BC Oil & Gas COMMISSION

OGC File: 9638854

November 30, 2013

Westcoast Connector Gas Transmission Ltd.
1100, 1055 West Georgia Street
Vancouver BC V6E 3R5

Attention: Surface Land Administrator

Re: Investigative Use Permit – Section 14 over Crown Land within Block L, Group 103-P-6; Block I, Group 103-P-5; Block J, Group 103-P-5; Block G, Group 103-P-5; Block F, Group 103-P-5; Block C, Group 103-P-5; Block K, Group 103-P-4; Block L, Group 103-P-4; Block E, Group 103-P-4; Block D, Group 103-P-4; Block A, Group 103-O-1; Block I, Group 103-J-16; Block J, Group 103-J-16; Block G, Group 103-J-16; Block B, Group 103-J-16; Block L, Group 103-I-13; Block E, Group 103-I-13; Block H, Group 103-J-16; Block C, Group 103-J-16; Block D, Group 103-J-16; Block L, Group 103-J-9; Block I, Group 103-J-10; Block H, Group 103-J-10; Block A, Group 103-J-10; Block I, Group 103-J-7; Block H, Group 103-J-7; Block A, Group 103-J-7; Block D, Group 103-J-8.

Date of Issuance: November 30, 2013
Commission File No: 9638854

PERMISSIONS

The Oil and Gas Commission (``Commission``) hereby authorizes the holder of permit number 9638854, under section 14 of the *Land Act*, to allow Westcoast Connector Gas Transmission Ltd. (the "permit holder") to occupy Crown land within the areas indicated on the attached sketch plans:, Focus Job No. 010042423, Pages No. 1 to 40, Revision 0, dated September 25, 2013, (hereinafter referenced together as the "Site"), to conduct appraisals, inspections, analyses, inventories, surveys or other investigations under Authorization Number 941924, subject to conditions set out below.

CONDITIONS

1. The permit holder may use and occupy the Site only for the purposes of investigating the site for potential oil and gas activities and related activities as defined in the *Oil and Gas Activities Act*.

2. The total disturbance within the Site must not exceed 0.215 ha.

3. The permit holder will indemnify the Province of British Columbia (the Province) and the Oil and Gas Commission against all losses, damages, costs and liabilities arising out of any breach or non-performance of any condition or agreement set out in this Permit and any personal injury, death or property damage occurring within the Site, or happening by virtue of its occupation of the Site, and the amount of such losses, damages and costs shall be payable to the Province or the Oil and Gas Commission immediately.

4. The permit holder will immediately effect, and keep in force while this Permit is in effect, insurance of an amount not less than $1,000,000 protecting the Province, the Commission and the permit holder (without any rights of cross-claim or subrogation) against claims for personal injury, death, property damage, or third party or public liability claims arising from any accident or occurrence on the Site.

5. The permit holder will restore the site to the satisfaction of the Oil and Gas Commission following expiration or cancellation of this Permit.

6. The authorization to occupy and use Crown land does not entitle the permit holder to exclusive possession of the Site. The permit holder will not interfere with any person found on the Site who has a public right of access over the Site or is using the Site pursuant to a prior or subsequent *Land Act* disposition.

7. The rights granted by this permit are subject to all subsisting grants to or rights of any person made or acquired under the *Coal Act*, *Forest Act*, *Mineral Tenure Act*, *Petroleum and Natural Gas Act*, *Range Act*, *Water Act* or *Wildlife Act*, or any extension or renewal of the same, any prior dispositions made under the *Land Act*, and the exceptions and reservations of rights and interests under Section 50 of the *Land Act*.

8. The permit holder will acknowledge and agree that any interference with rights granted under this permit by virtue of the exercise or operation of the rights or interests set out in the Sections (6) or (7) above shall not constitute a breach of the Province's or the Commission's obligations under this permit and the permit holder will release and discharge the Province and/or the Commission from any claim for loss or damage arising directly or indirectly out of any such interference. The permit holder will also agree to pay all costs and expenses that arise out of the permit holder's interference with the rights or interests set out in Sections (6) or (7) and that the permit holder will not commence or maintain proceedings under Section 65 of the Land Act with respect to interference with the permit holder's rights arising out of exercise or operation of the rights set out in Sections (6) or (7).

9. The permit holder must pay to the Province, when due, the Fees to the address and in accordance with the instructions set out in the attached covering letter.

10. The permit holder must not assign or sub-tenure this Permit. The permit holder must not transfer this permit without the Commission's written consent, which consent may be granted or withheld at the Commission's sole discretion.

11. This permit expires two years from the date of issuance.

12. The permit holder must notify the Commission prior to commencing activities under this permit. Notification may be sent to C&E@bcogc.ca .

13. If artifacts, features, materials or things protected under section 13(2) of the Heritage Conservation Act are identified the permit holder must, unless the permit holder holds a permit under section 12 of the Heritage Conservation Act in respect of that artifact, feature, material or thing:

    a. immediately cease all work in the vicinity of the artifacts, features, materials or things;

    b. immediately notify the Archaeology Branch of FLRNO and the Commission; and

    c. refrain from resuming work in the vicinity of the artifacts, features, materials or things except in accordance with an appropriate mitigation plan that has been prepared in accordance the Heritage Conservation Act, endorsed by a qualified archaeologist, and approved by the Archaeology Branch.

14. Within 60 days of the completion of the clearing phase of the activity authorized, the permit holder must submit to the Commission a Post-construction plan as an ePASS shape file accurately identifying the locations of the overall disturbance within the Site.

15. The permit holder must abide by and comply with all applicable laws, bylaws, orders, directions, ordinances, and regulations of any government authority having jurisdiction in any way affecting its use or occupation of the Site, including, without limitation, the provisions of the *Land Act* and the provisions of this Permit.

16. This permit does not authorize works located within lands within the Prince Rupert Port Authority.

17. Activities conducted below the high water mark must occur only within the period from November 30th until February 15th.

18. The permit holder must notify the Gitxaala Nation, Nisga'a Nation, Kitsumkalum First Nation, Lax Kw'alaams First Nation, Kitselas First Nation, and Metlakatla Band Council prior to commencement of project.

19. The permit holder must provide any archaeological reports to Metlakatla First Nations.

20. The permit holder must ensure a qualified specialist be on site during activities to monitor for marine wildlife in the project area. This individual must have the authority to suspend operations as required to minimize impact to the wildlife.

ADVISORY GUIDANCE

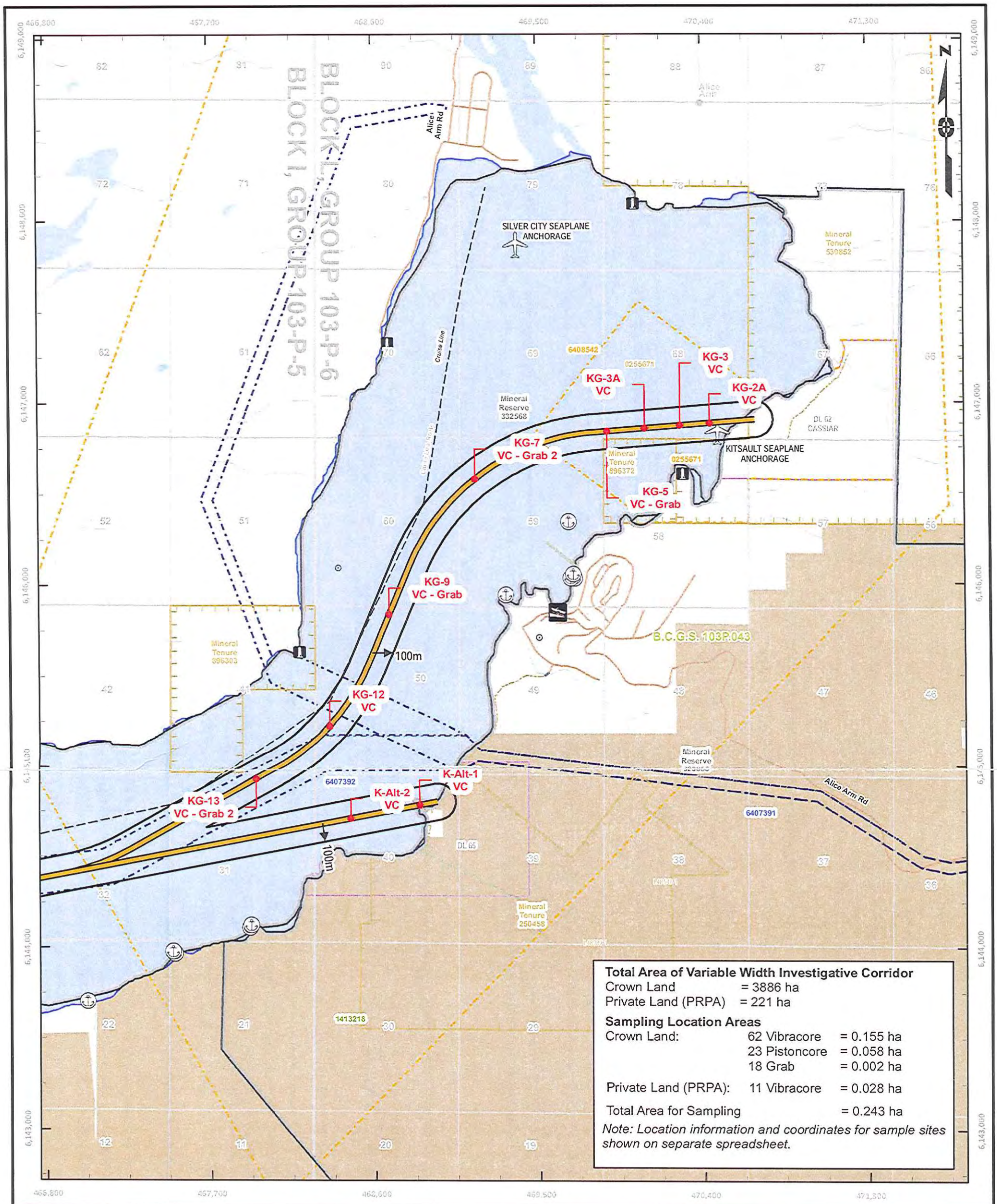
1. In the event of a spill of deleterious materials or other such emergency in which the permit holder would notify provincial authorities, notification should also be made to Metlakatla. Notifications should be provided to David Leask, Land and Marine Plan Implementation Manager at 250-628-3201 or dleask@metlakatla.ca
2. The permit holder should be aware that there may be Metlakatla First Nations traditional activities occurring during activities, and all reasonable efforts should be made to minimize interference with those activities.

The attached plan forms an integral part of this authorization.

Lori Phillips

Lori Phillips
Review and Approval Resource Officer

pc: digital copy: whalladay@spectraenergy.com; aimee.giesbrecht@lexterraland.com
pc: FLNRO
pc: Gitxaala Nation, Nisga'a Nation, Kitsumkalum First Nation, Lax Kw'alaams First Nation, Kitselas First Nation, and Metlakatla Band Council



PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.043

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

JOB NO.: 010042423		REVISION
FILE NO.: OGC_Offshore.mxd	PAGE #: 01	0
CLIENT FILE NO.:	DRAWN BY: HLF/BJB	
AFE:	CHECKED: -	IMAGE:
REF NO.:	LAND NO.:	-
DATE: September-25-13	SHEET: 1 of 1	

9638854

BLOCK I, GROUP 103-P-5

B.C.G.S. 103P.043

Mineral Reserve 332568

Mineral Tenure 896303

Mineral Reserve 328856

6407391

6408542

6407392

KG-15
PC - Grab 2

KG-14
PC - Grab

KG-13
VC - Grab 2

100m

Total Area of Variable Width Investigative Corridor
Crown Land = 3886 ha
Private Land (PRPA) = 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
	18 Grab	= 0.002 ha
Private Land (PRPA):	11 Vibracore	= 0.028 ha
Total Area for Sampling		= 0.243 ha

Note: Location information and coordinates for sample sites shown on separate spreadsheet.

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- Bird Colonies
- Industrial Point
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- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
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- Waterpower
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- Industrial
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WATER FEATURES
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ENVIRONMENTAL
- Muskwa-Kechika Management Area
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TRANSPORTATION
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MUNICIPAL
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CRITICAL HABITAT
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- Wildlife Habitat Area

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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.043

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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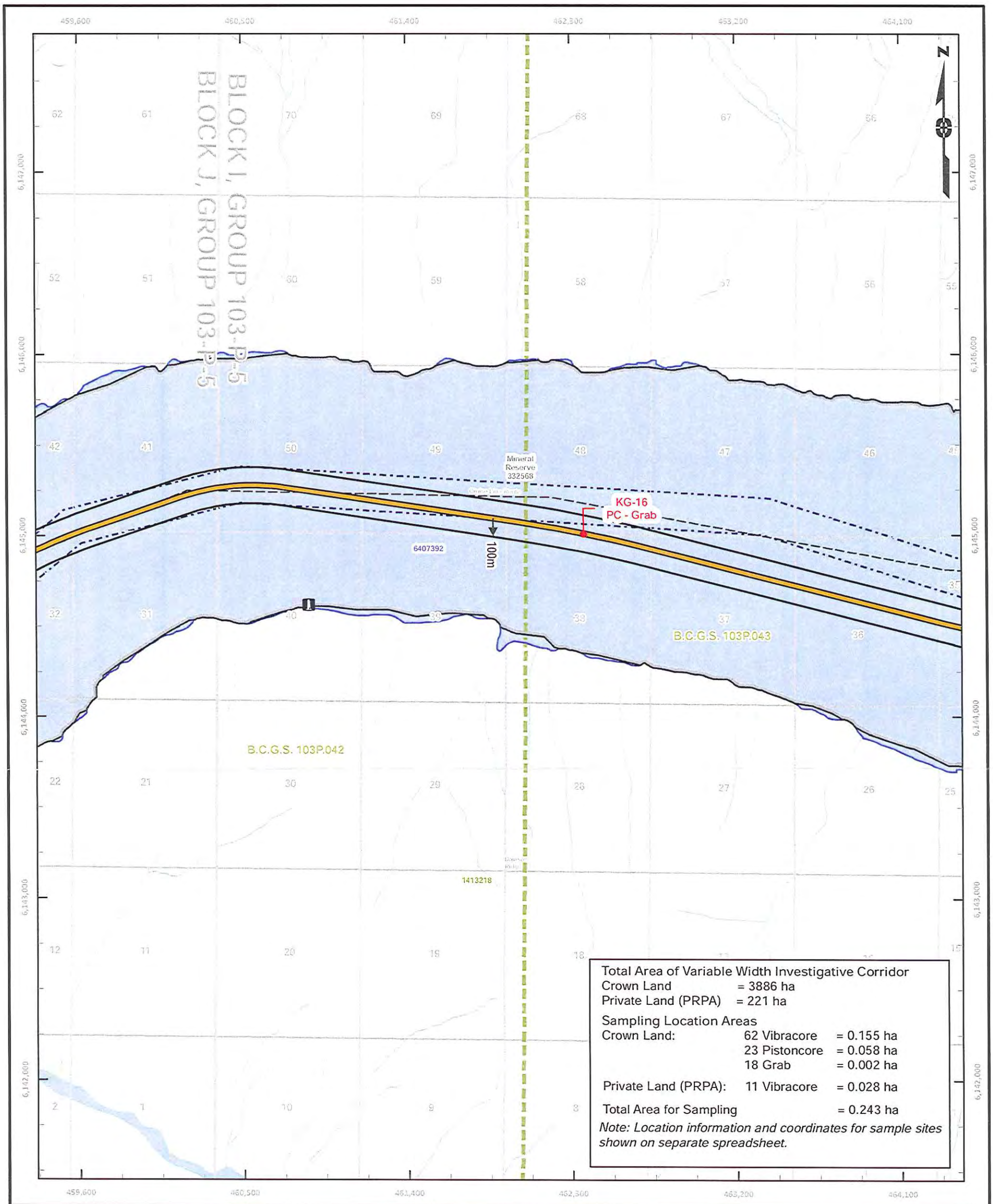

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Investigative Use Permit
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0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.043/.042

SCALE 1:20,000
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DATE: September-25-13	SHEET: 1 of 1	

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KG-19
PC - Grab

KG-20
PC - Grab

6407392

Mineral Reserve 332568

HPF-4
VC

HPF-5
VC

HPF-3
VC

HPF-6
VC

HPF-2
VC

630m

HPF-1
VC

KG-21
PC - Grab 2

100m

KG-22
PC - Grab

B.C.G.S. 103P.042

AR-2
VC

AR-3
VC

AR-4
VC

AR-1
VC

AR-6
VC

KG-23
VC - Grab 2

AR-5
VC

155m

AR-7
VC

1413218

AR-8
VC

KG-24
VC

BLOCK J, GROUP 103-P-5

BLOCK G, GROUP 103-P-5

B.C.G.S. 103P.032

Total Area of Variable Width Investigative Corridor

Crown Land	= 3886 ha
Private Land (PRPA)	= 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
	18 Grab	= 0.002 ha
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

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Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.042/.032

SCALE 1:20,000
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FOCUS
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10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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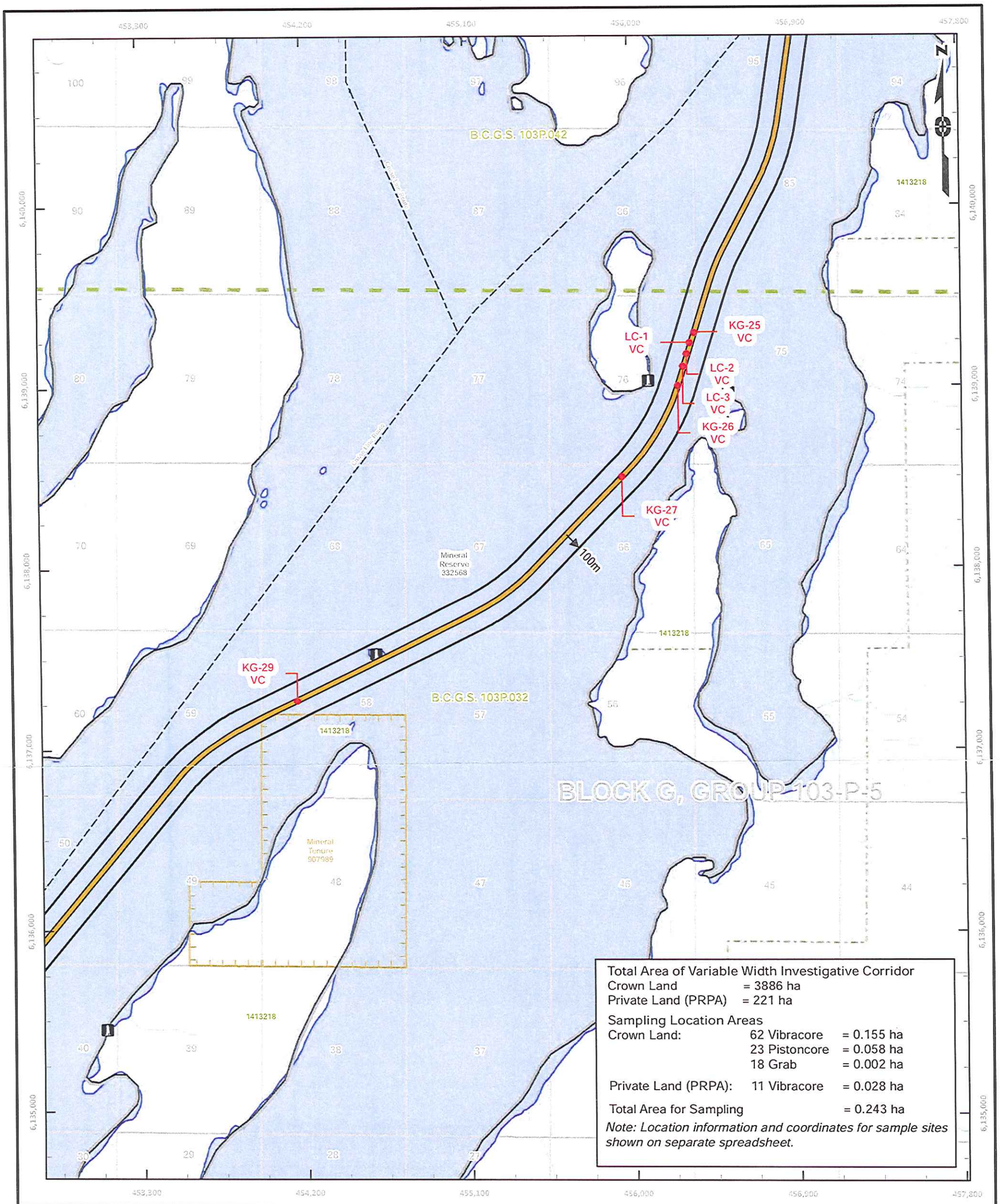

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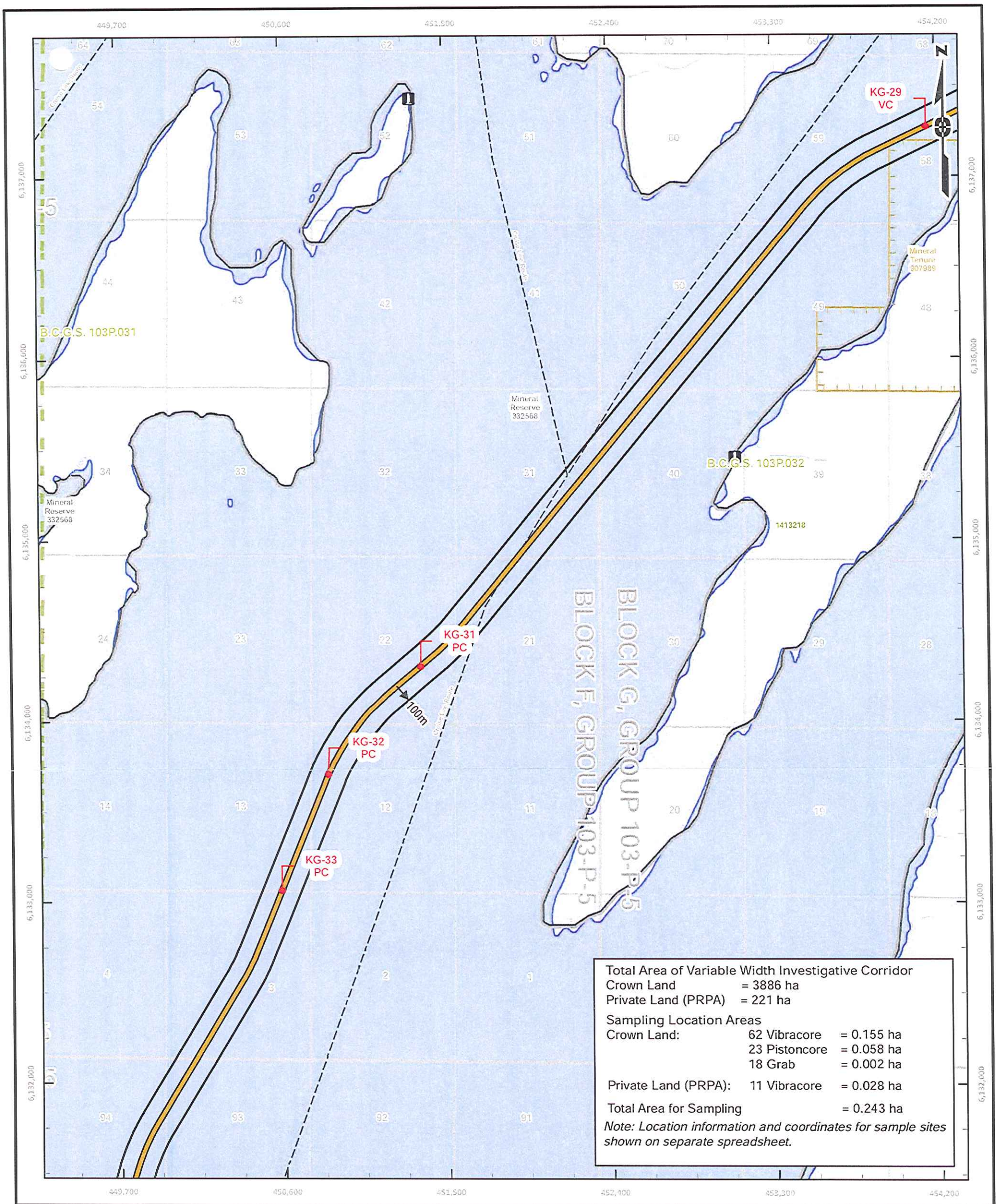

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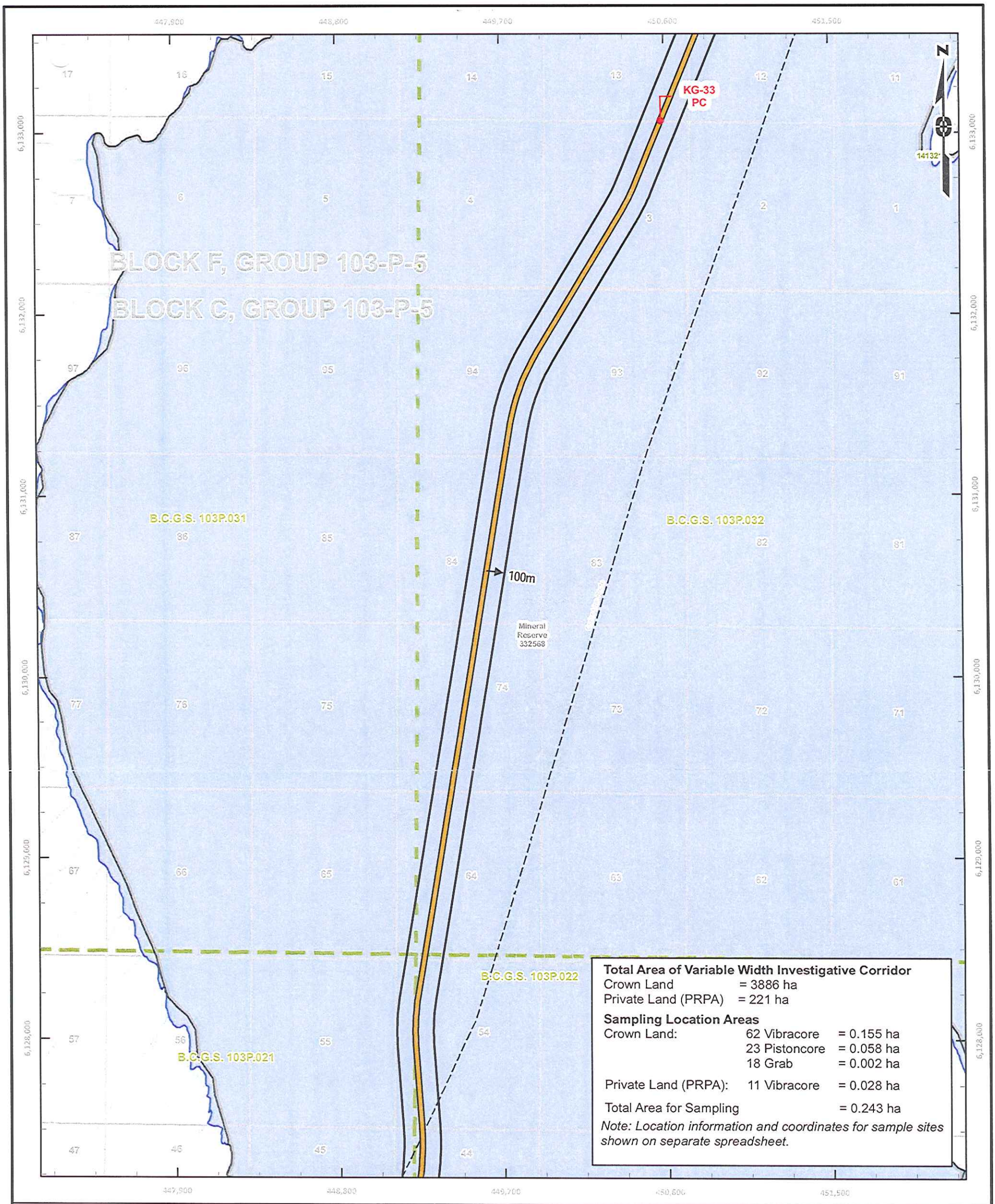

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- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.021/.022/.031/.032

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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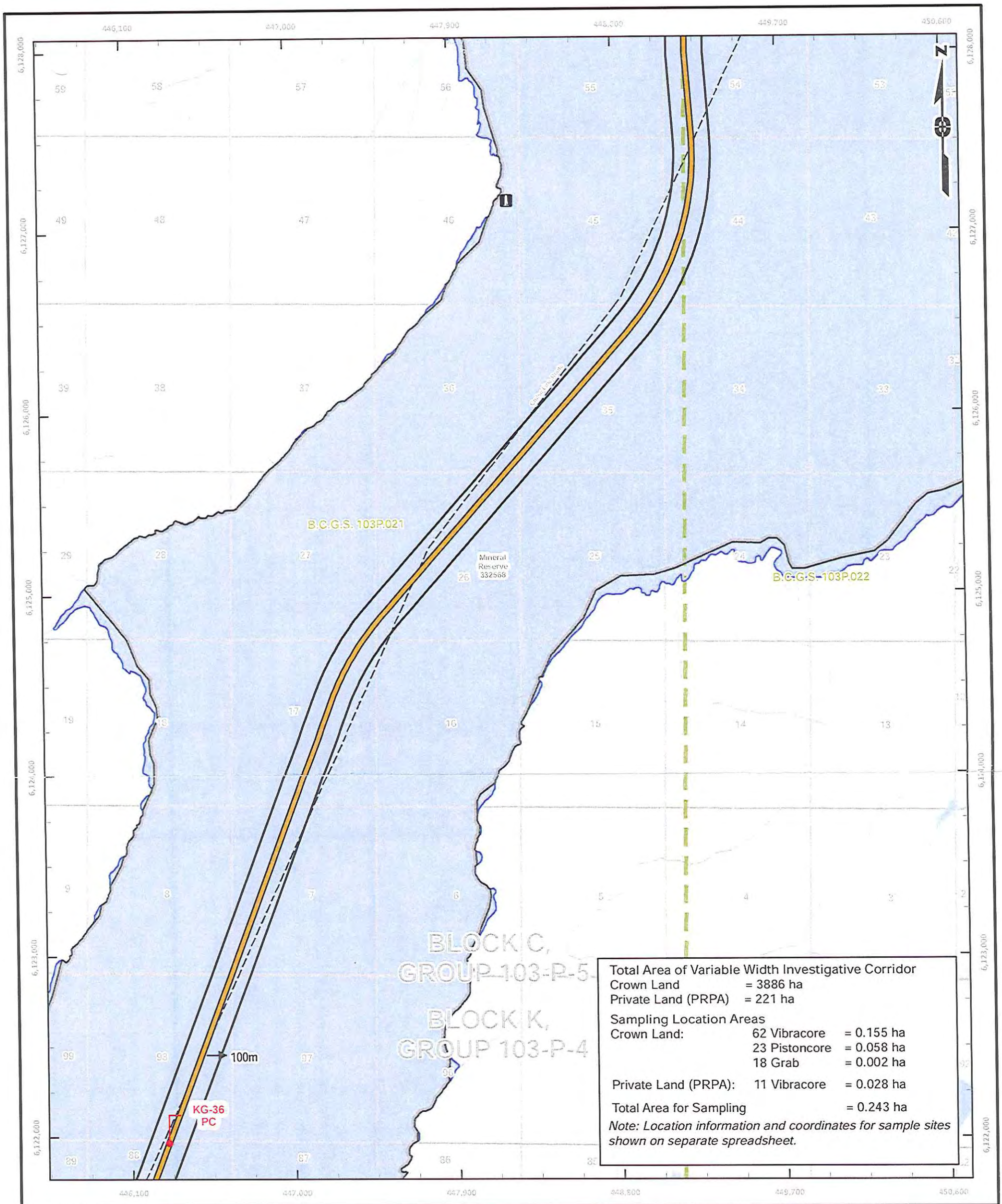

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
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Spectra Energy

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0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.021/.022

SCALE 1:20,000
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FOCUS
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10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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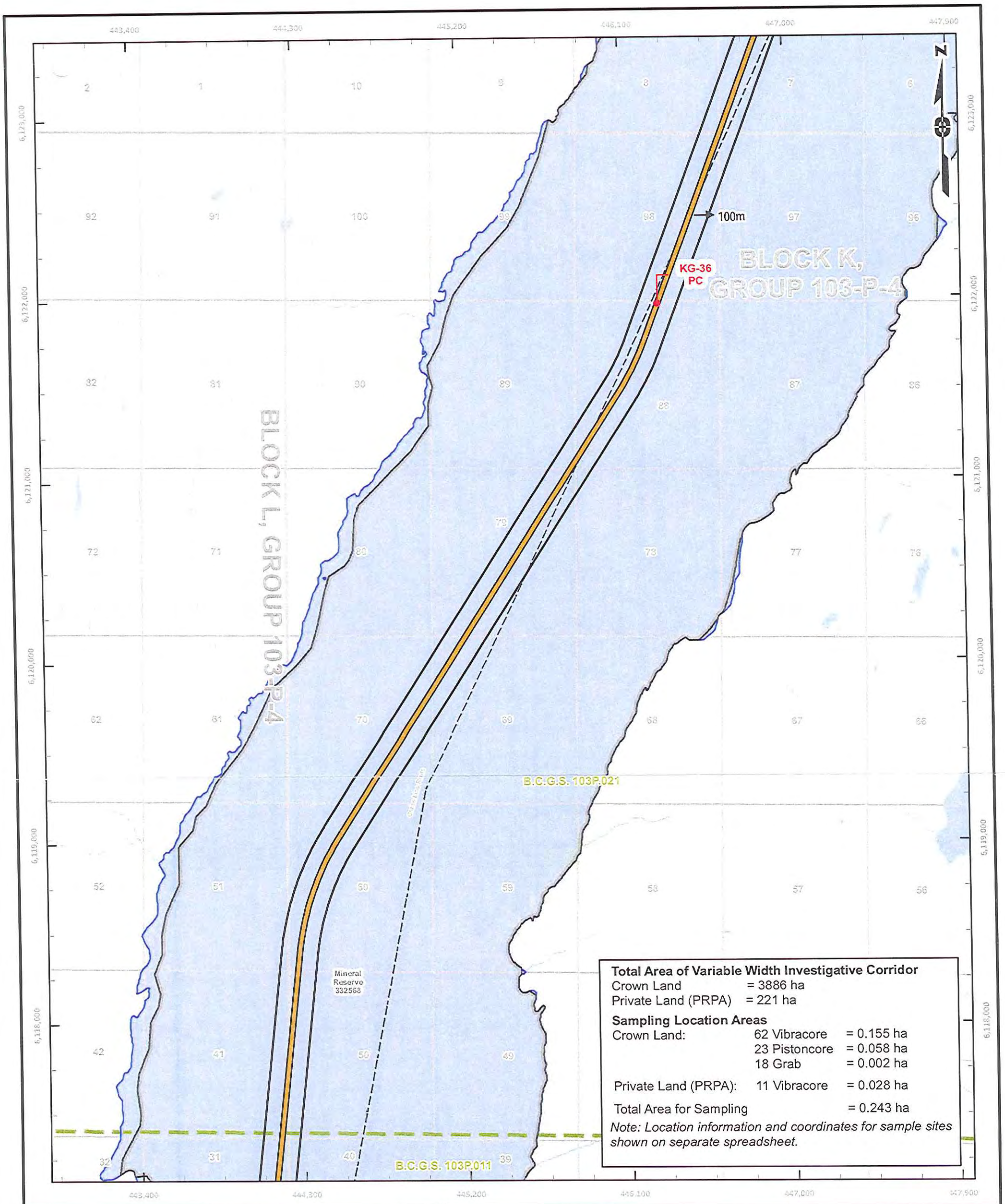

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SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.021/.011

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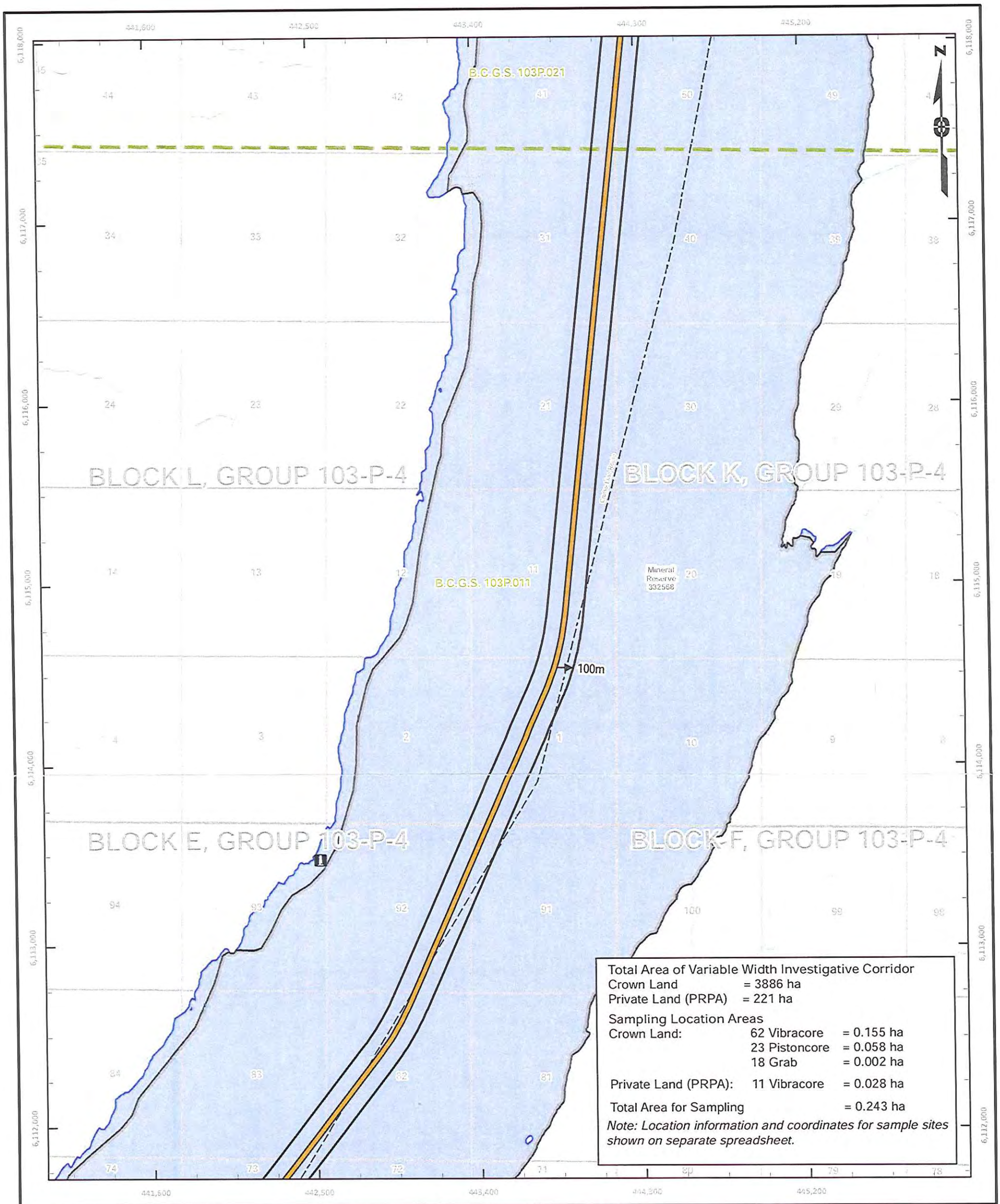

Total Area of Variable Width Investigative Corridor
Crown Land = 3886 ha
Private Land (PRPA) = 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
	18 Grab	= 0.002 ha
Private Land (PRPA):	11 Vibracore	= 0.028 ha
Total Area for Sampling		= 0.243 ha

Note: Location information and coordinates for sample sites shown on separate spreadsheet.

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OFFSHORE DATA
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TRANSPORTATION
- Highway
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- Highgrade Gravel
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- Winter Road
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- Railway Abandoned

MUNICIPAL
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CRITICAL HABITAT
- Caribou Review
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.021/.011

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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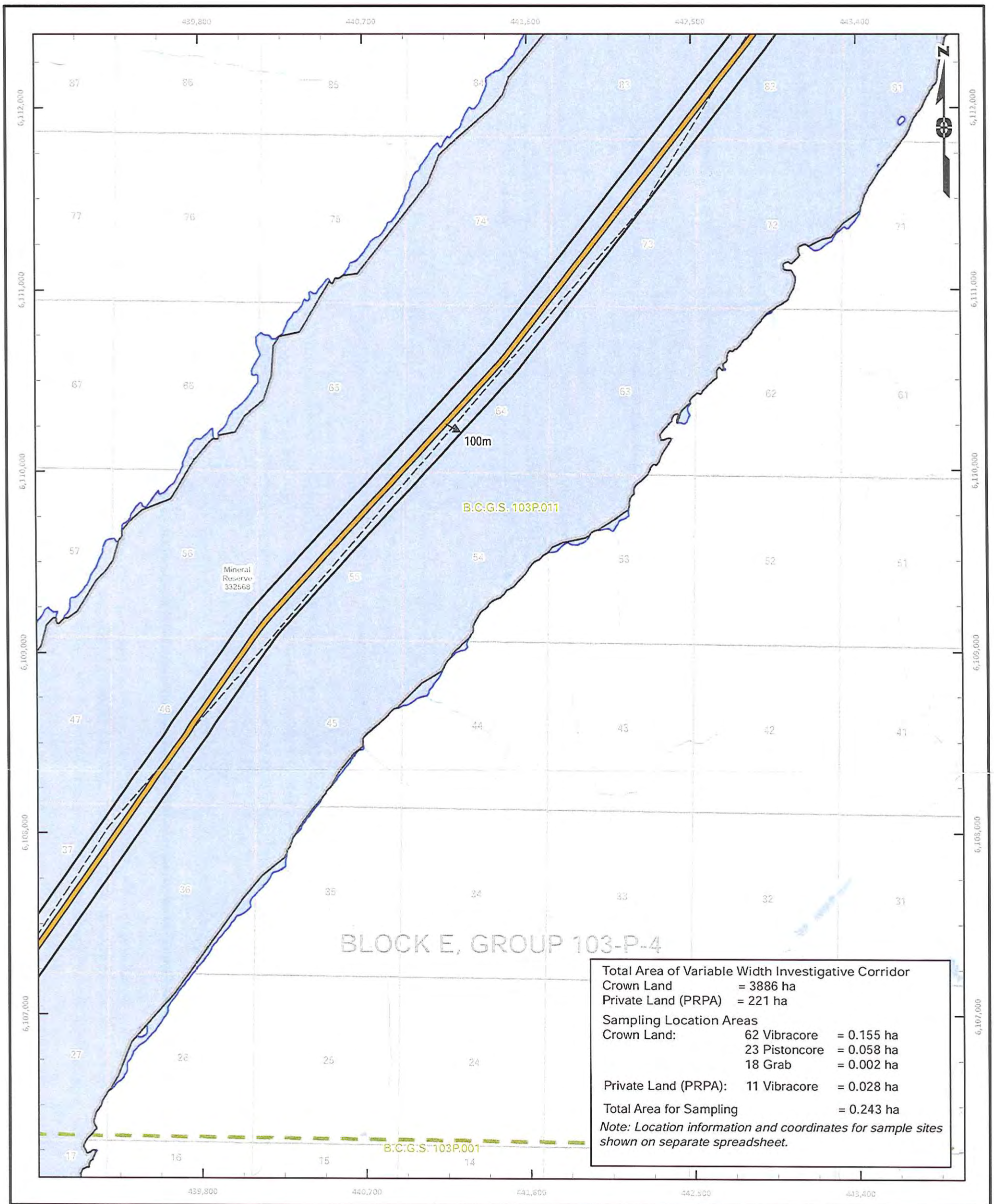

Total Area of Variable Width Investigative Corridor
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- Industrial Point
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OIL AND GAS
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WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
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ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
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MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
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CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
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FORESTRY
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.011

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z2 250.787.0300 www.focus.ca

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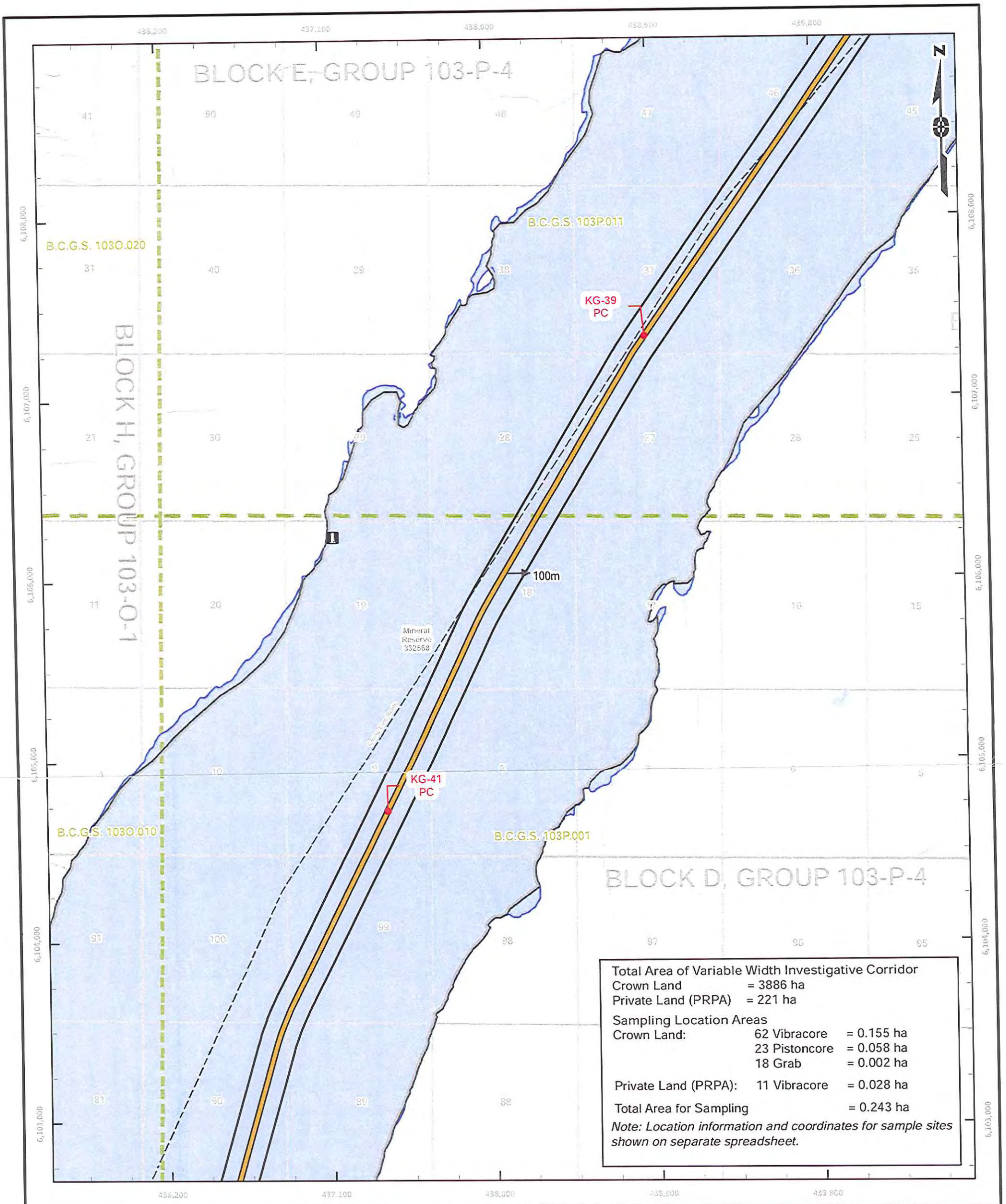

Total Area of Variable Width Investigative Corridor
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Sampling Location Areas

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- Coastal Airport
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- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
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TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
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- Industrial
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- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
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- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
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- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
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- Wildlife Tree Patch
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- Woodlots

MISCELLANEOUS
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.011/.001

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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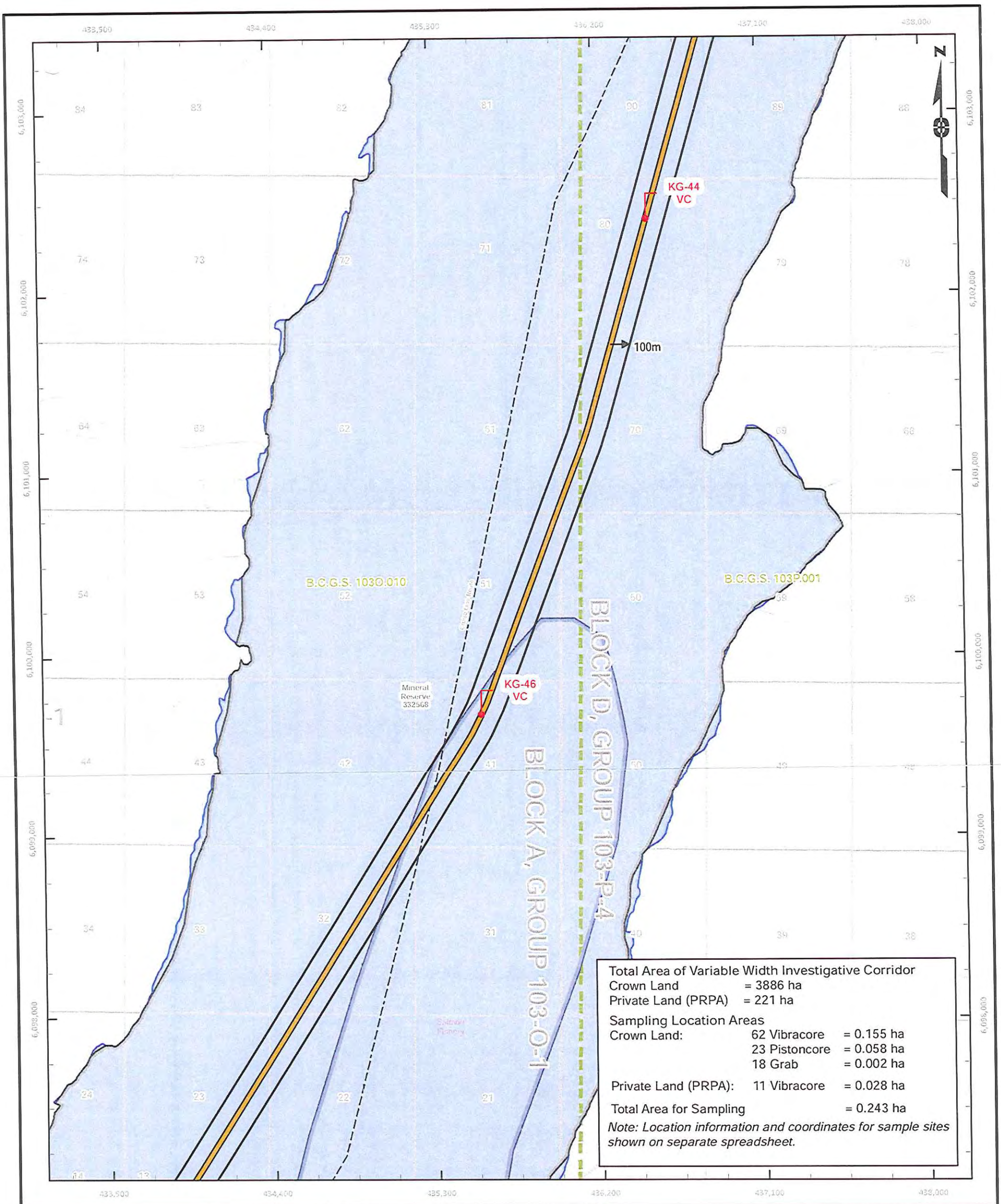

PROJECT FEATURES
Proposed Features
Pipeline R/W

OFFSHORE DATA
Coastal Boat Launches
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OIL AND GAS
Ground Disturbance/ Leases
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Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103P.001/103O.010

SCALE 1:20,000
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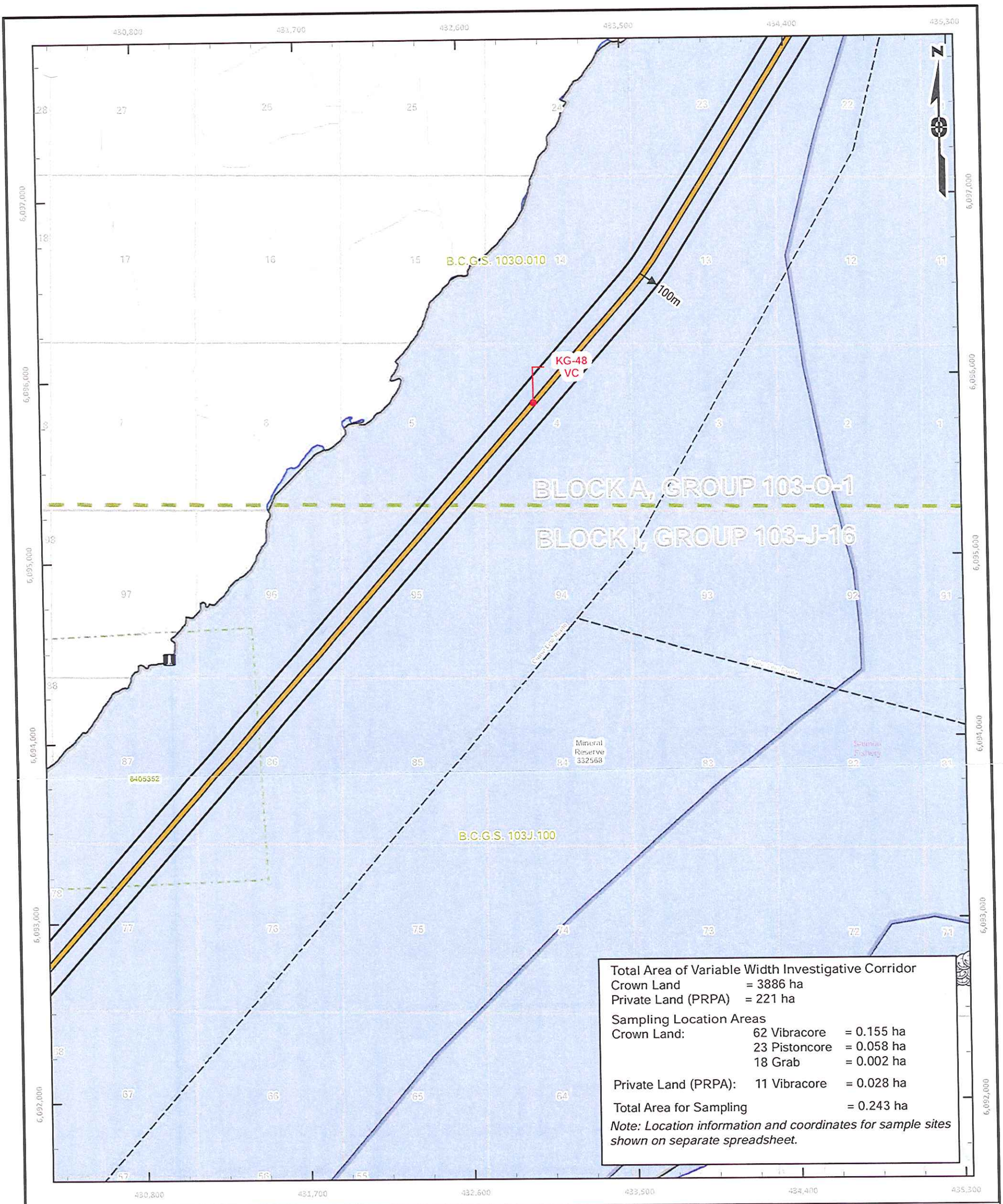

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B.C.G.S.: 103O.010/103J.100

SCALE 1:20,000
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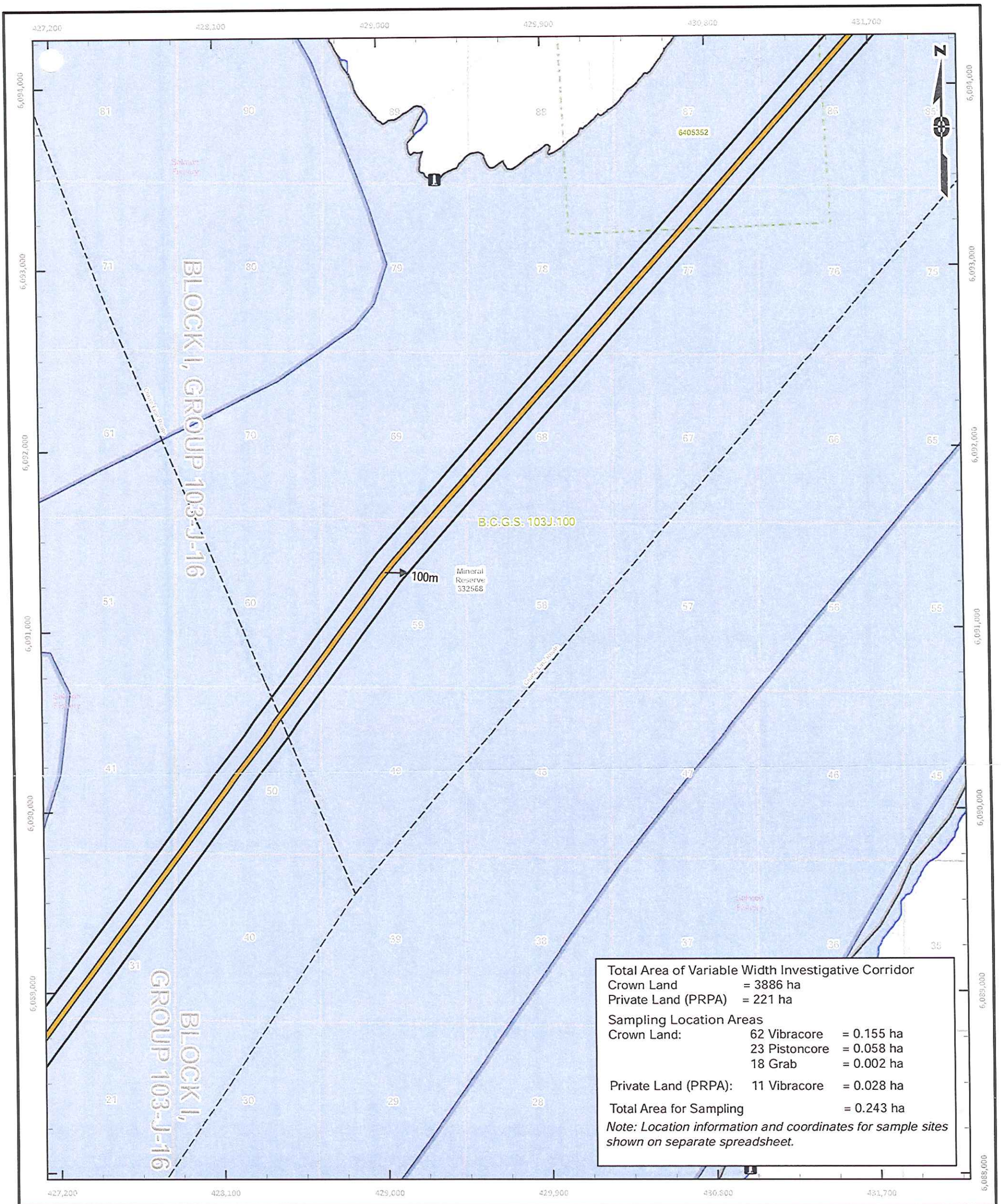

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- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.100

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

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FCS Land Services Limited Partnership
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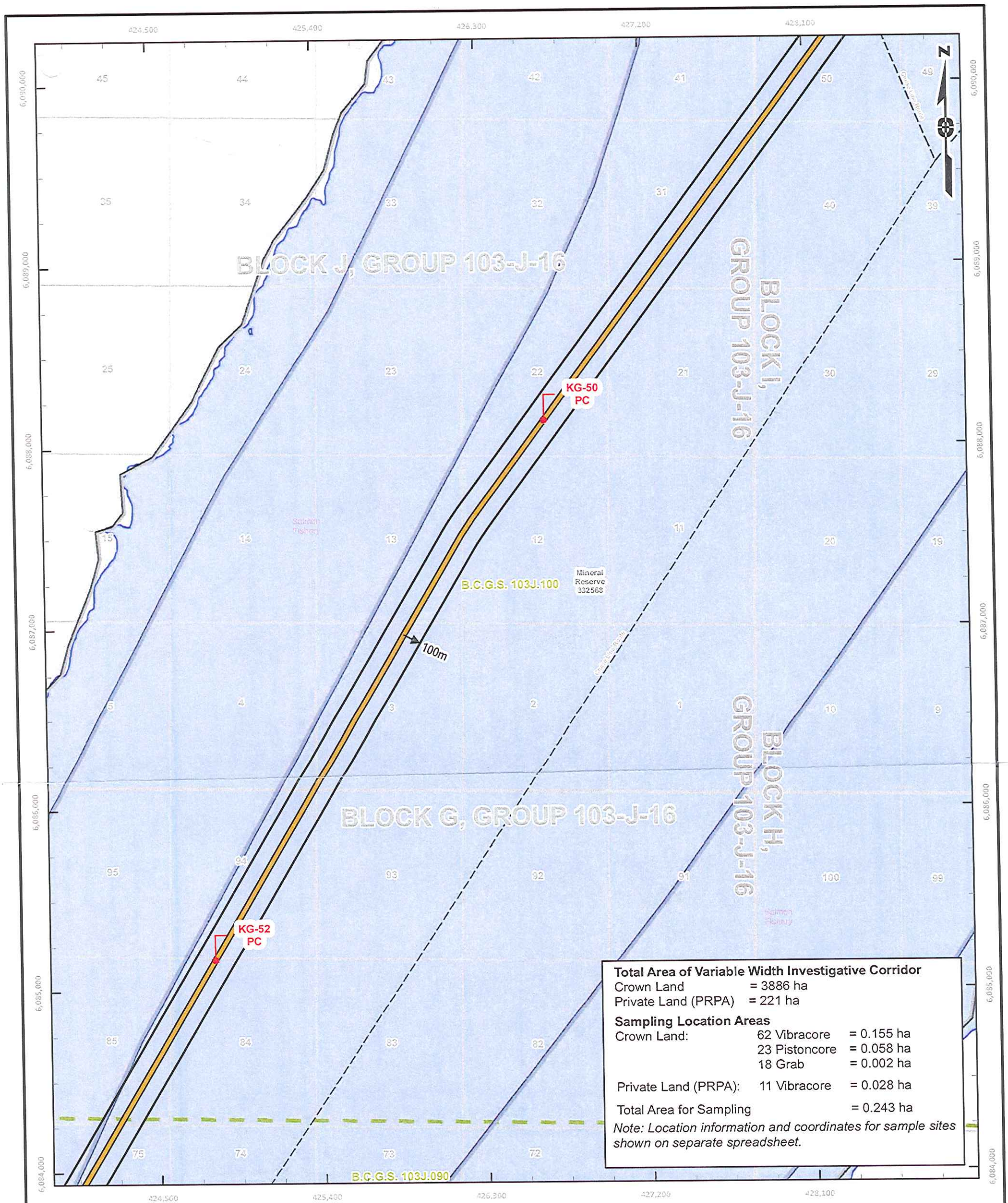

Total Area of Variable Width Investigative Corridor

Crown Land	= 3886 ha
Private Land (PRPA)	= 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
	18 Grab	= 0.002 ha
Private Land (PRPA):	11 Vibracore	= 0.028 ha
Total Area for Sampling		= 0.243 ha

Note: Location information and coordinates for sample sites shown on separate spreadsheet.

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commericial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commericial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
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CRITICAL HABITAT
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- Wildlife Habitat Area

FORESTRY
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- Community Forests
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MISCELLANEOUS
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- Mineral Tenure
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- Recreation Protected
- Grazing Tenure
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.100/.090

SCALE 1:20,000
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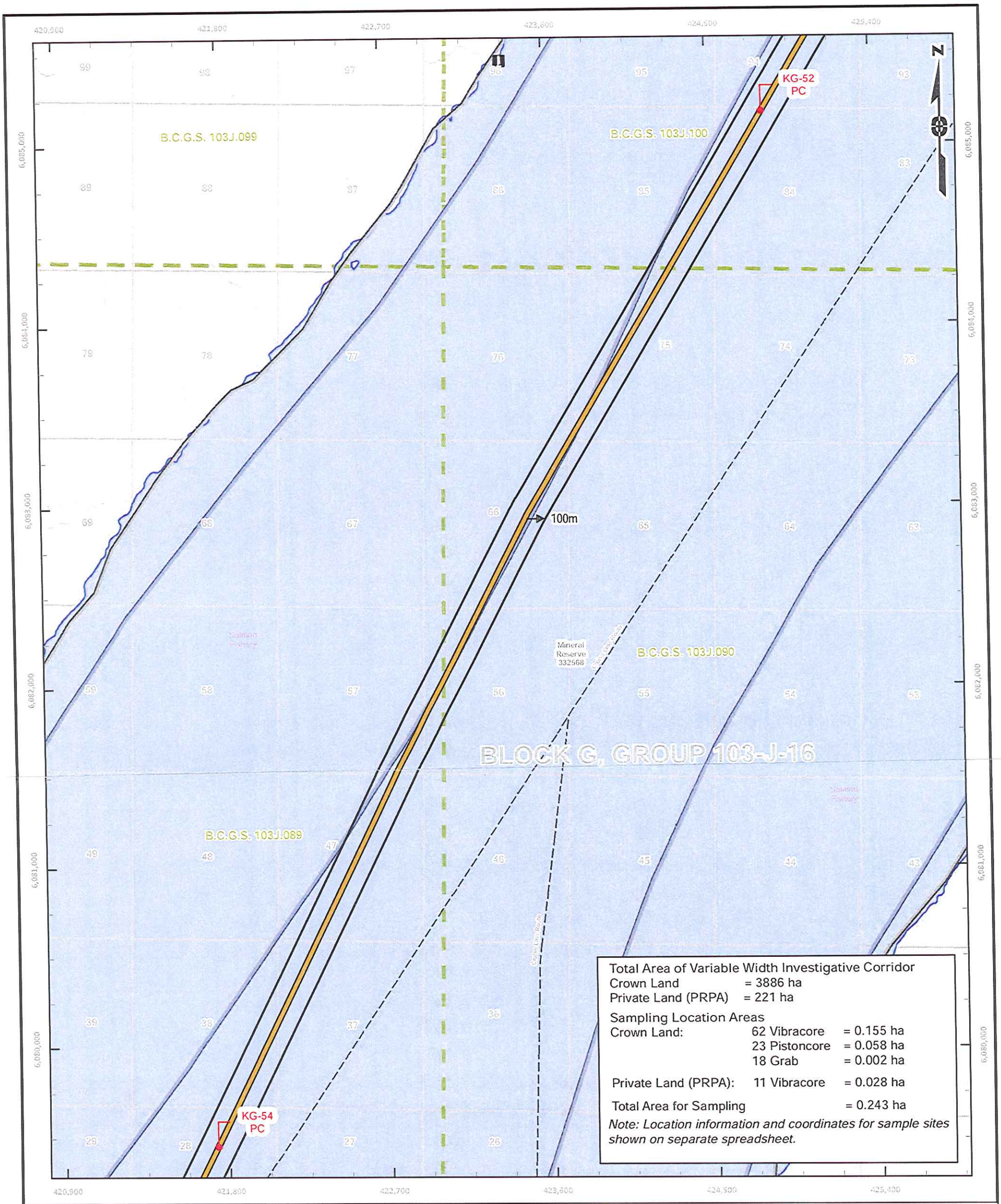

PROJECT FEATURES
Proposed Features
Pipeline R/W

OFFSHORE DATA
Coastal Boat Launches
Coastal Moorages
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Bird Colonies
Industrial Point
Freshwater Coast
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Cruise Line

OIL AND GAS
Ground Disturbance/ Leases
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FISHERIES
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TANTALIS TENURES
Watershed Reserve
Waterpower
Windpower
Aquaculture
Env. Conserv. & Rec.
Industrial
Communication
Quarrying
Utility

WATER FEATURES
Lake, River, Canal, Lagoon, Dugout
Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
Muskwa-Kechika Management Area
Protected Area/ Ecological Reserve
Provincial Park
Recreation Area
Vehicle Closure Area

TRANSPORTATION
Highway
Paved Road
Highgrade Gravel
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Winter Road
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Railway
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MUNICIPAL
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CRITICAL HABITAT
Caribou Review
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FORESTRY
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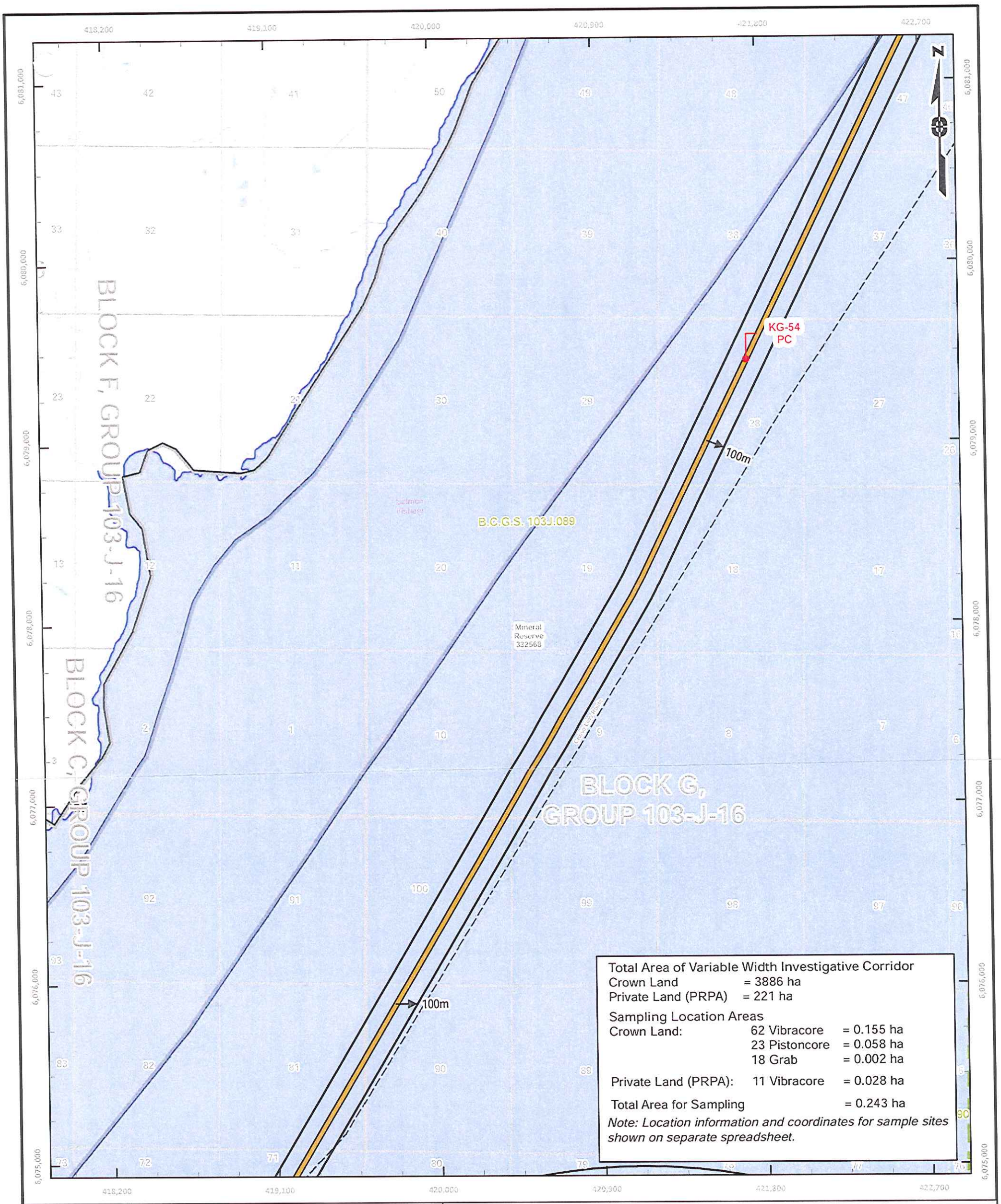

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OIL AND GAS
- Ground Disturbance/ Leases
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WATER FEATURES
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ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
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- Winter Road
- Cutline/Trail
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- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
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CRITICAL HABITAT
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Spectra Energy

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B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.089

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DATE: September-25-13	SHEET: 1 of 1	

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B.C.G.S. 103J.089

Mineral Reserve 332568

BLOCK C, GROUP 103-J-16

100m

KG-56 PC

B.C.G.S. 103J.079

Total Area of Variable Width Investigative Corridor
Crown Land = 3886 ha
Private Land (PRPA) = 221 ha

Sampling Location Areas

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- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
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TANTALIS TENURES
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WATER FEATURES
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ENVIRONMENTAL
- Muskwa-Kechika Management Area
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- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
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MISCELLANEOUS
- Coal Tenure
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Spectra Energy

Westcoast Energy

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B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.089/.079

SCALE 1:20,000
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FOCUS
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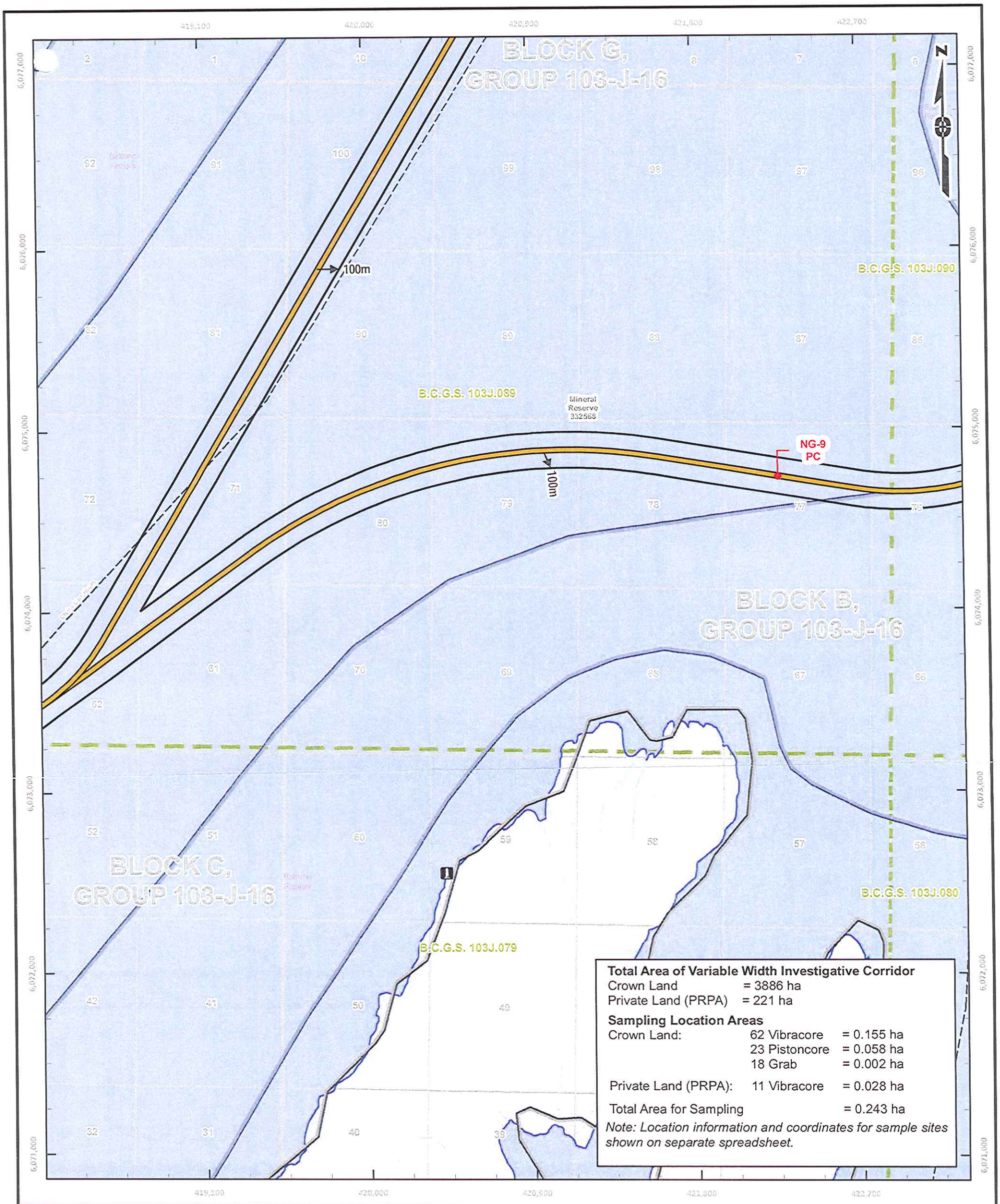

Total Area of Variable Width Investigative Corridor

Crown Land		= 3886 ha
Private Land (PRPA)		= 221 ha
Sampling Location Areas		
Crown Land:	62 Vibracore	= 0.155 ha
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- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
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- Commericial Crab Fishery
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TANTALIS TENURES
- Watershed Reserve
- Waterpower
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- Aquaculture
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- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
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FORESTRY
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- Woodlots

MISCELLANEOUS
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- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
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- Grazing Tenure
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- Transmission Line

Spectra Energy

Westcoast Energy

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SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.089/.090

SCALE 1:20,000
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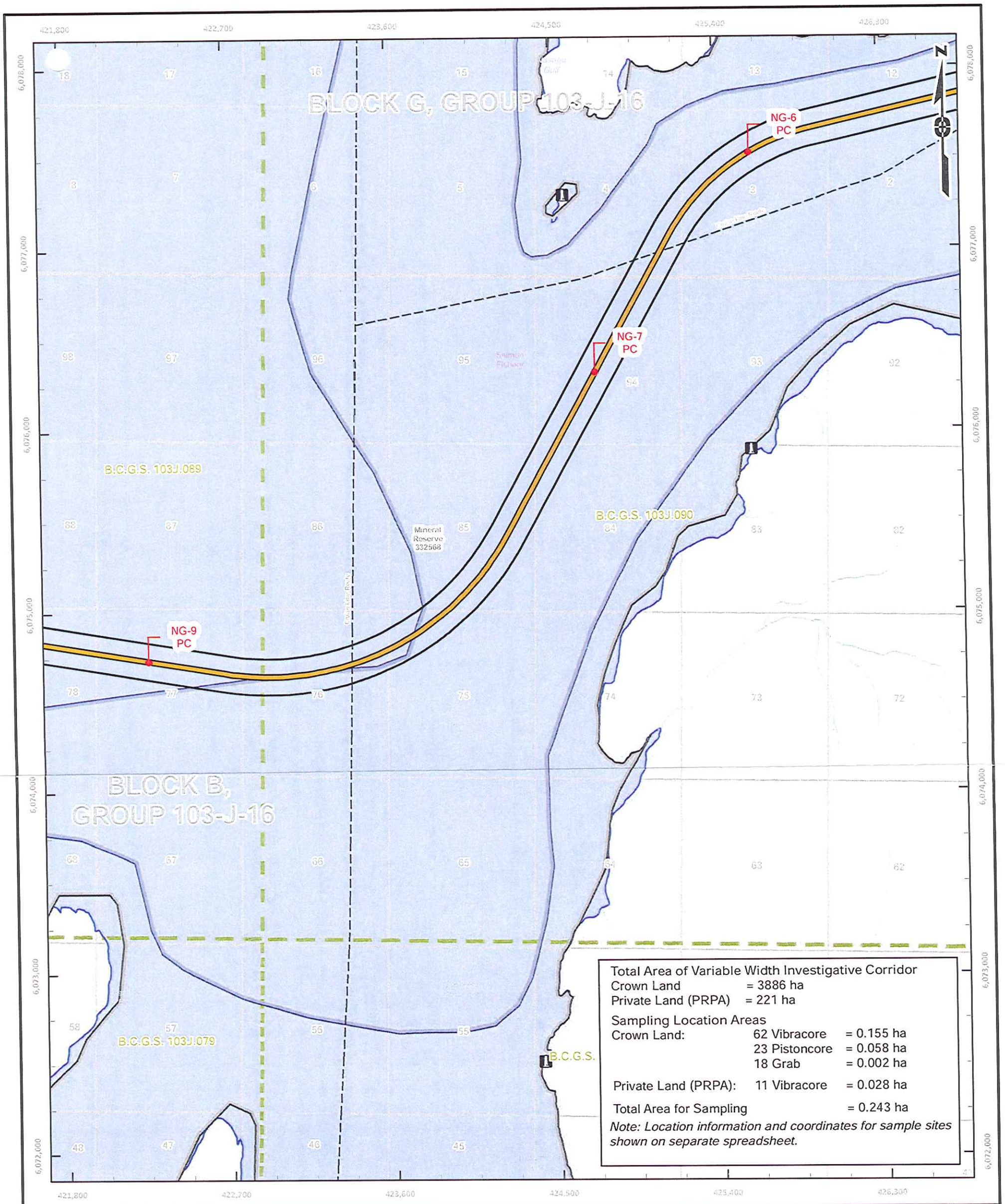

PROJECT FEATURES
Proposed Features
Pipeline R/W

OFFSHORE DATA
Coastal Boat Launches
Coastal Moorages
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Freshwater Coast
Submarine Pipeline
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OIL AND GAS
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TANTALIS TENURES
Watershed Reserve
Waterpower
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WATER FEATURES
Lake, River, Canal, Lagoon, Dugout
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ENVIRONMENTAL
Muskwa-Kechika Management Area
Protected Area/ Ecological Reserve
Provincial Park
Recreation Area
Vehicle Closure Area

TRANSPORTATION
Highway
Paved Road
Highgrade Gravel
Lowgrade Gravel
Winter Road
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MUNICIPAL
Municipality
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CRITICAL HABITAT
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FORESTRY
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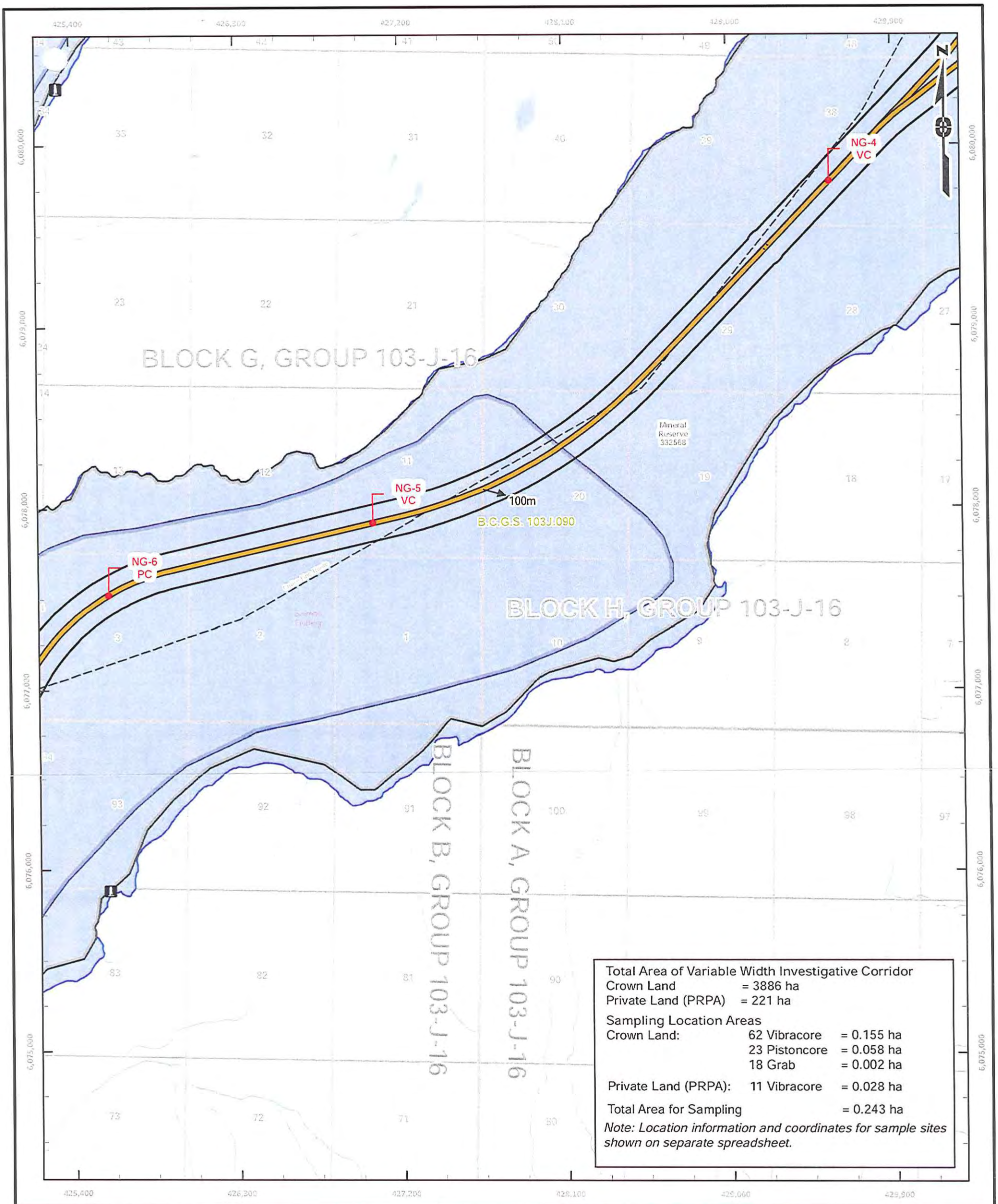

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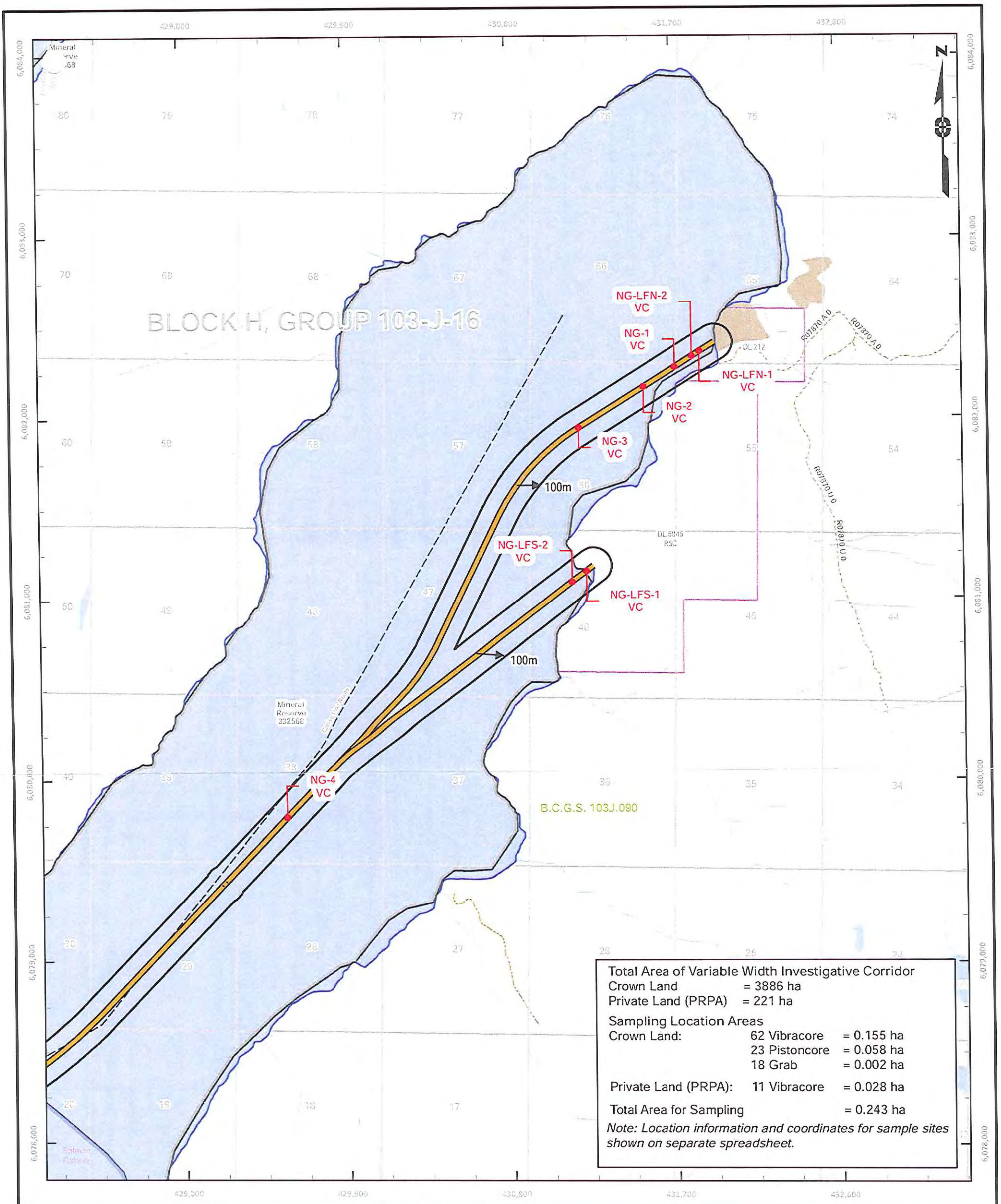

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DATE: September-25-13	SHEET: 1 of 1	

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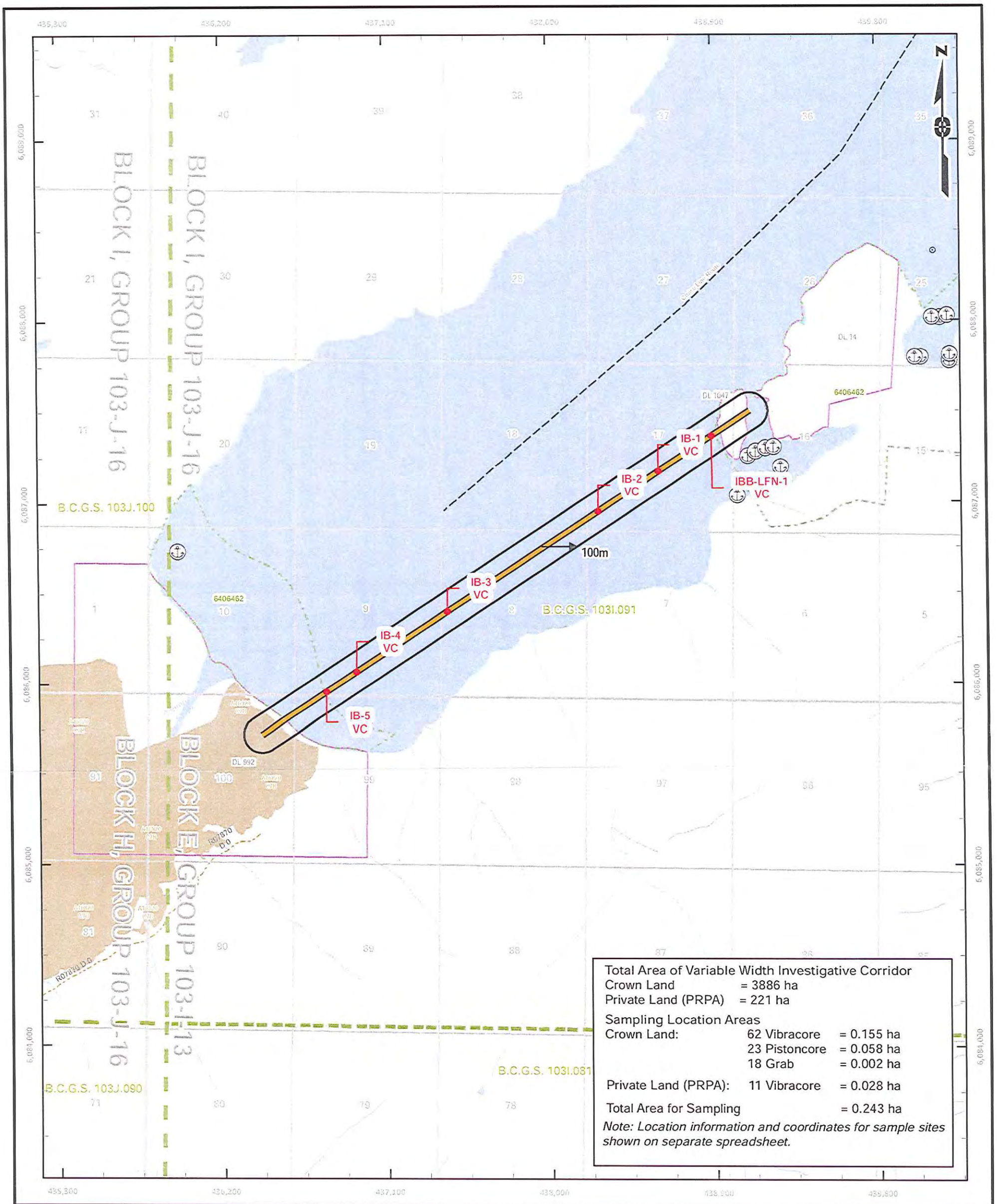

PROJECT FEATURES
Proposed Features
Pipeline R/W

OFFSHORE DATA
Coastal Boat Launches
Coastal Moorages
Navigational Light
Coastal Airport
Bird Colonies
Industrial Point
Freshwater Coast
Submarine Pipeline
Cruise Line

OIL AND GAS
Ground Disturbance/ Leases
Pipeline

FISHERIES
Commercial Salmon Fishery
Commercial Urchin Fishery
Recreational Fish Fishery
Commercial Crab Fishery
Recreational Crab Fishery
Recreational Groundfish Fishery

TANTALIS TENURES
Watershed Reserve
Waterpower
Windpower
Aquaculture
Env. Conserv. & Rec.
Industrial
Communication
Quarrying
Utility

WATER FEATURES
Lake, River, Canal, Lagoon, Dugout
Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
Muskwa-Kechika Management Area
Protected Area/ Ecological Reserve
Provincial Park
Recreation Area
Vehicle Closure Area

TRANSPORTATION
Highway
Paved Road
Highgrade Gravel
Lowgrade Gravel
Winter Road
Cutline/Trail
Forestry Road
Railway
Railway Abandoned

MUNICIPAL
Municipality
Large Municipality
First Nations Reserve
Private/Acquired Land

CRITICAL HABITAT
Caribou Review
Ungulate Winter Range
Wildlife Habitat Area

FORESTRY
Cutblock
Wildlife Tree Patch
Community Forests
Woodlots

MISCELLANEOUS
Coal Tenure
Mineral Tenure
Mineral Reserve
Site "C" HCA Permit
VLI - High
VLI - Moderate
VLI - Low
Recreation Protected
Grazing Tenure
Agricultural Land Reserve
Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103I.091

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
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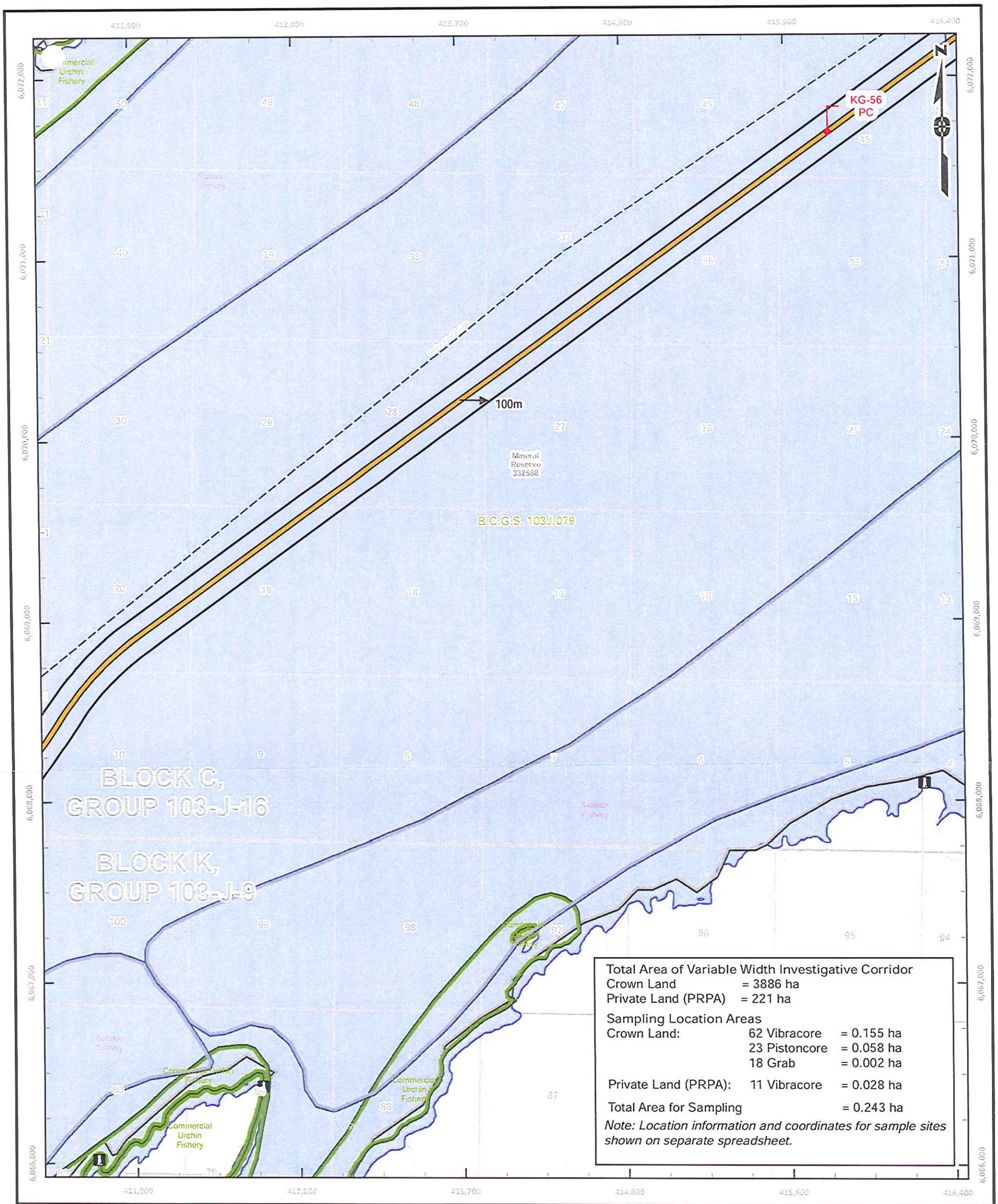

Total Area of Variable Width Investigative Corridor
Crown Land = 3886 ha
Private Land (PRPA) = 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
	18 Grab	= 0.002 ha
Private Land (PRPA):	11 Vibracore	= 0.028 ha
Total Area for Sampling		= 0.243 ha

Note: Location information and coordinates for sample sites shown on separate spreadsheet.

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env, Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.079

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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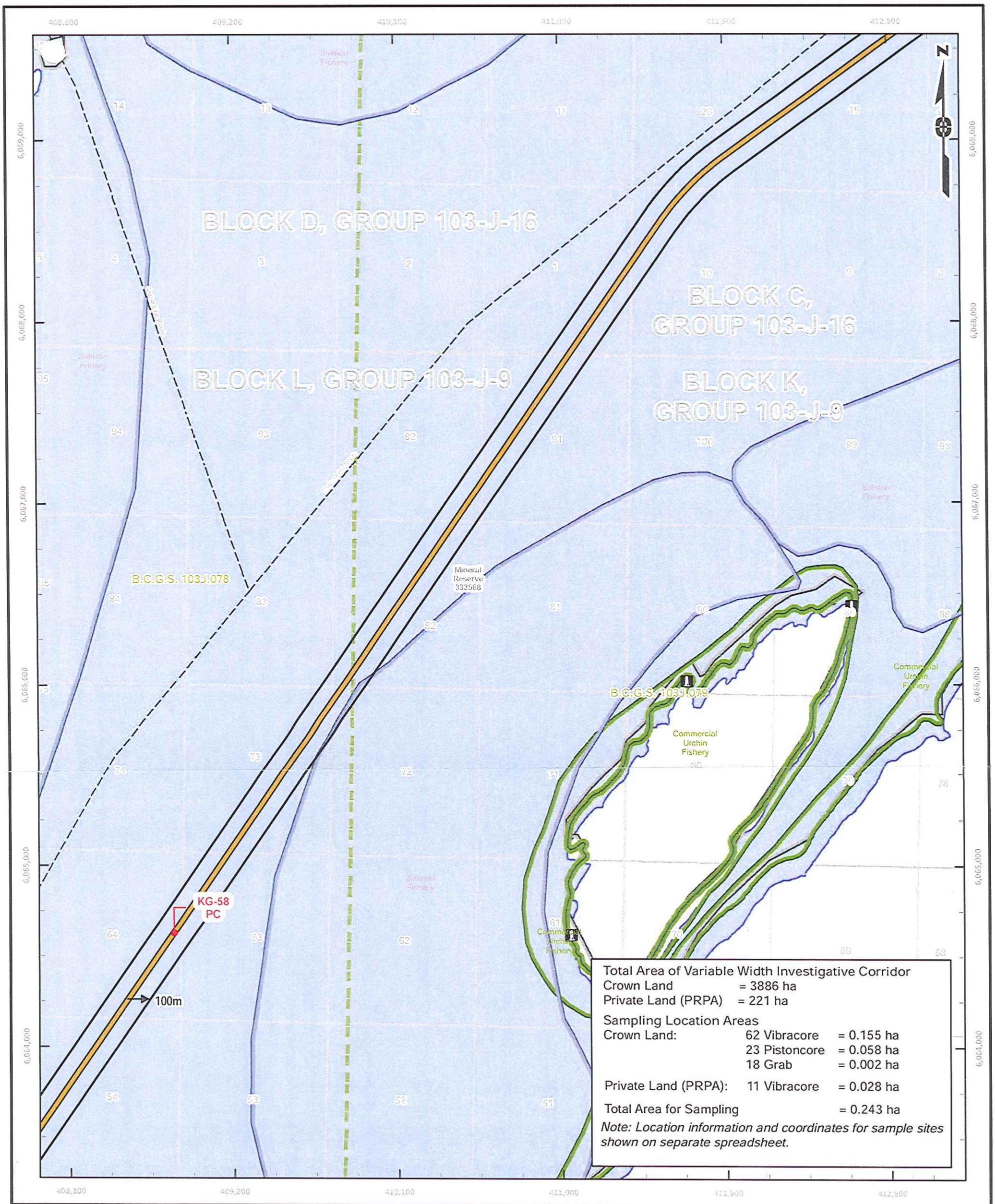

Total Area of Variable Width Investigative Corridor
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- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env, Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.078/.079

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
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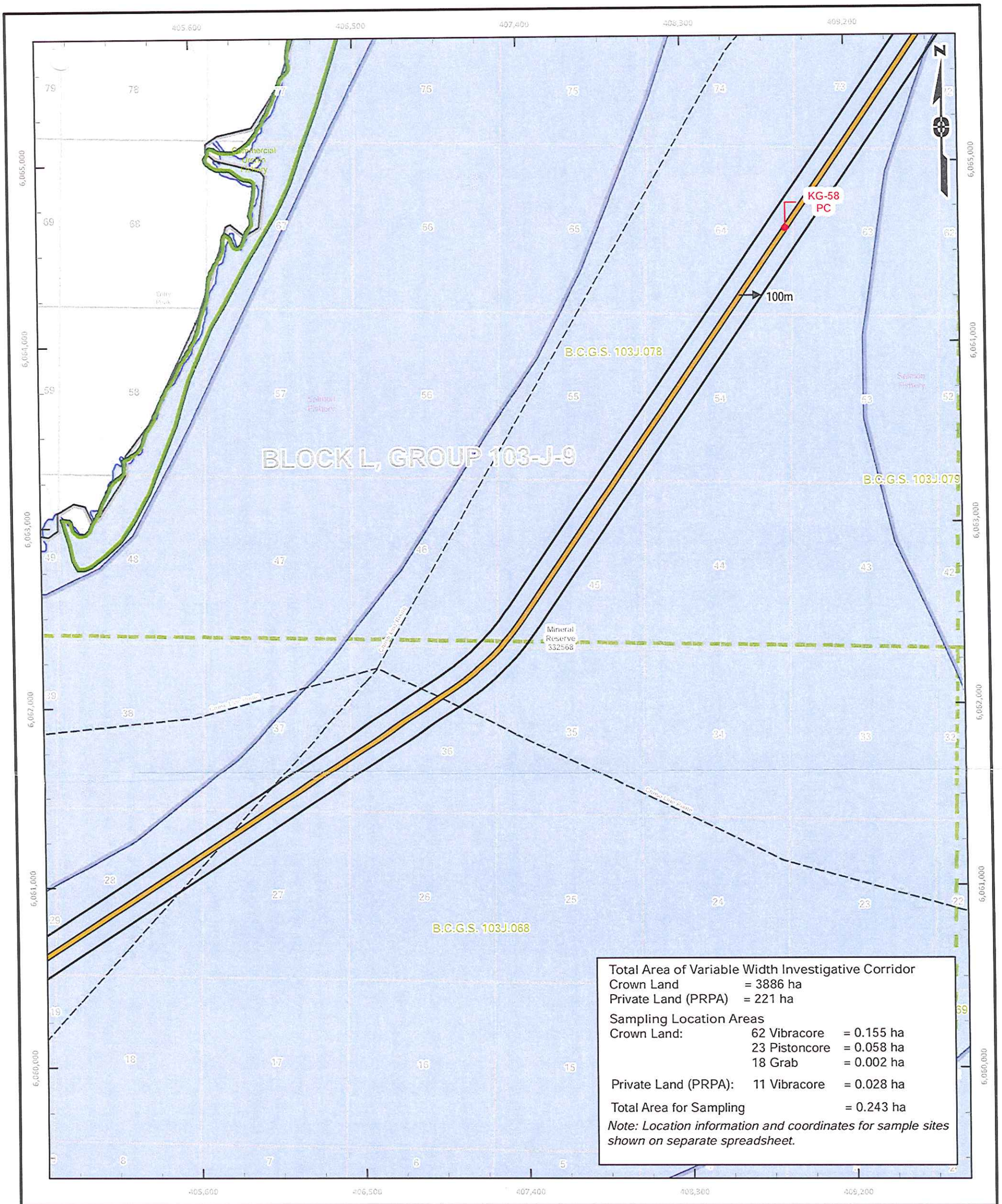

PROJECT FEATURES
Proposed Features
Pipeline R/W

OFFSHORE DATA
Coastal Boat Launches
Coastal Moorages
Navigational Light
Coastal Airport
Bird Colonies
Industrial Point
Freshwater Coast
Submarine Pipeline
Cruise Line

OIL AND GAS
Ground Disturbance/ Leases
Pipeline

FISHERIES
Commercial Salmon Fishery
Commercial Urchin Fishery
Recreational Fish Fishery
Commercial Crab Fishery
Recreational Crab Fishery
Recreational Groundfish Fishery

TANTALIS TENURES
Watershed Reserve
Waterpower
Windpower
Aquaculture
Env. Conserv. & Rec.
Industrial
Communication
Quarrying
Utility

WATER FEATURES
Lake, River, Canal, Lagoon, Dugout
Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
Muskwa-Kechika Management Area
Protected Area/ Ecological Reserve
Provincial Park
Recreation Area
Vehicle Closure Area

TRANSPORTATION
Highway
Paved Road
Highgrade Gravel
Lowgrade Gravel
Winter Road
Cutline/Trail
Forestry Road
Railway
Railway Abandoned

MUNICIPAL
Municipality
Large Municipality
First Nations Reserve
Private/Acquired Land

CRITICAL HABITAT
Caribou Review
Ungulate Winter Range
Wildlife Habitat Area

FORESTRY
Cutblock
Wildlife Tree Patch
Community Forests
Woodlots

MISCELLANEOUS
Coal Tenure
Mineral Tenure
Mineral Reserve
Site "C" HCA Permit
VLI - High
VLI - Moderate
VLI - Low
Recreation Protected
Grazing Tenure
Agricultural Land Reserve
Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.078/.068

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
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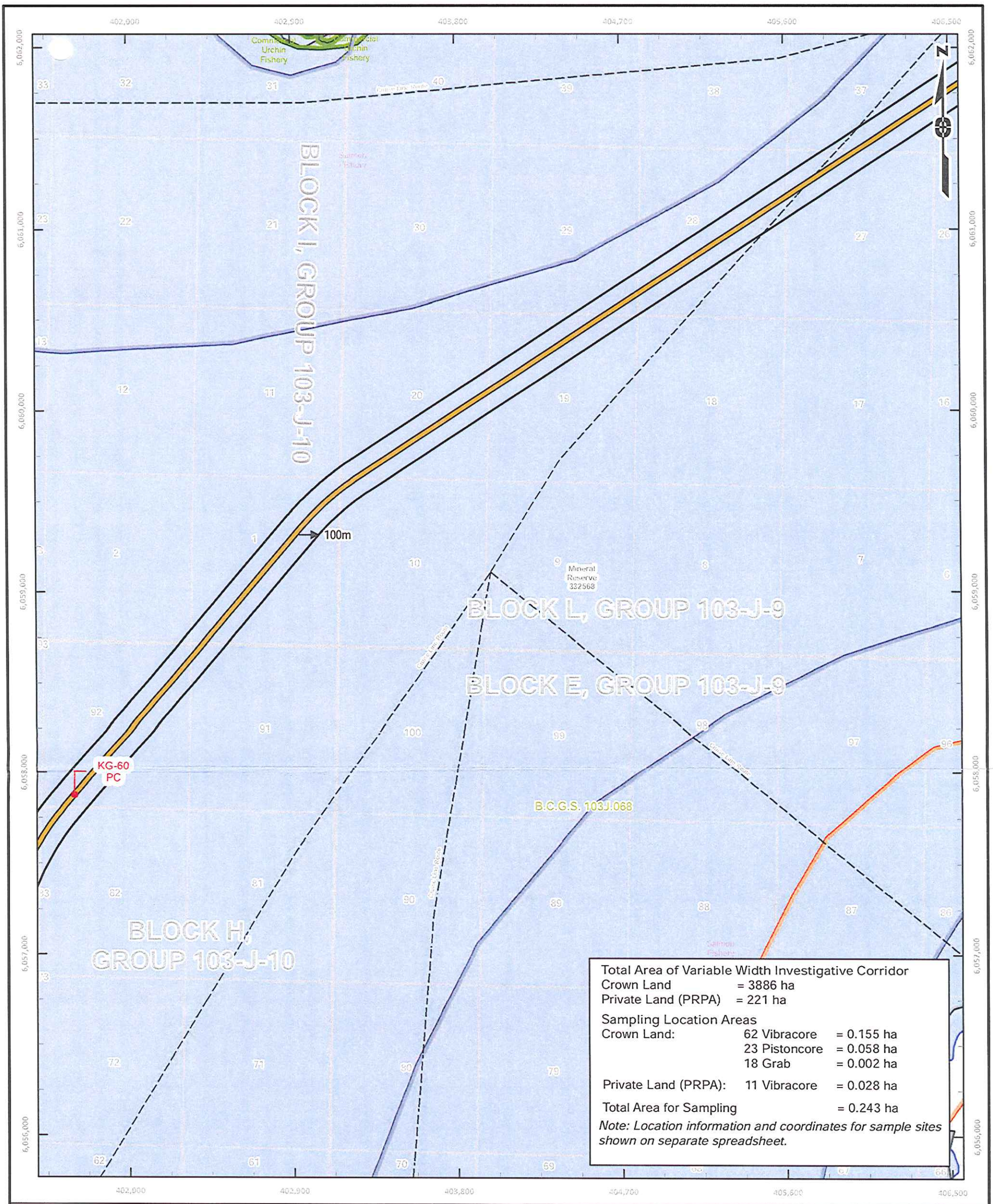

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
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- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.068

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
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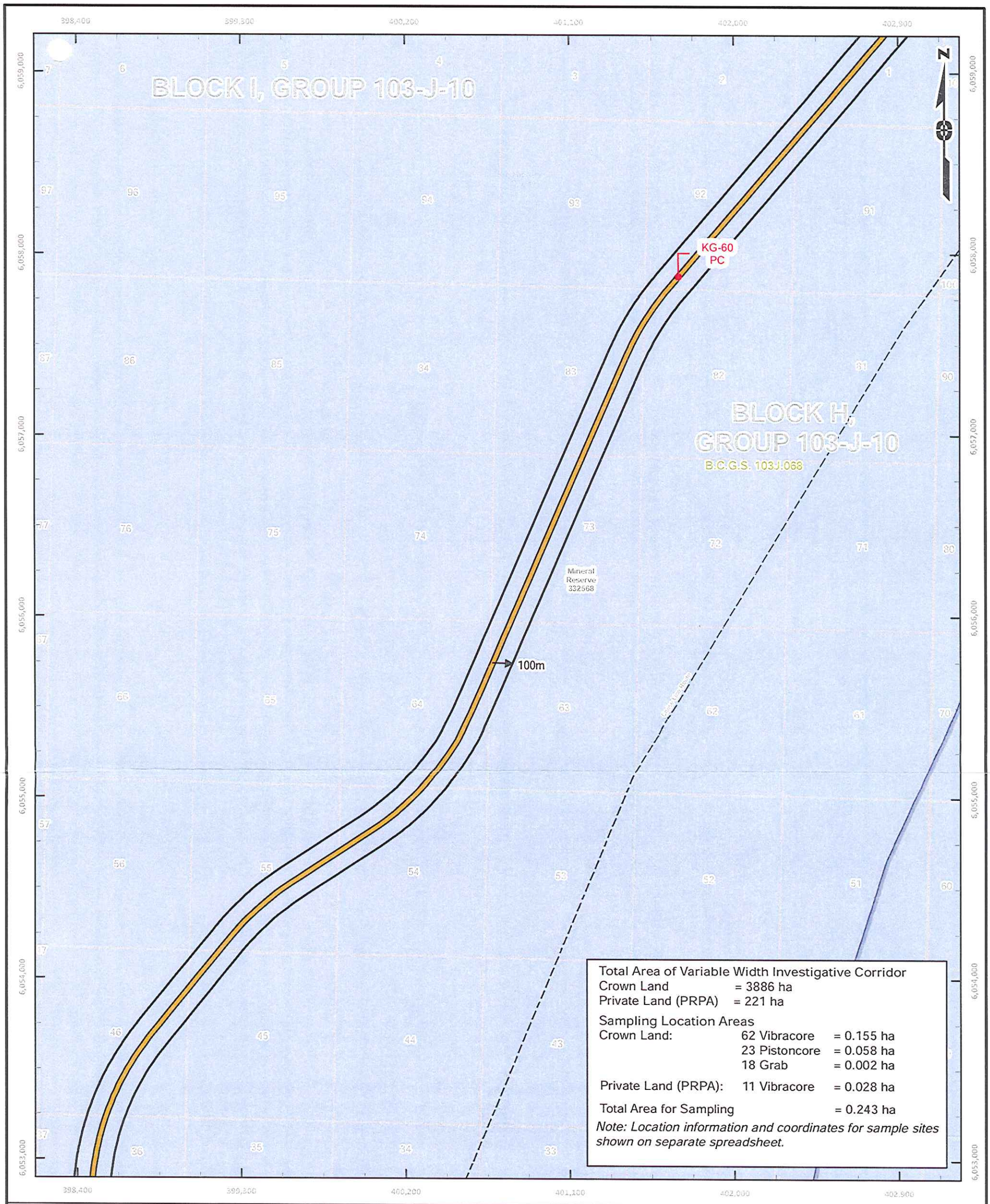

Total Area of Variable Width Investigative Corridor

Crown Land	= 3886 ha
Private Land (PRPA)	= 221 ha

Sampling Location Areas

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- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
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- Coastal Airport
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- Industrial Point
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- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
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TANTALIS TENURES
- Watershed Reserve
- Waterpower
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- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
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- Site "C" HCA Permit
- VLI - High
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.068

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
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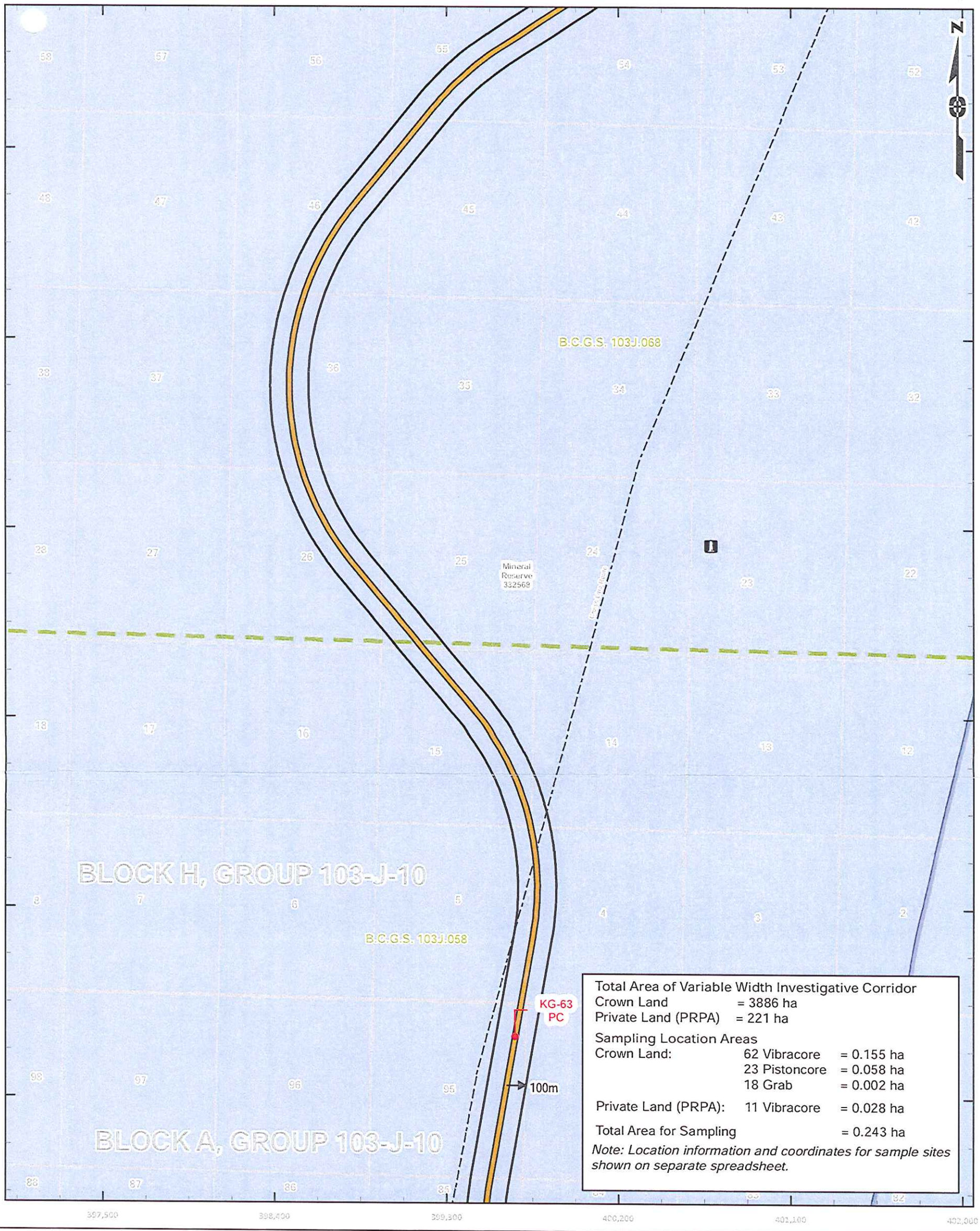

Total Area of Variable Width Investigative Corridor

Crown Land		= 3886 ha
Private Land (PRPA)		= 221 ha
Sampling Location Areas		
Crown Land:	62 Vibracore	= 0.155 ha
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OIL AND GAS
- Ground Disturbance/ Leases
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FISHERIES
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TANTALIS TENURES
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WATER FEATURES
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ENVIRONMENTAL
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TRANSPORTATION
- Highway
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MUNICIPAL
- Municipality
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CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
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FORESTRY
- Cutblock
- Wildlife Tree Patch
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.068/.058

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
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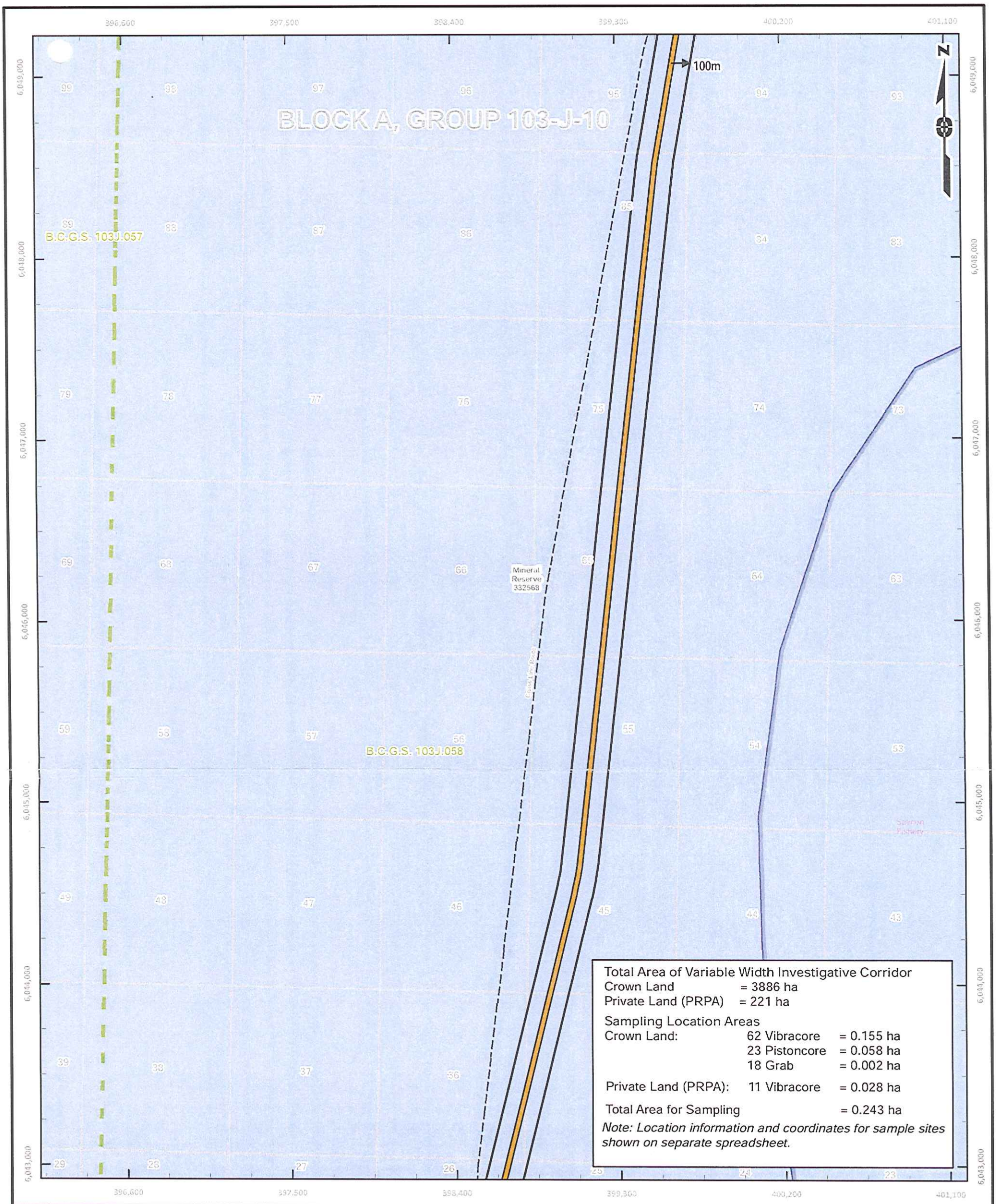

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
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OIL AND GAS
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FISHERIES
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TANTALIS TENURES
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WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
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- Provincial Park
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TRANSPORTATION
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MUNICIPAL
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- Large Municipality
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CRITICAL HABITAT
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FORESTRY
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.058

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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DATE: September-25-13	SHEET: 1 of 1	

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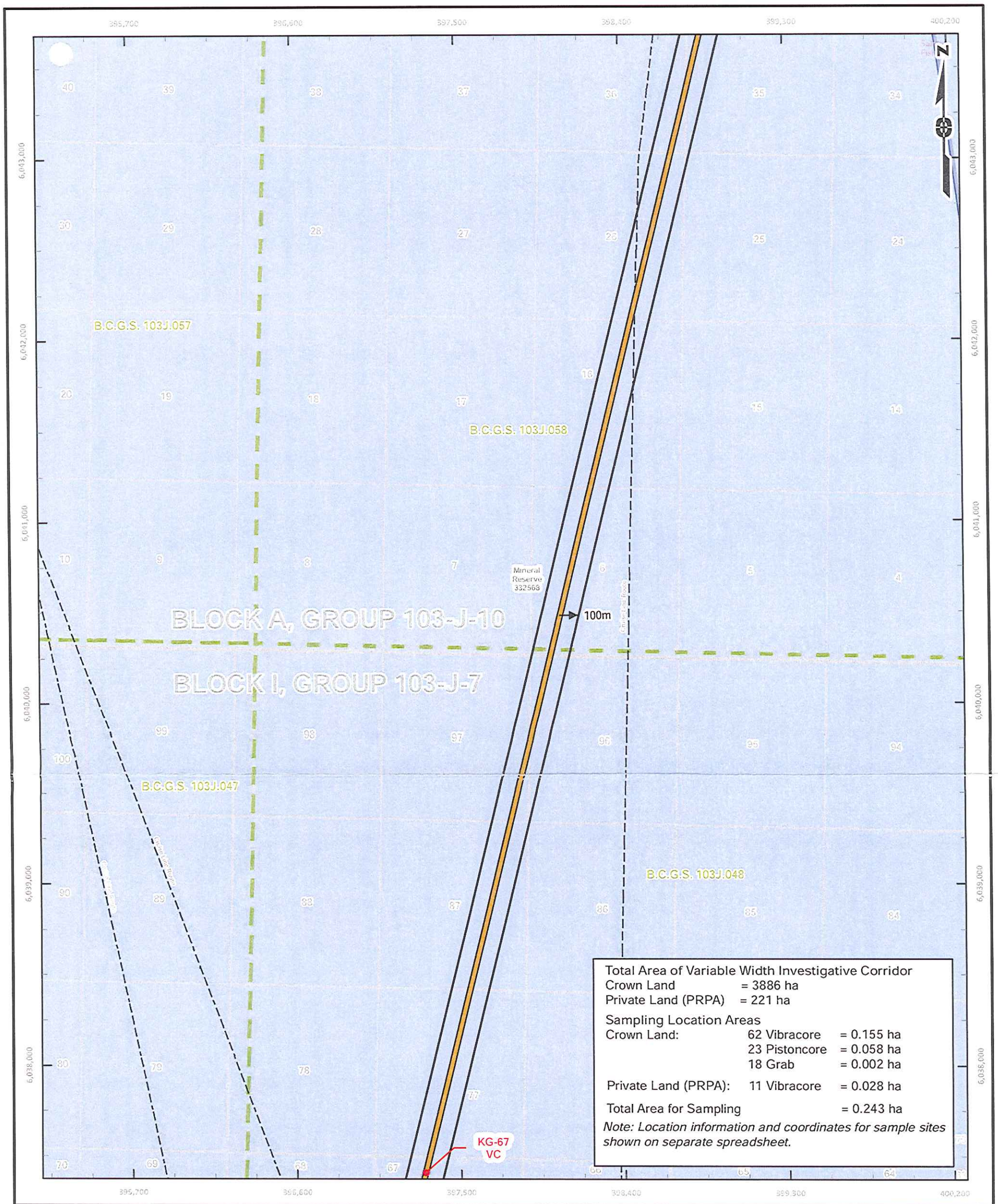

PROJECT FEATURES
Proposed Features
Pipeline R/W

OFFSHORE DATA
Coastal Boat Launches
Coastal Moorages
Navigational Light
Coastal Airport
Bird Colonies
Industrial Point
Freshwater Coast
Submarine Pipeline
Cruise Line

OIL AND GAS
Ground Disturbance/ Leases
Pipeline

FISHERIES
Commercial Salmon Fishery
Commercial Urchin Fishery
Recreational Fish Fishery
Commercial Crab Fishery
Recreational Crab Fishery
Recreational Groundfish Fishery

TANTALIS TENURES
Watershed Reserve
Waterpower
Windpower
Aquaculture
Env, Conserv. & Rec.
Industrial
Communication
Quarrying
Utility

WATER FEATURES
Lake, River, Canal, Lagoon, Dugout
Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
Muskwa-Kechika Management Area
Protected Area/ Ecological Reserve
Provincial Park
Recreation Area
Vehicle Closure Area

TRANSPORTATION
Highway
Paved Road
Highgrade Gravel
Lowgrade Gravel
Winter Road
Cutline/Trail
Forestry Road
Railway
Railway Abandoned

MUNICIPAL
Municipality
Large Municipality
First Nations Reserve
Private/Acquired Land

CRITICAL HABITAT
Caribou Review
Ungulate Winter Range
Wildlife Habitat Area

FORESTRY
Cutblock
Wildlife Tree Patch
Community Forests
Woodlots

MISCELLANEOUS
Coal Tenure
Mineral Tenure
Mineral Reserve
Site "C" HCA Permit
VLI - High
VLI - Moderate
VLI - Low
Recreation Protected
Grazing Tenure
Agricultural Land Reserve
Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.058/.048

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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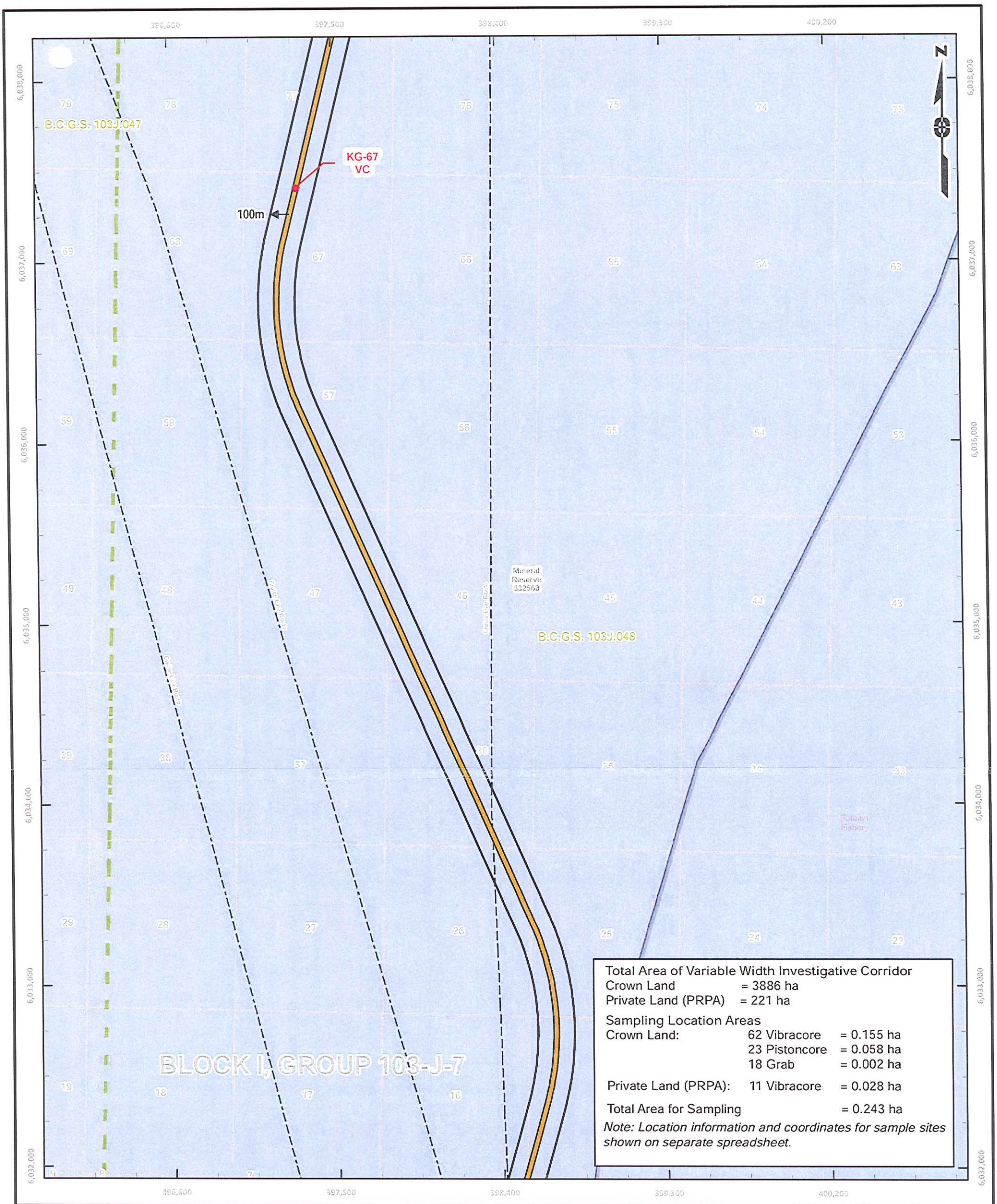

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.048

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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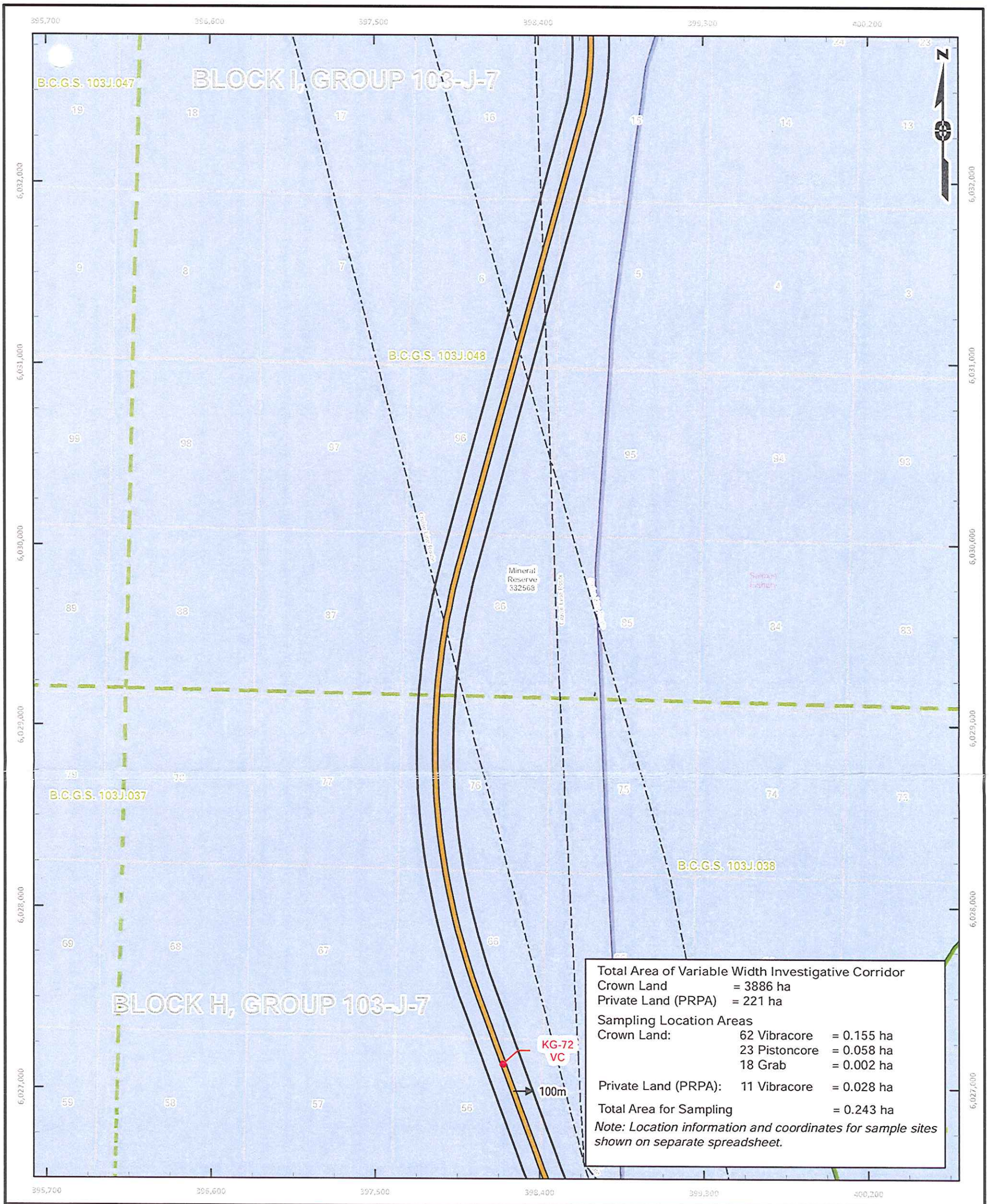

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env, Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.048/.038

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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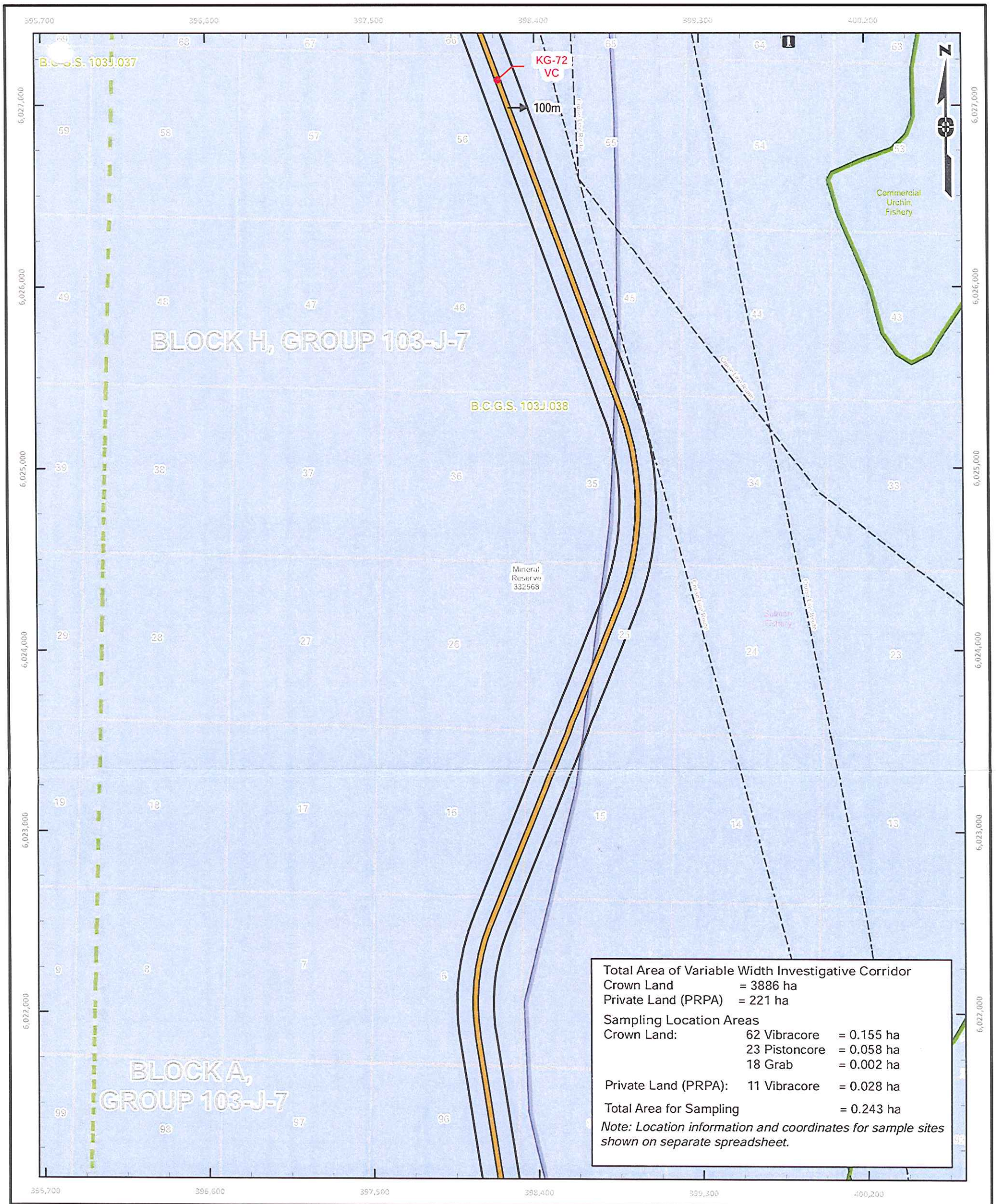

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.038

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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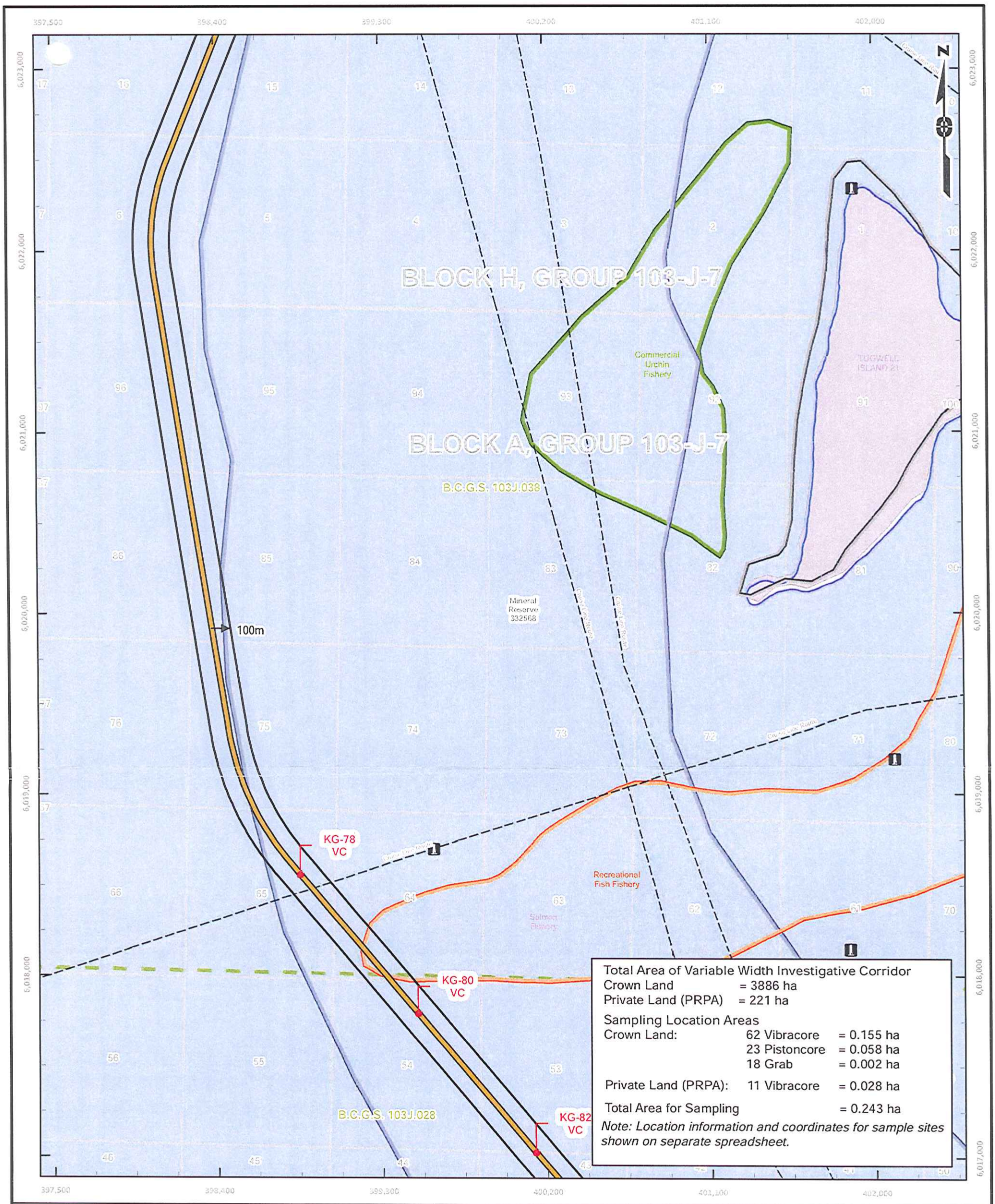

Total Area of Variable Width Investigative Corridor

Crown Land		= 3886 ha
Private Land (PRPA)		= 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
	18 Grab	= 0.002 ha
Private Land (PRPA):	11 Vibracore	= 0.028 ha
Total Area for Sampling		= 0.243 ha

Note: Location information and coordinates for sample sites shown on separate spreadsheet.

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env, Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.038/.028

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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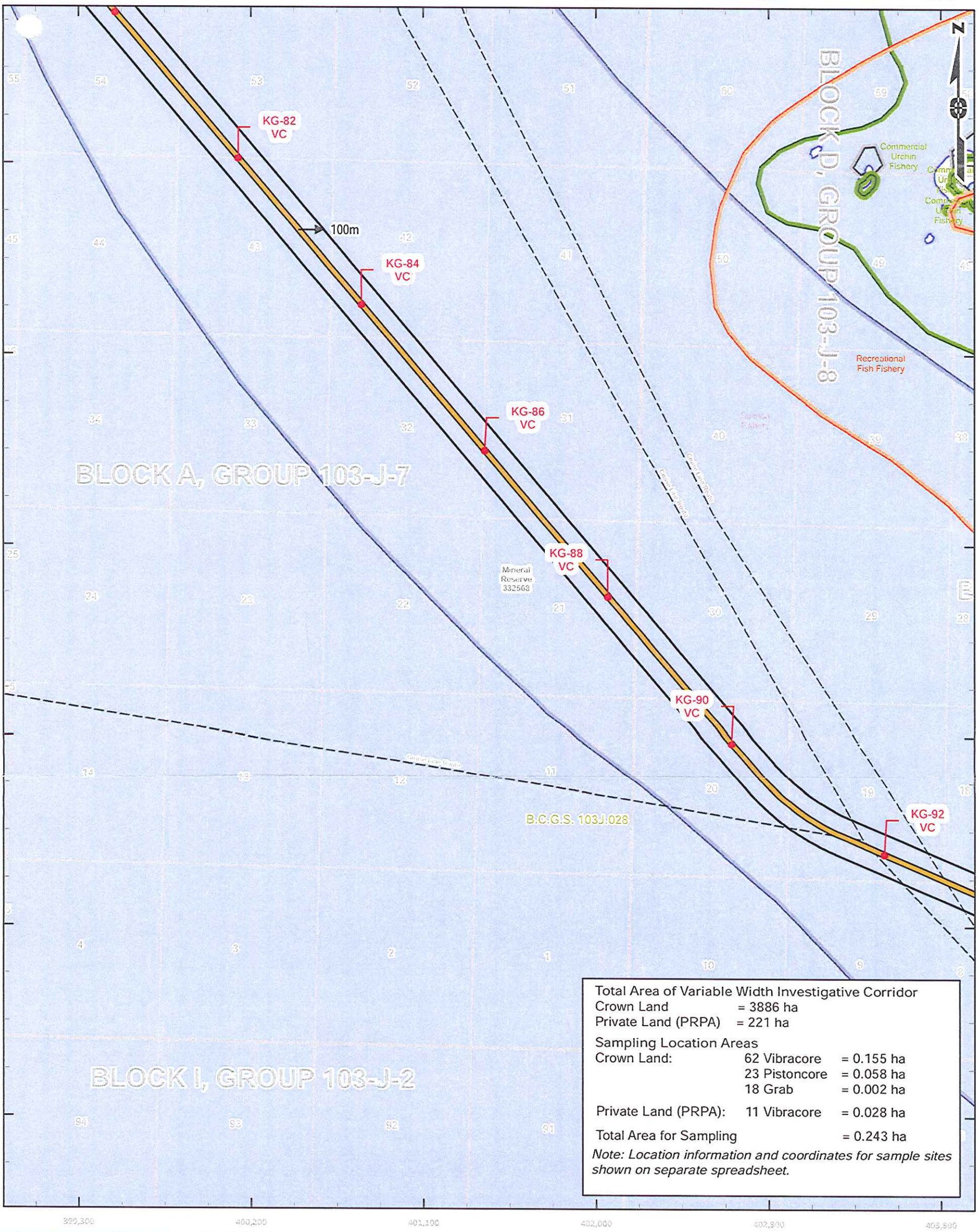

Total Area of Variable Width Investigative Corridor
Crown Land = 3886 ha
Private Land (PRPA) = 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
	23 Pistoncore	= 0.058 ha
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Private Land (PRPA):	11 Vibracore	= 0.028 ha
Total Area for Sampling		= 0.243 ha

Note: Location information and coordinates for sample sites shown on separate spreadsheet.

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
- Commercial Urchin Fishery
- Recreational Fish Fishery
- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env, Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.028

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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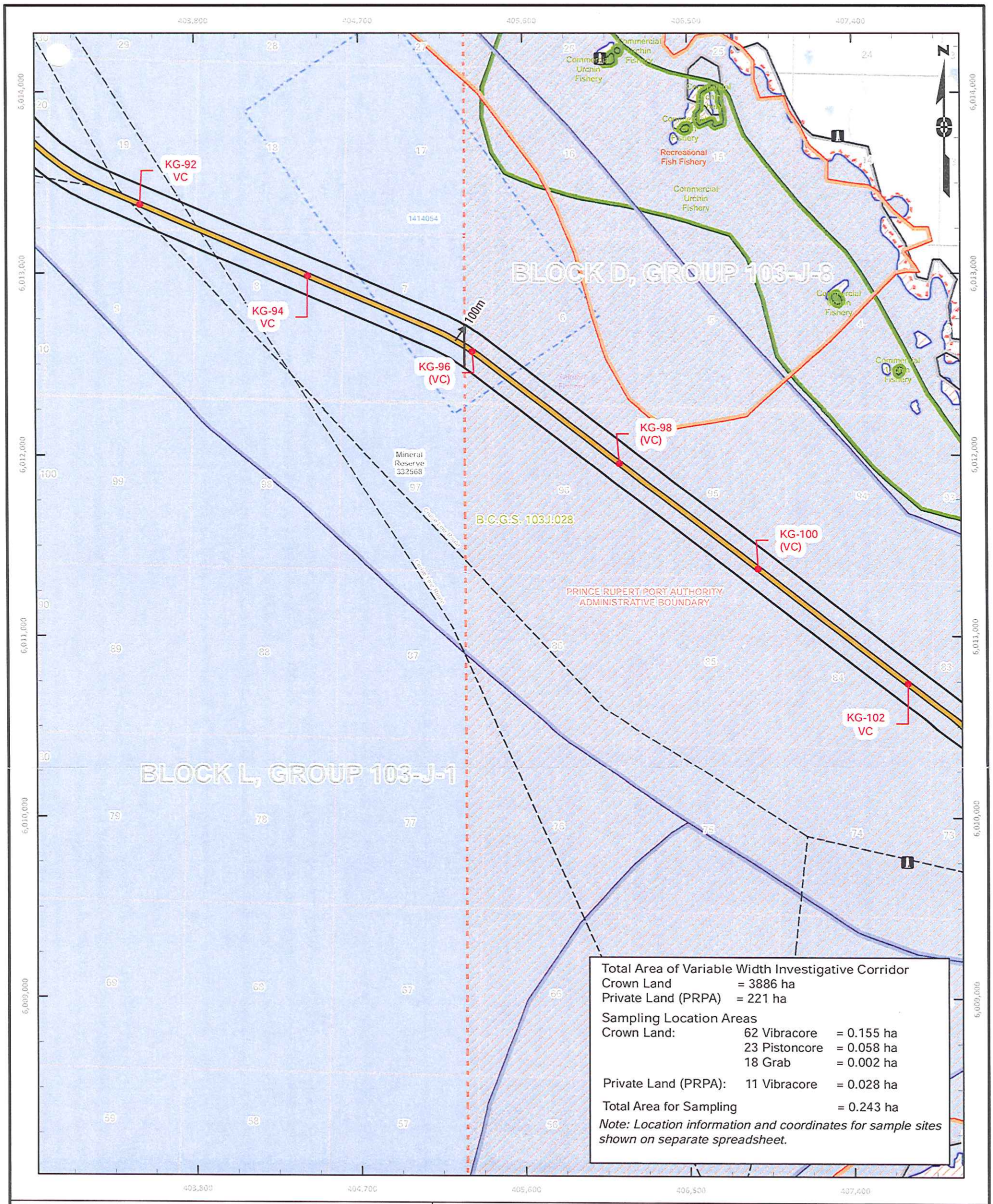

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
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- Submarine Pipeline
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OIL AND GAS
- Ground Disturbance/ Leases
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FISHERIES
- Commercial Salmon Fishery
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TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
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- Quarrying
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WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
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ENVIRONMENTAL
- Muskwa-Kechika Management Area
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TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
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- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
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FORESTRY
- Cutblock
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MISCELLANEOUS
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Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.028

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0309 www.focus.ca

JOB NO.: 010042423		REVISION
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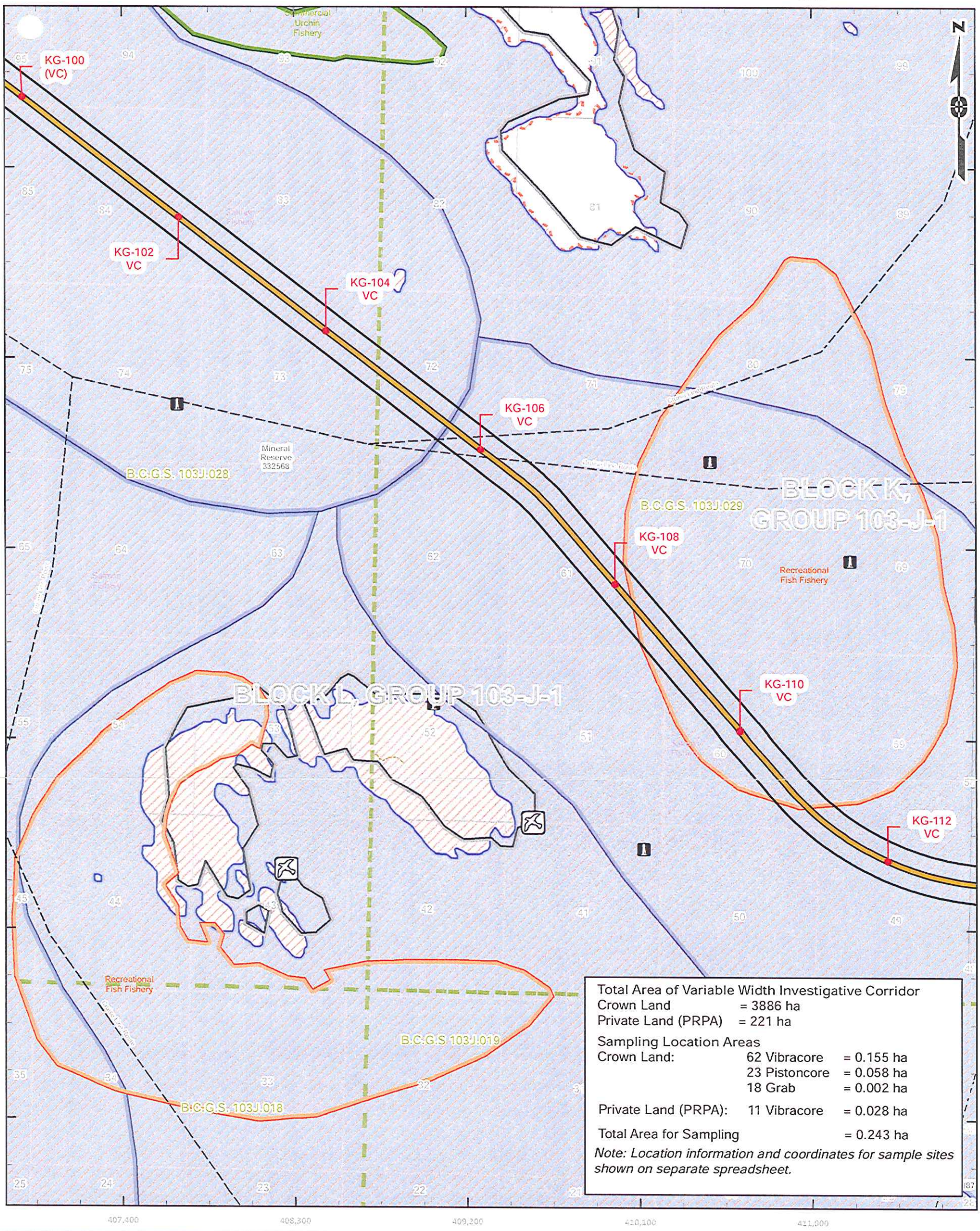

Total Area of Variable Width Investigative Corridor
Crown Land = 3886 ha
Private Land (PRPA) = 221 ha

Sampling Location Areas

Crown Land:	62 Vibracore	= 0.155 ha
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Note: Location information and coordinates for sample sites shown on separate spreadsheet.

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
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- Industrial Point
- Freshwater Coast
- Submarine Pipeline
- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
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- Commercial Crab Fishery
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TANTALIS TENURES
- Watershed Reserve
- Waterpower
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- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
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- Recreation Area
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TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
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- Railway
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MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
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CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
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FORESTRY
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- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.028/.029

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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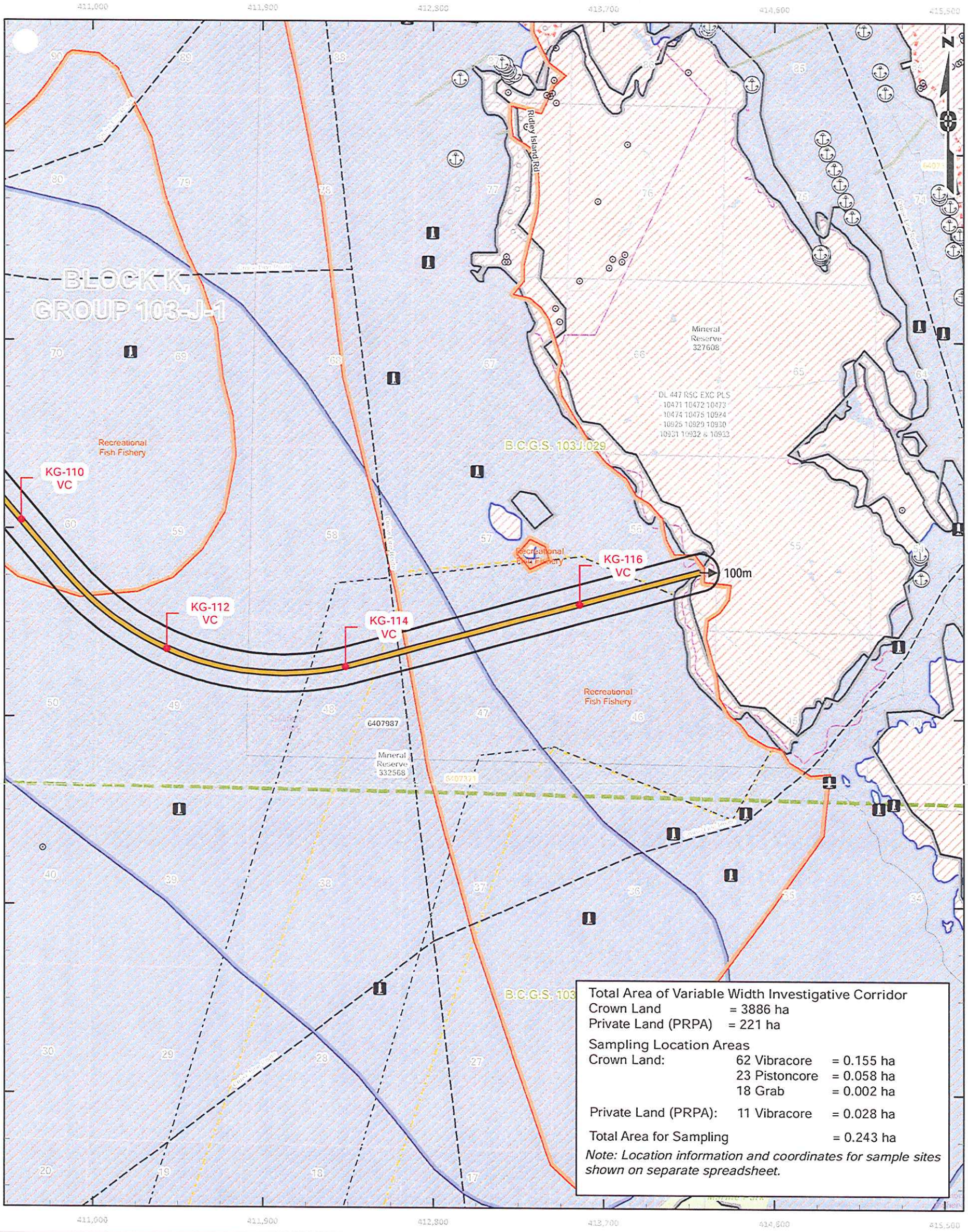

PROJECT FEATURES
- Proposed Features
- Pipeline R/W

OFFSHORE DATA
- Coastal Boat Launches
- Coastal Moorages
- Navigational Light
- Coastal Airport
- Bird Colonies
- Industrial Point
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- Cruise Line

OIL AND GAS
- Ground Disturbance/ Leases
- Pipeline

FISHERIES
- Commercial Salmon Fishery
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- Commercial Crab Fishery
- Recreational Crab Fishery
- Recreational Groundfish Fishery

TANTALIS TENURES
- Watershed Reserve
- Waterpower
- Windpower
- Aquaculture
- Env. Conserv. & Rec.
- Industrial
- Communication
- Quarrying
- Utility

WATER FEATURES
- Lake, River, Canal, Lagoon, Dugout
- Stream, Canal, Oxbow, Ditch

ENVIRONMENTAL
- Muskwa-Kechika Management Area
- Protected Area/ Ecological Reserve
- Provincial Park
- Recreation Area
- Vehicle Closure Area

TRANSPORTATION
- Highway
- Paved Road
- Highgrade Gravel
- Lowgrade Gravel
- Winter Road
- Cutline/Trail
- Forestry Road
- Railway
- Railway Abandoned

MUNICIPAL
- Municipality
- Large Municipality
- First Nations Reserve
- Private/Acquired Land

CRITICAL HABITAT
- Caribou Review
- Ungulate Winter Range
- Wildlife Habitat Area

FORESTRY
- Cutblock
- Wildlife Tree Patch
- Community Forests
- Woodlots

MISCELLANEOUS
- Coal Tenure
- Mineral Tenure
- Mineral Reserve
- Site "C" HCA Permit
- VLI - High
- VLI - Moderate
- VLI - Low
- Recreation Protected
- Grazing Tenure
- Agricultural Land Reserve
- Transmission Line

Spectra Energy

Westcoast Energy

0948090 B.C. LTD.

B.C.G.S SKETCH SHOWING

Investigative Use Permit
Application for Offshore Sediment Sampling

0 250 500 1,000 1,500 2,000 m

B.C.G.S.: 103J.029

SCALE 1:20,000
(NAD 1983 UTM ZONE 9N)

FOCUS
FCS Land Services Limited Partnership
10716 - 100th Avenue Fort St. John BC V1J 1Z3 250.787.0300 www.focus.ca

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