

AT+S

TEXACO

MAIDA CREEK

20-65 + 0-65

9211-A31-2-1



Canada Oil and Gas
Lands Administration

Administration du pétrole
et du gaz des terres du Canada

D.A. 1268

E.A. #174

Nova Scotia
Newfoundland
Gulf of St. Lawrence

☐ West Coast
☐ Northern
☐ Hudson Bay

☐ Exploratory
☒ Development
☐ Delineation
☐ Service

☒
☐
☐
☐

AUTHORITY TO DRILL A WELL

APPLICATION

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

Well Name in Full AT&S TEXACO MAIDA CREEK 0-65
Operator: AT&S EXPLORATION LTD. Drilling Program No. N/A
Contractor: JADE DRILLING LTD. Permit or Lease No. -
Drilling Rig ~~XXXX~~ No. 5 Estimated Well Cost: -
Location Unit: 0 Section: 65 Grid Area: 65-40-128-00
Coordinates Lat: 65° 34' 52.680" N Long: 128° 11' 47.210" W
Area: Norman Wells, N.W.T. Field/Pool: -
Elevation ~~XXXX~~ 121.9 mKB ~~XXXX~~ ~~XXXX~~ Grd. 114.9 m ~~XXXX~~
Approx. Spud Date: 1985-12-15 Estimated Days on Location: 20
Anticipated Total Depth: 740 mKB Target Horizon(s): Devonian Kee Scarp
UWI 3000656540128000 Location at Shot Point 221 on Line W-84-PE

EVALUATION PROGRAM

Ten-metre sample intervals: Surface to FTD, 5 set vials, 3 bag sets
Five-metre sample intervals: Geochem 1 bag set 10 m int. Below surface csg., Paleo below surface
Canned sample intervals: csg., 1 bag set unwashed 5 m int.
Conventional cores at: Core 18 m top Kee Scarp. Test if unwarranted, core & test.
Logs and Tests: CNL - FDC - GR, BHCS - GR - DLL

CASING AND CEMENTING PROGRAM

O.D.	Weight	Grade	Setting Depth KB	Cementing Program (Volumes)
340 mm	81.1 kg/m	J-55, LT&C	40 m	5.0 Tonnes incl. (100% excess)
245 mm	53.6 kg/m	J-55, LT&C	190 m	13.1 Tonnes incl. (100% excess)
173 mm	34.2 kg/m	J-55, LT&C	740 m	23.8 Tonnes incl. (100% excess)

Volumes to be calculated following caliper log

B.O.P. Equipment: 2 - 228.6 mm 21,000 kPa Single Shaffers
1 - 228.6 mm 21,000 kPa Shaffer Spherical
Accumulator (410 litre)
Manifold 76 mm x 34,500 kPa

Other Information: Dependent on on-site inspection and final survey, location will be within 61 m of specification.

Signed: D.R. Winslet /D.R. Winslet Title: Vice President, Exploration
Date: 29 August, 1985 Company: AT&S EXPLORATION LTD.

APPROVAL

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

Signed: [Signature]
Engineering Branch
Date: 26 Nov 1985
File: 9211-A31-2-1

Department of Energy
Mines and Resources
Ministère de l'Énergie
des Mines et des Ressources

Department of Indian Affairs
and Northern Development
Ministère des Affaires indiennes
et du Nord Canadien

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et du gaz des terres du Canada

D.A. 1268

E.A. 174

Nova Scotia ☐
Newfoundland ☐
Gulf of St. Lawrence ☐

West Coast ☐
Northern ☒
Hudson Bay ☐

Well Status
Suspended ☐
Completed ☒
Abandoned ☒

WELL TERMINATION RECORD

This record is submitted in triplicate in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

WELL DATA

Well Name: AT&S/TEXACO MAIDA CREEK CREEK 0-65 Area: N.W.T.
Grid Area: 65°40'N, 128°00'W Field/Pool: Wildcat
Permit or Lease No.: N85A423 Final Coordinates: Lat.: 65°34'52"N Long: 128°11'47"W
Drilling Unit: Jade #5 Elevations-RT/K2: 119.7m SF/GL: 115.2 Gr.
Spud Date: 86-12-15 Rig Released: 85-12-23 Total Depth: 191m

CASING AND CEMENTING

O.D.	Weight	Grade	Depth Set	Cement and Additives
2 Jts 340 mm	71.43 kg/m	H-40	15m	9.5 tonnes polarset cement
16 Jts 244.5mm	53.6 kg/m	J-35	191m/kb	5 tonnes Polarset cement + 3% R-15

PLUGGING PROGRAM

Approval of the following program was obtained by (person) Vic Elford from
(person) Kem Singh of the Canada Oil and Gas Lands Administration by means of
telephone on 85-12-23(?) 19 85

Type of Plug	Interval	Felt	Cement and Additives
Cement Plug #1	22m - surface		1.5 tonnes Polarset cement
Estimate bottom of hole cemented back to 113m.			
Cut off 340mm Conductor Casing 1.5m below ground - weld on plate and riser			
Identifier - Rig out to Skid Rig.			

Lost Circulation/Overpressure Zones: N/A

Equipment left on Seafloor (Describe): N/A

Provision for Re-entry (Describe and attach sketch): Vic Elford - COGLA Yellowknife - Permission to Drill
Maida Creek 2-0-65. 85-12-23 Skid Rig to new pad,

Cores Type: Intervals: 7m north of old hole (Maida Creek 2-0-65).

Other Downhole Completion/Suspension Equipment:

CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: *W.H. Slaght* P. Eng. Title: Chief Geologist
Name: W.H. Slaght Date: 86-06-17

Acknowledged by: *A.E. Slaght*
Engineering Branch

Date:

File: 9211-A31-2-1

Department of Energy,
Mines and Resources

Ministère de l'Énergie,
des Mines et des Ressources

Department of Indian Affairs
and Northern Development

Ministère des Affaires indiennes
et du Nord canadien

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X
C
C
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Operator: AT&S EXPLORATION LTD. Drilling Program No.: N/A
Contractor: JADE DRILLING LTD. Permit or Lease No.: -
Drilling Rig or Unit: No. 5 Estimated Well Cost: -
Location-Unit: Ø Section: 65 Grid Area: 65-40-128-00
Coordinates: Lat: 65° 34' 52.680" N Long: 128° 11' 47.210" W
Area: Norman Wells, N.W.T. Field/Pool: -
Elevation: ~~XXXX~~ 121.9 mKB ~~XXXXXXX~~ Grd. 114.9 m ~~XXXX~~
Approx. Spud Date: 1985-12-24 Estimated Days on Location: 20
Anticipated Total Depth: 740 mKB Target Horizon(s): Devonian Kee Scarp
UWI 3020656540128000 Location at Shot Point 221 on Line W-84-PE

EVALUATION PROGRAM

Terrestrial sample intervals: Surface to FTU, 5 set vials, 3 bag sets
Five-metre sample intervals: Geochem 1 bag set 10 m int. Below surface csg., Paleo below
Canned sample intervals: surface csg., 1 bag set unwashed 5 m int.
Conventional cores at: Core 18 m top Kee Scarp. Test if unwarranted, core & test.
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Volumes to be calculated following caliper log

B.O.P. Equipment: 2 - 228.6 mm 21,000 kPa Single Shaffers
1 - 228.6 mm 21,000 kPa Shaffer Spherical
Accumulator (410 litre)
Manifold 76 mm x 34,500 kPa

Other Information: Dependent on on-site inspection and final survey, location
will be within 61 m of specification.

Signed: D.R. Winslet Title: Vice President, Exploration
Date: 23 December 1985 Company: AT&S EXPLORATION LTD.

APPROVAL

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

Signed: Kem Singh
Engineering Branch
Date: January 02, 1986
File: 9211-A31-2-1

Department of Energy
Mines and Resources

Ministère de l'Énergie
des Mines et des Ressources

Department of Indian Affairs
and Northern Development

Ministère des Affaires indiennes
et du Nord Canadien

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SUMMARY

OTTAWA COPY

WELL SUMMARY: AT&S-Texaco Maida Creek O-65

AREA: Norman Wells, N.W.T.

LOCATION: Land

OPERATOR: AT&S Exploration Ltd.

DRILLING CONTRACTOR: Jade Drilling Ltd. Rig #5

SPUDED: December 15, 1985

RIG RELEASE: January 10, 1986

PARTNERS: AT&S Exploration Ltd. Paying 100%
AT&S Post completion Interest 75%
Texaco Post completion Interest 25%

EISMIC LINE: W84 - PE

RIG Jade Rig #5

WELL CLASS: Wildcat

KB: 119.7m

WELL STATUS: Dry & Abandoned

ELEV: 115.2m (Ground)

LAT: 65° 34' LONG: 128° 11'

FTD: Driller 685.0m
Logger 684.0m

WELL OBJECTIVES:

THE D-5 WELL HAVING ENCOUNTERED NON-COMMERCIAL GAS ON THE REEF INTERIOR SUGGESTS THAT THE REEF RIMS WOULD BE APPROPRIATE TARGETS, MOST LIKELY TO HAVE BETTER DEVELOPED RESERVOIR. TWO TESTS WILL BE NECESSARY TO TEST THIS THEORY. THE FIRST TO BE LOCATED ON THE SOUTHEAST RIM AT THE HIGHEST STRUCTURAL POSITION ON AT&S ACREAGE.

UWI 300 065 40128000

WELL RESULTS:

THIS WELL WAS DRILLED ON THE SOUTHEASTERN FLANK OF THE CARCAJOU REEF COMPLEX TO FURTHER EVALUATE THE KEE SCARP POTENTIAL: THE KEE SCARP WAS ENCOUNTERED AT 544.0 M KB (-423.3 M SS). WITHIN THE ZONE, THREE CORES WERE CUT: (1) 547-553 M; (2) 533-555 M; (3) 555-573 M. THE FORMATION HERE CONSISTS OF LIMESTONE: WHITE, LIGHT-MEDIUM GREY BROWN, CRYSTOCRYSTALLINE - MICROCRYSTALLINE, HARD, MASSIVE RARE POOR OIL STAIN WAS PRESENT BUT THE SECTION WAS TIGHT. THE HARE INDIAN WAS ENCOUNTERED AT 664.2 M KB (-544.5 M SS). THE WELL ENCOUNTERED 120.2 M OF KEE SCARP FORMATION.

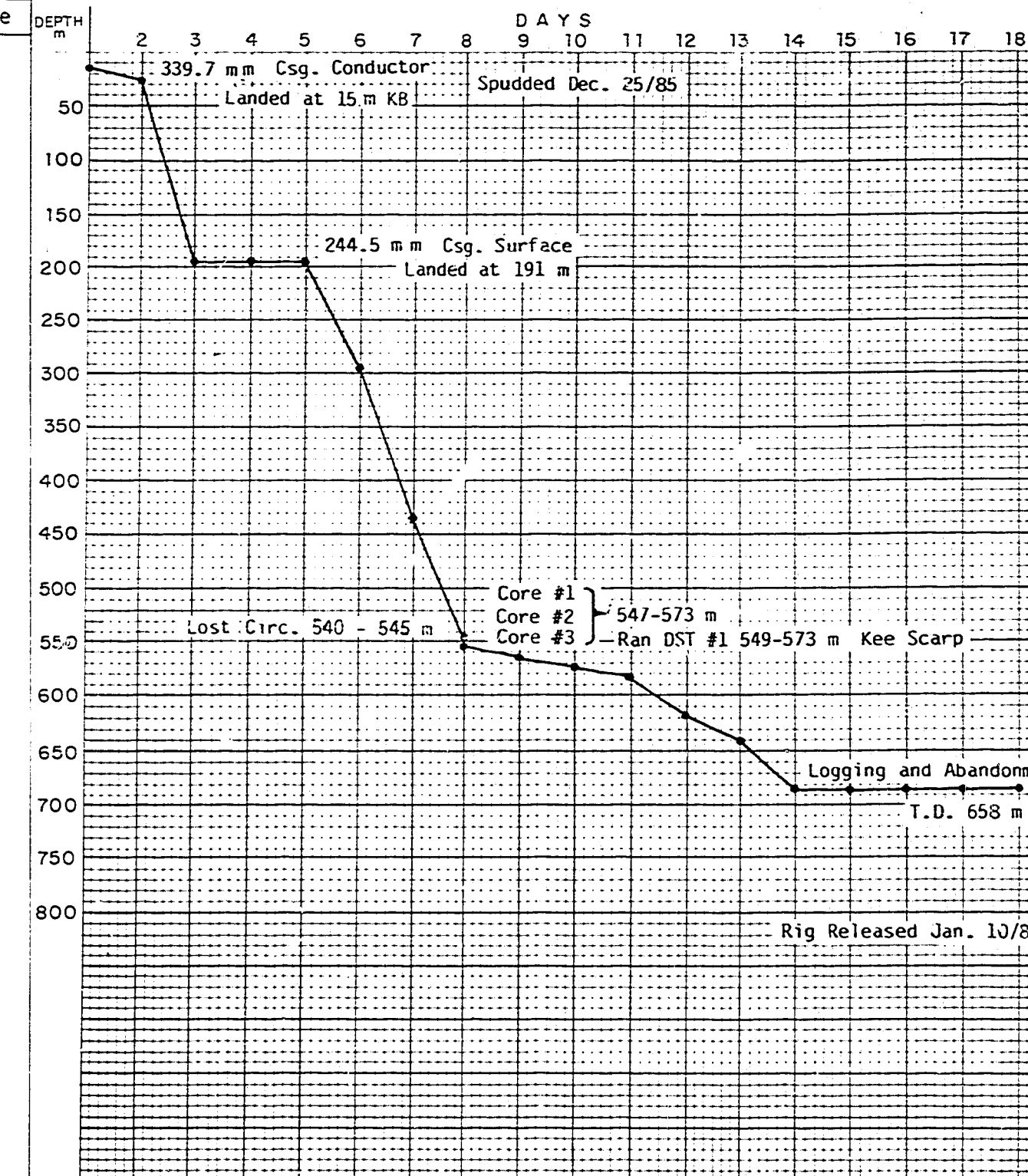
CONCLUSIONS:

MAIDA CREEK O-65 THE SECOND WELL DRILLED BY AT&S ON THE CARCAJOU REEF COMPLEX ENCOUNTERED 120.2 M OF KEE SCARP WHICH WAS VOID OF EFFECTIVE POROSITY. A THIRD WELL WILL BE DRILLED TO TEST THE REEF FLANK POTENTIAL ON THE NORTH-WESTERN RIM OF THE COMPLEX.

GEOLOGICAL DATA SUMMARY

STRATIGRAPHY				CORES	DEPTH m	LITHOLOGY	HYDROCARBON SHOWS/ TESTS	DESCRIPTION	
System	Period	Series	Formation					Lithologies	Pressure
CENOZOIC	QUATERNARY		Alluvial Glacial Drift						
	TERTIARY		Laramide						
MESOZOIC	CRETACEOUS		shale siltstone sandstone		100				
					200				
PALEOZOIC	DEVONIAN	Perm Penn. Miss.			300			Sh m-dkgy, mhd, firm, blk, dull-ls micmics, silty in pt, silice in pt, carb in pt, no shows	
					400			SS dr-lgy, vgr, silty in pt, sbrd-sbrng, m-w sil, w conc, dr sil, dr sil, slarg, tr no shows	
PALEOZOIC	DEVONIAN	Upper	Imp. shale siltstone sandstone		500			Sh m-dkgy, sft, firm, blk, dull-micmic silty vsily in pt, carb, no shows SS strgs, abnt metal flakes	
					600			Sh l-dkgy, sft, firm, blk, sil, micmic, multif. pt, dr sil, silty in part, no shows	
PALEOZOIC	DEVONIAN	Middle	Canol sh	Core No. 1 547 Core No. 2 547 Core No. 3 573	547			CANOL LS wh-pale brn, crpxl-mic, cin-silarg, pred. tr, onc a intl & a pyrobit & ad c, yel cut fluor w crl fill brng, strng Core 1, 2, 3 547-573, (see log for detail)	
			Kee Scarp		573			LS pale brn, crpxl-vfxl, mas-del in pt, dull rhy, cin, rr pyrobit, pos live o o str, m strong milky yel cut fluor p slow strng	
PALEOZOIC	DEVONIAN	Middle	Hare Indian shale siltstone		664.2			HARE INDIAN SLTST dkgy, freq grdg to vfg, SS at top of interval, mhd, vit- micmica, v calc, slarg, tr pyr, tr-r-p intgt d, no shows tr LS: a/a	

DRILLING PROGRESS CHART



CORES	DEPTH m	LITHOLOGY	HYDROCARBON SHOWS/ TESTS	DESCRIPTION	
				Lithologies	Pressure
	100				
	200				
	300			Sh med kg, mhd, firm, blk, dull - sil micaceous, slty in pt, silic in pt, carb in pt, no shows	
	400			SS clayey, vfg, slty in pt, sbrn-abund, mhw sst, w carb, cln silic, cln - slarg, tr no shows	
	500			Sh med kg, lft, firm, blk, dull - micaceous slty vs slt in pt, carb, no shows SS strng, abnt metal flakes	
	600			Sh med kg, lft, firm, blk, w fls, micaceous, dull, silic, abnt silic in pt, no shows	
Core No. 1 547 Core No. 2 Core No. 3 573	547 573			CANOL KEE SCARP Sample at 547 LS wh-pale brn, crp, micaceous, silarg, prv, tr, and g intxl w pyrobit & dnt, yel but fluor w ext silic, strng Core 1, 2, 3, 547 - 573, (see log for detail) LS pale brn, crp, vfxi, mos, del in pt, dull rhy, cin, tr pyrobit, pos live o ostr, m strong milky yel but fluor p slow strng HARE INDIAN LS 1st dkay, freq grd to vf gr, SS at top of interval, mhd, vit - micaceous, vcalc, slarg, tr pyr, Hare p intgr d, no shows tr LS a/b	
	700				
	800				

339.7 mm Csg. Conductor
Landed at 15 m KB

244.5 mm Csg. Surface
Landed at 191 m

Lost Circ. 540 - 545 m

Core #1
Core #2
Core #3

547-573 m

Ran DST #1 549-573 m

Kee Scarp

Logging and Abandonment

T.D. 658 m

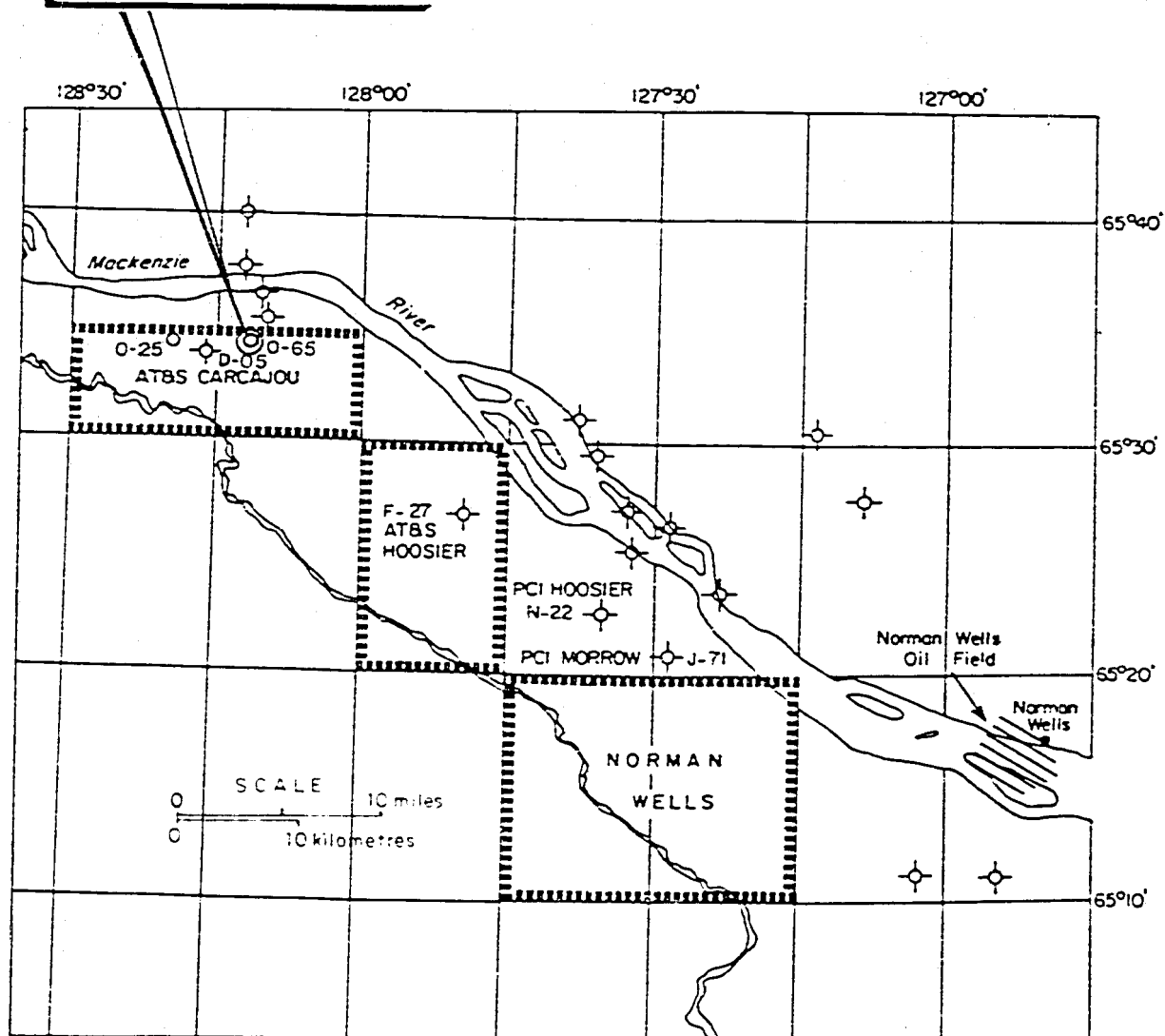
Rig Released Jan. 10/86

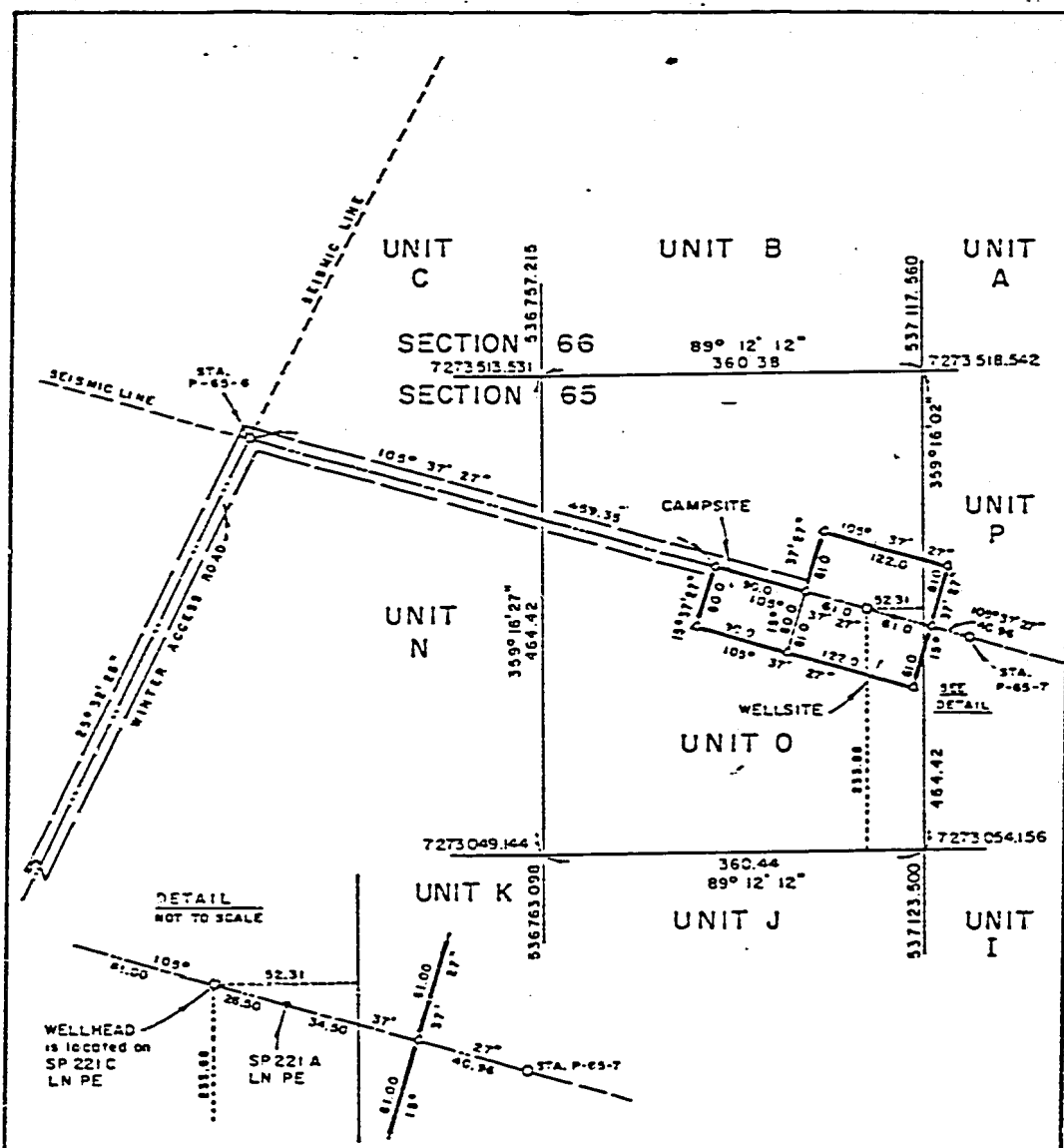
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SURVEY PLAT

LOCATION MAP

**MAIDA CREEK O-65
PROPOSED LOCATION**





N.T.S. MAP SHEET: 106 H/9

METRIC

NORTHWEST TERRITORIES

A.T. & S. EXPLORATION LTD.

PRELIMINARY SKETCH SHOWING WELL LOCATION

A.T. & S. MAIDA CREEK O-65

UNIT O, SECTION 65, GRID AREA 65°40', 128°00'

A.T. & S. EXPLORATION LTD.

CERTIFIED CORRECT:

THIS 3rd DAY OF JULY, A.D. 1985.

[Signature]
CANADA LANDS SURVEYOR

ELEVATION	GEOGRAPHIC CO-ORD'S.	U.T.M. CO-ORDINATES
ON GROUND AT WELLHEAD : 111.89	NORTH LATITUDE: 65° 34' 52.680" (65.5813000°) WEST LONGITUDE: 128° 11' 47.210" (128.1964472°)	NORTHING 7,273,287.285 EASTING 537,068.201 CO-ORDINATES ARE COMPUTED FOR ZONE 9 CENTRAL MERIDIAN 129°W
LEGEND	AREAS REQUIRED	HOSFORD, IMPEY, WELTER AND ASSOCIATES LTD. PO BOX 1409, YELLOWKNIFE, X1A 2P1 NORTHWEST TERRITORIES
Survey Monument found ☒ Survey Monument placed ☒ Inverse Station ☒	WELL SITE = 3.68 Acres 1.488 ha. CAMP SITE = 1.33 Acres 0.540 ha. FUEL SITE = ——— Acres ——— ha. TOTAL = 5.01 Acres 2.028 ha	FILE NO. Y 85011 DATE July 3/85
SCALE 1:5000		

GEOLOGICAL
REPORT

GEOLOGICAL WELLSITE REPORT

FOR

AT&S MAIDA CREEK

0-65

Prepared For

AT&S Exploration Ltd.

By

C.D. Frew

PRO GEO CONSULTANTS

January, 1986

PRO
GEO
CONSULTANTS

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WELL SUMMARY

WELL NAME: AT&S Maida Creek 0-65

COORDINATES: 65° 40' N, 128° 0' W

LOCATION: Northwest Territories

ELEVATIONS: Ground: 115.2m
KB: 119.7m

OPERATOR: AT&S Exploration Ltd.

DRILLING CONTRACTOR: Jade Drilling Rig #5

WELLSITE SUPERVISION: Toolpusher: Dave Ostapovich
Engineer: Earl Staroszik/Bryan Curle
Geologist: C.D. Frew

WELL SPUDDED: 1985/12/25 0300 hours

DRILLING COMPLETED: 1986/01/06 2220 hours

BIT SIZES: Surface: 311mm
Downhole: 222.2mm

CASING SIZES: Surface: 244.5mm
Production:

TOTAL DEPTH: Driller: 685.0m
Logger: 684.0m

BOTTOM HOLE FORMATION: Hare Indian

CORES CUT: Core #1 547 - 553m Core #2 553 - 555m Core #3 555 - 573m

LOGS RUN: DLL-MLL; BHCS-GR; CNL-FDC

DRILL STEM TESTS: DST #1: 549 - 573m

WELL STATUS: Plugged and Abandoned

RIG RELEASE: 1986/01/10 1200 hours

DAILY SUMMARY

1985/12/25

- Spud at 0300 hours
- Circulate, clean to run conductor pipe
- Ran 1 joint 339.7mm 71.43 kg/m, H-40 8rd ST&C casing for conductor
- Landed at 15m KB, cemented with 2 tonnes Polarset Cement in place at 1015 hours, 1985/12/24
- Cut casing and weld riser
- Run top 4 meters through 25.4mm, pipe down annulus with 1 tonne Polar Set
- WOC, rig up flare line and cement bottom of cellar
- Drill out cement
- Drill 311.2mm surface hole
- Conductor leaked into cellar back side of cribbing, P00H, remove flowline and wait on welder
- Cut off conductor riser, weld on collar and rig up to cement

1985/12/26

- Cement with 3 tonnes Polarset
- WOC, weld conductor riser back on, hook up flow line and make up bit and subs on 228mm drill pipe
- Drill out cement from conductor 13m to 18m
- Drill and survey 311.2mm surface hole

1985/12/27

- Drill and survey to 180m, circulate and clean
- Dummy trip and strap; difference, 0.18m
- Drill to 191m

1985/12/28

- Circulate clean for casing and survey
- Hoist bit, lay down 228mm drill collar and shock sub
- Rig up and run 16 joints 244.5mm, 53.6 kg/m, J-55 8rd LT&C (7 jts) and ST&C 9 jts
- Circulate and reciprocate casing and reduce viscosity
- head up and cement casing, WOC
- Cut off and weld on bowl

1985/12/29

- Nipple up
- Cement with 2m³ H₂O ahead - lead cement 7.75 tonnes PolarSet pjlus 0.3% R-15 tail cement, 9.0 tonnes oilwell Class "G" neat
- Displace with 7.19m³ drill mud, plug down at 0850 hours, 4m³ cement returns

ADDENDUM II

FLOT

30" Dec 1985

Drilled out cement and shoe.
Pressure up to 2800 KPa. No leak off.
Fluid: Fresh water 8.3 Density.
Surface casing shoe at 191 m.

1985/12/30

- Drill out float and 5m, pressure test bottom joint - OK
- Drill out shoe and 5m, leak-off at 2800 kPa
- Drill and survey 222mm hole

1985/12/31

- Trip for bit, resume drilling
- Lost circulation, 540 - 545m, 9m³ total loss
- Mix and circulate lost circulation material
- Control drill 2m
- Circulate sample, dummy trip 5 stands, well began to flow
- Run in, circulate and condition

1986/01/01

- Dummy trip 10 stands
- Run to bottom, circulate and condition hole
- Hoist to pick up core barrel
- Make up and run core #1
- Break circulation, drop ball and cut core #1
- Jammed at 553m, hoist and recover core #1

1986/01/02

- Service core barrel and run in hole
- Cut Core #2 - jammed off at 555m
- Hoist Core #2 and recover

1986/01/03

- Service barrel and run Core #3
- Break circulation and cut Core #3
- Cut full 18m, hoist and recover Core #3

1986/01/04

- Run in with bit, ream rathole and condition mud (547 - 573m)
- POOH
- Pick up core barrel from derrick, service and lay down
- Pick up DST #1
- Rig up tester - inflate packers, perform DST #1
- Pull packer loose
- Thaw out: HCR hose, kill line valve, manifold check, check BOP, blow manifold line
- Knock off test head and hoist DST #1
- Break down and rig out DST #1

ADDENDUM I

Casing and Cementing Record

CONDUCTOR
24 DEC 1985

Ran 1 Joint 339.7 mm, 71.43 kg/m, H40, 8 RD, ST + C casing at 15 m KB.
Cemented with 2 tonnes Polarset CPD cement. No returns. Cement top 4 m of annulus with 25.4 mm pipe with 1 ton Polarset.
Conductor leaked to cellar. Rigged up NOWSCO: established feed rate using 1.75 m³ water.
Recement using 3 tonnes Polarset CPD cement.

SURFACE CASING
28 DEC 1985

Ran 16 joints J-55 53.6 kg/m 244.6 mm 8 RD, 7 LT + C, 9 ST + C at 191 m.
Cemented with 1/2 Bbl water ahead: Lead cement 7.75 tonnes Polarset 7.3% R 15.
Tail cement 9.0 tonnes Class C neat.
Displace with 7.19 m³ drilling mud.
4 m³ cement returns.

1986/01/05

- Blow flare line and fill with antifreeze
- Run in with bit #2RR and clean 2m to bottom
- Drill and survey 222mm hole

1986/01/06

- Drill and survey 222mm hole to 685m, FTD
- Circulate bottom hole sample and condition mud
- Dummy trip 20 stands (hole OK)

1986/01/07

- Circulate to condition hole
- Hoist bit #2
- Rig up to log with Schlumberger

1986/01/10

- Finish logging, wait on orders
- Ran abandonment program
- Release rig 1986/01/10 at 1200 hours

CASING SUMMARY

Surface Casing

Ran 16 joints 244.5mm, 53.6 kg/m, J-55 8rd LT&C (7 joints) ST&C (9 joints) surface casing. Cemented by Nowsco with 7.75 tonnes Polar Set to 0.3% R-15 tail cement, 9 tonnes Oilwell Class "G". Landed at 191m. Plug down at 0850 hours, 1985/12/29. 4m³ cement returns to surface.

DRILL STEM TEST SUMMARY

DST #1 549 - 573m

FM: Kee Scarp Type: Packer Inflate

TIMES: 10/176/60/135
PF: Strong airblow remaining steady
VO: Strong airblow in 30 secs. (0.30m flare) GTS-TSTM
RECOVERY: 48m gas cut mud, 93m muddy water, 189m gas cut water
HP: 6066/5997 KPa
SIP: 5165/5095 KPa
FP: 1403/1892/3221 KPa
OTHER: Long initial Shut-in due to frozen flare line
which had to be thawed before continuing test

MAIDA CREEK

ADDENDUM III

~~Garcajer~~ 2-0-65

Spud 24th Dec 1985

Rig Release 10th Jan.

[illegible]

ABANDONMENT SUMMARY

Plug #1 Interval: 684 - 530m

Cemented with 10 tonnes Oilwell Class "G"

Plug #2 Interval: 210 - 170m.

Cemented with 3.6 tonnes Oilwell Class "G"

Plug #3 Interval: 15m - Surface

Cemented with 0.8 tonnes Class "G"

GEOLOGICAL SUMMARY

AT&S Texaco Maida Creek 0-65 was drilled as a Wildcat well with the intent of encountering the Kee Scarp reef and its associated hydrocarbons. This site is located at 65°40'N, 128° 00' in the Northwest Territories.

The well was initially spudded at 0300 hours, 1985/12/15 by Jade Drilling Rig #5. However, several subsequent problems required that the rig be moved and the hole re-spudded. Consequently it was re-spudded 0300 hours, 1985/12/25.

Surface casing of 244.5mm diameter was set at 191m K.B. and cemented by Nowsco. Sampling (consisting of 5 meter bulk samples and 10 meter "jar" samples) commenced at 200m K.B., likely in the Imperial formation, since a subsequent Imperial top was not picked. The Imperial consisted of: Shale: predominantly medium - dark grey, moderately hard, firm, blocky, subfissile, dull - micromicaceous in part, carbonaceous in part, silty in part, no show. There were some minor sandstones in this formation, mostly in the form of thin stringers.

The Canol Shale was encountered at 532.5m K.B. (-412.8m Subsea). This was 30.72 meters higher than prognosed.

The Canol consisted of: Shale: dark grey - black in part, moderately hard, firm, blocky, dull, very carbonaceous, pale slow milky yellow cut fluorescence, strong petroliferous odour while drying.

Lost circulation was experienced from 540 - 545m, most likely in coals encountered just below the Canol. Nine cubic meters were lost, but circulation was regained by the addition of lost circulation material to the mud system.

The Kee Scarp reef came in at 544.0m K.B. (-423.3m SS), 26.54 meters higher than prognosed. Within this zone, three cores were cut by Norton-Christensen Coring (please refer to the detailed core description). Drilling continued in the Kee Scarp after coring and it consisted of Limestone: white, light - medium grey brown, cryptocrystalline - microcrystalline, hard, massive, dull - earthy, vitreous in part, clean - slightly argillaceous, rare poor live oil stain, tight, occasional pale milky yellow cut fluorescence, no streaming.

Following the Kee Scarp, the Hare Indian formation was encountered at 664.2m K.B. (-544.5m SS) which was 74.01 meters higher than prognosed.

The Hare Indian was: Siltstone, dark grey, frequently grading to very fine gravel sandstone, moderately hard, vitreous - micromicaceous, very calcareous, slightly argillaceous, trace pyrite, tight - rare poor intergranular porosity, no shows. There were traces of limestone. Final total depth was reached in this formation.

Testing was conducted by Halliburton immediately following coring. A packer inflate test was conducted from 549 - 573 meters. Gas to surface was too small to measure, recovery consisted of 48 meters slightly gas cut mud and 199 meters of slightly gas cut water, 93 meters of muddy water.

Subsequent to drilling, wireline logging was performed by Schlumberger with the following logs run: DLL-MLL; BHCS-GR; CNL-FDC.

FORMATION TOPS

<u>FORMATION</u>	<u>SAMPLE</u>		<u>LOG</u>	
	<u>Depth(m)</u>	<u>Subsea(m)</u>	<u>Depth(m)</u>	<u>Subsea(m)</u>
Canol	532.5	-413.8	535.5	-415.8
Kee Scarp	544.0	-424.3	546.25	-426.55
Hare Indian	664.2	-544.5	664.5	-544.8
F.T.D.	685.0	-565.3	684.0	-564.3

SAMPLE DESCRIPTIONS

<u>Depth</u>	<u>Description</u>
200 - 270m	<u>Shale</u> ; medium - dark grey, moderately hard, firm, blocky, dull - slightly micromicaceous in part, silty in part, slightly calcareous in part, carbonaceous part, <u>no shows</u>
270 - 272m	<u>Sandstone</u> ; light - medium grey, very fine grained, subrounded, moderately well sorted, hard, clear calcite cement, argillaceous, trace silty and shaly, trace glauconite, <u>tight, no shows</u>
277 - 278m	<u>Sandstone</u> ; light - medium grey, very fine grained, subrounded, moderately well sorted, hard, clear calcite cement, argillaceous, trace silty and shaly, trace glauconite, <u>tight, no shows</u>
278 - 294m	<u>Shale</u> ; light - medium grey, dark grey in part, soft - moderately hard, firm, blocky, dull, silty in part
295 - 296m	<u>Sandstone</u> ; clear - light grey, very fine grained - silty in part, subrounded - subangular, moderately well sorted, well consolidated, clear siliceous cement, clean - slightly argillaceous, <u>tight, no shows</u>
296 - 385m	<u>Shale</u> ; medium - dark grey, moderately hard, firm, blocky - subfissile, dull - micromicaceous in part, carbonaceous in part, silty in part, <u>no show</u> ; occasional sandstone stringers, rare traces limestone
385 - 455m	<u>Shale</u> ; light - medium grey, soft, firm, blocky - subfissile, micromicaceous - dull in part, silty in part, <u>no show</u>
455 - 473m	<u>Shale</u> ; medium grey, moderately hard, firm, blocky, micromicaceous - dull, silty - becoming sandy in part, <u>no shows</u>
473 - 532.5m	<u>Shale</u> ; medium - dark grey, moderately hard, blocky, micromicaceous - dull in part, silty - sandy in part, <u>no shows</u>

CANOL 532.5m KB (-412.8m SS)

- 532.5 - 535m Shale; dark grey - black in part, moderately hard, firm, blocky, dull, very carbonaceous, pale slow milky yellow cut fluorescence, strong petroliferous odour while drying.
- 535 - 540m NO SAMPLE
- 540 - 545m LOST CIRCULATION (9m³ regained circulation after 5 meters)
- 540 - 541m Coal; dull - vitresous, hackly - blocky, soft - moderately hard
- 543 - 544m Coal; dull - vitreous, hackly - blocky, soft - moderately hard

KEE SCARP 544.0m (-423.3m SS)

- 544 - 547m Limestone; white - pale brown, cryptocrystalline - microcrystalline, occasionally very fine crystalline, massive - sucrosic in part, hard, brittle, clean - slightly argillaceous, predominantly tight; occasional good intercrystalline porosity with pyrobitumen and dead oil, slow pale milky yellow cut fluorescence with excellent ribbony streaming
- 547 - 573m CORE: refer to detailed core description
- 573 - 596m Limestone; white - medium grey, brown, cryptocrystalline - microcrystalline, hard, dull, earthy, vitreous in part, clean, trace pyrobitumen, tight, very poor pale milky yellow cut fluorescence, no streaming
- 596 - 606m Limestone; light - dark grey, brown, cryptocrystalline - very fine crystalline, massive - detrital in part, dull - earthy, clean, rare pyrobitumen, some fossil fragments, tight no shows
- 606 - 616m Limestone; pale brown, cryptocrystalline - very fine crystalline, soft, massive - detrital in part, dull - earthy, clean, rare pyrobitumen, rare massive live oil stain, moderately strong milky yellow cut fluorescence, poor slow streaming
- 616 - 642m Limestone; white, light - medium brown, cryptocrystalline - microcrystalline, hard, massive, dull - earthy, vitreous in part, clean - slightly argillaceous, rare poor live oil stain, tight, rare spotty pale milky yellow cut fluorescence, no streaming

642 - 652m Limestone; white - pale brown, cryptocrystalline, soft, earthy, clean, tight, no shows, interbedded with
Limestone; medium brown, very fine crystalline, microcrystalline in part, moderately hard, vitreous, argillaceous, tight, no shows

652 - 664.2m Limestone; pale - medium brown, cryptocrystalline - microcrystalline, moderately hard, brittle in part, dull - vitreous in part, clean - slightly argillaceous, trace pyrobitumen, tight, rare poor intercrystalline porosity, with rare possible live oil stain, predominantly poor slow pale milky cut with rare rapid milky yellow cut fluorescence with good streaming

HARE INDIAN 664.2m (-544.5m SS)

664.2 - 685m Siltstone; dark grey, frequently grading to very fine grained sandstone at top of interval, moderately hard, vitreous - micromicaceous, very calcareous, slightly argillaceous, trace pyrite, tight to rare poor intergranular porosity, no show, trace limestone, as before

F.T.D. 685m KB

DETAILED CORE DESCRIPTION

Core #1 547 - 553 m Cut 6m, Recovered 3.84m

Coring Times: (minutes/.20m)

20,58,11,12,4;	8,17,18,15,12;	15,13,15,16,8;
15,3,4,3,4;	5,9,7,15,15;	26,5,21,11,12

<u>Depth</u>	<u>Description</u>
547 - 548.23m	<u>Limestone; medium - dark brown, very fine crystalline, massive - sucrosic, moderately hard, argillaceous vitreous, tight, no direct fluorescence, no show, no visible fossils or structures, micrite.</u>
548.23 - 549.80m	<u>Limestone; dark brown, occasional medium brown, very fine - fine crystalline, massive - sucrosic, moderately hard, vitreous, very argillaceous, argillaceous, occasional coarse calcite crystals, inclusions, no direct fluorescence, no show, predominantly skeletal packstone.</u> <u>Abundant Stromatoporoids; massive, tabular, variable sized (up to 15cm), randomly oriented and distributed, no apparent porosity, in Stroms or at fossil-matrix contacts, occasional vertical calcite veins.</u>

549.80 - 550.72m Limestone; medium - dark brown, very fine crystalline, massive - sucrosic, slightly argillaceous, dull, very brittle and friable, tight - poor slow pale milky yellow cut fluorescence, no streaming; Predominantly skeletal packstone
Abundant Stromatoporoids; massive and colonial, some Amphipora, abundant stylolites at fossil-matrix contacts
Bottom 8cm of interval: limestone, as above, but very friable, good intercrystalline porosity, good porosity at fossil-matrix contact, abundant, coarse calcite crystals, poor slow pale milky yellow cut fluorescence, no streaming

550.72 - 550.84m Limestone Rubble; pale brown, very coarse crystalline in soft fine crystalline matrix, very very friable, very poorly indurated, very argillaceous excellent intercrystalline porosity, poor slow pale milky yellow cut fluorescence, poor streaming.
Abundant cobble-sized calcite crystals, suggesting very good vug porosity

CORE JAMMED AT 553.0m K.B.

Core #2 553 - 555m K.B. Cut 2m, Recovered 2m

Coring Times: (minutes/.20m)

12,10,10,16,15; 14,13,11,13,15

Depth

Description

553 - 555m Limestone; dark brown, occasional medium brown, very fine crystalline, moderately hard, massive - sucrosic in part, dull - vitreous in part, argillaceous with some pyrobitumen, tight; pale milky yellow cut fluorescence, rare streaming, possible massive live oil stain, Skeletal Packstone
Abundant Stromatoporoids; very large (up to 20cm) massive, tabular, with small individual Stroma and rare Amphipora, occasional vertical - some calcite filled, some stylolites at fossil - matrix contact, rare fracture porosity along fossil - matrix contact, very rare pinpoint porosity in Stroms, minor soft sediment deformation

CORE JAMMED at 555m K.B.

Core #3 555 - 573m Cut 18m, Recovered 18m

Coring times: (minutes/.20m)

10,19,14,11,15;	12,13,15,16,17;	15,15,18,15,12;
12,12,9,12,12;	14,10,11,11,10;	10,10,10,9,9;
11,13,10,10,10;	10,13,13,14,14;	14,13,13,13,13;
13,11,13,14,12;	14,14,14,15,14;	14,16,15,17,18;
19,18,21,15,15;	14,13,13,20,10;	10,11,11,10,10;
10,10,10,11,11;	13,16,20,21,22;	19,25,18,15,17

<u>Depth</u>	<u>Description</u>
555 - 560.57m	Limestone; medium - dark brown, very fine - fine crystalline, hard, dull - vitreous in part, <u>tight, very slow pale milky cut fluorescence - slow massive streaming</u> Predominantly Skeletal Packstone abundant <u>Stromatoporoid</u>; massive and tabular, randomly distributed, some dendritic (individual) Stroms, <u>spotty vug porosity, rare porosity at fossil - matrix contact with rare oil bleeding, trace random calcite filled fractures</u>
650.57 - 554.86m	Limestone; medium brown, fine - medium crystalline, coarse crystalline patches, massive, slightly argillaceous, hard, dull - vitreous in part, occasional coarse calcite crystals, <u>even live oil stain, tight, rapid pale milky yellow cut fluorescence, with minor ribbony streaming, predominantly Skeletal Wackestone grading to Skeletal Packstone in part</u>
560.57 - 564.86m	Occasional to abundant <u>Stromatoporoid</u> (up to 10cm) tabular, rare <u>Amphipora</u>, rare <u>stylolites</u>, <u>rare spot-ty oil bleeding, rare spotty bleeding along vertical fractures</u>
564.86 - 568.67m	Limestone; medium - dark brown, fine - occasional medium crystalline, occasional coarse crystalline patches, massive, hard, dull - vitreous in part, <u>even live oil stain, tight, pale yellow direct fluorescence, rapid pale milky yellow cut fluorescence with good rapid ribbony streaming, Skeletal Packstone abundant dendritic and some tabular Stromatoporoid, (all relatively small - 1cm) common stylolites (predominantly between Stroms) rare Amphipora</u>

568.57 - 571.49m Limestone; dark - very dark brown, fine - medium crystalline, becoming coarse crystalline in part, massive, sucrosic in part, some cryptocrystalline inclusions, hard, dull - vitreous in part, slightly argillaceous, tight; even live oil stain, straw gold color, direct fluorescence, milky yellow cut fluorescence with slow massive streaming. Skeletal wackestone occasional massive and tabular, Stromatoporoids, possible deformed in part, occasional stylolites, possible rare poor oil bleed.

571.49 - 573m Limestone; medium brown - dark brown in part, fine - occasional medium crystalline, massive - sucrosic in part, hard, dull vitreous, occasional medium crystalline calcite inclusions, slightly argillaceous, poor even live oil stain, tight, pale yellow direct fluorescence, very pale milky yellow cut fluorescence, rare streaming, skeletal packstone
Limestone; abundant tabular Stromatoporoids (up to 15cm), with equally abundant dendritic (individual) Stroms (1 - 2cm) both predominantly horizontally oriented, rare patches possible light oil bleed.

CORE
ANALYSIS

CORE ANALYSIS REPORT

AT&S EXPLORATION LTD.

AT&S TEXACO MAIDA CREEK 0-65 65-34-52/128-11-47

C86-2625

1986-01-13

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

RESERVOIR STUDIES DIVISION

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

GENERAL INFORMATION

COMPANY: AT&S EXPLORATION LTD.
WELL: AT&S TEXACO MAIDA CREEK 0-65
LOCATION: 65-34-52/128-11-47
FIELD: MAIDA CREEK
FORMATION: KEE SCARP
ELEVATION: KB: 119.70 M GRD: 115.20 M
CURING FLUID: CHEMICAL GEL
CURING EQUIPMENT: DIAMOND
CORE DIAMETER: 0.089 M
NO. OF CORES: 3
TOTAL CORED: 26.40 M
TOTAL RECOVERED: 24.24 M
PERCENT RECOVERED: 91.82 %
TOTAL TESTED: 0.00 M
PERCENT TESTED: 0.00 %

LAD NO: C86-2625
PAGE : 1
DATE : 1986-01-13

CORE HANDLING AND ANALYSIS METHODS

Core transported in boxes.

REMARKS: No analysis required.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY : AT&S EXPLORATION LTD.
WELL : AT&S TEXACO M...DA CREEK 0-65 65-34-52/128-11-47
FORMATION: KEE SCARP
CURED INTERVAL: 547.00 - 573.40

LAB NO: C86-2625
PAGE : 2
DATE : 1986-01-13

CORE ANALYSIS DATA REPORT

[illegible]

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY: ATIS EXPLORATION LTD.

LAB NO: C36-2625

WELL : ATIS TEXACO MAIDA CREEK C-6S 6S-34-52/128-11-47

DATE : 1986-01-13

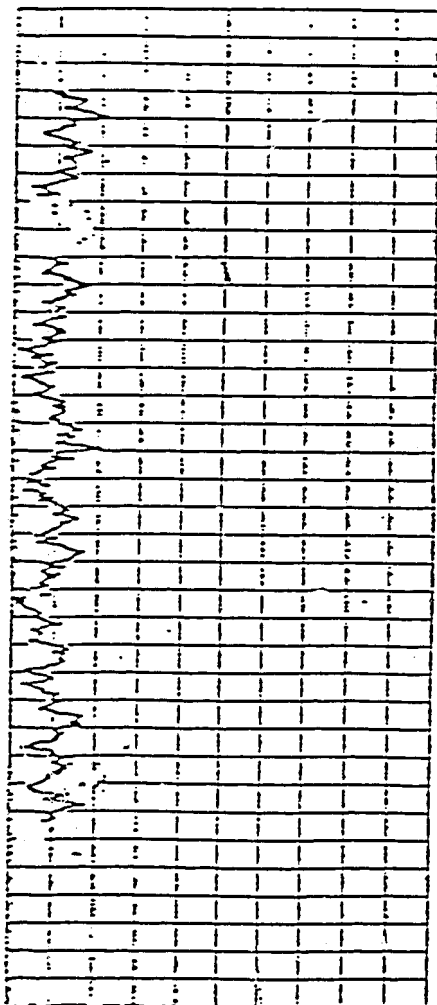
FIG : 1

GAMMA RAY LOG

VERTICAL SCALE 1:240

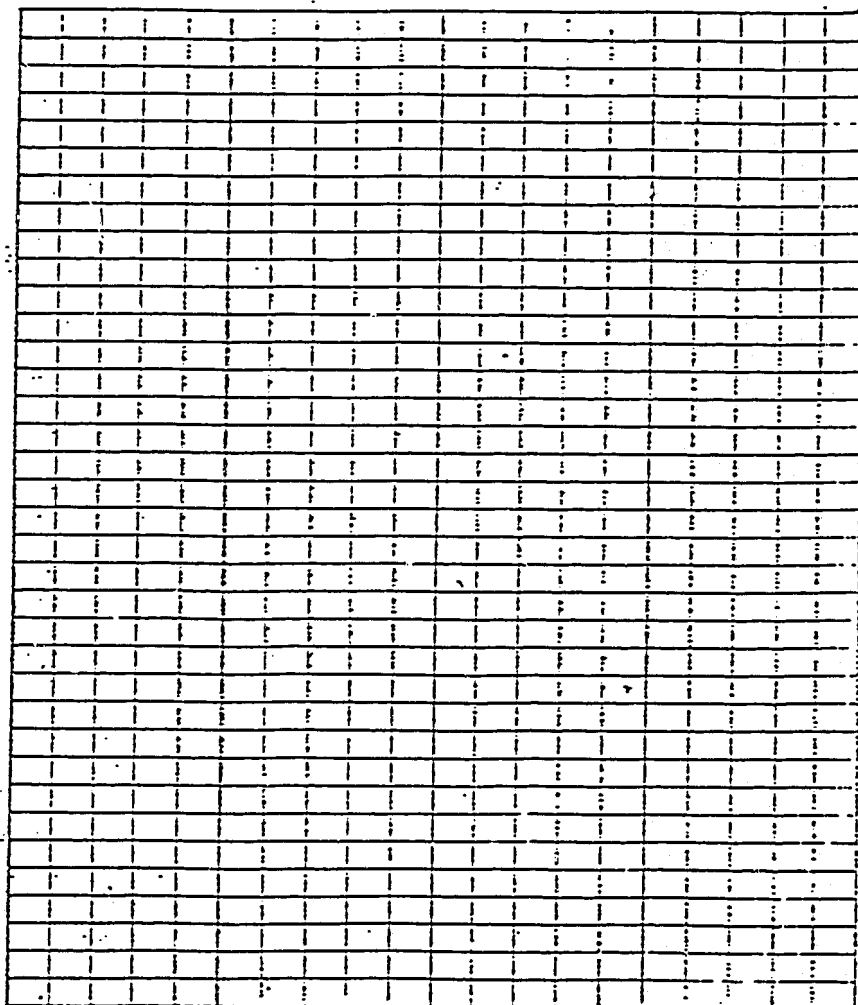
T.C. 15 SEC.

SENS. 6000 CPM



547.00

573.40



CHEMICAL & GEOLOGICAL LABORATORIES LIMITED

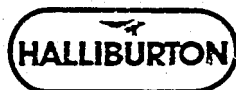
CORE DESCRIPTION SYMBOLS

abnt	Abundant	frag	Fragment (al)	phos	Phosphate (ic)	tex	Texture
Amph	Amphipora	fri	Friable	pk	Pink	Tham	Thamnopora
ang	Angular			pl	Plant	thk	Thick
anh	Anhydrite (ic)	g	Good	plg	Plug	thn	Thin
aren	Arenaceous	glau	Glauconite (ic)	plnr	Planar	thru	Throughout
arg	Argillaceous	gn	Green	por	Porous (sity)	tr	Trace
		gr	Grain (ed)	p-p	Pin Point	tt	Tight (ly)
bd	Bed	gran	Granular	pred	Predominant (ly)		
bdd	Bedded	grdg	Grading	pt	Part (ly)	uncons	Unconsolidated
bdg	Bedding	grnl	Granule	ptsl	Paper-Thin Shale Laminations	unident	Unidentifiable
bf	Buff	grnt	Granite	purp	Purple		
biocl	Bioclastic	gy	Grey	pyr	Pyrite (ic) (ized)	v	Very
biot	Biotite			pyrbit	Pyrobitumen	var	Variable
bioturb	Bioturated	hrtl	Horizontal			vcol	Varicolored
bit	Bitumen (inous)	HF	Horizontal Fracture	qtz	Quartz	VF	Vertical Fracture
blk	Black					vrtl	Vertical
Brac	Brachiopod	incr	Increase (ing)	ran	Random	vug	Vug (gy) (ular)
brn	Brown	intbd	Interbedded	rd	Round (ed)	/	With
bur	Burrow (ed)	intgran	Intergranular	repl	Replaced (ing) (ment)	v	Well
		intlaml	Interlaminated	rex1	Recrystallize (ation)	wh	White
c	Coarse (ly)	intxl	Intercrystalline	RF	Random Fracture	wvy	Wavy
calc	Calcite (areous)	intv	Interval	rip	Ripple	wxy	Waxy
carb	Carbonaceous	ireg	Irregular	rr	Rare		
cbl	Cobble (64-256 mm)			rthy	Earthy		
cgl	Conglomerate	kao	Kaolin			xbd	Cross-bedded
cht	Chert			s	Small	xbdg	Cross-bedding
cl	Clast	lam	Laminated	sa	Salt	xl	Crystal (line)
cln	Clean	len	Lentil (cular)	sdp	Salt & Pepper	xlam	Cross-laminated
clt	Clay (ey)	lrg	Large (er)	sb	Sub		
cmt	Cement (ed)	ls	Limestone	scat	Scattered	*	Broken Core (K90 used summary purpose)
coq	Coquina	lse	Loose	sd	Sand (1/16-2 mm)		
Cor	Coral			sdv	Sandy		
crbnt	Carbonate	m	Medium	sec	Secondary	**	Permeability >10,240 md
Crin	Crinoid (al)	mar	Maroon	sed	Sediment (ary)	<.01	Permeability less than 0.01
crpxl	Cryptocrystalline	mas	Massive	sft	Soft		
		md	Mud	sh	Shale		
decr	Decrease (ing)	mic	Micro	shy	Shaly		
dism	Disseminated	mica	Mica (eous)	sid	Siderite		
dk	Dark (er)	mnr	Minor	sil	Silica (eous)		
dns	Dense	mril	Mineral (ized)	sl	Slight (ly)		
dol	Dolomite (ic)	mot	Mottled	slt	Silt	DE	Dense
		mtx	Matrix	siltst	Siltstone	DR	Drilled
elg	Elongate	musc	Muscovite	sity	Silty	LC	Lost Core
				SP	Small Plug	NA	Not Analyzed
f	Fine (ly)	n	No, none, not	art	Sort (ed) (ing)	RU	Rubble
Fe-st	Ironstone	nod	Nodules	ss	Sandstone		
fis	Fissile			Strom	Stromatoporoid	Cum	Cumulative
fl	Fill (ed)	occ	Occasional	stromll	Stromatolite	Frac	Fraction
fld	Feldspar (thic)	ool	Oolite (ic)	styl	Stylolite (ic)	KV	Vertical Permeability
fos	Fossil (iferous)			suc	Sucrosia	MJ-M	Millidarcy Metre
fr	Fair	p	Poor (ly)	sz	Size	Por-M	Porosity Metre
frac	Fracture (ed)	pbi	Pebble			Resid	Residual
						Rng	Range
						Smpl	Sample
						Thickness	Representative Thickness
						Wt. Avg.	Weighted Average

KMAX and K90 are transverse permeability measurements on full diameter samples

DST'S

TESTERS	A. Barlow
WITNESS	E. Staroszk
DRILLING COMPANITOR	Jade #5



FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO.	68 440
DATE OF TEST	86-01-04
TEST No.	1
JCS TYPE	Hydroflate Bottom Hole

PRESSURE SUMMARY kPa

GAUGE NUMBER	3994	7817	3346			
GAUGE DEPTH	535 73	536 08	551 92			
BLANKED OFF	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOURLY TRAVEL	24	24	12			
INITIAL HYDROSTATIC	6025	6044	6246			
FIRST FLOW	INITIAL 632 FINAL 1588	INITIAL 766 FINAL 1547	INITIAL 2808 FINAL 2740			
FIRST CLOSED IN	5217	5214	5359			
SECOND FLOW	INITIAL 1966 FINAL 3309	INITIAL 2049 FINAL 3274	INITIAL 2868 FINAL 3467			
SECOND CLOSED IN	5163	5154	5288			
THIRD FLOW	INITIAL FINAL					
THIRD CLOSED IN						
FINAL HYDROSTATIC	6025	6033	6230			

TIME PERIODS

	FIRST	SECOND	THIRD	TESTER VALVE OPENED	TIME
FLOW	10	60			11:04
CLOSED IN	176	135		PACKER UNSEATED	17:25

LIQUID RECOVERY DATA

RES	DESCRIPTION OF LIQUID
48	Gasified mud.
93	Gasified muddy water.
189	Gasified water.
330	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED	KEE SCARP	TEMP REC NO	DEPTH	MAX TEMP	N/A
NET PRODUCTIVE THICKNESS	m	MUD TYPE	Gel Chemical		
K B ELEVATION	119.7	MUD DENSITY	1165	MUD VISC	53
ALL DEPTHS MEASURED FROM	☒ KB ☐ GROUND	CASING OR HOLE SIZE	222		
PACKER TOP DEPTHS	549	RATHOLE SIZE	mm		
DEPTH OF TESTER VALVE	531.03	DRILL PIPE	114.3	OD mm	24.7
CASING PERFORATED INTERVAL	N/A	DRILL COLLARS ABOVE TESTER VALVE	73	ID mm	130.89
TOTAL DEPTH	573	SURFACE CHOKE	25.4		
AMOUNT AND TYPE CUSHION	Nil	BOTTOM CHOKE	19.05		

SAMPLE DATA

OIL GRAVITY	@	°C
GAS/OIL RATIO		
REFRACTOMETER/RELATIVE DENSITY		
RECOVERY WATER	@	°C
CHLORIDE CONTENT		mg/L

SAMPLE SHIPPED TO LABORATORY	YES	NO
SAMPLER No.	81	
GAS SAMPLE BOTTLE No.		
LABORATORY	C and G (Calgary)	

REMARKS

COMPANY	AT & S EXPLORATION LTD.
LEGAL DESCRIPTION	-128-11-47,21 68-51-21.00
PROVINCE OR TERRITORY	N.M.T.
FIELD OR AREA	MAIDA CREEK
WELL NAME AND NUMBER	MAIDA CREEK
TEST NUMBER	1
TESTED INTERVAL	549 - 573

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m ³ /day)	LIQUID RATE (m ³ /day)	REMARKS
05:30					Make up DST #1.
07:45					Run tool in.
09:45					Head up.
10:35					Set packers.
11:04					Tool open for Preflow: Strong air blow in bucket immediately remaining steady throughout flow.
11:14					Shut tool in.
14:10					Valve Open: Fair blow increasing to bottom of bucket in 30 seconds. Gas to surface in 20 minutes. Approximately 0.3 m flame in pit steady. Too small to measure.
15:10					Shut tool in.
17:25					Pull packers loose.
17:35					Thaw out rig lines.
20:00					Pull tool out.
23:00					Tool to surface.
23:10					Recover recorders.
23:40					Lay tool down.

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 86-01-04

TICKET # 68440

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-----
* Gauge Number      :      3346.      *
* Gauge Depth       :      552.      m  *
* Time of Flow      :      10.0 min.  *
* Final Pressure    :      2748.8 kPa. *
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```

Initial Hydrostatic Pressure = 6245.6 kPa

Final Hydrostatic Pressure = 6230.2 kPa

GAUGE 1, FLOW 1

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	2807.5
2.	0.0366	5.0	2757.1
3.	0.0735	10.0	2748.8

HALLIBURTON SERVICES LIMITED

GAUGE 1, CIP 1

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0131	2.0	0.7855	3734.3
2.	0.0270	4.0	0.5410	3971.6
3.	0.0400	6.0	0.4267	4145.3
4.	0.0534	8.0	0.3525	4288.1
5.	0.0670	10.0	0.3005	4373.7
6.	0.0804	12.0	0.2628	4453.5
7.	0.1004	15.0	0.2216	4560.2
8.	0.1335	20.0	0.1763	4712.7
9.	0.1668	25.0	0.1463	4840.7
10.	0.2008	30.0	0.1248	4921.1
11.	0.2340	35.0	0.1091	4991.9
12.	0.2674	40.0	0.0969	5053.6
13.	0.3009	45.0	0.0871	5098.7
14.	0.3340	50.0	0.0792	5136.6
15.	0.3679	55.0	0.0725	5166.2
16.	0.4008	60.0	0.0670	5197.1
17.	0.4681	70.0	0.0580	5239.5
18.	0.5350	80.0	0.0511	5264.0
19.	0.6015	90.0	0.0458	5289.7
20.	0.6685	100.0	0.0414	5306.4
21.	0.7353	110.0	0.0378	5316.7
22.	0.8023	120.0	0.0348	5326.4
23.	0.8689	130.0	0.0322	5336.7
24.	0.9356	140.0	0.0300	5345.0
25.	1.0026	150.0	0.0280	5349.5
26.	1.0694	160.0	0.0263	5352.1
27.	1.1359	170.0	0.0248	5355.3
28.	1.1763	176.0	0.0240	5358.6

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 86-01-04

TICKET # 68440

* Gauge Number : 3346. *
* Gauge Depth : 552. m *
* Time of Flow : 60.0 min. *
* Final Pressure : 3467.3 kPa. *

GAUGE 1, FLOW 2

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	2868.0
2.	0.0341	5.0	2789.0
3.	0.0682	10.0	2774.3
4.	0.1020	15.0	2769.9
5.	0.1361	20.0	2816.4
6.	0.1706	25.0	2899.9
7.	0.2044	30.0	2976.4
8.	0.2382	35.0	3065.6
9.	0.2724	40.0	3164.4
10.	0.3067	45.0	3250.4
11.	0.3405	50.0	3326.9
12.	0.3745	55.0	3400.2
13.	0.4087	60.0	3467.3

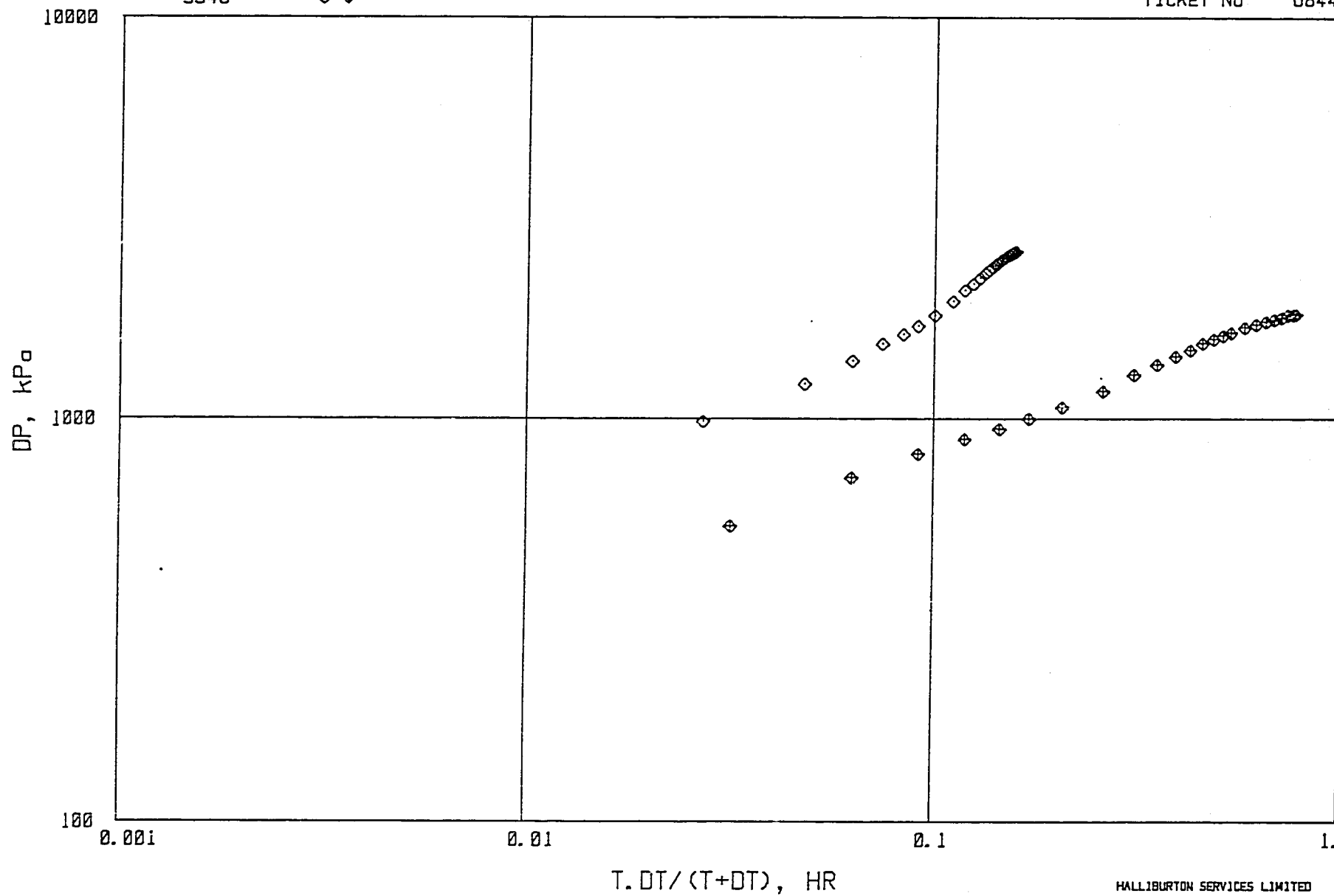
HALLIBURTON SERVICES LIMITED

GAUGE 1, CIP 2

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0133	2.0	1.5654	4007.7
2.	0.0269	4.0	1.2715	4181.3
3.	0.0405	6.0	1.1054	4286.2
4.	0.0544	8.0	0.9887	4358.2
5.	0.0677	10.0	0.9045	4412.9
6.	0.0818	12.0	0.8335	4470.8
7.	0.1020	15.0	0.7531	4539.0
8.	0.1359	20.0	0.6532	4641.9
9.	0.1703	25.1	0.5790	4757.7
10.	0.2042	30.0	0.5224	4834.3
11.	0.2379	35.0	0.4771	4899.2
12.	0.2720	40.0	0.4392	4952.6
13.	0.3055	45.0	0.4077	5010.5
14.	0.3399	50.0	0.3801	5049.8
15.	0.3738	55.0	0.3565	5081.3
16.	0.4074	60.0	0.3360	5107.0
17.	0.4757	70.0	0.3010	5158.5
18.	0.5434	80.0	0.2731	5187.4
19.	0.6117	90.0	0.2498	5214.5
20.	0.6793	100.0	0.2305	5236.3
21.	0.7474	110.0	0.2139	5255.6
22.	0.8155	120.0	0.1996	5281.4
23.	0.8834	130.0	0.1871	5285.2
24.	0.9174	135.0	0.1814	5287.8

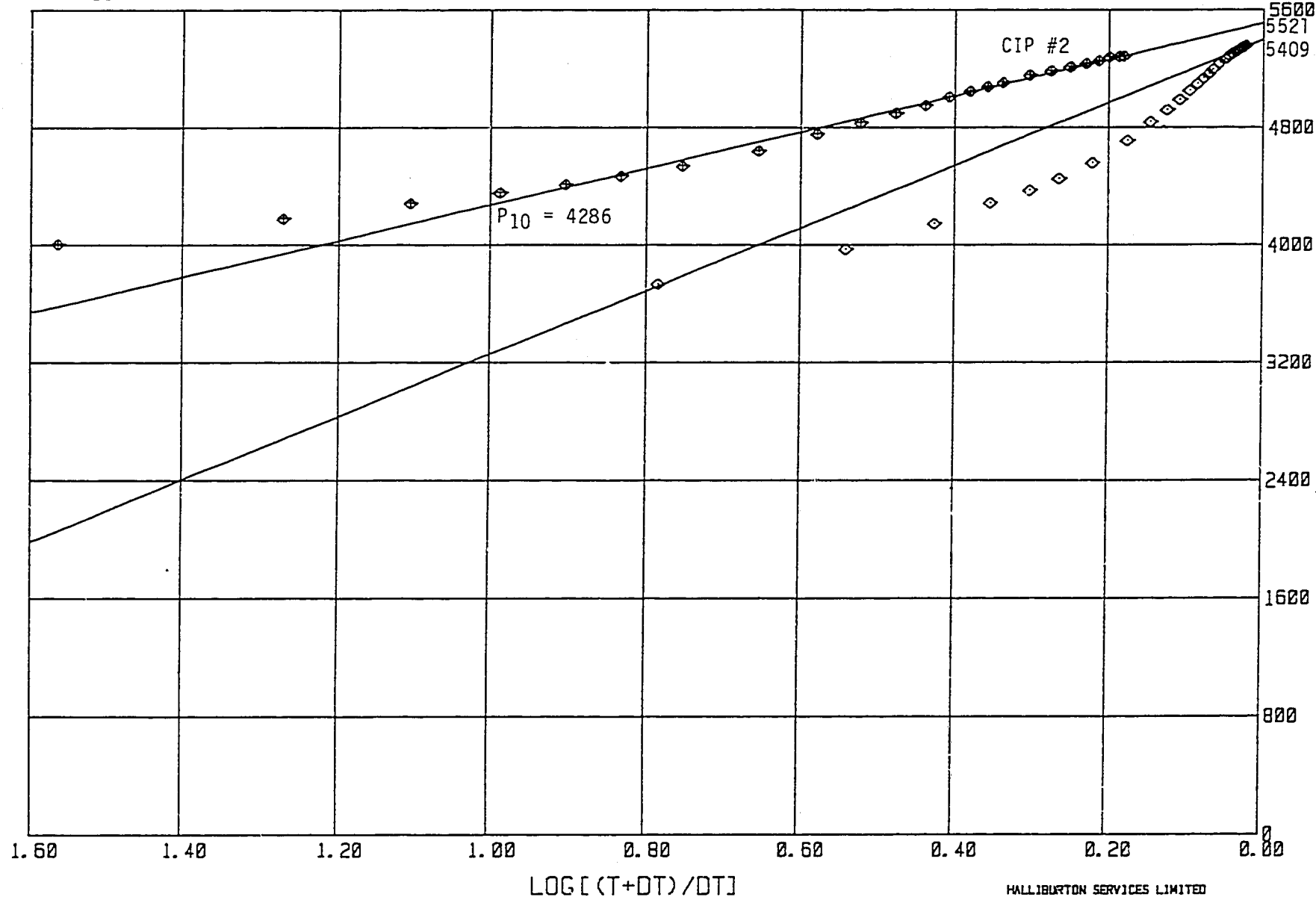
GAUGE NO CIP 1 2
3346 ◇ ◇

TICKET NO 68440



GAUGE NO CIP 1 2
3345 ◇ ◇

TICKET NO 68440



HALLIBURTON SERVICES LIMITED

		O.D. (mm)	I.D. (mm)	LENGTH(m)	DEPTH(m)
3		159.0	73.0	112.66	
50		159.0	73.0	0.31	
3		159.0	73.0	18.23	
5		159.0	73.0	0.31	
60		127.0	19.1	2.54	531.03
14		127.0	25.4	2.16	
80		127.0	57.2	1.25	535.73
80		127.0	57.2	1.25	536.98
15		127.0	44.5	1.52	
16		127.0	25.4	1.06	
26		127.0	22.3	2.15	
27		127.0	25.4	1.34	
11		127.0	25.4	1.25	
13		127.0	25.4	1.55	
74		171.5	26.9	2.55	549.00
28		127.0		1.03	
22		127.0	57.2	0.93	
5		127.0	57.0	0.31	
97			57.2	1.25	551.92
5		127.0	57.0	0.31	
5		159.0	73.0	0.31	
3		159.0	73.0	18.90	
5		159.0	73.0	0.31	

EQUIPMENT DATA

FLUID ANALYSIS



WATER ANALYSIS



AT&S EXPLORATION LTD.

AT&S Texaco Maida Creek 0-65

ELEVATIONS
AS MEASURED GMD
119.7

Maida Creek

Kee Scarp

COMPASS
Halliburton

DST 1

48 m gasified mud; 93 m gasified muddy water;
189 m gasified water

X

19 M Above Tool

549 - 573

• 1981-82 PRODUCTION

PRODUCTION DATES

• 2014

• 2004 •

1947

2006 年 9 月 1 日

201 25' 21" N 115° 5'

● ● ● ● ● ●

1986-01-09

1986-01-13

1986-01-20

S. Sargious

ION	$\frac{m \cdot V}{g \cdot m^{-3}}$	Mass Fraction	$\frac{C}{mo \cdot m^{-3}}$	ION	$\frac{m \cdot V}{g \cdot m^{-3}}$	Mass Fraction	$\frac{C}{mo \cdot m^{-3}}$
Na	5 930	0.2927	257.95	Cl	3 600	0.1777	101.52
K	35	0.0017	0.90	Br			
Ca	70	0.0035	1.75	I			
Mg	18	0.0009	0.74	HCO ₃	10 550	0.5206	173.02
Ba				SO ₄	59	0.0029	0.62
Sr				CO ₃	0	0.0000	0.00
Fe	TRACE			OH	0	0.0000	0.00

TOTAL SOLIDS

$$\frac{m \cdot V^2}{c \cdot m^3}$$

15 510

14 790

20 262

ORGANICS: TRACE

Abstract

1.011 1.3356

7.9 23.0 0.489

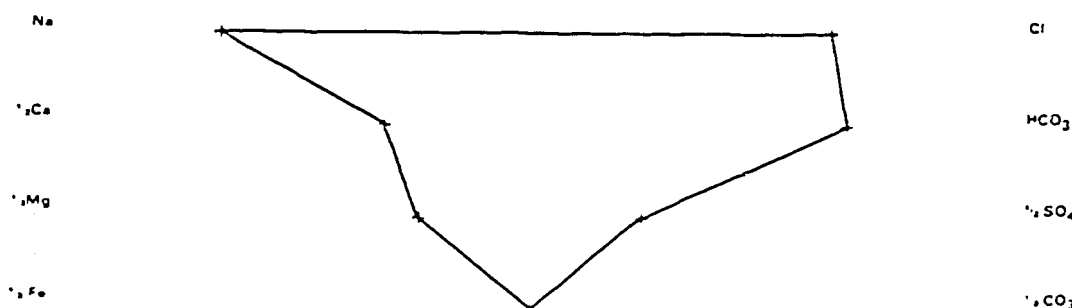
W.S. NIL

REMARKS

LOGARITHMIC PATTERN $\text{cm}^3 \text{mol}^{-1}$

iii i

Clear, colorless filtrate recovered from a sample containing approximately 10% sediment.



AT&S EXPLORATION LTD.

LAB REPORT NO: C86-2849

C86-2849-2 TOP OF FLUID - 330 M ABOVE TOOL

Resistivity: 1.31 ohm m @ 25°C.

Clear, colorless filtrate recovered from mud.

C86-2849-3 282 M ABOVE TOOL

Resistivity: 0.607 ohm m @ 25°C.

Clear, colorless filtrate recovered from a sample containing approximately 70% sediment.

C86-2849-4 189 M ABOVE TOOL

Resistivity: 0.515 ohm m @ 25°C.

Clear, colorless filtrate recovered from a sample containing approximately 10% sediment.

C86-2849-6 DRAINED FROM BOTTOM HOLE SAMPLER

Resistivity: 0.498 ohm m @ 25°C.

Clear, colorless filtrate recovered from a sample containing approximately 10% sediment.

C86-2849-1 BUBBLE HOSE (GAS)

Insufficient sample for analysis.

HISTORY
LOG

E-LOGS



Canada Oil and Gas Administration du pétrole
Lands Administration et du gaz des terres du Canada

E.A. 174
D.A. 1299

Nova Scotia	☐	West Coast	☐	Well Status	
Newfoundland	☐	Northern	☒	Suspended	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Completed	☐
				Abandoned	☒

WELL TERMINATION RECORD

This record is submitted in triplicate in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

WELL DATA

Well Name: AT&S TEXACO MAIDA CREEK 20-65 Area: N.W.T.
Grid Area: 65-40-128-00 Field/Pool: -
Permit or Lease No.: N85A423 Final Coordinates: Lat: 65°34'52.680" N Long: 126°12'47.210" W
Drilling Unit: Jade #5 Elevations-RT/KB: 121.9m SF/GL: 114.9m
Spud Date: 85-12-25 Rig Released: 86-01-10 Total Depth: 685m

CASING AND CEMENTING

O.D.:	Weight:	Grade:	Depth Set:	Cement and Additives:
<u>340mm</u>	<u>71.43</u>	<u>H40</u>	<u>15m</u>	<u>6.0 tonnes Polarset</u>
<u>245mm</u>	<u>53.6</u>	<u>J55</u>	<u>191m</u>	<u>7.5 tonnes Polarset & 0.3% R-15</u>
				<u>+9.0 tonnes Class G OWC</u>

PLUGGING PROGRAM

Approval of the following program was obtained by (person) W.H. Slaght from
(person) Kem Singh of the Canada Oil and Gas Lands Administration by means of
Telecopy on 86-01-09 19

Type of Plug:	Interval:	Felt:	Cement and Additives:
<u>Cement Plug #1</u>	<u>684-530mKB</u>	<u>10.0 tonnes (20% excess) Class G Oilwell</u>	
<u>Cement Plug #2</u>	<u>210-170mKB</u>	<u>3.60 tonnes (20% excess) Class G Oilwell</u>	
		<u>Plug No. 2 felt at 165mKB</u>	
<u>Cement Plug #3</u>	<u>19mKB to Surface</u>	<u>0.8 tonnes Class G Oilwell</u>	
<u>Cut Csg. off 1m below gr. level and weld on cap</u>			
<u>Install well identifier</u>			

Lost Circulation/Overpressure Zones: Lost Circ. Zone 542-44mKB

Equipment left on Seafloor (Describe):

Provision for Re-entry (Describe and attach sketch):

Cores: Type: Conventional Intervals: #1 - 547-553mKB #2 - 553-555mKB
#3 - 555-573mKB

Other Downhole Completion/Suspension Equipment:

CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: W.H. Slaght Chief Geologist
Name: W.H. Slaght Title: Chief Geologist
Date: 86-01-09

Acknowledged by: Kem Singh
Engineering Branch

Date: June 06/1986
File: 9211-A31-2-1

APPROPRIATE
REMOVED BY: WHA

DATE 86-06-16

Department of Energy,
Mines and Resources

Ministère de l'Énergie,
des Mines et des Ressources

Department of Indian Affairs
and Northern Development

Ministère des Affaires indiennes
et du Nord canadien

Canada

copied to C.Reg.