Appendix C – Plans Associated with the Application

June 28, 2011

SOUTHAMPTON ISLAND PROJECT

Closure and Restoration Plan

Submitted to:
Vale Exploration Canada Inc.
Hwy 17 West
Copper Cliff, ON P1M 1N0

REPORT

Report Number: 1113720019

Distribution:

Nunavut Water Board
Kivalliq Inuit Association
Indian and Northern Affairs Canada

Golder Associates

Table of Contents

1.0 INTRODUCTION

Vale Exploration Canada Inc. (Vale) has developed this Closure and Restoration Plan (the Plan) for the Southampton Island Project (the Project), located on Southampton Island, Nunavut approximately 65 km northeast of the Hamlet of Coral Harbour, Nunavut. The Project activities are located between 64°52'26" - 64°30'28" N and 82°59'30" - 82°29'28" W.

The Project area occurs on both Crown and Inuit Owned land, therefore Vale is applying for land use permits with Indian Northern Affairs Canada (INAC) and the Kivalliq Inuit Association (KIA), as well as a water licence with the Nunavut Water Board.

Vale has all the necessary prospecting permits issued by the INAC Mine Recorder's Office.

The first step for the Project is to do airborne surveys in the spring of 2011. Depending on the results of the surveys, Vale may undertake a geophysical survey and possibly drilling in the fall of 2011.

Vale does not plan on having a camp at the site in 2011; all field crews will stay in Coral Harbour and travel to and from the site by helicopter. Depending on the results of the 2011 program, Vale may decide to continue flying field crews to and from Coral Harbour or may setup a camp in 2012. Vale intends to conduct drilling activities during the summer and fall of 2012. Camp supplies and fuel, if constructed in 2012, may be flown in by Twin Otter or other equivalent aircraft.

The scope of this Closure and Restoration Plan (the Plan) covers both drilling activities and a camp. The Plan is effective from June 27, 2011 to December 31, 2014.

2.0 PROJECT SCHEDULE

In 2011, Vale intends to conduct the aerial surveys and apply for the required permits and licences. Depending on the results of the aerial surveys and the receipt all the necessary permits and licence, Vale intends to conduct a field program on the property in the fall of 2011. As previously stated, there will be no camp in 2011; field crews will fly in and out of Coral Harbour. The field program will include a geophysical survey and possibly drilling and will last approximately 2 to 3 weeks.

In 2012 and 2013, depending on the results of the 2011 program, further exploration work may be undertaken. The work may require a camp or Vale may decide to continue to be based out of Coral Harbour.

3.0 CLOSURE AND RESTORATION

3.1 Schedule

No Camp

For the field programs that do not use a camp, the seasonal closure and restoration will be limited to inspecting the fuel cache and ensuring the remaining drums are stored properly for use in the next year. The drill locations will be properly abandoned and restored once the drill hole is completed as discussed in Section 3.2.2. Seasonal or final closure and restoration would take approximately 1 to 2 days.

Camp

If a camp is used for the field program, closure and restoration will take approximately 3 days.

3.2 Seasonal Closure and Restoration

3.2.1 Buildings and Contents

If a camp was used during the field program, all tent structures will be secured for the winter and all camp equipment such as stoves, beds, shower etc. will remain securely stored on site. No food or food waste will be left on site.

3.2.2 Drill Locations

All drill equipment will be dismantled, packaged, and stored along with its ancillary equipment and rods, as directed by the drilling contractor. The drill will be left on a level surface, away from water bodies.

All drill locations will be inspected immediately after completion of the drill hole. All waste will be collected and taken to camp for incineration or removed to an approved disposal facility. All sumps will be backfilled and each drill collar will be cut off to ground level. All efforts will be made to contour the sump backfill to pre-existing conditions. At each drill site the surrounding soil will be inspected for potential contamination.

3.2.3 Fuel Storage

Any fuel drums or empty drums from the last drill location will be returned to the fuel cache. Empty drums will be returned to the staging area in Coral Harbour and backhauled to an approved facility throughout the project.

Remaining fuel drums at the fuel cache will be inventoried and stored until the next season. All remaining fuel drums and empty drums, as well as secondary containment, will be inspected. Surrounding soil will also be inspected for potential contamination. Any contaminated soil will be treated according to the *Spill Contingency Plan* (Golder 2011).

3.2.4 Waste

No Camp

For any field program with no camp associated with it, all solid wastes will be contained, packaged, and flown out to Coral Harbour. All non-hazardous wastes will be disposed at the Hamlet of Coral Harbour landfill, if all necessary tipping fees and access are in place with the hamlet. If Vale is not permitted by the hamlet to dispose of waste in Coral Harbour, alternate arrangements will be made to dispose of the wastes at an approved facility.

Camp

For any field program with a camp, Vale will use a modified burn barrel to incinerate paper products, paperboard packaging, untreated wood, food wastes, and food packaging as described in the Government of Nunavut's *Guideline for the Burning and Incineration of Solid Waste* (GN 2010). All other non-hazardous wastes will be packaged and flown to Coral Harbour for disposal in the hamlet landfill, if all necessary tipping fees and access are in place with the hamlet.

For seasonal camp closure, all ash will be removed from the modified burn barrel and disposed in a natural depression or pit at a minimum 31 m away from water bodies. The soil under and surrounding the modified burn barrel will be inspected for contamination.

Sewage will be incinerated using incineration toilets or contained using Pacto toilets. Greywater from the camp will be directed to a sump or natural depression at a minimum 31 m from a water body.

3.2.5 Water System

Pumps, tanks, and hoses will be drained, dismantled, packaged, and stored. Hoses will be rolled up and stored.

3.2.6 Contamination Clean Up

Contaminated soil or water at the drill sites or the camp will be treated as described in the *Spill Contingency Plan* (Golder 2011). Photographs before, during, and after the clean-up will be taken and all clean-up activities will be documented.

3.2.7 Documentation and Inspection

Prior to seasonal closure of the site, all remaining equipment and buildings will be inventoried, locations recorded, and photographed. All areas disturbed by the field program, (e.g., drill sites, fuel cache, camp) will be inspected prior to closure for the season. Records of the inspections will be kept in the project file.

3.3 Final Closure and Restoration

3.3.1 Building and Contents

All reusable equipment such as tents, tent frames, stoves, beds, shower etc. will be dismantled and removed from the site. All consumables associated with camp construction, such as nails, screws, anchors etc. will be recovered where possible, packaged, and flown out with other non-hazardous solid waste for disposal.

3.3.2 Drill Locations

All drill and ancillary equipment will be dismantled, packaged and removed from the site. All drill locations will be inspected immediately after completion of the drill hole. All waste will be collected and taken to camp for incineration or removed to an approved disposal facility. All sumps will be backfilled and each drill collar will be cut off to ground level. All efforts will be made to contour the sump backfill to pre-existing conditions. At each drill site the surrounding soil will be inspected for potential contamination.

3.3.3 Fuel Storage

All remaining fuel drums and empty drums will be removed from the site. The soil under and surrounding the fuel cache will be thoroughly inspected for any contamination, and photographs will be taken. Locations where fuel was stored at the drill sites will be inspected during the drill location inspection. Any contaminated soil will be treated according to the *Spill Contingency Plan* (Golder 2011).

3.3.4 Waste

No Camp

For any field program with no camp associated with it, all solid wastes will be contained, packaged, and flown out to Coral Harbour. All non-hazardous wastes will be disposed at the Hamlet of Coral Harbour landfill, if all necessary tipping fees and access are in place with the hamlet. If Vale is not permitted by the hamlet to dispose of waste in Coral Harbour, alternate arrangements will be made to dispose of the wastes at an approved facility.

Camp

For any field program with a camp, Vale will use a modified burn barrel to incinerate paper products, paperboard packaging, untreated wood, food wastes, and food packaging as described in the Government of Nunavut's *Environmental Guideline for the Burning and Incineration of Solid Waste* (GN 2010). All other non-hazardous

wastes will be packaged and flown to Coral Harbour for disposal in the hamlet landfill, if all necessary tipping fees and access are in place with the hamlet.

For final camp closure, all ash will be removed from the modified burn barrel and disposed in a natural depression or pit at a minimum 31 m away from water bodies. The modified burn barrel will be dismantled and removed from the site. The soil under and surrounding the modified burn barrel will be inspected for contamination.

Sewage will be incinerated using incineration toilets or contained using Pacto toilets. Greywater from the camp will be directed to a sump or natural depression at a minimum 31 m from a water body.

3.3.5 Water System

Pumps, tanks, and hoses will be drained, dismantled, packaged, and removed from the site. Hoses will be rolled up and removed from site.

3.3.6 Contamination Clean Up

Any contaminated soil or water identified during the closure inspections will be treated according to the *Spill Contingency Plan* (Golder 2011). Photographs will be taken, before, during, and after the clean up.

3.3.7 Documentation and Inspection

Prior to final closure of the site, a complete inspection of all disturbed areas will be conducted. The inspection will include recording locations of all disturbed areas (including coordinates), photographing all disturbed areas, and documenting a description of the area. Information gathered during the final inspection will be used to write a final closure and restoration report. The report will be distributed to the regulatory agencies as required by the project permits and licence. The final closure and restoration report will also include site maps showing the locations of all drill waste sumps, greywater sump, ash disposal area, camp location, and fuel cache location.

3.4 Site Map

At this time, the drill locations, fuel cache location, and potential camp location are unknown for the project. Vale will include site diagrams of the drill locations, fuel cache location, and potential camp location and layout with annual reporting requirements associated with permits and licence for the project.

A site map of the Project on Southampton Island can be found in Appendix A.

4.0 REFERENCES

Golder. 2011. Spill Contingency Plan, Southampton Island Project. Submitted to Vale Explorations Canada June 2011.

GN (Government of Nunavut). 2010. Environmental Guideline for the Burning and Incineration of Solid Waste. Department of the Environment. Iqaluit, Nunavut. Available on-line: http://env.gov.nu.ca/sites/default/files/guideline_-_burning_and_incineration_of_solid_waste_1010.pdf

Report Signature Page

GOLDER ASSOCIATES LTD.

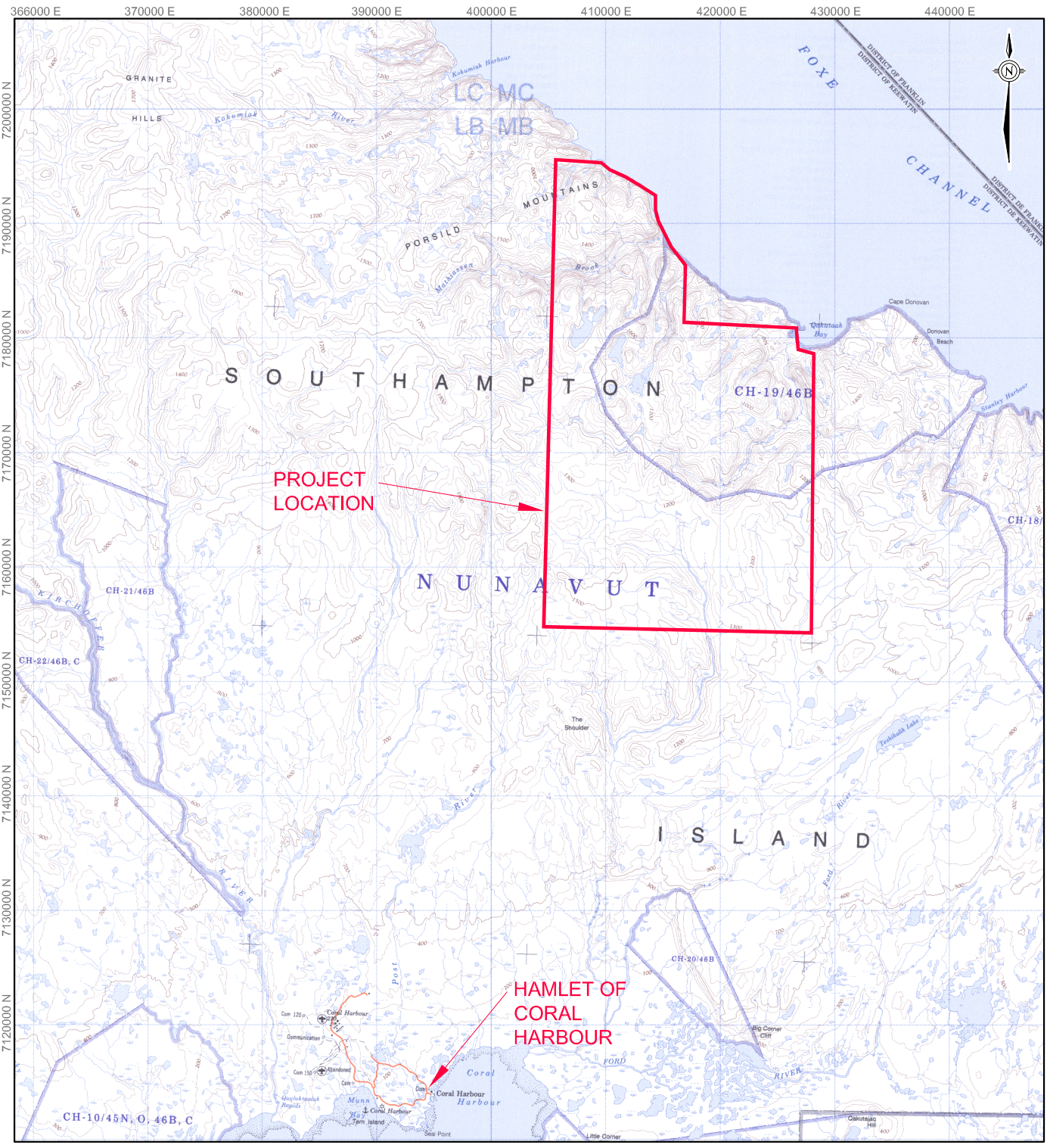
Sarah Gagné, P.Eng.
Project Manager

Corey De La Mare, B.Sc., P.Biol.
Associate, Project Director

SG/CD/bh

APPENDIX A

Site Map



PROJECT

CORAL HARBOUR AREA
SOUTHAMPTON ISLAND, NUNAVUT

TITLE

PROJECT LOCATION MAP

REFERENCE

TOPOGRAPHIC MAPS 46B AND 46G OBTAINED FROM CANMATRIX. © 1986 AND 1995 (RESPECTIVELY) HER MAJESTY THE QUEEN IN RIGHT OF CANADA. DEPARTMENT OF NATURAL RESOURCES. ALL RIGHTS RESERVED. DATUM: NAD83 PROJECTION: UTM ZONE 17.

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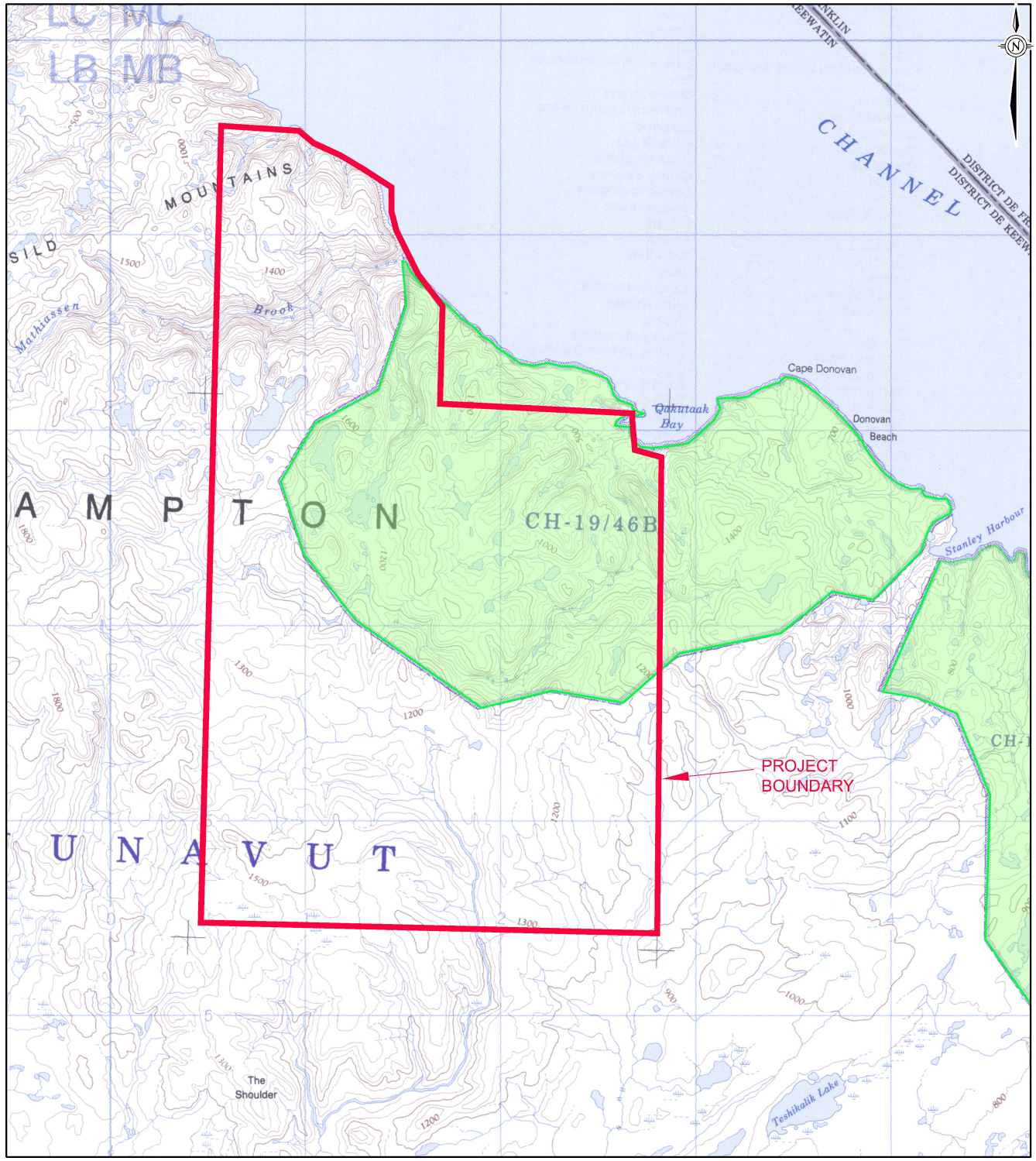
PROJECT	11.1372.0019.1000		FILE No.	11137200191000A001
DESIGN	SG	31/05/11	SCALE	AS SHOWN REV. 0
CADD	BSW	01/06/11		
CHECK	CD	15/06/11		
REVIEW	EM	23/06/11		

FIGURE: 1



LEGEND

- PROJECT BOUNDARY
- CROWN LAND
- INUIT OWNED LAND

5 0 5 10
SCALE KILOMETRES

PROJECT

CORAL HARBOUR AREA
SOUTHAMPTON ISLAND, NUNAVUT

TITLE

SITE MAP

REFERENCE

TOPOGRAPHIC MAPS 46B AND 46G OBTAINED FROM CANMATRIX. © 1986 AND 1995 (RESPECTIVELY) HER MAJESTY THE QUEEN IN RIGHT OF CANADA. DEPARTMENT OF NATURAL RESOURCES. ALL RIGHTS RESERVED. DATUM: NAD83 PROJECTION: UTM ZONE 17.

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Calgary, Alberta

PROJECT 11.1372.0019.1000			FILE No.11137200191000A002	
DESIGN	SG	31/05/11	SCALE AS SHOWN	REV. 0
CADD	BSW	01/06/11		
CHECK	CD	15/06/11		
REVIEW	EM	23/06/11		

FIGURE: 2

At Golder Associates we strive to be the most respected global company providing consulting, design, and construction services in earth, environment, and related areas of energy. Employee owned since our formation in 1960, our focus, unique culture and operating environment offer opportunities and the freedom to excel, which attracts the leading specialists in our fields. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees who operate from offices located throughout Africa, Asia, Australasia, Europe, North America, and South America.

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Golder Associates

MATERIAL SAFETY DATA SHEET

Bentonite

Section 01 - Chemical And Product And Company Information

Product Identifier ..... Wyoming Gel

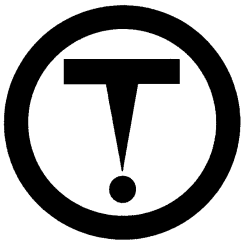
Product Use ..... Oil well drilling fluid additive

Supplier Name..... ClearTech Industries Inc.
2302 Hanselman Avenue
Saskatoon, SK. Canada
S7L 5Z3

Prepared By..... ClearTech Industries Inc. Technical Department
Phone: (306)664-2522

Preparation Date..... February 16, 2010

24-Hour Emergency Phone..... 306-664-2522



Section 02 - Composition / Information on Ingredients

Hazardous Ingredients.....	Bentonite	94-98%
	Quartz, crystalline silica	2-6%
CAS Number.....	Bentonite	1302-78-9
	Quartz, crystalline silica	14808-60-7

Synonym (s)..... Bentonite, bentonite clay, montmorillonite

Section 03 - Hazard Identification

Inhalation..... Breathing silica dust may not cause noticeable injury or illenss even though permanent lung damage is occurring. Inhalation may cause irritation of the nose, throat, and respiratory passages. Long term inhalation may cause silicosis, a progressiv, disabling, and sometimes fatal lung disease. Symptoms include cough, shortness of breath, wheezing, non-specific chest illnesss and reduced pulmonary function.

Skin Contact / Absorption..... Possible drying resulting in dermatitis.

Eye Contact..... Dust may cause eye irritation.

Ingestion.....No adverse effects expected.

Exposure Limits..... ACGIH/TLV: 0.05mg/m^3 (quartz)

Section 04 - First Aid Measures

Inhalation..... Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.

Skin Contact / Absorption..... Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.

Eye Contact..... Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention

Ingestion..... Material is non-toxic. However, seek medical attention if any symptoms or discomfort appear.

Additional Information.....None

Section 05 - Fire Fighting

Conditions of Flammability.....Non-flammable

Means of Extinction.....Does not burn. Use appropriate means of extinction for cause of fire with the exception of water as product becomes very slippery in contact with water.

Flash Point.....Not applicable

Auto-ignition Temperature..... Not applicable

Upper Flammable Limit ..... Not applicable

Lower Flammable Limit.....Not applicable

Hazardous Combustible Products.... Not available

Special Fire Fighting Procedures..... Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

Explosion Hazards.....None

Section 06 - Accidental Release Measures

Leak / Spill.....Wear an approved respirator. Vacuum if possible to avoid generating airborne dust. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Avoid adding water as product will become slippery when wet.

Deactivating Materials..... None

Section 07 - Handling and Storage

Handling Procedures..... Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

Storage Requirements..... Store in a cool, dry, well-ventilated place. Keep container tightly closed.

Section 08 - Personal Protection and Exposure Controls

Protective Equipment

Eyes.....Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

Respiratory…….... Always wear an approved dust mask for levels below the TLV. Use NIOSH/MSHA approved respirators for silica bearing dust if airborne concentrations exceed the TLV.

Gloves…….....Impervious gloves of chemically resistant material generally are not required other than what is mandated at place of work. Wash contaminated clothing and dry thoroughly before reuse.

Clothing……..…….....Body suits, aprons, and/or coveralls of chemical resistant material should be worn. Wash contaminated clothing with soap and water, dry thoroughly before reuse.

Footwear……..... No special footwear is required other than what is mandated at place of work.

Engineering Controls

Ventilation Requirements……..... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other…….....Keep an eye wash fountain and safety shower available and in close proximity to work area.

Section 09 - Physical and Chemical Properties

Physical State.....……...……....Solid

Odor and Appearance…..……..... Light tan to grey odourless powder or granules

Odor Threshold....……..... Not applicable

Specific Gravity (Water=1)……...2.45-2.55

Vapor Pressure (mm Hg, 20C)…….. Not applicable

Vapor Density (Air=1)..……..... Not applicable

Evaporation Rate.....……..……..... Not available

Boiling Point.....……..... Not applicable

Freeze/Melting Point....……..... 1450°C

pH......…….….. 8-10 (5% suspension)

Water/Oil Distribution Coefficient..... Not available

Bulk Density..... 881 kg/m^3

% Volatiles by Volume..... Not applicable

Solubility in Water.....Insoluble

Molecular Formula.....Not available

Molecular Weight.....Not available

Section 10 - Stability and Reactivity

Stability.....Stable

Incompatibility.....No incompatible substances known

Hazardous Products of Decomposition..None

Polymerization.....Will not occur

Section 11 - Toxicological Information

Irritancy..... Respiratory irritant

Sensitization.....Not available

Chronic/Acute Effects..... See notes under Inhalation in Section 3.

Synergistic Materials..... Not available

Animal Toxicity Data.....Not available

Carcinogenicity.....Inhaled crystalline silica is classified as carcinogenic to humans by IARC and NTP (Class 1) as well as ACGIH (A2) as a suspected human carcinogen. Bentonite is not listed as a carcinogen by IARC, ACGIH, OSHA and NTP.

Reproductive Toxicity.....Not available

Teratogenicity..... Not available

Mutagenicity..... Crystalline silica has been shown to cause mutagenic effects in human cells (in-vitro).

Section 12 - Ecological Information

Fish Toxicity..... Not available

Biodegradability..... Not available

Environmental Effects..... Not available

Section 13 - Disposal Consideration

Waste Disposal..... Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 - Transportation Information

TDG Classification

Class..... Not regulated

Group..... Not regulated

PIN Number..... Not regulated

Other..... Secure containers (full and/or empty) with suitable hold down devises during shipment.

Section 15 - Regulatory Information

WHMIS Classification.....D2

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 - Other Information

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

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As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that

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If you have any questions or concerns please call our customer service or technical service department.

ClearTech Industries Inc. - Locations

Corporate Head Office: 2302 Hanselman Avenue, Saskatoon, SK, S7L 5Z3
Phone: 306-664-2522
Fax: 306-665-6216

www.ClearTech.ca

Location	Address	Postal Code	Phone Number	Fax Number
Richmond, B.C.	12431 Horseshoe Way	V7A 4X6	604-272-4000	604-272-4596
Calgary, AB.	5516E - 40th St. S.E.	T2C 2A1	403-279-1096	403-236-0989
Edmonton, AB.	11750 - 180th Street	T5S 1N7	780-452-6000	780-452-4600
Saskatoon, SK.	2302 Hanselman Avenue	S7L 5Z3	306-933-0177	306-933-3282
Regina, SK.	555 Henderson Drive	S42 5X2	306-721-7737	306-721-8611
Winnipeg, MB.	340 Saulteaux Crescent	R3J 3T2	204-987-9777	204-987-9770
Mississauga, ON.	7480 Bath Road	L4T 1L2	905-612-0566	905-612-0575

24 Hour Emergency Number - All Locations - 306-664-2522