



NORTHWEST NEWS

North American Society for Trenchless Technology Northwest Chapter

Alberta, British Columbia, Washington

November 2004

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Kim's Remarks

I have a very positive conversation with Shaun Carrol from TTBC recently. She made it clear that she was very interested in moving the society forward to do positive things. She sounds very motivated and she and I got along very well. If the TTBC by-laws get accepted and everyone is on-board, the ties between the Northwest Chapter and whatever we are calling the Chapter in BC will naturally be strong. My personal goal is to advance trenchless technology without boundaries or lines or borders. I want to work with good people and it doesn't really matter to me if they live in Washington, BC or Alberta. I was thrilled to talk about putting on seminars, etc. and an overall plan for 2005 (which is what we discussed).

Breaking News

Northwest Chapter Reps,

Trenchless Technology BC (TTBC) has applied to become a regional chapter of NASTT and has submitted bylaws that appear to fully comply with NASTT requirements. I understand that you have no objection to British Columbia members of NASTT setting up a separate, stand alone chapter. And I anticipate that at the January 24, 2005 Board meeting the NASTT Board will act favorably on TTBC's request.

This process has been difficult, time consuming and stressful on all of us, particularly to the leadership of the Northwest Chapter. Thanks for hanging in there!

John Hemphill
Executive Director, NASTT

Northwest Chapter Fall 2004 Report

The Northwest Chapter, in conjunction with the Tunnel Association of Canada and the Canadian Society of Civil Engineering, held a 4-day joint conference and activities in Edmonton, Alberta, Canada. The conference opened on Sunday evening, September 26 with an ice breaker wine & cheese session, followed by exhibition in Fantasyland Hotel, West Edmonton Mall. Two full days of paper presentation were delivered thereafter. The first day was devoted to Tunnelling with keynote speech by Dr. Walter Steiner of Switzerland on "Tunnelling in the Alps: Recent Challenges and Past Lessons". The second day was on the Trenchless Technology. Keynote was given by Dr. Ray Sterling, Chair of the International Society for Trenchless Technology on "Tunnel and Trenchless: International Technology Development and Transfer". A half day site tour was conducted on the City of Edmonton's 170 Street tunnel, the 23rd Avenue Tunnel and the Light Rail Transit (LRT) Tunnel on September 29 morning. The conference and exhibition was well attended with 128 participants including 13 exhibitors and 9 sponsors.



presentation will resume this fall in Edmonton. Activities planned include:

- October 21 – HDD by Canadian Horizontal Drilling Ltd.
- November 25 – Pipe Bursting Case Study by Earth Tools
- January 27 – Lateral Servicing by Stantec
- February 17 – Microtunnelling Case Study

To promote and disseminate the trenchless technologies, Northwest Chapter participated in a student mixer session at the University of Alberta sponsored by the Association of Professional Engineers, Geologists and Geophysicists of Alberta on September 23. Further, a regional centre was formed in the City of Calgary to enhance the objectives of the Chapter. A trade booth has been sought in the Western Canada Water and Wastewater Association's 56th Annual Conference and Trade Show in Calgary from October 17 ~ 20, 2004. No-Dig 2005 brochures, Chapter Newsletter, Trenchless Technology magazines and membership registration information will be made available to the participants.

Submitted By: Ken Chua, MSCE, P. Eng.
October 25, 2004



Activities planning meetings were held several times during summer and teleconferences made with board members in British Columbia and Washington State. Monthly technical luncheon and

LOCAL GROUP NEWS

ALBERTA



Another successful trenchless symposium was held on September 26 to 28, 2004 in the Fantasyland Hotel in Edmonton. The event has been expanded to three days in order to hold the annual conference for the Tunnelling Association of Canada as well. The symposium attracted over 120 individuals, 13 exhibitors and 9 sponsors.

The Edmonton Region has resumed the 2004 to 2005 Technical Luncheons Program with a meeting on October 21, 2004. Continuing relationship with the Student Chapter at University of Alberta is also encouraged through presentations on trenchless technology and invitations to the Technical Luncheons.

The Calgary region has also formed a local board to promote trenchless technology in Calgary. Technical Luncheons and other trenchless events will be organized through this local board.

BRITISH COLUMBIA



Congratulations! The BC region has been approved as a separate chapter pending the submission of new Bylaws for approval by NASTT which should be complete in the near future. We certainly wish all the best for all the members in BC and look forward to working together on future endeavors.

TTBC conducted their AGM during early June 2004 in Burnaby. There were about 25 people in attendance. Shaun Carrol has been hired by TTBC as Executive Director.

A Trenchless symposium on SSET and Asset Management was successfully organized on October 25, 2004 in Burnaby. More than 30 participants attended the symposium. The final event of the year is scheduled for December 6, 2004 and will discuss the new trenchless specifications being developed for the Master Municipal Construction Document (MMCD).

WASHINGTON



The Northwest Chapter Board is presently working on getting things going. Washington State NASTT members are encouraged to support the local organizing committee and participate in future events.

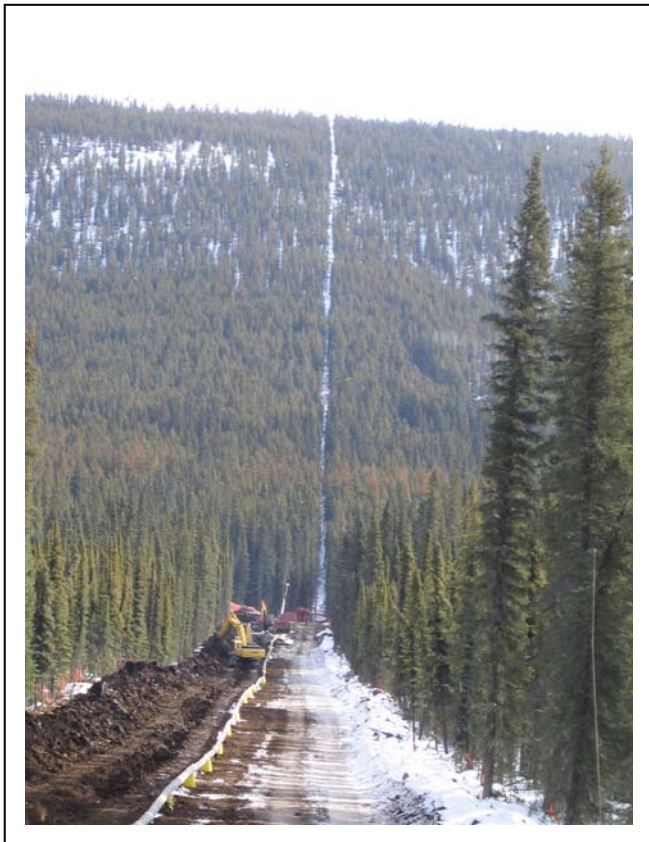
The short course on HDD good practices guideline is being organized for February 2005 in Seattle. This event will sure to generate interest on trenchless technology in general, and HDD in particular.

NORTHWEST TRENCHLESS PROJECTS

DRILLING UPHILL 1390 FEET (424 METRES) VERTICALLY ON A GAS PIPELINE PROJECT THROUGH HARD QUARTZ ARENITE USING HDD TECHNOLOGY

James P. Murphy, P.Eng., M.Eng. Canadian Horizontal Drilling Ltd., Wetaskiwin, Alberta

In 2003, a senior independent Oil and Natural Gas exploration, development and production company based in Calgary, Alberta made the decision to utilize HDD technology to drill up Pink Mountain in Northern British Columbia Canada. This drill would be the first time that horizontal directional drill technology would be utilized to climb a record 1390 feet (424 metres) vertically over a length of 4265 feet (1300 metres) to an elevation of 5167 feet (1575 metres) near the summit of the mountain at a maximum depth of 115 feet (35 metres). A review of costs, routing alternatives and environmental considerations led the owner to select the HDD technology as the preferred construction technique. The project was tendered and awarded in February,



2004. Recognizing the unique challenges and risks that lay ahead the owner utilized a form of contract whereby the risk would be shared with the successful contractor.

Construction started with mobilization of a CMS 500 drill rig in early March 2004. While only drilling a 311 mm (12 ¼ inch) diameter hole, the total vertical drilled height of 424 metres, the length of 1300 metres and the hard quartzite rock in the top half of the mountain combined to present unique challenges to the HDD contractor. As a result this drill was very hard on both manpower and equipment. These difficulties were overcome with a team effort and constant communication between the contractor and the owner. This paper describes the many challenges faced, the solutions that followed and the lessons learned from the project. Successful completion of the project was achieved in early May with gas flowing about one week later.

PIPE BURSTING FOR PIPE REHABILITATION – A DESKTOP STUDY ON COST EFFECTIVENESS

Albert Kwan and Ken Chua

The City of Edmonton has been utilising trenchless pipe rehabilitation for sewer rehabilitation in the last 25 years. The City has discovered a 450-mm diameter clay tile sewer with multiple severe fractures. The defected sewer is located along 114 Avenue from 97 Street to the west lane of 101 Street, a total of 189 meters long. 97 Street is the main north-south corridor between downtown and north Edmonton. Therefore, it is almost impossible to close down 97 Street for the repair of this sewer. In addition, 101 Street will be paved in 2004 and thus requiring all sewer repairs affecting 101 Street to be completed prior to the paving work. Based on the above constraints, pipe bursting was considered as the potential rehabilitation method for this project.

In addition to the environmental considerations, cost effectiveness for the various methods to rehabilitate this pipe was also performed. The various methods considered include pipe bursting only, hand tunnel spot repairs with relining, pipe bursting with relining, and open-cut spot repair with relining. The effectiveness between in-house construction and contracting outside firms was also evaluated as well. Based on the evaluation, the option to pipe bursting using outside contractor was selected. The project was successfully tendered and the pipe bursting work has been completed in the summer of 2004.

STUDENT CHAPTERS NORTHWEST CHAPTER



Professor -in- Charge	Dr. Mohamed Al-Hussein mhussein@construction.ualberta.ca	Dr. Janaka Ruwanpura janaka@ucalgary.ca
Student Organizer	Hussein Al-Battaineh htdb@construction.ualberta.ca	

CHAPTER SCHOLARSHIP

Several scholarships will be set up to promote interest in trenchless technology at the university level. These scholarships will be awarded to the best graduate research or the best undergraduate studies on trenchless technologies. Please contact the NASTT Northwest Chapter Executive Board for information.

NASTT Education Fund

NASTT has established two programs designed to encourage the establishment of new student chapters and to support the activities of existing chapter. These two programs are student chapter grant program and student chapter leadership stipend program. Each of these programs provide up to US\$1,000 to student chapters and professors. It is encouraged that the student chapters and their professors apply for these grants to further their interest in trenchless activities and development.

NEWS FLASH

September 23 – Participated in the APEGGA student mixer night at University of Alberta.

October 17 to 20 – Display booth for NASTT was setup during the WCWWA Annual Conference in Calgary.

TRENCHLESS TRAINING MODULES - INTRODUCTION

Pipe Bursting

This course is intended to train engineers, managers, contractors and other interested in pipe bursting projects. Participants will learn about the techniques. Its potential capabilities and provide guidance for design and construction of successful pipe bursting projects. The course will address the following topics:

- Introduction and Background
- Planning and Preliminary Design
- Design and Construction
- Trouble Shooting and Problem Solving

CIPP

This is a two-day course in pipeline rehabilitation using industry wide Cured-in-Place-Pipe rehabilitation methods. Attendees will be exposed to the full range and types of CIPP rehabilitation material and installation methods. The course will address proper application of CIPP; design considerations such as thickness, material selection, flow capacity and practical design considerations; and construction aspects of CIPP including shop vs. field preparation, resin and tube requirements, handling of excess flows, service lateral reinstatement, inspection and QA/QC testing.

BURIED ASSET MANAGEMENT – WHERE DO WE START? WHERE ARE WE GOING?

This cross Canada lecture tour has been organized and hosted by the Centre for Advancement of Trenchless Technologies (CATT), North American Association of Pipeline Inspectors (NAAPI) and the North American Society for Trenchless Technology (NASTT), Trenchless Technology British Columbia (TTBC) and supported by local chapters of CPWA. The cross Canada lecture has two stops in the NASTT NW region, October 25 in B.C. and October 26 in Edmonton.

The speaker for this cross Canada tour was Dr. Tom Iseley. Dr. Tom Iseley has been the founder of Trenchless Technology Centre at Louisiana Technical University. Recently, he has founded the Buried Asset Management Institute (BAMI) for City of Atlanta. He is currently the Acting Executive Director and Interim Managing Director for BAMI – International.

Dr. Iseley shared about his experience in founding the BAMI – International and discussed about the current development in trenchless technology.

The October 25 event was held as part of the trenchless symposium in the B.C. region. There were more than 30 attendees for the B.C. trenchless symposium. The lecture tour at Edmonton was organized as a stand alone event. There were about 10 participants in the Edmonton event.

UPCOMING EVENTS

January 25 to 27, 2005 - The UCT 2005 will be held at Houston, Texas, USA. UCT exhibiting companies will present their newest and most advanced technologies to the largest gathering of buyers and key personnel in the underground infrastructure industry.

April 24 to 27, 2005 - The NASTT 2005 No-Dig Show will be held from April 24 to 27, 2005 at Orlando (Kissimmee), Florida, USA. The 2005 No-Dig Show will include at least 100, high-quality, peer-reviewed papers in the conference. For further information, please visit www.nastt.org/nodig.html or contact 2005 No-Dig program chairman Joanne Hughes at ph: 918-584-2810 or e-mail: jhughes@ravenlining.com.

NASTT NW Chapter WEB Site

The NASTT Northwest Chapter Web site has been on-line since January 2004. The Web address is www.nastt-nw.com. Please log on to check for the latest news. Lists of companies in trenchless industry are also provided. Trenchless contractors, manufacturers and service providers are welcomed to add your name onto the list.

This is your newsletter. We are looking for articles, events, suggestions and ideas for the next issue. If you would like to receive the NORTHWEST NEWS, contact the editor. Letters to the editor are welcome.

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NASTT Northwest Chapter WEB Site: www.nastt-nw.com

Editor: Albert Kwan Phone: (780) 496-6852, Fax: (780) 496-6865, e-mail: albert.kwan@edmonton.ca