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SUBMISSION ON THE REX MINERALS' HILLSIDE PROJECT PROPOSAL NEAR PINE POINT

Thank you for your letter dated 10 September 2013 and mining proposal documents on CD, advising the public circulation period for Rex Mineral's Hillside Project at Pine Point. These days being carer for my wife gives me little time to keep up with what is happening at Pine Point and your letter has come as a complete shock.

Since receiving it I have made it my business to find out how many of my friends know of a "Monster Mine" being in the final stages of approval and discovered there were none. Like me, some knew about exploration happening a few kilometres from Pine Point and that mining might eventually happen, but none had any idea that there would be a "Monster Mine" that would consume most of the district. I believe this proposal has come to a complete shock to most living at Pine Point.

The information on the CD is overwhelming to the average person such as myself who does not have the technical knowledge to fully understand much of what is written or the time to read through and sift out every important detail. Non the less I must point out a few issues which others and myself consider are obvious and important but appear to be of minor consequence to those hoping to gain from the project.

SOCIAL INJUSTICE

The economic benefits of the mine can not be denied, but part of the mine's profitability appears to rely on existing infrastructure that is there because it is in a seaside food producing area where people want to farm, live, holiday and retire. It is somewhat unfair that these people will be pushed aside, their quality of life degraded and their community assets seconded for a temporary purpose that will forever devalue the place they have chosen to live.

SHORT TERM GAIN v LONG TERM PAIN

Immediate economic benefit can not be the decider as the price we pay, we pay forever. There is no final figure for what we pay. With each year that passes another year's lost benefit will add to the total. The value of each year's lost benefit will also increase, as a hungry world will struggle for places to grow food and residents in the growing city of Adelaide will put greater value on any nearby location that offers a pleasant seaside retreat away from the bustle of city life.

The mine's only legacy will be:-

- 34 square kms of South Australia's best cropping land destroyed, its production of Australia's finest barley lost forever.
- 34 square kms destined forever to be a wasteland, a rubbish dump and haven to feral animals forever.
- 14 square kms of rock heaps, containing radioactive material and asbestos and up to 115 metres high. A problem forever.
- A hole over 2 kms long and almost half a kilometre deep, there forever.
- Probable contamination of Gulf St Vincent and possibly the ground water for centuries to come.

This destructive type of mining could be justified in the outback, but not on prime farming land in a popular holiday seaside area. The method appears cheap and messy and if it is the only way to make the operation profitable, an ore body in such a location should be judged as not being worthy of mining. On a visit to Bendigo I was surprised to learn that mining still goes on under the city but has no impact on the residents above.

Technology is advancing all the time. There may well come a time when we can cost effectively extract the ore near Pine Point without destroying the surrounding environment. We should wait for that time. No doubt the price of copper will also have gone up by then, which would assist in making alternative methods profitable.

WHAT IS THE FUTURE FOR YORKE PENINSULA?

I note from the information provided that exploration permits cover the greater part of Yorke Peninsula and there is a strong likelihood of finding more deposits. Is the plan to one day have Yorke Peninsula covered in open pits and mining waste? If not, then why are we going down this track now?

WHAT IS BEST FOR THE COUNTRY?

Australia could be described as a beautiful little country on the edge of a very large desert. Our ability to support a large population is limited, yet world population growth will eventually force a much larger population on us. The desert is full of minerals yet to be discovered. The unnecessary sacrificing of our most livable land to mining is something future generations will not thank us for.

Miners should be opening up the outback, not destroying that part of the country already settled. We are a young country blessed with many resources. The Hillside Project is counter productive to how we should be opening up our continent for settlement.

I also wonder how much of the mine's value will finish up in the pockets of overseas investors and similarly I wonder how much of the mine's workforce will be brought in on 457 visas as happens at other mines around the country.

DUST, ASBESTOS AND RADIOACTIVITY

Pine Point is fortunate, as most properties are sheltered from the east of the wind, the sea breeze being the main wind event. The Summer Northerly is the exception and this wind appears to blow harder at Pine Point on a given day than at other locations along the coast. It is the town's most unpleasant wind and is now destined to become a great deal more unpleasant. With mine waste being heaped only 1 km north of the town, nothing will stop mine dust blowing over it in a Northerly. Local people I have talked to have all expressed concerns about their rainwater tanks but none yet realise that the dust could contain radioactive material and asbestos fibres.

A word search for "radioactive" and "asbestos" through the documents on the CD quickly finds the references to radioactive materials and asbestos fibres. These will be in the waste heaps and therefore the dust produced by the mine. The method for dealing with the higher radioactive material will be to dilute it with other material, but no plan exists to deal with air born asbestos fibres as sampling to date indicates they will be mostly low risk.

This acceptance of any risk for both material types may be acceptable in the out back or perhaps in the confines of an underground mine with adequate worker protection, but not in the middle of a residential, farming, holiday district. Knowing these materials may be in the dust people breath will be a point of stress for many and bad health outcomes from these materials will not become apparent until many years after exposure.

Keeping the kids from playing around the waste heaps will also be a problem for hundreds of years to come.

GROUND WATER

It is assumed that the mine will not contaminate Yorke Peninsula's ground water. This is based on modelling but several questions arise about the modelling:-

- How much reliable data was available to model this prediction?
- What effect will future changes in climate have, given that the pit will be there forever? Rainfall, evaporative rates and sea level all need to be considered.
- The pit is close to the sea. What happens if the volume of seawater seepage is not as estimated or if blasting or earthquake opens up aquifers leading to the sea?

Again I suggest that Yorke Peninsula is not a place where we can accept this type of risk.

THE MARINE ENVIRONMENT

There appears to be little effort put into understanding the marine environment of the area. To help people understand this area a little better, I offer the following observations.

For 30 years my father line fished commercially for King George Whiting at Pine Point and I fished with him for part of that time. Studying the habits of KG Whiting has for me been a life long interest.

The preferred summer habitat for KG Whiting is in water less than 6 metres deep at low tide. In 1971 commercial fishermen were allowed to net out to the 5 metre mark at low tide for the first time, causing KG Whiting numbers to drop dramatically in what was their preferred habitat. This in turn caused a noticeable drop in the biomass of KG Whiting in the Gulf St Vincent, although I do not believe any monitoring of this started until 1976, by which time a lot of damaged was already done.

The inshore reefs on the western side of the gulf play an important part in maintaining the biomass as they provide the preferred summer habitat. These reefs start adjacent to the proposed mine and can be found at several locations as you follow the coast southward. North of the proposed mine the inshore water is too deep.

The inshore reefs opposite Hills Creek and Pine Point Creek can be included in that small group of inshore reefs that would have sustained a significant part of the Gulf's biomass of KG Whiting prior 1971. The catchments for both creeks mentioned sit inside the proposed mine lease.

If I understand the documents of the CD correctly, there is a probability that run off water will carry industrial contamination during the life of the mine and some leaching from the waste

heaps is possible thereafter. Damage to seaweed adjacent the mine will be monitored but there is no plan on how to protect the marine environment if a problem occurs.

Ten years ago netting was again banned on the inshore reefs on the western shore of the Gulf St Vincent, which was the single most important thing that could have been done to stop the decline in whiting. The marine environment adjacent the proposed mine lease needs to be considered carefully as I believe it has an important part to play in the effort to halt the decline of KG Whiting in the Gulf.

To explain this further, whiting numbers increased many fold in the deeper water further out after 1971. These numbers have however now almost gone back to how they were pre 1971. I suspect this is because the deeper water is not their preferred habitat and can not sustain whiting in large numbers.

In 1968 I once came across a school of whiting near Black Point that would have covered an area at least 100 metres by 100 metres and weighed many tonnes. It stayed about three days then was gone. I believe such schools support the theory that whiting migrate in a mass and rely on the presence of small resident pods of whiting in an area they come to, to decide if it is safe for some to relocate there. This would explain the process that forced most fish out to deeper water after 1971 and why it is important to give them a chance to gradually settle back into their old and preferred habitat now.

Fishermen also noticed many years ago that KG Whiting seemed to disappear from the area adjacent to the proposed mine during holiday periods and on long weekends. As there were no boat ramps in the area in those days, there was little increase in boats or fishing effort. The only thing different was an increase in traffic noise from holidaymakers travelling down the Yorke Highway. Being such a quiet stretch of coast, it was probably one of only a few places where the reaction of KG Whiting to a sudden change of noise could be observed. We suspected the noise was travelling through the seabed because the whiting appeared to react to it, regardless of wind conditions.

NOISE, NATURAL BEAUTY AND OTHER CONSIDERATIONS

To the south of Pine Point is Black Point Beach where many of the 100 plus properties overlooking the water are said to have a \$1,000,000 price tag. The desirability of this area as a place to live and relax speaks for itself. Immediate to the north of Pine Point an untouched shoreline forms the eastern boundary of the mining lease.

Almost two kms of the cliffs on the mine lease's eastern boundary are unique. A different colour dominates each section. Colours include red, white, grey, brown, olive green and yellow. As a kid I discovered spots to scratch out good specimens of serpentine and iron concretions for swapping at school. Only people passing in boats or the occasional beach walker ever see these cliffs however. Google and you won't find them. They don't ever appear in Yorke Peninsula Tourism publications, yet in my experience they are far more interesting than the coloured sand cliffs of Rainbow Beach in Queensland. You need a 4WD to reach those cliffs, yet they feature as a Queensland tourism attraction.

A morning walk along the sheltered narrow beach at the foot of the Pine Point cliffs, tide up, warm sun and sparkling sea, is a memorable experience. Unfortunately this unique but little known stretch of coast may lose its special quality forever. Even if the cliff face remains untouched, (which I doubt) the Yorke Highway will squeeze between mining waste heaps and the cliff edge. The tranquillity of nature does not go well with mining waste and highway traffic.

Figures can always be presented in a way that favours the argument you wish to make. I believe tables of noise readings taken at Pine Point would be an example. They suggest a lot of noise but my guess is they are measuring the wind in the trees and perhaps the waves on the shore. Pine Point is actually that quiet that on a still night you can hear the engine of a passing ship on the horizon. Apart from the occasional motor vehicle, the most notable noise would be the voice of a neighbour, a disturbed sea bird on the reef or the odd popping made by little marine creatures on the exposed tidal flats. Like the rest of us, those little marine creatures should now be very worried.

PUBLIC AWARENESS AND PERCEPTION

I feel obligated to make this submission, as there appears to be no broad public awareness about the Hillside Project. Typical of the comments I have gathered from people living in Adelaide are:-

- "Surely they put the dirt back once they have finished with the hole."
- "I thought the scare on the Adelaide Hills' Face taught us not to do that type of thing again."

My barber's comment was:

- "Who cares, if it saves me money it sounds good."

Massive open cut mining in the middle of settlement is obviously a public debate we need to have.

Everyone I spoke to imagined copper mines as being neat tunnels disappearing into the ground like they were in the old days. They certainly did not realise a massive open cut mine could soon start up in a rural seaside location not that far from home.

I see on TV, public concerns about wind farms and coal seam gas mining in the Eastern States, but nothing about a monster copper mine about to be approved in a sensitive part of South Australia. My fear is that people will only become aware of the many issues involved after the mine is approved and those who protest will be told that they put hospital funding etc. in jeopardy by doing so.

Yours Sincerely



Robert K Hawes