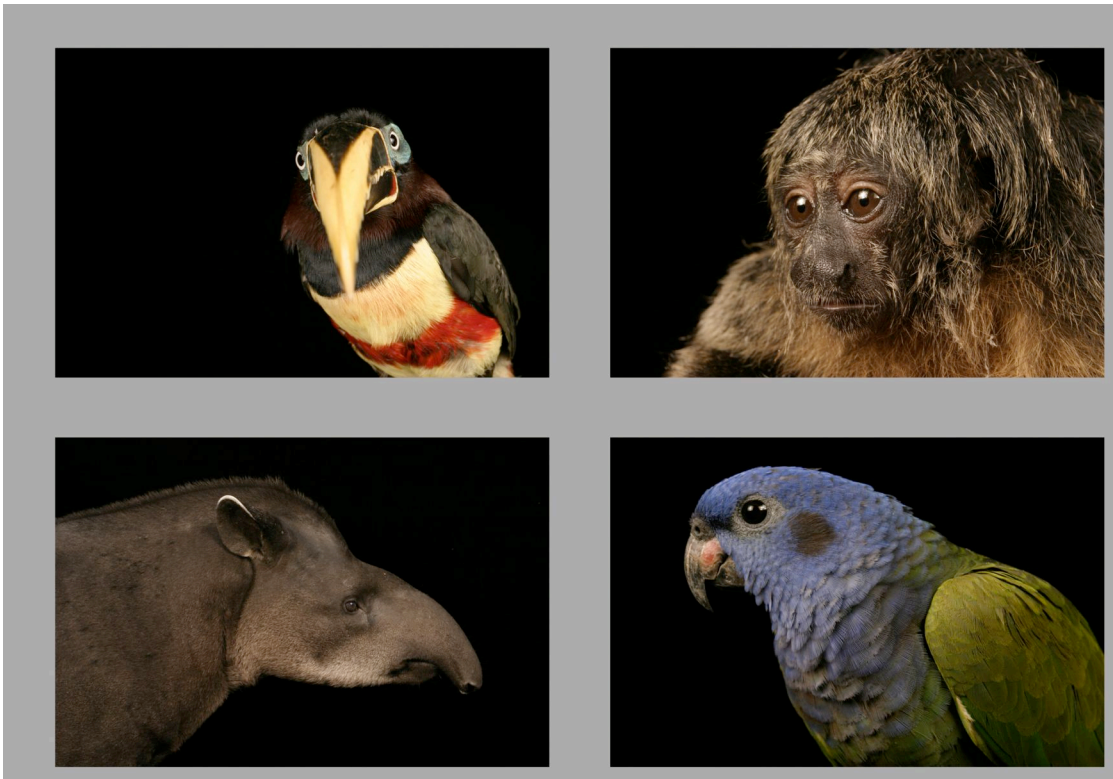
Scientists Concerned for Yasuní

Comments to Project for Development
and Production of Block 31:
the Apaika and Nenke Oil Fields.



Quito, 30 September 2006

TO: Alfredo Palacio, M.D.
President
Republic of Ecuador

Anita Albán Mora, J.D.
Minister of the Environment
Republic of Ecuador

FROM: Scientists Concerned for Yasuní

RE: Petrobras September 2006 Environmental Impact Study for Block 31

DATE: September 29, 2006

We, the Scientists Concerned for Yasuní, respectfully submit the following comments regarding the Environmental Impact Study (EIS) for Block 31 of the Brazilian state energy company, Petrobras.[1] The study presents plans to build two drilling platforms, a major processing facility, flowlines and an oil pipeline, and other infrastructure inside and in the buffer zone of Yasuní National Park in the heart of the Ecuadorian Amazon.

We represent leading scientists who have studied Yasuní National Park and other tropical researchers concerned for the future of Yasuní. We have published findings on many aspects of its outstanding biodiversity — plants, amphibians, insects, birds and mammals — as well as on the impacts of the Maxus Road built in 1994 in northwest Yasuní for petroleum activities. We have also studied the cultural, economic, and hunting systems of peoples living in and around the area.

In 2004, we submitted a letter and technical report to then-President Lucio Gutiérrez regarding Petrobras' original plans for Block 31. Those plans included building a new road through the core of Yasuní National Park. Our 2004 report presented three main summary findings: 1) Yasuní National Park is home to one of the most biodiverse forests on Earth, 2) the Park is of global conservation significance, and 3) any road into the Park could not be fully controlled, with roads creating the main primary threat to the biodiversity and indigenous peoples in the Park. Thus, the central conclusion of that report was that Petrobras should not be permitted to build any road into Yasuní National Park.

In this follow-up letter and Appendix, we wish to make four points:

I. We congratulate the Palacio Administration for its science-based leadership on this oil development issue. We especially commend the Administration for reconsidering the permits for this project, for reviewing the scientific information

[1] Dated September 2006, the study under consideration by the Ministry of the Environment is called "Proyecto de Desarrollo y Producción del Bloque 31: Campo Apaika Nenke," or in English, "Project for Development and Production of Block 31: the Apaika and Nenke Oil Fields." The study was prepared for Petrobras by Corpconsul and Entrix. The Ministry requested comments before September 30, 2006.

carefully, and for making the decision to not allow Petrobras to build a road into Yasuní National Park. The Administration provided tremendous, conscientious leadership in requiring this science-based change.

II. With this new 2006 Petrobras study, the Administration has set an important precedent: No new roads or road extensions should ever be permitted into Yasuní National Park. We urge the government to make this permanent policy and/or part of regulations for National Parks. Yasuní is currently threatened not only by oil development in Block 31 by Petrobras, but in many additional areas by several other oil companies. Threats include those from Andes Petroleum Company Limited, which is conducting major seismic work inside the Park near the two centers of long-term scientific research, the Pontificia Universidad Católica del Ecuador Yasuní Scientific Station and the Universidad San Francisco de Quito Tiputini Biodiversity Station. Moreover, the massive ITT project looms in the future. The new Petrobras study cited here and the Arco/Agip Block 10 projects are proof that "off-shore" roadless drilling methods (use of helicopters, monorails, directional drilling, and other state-of-the-art technologies) are both economically and technically feasible. Oil companies do not have to build roads to extract oil. State-of-the-art roadless methods should be the only ones ever permitted inside Yasuní National Park, as well as in other remote undisturbed tropical rainforest environments.

III. We do not support oil drilling into Yasuní National Park, regardless of the method used, because of the known broad direct and secondary environmental and social impacts. Yasuní conserves one of the larger contiguous tracts—almost 1 million hectares—of the Amazonian rainforest, identified by Conservation International as the most biodiverse intact wilderness in the world. Based on existing research, the forests of Yasuní are possibly the most diverse in the world when considering all taxonomic groups. For this reason, World Wildlife Fund scientists have declared it among the most important ecoregions globally to protect. In addition, the Park contains intact megafaunal assemblages, including the globally endangered Giant Otter (*Pteronura brasiliensis*) and Giant Armadillo (*Priodontes maximus*), and is recognized by Wildlife Conservation Society for its outstanding wildlife. Thus, Yasuní National Park is among Ecuador's top biological treasures.

Furthermore, Yasuní and adjacent areas, declared a UNESCO Man and The Biosphere Reserve, are home to the indigenous Waorani, and the Tagaeri and Taromenane, the last two known groups of people living in voluntary isolation in the Ecuadorian Amazon. The two principal Waorani representative organizations, ONHAE and AMWAE, have formally called for a moratorium of oil development in this area.

This Park, as an IUCN category II strict protected area, should not be subjected to the many known impacts of oil development, including the initial clearing of forest for facilities and rights of way, including erosion; noise and light pollution; contamination of rivers, lakes, and soils from inevitable later oil spills; and major cultural changes among the indigenous communities in the region.

While the project will be significantly less harmful if constructed using off-shore roadless drilling methods and if all five issues of concern in the EIS are changed as

we recommend below (Point IV), we emphasize that we do not support any new oil construction in Yasuní National Park or in the Waorani Ethnic Reserve.

IV. We recommend that the Administration only consider approving the new project after all of the following five changes are made. In reviewing Petrobras' new EIS, we continue to be concerned about oil exploitation within and around Yasuní National Park. The current plans have significant negative impacts. Over 100 hectares of primary rainforest will be cleared, 39 of which will be within the Park. On the Park's northern border, sixteen hectares of mature, inundated forests on the alluvial plain of the Tiputini River will be cleared and drained to make way for the Central Processing Facility. Thirty-two hectares will be cleared for a broad right of way for the pipeline. This is particularly alarming because the right of way will bisect the forests along the Tiputini River between Añangu and Block 31. These forests are, to our knowledge, among the least impacted of any in the Park or buffer zone, due to several decades or more essentially without any human presence.

Given these concerns and those outlined in Point III, we urge the Ministry of the Environment to not approve the new EIS. If, however, Ecuador decides the project must proceed, the following changes would significantly reduce the negative impacts:

1) A new Central Processing Facility (CPF) should not be built next to the Tiputini River. Instead, feasibility studies should be undertaken immediately to investigate the possibility of expanding the existing processing facility at Eden Yuturi Camp (CEY) in Block 15 to process oil coming out of Block 31.

2) The new 12.8 km access road, built by Petrobras in 2005 through the northern buffer zone of the park, should be eliminated and fully reforested.

3) The right-of-way to be permanently deforested for the flow lines and pipeline should be reduced to a width of less than 5 meters.

4) The Apaika drilling platform should not be constructed. Instead, Extended Reach Drilling (ERD) should be used from the Nenke platform to access the oil within the Apaika field.

5) Prior Informed Consent must be obtained from the Waorani leaders of ONHAE and AMWAE.

These five concerns are addressed in detail in the APPENDIX A to this letter.

In conclusion, we stress that Petrobras' new project design, although considerably better than the original design with the road proposed to be constructed inside Yasuní, will still have widespread significant negative impacts on the biodiversity and on the indigenous peoples of Yasuní National Park and its surroundings. Thus, we do not support this new development. However, if the project must proceed, this should only be done after addressing the five issues we have raised herein.

Yasuní National Park is one of Ecuador's most valuable environmental and cultural treasures. Its proper protection will provide long-term economic, social, environmental, and scientific benefits for Ecuador as well as the planet.

We thank you for your serious consideration of this matter.

Sincerely,

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Anita Albán Mora, J.D.
Minister of the Environment
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FROM: Scientists Concerned for Yasuní

RE: APPENDIX A TO LETTER REGARDING PETROBRAS SEPTEMBER 2006 ENVIRONMENTAL IMPACT STUDY FOR BLOCK 31

DATE: September 29, 2006

These are detailed comments which accompany and further explain key points in our September 29, 2006 letter to the President of the Republic of Ecuador and the Minister of the Environment. These comments are submitted in reference to the Petrobras study dated September 2006, called "Proyecto de Desarrollo y Producción del Bloque 31: Campo Apaika Nenke," or in English, "Project for Development and Production of Block 31: the Apaika and Nenke Oil Fields." The study, which we refer to below as the "new 2006 Petrobras EIS," was prepared for Petrobras by Corpconsul and Entrix. The Ministry requested comments before September 30, 2006.

If the Petrobras project in Block 31 proceeds, the following changes would significantly reduce the negative impacts:

1. A new Central Processing Facility (CPF) should not be built next to the Tiputini River. Instead, the existing processing facility located at the Eden Yuturi Camp (CEY) in Block 15 should be expanded and utilized.

According to the new 2006 Petrobras EIS, the CPF will be constructed on an alluvial plain, only 2 km north of the Tiputini River. The EIS documents how this area of mature, inundated forest is:

- Currently in an "excellent state of conservation" (p. 5-6)
- "very important" for terrestrial mammals (p. 3-160)
- Of "particular importance for birds associated with moist habitats" (p. 3-170). For example, given the abundance of morete palms (*Mauritia flexuosa*) in this moist area, "rarely have such a large number of blue and yellow macaws been observed than that live in this area" (p. 3-170).
- Home to "important species" of reptiles, such as Caimans and Anacondas (*Eunectes murinus*), and "rare" amphibians (p. 3-178).
- Home to a large number of fish species that enter from the Tiputini River (p. 3-191).
- An important hunting ground for the Chiru Isla Kichwa community (p. 3-160).

Given the extreme biological importance of this area, and the inadequate knowledge of the flora and fauna richness and dynamics of this type of forest, construction of a large processing facility here have significant and irreversible direct environmental impacts. The most serious is that 16 hectares of mature, inundated forests on the alluvial plain of the Tiputini River will have to be cleared and drained. As the EIS points out, "it will be necessary to drain the large area needed for the facility, completely destroying the habitat" (p. 6-16). The construction of the facility will result in the "desiccation of the area's wetlands, thus the amphibians and reptiles will all perish unless physically rescued" (p. 3-178).

The EIS states that the CPF "will be the largest location for construction and industrial activities, and large amounts of environmental impacts such as noise, emissions, liquid and solid waste will be generated" (p. 6-16). Moreover, at the CPF, "the possibility of a *catastrophic spill* [emphasis added] or fire cannot be ruled out" (p. 6-16). Any type of contamination or pollution at the CPF will be particularly damaging, given its proximity to the Tiputini River, home to rare mammals such as the globally endangered Giant Otter (*Pteronura brasiliensis*), the globally vulnerable (and in Ecuador critically endangered) Amazonian Manatee (*Trichechus inunguis*), the globally vulnerable (and in Ecuador endangered) Pink River Dolphin (*Inia geoffrensis*), and the Gray River Dolphin (*Sotalia fluviatilis*), which is also endangered in Ecuador. Demand for water at the CPF will also require the capture of considerable water from the Tiputini River (p. 4-48).

The EIS concludes that the CPF will have "very high direct and irreversible negative impacts" (p. 6-16) on this area's sensitive environment.

On the other hand, the area surrounding the Eden Yuturi Camp (CEY), constructed by Occidental Petroleum in Block 15 and now operated by PetroEcuador, is already impacted by oil activities. Since 2000, an access road, processing facility, and numerous drilling platforms have been constructed at this location. According to the EIS, "the impacts associated with the construction and operation of the processing facility have caused the total modification of the surrounding bird and animal communities" (p. 6-4). For instance, "the intense noise from the machinery, generators, and movement of vehicles, personnel and machines on the road have had a major impact on the large primate species, which are now not found within 4 km of the site" (p. 6-4).

Thus, we strongly oppose re-creating and duplicating these impacts at yet another site, particularly the alluvial plain of the Tiputini River. Instead, we propose studying the feasibility of expanding the existing processing facility at CEY to process all the oil from Block 31.

In November 2005, Occidental Petroleum indicated that, although several technical hurdles would need to be overcome, it would be possible to expand Eden Yuturi's processing facility to accommodate all the oil from Block 31. The major obstacles are 1) the pumping of a three-phase stream (gas, water, crude) an estimated 30 kilometers from the Petrobras wells to Occidental's Eden-Yuturi processing plant, and 2) the accurate metering of a three-phase stream.

An added benefit of this alternative would be that PetroEcuador, the current operator of the Eden Yuturi field within Block 15, would be more directly involved in the project and potentially receive greater financial gain, to the benefit of Ecuador.

Given that this expansion would take place on the territory of the El Eden Kichwa community, the project could only proceed with their prior informed consent.

2. The new 12.8 km road, built by Petrobras in 2005 through the northern buffer zone of the park, should be eliminated and reforested.

In the new 2006 EIS, Petrobras plans to build the new CPF just outside Yasuní National Park at the end of the new 12.8 km road they constructed in 2005. This road extends south from the dock at the Napo River through the northern buffer zone of the park and nearly connects with the park boundary at the Tiputini River. The approved right-of-way is 20 meters; therefore this road represents an unprecedented mode of access to the buffer zone of park and the Tiputini River. Given what has happened along previous roads built into the Ecuadorian Amazon, colonization, deforestation, and over-hunting along the road is inevitable.

Fortunately, if there is no new CPF, there is no need for the road. Therefore, we propose that this road be eliminated and reforested.

3. The right-of-way to be permanently deforested for the flow lines and pipeline should be reduced to a width of less than 5 meters.

The width of the flow line and pipeline right-of-ways (ROW) should be re-evaluated and reduced. The EIS calls for a ROW of 10 m during construction and 6 m during operation (p. 4-32; p. 4-34). However, the ROW for the flow line in Arco/Agip's Villano Project in nearby Block 10 was originally set at 5 m and eventually reduced to 3.5 m in all but the most difficult slopes (Lathrop et al. 1998, The Villano Project, p. 66). The wider the ROW, the more likely it will be used to access the primary forests within and around Yasuní National Park.

4. The Apaika drilling platform should not be constructed. Instead, Extended Reach Drilling (ERD) should be used from the Nenke platform to access the oil within the Apaika field.

Current Extended Reach Drilling (ERD) technology allows drilling from a remote location up to 11 km away. For example, the oil company Total drilled the Ara field in Argentina from over 10 km away. Several other companies, such as BP and Phillips, have accessed fields from over 8 km away (PlusPetrol, Extended Reach Drilling Wells Feasibility Analysis, 2005).

Given that the distance between the Nenke and Apaika platforms is only ~5km, there is no need to construct both platforms. Therefore, we propose that studies be done on the feasibility of ERD from the Nenke platform to access the Apaika reserves.

This technique would minimize the ecological footprint of the project and prevent impacts from extending so deeply into the heart of one of the most intact parts of Yasuní National Park. As the EIS indicates, construction of the platforms "diminishes

the quality of the habitat" due to the clearing of primary rainforest, entry of personnel and machinery, generation of noise, emissions, and liquid and solid waste, and introduction of colonizing species that drastically modify the ecological conditions of the area (p. 6-14).

The EIS indicates that the forest around Apaika is home to large mammal species considered indicators of high quality rainforest, such as Tapirs (*Tapirus terrestris*), Giant Armadillos (*Priodontes maximus*), and large monkey species (p. 3-123, p. 125). Moreover, the forests surrounding Apaika are considered sensitive since they contain a large mineral-lick important for Tapirs, and many ant nests where Giant Armadillos (*Priodontes maximus*) and Anteaters (*Myrmecophaga tridactyla*) come to feed on ants (p. 3-125). It is important to note that Giant Armadillos are globally Endangered, thus any sensitive site for this species, such as the forests around Apaika, should not be disturbed.

In addition to being important for mammal species conservation, the Apaika area is very important for amphibians. The streams surrounding Apaika are important breeding grounds for many species of amphibians (p. 3-137). We are concerned that, while the techniques used for herpetofaunal surveys are acceptable, the number of survey units was very low. In a rainforest environment and for the area covered, this data is statistically unacceptable. (The surveys for arthropods are similarly unacceptable.) In addition, arboreal amphibian and reptile species are completely disregarded. While these are baseline surveys, they have only represented ~36% of the herpetofauna species that most probably occupies the area, when compared to the cumulative data compiled by researchers at Tiputini Biodiversity Station. The study even acknowledges that many other surveys in the area have shown much greater diversity. We are very concerned that such poor data is being used to support the Petrobras EIA. Petrobras cannot use the EIS data for later comparisons to show findings of no impact according to these diversity values.

The area is also important for the Waorani. Given the close proximity of this area to the community of Kawimeno, Waorani hunters from the latter community come to the Apaika area to search for food (6-39). According to the data in Appendix G of the EIS, 86% of the Waorani living in Kawimeno currently still hunt (Appendix G, p. 8). Thus, there will be "major" impacts on community hunting during construction which will persist during the many years of proposed operation (6-39). In fact, the EIS states that it is "very probable" that the people of Kawimeno will occasionally paralyze company activities since the "platforms are located on their hunting grounds" (5-32).

The Apaika platform may also impact Waorani fishing as well. According to the EIS, 86% of the Waorani in Kawimeno regularly fish. However, waste generated at Apaika, unlike at the CPF where all wastes will be reinjected, will be released into a tributary of the Rumiyacu River (4-49).

In addition to negatively impacting Waorani hunting and fishing and culture, the development of the Apaika platform would also certainly negatively impact any future plans of ecotourism for Kawimeno.

The development of Apaika is likely to have substantial negative impacts on Kawimeno culture and livelihoods, as such impacts have been pervasive among other

Waorani communities that have contacts with petroleum companies and activities, along the Maxus road and elsewhere, as documented in the earlier report of Scientists Concerned for the Yasuní in 2004.

Therefore, given the impacts on fishing, hunting, ecotourism, and culture, we argue that elimination of the Apaika platform would substantially decrease the impacts on the Waorani.

It may well also have impacts on indigenous peoples living nearby in voluntary isolation. It is said among the Waorani that another group of uncontacted peoples live in the southern section of Block 31. The Taromenane may also still utilize this area, as in the past. Thus, it is critical to avoid any development in the southern section of Block 31.

A final point is that the only indicator species for poor quality habitat discovered in all of Block 31—the Tropical Kingbird (*Tyrannus melancholicus*)—has been found in the opening created by the Apaika exploratory well (p. 3-132; p. 6-14). Therefore, the problem for the kingbird would likely become much worse with the construction of a new platform at this site. Currently, the bird community is still very much intact in the forests surrounding Apaika (p. 3-132).

5. Prior Informed Consent must be obtained from the Waorani leaders of ONHAE and AMWAE.

As of the time of this writing, the Waorani leadership of ONHAE (Organizacion de la Nacionalidad Huaorani de la Amazonia Ecuatoriana) and AMWAE (Asociación de Mujeres Waorani de la Amazonía Ecuatoriana) had *not* been consulted about the details of the new project. This violates both the Ecuadorian Constitution and international law.

The Ecuadorian Constitution guarantees the collective right of indigenous peoples to be consulted about oil projects on their lands (Article 84.5). Thus, the representative organizations must be part of the process. Internationally, ILO Convention 169—which Ecuador has ratified—states that governments should consult indigenous peoples in an appropriate manner and "in particular through their representative organizations" (Article 6).

Instead, Petrobras has only consulted the single Waorani community located within Block 31, Kawimeno. Given that the drilling platforms and flow lines are located on what are thought to be ancestral Waorani territory, it is imperative that Petrobras and the Ecuadorian government consult and receive consent from the representative organizations ONHAE and AMWAE as well.

In conclusion, we stress that Petrobras' new project design, although considerably better than the original design with the road proposed to be constructed inside Yasuní, will still have widespread significant negative impacts on the biodiversity and on the indigenous peoples of Yasuní National Park and its surroundings. Thus, we do not support this new development. However, if the project must proceed, this should only be done after addressing the five issues we have raised herein.

We thank you for your serious consideration of this matter.

Respectfully,

Scientists Concerned for Yasuní

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