



2012 Annual Report on Vale Exploration Canada Inc. Southampton Project Nunavut Water Board Licence No. 2BE-SIP1117

Part B, Item 2

Vale Exploration Canada's (VEC) 2012 field program for its Southampton project consisted of an approximate four week ground-based geophysical survey conducted during April and May and an approximate six week diamond drill program which took place in July-August of that year. All field crew and personnel for these projects were based out of the community of Coral Harbour and were transported back and forth to site daily via helicopter; no exploration camp was erected on site during these programs. The project area was located approximately 65km to the northeast of Coral Harbour (Figure 1).

a.) There was no water usage at site for the geophysical program conducted in April and May. During the diamond drilling program, water was used as part of normal drilling operations. Below is a summary of the water use for that project (Table 1).

No waste products were generated at site during the geophysics program. Waste created during the drilling program consisted of drill cuttings; a fine grained, grey silty material. These cuttings were contained at site in sumps and then buried at the conclusion of the drill program. All other waste, including garbage, scrap metal and fuel were safely transported back to Coral Harbour and disposed of in the correct manner or transported off of the island. Water usage values are approximate, based on the average use of 45 liters of water per minute. The water source for the drilling was the meandering Mathiassen River, located roughly 2.5km north of the drill area.

Table 1: Water use during the 2012 season.

<u>Date</u>	<u>Usage (m³)</u>	<u>Comments</u>
July 5 th	0	Mobilization to town
July 6 th	0	Mobilization to town
July 7 th	0	Mobilization to site
July 8 th	0	Mobilization to site
July 9 th	0	Mobilization to site
July 10 th	0	Mobilization to site
July 11 th	0	Setting up drill
July 12 th	64.8	Casing
July 13 th	64.8	Drilling
July 14 th	64.8	Drilling
July 15 th	64.8	Drilling



July 16 th	0	Weather delays
July 17 th	64.8	Drilling
July 18 th	64.8	Drilling
July 19 th	64.8	Drilling
July 20 th	64.8	Drilling
July 21 st	64.8	Drilling
July 22 nd	64.8	Drilling
July 23 rd	64.8	Drilling
July 24 th	64.8	Drilling
July 25 th	0	Mechanical breakdown
July 26 th	0	Mechanical breakdown
July 27 th	0	Mechanical breakdown
July 28 th	0	Mechanical breakdown
July 29 th	0	Mechanical breakdown
July 30 th	0	Mechanical breakdown
July 31 st	64.8	Drilling
August 1 st	64.8	Drilling
August 2 nd	64.8	Drilling
August 3 rd	64.8	Drilling / Tear down
August 4 th	0	Demobilization to town
August 5 th	0	Demobilization to town
August 6 th	0	Demobilization to town
August 7 th	0	Reclamation of site

b.) No unauthorized discharges took place during the 2012 field program.

c.) In May 2012, VEC was granted water use licence 2BE-SIP1117 which was an amendment to its previous licence 2BE-SIP1114. This amendment, among other things, allowed for a change in the amount of water usage on site per day. The Spill Contingency Plan and the Abandonment and Restoration Plan were revised to reflect the changes to the amended water licence and were provided to the Nunavut Water Board in February of 2012. Both of these revised plans can be found at the end of this report as an addendum.

d.) Diamond drill hole SMP-SMPN-DH00001 was the only drill site on the project and was located at latitude 64° 38' 9.675" N and longitude 82° 55' 58.713" W (UTM: NAD 83, Zone 17, 407620E and 7169300N). This was the only drill site that required reclamation. Very minor reclamation work was completed at the water pump site located at latitude 64° 39' 29.338" N and longitude 82° 56' 3.176" W (UTM: NAD 83, Zone 17, 409636E and 7171767N) (Figure 2).



The diamond drill was mobilized to site between July 7th and 11th and was located at site between the dates of July 12th and August 7th with periodic drilling occurring throughout; mechanical breakdown and severe weather caused numerous drilling delays. The drill was demobilized from site between August 3rd and 7th. All fuel required for the drill and water pumps, including diesel, gasoline and hydraulic oil were placed in a protective berm at site and accompanied by a spill kit. Drip and catch pans were placed beneath the engine of the drill as well as beneath the water pumps as a safe measure. Drill cuttings were diverted into natural sumps within the land, crevices between rocks and in small hand dug sumps located at the drill site. All of the drill cuttings were confined to the drill site area.

Upon completion of the project the drill along with all of its components were transported back to Coral Harbour via helicopter, leaving nothing behind at the drill or pump sites. The sites were left in very good condition with only minor, small garbage items left behind at both sites, and the uncovered sumps and cuttings remaining at the drill site. Vale personnel then began the cleanup and reclamation of the sites. First, all of the garbage that remained at the sites were picked up, flown back to Coral Harbour and properly disposed of. The remaining cuttings that were left at surface were then hand shoveled, placed in small hand dug sumps and buried. Finally, all other sumps at site were buried and the site was contoured back to its original state; the site was left as close as possible to its original state. At the water pump site, minor garbage was picked up restoring it to its original state. Below are photos of the drill and water site during, pre, during and post operation.

- e). No artesian flows were encountered during the 2012 drill program.
- f). Water usage for the drill is based on the number of liters per minute that the water pump ingests. For a 24 hour drilling period, it is estimated that the total water consumption was 64.8 cubic meters.

Drill core for the program was sampled at site and all remaining core were cross stacked and left at site at latitude 64° 38' 6.565" N and longitude 82° 56' 9.191" W (UTM: NAD 83, Zone 17, 407478E, 7169208N). All other material was removed from this site.

The water intake hose for the water pump was equipped with a mesh screen. No alterations were made to the land and river banks near the water pump site and fuel for the pump was stored 31 meters away from the high water mark in a small fuel berm accompanied by a spill kit. No waste material of any kind entered into the water source.

The drill hole for this program was approximately 2.5km away from the water pump site and approximately 600m away from the nearest water body; a small stream to the east formed from snow melt run-off. Permafrost was encountered in the drill hole at a depth of 4-5m below surface. Casing for the drill hole was cut off just below the surface. It was then plugged and buried. Casing could not be removed from the ground as the engine of the drill broke and no longer had any power.

All restoration work of the site followed the “Southampton Island Project Closure and Restoration Plan” which was approved by the Nunavut Water Board when the permit was granted.

g). All other details have been covered in sections **a** through **f** of this report. All details that would be included in Vale’s Closure and Restoration Plan, Section 3.2.7 have been met and documented in this report.

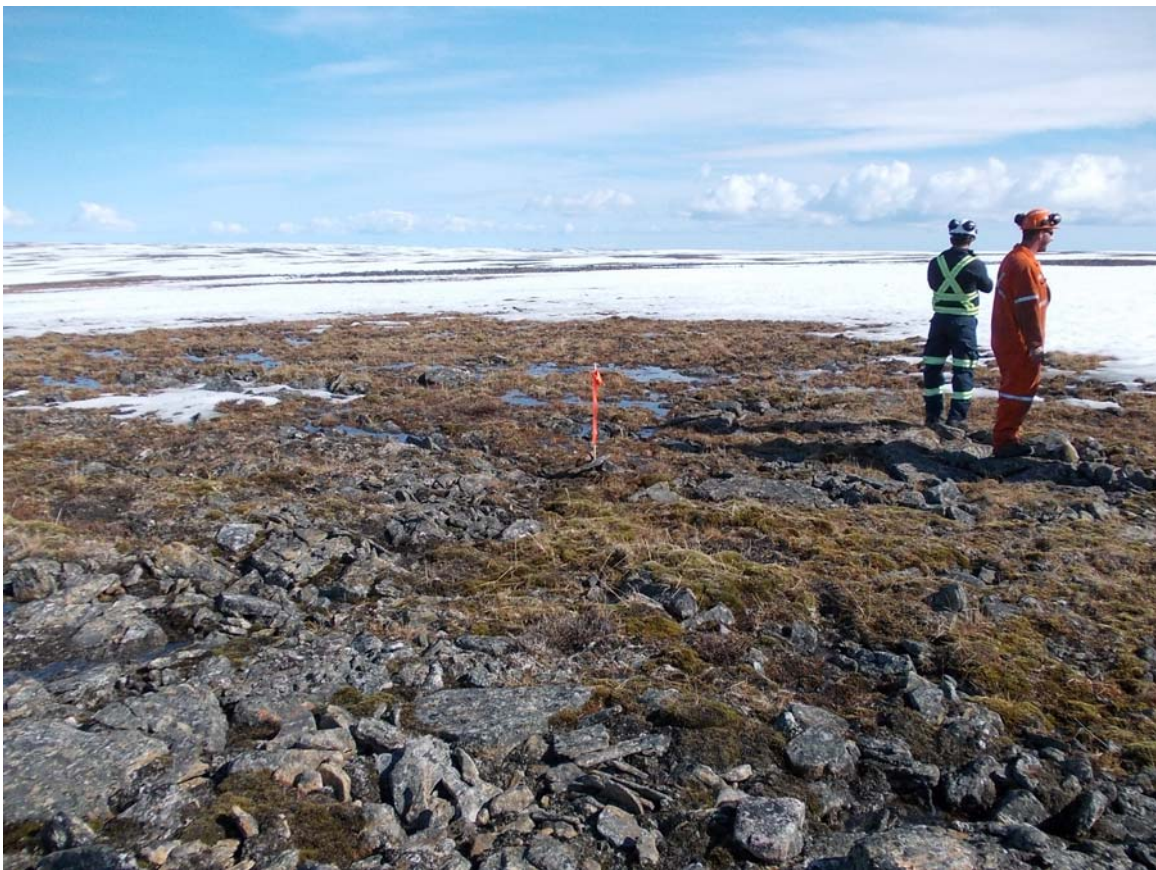


Photo 1: Drill site, pre operation. View towards the northeast, picket marks the collar location for the drill.

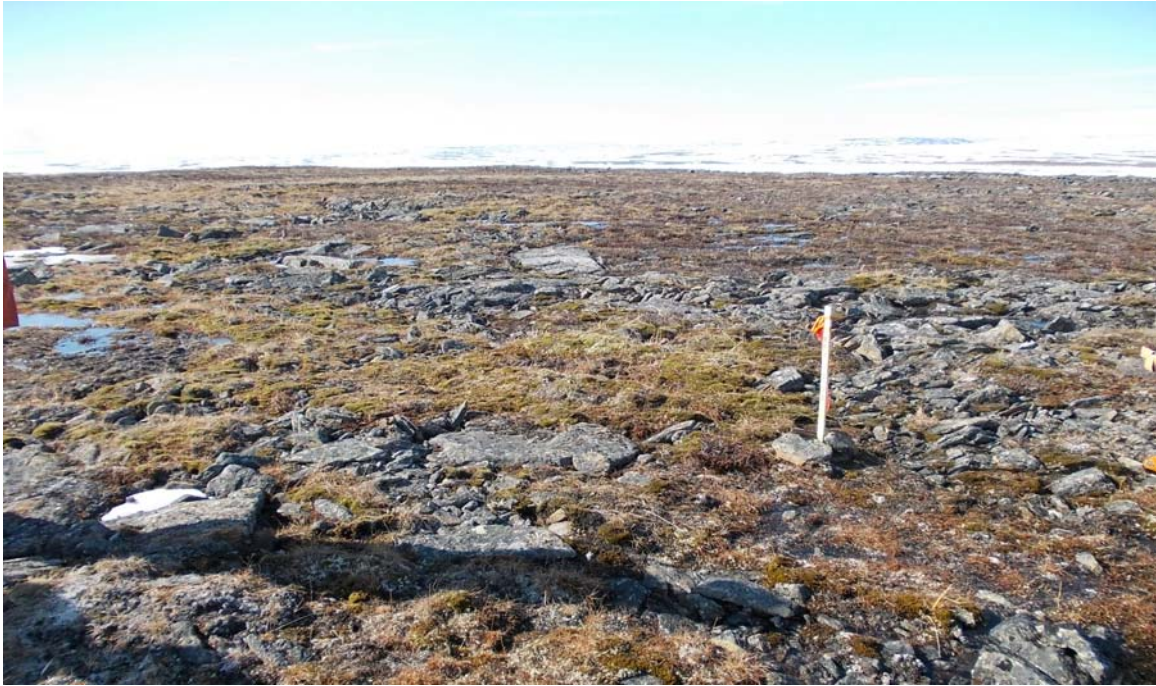


Photo 2: Drill site, pre operation. View looking northwest, picket marks the drill location.



Photo 3: The drill during operation. View towards the east.



Photo 4: Drill site after reclamation. View towards the east. Sump is buried along with remaining cuttings.



Photo 5: Drill site, post operation. View towards the south, sump has been buried in lower right hand corner.

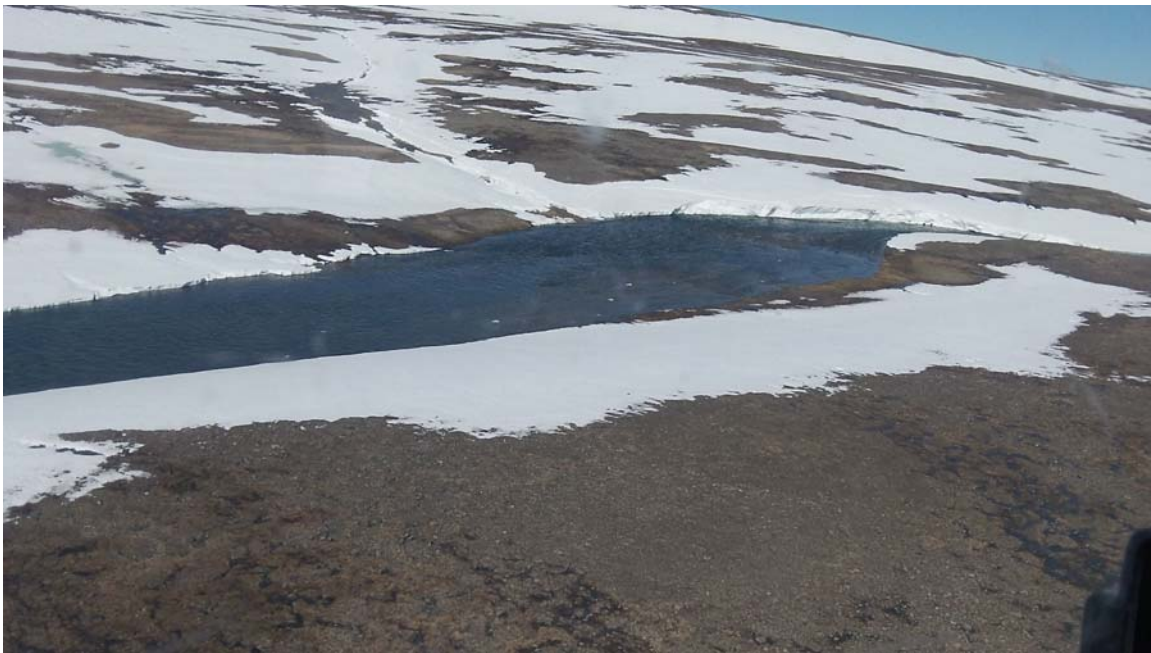


Photo 6: Water pump site, pre operation. View towards the north. The pump would be situated near the snow line on the southern side of the brook.



Photo 7: Pump site, during operation. View from helicopter towards the east.



Photo 8: Pump site, post operation. View towards the north, garbage bag marks the pumps location.



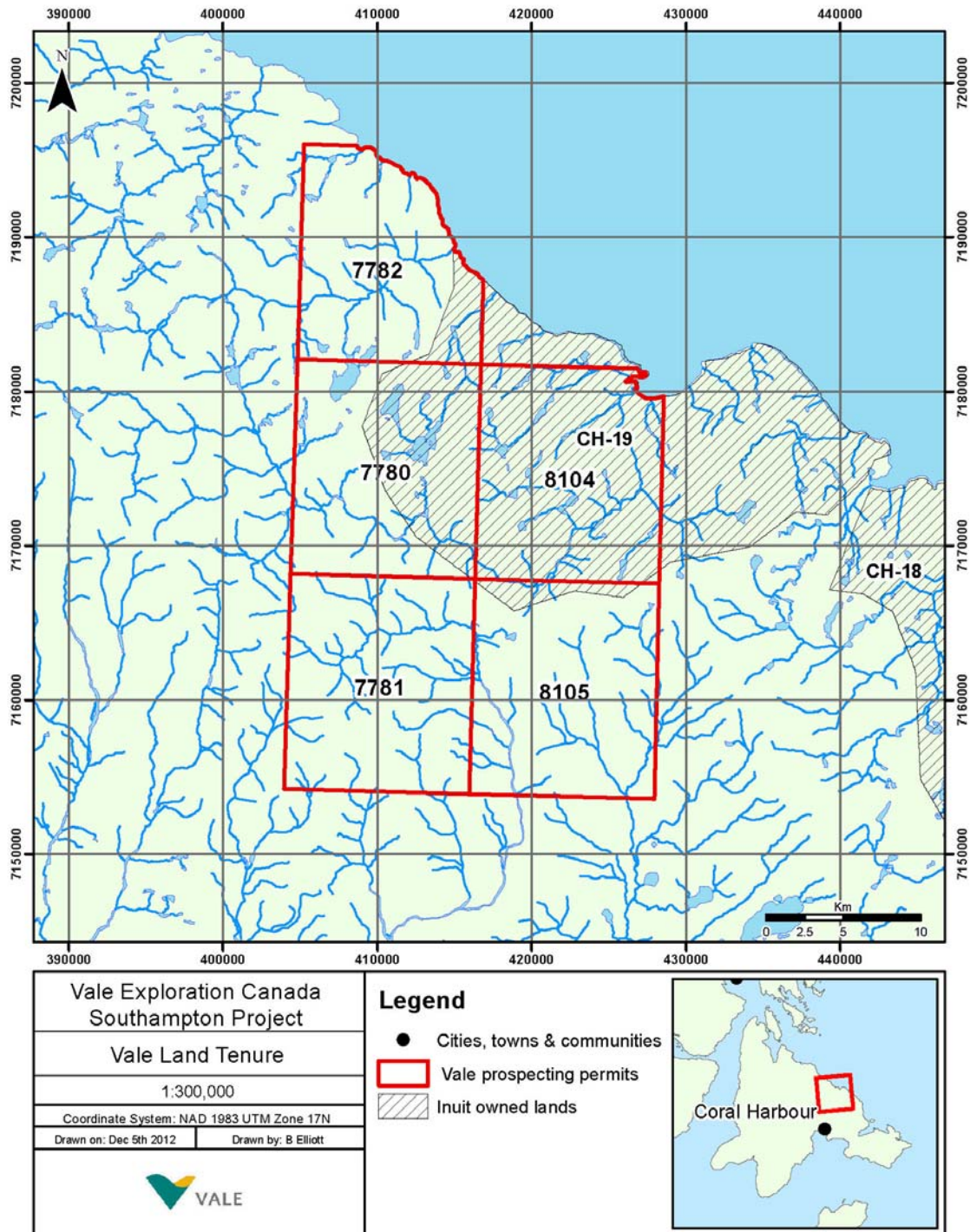


Figure 1: Location map for Vale's Southampton Project.

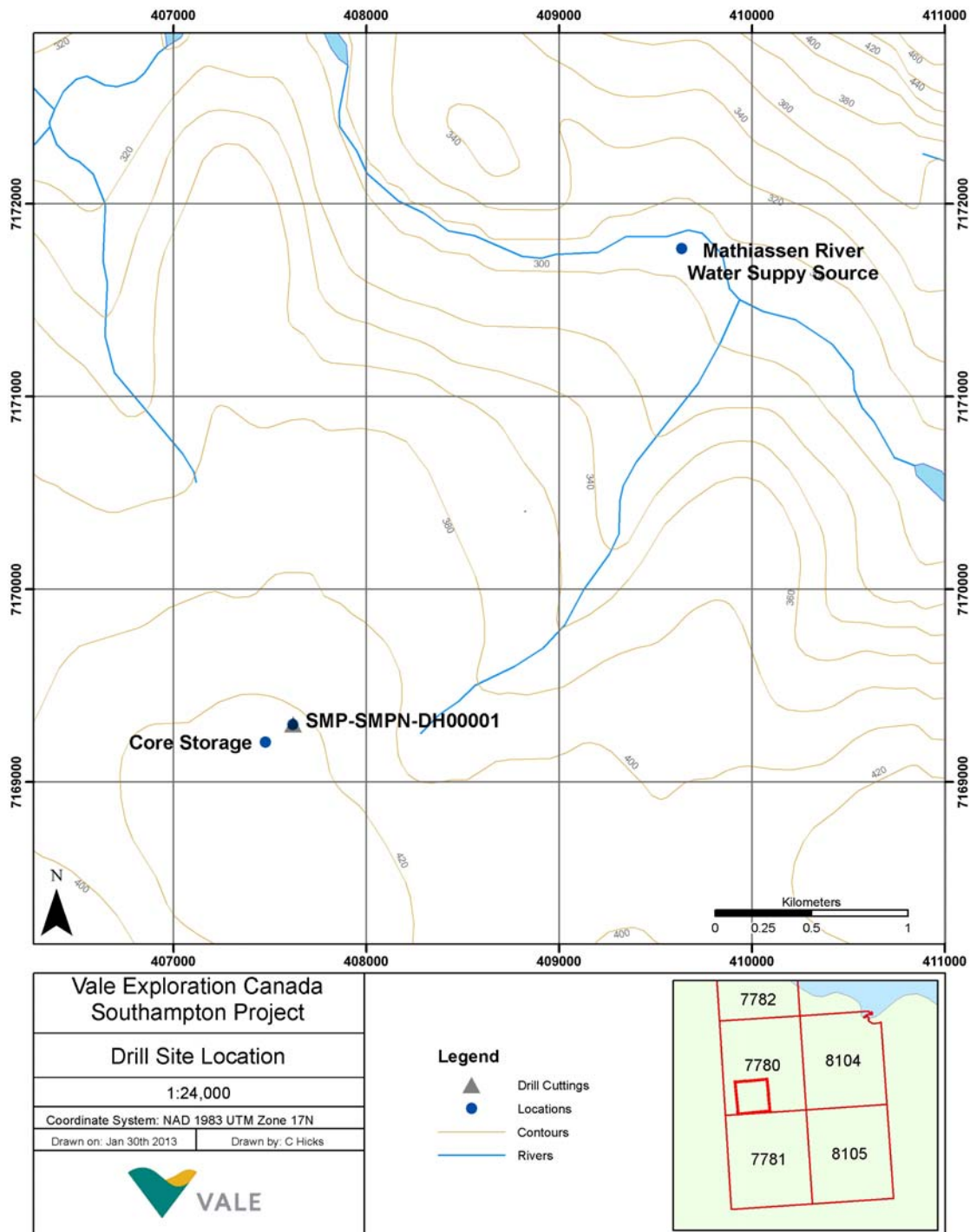


Figure 2: Site location map for the drill hole SMP-SMPN-DH00001, core storage, water source and the cuttings location.