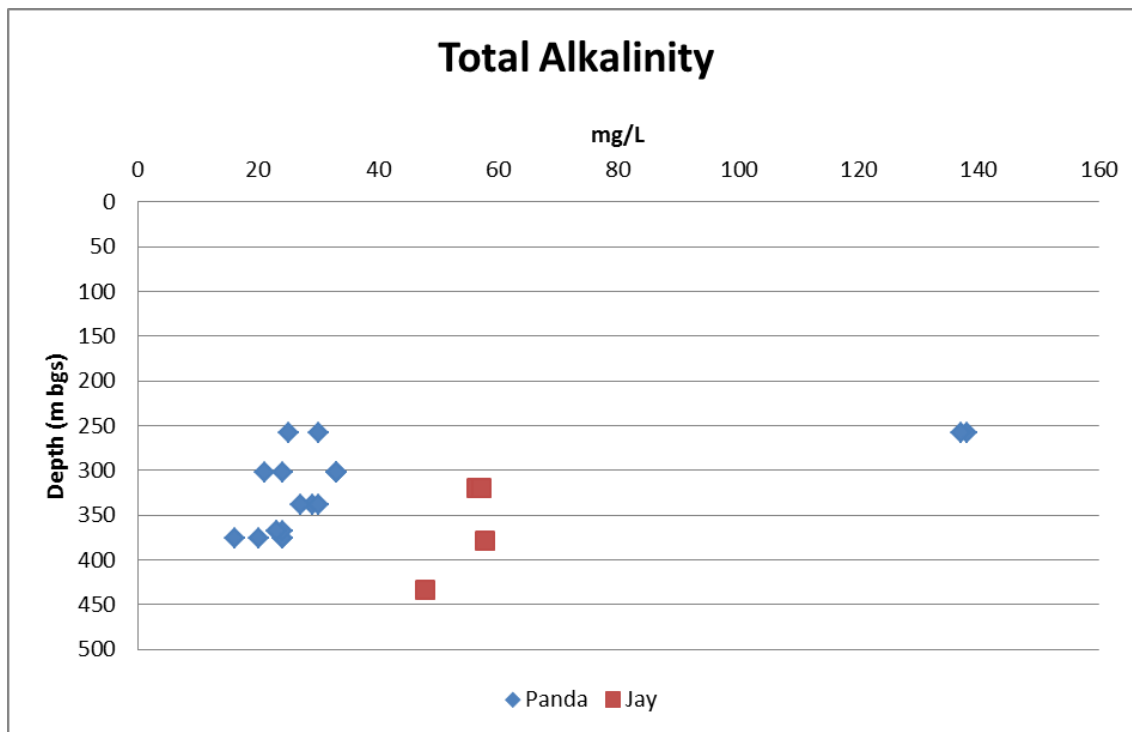


Figure E2-9 Nitrate-N Concentrations with Depth

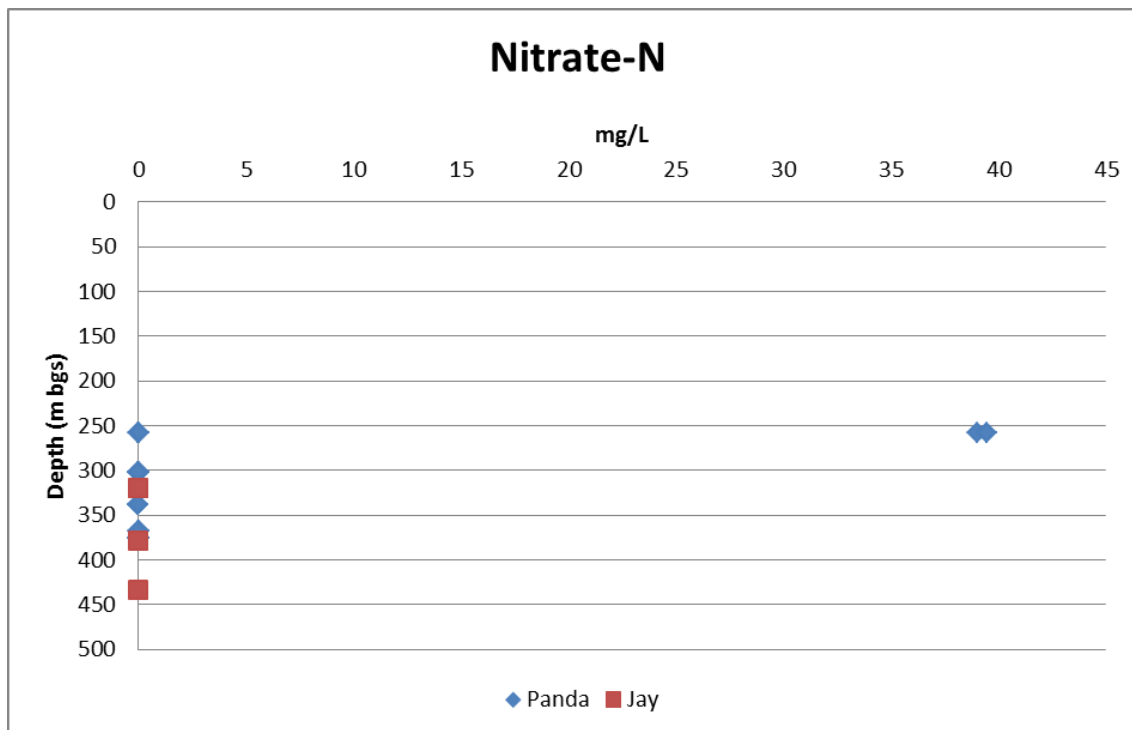


Figure E2-10 Nitrite-N Concentrations with Depth

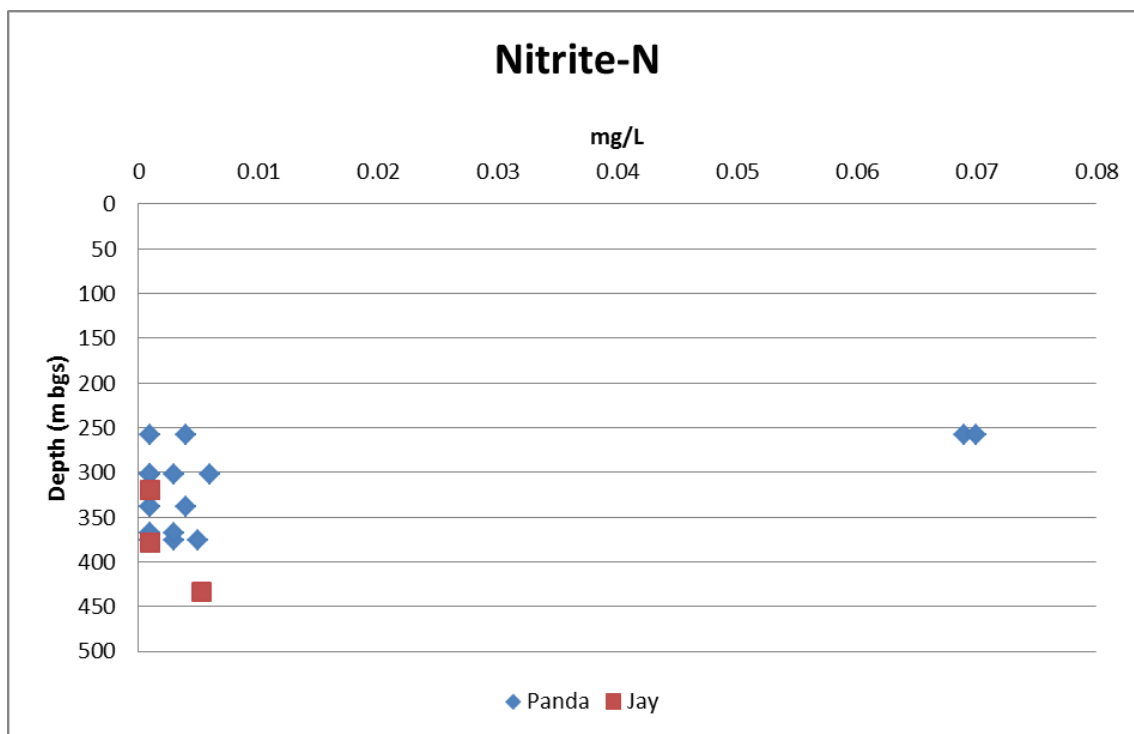


Figure E2-11 Ammonia-N Concentrations with Depth

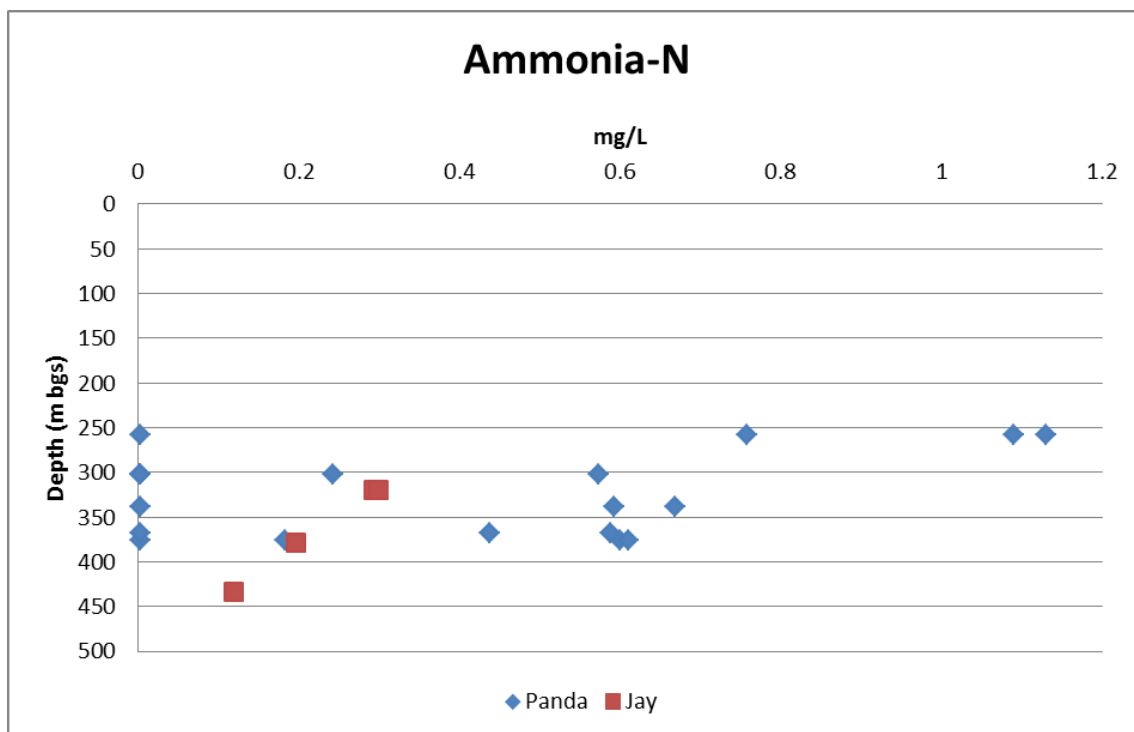


Figure E2-12 Total Dissolved Phosphorus Concentrations with Depth

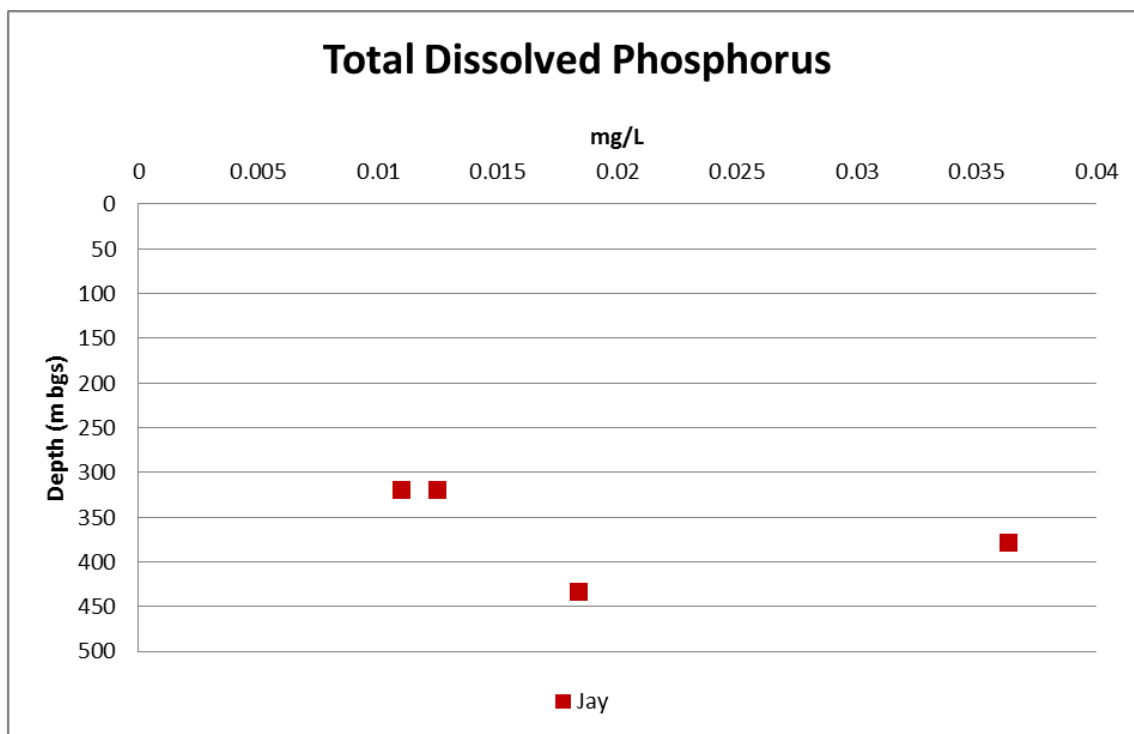


Figure E2-13 Total Kjeldahl Nitrogen Concentrations with Depth

