Canadian Petroleum Engineering Inc.

FINAL WELL REPORT

AURORA COLLEGE
INUVIK, NWT

AURORA TRAINING WELL INUVIK G-53

Grid # 6830-13330

DATE: 9/4/01

Company Representative: Lorne Hammer,
Canadian Petroleum Engineering Inc.

National Energy Board | Office national de l'énergie

Exploratory ☐ Delineation ☐

Development ☐ Service ☑

APPROVAL TO DRILL A WELL

This application is submitted under Section 82 of the *Canada Oil and Gas Drilling Regulations*. When approved under Section 83 of the Regulations, it is the requisite approval for the commencement of drilling operations

Well Name: Aurora Training Well Inuvik G-53

Operator: Aurora College, Inuvik — Drilling Program No: n/a

Contractor: AkitaEqutak — Interest Identifier: n/a

Drilling Rig or Unit: #15 — Estimated Well Cost: $850,000

Location-Unit: G — Section: 53 — Grid Area: 6830-13330

Coordinates: Lat.: 68°22'28.04" — Long: 133°43'08.47"

Area: Inuvik — Field / Pool: n/a

Elevation-KB/RT: 22.605m (ASL) — GL / Seafloor: 17.905m

Approx. Spud Date: July 28, 2001 — Est. Days on Location: 40

Anticipated Total Depth: 450m — Target Horizons: n/a

EVALUATION PROGRAM

Ten-metre sample intervals: n/a

Five-metre sample intervals: from surface casing to TD

Canned sample intervals: from surface casing to TD

Conventional cores at: none

Logs and Tests: Gamma Ray, Neutron Density to TD; Temperature and Caliper to TD

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m KB)	Cementing
610	refrigerated conductor casing		20	8.5
244.5	79.62	DST 80LT	150	16.5
178	47.62	DST 80LT	450	6.7

B.O.P. Equipment: diverter on 16" casing

Akita BOP on 9 5/8" surface casing. BOP consists of Hydril GK 11" 3m Annular

2 X Shaffer 9" LWP 3m Single Gate Blind/Pipe Rams. 21 Mpa choke manifold

Other Information: The well is being drilled to be used as a training facility for students from the Northwest Territories, the Yukon Territory and Nunavut

Signed: [signature] — Title: Vice Presdient

Responsible Officer

Name: Lorne Hammer — Company: Canadian Petroleum Engineering Inc.

Date: July 25, 2001 — Phone: (403) 263-0752

APPROVAL

An approved copy of this notice is to be posted at each wellsite

Date: July 27/01 — Signed: [signature]

Chief Conservation Officer

File: 9311-A72-1-1

WID: 1915

UWI: 300G536830133300

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Canada

01/07/99
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A. INTRODUCTION

Aurora College drilled a 400 meter test well spudded on 7/30/01and finishing on 8/4/01 to provide a training facility in the town site of Inuvik that would be used for training of Northwest Territories residents in safe oilfield practices. Stakeholders from Inuvik, PITS, CAPP, Aurora College and Akita Drilling were in support of the test well. Aurora College approached stakeholders in the oil and gas industry and government and received wholehearted support from all groups.

The drilling contractor was Akita Equtak based out of Inuvik. Akita Equtak is a joint venture between the Inuvialuit Regional Corporation and Akita Drilling Ltd. The drilling rig used was Akita Rig # 15, the rig that will be used by Japex et al to drill the Mallik 3L-38 Methane Hydrate Research Well on Richards Island this upcoming winter. Akita Rig #15 is rated to drill to 2000 meters. The rig has a 66 m^3 mud system and is equipped with two boilers, one is rated at 100 HP and the other rated at 80 HP.

The well was drilled on a site located within the town boundaries of Inuvik on Lot # 1001, Quad 107 B/7 LTO 1227. The lot was leased to Aurora College for a ten (10) year period by the Municipal Corporation of the town of Inuvik for the training facility.

The exact coordinates of the well are:
Latitude: 68^0 23' 25.9" N.
Longitude: 133^0 45' 42.2" N

Akita Rig #15 was moved onto the location on 7/29/01following the setting of a 406 mm refrigerated conductor to a depth of 16 meters. The conductor casing was cemented with good mud and cement returns throughout the job with cement to surface. The diverter was nippled up and pressure tested, as was the remainder of the well control equipment. The refrigeration unit was run continuously until the 244 mm permafrost casing was set at 155 meters. No evidence of permafrost was seen, and the mud cooler was not run for the main section of the well.

The conductor shoe was drilled out with a 311 mm bit and the 311 mm surface hole was control drilled to 155 meters at a penetration rate of 15 m/hr. The permafrost protection string made up of 11 joints of Siderco 244 mm, 71.62 kg/m, DST 80 LT, BT&C casing was run to 155 meters and cemented with 13 tonnes of permafrost cement. The casing was rotated and reciprocated during cementing and good cement returns, approximately 0.5 m^3 were circulated out at surface. The plug was bumped with 3000 kPa and the pressure held. The plug was down at 0522 on 8/1/01.

The BOP's were installed and the annular preventor pressure tested to 1400 and 10,000 kPa. The pipe rams, HCR, Choke manifold, kelly cock, stabbing valve, and kill lines were all tested to 1400 kPa and 10,000 kPa high. All of the equipment held for 10 minutes

without bleed off. The accumulator precharge bottles were checked and the accumulator function tested prior to drilling out.

The float collar and shoe were drilled out 8/2/01. A formation leak off test was not done due to the soft formation and 18 kPA /m was used for all well control calculations. The 216 mm hole was drilled from 155 meters to 340 meters without incident. At 340 meters, the penetration rate slowed from 10 meters/hr to approximately 5 to 6 meters /hr. Bit # 2 was tripped out at 349 meters and Bit # 3 run in. Bit #2 drilled from 349 meters to 401 meters at 5.1 m/hr.

After total depth was reached at 401 meters, Schlumberger logged the open hole. One log run was made and the following logs obtained from 401 m to 155 m: Temperature Log, Platform Express Array Induction - SP, Platform Express Compensated Neutron Litho Density, and a caliper-cement volume log.

Following the log run, a wiper trip was made in preparation for running casing. Thirty (30) joints of Siderco 178 mm, 47.62 kg/m, DST - 80 LT, BT&C casing was run to 397.5 meters. The casing was rotated and reciprocated while cementing and was cemented with 9 tonnes of permafrost cement with good cement returns to surface. The plug was bumped with 5000 kPa at 0930 on 8/4/01.

The rig was released at 1200 hours on 8/4/01for use as the training facility. Aurora College in conjunction with PITS has conducted 4 introductory courses for floor hands and 76 personnel from the Northwest Territories have successfully completed the course. Akita Rig #15 was released by Aurora College on 8/25/01 at the completion of the floor hand training courses. The well was suspended with a FMC wellhead installed on the 178 mm casing to facilitate a service rig training course. The service rig training course started 08/30/01 and it is to be completed 09/8/01.

Drilling Fluid:

Conductor Hole: Dry/Auger

Surface Hole:

Properties:		
	Viscosity:	52 sec/l
	Weight:	1170 kg/m^3
	PH:	9.0
	Solids	not available
	Gels:	not available
	PV/YP:	not available
	Filter Cake:	not available

Main Hole:

Properties:		
	Viscosity:	94 sec/l
	Weight:	1170 kg/m^3
	PH:	11.0
	Solids:	14%
	Gels:	10.5/18
	PV/YP:	20/25.5
	Filter Cake:	not available

Fishing Operations:not applicable

Well Kicks and Well Control Operations: not applicable

Formation Leak off Tests:

Leak Off test not conducted as the only casing that was dri
out was the conductor casing. As per regulations. Leak off
not required under conductor casing.

Time Distribution:

2001/08/01	00:00 - 00:15	POOH to run casing
	00:15 - 05:15	Rigged up to and Ran 11 joints 244.9 mm casing
	05:15 - 06:30	Rig up to cement, held safety meeting, cemented 245 mm casing with good returns to surface
	06:30 - 13:00	WOC
	13:00 - 23:15	Cut casing, Weld on casing bowl, nipple up BOP's
	23:15 - 24:00	Pressure test manifold & Blind rams
2001/08/02	00:00 - 04:00	Pressure test BOP's and HCR's, all valves, kelly cocks
	04:00 - 04:15	BOP Drill
	04:15 - 08:00	Drill 216 mm hole from 155 m to 164 m
	08:00 - 08:45	Trip for mud ring
	08:45 -09:00	BOP Drill
	09:00 - 23:45	Drill 164 m to 349 m
	23:45 - 24:00	Condition mud & circulate
2001/08/03	00:00 - 03:15	POOH for new bit
	03:15 - 14:00	Drill from 349 m to 401 mm
	14:00 - 14:15	Condition mud & circulate
	14:15 - 15:45	POOH to log w/Schlumberger
	15:45 - 19:00	Run Temp, Caliper, Array Induction-SP, Comp. Neutron Litho-density logs
	19:00 - 23:15	RIH, Condition mud & circulate, POOH to run casing
	23:15 - 24:00	Rig to & run casing
2001/08/04	00:00 - 04:00	Run 178 mm casing
	04:00 - 08:00	Wait on circulating swedge
	08:00 - 08:45	Run casing to 397.5 m
	08:45 - 09:00	Safety meeting w/ Schlumberger cementers
	09:00 - 10:00	Cement 178 mm casing to surface
	10:00 - 12:00	Set Slips and cut casing
	12:00	Rig Release

Time Breakdown:

Activity	Hours
Drilling	46.5
Surveying	2
Circulating	2.75
Cementing	1.25
WOC	6.5
Rig Service	2.25
Rig Repair	0
Tripping, reaming	15.25
Running Casing	13.5
Rig Up	34

Nipple Up/Test BOP's	15.5
Safety mtg/BOP Drills	2
Well Evaluation	2.75

15. Deviation Survey:

Depth (Meters)	Inclination (Degrees)	Instrument
28	1/2	Totco
60	1/2	Totco
87	3/4	Totco
112	3/4	Totco
150	3/4	Totco
245	1 1/2	Totco
350	1	Totco
401	2	Totco

16. Abandonment Plugs:
    a. No Abandonment plugs were set.
    b. The well was completed with 178 mm casing to 397.5 meters and cemented to surface; the well was not drilled out.
    c. The well is currently suspended.

17. Composite Well Record: Attached

18. Completion Record: Not Applicable

19. Final Well Configuration: Attached

CANADIAN PETROLEUM ENGINEERING LTD.

STICK DIAGRAM – POST IN DOGHOUSE

Well Name: Aurora Training Well Inuvik G-53 **License No.** 9311-A 72 - 1 - 1

Operator: Aurora College

Wellsite Supervisor: Stan Podulsky

Surface Hole

Drill 311 mm hole to 155 m
Survey at 30 m then every 30 m max
Dummy trip at 160 m
Polymer
Strap at 160 m

Potential Problems: Permafrost may be present, gravel may be encountered

Wellhead/BOP's Surface Mud
279 x 244 mm 21 Mpa
Casing Bowl Spud Mud : Gel XC

228.6 mm 21 Mpa
BOP Stack
AEUB Class n/a

For Gravel

For MudRings

Surface Casing
Depth: 155 m kb

Description: 244 mm
71.62kg/m, DST-80LT

Main Hole

Drill 216 mm hole to 400 m
Mud up at n/a m

Cut core at n/a m

Lost Circulation at Zone

Sample requirements: 5 m intervals
From 160 m to TD m

Potential Problems:
None Anticipated

Main Hole Mud
Upper Section
Drill to m

Formation Tops
Pleistocene @ surface

Lower Cretaceous
@ 160 mKB

Paleozoic @
340 m KB

Properties
viscosity 47
water loss n/c
ph 12
solids 5%
mudweight 1120

High Pressure Formations
n/a Pressure:
n/a Pressure:
Low Pressure Formations
Pressure:
n/a Pressure:

Lower Section
Drill to TD m
Properties
viscosity 94
water loss n/c
ph 11
solids 7.5
mudweight 1170

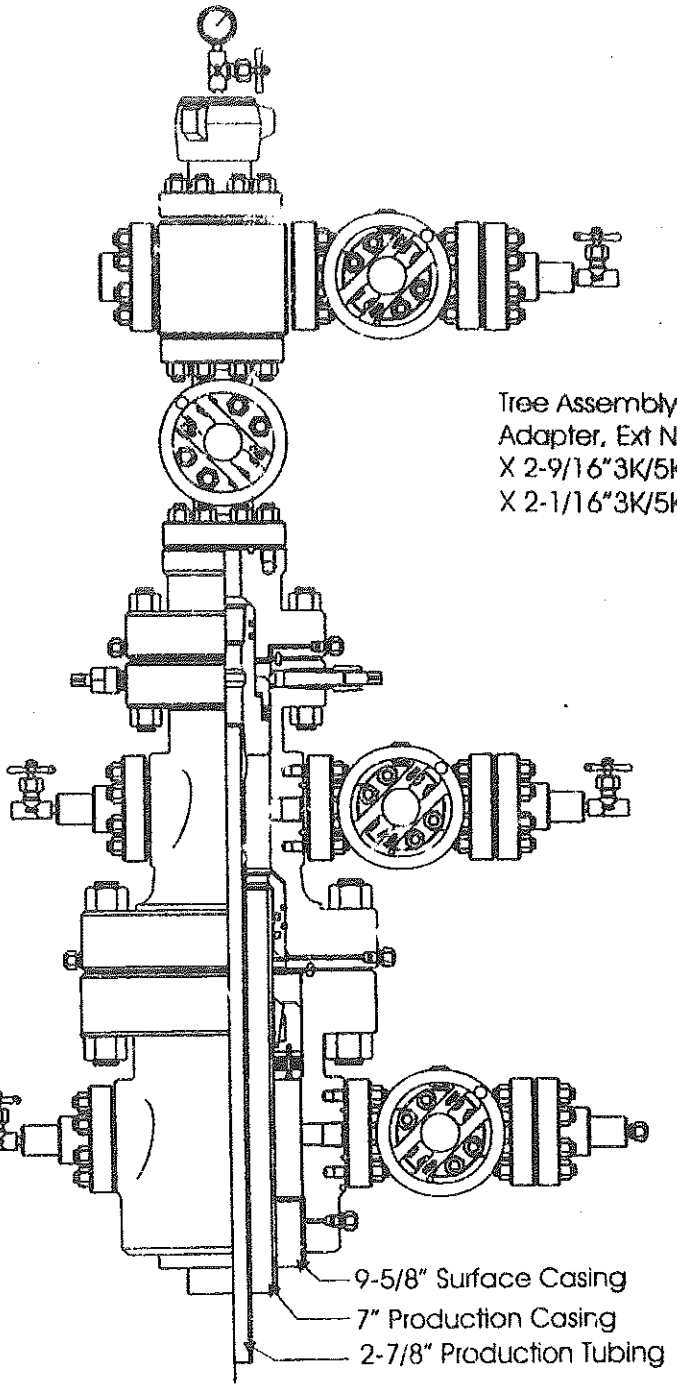
Primary Target Formation Pressure
normal Pressure: 3934 kPa
Sour Zones
n/a H2S
H2S

BottomHolePressure
4602 Kpa
Mud Weight
to control:

Logging Program: GR/Density/Temp/Cal
Drill Stem Tests: n/a

TD 401 m kg/m^3
General Comments: 178 mm, 47.62 kg/m, DST-80 LT csg. set at TD

FMC EnergySystems



CONVENTIONAL WELLHEAD AND TREE SYSTEM

AURORA COLLEGE

INUVIK, NWT

D: Geology

Geological Summary:

Formation Tops

Formation	Lithology	Approximate Depth
Pleistocene	Shale/ minor Siltstone	Surface
Lower Cretaceous	Shale / minor Sandstone	180 m
Paleozoic	Shale/Sandstone w/ Carbonates	340 m
Total Depth		401m KB

Sample tops have not been corrected to wireline log control.

Sample Descriptions: (see also geological strip log - Appendix 12)

0 - 160 m: No samples taken.

160 - 165 m: Pleistocene (?). Loose pebbles (50%) in fine sand (.250-.350 mm). Pebbles are 5 mm in size and subrounded.
165 - 170 m: As above.

170 - 175 m: Loose pebbles (20%) in fine sand (.250-.350 mm). Pebbles are 1-2 mm in size and subrounded.
175 - 180 m: As above.

180 - 185 m: Lower Cretaceous. Silty mudstone (dark grey), subangular, 1-2 mm in size.
185 - 190 m: As above.

190 - 195 m: Silty mudstone (dark grey), angular, 5 - 10 mm in size.

195 - 200 m: Silty mudstone (dark grey), subangular, .350 - .500 mm in size.

200 - 205 m: Silty mudstone (dark grey), subangular, 4 - 8 mm in size.
205 - 210 m: As above

210 - 215 m: Silty mudstone (dark grey), subangular, 5 - 20 mm in size.
215 - 220 m: As above.
220 - 225 m: As above.
225 - 230 m: As above

230 - 235 m: Silty mudstone (dark grey), subrounded, 3 - 8 mm in size.
235 - 240 m: As above.
240 - 245 m: as above
245 - 250 m: As above.

250 - 255 m: As above.
255 - 260 m: As above
260 - 265 m: As above.
265 - 270 m: As above.
270 - 275 m: As above.
275 - 280 m: As above.
280 - 285 m: As above.
285 - 290 m: As above
290 - 295 m: As above
295 - 300 m: As above.
300 - 305 m: As above.
305 - 310 m: As above.

310 - 315 m: Silty mudstone (dark grey), subangular, 3 - 8 mm in size. Finer matrix of fine sand (.177 - .250 mm) with high quartz content.
315 - 320 m: As above.
320 - 325 m: As above.

325 - 330 m: Silty mudstone (dark grey), angular, 5 - 10 mm in size. Finer matrix of fine sand (.177 - .250 mm) with high quartz content.
330 - 335 m: As above.
335 - 340 m: As above.

340 - 345 m: Paleozoic. Mixture of silty mudstone (dark grey) and sandstone with high silicate content, subangular, not well sorted. Fine particles are (.177 - .250 mm) in size with high quartz content.
345 - 350 m: As above.

350 - 355 m: Mostly sand (.177 - .250 mm) with some sandstone (15%) and silty mudstone. Presence of Anthracite.

355 - 360 m: Silty mudstone (dark grey), subangular, 3 - 8 mm in size. Some sand in fine matrix (.177 - .250 mm).

360 - 365 m: Clayey mudstone (green), angular, (0.1 - 10 mm), 85%. Presence of sandstone, subangular (3 - 10 mm), 10%. Some silty mudstone, 5%.
365 - 370 m: As above.

370 - 375 m: Clayey mudstone (green), angular, 3 - 15 mm, 95%. Small percentage of sandstone, subangular (< 3 mm).

375 - 380 m: Clayey mudstone (green), angular, (0.1 - 10 mm), 85%. Presence of sandstone, subangular (3 - 10 mm), 10%. Some silty mudstone, 5%.

380 - 385 m: Clayey mudstone (green), angular, 3 - 15 mm, 100%.

385 - 390 m: Clayey mudstone (different mineral composition), angular, 3 - 155 mm in size. 100%.

390 - 395 m: Clayey mudstone (green), angular, 2 - 15 mm in size, 100%.
395 - 400 m: As above. Last sample.
401 m: TD.

Coring Record

No cores were cut on this well.

Gas Detection Report

The Akita Rig 15 Pason gas detection system was used on this well to monitor background and drilled gas concentrations.
Background gas varied from 0 to 1.0% over the drilling of the well.
No significant gas shows were encountered during the drilling of the well to TD of 401 meters KB. Neither trip gas nor connection gas was recorded while drilling.

Drill Stem Tests

There were no tests on this well.

Well Evaluation

The following logs were run:

Array Induction - SP	399.5 meters to 153.5 meters
Compensated Neutron Litho Density	399.5 meters to 153.5 meters
Cement Volume Log (Caliper)	399.5 meters to 153.5 meters
Temperature Log	399.5 meters to 153.5 meters

AURORA COLLEGE TEST WELL — DAILY DRILLING REPORT

WELL	AURORA COLLEGE TEST WELL		REPORT # 1	DATE	01-07-28
DEPTH	mKB	PROGRESS	m	in	rotating hours (last 24 hours)
OPER 24.00	Rigging up and Waiting for remainder of rig to arrive		FOREMAN	STAN PODULSKY	MOBILE NO 780-975-8
DAILY COST		HOLE CND	Good	WEATHER	O/Cast	TOOLPUSH	
CUM COST		RIG / RIG #	AKITA DRILLING	TEMP		T P MOBILE	
FORMATION		K B ELEV.	22.91	ROADS	Rough	CHANNEL	

BIT PERFORMANCE

Bit No			
Size (mm)			
Mfg			
Type			
Serial #			
Nozzles			
From (mKB)			
To (mKB)			
Hrs on Bit			
WOB (daN)			
RPM			
Condition			
Pulled For?			
Meters			
m/hr			
Cum Hrs			

SURVEYS

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length:	String Wt	daN
Avail WOB:	Jts DP Racks	DC Conn:
JtsDP in hole:	DP on Loc:	DP Conn:

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO		Survey		Plug Back	
Drill Actual		Logging		Fishing	
Reaming		Run Casing		Direct. Dnil	
Coring		Cementing		Work Pipe	
Rm Rathole		WOC		Mouse / Rat	
Cond / Circ		NU BOP's		Safety Mtg	
Tripping		Test BOPs		Move Rig	
Lubricate Rig		Drill Out Cmt		WO Trucks	
Repair Rig		DST			
Slip/Cut Line		Hndle Tools		Total Hrs	

DRILLING FLUID

Time	
Depth(m)	
Density	
Mud Grad	
Vis	
PV	
YP	
Gels	
pH	
WL (cc's)	
Filter Cake	
Sand (%)	
Solids (%)	
Oil (%)	
Pf/Mf	
MBT	
Cl (ppm)	
Ca (ppm)	
Mud Co.	
Mud Man	
Mud Up @	

VOLUMES

CumWtrHld	
Loss Circ.	Nil

WELL CONTROL

RSPP-SPM	
MACP(kPa)	
Calc Hole Fill	
Act Hole Fill	
Est BOP Drill:	
Daylights	
Afternoons	
Graveyards	

PUMPS

Pump No	# 1	#2
Make	EMCO	EMCO
Model	D-650	D-650
Liner X Stk		
SPM		
Pump Rate	#VALUE!	
Pump Eff		
Pump Press.		kPa
Drillpipe AV		m/min
Drillcollar AV		m/min
Nozzle Vel		m/sec

MUD & CHEMICALS

Mud Cycle	#VALUE!	min
Bottoms Up	#VALUE!	min
Tanks		m3
Hole Volume		m3
System Vol.		m3

Mud & Chemicals Added

Mud Daily Cost	$260
Mud Cum Cost	$260

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/min)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs: (to 24 00)

24 HOUR SUMMARY

Worked on location ,drilled conductor hole, se ..d cemented conductor pipe.
Woc till morning.

Midnite operations

Well spudded @
Directions to location 3 Km. North of Inuvic

Original G.L.:	17.91 m
Cut At Pin:	m
New G L:	17.905 m
KB-Grd:	5 00 m
K B	22 91 m

AURORA COLLEGE TEST WELL — DAILY DRILLING REPORT

WELL	AURORA COLLEGE TEST WELL		REPORT #	2	DATE 01-07-20
DEPTH	18 mKB	PROGRESS 18 m	in		rotating hours (last 24 hours)
OPER 24 00	ld waiting on welder to weld on casing flange.		FOREMAN	STAN PODULSK	MOBILE NO [illegible]
DAILY COST		HOLE CND.	WEATHER	Good	TOOLPUSH
CUM COST		RIG / RIG # AKITA DRILLING	TEMP		T P MOBILE
FORMATION		K B ELEV 22.905	ROADS	Rough	CHANNEL

BIT PERFORMANCE

Bit No	
Size (mm)	
Mfg	
Type	
Serial #	
Nozzles	
From (mKB)	
To (mKB)	
Hrs on Bit	
WOB (daN)	
RPM	
Condition	
Pulled For?	
Meters	
m/hr	
Cum Hrs	

SURVEYS

DRILLING FLUID

Time	
Depth(m)	
Density	
Mud Grad	
Vis	
PV	
YP	
Gels	
pH	
WL (cc's)	
Filter Cake	
Sand (%)	
Solids (%)	
Oil (%)	
Pf/Mf	
MBT	
Cl (ppm)	
Ca (ppm)	
Mud Co.	Newpark
Mud Man	Shydowsky
Mud Up @	Surface

PUMPS

Pump No	# 1	#2
Make	EMSCO	EMSCO
Model	D-650	D-650
Liner X Stk		
SPM		
Pump Rate	#VALUE!	
Pump Eff	100%	100%
Pump Press		kPa
Drillpipe AV		m/min
Drillcollar AV		m/min
Nozzle Vel		m/sec

MUD & CHEMICALS

Mud Cycle	#VALUE!	min
Bottoms Up	#VALUE!	min
Tanks		m3
Hole Volume	1	m3
System Vol.	1	m3

Mud & Chemicals Added

Mud Daily Cost

Mud Cum Cost

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length	String Wt	daN
Avail WOB	Jts DP Racks	DC Conn:
JtsDP in hole	DP on Loc.	DP Conn:

VOLUMES

CumWtrHld	
Loss Circ.	

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO	12	Survey		Plug Back	
Drill Actual		Logging		Fishing	
Reaming		Run Casing		Direct. Drill	
Coring		Cementing		Work Pipe	
Rm Rathole		WOC		Wait O/water	
Cond / Circ		NU BOP's		Conductor	4
Tripping		Test BOPs			
Lubricate Rig		Drill Out Cmt			
Repair Rig		DST			
Slip/Cut Line		Hndle Tools		Total Hrs	16

WELL CONTROL

RSPP-SPM	
MACP(kPa)	
Calc Hole Fill	
Act Hole Fill	
Lst BOP Drill:	
Daylights	
Afternoons	
Graveyards	

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/min)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs: (to 24 00)

24 HOUR SUMMARY

8:00 Installed celler, Drilled mouse and rat hole, to 12:00 hrs. Spotted rig and equipment , rigged up to 24:00 hrs.

DAILY DRILLING REPORT

WELL	AURORA COLLEGE TEST WELL		REPORT #	3	DATE 01-07-30
DEPTH	32 mKB	PROGRESS 14 m	in	2	rotating hours (last 24 hours)
OPER 08:00	Drilling		FOREMAN	STAN PODULSKY	MOBILE NO [redacted]
DAILY COST		HOLE CND	WEATHER	O-Cast	TOOLPUSH [redacted]
CUM COST		RIG / RIG # AKITA DRILLING	TEMP	4	T.P. MOBILE
FORMATION	Surface	K.B. ELEV 22.905	ROADS	Good	CHANNEL

BIT PERFORMANCE

Bit No	1		
Size (mm)	311		
Mfg	Reed		
Type	HP11		
Serial #	QR6315		
Nozzles	3 x 19		
From (mKB)			
To (mKB)	32		
Hrs on Bit	2		
WOB (daN)	4		
RPM	80		
Condition	Run		
Pulled For?	in		
Meters	32		
m/hr	16.0		
Cum Hrs	2		

SURVEYS

DRILLING FLUID

Time	23:00
Depth(m)	30
Density	1040
Mud Grad	10.20
Vis	40
PV	
YP	
Gels	
pH	9.5
WL (cc's)	
Filter Cake	
Sand (%)	
Solids (%)	
Oil (%)	
Pf/Mf	
MBT	
Cl (ppm)	
Ca (ppm)	
Mud Co.	Newpark
Mud Man	Shydlowsky
Mud Up @	

PUMPS

Pump No	# 1	#2
Make	EMSCO	EMSCO
Model	P-650	P-650
Liner x Stk	152 X 254	152 X 254
SPM	140	
Pump Rate		
Pump Eff.	95%	
Pump Press		kPa
Drillpipe AV		m/min
Drillcollar AV		m/min
Nozzle Vel		m/sec

MUD & CHEMICALS

Mud Cycle	16	min
Bottoms Up	1	min
Tanks	30	m3
Hole Volume	1	m3
System Vol.	31	m3
Mud & Chemicals Added		
Bentonite		11
Dfoam		1
Soda ash		1
KCL		150
Caustic		1
Mud Daily Cost		
Mud Cum Cost		

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length	10.27	String Wt	7,000 daN		
Avail. WOB		Jts DP Racks		DC Conn:	
Jts DP in hole:		DP on Loc:		DP Conn:	

VOLUMES

CumWtrHld	
Lost Circ.	

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO	22	Survey		Plug Back	
Drill Actual	2	Logging		Fishing	
Reaming		Run Casing		Direct. Drill	
Coring		Cementing		Work Pipe	
Rm Rathole		WOC		Mix L.C.M.	
Cond / Circ		NU BOP's			
Tripping		Test BOPs			
Lubricate Rig		Drill Out Cmt			
Repair Rig		DST			
Slip/Cut Line		Handle Tools		Total Hrs	24

WELL CONTROL

RSPP-SPM	
MACP(kPa)	
Calc Hole Fill	
Act Hole Fill	
Last BOP Drill:	
Daylights	
Afternoons	
Graveyards	

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/mn)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs: (to 24:00)

24 HOUR SUMMARY

Rigged to spud to 21:00 drilled out cement to 22:00 hrs. drilled ahead to 32 M. to 24:00 hrs.

DAILY DRILLING REPORT

WELL	AURORA COLLEGE TEST WELL		REPORT #: 4	DATE	01-07-31
DEPTH	155 mKB	PROGRESS 123 m	In	18 1/4	rotating hours (last 24 hours)
OPER 24:00	Pull out to run casing		FOREMAN	STAN PODULSKY	MOBILE NO
DAILY COST		HOLE CND V/good	WEATHER	Clear	TOOLPUSH
CUM COST		RIG / RIG # AKITA DRILLING	TEMP		T P MOBILE
FORMATION		K.B. ELEV 22.905	ROADS:	Good	CHANNEL

BIT PERFORMANCE

Bit No	1-A
Size (mm)	311
Mfg	Reed
Type	HP-11
Serial #	QR6315
Nozzles	3 x 19
From (mKB)	
To (mKB)	155
Hrs on Bit	18 1/4
WOB (daN)	7,000
RPM	80/100
Condition	1-1-in
Pulled For?	casing
Meters	155
m/hr	8.5
Cum Hrs	18 1/4

SURVEYS

1/2	28M.
1/2	60 M.
3/4	87 M.
3/4	112 M.
3/4	150 M.

DRILLING FLUID

Time	21:30
Depth(m)	144
Density	1170
Mud Grad	11.48
Vis	52
PV	
YP	
Gels	
pH	9.0
WL (cc's)	
Filter Cake	
Sand (%)	
Solids (%)	
Oil (%)	
Pf/Mf	
MBT	
Cl (ppm)	
Ca (ppm)	
Mud Co.	
Mud Man	
Mud Up @	

PUMPS

Pump No	# 1	#2
Make	EMSCO	EMSCO
Model	P-650	P-650
Liner X Str	152 X 254	152 X 254
SPM	80	80
Pump Rate	1.12	1.12
Pump Eff	95%	100%
Pump Press	2,340	kPa
Drillpipe AV	24	m/min
Drillcollar AV	40	m/min
Nozzle Vel		m/sec

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length:	57.41	String Wt	12	daN	
Avail WOB:	10	Jts DP Racks	-6	DC Conn:	
Jts DP in hole:	6	DP on Loc:		DP Conn:	

VOLUMES

CumWtrHld	
Loss Circ.	

MUD & CHEMICALS

Mud Cycle	2	min
Bottoms Up	2	min
Tanks		m3
Hole Volume	5	m3
System Vol.	5	m3

Mud & Chemicals Added.

KCL	50
GEL	24
NEWZAN	7

Mud Daily Cost

Mud Cum Cost

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO		Survey	1 1/4	Plug Back	
Drill Actual	16 1/4	Logging		Fishing	
Reaming		Run Casing		Direct. Drill	
Coring		Cementing		Work Pipe	1 3/4
Rm Rathole		WOC			
Cond / Circ	3/4	NU BOP's			
Tripping	3 1/4	Test BOPs			
Lubricate Rig	3/4	Drill Out Cmt			
Repair Rig		DST			
Slip/Cut Line		Hndle Tools		Total Hrs	24

WELL CONTROL

RSPP-SPM	
MACP(kPa)	1149
Calc Hole Fill	
Act Hole Fill	
Lst BOP Drill:	
Daylights	
Afternoons	
Graveyards	

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/min)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs: (to 24:00)

24 HOUR SUMMARY

0:00 Serviced rig anddrilled to 41 m. to 01:15 hrs. Worked tight hole to 03:00 hrs.Drilled and surveyed to 78 m.

to 08:45 hrs. serviced rig to 09:00 hrs.Drilled and surveyed to 144 M. to 17:30 hrs.Circulated to 17.45 hrs.

Made wiper trip to 19:15 hrs.Serviced rig to 19:30 hrs. Tripped baqck in to 20:30 hrs.
Drilled to 155 M. to 22:30 hrs.Circulated and ran survey to 23:15 hrs. Hoist to run casing to 24:00 hrs.

AURORA COLLEGE TEST WELL — DAILY DRILLING REPORT

WELL:	AURORA COLLEGE TEST WELL			REPORT #: 5	DATE: 01-08-01
DEPTH	155 mKB	PROGRESS	m	in	rotating hours (last 24 hours)
OPER 24.00:				FOREMAN: STAN PODULSKY	MOBILE NO: [illegible]
DAILY COST:		HOLE CND:		WEATHER: O-cast	TOOLPUSH:
CUM COST:		RIG / RIG #:	AKITA DRILLING	TEMP: 5	T P MOBILE:
FORMATION:		K.B. ELEV.:	22.905	ROADS: Good	CHANNEL:

BIT PERFORMANCE

Bit No	1			
Size (mm)	215			
Mfg	Reed			
Type	EH11			
Serial #	Cm3310			
Nozzles	3x95			
From (mKB)	155			
To (mKB)	155			
Hrs on Bit				
WOB (daN)				
RPM				
Condition				
Pulled For?				
Meters				
m/hr				
Cum Hrs				

SURVEYS

DRILLING FLUID

Time	05:00 hrs
Depth(m)	155
Density	1160
Mud Grad	11.38
Vis	50
PV	
YP	
Gels	
pH	9.0
WL (cc's)	
Filter Cake	
Sand (%)	
Solids (%)	
Oil (%)	
Pf/Mf	
MBT	
Cl (ppm)	
Ca (ppm)	
Mud Co.	Newpark
Mud Man	Craig
Mud Up @	

PUMPS

Pump No.	# 1	#2
Make	EMSCO	EMSCO
Model	P-650	P-650
Liner X Stk	152 X 254	152 X 254
SPM		
Pump Rate		
Pump Eff.	95%	
Pump Press.		kPa
Drillpipe AV		m/min
Drillcollar AV		m/min
Nozzle Vel		m/sec

MUD & CHEMICALS

Mud Cycle		min
Bottoms Up		min
Tanks		m3
Hole Volume	5	m3
System Vol.	5	m3

Mud & Chemicals Added:

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length:	String Wt	daN
Avail WOB:	Jts DP Racks	DC Conn:
JtsDP in hole:	DP on Loc:	DP Conn:

VOLUMES

CumWtrHld	
Loss Circ.	

Mud Daily Cost

Mud Cum Cost

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO	1 1/4	Survey		Plug Back	
Drill Actual		Logging		Fishing	
Reaming		Run Casing	2	Direct. Drill	
Coring		Cementing	1 1/4	Work Pipe	
Rm Rathole		WOC	6 1/2	Weld on bowl	5 1/2
Cond / Circ	1	NU BOP's	4 1/2		
Tripping	1/4	Test BOPs	3/4	Safety meeting	3/4
Lubricate Rig	1/4	Drill Out Cmt			
Repair Rig		DST			
Slip/Cut Line		Hndle Tools		Total Hrs	24

WELL CONTROL

RSPP-SPM	
MACP(kPa)	1166
Calc Hole Fill	
Act Hole Fill	
Last BOP Drill:	
Daylights	
Afternoons	
Hours/Days	
Graveyards	

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/min)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs: (to 24:00)

24 HOUR SUMMARY

Tripped out to run casing to 00:15 Rig to and ran 11 jts. 244.9 mm. Casing to 06:30 hrs. Waited on cement to 13:00 hrs. Cut off casing and welded on bowl to 19:00 hrs.Nippled up BOPS. To23:15 hrs. Pressure tested Blind rams ,manifold pipe rams and Hydril to 1400 Kpa. And 10000Kpa. Ok.(10 mins.) each. Checked motor offs OK.to 24 00 hrs.

AURORA COLLEGE TEST WELL — DAILY DRILLING REPORT

WELL:	AURORA COLLEGE TEST WELL		REPORT #	6	DATE: 01-08-02
DEPTH:	349 mKB	PROGRESS: 194 m	in	16	rotating hours (last 24 hours)
OPER 24:00:	Circulate		FOREMAN:	STAN PODULSKY	MOBILE NO: 765-875-6886
DAILY COST:		HOLE CND:	WEATHER:	Ocast	TOOLPUSH:
CUM COST:		RIG / RIG #: AKITA DRILLING	TEMP:	10	CP MOBILE:
FORMATION:		K.B. ELEV.: 22.905	ROADS:	Good	CHANNEL:

BIT PERFORMANCE

Bit No	1		
Size (mm)	216		
Mfg.	Reed		
Type	EH11		
Serial #	CM3310		
Nozzles	3 X 9.5		
From (mKB)	155		
To (mKB)	349		
Hrs on Bit	16		
WOB (daN)	7,000		
RPM	120		
Condition	Run		
Pulled For?			
Meters	194		
m/hr	12.1		
Cum Hrs	16		

SURVEYS

1 1/2	245

DRILLING FLUID

Time	20:20
Depth(m)	349
Density	1170
Mud Grad	11.48
Vis	94
PV	20
YP	25.5
Gels	10.5/18
pH	11.0
WL (cc's)	N/C
Filter Cake	
Sand (%)	
Solids (%)	
Oil (%)	
Pf/Mf	
MBT	
Cl (ppm)	43000
Ca (ppm)	200
Mud Co.	Newpark
Mud Man	Shydlowsky
Mud Up @	Surface

PUMPS

Pump No.	# 1	#2
Make	EMSCO	EMSCO
Model	P-650	P-650
Liner X Stk	152 X 254	152 X 254
SPM		
Pump Rate		
Pump Eff.	95%	
Pump Press.		kPa
Drillpipe AV		m/min
Drillcollar AV		m/min
Nozzle Vel		m/sec

MUD & CHEMICALS

Mud Cycle		min
Bottoms Up		min
Tanks		m3
Hole Volume	11	m3
System Vol.	11	m3

Mud & Chemicals Added:

Gel	2
KCL	62
Newzan	2
Nofoam	1
Soda ash	1

Mud Daily Cost

Mud Cum Cost

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length:	84.87	String Wt:	12,000 daN		
Avail. WOB:	8,000	Jts DP Racks:		DC Conn:	
Jts DP in hole:		DP on Loc:		DP Conn:	

VOLUMES

CumWtrHld	
Loss Circ.	

WELL CONTROL

RSPP-SPM	920/60
MACP(kPa)	1149
Calc Hole Fill	
Act Hole Fill	
Lst BOP Drill.	
Daylights	01/08/02
Afternoons	01/08/02
Graveyards	

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO		Survey	1/4	Plug Back	
Drill Actual	16	Logging		Fishing	
Reaming		Run Casing		Direct. Drill	
Coring		Cementing		Work Pipe	
Rm Rathole		WOC		Bop Drill	1/2
Cond / Circ	1/4	NU BOP's			
Tripping	2	Test BOPs	2 3/4		
Lubricate Rig	1/2	Drill Out Cmt	1 3/4		
Repair Rig		DST			
Slip/Cut Line		Handle Tools		Total Hrs	24

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/min)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs: (to 24:00)

24 HOUR SUMMARY

Tested BOPs. To 01:00 hrs. Ran in with bit and pressure tested pop valve - OK. To 02:15 hrs. Finnish pressure testing BOPs :Tested Hydril, pipe rams, hcr, and manual valves, check valve , stabbing valve, inside bop., upper and lower kelly cocks, to 1400 and 10000 Kpa 10 mins each OK. Function tested motor kills OK. Function tested accumulator : precharge 6200 Kpa. Pumped up accumulater from 13000Kpa. To 20000 Kpa. OK. Precharge 6200 Kpa. Held BOP. Drill to 04:15 hrs. Drilled out cement to 06:00 hrs. drilled to 173 M. to 08:00 hrs. Tripped for mud ring to 08:45 hrs BOP drill to 09:00 hrs. Drilled and surveyed as required to 349 M. to 24:00 hrs.

AURORA COLLEGE TEST WELL

DAILY DRILLING REPORT

WELL	AURORA COLLEGE TEST WELL		REPORT #	7	DATE 01-08-05
DEPTH	401 mKB	PROGRESS 52 m	in	10 1/4	rotating hours (last 24 hours)
OPER 24:00	Rig to run casing		FOREMAN	STAN PODULSKY	MOBILE NO [illegible]
DAILY COST		HOLE CND	WEATHER	Rain	TOOLPUSH
CUM COST		RIG / RIG # AKITA DRILLING	TEMP	5	T P MOBILE
FORMATION		K.B. ELEV 22.905	ROADS	Good	CHANNEL

BIT PERFORMANCE

Bit No	2		
Size (mm)	216		
Mfg	Reed		
Type	HP13G		
Serial #	MB5510		
Nozzles	3 X 11		
From (mKB)	349		
To (mKB)	401		
Hrs on Bit	10 1/4		
WOB (daN)	7000		
RPM	120		
Condition	Bald		
Pulled For?	Casing		
Meters	52		
m/hr	5.1		
Cum Hrs	10 1/4		

SURVEYS

2	401

DRILLING FLUID

Time	14:15
Depth(m)	401
Density	1275
Mud Grad	12.51
Vis	150
PV	10
YP	42.5
Gels	1
pH	10.0
WL (cc's)	n/c
Filter Cake	
Sand (%)	1.0%
Solids (%)	14.0%
Oil (%)	
Pf/Mf	.17/.38
MBT	85
Cl (ppm)	38000
Ca (ppm)	220
Mud Co.	Newpark
Mud Man	Shydlowsky
Mud Up @	Surf.

PUMPS

Pump No.	# 1	#2
Make	Desco	Desco
Model	P-650	P-650
Liner X Stk	152 X 254	152 X 254
SPM		
Pump Rate		
Pump Eff.	95%	
Pump Press.		kPa
Drillpipe AV		m/min
Drillcollar AV		m/min
Nozzle Vel		m/sec

MUD & CHEMICALS

Mud Cycle		min
Bottoms Up		min
Tanks		m3
Hole Volume	13	m3
System Vol.	13	m3

Mud & Chemicals Added

Desco 4 sx

Mud Daily Cost

Mud Cum Cost

BOTTOMHOLE ASSEMBLY (No., Item, OD, ID, TJ Type)

BHA Length:	String Wt	daN
Avail. WOB:	Jts DP Racks	DC Conn:
Jts DP in hole	DP on Loc:	DP Conn:

VOLUMES

CumWtrHld	
Loss Circ.	

WELL CONTROL

RSPP-SPM	
MACP(kPa)	970
Calc Hole Fill	
Act Hole Fill	
Let BOP Drill:	
Daylights	
Afternoons	
Graveyards	

SOLIDS CONTROL

Shaker Make		
Shaker Mesh		
	Desilter	Centrifuge
Vol UF (l/min)		
U.F. (kg/m3)		
O.F. (kg/m3)		
Hours/Days		

Boiler Hrs. (to 24:00)

DRILLING OPERATIONS TIME BREAKDOWN

RU / TO		Survey	1/2	Plug Back	
Drill Actual	10 1/4	Logging	2 3/4	Fishing	
Reaming		Run Casing	3/4	Direct. Drill	
Coring		Cementing		Work Pipe	
Rm Rathole		WOC		Safety meeting	1/4
Cond / Circ	3/4	NU BOP's			
Tripping	8	Test BOPs			
Lubricate Rig	3/4	Drill Out Cmt			
Repair Rig		DST			
Slip/Cut Line		Handle Tools		Total Hrs	24

24 HOUR SUMMARY

Pulled out of the hole to change bits and make wiper trip to 01:45 hrs. Ran back in to 03:15 hrs. Drilled and surveyed as required to 401 Mkb.Circulated and pulled out to log to 15:45.Serviced rig and logged with Schlumberger to 19:00 hrs.Made up bit and ran in to lay down pipe to 20:15. Circulated , ran survey, and layed down pipe and drill collars to 23:15 hrs. Rigged to run casing to 24:00 hrs.

CANADIAN PETROLEUM ENGINEERING INC.
DAILY DRILLING REPORT

(report period from 0:00 to 24:00 hours)

DATE 01/08/04
DAY 8

Canadian Petroleum Engineering Inc.
WELL NAME: Aurora College Training Well Inuvik G-53
AFE NO.:
DEPTH (2400 h) 401 m PROGRESS 0 m OPERATION Well suspended

DRILLING FLUID

TIME 1415 hrs TYPE KCl Polymer LOST TO FORMATION 0 m³ @ m

DENSITY	1275 kg/m³	FILTRATE:	nc	cm³/30 min	SOLIDS	14	%
FUNNEL VISC.	150 s/L	FILTER CAKE:	0	mm	SAND	1	%
PLASTIC VISC.	10 mPa.s	CHLORIDE:	38000	mg/L	TEMP	26	°C
YIELD POINT:	42.5 Pa	CALCIUM:	220	mg/L	SCREEN MESH:	80	
GEL SYRENGTH:	22/27 Pa	POTASSIUM		mg/L	DUMPED		m³
PH:	10.0	BOTTOMS UP:		min			

CENTRIFUGE / DESANDER: OF: UF: DESILTER: OF: UF:
LAST BLOWOUT DRILL 01/08/02 LAST SAFETY TALK: 01/08/04

BIT RECORD

BIT NO.	SIZE (mm)	TYPE	CLASS	SERIAL NO.	JETS (mm) 1	2	3	DEPTH OUT	METRES DRILLED	HOURS	m/h	DULL CONDITIONS T	B	G
2	216	HP13G		137	11	11	11	401	52	10.25	5.1	8	8	1

BIT NO.	FORCE ON BIT (1000 daN)	ROTARY SPEED (r/min)	LINER SIZE (mm)	STROKE LENGTH (mm)	PUMP SPEED (r/min)	OUTPUT (m³/min)					JET VELOCITY (m/s)	PUMP PRESSURE (kPa)
2	7000	120	152	254	113	1.3					71.9	4650

DEVIATION SURVEYS

2 @ 401 m
@ m
@ m
@ m
@ m
@ m
@ m

MUD ADDITIVES USED (Sacks)

DRILLING ASSEMBLY (Bit to Kelly)

TOOL	O.D. (mm)	I.D. (mm)	LENGTH (m)

TIME DISTRIBUTION (hr)

DRILLING:		RUN CASING AND CEMENT:	9.5	SLIP LINE	
TRIPPING:		FISHING:		RIG REPAIR	
RIG SERVICE CHECK BOPS:		LOGGING:		RIG UP / TEAR DOWN	
SURVEYING:		CORING:		HANDLE TOOLS:	
REAM AND CLEAN:		DRILL STEM TESTING:		Safety Meeting	0.5
MIX AND CONDITION MUD:		WOC			
CIRCULATING		HEA	2	TOTAL:	12

REMARKS: Run 30 jts 178 mm, 47.62 kg/m, DST -80 ng to 398 meters. Make up 178 mm BTC swedge and cement with 9 tonnes permafrost cement. Set FMC slips and cut casing. Ri ed at 1200 Hrs.
Well training course to commence 01/08/05

DAILY COSTS: OPERATION AT: Rig Released 0700 h:
CUM COSTS: SPUDDED: 01/07/30 KB ELEV: 22.905 m GL ELEV: 17.605 m
AFE'D COSTS: RIG RELEASE: 00:01/08/04 PROJ TD: 450 m DRILLED: 401 m

CONTRACTOR: Akita RIG NUMBER: 15
WEATHER CONDITIONS: Sunny LEASE CONDITIONS: Dry
WELLSITE SUPERVISOR: Stan Podulsky REPORT TAKEN BY: I. Hammer

CANADIAN PETROLEUM ENGINEERING INC.

SUMMARY OF WELL DATA

NAME OF LOCATION: Aurora College Training Well — Inuvik G-53
GRD ELEVATION: 17.905
SPUD DATE: 2001-07-30

CONTRACTORS: Akita Equatak
Akita Rig 15

TARGET: N/A

TOTAL DEPTH: 401 m PLUGGED BACK 397.5 m
HOLE

CASING RECORD

SIZE (mm)	WEIGHT	MAKE	TYPE	GRADE	SHOE AT	CEMENT	CEMENT	NEW OR
244	71.62	Siderco	DST80-LT	BTC	155	P/F	13 t	New
178	47.62	Siderco	DST80-LT	BTC	397.5	P/F	9 t	New

LOG RECORD SURFACE HOLE

COMPANY	TYPE OF LOG	INTERVAL	

LOG RECORD MAIN HOLE

COMPANY	TYPE OF LOG	INTERVAL	
Schlumberger	Array Induction-SP	155	401
	Comp. CNL-Density	155	401
	Temperature	155	401
	Cement Volume	155	401

CORE RECORD

COMPANY	FORMATION	INTERVAL	

DEVIATION SURVEYS

DEPTH	INCL. DEG.	INSTRUMENT	DEPTH	INCL. DEG.	INSTRUMENT
28	1/2	totco	245	1 1/2	
60	1/2		350	1	
67	3/4		401	2	
112	3/4				
150	3/4				

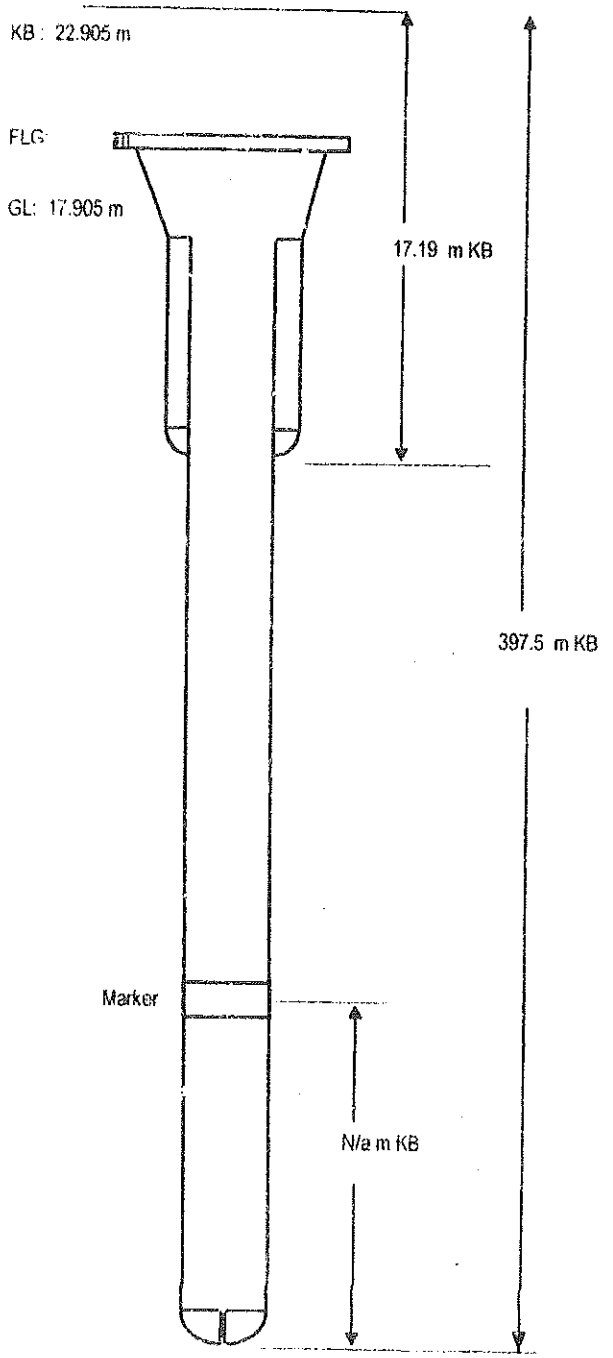
Canadian Petroleum Engineering Inc.

CPE CEMENTING AND CASING REPORT

TYPE OF STRING: Production String SIZE: 178 mm

NAME OF WELL: Aurora College Training Well Inuvik G-53

LOCATION Inuvik, NT



NO. OF JOINTS:	30	
TALLY:	396.71	m
FLOAT SHOE:	0.40	
FLOAT COLLAR:	0.39	
OTHER FITTINGS:		
CENTRALIZERS:	17 weatherford	
SCRATCHERS:		
PLUG USED:	Wiper, Cement	
CASING SHOE AT:	397.50	m
SHOE BUMPED WITH:	5000	Kpa
SLIP-SEAL ASSEMBLY: MAKE:	FMC	
MODEL:	TC-1A- ENS	
CASING HEAD: MAKE:	StreamFlo	
MODEL:		
SIZE:	244 x 279	
SERIES:	3 MPa	
CEMENT USED:	9	TONNES
THEORETICAL CEMENT TOP:	Surface (Observed)	
TYPE OF CEMENT:	P/F	
ADDITIVES:		
CEMENTING COMPANY:	Schlumberger	

REMARKS: String cemented full length, good cement returns to Surface.
Rig released at 1200hrs, 2001-08-04

CEMENTER: Jaye Asplund

WELLSITE SUPERVISOR: Stan Podulsky

CASING & CEMENTING REPORT

WELL NAME	AURORA COLLEGE TEST WELL G-53	CASING STRING	Surface	
		DATE	01-07-31	
SUPERVISOR	STAN PODULSKY	HOLE SIZE	311	mm
CEMENTERS		T.D.	155	m

CASING (as run in the hole - from the bottom, not including marker jts)

# JOINTS	O.D.	kg/m	GRADE	COUPLING	RGE	MAKE	LENGTH	
11	244.5	71.62	DST-80LT	LT&C	3	SEDERCA	155.26	m
								m
								m

CASING BOWL		ELEVATIONS					
MAKE	S/F CROWN	K.B. Elev.	22.91	GUIDE SHOE		Weatherford	0.49 m
TYPE	SLIP ON	GRD Elev.	17.91	FLOAT COLLAR		Weatherford	0.40 m
SIZE	11	KB-GRD	5.00	STAGE COLLAR			m
X	9 5/8	KB-CBF		MARKER JOINT			m
RATING	3000			MARKER JOINT			m
SER #	96702-15						

TOTAL ON HOOK	156.15	m
Stick Up	1.15	m
LANDED AT	155.00	m
Top of Float Collar	140.82	m
Top of Stage Collar		m
Top of Marker Jt #1		m
Top of Marker Jt #2		m
Joints Out	13.68	m
Total Casing on Location	168.94	m
Cut Off Length	6.40	m

No of PLUGS: 2
TYPE of PLUGS: Rubber

SCRATCHERS & STOP RINGS

Type and Total No. Run:
Intervals Scratched:
Total No. Stop Rings Used:

CENTRALIZERS

Type and Total No. Run:
Joint #'s Centralized:

SOLID VANE SPIRAL STAND-OFF BANDS

Depth Set & No. Used: 1 on every joint

CEMENT

ITEM	Tonnes	Class	Type	Additives	Kg/m3	Vol (m3)	Rate (m3 / min)
Pre-Flush			H2O	nil	1000	4.00	0.50
Mix	13	Permafrost			1860	9.80	0.80
Tail-in							
Displace			H2o		1000	5.50	0.60

CEMENTING

Start Mix Time	4:51	hrs	Mud Weight	1170	kg/m3	Vol. Cement returns	2	m3
Start Displ. Time	5:11	hrs	Mud Viscosity	52	sec/l	Vol. Lost Returns		m3
Bump Plug Time	5:22	hrs	Yield Point	10.5	Pa	Calc Cement Top	Surface	mKB
Bump Plug Press	3000	kPa	Open Hole Vol.	10.5	m3	Csg Rotated?	No	
Floats Held OK?	OK.		From		mKB	Slips Set With	n/a	daN
Pipe Recip. Until	N/A	m3 left	To	155	mKB	Cmt Bin Requested?	No	
Pipe Rot. Until	N/A	m3 left	Cmt Head Type	Swadge		Bell Nipple Welded On?	n/a	
Cmt Vol Based on	Calc		Init String Wt	10000	daN	Protector Plate On?	n/a	
plus % Excess	50		Final String Wt	Nil	daN	Primary Seal Install.?	n/a	

Comments:

MAXIMUM ALLOWABLE CASING PRESSURE
AURORA COLLEGE TEST
G-53

Depth of Last Casing String: 155 metres.

Fracture Gradient used: 11 kpa/m.

Mud Density (kg/m3)	MACP (kpa)
1000	184
1010	169
1020	154
1030	138
1040	123
1050	108
1060	93
1070	78
1080	62
1090	47
1100	32

MACP with Gas To Surface: 1705 kpa.

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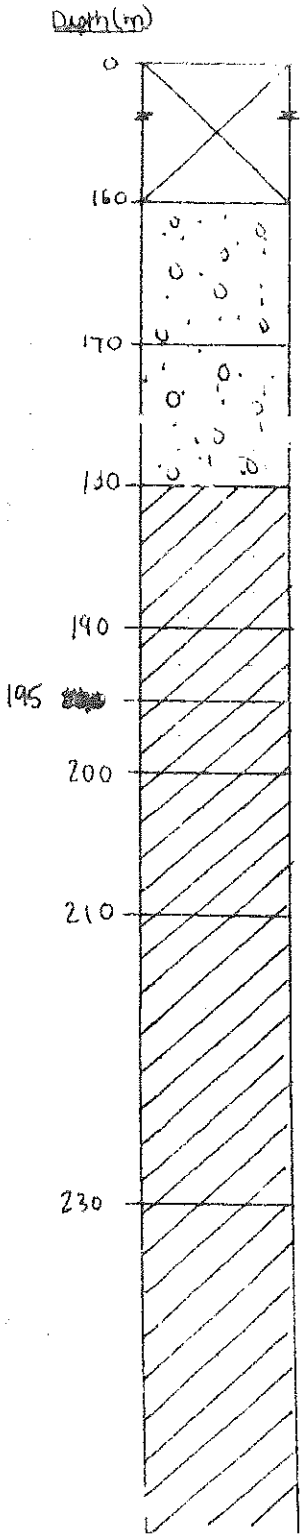
Log - Strip

Aurora College # AL.
Akita 1S
Well # G-53
Drilled 02/08/2001 – 03/08/2001 Sieving at 180 µm
Location Inuvik Sampling 5m Sizing is average



Not Recovered

Loose pebbles (30%) in fine sand (250 - 350 µm).
Pebbles are 5 mm in size and subrounded.

Loose pebbles (20%) in fine sand (250 - 350 µm)
Pebbles are 1-2 mm in size and subrounded

Silty mudstone (dark gray), subangular, 1-2 mm in size.

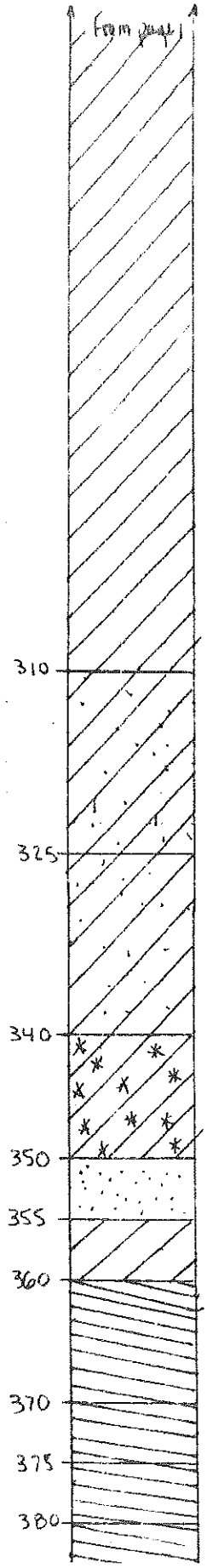
Silty mudstone (dark gray), Angular, 5-10 mm in size

Silty mudstone (dark gray), Subangular, 350 - 500 µm in size

Silty mudstone (dark gray), subangular, 4-8 mm in size

Silty mudstone (dark gray), subangular, 5-20 mm

Silty mudstone (dark gray), subrounded, 3-8 mm



Silty mudstone (dark gray), subangular, 3-8 mm in size
Finer matrix of fine sand (177 - 250 μm) with high quartz content.

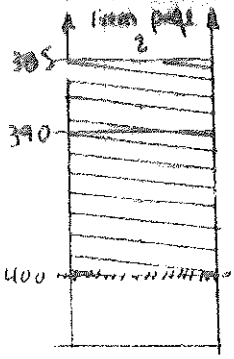
Silty mudstone (dark gray), Angular, 5-10 mm in size
Finer matrix of fine sand (177 - 250 μm) with high quartz content.

Mixture of silty mudstone (dark gray) and sandstone with high silicate content, subangular, not well sorted.
Fine particules are (177 - 250 μm) in size with high quartz conte.

Mostly sand (177-250 μm) with some sandstone (15%) and silty mudstone
Presence of anthracite.
Silty mudstone (dark gray), subangular, 3-8 mm in size
Some sand in fine matrix (177-250 μm)
Clayey mudstone (green), angular (0.1 - 10mm), 85 %
Presence of sandstone, subangular (3-10 mm), 10 %
Some silty mudstone (5%)

Clayey mudstone (green), angular, 3-15 mm, (95%)
Small % of sandstone, subangular (< 3mm)
(Same as unit 360 to 370m)

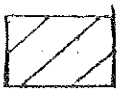
Clayey mudstone (green), angular, 3-15 mm), 100 %

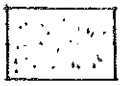


Clayey mudstone (different mineral composition), angular, (2-15 mm) 100%

Clayey mudstone (green), angular, (2-15 mm), 100%

Legend


Silty mudstone


Sand


Clayey mudstone


Sandstone

Accompanying : • 2 box of raw samples (canned)
• 1 box of bagged dry sample.

For Information called:

Caroline Duchesne
Geological Survey of Canada
613-995-7628
COUCHESN @ NRCAN.GC.CA