Memorandum

MIAMI-DADE COUNTY

Date: **November 3, 2009**

To: Honorable Chairman Dennis C. Moss
and Members, Board of County Commissioners

Agenda Item No. 8(A)(1)(H)

From: George M. Burgess
County Manager

Subject: Acceptance of Recommendations Outlined in the Report "Asset Evaluation: Dade-Collier Training and Transition Airport Property.""

Recommendation

It is recommended that the Board of County Commissioners (BCC) accept the report titled "Asset Evaluation: Dade-Collier Training and Transition Airport Property" and authorize the Miami-Dade Aviation Department (MDAD) to negotiate a license or other agreement with Collier Resources Company that owns approximately 70 percent of the mineral rights at Dade-Collier Training and Transition Airport (TNT), and any other company holding mineral rights to parcels of land at TNT. The license or agreement would entitle the County to engage in petroleum and mineral exploration and production at the airport. It is further recommended that the BCC authorize MDAD to begin to negotiate with a Collier entity or any other company, an agreement to generate to the County, revenue resulting from the exploration and production of oil and gas at TNT. MDAD will report back to the BCC for its approval, any agreements resulting from the aforementioned negotiations.

Scope

The impact of this item is countywide as Miami-Dade Aviation Department facilities are regional assets.

Fiscal Impact/Funding Source

Each option in the report was evaluated by type and availability of natural resource, environmental compliance, economic benefit, and opportunity for revenue generation. The revenue associated with the exploration and production of oil and gas, including potential bonuses, rents and royalties, is estimated to average $7 million annually over a 20-year period. In addition, other revenues such as oil and gas lease bonus, annual rentals, and environmental mitigation credit and payments could provide MDAD an additional $5.0 million over the next decade.

Track Record/Monitor

The monitor for the maintenance and operating agreement will be Gregory C. Owens, MDAD Division Director for Real Estate Management and Development.

Background

For Miami International Airport (MIA) to be competitive, in addition to tightly controlling costs, it is crucial that MDAD grow non-aeronautical revenue (revenue derived from sources other than airlines), to substantially reduce the burden of these high costs upon the airlines. And, while measures are being taken to build the traditional sources of non-aeronautical revenues – parking, concessions etc. -- MDAD must find non-traditional sources of revenue, a task that it has been exploring over the last two years primarily by examining what other airports around the country and indeed the world may be doing.

Miami-Dade County, through its Aviation Department, owns and operates Dade-Collier Training and Transition Airport (TNT), consisting of 23,840 acres; only approximately 1,000 acres is required to operate the airport. In 2008, MDAD hired Lampl Herbert Consultants to work in collaboration with MDAD to identify revenue-generating opportunities at the airport and provide an assessment of the

value of such opportunities. Among the potential uses and revenue sources identified by the Lampl Herbert report are:

1) Oil and gas exploration: The TNT property lies within the Sunniland Trend, an oil-prone area that extends 140 miles from Fort Myers to Miami. Assuming a net royalty position of 8 percent for all acreage, the revenue value to Miami-Dade is estimated from $59 million (at $37 per barrel) to $224 million (at $140 per barrel) for a 20-million barrel field.
2) Market value of conservation lands: This is the outright sale of the surface lands which could be expected to provide a one-time revenue gain of $22.8 million based on $1,000 per acre.
3) Mitigation: For the purpose of the restoration and enhancement of surface lands, the County or third parties could use these restoration projects to mitigate environmental impacts at internal or offsite projects.
4) Use of limestone and the quarry lakes: This project would have a dual purpose of restoring and enhancing the area in and around the five man-made lakes (where lime rock was excavated to build the TNT runway), while generating revenue. The estimated net revenue to the County is $13 million, including a mining cost of $9.75 million and revenue from the sale of aggregate of $22.75 million.
5) Recreational uses: Among such recreational activities and facilities are off-road vehicle (ORV) trails, back country trails, campground, camping facilities, and non-boat freshwater fishing. The Miami-Dade Parks and Recreation Department is exploring these activities.

More than 140 wells drilled in the Sunniland area since 1943 have led to discoveries and development of 13 oil fields. Even though the County owns 100 percent of the surface land associated with the 23,840 acres, the Collier family owns most of the mineral rights, approximately 70 percent, which they are free to explore. Exxon-operated Raccoon Point Field is adjacent to TNT and has operated since 1978. Through 2008, it has produced an estimated 20 million barrels of oil using technology and equipment that is so unconventional and environmentally friendly that a layperson, upon stumbling upon the site, would not suspect the nature of the operation. MDAD and its consultant anticipate that a TNT field could produce a similar volume of oil.

MDAD would like to proceed with the first option at this time. The other options may be recommended for implementation at a future date.

Therefore, it is recommended that the Board authorize the MDAD to negotiate a license or other agreement with Collier Resources Company and any other company holding mineral rights to parcels of land at TNT, under which the County would be entitled to engage in petroleum and mineral exploration and production at TNT. It is further recommended that the BCC authorize MDAD to begin to negotiate with a Collier entity or any other company, an agreement which would generate for the County, revenue resulting from the exploration and production of oil and gas at TNT. Any agreements resulting from the aforementioned negotiations will be presented to the Board for approval.

Assistant County Manager

MEMORANDUM

(Revised)

TO: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

DATE: November 3, 2009

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 8(A)(1)(H)

Please note any items checked.

_____ **"3-Day Rule" for committees applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **No committee review**

_____ **Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**

_____ **Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 8(A)(1)(H)
11-3-09

RESOLUTION NO. _____

RESOLUTION RELATING TO MIAMI-DADE COUNTY'S AIRPORT SYSTEM; AUTHORIZING THE AVIATION DEPARTMENT TO NEGOTIATE A LICENSE OR OTHER AGREEMENT WITH COLLIER RESOURCES COMPANY AND ANY OTHER COMPANIES HOLDING MINERAL RIGHTS TO PARCELS OF LAND ON THE COUNTY'S TRAINING AND TRANSITION AIRPORT LOCATED IN COLLIER COUNTY UNDER WHICH THE COUNTY WOULD BE ENTITLED TO ENGAGE IN PETROLEUM AND MINERAL EXPLORATION AND MINING AT SUCH AIRPORT; AUTHORIZING AVIATION DEPARTMENT TO NEGOTIATE ADDITIONAL AGREEMENTS WITH COMPANIES FOR THE MINING, DISTRIBUTION, AND SALE OF ANY PETROLEUM AND MINERAL PRODUCTS THAT THE AVIATION DEPARTMENT IS LEGALLY ENTITLED TO TAKE FROM THE AIRPORT GROUNDS; DIRECTING MAYOR TO RETURN TO THIS BOARD FOR ITS FURTHER CONSIDERATION OF ANY SUCH AGREEMENTS

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board, having received the report entitled "Asset Evaluation: Dade-Collier Training and Transition Airport Property" prepared by the consultant for Miami-Dade County's Aviation Department, authorizes the Aviation Department in conjunction with the County Attorney's Office to negotiate a license or other appropriate agreement with Collier Resources Company and any other company holding mineral rights to parcels of land located on the County's Training and Transition Airport in Collier County, under which negotiated agreement the County would be entitled to engage in petroleum and mineral exploration and mining at such Airport; authorizes the Aviation Department to negotiate

agreements with any other companies for the purpose of mining, distributing, and selling any petroleum and mineral products that the County is legally able to take from the Airport's grounds; directs the Mayor to return to this Board with any such negotiated agreements for this Board's further consideration.

The foregoing resolution was offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Dennis C. Moss, Chairman
Jose "Pepe" Diaz, Vice-Chairman

Bruno A. Barreiro	Audrey M. Edmonson
Carlos A. Gimenez	Sally A. Heyman
Barbara J. Jordan	Joe A. Martinez
Dorrin D. Rolle	Natacha Seijas
Katy Sorenson	Rebeca Sosa
Sen. Javier D. Souto	

The Chairperson thereupon declared the resolution duly passed and adopted this 3rd day of November, 2009. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

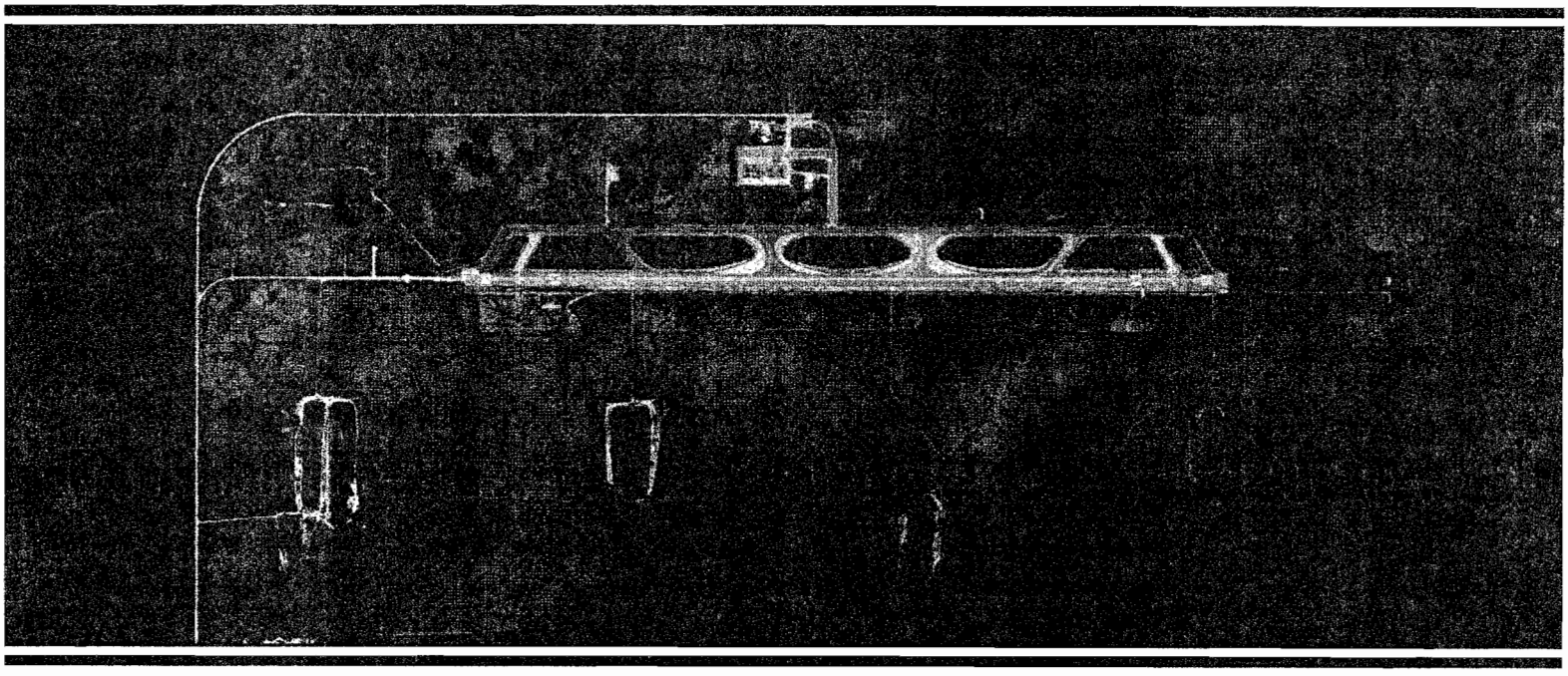
HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency. TPA

Thomas P. Abbott

Asset Evaluation:
Dade-Collier Training and Transition Airport Property



21 July 2009

Prepared for
Miami-Dade Aviation Department

by Lampl Herbert Consultants

LAMPL HERBERT

LeA

Asset Evaluation:
Dade-Collier Training and Transition Airport Property

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ACRONYMS

ACOE	US Army Corps of Engineers
ACSC	Area of Critical State Concern
ASR	Aquifer Storage and Recovery
ATV	All terrain vehicle
BICY	Big Cypress National Preserve
BTU	British thermal units
CCC	Comfortable carrying capacity
CDMP	Miami-Dade County Comprehensive Development Master Plan
CERP	Comprehensive Everglades Restoration Plan
DERM	Department of Environmental Resources Management
DHS	Department of Homeland Security
DOD	Department of Defense
DOR	Diversion of revenue
DPC	Division of Pollution Control
EA	Environmental Assessment
EEL	Environmentally Endangered Lands
ENP	Everglades National Park
ERP	Environmental Resource Permit
FAA	Federal Aviation Administration
FDCA	Florida Department of Community Affairs
FDEP	Florida Department of Environmental Protection
FDOF	Florida Department of Forestry
FDOT	Florida Department of Transportation
FLUCCS	Florida Land Use and Cover Classification System
FMV	Fair-market-value
FWC	Florida Fish and Wildlife Conservation Commission
FWS	US Fish and Wildlife Service
GAO	Government Accountability Office
GMP	Collier County Growth Management Plan
MBE	Million barrels equivalent
MDAD	Miami-Dade Aviation Department
MDPR	Miami-Dade Park and Recreation
MIA	Miami International Airport
MMP	Mineral Management Plan
MOU	Memorandum of Understanding
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NGO	Non-governmental organization
NPS	National Park Service
OHV	Off-highway vehicle
ORV	Off-road vehicle
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SEAC	Southeastern Archaeological Center
SFWMD	South Florida Water Management District
SST	Supersonic transport
TD	Total depth
TNT	Dade-Collier Training and Transition Airport
USFWS	United States Fish and Wildlife Service
WMA	Wildlife Management Area
WMD	Water Management District

INTRODUCTION

Miami-Dade County owns 23,840[1] acres of land in rural Miami-Dade and Collier Counties in south-central Florida. The County acquired the property through eminent domain in 1968 to create a regional airport capable of supporting commercial training facilities and supersonic transport (SST) aircraft outside the metropolitan area. The emergence of environmental policies and public opinion derailed the "Everglades Jetport" in 1970 after research suggested the project could threaten the nearby Everglades National Park (ENP).

The Miami-Dade Aviation Department (MDAD) oversees present-day activities at the site which is known as the Dade-Collier Training and Transition Airport (TNT). MDAD manages the airport, which consists of a single runway and support infrastructure constructed in 1968-1969, and contracts for management of the remaining 22,540 acres as part of the Big Cypress Wildlife Management area. The property generally remains in a semi-natural state. Five quarry pits were excavated in 1968 during construction of the runway, aprons, and entrance road and, separately, trails have been cut by swamp buggies, airboats, and other off-road vehicles commonly used by hunters.

MDAD initiated research in 2008 to identify options for the future use of the entire 23,840 acres at the site. The agency seeks opportunities that will generate revenue to be used for public purposes. The research was conducted between March 2008 – January 2009 and this report presents the results of the study.

The Introduction discusses the history and significance of the TNT property, surrounding land use, and regulatory considerations. Site-specific resources identified here are discussed in detail in the individual chapters.

The introductory material is followed by a series of opportunities that focus on specific surface and/or subsurface assets. The options include the sale of the land and/or the subsurface minerals; development for recreational services; mitigation, restoration, and enhancement of surface lands; the use of limestone and the existing quarry lakes; consideration of potential for development of subsurface oil and gas deposits, and emerging opportunities.

Each option is evaluated by type and availability of natural resource, opportunity for revenue generation, economic benefit, environmental

[1] The TNT property consists of 37 square miles or approximately 23,840 acres. Acreage totals presented here are based on interpretation of ownership maps and/or title descriptions provided in the 2008 title search. Given the lack of a current survey, total acreage figures reported vary slightly in some parts of this report. Determination of the exact acreage will require a survey of the TNT property.

soundness, and likelihood of public agreement and/or acceptance. Strategic considerations are presented.

The Economic Options section provides individual scenarios and potential timelines for development and revenue generation.

Dade-Collier Training and Transition Airport (TNT) History and Significance[2]

The TNT property is located north of U.S. 41 – the Tamiami Trail – near 50-Mile Bend; 16,640 acres are in Collier County and 7,840 acres are in Miami-Dade County. The airport occupies 1,300 acres on the southern third of the property; the facility includes a maintenance trailer, a 13,500 foot paved runway, taxi ways and apron, and communication structures.

The Dade County Port Authority, predecessor to the Miami-Dade County Commission and MDAD, acquired the acreage through condemnation in the early 1960s with the intent of developing a regional international airport at the edge of the Everglades away from the centers of population. Instead, the project served as a catalyst for creation of the Everglades Coalition, which is a collection of environmental groups, and precipitated an enduring interest in the Florida Everglades and surrounding areas that today focuses on restoration through the Comprehensive Everglades Restoration Plan (CERP).

The Everglades Jetport Pact of 1969 signaled the official end of the project as proposed by prohibiting large-scale construction at the Dade-Collier County property discussed here.[3] After multiple studies and much debate, federal, state, and local governments agreed to find a suitable site for the jetport; the federal government would purchase the new site and Miami-Dade would abandon the property at the edge of the Everglades at that time. Another site was selected in the 1970s; however, the project faltered.

The jetport pact was renewed on a semi-annual basis until 1983; the new document – signed only by Dade County and the federal government – provided for termination in 1998 or in the event that a site had not been identified and purchased by 1986. Federal research conducted in 1982 undermined the need for land – and federal funding – to develop a training facility at a time when the FAA allowed and commercial airlines increasingly required pilots to train on simulators.

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[2] The brief history draws from multiple sources, which are identified in the bibliography. Specific sources are cited throughout the report as appropriate.

[3] The Everglades Jetport Pact of 1969 was signed by the U.S. Secretaries of Transportation and Interior, the Governor of Florida, and a representative of the Dade County Port Authority; Collier County did not sign the document.

> *"...Operations at the jetport peaked in 1972 and by 1980 were less than one-third of the 1972 level. In that time technological advances in air carrier training simulators and recent Federal Aviation Administration regulations permitting almost all air carrier training to be done in simulators have, in GAO's opinion, almost eliminated the need for an air carrier training facility.*
>
> *"GAO therefore believes it is no longer necessary to construct a replacement training facility. If some actual use of aircraft for air carrier training is still needed in the future, such training could be handled at the existing Everglades Jetport apparently without significant adverse environmental impact, according to the final environmental impact statement."*[4]

Given that an alternative location was not agreed upon within the prescribed period, the Everglades Jetport Pact appears to have ended by default in 1986. Miami-Dade eventually expanded commercial operations at the existing Miami International Airport, and commercial airlines abandoned the use of supersonic aircraft in 2003. Miami-Dade County retains ownership of the entire site.

Agreements and Contracts

MDAD currently holds agreements with the Federal Aviation Administration (FAA) that address the use and equipment at the TNT facility. The National Aeronautic and Space Administration (NASA) provides an emergency landing strip for the space shuttle, and the U.S. Department of Homeland Security (DHS) provides a remote site to land and sequester aircraft in the event of an epidemiological / terrorist incident. MDAD allows U.S. Department of Defense (DOD) agencies to use portions of the property for specialized training in wilderness and remote terrains. The conditions of these agreements appear to govern only the 1,300 acres located within the fence-enclosed area.

Miami-Dade County contracts with the Florida Fish and Wildlife Conservation Commission (FWC) for management of the remaining 22,540 acres as part of the Big Cypress Wildlife Management Area (WMA); FWC also keeps track of 20 campers / campsites erected before and after the County's acquisition of the property. Separately, MDAD rents a paved parking area near the entrance to TNT fenced area of the Jetport Conservation Club for storage of swamp buggies used to reach camps at various parts of the property. The County recently agreed to a similar arrangement with a veterans group that will travel into the backcountry.

[4] United States Government Accountability Office. (1982) *Fresh look is needed at proposed South Florida jetport: report to the Congress* (No. CED-82-54).

Federal Aviation Agency

The FAA requires airport land to be used for its "highest and best use" which the FAA generally prioritizes as aeronautical and/or non-aeronautical uses. The FAA requires that airports get fair-market-value (FMV) rent on FAA premises. The FAA prohibits use of airport funds or resources that do not provide a direct benefit to airports. A diversion of revenue (DOR) violation results in either a re-payment of the funds or the FAA may withhold grant funds from that airport until it cures the violation.

Planning and Regulatory Considerations

The Big Cypress National Preserve was authorized and created by Public Law 93-440 in November 1971.[5] The Miami-Dade County property represents the largest single in-holding in the preserve, which after additional purchases, totals more than 700,000 acres. Subsequent general management plans produced by the U.S. National Park Service (NPS) for the Big Cypress National Preserve (BICY) recognize the presence of in-holdings that are owned by private entities, the Section 16 School Lands owned by the State of Florida, and the Dade-Collier TNT property.

The TNT property lies within the Big Cypress Area of Critical State Concern (ACSC), a planning overlay created by the Florida Legislature in 1972 to "protect resources and public facilities of major statewide significance."[6] The Florida Department of Community Affairs (FDCA) oversees activities in the Big Cypress ACSC; requirements are implemented at the local level by the Collier County Board of County Commissioners through the Collier County Growth Management Plan (GMP). The Collier County Growth Management Plan designates the Big Cypress ACSC as a specific conservation area and creates the Big Cypress Area of Critical State Concern Overlay.

The Miami-Dade County Board of County Commissioners oversees regulation in the eastern portion of the property, with local environmental oversight and permitting administered by the Department of Environmental Resource Management (DERM). The Miami-Dade County Comprehensive Plan requires the TNT property to be managed consistent with surrounding uses which include: the Big Cypress National Preserve, Water Management Area No. 3, the Everglades National Park, and the Big Cypress Area of Critical State Concern. The TNT property is categorized as conservation lands in both counties and, at some point in the future, may be subject to restrictions or changes associated with the Comprehensive Everglades Restoration Plan (CERP).

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[5] An Act to Establish Big Cypress National Preserve. Public Law 93-440 (2004).

[6] Areas of Critical State Concern. Florida Statute Chapter 380.05. (1986).
Approval of Local Comprehensive Plan for Big Cypress Area of Critical State Concern. 9J-7. U.S., Florida Administrative Code Weekly. 9J-7.003.

The U.S. Army Corps of Engineers (ACOE) issues dredge and fill permits for activities in wetland areas. The U.S. Fish and Wildlife Service (FWS) reviews impacts to fish and wildlife as part of the ACOE process; other governmental and non-governmental organizations also review and comment on applications made to the ACOE.

The Florida Department of Environmental Protection (FDEP) issues Environmental Resource Permits (ERP) for activities within environmentally sensitive areas and individual permits for activities related to exploration and production of oil and natural gas and mining, which is germane because of the proximity to such operations. Separately, the Big Cypress Swamp Advisory Committee reviews applications for activities associated with oil exploration, production, and transportation within the Big Cypress area. The South Florida Water Management District (SFWMD) oversees permitting for consumptive use of water for oil and gas operations. The National Park Service, other federal and state agencies, and non-governmental organizations (NGOs) are asked to comment on applications for Florida seismic or drilling permits within the Big Cypress National Preserve.

Natural Resources, Natural Assets

The TNT site presents a collection of natural resources that, taken individually or collectively, offer more than one type of economic opportunity for the Miami-Dade Aviation Department (MDAD). The resources include wetlands, fresh water, and minerals that occur on or beneath the surface.

The surface area consists primarily of wetlands, cypress, and upland hardwood forests, interspersed by freshwater marshes, bay swamps, emergent aquatic wetlands, and wet prairies. These provide habitat for wetlands vegetation and wildlife that include the Florida Panther. Eight bird, three mammal, and two reptile species listed by the U.S. Fish and Wildlife Services (FWS) or the Florida Fish and Wildlife Conservation Commission (FWC) as imperiled may be present on or in the vicinity of the TNT property; no federally listed plant species are reported as likely or potentially occurring at the site. A review of wildlife and wetlands issues at the TNT property is provided in Appendix 1.

The surface is currently used for training, hunting, and informal recreation. The Florida Master Site File reports 25 archaeological and historic sites in or adjacent to the TNT property, some of which may be counted in the 455 archaeological sites recorded within the boundaries of the Big Cypress National Preserve. A predictive model developed by Morrell and Cockrell for the Big Cypress area in 2006 anticipates prehistoric or historic sites in some 40 percent of the hardwood hammock areas. A review of cultural resources issues at the TNT property is provided in Appendix 2.

The subsurface matrix is made up of limestone, ground water, hydrocarbons, and pore space, all of which either have been or may be used by people. The Dade County Port Authority used limestone from the TNT property to construct the airport runway and support infrastructure from 1968-69. Hydrocarbon deposits are recovered at depths of 11,400 feet from oil fields to the north of TNT, transported to refineries along the Gulf Coast to produce gasoline, diesel, and aviation fuel.

The surface and subsurface are part of the overall ecosystem which provides environmental benefits to humans and other animals. Fresh water is transported to the Everglades National Park and surrounding areas to the south via a process known as sheet flow.

The TNT property is a sizable land mass that contains multiple natural resources that may be developed as assets to produce revenues for the Miami-Dade Aviation Department as well as used for other public purposes. Any change in use of the surface and/or subsurface lands at the TNT site must be undertaken with a strong environmental sensitivity that is consistent with stewardship of the resources. Given the origins of the ownership and initial airport plans – and the location within the Big Cypress National Preserve and adjacency to the Everglades National Park – MDAD will be held to the highest standards of environmental protection and practices. All activities will be the subject of intense public debate.

Dade-Collier Training and Transitional Airport: The Assets Plan

The development of the natural resource assets at the TNT property will be a lengthy and politically complicated process. MDAD could prepare an Assets Plan to prioritize options reviewed in this report that are deemed appropriate for further development. The Asset Plan could serve to direct the creation of an Environmental Impact Statement (EIS) that will, in all likelihood, be required by the U.S. Army Corps of Engineers for permits to carry out development activities for recreation and mitigation.

Limitations

This project was undertaken to evaluate the potential for developing an economic return to the MDAD from the 37 square miles of land that is the Dade-Collier Training and Transition Airport and surrounding lands. Lampl Herbert Consultants (LHC) has conducted an extensive literature review to develop the historical context for the project area. LHC has reviewed internal documents, studies, and reports supplied by MDAD and conducted interviews with persons knowledgeable about this area to provide background for this study. Numerous site visits were conducted including helicopter over flights. State and federal agency staffs were informed of the study and the plans for possible site development of the

assets at the TNT property. To the extent possible, the comments of the regulatory agencies has been factored into this report.

While LHC has extensive knowledge about this area of the Big Cypress from more than 30 years of work in the area on natural resource development projects, the findings are limited by the environmental context of the natural area and the attendant environmental constraints that may be placed on development ideas. Similarly, the concepts presented in this report depend on the funding and interest by Miami-Dade and Collier Counties.

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DIVESTITURE OF SURFACE LANDS AND/OR SUBSURFACE MINERALS

The Dade-Collier Training and Transition Airport (TNT) property consists of 23,840 acres of lands that include wetlands, prairies, freshwater marshes, upland, and five freshwater quarry lakes. The property is underlain by a subsurface matrix that includes limestone, ground water, hydrocarbons, and pore space. Miami-Dade County holds ownership to the entire surface and to varying percentages of the minerals that might occur in the subsurface (Figure 1).[7] The property is subject to FAA requirements regarding the fair-market-value and diversion of revenue as discussed in the Introduction.

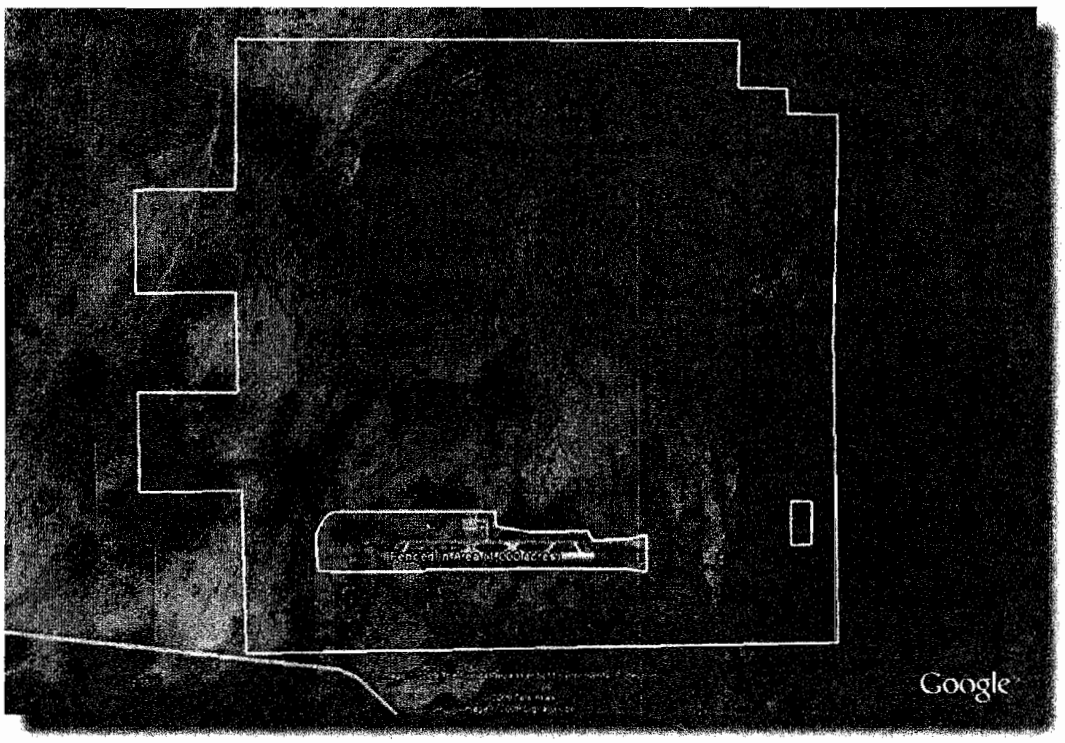

Figure 1 - Map of TNT property

MDAD currently uses approximately 1,300 acres of the surface to operate and otherwise support the airport and other training activities. The remaining 22,540 acres are categorized as non-essential surface assets that could be sold or traded by MDAD to generate revenue for public purposes. The mineral acreage could be sold or otherwise conveyed with the sale or trade of the surface acreage, or alternatively be retained by MDAD for future development.

[7] Hemisphere Title Company. (2007). Dade-Collier Training and Transition Airport (TNT) Title Report. Miami-Dade Aviation Department.

Market Value of Conservation Lands

The TNT lands represent the largest in-holding within the Big Cypress National Preserve (BICY) and are located within the watershed that serves the Everglades National Park (Figure 2). The property is designated for conservation uses by both Miami-Dade and Collier Counties and as an Area of Critical State Concern (ACSC) by the State of Florida; land use changes would be required to develop the property for purposes other than conservation or environmental protection.

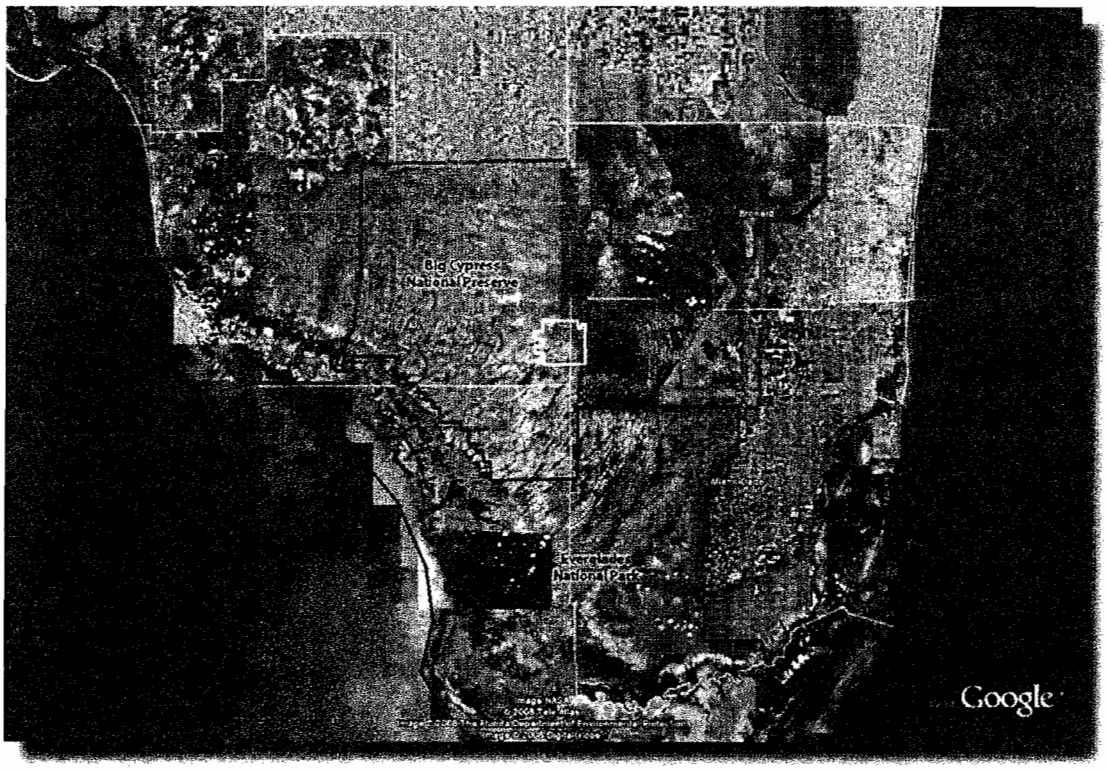

Figure 2 - Map of TNT property, BICY, and ENP

Sales information was assembled on twelve properties in Miami-Dade, Broward, and Collier Counties for a 25-year period (see Figure 3 and Table 1).[8] The report is found in Appendix 3. County future land use designations for the properties reviewed were, in all instances, limited to conservation or environmental protection. The individual parcels ranged from 32 acres to 502 acres in size and included several tracts that were under threat of eminent domain for conservation or environmental protection purposes. The land sales ranged from $100 per acre for tracts purchased by the South Florida Water Management District (SFWMD) to $2,468 per acre

[8] The market value discussion draws from an assessment of property values conducted by RE Analysts-Commercial, LLC, of Broward County, Florida, a commercial real estate appraisal firm experienced in the review of lands within the Everglades area. The assessment should not be considered as a site specific appraisal, which would be conducted at the time of sale.

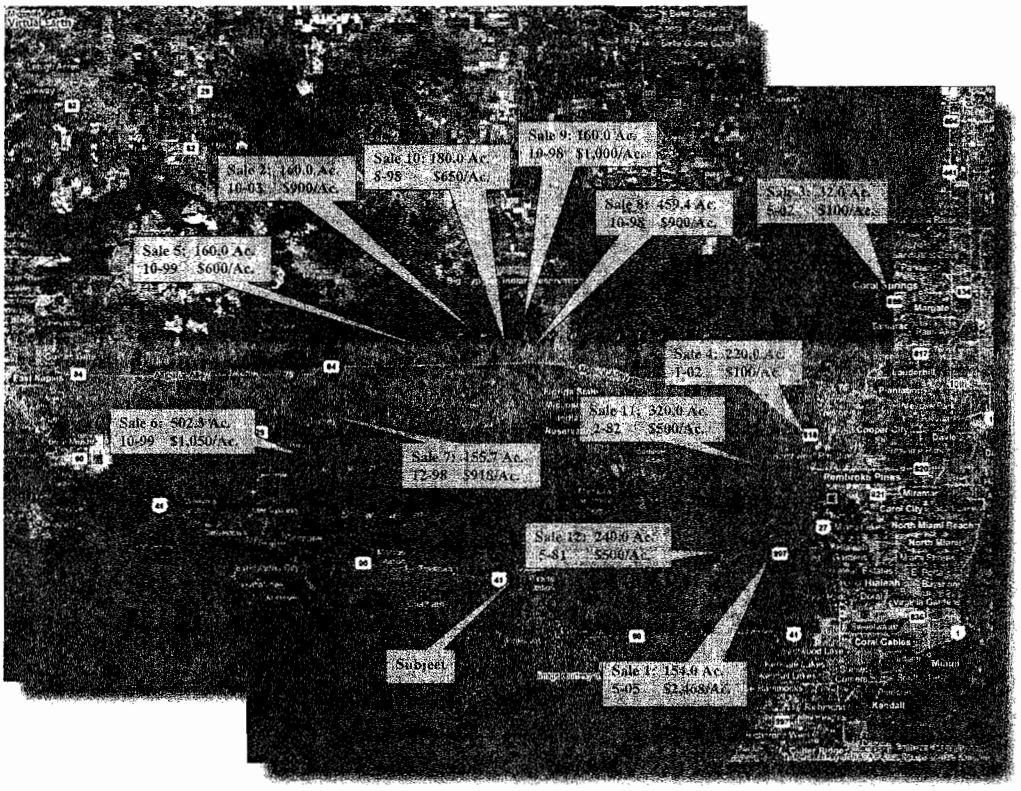

Figure 3 - Land values near TNT property

for property purchased for private purposes at a 154-acre tract near Krome Avenue in Miami-Dade County. The remainder of the sales ranged from $600-$1,000 per acre for purchases by the State of Florida or the federal government.

The market value of property in the Everglades area has been established by public entities that purchase tracts for protection or environmental management. The Department of the Interior (DOI) acquired several hundred thousand acres from several owners in 1974 to establish the Big Cypress National Preserve, which was authorized by Congress.[9] The DOI and the State of Florida gradually increased public ownership in the area by acquisition of small tracts. The Big Cypress National Preserve presently encompasses more than 720,000 acres, accumulated through more than 30,000 real estate transactions.

The South Florida Water Management District (formerly the Central & Southern Florida Flood Control District) began acquisition of property in South Florida soon after its creation in 1947 to establish a water management system. The SFWMD and other public entities are currently acquiring lands for restoration of the Everglades under the Comprehensive Everglades Restoration Plan (CERP). The Seminole and Miccosukee Tribes

[9] Approximately 65% of the surface land area of the Preserve was acquired from the Collier family interests.

maintain separate conservation/preservation programs for lands adjacent to the BICY and Everglades National Park.

The SFWMD announced plans in 2008 to purchase 187,000 acres of agricultural lands from U.S. Sugar Corporation south of Lake Okeechobee for the CERP. The land value has not been finalized but appears, at this time, to be in the range of $7,000 per acre which includes multiple buildings and road and rail infrastructure.

Prospects for the Sale or Trade of TNT Properties

The market for land in the rural parts of this region is limited to environmental purposes. Consequently, the pool of interested parties may be limited to governmental entities. The following agencies and organizations may be considered prospects for acquisition of the TNT lands:

Federal Government

At least three governmental entities within the structure of the federal government could have some interest in acquisition of the TNT property: the Department of the Interior, the Department of Transportation, and the Department of Defense.

The Department of the Interior could acquire the property to expand the holdings of the Big Cypress National Preserve. While such a transaction could be possible, the DOI would be disinclined to pay for the property

Table 1 - Assessment of similar properties

Sale #	County	Folio #	Sec.	Town-ship	Range	Grantor	Grantee	Zoning
1	Miami-Dade	30-2825-001-0010	25	52	38	Harris J. Buchbinder	NVL, Inc.	GU
2	Collier	00377880005	20	49	34	William B. Stein	USA	CON-ACSC/ST
3	Broward	4840-25-00-0010	24	48	40	Robert W. Strong	SFWMD	Conservation
4	Broward	5039-28-01-0010	28	50	39	Harold E. Pontious	SFWMD	Conservation
5	Collier	00366680009	36	49	33	Norma Lea Curry & Gary Baylock	USA	CON-ACSC/ST
6	Collier	00982760002	6	51	30	Bearcat Development Corp.	TIITF/ST of FL	A-ACSC/ST
7	Collier	00523480000	18	50	30	Jack H. Cole	TIITF/ST of FL	A-ACSC/ST
8	Collier	00378800000	26	49	34	Janmar Properties, LTD	USA	CON-ACSC/ST
9	Collier	00371400009	14	49	34	Janmar Properties, LTD	USA	CON-ACSC/ST
10	Collier	00378920003	28	49	34	Trusco Realty, Inc	USA	CON-ACSC/ST
11	Broward	51-38-23	23	51	38	Kanter Corporation of Florida, Inc.	George Zuckman	F-1
12	Miami-Dade	31-2819-000-004 & 30-2820-000-40	19	52	38	North Dade development Company	Tayssir Sabbagh	GU

since the acreage is currently owned by a public entity and is protected by state and local government land use designations and regulations. Separately, federal acquisition of the TNT property would shift the burdens and expenses associated with management and maintenance from Miami-Dade County to the BICY budget.

The Department of Transportation could acquire part or all of the property for the FAA to provide a buffer zone for the existing Dade-Collier Training and Transition Airport. Separately, the Department of Defense could acquire the property to control access to the remote portions of the site during training missions for special operations units – particularly if MDAD considers development of the surface lands for recreation and other public purposes.

State of Florida's "Florida Forever"

Florida Forever is the present-day state-funded land acquisition program, succeeding programs that included the Environmentally Endangered Lands (EEL) program initiated in 1973, which was created to purchase lands, some of which were subsequently added to the Big Cypress National Preserve. More than $5 billion have been spent over 36 years to acquire large and small tracts of private land for public purposes that include preservation of environmentally sensitive areas. As noted above, the TNT lands are already in public ownership and do not face the threat of private development, given regulatory protections.

Future Land Use	Date of Sale	Sale Amount	Site Size (Ac)	$/Acre	Comments
Environmental Protection	5/26/2005	$380,000	154.0	$2,468	Private Sale. Adjacent to Krome Ave., purchased for long term investment.
Conservation Designation	10/8/2003	$144,000	160.0	$900	North of I-75, threat of eminent domain. Near a roadway and airstrip
Conservation Area	5/14/2002	$3,200	32.0	$100	SFWMD standing offer of $100/Ac.
Conservation Area	1/22/2002	$22,000	220.0	$100	SFWMD standing offer of $100/Ac.
Conservation Designation	10/22/1999	$96,000	160.0	$600	North of I-75, threat of eminent domain.
Conservation Designation	10/12/1999	$527,200	502.3	$1,050	Adjacent to State Road 29.
Conservation Designation	12/16/1998	$143,000	155.7	$918	Adjacent to State Road 29.
Conservation Designation	12/16/1998	$413,500	459.4	$900	North of I-75, threat of eminent domain. Adjacent to a SFWMD canal and roadway, which intersect I-75
Conservation Designation	10/5/1998	$160,000	160.0	$1,000	North of I-75, threat of eminent domain. Near a SFWMD canal and roadway, which intersect I-75. Improvements on site.
Conservation Designation	8/5/1998	$117,000	180.0	$650	North of I-75, threat of eminent domain.
Conservation Area	2/8/1982	$160,000	320.0	$500	Private sale.
Environmental Sensitivity	5/15/1981	$120,000	240.0	$500	Private sale.

Miccosukee Tribe of Indians of Florida

The Miccosukee Tribe of Indians of Florida have land holdings north and east of the TNT property (Figure 4). The tribe has expressed, through MDAD, interest in purchasing some of the TNT lands to add to existing holdings in South Florida.

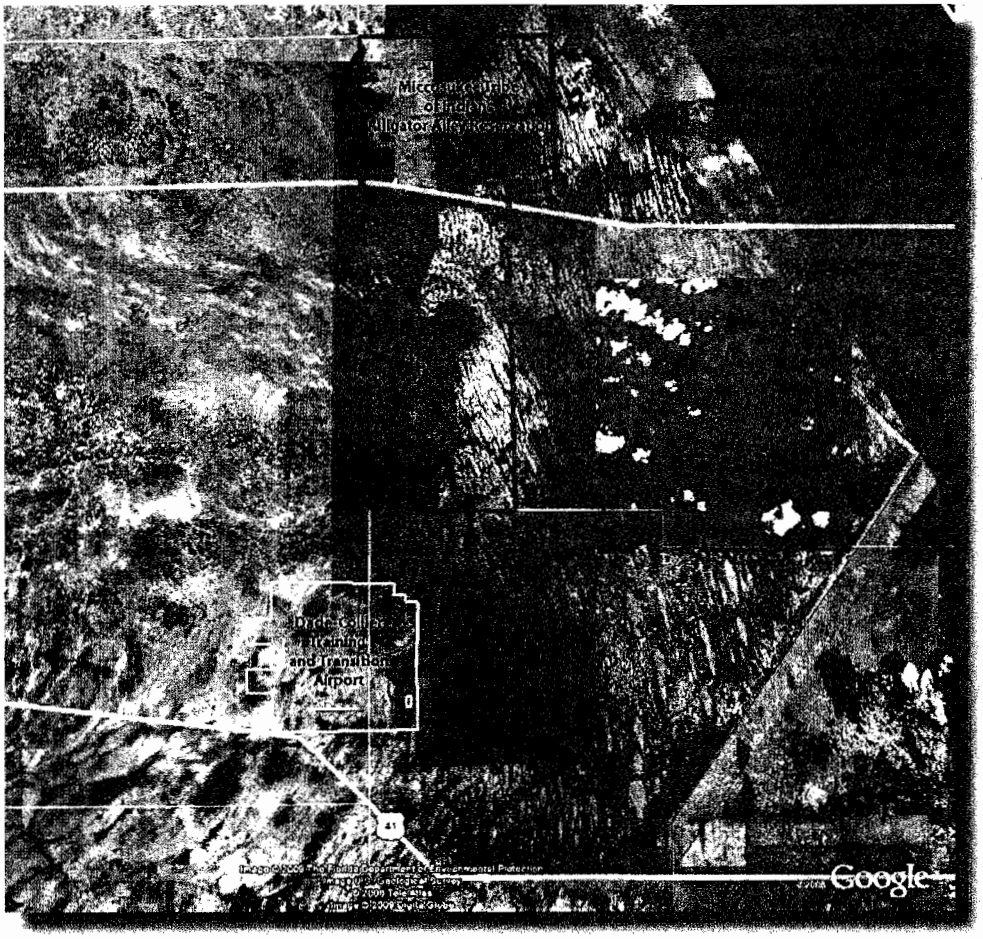

Figure 4 - Miccosukee Tribe of Indians' Land

South Florida Water Management District

The South Florida Water Management District maintains a land acquisition program as part of the Comprehensive Everglades Restoration Plan. However, the issues associated with acquisition and management of property for preservation or conservation in public ownership would also apply here as the TNT property already enjoys a protected status.

The SFWMD buys property for recreational uses. Recent issues relating to off-road vehicle use in South Florida could make portions of the TNT lands

attractive for public access. The limitations of district participation in any purchase for recreation would need to be explored in connection with a specific plan.

Land Transfer with Compensation

State and federal agencies would be disinclined to spend money from existing land buying programs to acquire property that is already within the sphere of public ownership. The property could become the subject of Special Legislation. The Florida Legislature can provide funds for state acquisition of specific projects through a special act and an accompanying appropriation.[10]

Land Exchange for Property of Comparable Value

Acquisition methods are not necessarily limited to outright purchase. Federal agencies, particularly DOT and the DOD, may have excess properties that could be swapped for the TNT property, then sold or otherwise developed by MDAD for revenue. The Everglades Jetport Pact and subsequent agreements were based on the exchange of the jetport for a more suitable site. The property could be exchanged for one or more properties suitable for undetermined developments to generate revenue for MDAD. Such properties would need to be identified and screened for potential environmental issues and public acceptance.

Sale of Oil and Gas Mineral Rights

Few sales of severed oil and gas minerals have been recorded in South Florida. The most recent land sale that involved valuation of oil and gas minerals was for lands within the Water Conservation Area just east of TNT. The property involved eminent domain for land taken in November 1990 by the South Florida Water Management District with a surface value of $450 and $75 for oil and gas minerals; the property is north of the 40-Mile Bend Oil Field. The valuation of the oil and gas was $75 per acre.

Strategic Considerations

This section presents a review of the ownership of the surface and subsurface resources, the market value of conservation/environmental lands, and options for divestiture through sale or trade. Other factors should be considered by MDAD in the evaluation of options available for the TNT property.

[10] The recent acquisition of the Babcock Ranch is an example of direct authorization and funding of a land purchase by the Legislature. For clarity, the Babcock Ranch was owned by private developers, not by a public entity.

Sale of Surface Land and Subsurface Oil and Gas Mineral Rights

The outright sale of the surface lands could be expected to provide a one-time gain of $22.8 million based on $1,000 per acre – if MDAD could find a buyer for property that is already in public ownership. The sale or retention of mineral rights represents two divergent strategic considerations:

1. If included with the sale, mineral rights could bring $50-$75 per mineral acre or $357,600-$534,400 total without proven production at the site. MDAD would, in effect, sell its rights to any potential royalties from an oil and gas field discovered on TNT or adjacent lands
2. If mineral rights were retained, MDAD could realize longer term gains over a 10-50 year time frame, if a field is discovered and produced at the TNT property

- ❒ All options are subject to MDAD's interest in development of a long term income stream. Sale of surface and/or subsurface land or minerals are also subject to FAA requirements related to fair-market-value or diversion of revenue.

Public Access and Use Issues

The 22,540 acres outside the airport property are currently managed as part of a Wildlife Management Area (WMA) under agreement with the Florida Fish and Wildlife Conservation Commission (FWC). Miami-Dade County allows access to 20 private camps situated across the WMA and holds a rental agreement for vehicle (swamp buggies) storage area near the airport maintenance complex. The sale of surface lands could be expected to change public access to the TNT property for recreational use and other purposes. The new owner would have the right to manage the property according to its management philosophies or mission.

Operations of the Training and Transition Airport

Federal agencies, including FAA, NASA, DOD, and DHS, would need to be consulted because of long-term commitments between these agencies and MDAD. The acreage within the fenced facility would remain as the Training and Transition Airport and be operated according to the terms of contracts. Any proposal to sell the lands surrounding the TNT Airport should be expected to guarantee access to the facilities for MDAD and its tenants to insure continued airport operations.

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MITIGATION: RESTORATION AND ENHANCEMENT OF SURFACE LANDS

> *... Mitigation ... should emphasize the restoration and enhancement of degraded ecosystems and the preservation of uplands and wetlands as intact ecosystems rather than alteration of landscapes to create wetlands. This is best accomplished through restoration of ecological communities that were historically present.*
>
> *373.4135 (1) Mitigation banks and offsite regional mitigation*

The Dade-Collier Training and Transition Airport (TNT) property consists of 23,840 acres of lands that include wetlands, prairies, freshwater marshes, upland, and five freshwater quarry lakes. The property is underlain by a subsurface matrix that includes limestone, ground water, hydrocarbons, and pore space. Miami-Dade County holds ownership to the entire surface and to varying percentages of the minerals that might occur in the subsurface (Figure 5). The property is subject to FAA requirements regarding the fair-market-value and diversion of revenue as discussed in the Introduction.

Wetlands were damaged in construction of the training airport – which occurred prior to the development and implementation of environmental permitting laws by federal, state, and local governments. Approximately

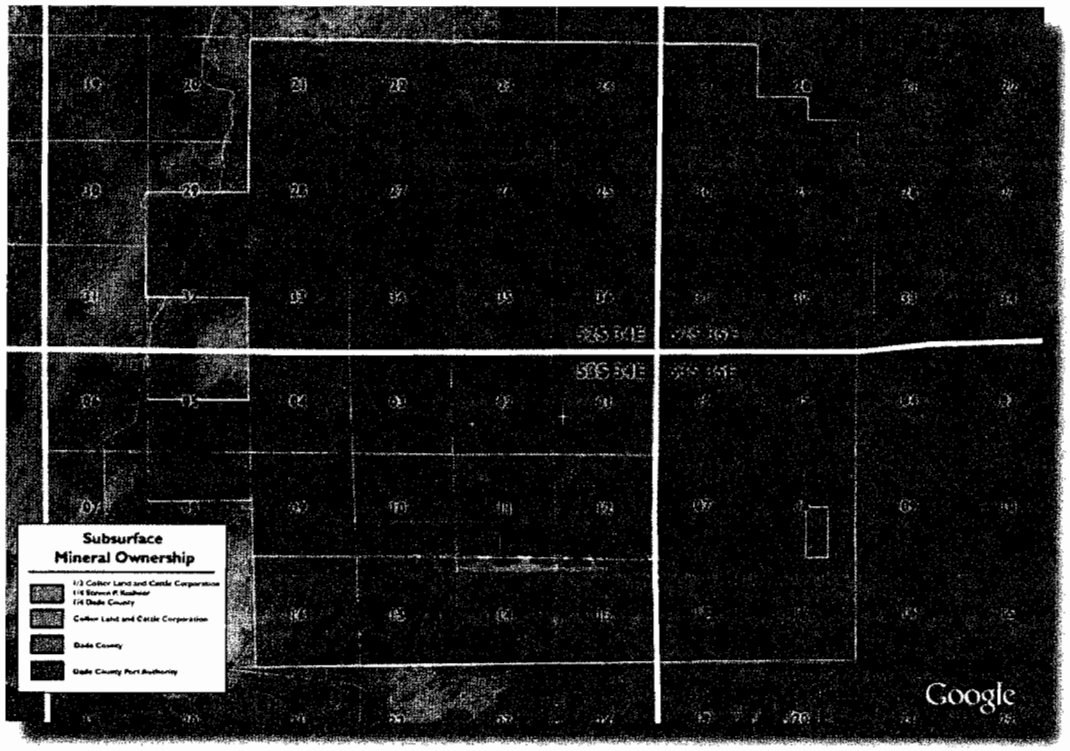

Figure 5 - Subsurface land ownership of TNT property

2,500 acres were cleared to create the airport footprint. Over 63 acres were mined to produce rock construction of the runway and taxi areas, leaving five small quarries (Figure 6).

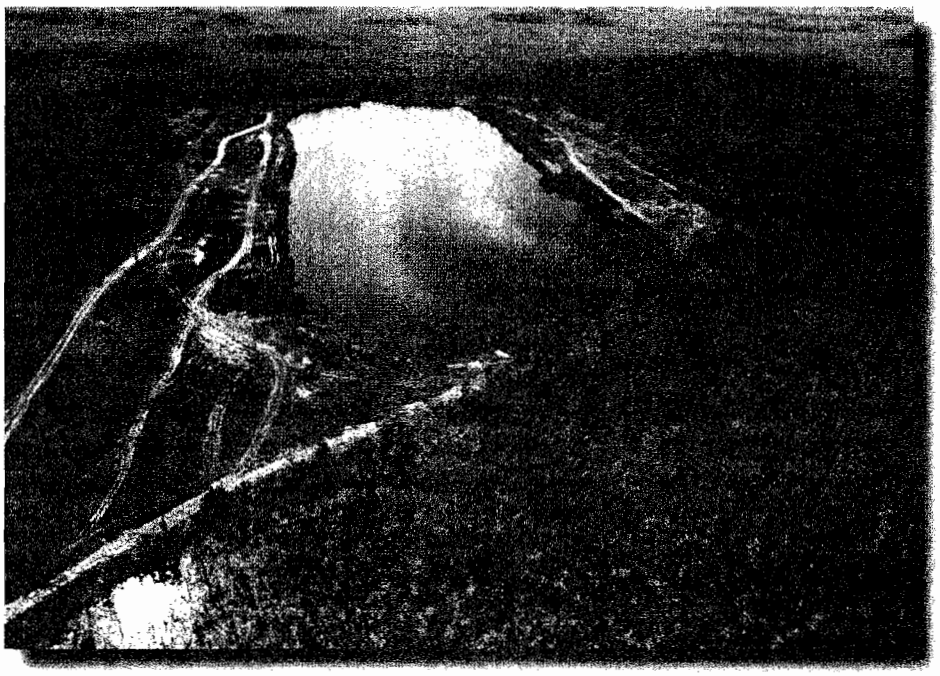

Figure 6 - Unimproved quarry at TNT property

Hunters and others have used swamp buggies and other vehicles to access the area now owned by Miami-Dade County. Estimates show that vegetation and soils on some 1,500 acres of land have been damaged, interrupting sheet flow over an area of about 3,500 acres. Aerial photos (Figure 7) document the occurrence of multiple trails at this and adjacent property prior to acquisition by Miami-Dade County for the Jetport and the federal government for Big Cypress National Preserve.

Mitigation

Mitigation emerged as a regulatory and permitting tool in the 1970s and was implemented, in part, by allowing developers to build new wetlands to compensate for resources lost in the course of public or private projects. Mitigation now focuses on the ecosystem instead of individual components. Restoration activities may occur on or off the project site. However, mitigation must occur within the watershed that hosts the altered or destroyed environmental resources.[12]

In the early days of mitigation, the primary participants included the developer, regulatory agencies, and in some cases, third parties who owned

[12] A watershed refers to a geographic region where streams and tributaries drain a contiguous area.

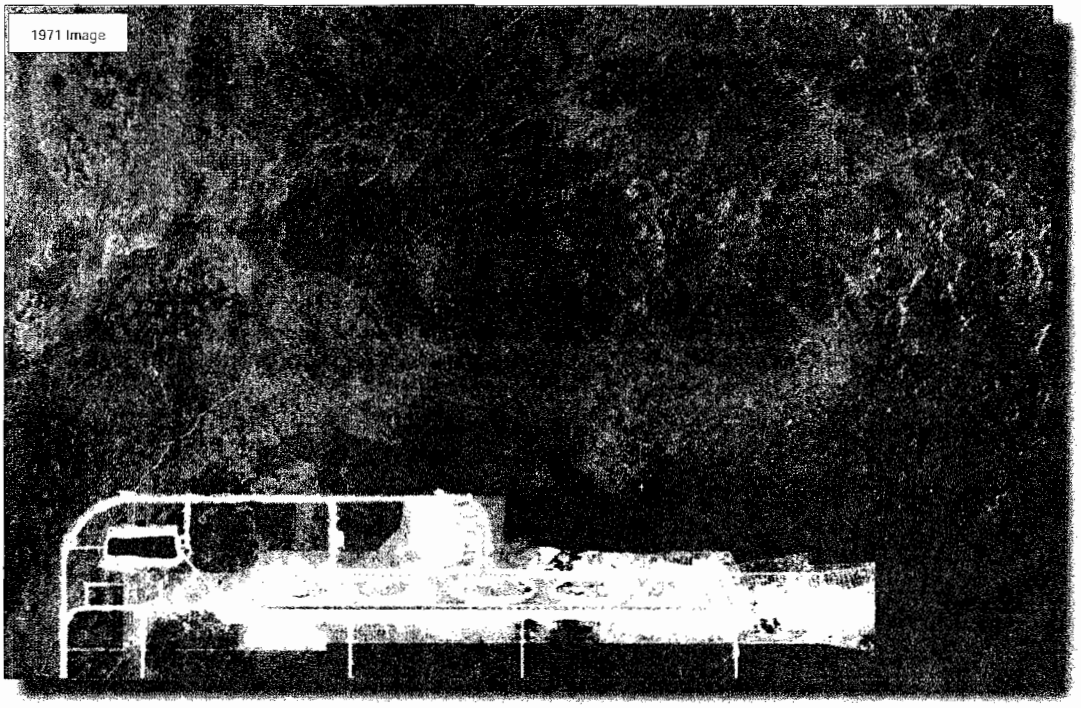

Figure 7 - 1971 aerial photo of TNT airport

property to be restored. In 1993, formal mitigation banks, operated by for-profit or non-profit organizations or governmental entities, were authorized in Florida.

Applicants negotiate mitigation projects and plans with the FDEP during the Environmental Resource Permit (ERP) process and/or with the U.S. Army Corps of Engineers (ACOE) to obtain a Dredge and Fill permit. The agencies assign environmental values to the lands that will be impacted and the lands that will be restored. These latter values are expressed as "credits" based on the inherent value of the wetlands or contributions to the degraded or restored ecosystem. The language of mitigation includes "ratios," which are based on the requirement that the applicant will restore or otherwise improve a larger portion of the ecosystem than is destroyed or degraded.

MDAD could use the mitigation process to restore and enhance damaged lands at the TNT site, offset costs associated with MDAD or other Miami-Dade County projects, and/or generate revenue. For example, the quarry lakes created in the 1960s and the acreage damage by vehicles from the 1950s to present may be designated for mitigation and restored for credit. With prior agreement from permitting agencies, MDAD/Miami-Dade County or third parties could use these restoration projects to mitigate environmental impacts at internal or offsite projects. Such activities would be subject to FAA regulations regarding fair-market-value.

The mitigation process requires developers to improve the environmental function of the impacted lands to a standard that matches surrounding undisturbed, natural areas. The actual cost of the restorative work may amount to $5,000 to $10,000 per acre excluding the cost of the land. Mitigation is less expensive if the developer – public or private – owns the land. Developers who do not have mitigation lands available must purchase more expensive mitigation "credits" from a bank or willing provider who must restore and maintain the site over time. A public agency is preferred for this role by the regulatory agencies.

The TNT lands could be used by third parties for mitigation on a fee basis that covers the restoration costs and provides revenue to MDAD. Restoration/mitigation includes activities such as removal of exotic vegetation, restoration of hydro-periods, reestablishment of wetlands soils and vegetation, and/or creation of wildlife habitats. In a larger context, mitigation work on the TNT land may benefit the CERP restoration of historic sheet flow to the Ten Thousand Islands.

Mitigation banks, using permitted and approved third party properties, are another way to offset wetland impacts. A mitigation bank could be created for the impacted lands at TNT to create asset value.

Some mitigation activities described above would occur within the context of other primary projects, which means that MDAD would not need to get separate permits for some of these activities. Private mitigation banks are subject to environmental permitting because activities may occur independently of other permitted projects and will require long-term maintenance that will be monitored by regulatory agencies. Separately, Miami-Dade County or Collier County could require some type of permitting if the intent is to excavate limestone for mitigation activities and to sell excess materials. (See discussion on limestone resources in separate section.)

Mitigation Opportunities

Preliminary research identified two types of areas suitable for mitigation at the TNT property: the existing lakes and adjacent property impacted by mining in 1968-1969 and the dispersed, rutted areas damaged by off-road vehicles. The mitigation values – credits and ratios – have yet to be established by regulatory agencies.

Lake Restoration and Enhancement

The mining pre-dated wetlands permitting and reclamation requirements and consequently the lakes were created without consideration for the creation of littoral shelf areas for fish and wildlife propagation. The quarries are 25-30 feet deep with vertical sides; the quarries lack a littoral zone that transitions from the upland to the depths of the quarry.

Preliminary analysis of these lakes and adjacent filled areas indicate that the edges of each lake could be excavated to create a shallow littoral zone to enhance fish and wildlife. The excavated materials could in turn be used for trail restoration and construction in rutted areas. This option is discussed in more detail in the excavation section of this report.

Restoration of the lakes could provide:

- ❒ Wading bird habitat with expanded shoreline areas of shallow water
- ❒ Shore-side fishing opportunities for children and persons with limited mobility
- ❒ Improvements to water quality and biological productivity.

"Floating islands," an emerging technology that recycles plastics and fiber materials, may be installed to provide for fish cover, food chain enhancements, and wading bird protection. See Figure 8 which depicts a littoral zone enhanced by installation of floating islands.

Restoration of Rutted Areas

The use of swamp buggies has caused removal of soil and vegetation and rutting over significant areas north and northeast of the airport (Figure 9). Studies by the University of Georgia conducted on behalf of the NPS documented that an excess of 1,500 acres of TNT land were impacted by vehicles.[13] The restoration of the rutted areas could reestablish or replace:

- ❒ Sheet flow to the benefit of the Big Cypress National Preserve and the Everglades National Park
- ❒ Native soils which provide the substrate for vegetation.

Such improvements would contribute to enhanced water quality and biological productivity within the South Florida area in general.

The MDPR is conducting a site-specific study that considers the feasibility of creating an OHV/ORV park at the TNT property. Preliminary on-site meetings with the USACE and the US Fish & Wildlife Service suggest that federal, state, and local agencies will require control of off-road traffic; riders would be limited to designated and stabilized trails. Restoration areas would be identified in subsequent research and plans which may include preparation of an Environmental Impact Statement, a process similar to the work done by the National Park Service in preparation for development of the Big Cypress National Preserve OHV/ORV management plan.

[13] United States Department of the Interior National Park Service. (2000). Final Recreational off-road vehicle management plan: Supplemental environmental impact statement: United States Department of the Interior National Park Service.

Figure 8 - Conceptual view of quarry lakes restoration

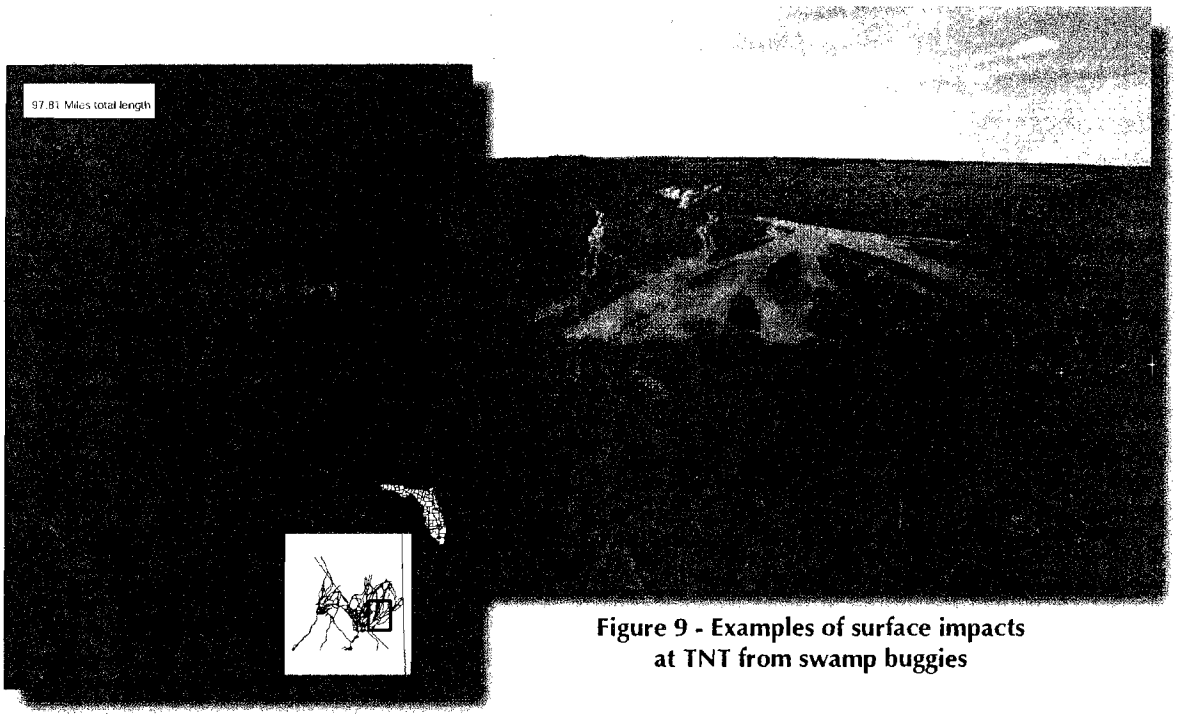

Figure 9 - Examples of surface impacts at TNT from swamp buggies

Revenue from Mitigation

Mitigation offers opportunities for new revenue for MDAD and cost offsets for MDAD and Miami-Dade County in general. The mitigation work could be planned and staged on a project-by-project basis over a 10-15 year period as funds become available.

Third parties could pay MDAD to restore TNT lands for mitigation credits with the concurrence of the permitting agencies. Such transactions will generate actual revenue when the price per acre is higher than the cost of restoration work, maintenance, and monitoring. The price of a per acre mitigation credit is estimated at $65,000 for fresh water marsh ecosystem areas, which includes the cost of land plus restoration activities. Given that Miami-Dade already owns the TNT property, MDAD could be expected to realize significant revenues.

In a simple scenario MDAD could be paid $65,000 per acre for 100 acres of property to be restored realizing gross revenues of $6.5 million. The actual mitigation work might cost $5,000-$10,000 per acre plus $5,000 per acre for long term maintenance and monitoring, netting MDAD $5 to $5.5 million in revenue. This arrangement would not be a mitigation bank transaction, rather it would be mitigation agreed upon by the regulatory agencies on behalf of a third party. Potential participants could include the Florida Department of Transportation, electric utilities, and private developers.

External Third Party Projects using Mitigation Lands Credits for Revenue Generation

Two third-party opportunities have been identified within the watershed. The Florida Department of Transportation and private oil and gas companies may need to purchase mitigation credits as some point in the near future. The projects are:

- FDOT U.S. 41 realignment – 50 acres of impacted wetlands
- Private oil and gas company infrastructure improvement project – 100 acres of impacted wetlands.

MDAD and the County may realize a greater value through the restoration of County owned property. Without mitigation opportunities at the TNT, county agencies purchase credits from independent mitigation banks at rates cited above. For example, some of the expenses associated with the proposed ORV facility could be offset by the use of onsite mitigation. As noted above, such activities would be subject to FAA regulations regarding fair-market-value. Other projects could include:

Internal, Proposed TNT Development Projects using Mitigation Lands as a Cost Offset

- ❒ OHV Recreational Complex – 100 acres of impacted wetlands
- ❒ OHV improved trails – 50 acres of impacted wetlands
- ❒ Veterans camp sites and support trails – 10 acres of impacted wetlands
- ❒ Other recreational impacts – 20 acres of impacted wetlands.

External Miami-Dade County Projects using Mitigation Lands as a Cost Offset

- ❒ Trail Glades Outdoor Range expansion project – 5 acres of impacted wetlands
- ❒ Tree Island Recreation Complex – 40 acres of impacted wetlands
- ❒ Milton E. Thompson Park – 40 acres of impacted wetlands.

Strategic Considerations

This option considered opportunities to restore impacted property at TNT and generate revenue from third party developers or cost offset for Miami-Dade County development projects. MDAD decisions will be based on need for generation of revenues and on county-wide need for mitigation. This section identifies strategic issues to be considered by MDAD in its evaluation of recreation options available for the TNT property.

- ❒ Define, inventory, and prioritize sites suitable for MDAD, Miami-Dade County, and/or third party mitigation as a component of the TNT Asset Plan
- ❒ Review individual projects for consistency with the TNT Asset Plan
- ❒ Negotiate project-specific rates and areas with individual developers
- ❒ Create a scope of work (SOW) for contractor to operate and manage mitigation sites.

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USE OF LIMESTONE AND THE QUARRY LAKES

The Dade-Collier Training and Transition Airport (TNT) property consists of 23,840 acres of lands that include wetlands, prairies, freshwater marshes, upland, and five freshwater quarry lakes. The property is underlain by a subsurface matrix that includes limestone, ground water, hydrocarbons, and pore space. Miami-Dade County holds ownership to the entire surface and to varying percentages of the minerals that might occur in the subsurface (Figure 10).[14] Limestone is not considered a mineral in Florida; therefore, ownership of limestone is linked to surface ownership. Consequently, Miami-Dade County holds all rights to the limestone resources. The property is subject to FAA requirements regarding the fair-market-value and diversion of revenue as discussed in the Introduction.

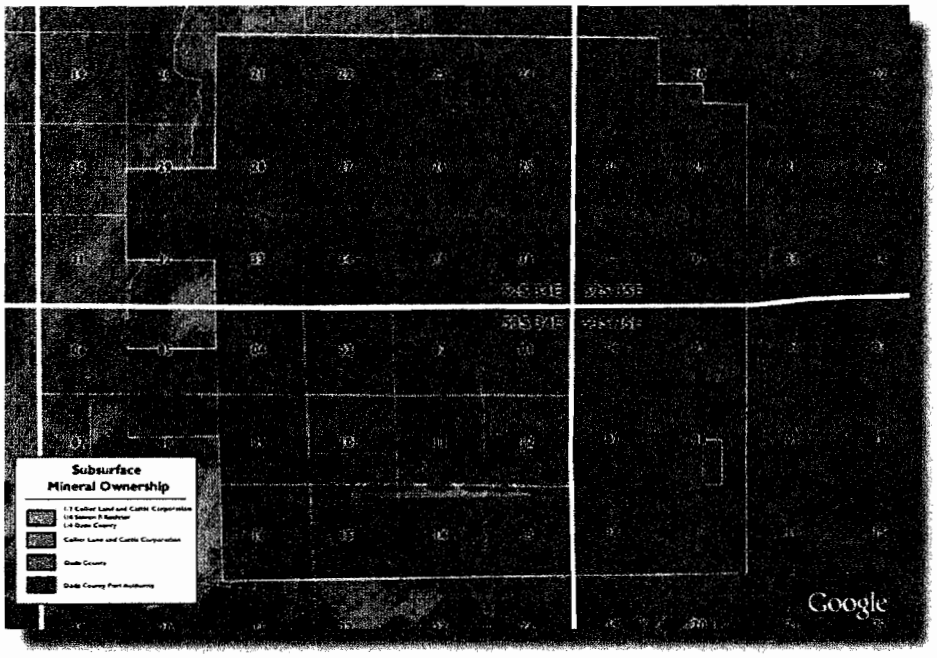

Figure 10 - Subsurface land ownership of TNT property

The 37-square mile property includes the airport, which is situated on approximately 1,300 acres of filled upland. Surrounding acreage includes five quarry lakes excavated in 1968 to provide limerock fill for construction of the runway, approaches and taxi lanes, and the road associated with the airport (Figure 11). The quarries were excavated before environmental or mining permits were required.

[14] ibid., 9.

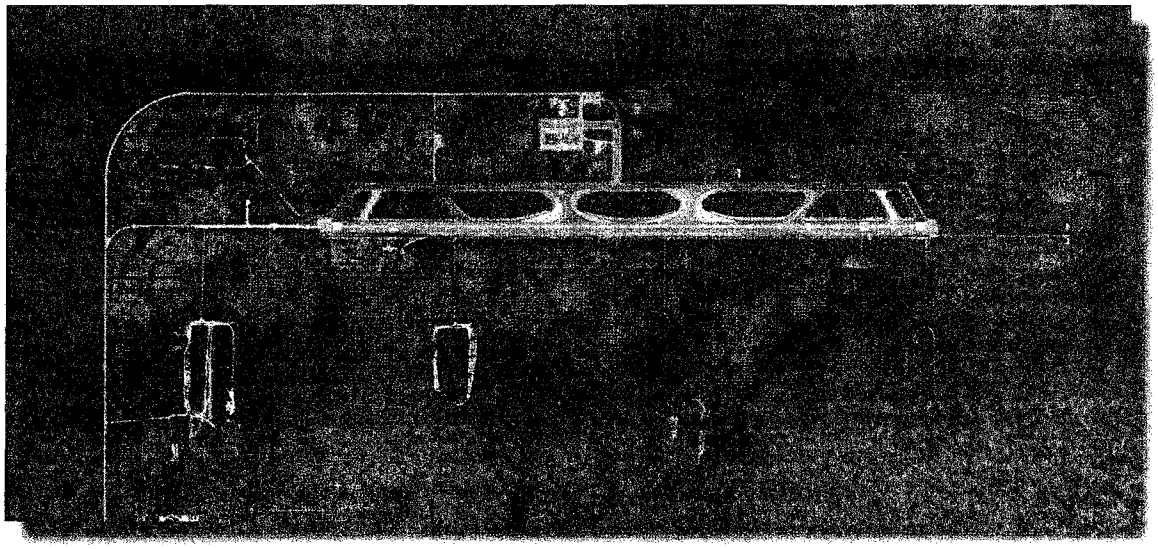

Figure 11 - Aerial close up of airport on TNT property

(Source: MDPR)

Limestone Resources at the TNT Property

Limestone is found at, or near the land surface, across the TNT property. The limestone occurs as part of the Tamiami Formation, which is a moderately hard to soft rock prevalent in the South Florida area.[15] The composition of the Tamiami Formation as presented at the TNT site is markedly different from the Tamiami Formation found at the Miami-Dade Lake Belt Resource Area some 30 miles to the east (Figure 12). The Lake Belt is known for production of durable rock suitable for use as construction aggregates for roads and commercial structures.

The TNT surface lands are marked by a hard caprock which allows swamp buggies to traverse the property. The Tamiami formation transitions to a soft, shelly, and sandy material at depths below 30 feet; this material has little or no value.

A preliminary geologic and geotechnical assessment at the TNT site confirmed that the upper 30 feet of the limestone formation, based on laboratory tests, is likely to be FDOT commercial quality for limerock; deeper units would be expected to produce low quality rock.[16] See Figure 13 for location of borings.

[15] The Tamiami Formation is the geologic term that describes a limestone layer or series of layers extending across South Florida.

[16] Lampl Herbert Consultants. (2007). Strategic Aggregates Study: Sources, Constraints and Economic Value of Limestone and Sand in Florida. Florida Department of Transportation.

Figure 12 - Subject west of the Miami Lake Belt Limestone Resource Area

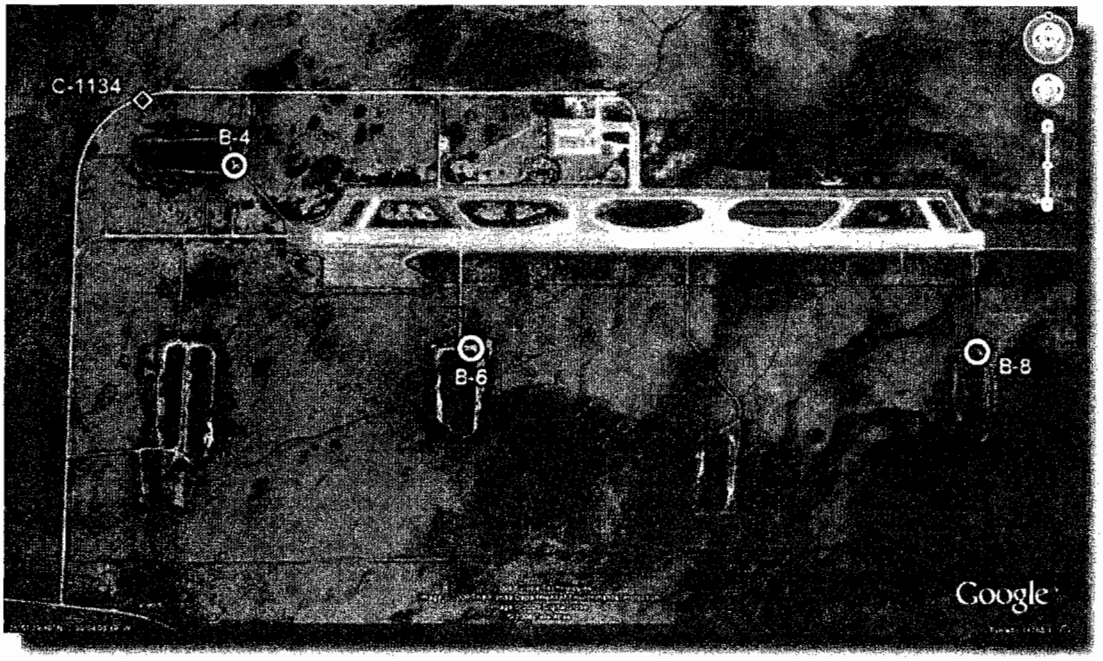

Figure 13 - Location of the three sonic borings

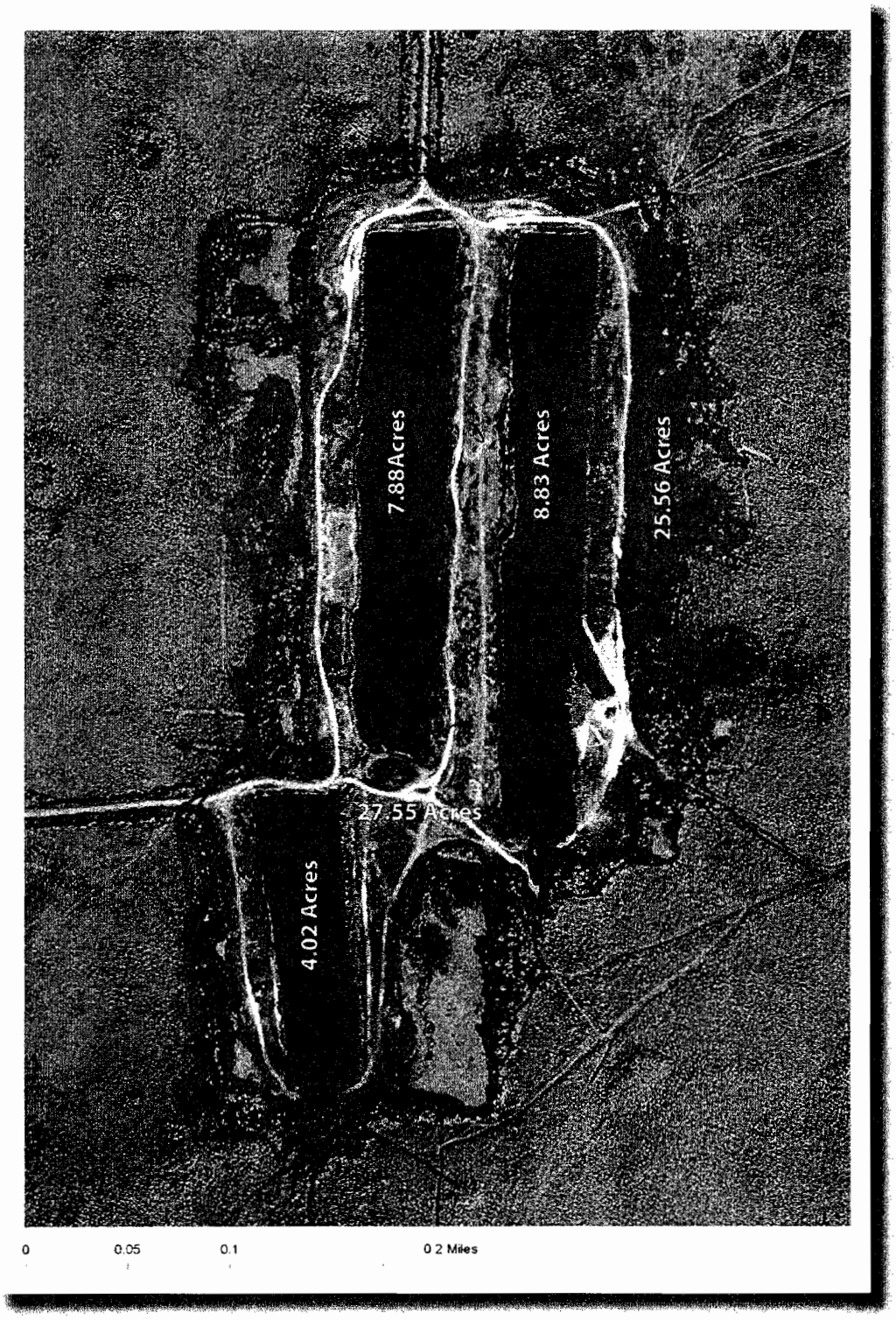

Figure 14 - Quarry Lake 1 at TNT

(Source: 2004 DOQQ)

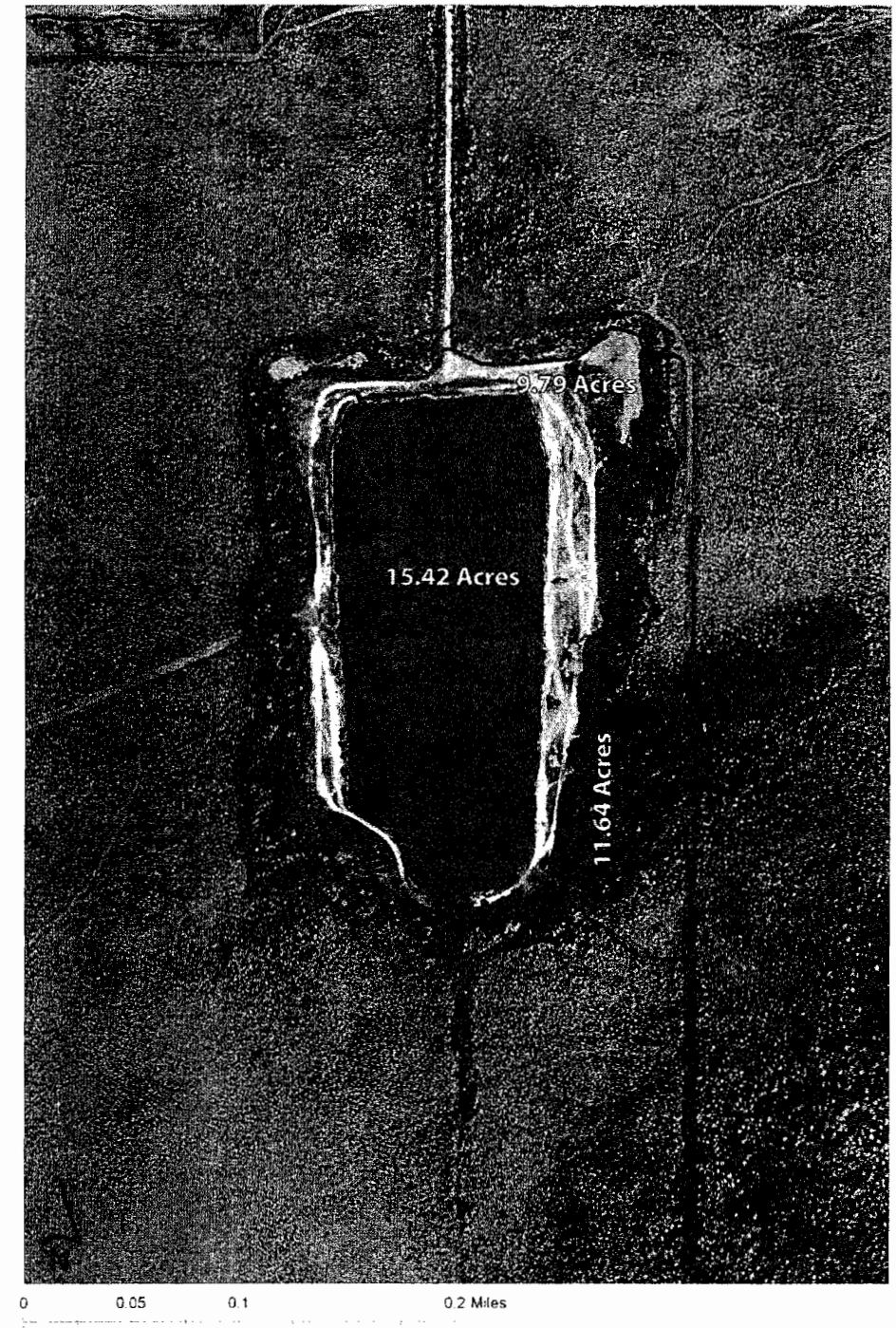

Figure 15 - Quarry Lake 2 at TNT

(Source: 2004 DOQQ)

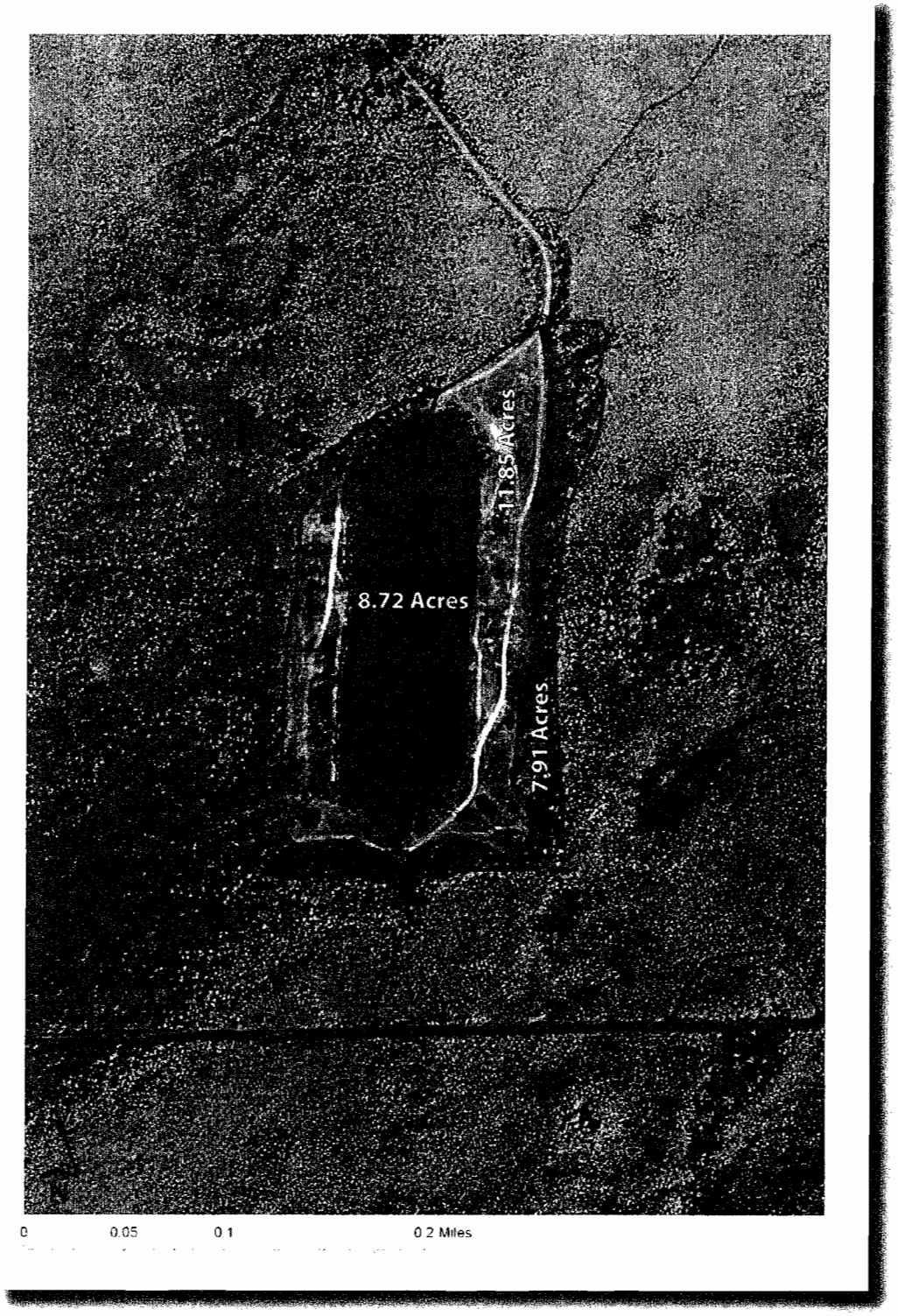

Figure 16 - Quarry Lake 3 at TNT

(Source: 2004 DOQQ)

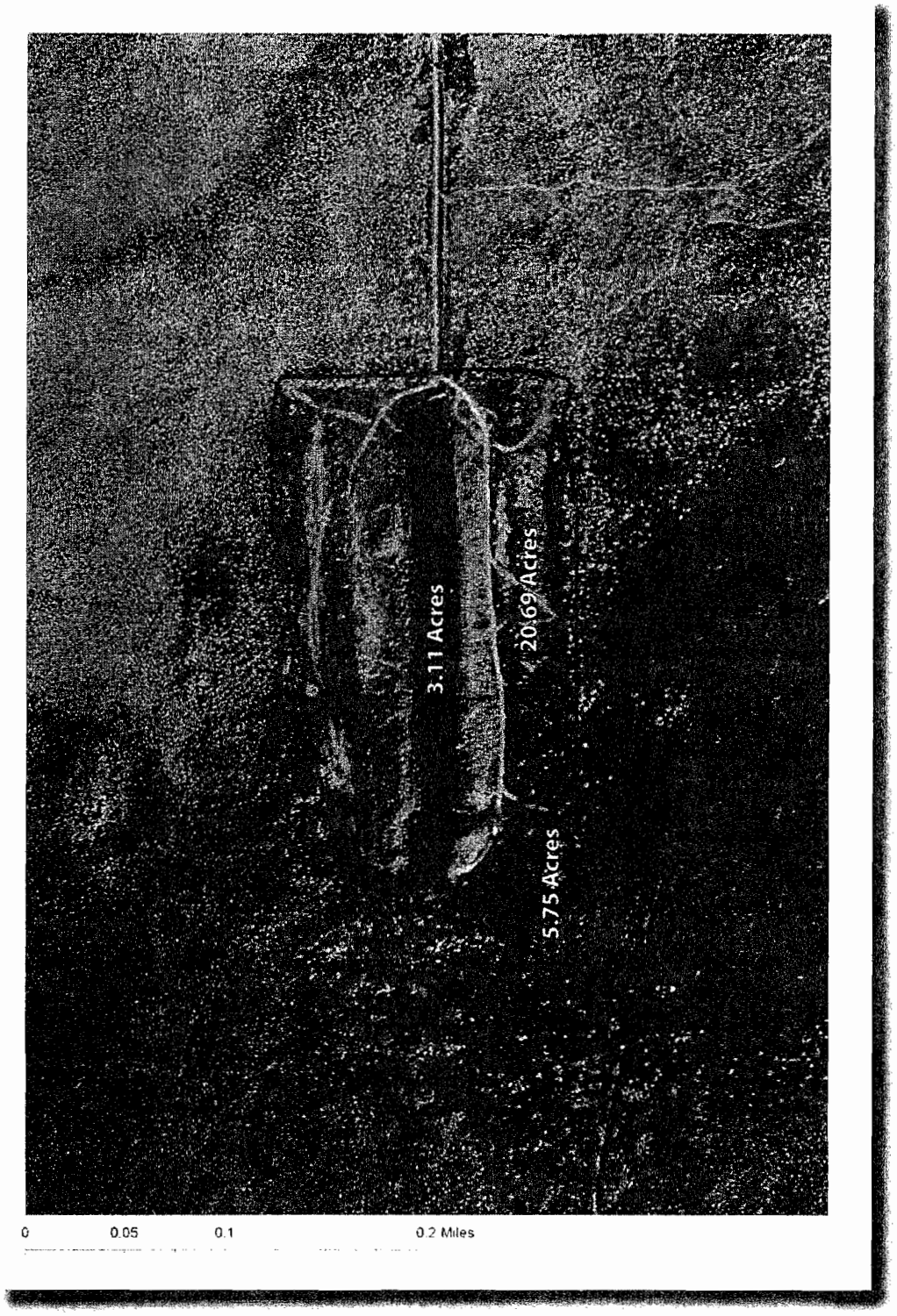

Figure 17 - Quarry Lake 4 at TNT
(Source: 2004 DOQQ)

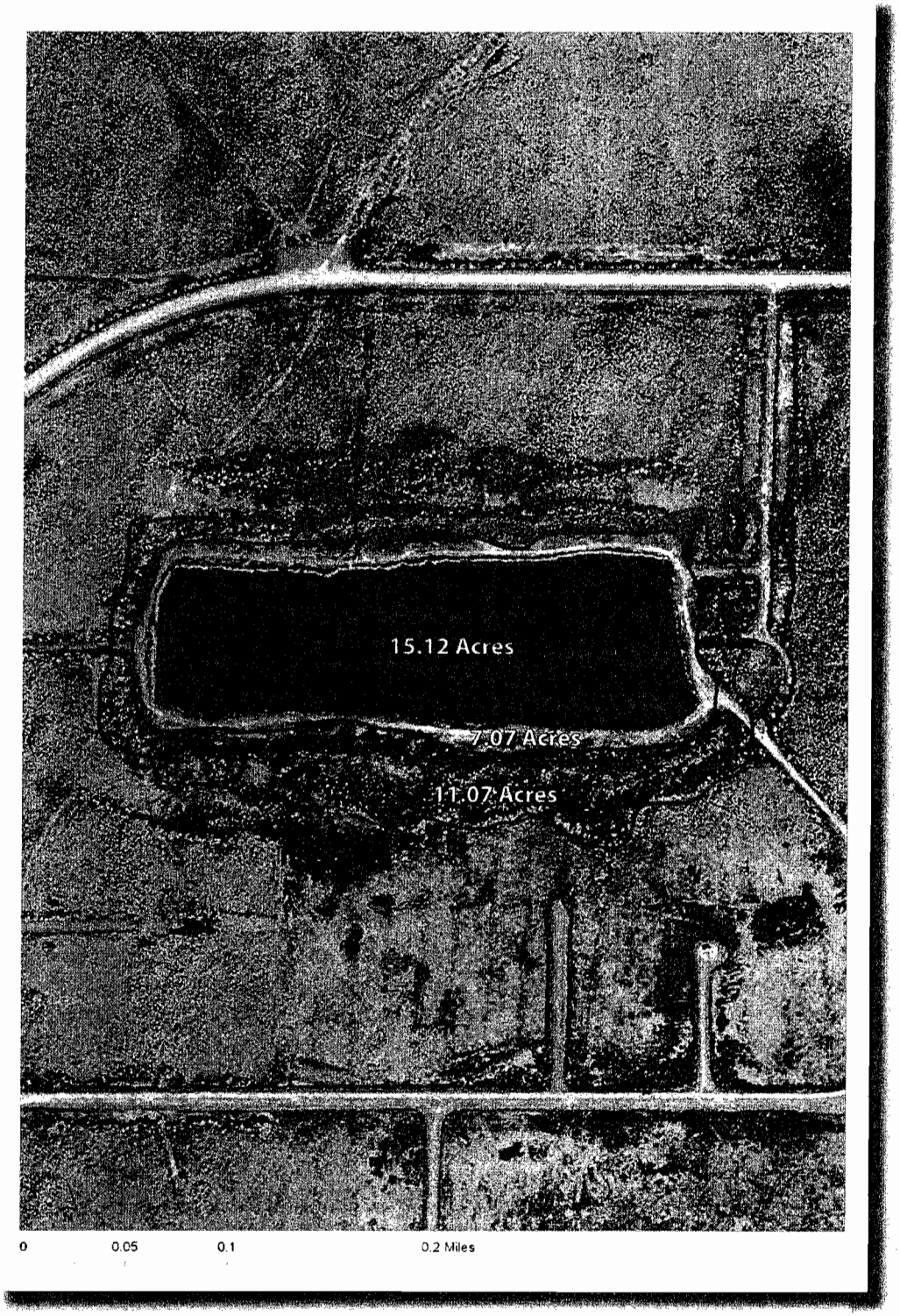

Figure 18 - Quarry Lake 5 at TNT

(Source: 2004 DOQQ)

Quantity of Limestone

Based on estimates from aerial imagery of the five existing quarry lakes (Figures 14 through 18), up to 138 acres could be excavated to produce limerock without creating new wetland impacts. Excavation would be restricted to the footprint of previous mining activities conducted c. 1968; see Figures 15-19 for estimated boundaries of each quarry lake. Excavation could produce up to 3.25 million tons of limestone; see Table 2 for volumetric estimates.[17]

TABLE 2 - VOLUMETRIC ESTIMATION OF LIMEROCK FROM THE QUARRY LAKES

LAKE	TOTAL AREA (AC)	TOTAL TONNAGE
Quarry Lake #1	53	1,243,000
Quarry Lake #2	21	501,000
Quarry Lake #3	20	462,000
Quarry Lake #4	26	619,000
Quarry Lake #5	18	425,000
Totals	**138 acres**	**3,250,000 tons**

Excavation Methods

Minimal vegetation and soil overburden would be removed prior to excavation at the TNT property because of site alterations made in 1968. The preferred excavation method would include a tracked excavator. Once excavated, the limestone would be prepared for use with an on-site portable crusher to limerock. The processed limerock would be moved by articulated haulers to on-site stockpile areas for future use.

Environmental Context: Excavation for Limestone in the Big Cypress National Preserve

The National Park Service management plans do not address rock mining within the Big Cypress National Preserve. Several existing sites have been reshaped as part of mitigation work at the BICY; however, no additional quarries are planned. The U.S. Army Corps of Engineers (ACOE) issues dredge and fill permits for activities in wetland areas. The U.S. Fish and Wildlife Service (FWS) reviews impacts to fish and wildlife as part of the ACOE process; other governmental and non-governmental organizations review and comment on all applications made to the ACOE.

The Florida Department of Environmental Protection (FDEP) issues Environmental Resource Permits (ERP) for mining activities within

[17] The volumetric estimate is based on excavation to a total depth of 26 feet with a minimum of a 1 to 10 side slope.

environmentally sensitive areas. The National Park Service, other federal and state agencies, and non-governmental organizations (NGOs) would be asked to comment on applications for mining within or adjacent to the Big Cypress National Preserve.

FDEP, Bureau of Mining and Reclamation, issues additional permits for activities related to reclamation of mining and excavation operations statewide. Excavation work conducted as part of an approved mitigation plan would not require mine reclamation permits. If excavated materials are to be used for offsite projects, or for sale, then FDEP mine reclamation permits would be required.

The TNT property is located within the Big Cypress Area of Critical State Concern (ACSC). The Florida Department of Community Affairs oversees activities in the ACSC with requirements implemented through the Collier County Growth Management Plan at the local level by the Collier County Board of County Commissioners. The Big Cypress Area of Critical State Concern Overlay appears to be silent on mining; however, in the context of site mitigation this excavation may be allowable if considered as a benefit to the ecosystem. Other mining requirements may apply.

The Miami-Dade County Board of Commissioners oversees activities in the eastern portion of the property with local environmental oversight and permitting administered by the Department of Environmental Resource Management (DERM). The County's Rockmining Overlay Zoning Area (ROZA) provides for mining in the Lake Belt area without a public hearing; other proposals for mines are subject to public hearings.[18] Miami-Dade County Comprehensive Plan requires the TNT property to be managed consistent with surrounding uses, which would include the management plans of the Big Cypress National Preserve and Everglades National Park, the requirements of the Area of Critical State Concern program, and the plans associated with the Comprehensive Everglades Restoration Program (CERP).

The regulatory timeline varies by type of permit. The permits associated with limestone mining in this area could involve a 12-18 month process, if permitted for the sale of rock, and integrated with other acquisition of environmental permits for other land uses. Mining or excavation projects are generally not affected by seasonal weather patterns.

Reclamation

The existing quarry pits were excavated in 1968-1969 prior to modern-day requirements for environmental permitting and reclamation. In a typical post-excavation quarry lake scenario, the reconstructed quarry lakes may provide wildlife, fisheries, and recreational benefits. The excavation of

[18] Miami-Dade County Rockmining Overlay Zoning Area (ROZA) Ordinance #04-163, Lake Excavation Rockmining.

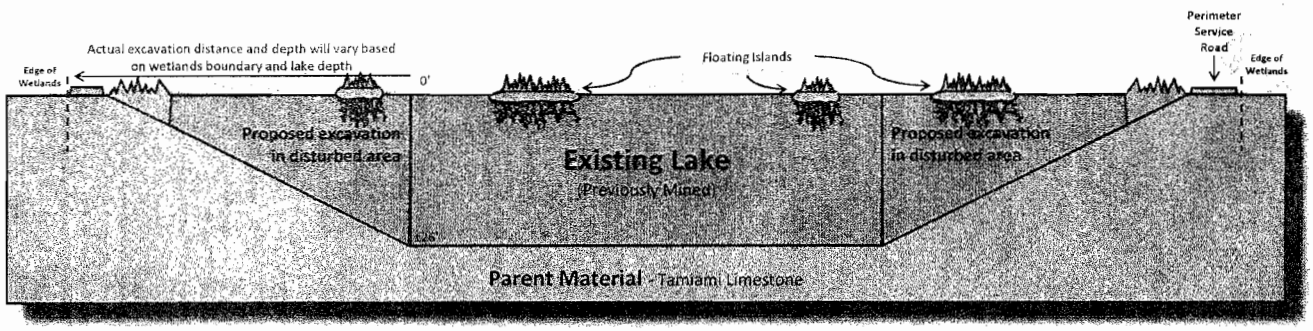

Figure 19 - Cross-section of a typical lake at TNT post-excavation (vertically exaggerated 1:10 slope)

material at a 1 to 10 slope will create shallow, littoral shelf areas around the perimeter of the quarry lakes. Additional vegetation and habitat areas could be added through the use of artificial floating islands in the deeper portions of the lake that normally could not support vegetation and wildlife (Figure 19).

Potential Uses of Limestone at TNT Property

Limestone excavation at the TNT site could provide multiple benefits for mitigation, environmental restoration, and infrastructure projects. The quarry sites were abandoned after the construction of the east-west runway. There is an estimated 60,000 tons of mined material stockpiled at various locations around the quarries from the 1968 excavation work. This stockpiled material can be processed and used. Additionally, up to 3.25 million tons of limestone are available through excavation and sculpting of the quarry lakes to provide a broad littoral fringe (Table 2).

Currently, the steep-sided quarry lakes have minimal environmental value and low biological productivity due to the lack of a broad littoral fringe. The proposed excavation activities would serve to restore biological productivity to these quarry lakes by creating significantly wider littoral zones around the impacted areas and use the excavated materials for highly beneficial purposes. An excavation plan would be developed as part of a site Master Plan that incorporates quarry lake restoration that will have long term site benefits and generate environmental mitigation credits for the post-mine landscape.

Excavation-related activities could provide an array of benefits which are outlined as follows.

- ❒ Strategic removal of limestone within the existing impacted footprint can reshape the steep-sided quarry lakes into littoral wetland areas to provide habitat for fish and wading birds and recreational opportunities for humans

- Limited removal of the limestone to create a broad littoral shelf can be used for mitigation credits to offset other wetland impacts on the site
- Excavated materials could be used to offset costs needed for internal development projects that include:
  - Construction of proposed recreational complex and campground
  - Repair and mitigation of surface damages from vehicle rutting
  - Creation of new stabilized back country trails
  - Stabilization of existing trails
  - Maintenance of runways and other airport infrastructure.
- Excavated materials could be sold for off-site projects to generate revenue; potential clients include:
  - Big Cypress National Preserve (BICY) road and trail improvement projects
  - Everglades National Park road and trail improvement projects
  - FDOT road improvements on US 41
  - Oil companies within the BICY for service road improvements
  - Miccosukee Tribe construction projects
  - CERP environmental restoration projects.

Revenue from Limestone

MDAD can either use materials excavated on-site or purchase limestone from an off-site source for mitigation projects. The economic analysis calculated the value of the excavated rock based on the cost of on-site extraction by a contract excavating company versus the potential revenue from the sale of excess material.

The cost for a private-contractor to excavate, process, and stockpile the 3.2 million tons of material from the five TNT lakes is estimated to be $3 per ton or $9.75 million. In addition, MDAD should be able to recapture revenue through the sale of excess materials at an estimated sale price of $10/ton or up to $22.75 million. See Table 3 for comparisons. Separately, if MDAD contracted an outside source (i.e., Lake Belt, Collier, or Lee County Mines) to deliver the same tonnage, it is estimated to be $15 per ton or $48.75 million.

TABLE 3 - ACQUISITION OR SALE OF LIMESTONE				
LAKE	LIMEROCK BASE MATERIAL (TONS)	COST OF EXCAVATION, PROCESSING, AND HAULING FROM TNT LAKES ($3 PER TON)	SALE OF EXCESS ($10 PER TON)	NET REVENUE GENERATED FROM SALE OF LIMESTONE (NET $7 PER TON)
TNT Lake #1	1,243,000	$3,729,000	$12,430,000	$8,701,000
TNT Lake #2	501,000	$1,503,000	$5,010,000	$3,507,000
TNT Lake #3	462,000	$1,386,000	$4,620,000	$3,234,000
TNT Lake #4	619,000	$1,857,000	$6,190,000	$4,333,000
TNT Lake #5	425,000	$1,275,000	$4,250,000	$2,975,000
Total	**3,250,000**	**$9,750,000**	**$32,500,000**	**$22,750,000**

The priority use of limerock would be for on-site construction of recreational facilities and trail stabilization projects. The value of the limerock can be an internal cost offset or a local government contribution for projects conducted under grant programs. Externally, the limerock can be sold offsite (to generate revenue) for use in local road and nearby construction projects consistent with FAA guidelines on diversion of revenue.

Strategic Considerations for Limestone Excavation

This option focuses on the potential for recovery, use, and/or sale of limestone for mitigation and other purposes at the Dade-Collier Training and Transition Airport (TNT). The assessment addresses historic mining, the quality of the rock, and reserve estimates of limestone that may be produced at the TNT site. In summary, MDAD should consider that:

- Re-sculpting quarry lakes will recover up to 3.2 million tons of limestone for on-site uses and/or sold off-site
- On-site use of limerock could be used to offset costs of mitigation, trail, and infrastructure projects at TNT by the elimination of transportation fees if limerock was purchased outside the TNT property
- Regulatory permits for recreation and mitigation designs will dictate how much of the limestone can be removed
- The sale of excess limerock offsite could generate additional revenue
- Contract excavation could occur in phases since the equipment used is portable
- The limerock can be stockpiled at the off-road vehicle complex around Lake #1 or #2.