

9229-E34-12P

NEB Final Report

**2D Geophysical Acquisition
Line CVL-1**

SAHTU 2005 2D

Contractor: Yamoria Geophysical Ltd.

Submitted by: Explor Data Ltd. March 2006

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Summary

In January of 2005, Yamoria Geophysical (Veritas DGC, Inc.) was awarded a vibroseis 2D contract to record 118 kilometers of winter road between Deline and Tulita NWT by Explor Data.

At this point mitigation was put in place for the risk assessment, emergency response plan and a time line.

This contract had an option of an additional 238 kilometers to be recorded North of Norman Wells on the Turton lake road NWT. This was later scaled back to 54 kilometers although 61.40 kilometers were surveyed.

On the week of January 17, bids were sent out for the following services using the EL 397 registry list provided by Explor Data.

The services that were required included:

- Medics
- Survey
- Slashing
- Cats

Accommodations for the crews were to bid out a camp, but this was later dropped and accommodations were changed to use the facilities Norman Wells.

Logistics

Upon arrival of the recording crew for the TD-1 program the Project Manager then traveled to Norman Wells to start on logistics for the 54-kilometer extension. Project Manager met with regulators and Apache personnel, to go over the road use agreement and the stipulation on line clearing with cats.

At this point it was determined that due to the drive time, a helicopter would be used to transport the workers to the field along with 110 nodwells for the medic and cat foremen.

It was suggested by INAC to use a skid mounted Atco trailer on site encase of an emergency or weather related conditions.

The line clearing involved numerous creek crossings and a temporary landing site at Doctor Lake for a fixed wing aircraft to support the recording crew when they arrive.

The line crew also used a helicopter along with a fixed wing aircraft for transportation due to the drive time, and because of restrictions on the cut line the crew went into total heliportable operations.

The recording crew utilized the personnel and equipment from the TD-1 program to record Line CVL-1.

Timeline

Project Manager-Mar 1 to Mar 28 2005

HSE Advisor-Mar 13 to Mar 28 2005

Monitors-Mar 05 to Mar 28 2005

Medics-Mar 05 to Mar 28 2005

Survey-Mar 05 to Mar 14 2005

Line Clearing/Slashing- Mar 5 to Mar 14 2005

Recording-Mar 13 to Mar 28 2005

Equipment

Project Manager / HSE Advisor	4 x 4 trucks.
Monitors	4 x 4 trucks and ski-doo.
Survey	4 x 4 truck / 110 Nodwell / Ski-doo.
Medics	4 x 4 trucks.
Cats	4 x 4 trucks, 110 Nodwell, 2 D6H LGP Cats, 1 D7G Cat.
Slashers	2-4 x 4 trucks, 2 Ski-doo.
Helicopter	1 AS 350 BA, 1 Bell 206.
Fixed Wing	1 Twin Otter.
Recording Crew	1 ton 4 x 4 trucks, Excursion, 5 ton 4 x 4 Fuel Truck, Mertz HD 18's(50,000 Lbs) Buggy Vibes, 110 Nodwells.

Crew Members

Recording Crew (includes Project Manager/HSE Advisor)	31
Medics	1
Monitors	2
Survey	2
Slashers	4
Cat Operators	3
Cat Foreman	1
Aircraft Personnel	2

Production

The survey production for a total of 61.4 kilometers was averaged out to 5.58 kilometers per day. This included control points and travel from Tulita to Norman Wells.

The line clearing and slashing had to open up and slash 39 kilometers of cut line out of 54 kilometers, as 15 kilometers was on the Turton Lake road. Production for line clearing, slashing was 3.9 kilometers per day.

The recording crew averaged a total of 3.375 kilometers per day for a total of 54 kilometers, and this included 2 days of weather due to fog and the line change from Tulita to Norman Wells. Other than the two days of fog that the recording crew encountered, this was the only down time for all phases of the program. The line crew recorded fewer kilometers than survey due to a decrease in line kilometers.

Weather

The weather through out the program was from a minus 10 to a minus 37 celcius, with light snow to blowing snow and two days of fog in Norman Wells on the 14th and 15th of March.

Instruments

Survey –Tremble GPS, RTK ground base survey
Recording-Sercel 408 FDU's with 36-meter extensions
OYO 10 Hertz's 6 per Marsh Geophones
Pelton-Vib Pro Vibroseis electronics.

Parameters

CVL-1 54 kilometers 20 meter Receiver and 20 Source spacing.
Number of Traces Recorder-400
Coverage-20000 %
Receiver array-6 phones over 20 meters
Number of Sweeps-2
Sweep Length-16 seconds
Sweep Frequency-10-120 Hz
Record Length-6 seconds
Sample Rate-2 Milliseconds
Channels on Crew-1000

Geophysical Data Processing

For Seismic Reflection Data:

Bandpass Filter:	5/10 – 120/150 HZ
Mute Pattern:	
Type of Deconvolution:	Surface Consistent Spiking <ul style="list-style-type: none">- Operator Length: 200ms- Pre-whitening: 0.1 PCT- Full Fold Trace Gather
Type of Velocity Analysis	Preliminary <ul style="list-style-type: none">- Surface Consistent Statics Final <ul style="list-style-type: none">- Surface Consistent Statics

Static Correction Method Parameters:

Statics	Refraction
Structure Statics	
Datum Elevation	550 m
Replacement Velocity	4500 m/s
Wave Velocity	610 m/s
Iterations	

Migration Method Parameters:

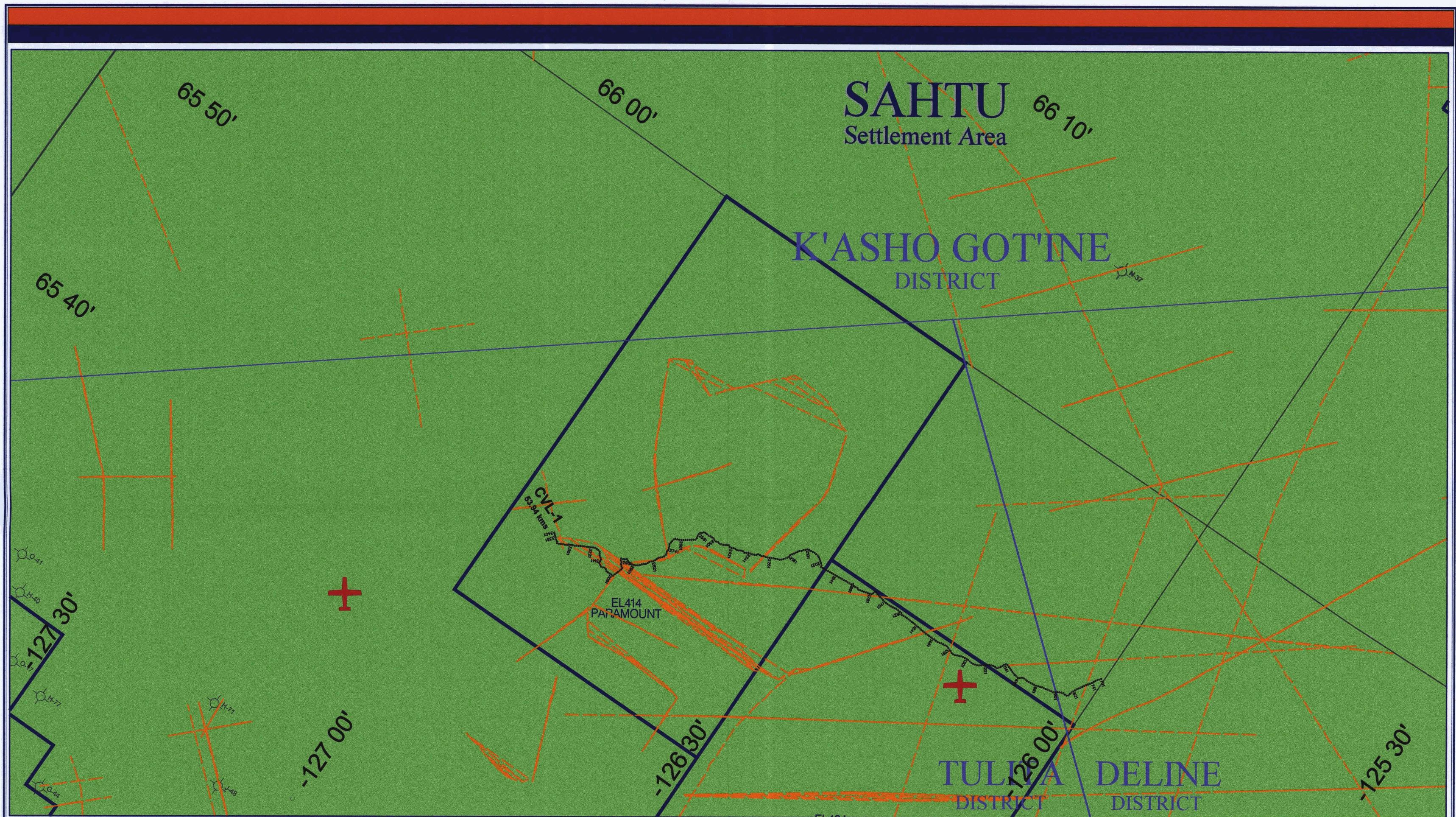
Finite Difference Time Migration Using 90% of NMO Velocity

Display Parameters:

Horizontal:	70 Traces per Inch
Vertical:	5.0 Inches per Second

Enclosures

- 2 - Paper copies of the Final Survey
- 1 - Mylar Copy of the Final Survey
- 1 - Paper copy of the Migrated Section
- 1 - Mylar Copy of the Migrated Section
- 1- DVD containing SEG P1



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WELL LEGEND

BOTTOM HOLE LOCATION
• BITUMEN
○ LOCATION
◇ SUSPENDED
◇ DRY & ABANDONED
◇ WATER INJECTED
◇ ABANDONED WATER INJ.
◇ SUSPENDED OIL & GAS
◇ SERVICE
◇ ABANDONED OIL & GAS
◇ CAPPED OIL
◇ DRILLING
— SURFACE HOLE LOCATION

◇ GAS
◇ OIL & GAS
◇ ABANDONED GAS
◇ SUSPENDED GAS
◇ CAPPED GAS
◇ OIL
◇ ABANDONED OIL
◇ SUSPENDED OIL
◇ CAPPED OIL
◇ DRILLING
◇ STANDING

LEGEND

TRAILS/CUTLINES
WINTER ROAD
EXISTING CUTLINES

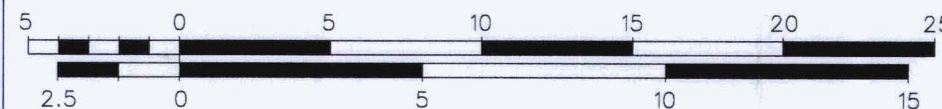
AIRSTRIIP

EXPLORATION LICENCE
FIRST NATIONS/INUVIALUIT ARE
SURFACE OWNERS
(NO MINERAL RIGHTS)

FIRST NATIONS/INUVIALUIT ARE
SURFACE & SUBSURFACE OWNERS
(HAVE MINERAL RIGHTS)

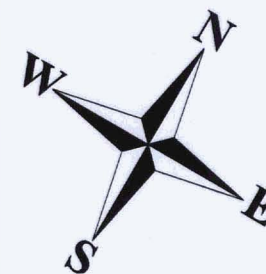
Contour Interval - 20 metres

SCALE 1:250 000
KILOMETRES



MILES

UNIVERSAL TRANSVERSE MERCATOR PROJECTION



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FINAL SURVEY
CVL-1

Divestco Project # 050121.bor (DB)

April 5, 2005

9229-EO34-012P