

**Audit of Timber Harvesting and
Road Construction, Maintenance
and Deactivation**

**Tree Farm Licence #10
International Forest Products Limited**



November 1998

FPB/ARC/09

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Report from the Board

A. Report from the Board

This is the Board's report on a compliance audit¹ of Tree Farm Licence (TFL) 10. This licence is held by International Forest Products Limited (Interfor) and is located north of Powell River, near Toba Inlet on the mainland coast (see map)².

The audit examined Interfor's timber harvesting, road practices, and related operational plans, for the period from May 1, 1997 to June 8, 1998. The audit assessed compliance with the *Forest Practices Code of British Columbia Act* and related regulations (the Code).

The Board's conclusions are based on an audit of the following plans and practices:

- harvesting of 8 cutblocks;
- operational planning for future harvesting of 8 cutblocks;
- layout and design of 5 road sections totaling 2.8 kilometres;
- construction of 8 road sections totaling 4.5 kilometres;
- maintenance and temporary deactivation of 31.2 kilometres of roads;
- construction of 2 bridges; and
- maintenance of 12 bridges.

Conclusions and Recommendations

Interfor's timber harvesting and road construction, maintenance and deactivation practices complied with the Code in all significant respects.

The Board agrees with the auditor about the need for improvement in the planning and layout of cutblocks near riparian areas. The Board recommends that Interfor review its operating procedures to ensure that the planning and field layout of cutblocks near riparian areas comply with Code requirements.

Riparian area: land adjacent to a stream, river, lake or wetland containing vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas.

¹ Part B of this document provides background information on the Board's audit program and the process followed by the Board in preparing its report.

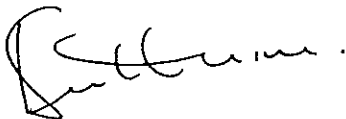
² The report from the auditor (Part C of this document) provides specifics about the operating areas of Tree Farm Licence 10 and the forest planning and field activities of International Forest Products Limited that were the subject of this audit and the audit results.

Old Road Systems on Tree Farm Licence 10

The auditor identified several old road systems on TFL 10 which have not been maintained or permanently deactivated and are deteriorating. Interfor has not used these roads since the Code came into effect and is not required to maintain or deactivate them. These situations do not represent non-compliance on the part of Interfor. This is because sections 63 and 64 of the Code do not require that licensees maintain or deactivate roads that have not been used since the introduction of the Code. There appears to be no party with legal responsibility under the Code to maintain or deactivate these roads.

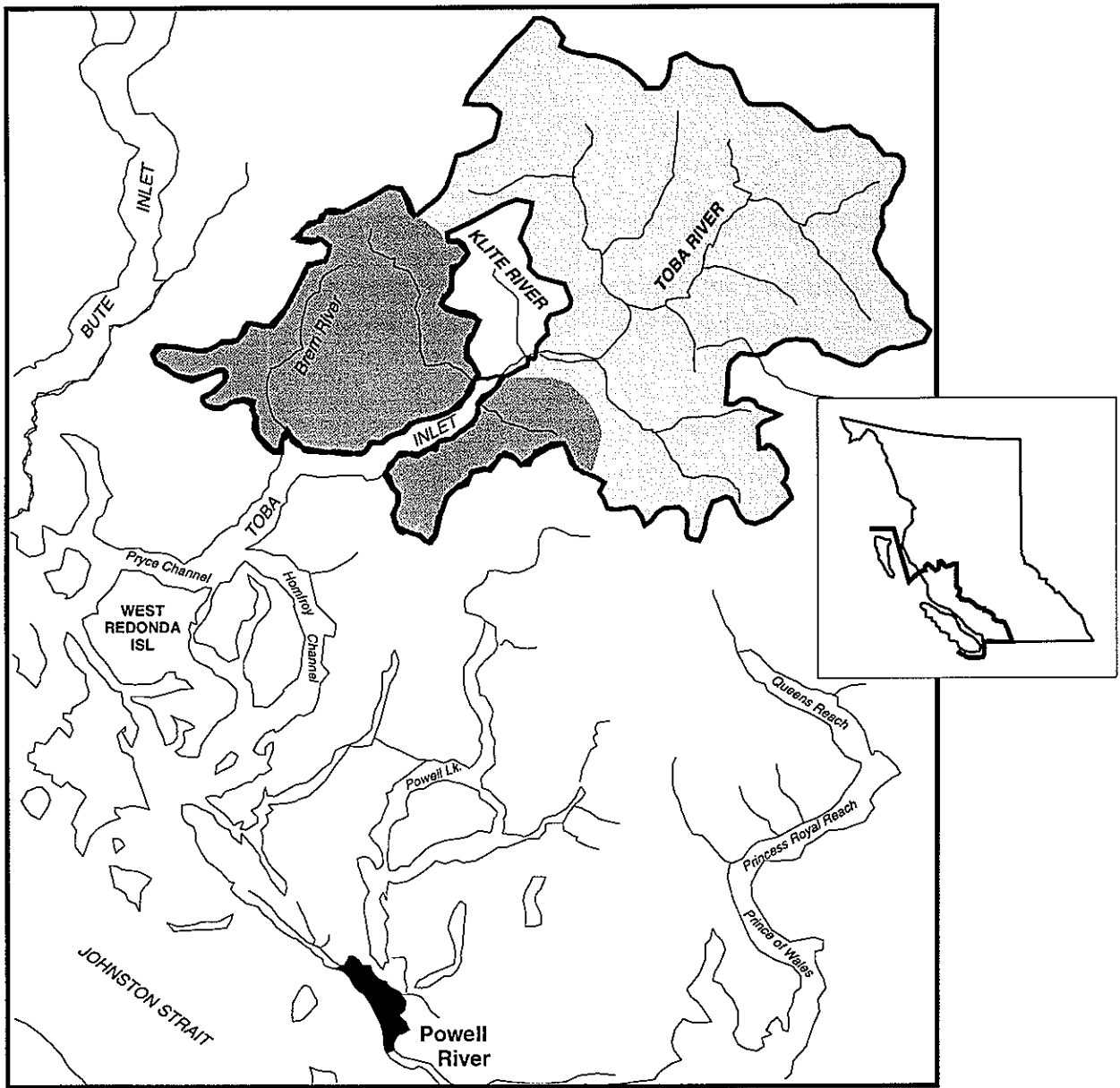
In the absence of maintenance or deactivation, some of these roads in one part of the TFL have deteriorated to the point that damage to the environment could occur in the future. Two of these road systems—Tahumming and South Chusan—are on naturally unstable slopes and are scheduled for semi-permanent deactivation under Forest Renewal BC projects.

There are also approximately 130 kilometres of old roads in another part of the TFL that Interfor has not been able to use. They do not have an agreement to use the road through the First Nation reserve at the mouth of the Toba River that provides access to that portion of the TFL. As a result, the roads have not been maintained or deactivated. This road infrastructure, and in particular the Toba mainline road, is in danger of deteriorating beyond repair. The loss of this road infrastructure would represent a significant economic loss to the Province of British Columbia. In the Board's view, this is a serious issue that requires attention by both Interfor and the government.



Keith Moore
Chair

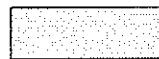
October 29, 1998



Tenure Area

Accessible portion of TFL

Inaccessible portion of TFL



Forest Practices Board Compliance Audit Process

B. Forest Practices Board Compliance Audit Process

Background

The Forest Practices Board conducts audits of government's and agreement holder's compliance with the *Forest Practices Code of British Columbia Act* and regulations (the Code). The Board is given the authority to conduct these periodic independent audits by section 176 of the Act. Compliance audits examine forest planning and practices to determine whether or not they meet Code requirements.

The Board undertakes both "limited scope" and "full scope" compliance audits. A limited scope audit involves the examination of selected forest practices (e.g. roads, or timber harvesting, or silviculture) and the related operational planning activities. A full scope audit examines all operational planning activities and forest practices.

The Board determines how many audits it will conduct in a year, and what type of audits (limited or full scope), based on budget and other considerations. The Board audits agreement holders who have forest licences or other tenures under the *Forest Act* or the *Range Act*. The Board also audits government's Small Business Forest Enterprise Program (SBFEP) which is administered by Ministry of Forests district offices. Selection of agreement holders and district SBFEPs for audit is done randomly, using a computer program, to ensure a fair, unbiased selection of auditees.

Audit Standards

Audits by the Forest Practices Board are conducted in accordance with the auditing standards developed by the Board. These standards are consistent with generally accepted auditing standards.

The audits determine compliance with the Code based on criteria derived from the *Forest Practices Code of British Columbia Act* and its related regulations. Audit criteria are established for the evaluation or measurement of each practice required by the Code. The criteria reflect judgments about the level of performance that constitutes compliance with each requirement.

The standards and procedures for compliance audits are described in the Board's "Reference Manual — Compliance Audits, Version 3, May 1998".

Audit Process

Conducting the Audit

Once the Board selects an audit and decides on the scope of the audit (limited scope or full scope), the staff and resources required to conduct the audit and the period covered by the audit are determined. Board staff also meet with the party being audited to discuss the logistics of the audit before commencing the work.

All the activities carried out during the period subject to audit are identified. This includes activities such as the sites harvested or replanted and road sections built or deactivated during the audit period. The items that comprise each forest activity are referred to as a “population.” For example, all sites harvested form the “timber harvesting population.” All road sections constructed form the “road construction population”. The populations are then sub-divided based on factors such as the characteristics of the sites and the potential severity of the consequences of non-compliance on the sites.

The most efficient means of obtaining information to conclude whether there is compliance with the Code is chosen for each population. Because of limited resources, sampling is usually relied upon to obtain audit evidence, rather than inspecting all activities.

Individual sites and forest practices within each population have different characteristics, such as the type of terrain or type of yarding. Each population is divided into distinct sub-populations on the basis of common characteristics (e.g. steep ground vs. flat ground). A separate sample is selected for each population (e.g. the cutblocks selected for auditing timber harvesting). Within each population, more audit effort (i.e. more audit sampling) is allocated to the sub-population where the risk of non-compliance is greater.

Audit work in the field includes assessments from helicopters and intensive ground procedures such as the measurement of specific features like road width. The audit teams generally spend two to three weeks in the field.

Evaluating the Results

The Board recognizes that compliance with the many requirements of the Code is more a matter of degree than absolute adherence. Determining compliance requires the exercise of professional judgment within the direction provided by the Board.

Auditors collect, analyze, interpret and document information to support the audit results. The audit team, comprised of professionals and technical experts, first determines whether forest practices are in compliance with Code requirements. For those practices considered to not be in compliance, the audit team then evaluates the degree to which the practices are judged not in

compliance. The significance of the non-compliance is determined based on a number of criteria including the magnitude of the event, the frequency of its occurrence, and the severity of the consequences.

As part of the assessment process, auditors categorize their findings into the following levels of compliance:

Compliance — where the auditor finds that practices meet Code requirements.

Not significant non-compliance — where the auditor, upon reaching a non-compliance conclusion, determines that a non-compliance event, or the accumulation and consequences of a number of non-compliance events, is not significant and is not considered worthy of reporting.

Significant non-compliance — where the auditor determines that the event or condition, or the accumulation and consequences of a number of non-compliance events or conditions, is significant and is considered worthy of reporting.

Significant breach — where the auditor finds that significant harm has occurred or is beginning to occur to persons or the environment as a result of the non-compliance. A significant breach can also result from the cumulative effect of a number of non-compliance events or conditions.

Identification of a possible significant breach requires the auditor to conduct tests to confirm whether or not there has been a breach. If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Ministers of Forests, Energy & Mines, and Environment, Lands & Parks.

Reporting

Based on the above evaluation, the auditor then prepares the “Report from the Auditor”, for submission to the Board. The party being audited is given a draft of the report before it is submitted to the Board so that the party is fully aware of the findings. The party is also kept fully informed of the audit findings throughout the process, and is given opportunities to provide additional relevant information and to ensure the auditor has complete and correct information.

Once the auditor submits the report, the Board reviews it and determines whether any party or person is potentially adversely affected by the audit findings. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final report to the public and government. The representations allow potentially adversely affected parties to present their views to the Board.

At the discretion of the Board, representations may be written or oral. The Board will generally offer written representations to potentially adversely affected parties, unless the circumstances strongly support the need for an oral hearing.

The Board then reviews both the report from the auditor and the representations before preparing its final report which includes the Board's conclusions and may also include recommendations, if appropriate.

If the Board's conclusions or recommendations result in newly adversely affected parties or persons, additional representations would be required.

Once the representations have been completed, the report is finalized and released: first to the auditee and then to the public and government.

Report from the Auditor

C. Report from the Auditor

1. Introduction

As part of the Forest Practices Board's 1998 compliance audit program, Tree Farm Licence (TFL) 10 was selected for audit from the population of major forest licences in the Vancouver Forest Region. The TFL, held by International Forest Products Limited, was selected randomly and not on the basis of location or level of performance.

TFL 10 is located north of Powell River on the mainland coast. The TFL surrounds Toba Inlet and encompasses all areas in the upper reaches of the inlet except the Klite River drainage, as shown on the map on page A-3. The TFL lies within the Sunshine Coast Forest District and is managed by Interfor's Campbell River operations. The company's operations are confined to approximately 25% of the TFL's 229,592 hectares. Operations are being conducted in two areas along Toba Inlet:

- Brem River, located on the north side of Toba Inlet, and
- Nor Creek, located on the south side of Toba Inlet.

The company is unable to gain access to the entire Toba River Valley and its tributaries. Access to this area can only be made through the Klahoose First Nation reserve located at the mouth of the Toba River, and an access agreement has not been in place since 1988.

The restriction of access has been reflected in the partitioning of the TFL's allowable annual cut of 170,950 cubic metres. In 1996, the chief forester allocated 55,000 cubic metres of the allowable annual cut to the accessible portion. Of this, Interfor was allocated 49,000 cubic metres and the remaining 6,000 cubic metres was allocated to the Small Business Forest Enterprise Program (SBFEP). This audit did not assess any practices undertaken by the SBFEP in the TFL.

2. Audit Scope

The audit examined the planning and field activities related to timber harvesting and road construction, maintenance and deactivation. These activities were assessed for compliance with the *Forest Practices Code of British Columbia Act* and related regulations (the Code).

All timber harvesting and road construction, maintenance, and deactivation activities for the period May 1, 1997 to June 8, 1998 were included in the scope of the audit. This involved examining all aspects of operational planning - such as forest development plans¹, silviculture prescriptions² and logging plans³ - that supported the activities examined during the audit period and included:

- operational plans approved and implemented in the audit period; and
- operational plans that were developed and/or approved before the audit period, and were implemented in the period.

The audit also examined operational plans approved during the audit period and not yet implemented (e.g. timber harvesting had not commenced).

The activities carried out during the audit period, and therefore subject to audit, comprised the:

- harvesting of 8 cutblocks;
- operational planning for future harvesting of 8 cutblocks;
- layout and design of 5 road sections totaling 2.8 kilometres;
- construction of 8 road sections totaling 4.5 kilometres;
- maintenance and temporary deactivation of 31.2 kilometres of roads;
- construction of 2 bridges; and
- maintenance of 12 bridges.

There was no permanent or semi-permanent deactivation of roads during the audit period. There were also no harvesting or road activities in the inaccessible (Toba River) portion of the TFL.

Section 3 describes the results of the audit. The Board's audit reference manual, "Reference Manual - Compliance Audits, Version 3.0, May 1998," sets out the standards and procedures that were used to carry out this audit.

3. Audit Findings

A. Planning and practices examined

The audit work on selected roads and cutblocks included assessments from the air using helicopters, and ground based procedures. Given the number of harvested cutblocks and roads constructed in the TFL during the audit period, we examined all of them. The audit examined the:

- harvesting of 8 cutblocks;
- field layout of 1 cutblock and the operational plans for 8 cutblocks to be harvested in the future;
- plans and profiles for 5 road sections totaling 2.8 kilometres and the layout of 1 road section of 0.2 kilometres;
- construction of 8 road sections totaling 4.5 kilometres;
- maintenance and temporary deactivation of 31.2 kilometres of roads;
- construction of 1 bridge; and
- maintenance of 4 bridges.

B. Findings

The audit found that Interfor's activities complied, in all significant respects, with the road and harvesting requirements of the Code.

Although the audit found compliance in all significant respects, there were two areas in which improvement is required. There were differences in the riparian prescriptions in the silviculture prescription and logging plan, and inconsistent layout of the riparian management areas⁴ of a fish stream between two cutblocks and a W3 wetland adjacent to one of the cutblocks. The fish stream was classified as an S3, but had sections which were determined to be S4 reaches. The inconsistencies did not constitute significant non-compliance because the riparian management areas established in the field provided adequate protection for the stream and wetland. The audit did not identify any concerns with other riparian management activities.

4. Other issues - old road systems

There are a number of "old road" systems in both the accessible and inaccessible portions of TFL 10. These roads have not been used since the Code came into effect on June 15, 1995, and so Interfor does not have a responsibility under the Code for the maintenance and deactivation of these roads. The situations described in this section were not considered to be non-compliance on the part of Interfor. They are included in this report because of the potential for environmental harm and loss of road infrastructure.

i) Old Road Systems within the Accessible (Toba Inlet) Portion of TFL 10

The condition of three road systems constructed and used before the introduction of the Code was identified as a concern. The company had performed assessment and some deactivation work on these roads before the introduction of the Code. However, some of these roads now have the potential to cause harm to the environment.

As these roads were constructed and used before the introduction of the Code, and not used since, Interfor does not have a legal obligation under sections 63 and 64 of the Act to maintain or deactivate these roads. If such an obligation existed, the audit would have assessed some of the situations as significant non-compliance because of the potential for harm to the environment from failures of fill and cut slopes, open slopes, and road drainage structures.

The roads in the Hillis Creek area are located on steeper slopes above a fish stream. In some places, there is evidence of cut and fill slope failures, surface erosion and possible minor sedimentation into the stream.

Two other road systems, in Tahumming and South Chusan, are on naturally unstable slopes. There is evidence of fill slope failures, tension cracks and cut bank raveling, which may lead to open slope failures, affecting productive forest site and small non fish streams. In the South Chusan, such a failure during periods of extreme water run-off could initiate a debris flow into Toba Inlet. These two road systems are scheduled for semi-permanent deactivation under Forest Renewal BC projects. The company has prepared deactivation prescriptions for these road systems.

ii) Old Road Systems within the Inaccessible (Toba River) Portion of TFL 10

About 75% of TFL 10 is accessed through the Klahoose First Nation reserve, for which there is no negotiated access agreement. The Toba mainline road traverses the active flood plain of the Toba River, providing access to the Toba River valley and its tributaries, and bisects the reserve at the mouth of the Toba River. Since 1988, there has been no agreement with the Klahoose over access through the reserve, and Interfor and the previous licensee, Weldwood of Canada, have been unable to undertake development or management activities in this area.

There are an estimated 130 kilometres of road in this inaccessible portion of the TFL. These roads and drainage structures have had no maintenance or deactivation activities since the original access agreement expired in 1988. The roads examined by the audit team were overgrown by brush in many places and were generally impassable by vehicle. Drainage structures, in particular bridges, had deteriorated and many were washed out. There were numerous instances of minor to moderate fill slope failures on roads in tributary valleys. However, none of these instances had caused or were likely to cause significant harm to the environment.

The Toba mainline, which follows the Toba River and is approximately 70 kilometres in length, is the area of most concern. The road is substantially overgrown, and in numerous locations the shifting meanders of the river have undercut river banks, encroaching on the road prism and drainage structures. At one point directly upstream from the "10-mile" bridge, the river has doubled its width as it has shifted direction. Without maintenance to protect the bridge and road, the river will eventually undercut the road, isolating the bridge. In addition, an extensive debris jam has built up against one of the bridge piers. Although it has not yet caused damage to the bridge structure, it could result in damage to the bridge if not removed. At several locations where the mainline crosses tributaries to the Toba River, the bridge crossings have either deteriorated or been washed out during high run-off periods. In the upper part of the valley, beaver dams have caused several sections of the road to wash out.

Had Interfor been able to access this area and use the roads, the company would have been required to maintain and deactivate the roads and bridges under sections 63 and 64 of the Act. Given the current access situation, the developed road infrastructure is in danger of being lost or becoming irreparable, at a significant economic cost to the Province of British Columbia.

5. Audit Opinion

In my opinion, the timber harvesting and road construction, maintenance and deactivation activities carried out by International Forest Products Limited on Tree Farm Licence 10 from May 1, 1997 to June 8, 1998 were in compliance, in all significant respects, with the road and harvesting requirements of the Code as of June 1998.

In reference to compliance, the term "in all significant respects" recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

Without qualifying my opinion, I also draw attention to section 4 which describes the condition of old roads in the TFL. These situations were not considered to be non-compliance by International Forest Products and are summarized below.

The condition of old roads in both the Toba Inlet and Toba River portions of the TFL is deteriorating. As these roads were constructed and used before the introduction of the Code, and not used since, International Forest Products does not have a legal obligation under the Code to maintain or deactivate these roads. However, on some of these roads there is the potential for harm to the environment, unless the deficiencies are addressed. The company has prepared deactivation prescriptions for some of these roads under Forest Renewal BC projects.

In the Toba River portion of the TFL, to which International Forest Products does not have a negotiated access agreement, the company's inability to conduct road maintenance activities has rendered the road infrastructure of approximately 130 kilometres in danger of becoming irreparable, at a significant economic cost to the Province of British Columbia.

Sections 2 and 3 of this report from the auditor describe the basis of the audit work performed in reaching this opinion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient road and timber harvesting practices to support an overall evaluation of compliance with the Code.



Jon Davies, CA
Auditor
Forest Practices Board

Victoria, British Columbia
September 29, 1998

Endnotes

1. A forest development plan is an operational plan that provides the public and government agencies with information about the location and scheduling of proposed roads and cutblocks for harvesting timber over a period of at least five years. The plan must specify measures that will be carried out to protect forest resources (including biological diversity, water, fisheries, wildlife and other forest resources). It must also illustrate and describe how objectives and strategies established in higher level plans, where they have been prepared, will be carried out. Site specific plans are required to be consistent with the forest development plan.
2. A silviculture prescription is a site specific operational plan that describes the forest management objectives for an area to be harvested (a cutblock). It describes the management activities proposed to maintain the inherent productivity of the site, accommodate all resource values including biological diversity, and produce a free growing stand capable of meeting stated management objectives. Silviculture prescriptions must be consistent with higher level plans that encompass the area where the prescription applies.
3. A logging plan is an operational plan that details how, when, and where timber harvesting and road construction activities will take place in a cutblock, in accordance with the approved silviculture prescription and forest development plan for the area. Information about other forest resource values, plus all current field information for the area, must be clearly shown in the logging plan.
4. A Riparian Management Area is an area adjacent to a stream, lake or wetland, consisting of a riparian management zone and, depending on the riparian class of the stream, lake or wetland, a riparian reserve zone. The Code's objectives for riparian areas are to minimize or prevent impacts of forest use on stream channel dynamics, aquatic ecosystems, and water quality, as well as on the diversity and sustainability of wildlife habitat and vegetation in these areas. Constraints to road and harvesting practices are applied within these zones, with the most stringent requirements for the riparian reserve zones.



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