



CANADIAN WILDLIFE SERVICE

YUKON LAND USE ADVISORY COMMITTEE REPORT

HERSCHEL ISLAND - KENTING OPERATION

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August 15, 1972
Whitehorse, Yukon

Recent Interest by Government and Industry in Herschel Island

During June, Commissioner Smith of the Yukon Territory conducted his annual tour of the northern settlements which included Herschel Island. During his visit he expressed his displeasure at the number of used fuel drums scattered about the Herschel settlement and requested P.C.S.P. (Polar Continental Shelf Project) to remove them from the Island. The Commissioner also expressed his desire to have the Island or the settlement area declared a historic site. The establishment of a historic site would protect and preserve the historical and archaeological relics of the area as well as attract tourists to view the Island's unique display of wildflowers during late July.

Prior to June 30, Amoco Canada Petroleum Co. Ltd. expressed an interest in drilling on the eastern side of the Island, covered by their permit. A preliminary application for drilling was presented to the Yukon Land Use Advisory Committee on June 30, 1972. The Territorial Government representative expressed concern for the historical and botanical attributes of the Island and mentioned their interest in establishing a Territorial park. I expressed the concerns of the Canadian Wildlife Service for the Island's flora and fauna and pointed out that the terrain was susceptible to erosion. A letter outlining the C.W.S.'s concerns for the Island's ecosystems was presented to Mr. Brandon, D.I.A.N.D., Regional Manager, Water, Forests & Lands, during the first week in July (App.1). Conditions outlined for this proposed drilling operation were drawn up in consultation with Dr. T. Barry, C.W.S. ornithologist, who is familiar with this area. Due to the extreme interest expressed by the Territorial Government and public sectors including I.B.P. - C.T., Amoco reconsidered its program and continued discussions with Mr. Brandon.

The Kenting Operation

On July 20 or 21, a barge, the Beaufort Sea Explorer, owned by KAPS Transport, arrived at the settlement at Thetis Bay, Herschel Island.

A D-7 dozer was off-loaded onto the beach and a loading ramp of beach gravel was constructed on the shore edge. Each of seven 14,000 gallon tanks, 12 feet in diameter by 20 feet high, were off-loaded from the barge. The tanks were skidded into position approximately 75 yards from the ramp and erected approximately 100 feet from normal high-water mark. Their location is below the legal boundaries of the R.C.M.P. property, now under the direction of P.C.S.P. Upon erection, the tanks were filled with marine diesel fuel and the tank drains were checked and secured.

Purpose of the Kenting Operation

The 100,000 gallons of fuel deposited on the beach will be used to refuel the M.V. Theta which will conduct marine seismic operations in the Beaufort Sea in 1972 and 1973 for Kenting Exploration Services Ltd. The ship which is currently conducting seismic operations will enter Thetis Bay during early October, overwinter for 8½ months, then proceed next June with further surveys. The ship will be manned throughout winter by a skeleton crew and the engines will be started periodically.

Inspection Tour of the Kenting Operation

News of the erection of the fuel tanks on Herschel Island did not arrive in Whitehorse until Monday, July 24. Mr. E. Debock, C.W.S., Old Crow informed me of the activity and D.I.A.N.D. personnel finally discovered the owners of the equipment late that day. In conjunction with a suggestion by Dr. A. H. Macpherson, I joined Mr. B. J. Trevor, Regional Manager of Resources for the Yukon and proceeded to Herschel Island on July 25. Photos of the results of the operation were taken (App. 2) and the procedures used to unload the tanks were learned from

Mr. Bob Mackenzie, a permanent resident at the settlement. The operation was also discussed with Mr. F. Hunt, the P.C.S.P. supervisor in the region. Mr. Gale of Kenquest Exploration, a division of Kenting was contacted in Inuvik and the operation was discussed. The operation site was re-visited on July 27 with Mr. Gale.

Some of the other individuals who visited the operation site were:

- Dr. V. Giest - I.B.P. - C.T. - University of Alberta, Calgary
- Dr. S. Rowe - I.B.P. - C.T. - University of Saskatchewan, Saskatoon
- Dr. G. Scotter - I.B.P. - C.T. and C.W.S., Edmonton
- Dr. M. Cooper - P.C.S.P.
- Mr. B. Sanregret - D.I.A.N.D. - Land Use Co-ordinator, Whitehorse

Environmental Damage Caused by the Operation

Very little environmental damage has been caused by this operation and the return of the gravel and vegetation relocated during the operation will prevent any permanent environmental damage from occurring. A strip of vegetation approximately 20 feet wide located above normal highwater mark, was ripped up by the D-7 dozer as it skidded the tanks into position. This vegetation and sandy soil can be leveled and many of the sods of vegetation can be replaced on the soil surface. The beach gravel just above highwater mark was bladed into a ramp and holes were cut below water line in several locations. If the ramp is leveled, the holes filled, and the gravel distributed evenly over the beach, no further erosion of the beach in the area will occur.

These recommendations were passed to Mr. Brandon during the Land Use Advisory Committee meeting of July 28, 1972 and were reiterated in a letter several days later.

If it is anticipated that the tanks will remain on the beach over winter and next summer, dikes to contain any fuel spills must be constructed. In view of preserving the environment as well as the historical and archaeological significance of the area, the dike surfaces and floor of the tankage must be made impermeable to diesel fuel. This can be accomplished by spraying the sides and floor of the tankage with urethane foam which will bind the gravel and prevent fuel seepage.

At the meeting on July 28, 1972, Mr. Brandon informed the Land Use Advisory Committee that the company had been required to post a \$100,000 bond and remove the tanks from the Island by September, 15, 1972. The company will deposit the fuel in a barge which will be frozen into the ice of Thetis Bay. A marine engineer will certify that the barge is safe from rupture or other damage from ice during winter.

Some Aspects Regarding the Ecosystems
In the Settlement Region of Herschel Island
and Considerations for Future Exploration and the Development
of a Historic Site

A survey of the alluvial fan on which the graves and old cellars are located showed that the fan is maintained in its present state by silt in streams that arise from two gullies north of the fan. The slopes of these gullies are unstable, consequently any increase in the present rate of erosion could in turn increase the rate of silt deposition on the fan and possibly bury the graves.

If drilling is anticipated on the slopes above the fan, this ecological situation must be brought to the attention of the company. Furthermore, it is strongly suggested that any drilling equipment be transported by helicopter to a site above the fan and that a drilling site be situated as far from the edges of these slopes as possible.

In view of the existing historical, archaeological and botanical interest in the alluvial fan and the sand spit where the settlement is located, the boundaries of any "National Historic Site" or "Territorial Site" should include the headlands and slopes that support the fan. Inclusion of the slopes and headland as part of the historic site would ensure the protection and preservation of the area for the benefit of future generations.

S. Wayne Speller
Biologist



Environment
Canada

Environnement
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Your file Votre dossier

Our file Notre dossier

Canadian Wildlife Service
Box 2706, c/o Dept. Public Works
Whitehorse, Y. T.
July 5, 1972

Mr. L. V. Brandon
Regional Manager
Water, Forests and Lands
Department of Indian Affairs
and Northern Development
Whitehorse, Y. T.

Dear Mr. Brandon:

This letter covers my comments and recommendations on the proposed Amco Canada Petroleum drilling operation on Herschel Island this winter. My recommendations regarding this operation are based on the current information pertaining to the environmental conditions and drilling operation. Future inspection tours and a detailed knowledge of the drilling operation when the application is received will likely result in additional recommendations.

The protection of the ecosystems on Herschel Island is of extreme interest to the Canadian Wildlife Service. Firstly, the island is frequented by tourists each summer because of the abundance of wild flowers. Furthermore, there is a possibility that the island may be set aside as a Territorial Park. Consequently, all precautions should be made to preserve the natural beauty of the area. Secondly, the island is currently being studied by the International Biological Program (I. B. P. -C T) and may be set aside as an ecological reserve for future environmental research. The barrier beaches on the island

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are of special significance as they represent the sequence of ecological succession ^{of} plant communities since the retreat of the glaciers and provide geologists with a situation whereby the rate of isostatic rebound and glacial retreat can be measured. It is essential, therefore, that the ecosystems present remain undisturbed and pollutants must not be allowed to contaminate the environment. Finally, a variety of birds and mammals frequent the island at various times of the year. The barrier beaches are used by shorebirds and moulting seabirds during the summer and thousands of waterfowl stage at the beaches during their fall migration. Polar bears also frequently inhabit the island during the winter and roam all over it.

I wish to point out that the surface of the island is covered with a thin layer of vegetation atop a mud-loam soil. The only source of gravel suitable for the base material of the drilling site is the barrier beaches which occur near the island's shores.

In view of the scientific and tourism -- recreational interest and wildlife significance that the island provides, Amco Canada Petroleum should carefully consider the following recommendations and comply with the conditions outlined below.

It is a condition that no gravel is to be removed from the barrier beaches or any other sources on the island. The drilling sight must not be located among the barrier beaches. If equipment must be transported over the ground surface to the drilling site, the barrier beaches

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should be traversed only as a last resort. A Land Use inspector at the site must approve any route planned through the barrier beaches and be on hand when the equipment is moved.

It is recommended that the company cover the drilling site including vehicle storage areas with matting^{of} sufficient insulative quality to protect the permafrost regime. Vehicle movements on the drilling site should also be restricted to the matting to prevent damages to the vegetation.

The proposal submitted by the company stated that all equipment would be moved by helicopter from the storage area to the drilling site. If this is the case, all vehicle traffic on the drilling site during summer and fall until Nov. 1, 1972, must be restricted to matting sufficient to protect the vegetation and active layer from damage.

It is a condition that no vehicles travel over the surface of the island until the ground surface is frozen to a depth sufficient to prevent disturbance to the vegetation and active layer. Vehicles and equipment may be landed and staged on the shores of the island during the summer or fall but must not be moved across the island until November 1, 1972. A Land Use inspector must be present at the drilling site when equipment is expected to be removed from the staging area to the drilling site in order to check on the conditions of the ground and give permission

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to move the equipment. A snow covered road must be prepared from the staging area to the drilling site prior to the movement of any equipment.

It is a condition that all fuel storage areas be diked. If fuel is stored at the drilling site during next spring or summer, I recommend that bentonite (drilling mud) be applied to the floor and dike surfaces of the fuel storage area (s). This material will provide an impermeable surface to the area and prevent any fuel that may be spilled from percolating into the ground.

Because the island is frequented by migrating waterfowl and polar bears, it is a condition that strict gun laws - 1 gun on the site under the supervision of the superintendent - must be enforced. Birds must not be harassed. In the event that polar bears become a nuisance to the camp the Canadian Wildlife Service or the Regional Manager, must be notified immediately in order that measures can be taken to safely remove the bears or stop their disturbance.

It is a condition that all combustible garbage must be burned in an incinerator. Garbage should be burned at regular intervals to reduce the attraction of bears and prevent littering by wind. All garbage should be stored in covered containers prior to incineration.

All conditions applied to this operation which cover activities prior to November 1, 1972 must be applied to activities conducted after April 1, 1972. It is strongly recommended that no summer clean-up operations which utilize land vehicles to move equipment, be conducted at the drilling site. If a clean-up must take place in spring or

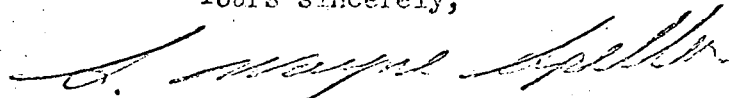
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summer then all vehicle movement must be restricted to matting of sufficient quality to prevent damage to the vegetation and ground surface.

At the completion of the operation the sump must be filled in and covered with sufficient material to prevent slumping. The surface of the sump must be covered with the surface material removed and revegetated. It is suggested that native species or a layer of spagnum moss be used to cover the sump.

If it is anticipated that the operation will proceed beyond May 1, 1973, it is a condition that a re-application be presented to the Land Use Committee one month prior to this date. The area must be inspected by a Land Use inspector prior to the renewal of the application.

Yours sincerely,



S. Wayne Speller

SWS/bp



Herschel settlement - looking N.W.
Note the 7 fuel tanks on the shore of Thetis Bay



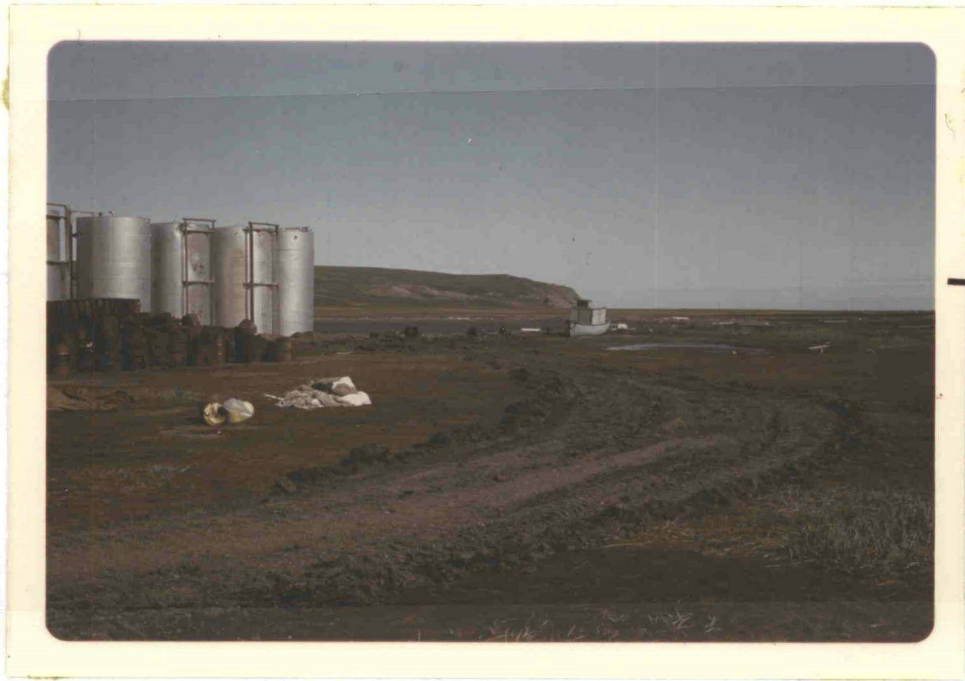
Fuel tanks on Herschel settlement
Owned by Kenting Oilfield Services Ltd.



Loading ramp on the shore edge constructed of gravel



Hole dug below waterline in beach gravel.
Old oil drums the property of P.C.S.P.



Skid trail through vegetation made by the D-7 dozer
as it skidded the tanks into position



A small leak in one of the fuel tanks.
Damage was caused during erection.