



TV

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UN IN ACTION

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CANADA: UPGRADING A LISTENING POST IN YELLOWKNIFE

VIDEO

AUDIO

VIEW FROM HELICOPTER OVER
LAKES AND WOODS/TWO MEN
WAITING/GEOPHYSICAL
OBSERVATORY SIGN

NARRATION:

Noise of Helicopter

Tools to detect nuclear explosions are delivered to a remote outpost in Yellowknife, Canada. (5.5)

MAN SPEAKS INTO A RADIO

"OK cross that"

HELICOPTER LOWERS EQUIP.

Teams from Canada and the Comprehensive Nuclear-Test-Ban Treaty Organisation, are upgrading seismic stations to uncover atomic blasts. (8.5)

VARIOUS SHOTS MEN

CONSTRUCTING STATIONS

Ross Ashlie is a seismic technician. (2.5)

ROSS ASHLIE, SEISMIC
TECHNICIAN, GEOLOGICAL
SURVEY OF CANADA
ON CAMERA

ROSS ASHLIE: (In English) M

"We're currently at Y3, this is the broadband site we're installing a new power supply, battery system, and new sensor....." (5.5)

EQUIPMENT, SOLAR PANELS,
TOWERS ETC./ PROPANE TANK

NARRATION:

It's a massive logistical effort. Around 60 tons of

IS AIR-LIFTED

equipment must be flown in to 20 different sites. Together they create an array – like a giant microphone – to track and record vibrations in the earth. (12.5)

ANIMATION OF AN ARRAY

DETECTING AND SENDING DATA

Nat sound

AERIAL SHOT OF YELLOWKNIFE

Yellowknife is one of the over 300 stations dotted across the globe to detect nuclear explosions. It's part of a verification system designed to monitor violations of the 1996 Comprehensive Test Ban Treaty, or CTBT, adopted by the UN General Assembly. (17)

DISSOVE INTO ANIMATION
GRAPHICS

CAMERA FOLLOWS TECHNICIAN
GOING INTO A DARK CAVE TO
TWO SEISMOMETERS
THERMOMETER, VARIOUS
SHOTS OF SEISOMETERS

At the heart of each station is a seismometer. This one is kept in a cave tunneled into solid stable rock to protect the sensors against extreme cold. It was initially established by the British in the 1960s to eavesdrop on Soviet nuclear explosions. (16.5)

SCOTT DODD

Scott Dodd, Technician from the Geological Survey of Canada has come to replace the old sensors. (5.5)

SCOTT DODD, FIELD
INSTRUMENT TECHNICIAN,
GEOLOGICAL SURVEY OF
CANADA ON CAMERA
SEISMOMETERS INSIDE CAVE
SCOTT INSTALLS CABLE

SCOTT DODD: (In English) M

“This site was selected because it's on very old competent bedrock, and it's North so the signals from the Soviets would travel across the arctic over this way. And so basically that's how it was established originally...until it got a new purpose for the Test Ban Treaty.” (20)

SKIDOOS ZIPPING ACROSS
FROZEN LAKE

NARRATION:

But the unforgiving Canadian arctic cold has taken a toll on the equipment, says Ross Ashlie. (5.5)

ROSS WALKS TO SEISMOTER
THROUGH SNOW
ROSS ASHLIE ON CAMERA

ROSS: (In English) M

“This is the original vault built in the 1960s and this houses the seismometer...A lot of these are very old. Some of these are subject to letting water in and icing up, effectively desensitizing the seismometers.” (19.5)

MEN INSTALLING RADIO TOWER

NARRATION:

The ageing equipment is well past its design life. The rusting radio towers that transmit the data will also be replaced. But the biggest challenge: power. (9.5)

VIEW OF SNOW AND FOREST
FROM DRIVER SEAT OF SKIDOO/
FRED DRIVES THROUGH FOREST
AND ACROSS LAKES IN
TRUCK/SHOVELS SNOW OFF
TANK, STARTS REFUELLING

The propane fuel is heavy. So is the vehicle that carries it. Refueling the tanks can only be done in winter, when the ice is at its thickest to hold the weight. Seismic Technician Fred Murphy navigates across frozen lakes to reach the stations. (14.5)

FRED MURPHY
SEISMIC TECHNICIAN
GEOLOGICAL SURVEY OF
CANADA ON CAMERA

FRED MURPHY: (In English) M

“Then we pump for half an hour/ 45 minutes to fill the tank.” (4)

GNARLY TREE, SOLAR TOWER IN
BACKGROUND

NARRATION:

As part of the upgrade, solar energy will be used to power the sites. (3.5)

ROSS ASHLIE: (In English) M

“...the solar power supplies now should be very

ROSS ASHLIE ON CAMERA

reliable and hopefully run without propane.” (5.5)

FIXED TOWER IS LIFTED, MEN
ASSIST, HELICOPTER FLIES
AWAY, WITH RADIO TOWER NOW
Upright in foreground

NARRATION:

It's taken almost two years to upgrade the 20 sites. Now one of the final radio towers is to be installed. (7)

MAN SITS AT COMPUTER
SCREEN SHOWS WAVE
FORMATION, CUTS TO ANALYST
IN VIENNA

The hard work pays off. The signal flows into the central recording facility. In less than five minutes it's transmitted to Ottawa then on to analysts in Vienna, Austria. (11)

Jacques Pretorius, Seismic Engineer, CTBTO:
(3.5)

JACQUES PRETORIUS
ON CAMERA

JACQUES PRETORIUS: (In English) M
“This is proof that the station that was installed today is sending data ... Definitely we know that the installation was successful. It's a good feeling.
(10)

UN LOGO

This report was produced by Kirstie Gregorich Hansen for the United Nations. (4.5)