

MGM, Energy Corp.
Traditional Ecological Knowledge Study December 2011.
MGM Tulita District Program, Tulita N.W.T.

Summery,

Purposes of collecting a Traditional Ecological Knowledge information from the Elders, and land user is to help understand the Dene and Metis way of life on the land past and the present.

Traditional Ecological knowledge Study is to capture and gather all traditional Ecological Knowledge information from the Elders, harvester, and to be documented on questionnaire form and Maps.

(e g) The History and background of ancestor burial site, historic site, land use, within the Mackay River, area where MGM propose to conduct Oil / Gas activity.

TEK documentation help us to better understand the local harvester land use around Mackay River Area.

Elders and local harvester have first hand traditional Ecological knowledge about the land in which MGM Proposing to conduct Oil/ Gas activity in the near future. The Proposed Well Sites are located just across from Community of Tulit'a on the South side of Mackenzie River.

From Mackay Range Mountain a gradual downhill sloping to the east toward Mackay River and Mackenzie River.

Methodology.

The interviews with participant are conducted one on one basis to obtain as much TEK information as possible from each Individual. It's very Important to make each individual feel comfortable when being interviewed so they can provide the best TEK Information.

All Interviews are conducted in both Slavey and English language.

Questionnaires Form

Questions are based on traditional Land uses of Mackay Range Mountain, and Mackay River, area within proposed project area .

(e g), Land use, Cabin, Campsite, Trails /Access Route, Fish Lake, Rivers /Stream, fish spawning area, Spring, Wildlife / habitat, Vegetation, freeze up, permafrost, historic site, Burial site, Ceremonial site, spiritual site, earthquake / Land slide, traditional boundary, and Features of area, and land use.

Terrain

All the way from Mackay Range Mountain, the terrain has about three step benches of land formation. Slowly sloping downhill toward Mackay River and Mackenzie River, Most of the water runoff will drain into Mackay River and Mackenzie River.

Inter point of Access at Little Bear River lower bench might have some soft spot due to muskeg patches . Elders have acknowledge during the Month, of October, and November, the Muskeg, and lake ice, freezes over real good. Depending how deep the snow get during the freezes up. (eg) When deep snow come in October and November the ground will not freeze properly.

North East side of Mackay River the area has lot of beaver pond, and lakes that are connected by creek from Mackay River will have fish. The Northeast area from Mackay River is more of a wetland with muskeg which will take some time before fully frozen .

Soil

The whole area is permafrost except natural underground spring. Lake around Mackay Range Mountain has lot of natural underground spring which come right out of the Mountain feed into the lakes. Elders are saying each year the permafrost slowly melting away. They have experience each Springtime snow melt water, simple drain into the ground soil too fast. This only mean the permafrost has thaw out early than usual. People notice that Mackay River banks slowly thawing out they can see land slide occurrence along the shore, near old cut lines crossing.

Climate,

The climate around Tulita is well known by the elders, for generation, they know how the four season's renew and the weather cycle changes. Fall, Winter, Spring, and Summer. September, is the starting point in water freezing temperature. And the frost continue to built well into February.

May spring arrive in Tulit'a and the melting thaw begin by early June all the snow should have melted away. Except Mackenzie Ice break up left on shore line.

Mackenzie River usually break up in middle of May.

Climate change have affected the River, Lakes, Ice rapid melting of snow have cause the winter Ice, to weaken. By Ice turning into Candle stick to early than usual. Candle Ice will fall apart easily underweight.

The weather cycle have change around Tulita. More southwest fierce wind occurring than usual. The natural north east wind slowly fading away.

Vegetation

The forest around the proposed program well site provide for wildlife habitat. Harvester have been using that area for everything, both in the Winter time and the Summer time. Material such as Birch, Spruce tree logs are use for building a cabin, snowshoe, Drum, sleigh, (etc)

The whole area on the south side of Mackay River MGM, Program area it rich with vegetation, such as Red Willows, Dark willows, Little Birch trees, Big Birch trees, Poplar trees Tamerack, Dark and White spruce tree, moss, lichen, mushroom, Labrador tea plants, lake lily pads, lake roots, Grass, flowers,.

All sort of berry plant, Blueberries, Cranberries, Knuckle berries, Bluejayberries, Bear berries, Thornberries, Ravenberries, Gooseberries, Raspberries, and many more berries in the Country.

Berries are survival food for human, and wildlife such as Bear, Bird and other wildlife.

River bank without vegetation, both manmade and natural causes are Potential for Landslide.

Water use

MGM Program area, lot of little muskeg lake not big enough for big project to draw water from . Jackfish lake is situated at the base of Mackay Range Mountain, fair size Lake but it has fish. Jackfish Lake stream flow also too small to draw water from . Jackfish lake drain through the southern Well site and continue into Mackay River then eventually Mackenzie River. Moose Lake in also important to summer moose hunting. See map.

Mackay Range Mountain has lot of natural underground spring water which feed into Yellow Lake, Fall Stone Lake, and Jackfish Lake, these are all fish lakes. The small lake around MGM program are way too small to draw large quantity of water from. Mackay River, Little Bear River, might have pocket of water pool for camp use.

Stream Flow

There are several small stream flow in MGM proposed program area. The stream coming out of Jackfish Lake, is a fish migration route to get in the lake to spawn. Ice bridge maybe use for crossing jackfish lake stream flow.

Mackay River, Little Bear River, has gravel bottom and should be frozen to the ground except pocket of water.

Lowers bench by Little Bear River MGM Access route is near muskeg, area natural underground spring between the two lake it may take some time to freeze over.

Stream flow are very important fish habitat to reach spawn, area such as Jackfish lake. All stream must be keep open and free of Ice bridge at the end of project.

Annual and Seasonal Trend

Wildlife Winter / Summer species

All kind of wildlife in the propose area of MGM program, Moose, Woodland Caribou, Wolves, Bear, Wolverine, Lynx, Marten, Mink, Otter, Porcupine, Weasel, Red squirrel, Foxes, Beavers, Muskrat, Sharp Tail Grouse, Spruce Grouse, Ptarmigan, Rabbit, Mice, Gray Owl, Raven, Bluejay,

Migratory Bird Waterfowl , North east side of Mackay River is mostly wetland nesting area for waterfowl such as Red Neck Grebe, Diver, Swan, Geese, Ducks, ETC, Beaver Pond, Frogs, Insect, Month of May waterfowl bird migrate back into land, to nest and raise their chick. And Fall time September come the bird leave again. Through Mackenzie Valley migration route to their destination down south wintering ground.

Woodland Caribou, roam the base of Mackay Range Mountain toward Tate lake Area, and all along the base of the Mackenzie Mountain Range, woodland Caribou move around all winter.

Occasionally Caribou appears at mouth of little Bear River, and Mackenzie River. Bear's are hard to predict where they will den for the winter and sleep. Black Bear usually try to den near Eskers.

Transportation.

Old cut line which can be travel by Ski- Doo, are used for trapline, and some of the cut lines is within the vicinity of the Southern MGM Project area, are in use by local trappers. Cutline leading toward Tate Lake area etc. See map

Access route, used by companies in the past, is situated by Little Bear River which MGM intend to use. Hunting will occasionally occur on cut line to access Mackay Range Mountain, and into the high Mountain range in the Background, and Tate Lake area.

Significant Site:

Burial site by mouth of Mackay River near old Cabin site. See attach map' Historical Site at Mouth of Mackay River Mountain Dene traditional Camp site. See attach map.

Fall stone Lake, mouth of the creek Burial site. See attach map, Historical site, Fall Stone Lake old cabin Site. See Maps, Historic site, old cabin, yellow lake, blueberry picking area Burial site. See map, Old camp are historic site along traditional trail. See map

Important of Sites Specific area,

The whole land it considered spiritual to the people, when a hunter or berry picker are out on the land they make gift offering to the Lands and Water all the time.

Area of visual spiritual ceremonial site are such as Bear Rock, Four mile smoke, Mackay Range Jackfish Lake, Windy Island,.

A special man Yats'ule first ever spiritual drum song came to him at (Berry Picking area Esker) see map. Berry picking esker is spiritual place for the Mountain Dene.

Elders also said Jackfish Lake is a Pre- Historic Lake, due a living giant spirit in lake, Dene elders have seen the living object not long ago.

Traditional Use:

Traditional way of life by Dene/Metis on the land, is fishing, hunting, and trapping, in the past and present. People have cabin within the Mackenzie River shore on south side of the community of Tulit'a.

Most people still depend on the land for harvesting food and fur bearing to survive the high cost of living in high North.

Should the hunting ground or fish lake, are no longer available near Tulita. Harvester have to travel further to new location to hunt and trap. Without land forest wildlife, there will no hunting, trapping, or fishing in general.

General Observation

The people are aware of the new technology in exploration for Oil/ Gas. And the search for Oil/Gas has come to their backyard, on their traditional lands/water. On the land where they have been hunting, trapping, fishing, from one generation to the next.

Company need to have a good monitoring system to watch over traditional lands, and water when exploration take place.

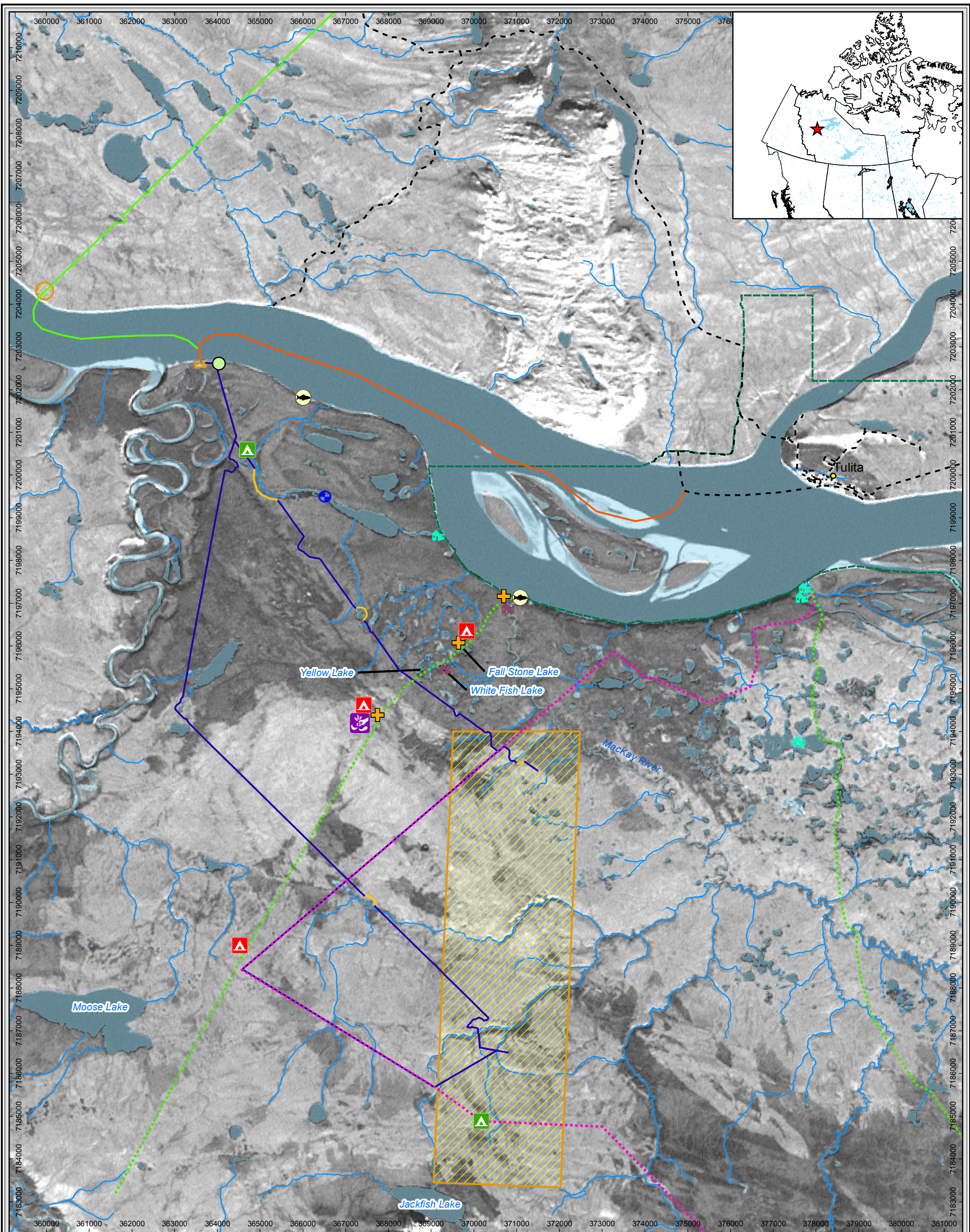
Harvester have Trap line on some old seismic cutline to access Tate lake, and other areas. Some cutline go right through southern portion of Parcel 5. Hunter too occasionally uses the access cutline to get to the high Mountain behind Mackay Range Mountain to harvest Moose and Caribou. Each year is different for harvester, they move around to new location to find fur bearing animals.

Fish migration route river/stream, each year grayling run to migrate up each little stream that enter into Mackenzie River, to spawn. Harvester have two cabins located within parcel 5, along Mackenzie River south shore. See map,

Lands and water are beautiful virtually untouched by development, should Companies come to work on the land work in the North, they need to keep a good communication with local RRC. Companies should keep an open dialog with the Local Renewable Resource Council to be on same page.

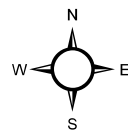
Communication will help create a good working relationship with the local RRC. Companies, must try to leave no foot print behind on the traditional land when they leave. And this will make harvester happy and enjoy their way of life.

Mahsi Cho Leon Andrew



Legend

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|----------------------------|---------------------------------|---------------------------|
| Access | Existing Roads and Winter Roads | Watercourse |
| Fish Net Area | Mountain Dene Trail | Area of Interest |
| Berry Picking Area (Esker) | Trapping Ski-Doo Trail | Tulita Community Boundary |
| Burial Site | Access Option 1 | Waterbody |
| Cabin | Access Option 2 | |
| Old Cabin | Alternate Site Access Options | |
| Campsite | Access New Cut | |
| Old Campsite | | |
| Spring | | |



0 700 1,400 2,800
m

UTM Zone 10, NAD 83

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**Traditional Ecological Knowledge
December, 2011**

April 2012
60224909

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Appendix 1-D