MAR 20150003: STEEN RIVER

Steen River - A report on Iron, Lead, and Zinc exploration on the Steen River property near Meander River.

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REPORT ON A SOIL pH (HYDROGEN ION CONCENTRATION) AND SOIL CONDUCTIVITY SURVEY CONDUCTED ON METALLIC AND INDUSTRIAL MINERALS PERMITS IN NORTHWESTERN ALBERTA (NTS 84 N 3) DURING JULY 2014

Work was done in connection with the following Metallic and Industrial Minerals Permits:

9312050710, 9312050711, 9312050713 and 9312050714

The Permits are held by Anglo Celtic Exploration Ltd.

1056-409 Granville Street, Vancouver BC, V6C 1T2

The Permits are located on the the Hay River between

the settlements of Meander River and Steen River

Dave Nickerson MSc.

[redacted]

August 5, 2014

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REPORT ON A SOIL pH (HYDROGEN ION CONCENTRATION) AND SOIL CONDUCTIVITY SURVEY CONDUCTED ON METALLIC AND INDUSTRIAL MINERALS PERMITS IN NORTHWESTERN ALBERTA (NTS 84 N 3) DURING JULY 2014

1 SUMMARY

Working out of the settlement of Meander River AB. between July 19 and July 21 some 21 soil samples were taken from the "Hydroxide Creek" area of Metallic and Industrial Minerals Permits 9312050710, 9312050711, 9312050713 and 9312050714. The work was done by Dave Nickerson and Isaiah Modeste, both of Yellowknife NT., with some local assistance from Willie Chambaud of Meander River. Measurements of pH, converted into hydrogen ion concentration, and conductivity were conducted off site. Difficulty and delays were caused by the many forest fires in the southern NT that resulted in highways being closed for many days at a time.

The Mineral Permits contain 2,034 hectares and are located some 25 kilometres northeast of the settlement of Meander River. They are shown in detail on Drawing 1.

The use and effectiveness of soil pH as an exploration technique that can be used even where heavier metallic ions have not migrated to the surface is described in Smee, B. W. 2003 (see references)

During the field work a second area of iron staining some 250m southwest of "Hydroxide Creek" was observed.

The survey was successful in that it expanded the area of interest and confirmed its geochemically anomalous nature. Recommendations are given in this report for further exploration work.

2 PREVIOUS WORK

As a result of a stream water and stream sediment geochemical survey undertaken in the summer of 2011 along the Hay River between the settlements of Indian Cabins and Meander River (Nickerson, D. 2012) a sizeable tract of exploration ground was acquired. In July 2012 a till, shale, spruce bark, stream water and stream sediment survey was conducted on the prospect (Nickerson, D. 2013). This identified an area of interest centred on iron stained "Hydroxide Creek". The purpose of the 2014 exploration program was to further evaluate this location.

3 METHODOLOGY

Sample Site Grid Layout

Access to the sample sites was by boat along the Hay River from the boat launch in Meander River and thence by foot

Twenty one samples were collected from an area 500m by 500m centred on the iron stained lower reaches of Hydroxide Creek. Sample locations were preplanned and are shown as numbered dots on the accompanying drawings. The grid was planned to minimize the number of samples required but to demarcate the extent of suspected mineralization and to determine its strike direction. Nearly all samples were collected from their initially planned locations except that, because of lack of remaining daylight, only two were collected from the west side of the Hay River.

Sample Collection and Measurement

Soil samples of about 50 g were collected with a 50 mm diameter soil auger from just below the organic layer and placed in a Kraft paper soil sample bag. A record was made of the soil type and colour. Each collection site was marked by a blazed tree or, where there were no trees, by flagging tape.

In a make shift laboratory back in Yellowknife one teaspoon (about 2.5 g) of the "soil" was agitated by hand for two minutes with 50 ml of distilled water to make a slurry. The pH was measured with a Milwaukie MW 102 pH/temperature meter with automatic temperature compensation. Conductivity and temperature were measured with an Omega PHH 7200 instrument.

In order to emphasize contrasts pH readings were converted into hydrogen ion Concentrations $[H^+]$ using the relationship:

$$[H^+] = 10^{-pH}$$

Instead of using absolute values as determined above hydrogen ion concentration was expressed more conveniently as nanoequivalents per litre (nEq/L) by multiplying the absolute value by 10^9.

Quality Assurance and Quality Control

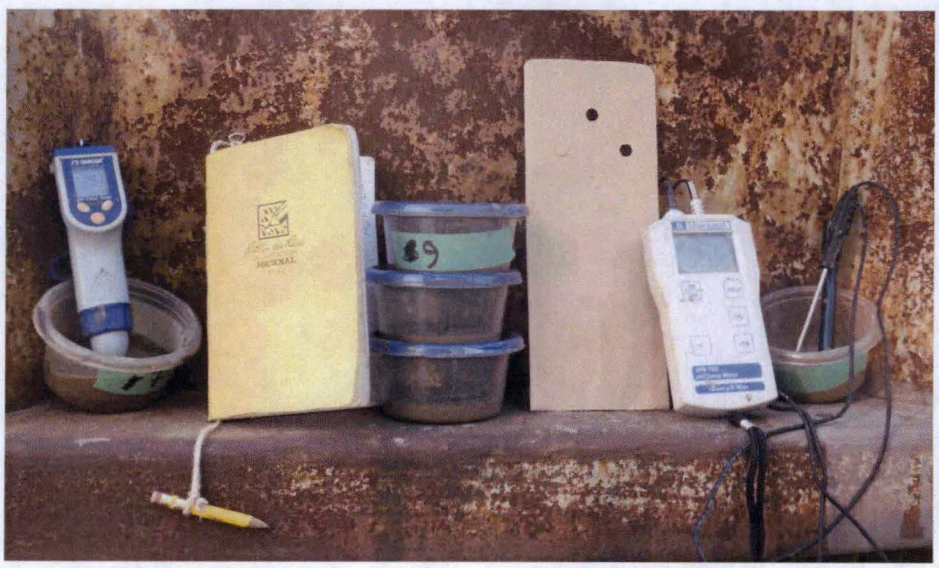
As a QA/QC check two samples, (numbers 03 and 17) were re-measured. Both pH and conductivity values were the same or almost the same between the first and duplicate samples as can be seen from Table 1.

Presentation of Results

To assist the reader Drawing 2 reproduces data from the 2012 geochemical surveys. Water and sediment samples from "Hydroxide Creek" will be seen to be anomalously high in a number of elements.

Drawings 3 and 4 present the pH (hydrogen ion concentration) and conductivity data in the form of contour maps and as a cross section in Drawing 5. Drawing 6 is a composite map showing all the results in a concise but simplified form.

Photograph 1 Isaiah Modeste collecting soil sample



Photograph 2 Soil pH and conductivity measuring equipment

4 DISCUSSION OF RESULTS AND RECOMMENDATIONS

1. The discovery of a second iron stained creek associated with coincident pH and conductivity anomalies some 250m southwest of Hydroxide Creek is significant.
2. There is a well-developed pH anomaly immediately to the northeast of Hydroxide Creek together with a smaller conductivity anomaly offset about 50m to the northwest. The pH anomaly is strong over a strike length of 200m and is traceable for a total length of some 300m
3. The pH anomalies trend, somewhat discontinuously, over a total strike length of about 650m sub-parallel to the southeastern bank of the Hay River.
4. In view of the information assembled about the Hydroxide Creek location in years 2011, 2012, and the current year 2014, further serious exploration work is justified.
5. It would be desirable to drill a -45^{o} diamond drill hole some 200m in length, collared near sample site 08. This should be drilled in a northwesterly direction to intersect maximum pH and conductivity values. Deep overburden can be expected.
6. Alternatively further geophysics could be done before drilling. A grid could be established with a base line about a kilometre in length in a northeast – southwest direction roughly parallel to the bank of the Hay River. The most appropriate types of surveys have yet to be determined.
7. Access from Highway 35 for geophysics and drilling would be easier in winter when the ground and river are frozen.

5 REFERENCES

Nickerson, D. 2012: Results of a stream water and stream sediment geochemical survey conducted in northern Alberta (NTS 84 N), summer of 2011. Assessment Work Report filed with the Coal and Mineral Development Unit, Department of Energy, Government of Alberta October 21, 2013

Nickerson, D. 2013: Report on a till, shale, spruce bark, stream water and stream sediment sampling program conducted in northern Alberta (NTS 84 N) during the summer of 2012. Assessment Work Report filed with the Coal and Mineral Development Unit, Department of Energy, Government of Alberta October 21, 2013

Paulen, R.C., Plouffe, A., Prior, G.J., McCurdy, M.W., and Friske, P.W. 2007: Cretaceous shale of northern Alberta: a new frontier for base metal exploration. Proceedings of Exploration 07: Fifth Decennial Conference on Mineral Exploration 2007 p. 1207-1213

R.A. Olson Consulting Ltd. and the Alberta Geological survey. 1994: Regional metallogenic evaluation of Alberta. AGS_OFR-1994-08

Smee, B. W. 2003: Theory behind the use of soil pH measurements as an inexpensive guide to buried mineralization, with examples. Explore Newsletter (2003). Association of Exploration Geochemists

Dave Nickerson M.Sc.

Aug 5, 2014

Photograph 3 "Hydroxide Creek" near the confluence of the Roe and Hay Rivers (2012)

TABLE 1. HYDROXIDE CREEK SOIL pH, (HYDROGEN ION CONCENTRATION) AND CONDUCTIVITY SURVEY.

STEEN RIVER PROJECT 2014

Sample collection July 20, 2014
Sample testing July 22 and 23, 2014

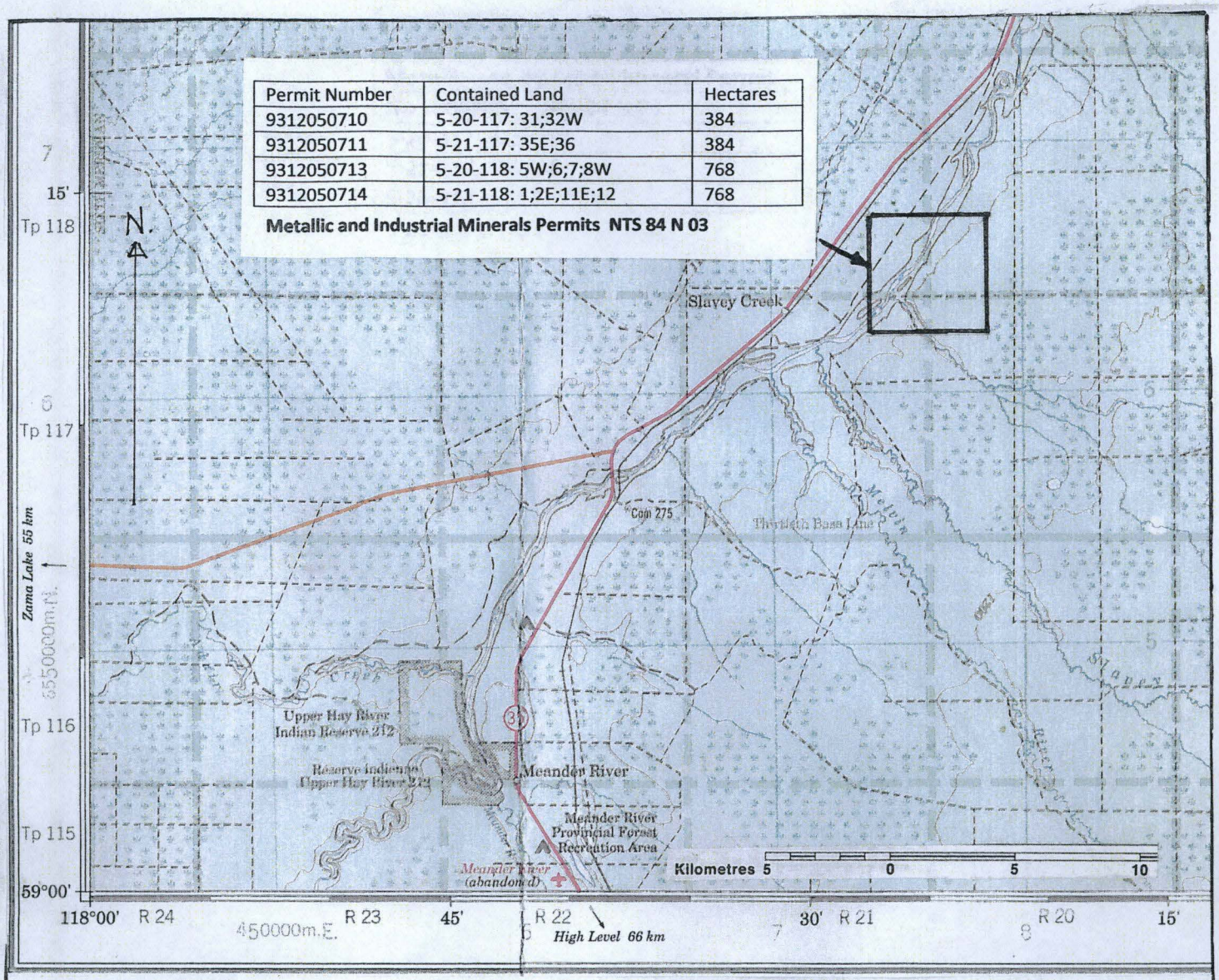
UTM uses NAD 27 (Canada) to correspond to published 50,000 scale maps of locality
Zone 11V, Full Easting 04XXXXX, Full Northing 65XXXXX

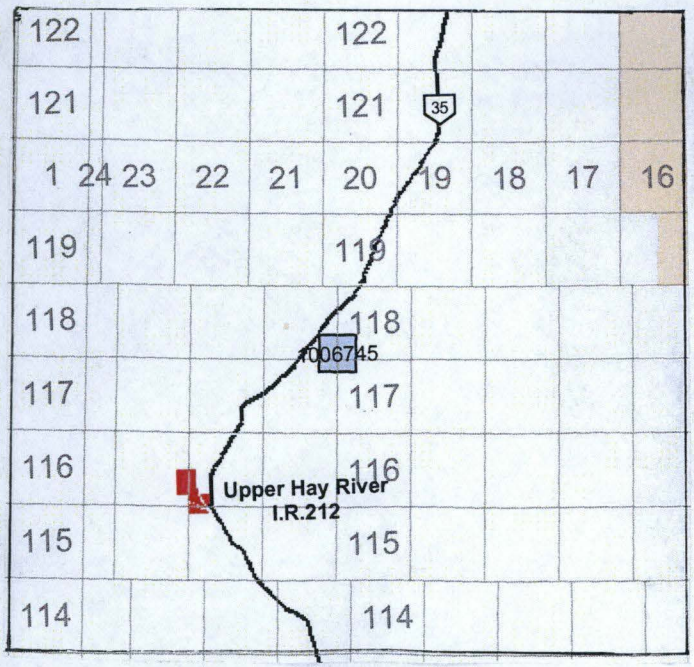
July 22, 2014

Sample No	GPS WP	Easting	Northing	Cond µS/cm	pH	$[H^+]$ nEq/L	Description	Comments
01	201	76,090	65,050	183	7.04	91	Grey Mud	East shore of Hay River
02	202	76,120	65,095	647	6.90	126	Grey Mud	East shore of Hay River
Average 03	203	76,150	65,055	120	4.30	50119	Brown Clay	
03				115	4.30			
Repeat 03				125	4.30			
04	204	76,200	65,095	92	5.60	2512	Brown Clay	
05	205	76,255	65,150	143	6.32	479	Brown Clay	
06	206	76,345	65,250	82	6.78	166	Brown/Black Clay	Small creek, clear water 2L/s. 5m SE of sample site
07	207	76,350	65,000	285	7.56	28	Brown Silt	
08	208	76,205	65,005	247	7.53	30	Brown Clay	Iron stained creek 1/2 way between sites 8 and 9
09	209	76,100	65,005	68	7.52	30	Brown Clay	
10	210	76,155	64,950	83	7.29	51	Brown Sand	
11	211	76,100	64,900	67	7.44	36	Brown Silt	
12	212	76,200	64,895	42	7.72	19	Brown Clay	On creek, clear water
13	213	76,255	64,845	99	7.63	23	Brown Clay	Between sites 13 and 14 an old NS cut line
14	214	76,350	64,750	157	7.32	48	Black Organic	No "real soil " found at this site
15	215	76,100	64,750	280	6.97	112	Brown Silt	Small creek, clear water between sites 14 and 15
16	216	75,850	64,755	214	7.04	91	Grey Mud	East shore of Hay River
July 23, 2014								
17	217	75,945	64,855	1362	6.37	427	Grey Mud	On small rusty creek near river. Expands interest area
Average 18	218	76,005	64,905	347	7.52	30	Grey Clay	
18				394	7.42			
Repeat 18				300	7.62			
19	219	76,055	64,955	372	7.45	35	Grey Clay	
20	220	76,060	65,215	205	7.85	14	Grey Silt	West shore of Hay River
21	221	75,915	65,010	297	7.60	25	Grey Mud	West shore of Hay River, River bank mud

Permit Number	Contained Land	Hectares
9312050710	5-20-117: 31;32W	384
9312050711	5-21-117: 35E;36	384
9312050713	5-20-118: 5W;6;7;8W	768
9312050714	5-21-118: 1;2E;11E;12	768

Metallic and Industrial Minerals Permits NTS 84 N 03





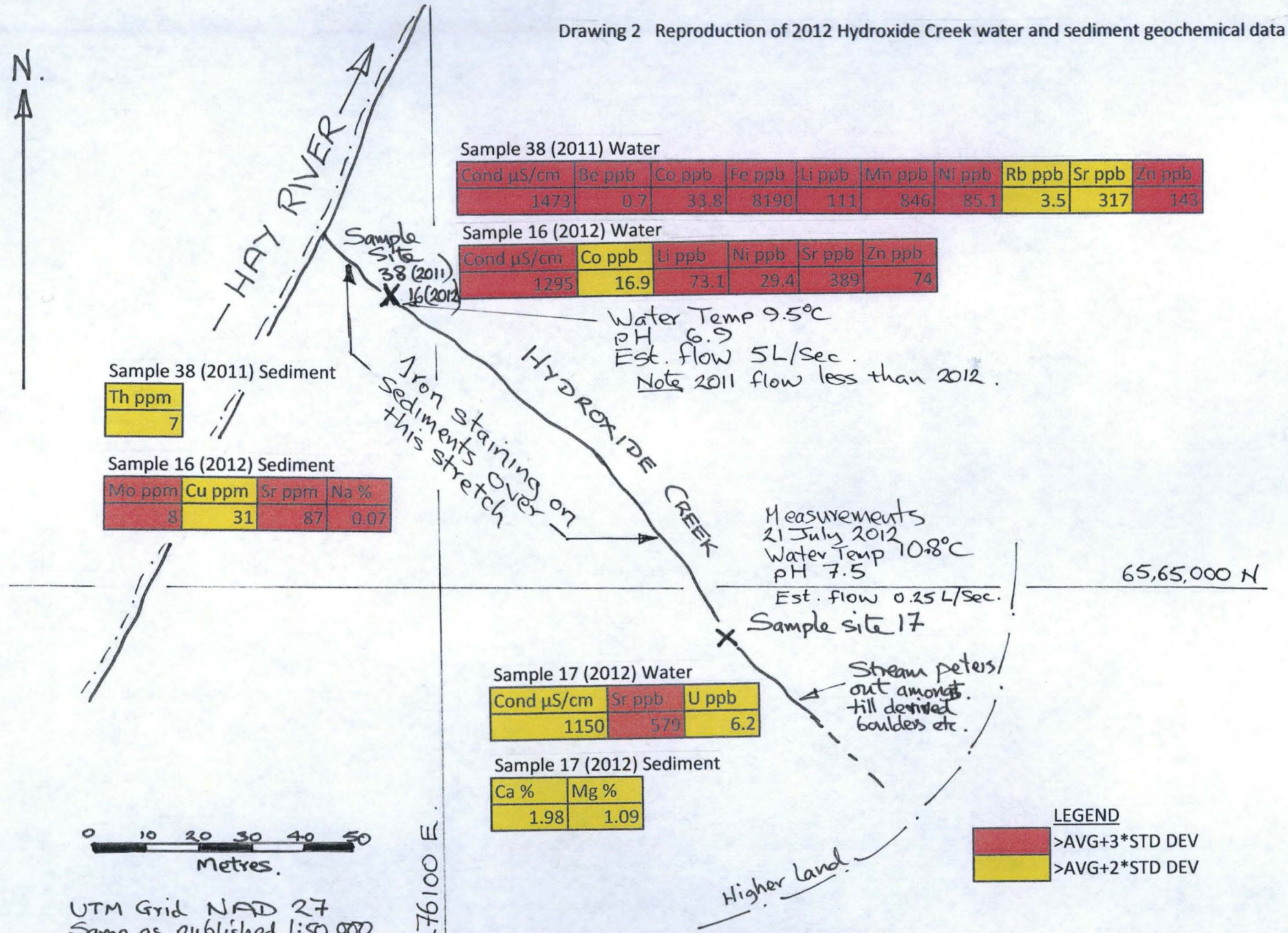
METALLIC AND INDUSTRIAL MINERALS PERMITS LOCATION AND ACCESS

Drawing 1 Metallic and Industrial Permits Location and access

From Govt of Canada and Govt of Alberta base maps

Dave Nickerson July 30, 2014

Drawing 2 Reproduction of 2012 Hydroxide Creek water and sediment geochemical data



Sample 38 (2011) Water

Cond µS/cm	Be ppb	Co ppb	Fe ppb	Li ppb	Mn ppb	Ni ppb	Rb ppb	Sr ppb	Zn ppb
1473	0.7	33.8	8190	111	846	85.1	3.5	317	143

Sample 16 (2012) Water

Cond µS/cm	Co ppb	Li ppb	Ni ppb	Sr ppb	Zn ppb
1295	16.9	73.1	29.4	389	74

Sample 38 (2011) Sediment

Th ppm
7

Sample 16 (2012) Sediment

Mo ppm	Cu ppm	Sr ppm	Na %
8	31	87	0.07

Sample 17 (2012) Water

Cond µS/cm	Sr ppb	U ppb
1150	579	6.2

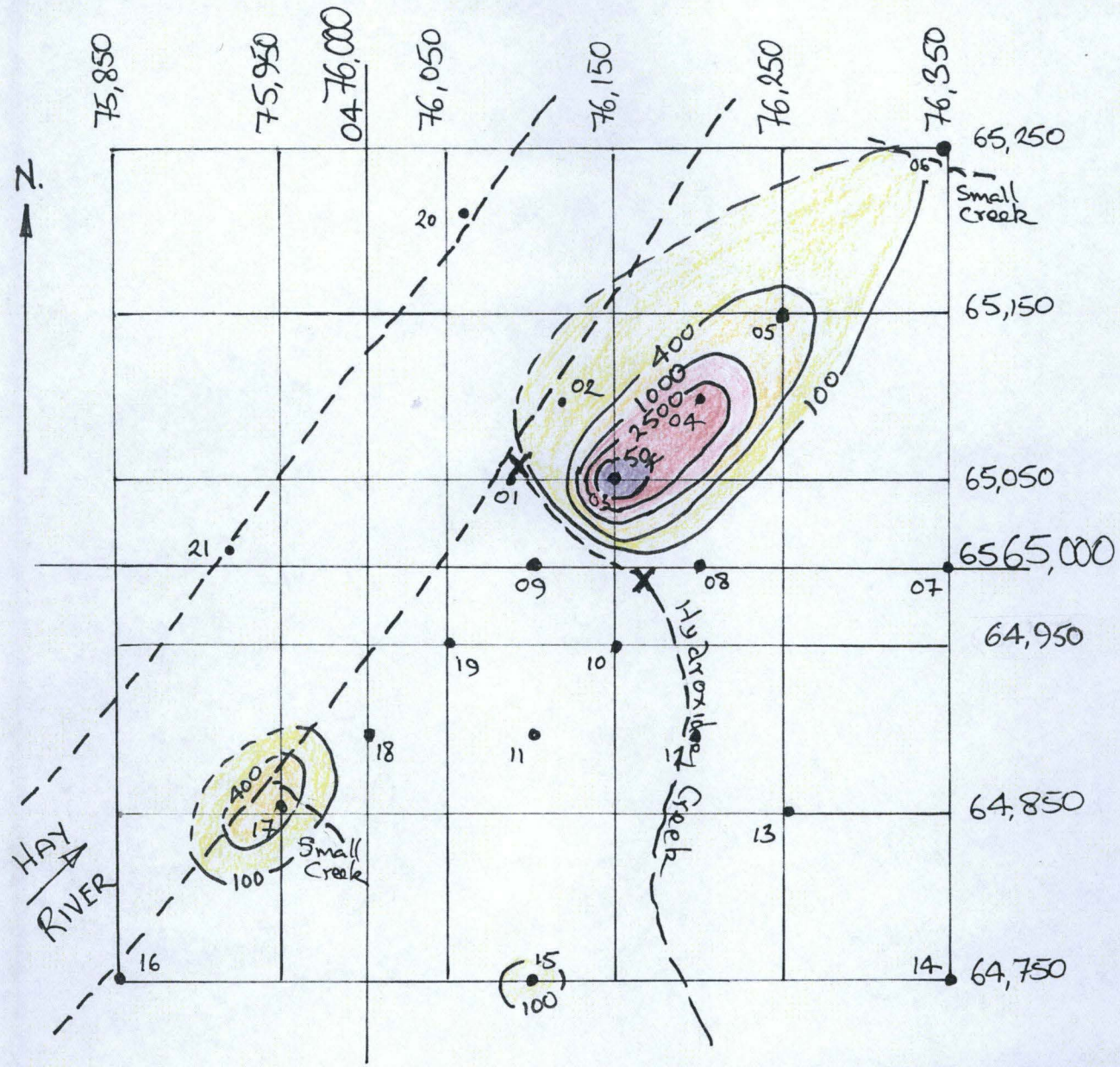
Sample 17 (2012) Sediment

Ca %	Mg %
1.98	1.09

STEEN RIVER PROJECT

HYDROXIDE CREEK - STREAM WATER AND STREAM SEDIMENT ANOMALIES

DN 10th January 2013



SOIL HYDROGEN ION CONCENTRATION SURVEY JULY 2014 HYDROXIDE CREEK

STEEN RIVER PROJECT 2014

0 100 200

metres

Contours at 100, 400, 1000, 2,500 and 50,000 n Eq/L

NAD 27 (CANADA) ZONE 11V.

UTM COORDINATES SHOWN.

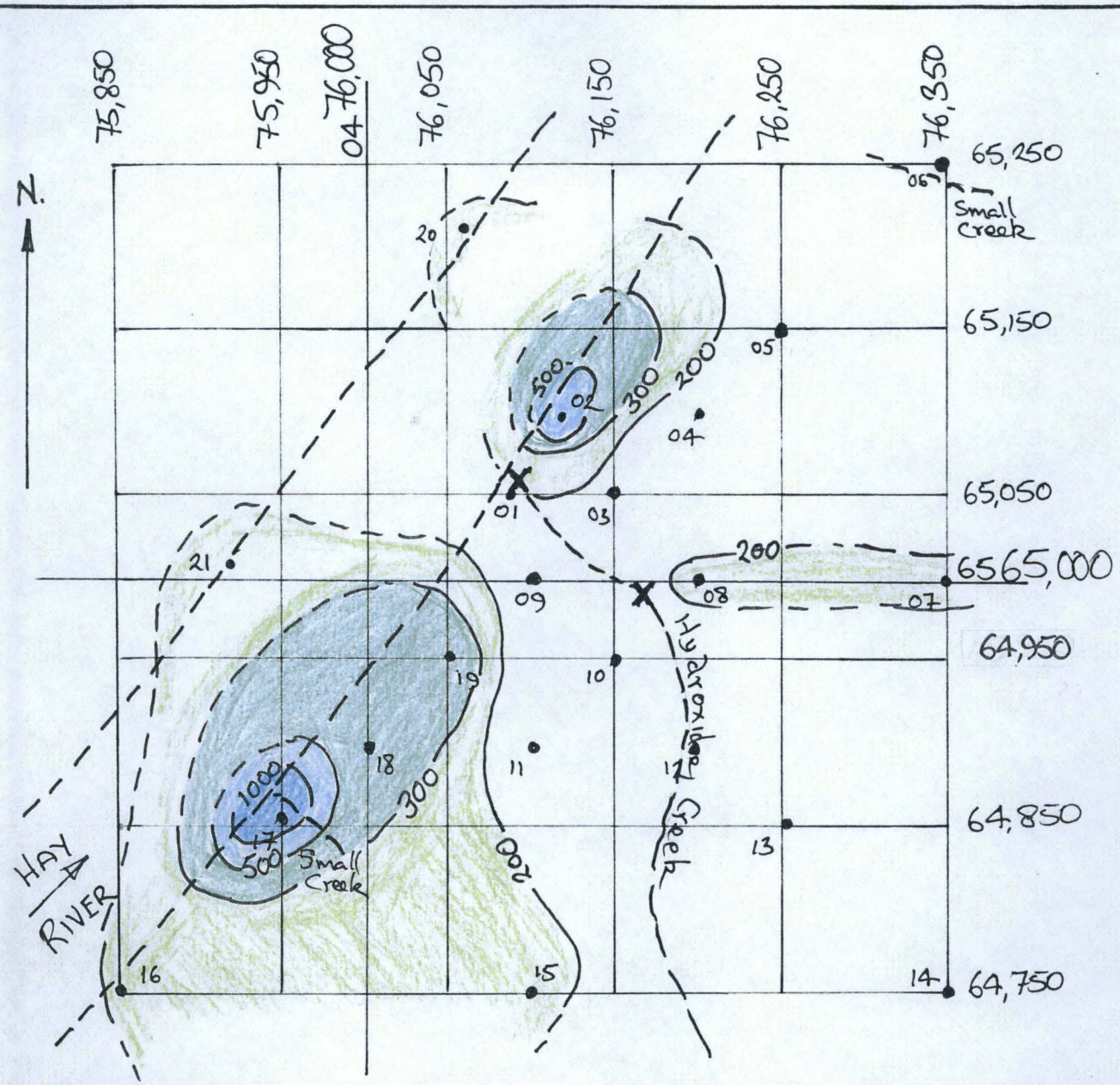
"HYDROXIDE CREEK" ALBERTA

Dave Nickerson 27th July 2014

• Soil sample site 2014

X Water, sediment sample sites of previous years
A Site 16 2012 Site 38 2011
B Site 17 2012

Drawing 3 Soil hydrogen ion concentration survey. 2014 Hydroxide Creek



SOIL CONDUCTIVITY SURVEY
HYDROXIDE CREEK
2014

Contours at 200, 300, 500 and 1000 µS/cm

STEEN RIVER PROJECT
2014

0 100 200
metres

NAD 27 (CANADA).
ZONE 11V.

UTM COORDINATES SHOWN.

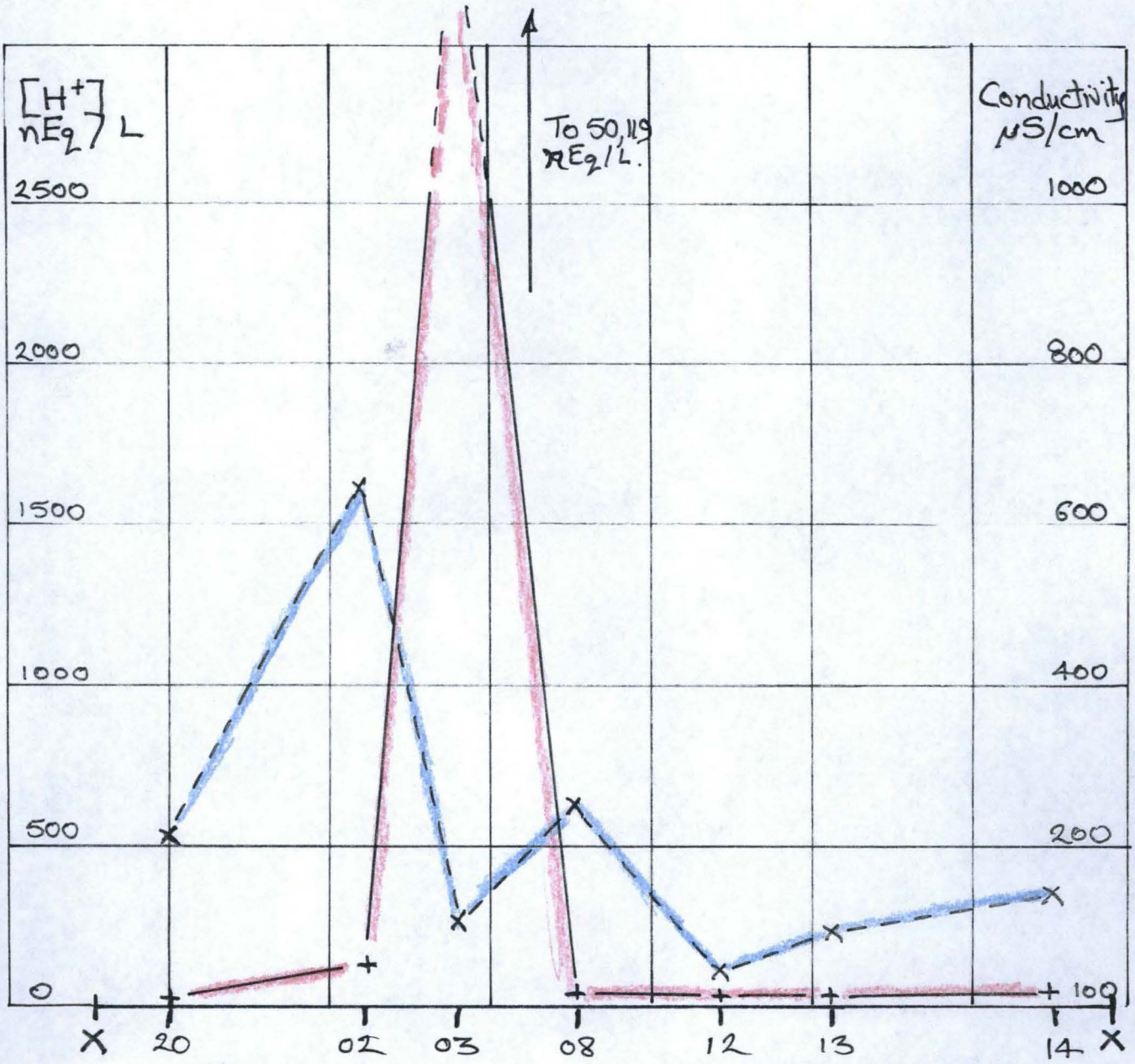
"HYDROXIDE CREEK"
ALBERTA

Dave Nickerson 27th July 2014

• Soil sample site 2014

X Water, sediment sample sites of previous years
A Site 16 2012 Site 38 2011
B Site 17 2012

Drawing 4 Soil conductivity survey. 2014 Hydroxide Creek



Sample Nº. Location projected to section line.

SOIL SURVEY JULY 2014
SECTION XX

STEEN RIVER PROJECT
2014

0 100 200
metres

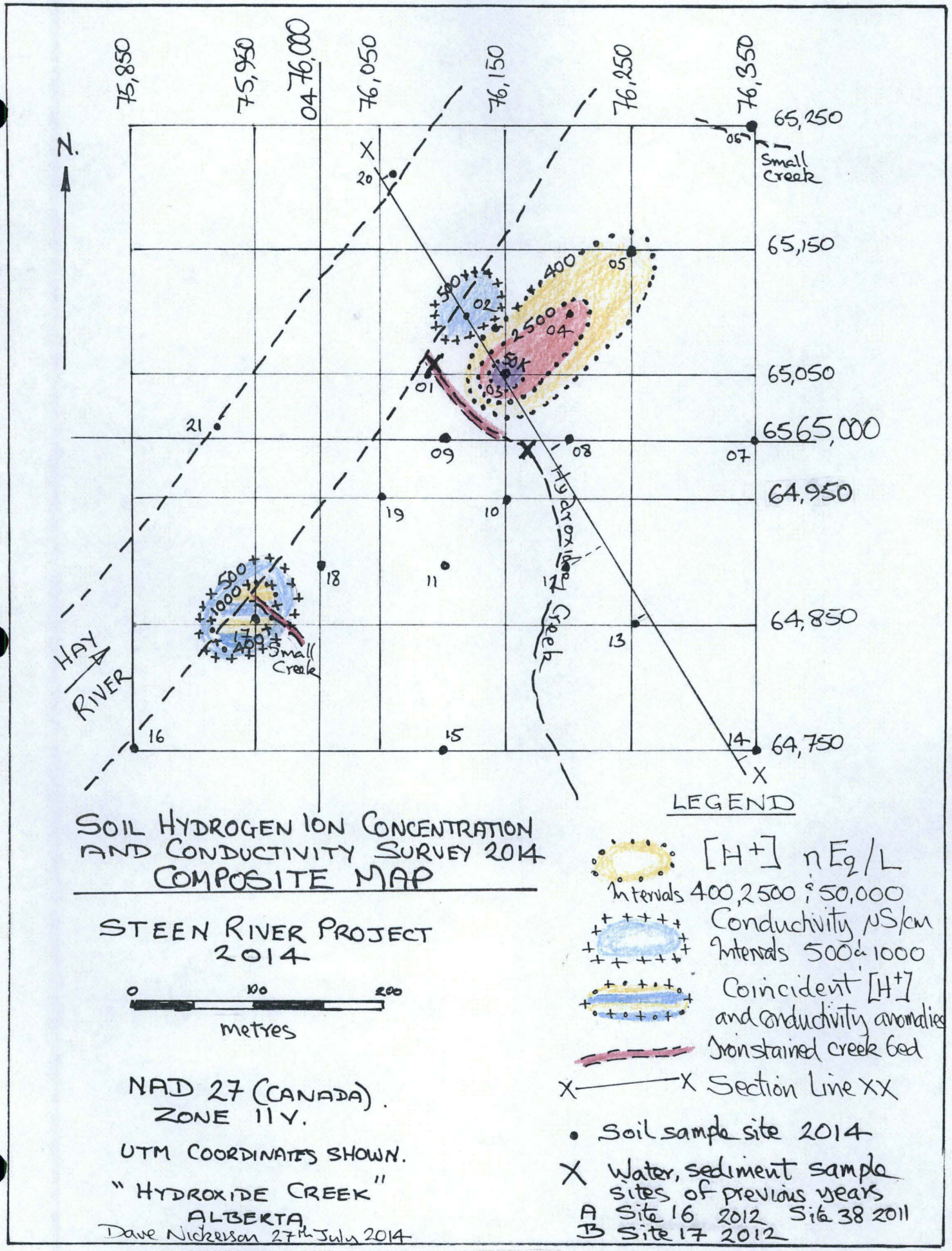
"HYDROXIDE CREEK"
ALBERTA

—x— x— Conductivity in µS/cm

—+— + Hydrogen ion concentration [H+] in nEq/L

Dave Nickerson July 26, 2014

Drawing 5 Soil survey. July 2014. Section XX



SOIL HYDROGEN ION CONCENTRATION AND CONDUCTIVITY SURVEY 2014
COMPOSITE MAP

STEEN RIVER PROJECT
2014

0 100 200
metres

NAD 27 (CANADA).
ZONE 11V.

UTM COORDINATES SHOWN.

"HYDROXIDE CREEK"
ALBERTA

Dave Nickerson 27th July 2014

Drawing 6 Soil hydrogen ion and conductivity survey 2014. Composite map