

HERITAGE GAS LIMITED

**PICTOU COUNTY PREFERRED PIPELINE
COMPREHENSIVE ARCHAEOLOGICAL ASSESSMENT
PICTOU COUNTY, NOVA SCOTIA**

**2013 ARCHAEOLOGICAL
ASSESSMENT REPORT**

Submitted to:
Heritage Gas Limited
and the
Special Places Program

Prepared by:
Cultural Resource Management Group Limited
6040 Almon Street
Halifax, Nova Scotia
B3K 1T8

Consulting Archaeologist: Robert H. J. Shears
Report Preparation: Robert H. J. Shears

Heritage Research Permit Numbers: A2013NS050;
A2013NS051; and, A2013NS052

CRM Group Project Number: 2012-0018-04

JUNE 2013



*The following report may contain sensitive archaeological site data.
Consequently, the report must not be published or made public without
the written consent of Nova Scotia's Coordinator of Special Places Program,
Department of Communities, Culture and Heritage.*

TABLE OF CONTENTS

	Page
LIST OF FIGURES	iii
LIST OF PLATES	iii
1.0 INTRODUCTION	1
1.1 2012 Archaeological Screening and High-Level Reconnaissance	1
1.2 2013 Archaeological Reconnaissance and Screening of the Preferred Route	1
1.3 2013 Archaeological Shovel Testing of Locations of Archaeological Sensitivity	2
2.0 STUDY AREA	4
2.1 2012 Archaeological Screening and High-Level Reconnaissance	4
2.2 2013 Archaeological Reconnaissance and Screening of the Preferred Route	4
2.3 2013 Archaeological Shovel Testing of Locations of Archaeological Sensitivity	4
3.0 METHODOLOGY	5
3.1 2012 Archaeological Screening and High-Level Reconnaissance	5
3.1.1 Background Study	5
3.1.2 2012 High-Level Field Reconnaissance	5
3.2 2013 Archaeological Reconnaissance and Screening of the Preferred Route	5
3.2.1 2013 Focused Field Reconnaissance	6
3.2.2 2012 Background Study	6
3.3 2013 Archaeological Shovel Testing of Locations of Archaeological Sensitivity	6
3.3.1 2013 Shovel Testing	6
4.0 RESULTS	8
4.1 2012 Archaeological Screening and Reconnaissance	8
4.1.1 Environmental Setting	8
4.1.2 Native Land Use	8

4.1.3	Historic Settlement	9
4.1.4	Archaeological Potential.....	10
4.1.5	2012 Field Reconnaissance	14
4.1.6	Additional Proposed Routes – Desktop Study.....	24
4.2	2013 Focused Field Reconnaissance and Follow-Up Background Research.....	30
4.2.1	Location 1 (West Bank of Miller Brook), 2012 High Potential Area 1	35
4.2.2	Location 2 (Former Livestock Feeding Area), 2012 High Potential Area 2	36
4.2.3	Location 3 (West Bank of Middle River), 2012 High Potential Area 3.....	37
4.2.4	Location 4 (East Bank of Middle River), 2012 High Potential Area 3	39
4.2.5	Location 5 (West Bank of Begg Brook), 2012 High Potential Area 8.....	40
4.3	2013 Shovel Testing of Locations of Archaeological Sensitivity	42
4.3.1	Plateau 1 (West Bank of Miller Brook).....	42
4.3.2	Plateau 2 (West Bank of Middle River)	44
4.3.3	Plateau 3 (East Bank of Middle River).....	47
4.3.4	Plateau 4 (West Bank of Begg Brook Tributary).....	50
5.0	CONCLUSIONS AND RECOMMENDATIONS	52
6.0	REFERENCES CITED	54

LIST OF FIGURES

Figure 1:	Study Area	3
Figure 2:	Charles Morris Map	11
Figure 3:	A.F. Church Map	12
Figure 4:	Historical Atlas	13
Figure 5:	Red Route	15
Figure 6:	Magenta Route	16
Figure 7:	Blue Route	26
Figure 8:	Green Route	29
Figure 9:	Preferred Route	31
Figure 10:	Location 2 Aerial Photograph Comparison	38
Figure 11:	Site plan of shovel tests at Plateau 1 (west bank of Miller Brook)	43
Figure 12:	Site plan of shovel tests at Plateau 2 (west bank of Middle River).....	45
Figure 13:	Site plan of shovel tests at Plateau 3 (east bank of Middle River).....	49
Figure 14:	Site plan of shovel tests at Plateau 4 (west bank of Begg Brook tributary).....	51

LIST OF PLATES

PLATE 1:	West end of proposed routing	14
PLATE 2:	Eastern end of Area 1	17
PLATE 3:	Historic road alignment within Area 2	18
PLATE 4:	Middle River crossing.	19
PLATE 5:	Railroad crossing of watercourse at Area 5.....	21
PLATE 6:	Historic road alignment at Area 6.....	22
PLATE 7:	Small watercourse at Area 7	23
PLATE 8:	Historic fencing (left) and detail of barbed wire grown into tree (right).	32
PLATE 9:	Historic road or driveway, 2012 High Potential Area 1	32
PLATE 10:	Vestigial apple trees and linear stone pile in 2012 High Potential Area 2	33
PLATE 11:	Foundation near the construction corridor in 2012 High Potential Area 3.....	33
PLATE 12:	Steel cattle stanchions and modern debris within barn foundation.	34
PLATE 13:	Scattered coal along former rail bed, 2012 High Potential Area 6	34
PLATE 14:	Location 1, west bank of Miller Brook.....	36
PLATE 15:	Remnants of twentieth-century livestock feeding area, High Potential Area 2.....	37
PLATE 16:	Level plateau at Location 3, west bank of Middle River, High Potential Area 3..	39
PLATE 17:	Level plateau at Location 4, east bank of Middle River, High Potential Area 3... 40	
PLATE 18:	Ravine at Location 5, Begg Brook Tributary, 2012 High Potential Area 8.	41
PLATE 19:	Location 5, Begg Brook Tributary, 2012 High Potential Area 8.....	41
PLATE 20:	Shovel testing at Plateau 1, the west bank of Miller Brook.....	44
PLATE 21:	Shovel testing at Plateau 2, the west bank of Middle River.	46
PLATE 22:	Thickness of sediment at creek bed on the east side of Middle River	47
PLATE 23:	Shovel testing at Plateau 3, east bank of Middle River.	48
PLATE 24:	Shovel testing at Plateau 4, west bank of the Begg Brook Tributary.	50

**HERITAGE GAS LIMITED
PREFERRED PICTOU COUNTY PIPELINE
ARCHAEOLOGICAL SHOVEL TESTING 2013
PICTOU COUNTY, NOVA SCOTIA**

1.0 INTRODUCTION

Heritage Gas Limited is proposing to expand its services into Pictou County by constructing a pipeline from Limerock to Northern Pulp, a distance of roughly 18 kilometres, with a potential off-shoot going into the town of New Glasgow to be built at a later date (*Figure 1*). Four pipeline alignments were considered for the project, with one route being selected by Heritage Gas as the preferred route. In order to investigate the potential for encountering archaeological resources during any development activities, Cultural Resource Management (CRM) Group Limited was retained by Heritage Gas Limited since the Fall of 2012 to undertake several stages of archaeological assessment of the proposed routes.

In November 2012, CRM Group undertook high-level archaeological screening and reconnaissance of the four proposed pipeline routes, resulting in the identification of areas of high archaeological potential along each of these routes (Garcin 2013). Following the selection of a preferred pipeline alignment in April 2013 (Shears and Stewart 2013) CRM Group conducted focused archaeological reconnaissance and screening of the 2012 areas of high archaeological potential within the preferred pipeline route (Shears and Stewart 2013). In June of 2013, CRM Group undertook archaeological shovel testing at locations of archaeological sensitivity, identified during the April 2013 reconnaissance and screening.

1.1 2012 Archaeological Screening and High-Level Reconnaissance

The 2012 study included background research (screening) of the four proposed alignments (identified as the Red, Magenta, Green and Blue routes) and high-level reconnaissance of two of the proposed alignments (Red and Magenta). The result was the identification of high archaeological potential areas within each of the four alignments. The four alignments were then compared for overall potential impact on cultural resources.

The archaeological screening and reconnaissance was directed by Staff Archaeologist Steve Garcin with technical assistance provided by W. Bruce Stewart, CRM Group President and Senior Technical Advisor. Reconnaissance was conducted on November 22, 2012. The archaeological investigation was conducted according to the terms of Heritage Research Permit A2012NS159 (Category 'C'), issued to Garcin through the Special Places Program.

1.2 2013 Archaeological Reconnaissance and Screening of the Preferred Route

The 2012 screening and reconnaissance contributed to a more comprehensive engineering and environmental study that resulted in the identification of a preferred alignment. Nine areas of high archaeological potential were observed within the preferred alignment as part of the 2012 archaeological screening and reconnaissance. The areas of high archaeological potential represent approximately 11 kilometres of the 18 kilometre preferred alignment.

The 2013 study was comprised of two components: focused reconnaissance; and, detailed historic research. The focused reconnaissance involved pedestrian survey of the areas ascribed high archaeological potential during the 2012 study. The goal was to more clearly identify and define the areas of high archaeological potential. The detailed historical research was intended to focus on any locations of archaeological sensitivity identified during focused reconnaissance. During the focused reconnaissance, the nine areas identified in 2012 were subsequently reduced to five specific locations that were identified as being archaeologically sensitive, and thus required further investigation in advance of any construction-related ground disturbance. Based on additional background study, one of the five locations was subsequently identified as not being archaeological in nature.

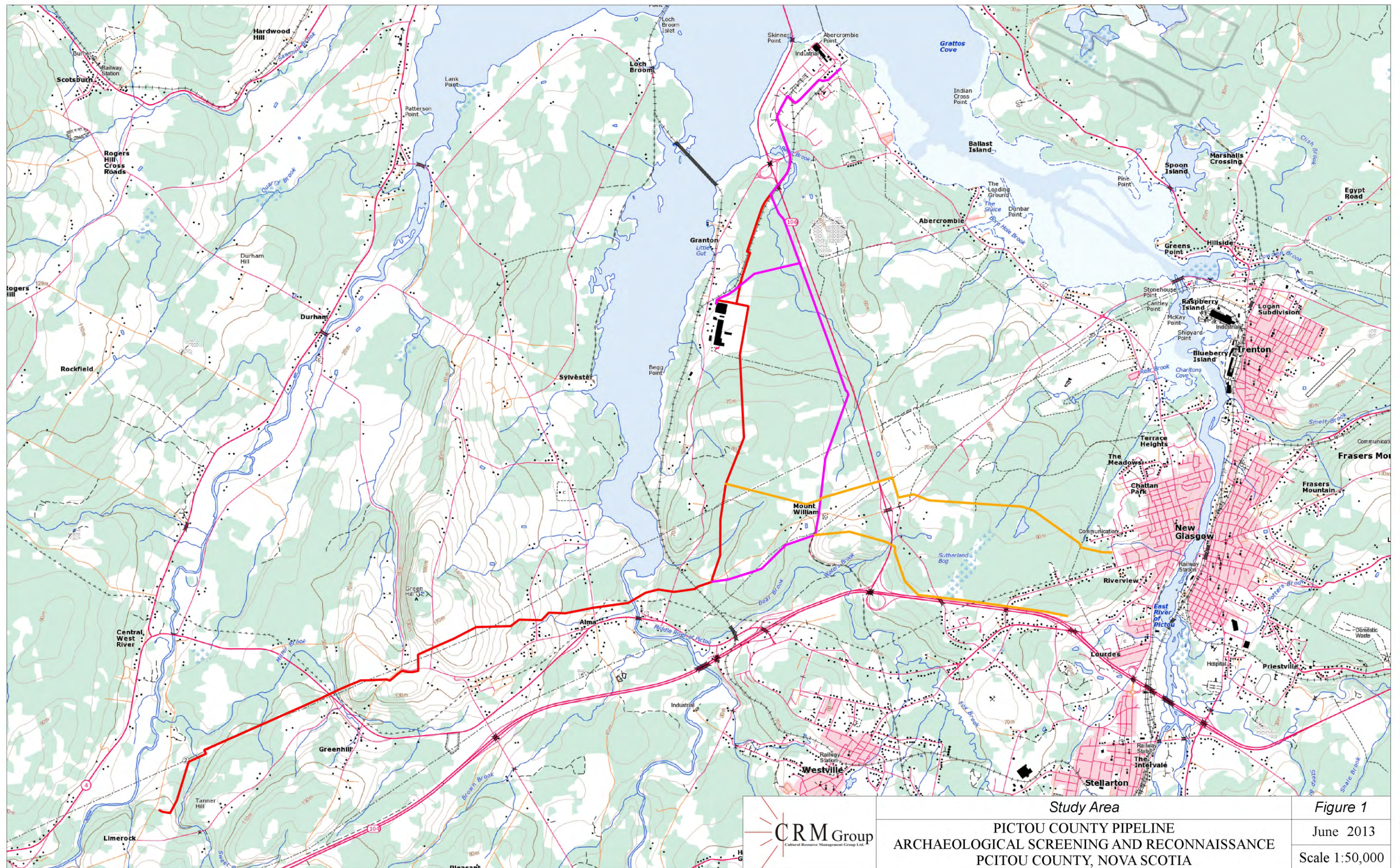
The 2013 focused archaeological screening and reconnaissance was conducted by Robert Shears with the assistance of Kathryn Stewart on April 22 and 23, 2013. Technical support was provided by W. Bruce Stewart, CRM Group's President and Senior Technical Advisor. The archaeological investigation was conducted according to the terms of Heritage Research Permit A2013NS022 (Category 'C'), issued to Shears through the Special Places Program.

1.3 2013 Archaeological Shovel Testing of Locations of Archaeological Sensitivity

Archaeological shovel testing was undertaken at the four locations of archaeological sensitivity identified within the preferred pipeline, during the 2013 focused archaeological reconnaissance and screening. Shovel testing was undertaken over a total area of approximately 2,600m² along the preferred pipeline alignment. The specific locations were as follows: the west bank of Miller Brook; the east and west banks of Middle River; and, the west bank of a tributary of Begg Brook.

The 2013 archaeological shovel testing was directed by Robert Shears with the assistance of archaeological technicians Sabrina Pichette and Emily Redden from June 17 to 19, 2013. Technical support was provided by W. Bruce Stewart, CRM Group's President and Senior Technical Advisor. The archaeological investigation was conducted according to the terms of Heritage Research Permits (Category 'C') A2013NS51 (Miller Brook), A2013NS50 (Middle River), and A2013NS52 (Begg Brook), issued to Shears through the Special Places Program.

This report describes the various stages of archaeological assessment conducted on the Heritage Gas Pictou County Pipeline project including: archaeological screening and high-level reconnaissance of the Pictou County Pipeline study area; focused archaeological reconnaissance and screening of the Pictou County Preferred Pipeline alignment; and, archaeological shovel testing at locations of archaeological sensitivity along the preferred pipeline alignment. It presents the results of these efforts and offers final cultural resource management recommendations.



2.0 STUDY AREA

2.1 2012 Archaeological Screening and High-Level Reconnaissance

The Pictou County Pipeline study area, encompassing all proposed alternate routes, extends from the West River to the East River in west-central Pictou County, paralleling sections of Highways 104 and 106 (**Figure 1**). The proposed pipeline will run from Limerock in the west to Northern Pulp, a distance of approximately 18 kilometres. The study area is bounded by the West River at Limerock and by the Middle and East Rivers at its northern and eastern extents.

2.2 2013 Archaeological Reconnaissance and Screening of the Preferred Route

As with the originally proposed pipeline routes, the preferred Pictou County pipeline alignment extends from the West River to the East River in west-central Pictou County, paralleling sections of Highways 104 and 106. The study area of the 2013 focused reconnaissance and screening encompassed the nine areas of high archaeological potential identified in CRM Group's 2012 archaeological screening and reconnaissance, totalling approximately 11 kilometres of the 18 kilometre alignment.

A planned branch of the preferred alignment, extending the pipeline to the communities of New Glasgow and Stellarton, is currently in the planning stage by Heritage Gas, but is not scheduled for construction in 2013. Two alternate routes of the New Glasgow branch were included in the 2012 high-level reconnaissance, with one area of high archaeological potential ascribed for each route. Since the New Glasgow branch is not scheduled for construction in 2013 it was not included in the 2013 focused reconnaissance of the preferred route. Archaeological assessment of the planned New Glasgow Branch is included in the results of the 2012 archaeological screening and high-level reconnaissance, but were not a part of study area of the 2013 focused archaeological reconnaissance and screening.

2.3 2013 Archaeological Shovel Testing of Locations of Archaeological Sensitivity

Archaeological shovel testing was carried out at four locations within the preferred pipeline alignment: the west bank of Miller Brook, the east and west bank of Middle River and the west bank of a tributary of Begg Brook.

Access to all potential and preferred alignments was gained from various provincial, municipal and private roads.

3.0 METHODOLOGY

3.1 2012 Archaeological Screening and High-Level Reconnaissance

In 2012, CRM Group was retained by Heritage Gas Limited to undertake high-level archaeological screening and reconnaissance of proposed pipeline routes in Pictou County. The objective of the archaeological assessment was to evaluate archaeological potential within the area that may be impacted by future development of the pipeline. To address this objective, CRM Group developed a work plan consisting of the following components: a review of relevant site documentation to develop an archaeological potential model (screening); archaeological reconnaissance of areas that may be impacted by development activities; and, a report summarizing the results of the background research and field survey, as well as providing cultural resource management recommendations.

3.1.1 Background Study

The archival research component of the archaeological screening and reconnaissance was designed to explore the land use history of the study area and provide information necessary to evaluate the area's archaeological potential. To achieve this goal, CRM Group utilized documentary resources available through various institutions including the Nova Scotia Archives, Nova Scotia Land Information Centre, the Department of Natural Resources and the Nova Scotia Museum.

The background study included a review of relevant historic documentation incorporating land grant records, legal survey and historic maps, as well as local and regional histories. Topographic maps and aerial photographs, both current and historic, were also used to evaluate the study area. This data facilitated the identification of environmental and topographic features that would have influenced human settlement and resource exploitation patterns. The historical and cultural information was integrated with the environmental and topographic data to identify potential areas of archaeological sensitivity.

3.1.2 High-Level Field Reconnaissance

The goals of the archaeological field reconnaissance were to conduct windshield and focused pedestrian surveys within each of the four proposed study corridors, to evaluate areas exhibiting high archaeological potential, to document any archaeological sites identified during the course of the background research and visual inspection, and to design and recommend strategies for the protection and preservation of those resources.

During the field reconnaissance, CRM Group archaeologists visually evaluated sections of the study corridors visible from public roads, with particular attention paid to areas identified as exhibiting high archaeological potential, in order to document any areas of archaeological sensitivity or archaeological sites. The process and results of the field reconnaissance were documented in field notes and photographs. A hand-held Global Positioning System (GPS) unit was used to record UTM coordinates for all survey areas.

3.2 2013 Focused Archaeological Reconnaissance and Screening of the Preferred Route

In 2013, CRM Group was retained by Heritage Gas Limited to undertake focused archaeological reconnaissance and screening of its preferred pipeline route in Pictou County following the 2012 high-level archaeological screening and reconnaissance. The objective of the focused reconnaissance was to evaluate archaeological potential within nine areas of high archaeological potential along the preferred pipeline alignment identified in the 2012 reconnaissance. To address

this objective, CRM Group developed a work plan consisting of the following components: focused archaeological reconnaissance of areas exhibiting high archaeological potential within the preferred alignment; a more detailed review of relevant documentation for any sites identified during the course of the focused field reconnaissance; and, the preparation of a Heritage Research Permit report summarizing the results of the fieldwork and background research, as well as recommendations for the management of identified archaeological resources or areas deemed to exhibit high archaeological potential.

3.2.1 2013 Focused Field Reconnaissance

The goals of the 2013 focused archaeological field reconnaissance were to conduct a pedestrian survey of the high potential areas within the preferred pipe alignment, to identify and document specific locations of high archaeological sensitivity or archaeological sites during the visual inspection, and to design a strategy for the management of those resources.

During the 2013 focused field reconnaissance, CRM Group archaeologists visually evaluated the nine areas of high archaeological potential (High Potential Areas 1-9) identified during the 2012 high-level archaeological screening and reconnaissance. The goal was to more accurately identify and define any locations of archaeological sensitivity or archaeological sites. The planned construction footprint consists of a 20 metre wide corridor, made up of a 15 metre permanent easement and a 5 metre wide work area. The archaeologists walked distinct transects within the alignment to maximize coverage within the proposed corridor. The process and results of the field reconnaissance were documented in field notes and photographs. Two hand-held Global Positioning System (GPS) units were used to record track logs and UTM coordinates for all points of interest within the survey areas.

3.2.2 2013 Background Study

In the event that archaeological resources were identified during the course of the field reconnaissance, CRM Group staff reviewed historical settlement and development patterns within that specific section of preferred pipe alignment. This more focused background study included a review of relevant documentation available through Nova Scotia Archives, the Nova Scotia Land Information Centre and the Nova Scotia Museum. Research focused on identification of the original land grants, historic maps and local/regional histories that provide further insight into the potential significance of any identified resources. Topographic maps and aerial photographs, both current and historic, were also used in the archaeological evaluation of the impact area.

3.3 2013 Archaeological Shovel Testing of Locations of Archaeological Sensitivity

In 2013, CRM Group was retained by Heritage Gas Limited to undertake archaeological shovel testing at locations of archaeological sensitivity within its preferred pipeline route. The objective of the shovel testing program was to test for the presence/absence of archaeological resources at four locations of archaeological sensitivity within the preferred pipeline alignment. To address this objective, CRM Group developed a work plan consisting of the following components: archaeological shovel testing of locations of archaeological sensitivity within the preferred alignment; and, the preparation of Heritage Research Permit reports summarizing the results of the shovel testing programs, as well as recommendations for the management of identified archaeological resources.

3.3.1 2013 Shovel Testing

Shovel tests averaging 40 centimetres in diameter were dug in a staggered grid pattern at five metre intervals at the four identified locations of archaeological sensitivity. The shovel tests were dug through the topsoil into subsoil. All excavated soil was screened through six millimetre wire

mesh in order to standardize artifact recovery from within the excavated soil. Shovel test locations were recorded using tape measurements from established baselines. Field documentation included photography and field notes. In the event that artifacts were identified during the excavation of a shovel test, the digging was halted temporarily to allow recovery of the artifacts and documentation of their context. Unless indications of a grave were noted, digging would resume in order to ensure that the shovel test penetrated through the cultural deposit and into undisturbed subsoil. The artifacts from each shovel test were bagged independently and documented accordingly. The location of shovel tests that were positive for artifacts were recorded with GPS technology and once backfilled, were identified with blue flagging tape labeled with the shovel test coordinates.

4.0 RESULTS

The following is an overview of the conditions and findings of the 2012-2013 archaeological assessment of the Pictou County Pipeline Project, specifically the 2012 screening and high-level reconnaissance, the 2013 focused archaeological reconnaissance and screening and the 2013 archaeological shovel testing program.

4.1 2012 Archaeological Screening and Reconnaissance

The following discussion details the environmental and cultural setting of the study area (screening) as well as results of the 2012 high-level archaeological reconnaissance of the four proposed pipeline alignments (Red, Magenta, Green and Blue routes). The background study provides a framework for the evaluation of archaeological potential and the initial interpretation of any resources encountered during the field component of the assessment. The goal of the reconnaissance was to assess the area for archaeological potential and investigate any topographical and/or cultural features that had been identified as areas of elevated potential during the background research.

4.1.1 Environmental Setting

A number of environmental factors such as water sources, physiographic features, soil types and vegetation have influenced settlement patterns and contribute to the archaeological potential of the area.

Water Sources

Proximity to water, for both drinking and transportation, is a key factor in identifying Precontact and historic Native, as well as early Euro-Canadian, archaeological potential. The study area is bounded by the West River at Limerock and by the Middle and East Rivers at the northern and eastern extents. These rivers served as important transportation routes facilitating travel inland from the Northumberland Strait at Pictou Harbour, and a significant source of salmon and other fish species.

Topography

The proposed pipeline route is located within the greater terrestrial regions known as the Carboniferous Lowlands – Hills and Valleys District – Pictou Valleys Unit (Pictou Rivers sub-Unit 582a) and the Coastal Plain District – Northumberland Plain Unit (Northumberland Strait sub-Unit 521a). These areas are characterized by undulating to hilly terrain underlain by Late Carboniferous strata (Davis & Browne 1996: 108, 140).

4.1.2 Native Land Use

The land within the study area was once part of the greater Mi'kmaq territory known as *Agg Piktuk*, meaning 'The Explosive Place'. Numerous lakes and watercourses spread throughout the general area would have been important transportation and trade corridors providing a resource base for the Mi'kmaq and their ancestors prior to the arrival of European settlers. The three rivers that converge at Pictou would have been the most significant transportation routes as they facilitated travel inland from the Northumberland Strait at Pictou Harbour, as well as a significant source of salmon and other fish species.

Early contact with the Mi'kmaq in the area indicates a strong native presence prior to European contact. An early map of the area depicts the location of a Native village site near the mouth of the East River (Patterson 1877: 27). An area situated further up the river was identified as a burying place and, at the time of English settlement, was marked by a large iron cross standing

approximately 10 feet high. Furthermore, farming activities along the three rivers frequently unearthed evidence of Precontact habitation throughout the area.

A review of the Maritime Archaeological Resource Inventory (MARI), a provincial archaeological site database maintained by the Nova Scotia Museum, determined that there are no registered Precontact or early historic Native archaeological resources in direct conflict with the proposed pipeline route. The closest registered Precontact site is BjCq-1, a Ceramic Period site located immediately north of the Northern Pulp plant at the northern end of the study area.

There are an additional 17 Precontact or early historic Native archaeological sites located within the general vicinity of the study area. Early habitation of the area during the Archaic Period (9,000 – 3,000 BP) is possibly seen at archaeological sites BjCq-04 and BjCq-07, where a number of groundstone tools were discovered including slate knives and a gorget. The remaining sites are either attributed to the Ceramic Period (3,000 – 500 BP), historic Native or cannot be placed within a particular cultural tradition. A wide range of artifacts have been recovered from these sites including: stemmed and notched projectile points, axes, adzes, celts, as well as iron tools and other Contact period objects.

4.1.3 Historic Settlement

Early European activity in the area consisted of Breton and Basque fisherman who visited the area and traded with the local Mi'kmaw during the sixteenth century (Patterson 1877: 24). However, little information exists about the colonization of the area by the French prior to 1763. What is known comes primarily from what was encountered during the early English settlement of the area. The largest French settlement in the area appears to have been on the island of Merigomish with other small settlements scattered throughout the area. Some evidence of early French settlement was noted in the vicinity of the study area as well. A log shanty once stood at the mouth of the Middle River with another noted on the East River. Evidence of tree clearing was also noted near the current town of Pictou and the remains of a possible French burying ground were observed inside the entrance of Pictou Harbour at Burying Ground Point. French settlement of the North Shore of Nova Scotia was abandoned shortly after the expulsion of the Acadians making way for English and Scottish settlement of the area.

Around 1765, the pace of land claims and grants was at its peak. At this time a company of men from Philadelphia, led by Edmund Crawley, were granted approximately 200,000 acres of land in Pictou and Colchester counties in what is known as the Philadelphia Grant. The terms of the grant stated that the company was obligated to find 1,000 Protestant settlers – one for every 200 acres of land (Byers & McBurney 1994: 264). At this time another developer, an Irishman by the name of Alexander McNutt, received a grant of 100,000 acres, which would be known as the Irish Grant.

In July of 1773, the Dutch ship *The Hector* set sail from Scotland bound for Pictou. Arrival of the Hector on September 15 signalled the beginning of the effective European settlement of the Pictou area and the start of a wave of Scottish settlement in the greater region. A small group of almost 200 individuals was brought to the area as part of the Philadelphia Company. However, upon arrival, their expectations were quickly dashed since what lay before them was an unbroken forest with little or no prior settlement. These difficulties, and the lack of provisions for the upcoming winter, meant that many of the settlers relocated to Truro and other adjacent places. Those who remained in the Pictou area occupied land fronting onto the three rivers.

A 1785 map published by Charles Morris illustrates the land grants as registered in the latter decades of the eighteenth century for the areas surrounding the three rivers of Pictou (**Figure 2**).

Of particular note on this map is a large area granted to Walter Patterson, the Lieutenant Governor of St. John's Island (Prince Edward Island) on the west side of the Middle River. An early road connecting the Pictou area with the rest of Nova Scotia is depicted running along the height of land between the East and Middle rivers. Earlier Mi'kmaw settlement of the area is also indicated by the "Indian Burial Ground" situated at the mouth of the East River. According to local tradition, the local Natives dispersed rapidly at the sound of the piper who announced the arrival of *The Hector* (Dawson 1988:125).

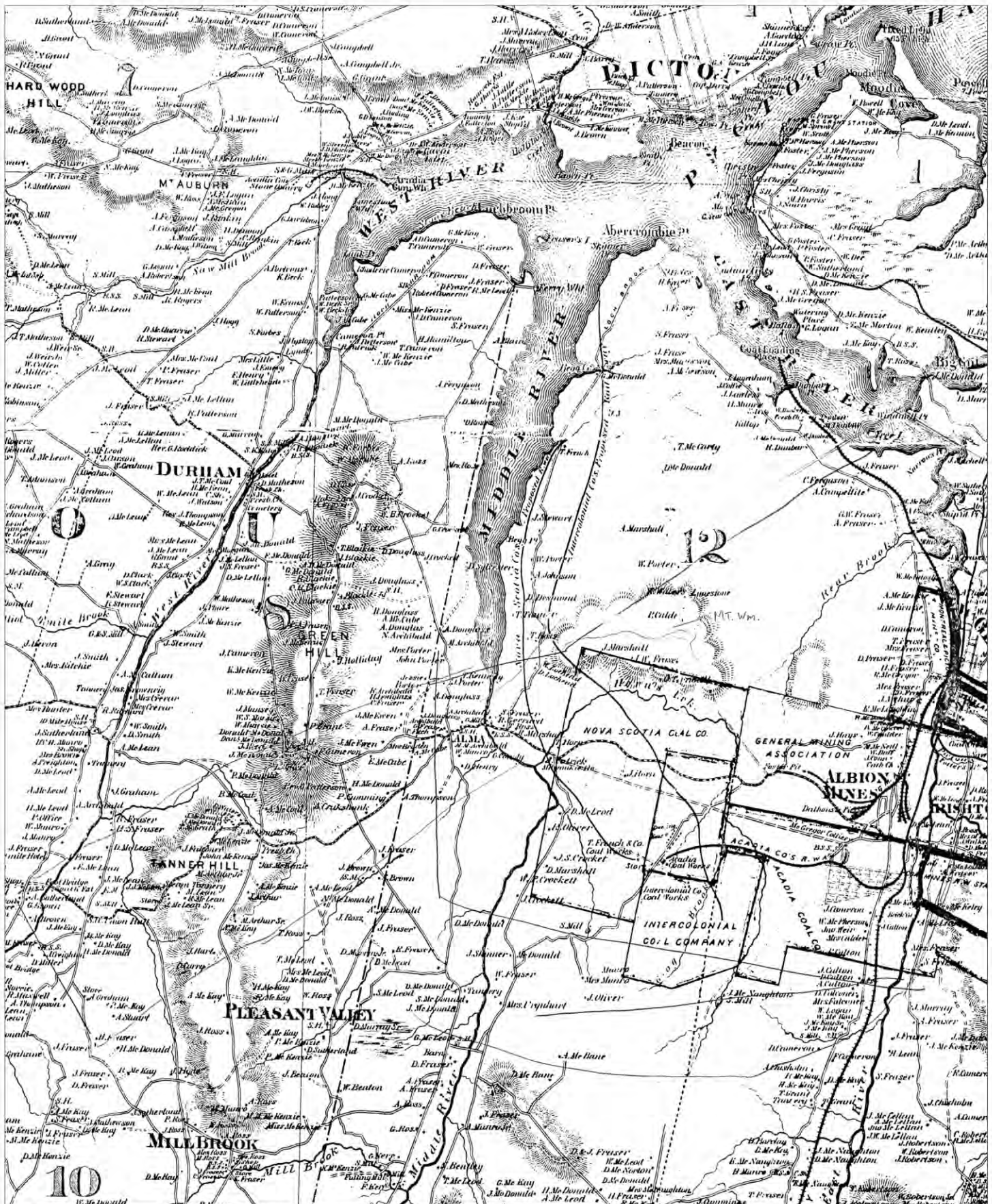
By the middle to late nineteenth century, settlement had taken hold and expanded throughout the entire study area. This can be seen from the *Topographical Township Map of Pictou County, Nova Scotia* by A.F. Church (1867) as well as several maps from the *Illustrated Historical Atlas of Pictou County, Nova Scotia* (1879) (**Figures 3 & 4**). Based on the detail provided in these nineteenth century maps, it is evident that the proposed pipeline route crosses a large number of historic properties, roads, and rail alignments. Given the large number of properties involved, a detailed discussion of property history was not undertaken in conjunction with the screening.

A review of the Maritime Archaeological Resource Inventory determined that there are three historic archaeological sites registered in the vicinity of the study area. These sites are registered as BkCq-21 (McCulloch House), BjCp-05 (Albion Iron Foundry) and BjCp-06 (Stellarton Pumphouse). All three sites are associated with nineteenth century settlement and industrialization of the Pictou area.

4.1.4 Archaeological Potential

Based on the various components of the background study, including environmental setting, Native land use and historic settlement, a number of locations throughout the study area are considered to exhibit high potential for encountering Precontact and/or historic archaeological resources.





A.F. Church - 1867

Figure 3



Eastern Portion of Study Area - 1879 Historical Atlas

Figure 4

**PICTOU COUNTY PIPELINE
 ARCHAEOLOGICAL SCREENING AND RECONNAISSANCE
 PICTOU COUNTY, NOVA SCOTIA**

June 2013

4.1.5 2012 High-Level Field Reconnaissance

The archaeological reconnaissance was undertaken on November 22, 2012 under clear conditions. The goal of the visit was to assess the area for archaeological potential and investigate any topographical and/or cultural features that had been identified as areas of elevated potential during the background research. This was achieved through windshield and focused pedestrian surveys within two of the proposed pipeline routes (Red and Magenta routes), as well as the associated New Glasgow off-shoots (**Figures 5 & 6**).

The field assessment began at Limerock, which forms the western end of the proposed pipeline routes, and proceeded eastward. Access to the potential alignments was gained from various provincial, municipal and private roads. When warranted, a focused pedestrian survey was conducted in order to get a detailed look at a particular area.

As a result of the background research and field assessment, 11 areas of high archaeological potential, both Precontact and historic, were identified during fieldwork for the proposed Red and Magenta pipeline routes. As the western sections of these routes are identical, many of these areas are shared by both potential routes. These areas are discussed in more detail below.

Red Route

In total, eight areas of high archaeological potential were observed for the Red Route and the associated New Glasgow off-shoots. Of these areas, five were along the Red Route (Areas 1-5) and three were along the New Glasgow off-shoots (Areas 6, 10 & 11) (**Figure 5**).

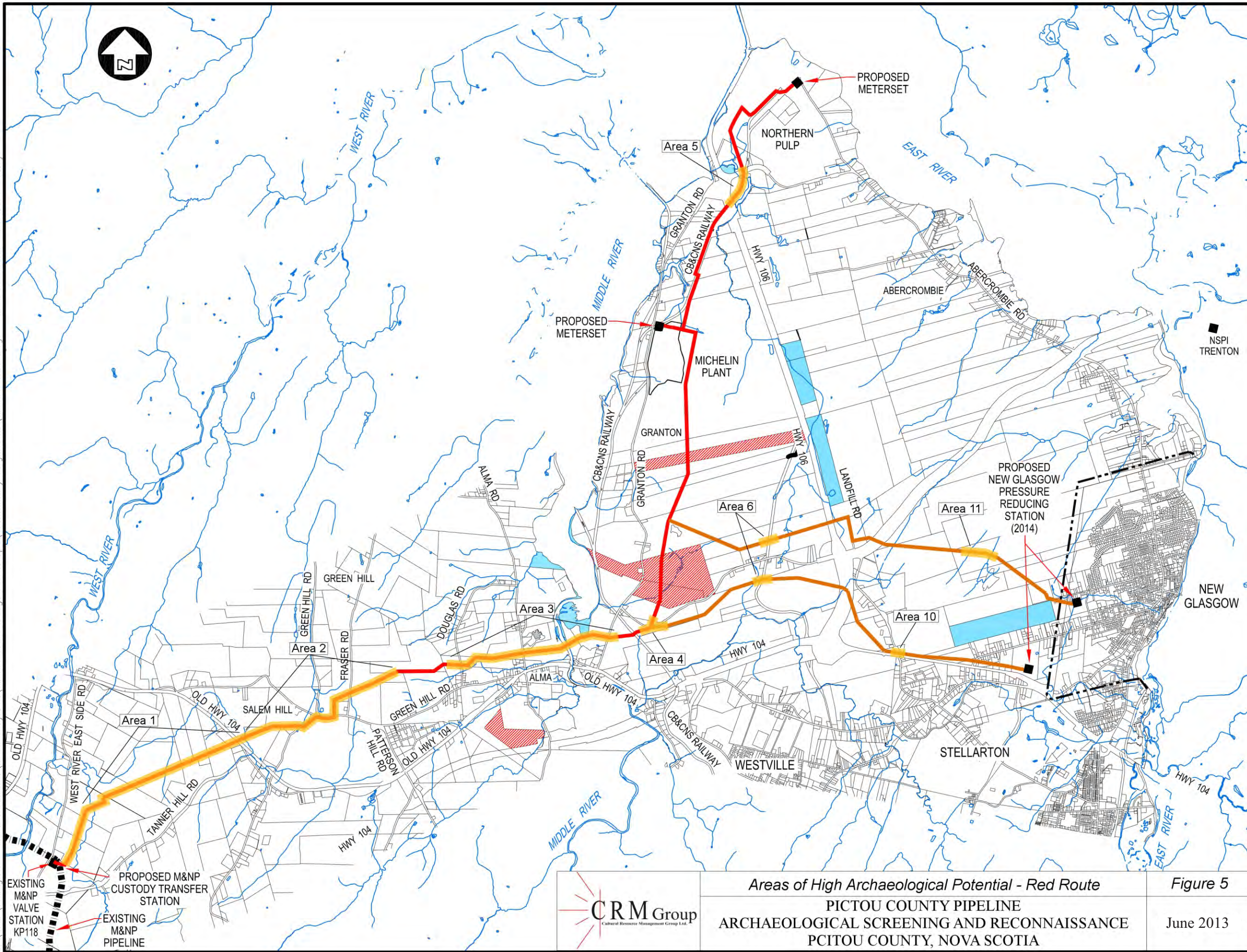
Magenta Route

In total, 11 areas of high archaeological potential were observed for the Magenta Route and the New Glasgow off-shoots. Of these areas, nine were along the Magenta Route (Areas 1-9) and two were along the New Glasgow off-shoots (Areas 10 & 11) (**Figure 6**).



PLATE 1: West end of proposed routing; facing east. November 22, 2012.

G:\CAD\11Region - NEW GLASGOW\2011 Projects\111101 New Glasgow Concept\Preliminary Alignment\111101-258.dwg 9-NOV-2012 9:00am Terry



LEGEND

- STEEL PIPELINE (2013)
- STEEL PIPELINE (2014)
- EXISTING M&NP STEEL PIPELINE
- PROPOSED HGL STATION SITE
- LAND OWNED IN TRUST FOR PICTOU LANDING FIRST NATION
- N.S. PROVINCIAL GOV'T
- HIGH POTENTIAL AREA

NO.	REVISIONS	DATE	DWN	APP
2	RE-ISSUED FOR REVIEW	12/11/09	TLM	
1	ISSUED FOR REVIEW	12/10/15	TLM	



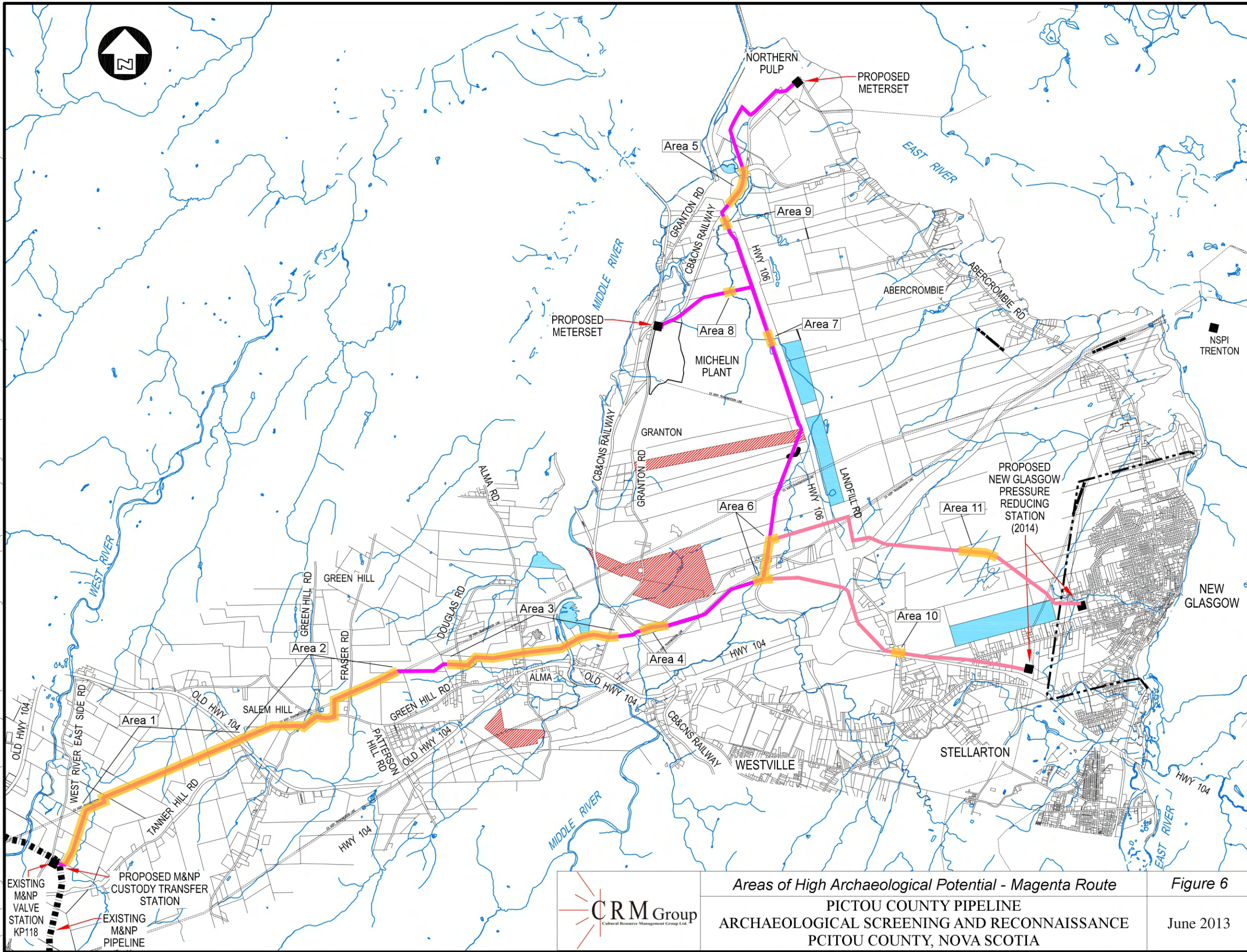
AREA:	NEW GLASGOW PICTOU CO., N.S.
PROJECT:	NATURAL GAS DISTRIBUTION SYSTEM NEW GLASGOW PIPELINE
TITLE:	PROPOSED PIPELINE ROUTE
DWG NO:	111101 - 258
DESIGN:	T.L.M.
DRAWN:	T.L.M.
SCALE:	0 500 1000m 1:50,000



Areas of High Archaeological Potential - Red Route
PICTOU COUNTY PIPELINE
ARCHAEOLOGICAL SCREENING AND RECONNAISSANCE
PCITOU COUNTY, NOVA SCOTIA

Figure 5
June 2013

G:\CAD\11Region - NEW GLASGOW\2011 Projects\111101 New Glasgow Concept\ Preliminary Alignment\111101-258.dwg 9-NOV-2012 9:00am Terry



LEGEND

- STEEL PIPELINE (2013)
- STEEL PIPELINE (2014)
- EXISTING M&NP STEEL PIPELINE
- PROPOSED HGL STATION SITE
- LAND OWNED IN TRUST FOR PICTOU LANDING FIRST NATION
- N.S. PROVINCIAL GOV'T
- HIGH POTENTIAL AREA

NO.	REVISIONS	DATE	DWN	APP
2	RE-ISSUED FOR REVIEW	12/11/09	TLM	
1	ISSUED FOR REVIEW	12/10/15	TLM	

Heritage Gas

AREA: NEW GLASGOW
PICTOU CO., N.S.

PROJECT: NATURAL GAS
DISTRIBUTION SYSTEM
NEW GLASGOW PIPELINE

TITLE: PROPOSED PIPELINE ROUTE

DWG NO: 111101 - 258

DESIGN: T.L.M. DRAWN: T.L.M. SCALE: 0 500 1000m
1:50,000



Areas of High Archaeological Potential - Magenta Route
PICTOU COUNTY PIPELINE
ARCHAEOLOGICAL SCREENING AND RECONNAISSANCE
PCITOU COUNTY, NOVA SCOTIA

Figure 6

June 2013

Area 1

Route: Red, Magenta

Location: See *Figures 5 & 6*

Description:

Area 1 extends between Limerock and Salem Hill at the western extent of the proposed Red and Magenta pipeline routes. At this location, the proposed pipeline originates from the existing valve station and crosses a number of small tributaries to the West River, including Miller Brook. These areas may be suitable for Precontact habitation and should be subjected to detailed reconnaissance. The eastern extent of Area 1 is bounded by steeply sloping terrain deemed unsuitable for habitation (*Plate 2*). Furthermore, the proposed pipeline is located in the vicinity of West River East Side Road and crosses the old Highway 104, both of which are historic road alignments.

Potential:

The area is considered to have high potential for encountering Precontact and/or historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.



PLATE 2: Eastern end of Area 1; facing east. November 22, 2012.

Area 2

Route: Red, Magenta

Location: See *Figure 5 & 6*

Description:

Area 2 is located near Salem Hill and Green Hill between the West and Middle Rivers. In this area the proposed Red and Magenta pipeline alignments follow an existing transmission line, as well as following and crossing two historic road alignments – Green Hill Road and Fraser Road (*Plate 3*). The terrain in the area is mostly level, making it suitable for historic occupation. Historic mapping of this area indicates a number of dwellings in this area (*Figure 3*). The lack of significant watercourses nearby diminishes potential for Precontact archaeological resources.

Potential:

The area is considered to have high potential for encountering historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.



PLATE 3: Historic road alignment within Area 2; Facing southwest. November 22, 2012.

Area 3

Route: Red, Magenta

Location: See *Figures 5 & 6*

Description:

Area 3 is located on either side of the Middle River. The area is bounded by Douglas Road in the west and Granton Road in the east, and crosses over Alma Road on the west side of Middle River. All three of the referenced roads are historic road alignments. Furthermore, the proposed pipeline route crosses Middle River just to the north of the old Highway 104 (*Plate 4*). While the area on the east side of Middle River is mostly low and wet, any level, dry areas in this vicinity would be suitable for both Precontact and historic settlement.

Potential:

The area is considered to have high potential for encountering Precontact and/or historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.



PLATE 4: Middle River crossing; facing northwest. November 22, 2012.

Area 4

Route: Red, Magenta

Location: See *Figures 5 & 6*

Description:

Area 4 is located along Mount William Road, just to the east of Middle River. In this area, the proposed pipeline lies adjacent to, and crosses an historic road alignment.

Potential:

The area is considered to have high potential for encountering historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.

No photo available.

Area 5

Route: Red, Magenta

Location: See *Figure 5 & 6*

Description:

Area 5 is located at the northern end of the pipeline alignment, just to the south of Northern Pulp at the intersection of Granton Abercrombie Road and Scalehouse Road. At this location, the proposed pipeline route crosses a small tributary near its confluence with Middle River. Areas of level terrain at the south end of this crossing may have been suitable for human occupation.

Potential:

The area is considered to have high potential for encountering Precontact and/or historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.



PLATE 5: Railroad crossing of watercourse at Area 5; facing southeast. November 22, 2012.

Area 6

Route: Magenta, New Glasgow Off-shoot

Location: See *Figures 5 & 6*

Description:

Area 6 is located within the community of Mount William, along the Mount William Road to the east of Middle River. At this point, the proposed pipeline crosses an historic road alignment (Mount William Road), as well as running adjacent to an old railway line that has since been converted to a road. Historic mapping of this area indicates a number of dwellings on either side of the Mount William Road (*Figures 3 & 4*).

Potential:

The area is considered to have high potential for encountering historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.



PLATE 6: Historic road alignment at Area 6; facing east. November 22, 2012.

Areas 7, 8 & 9

Route: Magenta

Location: See *Figure 6*

Description:

These three small areas consist of three creek crossings near the northern extent of the proposed pipeline route. Areas adjacent to these crossings may have been suitable for Precontact and/or historic settlement.

Potential:

These areas are considered to have high potential for encountering Precontact and/or historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.



PLATE 7: Small watercourse at Area 7; facing southeast. November 22, 2012.

Area 10

Route: New Glasgow Off-shoot

Location: See *Figures 5 & 6*

Description:

Area 10 is located just to the northwest of the town of Stellarton where Mount William Road crosses Highway 104. At this point, the proposed pipeline route crosses Mount William Road, an historic road alignment.

Potential:

The area is considered to have high potential for encountering historic archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.

No photo available.

Area 11

Route: New Glasgow Off-shoot

Location: See *Figures 5 & 6*

Description:

Area 11 is located along the northern option for the New Glasgow off-shoot, just west of the town of New Glasgow. At this location, the proposed pipeline route crosses two small tributaries of the East River, just north of a small lake. Areas adjacent to these crossings may have been suitable for Precontact settlement.

Potential:

These areas are considered to have high potential for encountering Precontact archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.

No photo available.

4.1.6 Additional Proposed Routes – Desktop Study

For two of the proposed pipeline routes (Blue and Green) a desktop-only study was conducted. However, due to the similarities with the other proposed routes, a number of the areas identified in-field also apply to these routes. As with the Red and Magenta Routes, the proposed Blue and Green Routes also included possible off-shoots to New Glasgow.

Blue Route

The western section of the proposed Blue Route, west of the Middle River, as well as portions of the eastern section, mirror that of the Red and Magenta Routes previously discussed in this report. Furthermore, the options for the proposed New Glasgow off-shoots associated with this route are similar to those associated with the Red and Magenta Routes.

The desktop study of the proposed Blue Route, including the New Glasgow off-shoots, identified 8 areas of elevated archaeological potential (*Figure 7*). Of these eight areas, only one is exclusive to the proposed Blue Route - the other seven being identical to the Red and/or Magenta Routes.

Areas 1-4

Areas 1-4 correspond with Areas 1-4 of the Red and Magenta Routes discussed in Subsection 4.1.5 of this report (*Figures 5-7*).

Area 5

Area 5 corresponds with Area 6 of the Red and Magenta Routes (**Subsection 4.1.5; Figures 5- 7**).

Area 6

Location: See *Figure 7*

Description:

Area 6 is located near the northern portion of the study area, just east of the Michelin Plant. At this location the proposed pipeline route crosses a small tributary to the Middle River and may have been suitable for Precontact habitation.

Potential:

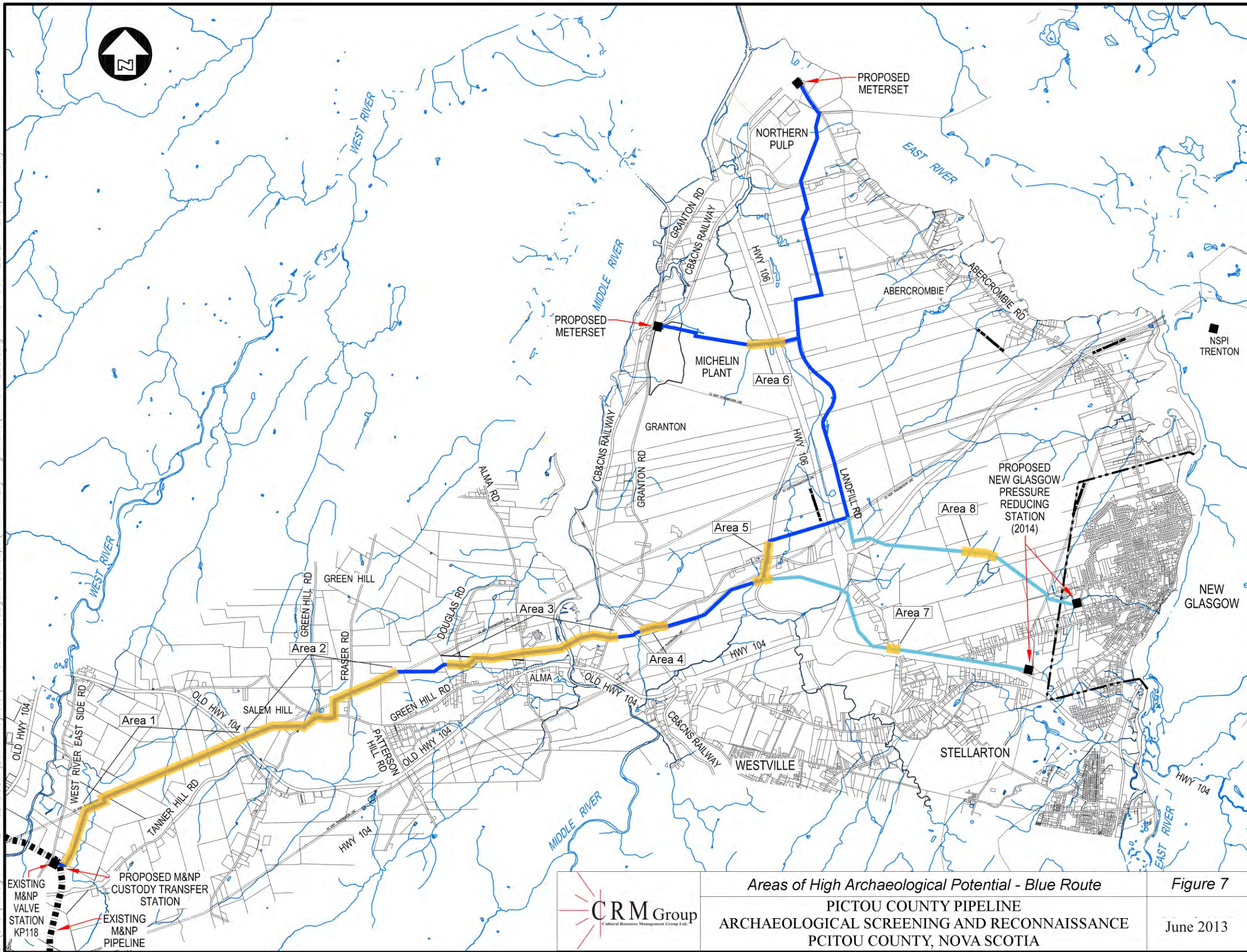
The area is considered to have high potential for encountering Precontact archaeological resources.

Recommendation: The area should be subjected to a detailed pedestrian survey.

Areas 7 & 8

Areas 7 & 8 correspond with Areas 10 & 11 of the Red and Magenta Routes (**Section 4.1.5; Figures 6 & 7**).

G:\CAD\11Region - NEW GLASGOW\2011 Projects\111101 New Glasgow Concept Preliminary Alignment\111101-258.dwg 15-OCT-2012 3:00pm Terry



LEGEND

- STEEL PIPELINE (2013)
- STEEL PIPELINE (2014)
- EXISTING M&NP STEEL PIPELINE
- PROPOSED HGL STATION SITE
- HIGH POTENTIAL AREA

1	ISSUED FOR REVIEW	12/10/15	TLM	
NO.	REVISIONS	DATE	DWN	APP



AREA:	NEW GLASGOW PICTOU CO., N.S.
PROJECT:	NATURAL GAS DISTRIBUTION SYSTEM NEW GLASGOW PIPELINE
TITLE:	PROPOSED PIPELINE ROUTE
DWG NO:	111101 - 258
DESIGN:	T.L.M.
DRAWN:	T.L.M.
SCALE:	0 500 1000m 1:50,000



Areas of High Archaeological Potential - Blue Route
PICTOU COUNTY PIPELINE
ARCHAEOLOGICAL SCREENING AND RECONNAISSANCE
PCITOU COUNTY, NOVA SCOTIA

Figure 7
June 2013