

▷ᑭᓕ▷ᑎᑦ: 613-993-2125, ᐱᓖᐸᓄᑦ:

$\gamma_b \Delta^c \dot{\gamma} \Pi \sigma^b \quad \Lambda c_n d^{\gamma b} \gamma \sigma d n d^{\alpha} l^a \sigma^b$

RV David Thompson -- 2019 Eastern Arctic Operations -- non-technical summary - Ice conditions permitting, in late September 2019 the Parks Canada Research Vessel (RV) David Thompson will transit east through Bellot Strait and into Prince Regent Inlet. Non-intrusive marine survey operations (i.e. underwater archaeological, bathymetric, selected marine water sampling, habitat mapping and seabed classification) will take place at selected locations along a planned route from Bellot Strait, through Prince Regent Inlet, then Lancaster Sound, and on to Pond Inlet, where a Port visit and community open house are planned, on or around October 3rd. From Pond Inlet, the RV David Thompson will continue its Arctic transit down the east coast of Baffin Island to Pangnirtung, where another port visit and community open house are planned on or around October 10th. The port visits will provide a firsthand opportunity to showcase select artefacts recently recovered from the wrecks of HMS Erebus and HMS Terror and to update communities on the progress of the ongoing archaeological work on these sites. In Cumberland Sound, additional non-intrusive marine survey is planned in the area of Kekerten Island and Black Lead Island where historic 19th century whaling stations operated. After departure from Cumberland Sound, the RV David Thompson will head south to the Gulf of St. Lawrence and ultimately for overwintering in Prescott, Ontario. Activities connected with the Eastern Arctic operations of the David Thompson are marine based, and will principally involve side-scan sonar and multi-beam echosounder survey. Any underwater archaeological features detected by sonar, would in turn be examined by remotely operated vehicle (ROV), autonomous underwater vehicle (AUV), and/or Parks Canada divers. In addition to locating and imaging potential underwater archaeological sites, post-processing of the same multi-beam data set by different software will also yield bathymetry/seafloor topography and seabed classification data (for the purposes of benthic habitat mapping). A marine survey off Bylot Island, will complement a brief 1 or 2 day terrestrial survey of the Maud Bight wreck (210-X3), looking for additional submerged hull remains related to the conspicuous wreckage on shore of a suspected whaleship that was driven aground long ago.

NR David Thompson -- Operations arctiques 2019 -- Sommaire non-technique -- À la fin septembre, les conditions de glace le permettant, le navire de recherche David Thompson de Parcs Canada transitera vers l'est à travers le détroit de Bellot et dans le bras de mer Prince Regent . Des opérations de prospection marine non-intrusives (c-a-d d'archéologie subaquatique, de bathymétrie, de l'échantillonnage sélectif d'eau marine, de cartographie d'habitat et de classification des fonds marins) auront cours à des endroits sélectionnés le long d'une route planifiée depuis le détroit de Bellot, à travers le bras de mer Prince Regent, ensuite dans le détroit de Lancaster et jusqu'à Pond Inlet, où une visite portuaire et un événement portes ouvertes pour la communauté sont planifiés, le 3 Octobre ou aux environs de cette date. De Pond Inlet, le NR David Thompson continuera son transit arctique le long de la côte de l'île de Baffin jusqu'à Pangnirtung où une autre visite portuaire et un événement portuaire sont planifiés aux alentours du 10 Octobre. Les visites portuaires fourniront une opportunité unique de montrer une sélection d'artefacts récemment récupérés des épaves du HMS Erebus et HMS Terror et d'informer les communautés sur le progrès des travaux archéologiques en cours sur ces sites. Dans le détroit de Cumberland, d'autres prospections marines non-intrusives sont planifiées aux alentours des îles Kekerten et Black Lead où des stations historiques de chasse à la baleine étaient opérationnelles au 19e siècle. Après le départ du détroit de Cumberland, le NR David Thompson se dirigera vers le sud vers le golfe du Saint-Laurent et ultimement vers son point d'hivernage à Prescott en Ontario. Les activités liées aux opérations dans l'est de l'Arctique du RV David Thompson sont marines, et impliqueront principalement des prospections au sonar latéral et à l'échosondeur multi-faisceaux. Tout élément archéologique submergé détecté par sonar, sera par la suite investigué par robot sous-marin téléguidé (ROV), par véhicule sous-marin auto-guide (AUV) et/ou par des plongeurs de Parcs Canada. En plus de localiser et de capturer des images des sites archéologiques submergés potentiels, le traitement des mêmes ensembles de données par différents programmes informatiques fournira aussi des données de bathymétrie, et de topographie et de classification des fonds marins (pour des objectifs de cartographie des habitats benthiques) Une prospection marine au large de l'île Bellot complètera une courte prospection terrestre de 1 ou 2 journées sur l'épave de Maud Bight (210-X3), pour chercher des restes de coque additionnels liés à ces restes d'épave visibles sur terre de ce que l'on croit être un baleinier qui fut jadis poussé sur terre.

[illegible]

Operations Phase: from 2019-09-19 to 2019-10-21

$$\Lambda \subset \mathbb{N} \triangleleft \mathbb{N} \xrightarrow{\gamma} \Sigma \triangleleft \mathbb{N}^{q_b} \supset \mathbb{C}$$

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RV David Thompson route -- Cambridge Bay to Pangnirtung and Cumberland Sound	Marine Based Activities	Marine	Various. Marine	Potential of underwater archaeological sites. To be evaluated in the event.	Various. Vessel transit from Cambridge Bay to Pangnirtung/Cumberland Sound via Gjoa Haven and Pond Inlet.

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ᑦᑦᑎᑕᑦᑦᑦ	Mayor Joshua Katsak and Council	Hamlet of Pond Inlet	2019-02-25
ᑕᑐᕕᐱᖅ	Mayor Simon Qingnaqtuq	Hamlet of Taloyoak	2019-02-12
ᑦᑦᑎᑕᑦᑦᑦ	N/A	Community visit / open house on RV David Thompson	2019-10-03
<ᖅᓴᖅᓴᖅᓴᖅ	N/A	Community visit / open house on RV David Thompson	2019-10-10
<ᖅᓴᖅᓴᖅᓴᖅ	Simeonee Keenainak	Hunters and Trappers Association - Mittamatilik	2019-03-25
<ᖅᓴᖅᓴᖅᓴᖅ	Mosesee Qappik	Hamlet of Pangnirtung	2018-03-29
ᑦᑦᑎᑕᑦᑦᑦ	Members	Hunters and Trappers Association - Mittamatilik	2019-02-25
ᑕᑐᕕᐱᖅ	Members	Hunters and Trappers Association - Mittamatilik	2019-02-12
ᐅᖅᓴᖅᓴᖅᓴᖅ	N/A	Community visit / open house on RV David Thompson	2019-08-18

[illegible]

$a^b r^c \Lambda_{\sigma} n^e \Delta \sigma d^{fb} c$ $\Pi \Pi f^g r^c:$

Kitikmeot

North Baffin

South Baffin

[illegible][illegible]

Project transportation types

Transportation Type	Person	Length of Use
Water	RV David Thompson	

Project accomodation types

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RV David Thompson (steel vessel)	1	29.0 meters (228.3 gross tonnage)	Accommodation and dive platform, remote sensing platform.
Rigid Hull Inflatable Boat RHIB	1	5.90 m	Ship's work boat and remote sensing platform.
FC 530 zodiac	1	5.30 m	Auxiliary workboat.

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ᐱᑦᓴᐅᑦ ᐃᖃᐱᖃᕐᓴᕐᓴᐱᑦ ᐋᑐᒐᐃᓂᐋᖃᑦ	ᖃᓄᐃᑦᑐᑦᑕᓇᐱᐅᑦ ᐃᖃᐱᖃᕐᓴᕐᓴᐱᑦ	ᖃᑦᐱᐅᑦ ᐃᖃᐱᖃᕐᓴᖃᐃᓈᑦ	ᓂᖃᐲᑦ ᐃᒐᖃᖃᓈᓵᑦᓴᓂᓂᓴᓴ	ᖃᓈᑦᑐ	ᓂᖃᐲᑦ ᐋᓴᓴᓂᓂᓴᑦ	ᐱᑦᓴᐅᑦ ᐋᑐᒐᐃᓂᐋᖃᑦ
Propane	fuel	2	20	40	Liters	Cooking
Diesel	fuel	1	53000	53000	Liters	RV David Thompson shipboard fuel
Diesel	fuel	4	205	820	Liters	Power tools and equipment
Gasoline	fuel	1	900	900	Liters	Boat and equipment fuel in jettison tank

$\Delta L^{\epsilon_b} \quad \triangleleft^{\epsilon_b} C \triangleright \dot{L}^{\epsilon_b} \triangleright^{\epsilon_b}$

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0	No fresh water retrieval. Two on board water makers (reverse osmosis) with a 22,000 L fresh water holding tank.	Aboard RV David Thompson

$\triangleleft^b C d^c$
$$\Delta^b C d_C \sim \sigma \Delta^a \sigma^a$$

Aᑦᓕᔭᒃᐅᓂᓄᓪᓗᑎᓪᓚᓴᓰ	ᖃᓈᐱᑐᖅ ᐊᓐᑕᐁᖅ	ᖃᓈᐠᓯ ᐊᓐᑕᐁᖅ ኣᖅᑲᐳᓂᐊᖅᐅᓂᓄᓪᓗᑎᓪᓚᓴᓰ	ᖃᓈᓇᖅ ᐊᓐᑕᖅᑕᐳᓂᐊᖅ<	ኣᓗᒫᒻᓶᐅᐸᖅᓐᓂᐳᓂᐊᖅᐅᓂᓄᓪᓗᑎᓪᓚᓴᓰ
Marine Based Activities	ᐊᓐᑕᐁᖅ ᐱᐋᐱᓕᐳᓂᓴᓵᓏᓂᓄᓪᓗᑎᓪᓚᓴᓰ	N/A	All garbage will be compacted and at the end of the project, brought to approved shore disposal facilities in Pond Inlet.	N/A
Marine Based Activities	ᐱᒫᐱᑐᖅ ᐊᓀᓐᑕᐳᓂᓴᓵᓏᓂᓄᓪᓗᑎᓪᓚᓴᓰ	1540 L/day	All accommodation will be on the ship which is equipped with a Transport Canada approved sewage treatment plant meeting the IMO MEPC 227(64) and Annex IV of MARPOL regulatory standards.	N/A
Marine Based Activities	ᖃᓷᓐᑕᓕᓂᓄᓪᓗᑎᓪᓚᓴᓰ	1540 L/day	All accommodation will be on the ship which is equipped with a Transport Canada approved sewage treatment plant meeting the IMO MEPC 227(64) and Annex IV of MARPOL regulatory standards.	N/A

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No negative impacts. Positive impacts include will the collection of multibeam echosounder data for bathymetry, seabed classification and habitat mapping purposes. Vessel will also collect water samples for pollution monitoring. Non-disturbance identification and evaluation of potential underwater archaeological sites will also be a positive impact.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G2: Onland Exploration

SECTION G4: Rig

See sections on Material Use, Water Use, and Waste. See non-technical summary. RV David Thompson (228 tonnes, 29 m, max 14 persons on board) -- ABS Classed as Govt. Survey vessel. 5.90 m RHIB and 5.30 m Zodiac (research support craft -- deployed by the ship). Ship equipped with DVZ Biomaster Plus SKA 20 sewage treatment plant (capacity for grey and black water waste from 20 ppl). Vessel is non-ice classed. Will not operate in or near ice.

SECTION 11: Municipal Development

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[illegible][illegible]

$a \rightarrow e \Delta^{fb} CD\sigma^{fr^c} \quad d^{bc} \Delta^{fb} CDPL\downarrow^c \quad f_b \omega \Delta^c \dot{\sigma}^{fr^c} \quad \langle c D \Gamma' \rangle \downarrow P^{fb} CD\sigma \Delta^{fs} \sigma^{fr^c}$

Cumulative Effects

Impacts

$\mathbb{C} \rightarrow \mathbb{C} \Delta^{\mathfrak{b}} \mathbb{C} \triangleright \sigma^{\mathfrak{a}} \mathfrak{r}^{\mathfrak{c}} \quad \mathbb{A} \mathfrak{C} \cap \Gamma \triangleright \mathbb{C} \mathfrak{C}^{\mathfrak{c}} \mathbb{D}^{\mathfrak{c}} \quad \mathbb{A}^{\mathfrak{b}} \mathbb{D}^{\mathfrak{b}} \mathbb{C} \triangleright \mathfrak{r}^{\mathfrak{b}} \mathbb{L} \mathfrak{r}^{\mathfrak{c}}$

[illegible][illegible]

1 polyline RV David Thompson route -- Cambridge Bay to Pangnirtung and Cumberland Sound

1 polyline RV David Thompson route -- Cambridge Bay to Pangnirtung and Cumberland Sound

