

9229-HC-1E

HUSKY OIL OPERATIONS LTD.

KOTENEE SEISMIC PROGRAM

**NORTHWEST TERRITORIES
JULY - AUGUST 1996**

FINAL REPORT

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**KOTANEELEE SEISMIC PROGRAM
NORTHWEST TERRITORIES
JULY - AUGUST 1996**

FINAL REPORT

Program Overview

Husky Oil's Kotaneelee 1996 seismic program consisted of 89.7 km of helicopter supported seismic. The program included six (6) lines ranging from 13.7 kilometres up to 16.8 kilometres in length trending east-west in the south end of the block to northeast-southwest at the north end of the block.

The program covered Husky's exploration block in the mountainous area west of the Liard River covering the south end of the Kotaneelee Range between approximately 60°30' and 60°50' North latitude and 124°00' and 124°25' West longitude.

The seismic program was designed to best utilize the existing resources, equipment, manpower and infrastructure available in the Fort Liard/Kotaneelee area of the Northwest Territories.

The program commenced with local aboriginal slash crews (Beaver Enterprises) following surveyed lines creating a 1.0 metre wide seismic line, where required, in the Chinkeh Creek valley on the east side of the property moving to the west, over the mountains of the Kotaneelee Range down into the Kotaneelee River valley. Through geological field work in 1995 and, as a result of numerous reconnaissance flights in 1995 and 1996 supported by detailed review of topographical maps and aerial photos of the study area, it was evident that up to a quarter of the proposed lines would traverse open or barren land where no slashing was required. It is estimated that of the 89.7 kilometres of seismic shot during the program, only approximately 68 kilometres or less required slashing and the balance required shallow trenching. It can be extrapolated that approximately 90 kilometres of lines 1.0 metres wide equaled 90,000² metres or 9 hectares of disturbed land. This represents 0.04% of the total 23,145 hectares in the Husky Exploration Block.

The abandoned airstrip located on the west side of the Kotaneelee River in the Kotaneelee River valley was utilized for logistical support of the seismic program. Small scale clearing of the strip was required involving removing shrubs, annual grass and weed vegetation. The strip was used by helicopters supplying fuel, equipment, supplies and manpower to the area for the duration of the seismic program. Helicopters based at the airstrip ferried men and equipment to the property.

Specifics regarding the deployment of receiver stations (geophones), cables and other recording equipment is addressed elsewhere in this document. (see parameters)

Reclamation

All shot holes were cleaned up and all debris was removed with cuttings or excess material deposited in the shot hole and/or spread around the area in an even pattern so as not to alter natural drainage patterns and to maintain a clear path for all wildlife. Any surface craters created from shot hole explosions were backfilled and groomed appropriate with the surrounding topography.

All seismic lines were physically walked and inspected to insure all activities resulted in innocuous environmental effect on the surrounding area including all forms of vegetation and wildlife. A post project inspection of all seismic lines and shot holes, heli-pads, fuel caches and the airstrip was done to insure the complete removal of all garbage, equipment and supplies from the work area. See attached inspections dated July 19 and August 29

Public Consultation

Husky Oil, along with its contractors, consultants and advisors made six (6) trips to the Ft. Liard area to meet with the Fort Liard Tribal Council and Chief Harry Deneron as well as the Ft. Liard Business Council. In these meetings Husky addressed the issues of how this project would impact the local aboriginal residents and what steps Husky must take to insure that native concerns for maintaining their livelihood were met.

Mr. Glen Williams, owner and operator of Nahanni Butte Outfitters, had three (3) meetings with Husky personnel, Dave Lochhead and Murray Place. Mr. Williams had the exclusive outfitting rights to lands covered by Husky's Exploration Block. Mr. Williams suggested and recommended that Husky begin its program in the south and work north, as traditionally he has outfitting trips planned in the north end of the property working south as the season goes on. An agreement was reached on a set flight schedule that had little or no impact on his operation. The interference and disturbance from the helicopters and seismic operations was at a minimum and both parties were able to co-exist in a productive and cooperative manner.

In addition, the government of the Northwest Territories was well informed of all plans and proposals as presented by Husky Oil. Meetings were held with regulatory officials in Ft. Liard and Yellowknife regarding requirements for Land use Permits from the Territorial Government. Continual correspondence occurred throughout the duration of the program.

Summary

The Kotaneelee seismic program was conducted with the highest regards for human and environmental safety and awareness. All steps necessary were taken to insure all personnel involved in the program were thoroughly trained in the jobs and responsibility

assigned and that they were given the tools and equipment to complete their tasks in a similar manner. Considering the topography, logistical considerations and weather (a total of 15 weather days), this seismic program was completed in a timely and safe manner.

Communication between all interested parties was of utmost importance to insure a safe and healthy program. Fifteen (15) safety meetings were held throughout the program. (See safety section for more detail). Daily reports were made to authorities in Ft. Liard, Calgary (Ed Reyven, NEB) and all other pertinent regulatory bodies.

OVERVIEW OF SEISMIC OPERATIONS - SIGNIFICANT DATES

June 13, 1996

Husky Field Representatives, Dave Lochhead and Murray Place traveled to Fort Liard to meet with Chief Harry Deneron

June 27, 1996

Began slashing operation on line H96-173

July 11, 1996

Drilling commenced on line H96-173

July 12, 1996

Commencement of GPS control survey

July 17, 1996

Conventional survey started up.

July 24, 1996

Recording started on line H96-173

August 14, 1996

Slashing and chaining of program complete.

August 16, 1996

Completion of drilling on program.

August 28, 1996

Recording and reclamation complete. An average of 3.7 km/day for recording production for this program.

August 29, 1996

Final inspection completed by Scott Davidson and Husky Representative, Bert Cowan.

COMMENCEMENT AND COMPLETION DATES

Murray Place - Field Representative, Husky - June 27 - Aug. 13

Bert Cowan - Field Representative, Husky - July 24 - Aug. 29

Chaining - July 11 - Aug. 12

Surveying - July 11 - Aug. 16

Slashing - June 27 - Aug. 12

Drilling - July 11 - Aug. 17

Recording - July 24 - Aug. 28

PRE-JOB CONSULTATIONS

May 2, 3 and June 16 - Dave Lochhead, Murray Place, Vern Chocan

Later dates - Jim Wickens, Jeff Tooth

KOTANEELEE SEISMIC PROGRAM - 1996

ACQUISTION COMPANY - GECO-PRAKLA

Production Stats - Recording

July 25, 1996 - Line H96-173

- 2.7 km

July 26, 1996 - Line H96-173

- 3.465 km

July 27, 1996 - Line H96-173

- 3.69 km

July 28, 1996 - Line H96-173

- 3.951 km

July 29, 1996 - Line H96-173

- 3.324 km

July 30, 1996 - Line H96-173

- No km

July 31, 1996 - Line H96-170

- No km

August 1, 1996 - **Weather Day**

August 2, 1996 - Line H96-170

- No km

August 3, 1996 - Line H96-170

- No km

August 4, 1996 - **Weather Day**

August 5, 1996 - **Weather Day**

August 6, 1996 - **½ Weather Day**

August 7, 1996 - **Weather Day**

*Total
98.83 km*

August 8, 1996 – Line H96-170

- 7.005 km

August 9, 1996 – Line H96-170

- 1.35 km

August 10, 1996 – Line H96-170

- 5.685 km

August 11, 1996 – Line H96-171

- 5.895 km

August 12, 1996 – Weather Day

August 13, 1996 – Weather Day

August 14, 1996 – Line H96-171

- 10.035 km

August 15, 1996 – Line H96-172

- 0.450 km

August 16, 1996 – Weather Day

August 17, 1996 – Line H96-172

- 7.665 km

August 18, 1996 – Line H96-172

- 7.35 km

August 19, 1996 – Weather Day

August 20, 1996 – Weather Day

August 21, 1996 – Line H96-174

- 3.51 km

August 22, 1996 – Line H96-174

- 3.96 km

August 23, 1996 – Weather Day

August 24, 1996 – Line H96-174

- 4.41 km

August 25, 1996

- Line H96-174 – 2.985 km
- Line H96-175 – 1.35 km

August 26, 1996 – Line H96-175

- 1.5 km

August 27, 1996 – Line H96-175

- 9.84 km

August 28, 1996 – Line H96-175

- 2.7 km

Crew List & Position

Anderson, Scott	Party Manager
Savard, Gaston	Senior Observer
Huziak, Mel	Mechanic
Taylor, Len	Junior Observer
Toesrud, Dawn	Field Administrator
McPhee, Troy	Staging
Dube, Eric	Cable Repair
Kosowan, Todd	Shooter
Macleod, Steve	Shooter
Millard, Mike	Shooter
Renneberg, Scott	Line Boss

Blouin, Marc	Rec. Helper
Briggs, Greg	Rec. Helper
Brown, Steward	Rec. Helper
Carrick, Bob	Rec. Helper
Krause, Neil	Trouble Shooter
Leland, Chad	Rec. Helper
Linkvist, Ryan	Rec. Helper
Mackenzie, Cam	Rec. Helper
Magwood, Wayne	Rec. Helper
Mathews, Ken	Rec. Helper
McLean, Stephen	Rec. Helper
Miller, Todd	Rec. Helper
Moran, Graydon	Rec. Helper
Nelson, Brian	Rec. Helper
Shirley, Dana	Rec. Helper
Smillie, Matt	Rec. Helper
Somers, Tim	Rec. Helper
Swagar, Steve	Rec. Helper
Wood Derrick	Rec. Helper
Brack, Jim	Technician

LAND USE PERMIT



Exed
19696

P.O. Box 1500
Yellowknife, N.T. X1A 2R3
Phone (403) 669-2671 Fax (403) 669-2713

June 19, 1996

Husky Oil Operations Ltd.
707-8th Avenue S.W.
Calgary, AB
T2P 3G7

ATTENTION: Dave Lochhead

Dear Mr. Lochhead:

**Re: Land Use Permit #N96B579
Heliportable Dynamite Seismic Data Acquisition Program
Kotaneesee Range and Chinken Creek Area, NT**

Enclosed is your copy of Land Use permit #N96B579 authorizing your project as described in your application dated May 10, 1996.

Your application has received a wide distribution to other Federal departments, departments of the Government of the N.W.T., communities in the area of your operation and concerned native groups. In distributing your application we sought comments from these various agencies based on their area of expertise that will help ensure minimum negative impact on the environment. The issuance of this permit indicates that as a result of this environmental screening process it was decided that the potentially adverse environmental effects that may be caused by your proposal are mitigable with known technology and are not significant. The terms and conditions in the permit will, in our opinion, provide the necessary protection to the environment.

The Government of the Northwest Territories, Department of Renewable Resources has informed us that you will require a Permit to Burn if you choose burning as a method to dispose of slash. A copy of this letter is attached.

Also be advised that prior to the commencement of your operation, you should contact the Nahanni Butte Outfitters Limited in regards to there comments concerning the scope of the seismic operation as per their (Nahanni Butte Outfitters) letter of June 14, 1996 (attached).

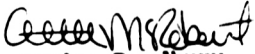
Please ensure that you adhere to the operating conditions annexed to your permit.

.../2

- 2 -

Should you have any questions, regarding any conditions of this permit, please contact our Field office in Fort Simpson, at (403) 695-2626.

Yours truly,



↓
Sandra Bradbury
Land Administrator
Land Administration

cc: District Manager
& RMO, Fort Simpson

O'DONNELL/sod

NATIONAL ENERGY BOARD



OFFICE NATIONAL DE L'ÉNERGIE

OPERATING LICENCE / PERMIS DE TRAVAUX

NO. 855

This operating licence is issued to / Le présent permis est délivré à:

HUSKY OIL OPERATIONS LTD.

707-8th Avenue S.W., Box 6525, Station D, Calgary, AB T2P 3G7

(Address / Adresse)

Dave Lochhead, Geophysical Operations Supervisor

(Telephone / Téléphone)

(Responsible Officer / Personne responsable)

pursuant to Section 5 of the Canada
Oil and Gas Operations Act /
en vertu de l'article 5 de la Loi sur
les opérations pétrolières au Canada

Fee / Droit: \$25.00

Date of issue /

Date de délivrance:

June 24, 1996


Chief Conservation Officer / Délégué à l'exploitation

This operating licence is not transferable and expires
on March 31 immediately after the date of issue

Le présent permis est non transférable et est valide
jusqu'au 31 mars qui suit sa délivrance



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada

Indian & Northern Affairs Canada,
P.O. Box 150,
Fort Simpson, NT
XOE ONO

July 03, 1996

Husky Oil,
707 -8th Avenue, S.W.,
Box 6525, Station 'D',
Calgary, AB T2P 3G7

Attn: Dave Lochhead,
Geophysical Operations Supervisor

Re: Amendment Request for realignment of lines H96 171 to 174 &
Use of Kotaneelee Airstrip, as per land use permit N96B579

We have received your letters dated June 24 and June 28, 1996 supporting your request for the above mentioned amendment. Our consultation process on this minor amendment was carried out with no objections, and no additional land use permit operating conditions.

The request to amend existing land use permit N96B579 to realign lines H96-171 to H96-174 as per your letter dated June 24, 1996 and original map (1:50,000 received in our office on June 27, 1996) showing these changes, is approved. Also approved is your request to carry out site specific improvements on the Kotaneelee River airstrip as per your letter of request dated June 28, 1996. Existing land use permit operating conditions are applicable to all aspects of your requested changes.

We ask that all slash be disposed of by either total disposal and/or by cutting into small sections and spreading out on the edges of the airstrip. On abandonment, all equipment, materials and supplies are to be removed from the area and the site cleaned up to meet Departmental standards.

If you have any questions on this approval process, please feel free to contact our office at any time.

Yours truly,


B.J.J. Gauthier,
District Manager

cc: Land Admin., c/w encls.
BJJG/fcm

Canada

PARAMETERS

HUSKY OIL OPERATIONS LTD.

Prospect: Chinkah Creek

Date: June 10, 1996

SOURCE PARAMETERS

- | | |
|--|----------|
| • Source type | Dynamite |
| • Source array interval | 90 m |
| • Source pattern description | |
| - Holes per shot point | 1 |
| - Distance between holes within shot point | n/a |
| • Charge size | 14 kg |
| • Charge depth | 18 m |

RECEIVER AND CABLE DESCRIPTION

- | | |
|--|-----------|
| • Spread | Symmetric |
| • Number of channels | 400 |
| • Group interval | 15 m |
| • Fold | 3300% |
| • Near offset distance (centre of source array to centre of near receiver array) | 7.5 m |
| • Far offset distance (centre of source array to centre of far receiver array) | 2992.5 m |
| • Number of groups in gap | 0 |
| • Geophones per group | 6 |
| • Geophone spacing | 2.5 m |
| • Geophone natural frequency | 14 hz |
| • Geophone damping | 70% |
| • Geophone base | marsh |

RECORDING PARAMETERS

- | | |
|-----------------------------|-------------------|
| • Instrument type and model | to be determined |
| • Sample rate | 2 ms |
| • Record length | 5 s |
| • High cut filter and slope | to be determined |
| • Low cut filter and slope | 125 hz, 120dB/oct |
| • SSF | Out |
| • HPE | Out |

SURVEY REQUIREMENTS

- These are according to Husky standards which are provided by David Lochhead

EQUIPMENT

EQUIPMENT

SURVEY EQUIPMENT

- Trimble 4000 SSI GPS receivers
- Wild T1010 Electronic Theodolites
- Accuracy was N5 x E3 x V 4 cm

DRILLING EQUIPMENT

- Explorer 1500
- Heli: Bell 212, Sikorsky 58T

RECORDING EQUIPMENT

- I/O System II
- 800 Channels
- Geophones: marsh

CHAINSAWS

- As supplied by slashing companies

HELICOPTERS

- AStar-BA
- AStar-B
- AStar B-1
- Bell 205
- Bell 206B
- Bell 212

SAFETY

Husky Oil

FOREWORD

Husky sincerely believes that accident prevention is everyone's business and enlists the continuous co-operation and active participation of each individual. Husky considers accident prevention as part of the job.

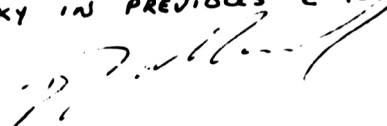
An effective accident prevention program will protect you, your families, the general public and company property from suffering and loss. It also contributes to the continued well being of both you and Husky that is vital to our future progress and growth.

The success of our accident prevention efforts depends on everyone doing his/her part. No job is so urgent that it cannot be done safely. If you know of any unsafe conditions and/or work practices, report them to your immediate supervisor.

Although it is not possible to deal with every hazard, these regulations along with applicable government acts, regulations, local municipal ordinances and good common sense will enable everyone to do his or her job in a safe manner.

J.C.S. Lau
C.E.O.
Husky Oil Ltd.

READ AT START OF SAFETY START-UP MEETINGS
1, 2 - CONTRACTORS AT THIS MEETING HAD
NOT WORKED FOR HUSKY IN PREVIOUS 2 YEARS



Husky Oil

Accident / Injury Emergency Response Chart

DATE: 07/10/96

PROSPECT: CHALKEN CREEK

Husky Field Supervisor

D. Lockhead
298-7140 (H) 284-2777 (C)

STAGING LOCATION

LATITUDE 60° 30.6'

LONGITUDE 124° 12.3'

Aircraft " " NMD
BELL 212 NMD
STEVE SCHWARTZ
Pilot
A-STAR "NMJ"
TOM CARSON

Party Manager/Husky
Representative
Motel/City LEAD VALLEY
Phone No. FT. LINDS
Fax No. 5
Murray Place 604-774-8844 (mobile)
Bert Cowan (mobile)

Medic THOMAS
SCHWARTZ RANK
Mobile No. _____

Slasher Foreman
KEVIN SCHWARTZ

Head Surveyor
QUICK WHEELER

Drill Push
BOB DODD

Observer

Mechanic

Head Chainer
KEITH SCHWARTZ

Senior Driller
MIKE LEAHY

Head Line Helper



WORKSITE PRE-COMMENCEMENT REPORT

Complete this form prior to work commencing, and update in subsequent safety meetings. Submit form along with all attendance sheets, ERP and EMP information, accident and incident reports, and WCB reports after job completion.

PROSPECT CHINKEN CREEK FT. LARD N.W.T.

Worksite Supervisors	Names	(list) Meeting #	Time
Advance PM.		3	07/12/96 7:00 A.M.
Party Manager	MURRAY PACE	1	07/10/96 9:00 P.M.
Observer			
Calpush		2	07/12/96 8:00 A.M.
Sr. Surveyor	RICK VENIER		
Sr. Chainer	KEITH SCHAEFER		
Shooter			
Drill Push	RON DEBUARD		
Sr. Driller	MIKE LEAMY		
Vibe Tech.			
Lead Cat			
Lead Slasher	KEN SIMPSON		
Helicopter Pilot	STAN SCHAEFER / JOHN CANNON / LARRY JOHNSON		
Other MEDIC	MARC SCHAEFER BOSE		

Please note Meeting # next to all topics discussed below

Safety Meeting General Topics (for jobsite specifics see the following pages)

- Emergency response procedures have been developed for each specific worksite and thoroughly discussed with all workers involved.
- All personnel must fully understand emergency and follow up procedures.
- All personnel must be fully aware of designated worksite supervisor's responsibilities.
- Verbally notify the person designated to supervise the specific worksite that they are job supervisor.
- Ensure workers are informed of who are the designated supervisor and the Husky representative.
- Report all near misses, incidents, and accidents immediately to your supervisor.
- Report any unsafe practices to your supervisor and if possible tell the worker he is working in an unsafe manner. You may save a life.
- Ensure at least one person on each crew of 2-9 workers has standard first aid training.
- All worksites shall have first aid services, equipment and supplies available as per OHS/WCB regulations.

1, 2, 3

1, 2, 3

1, 2, 3

1, 2, 3

1, 2, 3

1, 2, 3

1, 2, 3

1, 2, 3

1, 2, 3


Husky Field Representative

Worksite 071406


Operations Supervisor

PROSPECT CHINKEN CREEK FT. LINDSEY N.W.T.

Slashers 1	Hand held radio, ankle high safety boots, protective handwear, ear protectors, hard hat, face screen, saw proof pants, reflective vest, minimum #4 OHS first aid kit, proper certification, WHMIS, H2S Alive, Power Saw course, First Aid, Quad certification and helmet if appropriate.
Dozer Operators	Radio, appropriate handwear, ankle high safety boots, reflective vest, ear protectors, hard hat, proper screening on cat, first aid kit, TDG, H2S, WHMIS, First Aid certification.
Survey Crew 3	Appropriate handwear, ankle high work boots, hand held radio, hard hat or Quad helmet, reflective vest, first aid kit, and traffic signs, proper certification in WHMIS, H2S, Quads (if necessary), First Aid.
Drill Crew 2	Radio, protective handwear, ankle high safety boots, ear protection, appropriate eye and breathing protection, hard hat or Quad helmet, reflective strips on clothing, first aid kit, emergency shut down at drill, proper certification in WHMIS, TDG, Quads (if necessary), H2S, Blasting, First Aid.
Recording Crew	Appropriate handwear, radio, appropriate eye protection, ankle high work boots, hard hat or Quad helmet, reflective strips on clothing, headlamps, first aid kit, traffic signs, proper certification in WHMIS, TDG, Quads (if necessary), H2S, Blasting, First Aid.
Party Managers	Same as Recording Crew, additionally require OHS legislation training.

Slashpiles or Windrows on cutlines with spears sticking out	Drive slowly, keep alert. Be sure all personnel are in vehicle and that doors are shut. All personnel working at night should have headlamps.
Hand cut lines 1	Work in pairs. Watch for stumps and spears sticking out. Don't rush, be sure of your footing before you step.
Beaver Dam areas	Check thickness of ice before advancing either on foot or with equipment. Work in pairs, watch for open water. Don't rush, check your footing before you step. Use only approved routes to cross watercourses.
Turn arounds	Use the three point method to turn around. Do not drive into windrows. All personnel either must be in the vehicle or safely clear.
Driving on cut lines or roads to staging 1, 2, 3	Drive slowly under conditions of poor visibility and on slippery surfaces (this includes blowing snow or fog, and icy or muddy roads). Wear a seatbelt at all times. When driving on hills, do not carry riders on the back of trucks. Never drive on a hill where personnel are working, wait until area is clear. Keep all vehicles to the far right when proceeding up hills.
Quads or Skidoos	All Quads must be licensed and insured. Drivers must have a class 5 license and Quad certificate. Always wear a helmet, goggles, gloves, long sleeves and pants (and a face mask in winter). No passengers. Do not carry heavy or awkward loads when driving on hills. Speeds are to be kept to a safe minimum. Distribute loads properly.

PROSPECT CHICKEN CREEK

FT. LINDA N.W.T.

Wellsites <i>N/A - NO WELLSITES ON PROGRAM</i>	Do not enter a wellsite marked H2O. If entry into a wellsite is required, field production personnel must be notified prior to entrance. Do not use active well sites as staging or meeting areas.
Carbon Monoxide Poisoning <i>1, 2, 3</i>	Keep windows partly open when sitting in trucks. Park so exhaust blows downwind. Report any exhaust leaks immediately to the mechanic or PM.
Cold weather conditions	Stay in communication with other crew members. If you break down, do not wander from your vehicle. Do not take your vehicle to an area where no crew is working. Keep proper attire with you at all times.
Felling trees <i>1</i>	The minimum distance a slasher must keep from a working cat is equal to twice the height of the tallest tree. All slashing should be cut square and level to the ground. All snags, leaners, and scarred trees that have the potential to fall and cause injury to worksite personnel must be removed. Saws must be sharp at all times. An emergency escape route must always be available. Ensure good footing while cutting.
Cat cutting	At no time will a cat driver reverse the direction of his cat so that he is cutting towards other personnel without first shutting down his cat to confer with the other personnel and ensure that they have moved to a safe location. No personnel shall walk by a working cat. Cats will always cease cutting when vehicles or people are approaching.
Winching	Keep winch lines as low as possible on trees. Make sure tree is alive, not rotted, and large enough to take the strain. Use snatch block if possible. Keep all personnel well clear of winching area. Check winch line for defects prior to using. Wind cable back on to drum properly when finished to avoid damage to cable.
At Staging <i>1, 2, 3</i>	If working under helicopter, ear and eye protection mandatory.

Husky Oil

SAFETY MEETING

Use this form for recording tailgate meetings as well as startups. Attendance list must be attached.

PROSPECT CHINKEN CREEK

DATE 07/09/96 - 07/12/96 - 07/13/96

TAILGATE MEETING?

☒ Yes/No

STARTUP MEETING?

☒ Yes/No

For Startup Meetings, add Meeting #. For Tailgate Meetings, attach additional attendance list and subjects discussed.

SITE SPECIFIC HAZARDS	
* TERRAIN - STEEP SLOPES, CREEKS & RIVERS, ALPINES	1, 2, 3
* EXTREMELY REMOTE LOCATION - E.R.P. PLAN, QUICK ASSESSMENT BY MEDIC & PARTY MANAGER OF ANY MEDICAL AID, ACCIDENT OR INCIDENT - AIR EVACUATION IF NECESSARY IMMEDIATELY	1, 2, 3
* CREW SHUT DOWN DURING ANY INCIDENT REQUIRING MEDIC, LIMIT RADIO COMMUNICATIONS TO INVOLVED CREWS	1, 2, 3

ANY OTHER SENSITIVE AREAS	
* WILDLIFE - BEARS IN AREA, COEXISTENCE OF BLACK BEARS & GRIZZLIES - "BE BEAR AWARE" - CALL IN ALL SIGHTINGS	1, 2, 3
* ALL WATER COURSES TO BE KEPT CLEAR OF FENCED TREE DEBRIS OR OBSTRUCTIONS	1


OTHER TOPICS	
* REGULAR RADIO CHECKS FOR ALL CREWS - MEDIC TO DOCUMENT	1, 3
* GARBAGE - ABSOLUTELY NO GARBAGE TO BE LEFT ON LINE	1, 2, 3
* SMOKING - ALLOWED ONLY DURING REST BREAKS AWAY FROM FUELING AREAS - ALL BUTTS TO BE CARRIED OUT - NO "SMOKING BAN" WILL BE IN EFFECT IF FOREST FIRE HAZARD RANGES "HIGH"	1, 2, 3

DEFICIENCIES CORRECTED SINCE LAST MEETING	

Number of Crew Incidents _____ Number of Crew Accidents (attach report and WCB reports if accidents involved lost time) _____

ACCIDENTS AND INCIDENTS REPORTED SINCE LAST MEETING	
* ACCIDENT/INCIDENT REPORTING DISCUSSED IN DETAIL	1, 2, 3
* DRUG & ALCOHOL POLICY DISCUSSED	1, 2, 3
* RIGHT TO REFUSE WORK	1, 2, 3
* P.P.E. TO BE IN GOOD SHAPE, WORN, & USED PROPERLY	1, 2, 3
* HUSKY "HANDBOOK" WALKED THROUGH WITH JOB SPECIFIC FOR CREWS IN ATTENDANCE AT SPECIFIC MEETING	1, 2
HANDBOOKS DISTRIBUTED TO SLASHING CREWS - WILL DISTRIBUTE	
Submit to Safety Coordinator/Supervisor TO DRILL CREWS WHEN NEW ORDER COMES IN.	


Husky Field Representative
Salem 17498


Operations Supervisor



SAFETY MEETING ATTENDANCE RECORD

SAFETY MEETING ATTENDANCE	
JOB NAME	CHICKEN CREEK
CONTRACTOR/CREW #	BEAVER CONTRACTING — HELGESON
	SEASIDE - M.P. CONSTRUCTION.
DATE 07/10/96	
TAILGATE MEETING?	Yes/No
	STARTUP MEETING? Yes/No

START-UP MEETING # 1

START-UP MEETING # 1		
Beaver	FRED BERTRAND	Ed Bertrand
	Jimmy Katchen	Jimmy Katchen
	Steven Sweeney	Steven Sweeney
	Frank Wamsley	Frank Wamsley
VI	Merwin Tim Bae	Merwin Tim Bae
II	Dwight Beersault	Dwight Beersault
II	Mark Vital	Mark Vital
II	Dennis Bertrand	Dennis Bertrand
II	Frank Katchen	Frank Katchen
HELGESEN	MARC SCHOENKRAH	MARC SCHOENKRAH
SKISMED	DUGOLD KATCHEN	DUGOLD KATCHEN
Beaver	Jimmy Bertrand	Jimmy Bertrand
Beaver	CAREY D. EDDA	CAREY D. EDDA
Beaver	Harry Wilds	Harry Wilds
Helgesen	Mike Bourton	Mike Bourton
Helgesen	Donna Antoine	Donna Antoine
Beaver	GERALD BEAVER	GERALD BEAVER
HELGESEN	Grant Gindner	Grant Gindner
Beaver	HEN SIMPSON	HEN SIMPSON
Helgesen	MURRAY PLACER	MURRAY PLACER
M. P. CONSULTING		

Husky Oil

SAFETY MEETING ATTENDANCE RECORD

JOB NAME	CHICKEN CREEK		
CONTRACTOR/CREW #	DESTINY RESOURCES DRILL CREW		
	GECO-PRANLA DRILL CREW		
	M.P. CONSULTING		
DATE	07/12/96		
TAILGATE MEETING?	Yes/No	STARTUP MEETING?	Yes/No

START-UP MEETING # 2

Destiny	M. LEAMY	Willie
"	WILLIAM ACHKONT	Willie
"	Rah. boybawwa	Willie
"	Cellie Alene	Willie
"	Chad Cookman	Willie
"	Lee Iverson	Willie
"	Justin Leamy	Willie
"	Morgan Waldner	Willie
"	ALBERT WILSON	Willie
"	DARRIN RADBOURNE	Willie
"	Brian Ruk	Willie
"	ARABED HAFER	Willie
"	WILL TUCKER	Willie
"	DANIEL WALDNER	Willie
"	Dale De	Willie
GECO - PRANLA	ROD DORWARD	Willie
DESTINY	JOHN BERRINGER	Willie
DHE CH- HELICOPTERS	Chapman Basman	Willie
DESTINY	DRYD NAZARKO	Willie
M.P. CONSULTING	MURRAY PLASS	Willie

SAFETY MEETING ATTENDANCE RECORD

SAFETY MEETING ATTENDANCE	
JOB NAME	CHICKEN CREEK
CONTRACTOR/CREW #	RAVIAO-TECH SURVEYS
	M.P. CONSULTING
DATE	
TAILGATE MEETING?	Yes/No
STARTUP MEETING?	Yes/No

START-UP MEETING # 3

START-UP MEETING					
ENVURO - TECH SURVIV.		K. SCHAFER	V.IANOV	P.VENIER	G.RIES
" "	" "	MURRAY PLACE			
M.P. CONSULTING.					

SAFETY STATEMENT

TOTAL MAN HOURS FOR THE JOB

30,097

NEAR MISSES

7

MEDICAL AIDS

5

LOST TIME INCIDENTS

4

DEATHS

0

Husky Oil

707 8th Avenue SW
Box 6525, Station D
Calgary, Alberta, Canada
T2P 3G7

(403) 298-6111
Telex 038-22596
Telecopier 298-6535 7464

July 22, 1996

National Energy Board
311 - 6 Avenue S.W.
Calgary, AB
T2P 3H2

ATTENTION: Ed Reyven

Dear Mr. Reyven:

Follow up Report on the Medical Evacuation of Helgesen Contracting's Mike Bourlon

On Sunday, July 21, 1996, I received a phone call at 4:45 pm from Murray Place to inform me that there was a medical emergency in progress. The Helgesen slasher had fallen approximately 10 to 15 feet and sustained undetermined injuries to his chest and back. Mark Schoenrank was on the scene as soon as a heli-pad could be constructed. The crew was in heavy timber and this took approximately 1.75 hours. After examination Mark called for a medi-vac to Ft. Nelson by a 212.

At 5:12 pm I phoned Tom Helgesen to inform him of the situation. He could not be reached so a message was left but not returned.

At 7:10 pm I contacted Bob Craig of Helgesen Contracting. I informed him of the situation and he contacted the Ft. Nelson Hospital for an update on the condition of Mike Bourlon. It was decided that Mike would be sent home to recover and be replaced by another Helgesen employee.

Instructions were given to Murray Place to have follow up safety meetings with all contractors and to my knowledge this was completed Sunday evening and Monday morning.

I spoke with Adrian Erickson of Destiny Resources and discussed incident involving Ira Iverson which we both agreed was due to negligence and stupidity. The helper was reprimanded and more care will be taken in all phases of the drilling operation.

Keith Schefer was sent to Ft. Nelson to be examined by a doctor. It seems after further questioning Keith has a history of knee problems. When this was brought to my attention I spoke with George Nelson of Enviro-Tech Surveys and we have replaced Keith. I have brought him back to Calgary for rehabilitation.

I am forwarding all reports and near misses to your attention. I am sure you'll have some concerns so please do not hesitate to call

Sincerely,

HUSKY OIL OPERATIONS LTD



Dave Lochhead
Geophysical Operations Supervisor

INSPECTIONS



**Indian & Northern Affairs Canada,
P.O. Box 150,
Fort Simpson, NT
XOE 0N0**

July 19, 1996

**Husky Oil Operations Ltd.,
707 - 8th Avenue, S.W.,
Calgary, AB T2P 3G7**

Attn: Dave Lochhead

**Re: Land Use Permit N96B579
Heliportable Dynamite Seismic Data Acquisition Program
Kotanclee Range and Chinkeh Creek area, NWT**

Please find enclosed a copy of an initial Environmental Inspection Report prepared by Mr. Kent Halvorson on July 16, 1996. The inspection was carried out on your operation authorized by Land Use Permit N96B579. All land use permit operating conditions are adhered to, and the Inspector was impressed with your high standard of operation. Keep up the good work.

I would like to echo Mr. Halvorson's thanks for Mr. Place's assistance and performance, as well as supplying the aircraft for this inspection.

If you have any comments or questions on this report, please call the Inspector or any of our staff at any time.

For the record, I would like to express, on behalf of our Department and as a parting gesture on my behalf, a sincere appreciation for your coming up to Fort Simpson and attending our informal pre-construction meeting for your program. We feel it is important to meet with Permittees face to face, and discuss various operational systems and go over the land use permit conditions that regulate your activities in the field. By attending this meeting, your Company has shown a sincere willingness to explain your operation in detail and a concern for the Environment and the Land.

Good luck on your program.

Yours truly,

B.J.J. Gauthier
**B.J.J. Gauthier,
District Manager**

encs:

**cc: Land Admin.
F.N. Adlem, Director of Operations
Murray Place**

BJJG/fcm



ENVIRONMENTAL INSPECTION REPORT

Date: July 16, 1996

Permittee (complete name and address)

HUSKY OIL OPERATIONS LTD.

107-814 Avenue S.W. CALGARY ALBERTA T2P-3G7

Land Use Permit No.

N96B579

Permit Expiry Date

JUNE 15, 1998

Last Previous Inspection

10/1/91

Quarrying Permit No.

Contractor

SAME

Subcontractor

DESTINY DRILLING

Location(s) Inspected:

LINES 1196-170 1196-173 STUBBINS AREA

Current Stage of Operation

CUTTING ON 1196-170 1196-173, DRILLING 1196-173

Program Modifications Approved:

REINFORCEMENT OF LINES 1196-171 TO 1196-174

Condition of Operation "A" Acceptable "U" Unacceptable "N/A" Not Applicable

	Operating Condition	Aspect Inspected		
		1196-170	1196-173	STUBBINS AREA
A	Location as Permitted	A	A	A
B	Timing as Permitted	A	A	A
C	Equipment as Approved	A	A	A
D	Methods & Techniques	A	A	N/A
E	Facilities	N/A	N/A	A
F	Erosion	A	A	N/A
G	Chemicals, Waste	A	A	A
H	Wildlife & Fisheries Habitat	-	-	-
I	Biological Resource	-	-	-
K	Oil Storage	A	A	A
L	Brush Disposal	A	A	A
M	Matters Not Inconsistent	A	A	A
N	Water Engineering	-	-	-
O	Water Supply	-	-	-
P	Restoration	-	-	-
Q	Quarrying Methods	-	-	-
R	Sections 12 to 19 T L U R.	-	-	-
S				
T				

Surveillance Network Program

Explanatory Remarks (attach page 2, if required)

7th inspection was carried out with Murray Place who is the first rep for Husky. The Ken Henson of NEB was also present. 7th time since 1196-170 + 1196-173 were flown over by helicopter and

Page 2 attached? Yes ☐ No ☐

Representative's Signature

Inspector's Signature

RMO Initials

Representative's Title

District Mgr. Initials



Indian and Northern Affairs Canada
P.O. Box 150
Fort Simpson, N.T. X0E 0N0

August 30, 1996

Husky Oil Operations Ltd.
707 - 8th Avenue S.W.
Calgary, Alberta T2P 3G7

Attention: Dave Lochhead

Re: Land Use Permit N96B579
Heli-portable Seismic Prospect,
Kotaneeslee Range and Chinkah Creek Area, N.T.

On August 29, 1996 Kent Halverson and Scott Davidson, Land Use Inspectors, accompanied by Mr. Bert Cowan, conducted an inspection of the above noted land use operation. A self explanatory Environmental Land Use Inspection report is attached for your review.

Mr. Halverson has indicated that all conditions of this permit were found to be acceptable at the time of this inspection. We would like to thank both Mr. Murray Place and Mr. Bert Cowan for their co-operation and assistance provided to the Inspectors.

Should you have any questions regarding this inspection please contact either the undersigned or an Inspector from the Fort Simpson District Office at 403-695-2626.

Yours truly,

Scott W. Davidson
Acting District Manager

cc: Annette McRobert - Lands Administration
Floyd Adlem - Director of Operations

SWD/sd



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada

ENVIRONMENTAL INSPECTION REPORT

Date Aug. 29, 1996

Site: (complete name and address) HUSKY OIL OPERATIONS LTD
707-8th Ave. S.W. CALGARY ALBERTA T2P 3G7

Land Use Permit No	<u>196135-79</u>	Permit Expiry Date	<u>JUNE 18 1998</u>	Last Previous Inspection	<u>JUNE 16, 1996</u>
Quarrying Permit No					
Contractor	<u>Same</u>	Subcontractor	<u>GECO!</u> <u>DESTINY DRILLING</u>		

Location(s) Inspected: Lines H96-173 H96-175 STAGNA MERN

Current Stage of Operation OPERATIONS ARE COMPLETE - LINE 175 IS
being cleaned up.

Program Modifications Approved: None.

Condition of Operation A: Acceptable U: Unacceptable N/A: Not Applicable

	Operating Condition	Aspect Inspected		
		<u>H96-173</u>	<u>H96-175</u>	<u>STAGNA MERN</u>
A	Location as Permitted	A	A	A
B	Timing as Permitted	A	A	A
C	Equipment as Approved	A	A	A
D	Methods & Techniques	A	A	N/A
E	Facilities	N/A	N/A	A
F	Erosion	A	A	N/A
G	Chemicals, Waste	A	A	A
H	Wildlife & Fisheries Habitat	---	---	---
I	Ecological Resource	---	---	---
K	Fuel Storage	A	A	A
L	Brush Dispose	A	A	A
M	Matters Not Inconsistent	A	A	A
N	Water Engineering	---	---	---
O	Water Supply	---	---	---
P	Restoration	---	---	---
Q	Quarrying Methods	---	---	---
R	Sections 12 to 19 T.L.U.R	---	---	---
S				
T				

Surveillance Network Program None.

Explanatory Remarks (attach page 2, if required): This inspection was completed along
with the Best Power of Husky Resources. 7 to 8 hours.
17 complete over all. Work is finished. This is
17 hours of cleanup of line 175.

Representative's Signature [Signature] Inspector's Signature [Signature]
District Mgr. Initials _____


date Aug. 27, 1966

Permit No. 11965579
No de permis

Explanation and Remarks (Continued)
Explications et remarques (suite)

Small bags of plaster and cable will be removed today and workers will pick up all remaining flags, cables, wire, etc.
All staking gear equip. has been removed and entrance holes have been filled in. There are no signs of remaining garbage or any materials used in staking facilities. All remains of the staking area have been removed. All information has fully been taken.
All staking is gone and all line chain is removed at this time.
One flowing hole was encountered on line 175 and this was plugged, to a depth of 15 feet with bentonite. One other flowing hole was encountered on the next day of line 172; this was also plugged just prior to continuing to plug out, up the remaining tubing. This area is now dry and no problems are expected.
The program will be finally completed after clearing is completed and a final report is submitted.
All aspects of this operation are complete at this time.

Bob Cowan


Land Use Inspector - Inspecteur de l'utilisation des terres

Note: This form is to be used as necessary in conjunction with the Land Use Inspection Report Territorial Land Use Regulations, IAND 52-221 (10-72).
Au besoin, annexer la présente feuille au rapport d'inspection de l'utilisation des terres, Règlements sur l'utilisation des terres territoriales, MAINC 52-221 (10-72).

FROM : Geo Prakla 1263

PHONE NO. :

Sep. 01 1986 01:30PM P1

Geco-Prada, Crew 1267 FLOWING HOLE REPORT

Location: Chintoh Creek

Job Number: 19000013

Land use permit # 1000579

Date: 1-Sep-00

DATE PLUGGED LIST OF FLOWING HOLES:

[illegible]

R.
Banner
Enterprizes Ltd.

July 28, 1996

HUSKY OIL
Calgary, Alberta

ATTN: DAVE LOCHHEAD

RE: Safety Audit on Kotaneelee Creek Near Fort Liard N W T

Dear Sir

This is an account of the safety audit that you requested. Wednesday the 24th of July 1996 I travelled to Fort Liard Northwest Territories from Hines Creek, Alberta (a 9-hour drive)

On the morning of July 25, 1996 I met with Murray Place and made arrangements to travel to staging, then to the drill line. I arrived at Husky's staging at approximately 8:15 a.m. I did an audit around the staging area and found it to be very well set up with all the safety factors in order. There were two refuelling areas for the helicopters both of which were well signed and fuel absorption pads were set up around them. There were fire fighting tools set up in two baskets ready to be long lined by helicopter to line in case of a fire. There were two tents set up, one for a first aid station and one for an office. I inspected the first aid supplies and found that the two first aid attendants were well prepared for any type of incident. The first aid attendants have two backpacks set up ready to go if they are needed. The first aid tent has three stretchers set up for temporary use. The first aid attendants were both active in the flight watch and crew's safety checks. There was a flight watch log kept on all movement of the helicopters with the exception of the drill crew helicopter. The flight watch included time of each helipad landing and any shut down time for each helicopter on this job. The 58T (for moving drills on line) only called in while flying to line from the drill staging and when returning to staging, the rest of the time he was in steady contact with the line coordinator. The crew's safety checks were set up for each chainsaw and survey crew to call in every two hours and report the status of their crew. There was a hazard map set up in staging and updated daily by either Murray, Burt or the medics. There was also a log kept of any wildlife sightings including the type of animal, the time of day and the location of sighting.

Due to helicopter timing and availability I arrived on line 171 beside the drills at approximately 10:00 a.m. I followed the drills along doing audits on the equipment as I came to them. I also stood back and observed the drilling techniques and loading procedures of each drill. There is a copy of my drill audit form attached to this letter. The drill audit took me until approximately 4:30 p.m. I then caught a ride to the drill staging and completed the audit on the drilling crew there (copy of the staging audit

also attached) I arrived back in Fort Liard at approximately 8:00 p.m. I went over all drill audit concerns with Mike Leamy (Drill Supervisor for Destiny). The Destiny crew on line was very receptive to all my concerns and had replaced most items while I was still on line. All other concerns on line and around staging, Mike took the necessary actions needed to rectify the problems almost immediately.

On the morning of July 26, 1996 I travelled to staging with Murray and Burt. At approximately 10:00 a.m. Burt, Ken and myself flew to line 172 where the line was going through some very rugged terrain. All of the lines on this job cross over the Kotaneelee range that is very steep and has a lot of loose rocks. This range has very high accident/incident potential, but with the proper handling and the placing of ropes can be kept to a minimum. I did an audit on the line and aided in setting ropes and assessing the hazards on that portion of line. All three, Murray, Burt (Husky Representatives) and Ken (Helgesen Contracting's Supervisor) have a good handle on where the ropes are needed and in making sure there are enough ropes placed. While we were there, the chaining crew came along and I did an audit on them. They were wearing their head gear, knew the emergency response plan and what to do if they were to have an incident. At approximately 2:00 p.m. Burt and I flew to line 173 where the recording crew was laying out and shooting on the Husky program. I observed the layout crew working. There were four men out of the seven that were not wearing hard hats, although they all had hard hats with them tied onto their packs. The man in the lead doing the horse collaring, I am aware and agree does not have to wear a hard hat while laying out the cable. The other three men I asked if it was Geco's policy to wear hard hats or not and they commented that it was Geco's policy. I asked them why they were not wearing them now and they commented that it was just too hot to wear hard hats today. I asked them if they ever wear their hard hat and they commented that when they feel like it and it is not too hot. The next group we came to was the troubleshooters, they were wearing all PPE and knew the safety procedures. The last group that we made it to was the shooter and his helper. The shooter was staying back 30 meters from the shot point to do the blast and appeared to be following all the rules. At approximately 8:00 p.m. we returned to Fort Liard. Burt and I informed Scott Anderson (Geco's Party Manager) that evening about the hard hat issue. Scott said he would deal with it the following morning at the safety meeting. Geco's policy is the first time they give them a warning, the second time they lay them off for 10 days and dismissed the third time.

On July 27, 1996, I travelled to staging via the A-star and at approximately 8:30 we flew to line 174 to set off two slashing crews. While Murray was getting line set off, I did an audit on both crews. I found some minor things on the crew but they were fairly well equipped and knew the policies and procedures. There is a copy of the audit forms for the chainsaw crews attached to this report. After the audit was complete, we stayed there for a while watching the crews work. Both crews were following the three tree length rule between the faller and the buckers. Next we flew into another chainsaw crew that was working on the west end of line 172 and walked in on them. I did an audit on them and their equipment. There were only a few things that I was concerned about on this crew. Two of the chainsaws on the crew were missing the chain stoppers. The first operator did not have any spares chain stoppers with him. The other operator was missing the bolt to hold it in place and claimed that it was on back order from Grant Gardner (Beaver Enterprises Construction Ltd.'s supervisor). The second operator had a spare chain stopper in his pocket. We then returned to

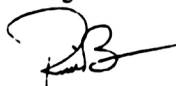
staging. The concerns noted on the chain saw crew audit I went over with both Murray and Ken Simpson that evening. The appropriate actions were taken the following morning at a safety meeting. That evening I went to the Pointed Mountain camp instead of back to Fort Liard and did an audit on camp and some of the support vehicles. I also put on a WHIMS and H2S Awareness courses for Beaver Enterprises and Destiny. I returned to Fort Liard by boat that evening at approximately midnight.

On July 28, 1996, I stayed in Fort Liard and completed the field reports. I also did an audit on the Beaver Enterprises camp just outside Fort Liard at the maintenance yard. There are copies of both camp audits included in this report.

The one recommendation that I have is that if it is possible the two medics should not ride in the same helicopter to and from the job site. If there was a helicopter incident with both medics on board, it is possible that both medics could be rendered unconscious and would not be available to aid in the emergency response. Other than that recommendation I feel Murray and Burt are handling the job very well. All safety concerns that I noted were dealt with almost immediately by the supervisor that was in charge of that unit. Except for the three men that were not wearing their hard hats I would like to commend the crews for doing a safe job. Considering the terrain that this job is going over there has been a minimum amount of incidents up to this point. All the supervisors involved in this operation are very safety oriented and are working very hard at keeping the accident/incidents down.

If you have any concerns or questions please do not hesitate to call me at (403) 835-0231

Regards



Richard Banner

encl.: 25

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Reg. 204 Street, Chesham, Bucks HP8 4AD Phone 01494 646661 Fax 01494 650 250**SAFETY AUDIT**

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 4
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Frank Kazony Employee's Position : Lead Faller (Forman)

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Property Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Box 104 Bloor Street, Albany NY 12212 Phone 518 435-0501 Fax 518 435-0501**SAFETY AUDIT**

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 4
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Darcy Bertrand Employee's Position : Bucker

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

The chain catcher on Darcy's saw was half broken off but there was enough to still give him the protection he needs.

Darcy has WHMIS, Chainsaw Safety Course, St. John Standard First Aid.

Darcy needs H2S Awareness

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Box 204 Shaw Creek, Alberta T0B 2A0 Phone: (403) 494-6242 Fax: (403) 494-2500**SAFETY AUDIT**

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 4
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Dan Lambert Employee's Position : Bucker (Drop Zone Cutter)

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Dan's chainsaw the chain brake is weak and needs replaced before using saw after July 27, 1996.

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Reg. 241 Street, Chesham, Bucks. HP8 4SD Phone: 714261 040001 Fax: 714261 040101**SAFETY AUDIT**

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 4
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Victor Scotty Employee's Position : Bucker (Drop Zone Cutter)

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Victor need to work on his falling techniques. He fell a tree without cleaning obstacles at the bases of the tree. Victor caught one of his co-workers shirts that was laying beside the tree in his saw while falling the tree. Victor also was cutting with only one hand on the saw while pushing on the tree with the other hand. This is a unsafe practice as the saw may kick back and operator may not be able to control the saw with only one hand.

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 4
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Mervin Trimbre Employee's Position : Packer

Proper Head Protection is being Worn	True	There is Enough Water for Crew	True
Proper leg Protection is being Worn	True	Packer has Hand Held Radio	True
Proper Hearing Protection is being Worn	True	Pack is in Good Shape	True
Proper Eye Protection is being Worn	True	Lines are being Cleaned Properly	True
Proper Foot Protection is being Worn	True	There is Enough Gas and Oil for the Job	True
Employee has a # 2 First Aid Kit in Pack	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Fire Extinguisher in Pack	False	Employee Knows Emergency Response Plan	True
Proper Size Pack for Size of Crew	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

This crew was very well equipped except that they did not have 2.5 lbs fire extinguisher in pack. All fallers and buckers had the fire powder shaker with them.

Mervin has WHMIS. St. John Emergency First Aid that will expire January 24, 1998, Chainsaw Safety Course that will expire January 25, 1998.

Mervin participated in the H2S Awareness Course in Camp on July 27, 1996.

DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

RIG # : 114

DATE : Jul 25 1996

JOB # : Husky Oil

SUPERVISOR'S NAME : Mike Leamy

DRILLER'S NAME : Mark Hofer

HELPER'S NAME : Mervyn Waldner

INSPECTOR'S NAME : Richard Banner

COMPRESSOR # : 161

DRILLER Has First Aid Training	S	DRILL Emergency shut Down is working properly	S
• Has H2S Alive or Awareness	S	• Airline Whipchecks are in place and properly	S
• Blasters for the province he is working	S	• Lockwires are on all clevises	S
• Has W.H.M.I.S. Training	S	• All Guards are in place	S
• Has T.D.G. Training	S	• Engine oil is full	N A
• Is wearing proper Head Protection	S	• Hydraulic oil full	N A
• Is wearing proper Hearing Protection	S	• No major leaks on drill	S
• Is wearing proper Eye Protection	S	• J-slot bolt has locking device on it	N A
• Is wearing proper Foot Protection	S	• Condition of Electrical wiring	S
• Is wearing High visibility Coveralls or Vest	S	• All Hoses are in good shape	S
• Is wearing Dust Protection (when applicable)	S	• Check landing legs for cracks or loose bolts	S
HELPER Has First Aid Training	S	• Condition of control levers and controls	S
• Has H2S Alive or Orientation	S	COMPRESSOR All lockwires are in place	U
• Blasters for the province he is working in	S	• Pressure Relief valve is fuctional	U
• Has W.H.M.I.S. Training	S	• All Guards are in place	U
• Has T.D.G. Training	S	• Whipchecks are on all airlines	S
• Is wearing proper Head Protection	S	• Condition of Airlines (no bubbles etc.)	S
• Is wearing proper Hearing Protection	S	• Condition of Hydraulic Hoses for compressor	S
• Is wearing proper Eye Protection	S	• Engine Oil is full	S
• Is wearing proper Foot Protection	S	• Hydraulic Oil in compressor is full	S
• Is wearing High Visibility Coveralls or Vest	S	• No major Leaks On compressor	S
• Is wearing Dust Protection (when applicable)	S	GENERAL No Garbage left at shotpoint or on line	S
DRILL BASKET Has proper T.D.G. signs on it	S	• Proper Explosives Handling are being practised	S
• • Has proper labeled Jerry Cans	S	• Proper Drilling Techniques are being Practised	S
• • Explosives Mags are properly locked	S	• Permit Tags are properly installed at shotpoint	N A
• • Has a B.C. # 2 First Aid Kit (fully stocked)	S	• All loose Items are Securlty tied down	S
• • Drill unit has adequate Fire Extinguishers	S	• Enough Spare Bungy Cords to tie down equip.	S
• • All Clevises are properly Lockwired	N A	• Has Cap Tester to test cap leads	S
• • Has proper Fire Fighting Tools	S	• General Housekeeping of drill unit	S
• • Has enough Tools to Fix minor Breakdowns	S	• Workers Knowledge of O.H.&S (Right to Refuse)	S

S = SATISFACTORY

U = UNSATISFACTORY

NA = NOT APPLICABLE

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DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

RIG # : 113

COMPRESSOR # 162

DRILLER'S NAME : John Hoyer (Spike)

HELPER'S NAME Daniel Waldner

DRILLER Has First Aid Training	S	DRILL Emergency shut Down is working properly	U
" Has H2S Alive or equivalent	S	" Airline Whipchecks are in place and properly	S
" Blasters for the province he is working	S	" Lockwires are on all clevises	S
" Has W.H.M.I.S. Training	S	" All Guards are in place	S
" Has T.D.G. Training	S	" Engine oil is full	N A
" Is wearing proper Head Protection	S	" Hydraulic oil full	N A
" Is wearing proper Hearing Protection	S	" No major leaks on drill	S
" Is wearing proper Eye Protection	S	" J-slot bolt has locking device on it	N A
" Is wearing proper Foot Protection	S	" Condition of Electrical wiring	S
" Is wearing High visibility Coveralls or Vest	S	" All Hoses are in good shape	S
" Is wearing Dust Protection (when applicable)	S	" Check landing legs for cracks or loose bolts	S
HELPER Has First Aid Training	S	" Condition of control levers and controls	S
" Has H2S Alive or Orientation	S	COMPRESSOR All lockwires are in place	S
" Blasters for the province he is working in	S	" Pressure Relief valve is fuctional	S
" Has W.H.M.I.S. Training	S	" All Guards are in place	S
" Has T.D.G. Training	S	" Whipchecks are on all airlines	U
" Is wearing proper Head Protection	S	" Condition of Airlines (no bubbles etc.)	S
" Is wearing proper Hearing Protection	S	" Condition of Hydraulic Hoses for compressor	S
" Is wearing proper Eye Protection	S	" Engine Oil is full	S
" Is wearing proper Foot Protection	S	" Hydraulic Oil in compressor is full	S
" Is wearing High Visibility Coveralls or Vest	S	" No major Leaks On compressor	S
" Is wearing Dust Protection (when applicable)	S	GENERAL No Garbage left at shotpoint or on line	S
DRILL BASKET Has proper T.D.G. signs on it	S	" Proper Explosives Handling are being practised	S
" Has proper labeled Jerry Cans	S	" Proper Drilling Techniques are being Practised	S
" Explosives Mags are properly locked	S	" Permit Tags are properly installed at shotpoint	N A
" Has a B.C. # 2 First Aid Kit (fully stocked)	S	" All loose Items are Secury tied down	S
" Drill unit has adequate Fire Extinguishers	U	" Enough Spare Bungy Cords to tie down equip.	S
" All Clevises are properly Lockwired	N/A	" Has Cap Tester to test cap leads	S
" Has proper Fire Fighting Tools	S	" General Housekeeping of drill unit	S
" Has enough Tools to Fix minor Breakdowns	S	" Workers Knowledge of O.H.&S (Right to Refuse)	S

S = SATISFACTORY

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DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

RIG # : 116

COMPRESSOR # 155

DRILLER'S NAME : Reg Coe

HELPER'S NAME Albert Waldner

DRILLER Has First Aid Training	S	DRILL Emergency shut Down is working properly	S
• Has H2S Alive or equivalent	S	• Airline Whipchecks are in place and properly	S
• Blasters for the province he is working	S	• Lockwires are on all clevises	S
• Has W.H.M.I.S. Training	S	• All Guards are in place	S
• Has T.D.G. Training	U	• Engine oil is full	N A
• Is wearing proper Head Protection	S	• Hydraulic oil full	N A
• Is wearing proper Hearing Protection	S	• No major leaks on drill	S
• Is wearing proper Eye Protection	S	• J-slot bolt has locking device on it	N A
• Is wearing proper Foot Protection	S	• Condition of Electrical wiring	S
• Is wearing High visibility Coveralls or Vest	S	• All Hoses are in good shape	S
• Is wearing Dust Protection (when applicable)	S	• Check landing legs for cracks or loose bolts	S
HELPER Has First Aid Training	S	• Condition of control levers and controls	S
• Has H2S Alive or Orientation	S	COMPRESSOR All lockwires are in place	S
• Blasters for the province he is working in	S	• Pressure Relief valve is fuctional	S
• Has W.H.M.I.S. Training	S	• All Guards are in place	U
• Has T.D.G. Training	U	• Whipchecks are on all airlines	S
• Is wearing proper Head Protection	S	• Condition of Airlines (no bubbles etc.)	S
• Is wearing proper Hearing Protection	S	• Condition of Hydraulic Hoses for compressor	S
• Is wearing proper Eye Protection	S	• Engine Oil is full	S
• Is wearing proper Foot Protection	S	• Hydraulic Oil in compressor is full	S
• Is wearing High Visibility Coveralls or Vest	S	• No major Leaks On compressor	S
• Is wearing Dust Protection (when applicable)	S	GENERAL No Garbage left at shotpoint or on line	S
DRILL BASKET Has proper T.D.G. signs on it	S	• Proper Explosives Handling are being practised	S
• Has proper labeled Jerry Cans	S	• Proper Drilling Techniques are being Practised	S
• Explosives Mags are properly locked	S	• Permit Tags are properly installed at shotpoint	N A
• Has a B.C. # 2 First Aid Kit (fully stocked)	S	• All loose items are Securtly tied down	S
• Drill unit has adequate Fire Extinguishers	S	• Enough Spare Bungy Cords to tie down equip.	S
• All Clevises are properly Lockwired	S	• Has Cap Tester to test cap leads	S
• Has proper Fire Fighting Tools	S	• General Housekeeping of drill unit	S
• Has enough Tools to Fix minor Breakdowns	S	• Workers Knowledge of O.H.&S (Right to Refuse)	S

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DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

RIG # : 115

COMPRESSOR # 158

DRILLER'S NAME : Neil Tucker

HELPER'S NAME : William Kerfont

DRILLER Has First Aid Training	S	DRILL Emergency shut Down is working properly	S
• Has H2S Alive or equivalent	S	• Airline Whipchecks are in place and properly	S
• Blasters for the province he is working	S	• Lockwires are on all clevises	S
• Has W.H.M.I.S. Training	S	• All Guards are in place	S
• Has T.D.G. Training	U	• Engine oil is full	N A
• Is wearing proper Head Protection	S	• Hydraulic oil full	N A
• Is wearing proper Hearing Protection	S	• No major leaks on drill	S
• Is wearing proper Eye Protection	S	• J-slot bolt has locking device on it	N A
• Is wearing proper Foot Protection	S	• Condition of Electrical wiring	S
• Is wearing High visibility Coveralls or Vest	S	• All Hoses are in good shape	S
• Is wearing Dust Protection (when applicable)	S	• Check landing legs for cracks or loose bolts	S
HELPER Has First Aid Training	S	• Condition of control levers and controls	S
• Has H2S Alive or Orientation	S	COMPRESSOR All lockwires are in place	S
• Blasters for the province he is working in	S	• Pressure Relief valve is fuctional	S
• Has W.H.M.I.S. Training	S	• All Guards are in place	U
• Has T.D.G. Training	U	• Whipchecks are on all airlines	S
• Is wearing proper Head Protection	S	• Condition of Airlines (no bubbles etc.)	S
• Is wearing proper Hearing Protection	S	• Condition of Hydraulic Hoses for compressor	S
• Is wearing proper Eye Protection	S	• Engine Oil is*full	S
• Is wearing proper Foot Protection	S	• Hydraulic Oil in compressor is full	S
• Is wearing High Visibility Coveralls or Vest	S	• No major Leaks On compressor	S
• Is wearing Dust Protection (when applicable)	S	GENERAL No Garbage left at shotpoint or on line	S
DRILL BASKET Has proper T.D.G. signs on it	S	• Proper Explosives Handling are being practised	S
• Has proper labeled Jerry Cans	S	• Proper Drilling Techniques are being Practised	S
• Explosives Mags are properly locked	S	• Permit Tags are properly installed at shotpoint	N A
• Has a B.C. # 2 First Aid Kit (fully stocked)	S	• All loose items are Secury tied down	S
• Drill unit has adequate Fire Extinguishers	U	• Enough Spare Bungy Cords to tie down equip.	S
• All Clevises are properly Lockwired	S	• Has Cap Tester to test cap leads	S
• Has proper Fire Fighting Tools	S	• General Housekeeping of drill unit	S
• Has enough Tools to Fix minor Breakdowns	S	• Workers Knowledge of O.H.&S (Right to Refuse)	S

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DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

RIG # : 373

COMPRESSOR # 153

DRILLER'S NAME : Dale Dea (Dudley)

HELPER'S NAME : Chad Lundgard

DRILLER Has First Aid Training	S	DRILL Emergency shut Down is working properly	S
Has H2S Alive or equivalent	S	Airtine Whipchecks are in place and properly	S
Blasters for the province he is working	S	Lockwires are on all clevises	S
Has W.H.M.I.S. Training	S	All Guards are in place	S
Has T.D.G. Training	S	Engine oil is full	N A
Is wearing proper Head Protection	S	Hydraulic oil full	N A
Is wearing proper Hearing Protection	S	No major leaks on drill	S
Is wearing proper Eye Protection	S	J-slot bolt has locking device on it	S
Is wearing proper Foot Protection	S	Condition of Electrical wiring	S
Is wearing High visibility Coveralls or Vest	S	All Hoses are in good shape	S
Is wearing Dust Protection (when applicable)	S	Check landing legs for cracks or loose bolts	S
HELPER Has First Aid Training	S	Condition of control levers and controls	U
Has H2S Alive or Orientation	S	COMPRESSOR All lockwires are in place	S
Blasters for the province he is working in	U	Pressure Relief valve is fuctional	S
Has W.H.M.I.S. Training	S	All Guards are in place	S
Has T.D.G. Training	S	Whipchecks are on all airlines	S
Is wearing proper Head Protection	S	Condition of Airlines (no bubbles etc.)	S
Is wearing proper Hearing Protection	S	Condition of Hydraulic Hoses for compressor	S
Is wearing proper Eye Protection	S	Engine Oil is full	S
Is wearing proper Foot Protection	S	Hydraulic Oil in compressor is full	S
Is wearing High Visibility Coveralls or Vest	S	No major Leaks On compressor	S
Is wearing Dust Protection (when applicable)	S	GENERAL No Garbage left at shotpoint or on line	S
DRILL BASKET Has proper T.D.G. signs on it	S	Proper Explosives Handling are being practised	S
Has proper labeled Jerry Cans	S	Proper Drilling Techniques are being Practised	S
Explosives Mags are properly locked	S	Permit Tags are properly installed at shotpoint	N A
Has a B.C. # 2 First Aid Kit (fully stocked)	S	All loose Items are Secury tied down	S
Drill unit has adequate Fire Extinguishers	S	Enough Spare Bungy Cords to tie down equip.	S
All Clevises are properly Lockwired	N/A	Has Cap Tester to test cap leads	S
Has proper Fire Fighting Tools	S	General Housekeeping of drill unit	S
Has enough Tools to Fix minor Breakdowns	S	Workers Knowledge of O.H.&S (Right to Refuse)	S

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DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

COMMENTS Rig # 114 1) Both driller and helper have Standard First Aid, H2S Awareness, Destiny WHMIS, Destiny TDG, and N.W.T. Blasters Certificate. 2) The driller was wearing CSA Hiking Boots, the Helper was wearing hard Plastic Scarpa Hiking Boot with excellent ankle support. 3) This drill has a square quill therefore there is no J Slot Bolt. 4) One clevis on the compressor the lock wire was broken helper replaced it while I was at the site. 5) Pressure relief valve was blowing off at 180 lbs instead of the 200 lbs that they are suppose to be set at. This setting is a factory setting therefore needs replaced with new one.

COMMENTS Rig # 113 1) Both driller and helper have Standard First Aid, H2S Awareness, Destiny WHMIS, and N.W.T. Blasters Certificate. 2) The driller was wearing CSA Hiking Boots, the Helper was wearing CSA Rubber Boots with some ankle support. 3) This rig had one dead fire extinguisher. 4) The emergency shut down did not work the first time we tried it but after cleaning the contacts worked the second time. 5) This drill has a square quill therefore there is no J Slot Bolt. 6) One whipcheck on the compressor side was broken when I arrived but driller had order one and replaced it before the start of next hole.

COMMENTS Rig # 116 1) Driller has Standard, helper has Emergency First Aid, Both have H2S Awareness, Destiny WHMIS, and N.W.T. Blasters Certificate. 2) The driller was wearing CSA Hiking Boots, the Helper was wearing CSA Rubber Boots with some ankle support. 2) One of the lockwires on clevis for the drill was worn bad and needs replaced. 3) There was a small leak on one of the rotary hoses, helper tighten it while I was at shot point. 3) Compressor is missing a guard that covers the fan belt on the compressor. 4) Minor leak by the hydraulic pump on the compressor.

COMMENTS Rig # 115 1) Both the driller and helper have Red Cross Standard First Aid, H2S Awareness, Destiny WHMIS, and N.W.T. Blaster Certificate. 2) Both the driller and helper were wearing CSA Rubber boots with some ankle support. 3) Rig only had one fire extinguisher on it, helper had ordered second one and sent the old one into staging to be recharged. 4) Compressor was missing a guard that covers the fan belt on the compressor.

COMMENTS Rig # 373 1) Both driller and helper have Standard First Aid, H2S Awareness, Destiny WHMIS, and Destiny TDG, only the driller had a N.W.T. Blasters Certificate. 2) Both the driller and the helper were wearing CSA Hiking Boots. 3) When I arrived at this drill both the driller and helper were doing some mechanical maintenance on the rig. This rig will need to be changed out and some welding done on the mast soon. The mast is starting to crack.

GENERAL COMMENTS 1) Housekeeping on all the rigs were fair to good. Rigs could use good wash down but with the remoteness of the jobs they were on, this is hard to do. 2) I was told by all the drillers that the surveyors are putting up permit tags on this job. 3) Destiny has a color code system for WHMIS labels on jerry cans, all yellow cans jerry cans had diesel fuel in them, all employees that I asked on line, seemed to know about the color code system. 4) All leaks that I notice were small weeping leaks. I could not find any sign of oil spots left in the drop zones.

Overall this crew was in fair to good shape but could use some general maintenance on some of the components.

DRILL CREW

R. Banner Enterprizes Ltd.

SAFETY AUDIT

RIG # : 117

COMPRESSOR #

DRILLER'S NAME : Brian Bak

HELPER'S NAME : Aronid Holer

DRILLER Has First Aid Training	S	DRILL Emergency shut Down is working properly	N A
* Has H2S Alive or equivalent	U	* Airline Whipchecks are in place and properly	S
* Blasters for the province he is working	S	* Lockwires are on all clevises	S
* Has W.H.M.I.S. Training	S	* All Guards are in place	S
* Has T.D.G. Training	U	* Engine oil is full	N A
* Is wearing proper Head Protection	S	* Hydraulic oil full	N A
* Is wearing proper Hearing Protection	S	* No major leaks on drill	S
* Is wearing proper Eye Protection	S	* J-slot bolt has locking device on it	S
* Is wearing proper Foot Protection	S	* Condition of Electrical wiring	S
* Is wearing High visibility Coveralls or Vest	S	* All Hoses are in good shape	S
* Is wearing Dust Protection (when applicable)	S	* Check landing legs for cracks or loose bolts	S
HELPER Has First Aid Training	S	* Condition of control levers and controls	S
* Has H2S Alive or Orientation	S	COMPRESSOR All lockwires are in place	N A
* Blasters for the province he is working in	S	* Pressure Relief valve is fuctional	N A
* Has W.H.M.I.S. Training	S	* All Guards are in place	N A
* Has T.D.G. Training	U	* Whipchecks are on all airlines	N A
* Is wearing proper Head Protection	S	* Condition of Airlines (no bubbles etc.)	N A
* Is wearing proper Hearing Protection	S	* Condition of Hydraulic Hoses for compressor	N A
* Is wearing proper Eye Protection	S	* Engine Oil is full	N A
* Is wearing proper Foot Protection	S	* Hydraulic Oil in compressor is full	N A
* Is wearing High Visibility Coveralls or Vest	S	* No major Leaks On compressor	N A
* Is wearing Dust Protection (when applicable)	S	GENERAL No Garbage left at shotpoint or on line	S
DRILL BASKET Has proper T.D.G. signs on it	S	* Proper Explosives Handling are being practised	N A
* Has proper labeled Jerry Cans	S	* Proper Drilling Techniques are being Practised	N A
* Explosives Mags are properly locked	S	* Permit Tags are properly installed at shotpoint	N A
* Has a B.C. # 2 First Aid Kit (fully stocked)	S	* All loose Items are Securtly tied down	S
* Drill unit has adequate Fire Extinguishers	S	* Enough Spare Bungy Cords to tie down equip.	S
* All Clevises are properly Lockwired	N/A	* Has Cap Tester to test cap leads	S
* Has proper Fire Fighting Tools	S	* General Housekeeping of drill unit	S
* Has enough Tools to Fix minor Breakdowns	S	* Workers Knowledge of O.H.&S (Right to Refuse)	S

S = SATISFACTORY

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NA = NOT APPLICABLE

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DRILL CREW

**R.
Banner
Enterprizes Ltd.**

SAFETY AUDIT

COMMENTS *By #* 117 1) This drill unit, the compressor was in staging being repaired when I arrived at the site. The compressor did not get back to the shot point until after I left line. 2) Both driller and helper have Standard First Aid, NWT Blasters Certificates, and Destiny WHMIS. The drillers H2S Alive ticket is expired but the helper has Awareness. The Drillers TDG is expired. 3) The driller was wearing Koflach Hiking Boots. Helper was wearing CSA Hiking Boots. 3) All components of the drill itself was up to the safety standards. 4) Driller participated in the H2S Awareness course on July 27, 1996 in camp.

COMMENTS Rtg #**COMMENTS Rtd #****COMMENTS Rq #****COMMENTS Rq #****GENERAL COMMENTS**

**R.
Banner
Enterprizes Ltd.**

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MECHANIC'S NAME : Ron Laybourne

STAGE HAND'S NAME : None

INSPECTOR'S NAME : Richard Banner

S = SATISFACTORY

U = UNSATISFACTORY

N/A = NOT APPLICABLE

STAGING & LINE**COORDINATOR AUDIT**

R. Banner Enterprizes Ltd.

Box 251 Stone Creek, Alberta T0B 2S0 Phone: (403) 494-0021 Fax: (403) 494-0021

CO-ORDINATOR'S NAME : Colin BurnsHOOK-UP MAN'S NAME : Jason Leamy

CO-ORDINATOR Has proper Head Protection on	S	HOOK-UP MAN Has proper Head Protection on	S
• Is wearing proper Hearing Protection	S	• Is wearing proper Hearing Protection	S
• Is wearing proper Eye Protection	S	• Is wearing proper Eye Protection	S
• Is wearing proper Foot Protection	S	• Is wearing proper Foot Protection	S
• Is wearing High visibility Coveralls or Vest	S	• Is wearing High visibility Cover-all's or Vest	S
• Is wearing Dust Protection (when applicable)	N/A	• Is wearing Dust Protection (when applicable)	N/A
• Has First Aid Training	U	• Has First Aid Training	U
• Has H2S Alive or Orientation	U	• Has H2S Alive or Orientation	U
• Has W.H.M.I.S. Training	S	• Has W.H.M.I.S. Training	S
• Has Chin Strap on Hard Hat	S	• Has Chin Strap on Hard Hat	S

COMMENTS FROM LINE PERSONNEL AUDIT 1) Co-ordinator's First Aid and H2S Alive ticket have expired. 2) One of the 15 to 20 setups that I observed, the coordinator had the compressor set up uphill and on the drillers side of rig. This can be a dangerous setup. On this particular setup there was a rock that would have stopped the compressor from rolling over completely. I explained to the coordinator why he should not set the compressor up hill and on the drillers side of the drill as I have seen a compressor roll down the hill while the driller was drilling and just missed rolling over driller. 3) Coordinator was wearing Koffach Hiking boots and the hook up man was wearing CSA Hiking boots.

GENERAL COMMENTS Stage hand was working on line the day of the audit as Destiny was short one helper. Mechanic and Supervisor were busy all day doing mechanical work and staging was a bit messy when I arrived there. Mike assured me that the following day he would have staging cleaned up. All safety items were in place with the exception of, there was only one fire extinguisher by the Jet "B" fuel bozer.

CHAIN SAW CREW**SAFETY AUDIT**

R. Banner Enterprizes Ltd.

Box 100 St. John's, Alberta T0B 2A0 Phone: (403) 495-0201 Fax: (403) 495-0201Job Number : Husky Oil Date : 07-27-1996 Crew Number : 2Inspector's Name : Richard Banner Supervisor's Name : Ken SimpsonEmployee's Name : Harry Wilds Employee's Position : Lead Faller (Forman)

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Worker need to work on proper notching. He was observed making only a saw cut rather that a proper notch. A proper notch consists of cutting into the tree, 1/3 the diameter, then making it as open as it is deep, with the two saw cuts meeting in the back evenly. The backcut should be 1 to 2 inches above the notch.

Crew stayed behind proper distance . Line was cleaned well .

Harry has St. John Standard First Aid that will expire November 2, 1996, ATV Safety, Helgeson WHMIS, H2S Alive that will expire May 9, 1997, And BAD Slasher's Chainsaw Safety Course that will expire October 10, 1997

CHAIN SAW CREW**SAFETY AUDIT**

R.
Banner
Enterprizes Ltd.

Box 211 Bloor Street, Atlanta, GA 30303 Phone: (404) 525-0001 Fax: (404) 525-0001

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 2
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Darrel Antoine Employee's Position : Bucker

Proper Head Protection is being Worn	True	Chain Stopper s are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Darrel has WHMIS, H2S Awareness, that will expire June 8, 1999, Chainsaw Safety Course that will expire November 15, 1998, and St. John Ambulance Emergency First Aid the will expire November 13, 1998

CHAIN SAW CREW**SAFETY AUDIT**

R.
Banner
Enterprizes Ltd.

Box 274 Stone Creek, Alberta T0B 2A0 Phone: (403) 494-0044 Fax: (403) 494-0047

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 2

Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson

Employee's Name : Floyd Wilmsmier Employee's Position : Packer

Proper Head Protection is being Worn	True	There is Enough Water for Crew	True
Proper leg Protection is being Worn	True	Packer has Hand Held Radio	True
Proper Hearing Protection is being Worn	True	Pack is in Good Shape	False
Proper Eye Protection is being Worn	True	Lines are being Cleaned Properly	True
Proper Foot Protection is being Worn	True	There is Enough Gas and Oil for the Job	True
Employee has a # 2 First Aid Kit in Pack	False	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	False
Fire Extinguisher in Pack	False	Employee Knows Emergency Response Plan	True
Proper Size Pack for Size of Crew	False	Employee Knowledge of O.H.&S.	True

COMMENTS :

This crew the pack was too small to carry the items that they needed. There was only a Alberta # 4 First Aid kit in the pack instead of a # 2 kit. There was no fire extinguisher in the pack but each chainsaw operator had the small shaker bottle of fire powder on them.

Floyd has B.C. Level 1 First Aid that will expire June 24, 1997, H2S Alive that has expired on May 20, 1996, WHIS, Chain Saw Safety Course that had no expiry date on certificate.

On the evening of July 27, 1996 I put on a H2S Awareness course and Floyd participated in the course and will receive a certificate that will expire in 3 years.

CHAIN SAW CREW**SAFETY AUDIT**

R. Banner Enterprizes Ltd.

Box 211 Bannockburn, Alberta T0B 1A0 Phone: (403) 494-0001 Fax: (403) 494-0001

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 2
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Dennis Nelson Employee's Position : Bucker

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	False
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	False	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Dennis did not have a tool belt or a belt that he could wear his tools or first aid kit on him. Both his tools and first aid kit were in the pack with the packer.

Dennis was also observed starting by holding the front handle and push the saw down while pulling on the starter rope. This is a dangerous practice because you do not have three point contact and when the saw starts you can loose control of it. The saw should have been secured on the ground or between his knees.

Dennis has WHMIS, H2S Awareness that will expire June 8, 1999, Chainsaw Safety Course that will expire November 15, 1998, St. John Emergency First Aid that will expire November 14, 1998.

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Box 101 Green Creek, Alberta T0B 2S0 Phone: (403) 466-0101 Fax: (403) 466-0201**SAFETY AUDIT**

Job Number : Husky Oil Date : 07-27-1996 Crew Number : 3
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Roy Yellowknee Employee's Position : Lead Faller (Forman)

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	False
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge, Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	False
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Roy did not have any fire powder on him and his chain catcher was broken. Roy did not have any spare chain catchers with him.

Roy has WHMIS, St. John Standard First Aid that will expire September 26, 1996. Chainsaw Safety Course certificate does not have the CAGC certified instructor number on it. The chainsaw ticket will expire December 13, 1996

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Box 204 Stone Creek, Alberta T0B 2S0 Phone: (403) 493-2222 Fax: (403) 493-2221**SAFETY AUDIT**

Job Number : Husky Oil Date : 07-27-1998 Crew Number : 3
Inspector's Name : Richard Banner Supervisor's Name : Ken Simpson
Employee's Name : Fred Bertrand Employee's Position : Bucker

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	False
Proper leg Protection is being Worn	True	Chain is Property Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

Fred was missing the chain catcher on his saw, he was missing the bolt that holds it in place. The bolt was ordered from his supervisor but was on back order. If the bolt is not in by July 28, 1998 Fred should try to borrow one from someones spare saw in order to keep operating his chainsaw.

Fred has WHMIS, H2S Awareness that will expire June 28, 1999, St. John Emergency First Aid that will expire January 23, 1999, Chainsaw Safety Course that will expire June , 1999

CHAIN SAW CREW**SAFETY AUDIT**

R. **Banner** *Enterprizes Ltd.*

Reg. P.M. Brown, Quebec, Canada. TOLL FREE 1-800-361-1234 Fax # 1-800-361-1234Job Number : Husky Oil Date : 07-27-1998 Crew Number : 3Inspector's Name : Richard Banner Supervisor's Name : Ken SimpsonEmployee's Name : Jimmy Bertrand Employee's Position : Bucker

Proper Head Protection is being Worn	True	Chain Stopper's are in Place on Chain Saws	True
Proper leg Protection is being Worn	True	Chain is Properly Sharpened	True
Proper Hearing Protection is being Worn	True	Operator has Proper Tools (eg. Wedge,Files)	True
Proper Eye Protection is being Worn	True	Side Cover's are not Cracked and Broken	True
Proper Foot Protection is being Worn	True	Operator has Adequate supply of Spare Parts	True
Employee has a # 4 First Aid Kit on Him	False	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Proper Anti-Vibration on Chain Saws	True	Employee Knows Emergency Response Plan	True
Bar Guards are in Place When Needed	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

The belt loops on Jimmy's # 4 first aid kit had ripped off and he had put it into the pack.

Jimmy has Chainsaw Safety Course that will expire on November 15, 1998, St. John Emergency First Aid that will expire November 13, 1998

Jimmy need both WHMIS and H2S Awareness.

CHAIN SAW CREW

R. Banner Enterprizes Ltd.

Box 201 Bruce Road, Alliston ON N0B 1P0 Tel: (519) 875-0100 Fax: (519) 875-0101**SAFETY AUDIT**Job Number : Husky Oil Date : 07-27-1998 Crew Number : 3Inspector's Name : Richard Banner Supervisor's Name : Ken SimpsonEmployee's Name : David Duntra Employee's Position : Packer

Proper Head Protection is being Worn	True	There is Enough Water for Crew	True
Proper leg Protection is being Worn	True	Packer has Hand Held Radio	True
Proper Hearing Protection is being Worn	True	Pack is in Good Shape	True
Proper Eye Protection is being Worn	True	Lines are being Cleaned Properly	True
Proper Foot Protection is being Worn	True	There is Enough Gas and Oil for the Job	True
Employee has a # 2 First Aid Kit in Pack	True	Proper (labeled) Jerry cans are being used	True
High Visibility Clothing is being Worn	True	Proper (labeled) Oil cans are being used	True
Fire Extinguisher in Pack	False	Employee Knows Emergency Response Plan	True
Proper Size Pack for Size of Crew	True	Employee Knowledge of O.H.&S.	True

COMMENTS :

The only thing that this crew was missing was two fire powder shakers and a 2.5 lbs fire extinguisher for the pack.

David has WHMIS, H2S Awareness that will expire on June 29, 1999, Chainsaw Safety Course that will expire June 24, 1998, St. John Emergency First Aid that will expire June 25, 1998.

Camps Safety Audit

R. Banner Enterprizes Ltd.

One Pitt Street, London, E14 3AB and Phone 071 493 0000 Fax 071 493 0001Job Number : Husky Oil Date : 07-27-1996 Camp Number : 1 Crew Number : 0Inspector's Name : Richard Banner Crew Supervisor's Name : Bob Drever

Emergency Response Plan is Set up	True	Fuel Sloop is Properly Located in Camp	N / A
Mobile Communications are Set up	True	Fuel Sloops are Properly Grounded	N / A
General Appearance of the Trailer's in Camp	True	There is no Fuel Spills or Leaks	N / A
There is Adequate Parking Defined in Camp	True	There is Proper Fire Extinguishers by Sloop	N / A
Sumps are in Good Condition	True	Adequate First Aid Room Available	True
Sumps are Fenced Properly	True	Certified First Aid Attendant is Available	True
Adequate Helicopter landing area Available	True	Housekeeping in Power Plant is Good	True
Helicopter Safety Poster's are posted	True	Hearing Protection Signs are Posted at Plant	True
There is a Fire Box on site (when needed)	True	All Safe Guards are in Place around Plant	True
All W.H.M.I.S. Labels are in Place	True	Proper Location of Power cord	True
All T.D.G. Labels are in Place	True	Camp and yard General Housekeeping	True
Propane Tanks are properly located in camp	True	Rooms all have a Fire Extinguisher	True
5 lb. Fire Extinguisher at the Propane Tanks	True	Proper Smoke Detector installed in Camp	True
Propane Tanks are not Filled Over 85 %	True	All Safe Guards are in Place around Camp	True

COMMENTS :

This camp is the camp at Pointed Mountain. The campsite is in a tight location for its size but is well set up, utilizing the space available. There is 10 meters between all trailers that are not part of the main camp. The main unit has a central alarm system with heat sensors in each room. There is a second unit that consists of four trailers joined with a walk way (covered hallway). This unit has the same fire alarm system as the main camp. The three outside trailers that are not wired into the same type of alarm system but have 10 meters between them and have fire extinguishers set up at each end of the trailer. The only problem that I have with this camp is the availability of a fire extinguisher by the incinerator. The closest fire extinguisher is 13 meters away from the incinerator.

Camps Safety Audit

R. Banner Enterprizes Ltd.

Box 201 Glenora, Alberta T0E 1P0 Phone: (403) 625-0000 Fax: (403) 625-0000Job Number : Husky Oil Date : 07-28-1996 Camp Number : 2 Crew Number : 0Inspector's Name : Richard Banner Crew Supervisor's Name : Scott Anderson

Emergency Response Plan is Set up	True	Fuel Sloop is Properly Located in Camp	N/A
Mobile Communications are Set up	True	Fuel Sloops are Properly Grounded	N/A
General Appearance of the Trailer's in Camp	True	There is no Fuel Spills or Leaks	N/A
There is Adequate Parking Defined in Camp	True	There is Proper Fire Extinguishers by Sloop	N/A
Sumps are in Good Condition	N/A	Adequate First Aid Room Available	True
Sumps are Fenced Property	N/A	Certified First Aid Attendant is Available	True
Adequate Helicopter landing area Available	True	Housekeeping in Power Plant is Good	True
Helicopter Safety Poster's are posted	True	Hearing Protection Signs are Posted at Plant	True
There is a Fire Box on site (when needed)	N/A	All Safe Guards are in Place around Plant	False
All W.H.M.I.S. Labels are in Place	False	Proper Location of Power cord	True
All T.D.G. Labels are in Place	True	Camp and yard General Housekeeping	True
Propane Tanks are properly located in camp	True	Rooms all have a Fire Extinguisher	True
5 lb. Fire Extinguisher at the Propane Tanks	False	Proper Smoke Detector installed in Camp	True
Propane Tanks are not Filled Over 85 %	True	All Safe Guards are in Place around Camp	True

COMMENTS :

This camp is located just outside of Fort Liard at the maintenance yard. This camp still has item left from the Geco's (Alan Chatenay) audit. Approximately 70 percent of the items on the list have been delt with and are inline with the proposed completion date. The diesel tank still need s a WHMIS label. The steps into the generator need replaced. Battery posts in the generator need covers over them. There still need to have emergency lighting in east washroom.

**AIR CARRIER
BASE INSPECTION**

DEH CHO AIR LIMITED

**P.O. Box 78
Fort Liard, N.W.T.
X0G 0A0**

Phone: (403) 770-4103

Fax: (403) 770-4102

Inspection Date: June 13, 1996

Submitted by Brian Van Humbeck

CONTRAIL AVIATION SAFETY LTD.

**1035 McTavish Road N.E.
Calgary, Alberta
T2E 7G9**

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

PART 1 - GENERAL

1.1 KEY PERSONNEL

COMPANY OWNER:	Fort Liard Indian Band
PRESIDENT:	Harry Deneron
OPERATIONS MANAGER/CHIEF PILOT:	Rob Borrelli
MAINTENANCE COORDINATOR:	Rob Borrelli
CONTRACT MAINTENANCE:	John Ostashek Northern Aviation Maintenance Fort Nelson, B.C.
ON-SITE MAINTENANCE ENGINEER:	Don Oliver

1.2 TRANSPORT CANADA APPROVALS

Deh Cho Air Ltd. operate under valid National Transportation Agency of Canada Licences #883005, 883006, 883007, and Transport Canada Operating Certificate #6282. The carrier is licensed to operate Southern Canada Domestic, Northern Canada Class 4 Domestic, and Class 9-4 Non-Scheduled International services utilizing aircraft Groups A, B, and C.

1.3 INSURANCE

Insurance is provided by Johnson & Higgins Ltd. of Edmonton, and underwritten by the British Aviation Insurance Group (B.A.I.G.). Policy #NWS 950998 is valid until November 13, 1996.

Limits of Liability: \$4,000,000.00 Combined Single Limit All Risk Flight and Ground Insurance Coverage

**JOHNSON
& HIGGINS****CERTIFICATE OF INSURANCE**ISSUE DATE 11/01/96
01-31-96

INSURER

Johnson & Higgins Ltd.
1400 OXFORD TOWER
10235 - 101 STREET
EDMONTON, ALBERTA
T5J 3G1

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER	A	AXA PACIFIC (Formerly Boreal Pacific)
COMPANY LETTER	B	B.A.I.G.
COMPANY LETTER	C	
COMPANY LETTER	D	
COMPANY LETTER	E	

INSURED

DEH CHO Air
General Delivery
Fort Liard, Northwest Territories
X06 0A0

Coverages

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

CO TR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE 11/01/96	POLICY EXPIRATION DATE 11/01/96	LIABILITY LIMITS IN THIS COVERAGE	AGGREGATE
	GENERAL LIABILITY					
A	<input checked="" type="checkbox"/> COMPREHENSIVE FORM	1146270	01-12-95	01-12-96	BODY INJURY \$ ---	\$ ---
	<input checked="" type="checkbox"/> PREMISES OPERATIONS				PROPERTY DAMAGE \$ ---	\$ ---
	<input checked="" type="checkbox"/> PRODUCTS COMPLETED OPERATIONS				B & P COMBINED \$1,000.	\$1,000
	<input checked="" type="checkbox"/> CONTRACTUAL				PERSONAL INJURY	\$1,000
	<input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS					
	<input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE					
	<input checked="" type="checkbox"/> PERSONAL INJURY					
	<input checked="" type="checkbox"/> <u>Non-Owned Auto</u>					
	AUTOMOBILE LIABILITY					
	ANY AUTO	NOT APPLICABLE			BODY INJURY PER PERSON \$	
	ALL OWNED AUTOS PRIV PASS				BODY INJURY PER ACCIDENT \$	
	ALL OWNED AUTOS OTHER THAN OR V PASS				PROPERTY DAMAGE \$	
	HIRED AUTOS				B & P COMBINED \$	
	NONOWNED AUTOS					
	GARAGE LIABILITY					
A	EXCESS LIABILITY	1146270	01-12-95	01-12-96	B & P COMBINED \$4,000.	\$4,000
	UNDER A FORM	Excluding Aircraft Liability				
	OTHER THAN UNDER A FORM					
	WORKERS COMPENSATION AND EMPLOYERS LIABILITY	NOT APPLICABLE			STATUTORY	
					\$ EACH ACCIDENT	
					\$ DISEASE POLICY	
					\$ INCREASE EACH EMPLOYEE	
B	Aircraft Liability	NWS 950998	11-13-95	11-13-96		\$4,000,000.00

DESCRIPTION OF OPERATIONS LOCATIONS VEHICLES SPECIAL ITEMS

ALL OPERATIONS USUAL TO THE NAMED INSURED

Certificate Holder

Cancellation

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED, THE EXPIRATION DATE THEREOF THE ISSUING COMPANY WILL BE ADVISED BY MAIL. DATES WRITTEN NOTICE TO THE CERTIFICATE HOLDER. IF NOT LEFT BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OF LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE **JOHNSON & HIGGINS LTD.**PER: *[Signature]*

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

1.4 OPERATIONAL PERSONNEL - PILOTS

NAME	LICENCE	INSTRUMENT	TOTAL HOURS
Rob Borrelli	A 264113	1,000	8,500
* Samo Cebul	C 407024	25	2,000
Brett Madson	C 363621	25	880
Leif Scott	C 405291	25	1,050
* Robert Shypitka	C 369241	75	1,100

NOTE: Pilots Cebul and Madson are summer employees.

1.5 OPERATIONAL PERSONNEL - ENGINEERS

NAME	LICENCE	YRS	CATEGORY
Chris Blanchard	M 295116	12	M2, M4
Don Oliver	M 077985	30+	M2, M3, M4, M6
John Ostashek	M 309678	7	M2, M4, S33
Derek Theede	Apprentice		

NOTE: The Engineers are employed by Northern Aviation Maintenance Ltd. an Approved Maintenance Organization (AMO) located in Fort Nelson, B.C. The Apprentice is employed by Deh Cho Aircraft Maintenance.

DEH CHO AIR LIMITED
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1.6 AIRCRAFT

REGISTRATION	TYPE & MODEL	SERIAL #	TOTAL TIME
GIHF	BN2A Islander	475	12,472✓
FZKW	DHC-3 Single Otter	465	12,685✓
FILO	Cessna U206	U206-02076F	5,593✓
GZXU	Cessna 185A	A185-03527F	7,624✓

Note: An additional Cessna 206 aircraft will be leased for the summer period.

1.7 ACCIDENTS, INCIDENTS, & VIOLATIONS

Within the previous thirty-six (36) month period, Deh Cho Air experienced the following accidents, incidents, and violations:

February 1996 Violation Pilot: Robert Shypitka

Transport Canada Enforcement initially issued Pilot Robert Shypitka a \$250.00 fine for operating an aircraft in the Yellowknife area at night, without the aid of functional navigation lights (pilot stated lights worked on the ground, prior to departure from Fort Liard). The fine was reduced to \$100.00 following a meeting in Edmonton between the pilot and one of the Transport Canada Enforcement Inspectors.

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April 1995

Violation

Pilot: Rob Borrelli *

Transport Canada Enforcement issued Pilot Rob Borrelli a thirty (30) day Licence suspension for failing to maintain his personal log book to current status, and also for failing to record one flight in the Aircraft Journey Log book.

January 1996

Cessna U206 C-FILO

Pilot: Leif Scott ✓

Shortly after departure, at an altitude of 1500-2000 feet ASL, the pilot experienced an engine failure, followed by two loud bangs. He successfully completed a forced landing in a snow covered area about one-half mile east of the Fort Liard runway. There were no injuries to the two occupants (pilot and one passenger), and no airframe damage.

Subsequent inspection of the engine determined that the pin which attaches the connecting rod to the engine crank had failed. The internal failure created two holes in the top of the engine case (each hole is approximately three inches in diameter). Although the oil sump pan was full of oil, there was visual evidence (observed through the holes) that the top of the engine was not receiving proper oil lubrication.

At the time of the failure, the engine had acquired only 35.5 hours since factory remanufacture by Continental Aircraft Engines. The temperature was -42 Celsius, but the carrier does not believe that to be a contributing factor to the engine failure. According to Rob Borrelli, the engine was replaced by Continental under full warranty.

June 1993

DHC-2 Beaver C-GDCJ

Pilot: Rob Borrelli *

During a landing at the 50' x 1200' hard packed clay Tsuga Airstrip, the main gear of the aircraft dropped into an unobserved washed-out area. The aircraft came to an abrupt stop, and the tail of the aircraft rose up, causing the aircraft to teeter on the main gear. The pilot immediately shut-down the engine, however the aircraft subsequently flipped over. There were no injuries to the three occupants, however the accident caused substantial damage to the engine, propeller, wing struts, right wing, lower engine cowlings, top of the tail, and rudder. The aircraft was repaired for \$85,000.00 and returned to service.

DEH CHO AIR LIMITED
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PART 2 - FLIGHT OPERATIONS

2.1 FLEET AND STAFF ACTIVITY

The average annual flying hours for each aircraft model and for the pilots on that model are:

A/C Model:	BN2A	DHC-3	C-206	C-185	
A/C Hours:	500	400	700	200	
Line Pilot Hrs:	300	400	200	125	

What is the average annual flying hours for the Chief Pilot? 100 Hrs

2.2 FLYING STAFF

	<u>Name</u>	<u>Years Co.</u>	<u>Years Exp.</u>
Operations Manager:	Rob Borrelli	8	14
Chief Pilot:	Rob Borrelli	8	14
Chief Training Captain:	Rob Borrelli	8	14

2.3 * SAFETY STAFF

	<u>Name</u>	<u>Years Co.</u>	<u>Years Exp.</u>
Director of Safety:	Nil		
Asst. Director of Safety:	Nil		

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.4 PILOT RECRUITMENT

- 2.4.1 Is present pilot manning sufficient? X Yes No
What is the present pilot to aircraft ratio?

Last summer 7 pilots
Winter Months: 3 pilots for 3 operational aircraft
(DHC-3 parked during winter)

Summer Months: 5 pilots for 5 aircraft (lease 1
additional C206 aircraft for summer) } *Manual*

- 2.4.2 What are the company employment minimum
experience requirements for pilots?

One of the two most recently hired pilots commenced
employment with 2,000 hours flying experience. However
three out of the past four pilots hired had approximately
700-800 hours.

- 2.4.3 What checks are made of references?

✓ Contact the listed references. The normal company policy
is to hire pilots known to the current staff members.

- ✓ 2.4.4 How are pilots paid? Base salary, plus mileage.

Are bonuses paid? Yes X No

- 2.4.5 Are free-lance or casual pilots hired? Yes X No

How are these pilots trained and currency checked? n/a

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.5 TRAINING PROGRAMS

2.5.1 General Training:

* Are ditching and evacuation drills held?
How often?

____ Yes X No
____ n/a

* Describe the program:

No program in place

* Do pilots attend Crew/Cockpit Resource
Management training?
In-house?

____ Yes X No
____ Yes n/a No

✓ Are records of training kept in appropriate
training folders/binders?

X Yes ____ No

As suggested, the carrier recently began
using individual binders to better
retain the Pilot Training Files.

SCALE D: 2/5

Are training records current?

____ Yes X No

Refer to Summary of Discrepancies for details

? Are they reviewed periodically by supervisors?

X Yes ____ No

Which procedures are in effect for scheduling
training and checks:

Manual (board)?
Computer?
Both, manual and computer?

____ Yes X No
____ Yes X No
____ Yes X No

DEH CHO AIR LIMITED
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2.5.2 Initial Training - Pilots:

In-house program?

☒ Yes ☐ No

Is there a written curriculum?

☒ Yes ☐ No

Briefly describe the Ground School.

Ground School consists primarily of pilot self study with some Company Instruction.

AIRCRAFT TYPE	CAPTAIN	COPILOT	CAPT/EXP	COPLT/EXP
Multi-Engine	4.0	n/a	1.5	n/a
Single Engine	3.0	n/a	1.0	n/a

Briefly describe the Initial Flight Training:

Chief Pilot Rob Borrelli conducts the majority of Initial Flight Training. VFR Flight Training is conducted in the Fort Liard area. IFR Flight Training is conducted in the Fort Nelson area. All Initial Instrument Flight Rules (IFR) Checks and Pilot Proficiency Checks (PPC's) are conducted by Transport Canada Inspectors.

Is simulator training conducted?

☐ Yes ☒ No

Indicate if pilots complete written exams on the following:

Company procedures?

☒ Yes ☐ No

Aircraft flight manual?

☒ Yes ☐ No

Aircraft systems?

☒ Yes ☐ No

Dangerous Goods?

☒ Yes ☐ No

Surface Contamination?

☒ Yes ☐ No

Other (List):

☒ Yes ☐ No

Are the exams corrected to 100%?

Indicate if pilots are subjected to oral exams of the following:

Company procedures?

☒ Yes ☐ No

Checklist memory items?

☒ Yes ☐ No

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.6 MEDICAL PROGRAM

- 2.6.1 What is the interval of flight physical exams? 6 months/12 months
Is a copy of medical certificates provided to the company? X Yes No
- 2.6.2 Is there a CPR training program? Yes X No
* Is there a First Aid training program? Yes X No
- 2.6.3 Is there a written Drug and Alcohol Policy? Yes X No
Is there a Drug and Alcohol Education Program? Yes X No
+ Is there a Company testing program for Drug and Alcohol abuse? Yes X No
Briefly describe program: n/a

2.7 FLIGHT OPERATIONS

- 2.7.1 List areas of Operation: N.E. British Columbia & South West N.W.T.
- 2.7.2 Flight Operations Manual NOT CURRENT. SCALE D: 2

Latest revision number & date: Revision # 1 dated June 1, 1994

Is it current? Yes * No

The current copy of the Flight Operations Manual I reviewed needs to be amended and/or customized in several areas. Rob Borrelli stated a new manual was completed in January 1996 and submitted to Transport Canada for approval. However, he stated Transport Canada Inspectors are not approving any new manuals, pending the release of the new Canadian Air Regulations (CARS), which has been delayed three times and is currently scheduled for implementation in the Fall of 1996.

Nov '95
R.B.

Who is responsible for ensuring all manuals are kept current?

The Operations Manager

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.7.3 Are Minimum Equipment Lists used? Yes n/a No

✓ If so, are they approved for each of your aircraft by serial number? Yes n/a No

2.7.4 Weather minimums - Please state any differences from the Transport Canada required minimums: No Differences

Do you have any restrictions on low time captains? Yes X No
Please describe:

2.7.5 Are aircraft operating/owners manuals available? X Yes No
Are they current? X Yes No

Are the following current:

Revisions? X Yes No

Weight and Balance? X Yes No

Installed equipment list? X Yes No

Supplements? X Yes No

2.7.6 *File* Flight Operations Publications: Are the following publications available and current?

Air Regulations X Yes No

Air Navigation Orders X Yes No

A.I.P. Canada X Yes No

Canada Flight Supplement X Yes No

LE/HE Charts and/or JEPP Charts X Yes No

C.A.P. and/or JEPP Charts X Yes No

Personnel Licensing Handbook # 1 X Yes No

Personnel Licensing Handbook # 3 n/a Yes No

Safety Publications - F/W X Yes No

Dangerous Goods/IATA Regulations X Yes No

2.7.7 Is flight scheduling firm? Yes X No
Are last minute changes normal? X Yes No

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.7.8 Are flight plans filed?

 X Yes No

With whom?

Company employees, Fort Liard CARS (Community AirRadio Station), or Fort Simpson Flight Service Station (FSS).

Describe the Flight Watch system:

Normal Flight Watch is provided by filing Company Flight Notifications with Rob Borrelli, who is normally at the hangar, or filed with one of the maintenance staff. When the hangar is not staffed, Flight Notifications are filed with the Fort Liard CARS (Community AirRadio Station) OR, if the station is closed (open 0800-1600, Monday thru Friday), filed with the Transport Canada Flight Service Station in Fort Simpson.

Prior to ALL flights, a three-copy Operational Flight Plan/Passenger Manifest/Charter Invoice Form is completed. The (white) original and (yellow) copy are carried onboard, with a (pink) copy retained on a clipboard in the hangar. When the flight is completed the (white) original becomes the customer invoice, and the (yellow) copy is forwarded to accounting.

2.7.9 Search and Rescue:

* Is there a written search & rescue plan?

 Yes X No

Are other aircraft available for emergency response?

 X Yes No

Are hospitals or medical resources locally available? * Nursing Station only

 * Yes No

Are they available 24 hours a day?

 Yes * No

* On-call 24 hours, but not staffed.

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.7.10 Safety Equipment: Do you have the following
equipment, if applicable:

Personal flotation device(s) for each occupant? * Yes No

* For float aircraft only

Life raft(s) of adequate number and capacity? Yes X No

ELT's? X Yes No

Survival kit appropriate to geographical area? X Yes No

Flares? X Yes No

First aid kit? X Yes No

Fire Extinguisher(s)? X Yes No

Crash Axe(s)? X Yes No

Passenger Briefing Cards? X Yes No

Other? Sleeping bags and winter covers, and
snowshoes for ski equipped aircraft.

2.7.11 Are briefings planned and conducted so
as to place sufficient emphasis on flight
planning and procedures? Yes X No

2.7.12 Are flight planning facilities available? X Yes No
Describe:

The pilots use one of two desks located in the
maintenance office. Each morning, a package containing
NOTAMS and weather is faxed to the carrier from the Fort
Simpson Flight Service Station.

SCALE C: 2

2.7.13 Are NOTAMS available? From Fort Simpson FSS X Yes No

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.7.14 Are dispatch facilities available?

____ Yes X No

Describe:

Deh Cho Air officially utilize a system of pilot self dispatch. During normal office hours, telephone calls are usually handled by Rob Borrelli, or by one of the other pilots. If there are no staff members available, the phones are call-forwarded to the Fort Liard Indian Band Development Corporation. X

Since the carrier does not have access to such features as cellular phones/pagers/24 hour telephone answering service, the Company has installed several extension telephones (Rob Borrelli, the pilot crew house, and in two of the Band Council member homes). On-call duties are normally handled by Rob (if available), or by one of the pilots.

2.7.15 Is a crew lounge available?

____ Yes X No

2.7.16 Are crew eating facilities available?

____ Yes X No

Describe:

SCALE C: n/a

2.7.17 How long before flight do crews report for duty? Normally 45 minutes

2.7.18 Are checklists available?

X Yes ____ No

Are checklists current?

X Yes ____ No

Are checklists easily read and utilized?

X Yes ____ No

SCALE D: 2

2.7.19 What manuals are carried aboard the aircraft?

SCALE D: 2

Aircraft Flight Manual, Company Operations Manual, Canada Flight Supplement, Canada Air Pilot, LE Charts (Islander only), and VFR Maps.

Attention to Detail

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.7.20 Are the following cockpit procedures
standardized in writing?

Electronic equipment usage?	_____	Yes	<u>X</u>	No
Crew coordination?	_____	Yes	<u>X</u>	No
Takeoff/enroute/approach & landing procedures?	_____	Yes	<u>X</u>	No
Emergencies-Flying and Non-Flying pilot duties?	_____	Yes	<u>X</u>	No
Pilot incapacitation?	_____	Yes	<u>X</u>	No
Flight profiles?	_____	Yes	<u>X</u>	No

2.7.21 Are flight discrepancies written concisely
and legibly?

_____ Yes * No

2.7.22 Do records show that discrepancies are
rectified or deferred prior to next flight?

_____ Yes * No

*See log
book*

* When I completed my previous Base Inspection (Jan/Feb 1996), there were almost no defects being recorded in the Aircraft Journey Log books, as required by Transport Canada Regulations. During my June 13, 1996 inspection, Rob Borrelli stated there has been improvement in this area. However I was unable to verify Rob's comments because the flying schedule on the day of my Base Inspection rendered three of the four Log books unavailable for my review, and the fourth Log book available briefly (in-between two flights).

SCALE D: * n/a

2.7.23 Are the following prepared for each flight:

Weight and Balance?	<u>X</u>	Yes	_____	No
Who does the computing?	<u>The Pilot-in-Command</u>			
Freight manifest?	_____	Yes	<u>X</u>	No
Passenger manifests?	<u>X</u>	Yes	_____	No

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

- 2.7.24 What position is responsible for controlling the duty hours and rest periods of flight crews?

The Operations Manager

Briefly describe system:

✓ Pilot Flight Sheets are maintained on individual clipboards retained in the maintenance office, and completed on a daily basis by each pilot. The monthly sheets consists of 4 columns (one for each aircraft type) with 31 rows.

- 2.7.25 Does the company provide all necessary pilot cockpit equipment?

_____ Yes X No

2.8 PASSENGER AND CARGO HANDLING

- 2.8.1 Is customer car parking area secure?
Describe type of security:

_____ Yes X No

- 2.8.2 Do you have a customer waiting room?

X Yes _____ No

- 2.8.3 Is there a physical barrier between the passenger waiting area and the ramp which prevents unescorted access?

SCALE C: 2-3

_____ Yes X No

- 2.8.4 Do you have a video for safety briefings?

_____ Yes X No

- 2.8.5 Is baggage held in a secure area?

X Yes _____ No

- 2.8.6 Is cargo properly secured in aircraft?

X Yes _____ No

- 2.8.7 Do you provide hearing protection?

X Yes _____ No

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

2.9 CARGO AND MATERIAL HANDLING. DANGEROUS GOODS

2.9.1 Does your company accept Dangerous Goods for shipment? ☒ Yes ☐ No

2.9.2 If yes, do you have written procedures for guidance of personnel? ☒ Yes ☐ No

2.9.3 Do you have a written syllabus for the training of personnel? ☒ Yes ☐ No

Staff utilize a Self Study Course provided by West Coast Training of Vancouver.

2.9.4 Is training documented? ☒ Yes ☐ No

2.9.5 Do you have Material Safety Data Sheets available to all personnel? ☒ Yes ☐ No

2.9.6 Do you have "Restricted Goods" notices posted in passenger waiting areas? ☒ Yes ☐ No

✓
upgraded

PART 3 - SAFETY PROGRAM

3.1 SAFETY PROGRAM

- 3.1.1 Is an Aviation Safety program in effect? _____ Yes X No
Is it in writing? _____ Yes X No
Does it include:
Ground Safety? _____ Yes X No
Flight Safety? _____ Yes X No
Industrial Safety? _____ Yes X No
- 3.1.2 Describe safety program or attach description:
No program in place.
- 3.1.3 Is a Safety committee established? _____ Yes X No
Are regular meetings held? _____ Yes * No
* Staff members do hold an operational meeting in the
Spring (prior to floats) and Fall (prior to winter).
- Is there follow-up action? X Yes _____ No
Is management involved? X Yes _____ No
- 3.1.4 Are safety publications received? X Yes _____ No
Are they current? X Yes _____ No
List: Only receive Transport Canada Safety publications
- 3.1.5 Are safety bulletin boards utilized? _____ Yes X No
Do they contain outdated material? _____ Yes n/a No
- 3.1.6 Are accident/incident reporting procedures
established in writing? _____ Yes X No
- 3.1.7 Are the reports of accident/incident
investigation teams made available
to all appropriate personnel? _____ Yes n/a No
- 3.1.8 Interview safety officer(s), attach comments
as necessary: _____ Yes n/a No

PART 4 - MAINTENANCE PROCEDURES

Maintenance of the Deh Cho Air aircraft fleet involves three different inter-related Companies as follows:

Deh Cho Air Limited

Deh Cho Air Limited is the Charter Company that owns and operates the aircraft fleet. They receive all of their aircraft maintenance from a theoretically independent Approved Maintenance Organization, who is sub-contracted through a Transport Canada Approved Contract Maintenance Agreement.

Deh Cho Aircraft Maintenance Ltd.

Deh Cho Aircraft Maintenance is a Transport Canada Approved Maintenance Organization (AMO), and are responsible for conducting the actual aircraft maintenance. Currently, the Company does not employ ANY Licensed Aircraft Maintenance Engineers, however they do employ one Apprentice Engineer.

Northern Aviation Maintenance Ltd.:

Northern Aviation Maintenance is a Transport Canada Approved Maintenance Organization (AMO) located in Fort Nelson, British Columbia. John Ostashek is the Director of Maintenance. He is also named the Director of Maintenance for Deh Cho Aircraft Maintenance, who have contracted Northern Aviation Maintenance to manage their AMO. They employ four Aircraft Maintenance Engineers, with one of them based in Fort Liard for the summer. When additional maintenance manpower is required in Fort Liard, the Engineers travel from Fort Nelson by ground transportation.

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

When I conducted my January/February 1996 base inspection I also conducted a base inspection of Northern Aviation Maintenance in Fort Nelson, in order to properly evaluate the operation of Deh Cho Air.

My June 13, 1996 base inspection was only conducted in Fort Liard in conjunction with the inspection of a landing strip. Therefore segments of the following information regarding maintenance apply to Northern Aviation Maintenance when previously inspected (identified as such), and furthermore only pertains to their operation with Deh Cho Air (and not their other customers).

4.1 MAINTENANCE STAFF Name Years Co. Years Exp.

Director of Maintenance:	John Ostashek	6	6
	Northern Aviation Maintenance		
Base Engineer - Ft. Liard:	Don Oliver	2 months	30+
	Northern Aviation Maintenance		

4.2 MAINTENANCE SAFETY STAFF Nil

4.3 TECHNICIAN RECRUITMENT

4.3.1 Is present A.M.E./Apprentice manning sufficient? * Yes ____ No
What is the present A.M.E. to aircraft ratio?

* Deh Cho Aircraft Maintenance employ one Apprentice Engineer. Northern Aviation Maintenance Fort Nelson employ four Aircraft Maintenance Engineers, with one of them based in Fort Liard for the summer.

4.3.2 What are company employment minimum experience requirements for technicians?

When I last inspected Northern Aviation Maintenance, their preference was to hire licensed Aircraft Maintenance Engineers, however they have recently also hired Apprentice Engineers.

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

4.3.3 What checks are made of references?

When last inspected Northern Aviation Maintenance, they contacted the references that were supplied to them.

4.3.4 How are technicians paid?

Northern Aviation Maintenance staff paid an Hourly Salary

Are bonuses paid? Yes X No

4.3.5 Are free-lance or casual technicians hired? Yes X No
How are these technicians trained and
currency checked? n/a

4.4 TRAINING PROGRAMS

4.4.1 General Training - Technicians:

All of the Aircraft Maintenance Engineers are officially employed by Northern Aviation Maintenance, who are responsible for all training, and therefore all of Section 4.4 pertains to Northern Aviation Maintenance.

Are training records maintained? X Yes No

SCALE D: 1

Are records reviewed periodically by supervisors? Yes X No

Are records of training kept in appropriate training folders/binders? X Yes No

Which following procedures are in effect for scheduling training and checks:

Manual (board)? Yes X No

Computer? Yes X No

Both, manual and computer? Yes X No

*

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

4.4.2 New Hire/Initial Training - Technicians:

Do you have in-house program?

 X Yes No

Briefly describe the program:

Initial Training includes four (4) hours self study of the Maintenance Control Manual, Shop Procedures, and Aircraft Familiarization.

Do you have Written Exams on the following:

Company procedures?

 Yes X No

Aircraft manuals?

 Yes X No

Aircraft systems?

 Yes X No

MEL?

 Yes n/a No

Other (List):

Are exams corrected to 100%?

 Yes n/a No

4.4.3 Recurrent Training - Technicians:

Do you have in-house program?

 X Yes No

Briefly describe program:

The NAM Maintenance Control Manual requires eight (8) hours of self study annually of the Technical and Regulatory Library, and/or review of Aviation Trade magazine articles that pertain to aircraft maintenance.

In January 1996, Director of Maintenance John Ostashek attended a three day Canadian Air Regulations (CAR's) Course held in Edmonton. According to their training files, none of the other Engineers have attended outside training.

Do you have Written Exams on the following:

Company procedures?

 Yes X No

Aircraft manuals?

 Yes X No

Aircraft systems?

 Yes X No

MEL?

 Yes n/a No

Other (List):

Are these exams corrected to 100%?

 Yes n/a No

DEH CHO AIR LIMITED
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4.5 * MEDICAL PROGRAM

- 4.5.1 Do technicians receive a yearly physical exam? _____ Yes X No
- 4.5.2 Is a copy of medical certificates provided to the company? _____ Yes n/a No
- 4.5.3 Is there a CPR training program? _____ Yes X No
Is there a First Aid training program? _____ Yes X No
- 4.5.4 Is there a written Drug and Alcohol Policy? _____ Yes X No
Is there a Drug and Alcohol Education Program? _____ Yes X No
Is there a Company testing program for Drug and Alcohol abuse? _____ Yes X No
- 4.5.5 Briefly describe program: Not applicable

4.6 POLICY AND PROCEDURES

4.6.1 Maintenance Control Manual:

SCALE D: _____

Latest revision number & date:

Deh Cho Air Ltd.

Revision # 2 dated June 20, 1995

Deh Cho Aircraft Maintenance

Revision # 5 dated June 10, 1996

Northern Aviation Maintenance

Original approved January 11, 1996

Are they current?

_____ Yes X No

None of these manuals accurately reflect the business structure under which the three Companies receive and/or conduct aircraft maintenance. Furthermore, there is no formal maintenance agreement in place between the two Maintenance Companies.

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

Is the following information available:

Duties and responsibilities?	<u>X</u>	Yes	_____	No
Maintenance and overhaul procedures?	<u>X</u>	Yes	_____	No
Inspection procedures?	<u>X</u>	Yes	_____	No
Inventory and stores organization and procedures?	<u>X</u>	Yes	_____	No
Training procedures?	<u>X</u>	Yes	_____	No
Maintenance forms and their administration?	<u>X</u>	Yes	_____	No
Weight and Balance control procedures?	<u>X</u>	Yes	_____	No

Who is responsible for ensuring that all manuals
are kept current? The Director of Maintenance

4.6.2 Does your department hold Transport Canada
Approved Maintenance Organization (AMO) status? X Yes _____ No

AMO Approval Number and Date Approved/Revised:

Deh Cho Aircraft Maintenance Approval # 245-92 December 30, 1992

Northern Aviation Maintenance Approval # 114-95 December 22, 1995

4.6.3 Are you an authorized Manufacturer's Overhaul/
Repair Service Station? _____ Yes X No
List types authorized:

4.6.4 Is there a written continuing analysis and
surveillance program (Quality Assurance)? X Yes _____ No

John Ostashek, Director of Maintenance of Northern
Aviation Maintenance is suppose to conduct an annual in-
house audit of Deh Cho Aircraft Maintenance.

SCALE D: 1

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

4.7 AIRCRAFT

4.7.1 Inspection Program Approvals (IPA's)

APPROVAL #	AIRCRAFT TYPE	REVISION #	DATE APPROVED
W 0080	Cessna 206	Rev # 2	Mar 10, 1995
W 0672	DHC3 Single Otter	Rev # 1	Feb 24, 1994
W 0673	Cessna 185	Rev # 1	Feb 24, 1994
W 0954	BN2A Islander	Original	Apr 26, 1994

Are IPA's based upon Manufacturers inspection program?

 X Yes No

4.7.2 Are the aircraft overhauled, and repaired in accordance with the manufacturer's procedures and recommendations?

 X Yes No

4.7.3 Are you required by your operations and/or Maintenance Control Manual to perform manufacturer's mandatory service bulletins?

 Yes X No

4.7.4 Are the inspection work forms and work sheets current and available for review?

 X Yes No

4.7.5 Are the Inspector signatures and/or Independent Control Inspections entered on all required inspection forms and work sheets?

 X Yes No

4.7.6 Are the inspections completed within the designated time period, being hours or calendar?
Are extensions used?

 X Yes No

 X Yes No

4.7.7 Are Aircraft Journey Log books and Aircraft Technical Log books up-to-date, and do they contain all required information?

 * Yes No



* Maintenance entries are very brief.

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

4.7.8 Is the following information recorded in the appropriate logbooks for components replaced:

Serial numbers?

X Yes No

Part numbers?

X Yes No

Time Since Overhaul (TSO)?

X Yes No

4.7.9 Are Maintenance Release Tags for installed components properly maintained?

X Yes No

4.7.10 Which of the following are used to track and schedule inspections, TBO(s), airworthiness directives and mandatory service bulletins:

* Manual (Board)?

 Yes X No

Computer? A.M.C.S. Computer System

* Yes No

Both, manual and computer?

 Yes X No

4.7.11 Are aircraft fuel sumps drained daily?

X Yes No

Are samples maintained until the next refuelling?

 Yes X No

4.7.12 Is an oil analysis program in effect?

 Yes X No

4.7.13 Are component time changes completed on schedule?

X Yes No

4.7.14 Are extensions used?

X Yes No

For some of the recent items, extensions appear to have been utilized to the maximum possible.

4.7.15 Are applicable AD's/SB's complied with, and properly documented?

X Yes No

4.7.16 Are Pitot-Static inspections completed on schedule?

X Yes No

4.7.17 Are altimeter/transponder checks completed on schedule?

X Yes No

Completed for BN2A Islander aircraft, as per Transport Canada requirements.

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

4.7.18 Are discrepancies and flight tests properly recorded and certified?

 * Yes No

* As noted in Section 2.7.22.

4.7.19 Are records available of all maintenance performed?

 X Yes No

4.7.20 Are the applicable Minimum Equipment Lists available?

 Yes n/a No

SCALE D: n/a

4.7.21 Is engine performance monitored by recording trend data?

 Yes X No

4.7.22 Who is responsible for pre-flight inspections?

The Flight Crew

4.8 OVERHAUL AND REPAIR

4.8.1 Name of major agencies that perform the following:

Airframe: Major inspection?

Spring Aviation, Kamloops

Thomas Aircraft, Edmonton

Northern Aviation Maintenance, Fort Nelson

Engines: Overhaul?

Progressive Air, Aero Recip, or Factory Remans

Components: Overhaul?

Various places (based upon price)

Prairie Flying Service (for new)

Electrical: Overhaul?

Ducey Avionics

Avionics: Overhaul?

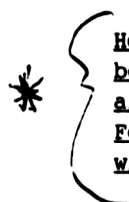
Ducey Avionics, IFR Precision

DEH CHO AIR LIMITED
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- 4.8.2 Who is responsible for monitoring aircraft times and scheduling maintenance? The Director of Maintenance

Briefly explain system:

Deh Cho Air utilize Aircraft Journey Log book Alert Cards in order to alert the pilots as to the upcoming items. Additionally, Northern Aviation Maintenance utilize the A.M.C.S. Computer Program to track scheduled inspection due times, component due times, and calendar items (i.e. cabin fire extinguishers, survival kits, First Aid kits, two year transponder inspections, two year altimeter inspections). Following each scheduled inspection, the computer is to be updated, and a new Aircraft Status Sheet is to be printed. One copy of the new Status Sheet is to be placed in the aircraft file, and one copy is to be provided to Deh Cho Air.

 However, the above noted procedure is NOT being followed because the Fort Liard staff are not forwarding the aircraft information to Fort Nelson, and therefore the Fort Nelson staff are not supplying the Fort Liard base with current computer printouts.

4.9 TECHNICAL LIBRARY

SCALE D: 3 ✓

Two Technical Libraries are utilized - one maintained in Fort Liard by Deh Cho Aircraft Maintenance, and the other maintained in Fort Nelson by Northern Aviation Maintenance.

The following Section only pertains to Fort Liard.

- 4.9.1 Is the location of the Technical Library accessible to all maintenance staff? X Yes No
- 4.9.2 Is there a master listing of ALL manuals/publications to show revision status? Yes X No

DEH CHO AIR LIMITED
Charter Air Carrier Base Inspection Report

4.9.3 Does the Technical Library contain the following publications, and are they current?

Service Bulletins/Service Letters	<u>X</u>	Yes	<u> </u>	No
Aircraft and Engine Manuals	<u>X</u>	Yes	<u> </u>	No
Parts Catalogues	<u>X</u>	Yes	<u> </u>	No
Personnel Licensing Handbook - Volume 2	<u>X</u>	Yes	<u> </u>	No
FAA Airworthiness Directives <u>On Microfiche</u>	<u>X</u>	Yes	<u> </u>	No
Canadian Airworthiness Directives	<u>X</u>	Yes	<u> </u>	No
Airworthiness Notices - Series A (White)	<u>X</u>	Yes	<u> </u>	No
Airworthiness Notices - Series B (Pink)	<u>X</u>	Yes	<u> </u>	No
Airworthiness Notices - Series C (Yellow)	<u>X</u>	Yes	<u> </u>	No
A/W Manual 501 Definition of Terms	<u>X</u>	Yes	<u> </u>	No
A/W Manual 505 Delegation of Authority	<u>n/a</u>	Yes	<u> </u>	No
A/W Manual 507 General Procedures	<u>X</u>	Yes	<u> </u>	No
A/W Manual 513 Design Approval	<u>X</u>	Yes	<u> </u>	No
A/W Manual 571 Maint of Aeronautical Products	<u>X</u>	Yes	<u> </u>	No
A/W Manual 573 AMO's	<u>X</u>	Yes	<u> </u>	No
A/W Manual 575 Maintenance Certification	<u>X</u>	Yes	<u> </u>	No
A/W Manual 591 SDR's	<u>X</u>	Yes	<u> </u>	No
A/W Manual 593 Airworthiness Directives	<u>X</u>	Yes	<u> </u>	No

4.10 HANGAR MAINTENANCE AREAS

SCALE C: 2-3 ✓

4.10.1 Is the facility of sufficient size?	<u>X</u>	Yes	<u> </u>	No
4.10.2 Is it clean and in a good state of repair?	<u>X</u>	Yes	<u> </u>	No
4.10.3 Are the facilities well lit?	<u>X</u>	Yes	<u> </u>	No
4.10.4 Are Material Safety Data Sheets available?	<u>X</u>	Yes	<u> </u>	No
4.10.5 Is there a flammable(s) storage area?	<u> </u>	Yes	<u>X</u>	No

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- 4.10.6 Is a fire alarm system installed? Yes X No
Is it exercised? Yes n/a No
- 4.10.7 Is the fire department's telephone number displayed? Yes X No
- 4.10.8 Are sufficient fire extinguishers available? X Yes No
Are they inspected at least annually? X Yes No
- By whom? Inspected January 1996 by Pyre master in Yellowknife
- Are records available? X Yes No
- 4.10.9 Are utility outlets available and properly marked? Yes X No
- 4.10.10 Are static ground connectors provided? Yes X No
Are they used? Yes n/a No
- 4.10.11 Do hangar doors work properly? X Yes No
- 4.10.12 Are emergency shower and/or emergency eye wash facilities available? X Yes No
- 4.10.13 Are machinery guards in place? (or) X Yes No
- 4.10.14 Is personal protective gear provided? X Yes No
- 4.10.15 Is there a security system in place? Yes X No
- Electronic? Yes n/a No
Security Guards? Yes n/a No
Other (List):
- 4.10.16 Ground Support Equipment: SCALE A: n/a
- Is it properly maintained? Yes No
Is it inspected periodically? Yes No
Are records maintained? Yes No
Do operators of the equipment receive training? Yes No

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4.11 WORKSHOPS

SCALE C: n/a

4.11.1 Does the company operate workshops? Yes X No

4.12 STOCK ROOM

SCALE C: 2-3✓

4.12.1 Is it temperature controlled? X Yes No

4.12.2 Are materials stored properly? X Yes No

4.12.3 Are materials marked properly? X Yes No

Parts are identified with stickers cross-referenced to the Suppliers Invoice Number. Sign-out sheets are used to record parts that are removed (one clipboard for each aircraft).

4.12.4 Are outdated materials removed? X Yes No

4.12.5 Is there an inventory list? Yes X No

4.12.6 Are stock control limits established? Yes X No

4.12.7 Are parts inspected on receipt? X Yes No

4.12.8 Do separate reception, dispatch and quarantine areas exist? X Yes No

4.12.9 How often are physical inventories performed? Are not conducted

4.12.10 Are shelf life items monitored for expiration dates? Yes X No

4.12.11 Are parts properly tagged? X Yes No

4.12.12 Where are original issue documents held?

Retained in a filing cabinet, and filed alphabetically according to the name of the supplier.

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AIRCRAFT INSPECTION

	A/C #1	A/C #2
MODEL	Cessna 185	Cessna 206
Location	Fort Liard	Fort Liard
Registration, Age	GZXU - 1978	FILO - 1973
Total Time	7,624 hrs	5,593 hrs
Max Gross	3,350 lbs	3,800 lbs
Ramp Weight	1,898 lbs	2,073 lbs
Payload	1,361 lbs	1,727 lbs
1. Exterior Appearance SCALE A:	3-4	2
Involves: skin, paint, undercarriage, leaks.		
2. Interior Appearance SCALE B:	3	2
SCALE D:	3	3
Involves, crew compart, flight documents, pax cabin, seats, headliner, sidewalls, carpets.		
3. Safety Equipment - * installed & condition		
SCALE B:	3	3
Involves, fire extinguisher, first aid kit, life jackets, life rafts, survival equipment, PAX briefing cards, shoulder restraints, ELT, recognition lights.		
Other:		
4. Mechanical - general condition SCALE A:	3 ✓	3 ✓
Involves: Engine compart, battery compart, gearbox or transmission compartment(s).		
5. Comms/Nav aids Quant (None, Single, Dual)		
VHF COMM	S	D
HF COMM	N	N
VHF - FM COMM	N	N

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	C185 - GZXU	C206 - FILO
ILS	N	S
VOR	S	S
ADF	S	D
Radar	N	N
DME	N	N
Xponder	N	N
Radio Altimeters	N	N
Area Nav	N	N
Auto Pilot	N	N
Flight Director	N	N
CVR/FDR	N	N
Global Positioning GPS	Garmin GPS-55	Garmin GPS-55
Other:		

6. Aircraft Documents

Is the flight manual in the aircraft?	<u>X</u> Yes ___ No
Is it up to date?	<u>X</u> Yes ___ No
Airworthiness Certificate?	<u>X</u> Yes ___ No
Registration Certificate?	<u>X</u> Yes ___ No
Radio License?	<u>X</u> Yes ___ No
Insurance?	n/a Yes ___ No
Compass Swing & correction card?	<u>X</u> Yes ___ No
Weight and Balance?	<u>X</u> Yes ___ No

7. Remarks concerning aircraft inspection:

OK!

DEH CHO AIR LIMITED
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	BN2A - GIHF	
ILS	S	
VOR	D	
ADF	D	
Radar	N	
DME	N	
Xponder	S	
Radio Altimeters	N	
Area Nav	N	
Auto Pilot	N	
Flight Director	N	
CVR/FDR	N	
Global Positioning GPS	Garmin GPS-95XL	
Other:		

6. Aircraft Documents

Is the flight manual in the aircraft?	<u>X</u> Yes <u> </u> No
Is it up to date?	<u>X</u> Yes <u> </u> No
Airworthiness Certificate?	<u>X</u> Yes <u> </u> No
Registration Certificate?	<u>X</u> Yes <u> </u> No
Radio License?	<u>X</u> Yes <u> </u> No
Insurance?	n/a Yes <u> </u> No
Compass Swing & correction card?	<u>X</u> Yes <u> </u> No
Weight and Balance?	<u>X</u> Yes <u> </u> No

7. Remarks concerning aircraft inspection.

- * - Notable fuel leak on Right Hand Engine (repaired during my inspection),
- * Outboard exhaust pipe and exhaust clamp on Right Hand Engine improperly installed, and therefore wearing a hole in the engine cowling.

PART 5 - SUMMARY OF DISCREPANCIES

SECTION NOTED DISCREPANCY

2.5.1 Pilot Files and Training Files require attention:

Chief Pilot Rob Borrelli:

- Expired file copy of Medical Certificate (rectified during my inspection).
- Rob has not completed the Transport Canada required One (1) Hour of Dedicated Recurrent Flight Training on the DHC-3 Single Otter (He did complete some 1996 Enroute Training on the aircraft, during a ferry flight from Watson Lake to Fort Liard).
- Several Flight Training forms not properly completed and/or certified in accordance with Transport Canada Regulations.

*Rob has
confirmed*

Pilot Samo Cebul:

- Expired file copy of Medical Certificate.
- Dangerous Goods Training not completed.

Pilot Brett Madson:

- Dangerous Goods Training not completed.

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Pilot Lief Scott:

- Expired file copy of Medical Certificate.
- During my January 31 & February 1, 1996 base inspection Lief had not completed Dangerous Goods Training.

On March 1, 1996 Rob Borrelli informed me via fax that Lief had completed Dangerous Goods Training on March 1, 1996.

However, on June 13, 1996 the training file contained both a completed exam and a Dangerous Goods Certificate that were dated January 29, 1996 (dated prior to my Jan/Feb inspection, during which time the training had not been completed).

Pilot Robert Shypitka:

- No File copy of Medical Certificate.
- During my Jan/Feb 1996 Base Inspection, there was no file copy of his Dangerous Goods Certificate, as required by Transport Canada.

On March 1, 1996, Rob Borrelli informed me via fax that Robert's training file had been updated with a copy of his Dangerous Goods Certificate.

However, during my June 13, 1996 base inspection, the file copy of the Certificate could not be found (original photocopied during my inspection, and placed on file).

- The Cessna 206 Flight Training record indicates a training flight of 4.3 hours duration. However, this flight could not be verified by the Aircraft Journey Log book, and Rob Borrelli could not explain the reason for the excessive duration of the flight (1.0 hours required).

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2.7.2 The current Flight Operations Manual (last Amended June 1, 1994) needs to be amended and/or customized in several areas. Rob Borrelli stated a new manual was completed in January 1996 and submitted to Transport Canada for approval. However, he stated the Transport Canada Inspectors are not approving any new manuals, pending the release of the new Canadian Air Regulations (CARS), which has been delayed three times and is currently scheduled for implementation in the Fall of 1996.

4.6.1 Deh Cho Air, Deh Cho Aircraft Maintenance, and Northern Aviation Maintenance each utilize separate Transport Canada approved Maintenance Control Manuals. However, none of the manuals accurately reflect the business structure under which the three Companies receive and/or conduct aircraft maintenance. Furthermore, there is no formal maintenance agreement in place between the two Maintenance Companies.

4.7.7 The maintenance certifications completed by Fort Liard based Engineer Don Oliver consist of his signature, date, and licence number. However, this does not comply with the procedures outlined in the Maintenance Control Manual of Northern Aviation Maintenance (and Transport Canada advisory information) which requires the entry to identify the Approved Maintenance Organization (AMO) who performed the work.

NOTE: This discrepancy was previously reported.

On March 1, 1996 Rob Borrelli informed me via fax that: "maintenance staff advised and will now comply."

4.8.2 According to the Northern Aviation Maintenance Ltd. Maintenance Control Manual, Quality Control for aircraft maintenance (i.e. track and schedule inspections, TBO's, airworthiness directives, mandatory service bulletins, etc.) is maintained through the AMCS Computer Program in Fort Nelson. However, the Fort Liard staff are not forwarding the aircraft information to Fort Nelson, and therefore the Fort Nelson staff are not supplying the Fort Liard base with current computer printouts.

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Aircraft Inspection BN2A Islander C-GIHF:

- Notable fuel leak on Right Hand Engine (repaired during my inspection).
- Outboard exhaust pipe and exhaust clamp on Right Hand Engine improperly installed, and therefore wearing a hole in the engine cowling.
- On February 1, 1996 during my inspection, I reported that the cockpit indicator for the Rudder Trim was missing.

* It is my opinion there is enhanced potential for an incident/accident to occur should the aircraft depart with an incorrectly set rudder trim, and subsequently experience an engine failure (somewhat supported by a recent Islander accident, which claimed seven lives).

Therefore, during my June 13, 1996 base inspection, I was disappointed to discover Deh Cho Air operated the aircraft for another two and one-half months (until April 15th) until a replacement indicator was fabricated and installed.

PART 6 - CONCLUSION

In my opinion, Deh Cho Air continue to operate a marginally adequate Fixed Wing Charter Air Carrier service.

Due to the limited time frame available to me, combined with the reduced potential for utilization of the single engine aircraft, the safety base inspection focused primarily on the BN2A Islander aircraft and associated maintenance records. In addition, I also concentrated on verifying what action, if any, the carrier took to rectify the discrepancies I detected and reported during my previous safety base inspection conducted on January 31 and February 1, 1996.

General Manager/Operations Manager/Chief Pilot Rob Borrelli, Islander Pilot Robert Shypitka, and Apprentice Engineer Derek Theede were available for my base inspection. The staff members appeared to be interested in the inspection and the requested information was provided. I was introduced to the new Base Engineer, Don Oliver, upon arriving at the hangar, unfortunately he was not available during my inspection of the maintenance operations due to the fact he left for Hay Lake to conduct maintenance on the DHC-3 Single Otter.

My June 13, 1996 safety base inspection was the fourth (4th) inspection that I have conducted on Deh Cho Air (others completed in November 1993, December 1994, January/February 1996). As with the current base inspection, each of the previous base inspections also identified several noted discrepancies.

My concerns are as follows:

- ✓ - Despite receiving a copy of my Summary of Discrepancies, Deh Cho Air have allowed some of the previously reported discrepancies to reoccur, and furthermore some of those reported discrepancies do not appear to have been rectified properly.
- ✓ - The significant number of discrepancies that continue to be detected and reported during each base inspection. This is in direct contrast to many other charter air carriers I regularly inspect, and who continually strive to reduce their number of discrepancies each year.

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- The notable fuel leak I detected during my inspection of the BN2A Islander, and the initial response to my discovery of the problem.

I identified the problem first to Pilot Robert Shypitka, who mentioned he probably over-primed the aircraft on his previous flight, and therefore there was no cause for my concern. Apprentice Engineer Derek Theede arrived shortly thereafter, and in my opinion, he also appeared hesitant to further investigate the problem. I believe the reluctance to investigate the problem may possibly have been influenced by the fact the aircraft was preparing to depart on a Charter flight. Only after I insisted however, was the engine cowling removed in order to facilitate the investigation of the fuel leak (the fuel smell could be identified from approximately two feet away, and there was a noticeable fuel trail inside the engine cowling, which appeared to have been there for an extended period).

Rob Borrelli appeared after the cowling was removed, and in my opinion, he appeared to be somewhat distraught that the cowling had been removed. He immediately questioned the status of the aircraft and reminded the staff the aircraft was scheduled for another flight. Rob did appear more subdued when I stated I was responsible for the removal of the engine cowling because I detected a notable fuel leak. He briefly assisted in determining the origin of the fuel leak, and then returned to the office without further communication.

The fuel leak was determined to be a loose fitting on the line connecting the fuel boost pump and the carburettor (for reasons unknown, the fitting was only hand tight). The line was tightened, the cowling reinstalled, and the aircraft departed without any further complications.

However, the fact remains it appeared the Deh Cho Air staff were willing to consider dispatching the BN2A Islander without investigating the significant fuel leak. This is especially disconcerting when considering the fact the fuel leak was enabling raw fuel to be introduced into the hot engine exhaust area.

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- The outboard exhaust pipe and clamp are wearing a hole in the Right Hand engine cowling on the Islander. In my opinion, and based upon the considerable amount of wear already present on the cowling, the exhaust pipe has been contacting the cowling for an extended period of time. Although the wear on the cowling does not present a safety risk, I would question any Maintenance Department or Aircraft Maintenance Engineer who would install the cowling in this manner, and then allow the aircraft to operate like this for an extended period of time.

In my opinion, this apparent lack of timely and effective action certainly does not portray an enhanced level of maintenance care and/or detail.

- Although General Manager/Operations Manager/Chief Pilot Rob Borrelli has acquired over 8,500 hours of flying experience, the remainder of the pilot staff are ALL low-time pilots. The current level of pilot experience for those particular pilots ranges from a high of only 2,000 hours to a low of 880 hours. (These two individuals recently commenced employment, while the two other pilots, who have been employed since last summer, only have 1,100 hours and 1,050 hours respectively.

PART 7 - RECOMMENDATION

This report is based upon opinion and/or observation of the Deh Cho Air operation as it appeared on the actual day of the Contrail Aviation Safety base inspection. Based upon this information, I recommend Deh Cho Air for your conditional approval, with the following restrictions:

- I recommend an in-depth follow-up Base Inspection be completed, in order to ensure the current discrepancies have indeed been rectified.
- Considering the limited level of experience of the Deh Cho Air pilots, I recommend ALL flights be conducted with both a Pilot-In-Command (Captain) and a Second-In-Command (Co-Pilot).

* Furthermore, I recommend that Husky Oil establish guidelines which stipulate the minimum qualifications acceptable for each of the crew members.

- Considering the maintenance concerns that arose during my base inspection, I recommend a Licensed Aircraft Maintenance Engineer be required to conduct and certify a thorough Daily Inspection, prior to Husky Oil accepting the aircraft for charter use.

Note: The Daily Inspection is currently completed by the pilots.

- If Rob Borrelli should resign, and considering the current limited level of experience of the other pilots on staff, I recommend suspend utilization of the carrier until a qualified replacement has commenced employment, and received Transport Canada approval as Operations Manager/Chief Pilot.
- If the current level of Maintenance manpower based in Fort Liard (one Licensed Aircraft Maintenance Engineer and one Apprentice Engineer) decreases during the busy summer season, I recommend suspend utilization of the carrier until additional qualified maintenance personnel are retained.

*** END ***