



# **Chedabucto Silica Project**

## **Delineation Program**

### **Tłıchq Region, NWT**

**(NTS Sheet 85J)**

**62°15'50" N to 62°29'35" N**

**-115°13'26" W to 115°29'22" W**

#### **APPENDIX VI**

**Archaeological Impact Assessment Report**

Golder Associates Ltd.

NWT Class 2 Archaeologist Permit

Archaeological Impact Assessment Report



**NORTHWEST TERRITORIES**  
**CLASS 2 ARCHAEOLOGIST PERMIT # 2014-010**

*Under the authority of the Northwest Territories Act and the NWT  
 Archaeological Sites Regulations, authorization is granted*

**To:** Julie Ross  
**Affiliation:** Golder Associates Ltd.  
**Name of Project:** Chedabucto Lake Archaeological Impact Assessment

**Location:** Tłjchq Settlement Area  
**For the Purpose of:** Assessing the proposed project area for archaeological resources by locating and recording previously documented sites and surveying for unrecorded archaeological sites.

**Conditions:** None

*The permittee shall abide by the attached Permit Requirements*  
*The permit is valid until December 31, 2014*  
*The permit was issued in the City of Yellowknife, Northwest Territories*  
 on     MAY 29 2014    

*Distribution of documentation: The permittee shall distribute the listed materials to the agencies below according to this schedule.*

	Prince of Wales Northern Heritage Centre			Other
	Paper Copy	PDF Copy	Digital	Paper Copy
<b>Required by 30 November, 2014</b>				
1. One-page non-technical summary & two photographs			✓	
<b>Required by 31 March, 2015</b>				
1. Report (with photos, maps, artifact catalogue, site forms, & field notes)	✓	✓		
2. Report (with photos, maps & artifact catalogue)				See List on Reverse
3. Artifacts and Catalogue	✓		✓	

  
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**Minister, Education, Culture and Employment**

Attachments: Archaeologist Permit Requirements



**Distribution**

**Ms. Kerri Garner  
Lands Protection Director (Acting)  
Tłı̨chǫ Lands Protection Department  
Tłı̨chǫ Government  
PO Box 412  
Behchokò NT X0E 0Y0**

**Mr. Matt Hoover  
Environment and Resource Manager  
North Slave Métis Alliance  
32 Melville Drive  
PO Box 2301  
Yellowknife NT X1A 2P7**

**Mr. Randy Freeman  
Traditional Knowledge Specialist  
Yellowknives Dene First Nation  
P.O. Box 2514  
Yellowknife NT X1A 2P8**

**Mr. Garry Bailey  
President  
Northwest Territory Metis Nation  
PO Box 720  
Fort Smith NT X0E 0P0**

**Ms. Annie Boucher  
Executive Director  
Akaitcho Territory Government  
General Delivery  
Fort Resolution NT X0E 0M0**



## MEMORANDUM

**TO** Jenica von Kuster, Envi. Tech., EPt Husky Oil Operations Limited; Dave White Vice President Aurora Geosciences Ltd

**DATE** October 2, 2014

**CC** Grant Clarke MA Associate, Biophysical Division Manager, Senior Archaeologist

**FROM** Julie M. Ross MA Senior Archaeologist

**PROJECT No.** 13-1328-0028

**RE: ARCHAEOLOGICAL IMPACT ASSESSMENT OF DRILL HOLES PROPOSED FOR CHEDABUCTO LAKE PROJECT**

Golder Associates Ltd. (Golder) was retained by Aurora Geosciences Ltd. to complete an Archaeological Impact Assessment (AIA) in the Chedabucto Lake and White Beach Point area. The project area encompasses approximately 195 km<sup>2</sup> and is located approximately 50 km west of Yellowknife. The AIA was carried out on behalf of Aurora Geosciences Ltd. (Aurora) working for Husky Oil Operations Limited. One hundred<sup>1</sup> proposed drill locations were included in the assessment. All required field work was done under Archaeologist Permit 2014-010, issued by the Prince of Wales Northern Heritage Centre, Department of Education, Culture and Employment, Government of the Northwest Territories to Julie Ross of Golder. Field work was completed using a desktop overview of the project area and discussions with local community members knowledgeable with the area. At the onset of the field program a helicopter assessment of all proposed drill locations was completed to confirm the heritage resource potential identified in the overview stage. Forty-four proposed drill locations were assessed as having low archaeological potential based on the aerial assessment and no further archaeological work is recommended (Table 1).

The archaeological potential of fifty-six proposed drill locations was confirmed to be moderate to high as a result of the aerial assessment and were subsequently subject to a pedestrian assessment. The pedestrian assessments, depending on the ground cover, involved visual inspection of all existing exposures, systematic and judgmental shovel testing of areas with elevated archaeological potential, but lacking exposure of the sediments. As a result of the pedestrian assessment 35 additional drill holes were assessed as having low archaeological potential and the recommendation is for no further archaeological work with respect to the proposed drilling program. Nine proposed drill holes directly conflict with previously unrecorded heritage resource sites; the recommendation is that development of these locations be delayed until further mitigation can occur. Alternatively new drill locations could be proposed which would require an archaeological assessment in 2015. No heritage resources were identified within the immediate vicinity of the remaining 13 proposed drill locations; however, there are land forms within 20 to 50 metres which have potential for buried material culture. For these 12 proposed drill locations it is recommended that field staff be made aware that moving the drill locations may impact unidentified heritage resources.

Analysis of field data is currently underway; however, approximately 15 previously unrecorded sites were recorded. Sites type includes: lithic scatters, tent rings and historic tent frames as well as a stranded barge. All prehistoric sites were identified in naturally occurring sand blow-outs. All shovel tests were negative for heritage materials. Final analysis will be provided to the Prince of Wales Northern Heritage Centre in a Permit report prior to March 31, 2015 as required under the Permit requirements.

<sup>1</sup> Aurora's proposed drill location DDh\_022, RC\_029 and RC\_030 were not assessed.



## MEMORANDUM

Field work involved the participation of two members of the Yellowknives Dene First Nation (YKDFN). Community visits with representatives of the Tłıchǫ communities, the YKDFN and the North Slave Métis also occurred.

**Table 1: Drill Hole Assessment Summary**

Field <sup>2</sup> Assessment Drill Hole Identifier	YKDFN Drill Hole Identifier	Aurora Drill Hole Identifier	Latitude (N NAD83)	Longitude (W NAD83)	Assessment Type	Recommendation With Respect to Proposed Drill Program
RC_1	RC	RC_001	62.48095	115.3435638	pedestrian	Vicinity has archaeological potential
RC_2	RC1	RC_002	62.47961	115.2989807	pedestrian	Conflicts with archaeology
RC_3	RC2	RC_003	62.46166	115.3000013	pedestrian	No further archaeology work
RC_4	RC3	RC_004	62.40909	115.3152238	pedestrian	No further archaeology work
RC_5	RC4	RC_005	62.39121	115.3917409	pedestrian	Vicinity has archaeological potential
RC_6	RC5	RC_006	62.39528	115.3286393	pedestrian	No further archaeology work
RC_7	RC6	RC_007	62.37194	115.3050835	pedestrian	No further archaeology work
RC_8	RC7	RC_008	62.35492	115.3833318	aerial	No further archaeology work
RC_9	RC8	RC_009	62.35446	115.3447132	aerial	No further archaeology work
RC_10	RC9	RC_010	62.33428	115.3684505	aerial	No further archaeology work
RC_11	RC10	RC_011	62.34249	115.3606646	aerial	No further archaeology work
RC_12	RC11	RC_012	62.35071	115.3528745	aerial	No further archaeology work
RC_13	RC12	RC_013	62.35892	115.34508	aerial	No further archaeology work
RC_14	RC13	RC_014	62.36538	115.3389407	aerial	No further archaeology work
RC_15	RC14	RC_015	62.33904	115.3500816	aerial	No further archaeology work
RC_16	RC15	RC_016	62.35984	115.3161813	aerial	No further archaeology work

<sup>2</sup> During field assessment it became apparent that there were three different naming conventions for drill locations, all are presented here.



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Field <sup>2</sup> Assessment Drill Hole Identifier	YKDFN Drill Hole Identifier	Aurora Drill Hole Identifier	Latitude (N NAD83)	Longitude (W NAD83)	Assessment Type	Recommendation With Respect to Proposed Drill Program
RC_17	RC16	RC_017	62.3516	115.3238267	aerial	No further archaeology work
RC_18	RC17	RC_018	62.34335	115.3314679	aerial	No further archaeology work
RC_19	RC18	RC_019	62.33511	115.3391049	aerial	No further archaeology work
RC_20	RC19	RC_020	62.31687	115.3005136	aerial	No further archaeology work
RC_21	RC20	RC_021	62.3203	115.3183447	aerial	No further archaeology work
RC_22	RC21	RC_022	62.32596	115.3478596	pedestrian	Vicinity has archaeological potential
RC_23	RC22	RC_023	62.38535	115.3096533	aerial	No further archaeology work
RC_24	RC23	RC_024	62.3856	115.3289809	aerial	No further archaeology work
RC_25	RC24	RC_025	62.38585	115.3483088	aerial	No further archaeology work
RC_26	RC25	RC_026	62.3861	115.3676372	pedestrian	No further archaeology work
RC_27	RC26	RC_027	62.3863	115.3834471	pedestrian	Vicinity has archaeological potential
RC_28	RC27	RC_028	62.39512	115.3160137	pedestrian	Conflicts with archaeology
RC_29	RC28	RC_031	62.46405	115.3282468	pedestrian	No further archaeology work
RC_30	RC29	RC_032	62.46828	115.3427837	aerial	No further archaeology work
RC_31	RC30	RC_033	62.47217	115.3558805	aerial	No further archaeology work
RC_32	RC31	RC_034	62.48051	115.3844413	aerial	No further archaeology work
RC_33	RC32	RC_035	62.48253	115.3614207	pedestrian	No further archaeology work
RC_34	RC33	RC_036	62.47652	115.3705371	aerial	No further archaeology work
RC_35	RC34	RC_037	62.4675	115.3844311	aerial	No further archaeology work





## MEMORANDUM

Field <sup>2</sup> Assessment Drill Hole Identifier	YKDFN Drill Hole Identifier	Aurora Drill Hole Identifier	Latitude (N NAD83)	Longitude (W NAD83)	Assessment Type	Recommendation With Respect to Proposed Drill Program
RC_36	RC35	RC_038	62.46019	115.3956855	pedestrian	No further archaeology work
RC_37	RC36	RC_039	62.4814	115.3211859	pedestrian	Conflicts with archaeology
RC_38	RC37	RC_040	62.4731	115.2740433	pedestrian	Conflicts with archaeology
RC_39	RC38	RC_041	62.47527	115.2823173	pedestrian	No further archaeology work
RC_40	RC39	RC_042	62.46876	115.2956663	pedestrian	No further archaeology work
RC_41	RC40	RC_043	62.47241	115.288213	pedestrian	No further archaeology work
RC_42	RC41	RC_044	62.48463	115.3329548	pedestrian	No further archaeology work
RC_43	RC42	RC_045	62.4784	115.309983	pedestrian	No further archaeology work
RC_44	RC43	RC_046	62.47496	115.2975623	pedestrian	No further archaeology work
RC_45	RC44	RC_047	62.46921	115.2766556	pedestrian	No further archaeology work
RC_46	RC45	RC_048	62.46552	115.2634879	pedestrian	Conflicts with archaeology
RC_47	RC46	RC_049	62.47844	115.3479261	pedestrian	No further archaeology work
RC_48	RC47	RC_050	62.47397	115.3334246	pedestrian	No further archaeology work
RC_49	RC48	RC_051	62.4686	115.3154881	pedestrian	No further archaeology work
RC_50	RC49	RC_052	62.46492	115.3033509	pedestrian	No further archaeology work
RC_51	RC50	RC_053	62.45427	115.3040682	pedestrian	No further archaeology work
RC_52	RC51	RC_054	62.45409	115.2896136	pedestrian	No further archaeology work
RC_53	RC52	RC_055	62.4479	115.3135062	pedestrian	No further archaeology work
RC_54	RC53	RC_056	62.44778	115.3043305	pedestrian	Vicinity has archaeological potential
RC_55	RC54	RC_057	62.44775	115.2953609	pedestrian	No further archaeology work





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Field <sup>2</sup> Assessment Drill Hole Identifier	YKDFN Drill Hole Identifier	Aurora Drill Hole Identifier	Latitude (N NAD83)	Longitude (W NAD83)	Assessment Type	Recommendation With Respect to Proposed Drill Program
RC_56	RC55	RC_058	62.44176	115.295599	pedestrian	No further archaeology work
RC_57	RC56	RC_059	62.44172	115.2875546	pedestrian	Conflicts with archaeology
RC_58	RC57	RC_060	62.4419	115.304564	pedestrian	No further archaeology work
RC_59	RC58	RC_061	62.45416	115.295088	pedestrian	No further archaeology work
RC_60	RC59	RC_062	62.44518	115.2955018	pedestrian	No further archaeology work
RC_61	RC60	RC_063	62.43683	115.2957776	pedestrian	Conflicts with archaeology
RC_62	RC61	RC_064	62.43697	115.3066673	pedestrian	No further archaeology work
RC_63	RC62	RC_065	62.43139	115.3116651	aerial	No further archaeology work
RC_64	RC63	RC_066	62.42311	115.3191679	aerial	No further archaeology work
RC_65	RC64	RC_067	62.41646	115.3252441	aerial	No further archaeology work
RC_66	RC65	RC_068	62.39151	115.3286801	pedestrian	No further archaeology work
RC_67	RC66	RC_069	62.39964	115.3244216	pedestrian	No further archaeology work
RC_68	RC67	RC_070	62.40406	115.3201135	pedestrian	Vicinity has archaeological potential
RC_69	RC68	RC_071	62.41366	115.3109022	pedestrian	Conflicts with archaeology
RC_70	RC69	RC_072	62.42185	115.3029947	pedestrian	Vicinity has archaeological potential
RC_71	RC70	RC_073	62.43004	115.2950827	pedestrian	Vicinity has archaeological potential
RC_72	RC71	RC_074	62.43673	115.2886365	pedestrian	Vicinity has archaeological potential
RC_73	RC72	RC_075	62.40409	115.3241426	pedestrian	No further archaeology work
RC_74	RC73	RC_076	62.40401	115.3104206	pedestrian	No further archaeology work



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Field <sup>2</sup> Assessment Drill Hole Identifier	YKDFN Drill Hole Identifier	Aurora Drill Hole Identifier	Latitude (N NAD83)	Longitude (W NAD83)	Assessment Type	Recommendation With Respect to Proposed Drill Program
RC_75	RC74	RC_077	62.40394	115.2993674	pedestrian	Conflicts with archaeology
RC_76	RC75	RC_078	62.39606	115.3832282	pedestrian	No further archaeology work
RC_77	RC76	RC_079	62.39566	115.3546792	aerial	No further archaeology work
RC_78	RC77	RC_080	62.39539	115.3353462	pedestrian	No further archaeology work
RC_79	RC78	RC_081	62.39588	115.3697918	aerial	No further archaeology work
P_DDH_1	DDH Priority	DDH_002	62.46303	115.4162735	pedestrian	No further archaeology work
P_DDH_2	DDH Priority1	DDH_004	62.44464	115.3784875	aerial	No further archaeology work
P_DDH_3	DDH Priority2	DDH_006	62.42669	115.3794591	aerial	No further archaeology work
P_DDH_4	DDH Priority3	DDH_009	62.40875	115.3804292	aerial	No further archaeology work
P_DDH_5	DDH Priority4	DDH_011	62.37241	115.3437238	aerial	No further archaeology work
P_DDH_6	DDH Priority5	DDH_012	62.33741	115.4228935	aerial	No further archaeology work
P_DDH_7	DDH Priority6	DDH_013	62.31902	115.3852602	pedestrian	Vicinity has archaeological potential
P_DDH_8	DDH Priority7	DDH_014	62.30998	115.2657395	aerial	No further archaeology work
P_DDH_9	DDH Priority8	DDH_019	62.30101	115.3932604	aerial	No further archaeology work
P_DDH_10	DDH Priority9	DDH_020	62.3001	115.3161624	aerial	No further archaeology work
S_DDH_1	DDH	DDH_001	62.31883	115.4667007	aerial	No further archaeology work
S_DDH_2	DDH1	DDH_003	62.44508	115.4172231	aerial	No further archaeology work
S_DDH_3	DDH2	DDH_005	62.39158	115.4655429	pedestrian	Vicinity has archaeological potential
S_DDH_4	DDH3	DDH_007	62.42746	115.4612666	pedestrian	Vicinity has archaeological potential



## MEMORANDUM

Field <sup>2</sup> Assessment Drill Hole Identifier	YKDFN Drill Hole Identifier	Aurora Drill Hole Identifier	Latitude (N NAD83)	Longitude (W NAD83)	Assessment Type	Recommendation With Respect to Proposed Drill Program
S_DDH_5	DDH4	DDH_008	62.4077	115.4191973	aerial	No further archaeology work
S_DDH_6	DDH5	DDH_010	62.3733	115.4210085	aerial	No further archaeology work
S_DDH_7	DDH6	DDH_015	62.284	115.4773275	aerial	No further archaeology work
S_DDH_8	DDH7	DDH_016	62.28314	115.4002698	aerial	No further archaeology work
S_DDH_9	DDH8	DDH_017	62.28223	115.3232171	aerial	No further archaeology work
S_DDH_10	DDH9	DDH_018	62.30188	115.4703637	aerial	No further archaeology work
S_DDH_11	DDH10	DDH_021	62.35597	115.4670522	aerial	No further archaeology work

Yours Truly,

**GOLDER ASSOCIATES LTD.**

Julie Ross, MA  
Senior Archaeologist

Grant Clarke MA Associate,  
Biophysical Division Manager, Senior Archaeologist

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