

## Landowner Backgrounder November 28, 2013



The Labrecque family members are decedents (second, third and fourth generation) of the original homesteaders in this area. Some of the members of the group were the first ones to clear and develop the lands where Baytex now operates its Reno Field.



### Heavy Oil Production History in Reno Field

It needs to be emphasized that the Reno Field covers a very small area of land. The 23 well pads along with 86 heated tanks processing bitumen are concentrated into an area that is approximately 1 mile wide and 5 miles long. These landowners are in the middle of this field.

In 2004, Koch Exploration drilled the first wells in the area. None of the landowners filed objections to those well applications with the ERCB. They consented to the bitumen wells coming into their community and onto their own lands.

Prosper Energy took over in 2008 and more wells were drilled and more tank facilities put into operation. Again, these landowners did not object and welcomed the wells/facilities along with the economic activity they generated. They had no reason to be concerned. Their experience had been good.

Prior to Baytex these landowners report living happy, healthy and productive lives on these lands. Some of the residences were close enough that they could walk to grandma and grandpas house for Sunday dinners with their kids. Their farms were doing well and they

were also engaged in businesses or employed off of the farm. They liked living there and had no complaints—and certainly no reason to abandon their homes.

Importantly, the landowners did not experience any significant impacts, adverse odours or health effects, nor file any complaints while Koch and Prosper were operating the wells and facilities from 2004 until the winter of 2010-2011.

During the initial 6 year period that bitumen production was occurring there were no serious problems. The landowners and the energy companies had a positive and constructive working relationship. The air was breathable and non-offensive.

However, it was during September or October 2010—a few months prior to the formal well transfer from Prosper to Baytex—that the landowners began to notice a dramatic increase in heavy oil odours and aerosol emissions. It was also at this time that they began to experience health effects.

They contacted Baytex about their concerns and were assured by Baytex many times that Baytex was going to correct whatever was causing these new emissions they were experiencing on their lands and in their homes. For the most part Baytex did not and has not honoured many of the numerous commitments that Baytex made to the community to get the emissions back to the non-intrusive levels they were prior to September/October 2010.

### **Baytex Production Method Change**

Michel Labrecque had worked for Prosper and then Baytex. Since he lived right in the middle of the Reno Field, he was hired to clear snow at the sites and to use his large four wheel drive tractor to pull the tanker trucks into and out of the sites whenever wet conditions or snow inhibited tanker truck movements.

Michel would hook onto the tanker truck on the county road with his chains. He would pull the truck into the site and stop beside the bitumen tank that would need to be unloaded. While the tanker truck was being loaded, Michel would leave the truck chained to his tractor. When the tanker truck was full, the driver would instruct him to pull the truck to the county road at which point Michel would disconnect the chains. The truck would leave and then Michel would go to wherever the next tanker truck was waiting to be pulled in for loading either at the same site or another site. This process would repeat itself many times in a day and over a week.

Michel advises that prior to September/October 2010, it always took the same amount of time to load the tanker trucks: approximately 3 hours. This was same for all of the Reno sites. The time for the bitumen to be pumped from the heated tanks into a parked tanker truck was 3 hours given that the oil was highly viscous.

He remembers being surprised in September/October 2010 when an operational change was made and it suddenly only would take 30 to 45 minutes to load the same tanker truck.

He said there were no changes to the pump, the pipes, nor the procedures used in loading the trucks yet the loading time was reduced from 3 hours to only 30 or 45 minutes.

Michel and the other landowners believe that Baytex increased the temperature of the tanks and possibly added chemical thinners to allow the heavy oil to be loaded faster.

There is scientific literature that indicates that increasing the temperature at which bitumen is heated can significantly change the composition and rate of aerosol emissions from the tanks.

### **Intensity of Emissions**

The landowners report that the emissions and odours were typically not too bad during sunny days or if the wind was strong. However, when the air is still in the evenings, overnight and in the mornings, the odours and emissions were intense, disruptive and causing dizziness, loss of balance and other characteristics associated with intoxicative inhalants. The emission levels increased significantly in the winter.

### **Health Impacts**

All of the landowners have had similar symptoms. When we leave the area, the symptoms go away but reoccur when we come back. The symptoms include severe headaches, dizziness, loss of balance, respiratory tract irritation (nose, throat, trachea and lungs), muscle aches and spasms, eye twitching, dizziness, fatigue, tingling tongue and metallic taste, constipation, vomiting, weight loss and others.

The scientific literature is clear that the toxic chemicals in the emissions from heating bitumen are known to cause these effects on humans.

Each of the landowners took a variety of steps to try to understand why they were experiencing these health impacts. As the exposure time increased their symptom changed and intensified.

The landowners went to their doctors and to hospitals and clinics to have testing and diagnosis completed.

They all began to observe that the symptoms would subside when they left the area and would reoccur when they returned to their land and homes.

The net result is that with the emissions being so intense, Baytex failing to honour its commitments, and everyone getting sicker, the families began to abandon their homes.

### **Baytex's Air Quality Studies**

We have reviewed the Baytex air quality studies referred to in Baytex's November 27, 2013 letter.

There are several serious problems that call into question the validity of the findings and recommendations set out in those reports.

### **Timing and Duration of the Ambient Air Testing**

- The testing was done during the day when it was sunny. The landowners have repeatedly explained that the odour and emissions were typically not too serious during sunny days. The aerosol plume would rise and not stay close to the ground. The main odour and emission impacts occurred during overcast days, in the evening, over-night and in the morning but that is not when the testing was done.
- The landowners and their children breathed the air 24 hours a day, seven days a week except when they were away from the lands. The testing samples were only taken once for either an 1 hour, 4 hour or 24 period depending on the nature of the compound being sampled. A proper study would have taken continuous samples over the period days, weeks, or even months. The samples from the Baytex report are not representative of the ambient air that these landowners have been exposed to.
- Based on the photographs in the reports, it appears that the hatches on the top of the tanks were closed when the ambient air monitoring was conducted. However, Baytex does not close the top hatches on the heated tanks during normal operations. The landowners have consistently observed these top tank hatches being open. They have complained to Baytex about it. They have numerous photos—some taken last week and more this past weekend—showing emissions coming from the open tank to hatches. Any ambient testing that occurred while the tank top hatches were closed is invalid. It is not representative of what these landowners have experienced. So too is any dispersion model based on this flawed data.

### **Improper Exclusion of Emissions from 59 of the 86 Tanks From Study**

Baytex's consultants decided to exclude 59 of the 86 tanks from their studies based on advice from Baytex. This means that the emissions' composition sample, the dispersion model, health impacts and other study conclusions all assumed that there were only 27 tanks emitting gasses and aerosol plumes when in fact there are 86 tanks located in the Reno field emitting gasses.

Attached are additional photographs taken on Sunday showing the tank top hatches open. The landowners have many photographs showing that this is Baytex's normal operating procedure.

Here is one Baytex site:



And another site with emissions more visible:



And another site showing the tanks with open hatches:



Baytex also persuaded its consultants to assume that only the first tank in a series of tanks had any emissions. However, we know that solution gas disengages from the oil in the production tanks when they are heated. The landowners have observed and experienced emissions coming from all tanks. Michel who worked closely under the tanks observed all of the tanks giving off emissions. All tanks should have been included in the studies but they weren't resulting in questions as to the validity of the information Baytex has filed with the Regulator.

Baytex also purposed that the pad sites with flares should be excluded. However, not all of the tank top gasses are being captured and sent to flare at the pads with flares. The landowners have observed strong odours and emissions coming from the pad sites with flares.

Happier times:

