



## ***Introducing Jerry Ell of Iqaluit***

Two decades of quarrying Kangiksuqtaak (Korok Inlet), Tatsituya (Aberdeen Bay) and elsewhere in the south Baffin with his father, the late Ben Ell of Iqaluit

*Teaches granite carving (hard stone) workshops*

Has evaluated stone from all sites visited by EDT carving stone program

*Jerry will speak about south Baffin quarries as well as Mary River stone on behalf of Moses Koonark of Pond Inlet (north Baffin region carving stone advocate)*



*Philiposie Kooneeluisie and Jerry  
at Clearwater Fiord*



*Moses Koonark at Mary River*





## ***Introducing Jimmy Iqaluk Snr of Sanikiluaq***

More than four decades of quarrying Qullisajaniavvik (Main Quarry), the abandoned Aqitniavvik (Old Quarry), has gathered stone throughout the Belcher Islands and elsewhere in Nunavik

*Hudson Bay region carving stone advocate*

Guided EDT's carving stone program on several occasions

*Jimmuy will speak about both of Sanikiluaq's large quarries, the abandoned Old Quarry depleted by the prior generation of carvers and newer Main Quarry*



*Jimmy with sons Jack and Ippak*





## ***Introducing Jaco Ishulutak of Pangnirtung***

More than four decades of travelling and gathering throughout the south Baffin

*South Baffin region carving stone advocate*

National and international art show exhibitor

*Jaco will speak about recent opening of Opingivik Quarry, shipping stone elsewhere and his never-ending search for new stone*



*Jaco and Oleeta all done  
camping at Opingivik*







## ***Introducing Paul Malliki of Repulse Bay (Naujaat)***

More than four decades of travelling and gathering throughout Nunavut

*Kivalliq region carving stone advocate*

National and international art show exhibitor

*Paul will speak about those nice quarries and sites of Repulse Bay and fetching stone from elsewhere.*



*Naujaat deposit in Repulse Bay's back harbour*



*Qukiutitalik marble deposit on skidoo trail to Hall Beach*





## ***Introducing Uriash Puqniqak of Gjoa Haven***

More than four decades of quarrying at Murchison River and Chantry Inlet marble

*Kitikmeot region carving stone advocate*

National art show exhibitor

*Uriash will speak about the challenges facing eastern Kitikmeot communities*







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## Carvingstone Quarrier Panel Session A

# Arctic Community Commodity of Carving Stone and Introducing Nunavut's Largest Quarries

[ *Uriash Puqniqak, Gjoa Haven* ]

[ *Paul Malliki, Repulse Bay* ]

[ *Jaco Ishulutak, Pangnirtung* ]

[ *Jimmy Iqaluk, Snr, Sanikiluaq* ]

[ *Jerry Ell, Iqaluit* ]

# Inuit Surface Rights to Carving Stone in Nunavut

The Regional Inuit Association owns and manages surface rights with regards to Inuit Owned Land in each of three respective Regions in Nunavut.

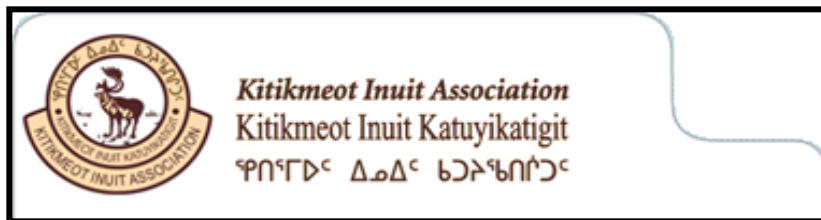
*Ownership includes all carving stone deposits found on Inuit Owned Land.*

1993 Nunavut Land Claim Agreement (NLCA) Part 19.9: Rights to Carving Stone

*Government shall notify the Designated Inuit Organization (DIO) of the discovery of any deposits of carving stone on Crown Lands.* NLCA (1993) Section 19.9.1

*The DIO... has the right to obtain exclusive quarry lease... or acquire title to land containing significant deposits of carving stone in exchange for other Inuit Owned Lands.* NLCA (1993) Section 19.9.2

*An Inuk shall have the right to remove up to 50 cubic yards per year of carving stone from Crown lands without a permit.* NLCA (1993) Section 19.9.4





# Size of Carving Stone Deposits

**“An Inuk shall have the right to remove up to 50 cubic yards per year of carving stone from Crown lands without a permit \_”**

**Section 19.9.2, Nunavut Land Claim Agreement**

Yearly Gather Limit per Person = up to 227,500 pounds or 103 metric tonnes = more than 100 komatik loads of stone  
(Enough stone for the careers of one to several full-time carvers)

## Carver-derived Size of Carving Stone Deposits in Nunavut

- Tiny deposit, less than 25 tons/tonnes (less than 50,000 pounds)
- Small deposit, up to 100 tons/tonnes (individual yearly gather limit)
- Modest deposit, up to 1000 tons/tonnes (21 community-sized)
- Large deposit, at least 10,000 tons/tonnes or more (5 regional-sized)
- Major deposit, up to million tons/tonnes (2 confirmed)

# Quality or Grade of Carving Stone

<b><u>Excellent</u></b>	softer, 2.0 - 2.5 on Mohs Scale of Hardness <i>Nunavut's premier carving stones can be shaped by hand-file.</i>
<b><u>Good</u></b>	medium, H = 2.5+, lacks somewhat with an attribute <i>Carbide power tools are required.</i>
Fair	harder, H = 3.0+, lacks an attribute or more <i>Diamond power tools are required.</i>
Poor	still takes a file, variable, small pieces

*Inuit carvers use carbide hand-files to determine soft, medium-soft, medium, medium-hard or hard for any carving stone, in increments more precise than the Mohs Scale of Hardness field test will allow.*

## **Carver-Derived Attributes for High-Quality (Good to Excellent Grade) Carving Stone across Nunavut**

overall consistency	toughness
holds fine detail	good colour
<b>\$\$</b> available in large blocks <b>\$\$</b>	polishes well

*The file is the artist's introduction to the stone but the sculpture is the ultimate test of artisan suitability, which in the end is subjective.*

# **A Best Use Request for Carvers, Hamlets, Funding Agencies and Mining Companies to Not Drill and Blast Our Soapstone**

*Jerry Ell, Jimmy Iqaluk Snr, Jaco Ishulutak, Paul Malliki, Uriash Puqniqak*

We are full-time carvers and experienced quarrymen of Nunavut's largest quarries. We ask everyone to never use explosives when gathering carving stone.

- Experienced carvers prefer not to use blasted stone for detail work:
  - explosives work by fracturing
  - damage within blasted rock is difficult to ascertain
  - sold pieces have a higher tendency to break.
- Blasting will ruin most of the stone and leave little to gather. Larger blocks are not possible and the recovery is very poor.
- Hand-mining of high-quality carving stone should yield 90% or better recovery with blocks averaging 1-2 feet or more in size.
- Hand-mining is done with pry bar, diamond-bladed rock-saw and swelling S-Mite / feathering chisel in plugger (gasoline-powered drill) holes.

The carving industry relies on the development of excellent quality material, hence our endorsement of good hand-mining techniques.

***“Don't Be Lazy!”***



*Soapstone is hand-mined, never blasted.  
Use of explosives will ruin carving stone.*



*Good use of S-Mite  
(swelling powder)*



*Site ruined by blasting  
at Daly Bay*

# Rare Use Made of Talcose Soapstone



***Rankin Inlet carver Jocham Karvik (deceased) gathering a soapstone boulder at low tide on Falstaff Island***



***Carver Ike Angotialuk beside a face he carved when a young man at "Fast Money" site on Ajaqutalik River, south of Hall Beach***

Talc-bearing soapstone of Hardness of 1+ (scratched by fingernail) has seen occasional use as "primitive art" and less-detailed carvings. Most Inuit carvers prefer non-talcose artisan serpentinite and artisan marble with Hardness of 2 - 2.5 for modern sculpture.



## ***Nunavut's 5<sup>th</sup> Largest Quarry***



***Uriash Puqniqak at Murchison River Quarry***



*Almost worn flat with ~500 tonnes in ground*



*Murchison River Quarry*





***Simon Oleekatalik of Taloyoak at Murchison River***





***Gjoa Haven Quarry Crew at Murchison River***





***Winter-gathered Murchison River stone in Gjoa Haven***



***Soapstone boulders from Arrowsmith River to Kugaaruk 25 years ago***



***Hilltop site looked for but not relocated in 2013***

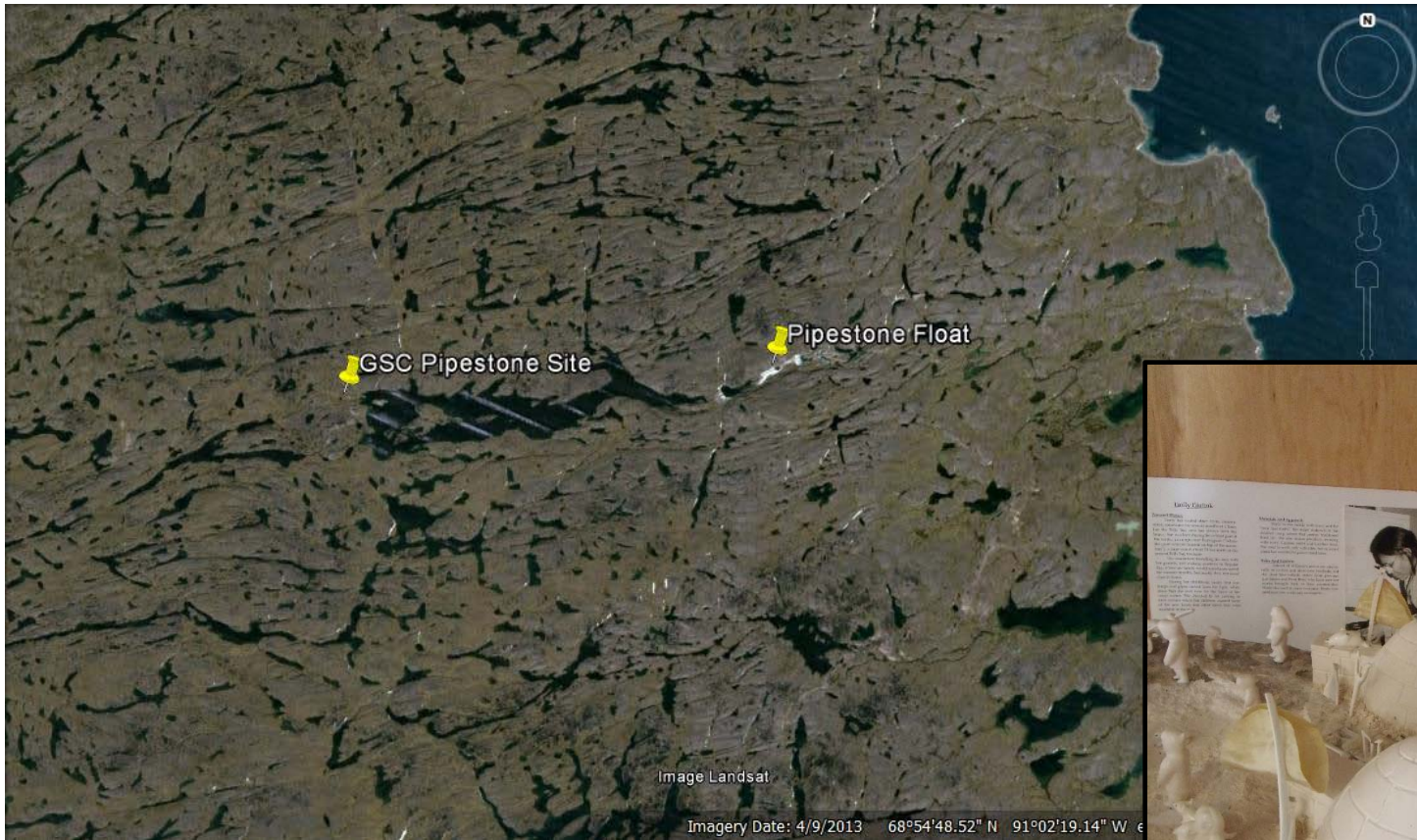


***Large formation of lesser quality stone at Kitungyuk***



***Kugaaruk traditional site not relocated in 2013***





***Unevaluated pipestone  
(meerschau) site with floating rock  
collected by Kugaaruk residents at  
fishing rapids further east***

***Airport display of igloos and  
base plate made of pipestone,  
“rock that floats”***



# Rare Use Made of Talcose Soapstone



***Rankin Inlet carver Jocham Karvik (deceased) gathering a soapstone boulder at low tide on Falstaff Island***



***Carver Ike Angotialuk beside a face he carved when a young man at "Fast Money" site on Ajaqutalik River, south of Hall Beach***

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## ***Some of Repulse Bay's Nicer Sites***



***from river boulders to***

## ***New Marble for Repulse Bay and Hall Beach***

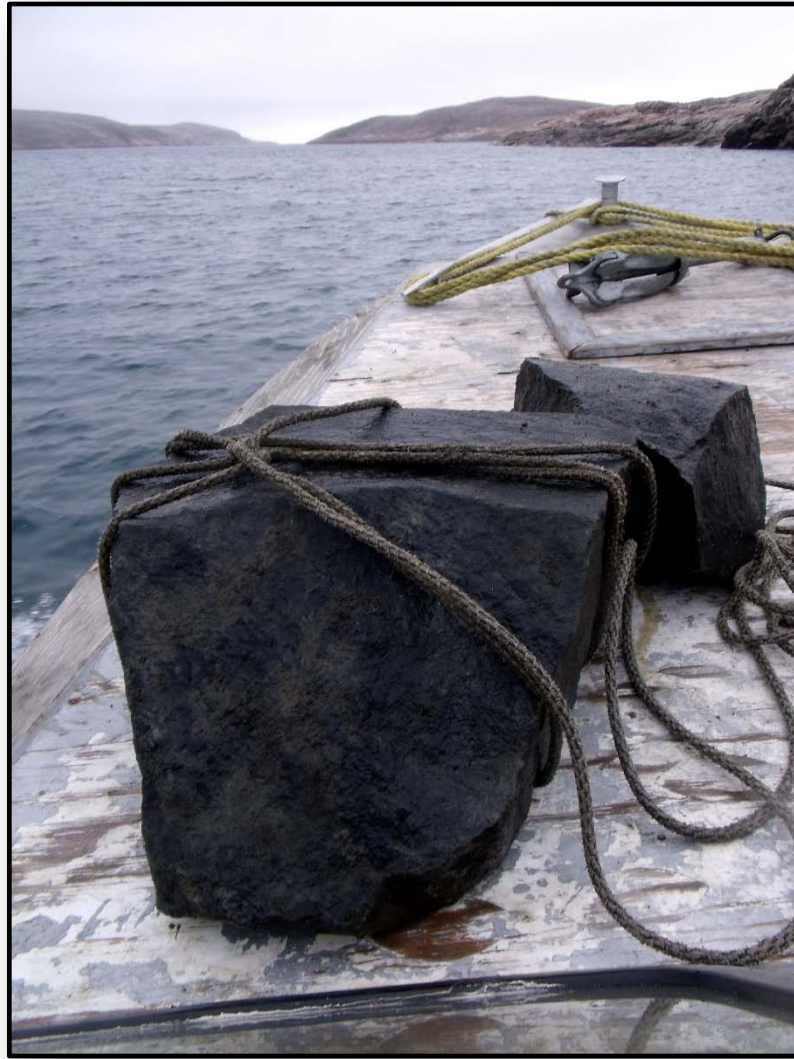


***Paul Malliki***





***Naujaat Inlet***



*Paul Malliki*



***Niaquguak (North Pole River)***



***Nasartugaq (George Bay)***



***Paul Malliki***



*Any Questions?? For the carvers about carving stone or community-sized quarries?*





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## **Carving Stone Quarrier Panel Session B**

### **Benefits and Challenges of Large Sites;** **Looking Ahead to New Resources** **from 3 Quarries and 4 Deposits**

*Discussions between Jerry Ell, Jimmy Iqaluk Snr,  
Jaco Ishulutak, Paul Malliki and Uriash Puqniqak*

***Recently Opened Opingivik Quarry with Potential for Large Size***



***Jaco Ishulutak***



***125 m below Opingivik quarry***



***Jaco Ishulutak and Jerry Ell***





*Opingivik*





***Opingivik***





***Opingivik***



# Mining Industry and Geoscience Acknowledgements

Peregrine Diamonds Ltd for forthcoming magnetometer survey at Opingivik.

De Beers Exploration for magnetometer survey performed at Korok Inlet.

Baffinland Iron Mines Corp for Mary River property visit.

Agnico-Eagle Mines Ltd for Meadowbank Mine visit.

AREVA for Kiggavik property visit.

Canada-Nunavut Geoscience Office for their mapping at Korok Inlet and Opingivik.

With anticipation for further collaborations in the future.

## ***Nunavut's 3<sup>rd</sup> Largest Quarry (Abandoned)***



***Jimmy Iqaluk Snr***



***Debris pile from 1000 tonnes taken out by pry-bar***



***Old Quarry, Belcher Islands***



***2000 tonnes production, Main Quarry, Belcher Islands***



***Jimmy Iqaluk Snr***



***mid-1970s, Main Quarry, Belcher Islands***



***Photo c/o Hamlet of Sanikiluaq***

## ***Sanikiluaq's Main Quarry (2013)***



***Ippak Iqaluk***



***30,000 tonnes of reserves***



***Main Quarry, Belcher Islands***

***New sites of artisan marble were found elsewhere.***



***Iqaluk deposit 10 km north***



***Small deposit 40 km south***



## ***Nunavut's largest hand-mined excavation***



***South Baffin stone supplier since 1970s***

***Debris-impacted lower pit***



***Kangiqsukutaq***

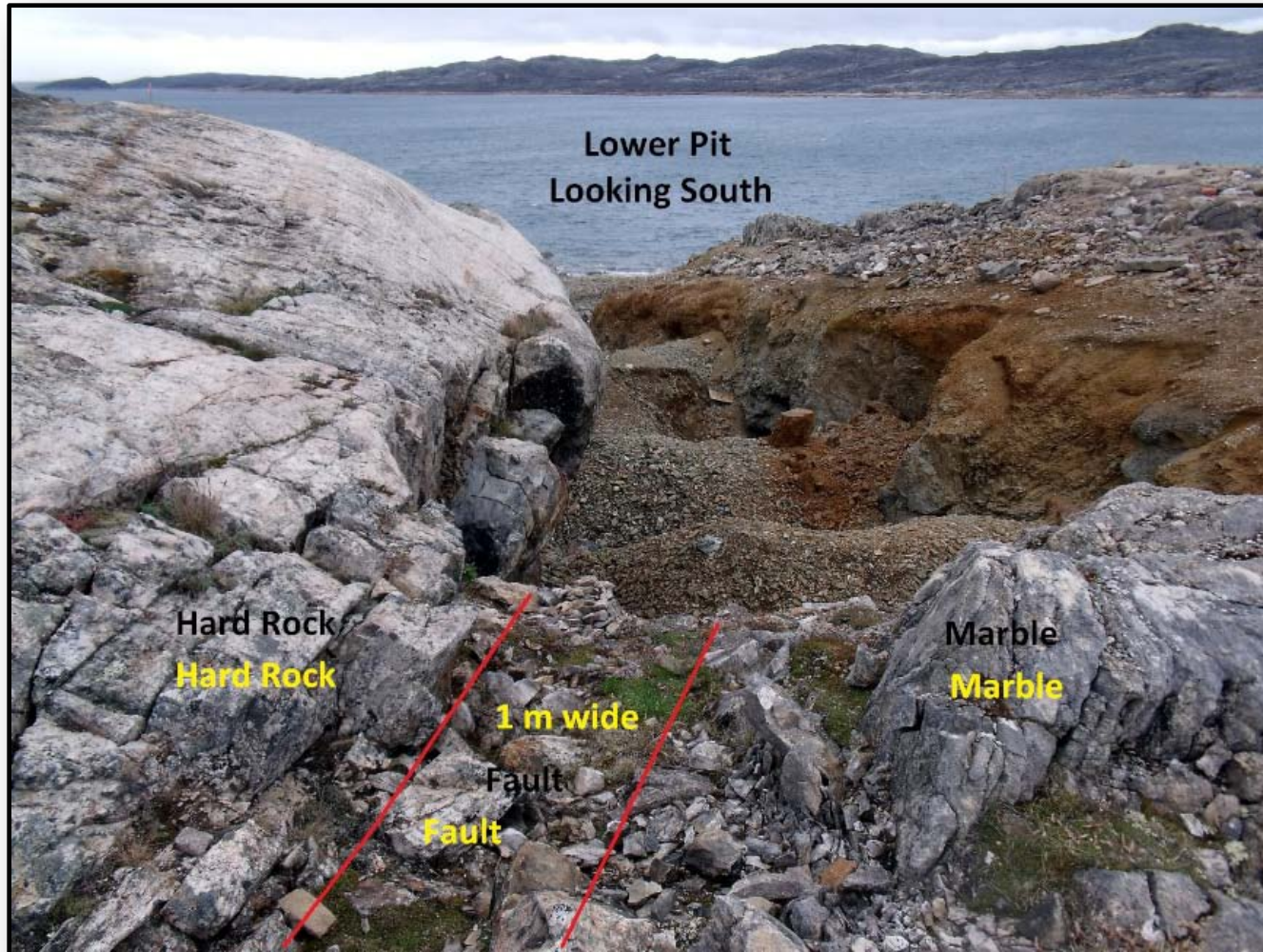


***Lower pit at Korok Inlet***



***Kangiqsukutaq***

***Hard rock seen all the way across at top end of lower pit***



***Kangiqsukutaq***



***Top end of upper pit***



***Working wall and quarry crew at Kangisukutaq***



***More stone under upper pit ramp***



***Upper pit, Kangisuqutaq***



***Place to dig and check for soapstone***



Dig Here to outcrop to source  
this soapstone float

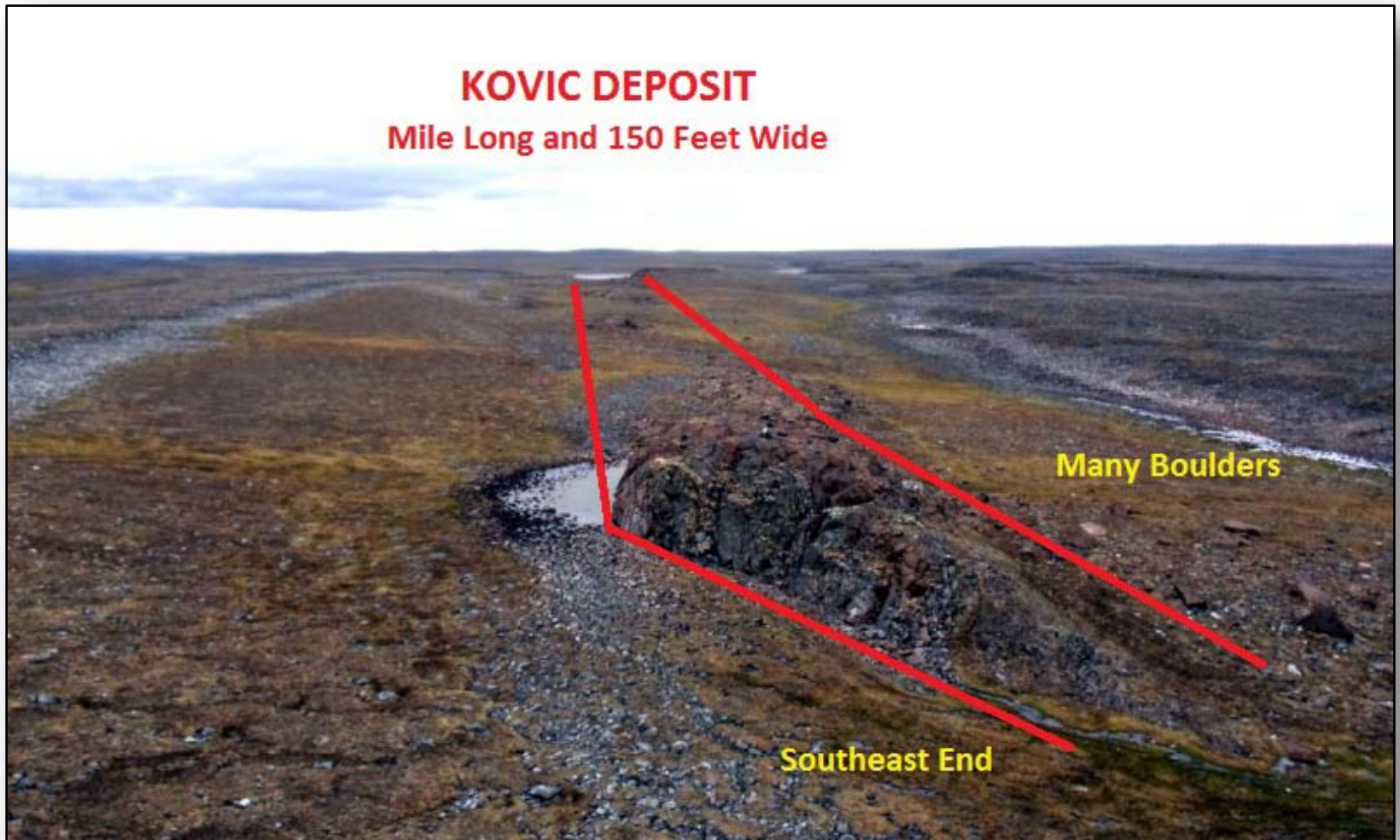
***Halfway between pits at Kangisuqutaq***



***Kangiqsukutaq***



**KOVIC DEPOSIT**  
**Mile Long and 150 Feet Wide**



***1,000,000 tonnes or 100 times the size of Korok Inlet***

***Kovic deposit***



***southeast end, other way***



## ***Repulse Bay's and Kugaaruk's Kovic deposit***



***Jerry Ell and Paul Malliki***

## ***Kingora deposit***



***600 m long formation***



***black stone section***



***Kingora deposit***

***grey stone section***



***Ike Angotialuk and Jerry Ell at Kingora***



## Large deposit of black stone at Mary River



*Moses Koonark*

## Community quarry of yellow stone at Mary River



*Moses Koonark and Jerry Ell*

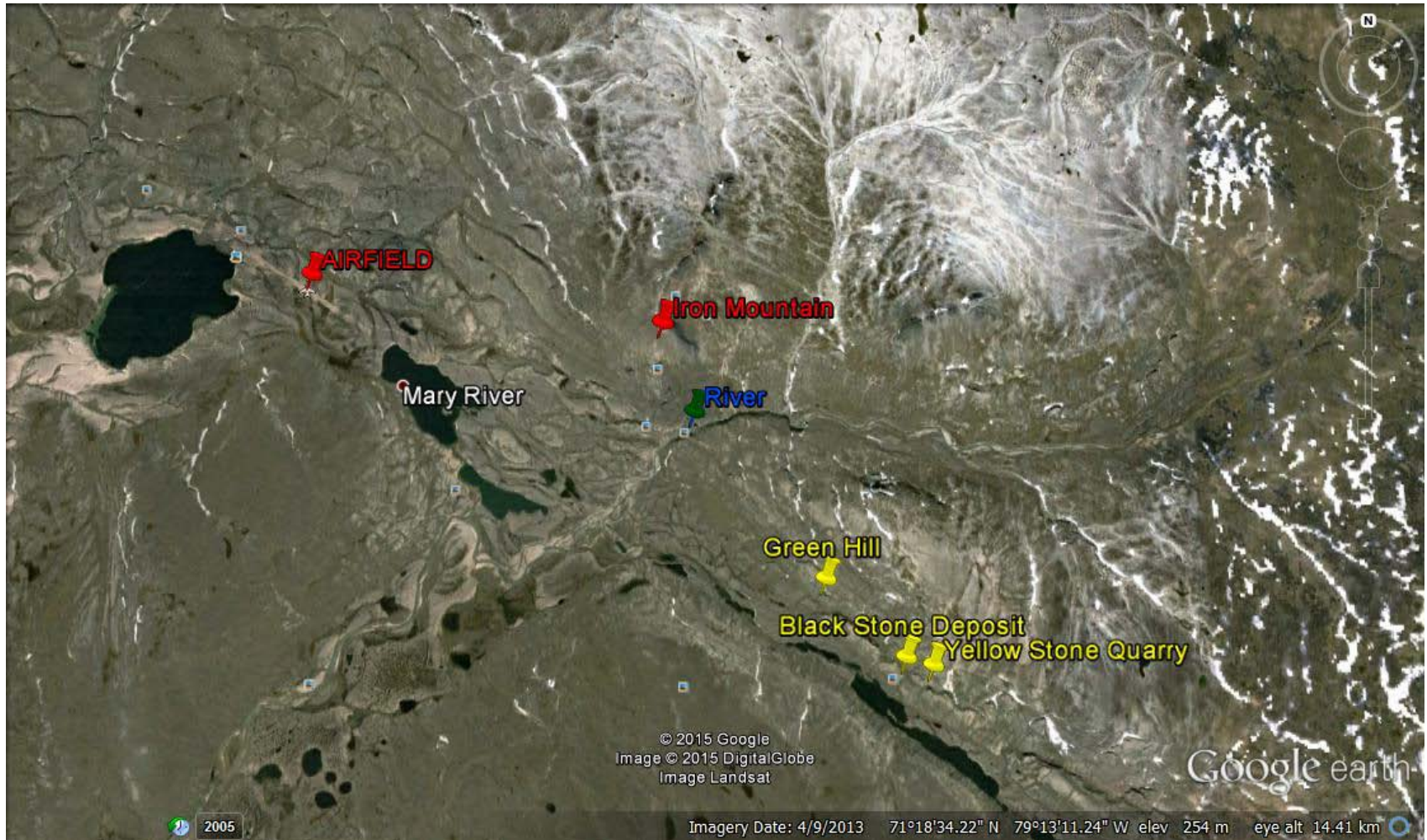


## Green, red and grey soapstone sites



*Mary River*

# Mary River Carving Stone Sites





## On top of Leybourne Islands deposit



*Jerry Ell*



## Bottom of Leybourne Islands deposit



*Jerry Ell*



# Mark Paniyuk, Finder of “*Lost Soapstone Sites*”

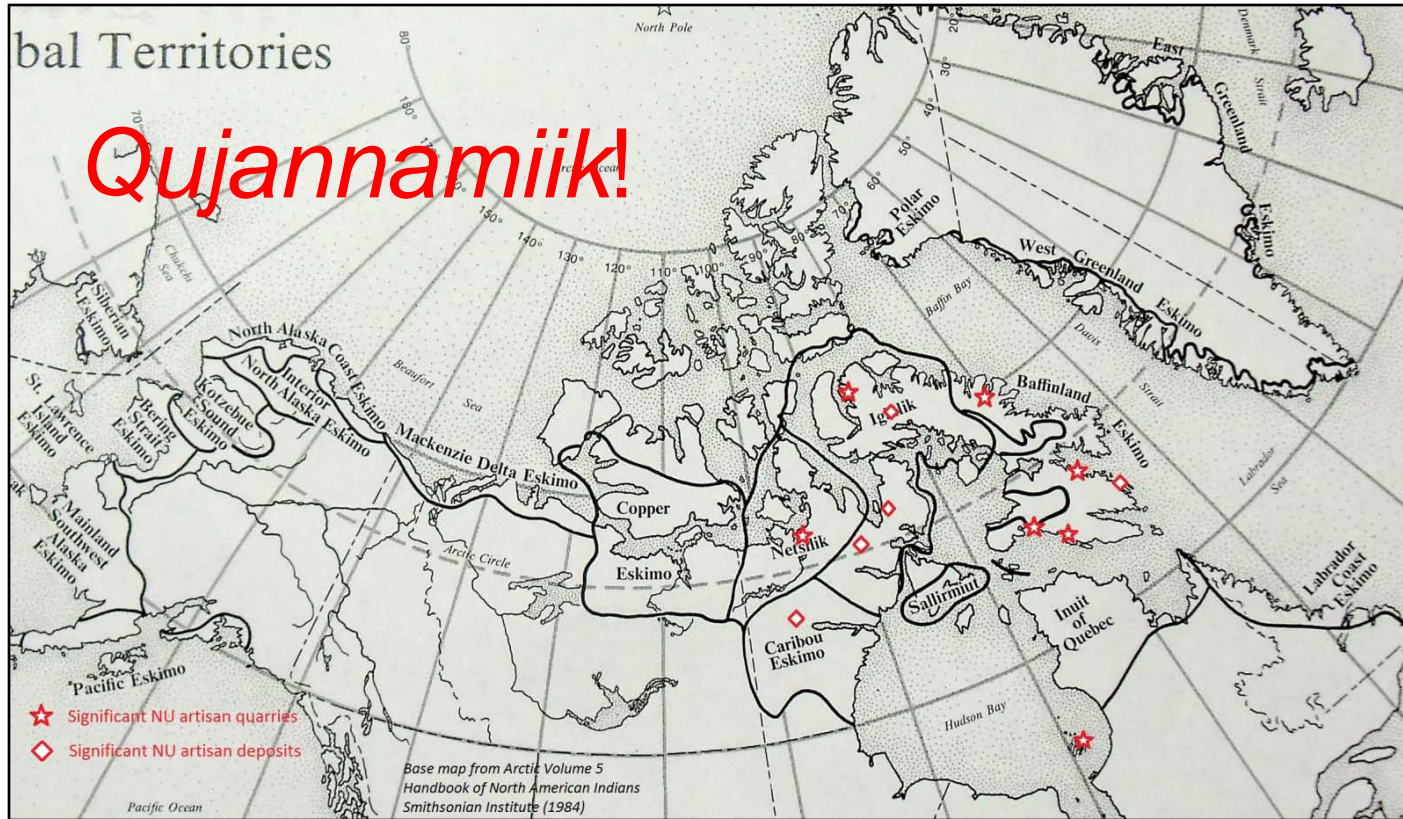


Hunter Mark Paniyuk of Coral Harbour at Boaz River site, one of five places shown to the program in 2010

***“Come back sometime soon,  
I’ve found another site”  
summer 2013***

- *One out of every two traditional gathering sites across Nunavut are “heard about” places. Unless followed up by local persons, these sites are lost.*
- *By following directions from elders, Coral Harbour hunter Mark Paniyuk relocated a number of ‘Ukkusisaqtarviq’ or ‘Places Where We Find Stone’.*
- *Whether impoverished for stone or not, every community needs proficient ‘Ukkusisaqtaarvingni’ or “people who look for places where we once gathered stone”. Hamlet- or HTO- or EDT-sponsored carvers, hunters and Canadian Rangers can be prospecting for old soapstone sites.*

# Any Questions About Nunavut's Newly Identified Resources?



**Inuit Stone Resources from Alaska to Greenland**  
*Alaska serpentinite, marble, jade (Jade Mtn); NWT gypsum  
NUNAVUT artisan serpentinite, artisan marble, marble  
Nunavik serpentinite, argillite; Labrador serpentinite, Ramah Chert  
Greenland marble, serpentinite, talcoso soapstone, olivine*