EXHIBIT NO. H-056
File Name:
Date: March 11, 2
Received by: Pete Cook
(Commission Secretary)

Vivian Silica Sand Project

Thanks to the CEC Commission for your attention to the matters that are being considered over the three weeks assigned to this Hearing.

I submit that there are significant issues that the Sio Silica Project presents.

"Facts Matter", on that we need to be clear. Sio's "Facts" are in need of review and being challenged. One such challenge was posed by Dr. Ian Halket(Environment Consultant), just minutes into our first session. Dr. Halket called out Sio on their claim of 'room and pillar' mining of Silica sand, "as the norm for the mining industry"-not true.

Another Sio 'fact' they assert is that there are no available experts to challenge their claim that their project is" safe for the water and the environment"-not true if you follow the presentations.

Also not true is their claim of "no subsidence" associated with their up to five 16" bore holes per well cluster, with clusters 200 feet apart, leaving large sand caverns that "will result in a mass of loose sand with the potential for the progressive large scale sequential failure of overlying strata"(p 35 attached report). This is to continue for 4 years of a 24 year project. This contravenes the Water Act 3(1) " a person must not construct or seal a well or test hole in a manner that allows the interconnection or moving of ground water between the Winnipeg formation and any other overlying aquifer".

Again and again Sio is being called on their lack of data showing how multi well clusters function. Their monitoring and cumulative impact studies are deficient. Assumptions, speculations, diversions and media propaganda are not facts.

Fact: ground zero for extraction and processing at Vivian is in the zone above and below ground that is classified as" high aquifer vulnerability"(FD 1&2 attached).

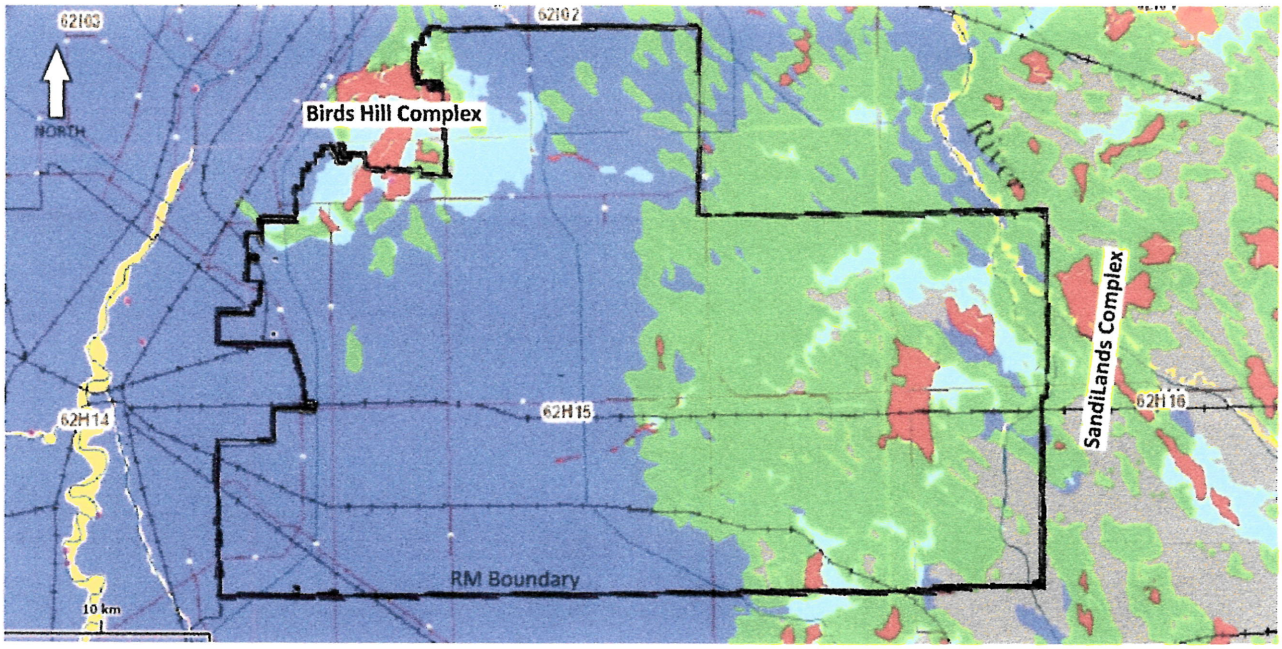
All this to compromise a pristine fresh water source for profit taking by investors??

These deep aquifers are our fresh water bank to tide us through the challenges of climate change weather events. We need to guard them-without water we are nothing.

Fact: I stand with all those who will oppose Sio Silica's plan to exploit our water source.

Submitted by,

Darryl Speer



A — ALLUVIAL SEDIMENTS: sand and gravel, sand, silt, clay, organic detritus; 1–20 m thick; channel and overbank sediments; reworked by existing rivers and deposited primarily as bars

G — PROXIMAL GLACIOFLUVIAL SEDIMENTS: sand and gravel; 1–20 m thick; complex deposits, belts with single or multiple esker ridges and kames, as well as thin, low-relief deposits; deposited in contact with glacial ice by meltwater

Ls — MARGINAL GLACIOLACUSTRINE SEDIMENTS: sand and gravel; 1–20 m thick; beach ridges, spits, bars, littoral sand and gravel; formed by waves at the margin of glacial Lake Agassiz

Tc — Calcareous silt diamicton, predominantly derived from Paleozoic dolomite and limestone

Lc — OFFSHORE GLACIOLACUSTRINE SEDIMENTS: clay, silt, minor sand; 1–20 m thick; very low relief massive and laminated deposits; deposited from suspension in offshore, deep water of glacial Lake Agassiz; commonly scoured and homogenized by icebergs

Figure 6 – Surficial geology of the RM of Springfield. (modified source – Matile and Keller, 2004)

HYDROGEOLOGICAL INVESTIGATIONS

Methodology and Data Collection

GEOLOGICAL/HYDROGEOLOGICAL DATA

The data utilized in this project were collected from multiple sources, including field visits, government departments, academic literature and other government agencies. A majority of the data presented has been developed and complied by the various departments of the provincial government and was obtained through Manitoba Sustainable Development (MSD) – Groundwater Management Section. Friesen Drillers has assumed that the majority of this information is correct, and complete. We have not undertaken any steps to confirm the validity or accuracy of the information provided.

The data was collected, reviewed, compiled, and analysed in an effort to characterize the hydrogeological setting of the major aquifers within the RM of Springfield with respect to the following considerations:

- Local well records (including salinity, hardness, depth to target aquifer water level) from the most recent version of the province's Drilled Well Database.
- Pumping test results from the most recent version of the province's Pumping Test Database for the proposed aquifer source.
- Summarize available water quality analyses for the proposed aquifer source.
- Assess local bedrock and surficial geology, including stratigraphy, depth, thickness, composition, texture, known relevant weathering/alteration/structural features (i.e. joints, fractures, faults, or bedding planes), water-bearing potential, and lateral continuity based on existing information.

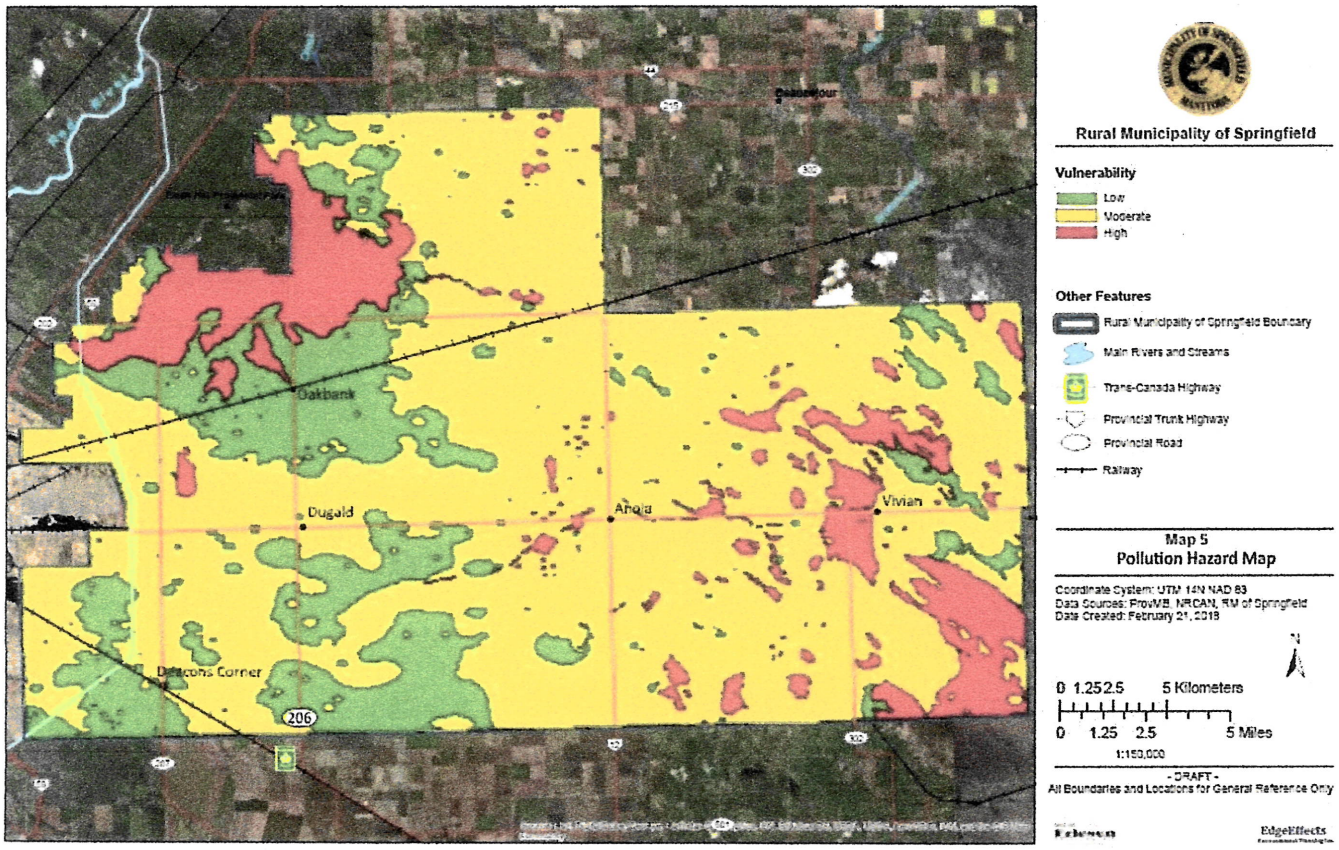


Figure 31 – Pollution hazard map indicating areas of low, moderate and high aquifer vulnerability to impacts from surface activities.

Groundwater sensitive areas within the RM are represented by the High Vulnerability class on Figure 31. The major defining features of these areas are permeable surficial material and a shallow depth to aquifer. The largest groundwater sensitive area in the region is the Birds Hill Glacio-Fluvial Complex. The area serves as a major recharge area for the carbonate aquifer system. A downward hydraulic gradient exists through the highly permeable subsurface directly to the carbonate aquifer. The glacio-fluvial complex is largely unconfined and provides a direct recharge pathway to the carbonate aquifer.

Towards the eastern portions of the RM, scattered sand and gravel deposits are observed in the shallow subsurface. The spatial extent and level of hydraulic connectivity to the carbonate aquifer of these deposits are not well defined. Consequently, based on the available information, the sand and gravel deposits in the east of the RM, though considered to be groundwater sensitive areas, are not considered to form mappable aquifers. Further hydrogeological investigation is required to characterize the sand and gravel features and relate them to the regional groundwater system.

Land uses and general development taking place within groundwater sensitive areas should be closely scrutinized and any activities that introduce contaminants at the surface should be minimized. High risk land uses such as landfills, lagoons and heavy industry should not be located within groundwater sensitive areas without suitable protections put in place. The use of private septic fields and tanks should also be minimized in these areas. It is recommended that subdivision proposals which would utilize private septic fields and supply wells be required to undertake a site specific hydrogeological assessment prior to approval. The hydrogeological assessments should include field testing to determine the thickness and permeability of the subsurface material and review the local hydrogeological conditions that would be potentially impacted by the development.

Land used for agricultural purposes can also pose a risk to groundwater/aquifer protection. This is especially true for intensive operations, where the storage of large amounts of fuel, manure, fertilizers and other potentially hazardous chemicals is common. Where possible, these types of land uses should be kept out of groundwater sensitive areas.

It is strongly recommended that the spreading of manure and the application of fertilizers, herbicides and pesticides be limited to locations outside of the groundwater sensitive areas. In addition, the number of private well fields developed within the sensitive areas should be based on site specific hydrogeological investigations. Where these high risk activities within groundwater sensitive areas cannot be