

APPENDIX B

SUMMARIES BY DEPARTMENT

B.1 INTRODUCTION

This appendix summarizes some of the social and economic characteristics of departments crossed by the Land Easement (also see Section 4.2). Table B-1 summarizes the names of villages, land files, and land uses by alignment sheets. In addition, the reader should consult the 1996 report entitled *The Chad-Cameroon Pipeline Project Environmental Assessment: Socioeconomic and Cultural Issues*.²³

In general, most of the pipeline route passes through rural Cameroon where the economy is based on agriculture. For over 50 years cash crops such as cocoa, coffee, or cotton have provided a basic source of income to rural farmers. Recent fluctuations in the world market and government withdrawal of investment support have considerably diminished the importance of these crops. However, cocoa, coffee, or cotton, plantations are part of rural life, and especially older people may never abandon their “cacaoyère” cocoa plantation, which has been their pride for so many years.

Palm wine, mainly derived from oil palms, and sometimes from raffia palms, is now an important source of appreciable income in the forested areas of the Project area. A liter sells for about 300 FCFA/liter, and can provide a regular income to farmers.

Hunting is still important in the less densely inhabited areas. Hunters still use traditional methods, mainly snares and traps. Nowadays, use of guns has become more important to local and commercial hunters. Often, an individual in need of bush meat will buy bullets for a hunter, who will repay him with part of his catch.

The market for bush meat is very important, not only in the rural areas also in the major towns. Bush meat is not only highly valued, it is much more expensive than other meats (beef, mutton, chicken) in rural areas. In Yaoundé it is an important restaurant item and is sold as street food. It usually costs about the same as a dish of beef or fish.

Fishing in bigger rivers, like the Sanaga, produces a good income for some fishermen, since the demand for fish exceeds supply. In certain rural areas dried and smoked fish from North Cameroon and frozen fish from West Africa is available. The later wherever electricity is available.

²³ This report, prepared by Dr. Muneera Salem-Murdock *et al.* (Institute for Development Anthropology, Binghamton, New York), can be found in the October 1997 version of the *Environmental Assessment, Chad Export Project: Cameroon Portion*.

There is little commercial activity outside of urban areas. Only medium sized villages in southern Cameroon have regular markets. Village women often sell beer and soft drinks from their homes, and bars can only be found in the bigger villages. Itinerant merchants sell clothing and household utensils in the villages

Salaried jobs are difficult to find outside urban areas, and those that are available are often on plantations. Along the pipeline route, salaried jobs can be found at the palm oil plantations of Socapalm near Kribi, the sugar plantations of Sosucam in Mbandjock, and Camsuco in Nkoteng.

Logging companies hire in some areas along the pipeline route, especially in the Departments of Haute-Sanaga and Lom-et-Djérem, and in the Deng Deng forest. Logging in semi-deciduous forests is significant. Five to ten trees of commercial value can be harvested, per hectare, during a first cut in this zone, compared to only one or two trees per hectare in the Atlantic Littoral evergreen forest zone.

B.2 OCÉAN DEPARTMENT²⁴

Many ethnic groups live in the Océan Department; those leading the most traditional lifestyles being generally categorized as the Bantus and Pygmies. Each is culturally distinctive and have their own communities. Most live along the main roads those between Kribi-Edea; Kribi-Bipindi-Lolodorf; Kribi-Campo, and Kribi-Akom II.

Most individuals are Christians of various denominations. Around Kribi most are Roman Catholics with some Presbyterians. More recently, churches have been established by the Neo-apostolic church and by Jehovah's witnesses.

The major commercial activities are in the Kribi area and include industrial plantations such as Socapalm (palm oil) and Hevecam (rubber), and some commercial enterprises in the harbor area, and a weekend tourist trade. Retirees from the private enterprises play important roles in the local economy. Outside of Kribi, the coastal Batanga rely on fishing, while other groups rely primarily on subsistence agriculture and cocoa as a cash crop.

There are only two markets in the region: the daily market in Kribi and the weekly market, on Saturdays, in Bipindi. The coastal populations have markets but no products to sell, and the inland populations have products to sell but no market, as transport costs are very high.

²⁴ The economy of the area has been extensively studied by GEPFE during the market survey of August 1997 (Kribi and Lolodorf), the socio-economic studies around the storage yards (Kribi, Bipindi and Lolodorf) and during the consultation process for the Bakola Pygmies. This text is based on the reports written by GEPFE.

Commercial logging is an important activity in some parts of the region though no company is currently operating near the pipeline route, except near Kribi. Local villagers work on these projects whenever possible.

Rainfall of about 2,000 to 3,000 mm/year allows a growing season of 245-365 days. Subsistence agriculture is widely practiced following an agricultural cycle that lasts for 2-3 years followed by a fallow period of 5 to 15 years.

Cocoa fields are still planted, but since the world prices of cocoa and coffee crumbled during the late 1980s, their importance has diminished substantially. During the last few years prices have risen, but fields have not been significantly rehabilitated. Many plantations have crop disease problems. Since pest control products are not readily available, many farmers have little production.

In the Kribi area most people grow only food crops. Intercropped fields belong to the woman and in rare instances to men as well. The coastal populations primarily grow cassava, but their agricultural productivity is low compared to inland groups whose agricultural production is more varied and with higher yields.

A typical crop rotation in the Kribi area is as follows:

Year	(Bidou)	(Bikondo)	(Bwambe)
Fallow	4-5 years	3-4 years	5 years
1A	cucumber, yam, macabo	Maize + groundnuts + cassava	Cassava + maize + some cocoyam
1B		Cassava + bananas + yam + cocoyam	
2	cucumber-cassava-maize	Consumption of cassava	Consumption of cassava
3	Consumption of cassava		

Most produce is sold in the villages for food crops and at the beach for fish and fishing products. Selling at the Kribi market is rare. The most frequently sold items include cassava tubers, their derivatives, and salt-water products such as fish. These items are an important source of income.

In the Lolodorf area men farm, tap palm wine, and hunt. Women farm and sell produce in the Saturday market. Most agricultural production is food crops. Cocoa, the only cash crop, is of little importance and the plantations belong to men. Coffee was formerly an important crop but was abandoned by most farmers about 10 years ago. Fruit trees are abundant and are usually more than 25 years old.

Fruits and nuts for food and many medicinal plants are gathered throughout the Department. Except for traditional healers, women usually have more knowledge concerning medicinal plants for daily use than men. The Bantus buy *Strophanthus* lianas for medical purposes from Pygmies for their use.

Animal husbandry is not important. Some individuals keep sheep, goats and chickens but their use is limited to festive occasions.

Hunting is also important throughout the area, but game is rapidly diminishing due to population pressure, use of rifles, hunting with lamps during the night, illegal hunters from outside the area (poachers or "braconniers"), and logging activities.

Salt-water fishing is practiced only by the Batanga around Kribi. Some river dwelling people fish in the Lokoundje River but it appears to be of secondary importance.

B.3 NYONG-ET-SO'O

The pipeline crosses only 16.2 km in the Nyong-et-So'o Department or less than two percent of its total length. The 1987 census indicated a population of 96,038.

The most important ethnic group in the area is the Ewondo, belonging to the Béti. The population is largely Christian of various Catholic and Protestant denominations. The livelihood is very similar to that of the Mvengue area (Océan department).

Significant forest reserves still exist, and Leplaideur estimated sufficient land was available for 80 percent of the farmers, although 11 percent of the available land for agriculture has already been used. The agricultural system practiced in this region is slash-and-burn agriculture. A land use of over 12 percent in swidden agriculture means that fallow periods are too short and longtime fertility not assured.

Rainfall is lower than in the Océan province and the forest is of the semi evergreen style according to Letouzey. Agriculture is based on crop rotations similar to Océan Department using crops such as groundnuts, cassava, macabo, cucumber, and plantain. As in the whole peri-urban area of Yaoundé, the diet is based on cassava and peanuts (Leplaideur, 1985; Santoir, 1992; Koppert, *et al.*, 1997). Yearly differences in climatic conditions play an important role in food sufficiency.

B.4 MEFOU-ET-AKONO

The pipeline crosses the Mefou-et-Akono Departments for 56 km. The population is mainly made up of the Ewondo (Béti ethnic group), and the estimated population density varies between 40 and 60 inhabitants/km² (Santoir, 1992). In 1992 the old Mefou department was split into two, Mefou-et-Akono and Mefou-et-Afamba. Population of the two departments grew about 14 percent from 125,000 inhabitants in 1976 to 143,000 in 1987.

According to mission reports at least 90 percent of the population is Catholic. A few families are Protestant, and there are some Muslim immigrants. Newer churches and sects are starting to attract some members.

The prefecture of Ngoumou lies on a railroad junction with a regular connection to Yaoundé-Douala and an irregular one to Mbalmayo. The road connecting Ngoumou to Kribi and to Yaoundé (about 30 km) is in a poor state of repair.

The Ngoumou economy was formerly based on cocoa cultivation, but has since shifted to food production meant for the Yaoundé urban area. No important commercial and manufacturing activities have been established in the area. Logging is absent. The commercial activities in the region are: the sale of cocoa, agricultural products and palm wine and petty trading. As elsewhere, palm wine is a very regular source of income. The local markets have a strong growth potential.

Ngoumou is an important education center for the area with primary and secondary schools. The literacy rate is high, but so is the dropout rate from the schools, often because of parents inability to pay school fees. However, most people speak French.

According to a recent survey by a Catholic Mission,²⁵ the average family size is 5.4 in the area and 62 percent of the population is less than 25 years old. The report describes the area as one of degraded forest, rather swampy and of low fertility, and thus suited for agriculture. Income is low, and the area is characterized as being "structurally poor," as shown by the quality of housing, sanitary conditions, the lack of good medical care and difficulties of communication.

Mefou-et-Akono, is located in an agro-ecological zone 5, a semi evergreen forest, with a bimodal rainfall (May-June and September-November). Rainfall reaches 1700 mm and the average temperature is 24°C. Land use is dense in both Mefou departments. Leplaideur (1985) states that 15 percent of the land is under cultivation, which is high for a system based on slash-and-burn agriculture.

Cassava is the main food crop, but which suffers from cochineal, mosaic virus and early rot of the roots maize and groundnuts are also cultivated, but in lesser quantities. Bananas grow well in the area, but plantain banana are rare. Cocoyam is of secondary importance, as are yams and sweet potatoes. Some farmers grow beans and soybeans. Vegetables include various *Amaranthus* and *Solanum* leaves, bitterleaf, gumbo, red pepper, and onions.

The main cash crop in the area is cocoa, but once again, due to low prices and the absence of fertilizer and pest control, its production is dwindling. Perennial crops are cocoa, fruit trees: (mangoes, bush butter, avocado, citrus fruits) cola tree, raffia and oil palms, and pineapple. Oil palms, which are semi domesticated, are more and more rare as they are reserved for the production of palm wine.

²⁵ Centre d'Etudes Redemptor hominis (1995); Programmer ensemble le développement. Enquête socio-économique dans les missions d'Ozom, Nkum-Eye, Nkol-Messi). Mbalmayo. 71 p.

Typical crop rotations in Ngoumou include:

Year	Field I	Field II
3 years	Fallow	Fallow
1A	Groundnuts + maize + cassava + cocoyam	Maize + cucumbers + Cassava + cocoyam
1B	Cassava + cocoyam	Cassava + cocoyam
2	Cassava (consumed 12-24 months after planting)	Cassava

Some people construct small fish ponds to raise tilapia. Other fishing is in the Akono River during the dry season. Fishing in the artificial ponds, left after the railroad construction, is accessible to the entire population. Game is scarce and hunting is rarely practiced anymore.

B.5 MFOUNDI

The pipeline route crosses only 1.3 km of this department, affecting only one village. The village of Nkolnkoumou has an estimated population of about 2000 that belong to the ethnic groups of Ewondo, Bamilekes, and Eton. The village has a primary school and a health clinic, but no electricity. Economic activities are oriented towards the Yaoundé market.

B.6 LÉKIÉ

Lékié is part of a densely populated area (75-150 inhabitants/km) and includes important villages near the former dirt surfaced road to Douala such as that of Ngoya (population 2,500) and the asphalt road of Ydi-Okola, and near the Yaoundé-Bafia asphalt road. The markets at Okola on Saturdays and NKométou on Sundays, constitute very important supply centers for the Yaoundé area.

Proximity to Yaoundé, makes the sale of agricultural products important not only for women, but increasingly important for men. Palm wine used to be a wide spread product and was sold in large quantities. It is still an important product, but many of the local palm trees were cut down during the last decade and not replanted. As a result, the amount of palm wine which can be produced and sold is limited.

Cocoa is an important source of revenue.

Traditionally, Eton's plant a main food crop field with cassava, plantain, cocoyam, sugar cane and cucumber (Ngon, *Cucumeropsis manni*), and smaller fields with groundnuts. Yams are grown in other fields, often in monoculture. Now maize has become more important, since it is easily sold at market. Plantain bananas are grown in the kitchen gardens near the house, but bigger fields further in the bush are also used.

Typical crop rotations in the NKométou (Esse Arrondissement) include:

Year	Field I	Field II	Field III
3 years	Fallow	Fallow	Fallow
1A	Groundnuts + maize + cassava	Maize (monoculture)	Maize + Cassava
1b	Maize (+ cassava)	groundnuts + cassava (+ some maize)	Cassava
2	Cassava (consumed 12-24 months after planting)	Cassava (+ some maize)	Cassava

The duration of fallow is sometimes shortened because of the lack of arable land. This has had a detrimental effect on yields.

B.7 MEFOU-ET-AFAMBA

The Department of Mefou-et-Afamba was created in 1992 by dividing the Mefou department in two. The pipeline crosses the arrondissements of Soa and of Esse. The former is densely populated and close to Yaoundé with about 60-80 inhabitants/km² (Santoir, 1992). Towards Esse it is more rural and the population density falls to less than 20 inhabitants/km².

In NKométou, the population is mainly Eton, an ethnic group of the Béti family. Agriculture is very similar to that practiced in the Lékié department.

B.8 HAUTE-SANAGA

Haute-Sanaga is crossed by 173 km of pipeline including, 10 km in the CAMSUCO agro-industrial plantation. The 1987 census cited a population of about 80,000 individuals.

Most ethnic groups in the Department are related to the Béti group. The sugar plantations the Toupouri, Massa, and Mousgoum have migrated from northern Cameroon to do manual labor in the sugar plantation. Towards the east, other groups from the north, such as the Fulbé, have their southern extension. Bamileke are especially active in commercial activities.

The Nanga Eboko region in the Haute-Sanaga Department is the northern limit of the Béti populations. Most ethnic groups in the area understand each other, including the Ewondo-Béti or Eton-Béti speaking people, except the Baboulé, that live near Mbandjock.

The majority of the population is Christian, mainly Catholic or Protestants. Muslim minorities are immigrants from the north, and some animism is practiced among some of the southerners.

The railway is very important in the local economy, as the road network is often in a poor state of repair. As a result, the rail system is used extensively to transport food products to the Yaoundé markets for sale, and by the two agro-industrial sugar production complexes: the SOSUCAM (in Mbandjock) and the CAMSUCO (in Nkoteng).

Agriculture is the major economic activity of the region. In the southern forested areas coffee, cocoa, and plantain grow the best, and the northern savannas are suitable for maize, cucumber and groundnuts.

There are four climatic seasons in this region, including two rainy seasons and two dry seasons. Yearly rainfall ranges from 1,200 to 1,500 mm. Fields, sown in March, produce better than those sown in August, but in many fields farmers plant only in March.

- Local agriculture of the Béti type, with strong emphasis on tubers, bananas, and maize cultivation.
- Food crop fields grown by the estimated 5,000 SOSUCAM and CAMSUCO workers, most of whom are from northern Cameroon. Most of their fields are located in gallery forests inside the plantations. The crops grown (cereals, maize, yam, sorghum and red sorrel), as well as the agricultural methods used, resemble those of the north. They also grow cassava, (manioc), macabo, sweet potato and other tubers, following the agricultural practices of the local populations.

Local cash crops are varied. Cocoa and Robusta coffee are the main crops, with coffee becoming more important than cocoa. Market crops such as tomatoes, melons, and vegetables are sometimes grown for local markets and for transport by rail to urban centers Sugar cane is grown for both home consumption and for sale in local markets. Oil palms have just been introduced in the region.

Typical crop rotations in the Haute-Sanaga Department are as follows:

Year	Yekaba (Etog nang)	Forest Field	Savanna Field
Fallow	> 10 years	4-5 years	5 years
1A	Cucumber, maize, cassava	Plantain + cucumber + cocoyam	Cassava + maize + cucumber or groundnut
1B		Plantain + macabo	
2	Consumption of cassava	Cassava + groundnuts + yams added	Consumption of cassava
3		Cassava consumption	

In this area *Chromolaena odorata*, an invasive weed, is present on all fallow land. Contrary to people in the forest regions, local people understand how it increases soil fertility, making it possible to shorten the fallow period by one year, and raising yields of succeeding crops. It is called *ofara bikoro* (the fallow invader).

People fish in the Sanaga river, although fishing is generally limited to villages closest to the river. Hunting is an extremely valued activity for the men, but consumption of bush meat is not as significant in this area as in the forest zones.

B.9 LOM-ET-DJÉREM

The main ethnic groups are the Bobilis, at Bélabo and surroundings, the Peuls to the northeast of Bélabo, the Kepere, in the Bertoua and at the other side of the Sanaga. The town of Bélabo has a mixed population. These populations are different from the Ewondo-Béti group. In the Bétaré Oya area the main ethnic group is the Gbaya.

B.9.1 Bélabo Arrondissement

The area around Bélabo is densely populated, especially along the railroad track. Further north, density diminishes rapidly, and for a stretch of 70 km near the Deng Deng forest no fields are to be found. Over the last 38 km of the Bétaré Oya arrondissement there are again some villages and fields.

Bélabo is the main town of the sub-préfecture (in the department of Lom-et-Djérem, capital Bertoua). Its population in 1987 was about 23,000 inhabitants for an area of 5,960 km² or about 4 inhabitants/km². It is an important market place, developed on the railway line from Yaoundé to Ngaoundéré. It is an important dispatch center of wood toward SOFIBEL. The town is linked to Bertoua, the capital of the Eastern Province, by a good tarred road. The main market crop transported by train to Northern Cameroon is plantain.

The climate is bimodal with two rainy seasons (March-June and September-October), and a total rainfall between 1,200 and 1,500 mm. The vegetation is a transitional zone savanna - forest.

This region is characterized by the higher production of maize than cassava, and the fact that cassava is not planted at the beginning of the rotation of the field, but only after one or more crops of maize, cucumbers and groundnuts. The fields lie fallow for long periods, but are used far longer than in the western zone of the project area. Soils appear to be more fertile here than in the forest zones to the west.

Cash crops are cocoa, Robusta coffee, rubber and pineapple. Average yield is, according to the agricultural extension service, 1,000 kg/ha for coffee and 800 kg/ha for cocoa. Such yields are higher than those observed in other departments.

Maize is the staple food around Bélabo, followed by cassava. Both products are eaten as a thick paste called "foufou." Secondary crops are plantain, banana, cocoyam, yam and sweet potato. There is a tendency to have separate fields for plantain bananas, cocoyam and yam.

Market garden crops are tomato, parsley, leek, and celery. They are cultivated in the fields around Bélabo. Some are sold in the market, but several are shipped to Ngaoundéré.

Other vegetables are planted mixed with the staples. These are *Amaranth* spp., *Solanum* spp. gumbo (okra) and red sorrel (*Hibiscus* spp.). Compared to the more western regions, the *Hibiscus* varieties become more numerous.

Example of rotations in a cassava field (Bélabo, ethnic group: Bobilis) are as follows:

Year	Crop	Harvest	Crop	Harvest
March year I	Maize	August	Maize - Plantain - Cocoyam	Maize in August
August year I	Cucumber	December January 1996	Nothing	Cocoyam from December on
March year II	Macabo	Jan-March year III	Maize	Maize in August
March year II	Plantain	Year III and following	Groundnuts - Cassava	Groundnuts December-January
Year III		Macabo-plantain harvest		Cassava after 12-18 months
year IV	Cassava	red (sweet cassava) after 6-8 months	New cassava	
Year V		white (bitter) cassava after 12-24 months		Harvest
Year VI	New Cassava		2-3 years of fallow	
Year VII		Cassava harvest		
	5-6 yrs. Fallow			

B.9.2 Bétaré Oya Arrondissement

Bétaré Oya is the 2nd Arrondissement (district) of the Lom-et-Djérem department (capital Bertoua). The pipeline crosses the area in its least densely populated region, of which large parts are uninhabited. The population of the district in 1987 was 33,000 inhabitants. Most of them are of the Gbaya ethnic group, and are farmers. Some Fulbe merchants and Mbororo cattle herders live in the area. The town, founded by the Germans during their colonial occupation of Cameroon, is known for gold mining.

Here, contrary to practices of all the other populations to the south, fields are tilled before the planting. Planting and sowing are in a regular pattern only in the fields of farmers that follow the recommendations of the agricultural extension program. Fertilizer and pesticides are hardly used, as they are unavailable. However, there is a strong demand for these products.

The most important cash crop cultivated in the region is Robusta coffee. Around Bitom, some cocoa is grown. Tobacco has been introduced by the Cameroonian Tobacco Company.

The following are typical of local crop rotations:

	Field I	Field II	Field III
Fallow	3-4 years	4-5 years	3-4 years
Year 1a	Groundnut - cassava	maize	yams
Year 1b		groundnuts -cassava	yam harvest
Year 2	cassava harvest	cassava harvest	yam harvest

Mangoes are the main fruits often dating back to the colonial period at the beginning of the century. Avocados are planted mainly around the compounds. Oil palms do not grow naturally in the region, but are mostly planted. A small commercial plantation exists in Boull.

There is no real sexual division of agricultural labor, and all activities are practiced by men and women alike. There are mutual assistance groups that are invited to help in the agricultural labor.

B.10 MBÉRÉ DEPARTMENT

The population of this wooded savanna zone is comprised predominantly of Gbaya farmers, with substantial minorities of pastoral Fulbe herders, and sedentary Fulbe farmers and traders. Population density in the area is 5-10 persons/km², except in the immediate surroundings of Meiganga, the principal town with a population of some 31,000 according to the 1987 census. From 1966 to 1987, according to the national census, the department's population doubled, corresponding to an annual growth rate of some 3.5 percent.

The largest religious group in the Mbéré Department is the Lutherans (EELC), followed by the Catholics. Islam is practised by a sizeable minority.

Modern education came relatively late to the Mbéré region, but most larger villages now have a primary school, run by government or by churches. Secondary school is only locally available in Meiganga. Opportunities for local employment for people with primary and secondary diplomas are currently very limited. Koranic schools exist in several villages and towns.

Commercial activity in the department, aside from the very important cattle trade, is limited mainly to small and medium scale trade in consumer and agricultural products, within the system of weekly rotational markets.

The settlements of the department, with the exception of the herders' encampments, are largely concentrated along roads with motor traffic, and large tracts of land away from the road remain only very lightly utilized. Transport links with the rest of Cameroon are rather of poor quality, with the unpaved national north-south motor road in a very bad state. A paved road from Meidougou gives access to the railhead town of Ngaoundal, some 120 km to the west.

The economy of the Mbéré Department is based on subsistence and market-oriented agriculture, with cassava and maize being the principal crops, and on cattle herding by transhumant Fulbe herders. Other crops include groundnuts, sweet potatoes, yams, and a great diversity of vegetables, including gourd seeds, okra, red pepper, amaranth, and other leaf plants. Bananas, mangoes, pineapples, citrus and guavas are relatively common, and small livestock is raised fruits.

Agricultural land is not scarce, except in the immediate vicinity of Meiganga. Most Gbaya farming families prefer to spend about one-half the year living in bush encampments, often at some distance from their home village, to guard distant fields, to hunt, gather bush products and fish. Cassava fields are traditionally planted in the upland wooded savannas and begin to produce after some 14 months; the cassava continues to yield for some 4 to 5 years, after which the field is fallowed for a minimum of 15-20 years. Maize is normally cultivated by long-fallow methods in the wooded valley bottoms. Most Gbaya fields are usually intercropped with subsidiary species.

Fulbe cattle herders utilize the wooded savannas of the Mbéré Department chiefly in the wet season (May-October), moving further south during the dry season to seek green pastures. Stocking rates on the pastures of the Mbéré Department are not, generally excessive, except in certain areas on the southern flanks of the Mbéré river valley, where groups of herders have concentrated to take advantage of favorable herding and market conditions.

Cattle trade is a key element in the local economy, and the system of rotational weekly markets, held in numerous towns and villages in the region, is much more active during the wet season when the herders are present.

B.11 VINA DEPARTMENT

The pipeline crosses about 24 km of Vina. The Bélel arrondissement had a population of 21,000 in 1987. The ecology of the area is similar to Mbéré Department; 31 per cent of the area crossed by the pipeline is estimated to be covered with fields.

The population of this wooded savanna zone is comprised of sedentary and pastoral Fulbe, several Mbum-speaking groups, and Gbaya. Population density is 5-10 persons per km², with the population concentrated along the few roads of the region (except for herders' encampments in the bush).

The predominant religion of the area is Islam, with significant minorities practicing the Lutheran and Catholic faiths. Public facilities are available in Bélel. Modern education came relatively late to the Vina Department, but most larger settlements now have a primary school. Opportunities for local employment for people with primary and secondary diplomas are currently very limited. Koranic schools exist in virtually all villages and towns.

Commercial activity in the department, aside from the very important cattle trade, is limited mainly to small and medium scale trade in consumer and agricultural products within the system of weekly rotational markets.

Agricultural land is generally available. Cassava is the principal crop of Gbaya farmers, who utilize long-fallow farming methods. Subsidiary crops include maize, groundnuts, sweet potatoes, okra, peppers, amaranth and other leafy vegetables.

Mbum and Fulbe cultivators focus particularly on sorghum, with cassava, maize, groundnuts, sweet potatoes, okra, peppers and various leafy vegetables also important. Mbum and Fulbe utilize short fallow methods, employing animal dung and fertilizers where available, and also sometimes use ox ploughs.

Hunting and fishing are of limited significance in the department, while certain bush products - such as karité and nere (dadawa) used for sauces – are gathered in some quantity.

Cattle raising, particularly by the Fulbe, forms another important element in the local economy. Transhumant pastoral Fulbe groups visit the area during the wet season but are largely absent in the dry season (October through April). The more common mode of cattle herding in the region is based on an agro-pastoral system practiced by sedentary Fulbe farmer-herders, who nonetheless also send their herds out of the region during the dry season in search of greener pastures and water.

B.12 MAYO REY DEPARTMENT

The population is comprised of several Mbum-speaking groups, sedentary and pastoral Fulbe, and Gbaya. Population density is 5-10 persons per km², with population concentrated along the few roads of the region. Road access in the area of the department that the pipeline ROW traverses is poor, with some areas that can become inaccessible to vehicles in the rainy season.

The predominant religion of the area is Islam, with significant minorities practicing the Lutheran and Catholic faiths. The school system is poorly developed. Many villages still lack primary schools and, even where schools have been built, there is often difficulty in recruiting teachers, many of whom do not wish to live in this isolated region. Modern health facilities are also absent in the zone adjacent to the pipeline ROW.

The economy of the area is based primarily on subsistence and cash-crop agriculture. Agricultural land is generally available. Cassava is the principal crop of Gbaya farmers, who utilize long-fallow farming methods. Subsidiary crops include maize, groundnuts, sweet potatoes, okra, peppers, amaranth and other leafy vegetables. Mbum and Fulbe cultivators focus particularly on sorghum, with cassava, maize, groundnuts, sweet potatoes, okra, peppers

and various leafy vegetables also important. Mbum and Fulbe utilize short fallow methods, employing animal dung and fertilizers where available, and also sometimes use ox ploughs.

Cotton is the most important cash crop in much of this region, especially in the plain area adjacent to the Chad frontier. The governmental cotton para-statal SODECOTON takes a very active role in promoting this crop, offering extension advice and assistance to farmers, extending credit for seeds and chemical inputs, maintaining roads, offering veterinary care for oxen, and purchasing the crop. Cotton is therefore cultivated using quite intensive methods on permanently cleared fields.

Cattle raising, particularly by the Fulbe, forms another element in the local economy. Environmentally, however, the region is not a prime cattle herding area, and *trypanosomiasis* is a particular threat, which is combated with modern drugs where available. Transhumant pastoral Fulbe visit the area in small numbers, usually during the dry season.

Aside from cotton marketing and the very active market on the Chad frontier at Mbai Mboum, the market economy of the region is quite poorly developed. Many villages are only served by itinerant "buyam-sellam" traders on bicycles.

Some parts of the department have significant populations of game animals remaining, and subsistence hunting by traditional means remains locally important. The gathering of bush products, such as karité and nere (*dadawa*) for sauces, is also practiced. Fishing is significant along the major rivers (Mbéré and Vina), especially in the dry season.

Table B.1 Summary of Land Easement Information by Alignment Sheet

Drwg #	Length	Estimated Area	Length	Estimated Area	# of Files	File Density	Avg File Density	Young Trees	Adult Trees	Cult Surface Area	% Cultivated	Avg % Cultivated	Villages
OCEAN DEPARTMENT													
Kribi	656	3.730	111,900 m ²	42.870 km	1,286,100 m ²	39	10.5 files/km	458	394	15,836 m ²	14.2%		Ebomé, Mboamanga, Mpango, Talla
	655	7.043	211,290 m ²			83	11.8 files/km	446	785	40,044 m ²	19.0%		Bikondo, Dombé, Mabi, Quartier Mokolo, Quartier Bell, Talla
	654	6.610	198,300 m ²			30	4.5 files/km	274	312	18,264 m ²	9.2%		Bikondo, Bissiang
	653	6.477	194,310 m ²			30	4.6 files/km	83	239	3,277 m ²	1.7%		Bidou I, Bissiang
	652	6.609	198,270 m ²			32	4.8 files/km	297	279	10,393 m ²	5.2%		Bidou I
	651	5.940	178,200 m ²			27	4.5 files/km	295	439	1,683 m ²	0.9%		Bidou I, Makouré I, Makouré II
	650	6.461	193,830 m ²			39	6.0 files/km	612	78	10,076 m ²	5.2%	7.7%	Bandevouri
Bipindi	649	7.090	212,700 m ²	35.830 km	1,074,900 m ²	44	6.2 files/km	1,326	2,571	15,306 m ²	7.2%		Ndtoua, Grand Zambi, Petit Zambi
	648	6.996	209,880 m ²			28	4.0 files/km	231	129	8,177 m ²	3.9%		Grand Zambi, Kouambo, Madoungou
	647	7.025	210,750 m ²			70	10.0 files/km	3,766	5,193	6,344 m ²	3.0%		Bifoum, Bipindi Rural, Kouambo
	646	6.613	198,390 m ²			50	7.6 files/km	2,426	1,530	1,936 m ²	1.0%		Bidjouka, Bipindi Rural, Lambi
	645	7.186	215,580 m ²			85	11.8 files/km	3,979	5,752	2,706 m ²	1.3%		Bidjouka
	644	0.920	27,600 m ²			8	9.2 files/km	490	575	1,466 m ²	5.3%	3.3%	Bidjouka
Lolodorf	644	6.337	190,110 m ²	39.523 km	1,185,690 m ²	59	9.2 files/km	3,379	3,957	10,097 m ²	5.3%		Mbikiiki, Bikalla
	643	7.010	210,300 m ²			50	7.1 files/km	2,155	1,645	8,808 m ²	4.2%		Bikalla, Mvilié, Ngovayang I
	642	6.183	185,490 m ²			55	8.9 files/km	2,086	6,627	4,440 m ²	2.4%		Mougoué, Ngovayang I, Ngovayang II, Ngovayang III
	641	7.186	215,580 m ²			43	6.0 files/km	1,265	1,130	5,948 m ²	2.8%		Bibia, Bikoka, Saballi
	640	6.811	204,330 m ²			45	6.6 files/km	1,691	1,712	6,025 m ²	2.9%		Saballi, Madong I, Madong II, Mill, Nkouamboer
	639	5.996	179,880 m ²			28	4.7 files/km	641	364	142 m ²	0.1%	3.0%	Nkouamboer
Mvengue	638	6.046	181,380 m ²	27.577 km	827,310 m ²	60	9.9 files/km	1,572	2,903	9,821 m ²	5.4%		Bikoe I, Bikoe II, Bikoe-Si
	637	6.219	186,570 m ²			47	7.6 files/km	1,319	2,025	17,000 m ²	9.1%		Bikoe I, Bikoe II, Minkan I, Minkan II
	636	7.207	216,210 m ²			45	6.2 files/km	1,417	497	20,574 m ²	9.5%		Awanda, Ebayega, Melondo, Minkan I
	635	7.005	210,150 m ²			47	6.7 files/km	2,593	4,361	5,574 m ²	2.7%		Akom, Akom-Bikoe, Ebayega, Kaan, Nkoala'a, Okarobélé
	634	1.100	33,000 m ²			10	8.9 files/km	758	540	2,817 m ²	8.5%	6.7%	Awanda, Nkoala'a
				145.800 km	4,374,000 m²	1054	7.2 files/km	33,559	44,037	226,755 m²		5.2%	
NYONG ET SO'O DEPARTMENT													
Ngomedzap	634	5.441	163,230 m ²	16.181 km	485,430 m ²	48	8.9 files/km	3,750	2,669	13,932 m ²	8.5%		Abang Akongo, Akongo II, Akongo III, Ekoud Bessanda
	633	5.215	156,450 m ²			71	13.6 files/km	1,605	5,373	12,042 m ²	7.7%		Akongo III, Angonfémé
	632	5.525	165,750 m ²			39	7.0 files/km	2,085	2,294	8,868 m ²	5.4%	7.2%	Angonfémé, Nyengué, Osoé-Bikobo
				16.181 km	485,430 m²	158	9.8 files/km	7,440	10,336	34,842 m²		7.2%	
MEFOU ET AKONO DEPARTMENT													
Akono	632	1.475	44,250 m ²	17.259 km	517,770 m ²	10	7.0 files/km	557	612	2,368 m ²	5.4%		Nkolnlong II
	631	7.694	230,820 m ²			71	9.2 files/km	5,284	11,204	24,548 m ²	10.6%		Mbeng, Nda-Ngeng, Nkolnlong I, Nkolnlong II, Nkolnlong III
	630	6.640	199,200 m ²			56	8.4 files/km	2,379	6,470	17,675 m ²	8.9%		Blik I, Fegmimbang I, Fegmimbang II, Mbeng, Nkolnlong III
	629	1.450	43,500 m ²			16	11.3 files/km	651	1,685	3,597 m ²	8.3%	9.3%	Fegmimbang II, Kamba
Ngoumou	629	5.453	163,590 m ²	15.511 km	465,330 m ²	62	11.3 files/km	2,450	6,336	13,526 m ²	8.3%		Nkongbibega I, Nkongmeyos III, Nkongzok I, Nkongzok II
	628	6.247	187,410 m ²			62	9.9 files/km	2,072	6,700	27,527 m ²	14.7%		Ngoumou II, Nkol Emomodo, Nkongmeyos I, Obokoé I
	627	3.811	114,330 m ²			24	6.2 files/km	1,143	2,460	4,705 m ²	4.1%	9.8%	Obokoé I, Obokoé II
Mbankomo	627	1.365	40,950 m ²	23.165 km	694,950 m ²	8	6.2 files/km	410	881	1,685 m ²	4.1%		Ossokoé
	626	6.893	206,790 m ²			69	10.0 files/km	2,292	4,046	17,373 m ²	8.4%		Nkolakono, Nkolngok, Ossokoé, Zoassel II
	625	6.831	204,930 m ²			60	8.8 files/km	7,707	7,707	13,035 m ²	6.4%		Angon II, Binguéla II, Mbankomo Village, Nkolngok
	624	7.421	222,630 m ²			87	11.7 files/km	7,707	7,707	29,804 m ²	13.4%		Mbankomo Village, Nkol-Nitsam, Ongot, Zoatoupsi
	623	0.655	19,650 m ²			5	7.6 files/km	595	330	2,382 m ²	12.1%	9.2%	Ongot
				55.935 km	1,678,050 m²	530	9.5 files/km	33,247	56,139	158,224 m²		9.4%	
MFOUNDI DEPARTMENT													
Yaounde II	623	1.335	40,050 m ²	1.335 km	40,050 m ²	10	7.6 files/km	1,213	673	4,854 m ²	12.1%	12.1%	Nkolnkoumou
LEKIE DEPARTMENT													
Okola	623	3.772	113,160 m ²	18.656 km	559,680 m ²	29	7.6 files/km	3,428	1,902	13,715 m ²	12.1%		Eyang, Ozom II, Etoud
	622	7.011	210,330 m ²			70	10.0 files/km	7,177	1,505	17,635 m ²	8.4%		Etoud, Leboudi, Ngoya
	621	6.208	186,240 m ²			67	10.8 files/km	4,927	2,859	19,964 m ²	10.7%		Ngoya, Nkong, Ebod, Yegue-Assi
	620	1.665	49,950 m ²			27	16.4 files/km	1,935	1,007	11,063 m ²	22.1%	11.1%	Yegue-Assi
Obala	620	5.030	150,900 m ²	13.723 km	411,690 m ²	83	16.4 files/km	5,844	3,041	33,423 m ²	22.1%		Nkol Tara, Nkolmendouga, Ezeang, Mvog Dzigué
	619	5.038	151,140 m ²			80	15.8 files/km	6,771	6,407	19,119 m ²	12.6%		Nkométou II, Nkométou III, Ekabita, Nkol Tara
	618	3.655	109,650 m ²			26	7.1 files/km	1,931	392	8,321 m ²	7.6%	14.8%	Nkométou III
				32.379 km	971,370 m²	382	11.8 files/km	32,014	17,113	123,240 m²		12.7%	

Table B.1 Summary of Land Easement Information by Alignment Sheet

	Drwg #	Length	Estimated Area	Length	Estimated Area	# of Files	File Density	Avg File Density	Young Trees	Adult Trees	Cult Surface Area	% Cul- tivated	Avg % Cultivated	Villages							
MEFOU et AFAMBA DEPARTMENT																					
Soa	619	2.100	63,000 m ²	6.028 km	180,840 m ²	33	15.8 files/km	10.1 files/km	2,822	2,670	7,969 m ²	12.6%	9.4%	Nkométou I							
	618	3.358	100,740 m ²			24	7.1 files/km		1,775	361	7,644 m ²	7.6%		Nkométou I, Essong-Mintsang, Oboua							
	617	0.57	17,100 m ²			3	6.1 files/km		363	510	1,372 m ²	8.0%		Oboua							
Esse	617	6.448	193,440 m ²	30.403 km	912,090 m ²	40	6.1 files/km	5.3 files/km	4,111	5,764	15,519 m ²	8.0%	5.2%	Ndzana							
	616	7.001	210,030 m ²			43	6.1 files/km		2,157	2,124	17,647 m ²	8.4%		Afan-Mve, Afanessele, Mvomndoumba, Ndzana							
	615	7.012	210,360 m ²			35	5.0 files/km		888	655	5,009 m ²	2.4%		Mvomndoumba							
	614	6.997	209,910 m ²			31	4.4 files/km		1,592	1,759	4,078 m ²	1.9%		Mvomndoumba, Nkoayos							
	613	2.945	88,350 m ²			12	4.0 files/km		656	421	5,517 m ²	6.2%		Nkoayos							
						36.431 km			1,092,930 m²	221		6.1 files/km		14,364	14,264	64,755 m²		5.9%			
HAUTE SANAGA DEPARTMENT																					
Mbandjock	613	4.057	121,710 m ²	23.790 km	713,700 m ²	16	4.0 files/km	7.1 files/km	904	581	7,601 m ²	6.2%	13.7%	Ndjoré II							
	612	6.997	209,910 m ²			17	2.4 files/km		1,243	560	4,927 m ²	2.3%		Ndjore, Ndjore I, Ndjore II							
	611	7.001	210,030 m ²			41	5.9 files/km		467	447	28,083 m ²	13.4%		Mbandjock, Ndjore							
	610	5.735	172,050 m ²			94	16.4 files/km		1,354	626	57,045 m ²	33.2%		Mbandjock Plateau, Mbandjock							
Nkoteng	610	1.500	45,000 m ²	35.330 km	1,059,900 m ²	25	16.4 files/km	5.0 files/km	354	164	14,920 m ²	33.2%	5.8%	Zilli-Nkoteng							
	609	2.511	75,330 m ²			18	7.2 files/km		283	101	11,728 m ²	15.6%		Zilli-Nkoteng							
	Camsuco	609	3.650			109,500 m ²	10.158 km		304,740 m ²										CAMSUCO, Zilli-Nkoteng		
		608B	2.253			67,590 m ²															CAMSUCO, Zilli-Nkoteng
		608A	1.565			46,950 m ²															CAMSUCO, Nkoteng Village
		607	2.690			80,700 m ²															CAMSUCO
	607	4.223	126,690 m ²						28	6.6 files/km		1,464		308	3,891 m ²	3.1%		Nkoteng Village			
	606	6.340	190,200 m ²						73	11.5 files/km		3,760		1,894	25,822 m ²	13.6%		Mvan, Bilone, Bifogo, Nkoteng Village			
	605	6.841	205,230 m ²						21	3.1 files/km		1,510		558	3,609 m ²	1.8%		Messeng, Meboue, Mvan			
	604	6.997	209,910 m ²						5	.7 files/km		995		215	0 m ²	0.0%		Ndoumba, Megangme, Messeng			
	603	6.003	180,090 m ²						5	.8 files/km		783		257	0 m ²	0.0%		Camp Ndoumba, Ndoumba			
	602	0.915	27,450 m ²						2	1.8 files/km		87		18	1,157 m ²	4.2%		Ndoumba			
	Nanga Eboko	602	5.681			170,430 m ²	54.128 km		1,623,840 m ²	10	1.8 files/km	3.0 files/km		540	110	7,184 m ²	4.2%	5.7%	Nguinda, Ebigidi		
601		6.642	199,260 m ²	82	12.3 files/km	2,366		2,460		54,280 m ²	27.2%		Nguinda, Mbong-Sol								
600		6.999	209,970 m ²	40	5.7 files/km	609		813		25,428 m ²	12.1%		Ekanga II, Boundjou, Mbong-Sol								
599		7.022	210,660 m ²	1	.1 files/km	498		177		0 m ²	0.0%		Ekanga II								
598		6.869	206,070 m ²	3	.4 files/km	1,027		239		0 m ²	0.0%		Ekanga II, Ding Bekoua								
597		7.066	211,980 m ²	4	.6 files/km	284		131		1 m ²	0.0%		Okwpenng, Mbenda, Ding Bekoua								
596		7.069	212,070 m ²	13	1.8 files/km	1,613		499		3,896 m ²	1.8%		Mvan, Epegang, Okwpenng								
595		6.780	203,400 m ²	10	1.5 files/km	2,077		1,695		2,488 m ²	1.2%		Meyang								
Minta		595	0.250	7,500 m ²	49.597 km	1,487,910 m ²		1		4.0 files/km	3.8 files/km		77	62	92 m ²	1.2%	6.2%		Nguinouma, Nkolebengue		
		594	6.610	198,300 m ²				41		6.2 files/km			3,266	1,826	18,352 m ²	9.3%			Ngolkang I, Kidmeboue, Amgbanine, Nguinouma		
	593	5.006	150,180 m ²	14			2.8 files/km	1,441	816	1,455 m ²		1.0%	Ngolkang II, Ntal, Meyene								
	592	7.057	211,710 m ²	8			1.1 files/km	2,161	933	7,740 m ²		3.7%	Meyene, Mbong, So'o Ndene								
	591	7.036	211,080 m ²	18			2.6 files/km	2,444	3,207	6,254 m ²		3.0%	So'o Ndene, Meyak								
	590	7.059	211,770 m ²	16			2.3 files/km	720	497	2,540 m ²		1.2%	Meyak, Koukouni								
	589	7.020	210,600 m ²	28			4.0 files/km	996	2,099	5,794 m ²		2.8%	Ngoketele, Koukouni								
	588	7.002	210,060 m ²	14			2.0 files/km	313	81	0 m ²		0.0%	Mbinang								
	587	2.557	76,710 m ²	10			3.9 files/km	5,133	2,435	50,544 m ²		65.9%	Mbinang								
				173.003 km				5,190,090 m²	658			3.8 files/km	38,769	23,809	344,828 m²			6.6%			
	LOM ET DJEREM DEPARTMENT																				
Belabo	587	4.438	133,140 m ²	120.956 km	3,628,680 m ²	58	13.1 files/km	3.0 files/km	8,909	4,227	87,725 m ²	65.9%	6.6%	Ndoumba Kanga							
	586	7.044	211,320 m ²			79	11.2 files/km		3,576	2,776	62,374 m ²	29.5%		Belabo Village, Ndoumba Kanga							
	585A	6.128	183,840 m ²			69	11.3 files/km		4,484	3,248	182,455 m ²	99.2%		Ebaka, Essandjane, Belabo Village							
	585	6.873	206,190 m ²			57	8.3 files/km		4,721	4,227	37,285 m ²	18.1%		Tamstek, Biombe, Yebi, Ebaka							
	584	7.957	238,710 m ²			50	6.3 files/km		2,061	1,023	43,143 m ²	18.1%		Mbambo, Sakoudi, Tamsek							
	583A	5.093	152,790 m ²			47	9.2 files/km		2,556	1,867	46,171 m ²	30.2%		Satando, Mbambo							
	583	4.490	134,700 m ²			36	8.0 files/km		3,174	2,347	79,062 m ²	58.7%		Mbaki II, Satando							
	582	8.068	242,040 m ²			57	7.1 files/km		4,149	2,566	92,560 m ²	38.2%		Goyoum, Mbaki I, Mbaki II							
	581	7.943	238,290 m ²			83	10.4 files/km		2,165	1,293	30,396 m ²	12.8%		Goyoum							
	580	7.408	222,240 m ²			18	2.4 files/km		448	341	0 m ²	0.0%		Lom II, Goyoum							
	579	7.672	230,160 m ²			24	3.1 files/km		528	351	5,784 m ²	2.5%		Lom, Lom II							
	578	7.220	216,600 m ²			6	.8 files/km		389	361	0 m ²	0.0%		Lom							

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Drwg #	Length	Estimated Area	Length	Estimated Area	# of Files	File Density	Avg File Density	Young Trees	Adult Trees	Cult Surface Area	% Cultivated	Avg % Cultivated	Villages
577	7.877	236,310 m ²			1	.1 files/km		200	300	0 m ²	0.0%		Lom
576	7.668	230,040 m ²			2	.3 files/km		200	300	0 m ²	0.0%		Ligium, Lom
575	7.361	220,830 m ²			2	.3 files/km		300	150	0 m ²	0.0%		Ligium
574	7.420	222,600 m ²			9	1.2 files/km		376	340	0 m ²	0.0%		Ligium, Tete d'Elephant
573	7.411	222,330 m ²			9	1.2 files/km		0	0	0 m ²	0.0%		Tete d'Elephant
572	2.885	86,550 m ²			3	1.1 files/km	5.0 files/km	12	2	0 m ²	0.0%	18.4%	Tete d'Elephant
Bétaré-Oya	572	4.127	123,810 m ²	59.865 km	1,795,950 m ²	5	1.1 files/km	17	4	0 m ²	0.0%		Biboko
	571	7.173	215,190 m ²			27	3.8 files/km	103	37	0 m ²	0.0%		Biboko
	570	7.202	216,060 m ²			2	.3 files/km	0	0	0 m ²	0.0%		Doyo
	569	3.397	101,910 m ²			2	.6 files/km	63	15	0 m ²	0.0%		Doyo
	568	7.006	210,180 m ²			32	4.6 files/km	262	118	19,909 m ²	9.5%		Tapare, Bambiri, Kassa-Ngaoundere, Begoro, Doyo
	567	5.812	174,360 m ²			42	7.2 files/km	19	49	21,411 m ²	12.3%		Mbale, Daboule, Zoubara, Dang Haoussa II, Tapare
	566	6.001	180,030 m ²			20	3.3 files/km	466	379	14,027 m ²	7.8%		Baboua, Dangi-Patou, Dole
	565	7.029	210,870 m ²			12	1.7 files/km	84	115	0 m ²	0.0%		Mabele II
	564	7.030	210,900 m ²			23	3.3 files/km	7	1	12,842 m ²	6.1%		Kongolo, Mabele I, Pokea, Kpockea, Mabele II
	563	5.088	152,640 m ²			4	.7 files/km	1	265	0 m ²	0.0%	3.8%	Kongolo
			180.821 km		5,424,630 m²	779	4.3 files/km	39,270	26,701	735,144 m²		13.6%	
MBERE DEPARTMENT													
Meiganga	563	2.100	63,000 m ²	91.909 km	2,757,270 m ²	1	.7 files/km	0	109	0 m ²	0.0%		Kaaka
	562	7.009	210,270 m ²			10	1.4 files/km	302	1,123	17,832 m ²	8.5%		Kaaka
	561	7.005	210,150 m ²			10	1.4 files/km	172	476	0 m ²	0.0%		Kaaka
	560	7.000	210,000 m ²			10	1.4 files/km	133	632	6,221 m ²	3.0%		Kaaka, Konde, Kpaama
	559	6.996	209,880 m ²			8	1.1 files/km	786	643	6,030 m ²	2.9%		Kpaama
	558	7.002	210,060 m ²			12	1.7 files/km	54	603	5,745 m ²	2.7%		Kpaama, Kpaama-Dankali, Dankali
	557	7.011	210,330 m ²			13	1.9 files/km	93	996	3,409 m ²	1.6%		Meidougou, Dankali
	556	7.011	210,330 m ²			13	1.9 files/km	271	280	2,579 m ²	1.2%		Meidougou, Bounou
	555	7.068	212,040 m ²			36	5.1 files/km	734	315	25,156 m ²	11.9%		Bounou, Nandeki, Njallo-Meiganga, Djalo, Mbakoungue
	554	7.016	210,480 m ²			44	6.3 files/km	635	203	18,603 m ²	8.8%		Mbakoungue, Dabo Loy, Meiganga
	553	7.013	210,390 m ²			13	1.9 files/km	532	604	9,706 m ²	4.6%		Meiganga, Damboura-Meiganga, Damboura
	552	7.139	214,170 m ²			13	1.8 files/km	505	1,211	10,560 m ²	4.9%		Damboura, Mbarang II, Mbarang I
	551	6.645	199,350 m ²			8	1.2 files/km	264	303	0 m ²	0.0%		Mbarang I, G'bata
	550	5.894	176,820 m ²			9	1.5 files/km	147	245	4,447 m ²	2.5%	4.0%	Zon
Djohong	550	0.170	5,100 m ²	11.061 km	331,830 m ²	1	5.9 files/km	4	7	128 m ²	2.5%		Gandinang
	549	6.533	195,990 m ²			7	1.1 files/km	74	123	2,870 m ²	1.5%		Gandinang, Bekapetel
	548	4.358	130,740 m ²			2	.5 files/km	256	271	0 m ²	0.0%	0.9%	Bekapetel
			102.970 km		3,089,100 m²	210	2.0 files/km	4,962	8,144	113,286 m²		3.7%	
VINA DEPARTMENT													
Bélel	548	2.370	71,100 m ²	24.357 km	730,710 m ²	1	.4 files/km	139	147	0 m ²	0.0%		Hossere-Lesdi, Dibi
	547	6.830	204,900 m ²			4	.6 files/km	1,425	1,243	24,563 m ²	12.0%		Hossere-Lesdi
	546	5.455	163,650 m ²			33	6.0 files/km	921	476	112,137 m ²	68.5%		Mvog Ngo, Sindere, Seka, Mayo Dadi, Nyassey-Souckol
	545	6.137	184,110 m ²			30	4.9 files/km	2,179	1,567	88,887 m ²	48.3%		Sindere, Leswoka
	544	3.565	106,950 m ²			3	.8 files/km	8	4	0 m ²	0.0%	30.9%	Leswoka
			24.357 km		730,710 m²	71	2.9 files/km	4,672	3,437	225,588 m²		30.9%	
MAYO REY DEPARTMENT													
Touboro	544	3.144	94,320 m ²	121.422 km	3,642,660 m ²	2	.6 files/km	7	4	0 m ²	0.0%		Touldoro
	543	7.044	211,320 m ²			6	.9 files/km	0	56	0 m ²	0.0%		Touldoro
	542	6.994	209,820 m ²			11	1.6 files/km	166	150	0 m ²	0.0%		Touldoro
	541	6.998	209,940 m ²			7	1.0 files/km	628	272	0 m ²	0.0%		Sokorta Manga, Touldoro
	540	7.046	211,380 m ²			12	1.7 files/km	969	666	0 m ²	0.0%		Yandia, Sokorta Manga
	539	6.968	209,040 m ²			1	.1 files/km	31	22	0 m ²	0.0%		Bakani, Yandia
	538	6.393	191,790 m ²			4	.6 files/km	297	168	0 m ²	0.0%		Ngaye, Nana
	537	7.025	210,750 m ²			29	4.1 files/km	701	716	23,938 m ²	11.4%		Koman, Kaboua (Nana)
	536	6.972	209,160 m ²			24	3.4 files/km	478	483	18,660 m ²	8.9%		Koman, Mbono, Mboko
	535	7.105	213,150 m ²			9	1.3 files/km	1,477	6,765	6,240 m ²	2.9%		Mboko, Bougoui, Dompta
	534	4.645	139,350 m ²			13	2.8 files/km	603	566	1,800 m ²	1.3%		Dompta Satom

Table B.1 Summary of Land Easement Information by Alignment Sheet

Drwg #	Length	Estimated Area	Length	Estimated Area	# of Files	File Density	Avg File Density	Young Trees	Adult Trees	Cult Surface Area	% Cul- tivated	Avg % Cultivated	Villages
533a	5.951	178,530 m ²			18	3.0 files/km		196	439	0 m ²	0.0%		Dompta Satom, Wangtounou
533	4.512	135,360 m ²			10	2.2 files/km		341	454	3,151 m ²	2.3%		Wangtounou
532	6.901	207,030 m ²			25	3.6 files/km		512	1,052	11,770 m ²	5.7%		Wakassao, Mbong
531	7.098	212,940 m ²			41	5.8 files/km		396	973	65,522 m ²	30.8%		Mbong, Djakone, Djom, Ngaouring
530	7.201	216,030 m ²			55	7.6 files/km		114	222	58,734 m ²	27.2%		Ngaouring, Sari-Mbayaba, Voi, Boklere, Helbao
529	7.008	210,240 m ²			27	3.9 files/km		84	199	17,708 m ²	8.4%		Mbai-Mboum, Ndicka, Helbao
528	6.695	200,850 m ²			37	5.5 files/km		76	84	38,988 m ²	19.4%		Mbai-Mboum
527	5.722	171,660 m ²			12	2.1 files/km	2.8 files/km	45	113	4,545 m ²	2.6%	6.9%	Mbai-Mboum
			121.422 km	3,642,660 m²	343		2.8 files/km	7,121	13,404	251,057 m²		6.9%	
	890.634 km	26,719,020 m²			4,416		5.0 files/km	216,631	218,058	2,282,574		8.5%	