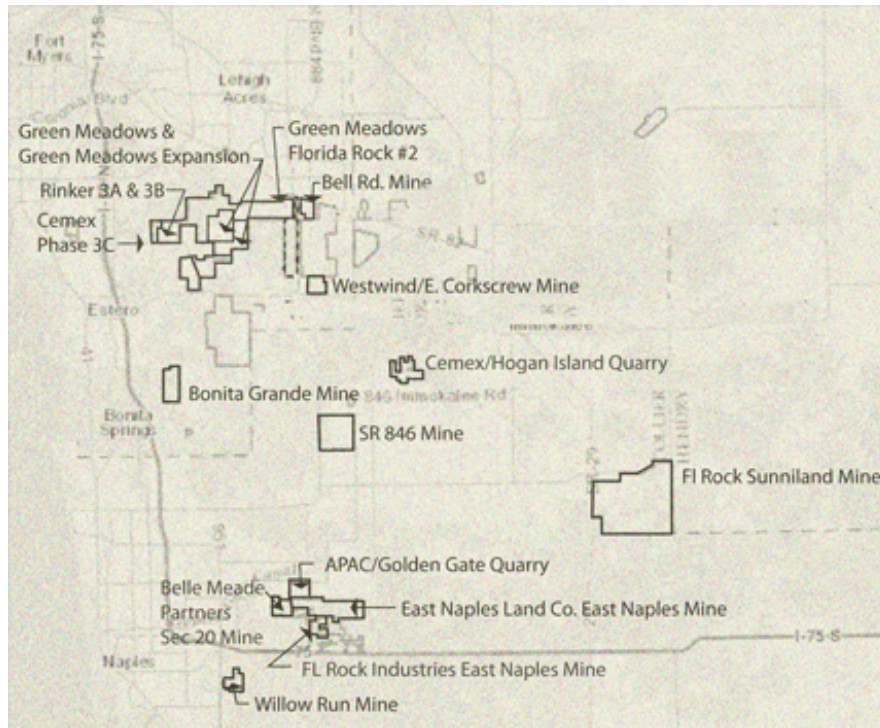


AN EVALUATION OF SE LEE CO. DR/GR AND REGIONAL LIME ROCK MINES



A Local and Regional Mine Analysis Using Mine Specific Geotechnical Reports and County Monitoring Reports

Prepared for:

Sakata Seed America, Inc. and Lee Co. Board of County Commissioners

05/30/2018

Executive Summary

DR/GR Lime Rock Mining Public Policy

The Lee Plan's Objective 10.1, Goal 33, Objective 33.1, and Policies 33.1.1 and 33.1.4, rests on the Dover, Kohl Study's recognition of: *"Reserving sufficient land for mining is critical to the economy, yet avoiding over-allocation is also critical because mining is an industrial process that unavoidably destroys natural resources and is not compatible with most other uses of nearby land."* Goal 33, Objectives 10.1 and 33.1, and Policies 33.1.1 and 33.1.4 do not require Lee County to be the 100%, sole source of lime rock resources for the 7 county Southwest Florida region. If the Lee Plan's Map 14 was based on providing 100% of the regions lime rock supply, then the map would be internally inconsistent with 10.1, 33.1, 33.1.1 and 33.1.4. This is because Collier and Charlotte County have ample lime rock reserves to service their respective counties. By not taking into account Collier and Charlotte County lime rock resources, a Lee County "100% Supply" land use planning approach will lead to unwarranted mine approvals and operations, with associated Lee County system-wide impacts and compatibility conflicts, becoming internally inconsistent with the Lee Plan in direct violation of Objectives 10.1 and 33.1, and Policies 33.1.1 and 33.1.4.

Mining Economics, Proximity and Location

The 2005 Greg Rawl study, the 2008 Dover Kohl study and the 2016 Waldrop Report did not provide a comprehensive evaluation of SW Florida lime rock mines and essentially relied on Lee County as the regions source. It is economically irrefutable that, when evaluating regional resource demand, one must evaluate regional resource supply so as to factor in resource proximity and location to the marketplace. The more proximate the lime rock mine will be, the more economically competitive will be its resources when compared to less proximate lime rock mines. It is logical for Collier and Charlotte mines to be evaluated as the primary suppliers of lime rock for Collier and Charlotte projects due better proximity and location, reduced hauling costs and lower product costs. Any Lee County DR/GR mine plan that ignores this fact and assumes Lee County as the 100% supplier of regional resource demand is flawed.

A Failure To Use The Most Credible Lime Rock Supply Data

Though Dover Kohl and Waldrop state that lime rock thickness data relied on geotechnical information, the author of this report could not find specifically cited mine soil profiles and associated geotechnical data to support this claim. Dover Kohl and Waldrop did not use mine specific monitoring reports for lime rock resource estimates. The failure to use mine specific data and monitoring reports led to a significant under-reporting of future lime rock reserves. The 2018 Stuart report uses mine specific geotechnical data and soil profiles, Lee and Charlotte County monitoring reports, and FDEP permits to obtain a more accurate supply evaluation and forecast.

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To maintain consistency with the 2016 Waldrop Report, this report re-evaluates lime rock mines and resource using Waldrop Report's methodology and assumptions. Data sources are the only difference between 2016 Waldrop Report and 2018 Stuart Evaluation. Waldrop uses air photo interpretation, regional lime rock thickness averages and overburden assumptions for supply calculations. Stuart uses more accurate county monitoring reports, mine specific soil profiles and geotechnical data and FDEP permit information. The use of case source data provides for a more accurate lime rock supply forecast.

FINDINGS _ Plentiful Lime Rock Resources Available Through 2051

The combined Lee, Collier and Charlotte County permitted lime rock is 526,613,153 cyds. This quantity of available lime rock can service 100% of the 7 county regional demand through the year 2051. Based upon a currently inventoried 8,046 acres of permitted mines, Lee County alone has 372,956,998 cyd of lime rock reserves (Note: Waldrop identifies 253,963,320 cyd based on 8,031 acres). Excluding Collier and Charlotte County, Lee County can provide 100% of the regions required lime rock needs through the year 2042 and can do so without taking into account a 20% demand reduction (DEO-12-029; Case # 10-2988GM; CEMEX, Troyer Bros vs. Lee County). DEO-12-029 upheld the use of a 20% lime rock demand reduction based on the availability of other regional lime rock sources. When factoring in a 20% regional supply reduction, Lee County alone can provide 100% of the regions required lime rock needs generally through the year 2045/2046. Finally, Lee County (without the 20% discount) and Collier County can provide 495,113,074 cyd of lime, equal to 100% of the regions required lime rock needs through the year 2049.

RECOMMENDATIONS _ Lee Plan Table 1(b) and Lime Rock Mine Map Overlay 14 Amendments

No Lee Plan Map 14 amendments and Table 1.b text amendments to support IPD/MEPD lime rock mining rezoning will be needed for the next 32 years, until 2051 and the 2050 Planning Horizon. Using only Lee County as the regional lime rock source, no amendments and IPD/MEPD rezoning are needed for the next 28 years, until 2045/2046 at the mid-point of the 2040 Planning Horizon. Any Map 14 and Table 1.b lime rock map amendments prior to the afore referenced time frames will be internally inconsistent with Objectives 10.1 and 33.1, and Policies 33.1.1 and 33.1.4., in violation of FSS 163.3177.

The 2018 Updated 2030 & 2040 Forecast _

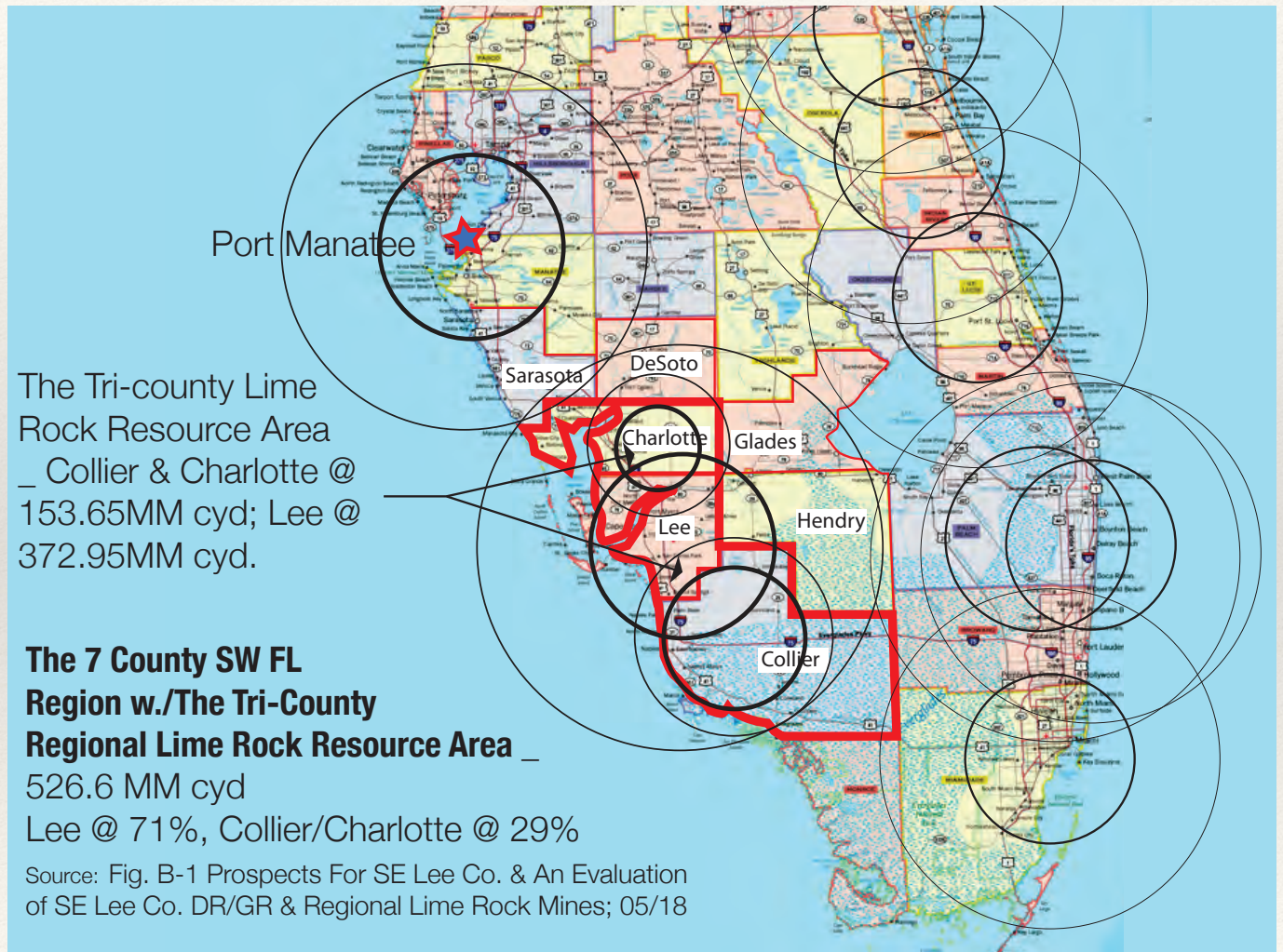
Findings - Is The Troyer Bros. Mine Clearly Needed Based Upon Best Available Data

- ❖ There Is An Ample Supply Of Lime Rock - **The Troyer Bros. Mine Is Not Needed**
 - ❖ Lee, Collier & Charlotte Counties Can Provide 100% Of The Regions Lime Rock Supply Through 2051
 - ❖ Tri-county Aggregate Reserves @ **526,613,153** cyd
 - ❖ Troyer Bros. @ 251,421,793 cyd. (275.19MM Under-reported Lime Rock)
 - ❖ Lee County Alone Can Provide 100% Of The Regions Lime Rock Supply Through **2042** (Up To **2045/46** If Using The 20% Dover Kohl Supply Discount)
 - ❖ Lee & Collier Counties Can Provide 100% Of The Regions Lime Rock Supply Through **2049**

The 2018 Updated 2030 & 2040 Forecast _ The Tri-county Lime Rock Resource Area

❖ The Troyer Bros. Mine Is Not Needed:

- ❖ Lee Co @
372,956,998 cyd
On 5,321 acres
- ❖ Charlotte, Collier
& Lee Co. w./
Overlapping
Markets &
Regional Exports
- ❖ Charlotte Co.
Exports To North
Lee Co.



The 2018 Update _ SE Lee Co. DR/GR & Regional Lime Rock Mine Study

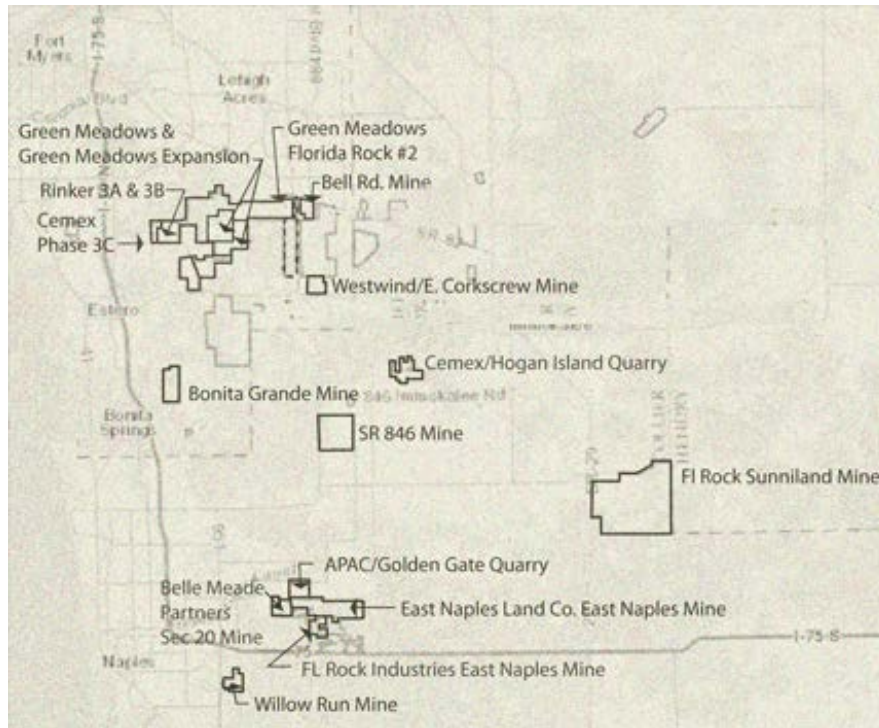
Lee Co. Lime Rock Supply & Demand (Ex. Two, Appendix A & C.1 - C.10)

05/2018 Stuart _ An Evaluation and Appraisal DR/GR Lime Rock Resources _ Comparative Data Table
 Waldrop Table III-1 Lee Co. Limerock Supply; 2018 Geotechnical Soil Profiles and Mine Monitoring Reports

Mine Name	Approved & 2015 Remaining Lime Rock Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extraction To Date 2015 Cyd. (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock Cyd.	Stuart Remaining Post-excavation Limerock Cyd. (Note #14)
Rinker Materials 3A & 3B (1) CEMEX Alico Quarry SEZ2000-00034 LDO2007-00214	503 _ 118	36,517,800	10,559,266	3,236,346	2,589,077	17	45	45	15,000,000	8,800,000	0.7	6,160,000	4,928,000
Green Meadows/Harper Bros. FL Rock (2) 99-05-243.06S LDO 97-05-073.08 LDO2006-00055 & DCI2005-00105	1075 _ 385	107,651,279	27,830,000	15,528,333	12,422,666	25	62	45.8	62,115,108	45,536,171	0.74	33,696,767	26,957,413
Green Meadows Expansion (3) DCI2000-00044 LDO2001-00038 LDO2006-00055 & Z-07-054	1132 _ 812	125,175,306	12,906,666	32,750,666	26,200,533	25	68	42.9	40,050,613	85,124,693	0.73	62,141,026	49,712,821
Green Meadows FL Rock Mine #2 (4) DOS2014-00062 DCI2010-00028 & Z-12-003	2471 _ 2471	168,819,200	0	168,819,200	135,055,360	36	60	37.9			0.69	168,819,200	135,055,360
University Lakes & West Lakes (5) DCI2004-00019 LDO2006-00071 Z-05-088 DCI2000-00079	1511 _ 879	244,725,888	37,000,000	42,543,600	34,034,880	30	108 90	60.7	37,000,000	207,000,000	0.72	149,040,000	119,232,000
Westwind (E. Corkscrew Mine) (6) DCI2002-00066 DCI2000-00057 Z-01-016 DOS2012-00010	299 _ 60	24,926,000	16,113,973	4,259,200	3,407,360	44	50	83.6			0.82	5,749,920	4,599,936
Bonita Grande Mine (7) DCI2001-00065 LDO2000-00058 & IPD Z-02-047	557 _ 117	20,000,000 --		20,000,000	16,000,000	30	90	29			0.80	20,000,000	16,000,000
Plumosa Farms LDO2007-00063 DCI2000-00056 IPD Res Z-01-004 33-47-26-00-00001.002A	30 _ 20	1,306,800	161,333	322,677	258,134	10	30					322,677	258,134
Bell Road (8) LDO2003-00403 IPD Z-04-047 w./Monitoring Report	262 _ 235	16,907,733	1,000,000	15,165,333	12,132,266	40	40		1,000,000	15,000,000		12,000,000	12,000,000
Cemex North Quarry 3 (9) DOS2015-00078 Sec. 6 Expansion Phase 3C DCI2010-00012 & MEPD Z-13-026	203 _ 203	14,737,800	0	14,737,800	11,863,044		45					5,266,667	4,213,334
LEE CO SUBTOTAL	8,043 _ 5,300			317,363,155	253,963,320							463,196,256	372,956,998

LEE COUNTY:
 372,956,998 cyd On 5,321 Acres (2015)
 Troyer Bros. Estimate @ 251,421,793 cyd _ Under-reported 121,535,205 cyd
 Waldrop Total Estimate @ 297,937,834 cyd _ Under-reported 75,019,164 cyd

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Introduction _ Lime Rock Supply, Demand & The Lee Plan

Introduction

Stuart and Associates was commissioned to provide an accurate Lee County and Southwest Florida inventory of permitted lime rock mines by Sakata Seed America, Inc., a multi-national agricultural bio-tech corporation. The analysis is to provide local and regional supply and demand for lime rock resources for the years 2030, 2040 and 2050. The study's primary geographic focus is Lee County's 80,329 acre DR/GR area. However the study acknowledges that lime rock is a regional resource, and therefore provides a detailed analysis of Collier County, Charlotte County and other SW Florida lime rock resource suppliers. This report examines 3 prior DG/GR lime rock studies, the March 2005 Groundwater Resource and Mining Study prepared by Greg Rowl, the 2008 Dover, Kohl and Partners study, and the September 2016 Waldrop Report. It is noted that, unlike the 3 previous studies, this report extensively utilizes mine specific geotechnical reports and soil column profiles, County monitoring reports, and FDEP permits. By utilizing this type of source data, as contrasted with using regional data and averages, a more accurate supply assessment consistent with Lee Plan Goal 33 is obtained. The study's geographic area is identical to Dover Kohl and Waldrop (Charlotte, Collier, Desoto, Glades, Hendry, Lee and Sarasota Counties). A discussion of the Lee County comprehensive plan (the Lee Plan), will now follow.

The Lee Plan Goal 33 Southeast Lee County

The Lee Plan's Southeast Lee County Planning Community vision statement identifies the DR/GR area consisting of mining operations. The Lee Plan does not state or imply that mining is an appropriate use for all property within the SE Lee Co. Planning Community ([CPA2016-06 and CPA2016-10 Staff Report](#); 03/22/17, pg. 3 para. 3). To protect DR/GR water and ground environmental resources and recognizing that all DR/GR lands are not appropriate for mining, Goal 33 calls for map amendments and rezoning sites to be located that minimizes or eliminates adverse effects on surround land uses and natural resources, and based on a clear necessity resting upon accurate data and analysis.

The Lee Plan Objective 33.1 Lime Rock Mining and Policy 33.1.1

Goal 33 and its supporting objectives and policies originated from the [2008 Prospects For Southeast Lee County, Mine Appendix B](#) (Dover, Kohl and Partners). The Dover, Kohl study recognizes: *"Reserving sufficient land for mining is critical to the economy, yet avoiding over-allocation is also critical because mining is an industrial process that unavoidably destroys natural resources and is not compatible with most other uses of nearby land."* (Dover, Kohl Appendix B; pg. B.2, para. 4).

The Lee Plan's Goal 33 is based upon preventing an over-allocation of DR/GR land for rock mining. Objective 33.1 directs the County to designate on the Future Lime Rock Mining Overlay Map 14 sufficient land for continued lime rock mining traditionally near the Alico Road corridor to meet local and regional demand through the Lee Plan's planning horizon (currently 2030). The intent of Objective 33.1 is to prevent unnecessary mining operations and impacts until such time as there is a clear necessity for the mine to begin excavating. Additional mine lands are required to be quantitatively evaluated and considered as to planning horizon need (Policy 33.1.4). Objective 33.1 requires:

"Designate on a Future Land Use Map overlay sufficient land near the traditional Alico Road industrial corridor for continued lime rock mining to meet regional demands through this plan's horizon (currently 2030). (Ordinance No. 10-20)". To implement Objective 33.1, Policy 33.1.1 requires: "Lime rock mining is a high-disturbance activity whose effects on the surrounding area cannot be completely mitigated. To minimize the impacts of mining on valuable water resources, natural systems, residential areas, and the road system, Map 14 identifies Future Lime rock Mining areas that will concentrate lime rock mining activity in the traditional Alico Road industrial corridor east of I-75. By formally identifying such areas in this plan and allowing rezonings for new and expanded lime rock mines only in the areas identified in Map 14, lime rock resources in or near existing disturbed areas will be more fully utilized and the spread of lime rock mining impacts into less disturbed environments will be

precluded until such time as there is a clear necessity to do so (and Map 14 is amended accordingly). The 2018 Stuart Evaluation is consistent with Goal 33 SE Lee County, Lee Plan Objective 33.1, and implementing Policies 33.1.1, 33.1.4, 1.4.5.2(c) and 1.7.12.

Lee Plan Policy 33.1.4

The Dover Kohl report recommends that mine supply analysis be based on data in the public record, primarily Lee Co. zoning and DO files, but also Florida Department of Environmental Protection and South Florida/Southwest Florida Water Management District permit files (Dover, Kohl Appendix B; pg. B.5, para. 3). Lee Plan Policy 33.1.4 requires the County to use best available and credible data, including monitoring reports, to determine the acreage of lime rock mining pits to meet local and regional demand through 2030. Policy 33.1.4 states: *“Table 1(b) contains industrial acreage in Southeast Lee County that reflects the acreage of lime rock mining pits needed to meet local and regional demand. The parcel-based database of existing land uses described in Policy 1.7.6 will be updated at least every seven years to reflect additional data about lime rock mining in Southeast Lee County, including mining acreage zoned (project acres and mining pit acreage), pit acreage with active mine operation permits, acreage actually mined, and acreage remaining to be mined. Current totals are based on data compiled in Prospects for Southeast Lee County for the year 2006. Future amendments will reflect any additional data that becomes available through routine monitoring reports and bathymetric surveys or other credible sources. The industrial acreage totals for Southeast Lee County that are found in Table 1(b) for Planning Community #18 will be used for the following purposes:*

1. *In accordance with Policies 1.1.1 and 1.7.6, new mine development orders and mine development order amendments may be issued provided that the industrial acreage totals in Table 1(b) are not exceeded. For purposes of this computation, the proposed additional lime rock pit acreage, when added to the acreage of lime rock pits already dug, cannot exceed the acreage limitation established in Table 1(b) for Planning Community #18.*
2. *By monitoring the remaining acreage of land rezoned for mining but not yet mined, Lee County will have critical information to use in determining whether and to what extent the Future Lime rock Mining areas in Map 14 may need to be expanded in the future to meet local and regional demands. (Ordinance No. 10-20)”*

From a review of the CPA2016-06 Map 14 Transmittal Report, the Board of County Commission has instructed Staff to make necessary amendments to update the Lee Plan for the 2040 Planning Horizon (CPA2016-06 and CPA2016-10 Staff Report; 03/22/17, pg. 6 para. 3). The Department of Community Development notes that there is an adequate, positive supply for lime rock resources through the current 2030 Planning Horizon. But, relying on the 09/2016 Southeast Lee County DR/GR Mine Study (the Waldrop Report), there will be a deficit of lime rock resource by the year 2040.

Findings _ Lee Plan Goals, Objectives and Policies

1. The Lee Plan places regulatory emphasis on preventing new mines outside the Alico Road corridor (Objective 33.1).
2. Policy 33.1.1 & 33.1.4 requires that new mines must be based on quantified evidence that demonstrates a *“clear necessity”* that there will be a deficit of lime rock resource for the subject planning horizon (currently 2030, with pending 2040 horizon).
3. The Lee Plan does not require Lee County to provide one-hundred percent of regionally needed future lime rock resources (Policy 33.1.4).

Background _ Lime Rock Supply & Demand Studies

The 2005 Greg Rawl Groundwater Resource and Mining Study

The purpose of the 03/2005 Groundwater Resource and Mining Study was to compile and present summary data aimed at evaluating the location and quality of mineral resources, to assess mining activity capacity and the future need for mining materials, and, to assess the effects of mining on ground water resources. The study was to expected to develop a scientifically-based platform for future DR/GR land use decisions and to advance planning and zoning mining considerations. The study placed greater emphasis on water resource impacts and the associated geology and hydrogeology effects of resource extraction. The report inventoried 328 excavations that encompassed 5,544 acres of Lee County. The Rawl Report noted that most of the inventoried fill dirt borrow pits were never permitted. The provided DR/GR estimates were for 9 mines (2004) that generated 892MM cubic yards of overburden and 2.676MM cubic yards of lime rock within 29,050 acres. For demand analysis, the Rawl study utilized a 9 ton per permanent resident lime rock demand assumption. It appears that the Rawl Report did not provide for review mine specific geotechnical reports, monitoring reports and other direct source materials. Regional lime rock thickness averages were used for geotechnical information when calculating future available lime rock resources. Dover Kohl study cited Rawl as identifying 1,800MM cubic yards of available lime rock in the Lee County DR/GR area.

The 2008 Dover Kohl Prospects For SE Lee County Mine Study Appendix B

For the 2008 DR/GR Restudy, Dover, Kohl and Partners (D.K.) conducted an analysis to determine the amount of lime rock that has been permitted for excavation and has the potential to be permitted for future excavation, subject to additional local and state approvals. It then conducted a demand assessment which utilized the Rawl Report's 9 ton per permanent resident lime rock demand assumption. For local and regional demand analysis, D.K. used 80% of the various counties permanent population, which general is equal to the average population. D.K. noted that an alternative method of assessing future demand would be based on peak-season population and expected growth rates, rather than cumulative permanent population growth.

The D.K. study examined 13 approved mines totaling 7,645 mine pit acres, 1 partially approved mine totaling 2,471 acres, and 7 mines that were in litigation totaling 2,257 acres (12,373 mine pit acres total; see *Table B-1 Mine Appendix B, Prospects For Southeast Lee County*, Dover, Kohl and Partners; 2008). Of the 21 mines examined, the D.K. study identified 7,645 acres of mines approved (1980 - 2006), 141,216,680 c.yd. excavated (1980 - 2006), and 152,166,373 c.yd. remaining to be excavated. The D.K. study stated that *"reliable data on limestone thickness is sometimes available in the public record"* (para. 3, page B-7; Mine Appendix B), and *"in other cases, both the top and bottom of the limestone layer has been estimated from soil borings or from regional geological data"*, citing the 2005 *Lee County Groundwater Resource and Mining Study*, prepared by Greg Rawl, et.al. (para. 1, page B-9; Mine Appendix B). As with the Rawl Study, the author of this report could not find documentation that D.K. directly cited and provided for review mine specific geotechnical reports, monitoring reports and other direct source cited materials. Regional lime rock thickness averages were used for geotechnical information when calculating future available lime rock resources. The use of average regional limestone thickness presents a fundamental assumption because, as the Dover Kohl study states, *"the amount of aggregate that can be produced from an acre of land depends on the quality and consistency of the limestone and the thickness of it's layer"* (para. 3, page B-15; Mine Appendix B). The more accurate the estimate of limestone thickness, the greater the accuracy of projected lime rock reserves.

	Mine Acres Approved 1980-2006	Mine Acres Dug 1980-2006	Details of Acres Dug, 1980-2006:			Acres of Rock Excavated 1980-2006	Avg. Rock Thickness	C.Y. of Rock Excavated 1980-2006	Tons of Rock Excavated 1.35 tons / C.Y.	Remaining Limerock Acres	C.Y. of Rock To Be Excavated 2007-Future
			fill-only pits	open rock pits	refilled rock pits						
Rinker Materials (s of Alico)	537	537	0	336	201	537	23	19,926,280	26,900,478	0	0
Rinker Materials (n. of Alico)	622	189	0	189	0	189	17	5,183,640	6,997,914	433	11,875,747
Rinker Materials (Ginn Lago)	1,357	1,209	0	1,209	0	1,209	23	44,861,960	60,563,646	149	5,528,893
Florida Rock (Miromar Lakes)		191	0	191	0	191	25	7,703,667	10,399,950	0	0
Florida Rock Greenmeadows	1,075	765	0	679	86	765	25	30,855,000	41,654,250	310	12,503,333
Florida Rock Greenmeadows exp.	1,132	184	0	184	0	184	25	7,421,333	10,018,800	948	38,236,000
Youngquist Brothers	1,511	554	350	204	0	204	30	9,873,600	13,329,360	1,307	63,258,800
Cemex/RMC	228	181	0	181	0	181	30	8,760,400	11,826,540	9	435,600
Westwind Corkscrew	299	240	240	---	---	---	---	---	---	---	---
Bell Road	265	6	6	---	---	---	---	---	---	---	---
Bonita Grande Aggregates	557	430	293	137	0	137	30	6,830,800	8,951,580	420	20,328,000
Bonita Land Resources	32	26	26	---	---	---	---	---	---	---	---
Plumosa Farm	30	8	8	---	---	---	---	---	---	---	---
TOTALS:	7,645	4,520	923	3,310	287	3,597		141,216,680	190,642,518	3,576	152,166,373

Table B-2: Capacity of mines already approved

FIGURE 1 TABLE _B-2 CAPACITY OF MINES ALREADY APPROVED, MINE APPENDIX B, PROSPECTS FOR SOUTHEAST LEE COUNTY, DOVER, KOHL AND PARTNERS; 2008

The D.K. study utilized two alternative methodological assumptions in determining lime rock demand, followed by comparing the results to establish estimates of needed mine area through to the 2030 planning horizon. The first method assumes demand will remain at its current rate of 9 tons per year per permanent resident and that total annual demand will rise proportionately with the number of permanent residents. The second method assumes aggregate demand will be more closely related to growth than to cumulative permanent population. The study notes that Collier County has substantial reserves, but assumes that counties to the north have only minor reserves ((para. 3, page B-13; Mine Appendix B). Though Collier County was identified as having substantial reserves, the D.K. study did not identify and quantify Collier Co. reserves when estimating regional lime rock supply. The D.K. study concluded with a regional lime rock reserve forecast recommendation. The population demand estimate relied on three-quarters of the growth method and one-quarter of the cumulative population growth method findings. The specific conclusion was that 4,387 additional acres will need to be mined from 2007 through 2030, which equals 183 acres per year, or about 22% more land than the 3,576 acres that have already been permitted in Lee County to service the southwest Florida regional market.

The 2016 Waldrop Engineering Southeast Lee County DR/GR Mining Study

The September 2016 Southeast Lee County DR/GR Mining Study (the Waldrop Report) was a Lee Plan mandated supply and demand analysis for lime rock mines to update 2008 Dover Kohl findings. For lime rock demand, the Waldrop Report utilized the medium range population growth projections for 2020 to 2045 (cited from the Bureau of Economic and Business Research, Un. of FL). Waldrop used a cumulative population growth model. This differed from Dover, Kohl that used a combined 3/4's growth with a 1/4 cumulative population growth methodology. Waldrop assigned a 9 tons of lime rock per capita consumption rate. For Charlotte, Collier, DeSoto, Glades, Hendry, Lee and Sarasota County's, the 2030 and 2040 population projections were 2,096,500 and 2,319,600 respectively. Cumulative projected 2030 and 2040 lime rock demand was established at 189,971,387 cyd for 2030 and 338,136,720 cyd for 2040. Finally, 2040 Lee County population projection was 1,055,000 (45.5% of regional total). Collier County, at 20.8%, and Sarasota County, at 20.6%, were the two following largest regional totals (see Fig. 7).

For lime rock supply estimates the Waldrop Study updated the active and permitted Lee Co. DR/GR mine list. Waldrop eliminated potential mines that were not successful in permitting, were in litigation, were closed and/or were converted. The updated list included Florida Rock Mine #2 (see Fig. 2). The Waldrop Report factored in all limestone materials (base rock, fill material, fine and coarse aggregates) produced for commercial or FDOT-grade. It did not provide for a qualitative lime rock assessments and the report did not include fill dirt burrow pits. The Waldrop Report inventoried 10 existing mines and 3 closed mines (Table 11-1 Inventory of Existing Mines and Table 11-2 Inventory of Closed Mines; 09/2016, Waldrop Engineering). When estimating SE Lee County lime rock supply, Waldrop relied on 2015 air photo imagery to calculate total mine area and the remaining mine area available for future excavation. No information was provided as to the percentage lake excavation completion for resource estimates. As with the Rawl and D.K. studies, it appears that Waldrop failed to use and provide for review detailed, mine specific geotechnical reports, monitoring reports and other direct source cited materials. Waldrop used average lime rock thickness based upon soil borings and other data available through Lee County and FDEP (see Fig. 4). The use of regional averages served to factor out overburden and fill. Lime rock estimates were not based on maximum permitted excavation depth, used a 1.35 tons per cubic yard lime rock density coefficient, and factors in a 20% volume loss from operational and transportation considerations. The Waldrop Report identified 10 Lee Co. DR/GR lime rock mines with an estimated post excavation future yield of 253,963,320 cyd., and 4 Collier Co. mines (data not available for the 5th mine) with an estimated pre- excavation future yield of 54,968,142 cyd. and post-excitation 43,974,514. cyd. (see Fig. 3). The total Lee and Collier Co. post-excitation estimate was 297,937,843 cyd.

TABLE III-1. LEE COUNTY LIMEROCK SUPPLY								
Mine Name	Approved Mine Acres ¹	CY of Excavation Authorized ¹	Avg. Limerock Thickness ^{2,3}	EST. AC of Limerock Excavated To Date (2015) ⁴	EST. CY of Limerock Excavated To Date (2015) ⁴	EST. AC of Remaining Limerock Excavation ⁴	EST. CY of Limerock Remaining (Pre-Excavation)	EST. CY of Limerock Remaining (Post-Excavation) ⁵
Rinker Materials 3A & 3B	503	36,517,800	17 FT	385	10,559,266	118	3,236,346	2,589,077
Green Meadows	1,075	107,651,279	25 FT	690	27,830,000	385	15,528,333	12,422,666
Green Meadows Expansion	1,132	125,175,306	25 FT	320	12,906,666	812	32,750,666	26,200,533
Green Meadows Florida Rock Mine #2	2,471	168,819,200	36 FT	0	0	2,471	168,819,200 ⁵	135,055,360
West Lakes	1,511	244,725,888	30 FT	632	37,000,000	879	42,543,600	34,034,880
Westwind Corkscrew	287	24,926,000	44 FT	227	16,113,973	60	4,259,200	3,407,360
BG/Bonita Grande Mine	557	20,000,000	30 FT	440	—————	117	20,000,000 ⁵	16,000,000
Plumosa Farms	30	1,306,800	10 FT	10	161,333	20	322,667	258,134
Bell Road Cemex North Quarry 3	262	16,907,733	40 FT	27	1,000,000	235	15,165,333	12,132,266
	203	14,737,800	—————	0	0	203	14,737,800	11,863,044
TOTAL	8,031	760,767,806		2,731	105,571,238	5,300	317,363,145	253,963,320
(1) Data provided by Lee County Development Services (2) Data obtained from 2008 Dover, Kohli & Partners, July 2008. "Prospects for Southeast Lee County Planning for the Density Reduction/Groundwater resource Area (DR/GR)". (3) Data obtained from average depth of soil boring log obtained from permit case files. (4) Calculation based upon 2015 aerial imagery. (5) Calculation based upon available permit data. (6) Post-excitation calculation assumes 20% loss of volume based upon blasting, operational/processing, and trucking losses.								

FIGURE 2 TABLE III-1 LEE CO. LIME ROCK SUPPLY, SE LEE COUNTY DR/GR MINING STUDY; WALDRUP ENGINEERING; 09/16

TABLE III-2. COLLIER COUNTY LIMEROCK SUPPLY PROJECTION			
Mine Name	Sec-Twn-Range	Estimated CY of Limerock Excavation Authorized	Estimated CY of Limerock Excavation Remaining
East Naples Mine	21 & 22-49-27	25,325,300 CY	25,325,300 CY
Golden Gate Quarry	21-49-27	7,800,000 CY	1,843,254 CY
SR 846 Earth Mine	35 & 36-47-27, 1 & 2-48-27	33,620,000 CY	23,722,588 CY
Willow Run	11, 12, 13 & 14-50-26	8,900,000 CY	4,077,000 CY
Sunniland	13, 23- 29, 33 & 35-48-30	Data Not Available	Data Not Available
TOTAL		75,645,300 CY	54,968,142 CY

FIGURE 3 TABLE_ III-2 COLLIER CO. LIME ROCK SUPPLY, SE LEE COUNTY DR/GR MINING STUDY; WALDROP ENGINEERING; 09/16

04/18 Stuart _ An Evaluation and Appraisal of Dover Kohl & Waldrop Mine Depths
 Dover Kohl Table B-2 and Waldrop Table III-1

Mine Name	Dover Kohl Est. Ave. Limerock Thickness (ft)	Waldrop: Est. Ave. Limerock Thickness (ft)	Lee Co. Approved Mine Depth
Rinker Materials 3A & 3B CEMEX Alico Quarry	17	17	45
Green Meadows/Harper Bros. FL Rock	23	25	62
Green Meadows Expansion	25	25	68
Green Meadows FL Rock Mine #2		36	60
University Lakes & West Lakes	30	30	90 to 108
Westwind (E. Corkscrew Mine)		44	50
Bonita Grande Mine	30	30	90
Plumosa Farms		10	30
Bell Road		40	40
Cemex North Quarry 3	30		45

FIGURE 4 TABLE_DOVER KOHL AND WALDROP LIME ROCK DEPTH COMPARISON

The Waldrop Report findings were, for the 2030 Planning Horizon, there will be 63,991,933 cyd excess regional supply (see Fig. 5). For the 2040 Planning Horizon, and not using Collier Co. resources, there will be a regional deficit of lime rock resources by 2035; factoring in Collier Co. resources, there will be a deficit by 2038 (see Fig. 6). Waldrop estimates a total lime rock regional resource deficit of 84MM cyd.

Waldrop Engineering SE Lee Co. DR/GR Mining Study 09/2016
 Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ No Collier Co. Supply

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Waldrop _Lee Co. w./No Collier Co Supply
2015	1,654,604	14,891,436	11,030,693		253,963,320
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	195,589,934
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	132,105,934
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	63,991,934
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	6,510,600
2035	2,214,600	19,931,400	14,764,000	262,216,720	-8,253,400

FIGURE 5 TABLE_WALDROP REGIONAL LIME ROCK DEMAND PROJECTIONS _ NO COLLIER CO.; SOURCE: TABLE III-4 WALDROP REPORT

Waldrop Engineering SE Lee Co. DR/GR Mining Study 09/2016
 Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ With 4 Mine Collier Co. Limerock Mines

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Waldrop W./ 4 Collier Co Limerock Mines
2015	1,654,604	14,891,436	11,030,693		297,937,834
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	239,564,447
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	176,080,447
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	107,966,447
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	35,721,114
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	5,773,114
2038	2,277,600	20,498,400	15,184,000	307,348,720	-9,410,886

FIGURE 6 TABLE_WALDROP REGIONAL LIME ROCK DEMAND PROJECTIONS _ WITH COLLIER CO.; SOURCE: TABLE III-4 WALDROP REPORT

Findings _ The Rawl, Dover Kohl and Waldrop Mine Studies

1. It appears that all three reports used regional lime rock depth averages for supply calculations. Both Dover Kohl and Waldrop stated that they reviewed soil borings, did not provide for review mine specific soil borings, geotechnical data and monitoring reports. Reflecting a high degree of rock thickness depth similarity, it appears that Waldrop primarily relied on D.K. for critical lime rock thickness information.

2. Both Dover Kohl and Waldrop identify Lee County as the primary regional lime rock source for SW Florida (page 15, para. 1; The Waldrop Report, 09/16). D.K. does not provide any non-Lee Co. regional mine supply data. Waldrop provides Collier County mine data, but it is incomplete by overlooking 3 lime rock mines and failing to provide data for the Sunniland Mine.
3. The 3 studies assume that Charlotte County does not significantly contribute to regional lime rock supply; no Charlotte County resource data is provided. This is a false assumption in that Charlotte County supplies lime rock for Lee and Sarasota County, having 31.5MM cyd. of permitted lime rock in 2015.
4. Dover Kohl identifies regional aggregate port terminals as major sources for lime rock, but does not provide any data (see Fig. B-1 Major Regional Sources For Lime Rock, Port Manatee; pg B.4. Prospects For SE Lee County). Data does need to be provided for Port Manatee due to it's importance as a Sarasota County lime rock supplier. Because of close proximity, Port Manatee is more likely to provide lime rock to Sarasota County when compared to Lee County. By not factoring in Port Manatee supply for Sarasota, the regions third most populous county (see Fig. 7), the Waldrop supply estimates are conservative. Finally, cited from the Manatee County Clerk of the Courts 2017 Financial Records, from a total 5.66MM tons imported and exported, Port Manatee imported 6,464,288 cyds of aggregate in 2017 and a 64.6MM cyd. estimated 10 year total (see Fig. 8). Reflecting the difficulty in allocating specific resource from the port to southwest Florida County's, Port Manatee was not included in this report's final lime rock resource supply and demand evaluation.
5. All 3 prior reports failed to adequately use county and state monitoring reports for supply estimates. Waldrop utilized air photo interpretation by measuring the remaining area available for mine excavation to determine future available supply estimates. Air photo interpretation does not provide accurate information as to percentage excavation depth; i.e., if the pit is fully or partially excavated. The Waldrop Report assumes that all visually identified mine pits have been 100% excavated, which is a very conservative and potentially not-to-accurate approach.
6. When logically including Collier County, the Waldrop Report predicted a lime rock resource deficit by 2038 (see Fig. 6).

Waldrop Engineering SE Lee Co. DR/GR Mining Study 09/2016
Table III-3 BEBR Medium Regional Pop. Projections

County	Est. 2015 BEBR Pop.	BEBR Medium Population Projections					Percentage Regional
		2020	2025	2030	2035	2040	
Charlotte	167,141	178,200	187,900	195,900	202,700	209,600	9.0%
Collier	343,802	378,700	409,900	436,800	460,900	482,700	20.8%
DeSoto	34,777	35,600	36,300	36,900	37,400	37,800	1.6%
Glades	12,853	13,300	13,700	14,100	14,400	14,600	0.6%
Hendry	38,096	39,100	39,900	40,600	41,000	41,600	1.8%
Lee	665,845	754,800	839,500	918,300	991,200	1,055,000	45.5%
Sarasota	392,090	415,900	436,600	453,900	467,000	478,300	20.6%
Subtotal	1,654,604	1,815,600	1,963,800	2,096,500	2,214,600	2,319,600	

FIGURE 7 TABLE_WALDROP REGIONAL POPULATION PROJECTIONS; SOURCE: TABLE III-3 WALDROP REPORT

Lee County Lime Rock Supply and Demand Evaluation

Introduction

The Rawl, Dover Kohl and Waldrop studies provide useful information but the reports are to a degree flawed because of:

1. In order to accurately address the role of Lee County as a regional lime rock supplier, the reports are required to evaluate other regional lime rock sources so as to be economically logical and to prevent unwarranted DR/GR lime rock mining consistent with Goal 33. Yet the 3 reports do not accurately and comprehensively evaluate Collier, Charlotte and other regional sources of lime rock. Hence the 3 report's provide estimates are internally inconsistent; i.e., they provide regional demand estimates but they do not provide regional supply estimates. The Dover Kohl and Waldrop recommendations are not based on complete and accurate data.
2. It appears that the previous reports rely upon regional lime rock depth averages when calculating future supply. The three reports do not directly cite and provide for review mine specific monitoring reports and geotechnical information as required by Lee Plan Policy 33.1.4 (*"Future amendments will reflect any additional data that becomes available through routine monitoring reports and bathymetric surveys or other credible sources."*).
3. All three reports fail to fully take into account other regional mines and marketplace proximity when providing land use estimates for future DR/GR mines. As Dover Kohl notes, *"Hauling costs make up such a large proportion of the cost to purchasers of fill dirt and rock products that local sources are a great economic advantage where products must be hauled by truck."* (para 2 page b.3; [Prospects For SE Lee County](#)). For land use planning it is critical to take into account other regional lime rock sources. For example, it is more probable that Port Manatee will be the primary lime rock source for Sarasota County because of lower transportation costs. It is similarly logical for Collier County mines to be the primary supplier of lime rock for Collier County projects. Any DR/GR mine supply and demand evaluation that fails to take into account other major regional supply sources will lead to flawed recommendations inconsistent with Goal 33.

The DR/GR Lime Rock Resource Analysis Methodology

To maintain consistency with the recent 2016 Waldrop Report, this report evaluates 2015 lime rock resources based on the same methodology and assumptions as the Waldrop Report:

- a. The Stuart Report demand assessment uses Waldrop's BEBR medium range regional population projections to 2040 for the seven identified southwest Florida County's. For projections beyond 2040, the Stuart Report used the same annualized growth percentage as BEBR.
- b. For lime rock demand population growth, the Stuart Report utilized Waldrop's cumulative approach, and not Dover Kohl's three-quarters growth method plus one-quarter cumulative population growth method.

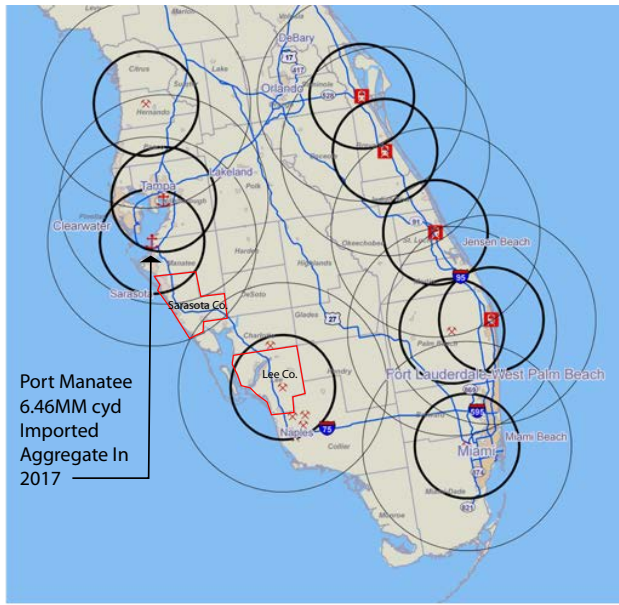


Figure B-1: Major sources for limerock products in South Florida, as identified in public records of Lee and Collier Counties; web sites of individual suppliers; FDOT databases of approved aggregate sources; and Strategic Aggregates Study (FDOT, March 2007)

Legend

- X Limerock Mines
- + Aggregate Terminals at Ports
- Rail Terminals
- 25 Mile Radius
- 50 Mile Radius

SOURCE: Prospects For SE Lee County Fig. B-1; Dover Kohl
 SOURCE: Manatee County Clerk of the Courts
 www.manateeclerk.com/portals/0/docs/finance/reports/portauthority/manatee%20

FIGURE 8 MAP_DOVER KOHL MAJOR LIME ROCK SOURCES MAP

- c. Identical to the Waldrop Report, this study’s final lime rock mine inventory excludes mines currently being permitted, under litigation and are in the process of closing down and converted. Only fully permitted lime rock mines were analyzed for supply; fill dirt mines were excluded. Both Waldrop and Stuart relied upon Lee County’s definition of “limestone” and did not provide for qualitative differences.
- d. The Stuart Report did not utilize the maximum permitted excavation depth.
- e. The Stuart Report used a 1.35 tons per cubic yard coefficient of measurement.
- f. The Stuart Report factored in a post-excitation 20% loss value.
- g. The Stuart Report used a 9 tons per capita projected regional lime rock demand.

The Stuart Report’s data sources are different from the 09/2016 Waldrop Mining Study in the following manner:

- a. Consistent with Lee Plan Policy 33.1.4, the Stuart Report rests upon mine specific source data, including Lee County Mine Monitoring Reports and mine specific geotechnical data and soils reports. Where ever possible mine specific soil column profiles identified overburden thickness and lime rock thickness.
- b. The Stuart Report relied upon Florida Department of Environmental Protection maps and data for it’s SW Florida mine inventory assessment (see <https://ca.dep.state.fl.us/mapdirect/?focus=mannon>). The Stuart Report evaluated 37 SW Florida mines with 26 active mines, 3 times the number of mines when compared to the 2016 study (see Fig. 9).

- c. The 2018 Stuart Report logically examines both regional lime rock demand to regional supply. This approach takes into account resource supply, demand, proximity and economics, and provides for a more economically rational and accurate estimates.

FDEP Mine Permits and Regional Lime Rock Mine Inventory

Figure 10, the FDEP mine map, identifies regionally and locally important SW Florida lime rock mines. From this map, the Stuart Report evaluated 37 SW Florida mines, and identified 25 active lime rock mines for further study (Figure 9). The 09/16 Waldrop Study inventoried 18 Lee (13 mines) and Collier County (5 mines) lime rock mines, identified 3 closed or converted mines, and did not provide data for the Sunniland Mine. In providing estimates for available lime rock resources, the author primarily relied on local regulatory monitoring reports (Appendix B) and FDEP permits (Appendix C, D & E). To identify and factor out the upper layers of overburden and fill the author utilized mine specific soil borings and associated geotechnical information (Appendix C, D & E). The soil profiles allowed for specific overburden coefficients to be identified by overburden depth for 6 mines. The author evaluated multiple mine soil borings, then calculated the average lime rock column depth for that mine. The evaluation’s overburden coefficient was obtained from the mines average lime rock column depth and correlated overburden depth. The overburden coefficient was used to exclude overburden and fill from future available lime rock projections. The report found that, typically, 30% of the estimated total excavated materials can be classified as overburden and fill. In the Westwind / East Corkscrew Mine, where the available lime rock resource exceeded approved mine depth, then estimates were restricted to permitted depth and not actual resource depth. The report’s Appendix’s C, D and E provide cited lime rock mine data on a county mine basis.

05/2018 Stuart Study 37 SW FL Lime Rock Mine Inventory Re-evaluation
Source: FDEP

	TOTAL	LIME ROCK	RECLAMATION	DIRT/SHELL
Sarasota Co.	1			1
DeSoto Co.	2		2	1
Hendry Co.	1	1		
Glades Co.	1	1		
Charlotte Co.	9	5	2	
Lee Co.	14	10	4	1
Collier Co.	9	9		
SUBTOTALS	37	26	8	3

FIGURE 9 TABLE_2018 REGIONAL LIME ROCK MINE INVENTORY

Lee County Lime Rock Supply Update Summary _ Year 2042 Lime Rock Surplus (Appendix A & B)

The Figure 10 SW Florida Regional and Lee Co. Mine Map, identifies all key Lee County lime rock mines. Figures 11 identifies and compares the 2016 Waldrop Engineering mine supply findings to the 2018 Stuart and Association findings. Both studies use the year 2015 for the mine resource baseline. Relying upon Lee County monitoring reports, FDEP permits and mine specific lime rock thickness data, in 2015 Lee County had an estimated lime rock reserve of 372,956,998 cyds. This estimate is 146% greater than the Waldrop Report’s 253,963,320 cyd estimate. Using the identified 372.95MM cyds. of Lee County lime rock reserves, and excluding all other county sources, Lee County can provide 100% of the regions required lime rock needs through the year 2042 (see Fig. 12). When taking into account a 20% demand reduction based on the availability of other regional lime rock sources (DEO-12-029;Case # 10-2988GM; CEMEX, Troyer Bros vs. Lee County), Lee County alone can provide 100% of the regions required lime rock needs generally through the year 2046.

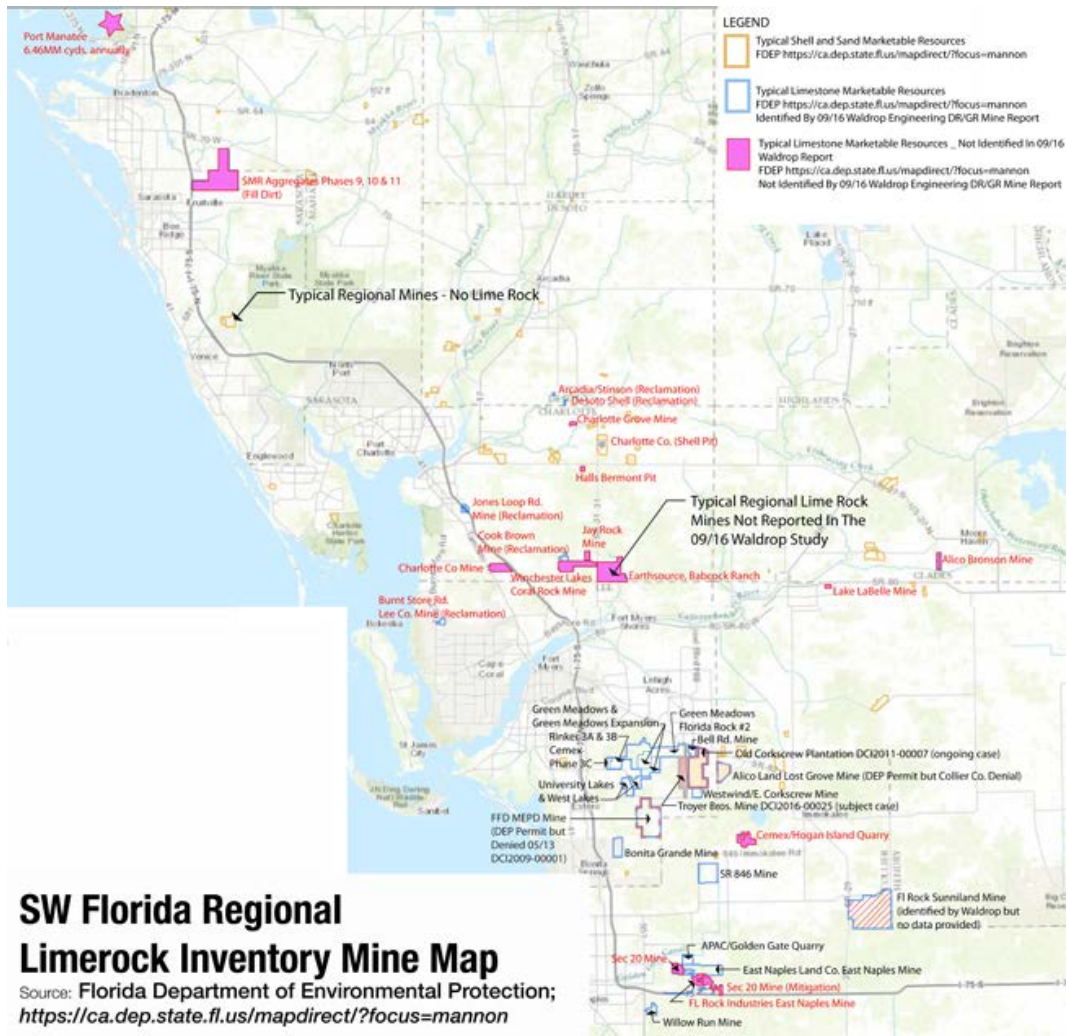


FIGURE 10 MAP_SW FLORIDA REGIONAL & LEE CO. LIME ROCK INVENTORY MINE MAPS

05/2018 Stuart _ An Evaluation and Appraisal DR/GR Lime Rock Resources _ Comparative Data Table
 Stuart & FDEP Inventory

Mine Name	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extraction To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Rinker Materials 3A & 3B (1) CEMEX Alico Quarry SEZ2000-00034 LDO2007-00214	2,589,077	17	45	45	15,000,000	8,800,000	0.7	6,160,000	4,928,000
Green Meadows/Harper Bros. FL Ro 99-05-243.06S LDO 97-05-073.08 LDO2006-00055 & DCI2005-00105	12,422,666	25	62	45.8	62,115,108	45,536,171	0.74	33,696,767	26,957,413
Green Meadows Expansion (3) DCI2000-00044 LDO2001-00038 LDO2006-00055 & Z-07-054	26,200,533	25	68	42.9	40,050,613	85,124,693	0.73	62,141,026	49,712,821
Green Meadows FL Rock Mine #2 (4) DOS2014-00062 DCI2010-00028 & Z-12-003	135,055,360	36	60	37.9			0.69	168,819,200	135,055,360
University Lakes & West Lakes (5) DCI2004-00019 LDO2006-00071 Z-05-088 DCI2000-00079	34,034,880	30	108 90	90.0	37,000,000	207,000,000	0.72	149,040,000	119,232,000
Westwind (E. Corkscrew Mine) (6) DCI2002-00066 DCI2000-00057 Z-01-016 DOS2012-00010	3,407,360	44	50	83.6			0.82	5,749,920	4,599,936
Bonita Grande Mine (7) DCI2001-00065 LDO2000-00058 & IPD Z-02-047	16,000,000	30	90	29				20,000,000	16,000,000
Plumosa Farms LDO2007-00063 DCI2000-00056 IPD Res Z-01-004 33-47-26-00-00001.002A	258,134	10	30					322,677	258,134
Bell Road (8) LDO2003-00403 IPD Z-04-047 w./Monitoring Report	12,132,266	40	40		1,000,000	15,000,000		12,000,000	12,000,000
Cemex North Quarry 3 (9) DOS2015-00078 Sec. 6 Expansion Phase 3C DCI2010-00012 & MEPD Z-13-026	11,863,044		45	45				5,266,667	4,213,334
LEE CO SUBTOTAL	253,963,320							463,196,256	372,956,998

FIGURE 11 TABLE_LEE COUNTY LIME ROCK RESERVES UPDATE BASED ON MONITORING REPORTS & MINE SPECIFIC SOILS DATA (APPENDIX A & C)

05/18 Stuart Updated Lee Co. Findings _ Lee County Regional Supply Only
 Updated 2030 & 2040 Regional Pop. Projections and Limerock Demand

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Revised 05/18 Lee Co. Limerock
2015	1,654,604	14,891,436	11,030,693		372,956,998
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	314,583,611
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	251,099,611
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	182,985,611
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	110,740,278
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	34,820,278
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	3,263,168
2043	2,414,818	21,733,360	16,098,785	385,792,615	-12,835,617

FIGURE 12 TABLE_SW FL POPULATION GROWTH _ LEE CO. LIME ROCK SUPPLY & REGIONAL DEMAND UPDATE
 (APPENDIX A)

An Evaluation and Update Of Lee County Lime Rock Mines (Appendix C)

Based on the Lee Co. monitoring reports, FDEP permits, mine specific soil profiles, Lee Co. monitoring reports and the Waldrop Report, this update identifies 10 Lee County lime rock mines for existing and future resource needs. Detailed information concerning each mine is found in Appendix C. A summary of data pertaining to the 10 Lee Co. mines are as follows:

RINKLER MATERIALS 3A & 3B (CEMEX ALICO) ⁽¹⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	LEE CO. MONITORING REPORT REMAINING LIME ROCK
APPENDIX C.1	17-ft.	2,589,077 cyd.	45-ft.	8,800,000

STUART OVERBURDEN COEFFICIENT 0.7

STUART AND ASSOCIATES Planning & Design Services An Evaluation of DR/GR Lime Rock Mine Resources

RINKLER MATERIALS 3A & 3B (CEMEX ALICO) ⁽¹⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	LEE CO. MONITORING REPORT REMAINING LIME ROCK
STUART PRE-EXCAVATION REMAINING				6,160,000 cyd.
STUART POST-EXCAVATION EST.				4,928,999 cyd.

Note 1: Rinkler 3A & 3B estimates based on 08/08/16 CEMEX Monitoring Report (LDO 2007-00214); 30% overburden & 45-ft. average lime rock thickness derived from R. A. Kirkner and Associates Soil Profile (1 sample) (SEZ2000-00034).

GREEN MEADOWS/ HARPER BROS. FL ROCK #2 ⁽²⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	LEE CO. MONITORING REPORT REMAINING LIME ROCK
APPENDIX C.2	25-ft.	12,422,666 cyd.	45.8-ft.	45,536,171 cyd.
STUART OVERBURDEN COEFFICIENT	0.74			
STUART PRE-EXCAVATION REMAINING				33,696,767 cyd.
STUART POST-EXCAVATION EST.				26,957,413 cyd.

Note 2: Green Meadows/Harper Bros. estimates based on 08/15/16 Vulcan Monitoring Report (LDO 97-05-073.08); 26% average overburden & 45.8-ft. average lime rock thickness derived from Harper Bros. 13 soil profiles (99-05-243.06S).

GREEN MEADOWS EXPANSION ⁽³⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	LEE CO. MONITORING REPORT REMAINING LIME ROCK
APPENDIX C.3	25-ft.	26,200,533 cyd.	42.9	85,124,693
STUART OVERBURDEN COEFFICIENT	0.73			
STUART PRE-EXCAVATION REMAINING				62,141,026 cyd.
STUART POST-EXCAVATION EST.				49,7912,821 cyd.

Note 3: Green Meadows Expansion estimates based on 08/15/16 Vulcan Materials Monitoring Report and J.D. Walker soil profiles (10); 27% average overburden & 42.9-ft. average lime rock thickness (DCI2000-00044).

GREEN MEADOWS FL ROCK MINE #2 (4)	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
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APPENDIX C.4	36-ft.	135,055,360 cyd.	37.9-ft.	
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STUART OVERBURDEN COEFFICIENT	0.74			
STUART PRE-EXCAVATION REMAINING				168,819,200 cyd.
STUART POST-EXCAVATION EST.				135,055,360 cyd.

Note 4: Green Meadows FL Rock Mine #2 estimates based on 1984 - 97 Vulcan Materials soil profiles (20); 31% average overburden & 37.9-ft. average lime rock thickness (DCI2010-00028 & DOS2014-00062).

UNIVERSITY LAKES & WEST LAKES (5)	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	LEE CO. MONITORING REPORT REMAINING LIME ROCK
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APPENDIX C.5	30-ft.	34,034,880 cyd.	60.7-ft.	207,000,000 cyd.
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STUART OVERBURDEN COEFFICIENT	0.72			
STUART PRE-EXCAVATION REMAINING				149,040,000 cyd.
STUART POST-EXCAVATION EST.				119,232,000 cyd.

Note 5: University Lakes & West Lakes estimates based on 08/02/16 Morris Depew Monitoring Report (LDO2016-00071); soil profiles (20) based on CDM Missimer 06/04/18 with 28% average overburden & 60.7-ft. average lime rock thickness.

WESTWIND / EAST CORKSCREW MINE (6)	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
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APPENDIX C.6	44-ft.	3,407,360 cyd.	83.6-ft.	NA
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STUART OVERBURDEN COEFFICIENT	0.82			
STUART PRE-EXCAVATION REMAINING				4,259,200 cyd.
STUART POST-EXCAVATION EST.				3,771,948 cyd. (6)

Note 6: Westwind / East Corkscrew Mine _ Waldrop estimated based on 60 available acres @ 44-ft. rock thickness; actual available acreage at 81-acres and a net yield of 5.7MM cyd.. 10/2002 CDM Missimer soil borings (14) with 18.6% average overburden & 83.6-ft. average lime rock thickness. Though total available lime rock resources @ 17.3MM

cyd., because of the 50-ft. IPD mine depth limitation, the maximum potential 17.3MM yield is not factored into update.

PLUMOSA FARMS	WALDROP-LIME ROCK THICKNESS	WALDROP POST-EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX C.7	10ft.	258,134 cyd.	NA	NA
STUART OVERBURDEN COEFFICIENT	NA			
STUART PRE-EXCAVATION REMAINING	322,677 cyd.			
STUART POST-EXCAVATION EST.	258,134 cyd.			

BONITA GRANDE MINE ⁽⁷⁾	WALDROP-LIME ROCK THICKNESS	WALDROP POST-EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX C.8	30-ft.	16,000,000	29-ft.	NA
STUART OVERBURDEN COEFFICIENT	0.8			
STUART PRE-EXCAVATION REMAINING	20,000,000 cyd.			
STUART POST-EXCAVATION EST.	16,000,000 cyd.			

Note 7: Bonita Grande Mine _ Geotechnical data provided by the 06/14/2000 Allied Engineering and Testing report (10 soil borings) with 29-ft. average lime rock thickness.

BELL ROAD ⁽⁸⁾	WALDROP-LIME ROCK THICKNESS	WALDROP POST-EXCAVATION	CORRECT LIME ROCK THICKNESS	LEE CO. MONITORING REPORT REMAINING LIME ROCK
APPENDIX C.9	NA	12,132,266 cyd.	NA	15,000,000 cyd.
STUART OVERBURDEN COEFFICIENT	0.8			
STUART PRE-EXCAVATION REMAINING	15,000,000 cyd.			
STUART POST-EXCAVATION EST.	12,000,000 cyd.			

Note 8: Bell Road Mine _ 07/22/16 Inge and Associates Monitoring Report (LDO2003-00403).

CEMEX NORTH QUARRY 3 (9)	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX C.10	NA	11,863,044 cyd.	NA	15,000,000 cyd.

STUART OVERBURDEN COEFFICIENT

STUART PRE-EXCAVATION REMAINING

5,266,667 cyd.

STUART POST-EXCAVATION EST.

4,213,334 cyd.

Note 9: CEMEX North Quarry 3 _ DOS2015-00078 Sec. 6, Phase 3C identifies 7,110,000 finished tons, equal to 5,266,667 cyd.; The 06 Waldrop Report estimated 11,863,044, which overestimates the resource by 6,596,377 cyd.

Collier Co. Lime Rock Supply and Demand Evaluation

A Summary Overview Of Collier County Lime Rock Supply _ Year 2049 Lime Rock Surplus (Appendix D)

The Figure 13 SW Florida and Collier Co. Regional Lime Rock Inventory Map identifies 8 regionally important Collier Co. lime rock mines; the 2016 Waldrop report evaluated 5 mines and did not provide supply estimates for Sunniland Mine (see Figure 13 the rose colored mines). This report did not include the Lost Grove Mine (112.22MM cyds) because it lacked Collier County permits. Figures 14 identifies and compares the 2016 Waldrop Report mine supply findings to the 2018 Stuart and Association findings. The year 2015 is the mine resource baseline for both studies. Relying upon Collier County permits, FDEP permits and the 2016 Waldrop Engineering Report, in 2015 Collier County had an estimated lime rock reserve of 122,156,076 cyds. This estimate is 277% greater than the Waldrop Report's 43,974,514 cyd. estimate, primarily because the 2016 report omitted 3 permitted lime rock mines (CEMEX/Hogan Island Mine, Belle Meade Partners/Sec. 20 Mine & Florida Rock Industries East Naples Mine) and did not account for Sunniland Mine resources. Adding the 8 Collier Co. lime rock reserves of 122.15MM cyds. with the 372.95MM cyds. of Lee County lime rock reserves, one obtains 495,113,074 cyds of available lime rock resource. Lee County and Collier County can provide 100% of the regions required lime rock needs through the year 2049 (see Fig. 15).

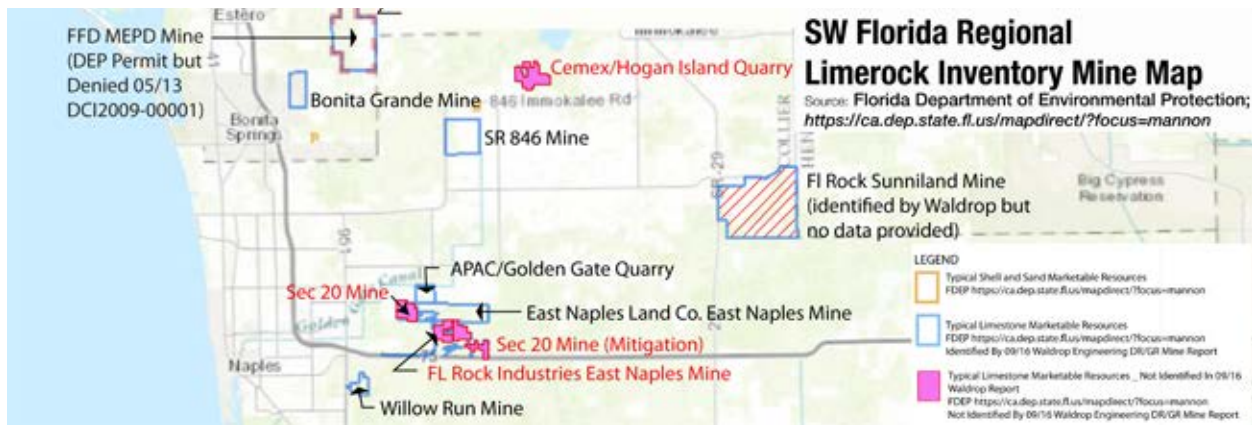


FIGURE 13 MAP_SW FLORIDA REGIONAL COLLIER CO. LIME ROCK INVENTORY MINE MAP

09/2016 Waldrop Engineering SE Lee Co. DR/GR Mining Study
Table III-2 Collier Co. Limerock Supply Projection

Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Cyd. Limerock Authorized Excavation	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction
East Naples Mine (Golden Gate #59.814-2)	12/5/05	209749	716.3	257.3	21 & 22-49-27	25,325,300	25,325,300	20,260,240
Golden Gate Quarry Collier Permit#59.814)		200965-002			21-49-27	7,800,000	1,843,254	1,474,603
SR 846 Earth Mine (Collier Permit#59.703-3)	4/29/09	0271820-001	2576	1106.3	35 & 36-47-27 1 & 2-48-27	33,620,000	23,722,588	18,978,070
Willow Run (Collier Permit#59.206-1)		11-0134951-004			11, 12, 13 & 14-50-26	8,900,000	4,077,000	3,261,600
Sunniland (Collier Permit#59.251)					13, 23-29, 33 & 35-48-30			
WALDROP COLLIER SUBTOTAL						75,645,300	54,968,142	43,974,514

Stuart 05/2018 Additional Collier Mines
FDEP ERP Files for Lime Rock Resources

Non-reported 2015 Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Mine Depth	% Remaining	Cyd. Excavation Authorized	Overburden Adjustment Coef. (Note 6)	Corrected Remaining Pre-extraction Lime Rock	Corrected Remaining Post-extraction Lime Rock (Note 7)
Alico Land Develop. Lost Grove Mine (1)	08/032011	299533-002	1,382	740	44-ft. to 144-ft.	100%	112,223,467	0.7		
Cemex/Hogan Island Quarry (2)	2/1/10	0286236-001	2757	650.45		40	41,975,706	0.7	29,382,994	23,506,395
Belle Meade Partners Sec. 20 Mine (3)	9/7/11	0299365-001	670.9	510		100%	59,793,263	0.7	41,855,284	33,484,227
Florida Rock Industries East Naples Mine (4)	10/1/12	258805-001	345	257		72	29,853,120	0.7	20,897,184	16,717,747
Sunniland Mine (5)		ERP MMR 50741	12,285	640		40	7,214,827	0.77	5,555,417	4,473,193
ADDITIONAL COLLIER MINE SUBTOTAL									97,690,879	78,181,562
CORRECT COLLIER CO SUBTOTAL									122,156,076 C.yds.	

FIGURE 14 TABLE_COLLIER COUNTY UPDATE LIME ROCK RESERVES (APPENDIX A & D)

05/2018 Stuart _ Non-reported Collier Co. Mines, Sunniland, Waldrop 09/16 4 Collier & New Lee Co. Mine Findings
Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ With Revised Collier Co. Limerock Findings

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Revised 09/17 Collier Co & Lee Co. Limerock
2015	1,654,604	14,891,436	11,030,693		495,113,074
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	436,739,687
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	373,255,687
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	305,141,687
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	232,896,354
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	156,976,354
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	
2043	2,414,818	21,733,360	16,098,785	385,792,615	
2044	2,447,418	22,026,760	16,316,119	402,108,734	
2045	2,480,458	22,324,121	16,536,386	418,645,120	76,467,954
2046	2,513,944	22,625,497	16,759,627	435,404,747	
2047	2,547,882	22,930,941	16,985,882	452,390,630	
2048	2,582,279	23,240,509	17,215,192	469,605,822	
2049	2,617,140	23,554,256	17,447,597	487,053,419	8,059,655
2050	2,652,471	23,872,238	17,683,139	504,736,558	-9,623,484

FIGURE 15 TABLE_SW FL POPULATION GROWTH _ LEE & COLLIER CO. LIME ROCK SUPPLY & REGIONAL DEMAND UPDATE (APPENDIX A)

An Evaluation and Update Of Collier County Lime Rock Mines

Based on the FDEP permits, Collier Co. reports and the 2016 Waldrop Report, this update identifies 8 Collier County lime rock mines. Detailed information concerning each mine is found in Appendix D. A summary of data pertaining to these 8 mines are as follows:

EAST NAPLES MINE ⁽¹⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX D.1	--	20,260,240 cyd	--	NA
<hr/>				
STUART OVERBURDEN COEFFICIENT				
STUART PRE-EXCAVATION REMAINING				25,325,300 cyd.
STUART POST-EXCAVATION EST.				20,260,240 cyd.

Note 1: East Naples Mine (ERP #209749; Collier Permit #59.814-2); no additional data and update from 2016.

GOLDEN GATE QUARRY ⁽²⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX D.2	--	1,474,603 cyd	--	NA
<hr/>				
STUART OVERBURDEN COEFFICIENT				
STUART PRE-EXCAVATION REMAINING				1,843,254 cyd.
STUART POST-EXCAVATION EST.				1,474,604 cyd.

Note 2: Golden Gate Quarry (ERP #200965-002; Collier Co. Permit # 59.814); no additional data & update from 2016.

SR 846 EARTH MINE ⁽³⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX D.3	--	18,978,070 cyd	--	NA
<hr/>				
STUART OVERBURDEN COEFFICIENT				
STUART PRE-EXCAVATION REMAINING				23,722,588 cyd.
STUART POST-EXCAVATION EST.				18,978,070 cyd.

Note 3: Golden Gate Quarry (ERP #0271820-001; Collier Co. Permit # 59.703-3); no additional data & update from 2016.

WILLOW RUN ⁽⁴⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK
APPENDIX D.4	--	3,261,600 cyd	--	NA

STUART OVERBURDEN COEFFICIENT

STUART PRE-EXCAVATION REMAINING 4,077,000 cyd.

STUART POST-EXCAVATION EST. 3,261,600 cyd.

Note 4: Willow Run (ERP #11-0134951-004; Collier Co. Permit # 59.206-1); no additional data & update from 2016.

SUNNILAND ⁽⁵⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK (FDEP)
APPENDIX D.5	--	--	40-ft.	NA

STUART OVERBURDEN COEFFICIENT 0.77

STUART PRE-EXCAVATION REMAINING 5,555,417 cyd.

STUART POST-EXCAVATION EST. 4,473,193 cyd.

Note 5: Sunniland Mine (FDEP ERP MMR_50741; Collier Co. Permit # 59.251); total project area @ 12,285 ac., mined area @ 640 ac.. 2015 remaining area @ 111 ac. +/- (est. 7,214,827 cyd. excavation authorized); 40-ft. depth based on permit excavation drawing and 0.77 overburden adjustment coefficient based on regional average and permit information.

CEMEX / HOGAN ISLAND (6)	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK (FDEP)
APPENDIX D.6	--	--	40-ft.	NA

STUART OVERBURDEN COEFFICIENT 0.7

STUART PRE-EXCAVATION REMAINING 29,382,994 cyd.

STUART POST-EXCAVATION EST. 23,506,395 cyd.

Note 6: CEMEX/Hogan Island(ERP 0286236-001); total project area @ 2,757 ac., mined area @ 650 ac.. 2015 remaining area @ 650- ac. (est. 41,975,706 cyd. excavation authorized); 40-ft. depth based on permit Activity Description, 0.7 overburden adjustment coefficient based on regional average.

BELL MEADE PARTNERS SEC. 20 MINE ⁽⁷⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK (FDEP)
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APPENDIX D.7	--	--	40-ft.	NA
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STUART OVERBURDEN COEFFICIENT	0.7			
STUART PRE-EXCAVATION REMAINING				41,855,284 cyd.
STUART POST-EXCAVATION EST.				33,484,227 cyd.

Note 7: Bell Meade Partners Section 20 Mine (ERP 0299365-001); total project area @ 670.9 ac., mined area @ 510 ac.. 2015 remaining area @ 510- ac. (est. 59,793,263 cyd. excavation authorized 0299365-001-005 page 24 of 44 & Sec. 20 Dredge & Fill Permit Robau and Associates Sheet 5 of 12); 0.7 overburden adjustment coefficient based on regional average.

FLORIDA ROCK INDUSTRIES EAST NAPLES MINE ⁽⁸⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK (FDEP)
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APPENDIX D.8	--	--	72-ft.	NA
---------------------	----	----	--------	----

STUART OVERBURDEN COEFFICIENT	0.7			
STUART PRE-EXCAVATION REMAINING				20,897,184 cyd.
STUART POST-EXCAVATION EST.				16,717,747 cyd.

Note 8: Florida Rock East Naples Mine (ERP 258805-001); total project area @ 345 ac., mined area @ 257 ac.. 2015 remaining area @ 257- ac. (est. 29,853,120 cyd. excavation authorized); authorized excavation and mine depth as per ERP Activity Description; 0.7 overburden adjustment coefficient based on regional average.

The Charlotte County Lime Rock Supply and Demand Evaluation

An Summary Overview Of Charlotte County Lime Rock Supply _ Year 2051 Lime Rock Surplus (Appendix E)

The Figure 16 SW Florida and Charlotte Co. Regional Lime Rock Inventory Map identifies 5 regionally important Charlotte Co. lime rock mines. Relying upon Charlotte County Monitoring Report (Appendix B) and FDEP permits, for 2015 Charlotte County had an estimated lime rock reserve of 31,500,079 cyd (see Fig. 17 and Appendix E). The Waldrop Report did not take into account Charlotte Co. supply, assuming that Charlotte County did not provide significant resources. Adding Charlotte County to Collier and Lee County resources, the combined 3 county reserves equal 526,613,153 cyd of lime rock. Lee County, Collier County and Charlotte County can provide 100% of the regions required lime rock needs through the year 2051 (see Fig. 18).

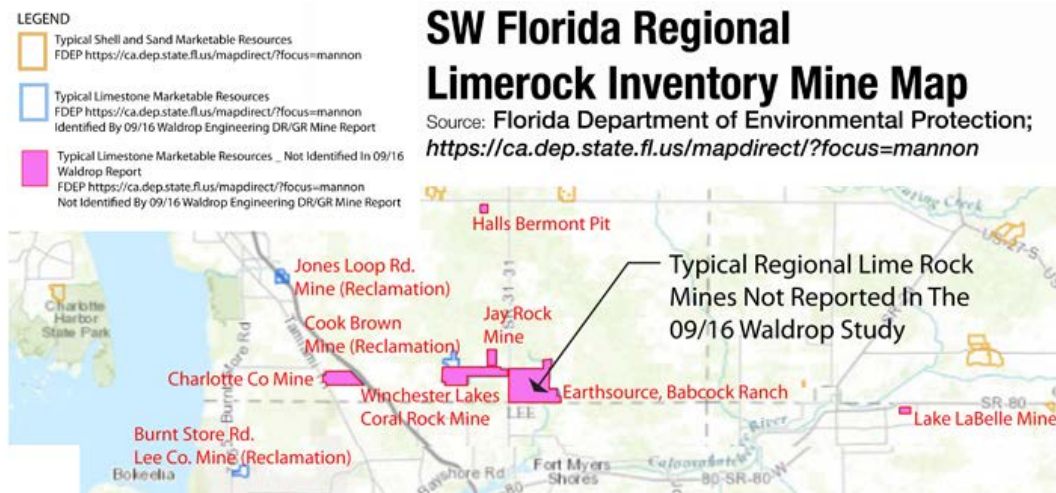


FIGURE 16 MAP_SW FLORIDA REGIONAL CHARLOTTE CO. LIME ROCK INVENTORY MINE MAP

Stuart 05/18
Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co. Dept. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coef. (6)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (7)
Earthsource Babcock Ranch (1)	07/0611	0184047-007	3471	126	28,000,000	27,004,562	0.7	18,903,193	15,122,555
Coral Rock Mine (2)	1/13/09	182147-002	1015	267	14,900,000	14,900,000	0.7	10,430,000	8,344,000
Jay Rock Mine (3)	11/21/06	1990046-006	320	194	12,600,000	10,904,637	0.7	7,633,246	6,106,597
Charlotte County Mine (4)	7/29/03		1031	421	8,200,000	1,625,942	0.7	1,138,159	910,528
Halls Belmont Pit (5)	3/28/07	44008676	8000	50	2,015,000	1,815,000	0.7	1,270,500	1,016,400
CHARLOTTE CO. SUBTOTAL									31,500,079

FIGURE 17 TABLE_CHARLOTTE COUNTY 2015 LIME ROCK RESERVES (APPENDIX A & E)

05/18 Stuart _ All Lee, Collier & Charlotte Co. Mines

Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ With Revised Lee Co. & Regional Limerock Findings

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Revised 09/17 Collier, Charlotte & Lee Co Limerock
2015	1,654,604	14,891,436	11,030,693		526,613,153
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	468,239,766
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	404,755,766
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	336,641,766
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	264,396,433
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	188,476,433
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	
2043	2,414,818	21,733,360	16,098,785	385,792,615	
2044	2,447,418	22,026,760	16,316,119	402,108,734	
2045	2,435,580	21,920,220	16,237,200	418,345,934	108,267,219
2046	2,468,460	22,216,143	16,456,402	434,802,336	
2047	2,501,785	22,516,061	16,678,564	451,480,900	
2048	2,535,559	22,820,028	16,903,724	468,384,624	
2049	2,615,429	23,538,859	17,436,192	485,820,816	
2050	2,650,737	23,856,633	17,671,580	503,492,396	
2051	2,686,522	24,178,698	17,910,146	521,402,542	5,210,611
2052	2,722,790	24,505,110	18,151,933	539,554,476	-12,941,323

FIGURE 18 TABLE_ FL POPULATION GROWTH _ LEE, COLLIER & CHARLOTTE CO. LIME ROCK SUPPLY & REGIONAL DEMAND (APPENDIX A)

An Evaluation and Update Of Charlotte County Lime Rock Mines

Based on Charlotte County monitoring reports and FDEP permits, this evaluation provides information concerning the 5 identified Charlotte County lime rock mines. Detailed information concerning each mine is found in Appendix E. A summary of data of these 5 mines are as follows:

EARTHSOURCE / BABCOCK ⁽¹⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	COUNTY MONITORING REPORT REMAINING LIME ROCK
APPENDIX E.1	--	--	NA	27,004,562

STUART OVERBURDEN COEFFICIENT	0.7
STUART PRE-EXCAVATION REMAINING	18,903,193
STUART POST-EXCAVATION EST.	15,122,555 cyd.

Note 1: Earthsource/Babcock total project area @ 3471 ac., mined area @ 126 ac.. 2015 remaining extraction @ 27,004,562 cyd. (28,000,000 cyd. excavation authorized); 2012 to 2015 excavation @ 750,000 cyd.; 0.7 overburden adjustment coefficient based on regional average.

CORAL ROCK MINE ⁽²⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	COUNTY MONITORING REPORT REMAINING LIME ROCK
APPENDIX E.2	--	--	NA	14,900,000
STUART OVERBURDEN COEFFICIENT	0.7			
STUART PRE-EXCAVATION REMAINING				10,430,000
STUART POST-EXCAVATION EST.				8,344,000 cyd.

Note 2: Coral Rock Mine total project area @ 1015 ac., mined area @ 267 ac.. 2015 remaining extraction @ 14,900,000 cyd. (14,900,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average.

JAY ROCK MINE ⁽³⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	COUNTY MONITORING REPORT REMAINING LIME ROCK
APPENDIX E.3	--	--	NA	10,904,636 cyd
STUART OVERBURDEN COEFFICIENT	0.7			
STUART PRE-EXCAVATION REMAINING				7,633,246 cyd.
STUART POST-EXCAVATION EST.				6,106,597 cyd.

Note 3: Jay Rock Mine total project area @ 320 ac., mined area @ 194 ac.. 2015 remaining extraction @ 10,904,637 cyd. (12,600,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average and 2012 to 2015 3 year excavation of 150,000 cyd. per year.

CHARLOTTE COUNTY MINE ⁽⁴⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	COUNTY MONITORING REPORT REMAINING LIME ROCK
APPENDIX E.4	--	--	NA	1,625,942 cyd
STUART OVERBURDEN COEFFICIENT	0.7			

CHARLOTTE COUNTY MINE ⁽⁴⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	COUNTY MONITORING REPORT REMAINING LIME ROCK
STUART PRE-EXCAVATION REMAINING				1,138,159 cyd.
STUART POST-EXCAVATION EST.				910,528 cyd.

Note 4: Charlotte County Mine total project area @ 1031 ac., mined area @ 421 ac.. 2015 remaining extraction @ 1,625,942 cyd. (8,200,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average and 2012 to 2015 3 year excavation of 812,970 cyd. per year.

HALLS BERMONT PIT ⁽⁵⁾	WALDROP- LIME ROCK THICKNESS	WALDROP POST- EXCAVATION	CORRECT LIME ROCK THICKNESS	COUNTY MONITORING REPORT REMAINING LIME ROCK
APPENDIX E.5	--	--	NA	1,815,000 cyd

STUART OVERBURDEN COEFFICIENT	0.7			
STUART PRE-EXCAVATION REMAINING				1,270,500 cyd.
STUART POST-EXCAVATION EST.				1,016,400 cyd.

Note 5: Halls Bermont Road Pit total project area @ 8000 ac., mined area @ 50 ac.. 2015 remaining extraction @ 1,815,000 cyd. (2,015,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average and 2012 to 2015 3 year excavation of 50,000 cyd. per year.

Glades, Hendry & Sarasota County Lime Rock Supply and Demand Evaluation

A Summary Overview Of Glades, Hendry and Sarasota County Lime Rock Supply _ Year 2051 Lime Rock Surplus

The Figure 19 SW Florida Regional Lime Rock Mine Inventory Map identifies 1 minor Glades County mine and 1 minor Hendry County mine; both mines provide a limited supply of local lime rock resource. Figure 19 identifies Sarasota County’s SMR Aggregates (phases 9, 10 & 11). From a review of FDEP permits, though SMR Aggregates previous phases did excavate lime rock, these mine areas have been restored and reclaimed. The current phases (9, 10 & 11) provide fill dirt and no lime rock. Port Manatee provides a source of lime rock resource for local Sarasota County demand. The Port’s 1,100 acres make it one of the largest of Florida’s 14 deepwater seaports. From a review of Manatee County’s 2017 Comprehensive Annual Financial Report, Port Manatee’s aggregate annual cargo tonnage was 5,660,000 (page 47; <https://www.manateeclerk.com/Portals/0/docs/Finance/Reports/PortAuthority/Manatee%20Port%20CAFR%20FY2017.pdf>). With 84.6% of annual cargo being imports, it is estimated that 4,788,360 tons, equal to 6,464,286 cyd of lime rock, was shipped in to support Tampa Bay and southwest Florida regional demand. Over a ten year span, imported lime rock may equal 64.6MM cyd. Reflecting the fact that there is no data available to directly account for port aggregate imports for Sarasota County and other SW Florida counties, Port Manatee lime rock imports were excluded from the study’s supply analysis. Relying on FDEP permits, at the end of 2015 there were 2 local mines that provided 1,797,254 cyd of lime rock for the local Glades and Hendry County markets. Both the 2016 Waldrop Report and the 2018 Stuart Report do not take into account these 2 mines because they provide for local, and not regional, lime rock needs. Finally, Figures 20 provides the 2018 mine update data for the 2 Glades and Hendry County mines.

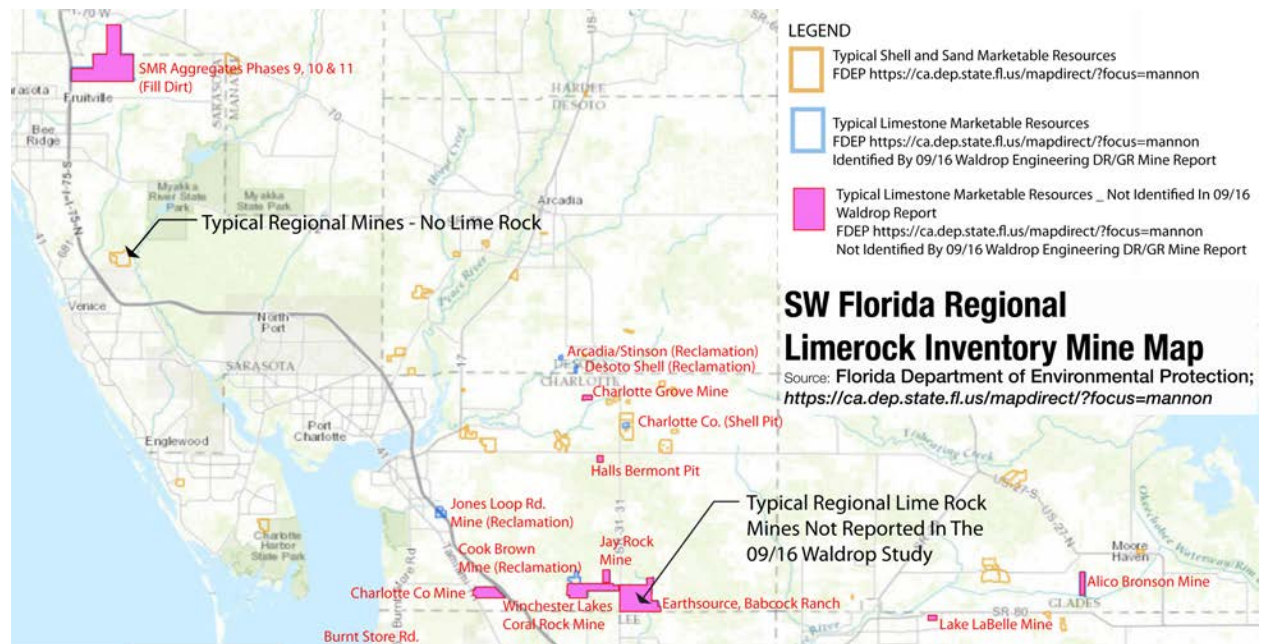


FIGURE 19 MAP_SW FLORIDA REGIONAL GLADES, HENDRY & SARASOTA CO. LIME ROCK INVENTORY MINE MAP

2015 Lime Rock Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Mine Depth	Soil Profile Limerock Thickness (3)	% Remaining	Remaining Cyd. Excavation Authorized	Overburden Adjustment Coef. (3) & (4)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction
Glades Co.: Alico Bronson Mine (1) & (3)	9/4/09	296517-003	515	203	30	14	38%	3,702,600	0.5	1,851,300	1,481,040
Hendry Co.: Lake LaBelle Mine (2)	10/14/14	296517-003	75	25	14		100%	564,667	0.7	395,267	316,214
GLADES AND HENDRY CO SUBTOTAL											1,797,254

FIGURE 20 TABLE_ GLADES AND HENDRY COUNTY 2015 LIME ROCK RESERVES

An Evaluation Of Glades & Hendry County Lime Rock Mines

Based on FDEP permits, this evaluation provides information concerning 2 identified lime rock mines located in Glades and Hendry County. A summary of data of these 2 mines are as follows:

ALICO BRONSON MINE (1)	WALDROP-LIME ROCK THICKNESS	WALDROP POST-EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK (FDEP)
APPENDIX F.1	--	--	NA	3,702,600 cyd
STUART OVERBURDEN COEFFICIENT	0.5			
STUART PRE-EXCAVATION REMAINING				1,851,300 cyd
STUART POST-EXCAVATION EST.				1,481,040 cyd.

Note 1: Alico Bronson Mine total project area @ 515 ac., mined area @ 203 ac.. 2015 remaining extraction based on 38% authorized @ 3,702,600 cyd.; .50 overburden adjustment coefficient based on Johnson and Prewitt Eng. and 07/04 MACTEC Geotechnical Findings and Soil Profiles.

LAKE LABELLE MINE (2)	WALDROP-LIME ROCK THICKNESS	WALDROP POST-EXCAVATION	CORRECT LIME ROCK THICKNESS	REMAINING LIME ROCK (FDEP)
APPENDIX F.2	--	--	NA	564,667 cyd
STUART OVERBURDEN COEFFICIENT	0.5			
STUART PRE-EXCAVATION REMAINING				395,267 cyd
STUART POST-EXCAVATION EST.				316,214 cyd.

Note 2: Lake LaBelle Mine total project area @ 72 ac., mined area @ 25 ac.. 2015 remaining extraction based on 100% authorized @ 564,667 cyd.; 0.70 overburden adjustment coefficient based on regional averages.

A Mine Evaluation Sensitivity Analysis

A Sensitivity Analysis Based On Lime Rock Thickness & Excludes Monitoring Data

Given the regional economic importance of ensuring an adequate, long range supply of lime rock, it is necessary to test the report's updated lime rock findings. Using the same methodology as Waldrop, a sensitivity analysis is presented that relies on rock depth geotechnical data while ignoring the 5 Lee County Monitoring Reports. The monitoring reports identified 361.46MM cyd gross of which 212.83MM cyd estimated post-extraction lime rock. The sensitivity analysis utilizes the percentage difference between the 2016 Waldrop Report's regional average lime rock depth and the 2018 documented lime rock depth (as expressed by Percentage Lime rock Soil Profile Adjustment; see Appendix C soil profiles). This approach assumes the percentage increase of pre-excitation resource is the same as the percentage increase of rock depth; i.e., a 50% increase in rock thickness will grant a 50% increase in resource yield. Referring to Figure 21 Sensitive Analysis, in order to ensure a conservative assessment, the 2016 report's lower Westwind Mine estimate was used (3.407MM cyd compared to the 2018 4.599MM cyd) (see Fig. 21). The lower 2018 Stuart estimate was used for CEMEX North Quarry (4.21MM cyd to the 2016 Waldrop 11.86MM cyd). Finally, the sensitivity analysis limited itself to 4 original Collier Co. mines and excluded Sunniland Mine, CEMEX/Hogan Island Quarry, Belle Meade Partners Section 20 Mine and Florida Rock Industries East Naples Mine.

Relying on lime rock thickness geotechnical data and ignoring monitoring report data, Lee County's post-excitation resource was 320,873,940 cyd., a 14% reduction from the monitoring reports 372,956,998 cyd estimate. Including the Collier County 4 mine 43,974,514 cyd total, Lee County had 364,848,454 cyd lime rock, providing 100% of the regions required lime rock needs through the year 2041 (see Figure 22). Including the 8 total Collier County mines (122,156,076 cyd), Lee County had 443,030,016 cyd lime rock providing 100% of the regions required lime rock needs through the year 2046 (see Figure 23). Finally, when factoring in Charlotte County post excavation lime rock resources (31,500,079 cyd) for a 3 county total of 474,530,095 cyd, there will be a positive resource inventory to last through 2048 (see Figure 24).

05/18 LEE CO LIME ROCK FINDINGS SENSITIVITY ANALYSIS - ALTERNATIVE RESOURCE ASSESSMENT
 BASED ON % DIFFERENCE RESOURCE PROFILE DEPTH

Mine Name	Cyd. of Excavation Authorized	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Geotechnic Boring Ave. Limerock Thickness Feet (1)	Percentage Limerock Soil Profile Adjustment (2)	Alternative Est. Remaining Post-excavation Based On % Increase In Limerock Thickness
Rinker Materials 3A & 3B	36,517,800	2,589,077	17	45	45	264.71%	6,853,439
Green Meadows/Harper Bros	107,651,279	12,422,666	25	62	45.8	183.08%	22,743,035
Green Meadows Expansion	125,175,306	26,200,533	25	68	42.9	171.6%	44,960,114
Green Meadows FL Rock Mine #2	168,819,200	135,055,360	36	60	37.89	105.3%	142,145,766
University Lakes & West Lakes	244,725,888	34,034,880	30	90	60.7	202.2%	68,826,091
West Wind/E. Corkscrew Mine (3) * Waldrop Available Excava.Acres	24,926,000	3,407,360	44	50	83.6		3,407,360
Bonita Grande Mine	20,000,000	16,000,000	30	90	29	96.7%	15,466,667
Plumosa Farms	1,306,800	258,134	10	30			258,134
Bell Road Mine	16,907,733	12,132,266	40	40			12,000,000
CEMEX North Quarry (4)	14,737,800	11,863,044		45			4,213,334
SUBTOTAL LEE CO. (5)		253,963,320					320,873,940
2016 WALDROP COLLIER CO. (4 mines) (6)		43,974,514					43,974,514
SENSITIVITY ANALYSIS TOTAL							364,848,454

FIGURE 21 TABLE_LEE COUNTY SENSITIVITY ANALYSIS 2015 LIME ROCK RESERVES (APPENDIX A, C & D)

05/18 LEE CO LIME ROCK FINDINGS SENSITIVITY ANALYSIS - ALTERNATIVE SUPPLY & DEMAND ASSESSMENT BASED ON % DIFFERENCE RESOURCE PROFILE DEPTH

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Updated 05/18 Lee & 4 Mine Collier Limerock
2015	1,654,604	14,891,436	11,030,693		364,848,454
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	306,475,067
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	242,991,067
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	174,877,067
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	102,631,734
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	26,711,734
2041	2,350,915	21,158,231	15,672,764	353,809,484	11,038,970
2042	2,382,652	21,443,868	15,884,346	369,693,830	-4,845,377

FIGURE 22 TABLE_ SENSITIVITY ANALYSIS SW FL POPULATION GROWTH _ LEE & 4 MINE COLLIER LIME ROCK SUPPLY & REGIONAL DEMAND (APPENDIX A, C & D)

05/18 LEE CO LIME ROCK FINDINGS SENSITIVITY ANALYSIS - ALTERNATIVE SUPPLY & DEMAND ASSESSMENT BASED ON % DIFFERENCE RESOURCE PROFILE DEPTH

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Updates 05/18 Lee & 8 Mine Collier Limerock
2015	1,654,604	14,891,436	11,030,693		443,030,016
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	384,656,629
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	321,172,629
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	253,058,629
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	180,813,296
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	104,893,296
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	
2043	2,414,818	21,733,360	16,098,785	385,792,615	
2044	2,447,418	22,026,760	16,316,119	402,108,734	
2045	2,435,580	21,920,220	16,237,200	418,345,934	24,684,082
2046	2,468,460	22,216,143	16,456,402	434,802,336	8,227,680
2047	2,501,785	22,516,061	16,678,564	451,480,900	-8,450,884

FIGURE 23 TABLE_ SENSITIVITY ANALYSIS SW FL POPULATION GROWTH _ LEE & UPDATED 8 MINE COLLIER LIME ROCK SUPPLY & REGIONAL DEMAND (APPENDIX A, C & D)

05/18 LEE CO LIME ROCK FINDINGS SENSITIVITY ANALYSIS - ALTERNATIVE SUPPLY & DEMAND ASSESSMENT BASED ON % DIFFERENCE RESOURCE PROFILE DEPTH

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Updates 05/18 Lee, 8 Mine Collier & Charlotte Limerock
2015	1,654,604	14,891,436	11,030,693		474,530,095
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	416,156,708
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	352,672,708
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	284,558,708
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	212,313,375
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	136,393,375
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	
2043	2,414,818	21,733,360	16,098,785	385,792,615	
2044	2,447,418	22,026,760	16,316,119	402,108,734	
2045	2,435,580	21,920,220	16,237,200	418,345,934	56,184,161
2046	2,468,460	22,216,143	16,456,402	434,802,336	39,727,759
2047	2,501,785	22,516,061	16,678,564	451,480,900	23,049,195
2048	2,535,559	22,820,028	16,903,724	468,384,624	6,145,471
2049	2,615,429	23,538,859	17,436,192	485,820,816	-11,290,721

FIGURE 24 TABLE_ SENSITIVITY ANALYSIS SW FL POPULATION GROWTH _ LEE, 8 MINE COLLIER & CHARLOTTE CO. LIME ROCK SUPPLY & REGIONAL DEMAND (APPENDIX A, C, D & E)

2017/18 Lee County Mine Permitting

2018 Lime Rock Mine Zoning and Plan Amendments - Old Corkscrew Road Plantation

Identical to the 2016 Waldrop Report, this study excludes all proposed mines that have not obtained local and state entitlements and related approvals, such as and including the 2018 Old Corkscrew Plantation (DCI 2011-00007). Old Corkscrew Plantation has obtained staff recommended approval for a 4,204 acre IPD with 1,727 acres set aside for surface mines up to 110-ft. deep. Mining is projected for 30 years, beginning in 2020. As of the date of this report, public hearings are ongoing and the project has not been approved by the Lee County BOCC. Various application materials document the existence of lime rock at approximate 42-ft. depth to 250-ft. below the surface and within the surficial table aquifer. The mining plan features a 156-acre rock processing facility area. From a review of the records on file, the author has not found a specific estimate of future lime rock yield for the subject IPD. Assuming a net 60-ft. deep resource core over 1,727 acres and a 20% loss rate, the post-excavation estimate is 133,738,880 cyd. This is equal to 36% of Lee County's 372.95MM cyd reserves. If approved, the project will increase Lee County's total estimated reserves to 506,695,878 cyd., which can provide 100% of the regions demand through 2049/50. Combining Lee, Collier and Charlotte reserves with OCP, total lime rock permitted reserves are estimated at 660,352,033 cyd. This quantity is more than enough to meet population growth and demand well past 2055/56.

2018 Lime Rock Mine Zoning and Plan Amendments - CEMEX Alico Quarry Extension Area

A second 2018 lime rock mine request is CPA2017-00002, the CEMEX Alico Quarry Extension Area Map 14 Amendment. The 164.8 acre site adjoins on the north and east the current CEMEX North Quarry Phase 3A which is included in the Lee County inventory and Map 14. Comprised of 96.2 acres of DR/GR uplands and 68.5 acres of wetlands, the requested Map 14 amendment is to support a MEPD. Mine material processing will be on the existing mine site, and the life of the requested extension is for approximately 5 to 8 years. Mine depth is proposed at a maximum 45-ft. deep with an applicant estimated yield of 8MM tons, equal to 10,800,000 cyd. Assuming a 20% loss rate, the post-excavation yield is 8,640,000 cyd, equal to 2.3% of the updated Lee County total reserves. If approved, the project will increase Lee County's total estimated reserves to 383,756,998 cyd. Excluding Collier County and Charlotte County Resources, the CEMEX Alico Quarry Extension Amendment can provide 100% of the regions required lime rock needs through the year 2041/42.

2018 Lime Rock Mine Zoning and Plan Amendments - Troyer Bros. MEPD

A third 2017/2018 lime rock mine request is the Troyer Bros. Mine, DCI2016-00025. From a review of the public records, the 1,732 acre Mine Excavation Planned Development request includes a 682 acre mine pit area to be excavated over a 32 year period. The applicant provides an estimated lime rock yield of 103,700,000 tons, which is equal to 139,995,000 cyd. Assuming a 20% loss rate, the post-excavation yield is 111,996,000 cyd., equal to 30% of Lee County's 372.95MM cyd reserves. If approved, the project will increase Lee County's total estimated reserves to 484,952,998 cyd, providing 100% of the regions required lime rock demand through 2048/49. Including Collier and Charlotte reserves, the Troyer mine will increase the county's estimated lime rock reserves to 638,609,153 cyd, which can provide 100% of the regions required lime rock demand through the year quantity is more than enough to meet population growth through the year 2055.

Findings and Conclusions

Findings and Conclusions

1. Lee County As The Sole Lime Rock Source For SW Florida: The Lee Plan does not require Lee County to be the 100%, sole source of lime rock for southwest Florida. The Rawl study and the Dover Kohl study and, to a lesser extent, the Waldrop Report, are in error when not accurately factoring in other SW Florida regional lime rock mines. The 3 previous reports evaluate demand based on regional population growth but they evaluate regional lime rock supply primarily based on Lee County. In so doing, the Rawl report, Dover Kohl report, and to a lesser extent the Waldrop report, are to a degree flawed. When evaluating regional resource demand, the study must include an evaluation of regional resource supply.
2. Lee Plan 33.1.1 and 33.1.4 Consistency: A supply and demand analysis that does not take into account Collier and Charlotte County lime rock will not be consistent with Policies 33.1.1 and 33.1.4. The objective of Policy 33.1.1 and 33.1.4 is to regulate lime rock mining in a manner that avoids unwarranted impacts on water resources, natural systems, residential systems and road networks. The policies regulate unwarranted mining impacts by placing an industrial land use/mine area cap based upon resource supply and demand (see Lee Plan Table 1(b) and Future Lime Rock Map Overlay 14) . Succinctly, the Lee Plan will only allow new lime rock mines when it is quantitatively determined that projected regional demand will be greater than projected supply. It defies economic reason to assume that Lee County mines are and will be the predominant supplier for Collier or Charlotte County demand while ignoring Collier and Charlotte County lime rock supply. It is a basic economic fact that locally mined resources are less expensive to supply a given local marketplace due to lower transportation costs. Lee County mines will have a greater hauling cost and the product more expensive, than what can and is being provided by Collier and Charlotte County mines, which have a lower hauling costs. By not taking into account Collier and Charlotte County resources, unwarranted impacts on various Lee County systems will occur in violation of Objective 33.1 and Policies 33.1.1 and 33.1.4
3. Lee Plan 33.1.4 Monitoring Reports and Credible Data: Policy 33.1.4 calls for *“Future amendments will reflect any additional data that becomes available through routine monitoring reports and bathymetric surveys or other credible sources.”* Though Dover Kohl and Waldrop state that the reports lime rock resource thickness data relied on specific geotechnical information, the author of this report could not find for review specifically cited mine soil profiles and associated geotechnical data. Both Dover Kohl and Waldrop did not utilize regulatory monitoring reports when providing lime rock estimates. As a result both Dover Kohl and Waldrop underestimated DR/GR and regional lime rock resources.
4. Lime Rock Resource Thickness & Future Reserves: As Figure 2 depicts, when evaluating Lee County mines, both Dover Kohl and Waldrop did not base their estimates on accurate lime rock thickness. This error directly leads to an under-reporting of future lime rock reserves. By using cited, mine specific geotechnical data and soil profiles, the 2018 study accurately identifies the overburden thickness and lime rock thickness, which in turn leads to a more reliable forecast.

04/18 Stuart _ An Evaluation and Appraisal of Report Mine Depths
 Dover Kohl Table B-2 and Waldrop Table III-1

Mine Name	Dover Kohl Est. Ave. Limerock Thickness (ft)	Waldrop: Est. Ave. Limerock Thickness (ft)	Lee Co. Approved Mine Depth	2018 Update Soil Profiles & Geotechnical Data
Rinker Materials 3A & 3B CEMEX Alico Quarry	17	17	45	45
Green Meadows/Harper Bros. FL Rock	23	25	62	45.8
Green Meadows Expansion	25	25	68	42.9
Green Meadows FL Rock Mine #2		36	60	37.9
University Lakes & West Lakes	30	30	90 to 108	60.7
Westwind (E. Corkscrew Mine)		44	50	83.6
Bonita Grande Mine	30	30	90	29
Plumosa Farms		10	30	
Bell Road		40	40	
Cemex North Quarry 3	30		45	

FIGURE 25 TABLE_MINE DEPTH LIME ROCK THICKNESS COMPARISON (APPENDIX C, D & E)

5. Air Photo Interpretation vs. Monitoring Reports: The Lee Plan calls for the use of monitoring reports as a credible data source. The 2016 study's use of air photo interpretation had an inherent uncertainty regarding the percentage completion of existing mine lake area excavation. The use of regulatory monitoring reports provides a more accurate forecast. For example, the 2016 Waldrop Report's University Lakes & West Lakes post-excavation estimate was 34,034,880 cyd; the cited 08/02/16 monitoring report identifies 207,000,000 cyd. With a .72 overburden coefficient and a 20% loss, the net, post-excavation yield is 119,232,000 cyd, which is 350% greater than the Waldrop estimate. An additional example is the 2016 Waldrop Report's Green Meadows/Harper Bros. post-excavation estimate of 12,422,666 cyd; the cited 08/15/16 monitoring report states 45,536,171 cyd. With a .74 overburden coefficient and a 20% loss, the net, post-excavation yield is 26,957,413 cyd, which is 217% greater than the Waldrop estimate.
6. Port Manatee and Sarasota County: Over a ten year span, Port Manatee's imported lime rock may equal 64.6MM cyd. It is economically logical to consider Port Manatee as a primary source of lime rock for Sarasota County; due to distance and separation Lee County should be considered as a secondary source for Sarasota County. Port Manatee's proximity to the Sarasota market place with associated lower hauling costs put Lee County lime rock at a competitive disadvantage. Reflecting the fact that there is no data available to directly account for port aggregate imports for Sarasota County and other SW Florida counties, Port Manatee lime rock imports are excluded from the study's supply and demand analysis. This fact leads to conservative Lee County supply finding.
7. Updated Lee County Lime Rock Reserves: Utilizing the Waldrop Report methodology and mine monitoring reports and geotechnical information, in 2015 Lee County had 372,956,998MM cyd of lime rock reserves. This estimate is 146% greater than the Waldrop Report's 253,963,320 cyd. Based on the identified 372.95MM cyd of re-

serves, and excluding Collier County other county sources, Lee County can provide 100% of the regions required lime rock needs through the year 2042.

8. Updated Collier County Lime Rock Reserves: Utilizing the Waldrop Report methodology and relying upon Collier County, FDEP permits and the 2016 Waldrop Report, in 2015 Collier County had 122,156,076 cyd of lime rock reserves. This estimate is 277% greater than the Waldrop Report's 43,974,514 cyd. This error is because the 2016 Waldrop Report omitted 3 permitted lime rock mines (CEMEX/Hogan Island Mine, Belle Meade Partners/Sec. 20 Mine & Florida Rock Industries East Naples Mine) and did not account for Sunniland Mine resources. Combining Collier County with Lee County reserves, 495,113,074 cyds of permitted lime rock reserve will provide 100% of the regions required lime rock needs through the year 2049.
9. Updated Charlotte County Lime Rock Reserves: Both the Dover Kohl and the Waldrop reports did not take into account Charlotte Co. supply, assuming that the county does not provide significant resources. This is a false assumption, Charlotte Co. has 31.5MM cyd of lime rock reserves. Utilizing the Waldrop Report methodology and relying upon Charlotte County Monitoring Report, permits and FDEP permits, in 2015 Charlotte County had 31,500,079 cyd of lime rock reserves. Adding Charlotte County to Collier and Lee County resources, the combined 3 county reserves are 526,613,153 cyds. Lee County, Collier County and Charlotte County can provide 100% of the regions required lime rock needs through the year 2051.
10. An Alternative Sensitivity Analysis: Using a sensitivity analysis approach that discarded monitoring reports information while relying on geotechnical information, 320,873,940 cyd post-excavation resource was estimated. Including the 2016 Waldrop 4 mine Collier County 43,974,514 cyd total, Lee County is estimated to have 364,848,454 cyd lime rock, providing 100% of the regions required lime rock needs through the year 2041. Including the total 8 Collier County mines (122,156,076 cyd), Lee County had 443,030,016 cyd lime rock providing 100% of the regions required lime rock needs through the year 2046. Finally, factoring in Charlotte County post excavation lime rock resources (31,500,079 cyd), Lee and Collier County estimates 474,530,095 cyd of lime rock reserves, a positive resource inventory to last through 2048. A recommendation of not amending the Future Lime Rock Map Overlay 14 and Table 1(b) for the 2040 Planning Horizon is valid.
11. Lee Plan Table 1(b) and Lime Rock Map Overlay Recommendations: There are available lime rock resources to service the region through the year 2051. The current Planning Horizon is 2030; the pending Planning Horizon is 2040. Given the significant amount of local and regional resource, no Lee Plan amendments are needed to increase Table 1(b) DR/GR industrial/mine area and to expand mine areas on the Future Lime Rock Map Overlay 14 for the pending 2040 Planning Horizon. No additional IPD and MEPD zonings are needed for the 2040 Planning Horizon.

Appendix A

Lee County and Regional 2015 Lime Rock Resources Tables & Projections

05/2018 Stuart _ An Evaluation and Appraisal DR/GR Lime Rock Resources _ Comparative Data Table
 Waldrop Table III-1 Lee Co. Limerock Supply; 2018 Geotechnical Soil Profiles and Mine Monitoring Reports

Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extracted To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Rinker Materials 3A & 3B (1) CEMEX Alico Quarry SEZ2000-00034 LDO2007-00214	503	36,517,800	10,559,266	3,236,346	2,589,077	17	45	45	15,000,000	8,800,000	0.7	6,160,000	4,928,000
Green Meadows/Harper Bros. FL Rock (2) 99-05-243.065 LDO 97-05-073.08 LDO2006-00055 & DCI2005-00105	1075	107,651,279	27,830,000	15,528,333	12,422,666	25	62	45.8	62,115,108	45,536,171	0.74	33,696,767	26,957,413
Green Meadows Expansion (3) DCI2000-00044 LDO2001-00038 LDO2006-00055 & Z-07-054	1132	125,175,306	12,906,666	32,750,666	26,200,533	25	68	42.9	40,050,613	85,124,693	0.73	62,141,026	49,712,821
Green Meadows FL Rock Mine #2 (4) DOS2014-00062 DCI2010-00028 & Z-12-003	2471	168,819,200	0	168,819,200	135,055,360	36	60	37.9			0.69	168,819,200	135,055,360
University Lakes & West Lakes (5) DCI2004-00019 LDO2006-00071 Z-05-088 DCI2000-00079	1511	244,725,888	37,000,000	42,543,600	34,034,880	30	108 90	60.7	37,000,000	207,000,000	0.72	149,040,000	119,232,000
Westwind (E. Corkscrew Mine) (6) DCI2002-00066 DCI2000-00057 Z-01-016 DOS2012-00010	299	24,926,000	16,113,973	4,259,200	3,407,360	44	50	83.6			0.82	5,749,920	4,599,936
Bonita Grande Mine (7) DCI2001-00065 LDO2000-00058 & IPD Z-02-047	557	20,000,000	--	20,000,000	16,000,000	30	90	29			0.80	20,000,000	16,000,000
Plumosa Farms LDO2007-00063 DCI2000-00056 IPD Res Z-01-004 33-47-26-00-00001.002A	30	1,306,800	161,333	322,677	258,134	10	30					322,677	258,134
Bell Road (8) LDO2003-00403 IPD Z-04-047 w./Monitoring Report	265	16,907,733	1,000,000	15,165,333	12,132,266	40	40		1,000,000	15,000,000		12,000,000	12,000,000
Cemex North Quarry 3 (9) DOS2015-00078 Sec. 6 Expansion Phase 3C DCI2010-00012 & MEPD Z-13-026	203	14,737,800	0	14,737,800	11,863,044		45					5,266,667	4,213,334
LEE CO SUBTOTAL				317,363,155	253,963,320							463,196,256	372,956,998

UNDERREPORTED LEE CO. RESOURCE ##### C.yds

OTHER LEE CO MINES:

SW FL Agg. Burnt Stone Lee Co Mine (10)	107.4	25	1,314,867	0.7	920,407	736,325
LDO2007-00057 (expires 2016)						
ERP36-02926-S & Z-99-003						

NOTES:

- #1 Rinker 3A & 3B **08/08/16 Cemex Monitoring Report** @ 8.8M C.yd. LDO2007-00214, **R.A. Kirkner & Assoc. 1 Soil Profile** w./30% Overburden & 45-ft. L.S. resource (SEZ2000-00034)
- #2 Green Meadows/Harper Bros **08/15/16 Vulcan Monitoring Report** @45.5M C.yd. LDO 97-05-073.08, **Harper Bros. 13 Soils Profiles** w./26% Ave. Overburden & 45.8-ft Ave. L.S. resource (99-05--243.065).
- #3 Green Meadows Expansion **08/15/16 Vulcan Monitoring Report** @85.1M C.yd. LDO2001-00038, **J.D. Walker 11/99 10 Soils Profiles** w./27% Ave. Overburden & 42.9-ft Ave. L.S. resource (DCI2000-00044).
- #4 Green Meadows FL Rock Mine #2 **Vulcan Materials 1984-87 20 Soils Profiles** w./31% Ave. Overburden & 37.9-ft Ave. L.S. resource (DCI2010-00028 & DOS2014-00062)
- #5 University Lakes & West Lakes **08/02/16 Morris Depew Monitoring Report** @207M C.yd. LDO2016-00071, **CDM Missimer 06/04 18 Soil Profiles** w./28% Ave. Overburden & 60.7-ft Ave. L.S. resource.
- #6 East Corkscrew/Westwind Mine Waldrop Est. based on 60 available acres @ 44-ft. depth, actual available acres @ 81-ac @ 44-ft., equal to a net yield of 5.7MM C.yd. , **10/02 Allied Engineering & Testing 14 Soil Profiles** w./18.6% Ave. Overburden & 83.6-ft. Actual Ave. L.S. resource w./est. net yield of 17,393,437 C.yd. Limestone. The actual resource yield is not used due to the 50-ft. depth limitation
- #7 Burnita Grande Mine **06/14/2000 Allied Eng. & Testing 10 Soil Profiles** w./Ave. 29-ft. L.S. resource
- #8 Bell Road Mine **07/22/16 Inge & Assoc. Monitoring Report** @ 15M C.yd. LDO2003-00403, para 2 "There is no limit on the amount of material that can be extracted in the approved zoning Res. Z-04-047".
- #9 Cemex North Quarry #3 Waldrop Study reported 14,737,800 C.yd. Pre-ex. & 11,863,044 C.yd. Post-ex. DOS2015-00078 Sec. 6 Phase 3C identifies 7,110,000 finished tons = 5,266,667 C.yds & 6,638,000 Overburden tons = 4,917,037 C.yds
- #10 SW FL Aggregate Burnt Stone Mine Stuart and Assoc. 32.6-ac @ 25-ft. (30.4% remaining of 107.4 ac. mine).
- #11 Corrected Soil Profile Average Lime Rock Thickness resource thickness based upon specific mine soil profiles and geotechnical data.
- #12 Lee County Monitoring Reports 2015 Extraction To Date available resource as per mining companies annual monitoring reports (6 available reports)
- #13 Overburden Adjustment Coefficient calculated from the inverse of the average percentage fill dirt and overburden as per cited geotechnical reports.
- #14 Corrected Remaining Post-excavate Lime Rock using the 2016 Waldrop Study; 20% loss due to compaction, etc.

05/18 Stuart Updated Lee Co. Resource Findings _ No Other Regional Supply

Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ With Revised Collier Co. & Regional Limerock

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Revised 09/17 Collier Co & Regional Limerock
2015	1,654,604	14,891,436	11,030,693		372,956,998
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	314,583,611
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	251,099,611
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	182,985,611
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	110,740,278
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	34,820,278
2041	2,350,915	21,158,231	15,672,764	353,809,484	19,147,514
2042	2,382,652	21,443,868	15,884,346	369,693,830	-12,835,617

Waldrop Engineering SE Lee Co. DR/GR Mining Study 09/2016

Table III-3 BEBR Medium Regional Pop. Projections

County	Est. 2015 BEBR Pop.	BEBR Medium Population Projections					Percentage Regional
		2020	2025	2030	2035	2040	
Charlotte	167,141	178,200	187,900	195,900	202,700	209,600	9.0%
Collier	343,802	378,700	409,900	436,800	460,900	482,700	20.8%
DeSoto	34,777	35,600	36,300	36,900	37,400	37,800	1.6%
Glades	12,853	13,300	13,700	14,100	14,400	14,600	0.6%
Hendry	38,096	39,100	39,900	40,600	41,000	41,600	1.8%
Lee	665,845	754,800	839,500	918,300	991,200	1,055,000	45.5%
Sarasota	392,090	415,900	436,600	453,900	467,000	478,300	20.6%
Subtotal	1,654,604	1,815,600	1,963,800	2,096,500	2,214,600	2,319,600	

09/2016 Waldrop Engineering SE Lee Co. DR/GR Mining Study

Table III-2 Collier Co. Limerock Supply Projection

Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Cyd. Limerock Authorized Excavation	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction
East Naples Mine (Golden Gate #59.814-2)	12/5/2005	209749	716.3	257.3	21 & 22-49-27	25,325,300	25,325,300	20,260,240
Golden Gate Quarry (Collier Permit#59.814)		200965-002			21-49-27	7,800,000	1,843,254	1,474,603
SR 846 Earth Mine (Collier Permit#59.703-3)	4/29/2009	0271820-001	2576	1106.3	35 & 36-47-27 1 & 2-48-27	33,620,000	23,722,588	18,978,070
Willow Run (Collier Permit#59.206-1)		11-0134951-004			11, 12, 13 & 14-50-26	8,900,000	4,077,000	3,261,600
Sunniland (Collier Permit#59.251)					13, 23-29, 33 & 35-48-30			
WALDROP COLLIER SUBTOTAL						75,645,300	54,968,142	43,974,514

Stuart 05/2018 Additional Collier Mines

FDEP ERP Files for Lime Rock Resources

Non-reported 2015 Collier Co. Mir	Year Permitted	ERP Permit #	Project Area	Mined Area	Mine Depth	% Remaining	Cyd. Excavation Authorized	Overburden Adjustment Coef. (Note 6)	Corrected Remaining Pre-extraction Lime Rock	Corrected Remaining Post-extraction Lime Rock (Note 7)
Alico Land Develop. Lost Grove Mine (1)	08/032011	299533-002	1,382	740	44-ft. to 144-ft.	100%	112,223,467	0.7		
Cemex/Hogan Island Quarry (2)	2/1/2010	0286236-001	2757	650.45	40	100%	41,975,706	0.7	29,382,994	23,506,395
Belle Meade Partners Sec. 20 Mine (3)	9/7/2011	0299365-001	670.9	510		100%	59,793,263	0.7	41,855,284	33,484,227
Florida Rock Industries East Naples Mine (4)	10/1/2012	258805-001	345	257	72	100%	29,853,120	0.7	20,897,184	16,717,747
Sunniland Mine (5)		ERP MMR_50741	12,285	640	40	17.5%	7,214,827	0.77	5,555,417	4,473,193
ADDITIONAL COLLIER MINE SUBTOTAL									97,690,879	78,181,562
CORRECT COLLIER CO SUBTOTAL									122,156,076 C.yds.	
UNDERREPORTED COLLIER CO RESOURCE										78,181,562 C.yds.

111.8

NOTES:

- #1 Lost Grove Mine _ Lake #1 @ 376ac., Lake #2 @ 209ac. & Lake #3 @ 155ac.; ave. lake depth as per ERP 299533-001 Project Description & Construction Condition #10. Collier Co. permit denial.
- #2 Hogan Island _ Seven Cells @ 650.45ac. As per ERP 0286236; lake depth max. 40-ft. as per permit Activity Description.
- #3 Belle Meade Sec. 20 _ Authorized Excavation cited: Permit 299365-005 pg. 24 of 44; Sec. 20 Mine Resource D&F Permit Robau and Associates sheet 5 of 12
- #4 FL Rock East Naples Mine _ Lake area excavation @ 257 and lake depth @ 72-ft. as per permit 258805-001 Activity Description.
- #5 Sunniland Mine _ 0.77 Adjustment Coef. Based on regional averages and permit drawing excavation pit cross section.
- #6 Overburden Adjustment Coefficient _ calculated from the inverse of the average percentage fill overburden as per cited geotechnical reports.
- #7 Corrected Remaining Post-excavate Lime Rock _ using the 2016 Waldrop Study; 20% loss due to compaction, etc.

05/18 Stuart Updated Lee Co. Mine Resource Findings & 5/18 Updated Collier Co. Mine Findings
 Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand With Revised Collier Co. Limerock Finding:

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Revised 09/17 Collier Co & Lee Co. Limerock
2015	1,654,604	14,891,436	11,030,693		495,113,074
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	436,739,687
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	373,255,687
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	305,141,687
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	232,896,354
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	156,976,354
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	

2043	2,414,818	21,733,360	16,098,785	385,792,615	
2044	2,447,418	22,026,760	16,316,119	402,108,734	
2045	2,480,458	22,324,121	16,536,386	418,645,120	76,467,954
2046	2,513,944	22,625,497	16,759,627	435,404,747	
2047	2,547,882	22,930,941	16,985,882	452,390,630	
2048	2,582,279	23,240,509	17,215,192	469,605,822	
2049	2,617,140	23,554,256	17,447,597	487,053,419	8,059,655
2050	2,652,471	23,872,238	17,683,139	504,736,558	-9,623,484

Stuart 05/18
Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co. Dept. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coef. (6)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (7)	
Earthsources Babcock Ranch (1)	07/0611	0184047-007	3471	126	28,000,000	27,004,562	0.7	18,903,193	15,122,555	
Coral Rock Mine (2)	1/13/2009	182147-002	1015	267	14,900,000	14,900,000	0.7	10,430,000	8,344,000	
Jay Rock Mine (3)	11/21/2006	1990046-006	320	194	12,600,000	10,904,637	0.7	7,633,246	6,106,597	
Charlotte County Mine (4)	7/29/2003		1031	421	8,200,000	1,625,942	0.7	1,138,159	910,528	
Halls Bermont Pit (5)	3/28/2007	44008676	8000	50	2,015,000	1,815,000	0.7	1,270,500	1,016,400	
CHARLOTTE CO. SUBTOTAL									31,500,079	
UNDERREPORTED CHARLOTTE CO. RESOURCE									31,500,079	

NOTES:

- #1 Earthsources/Babcock _ 27.7M C.yds. cited from Group III Active Permit Table, Charlotte Co. Mines, Dept. of Community Development 09/17.; est. 3 yr. excavation @ 750,000 cyd.
- #2 Coral Rock Mine _ 14.9M C.yds. cited from Group III Active Permit Table, Charlotte Co. Mines, Dept. of Community Development 09/17.
- #3 Jay Rock Mine _ 11.3M C.yds. cited from Group III Active Permit Table, Charlotte Co. Mines, Dept. of Community Development 09/17; est. 3 yrs. excavation @450,000 cyd.
- #4 Charlotte County Mine _ 4.0M C.yds. cited from Group III Active Permit Table, Charlotte Co. Mines, Dept. of Community Development 09/17; est. 3 yrs. excavation @ 2,438910 cyd
- #5 Hall Bermont Pit _ 2.015 MM C.yds. cited from FDEP & Group III Active Permit Table, Charlotte Co. Mines, Dept. of Community Development 09/17; est. 3 yrs. excavation @150,000 cyd
- #6 Overburden Adjustment Coefficient _ Lee Co. median resource profile percentage.
- #7 Correccted Remaining Post-excavate Lime Rock _ using the 2016 Waldrop Study; 20% loss due to compaction, etc.

05/18 Stuart Updated Lee Co. Resource Findings W./Updated Collier & Charlotte Co. Findings

Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ With Revised Lee Co. & Regional Limerock

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Revised 09/17 Collier, Charlotte & Lee Co Limerock
2015	1,654,604	14,891,436	11,030,693		526,613,153
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	468,239,766
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	404,755,766
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	336,641,766
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	264,396,433
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	
2038	2,277,600	20,498,400	15,184,000	307,348,720	
2039	2,298,600	20,687,400	15,324,000	322,672,720	
2040	2,319,600	20,876,400	15,464,000	338,136,720	188,476,433
2041	2,350,915	21,158,231	15,672,764	353,809,484	
2042	2,382,652	21,443,868	15,884,346	369,693,830	

2043	2,414,818	21,733,360	16,098,785	385,792,615	
2044	2,447,418	22,026,760	16,316,119	402,108,734	
2045	2,435,580	21,920,220	16,237,200	418,345,934	108,267,219
2046	2,468,460	22,216,143	16,456,402	434,802,336	
2047	2,501,785	22,516,061	16,678,564	451,480,900	
2048	2,535,559	22,820,028	16,903,724	468,384,624	
2049	2,615,429	23,538,859	17,436,192	485,820,816	
2050	2,650,737	23,856,633	17,671,580	503,492,396	
2051	2,686,522	24,178,698	17,910,146	521,402,542	5,210,611
2052	2,722,790	24,505,110	18,151,933	539,554,476	-12,941,323

Stuart 05/2018

Glades Co. and Hendry County Mines

2015 Lime Rock Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Mine Depth	Soil Profile Limerock Thickness (3)	% Remaining	Remaining Cyd. Excavation Authorized	Overburden Adjustment Coef. (3) & (4)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction
Glades Co.: Alico Bronson Mine (1) & (3)	9/4/2009	296517-003	515	203	30	14	38%	3,702,600	0.5	1,851,300	1,481,040
Hendry Co.: Lake LaBelle Mine (2)	10/14/2014	296517-003	75	25	14		100%	564,667	0.7	395,267	316,214
GLADES AND HENDRY CO SUBTOTAL											1,797,254

UNDERREPORTED RESOURCE 1,797,254 C yds.

NOTES:

- #1 Alico Bronson Mine
- #2. Lake LaBelle Mine
- #3 Bronson Mine: Johnson and Prewitt, & 07/04 MACTEC Geotechnical Findings & Soil Profiles source of Lime Rock Thickness & Overburden Coefficient
- #4 Lake LaBelle Mine Overburden Adjustment Coefficient Bronson Mine Soil Profile and Lee Co. median resource profile percentage.

Waldrop Engineering SE Lee Co. DR/GR Mining Study 09/2016

Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand _ No Collier Co. Supply

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Waldrop _Lee Co. w./No Collier Co Supply
2015	1,654,604	14,891,436	11,030,693		253,963,320
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	195,589,934
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	132,105,934
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	63,991,934
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	6,510,600
2035	2,214,600	19,931,400	14,764,000	262,216,720	-8,253,400

Waldrop Engineering SE Lee Co. DR/GR Mining Study 09/2016

Table III-4 2030 & 2040 Regional Pop. Projections and Limerock Demand With 4 Mine Collier Co. Limerock Mines

Year	2030 BEBR Med. Pop.	Annual Projected Demand 9 tons per cap.	Annual Projected Demand	Cummulative Projected Demand	Waldrop W./ 5 Collier Co Limerock Mines
2015	1,654,604	14,891,436	11,030,693		297,937,834
2016	1,686,803	15,181,227	11,245,353	11,245,353	
2017	1,719,002	15,471,018	11,460,013	22,705,367	
2018	1,751,202	15,760,818	11,674,680	34,380,047	
2019	1,783,401	16,050,609	11,889,340	46,269,387	
2020	1,815,600	16,340,400	12,104,000	58,373,387	239,564,447
2021	1,845,240	16,607,160	12,301,600	70,674,987	
2022	1,874,880	16,873,920	12,499,200	83,174,187	
2023	1,904,520	17,140,680	12,696,800	95,870,987	
2024	1,934,160	17,407,440	12,894,400	108,765,387	
2025	1,963,800	17,674,200	13,092,000	121,857,387	176,080,447
2026	1,990,340	17,913,060	13,268,933	135,126,320	
2027	2,016,880	18,151,920	13,445,867	148,572,187	
2028	2,043,420	18,390,780	13,622,800	162,194,987	
2029	2,069,960	18,629,640	13,799,733	175,994,720	
2030	2,096,500	18,868,500	13,976,667	189,971,387	107,966,447
2031	2,120,120	19,081,080	14,134,133	204,105,520	
2032	2,143,740	19,293,660	14,291,600	218,397,120	
2033	2,167,360	19,506,240	14,449,067	232,846,187	
2034	2,190,980	19,718,820	14,606,533	247,452,720	
2035	2,214,600	19,931,400	14,764,000	262,216,720	35,721,114
2036	2,235,600	20,120,400	14,904,000	277,120,720	
2037	2,256,600	20,309,400	15,044,000	292,164,720	5,773,114
2038	2,277,600	20,498,400	15,184,000	307,348,720	-9,410,886

Appendix B

Lee County and Charlotte County Monitoring Reports

L-1 PINKLE MATERIALS 3A & 3B (CEMEX ALIC)



August 8, 2016

Mr. Benjamin H. Dickson
Development Services Manager
P.O. Box 398
Ft Myers, Florida 33902-0398

Re: 2016 Annual Report for CEMEX Alico Quarry - LDO 2007-00214

Dear Mr. Dickson,

In accordance with Chapter 12 of the Lee County Land Development Code, please find below the requested information,
Additionally, please note James P. Morris (jamesp.morris@cemex.com) as official company contact with Rick Brylanski at Hole Montes to be copied on all correspondence:

Condition

1. Nature of the excavated material

Response: Limestone and Sand Overburden

Condition

2. Cumulative total of cubic yards extracted to date

Response: Based on estimated lake acres, a total of 15,000,000 cubic yards have been excavated to date.

Condition

3. Cubic yards excavated over the last twelve (12) month period

Response: This is estimated at 1,600,000 cubic yards.

Condition

4. Estimated remaining cubic yards to be extracted over the life of mine

Response: This is estimated at 8,800,000 cubic yards.

Condition

5. Volumes in items 1 – 4 expressed in pre or post-transport quantities

Response: Items 1-3 are Post Transport. Item 4 is Pre transport.

Condition

6. Total number of vehicular trip of excavated material exited the mine site to date

Response: Based on 15,000,000 cubic yards of material at 18.5 cubic yards per truck, the estimated vehicular trips are 811,000.

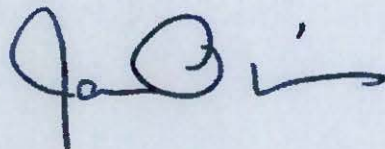
Condition

7. Vehicular trips of excavated material exited the mine site over the last twelve (12) calendar months

Response: Based on 1,600,000 cubic yards of material for 2015 at 18.5 cubic yards per truck, the estimated vehicular trips are 86,000.

If you have any questions, please contact me at (352) 303-3563.

Sincerely,



James P Morris
Regional Environmental Manager
CEMEX Construction Materials Florida, LLC.

CC. Rick Brylanski – Hole Montes



LORI SANVILLE
ENVIRONMENTAL MANAGER
FLORIDA

P.O. BOX 4667 • JACKSONVILLE, FL 32201
10151 DEERWOOD PARK BLVD • BLDG 100
JACKSONVILLE, FL 32256
TELEPHONE: 239-280-9156
FAX: 407-264-8121
EMAIL: sanville@vmcmail.com

August 15, 2016

Mr. Benjamin Dickson
Lee County
Development Services Manager
PO Box 398
Ft. Myers, FL 33902

Submitted via eMail: BDickson@leegov.com

RE: LDO 97-05-073.08 and LDO 2001-00034 Florida Rock (Green Meadow) Mine

Mr. Dickson:

This letter is in response to your two letters dated June 28, 2016 and referencing both LDOs above. A single response is being used because some of the answers can not be separated. Below, please find your questions in **bold**, followed by Vulcan's response. Please note that Florida Rock Industries, Inc. is a wholly owned subsidiary of Vulcan Materials Company.

1) **What is the nature of the excavated material (sand, limerock, etc.)**

All material excavated at the site is a sand/clay mix at the top and limestone below that.

2) **Of the total 107,651,279 cubic yards approved, what is the cumulative total cubic yards of extracted material to date? (LDO 97-05-073.08)**

Of the total 125,175,306 cubic yards approved, what is the cumulative total cubic yards of extracted material to date? (LDO 2001-00038)

3) **How many cubic yards of material have been extracted over the last twelve (12) calendar months?**

	LDO		Year	LDO		Year
	97-05-073.08	2015	2001-00038	2015		
Extracted (CY) to date	62,115,108		40,050,613			
Original Total CY	107,651,279		125,175,306			
Last 12 Months (CY)		967,193			3,894,587	
Remaining Extraction (CY)	45,536,171		85,124,693			

Please note, some of the extracted cubic yards have been returned to the bottom of the pit and

LDO 97-05-073.08
LDO 2001-00038
Response
August 15, 2016

may be dredged at a later date or sent through the plant into the future whitefill mine area. Any and all material stored on the bottom of pit(s) is shown in bathymetric as-builts and submitted to Lee County annually.

All calculations herein, are based on aerial photography and contain the errors inherent to said photography. All volumes have been calculated straight down from the water line and not corrected for side slopes and are therefore estimates. Errors associated with georeferencing are Lee County's, as the 2016 Lee County photography was used as the basis of all calculations.

4) Are the volumes in items 1 through 4 expressed in pre or post-transport quantities?

All volumes shown are pretransport.

5) What is the total number of vehicular trips of excavated material that have exited the mine site to date?

This number will be supplied at a later date. Unfortunately, the plant information only goes back 24 months. As this question references the start of the permit (2009), the information request had to be made through our Birmingham staff. Someone is working on this request and as soon as I have it, this report will be updated.

6) How many vehicular trips of excavated materials have exited the site over the last twelve (12) calendar months?

All vehicular trips are based on an average truck load weight. Specific truck counts are not made, however, amount of material sold is maintained through scale records. The approximate truck count for January through December 2015 was $\pm 178,546$. Please note that all material processed and sold for this site is completed through Harper Bros., Inc. a wholly owned subsidiary of Florida Rock Industries, Inc. Harper Bros., Inc. is permitted under Stipulation of Settlement Case No. 85-4651CA.

I may be reached at the above telephone number should you need additional information.

Sincerely,



Lori Sanville



LORI SANVILLE
ENVIRONMENTAL MANAGER
FLORIDA

P.O. BOX 4667 • JACKSONVILLE, FL 32201
10151 DEERWOOD PARK BLVD • BLDG 100
JACKSONVILLE, FL 32256
TELEPHONE: 239-280-9156
FAX: 407-264-8121
EMAIL: sanville@vmcmail.com

August 15, 2016

Mr. Benjamin Dickson
Lee County
Development Services Manager
PO Box 398
Ft. Myers, FL 33902

Submitted via eMail: BDickson@leegov.com

RE: LDO 97-05-073.08 and LDO 2001-00034 Florida Rock (Green Meadow) Mine

Mr. Dickson:

This letter is in response to your two letters dated June 28, 2016 and referencing both LDOs above. A single response is being used because some of the answers can not be separated. Below, please find your questions in **bold**, followed by Vulcan's response. Please note that Florida Rock Industries, Inc. is a wholly owned subsidiary of Vulcan Materials Company.

1) What is the nature of the excavated material (sand, limerock, etc.)

All material excavated at the site is a sand/clay mix at the top and limestone below that.

2) Of the total 107,651,279 cubic yards approved, what is the cumulative total cubic yards of extracted material to date? (LDO 97-05-073.08)

Of the total 125,175,306 cubic yards approved, what is the cumulative total cubic yards of extracted material to date? (LDO 2001-00038)

3) How many cubic yards of material have been extracted over the last twelve (12) calendar months?

	LDO		Year	LDO		Year
	97-05-073.08		2015	2001-00038		2015
Extracted (CY) to date		62,115,108			40,050,613	
Original Total CY		107,651,279			125,175,306	
Last 12 Months (CY)			967,193			3,894,587
Remaining Extraction (CY)		45,536,171			85,124,693	

Please note, some of the extracted cubic yards have been returned to the bottom of the pit and

LDO 97-05-073.08
LDO 2001-00038
Response
August 15, 2016

may be dredged at a later date or sent through the plant into the future whitefill mine area. Any and all material stored on the bottom of pit(s) is shown in bathymetric as-builts and submitted to Lee County annually.

All calculations herein, are based on aerial photography and contain the errors inherent to said photography. All volumes have been calculated straight down from the water line and not corrected for side slopes and are therefore estimates. Errors associated with georeferencing are Lee County's, as the 2016 Lee County photography was used as the basis of all calculations.

4) Are the volumes in items 1 through 4 expressed in pre or post-transport quantities?

All volumes shown are pretransport.

5) What is the total number of vehicular trips of excavated material that have exited the mine site to date?

This number will be supplied at a later date. Unfortunately, the plant information only goes back 24 months. As this question references the start of the permit (2009), the information request had to be made through our Birmingham staff. Someone is working on this request and as soon as I have it, this report will be updated.

6) How many vehicular trips of excavated materials have exited the site over the last twelve (12) calendar months?

All vehicular trips are based on an average truck load weight. Specific truck counts are not made, however, amount of material sold is maintained through scale records. The approximate truck count for January through December 2015 was $\pm 178,546$. Please note that all material processed and sold for this site is completed through Harper Bros., Inc. a wholly owned subsidiary of Florida Rock Industries, Inc. Harper Bros., Inc. is permitted under Stipulation of Settlement Case No. 85-4651CA.

I may be reached at the above telephone number should you need additional information.

Sincerely,



Lori Sanville

MORRIS

2891 Center Pointe Drive Unit 100 | Fort Myers, Florida 33916

DEPEW

Phone (239) 337-3993 | Toll Free (866) 337-7341
www.morris-depew.com

ENGINEERS · PLANNERS · SURVEYORS
LANDSCAPE ARCHITECTS

August 2, 2016

Benjamin H. Dickson
Development Services Manager
P.O. Box 398
Fort Myers, Florida 33902

**RE: LDO2006-00071 University Lakes/West Lakes (Youngquist Quarries) Mine
MDA 04113**

Dear Mr. Dickson:

The purpose of this letter is to provide a response to the Lee County Development Services review comments dated June 28, 2016 for the above-referenced case. We always appreciate interaction with Staff on matters related to this application and welcome additional calls and emails that will assist us to address all the concerns in the most efficient manner to the extent this request can be approved.

Comment/Condition:

1. *What is the nature of the excavated material (sand, limerock, etc.)*

Response:

The previously submitted monitoring reports characterized the material as aggregate and sand/overburden. The aggregate is limestone aggregate. The overburden is characterized as sand.

Comment/Condition:

2. *Of the total 244,725,888 cubic yards approved, what is the cumulative total cubic yards of extracted material to date?*

Response:

From 2004 through 2015, approximately 37,000,000 cubic yards of material has been processed.

Comment/Condition:

3. *How many cubic yards of material have been extracted over the last twelve (12) calendar months?*

Response:

Approximately 3,300,000 cubic yards of material was processed in the 2015 calendar year.

Comment/Condition:

4. *What is the anticipated quantity, in cubic yards, remaining or anticipated for extraction over the life of the mine?*

Response:

The anticipated quantity varies upon quality of material. It is estimated in that 207,000,000 CY of material is available to be excavated.

Comment/Condition:

5. *Are the volumes in items 1 through 4 expressed in pre or post-transport quantities?*

Response:

For items 1-3, quantities are post-transport. For item 4, the estimated volume is pre-transport.

Comment/Condition:

6. *What is the total number of vehicular trips of excavated material that have exited the mine site to date?*

Response:

Based on 37,000,000 cubic yards at 18.5 cubic yards per truck, approximately 2 million trucks with excavated material have exited the site since 2004.

Comment/Condition:

7. *How many vehicular trips of excavated materials have exited the site over the last twelve (12) calendar months?*

Response:

Based on 3,300,000 cubic yards for 2015 at 18.5 cubic yards per truck, approximately 178,500 trucks of excavated material have exited the site.

Please let us know if you have any questions or need additional documents.

Sincerely,

MORRIS-DEPEW ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read 'R. Shute', written in a cursive style.

Ryan M. Shute, P.E.

Vice President

Enclosure:

Cc: Richard Friday

RECEIVED
JUL 25 2016

COMMUNITY DEVELOPMENT

Inge & Associates, Inc.
Mining and Real Estate Consultants
5571 Halifax Ave.
Fort Myers, FL 33912
Phone: 239-454-4999 Fax: 239-454-2773
Email: ron@ingeandassociates.com

July 22, 2016

Mr. Benjamin H. Dickson
Development Services Manager
Lee County Department of Community Development
PO Box 398
Fort Myers, FL 33902-0398

RE: LDO2003-00403-Bell Road Mine

Dear Mr. Dickson:

This letter is in reply to your June 28, 2016 request for an annual monitoring report for the above referenced mine, copy attached.

Please also note that Ms. Abby Henderson and Mr. Lloyd Nixon, Lee County, performed an onsite inspection of the operation on Thursday, July 21, 2016.

The responses below are in the same order as the questions in your June 28, 2016 letter:

1. The material produced at the Bell Road Mine consists of fill dirt, perk sand and crushed limerock
2. The notation for 8,000,000 cubic yards as a limit on the Bell Road Mine is based on a drawing in the original LDO submittal. This drawing considered and estimated 1,000,000 cubic yards of material being removed from the site over an estimated life of 8 years. There is no limit on the amount of material that can be extracted in the approved zoning resolution for the property-Lee County Resolution Z-04-047. The limitation on the life of the mine was removed per Lee County Administrative Approval ADD2014-00172. Accordingly, under separate cover, we will be submitting an update to the drawings for the Bell Road Mine to reflect the current estimated material available on site.

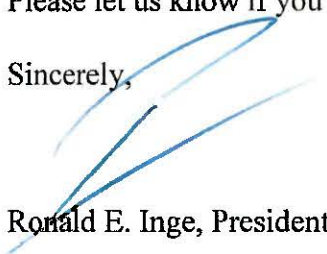
The mine has been through several owners over the last ten years, primarily as a result of the significant downturn in the local construction economy. Unfortunately, information concerning past activity is not available. Our best estimate is that less than 1,000,000 cyds of material have been removed from the site to date.



3. The mine was issued a Mine Operation Permit on April 4, 2016, MOP2016-00001. Operations began in May and through July 15, 2016, a total of 29,862 cyds of material have been removed from the site in the last 12 calendar months.
4. Approximately 15,000,000 cubic yards of material remain to be excavated based on an estimate of the remaining area to be excavated, and to the permitted depth of 40'.
5. The volumes contained in items 2 and 3 are in post-transport quantities. The estimate in item 4 is in pre-transport quantities.
6. The total trips since the operation re-opened in May are 1,659 through July 17, 2016. As noted in item 2, we do not have the information available for operations prior to the issuance of MOP2016-00001.
7. The number of trips, other than employees, that have exited the site since the mine was reopened total 1,659.

Please let us know if you need any further information.

Sincerely,



Ronald E. Inge, President

June 28, 2016

John Manning
District One

Cecil L. Pendergrass
District Two

Larry Klker
District Three

Brian Hamman
District Four

Frank Mann
District Five

Roger Desjarlais
County Manager

Richard Wm. Wesch
County Attorney

Donna Marie Collins
Hearing Examiner

Ron Inge
Inge and Associates
5771 Halifax Avenue
Fort Myers, FL33912

Re: LDO2003-00403
Bell Road Mine

Dear Mr. Inge:

In addition to periodic water quality monitoring, Chapter 12 of the Lee County Land Development Code (LDC) and specific approvals to extract materials requires the submittal of annual monitoring reports on mine progress [see §12-118 of the LDC] as well as cumulative five year reports. Records pertaining to the above-referenced mining approval do not reflect consistent submittal of required data for the mine operation. Accordingly, please provide the following information for the preceding twelve (12) month period and a cumulative total over the life of the mine to date. If the mining operation has not yet begun, please respond with zero to each of the requested data elements.

1. What is the nature of the excavated material (sand, limerock, etc.)
2. Of the total 8,000,000 cubic yards approved, what is the cumulative total cubic yards of extracted material to date?
3. How many cubic yards of material have been extracted over the last twelve (12) calendar months?
4. What is the anticipated quantity, in cubic yards, remaining or anticipated for extraction over the life of the mine?
5. Are the volumes in items 1 through 4 expressed in pre or post-transport quantities?
6. What is the total number of vehicular trips of excavated material that have exited the mine site to date?
7. How many vehicular trips of excavated materials have exited the site over the last twelve (12) calendar months?

I may be reached at the above telephone number should you need additional information.

Sincerely,



Benjamin H. Dickson
Development Services Manager

CHARLOTTE Co ANNUAL MINE COUNTY MONITORING REPORT
 SOURCE: CHARLOTTE Co DEPT OF COMMUNITY DEVELOPMENT

Group III Active Permits										
Permit #	Project Name	Location	Permitted Date	Explr. Date	Site Acreage	Exc. Acreage	Cu. Yds. Approved	Cu. Yds. Remaining as of 12/2012	Expected to remove in 2013	Product
99-EX-07	Superior Groves	SR 31 n of CR 74	11/12/2002	11/12/2012	66	27	1,000,000	0,000,000	0	Expired but in use by 04-EX-13
00-EX-12	Highland County	E of SR 31	08/28/2001	7/18/2016	103	69	2,000,000	126,593	50,000	Shell
01-EX-05	Three Lakes (Coral Rock)	Cook Brown Rd.	04/01/2002	02/11/2012	757	491	3,664,623	36,134	0	Sand, limestone & rock
01-EX-06	C & S Shell (Panther)	Farabee e of SR31	05/28/2002	5/28/2014	118	99	2,626,000	1,438,700	50,000	Shell, sand, gravel
01-EX-07	Jay Rock Mine	Cook Brown Rd.	11/21/2006	11/21/2016	320	194	12,600,000	11,354,637	150,000	Overburden & rock
02-EX-07	Charlotte County Mine	US 41 at Lee Co. line	07/29/2003	06/19/2014	1,031	421	8,200,000	4,064,852	812,970	(FDOT)
04-EX-10	Williams Farm South	Neal Road	02/23/2007	02/28/2015	1,120	100	6,500,000	4,357,800	0	Fill & Shell
04-EX-13	Florida Shell & Fill Co.	SR 31 n of CR 74	08/04/2005	08/14/2015	100	85	4,392,000	1,963,893	250,000	Fill & Shell
05-EX-24	Catalpa Excavation	1150 Duncan Rd	05/29/2007	05/29/2017	35	14	375,000	375,000	0	
05-EX-25A	Infinity Lakes	Bermont Rd	10/19/2006	10/18/2016	569	301	17,000,000	16,409,845	0	
06-EX-21	American Citrus Lake #1	Neal Road	05/07/2008	05/07/2018	600	39	1,686,352	1,686,352	0	Fill dirt, top soil & shell
06-EX-29T	Mirror Lakes	39020 Wash. Loop	12/05/2006	12/04/2016	197	58	4,600,000	2,928,000	40,000	Fill dirt
06-EX-46	Char. Grove Exc. (TRB)	1451 SR 31	09/10/2007	09/10/2014	99	68	1,923,000	1,613,800	350,000	Fill dirt
07-EX-03	R & D Cattle	Bermont Road	05/08/2008	04/08/2019	1,248	292	11,846,428	11,846,428	0	Fill dirt, top soil & shell
07-EX-06	Farabee Mine	45030 Farabee Rd.	07/02/2007	07/27/2014	138	102	4,330,000	3,699,202	100,000	overburden, shell, sand
07-EX-07	Coral Rock	38211 Cook Brown	01/13/2009	01/12/2019	1,015	267	14,900,000	14,900,000	0	Shell, rock, sand
07-EX-08	Wright Shell	e SR31	07/14/2009	06/03/2020	916	408	16,069,000	16,069,000	0	
07-EX-09	Hall's Bermont	40551 Bermont	04/10/2009	04/09/2019	8,000	50	2,015,000	1,965,000	50,000	Fill dirt
07-EX-12	South Loop	Wash. Loop	07/22/2009	07/22/2019	277	50	4,600,000	4,586,738	30,000	
07-EX-15	Waterside	31550 Bermont	06/22/2010	06/22/2020	595	73	3,227,259	3,227,259	0	
07-EX-34	Quality Materials	14400 Robin Road	12/19/2008	11/10/2019	395	113	3,681,000	2,499,212	50,000	Fill dirt
08-EX-06	Triple D	38700 Wash. Loop	02/09/2010	02/09/2020	108	62	3,800,000	3,800,000	0	
07-EX-16	Earthsource (Babcock)	SR 31	07/06/2011	05/09/2022	3,471	126	28,000,000	27,754,562	250,000	
07-EX-20	Charlotte County Mine Phase 4	16450 Tamiami Trail	10/05/2011	02/22/2022	136	43	1,600,000	1,600,000	0	
07-EX-47	Watermelon Pit	2000 SR 31	10/18/2010	10/18/2020	40	35	1,600,000	1,600,000	177,777	
10-EX-01	Bermont Lakes	Bermont Road, west of SR 31	01/13/2012	12/05/2022	161	58	2,719,868	2,719,868	0	
Totals					21,615	3,647	164,955,530	102,495,421	1,047,777	

Expiration date of Phase 3C only was extended by approval of O7-EX-20; The original permitted 02-EX-18 & 06-EX-29T Mirror Lakes combo 4,600,000
 07-EX-16 closed out 01-EX-03 and included the remainder of that area in the new permit

40390 Horseshoe Road
Punta Gorda, Florida 33982
January 6, 2014

Florida Department of Environmental Protection
Bureau of Mining and Minerals Regulation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Received
FDFD
JAN 16 2014

Attn: Mr. Alan Whitehouse

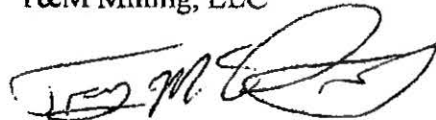
**Re: 2012/2013 Annual Excavation Activity Status Report
Charlotte County Permit No. 07-EX-09
Hall Bermont Pit: S 2, T 41 S, R 26 E**

Dear Mr. Whitehouse:

Enclosed please find a copy of the 2012/13 Annual Excavation Activity Status Report for your review. This report was submitted to Mr. Jay Drew, Excavations Coordinator of the Charlotte County Government, Community Development Department, Excavation & Earthmoving Division on December 30, 2013.

Should you require additional information, please contact me at (239) 462-8907.

Sincerely,
T&M Mining, LLC



Troy McDonald

HALL BERMONT PIT

PERMIT #07-EX-09

40390 Horseshoe Road
Punta Gorda, Florida 33982
December 27, 2013

Mr. Jay Drew, Excavation Coordinator
Charlotte County Government
Community Development Department
Excavations Division
18400 Murdock Circle
Port Charlotte, Florida 33948

COPY

Received
FDFD
JAN 16 2014

**RE: 2012/2013 Excavation Activity Status Report
Hall Bermont Pit; Permit No. 07-EX-09 (Excavation Group III)
Location: Section 2, Township 41 South, Range 26 East**

Dear Mr. Drew:

Enclosed please find the 2012/13 Annual Excavation Activity Status Report for the Hall Bermont Pit. Also enclosed is a check in the amount of \$1,250.00 for the annual activity status report fee for a Group III mining operation.

The following is submitted to fulfill the annual excavation activity status report requirement from October 1, 2012 through October 1, 2013 for the above referenced site location in accordance with the requirements of Charlotte County Ordinances 2003-003 and 2007-054.

The Hall Bermon Pit is located within the ±8,000 acre Hall Ranch. The project area is located in Section 2, Township 41 South, Range 26 East, Charlotte County on the south side of Bermont Road approximately 1 mile west of State Road 31 and contains one completed and reclaimed excavation pit (Pit #1) and one existing pit (Pit#2).

HALL BERMONT PIT

PERMIT #07-EX-09

RECEIVED
DFPD
JAN 1 8 2016

As permitted in the Environmental Resource Permit No. 44008676.004, approximately 2,015,000 cubic yards (CY) are proposed to be mined over a 10 year period. The estimated peak average volume of material to be excavated in a year is 225,000 CY.

Excavation occurred in Pit#2 during the 2012/2013 reporting period, for a total removal of 46,613 tons (35,047 CY) of material.

The permittee plans to continue excavation activities in 2013/2014, which is estimated to total 50,000 tons (37,593 CY).

The permittee has been in compliance with all conditions of the existing permit and has not experienced any problems during the 2012/2013 reporting period. Charlotte County staff has inspected the site within the past year, and no concerns were raised regarding permitted operations or compliance. As of this date, reclamation activities have not yet commenced.

Should you have any questions or comments regarding this submittal, please do not hesitate to contact me at 239-462-8907.

Sincerely,
Hall Bermont Ranch

Lewshane Hall
Permit Holder

CC: Diane Clim

Permit # 07-EX-09 Excavation Name Hall Bermont Pit

Received
FDFD
JAN 16 2014



**Charlotte County
Community Development Department, Excavations Division
2012/2013 Excavation Activity Status Report**

Per Ordinances 2003-003 and 2007-054, this report, along with the fee, is to be filed on or before December 31, 2013. The report must include all activity from October 1, 2012 through October 1, 2013. Failure to submit this report may result in suspension of the permitted activities.
Make all checks payable to Charlotte County Board of County Commissioners or CCBC

Activity Status Report Fees:
Group II and IV: \$1,200
Group III: \$1,250

- 1. Excavation Name: Hall Bermont Pit
- 2. Permit Number: 07-EX-09 Permit Expiration Date: 04-09-2019
- 3. Permittee: William Lewshane Hall

4. Provide current contact information for the Permittee:

Name Wm. Lewshane Hall Phone Number (239) 462-8907
 Address 40390 Horseshoe Road
 City Punta Gorda State FL Zip Code 33982
 Fax number: (239) 543-2010
 E-mail address fmmining@reagan.com

5. Place a check mark next to the item below which best describes this project:
- N/A Excavation activity related to this project is complete. Closure documentation will be submitted.
 - N/A Excavation activity has ceased and will not resume. Closure documentation will be submitted. A new application will be filed if excavation is to resume.
 - N/A Excavation has been temporarily halted, but is expected to resume in accordance with the permit.
- Amount of material removed during reporting period _____ cu. yd.
 Approximate amount of material removed to date _____ cu. yd.
 Remaining amount of material _____ cu. yd.
 Number of truckloads during reporting period _____

Continued on next page...

Permit # 07-EX-09 Excavation Name Hall Bermont Pit

Excavation progressing as planned.
Amount of material removed during reporting period 35,047 cu. yd.
Approximate amount of material removed to date 85,047 cu. yd.
Remaining amount of material 1,864,953 cu. yd.
Number of truckloads during reporting period N/A

Received
FDFD
JAN 1 6 2014

6. Attach a narrative summarizing the Excavation and Reclamation progress to date. The narrative shall include, at a minimum, the following:

- All activity performed at the site during the reporting period.
- Compliance with all conditions of the permit.
- Any non-compliance with conditions of the permit.
- Document any Reclamation that has been completed and how this activity meets or does not meet the plans supplied by the applicant and approved by the Excavation Administrator.

7. Operating Hours and Days:
Begin 7:00 a.m. End 5:00 p.m. Monday thorough Friday
State any Saturday hours: Begin 7:00 a.m. End 12:00 p.m.
State hour first truck enters site: Begin 6:30 a.m. Last truck leaves site at 5:00 p.m.

8. Amount of material planned to be excavated during next reporting period 37,593 cu. yd.

9. Percentage of excavated material of total approved cu. yds. remaining 93 %

10. Note dates of expiration of all permits associated with excavation activity.
SWFWMD 01/12/2021 Army Corps of Engineers _____
DEP _____ Other (identify) _____

11. Other - Please Explain N/A

12. Number of truckloads exiting the site during the reporting period N/A
Roadway Service Life Reduction Fee: copies of truck tickets. Attach separate check, made out to the Charlotte County Board of County Commissioners, for \$1 per truckload.

13. Reclamation Bond # SEE ATTACHED
Reclamation Bond Amount _____
Date Reclamation Bond expires _____

14. Applicant must submit an As-Built drawing, signed and sealed by a professional engineer, showing current status of the site.

SEE ATTACHED

Permit # 07-EX-09 Excavation Name Hall Bermont Pit

Person submitting this form: Owner Agent Engineer Attorney

Received
FDFD


SWORN STATEMENT

I, the undersigned, being first duly sworn, depose and say that I am empowered to submit this Annual Report, that I have supplied all updated information required by this report form, and that such information is true and accurate to the best of my knowledge.

STATE OF FLORIDA, COUNTY OF CHARLOTTE

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ who is personally known to me or has/have produced as identification and who did/did not take an oath.

Notary Public Signature


Signature of person supplying information

Notary Printed Signature

Troy McDonald
Printed Signature

Pres.
Title

40390 Horseshoe Road
Address

Commission Code

Punta Gorda, FL 33982
City, State, Zip

(239) 462-8907
Telephone Number

If the person submitting this form is not the engineer, the engineer must complete the following information.

ENGINEER'S CERTIFICATION

I certify all information provided is accurate, and that the As-Built certification has been conducted in accordance with the permit provisions, including the excavation plans.

Signed by Professional Engineer _____

Printed Name _____

Firm Name _____

Phone Number _____

Address _____

Continued on next page...







Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road MS 3577
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

January 3, 2017

Mr. Lewshane Hall
40380 Bermont Road
Punta Gorda, FL 33982
Email: lewshanehall@hotmail.com

**RE: Hall Bermont Pit, 2016 Annual Report Deemed Complete
File # MMR_315828, Charlotte County**

Dear Mr. Hall:

The 2016 Annual Report for Hall Bermont Pit was received by the Florida Department of Environmental Protection (Department) on December 30, 2016. In accordance with Chapter 120, Florida Statutes, this letter serves as notification that the 2016 Annual Report is hereby deemed complete by the Department. Noting that no reclamation activities have begun in the active pit as excavation is still ongoing.

If you have any questions or comments, please contact me at (850) 245-7569 or Laura.Kellam@dep.sate.fl.us.

Sincerely,

A handwritten signature in cursive script that reads "Laura Kellam".

Laura Kellam
Environmental Specialist
Mining and Mitigation Program
Florida Department of Environmental Protection

CC (email): Julie and Troy McDonald, T&M Mining, LLC, tmmining@reagan.com

HALL BERMONT PIT

PERMIT #07-EX-09

40390 Horseshoe Road
Punta Gorda, Florida 33982
December 21, 2016

Charlotte County Government
Zoning Department
Excavations Division
18400 Murdock Circle
Port Charlotte, Florida 33948

ATTN: Ms. Beth Reed, Excavations Coordinator

**RE: 2015/2016 Annual Excavation Activity Status Report
Hall Bermont Pit; Excavation Permit No. 07-EX-09
Permittee: M. Lewis Hall Protective Testamentary Trust**

Dear Ms. Reed:

Enclosed please find the 2015/16 Annual Excavation Activity Status Report for the Hall Bermont Pit. The Annual Excavation Activity Status Report Fee in the amount of \$1,250.00 for a Group III mining operation will be sent under separate cover by the Permittee.

The following is submitted by T&M Mining, LLC on behalf of the Permittee to fulfill the Annual Excavation Activity Status Report requirement from October 1, 2015 through October 1, 2016 for the above referenced site location in accordance with the requirements of Charlotte County Ordinance 2014-031, Section 3-5-478.

The Hall Bermont Pit is located within the ±8,000 acre Hall Ranch. The project area is located in Section 2, Township 41 South, Range 26 East, Charlotte County on the south side of Bermont Road approximately 1 mile west of State Road 31.

As permitted in the Environmental Resource Permit No. 44008676.004, approximately 2,015,000 cubic yards (CY) are proposed to be mined over a 10 year period. The estimated peak average volume of material to be excavated in a year is 225,000 CY.

Excavation occurred during the 2015/2016 reporting period, for a total removal of 138,325 tons (98,804 CY) of material. This is the last Annual Excavation Activity Status Report to be submitted by T&M Mining, LLC on behalf of the Permittee per the conclusion of our 5 year lease.

HALL BERMONT PIT

PERMIT #07-EX-09

The Permittee has been in compliance with all conditions of the existing permit and has not experienced any problems during the 2015/2016 reporting period. The site has been inspected by various agencies within the past year, and no concerns were raised regarding permitted operations or compliance. As of this date, reclamation activities have not yet commenced.

Please be advised that T&M Mining, LLC has completed its contract lease for mining rights with the Permittee as of October 9, 2016 and has opted to not renew at this location. T&M Mining, LLC will no longer be associated with any excavation activities on Hall's Ranch at the Hall Bermont Pit.

Please be advised that T&M Mining, LLC will no longer be the excavation contractor on site as of October 10, 2016. We have no knowledge of the permittee's plans to continue excavation activities in 2016/2017.

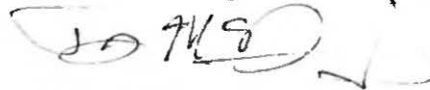
Should you have any questions or comments regarding this submittal, please do not hesitate to contact me at 239-462-8907.

Any future concerns regarding excavation after October 9, 2016 may be directed to the permittee, Mr. Lewshane Hall at 941-575-1100.

It has been a pleasure to work with you in association with the excavation activities at this location.

Thank you very much.

Sincerely,
T&M Mining, LLC



Troy McDonald
Manager

CC: M. Lewis Hall Protective Testamentary Trust, Permittee
Ms. Laura Kellum, FDEP
Ms. Andrea Hughes, SWFWMD

Permit # 07-EX-09 Excavation Name Hall Bermont Pit.



**Charlotte County
Community Development Department, Excavations Division
2015/2016 Excavation Activity Status Report**

Per Ordinance 2014-031, this report, along with the fee, is to be filed on or before December 31, 2016. The report must include all activity from October 1, 2015 through October 1, 2016. Failure to submit this report may result in suspension of the permitted activities.

Make all checks payable to Charlotte County Board of County Commissioners or CCBC

Activity Status Report Fees:

Group II/Standard - \$1,200

Group III/Commercial/Specific - \$1,250

1. Excavation Name: Hall Bermont Pit
2. Permit Number: 07-EX-09 Permit Expiration Date: 4/09/19
3. Permittee: M. Lewis Hall Protective Testamentary Trust
4. Provide current contact information for the Permittee:
 Name Lewshane Hall Phone Number 941-575-1100
727-743-6669 cell
 Address 40380 Bermont Road
 City Punta Gorda State FL Zip Code 33982
 Fax number: 941-575-1115
 E-mail address lewshanehall@hotmail.com
5. Place a check mark next to the item below which best describes this project:

Excavation activity related to this project is complete. Closure documentation will be submitted.

Excavation activity has ceased and will not resume. Closure documentation will be submitted. A new application will be filed if excavation is to resume.

Excavation has been temporarily halted, but is expected to resume in accordance with the permit.

Amount of material removed during reporting period	<u>98,804</u>	cu. yd.
Approximate amount of material removed to date	<u>276,982</u>	cu. yd.
Remaining amount of material	<u>1,738,018</u>	cu. yd.
Number of truckloads during reporting period	<u>N/A</u>	

Continued on next page...

Permit # 07-EX-09 Excavation Name Hall Bermont Pit

Excavation progressing as planned.
 Amount of material removed during reporting period _____ cu. yd.
 Approximate amount of material removed to date _____ cu. yd.
 Remaining amount of material _____ cu. yd.
 Number of truckloads during reporting period _____

6. Attach a narrative summarizing the Excavation and Reclamation progress to date. The narrative shall include, at a minimum, the following:

- All activity performed at the site during the reporting period.
- Compliance with all conditions of the permit.
- Any non-compliance with conditions of the permit.
- Document any Reclamation that has been completed and how this activity meets or does not meet the plans supplied by the applicant and approved by the Excavation Administrator.

7. Operating Hours and Days:

Begin 7:00 a.m. End 5:00 p.m. Monday through Friday
 State any Saturday hours: Begin 7:00 a.m. End noon p.m.
 State hour first truck enters site: Begin 6:30 a.m. Last truck leaves site at 5:00 p.m.

8. Amount of material planned to be excavated during next reporting period unknown cu. yd.

9. Percentage of excavated material of total approved cu. yds. remaining 86 %

10. Note dates of expiration of all permits associated with excavation activity.

SWFWMD WUP 01/12/21 Army Corps of Engineers _____
 DEP _____ Other (identify) SWFWMD ERP 11/19/17

11. Other – Please Explain T+M Mining, LLC will no longer be the site contractor as of 10/10/16. We have no knowledge of the Permittee's plans to continue excavation activities in 2016-2017.

12. Number of truckloads exiting the site during the reporting period N/A
Roadway Service Life Reduction Fee: copies of truck tickets. Attach separate check, made out to the Charlotte County Board of County Commissioners, for \$1 per truckload.

13. Reclamation Bond # SEE ATTACHED
 Reclamation Bond Amount _____
 Date Reclamation Bond expires _____
 ** Provide a copy of current Bonds

14. Applicant must submit an As-Built drawing, signed and sealed by a professional engineer, showing current status of the site.

SEE ATTACHED

Appendix C

Lee Co. Lime Rock Supply and Demand Evaluation

Appendix C.1

The Rinkler Materials 3A & 3B (CEMEX Alico) Mine

Appendix C.1

The Rinkler Materials 3A & 3B (CEMEX Alico) Mine



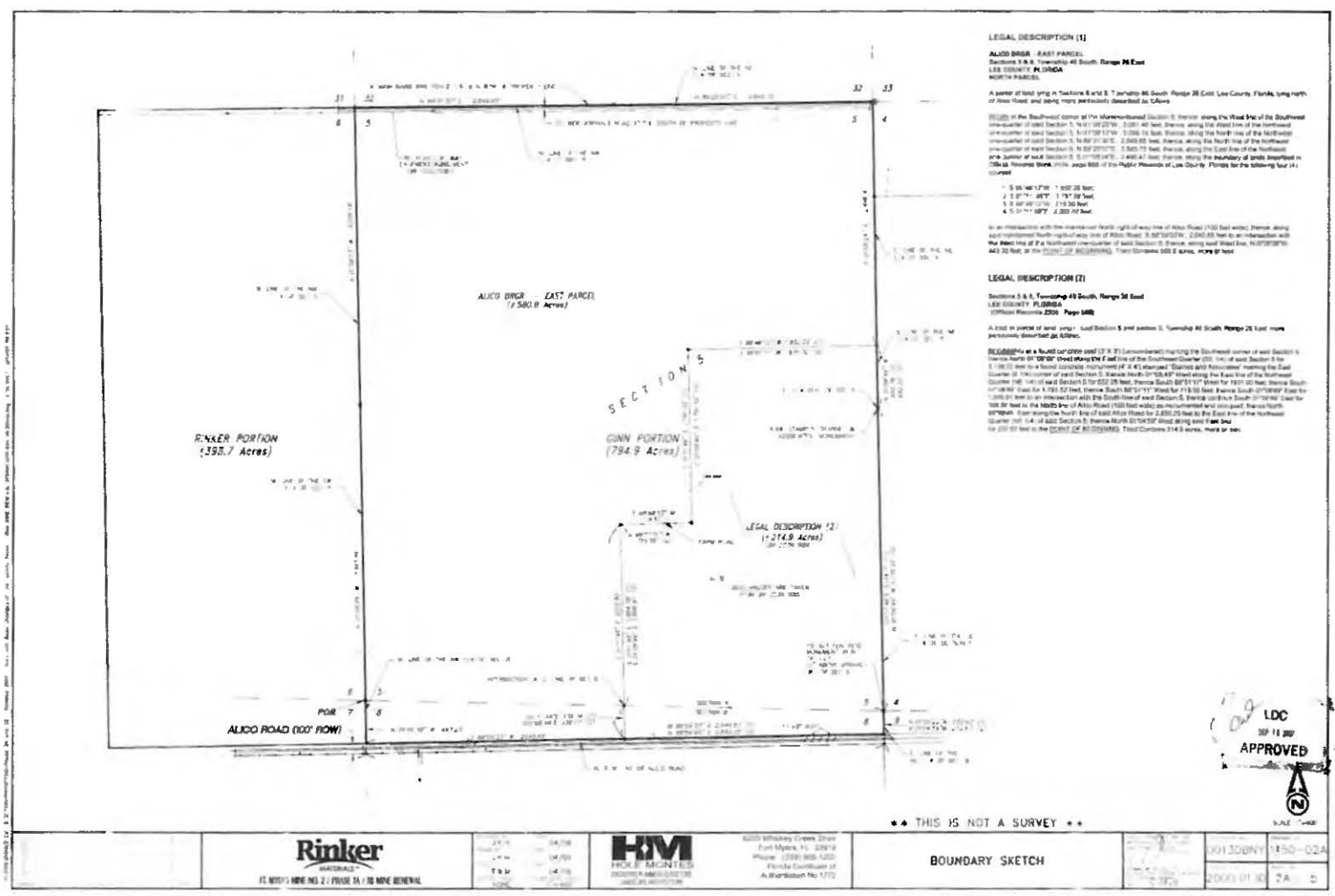
Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extraction To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Rinkler Materials 3A & 3B (1) CEMEX Alico Quarry SEZ2000-00034 LDO2007-00214	503	36,517,800	10,559,266	3,236,346	2,589,077	17	45	45	15,000,000	8,800,000	0.7	6,160,000	4,928,000

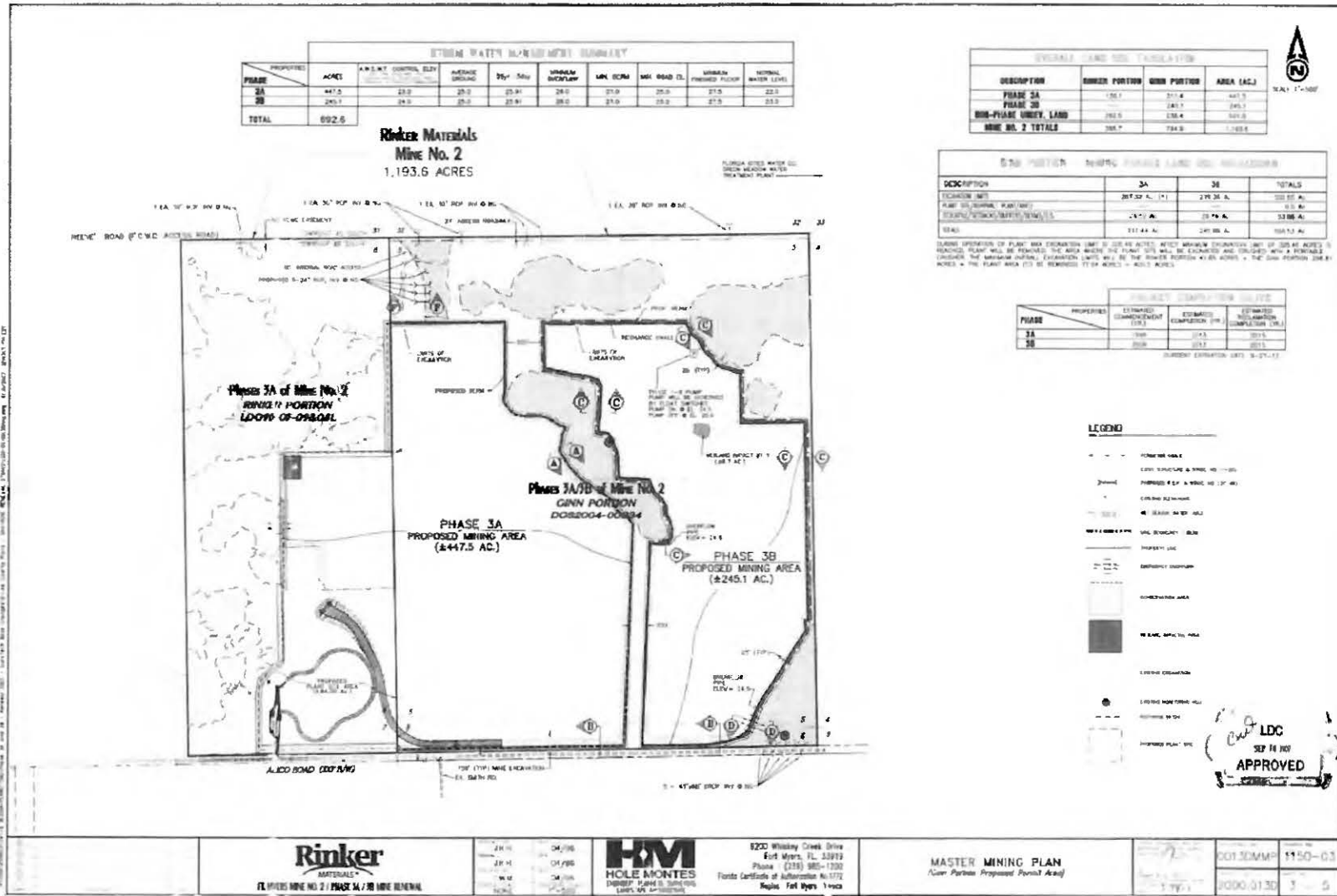
Note 1: Rinkler 3A & 3B estimates based on 08/08/16 CEMEX Monitoring Report (LDO 2007-00214); 30% overburden & 45-ft. average lime rock thickness derived from R. A. Kirkner and Associates Soil Profile (1 sample) (SEZ2000-00034).

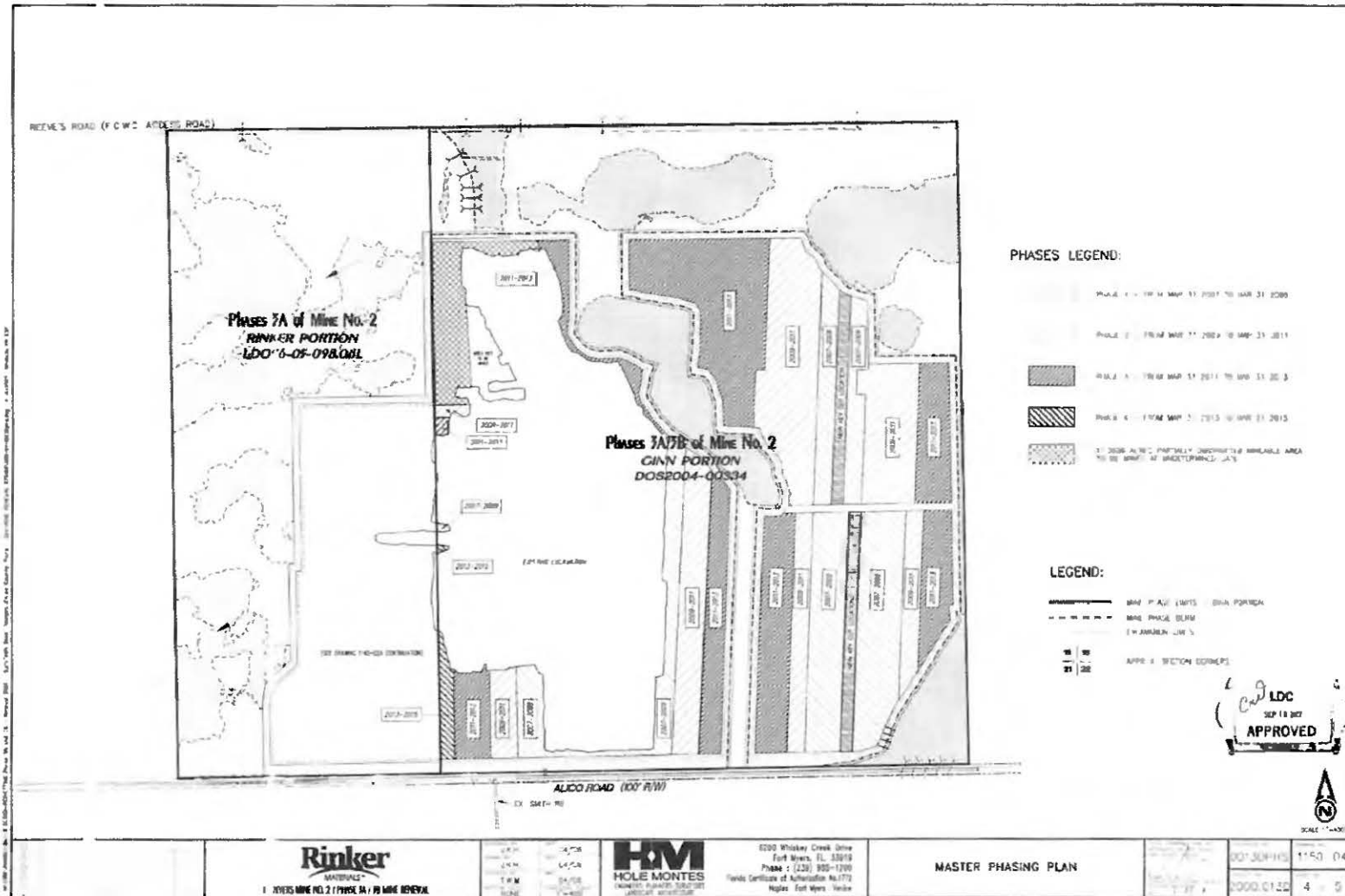
Rinker Materials 3A & 3B
 CEMEX Alico Quarry _ Lee Co.

	Project Area	Mine Acres		
Site Area	1194	503		
C.Yd. of Excavation Authorized	36,517,800			
	Regulatory	Waldrop 09/16 Actual Limerock	Thickness	%
	Depth	Est. Limerock	(09/17 Stuart)	Difference
Mine Depth	45	17	45	264.7%
Waldrop Study 09/16				
Est. Limerock Excavation To-date (2015)	10,559,266 C.Yd.			
Est. Limerock Remaining (Pre-excavation)	3,236,346 C.Yd.			
Est. Limerock (Post-excavation)	2,589,077 C.Yd.			
Lee Co. Mine Monitoring Reports/Stuart 09/17				
Mine Monitoring Reports Excavation To-date (2015)	15,000,000 C.Yd.			
Correct Limerock Remaining (As Per Monitoring Rep	8,800,000 C.Yd.			
Overburden Adjustment Coefficient	0.7			
Corrected Limerock Remaining (Pre-excavation)	6,160,000 C.Yd.			
Corrected Limerock Remaining (Post-excavation)	4,928,000	C.Yd.	190.3%	

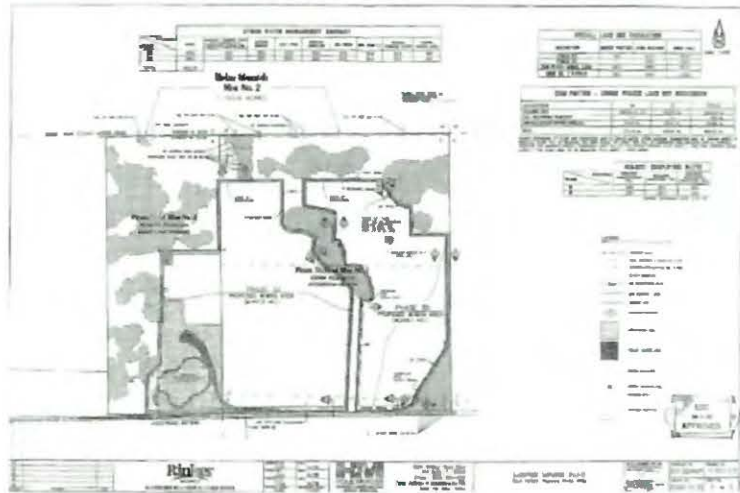
The Rinkler Materials 3A & 3B (CEMEX Alico) Mine Plans



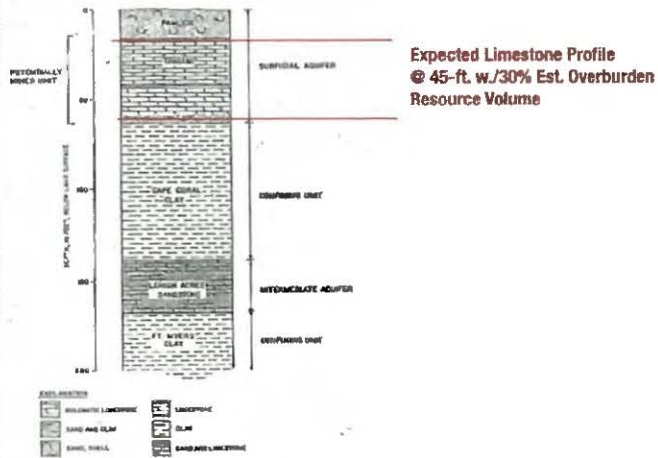




Rinkler Materials 3A & 3B (CEMEX Alico) Mine __ Geotechnical Data



Rinkler Materials 3A & 3B Generalized Hydrostratigraphic Profile In The Vicinity of Florida Rock Mine
 Figure 2; R. A. Kirkner and Associates. SEZ2000-00034

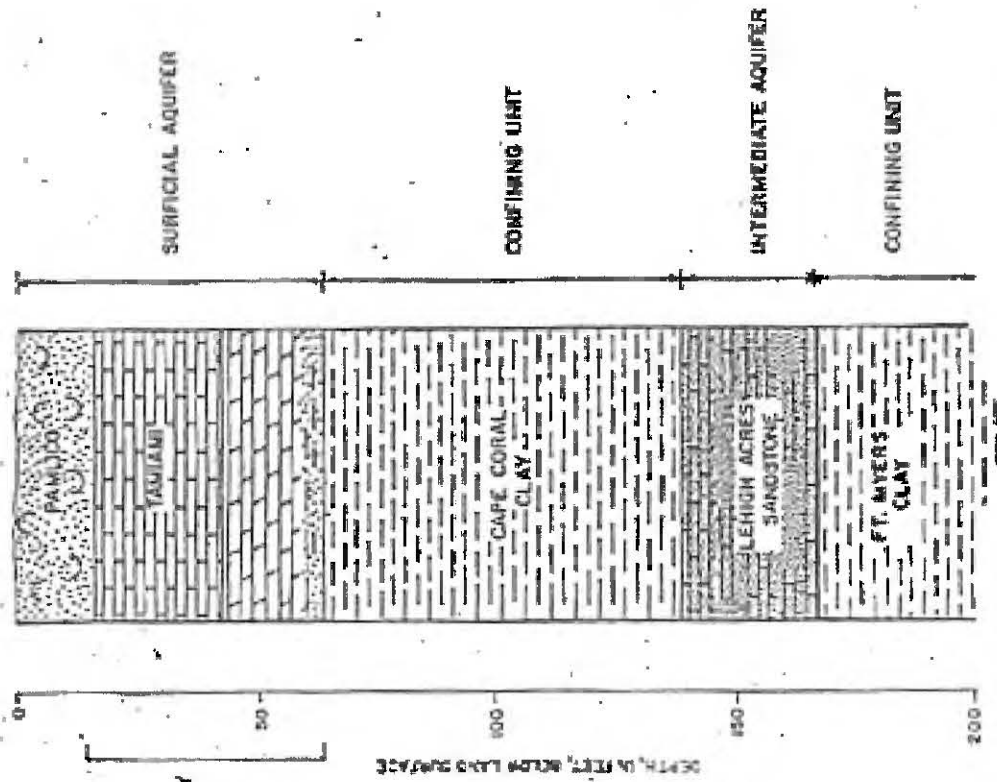


Source: Hole Montes and Associates, LDO2007-00214

Stuart and Associates Greg@Stuartbandesign.com www.stuartbandesign.com

Rinker Materials 3A & 3B SEZ2000-00034

<u>Core ID #</u>	<u>Limestone Core Percentage Resource Depth Overburden</u>	
<u>1</u>	45	0.3



EXPLANATION

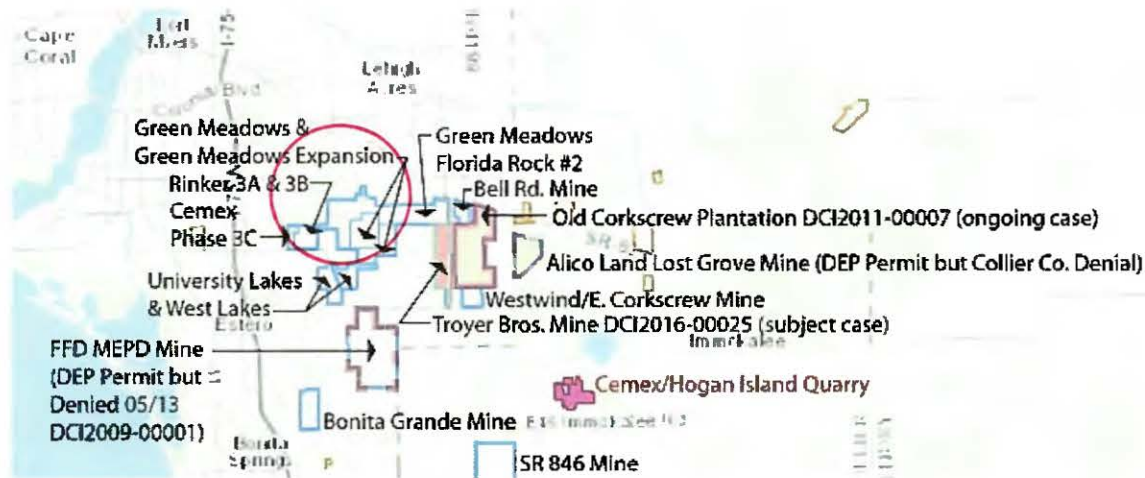
	WOLFRATIC LIMESTONE		LIMESTONE
	SAND AND CLAY		CLAY
	SAND, SHELL		SAND AND LIMESTONE

Appendix C.2

The Green Meadows/Harper Bros. FL Rock Mine

Appendix C.2

The Green Meadows/Harper Bros. FL Rock Mine



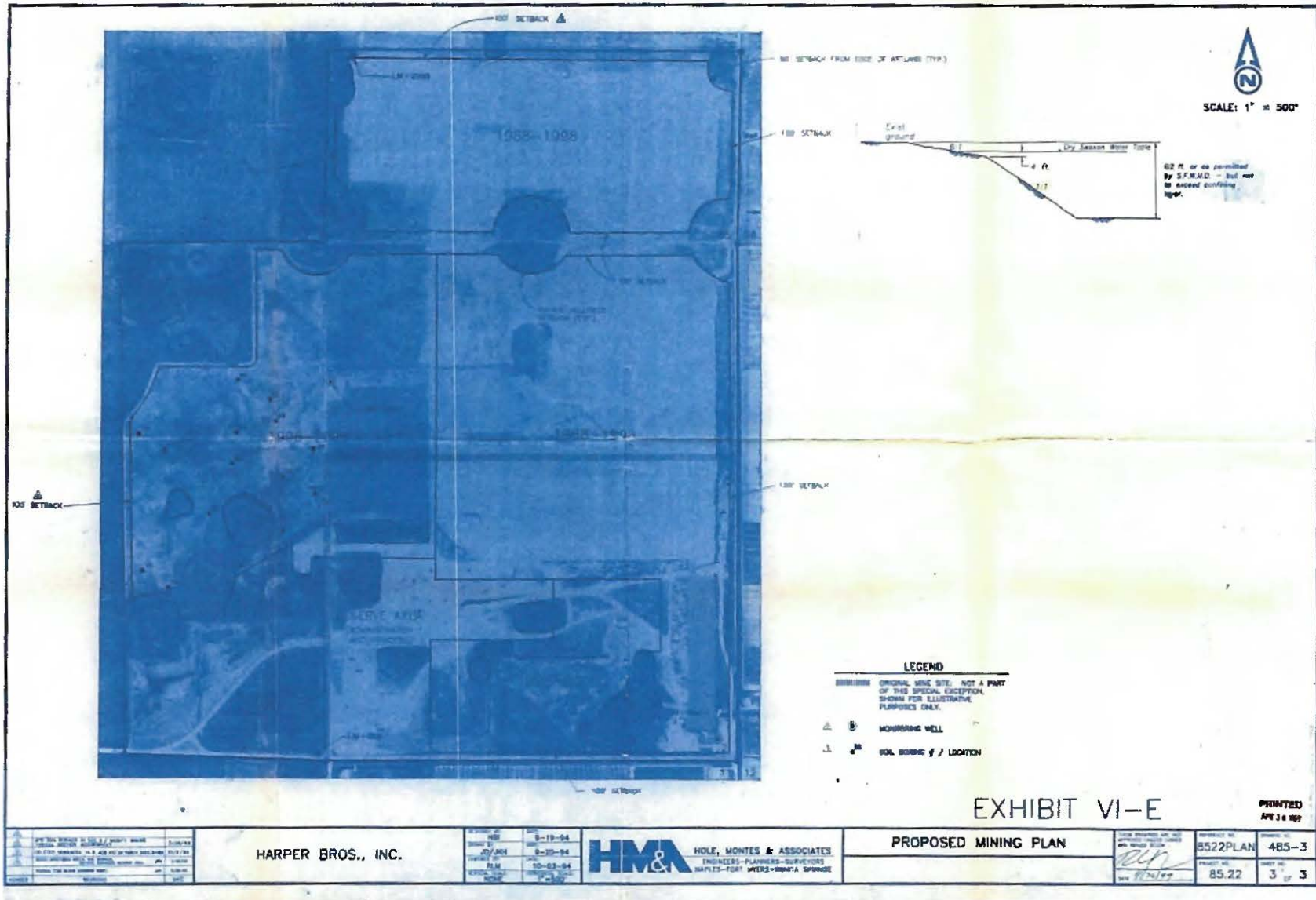
Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note #12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Green Meadows/Harper Bros. FL Rock (2) 99-05-243.06S LDO 97-05-073.08 LDO2006-00055 & DCI2005-00105	1075	107,651,279	27,830,000	15,528,333	12,422,666	25	62	45.8	62,115,108	45,536,171	0.74	33,696,767	26,957,413

Note 2: Green Meadows/Harper Bros. estimates based on 08/15/16 Vulcan Monitoring Report (LDO 97-05-073.08); 26% average overburden & 45.8-ft. average lime rock thickness derived from Harper Bros. 13 soil profiles (99-05-243.06S).

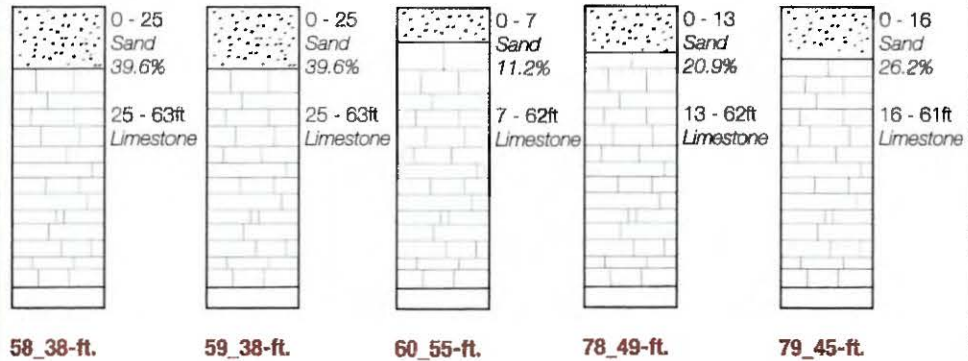
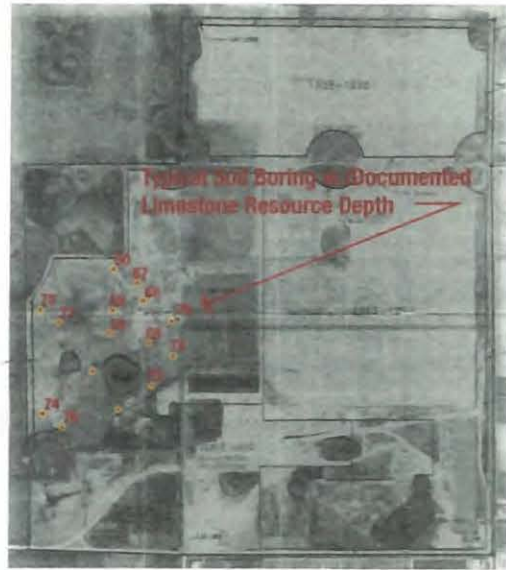
Green Meadows (Harper Bros./FL Rock) _ Lee Co.

Site Area	Project Area	Mine Acres		
	1521	1075		
C.Yd. of Excavation Authorized	107,651,279			
	Waldrop 09/16 Actual Limerock			
	Regulatory	Est. Limerock	Thickness	%
	Depth	Thickness	(09/17 Stuart)	Difference
Mine Depth	62	25	46	183.1%
Waldrop Study 09/16				
Est. Limerock Excavation To-date (2015)	27,830,000 C.Yd.			
Est. Limerock Remaining (Pre-excavation)	15,528,333 C.Yd.			
Est. Limerock (Post-excavation)	12,422,666 C.Yd.			
Lee Co. Mine Monitoring Reports/Stuart 09/17				
Mine Monitoring Reports Excavation To-date (2015)	62,115,108 C.Yd.			
Correct Limerock Remaining (As Per Monitoring Rep	45,536,171 C.Yd.			
Overburden Adjustment Coefficient	0.74			
Corrected Limerock Remaining (Pre-excavation)	33,696,767 C.Yd.			
Corrected Limerock Remaining (Post-excavation)	26,957,413	C.Yd.	217.0%	

The Green Meadows/Harper Bros. FL Rock Mine Plan

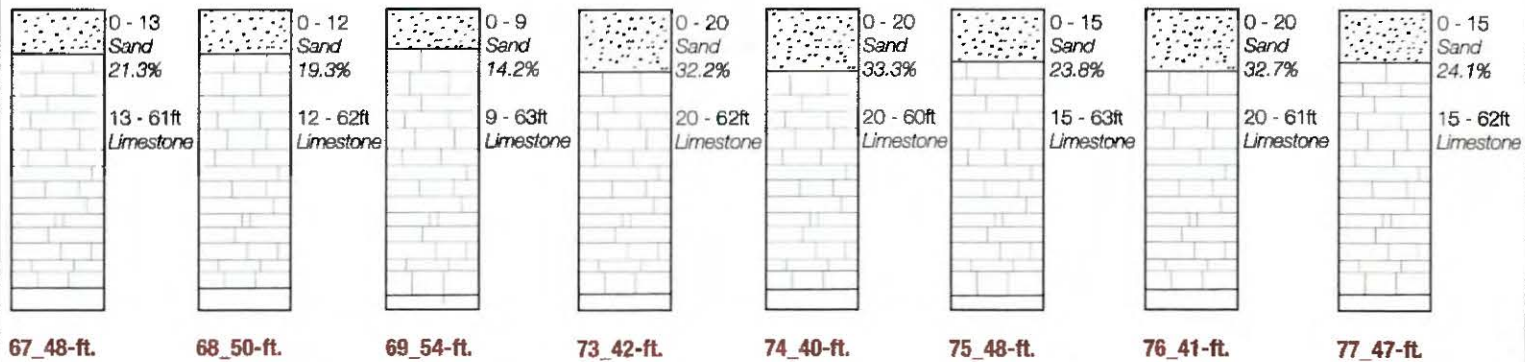


The Green Meadows/Harper Bros. FL Rock Mine _ Geotechnical Data



Proposed Mining Plan, Soil Borings For The Alico Quarry; Harper Bros. Inc. 01/07/1999

Note: Average Limerock Resource Core Depth @ 45.8-ft. w./26% Overburden



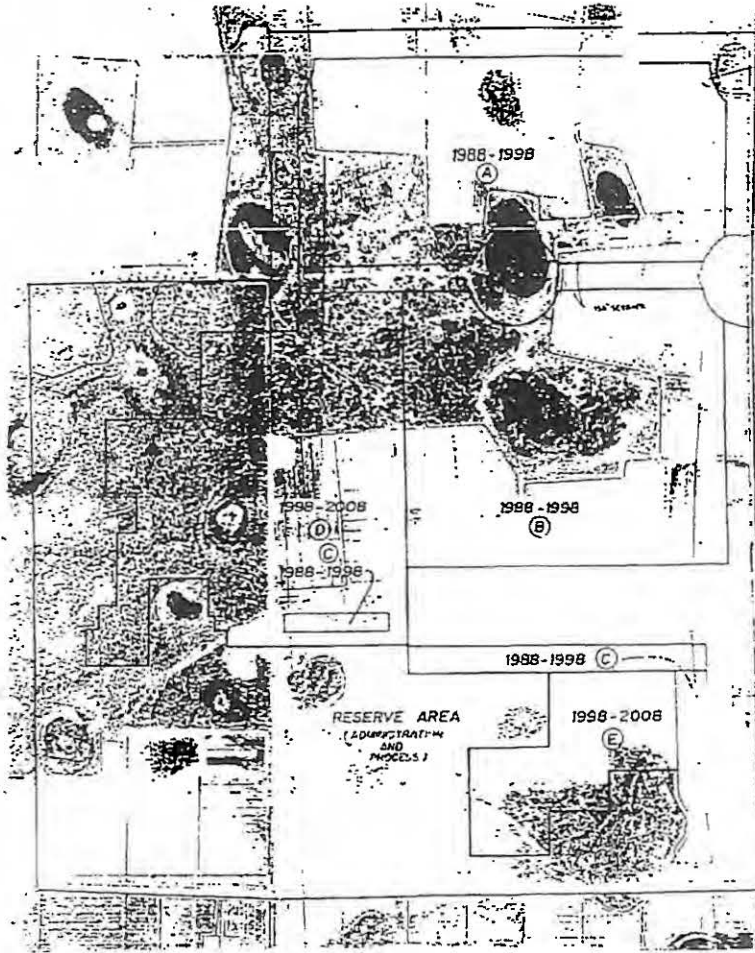
Source: Harper Bros., Inc., Ex. VI-E Green Meadows Mine; Hole, Montes and Associates, Inc. 10/03/1994 _ 99-05-243.06S

Green Meadows (Harper Bros/FL Rock) 99-05-243.06S Soil Borings

Core ID #	Limestone Core Percentage	
	Resource Depth	Overburden
#58	38	40%
#59	38	40%
#60	55	11%
#67	48	21%
#68	50	19%
#69	54	14%
#73	42	32%
#74	40	33%
#75	48	24%
#76	41	33%
#77	47	24%
#78	49	21%
#79	45	26%

Total # Cores	13
Average Depth	45.8
Average Overburden %	0.26

9061019



SECTION 1
 THE WEST PORTION OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, AND THE EAST PORTION OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, AND THE WEST PORTION OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, BEING 31.4 ACRES, MORE OR LESS.

SECTION 2
 THE WESTPORT QUARTER OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, AND THE WEST PORTION OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, BEING 160.0 ACRES, MORE OR LESS.

SECTION 3
 THE EAST PORTION OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, AND THE EAST PORTION OF SECTION 2, TOWNSHIP 28 NORTH, RANGE 45 WEST, BEING 160.0 ACRES, MORE OR LESS.

APPLICATION FOR PRELIMINARY AND FINAL DEVELOPMENT ORDER
 FOR PARCELS A, PARCEL B, AND PARCEL C LYING
 SECTION 2, TOWNSHIP 28 N., RANG 45 W., BEING 31.4 ACRES IN SECTION 2,
 TWP 28 N., RANG 45 W.

APPROVED BY THE BOARD OF SUPERVISORS OF THE COUNTY OF ALBERTA, CANADA, ON MAY 18, 1988.

ALL OTHER PROCEEDS APPLICABLE TO REMAIN IN THE COUNTY OF ALBERTA, CANADA.

HARPER BROS., INC.

HOLE, MONTGOMERY & ASSOCIATES, INC.

Alta Rd - Greenmeadow Mine

202-1
87.94

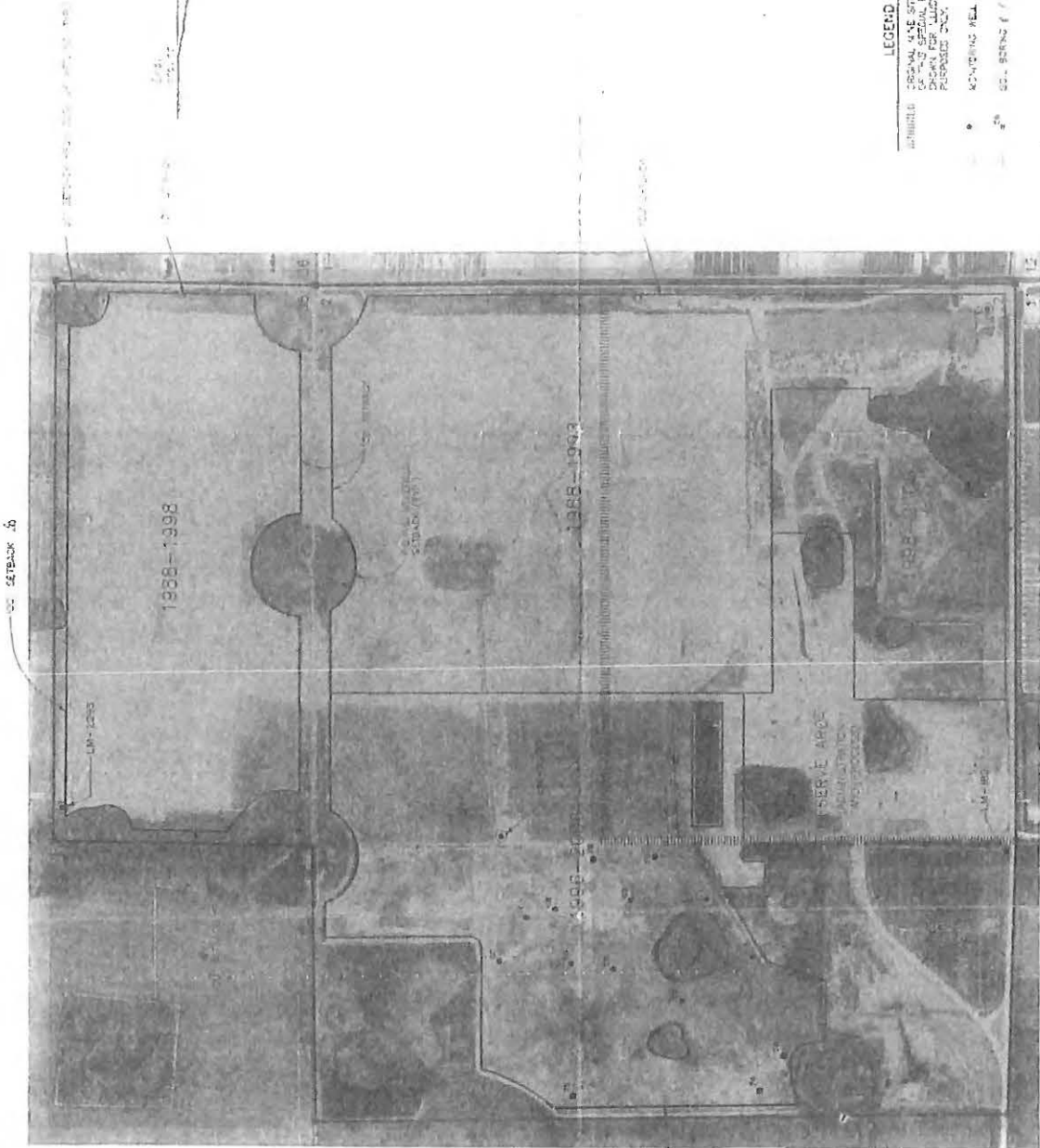
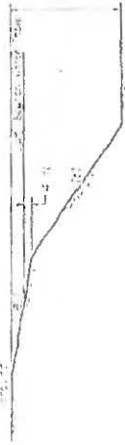
RECORDED & RECORDED VERIFIED
 ALBERTA COUNTY CLERK
 MAY 18 9 44 AM '88

F ATTACHMENT



SCALE: 1" = 500'

DO NOT SCALE DISTANCES
ON THIS PLAN - ALL DISTANCES
TO BE MEASURED FROM
FIELD DATA.



LEGEND

SHRIMP GEAR SITE, NOT A PART
OF THIS PROJECT, SHOWN FOR
REFERENCE ONLY.

- KENYONG WELL
- 6" SP. SPRING / LOCATION

EXHIBIT VI-E

PRINTED
APR 23 1993

HARPER BROS., INC.

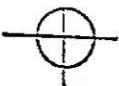


H&M ASSOCIATES
ENGINEERS-ARCHITECTS-PLANNERS
1400 WEST 10TH AVENUE
DENVER, CO 80202

PROPOSED MINING PLAN

ES22PLAN
455-5

85.22
0 1 2

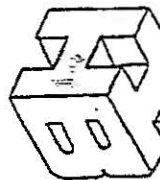


HARPER BROS INC

SOIL BORING LOG

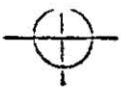
DATE Jan. 7, 1999

PROJECT Alice Quarry — LOCATION Sec. 3, 46-26



1500' W. of E. Sec. Line

57 | 3100' N. of S. Sec. Line



LOCATION 1250' West of East Sec. Line

56 | 2300' N. of S. Sec. Line

DPH

0'

2

4

6

10

20

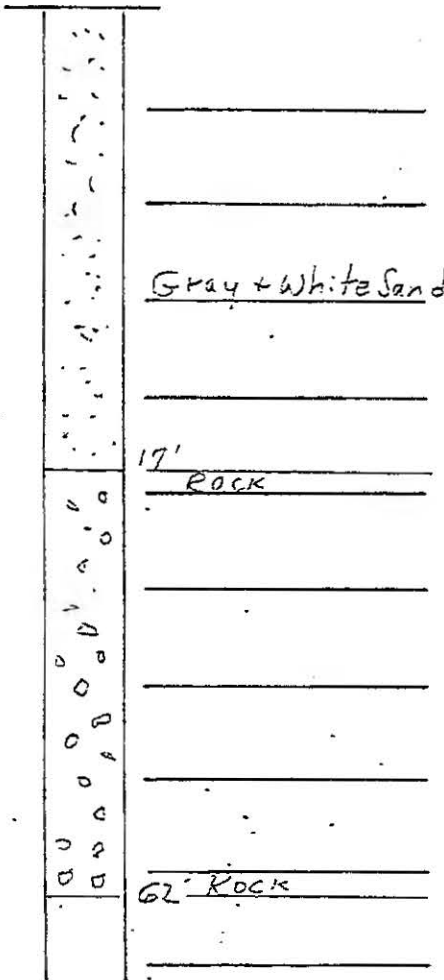
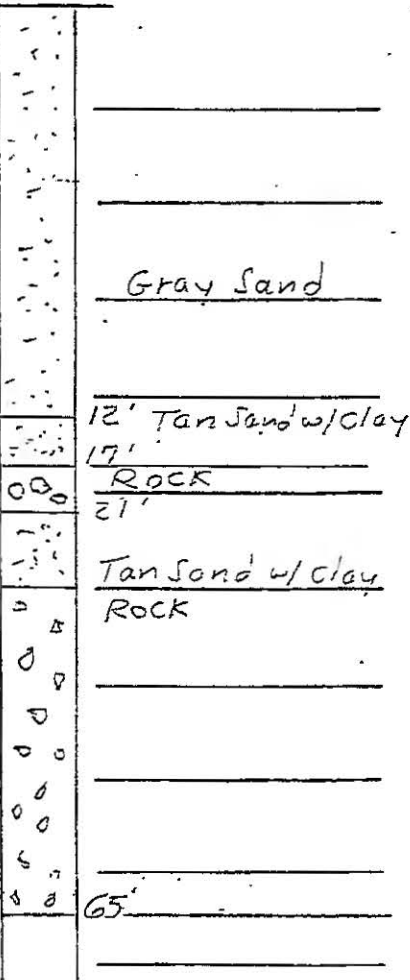
30

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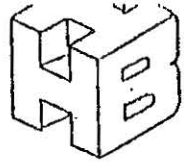


REMARKS

SHEET OF

99-05-243, 065

HARPER BROS INC



SOIL BORING LOG

DATE Jan 7, 1999

PROJECT Alico Quarry

LOCATION Sec. 3, 46-26

DPH	67	68	69
0	2100' S. of N. Sec. Line	2400 S. of N. Sec. Line	2850' S. of N. Sec. Line
2	Gray sand		Gray sand
4			
6	White sand	Sands	
10	Brown sand		Tan w/ clay
20	13' Rock	12' Rock	8' Rock
30			
40			
50			
60	Rock	Rock	Rock
70	67'	62'	63'

REMARKS

SHEET OF

99-05-243-063

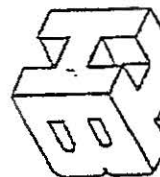
HARPER BROS INC

SOIL BORING LOG

DATE Jan. 7, 1999

PROJECT Aliso Quarry

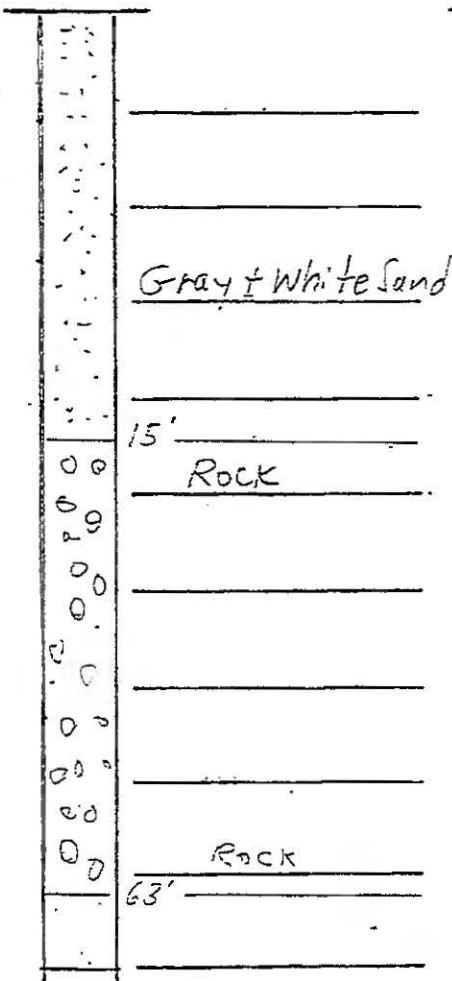
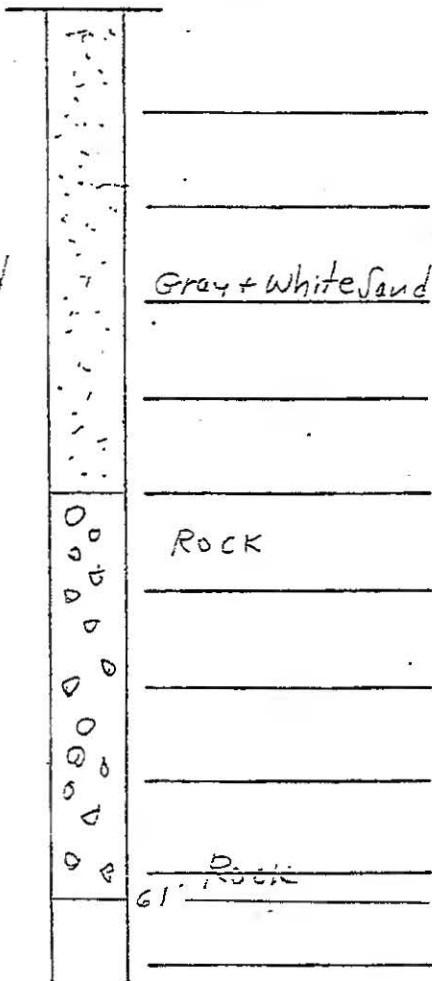
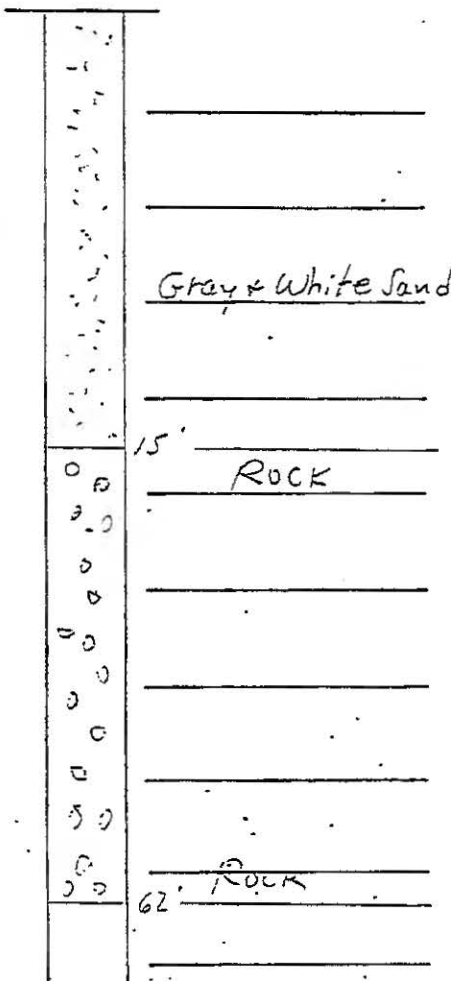
LOCATION E 1/2 Sec. 3, 46-26



550' E. of W. 1/2 Sec. Line
 77 | 4100' N. of S. Sec. Line

500' E. of W. 1/2 Sec. Line
 76 | 2100' N. of S. Sec. Line

250' E. of West 1/2 Sec. Line
 75 | 4000' N. of S. Sec. Line



DPH
0
3
6
10
20
30
40
50
60
70

REMARKS _____

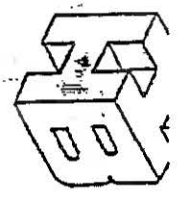
99-05-243-065

HARPER BROS INC

SOIL BORING LOG

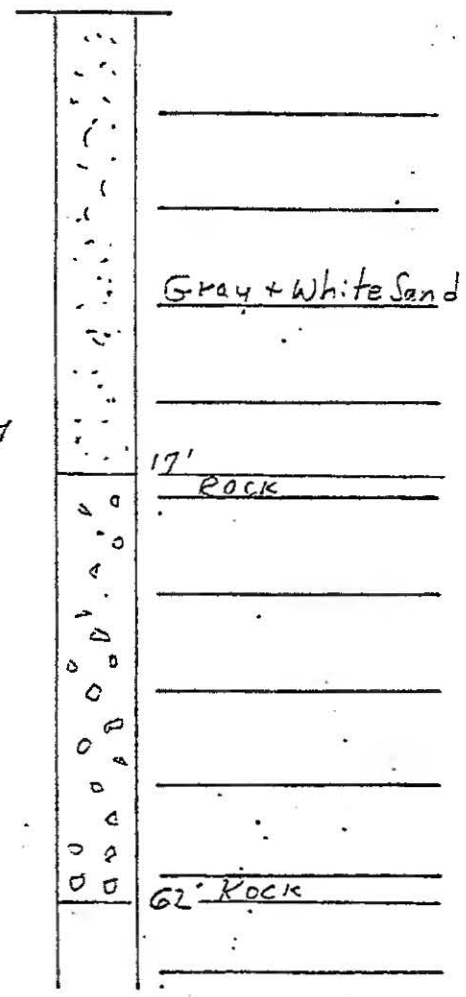
DATE Jan. 7, 1999

PROJECT *Alicia Quarry* — LOCATION *Sec. 3, 46-26*



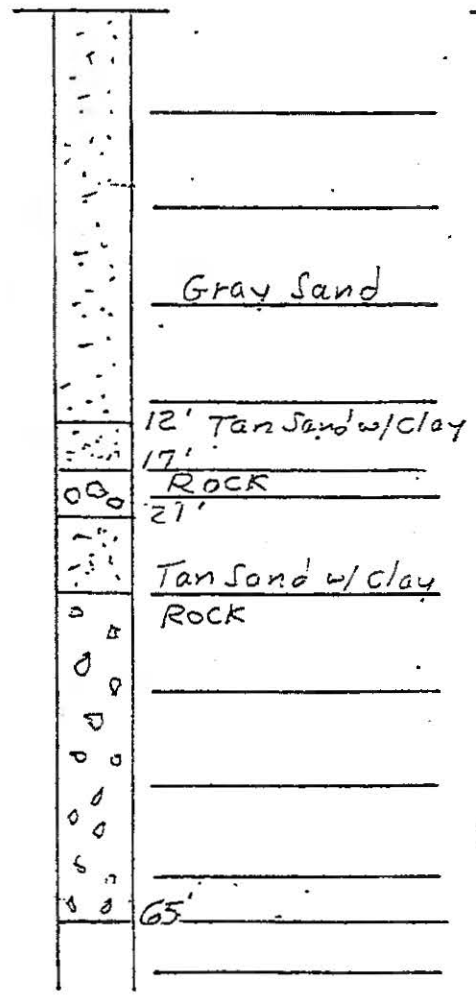
1500' W. of E. Sec. Line

57 3100' N. of S. Sec. Line



LOCATION 1250' West of East Sec. Line

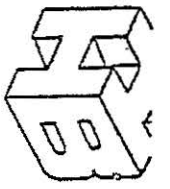
56 2300' N. of S. Sec. Line



DPH
0'
2
4
6
10
20
30
40
50
60
70

09-05-243.065

REMARKS _____



LOCATION 1340' West of E. Sec. Line

DPH
0
2
4
6
10
20
30
40
50
60
70

58 | 3800' N. of S. Sec. Line

59 | 4200' N. of S. Sec. Line

60 | 4800' N. of S. Sec. Line

0	
2	
4	Gray Sand
6	
8	3' Tan Sand
10	
20	
25	25' Rock
30	
40	
50	
60	
63	63' Rock
70	

0	
2	
4	Gray Sand
6	
8	3' Tan Sand
10	
20	
25	25' Rock
30	
40	
50	
60	
63	63' Rock
70	

0	
2	
4	
5	5' Gray Sand
6	Whit + Tan Sand
7	7' Rock
10	
20	
30	
40	
50	
60	
62	62' Rock
70	

REMARKS _____

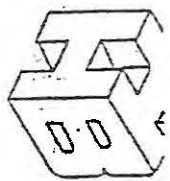
HARPER BROS INC

SOIL BORING LOG

DATE Jan 7, 1999

PROJECT *Aliso Quarry*

LOCATION *Sec. 3, 46-26*



LOCATION 850' West of East Sec. Line

67 | 2100' S. of N. Sec. Line

68 | 2400 S. of N. Sec. Line

69 | 2850' S. of N. Sec. Line

DPH
0'
2
4
6
10
20
30
40
50
60
70

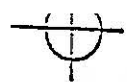
0-2	Gray Sand
2-4	
4-6	
6-7	White Sand
7-10	Brown Sand
10-13	Rock
13-67	Rock

0-12	Sands
12-62	Rock

0-8	Gray Sand
8-9	Tan w/ clay
9-63	Rock

REMARKS _____

29.05-243.065



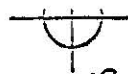
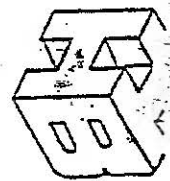
HARPER BROS INC

SOIL BORING LOG

DATE Jan. 7, 1999

PROJECT Aliso Quarry

LOCATION E 1/2 Sec 3, 46-26



OUT OF MINING AREA
2,450' W. of E. Sec. Line

73 | 1200' N. of S. Sec. Line

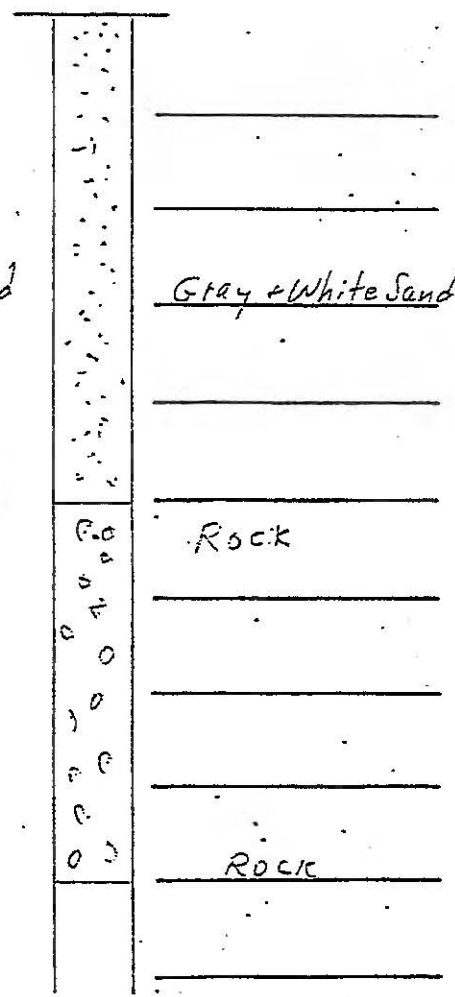
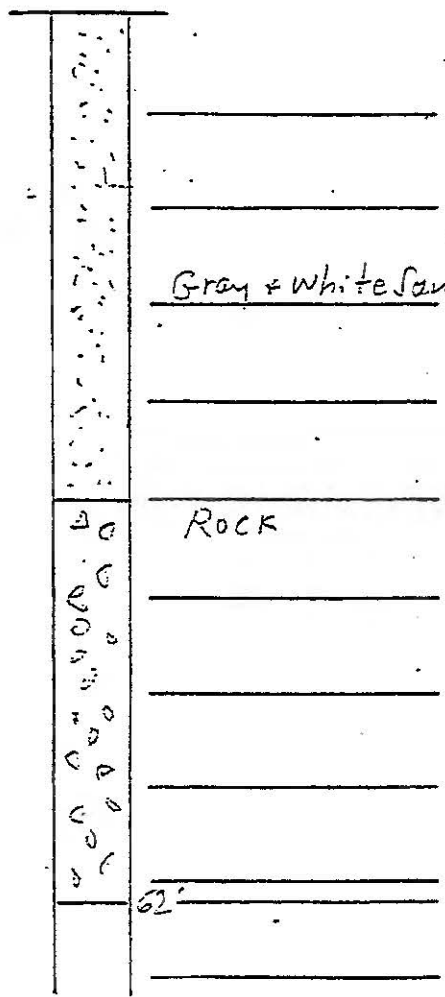
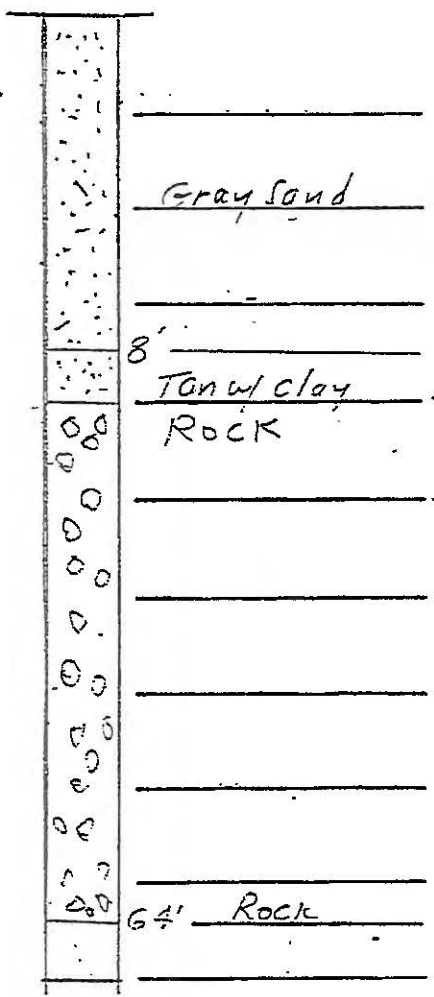
2,450' W. of E. Sec. Line

74 | 2700' N. of S. Sec. Line

650' W. of E. Sec. Line
LOCATION

71 | 3,900' S. of N. Sec. Line

DPH
0'
2
4
6
10
20
30
40
50
60
70

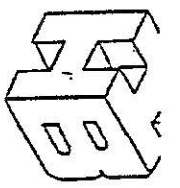


REMARKS _____

HARPER BROS INC

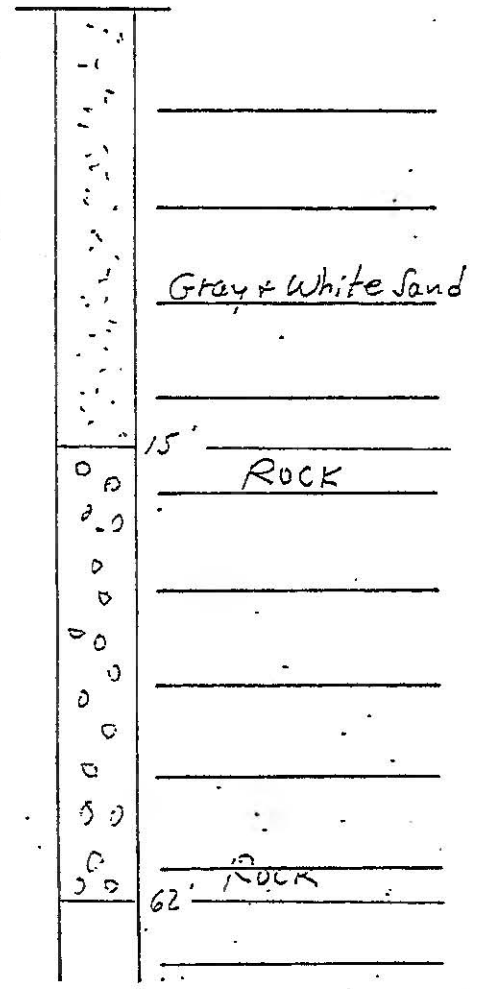
SOIL BORING LOG

DATE Jan. 7, 1999

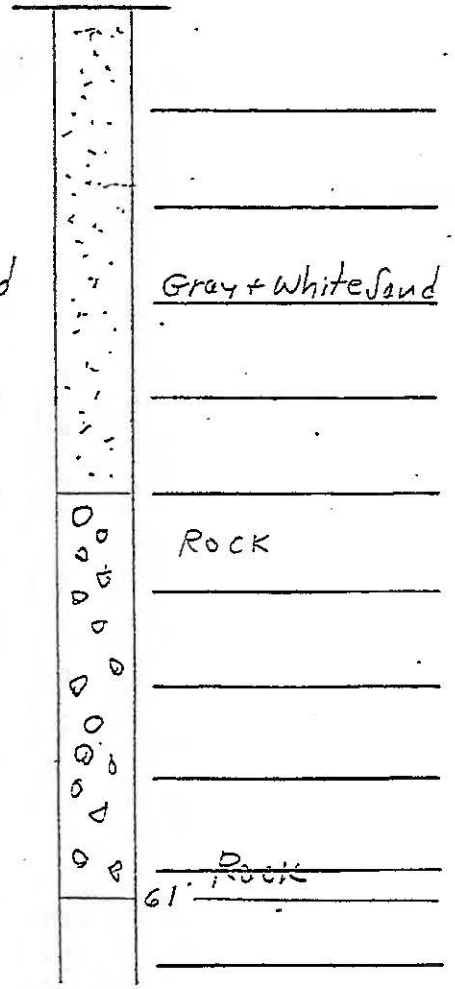


PROJECT Alico Quarry LOCATION E 1/2 Sec. 3, 46-26

550' E. of W. 1/2 Sec. Line
 77 | 4100' N. of S. Sec. Line

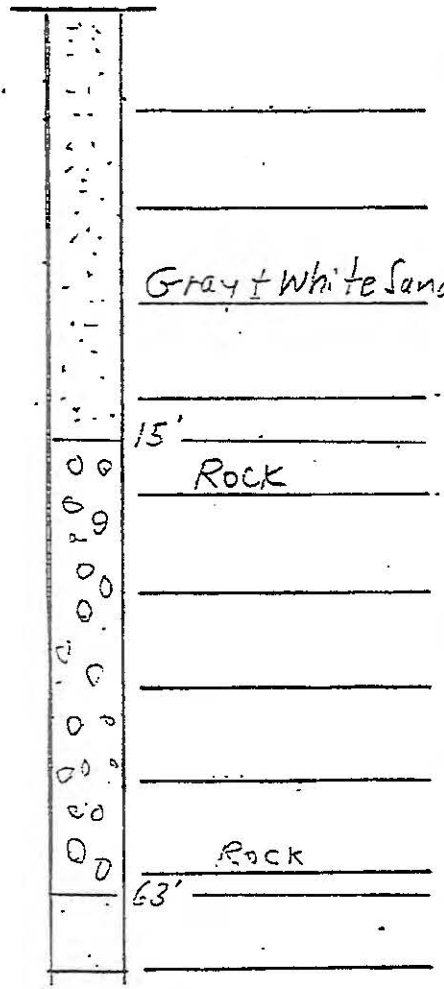


500' E. of W. 1/2 Sec. Line
 76 | 2100' N. of S. Sec. Line



250' E. of West 1/2 Sec. Line
 LOCATION
 75 | 4000' N. of S. Sec. Line

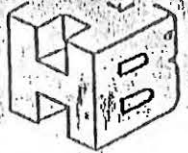
DPH
 0
 2
 4
 6
 10
 20
 30
 40
 50
 60
 70



REMARKS _____

99-05-243-065

HARPER BROS INC

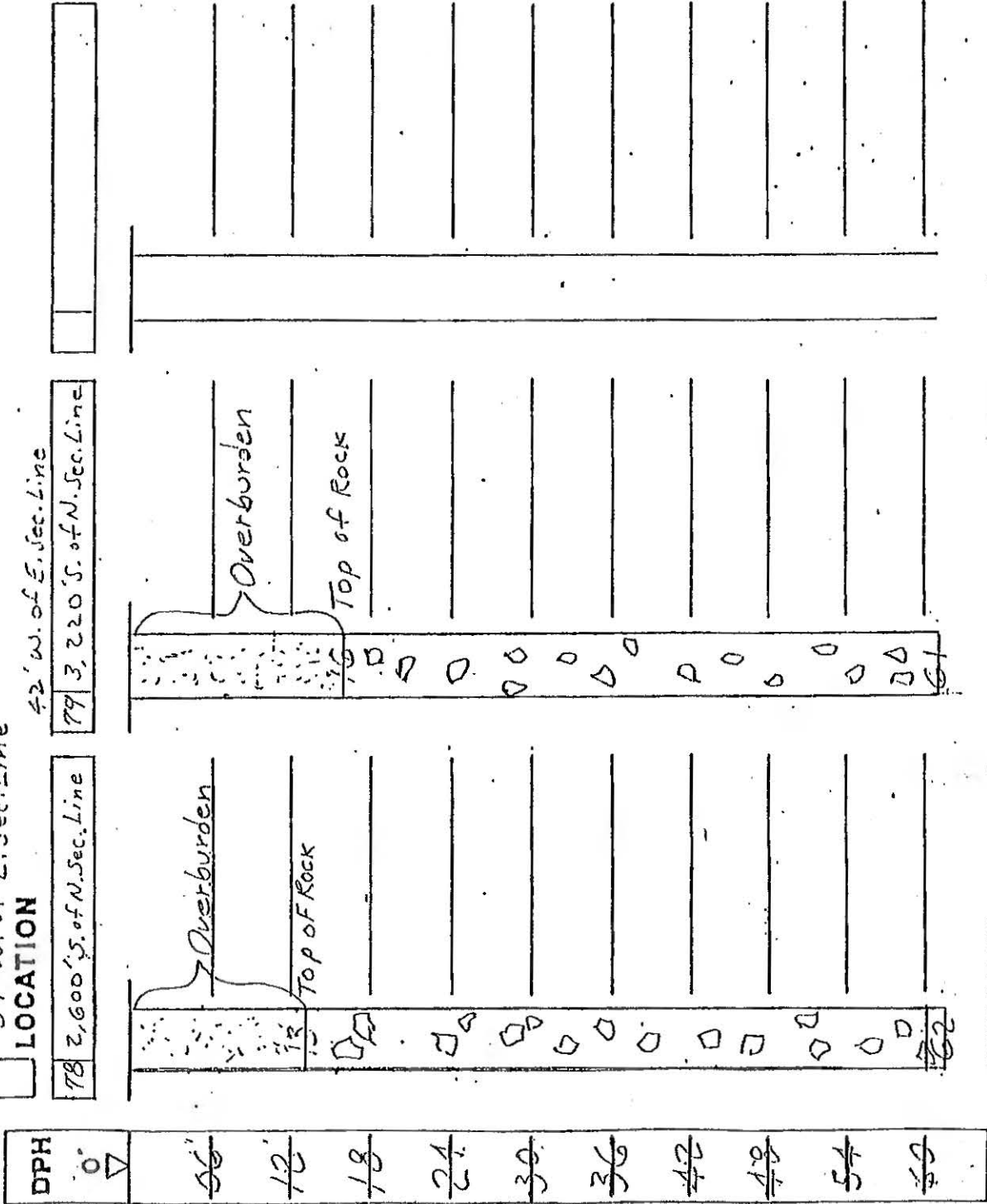


SOIL BORING LOG

DATE 02.27.99

PROJECT Alico Quarry

LOCATION Sec. 03, - 46 - 26



REMARKS

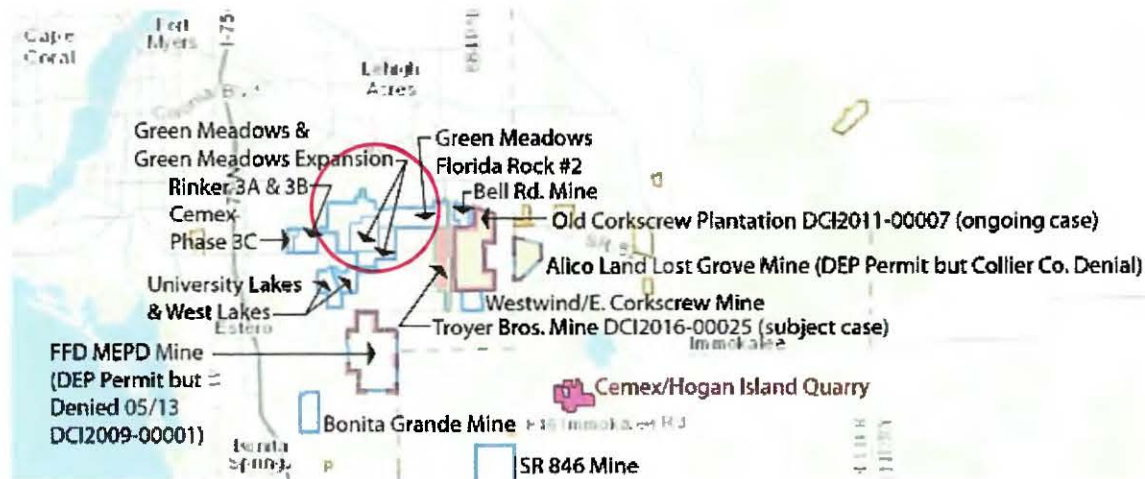
SHEET OF

Appendix C.3

The Green Meadows Expansion Mine

Appendix C.3

The Green Meadows Expansion Mine



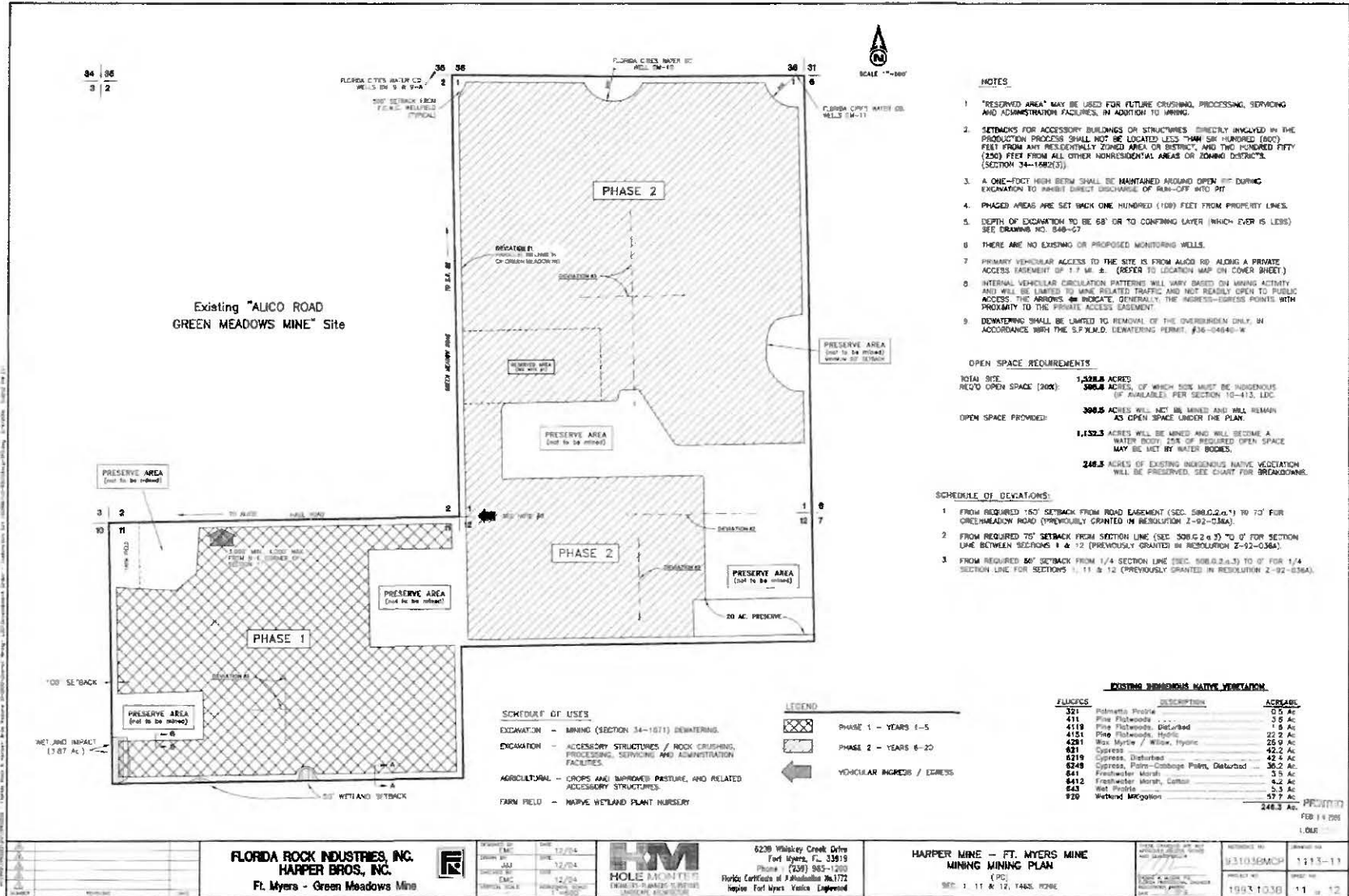
Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction (Note #13)	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Green Meadows Expansion (3) DCI2000-00044 LDO2001-00038 LDO2006-00055 & Z-07-054	1132	125,175,306	12,906,666	32,750,666	26,200,533	25	68	42.9	40,050,613	85,124,693	0.73	62,141,026	49,712,821

Note 3: Green Meadows Expansion estimates based on 08/15/16 Vulcan Materials Monitoring Report and J.D. Walker soil profiles (10); 27% average overburden & 42.9-ft. average lime rock thickness (DCI2000-00044).

Green Meadows Expansion _ Lee Co.

Site Area	Project Area	Mine Acres		
	1529	1132		
C.Yd. of Excavation Authorized	125,175,306			
Mine Depth	Regulatory Depth	Waldrop 09/16 Actual Limerock Est. Limerock Thickness (09/17 Stuart)	Thickness (09/17 Stuart)	% Difference
	68	25	43	171.6%
Waldrop Study 09/16				
Est. Limerock Excavation To-date (2015)	12,906,666 C.Yd.			
Est. Limerock Remaining (Pre-excavation)	32,750,666 C.Yd.			
Est. Limerock (Post-excavation)	26,200,533 C.Yd.			
Lee Co. Mine Monitoring Reports/Stuart 09/17				
Mine Monitoring Reports Excavation To-date (2015)	40,050,613 C.Yd.			
Correct Limerock Remaining (As Per Monitoring Rep	85,124,693 C.Yd.			
Overburden Adjustment Coefficient	0.73			
Corrected Limerock Remaining (Pre-excavation)	62,141,026 C.Yd.			
Corrected Limerock Remaining (Post-excavation)	49,712,821	C.Yd.	189.7%	

The Green Meadows Expansion Mine Plans



MORRIS - DEWE ASSOCIATES, INC. ENGINEERS - PLANNERS - SURVEYORS & MAPPERS 1225 W. UNIVERSITY BLVD. SUITE 200 TAMPA, FLORIDA 33606 PHONE: (813) 288-1111 FAX: (813) 288-1112 WWW: WWW.MORRIS-DEWE.COM		MD MORRIS - DEWE ASSOCIATES, INC.		SPECIFIC PURPOSE SURVEY FORT MYERS QUARRY 1 OF 3	
PREPARED BY [Signature] DATE: 11/11/2008		SURVEYED BY [Signature] DATE: 11/11/2008		1 OF 3 11-2008 MORRIS - DEWE ASSOCIATES, INC.	

SURVEYOR'S NOTES

THE PURPOSE OF THIS SURVEY WAS TO LOCATE LIME ROCK AND TOP OF LIME ROCK AT FORT MYERS QUARRY. THIS QUARRY IS BOUNDED BY THE QUINCY ROAD TO THE NORTH AND THE QUINCY ROAD TO THE SOUTH. THE QUARRY IS BOUNDED BY THE QUINCY ROAD TO THE EAST AND THE QUINCY ROAD TO THE WEST. THE QUARRY IS BOUNDED BY THE QUINCY ROAD TO THE NORTH AND THE QUINCY ROAD TO THE SOUTH. THE QUARRY IS BOUNDED BY THE QUINCY ROAD TO THE EAST AND THE QUINCY ROAD TO THE WEST.

NO SEARCH OF THE PUBLIC RECORDS HAS BEEN CONDUCTED BY THIS OFFICE, AND WAS PREPARED WITHOUT BENEFIT OF ABSTRACT OF TITLE.

PROJECT IS SUBJECT TO EASEMENTS, RESTRICTIONS, ENCUMBRANCES AND RIGHTS OF WAY OF RECORD.

CONVEYANCE MADE FOR THE WEST WESTERLY CORNER OF THE QUARRY WHICH IS BASED ON PLATONIC SURVEY.

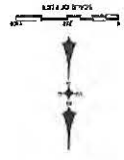
STATIONING SHOWN HEREON ARE BASED ON NATIONAL GRID COORDINATE SYSTEM OF 1983.

THIS SURVEY WAS NOT INTENDED TO DETERMINE OR DEFINE ADJACENTLY BOUNDING ESTATE AND IS NOT TO BE CONSIDERED AS A PART OF ANY CONVEYANCE INSTRUMENT.

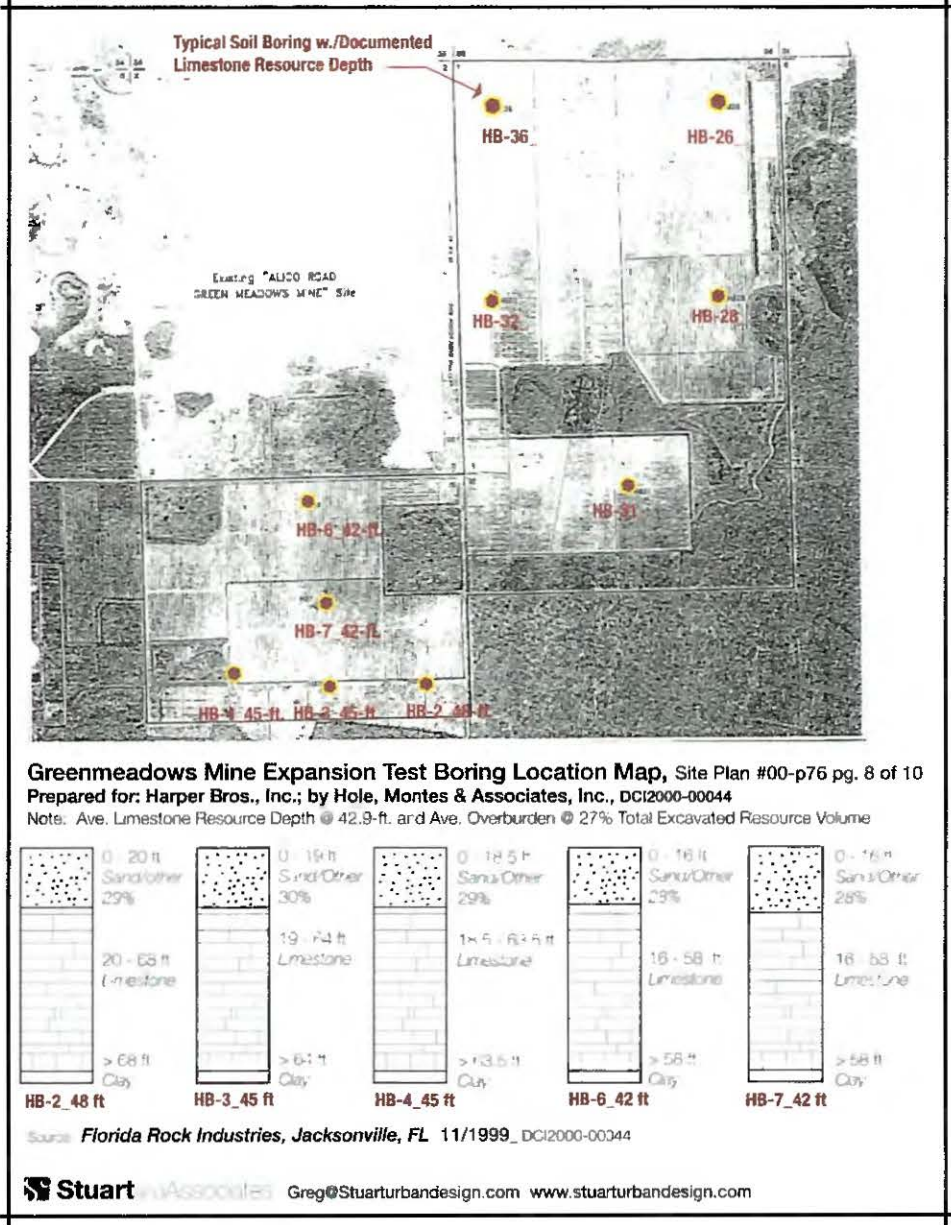
THE LOCATION OR EXISTENCE OF UNDERGROUND OR NON-VISIBLE ENCUMBRANCES OR UTILITIES NOT INVESTIGATED.

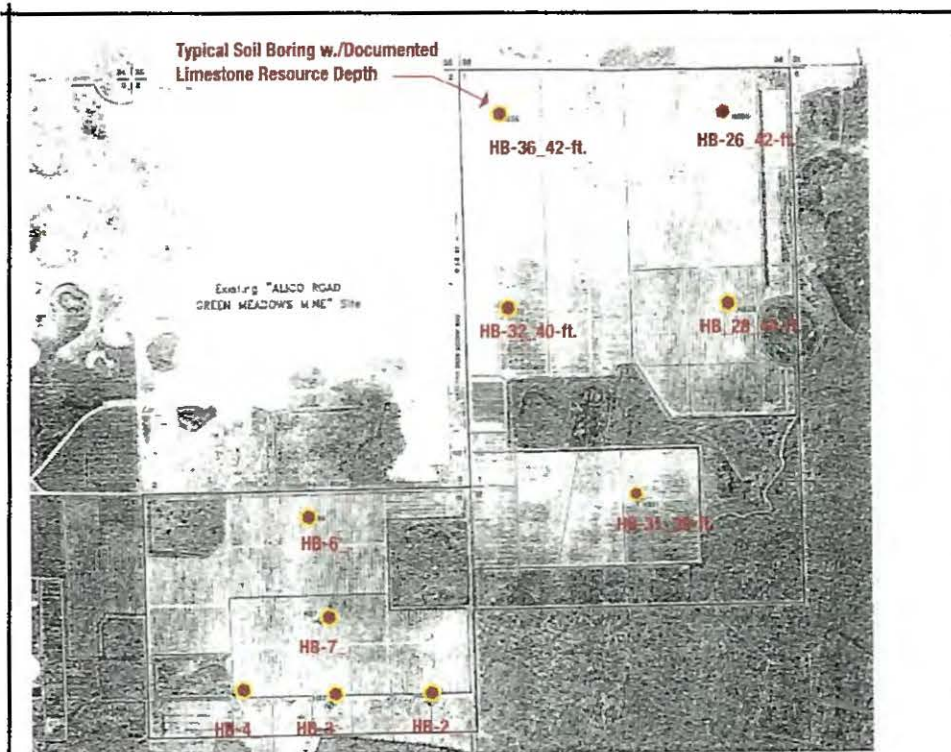
THIS SURVEY BEARS THE SIGNATURE AND ORIGINAL PAVED SEAL OF A PROFESSIONAL SURVEYOR. SURVEYORS AND MAPMANS AND ALL THESE SHEETS ARE NOT VALID, THIS MAP IS NOT VALID.

LINES SURVEYED: 1-10-08, FIELD BOOK BY: [Signature] SHEETS: 1 AND 2



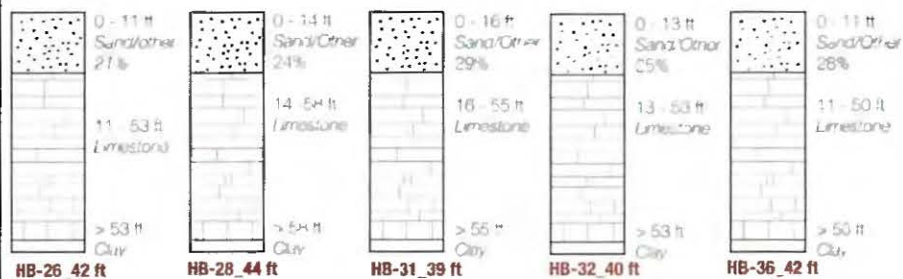
The Green Meadows Expansion Mine _ Geotechnical Data





Greenmeadows Mine Expansion Test Boring Location Map, Site Plan #00-p76 pg. 8 of 10
 Prepared for: Harper Bros., Inc.; by Hole, Montes & Associates, Inc., DCI2000-00044

Note: Ave. Limestone Resource Depth @ 42.9-ft. and Ave. Overburden @ 27% Total Excavated Resource Volume



Source: Florida Rock Industries, Jacksonville, FL 11/1999 DCI2000-00044

Stuart and Associates Greg@Stuartbandesign.com www.stuartbandesign.com

Greenmeadows Mine Expansion DCI2000-00044 Soil Borings

<u>Core ID #</u>	<u>Limestone Core Percentage</u> <u>Resource Depth Overburden</u>	
HB-2	48	29%
HB-3	45	30%
HB-4	45	29%
HB-6	42	28%
HB-7	42	28%
HB-26	42	21%
HB-28	44	24%
HB-31	39	29%
HB-32	40	25%
HB-36	42	28%

Total # Cores	10
Average Depth	42.9
Average Overburden %	27%

The Greenmeadows Mine Expansion:

DCI2000-00044 Florida Rock Industries Case Materials _ Narrative Regarding Change Of Depth Request
& Soil Profiles

NARRATIVE REGARDING CHANGE OF DEPTH REQUEST

In recent months the Green Meadows Mine has undergone extensive geologic research. The fruit of this effort is updated soil boring information, showing rock at a greater depth than what was originally thought. Previously, we were limited by our equipment in exploring to depths greater than 50 – 55'. We would like to request a change in depth from 55' to 68' or confining layer, whichever occurs later, for all of Sections 1, 11 and 12, which is included in this application.

The submitted boring logs indicate that the rock depth in this area varies. From an economical standpoint we would like to excavate the rock to its fullest extent. We, however, have no intentions of breaching the integrity of any hydraulically significant confining beds or creating adverse impacts to the aquifer system. To extract the confining layer with the limerock causes difficulty in achieving the proper quality control required for DOT approved material. This provides economic incentive and assurance to you that confining beds will not be impacted.

RECEIVED
JUN 12 2000

PERMIT COUNTER

DCI 2000-00044

APPROVED

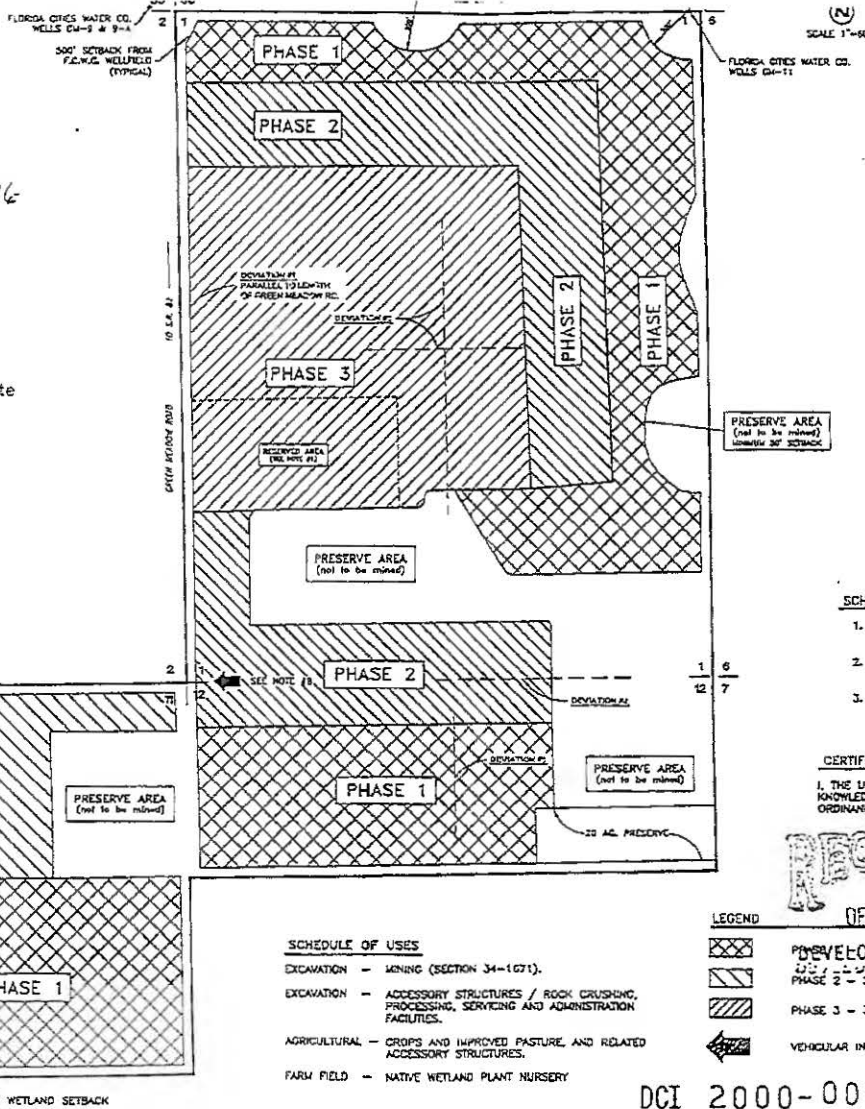
Master Concept Plan

Site Plan 00-76 Page 6 of 10

Subject to conditions in Resolution 2-00-076

Zoning Case # DCI 2000-00044

Existing "ALICO ROAD
GREEN MEADOWS MINE" Site



SCALE 1"=500'

- "RESERVED AREA" MAY BE USED FOR FUTURE OPERATIONAL, PRODUCTION, SUPPORT AND ADMINISTRATION FACILITIES, IN ADDITION TO MINING.
- SETBACKS FOR ACCESSORY BUILDINGS OR STRUCTURES DIRECTLY INVOLVED IN THE PRODUCTION PROCESS SHALL NOT BE LOCATED LESS THAN SIX HUNDRED (600) FEET FROM ANY RESIDENTIALLY ZONED AREA OR DISTRICT, AND TWO HUNDRED FIFTY (250) FEET FROM ALL OTHER NONRESIDENTIAL AREAS OR ZONING DISTRICTS. (SECTION 34-1682(3)).
- A ONE-FOOT HIGH BERM SHALL BE MAINTAINED AROUND OPEN PIT DURING EXCAVATION TO INHIBIT DIRECT DISCHARGE OF RUN-OFF INTO PIT.
- PHASED AREAS ARE SET BACK ONE HUNDRED (100) FEET FROM PROPERTY LINES.
- DEPTH OF EXCAVATION TO BE 70' OR TO CONFINING LAYER (WHICH EVER IS LESS). SEE DRAWING NO. 806-07.
- THERE ARE NO EXISTING OR PROPOSED MONITORING WELLS.
- PRIMARY VEHICULAR ACCESS TO THE SITE IS FROM ALICO RD. ALONG A PRIVATE ACCESS EASEMENT OF 1.7 AC. (REFER TO LOCATION MAP ON COVER SHEET.)
- INTERNAL VEHICULAR CIRCULATION PATTERNS WILL VARY BASED ON MINING ACTIVITY AND WILL BE LIMITED TO MINE RELATED TRAFFIC AND NOT READILY OPEN TO PUBLIC ACCESS. THE ARROWS INDICATE, GENERALLY, THE INGRESS-EGRESS POINTS WITH PROXIMITY TO THE PRIVATE ACCESS EASEMENT.

OPEN SPACE REQUIREMENTS

TOTAL SITE: 1,528.77 ACRES
 REQ'D OPEN SPACE (20%): 305.75 ACRES, OF WHICH 50% MUST BE INDIGENOUS (IF AVAILABLE), PER SECTION 10-413, LDC.

OPEN SPACE PROVIDED: 386.48 ACRES WILL NOT BE MINED AND WILL REMAIN AS OPEN SPACE UNDER THE PLAN.

1,132.29 ACRES WILL BE MINED AND WILL BECOME A WATER BODY; 25% OF REQUIRED OPEN SPACE MAY BE MET BY WATER BODIES.

246.3 ACRES OF EXISTING INDIGENOUS NATIVE VEGETATION WILL BE PRESERVED. SEE CHART FOR BREAKDOWNS.

- SCHEDULE OF DEVIATIONS:**
- FROM REQUIRED 150' SETBACK FROM ROAD EASEMENT (SEC. 508.6.2.a.1) TO 70' FOR GREENMEADOW ROAD.
 - FROM REQUIRED 75' SETBACK FROM SECTION LINE (SEC. 508.6.2.a.3) TO 0' FOR SECTION LINE BETWEEN SECTIONS 1 & 12 (PREVIOUSLY GRANTED IN RESOLUTION Z-92-036A).
 - FROM REQUIRED 60' SETBACK FROM 1/4 SECTION LINE (SEC. 508.6.2.a.3) TO 0' FOR 1/4 SECTION LINE FOR SECTIONS 1, 11 & 12 (PREVIOUSLY GRANTED IN RESOLUTION Z-92-036A).

CERTIFICATION:

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THIS MAP IS CORRECT, AND SHOWS TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL INFORMATION REQUIRED BY THE REQUIREMENTS OF THE LEE COUNTY ZONING ORDINANCE.

Robert L. Murray, P.E. #35826



EXISTING INDIGENOUS NATIVE VEGETATION

FLUCCODES	DESCRIPTION	ACREAGE
321	Palmetto Prairie	0.5 AC.
411	Pine Flatwoods	3.6 AC.
410	Pine Flatwoods, Disturbed	1.6 AC.
4151	Pine Flatwoods, Hydric	22.2 AC.
4201	Wax Myrtle / Willow, Hydric	26.9 AC.
521	Cypress	42.2 AC.
621B	Cypress, Disturbed	42.4 AC.
6249	Cypress, Palm-Cabbage Palm, Disturbed	34.2 AC.
641	Freshwater Marsh	3.5 AC.
6412	Freshwater Marsh, Cortical	4.2 AC.
643	Wet Prairie	5.3 AC.
920	Wetland Migation	57.7 AC.
		246.3 AC.

- SCHEDULE OF USES**
- EXCAVATION - MINING (SECTION 34-1671).
 - EXCAVATION - ACCESSORY STRUCTURES / ROCK CRUSHING, PROCESSING, SERVICING AND ADMINISTRATION FACILITIES.
 - AGRICULTURAL - CROPS AND IMPROVED PASTURE, AND RELATED ACCESSORY STRUCTURES.
 - FARM FIELD - NATIVE WETLAND PLANT NURSERY

- LEGEND**
- PHASE 1 - 1st 10 YEARS
 - PHASE 2 - 2nd 10 YEARS
 - PHASE 3 - 3rd 10 YEARS
 - VEHICULAR INGRESS / EGRESS

DCI 2000-00044 EXHIBITS: IV-F, IV-D, IV-G, IV-H & IV-K DRAWING NUMBER 82 OF 11/21/99

APPROVED	DATE
	11-29-99
REVISED	DATE
	11-29-99
REVISED	DATE
	11-29-99
REVISED	DATE
	11-29-99

HARPER BROS., INC.

DESIGNED BY	J.K.H./R.L.M.	DATE	11-99
DRAWN BY	J.K.H.	DATE	11-29-99
CHECKED BY	R.L.M.	DATE	11-99
APPROVED BY	R.L.M.	DATE	11-99
SCALE	1"=500'		

H.M. HOLE MONTES ENGINEERS PLANNERS SURVEYORS

6022-F Prudential Court
 Fort Myers, FL 33912
 Phone: (941) 935-1200
 Florida Certificate of Authorization No. 1774

MASTER CONCEPT PLAN

DATE	89.75	SHEET NO.	6 OF 10
PROJECT NO.	8976MCPL	DRAWING NO.	806-6



APPROVED

Master Concept Plan
Site Plan # 00-76 Page 8 of 10
Subject to conditions in Resolution 2-00-076
Zoning Case # DCI 2000-00044

RECEIVED
JUN 12 2000

DEVELOPMENT SERVICES

- LEGEND
- BOUNDARY LINE
 - ◆ HB2 TEST BORING IDENTIFICATION NUMBER
 - $\frac{34}{3} \frac{35}{2}$ APPROXIMATE SECTION CORNER

NOTE: FOR BORING LOGS, SEE ZONING APPLICATION PACKAGE.

DCI 2000-00044

DRAWING CANNOT BE OPENED



Existing "ALICO ROAD GREEN MEADOWS MINE" Site

NO.	DESCRIPTION	DATE

HARPER BROS., INC.

DESIGNED BY J.K.H./R.L.M.	DATE 11-99
DRAWN BY J.C.H.	DATE 11-99-99
CHECKED BY R.L.M.	DATE 11-99
WORKING COPIES NONE	WORKING COPIES NONE

HMA HOLE, MONTE & ASSOCIATES, INC.
 ENGINEERS - PLANNERS - SURVEYORS
 14001 - FT. WYCK - BOYDLE SPUR - YONKE
 SUITE 400 - FEDERAL RD. - FT. WYCK, FLORIDA 32811
 "PRESERVING AND ENHANCING FUTURE QUALITY OF LIFE SINCE 1947"

TEST BORING LOCATION MAP

THREE DIMENSIONS ARE NOT APPROVED UNLESS SHOWN AND SCALED PROPERLY	REFERENCE NO. 8976TSTB	DRAWING NO. 806-B
DATE 89.76	PROJECT NO.	SHEET NO. 8 OF 10

FLORIDA ROCK INDUSTRIES, INC.

Jacksonville, Florida

Geology Department

Auger Log
Core Log

Driller/Geologist: J.D. WALKER Date 11/15/99 Hole No. HB-2
County Lee State FL Location TAGS R.266 SECT 11 Water _____

DEPTH	LITHOLOGIC DESCRIPTION	GEO SKETCH	REC	% REC	REMARKS
	↑ UNCONSOLIDATED SANDS		+	+	
10			+	+	
	↓		+	+	
20			+	+	
	↑		+	+	
30			+	+	
	Rock		+	+	
40			+	+	
			+	+	
50			+	+	
			+	+	
60			+	+	
			+	+	
68			+	+	
70	CLAY		+	+	
70			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	
			+	+	

FLORIDA ROCK INDUSTRIES, INC.

Auger Log
Core Log

Jacksonville, Florida

Geology Department

Driller/Geologist: J. D. WALKER Date 11/16/99 Hole No. H133
 County Lee State FL Location TABE R. 26E SECT 11 Water _____

DEPTH	LITHOLOGIC DESCRIPTION	GEO SKETCH	REC	% REC	REMARKS
10	UNCONSOLIDATED SANDS				
19 20					
30					
40	ROCK				
50					
60					
64					
70	CLAY				
TD					


FLORIDA ROCK INDUSTRIES, INC.

Auger Log
Core Log

Jacksonville, Florida

Geology Department

Driller/Geologist: J. D. WALKER Date 11/18/99 Hole No. H B - 4
 County Lee State FL Location T 46S R 26E S 21 Water _____

D E P T H	LITHOLOGIC DESCRIPTION	GEO SKETCH	REC	% REC	REMARKS
10	UNCONSOLIDATED SAND				
18.5 20	 Rock				
30					
40					
50					
60					
66.5					
70					
70					

FLORIDA ROCK INDUSTRIES, INC.

Auger Log
Core Log

Jacksonville, Florida

Geology Department

Driller/Geologist: J. D. WALKER Date 1/17/00 Hole No. HB 24
 County Lee State FL Location TALS R26E Sect 1 Water _____

DEPTH	LITHOLOGIC DESCRIPTION	GEO SKETCH	REC	% REC	REMARKS
10	↑ unconsolidated sand ↓				
20	↑ Rock ↓				
30					
40					
50					
53	CLAY				
60	TD				

FLORIDA ROCK INDUSTRIES, INC.

Auger Log
Core Log

Jacksonville, Florida

Geology Department

Driller/Geologist: J.D. WALKER Date 2/2/00 Hole No. 14B36
 County Lee State FL Location T465 R26 E Sect 1 Water _____

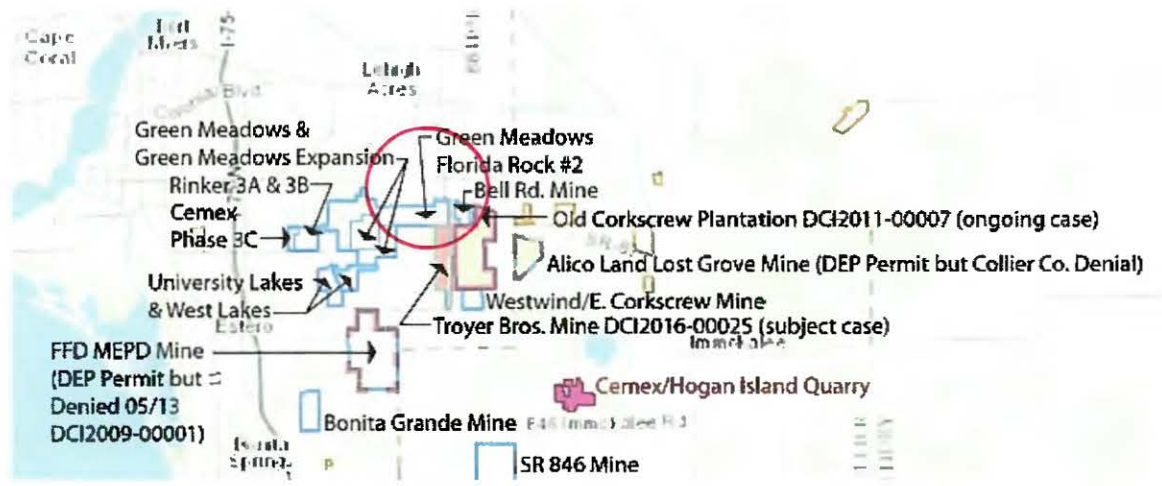
DEPTH	LITHOLOGIC DESCRIPTION	GEO SKETCH	REC	% REC	REMARKS
10	UNCONSOLIDATED SAND				
20	ROCK				
30	CLAY				
40					
50					
53 TO					
60					

Appendix C.4

The Green Meadows FL Rock Mine #2

Appendix C.4

The Green Meadows FL Rock Mine #2



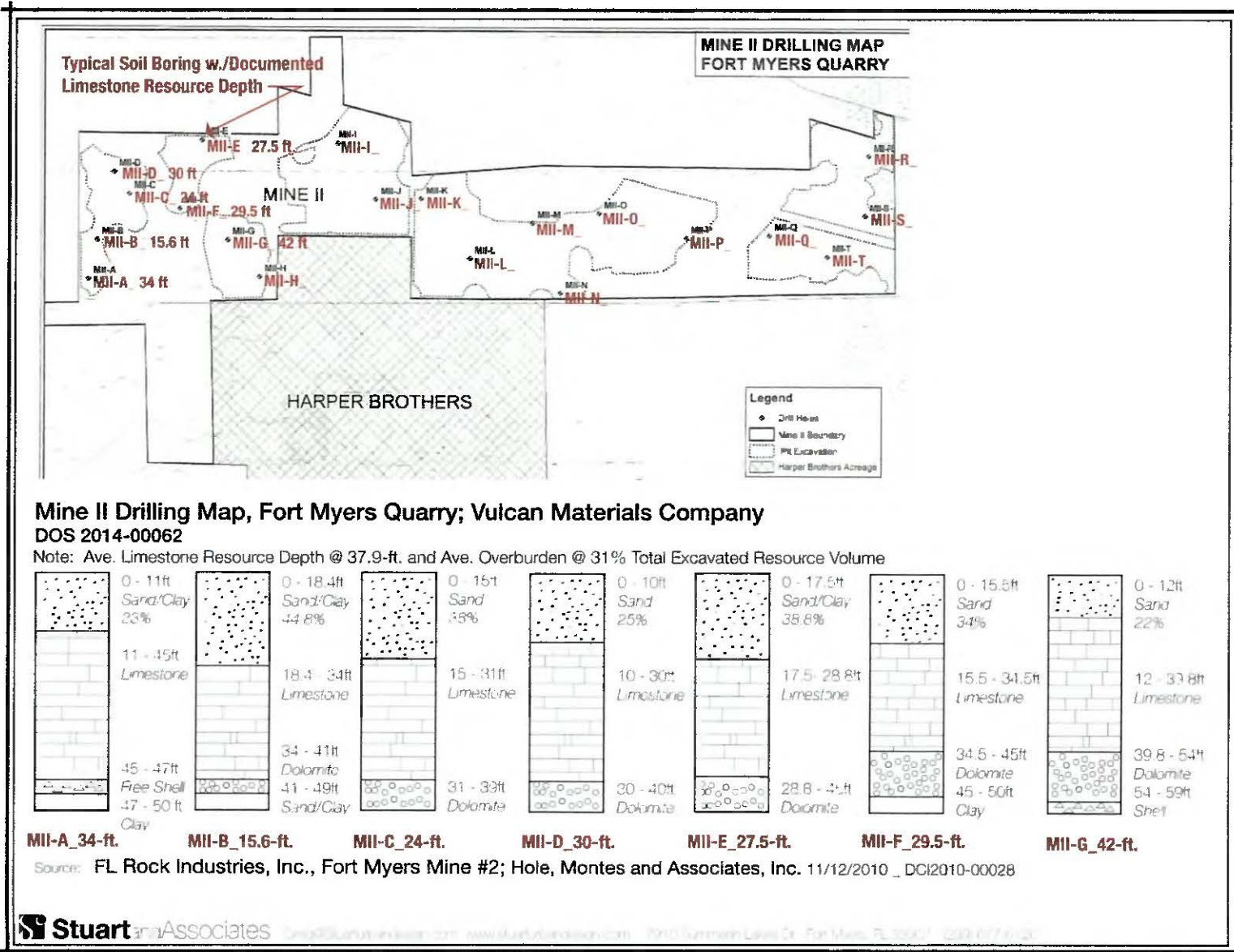
Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Green Meadows FL Rock Mine #2 (4) DOS2014-00062 DCI2010-00028 & Z-12-003	2471	168,819,200	0	168,819,200	135,055,360	36	60	37.9			0.69	168,819,200	135,055,360

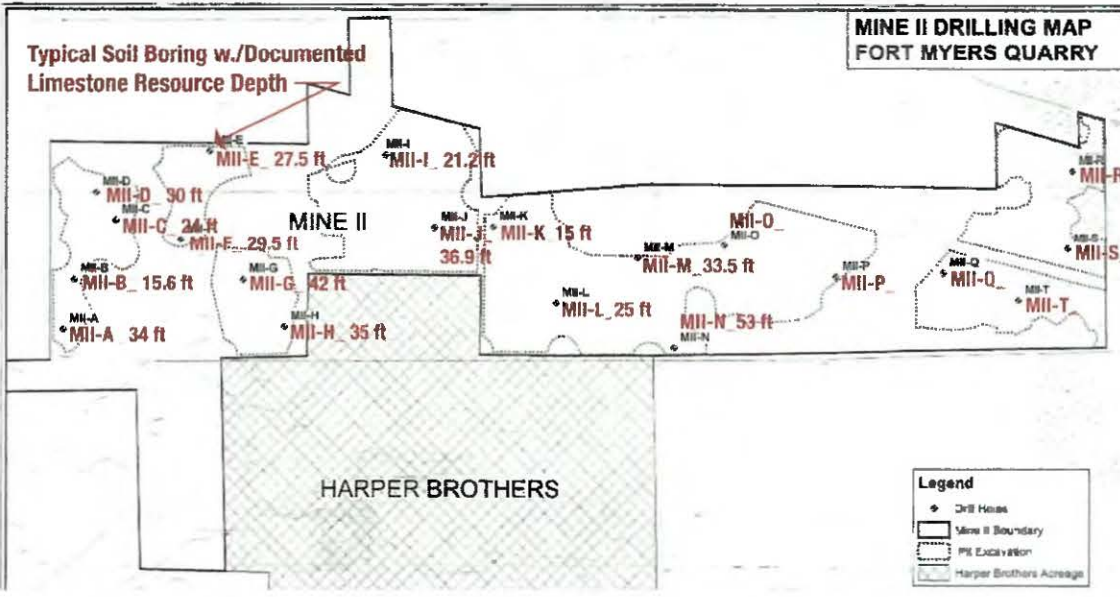
Note 4: Green Meadows FL Rock Mine #2 estimates based on 1984 - 97 Vulcan Materials soil profiles (20); 31% average overburden & 37.9-ft. average lime rock thickness (DCI2010-00028 & DOS2014-00062).

Green Meadows Florida Rock #2 _ Lee Co.

Site Area	Project Area	Mine Acres		
	4839	2471		
C.Yd. of Excavation Authorized	168,819,200			
Mine Depth	Regulatory Depth	Waldrop 09/16 Actual Limerock Est. Limerock Thickness (09/17 Stuart)	Waldrop 09/16 Actual Limerock Est. Limerock Thickness (09/17 Stuart)	% Difference
	60	36	38	105.3%
Waldrop Study 09/16				
Est. Limerock Excavation To-date (2015)	168,819,200	C.Yd.		
Est. Limerock Remaining (Pre-excavation)	168,819,200	C.Yd.		
Est. Limerock (Post-excavation)	135,055,360	C.Yd.		
Lee Co. Mine Monitoring Reports/Stuart 09/17				
Mine Monitoring Reports Excavation To-date (2015)	NA		C.Yd.	
Correct Limerock Remaining (As Per Monitoring Rep)	NA		C.Yd.	
Overburden Adjustment Coefficient	NA			
Corrected Limerock Remaining (Pre-excavation)	168,819,200	C.Yd.		
Corrected Limerock Remaining (Post-excavation)	135,055,360	C.Yd.		100.0%

The Green Meadows FL Rock Mine #2 _ Geotechnical Data

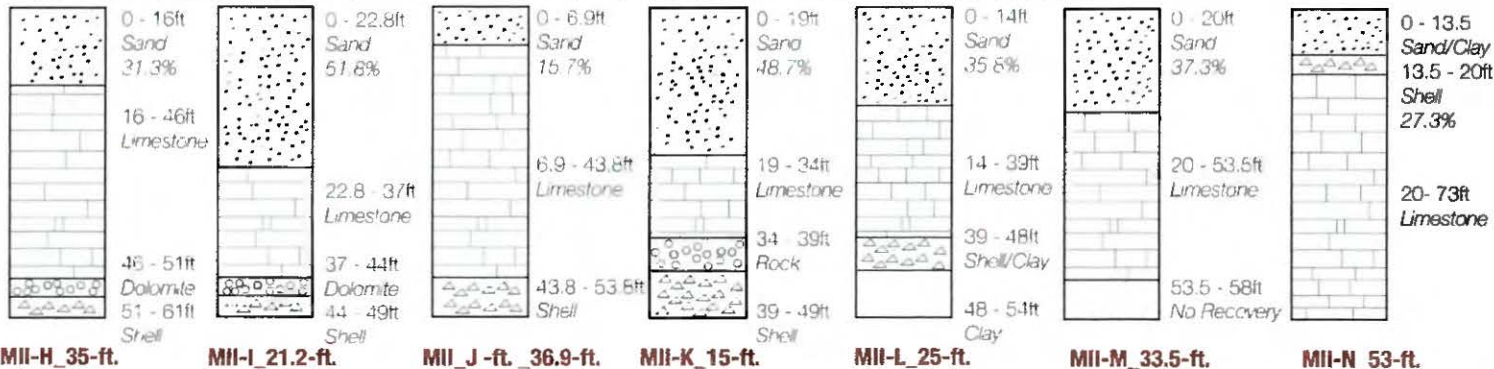




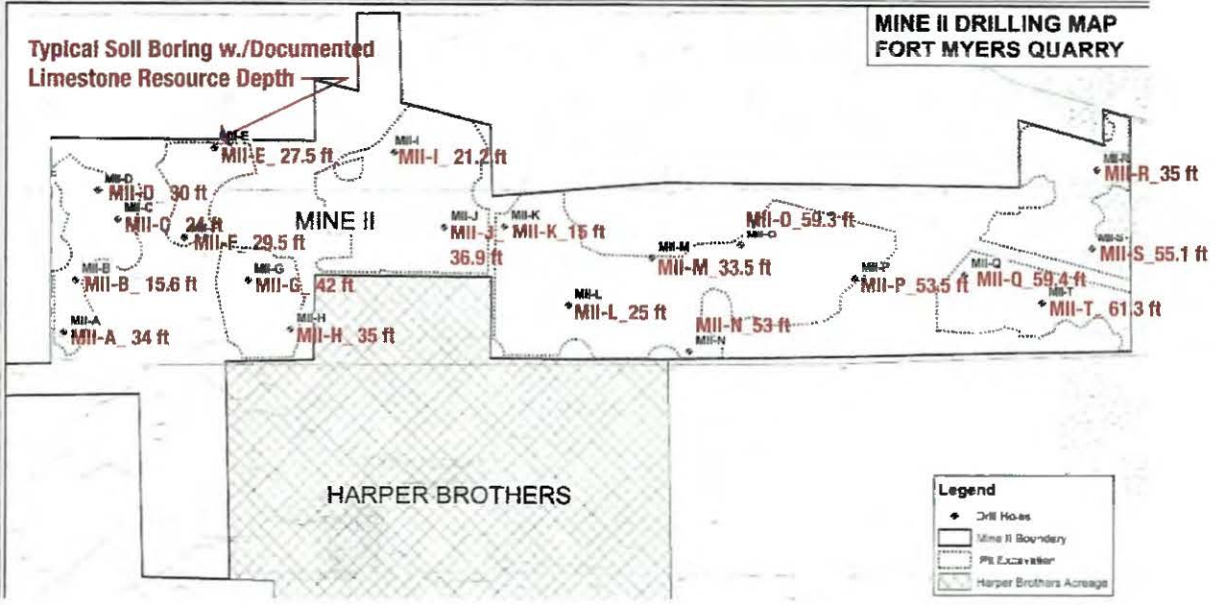
Mine II Drilling Map, Fort Myers Quarry; Vulcan Materials Company

DOS 2014-00062

Note: Ave. Limestone Resource Depth @ 37.9-ft. and Ave. Overburden @ 31% Total Excavated Resource Volume

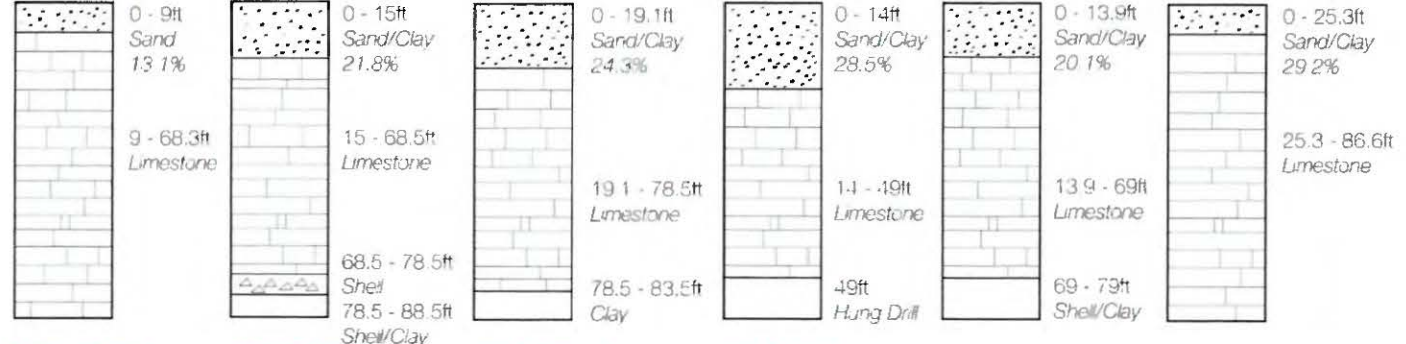


Source: FL Rock Industries, Inc., Fort Myers Mine #2; Hole, Montes and Associates, Inc. 11/12/2010 _ DCI2010-00028



**Mine II Drilling Map, Fort Myers Quarry; Vulcan Materials Company
DOS 2014-00062**

Note: Ave. Limestone Resource Depth @ 37.9-ft. and Ave. Overburden @ 31% Total Excavated Resource Volume



Source: FL Rock Industries, Inc., Fort Myers Mine #2; Hole, Montes and Associates, Inc. 11/12/2010 _ DCI2010-00028



Greenmeadows FL Rock Mine#2 DCI2010-00028 Soil Borings

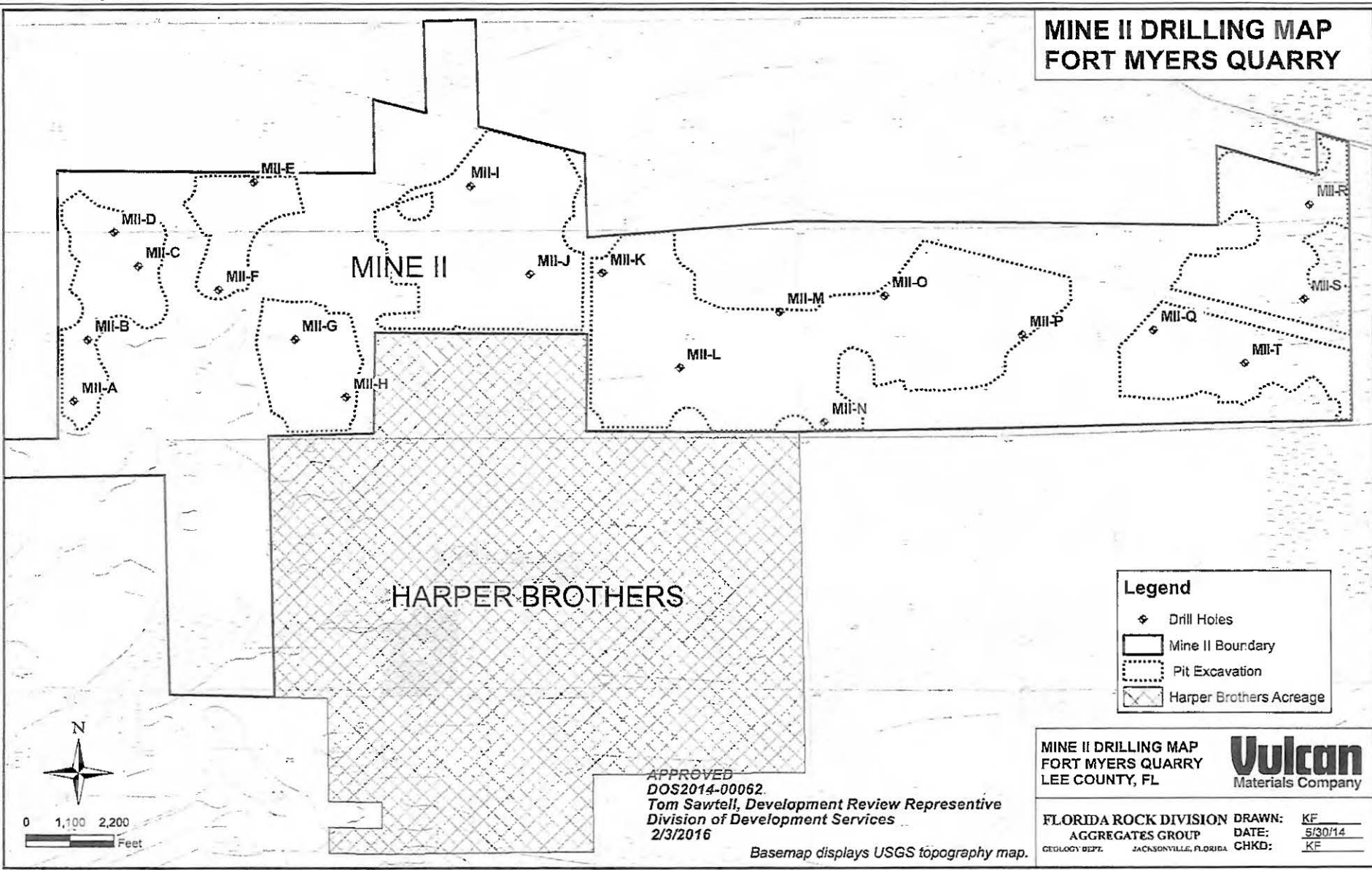
<u>Core ID #</u>	<u>Limestone Core Percentage</u>	
	<u>Resource</u>	<u>Depth Overburden</u>
MII-A	34	24%
MII-B	22.6	45%
MII-C	24	38%
MII-D	30	25%
MII-E	27.5	39%
MII-F	29.5	34%
MII-G	42	22%
MII-H	35	31%
MII-I	21.2	52%
MII-J	36.9	16%
MII-K	20	49%
MII-L	25	36%
MII-M	33.5	37%
MII-N	53	27%
MII-O	59.3	13%
MII-P	53.5	22%
MII-Q	59.4	24%
MII-R	35	29%
MII-S	55.1	20%
MII-T	61.3	29%

Total # Cores	20
Average Depth	37.9
Average Overburden %	31%

The Green Meadows FL Rock Mine #2:

DCI2010-00028 Hole Montes and Associates and Vulcan Materials Co. Case Materials _ Geotechnical Information

MINE II DRILLING MAP FORT MYERS QUARRY



Legend

- ◆ Drill Holes
- ▭ Mine II Boundary
- ⋯ Pit Excavation
- ▨ Harper Brothers Acreage

MINE II DRILLING MAP
FORT MYERS QUARRY
LEE COUNTY, FL



APPROVED
DOS2014-00062.
Tom Sawtell, Development Review Representative
Division of Development Services
2/3/2016

Basemap displays USGS topography map.

FLORIDA ROCK DIVISION	DRAWN:	KF
AGGREGATES GROUP	DATE:	5/30/14
GEOLOGY DEPT. JACKSONVILLE, FLORIDA	CHKD:	KF

Hole MII-A	Drilled Depth 50 ft	5/27/87
0' to 11'	Sand & clay (OB)	
11' to 45'	Limestone	
45' to 47'	Free shell	
47' to 50'	Clay	
Hole MII-B	Drilled Depth 49 ft	8/6/84
0' to 18.4'	Sand & clay (OB)	
18.4' to 34'	Limestone fine to medium grained (white to brown)	
34' to 41'	Dolomite porous to vuggy (brown)	
41' to 49'	Shell fragments	
Hole MII-C	Drilled Depth 39 ft	7/24/84
0' to 15'	Fine grained Sand (OB)	
15' to 31'	Limestone fossiliferous (white)	
31' to 39'	Dolomite pelletal (brown)	
Hole MII- D	Drilled Depth 40 ft	1982
0' to 10'	Fine grained white Sand (OB)	
10' to 30'	Limestone fossiliferous (white)	
30' to 40'	Dolomite shell fragments (brown)	
Hole MII-E	Drilled Depth 45 ft	8/6/84
0' to 17.5'	Sand & Clay (OB)	
17.5' to 28.8'	Limestone fossiliferous (white)	
28.8' to 45'	Dolomite fossiliferous (brown)	
Hole MII- F	Drilled Depth 50 ft	7/24/84
0' to 15.5'	Fine grained Sand (OB)	
15.5' to 34.5'	Limestone fossiliferous (white-grey)	
34.5' to 45'	Dolomite fossiliferous (brown)	
45' to 50'	Green Clay (confining layer)	
Hole MII- G	Drilled Depth 59 ft	8/6/84
0' to 12'	Fine grained Sand (OB)	
12' to 39.8'	Limestone fossiliferous (white-grey)	
39.8' to 54'	Dolomite fossiliferous (brown)	
54' to 59'	Shell fragments	

Hole MII- H	Drilled Depth	61 ft	8/6/84
0' to 16'	Fine grained Sand (OB)		
16' to 46'	Limestone fossiliferous (white-grey-brown)		
46' to 51'	Dolomite fossiliferous (brown)		
51' to 61'	Shell fragments		
Hole MII- I	Drilled Depth	49 ft	7/24/84
0' to 22.8'	Fine grained Sand (OB)		
22.8' to 37'	Limestone fossiliferous (white-brown)		
37' to 44'	Dolomite fossiliferous (brown)		
44' to 49'	Shell fragments		
Hole MII- J	Drilled Depth	53.8 ft	5/20/92
0' to 6.9'	Fine grained Sand (OB)		
6.9' to 43.8'	Limestone fossiliferous (white-grey)		
43.8' to 53.8'	Shell fragments		
Hole MII- K	Drilled Depth	49 ft	5/20/92
0' to 19'	Fine grained Sand (OB)		
19' to 34'	Limestone fossiliferous (white-grey)		
34' to 39'	Rock fossiliferous (brown)		
39' to 49'	Shell fragments		
Hole MII- L	Drilled Depth	54 ft	5/22/92
0' to 14'	Fine grained Sand (OB)		
14' to 39'	Limestone fossiliferous (white-grey)		
39' to 48'	Shell & Clay		
48' to 54'	Green Clay		
Hole MII- M	Drilled Depth	58.5 ft	11/8/91
0' to 20'	Fine grained Sand (OB)		
20' to 53.5'	Limestone fossiliferous (white-grey)		
53.5' to 58.5'	No Recovery		
Hole MII- N	Drilled Depth	73 ft	12/18/91
0' to 13.5'	Sand & Clay (OB)		
13.5' to 20'	Abundant Shell		
20' to 73'	Limestone vuggy (white-grey)		

Hole MII-O	Drilled Depth	68.3 ft	11/26/91
0' to 9'	Fine grained Sand (OB)		
9' to 68.3'	Limestone fossiliferous (white-grey)		
Hole MII- P	Drilled Depth	88.5ft	11/8/91
0' to 15'	Sand & Clay (OB)		
15' to 68.5'	Limestone fossiliferous (white-grey)		
68.5' to 78.5'	Shell		
78.5' to 88.5'	Shell & Clay		
Hole MII- Q	Drilled Depth	83.5 ft	10/30/91
0' to 19.1'	Sand & Clay (OB)		
19.1' to 78.5'	Limestone fossiliferous (white-grey)		
78.5' to 83.5'	Grey Clay		
Hole MII- R	Drilled Depth	49 ft	4/7/92
0' to 14'	Sand & Clay (OB)		
14' to 49'	Limestone fossiliferous (white-grey)		
49'	Drill Hung in hole		
Hole MII- S	Drilled Depth	79 ft	4/7/92
0' to 13.9'	Sand & Clay (OB)		
13.9' to 69'	Limestone fossiliferous (white-grey-brown)		
69' to 79'	Shell & Clay		
Hole MII- T	Drilled Depth	86.6 ft	4/9/92
0' to 25.3'	Sand & Clay (OB)		
25.3' to 86.6'	Limestone fossiliferous (white-grey)		

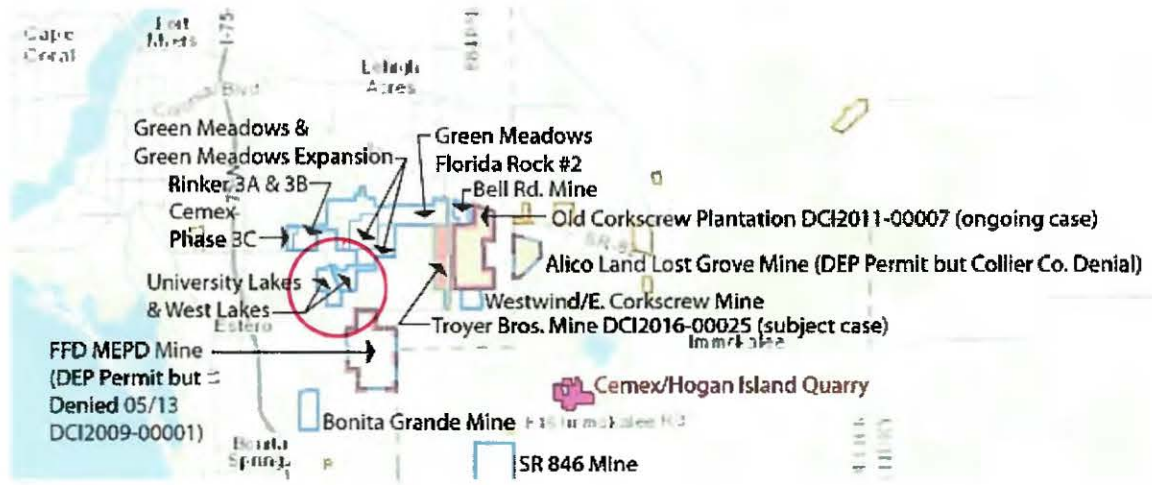
NOTES: HISTORICAL LOGS ASSEMBLED FROM MULTIPLE GEOLOGISTS AND DRILLERS. THE GREEN CLAY CONFINING LAYER WAS NOT ENCOUNTERED IN ALL BORINGS.

Appendix C.5

The University Lakes and West Lakes Mine

Appendix C.5

The University Lakes and West Lakes Mine



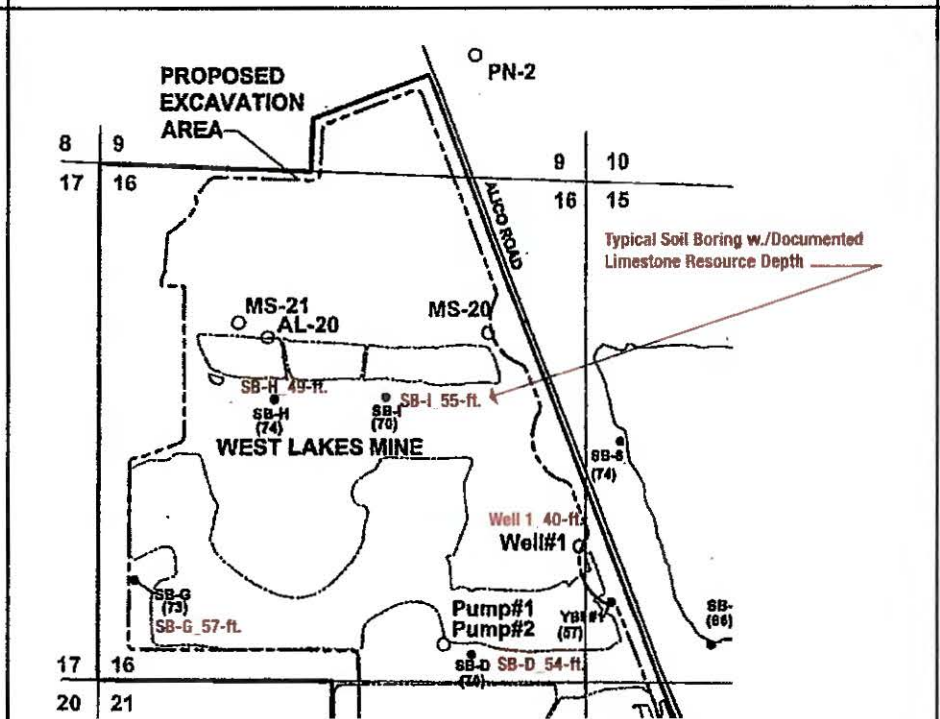
Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excitation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excitation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excitation Limerock	Stuart Remaining Post-excitation Limerock (Note #14)
University Lakes & West Lakes (5) DCI2004-00019 LDO2006-00071 Z-05-088 DCI2000-00079	1511	244,725,888	37,000,000	42,543,600	34,034,880	30	90	60.7	37,000,000	207,000,000	0.72	149,040,000	119,232,000

Note 5: University Lakes & West Lakes estimates based on 08/02/16 Morris Depew Monitoring Report (LDO2016-00071); soil profiles (20) based on CDM Missimer 06/04/18 with 28% average overburden & 60.7-ft. average lime rock thickness.

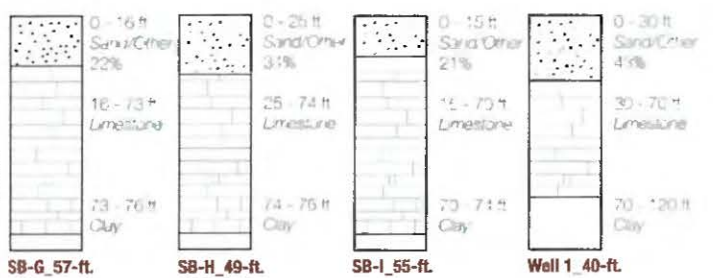
University Lakes & West Lakes IPD _ Lee Co.

	Project Area	Mine Acres			
Site Area	1995	1511			
C.Yd. of Excavation Authorized	244,725,888				
	Regulatory	Waldrop 09/16 Actual	Limerock		
	Depth	Thickness	Thickness	%	
Mine Depth	90 & 108	30	(09/17 Stuart)	Difference	
			61	202.2%	
Waldrop Study 09/16					
Est. Limerock Excavation To-date (2015)	37,000,000 C.Yd.				
Est. Limerock Remaining (Pre-excavation)	42,543,600 C.Yd.				
Est. Limerock (Post-excavation)	34,034,880 C.Yd.				
Lee Co. Mine Monitoring Reports/Stuart 09/17					
Mine Monitoring Reports Excavation To-date (2015)	37,000,000 C.Yd.				
Correct Limerock Remaining (As Per Monitoring Rep	207,000,000 C.Yd.				
Overburden Adjustment Coefficient	0.72				
Corrected Limerock Remaining (Pre-excavation)	149,040,000 C.Yd.				
Corrected Limerock Remaining (Post-excavation)	119,232,000	C.Yd.			350.3%

The University Lakes and West Lakes Mine _ Geotechnical Data

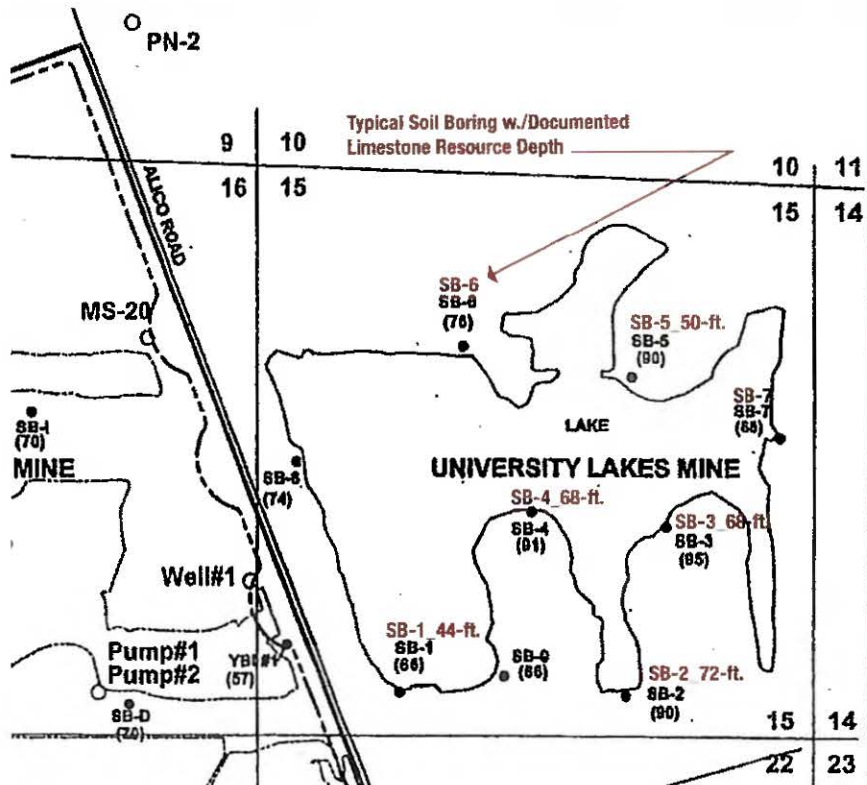


West Lakes Mine Mine Soil Bore Map Exhibit F; CDM Missimer 06/04
 Figure 5 YBI West Lakes Mine Depth To Top of Confinement (pg 15 of 61)
 Note: Ave. Limestone Resource Depth @ 60.7-ft. and Ave. Overburden @ 28% Total Excavated Resource Volume



Source: Hydrogeology & Public Water Supply Impact Analysis of The West Lakes Mine Site, Technical Memorandum Exhibit F. CDM 06/04 _ DCI2004-00019

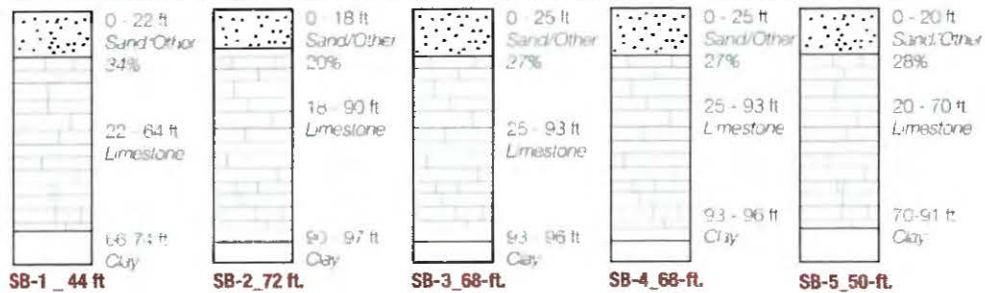
Stuart and Associates Greg@Stuarturbandesign.com www.stuarturbandesign.com



University Lakes Mine Soil Bore Map Exhibit F; CDM Missimer 06/04

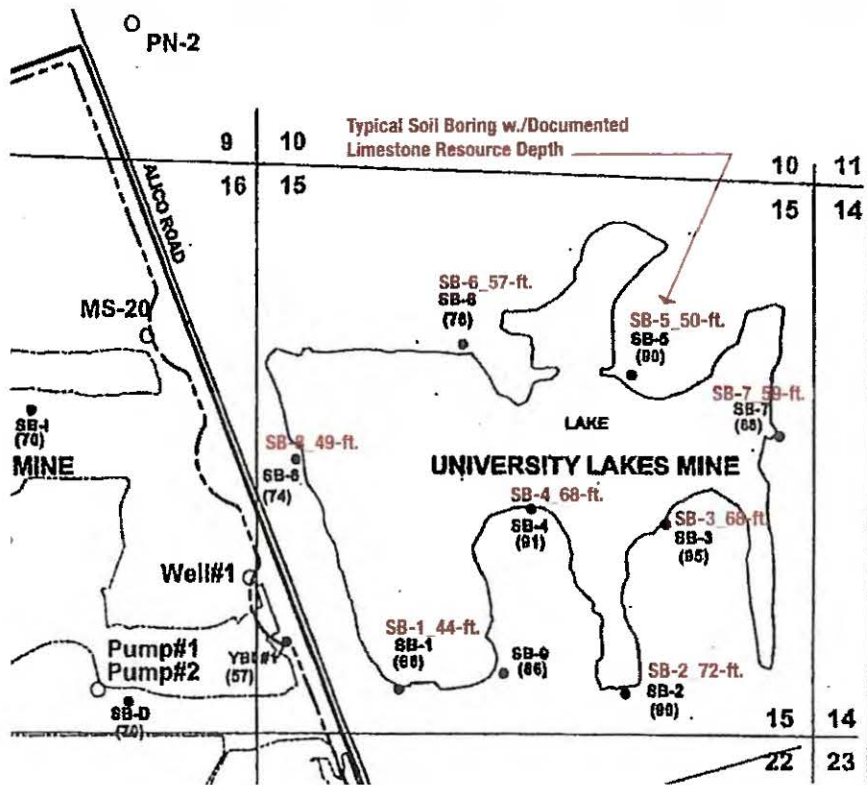
Figure 5 YBI West Lakes Mine Depth To Top of Confinement (pg. 15 of 61)

Note: Ave. Limestone Resource Depth @ 60.7-ft. and Ave. Overburden @ 28% Total Excavated Resource Volume

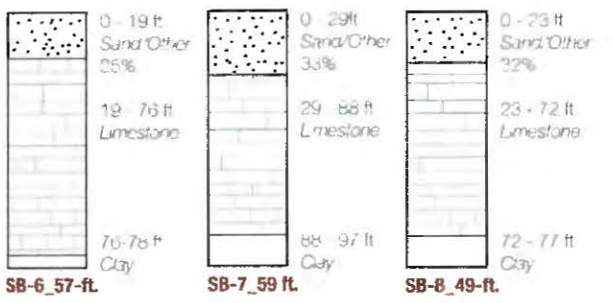


Source: *Hydrogeology & Public Water Supply Impact Analysis of The West Lakes Mine Site, Technical Memorandum Exhibit F.* CDM 06/04 _ DCI2004-00019

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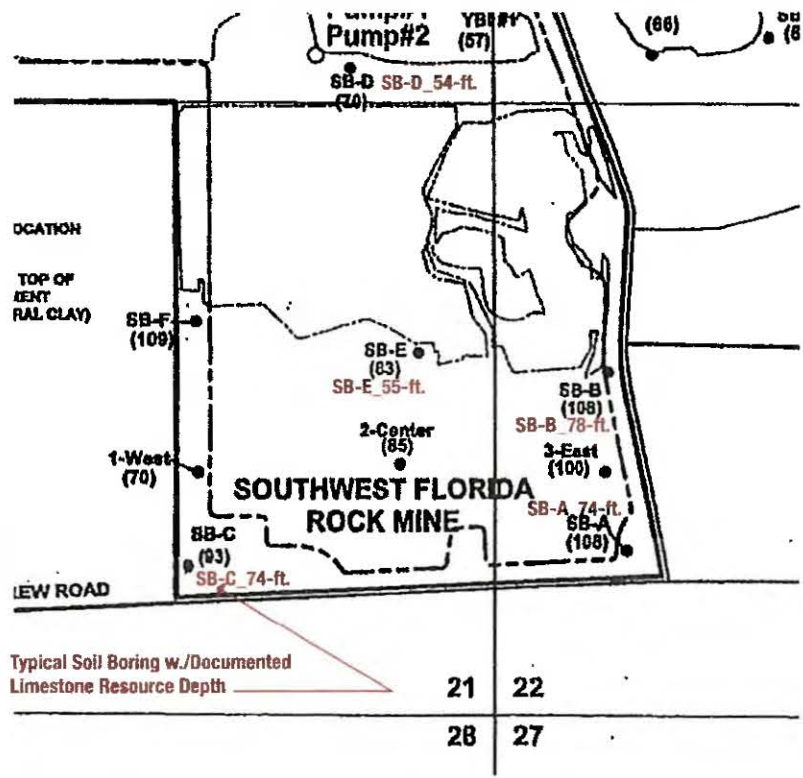


University Lakes Mine Soil Bore Map Exhibit F; CDM Missimer 06/04
 Figure 5 YBI West Lakes Mine Depth To Top of Confinement (pg. 15 of 61)
 Note: Ave. Limestone Resource Depth @ 60.7-ft. and Ave. Overburden @ 28% Total Excavated Resource Volume



Source: *Hydrogeology & Public Water Supply Impact Analysis of The West Lakes Mine Site, Technical Memorandum Exhibit F.* CDM 06/04 _ DCI2004-00019

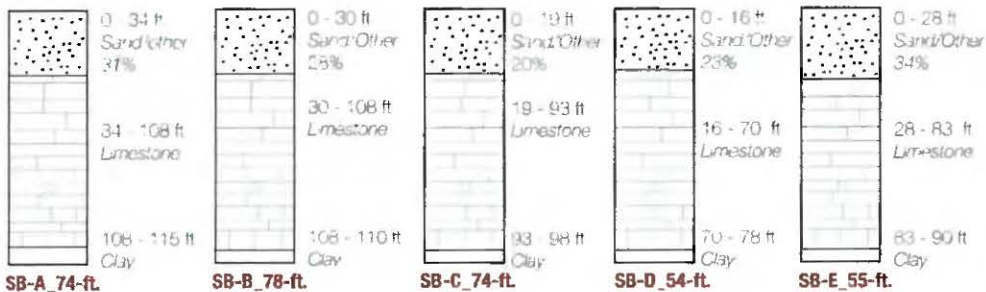
Stuart and Associates Greg@Stuarturbandesign.com www.stuarturbandesign.com



SW Florida Rock Mine Soil Bore Map Exhibit F; CDM Missimer 06/04

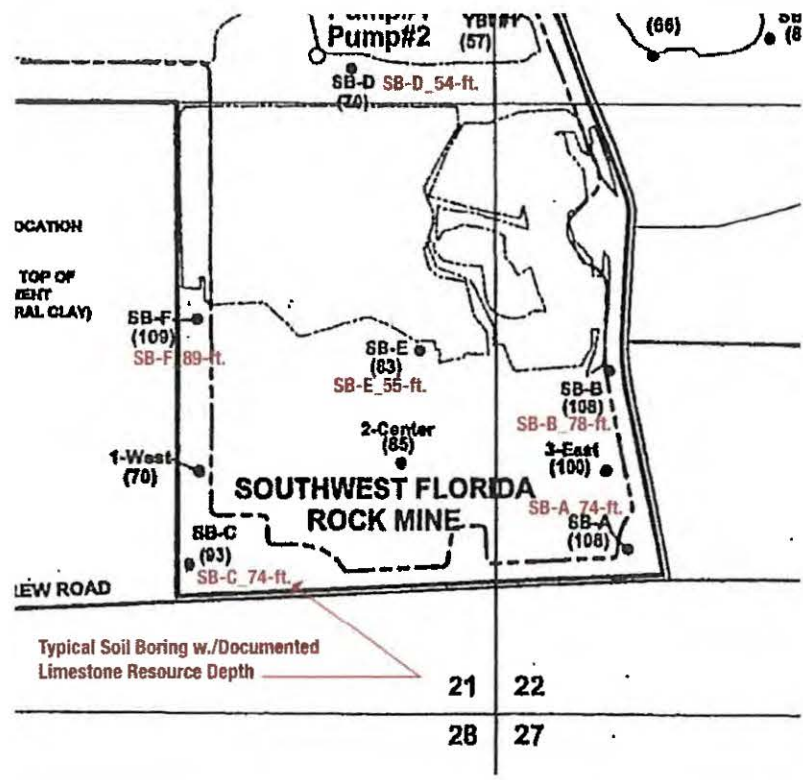
Figure 5 YBI West Lakes Mine Depth To Top of Confinement (pg. 15 of 61)

Note: Ave. Limestone Resource Depth @ 60.7-ft. and Ave. Overburden @ 28% Total Excavated Resource Volume



Source: Hydrogeology & Public Water Supply Impact Analysis of The West Lakes Mine Site, Technical Memorandum Exhibit F. CDM 06/04 _DCI2004-00019

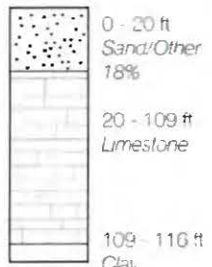
Stuart Associates Greg@Stuarturbandesign.com www.stuarturbandesign.com



SW Florida Rock Mine Soil Bore Map Exhibit F; CDM Missimer 06/04

Figure 5 YBI West Lakes Mine Depth To Top of Confinement (pg. 15 of 61)

Note: Ave. Limestone Resource Depth @ 60.7-ft. and Ave. Overburden @ 28% Total Excavated Resource Volume



SB-F_89-ft.

Source: Hydrogeology & Public Water Supply Impact Analysis of The West Lakes Mine Site, Technical Memorandum Exhibit F. CDM 06/04_DCI2004-00019

Stuart & Associates Greg@Stuarturbandesign.com www.stuarturbandesign.com

West Lakes Excavation DCI2004-00019 Soil Borings

<u>Core ID #</u>	<u>Limestone Core Percentage Resource Depth Overburden</u>	
<u>SW Fl Rock Mine:</u>		
SB-A	74	31%
SB-B	78	28%
SB-C	74	20%
SB-D	54	23%
SB-E	55	34%
SB-F	89	18%
<u>University Lakes Mine:</u>		
SB-1	44	34%
SB-2	72	20%
SB-3	68	27%
SB-4	68	27%
SB-5	50	28%
SB-6	57	25%
SB-7	59	33%
SB-8	49	32%
<u>Werst Lakes Mine:</u>		
SB-G	57	22%
SB-H	49	34%
SB-I	55	21%
Well 1	40	43%

Total # Cores	18
Average LS Resource Depth	60.7
Ave. LS Resource Depth West Alico	70.7
Ave. LS Resource Depth East Alico	55.7
Average Percentage Overburden Dep	28%

The University Lakes and West Lakes Mine:

DCI2004-00019 West Lakes Excavation Geotechnical Data

Applicants Exhibit F

Case No.: DCI 2004-00019



Intake Date: 4/6/04

Project Name: West Lakes Excavation

STRAP Number(s): 15-46-26-00-00001.0010, 0020
21-46-26-00-00001.0000, 0020, 0030
22-46-26-00-00001.0040, 0000
16-46-26-00-00001.1620, 1000, 2000, 0010
Planner Name: 09-46-26-00-00001.0220 Ext.

Chip Block 8371

LEGAL DESCRIPTION VERIFICATION and INITIAL GIS MAPPING

Date: 13 July 04

INTAKE: DCI04019 [Signature]

LEGAL SUFFICIENT YES LM NO

Initials:

If not, give brief explanation:

MAP UPDATE following FINAL ACTION

Date:

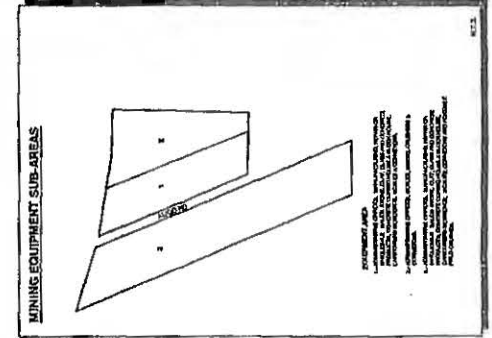
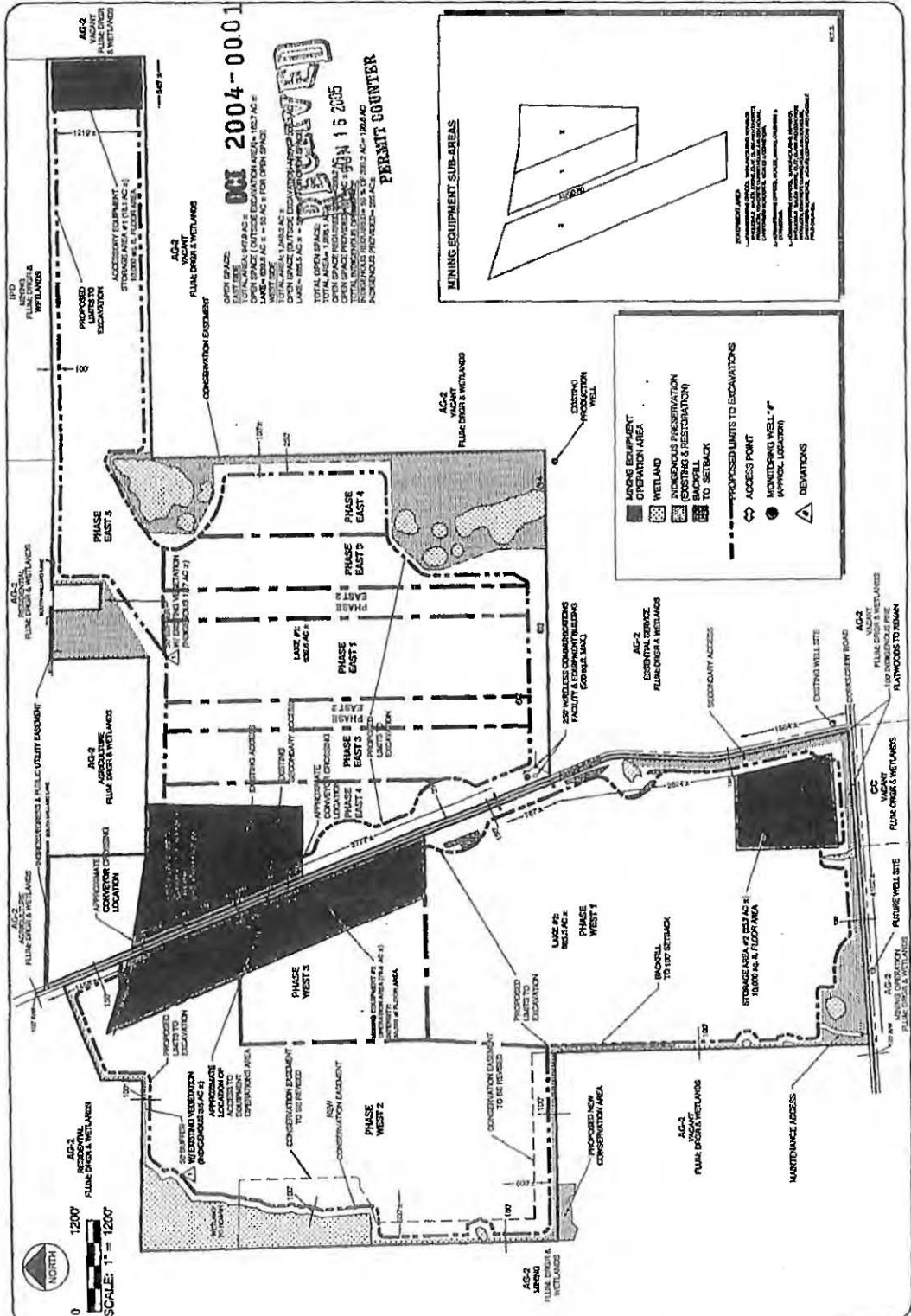
- Hearing Examiner Decision
- Board of County Commissioner's Resolution
- Administrative Approval
- Blue Sheet

Zoning Notes: Z-05-088, DCI 2004-00019, 30 JAN 06, AMEND UNIVERSITY LAKES EXCAVATION RPD, WEST LAKES EXCAVATION IPD, SOUTHWEST FLORIDA ROCK IPD AND REZONE 157.4 ACRES FROM AG-2 TO IPD TO CONSOLIDATE + CREATE A SINGLE IPD OF 1995.27 ACRES; CONDS.

MAP UPDATED YES NO

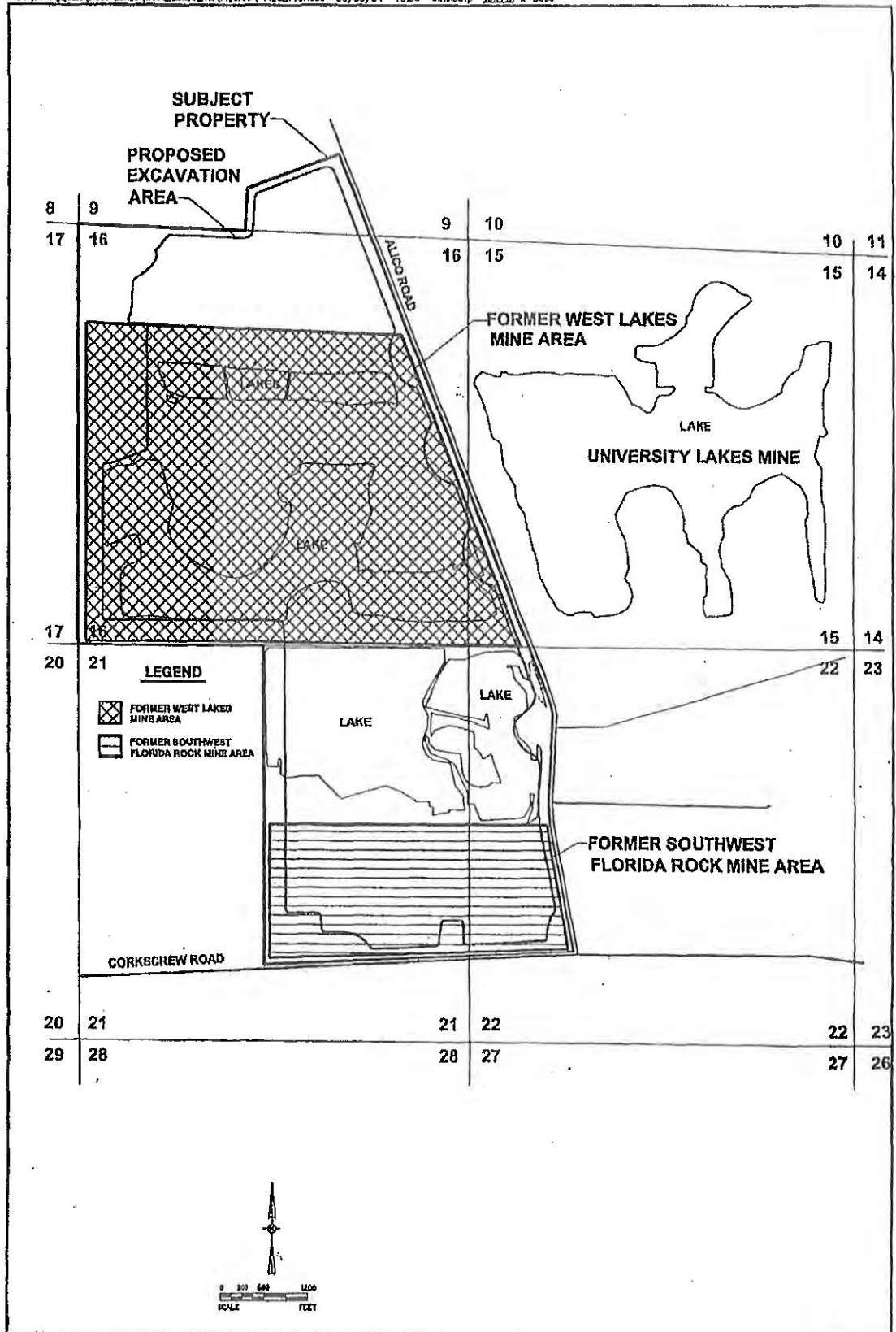
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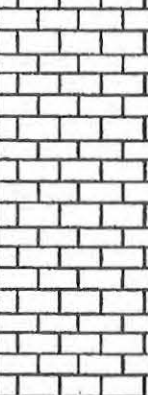


If not, give brief explanation:



DCI 2004-00-019
 PERMIT COUNTER
 APR 15 2005

NORTH
 0 1200
 SCALE: 1" = 1200'



SERIES	FORMATIONS	LITHOLOGY	HYDROLOGY
PLEISTOCENE	PAMLICO		SAND
	FT. THOMPSON/ CALOOSAHATCHEE		SAND AND SHELL
PLIOCENE	TAMIAMI		LIMESTONE
	BUCKINGHAM MEMBER	MARL	
MIOCENE	PEACE RIVER		CLAY AND SILT
	CAPE CORAL CLAY		
	LEHIGH ACRES SANDSTONE		SANDSTONE AND LIMESTONE

WATER TABLE
(SURFICIAL)
AQUIFER

CONFINING
UNIT

SANDSTONE
AQUIFER

CDM Missimer

Pr. Name: YBI - WEST LAKES MINE

Dwn. By:

Pr. No.: FH00-1135 DWG No:

Date: 06/03/04

Groundwater
and
Environmental Services

FIGURE 3. GENERALIZED HYDROGEOLOGY AT THE WEST LAKES MINE SITE.

Section 3

West Lakes Mine Test Borings

The data used to create Figure 4 is regional in nature and therefore may not be accurate on a local scale. Site-specific data were collected as part of investigations for the West Lakes Mine, Southwest Florida Rock Mine, and the University Lakes Mine. Boring logs from these investigations are attached in Appendix A. Locations of test borings and depths to the top of the regional confining bed are depicted on Figure 5.

The objective of the test borings was to obtain site specific data on the depth to the top of the confining unit at the project site. Such data would determine the depths to which the mines could be safely deepened without breaching the confining zone. Test borings were advanced via mud rotary drilling at four locations at the West Lakes Mine site, at eight locations at the Southwest Florida Rock Mine Site, and at nine locations at the University Lakes Mine Site.

The proposed mine site is underlain by fine-grained quartz sand from land surface to approximately 19 to 34 feet bls. The sands are part of the Pamlico Sand and the undifferentiated Ft. Thompson/Caloosahatchee Formation. The sands are underlain by a very porous and permeable fossiliferous limestone of the Ochopee Limestone. During boring activities, mud circulation was usually difficult to maintain in the limestone at depths between 35 and 50 feet bls, which often prevented the collection of drill cuttings below that depth, however, the top of the Cape Coral Clay is readily identified by a change in drilling behavior. The change from the relatively hard limestones of Ochopee Limestone to the soft Buckingham Marl or Cape Coral Clay can be identified by an increase in drilling rate and the absence of drill rig chatter. The presence of the Cape Coral Clay was also confirmed by removing the drill string after the drilling break was encountered and examining the bit for adhering dark greenish gray clay.

The depth to the top of the confining unit ranges from approximately 70 feet bls in the northern part of the proposed mine site to 109 feet bls in the southern part of the proposed mine site. These data generally confirm the regional trends noted earlier (increasing depth to confining unit in the southern part of the proposed mine site). One site located in the east-central part of the mine site indicated a top of confining bed depth of 57 feet bls.

No laterally continuous beds of clay, marl, or other low permeability sediments or rock were encountered between land surface and the top of the Cape Coral Clay that would hydraulically separate aquifers or aquifer zones. Mining could occur to depths as great as 109 feet bls without penetrating into the principal confining unit between the water-table aquifer and sandstone aquifer. Because the sediments underlying the Ochopee Limestone have no economic value, no excavation will occur beneath the top of the confining bed.

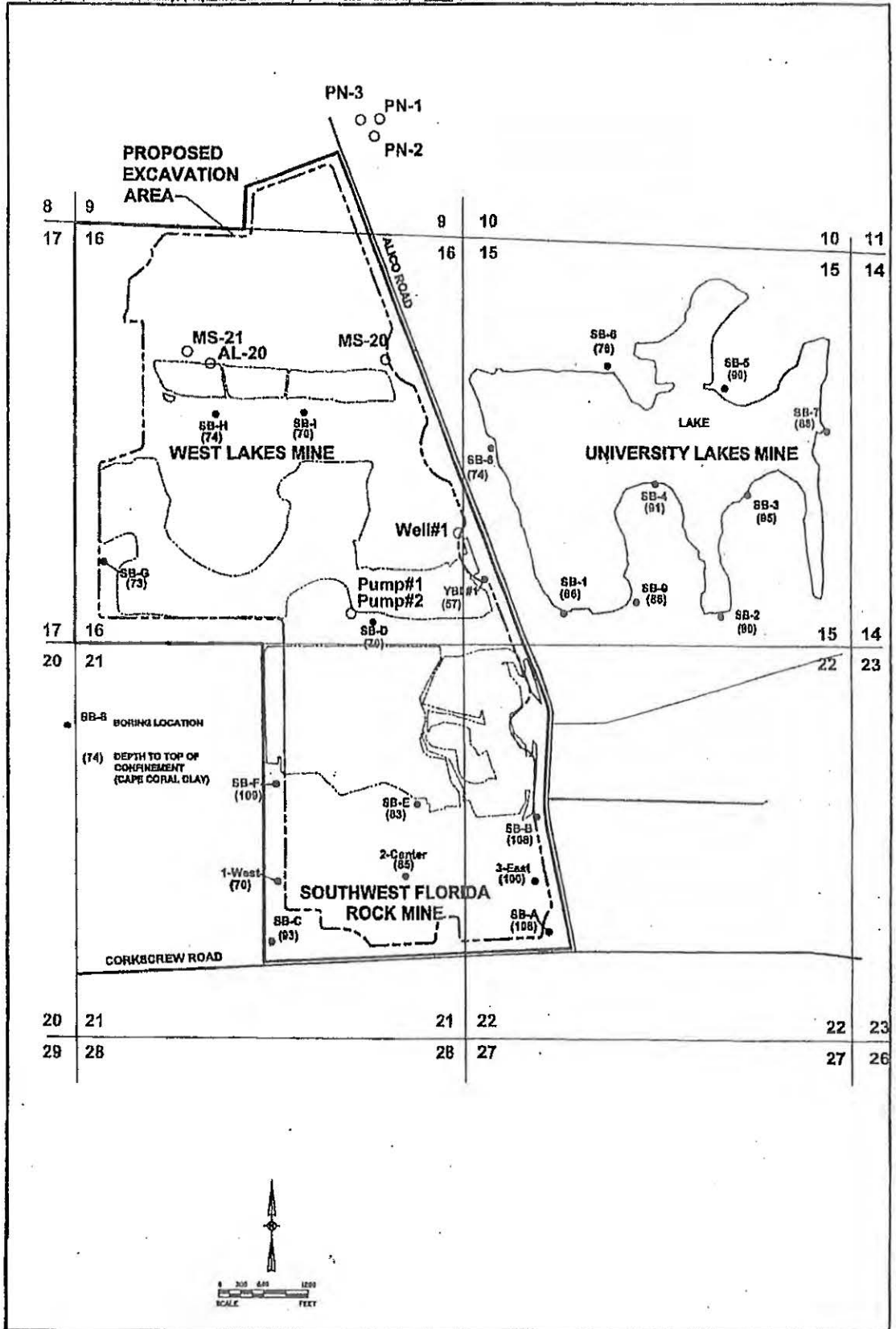


Table A-4 Geologist's Log L-M-926.

<u>Depth (ft.)</u>	<u>Description</u>
0-4	Sand, quartz, dark brown, organic, iron-stained, very fine, slightly clayey.
4-7	Sand, quartz, brown, same generally as above with less clay, some weathered rock fragments.
7-10	Sandstone, lt. gray, medium hard, very fine quartz sand +80% cemented by carbonate.
10-15	Sand, quartz, lt. brown to tan, very fine, clean.
15-24	Sandstone, lt. brown, shelly, shells appear weathered, overall sequence medium hard, very permeable.
24-26	Shell, thin bed, unconsolidated shell, mostly <u>Chione cancellata</u> .
26-30	Sandstone and shell, interbedded, sandstone is medium hard to hard, shell sequence is Pleistocene, high permeability.
30-34	Limestone, lt. gray, sandy, medium hard to hard, some shell.
34-39	Sandstone, lt. gray, hard, tightly cemented, some shell and molds and casts.
39-44	Limestone, lt. gray, very hard, trace of very fine quartz sand, medium porosity.
44-50	Limestone, gray, clean with some shell, higher porosity than above.
50-64	Limestone, lt. tan to dark gray, very hard light color limestone - very permeable, darker limestone very hard - medium porosity.
64-74	Limestone, lt. gray, medium hard, trace of shell, high porosity.

(Con't.)

Table A-4 (Con't.). Geologist's Log L-M- 926.

<u>Depth (ft.)</u>	<u>Description</u>
74-79	Limestone, gray, hard to medium hard, same as above.
79-84	Limestone, gray, very hard, shelly, probably interbedded, high porosity.
84-87	Marl, gray, mixture of gray carbonate mud and rock fragments.
87-94	Clay, green, carbonate, silty, abundant micro-fossils, fat.
94-104	Clay, green, slightly silty, fairly clean, abundant micro-fossils.
104-114	Clay, green, light color than above, carbonate, less silt than above.
114-124	Clay, green, same as above with some shell fragments.
124-126	Clay, green, some weathered rock and shell fragments, phosphorite nodules.
126-134	Limestone, gray-tan, slightly phosphatic, some shell, medium hard, medium porosity.
134-144	Limestone, gray-tan, slightly sandy, trace of shell, medium hard, medium porosity.
144-146	Limestone, gray-tan to tan, sandy, same as above.
146-155	Sandstone, tan, very fine quartz sand and very fine micro-phosphorite nodules.
155-164	Sandstone, tan, more than 60% shell fragments nearly unconsolidated, soft, very porous.
164-174	Sandstone, tan-lt. gray, very shelly, lithified better than above, very porous.
174-184	Sandstone, gray, medium hard, less shell, medium porosity.

(Con't.)

Table A-4 (Con't.). Geologist's Log L-M-926.

<u>Depth (ft.)</u>	<u>Description</u>
184-188	Marl, gray, mixture of gray carbonate mud and rock-fragments, slightly phosphatic.
188-195	Clay, green, very silty, phosphatic, same quartz sand.

LITHOLOGIC LOGS
WEST LAKES MINE TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-A	
0 - 1	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted.
1 - 3	LIMESTONE (CAP ROCK), pale greenish yellow (10Y 8/2), fossil wackestone, hard, low macroporosity.
3 - 34	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted.
34 - 73	LIMESTONE, light olive gray (5Y 6/1) fossil wackestone, hard, very high macroporosity (moldic), mollusks.
73 - 87	LIMESTONE, no returns, drills like soft silt limestone. Lost circulation
87 - 95	No returns, drills like clay/marl.
95 - 108	LIMESTONE, no returns
108 - 115	CLAY, no returns.
Test boring SB-B	
0 - 16	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted.
16 - 30	SAND, similar to above except very shelly.
30 - 89	LIMESTONE, lost circulation, no returns. Drills like rock.
89 - 108	LIMESTONE, no returns. Drills like soft silty limestone. Silty and sandy clay with limestone fragments were recovered from drill bit.
108 - 110	CLAY, dark greenish gray (5GY 4/1), stiff.

LITHOLOGIC LOGS (Continued)
WEST LAKES MINE TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-C	
0 - 1	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted.
1 - 3	LIMESTONE (CAP ROCK), pale greenish yellow (10Y 8/2), fossil wackestone, hard, low macroporosity.
3 - 19	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted.
19 - 70	LIMESTONE, light olive gray (5Y 6/1) fossil wackestone, hard, very high macroporosity (moldic), mollusks.
70 - 93	LIMESTONE, no returns, drills like soft silty limestone.
93 - 98	CLAY, dark greenish gray (5GY 4/1), stiff (recovered from bit)
Test boring SB-D	
0 - 16	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted
16 - 35	LIMESTONE, light olive gray (5Y 6/1) fossil wackestone, hard, very high macroporosity (moldic), mollusks.
35 - 50	LIMESTONE, lost circulation, no returns. Drills like rock.
50 - 70	LIMESTONE, drills soft like silty oyster shell rock. SILT, pale olive (10 Y 6/2), sandy and clayey with limestone fragments recovered from drill bit at approximately 60 ft.
70 - 78	CLAY, dark greenish gray (5GY 4/1), stiff (recovered from drill bit).

LITHOLOGIC LOGS (Continued)
WEST LAKES MINE TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-E	
0 - 28	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted.
28 - 83	LIMESTONE, light olive (5Y 6/1), fossil wackestone, hard, very high macroporosity (moldic). Lost circulation at 35 ft. No returns below 40 ft.
83 - 90	CLAY, dark greenish gray (5GY 4/1), stiff.
Test boring SB-F	
0 - 1	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, mollusks.
1 - 2	LIMESTONE (CAP ROCK), pale greenish yellow (10Y 8/2), fossil wackestone, low macroporosity, hard.
2 - 20	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, mollusks.
20 - 80	LIMESTONE, light olive (5Y 6/1) fossil wackestone, hard, very high macroporosity (moldic and vuggy), mollusks. Lost circulation and no returns below 40 ft.
80 - 109	LIMESTONE, drills like soft rock.
109 - 116	CLAY, dark greenish gray (5GY 4/1), stiff.
Test boring SB-G	
0 - 16	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, mollusks.
16 - 73	LIMESTONE, light olive (5Y 6/1), fossil wackestone, hard, very high macroporosity (moldic and vuggy), bivalves, mollusks. Lost circulation and no returns below 35 ft.
73 - 76	CLAY, dark greenish gray (5GY 4/1), stiff.

LITHOLOGIC LOGS (Continued)
WEST LAKES MINE TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-H	
0 - 1/2	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, mollusks.
1/2 - 3	LIMESTONE (CAP ROCK), pale greenish yellow (10Y 8/2), fossil wackestone, low macroporosity, hard.
3 - 25	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, mollusks.
25 - 29	LIMESTONE, no returns, drills like rock.
29 - 35	MARL, yellowish gray (5Y 8/1), soft, sandy (50%) and CLAY, grayish olive green (5GY 3/2), sandy, stiff.
35 - 74	LIMESTONE, yellowish gray (5Y 8/1), fossil wackestone to grainstone, moderate hardness, moderate to high macroporosity, mollusks.
74 - 76	CLAY, dark greenish gray (5GY 4/1), stiff.
Test boring SB-I	
0 - 15	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted. Clayey between about 14 and 15 feet.
15 - 70	LIMESTONE, light olive (5Y 6/1), fossil wackestone, hard, very high macroporosity, mollusks. Lost circulation at 35 ft. No returns below 35 ft.
70 - 74	CLAY, dark greenish gray (5GY 4/1), stiff.

GEOLOGIST'S LOG
Well 1 West Side

<u>Depth (feet)</u>	<u>Lithology</u>
0 - 5	SANDSTONE, light brown (5YR 6/4) to yellowish gray (5Y 7/2), moderately soft.
5 - 7	SILT (60%), dark yellowish orange (10YR 6/6), fine-grained, very sandy, soft to cohesive. SANDSTONE (40%), pale yellowish brown (10YR 6/2), moderately hard to hard.
7 - 15	SILT (60%), dark yellowish orange (10YR 6/6) to yellowish gray (5Y 7/2), very sandy, soft to cohesive. SANDSTONE (40%), dark yellowish orange (10YR 6/6) to light brown (5YR 6/4), moderately hard to hard.
15 - 20	SANDSTONE (50%), yellowish gray (5Y 8/1) to medium light gray (N6), hard. FOSSILS (50%), very pale orange (10YR 8/2), mollusks.
20 - 25	SANDSTONE (75%), very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), moderately soft to moderately hard. FOSSILS (25%), very pale orange (10YR 8/2), mollusks.
25 - 30	SANDSTONE (60%), pale yellowish brown (10YR 6/2), hard. FOSSILS (40%), very pale orange (10YR 8/2), mollusks.
30 - 35	LIMESTONE (60%), yellowish gray (5Y 8/1), hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks. SANDSTONE (10%), yellowish gray (5Y 8/1), hard.
35 - 40	LIMESTONE (60%), yellowish gray (5Y 8/1), moderately soft to hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks. SANDSTONE (10%), yellowish gray (5Y 8/1), moderately hard. MARL (trace), white (N9), soft.
40 - 45	LIMESTONE (70%), yellowish gray (5Y 8/1), hard. FOSSILS (30%), yellowish gray (5Y 8/1), mollusks, corals.
45 - 50	LIMESTONE (60%), yellowish gray (5Y 8/1), hard. FOSSILS (40%), yellowish gray (5Y 8/1), mollusks, corals.
50 - 55	LIMESTONE (60%), yellowish gray (5Y 7/2) to medium light gray (N6), hard. FOSSILS (40%), very pale orange (10YR 8/2), mollusks.
55 - 60	LIMESTONE (50%), yellowish gray (5Y 7/2) to medium light gray (N6), hard.

GEOLOGIST'S LOG
Well 1 West Side

<u>Depth (feet)</u>	<u>Lithology</u>
	FOSSILS (50%), very pale orange (10YR 8/2), mollusks.
60 - 65	LIMESTONE (60%), yellowish gray (5Y 7/2), hard. FOSSILS (40%), very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), mollusks, corals.
65 - 70	LIMESTONE (70%), yellowish gray (5Y 8/1) to yellowish gray (5Y 7/2), moderately soft to hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks, echinoids.
70 - 75	CLAY (60%), grayish yellow green (5GY 7/2), cohesive. SANDSTONE (20%), yellowish gray (5Y 7/2), hard. FOSSILS (20%), very pale orange (10YR 8/2), mollusks, barnacles.
75 - 80	CLAY, greenish gray (5GY 6/1), cohesive.
80 - 120	CLAY, dusky yellowish green (5GY 5/2), soft, cohesive.

GEOLOGIST'S LOG
Well 2 Middle

<u>Depth (feet)</u>	<u>Lithology</u>
0 - 5	SAND, moderate yellow green (5GY 7/4), silty.
5 - 10	SILT (50%), moderate greenish yellow (10Y 7/4), sandy, soft. SANDSTONE (50%), yellowish gray (5Y 8/1) to dark yellowish orange (10YR 6/6), hard.
10 - 15	SANDSTONE (70%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1) to medium light gray (N6), hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks.
15 - 20	FOSSILS (95%), very pale orange (10YR 8/2), mollusks. SANDSTONE (5%), very pale orange (10YR 8/2), moderately hard.
20 - 25	FOSSILS (70%), very pale orange (10YR 8/2), mollusks. SANDSTONE (20%), very pale orange (10YR 8/2), hard. SILT (10%), light brownish gray (5YR 6/1).
25 - 30	FOSSILS (80%), very pale orange (10YR 8/2), mollusks. SILT (10%), light brownish gray (5YR 6/1). SANDSTONE (10%), yellowish gray (5Y 8/1), moderately hard.
30 - 35	SANDSTONE (50%), light gray (N7), moderately soft. FOSSILS (50%), very pale orange (10YR 8/2), mollusks.
35 - 40	SANDSTONE (50%), yellowish gray (5Y 7/2), moderately hard. FOSSILS (50%), very pale orange (10YR 8/2), mollusks.
40 - 45	FOSSILS (50%), very pale orange (10YR 8/2), mollusks. SANDSTONE (25%), yellowish gray (5Y 8/1), hard. LIMESTONE (25%), yellowish gray (5Y 8/1), hard.
45 - 50	SANDSTONE (35%), yellowish gray (5Y 8/1), hard. LIMESTONE (35%), yellowish gray (5Y 8/1), hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks.
50 - 55	LIMESTONE (60%), yellowish gray (5Y 7/2) to medium dark gray (N4), hard. FOSSILS (40%), very pale orange (10YR 8/2), mollusks, corals.
55 - 60	LIMESTONE (60%), yellowish gray (5Y 7/2) to medium gray (N5), hard. FOSSILS (40%), very pale orange (10YR 8/2), mollusks.
60 - 65	LIMESTONE (70%), yellowish gray (5Y 7/2), hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks, corals.

GEOLOGIST'S LOG

Well 2 Middle

<u>Depth (feet)</u>	<u>Lithology</u>
65 - 70	LIMESTONE (70%), yellowish gray (5Y 7/2), hard. FOSSILS (30%), very pale orange (10YR 8/2), mollusks.
70 - 75	LIMESTONE (85%), yellowish gray (5Y 7/2) to medium light gray (N6), moderately soft to hard. FOSSILS (15%), very pale orange (10YR 8/2), mollusks.
75 - 80	LIMESTONE (85%), yellowish gray (5Y 7/2) to medium light gray (N6), moderately hard. FOSSILS (15%), very pale orange (10YR 8/2), mollusks.
80 - 85	CLAY (60%), grayish yellow green (5GY 7/2), sandy, soft to cohesive. FOSSILS (30%), very pale orange (10YR 8/2), mollusks, barnacles. SANDSTONE (10%), yellowish gray (5Y 7/2), hard.
85 - 90	CLAY (45%), grayish yellow green (5GY 7/2), sandy, soft to cohesive. FOSSILS (45%), very pale orange (10YR 8/2), mollusks, barnacles. SANDSTONE (10%), yellowish gray (5Y 7/2), hard.
90 - 120	CLAY, grayish green (10GY 5/2), cohesive.

GEOLOGIST'S LOG
Well 3 East Side

<u>Depth (feet)</u>	<u>Lithology</u>
0 - 5	SAND, dark yellowish orange (10YR 6/6), silty, soft.
5 - 10	SAND (80%), dark greenish yellow (10Y 6/6), silty, soft. SANDSTONE (20%), dark yellowish brown (10YR 4/2), moderately hard.
10 - 15	SANDSTONE (85%), yellowish gray (5Y 8/1) to light brown (5YR 6/4), moderately hard. SAND (15%), yellowish gray (5Y 8/1) to dark yellowish orange (10YR 6/6), silty, soft.
15 - 20	SANDSTONE (60%), yellowish gray (5Y 7/2), hard. FOSSILS (40%), very pale orange (10YR 8/2), mollusks.
20 - 25	SANDSTONE (75%), very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), hard. FOSSILS (25%), very pale orange (10YR 8/2), mollusks.
25 - 30	SANDSTONE (85%), yellowish gray (5Y 7/2), hard. FOSSILS (15%), very pale orange (10YR 8/2), mollusks.
30 - 35	SANDSTONE (50%), yellowish gray (5Y 7/2), hard. FOSSILS (50%), very pale orange (10YR 8/2), mollusks.
35 - 40	FOSSILS (60%), very pale orange (10YR 8/2), mollusks. SANDSTONE (40%), very pale orange (10YR 8/2) to medium light gray (N6), hard.
40 - 50	SANDSTONE (50%), light brownish gray (5YR 6/1), hard. FOSSILS (50%), very pale orange (10YR 8/2), mollusks.
50 - 55	SANDSTONE (40%), yellowish gray (5Y 7/2), moderately soft. LIMESTONE (35%), yellowish gray (5Y 8/1) to medium dark gray (N4), moderately soft. FOSSILS (25%), very pale orange (10YR 8/2), mollusks.
55 - 60	LIMESTONE (80%), light brownish gray (5YR 6/1), hard. FOSSILS (20%), very pale orange (10YR 8/2) to yellowish gray (5Y 7/2) to medium gray (N5), mollusks, corals.
60 - 65	LIMESTONE (80%), medium gray (N5) to yellowish gray (5Y 7/2), hard. FOSSILS (20%), yellowish gray (5Y 7/2), mollusks.
65 - 70	LIMESTONE (45%), medium gray (N5) to yellowish gray (5Y 7/2), hard.

GEOLOGIST'S LOG
Well 3 East Side

<u>Depth (feet)</u>	<u>Lithology</u>
	FOSSILS (45%), yellowish gray (5Y 7/2), mollusks, corals, crabs. CLAY (10%), light greenish gray (5GY 8/1), soft.
70 - 75	LIMESTONE/SANDSTONE (40%), medium gray (N5) to yellowish gray (5Y 7/2), hard. FOSSILS (40%), yellowish gray (5Y 7/2), mollusks. CLAY (20%), light greenish gray (5GY 8/1), soft.
75 - 80	LIMESTONE/SANDSTONE (60%), medium gray (N5) to yellowish gray (5Y 7/2) to yellowish gray (5Y 8/1), hard. FOSSILS (40%), very pale orange (10YR 8/2), mollusks.
80 - 85	LIMESTONE/SANDSTONE (80%), medium gray (N5) to yellowish gray (5Y 7/2), hard. FOSSILS (20%), very pale orange (10YR 8/2), mollusks. CLAY (trace), light greenish gray (5GY 8/1), soft.
85 - 90	LIMESTONE/SANDSTONE (80%), medium gray (N5) to yellowish gray (5Y 7/2), hard. FOSSILS (20%), very pale orange (10YR 8/2), mollusks.
90 - 100	LIMESTONE (60%), yellowish gray (5Y 7/2), hard. CLAY (25%), grayish yellow green (5GY 7/2), soft. FOSSILS (15%), yellowish gray, mollusks.
100 - 105	CLAY (50%), grayish yellow green (5GY 7/2), soft. FOSSILS (30%), yellowish gray (5Y 7/2), mollusks. LIMESTONE (20%), yellowish gray (5Y 7/2), hard.
105 - 110	CLAY, grayish yellow green (5GY 7/2), cohesive.
110 - 120	CLAY, grayish green (10GY 5/2), cohesive.

LITHOLOGIC LOGS
UNIVERSITY LAKES MINES TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-1	
0 - 22	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, silty, organic material in upper 5 feet.
22 - 66	LIMESTONE, yellowish gray (5Y 8/1), fossil wackestone, hard, very high macroporosity, slightly sandy. Loss of circulation below 33 feet, no returns below 35 ft.
66 - 74	CLAY, dark greenish gray (5GY 4/1), stiff. Change in lithology was marked by a drilling break. No returns but clay was adhering to drill bit.
Test boring SB-2	
0 - 18	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, silty, organic material in upper 5 feet. Clayey near the base.
18 - 90	LIMESTONE, light olive gray (5Y 6/1), fossil grainstone, moderately hard, very high macroporosity. Lost circulation at 40'. No returns below 40 feet. Limestone became softer below 72 feet.
90 - 97	CLAY, dark greenish gray (5GY 4/1), stiff. Change in lithology was marked by a drilling break. No returns but clay was adhering to drill bit.
Test boring SB-3	
0 - 25	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well sorted, minor silt and shell. Organic material in upper 1 ft.
25 - 93	LIMESTONE, lost circulation, no returns. Drills like rock (chatter).
93 - 95	CLAY, light greenish gray (5GY 8/1), stiff, sandy, very fine to fine-grained quartz sand, bivalve fragments, trace of phosphate. Change in lithology was marked by a drilling break.
95 - 96	CLAY, dark greenish gray (5GY 4/1), stiff

LITHOLOGIC LOGS (Continued)
UNIVERSITY LAKES MINES TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-4	
0 - 22	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, silty.
23 - 40	LIMESTONE, light olive gray (5 Y 6/1), fossil grainstone, moderately hard, very high-macroporosity, mollusks shells. Lost circulation at 35 ft, no returns below 40 ft.
40 - 91	LIMESTONE, no cuttings.
91 - 92	CLAY, dark greenish gray (5GY 4/1), stiff, sandy. Change in lithology was marked by a drilling break. No returns but lithology determined was determined from clay was adhering to drill bit.
Test boring SB-5	
0 - 20	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, minor silt and shell.
20 - 70	LIMESTONE, lost circulation, no returns. Drills like rock (chatter).
70 - 90	CLAY, light greenish gray (5GY 8/1), stiff, sandy, very fine to fine-grained quartz sand, bivalve fragments, trace of phosphate. Change in lithology was marked by a drilling break.
90 - 91	CLAY, dark greenish gray (5GY 4/1), stiff.
Test boring SB-6	
0-19	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, minor silt and shell.
19-21	LIMESTONE, light olive (5Y 6/1), fossil grainstone, moderately hard, very high macroporosity (moldic and vuggy), bivalves, sandy.
21 - 76	LIMESTONE, no returns, loss of circulation. Drills lake rock. Limestone lithology confirmed in second boring at site (SB-6B)
76 - 78	CLAY, dark greenish gray (5GY 4/1), stiff.

LITHOLOGIC LOGS (Continued)
UNIVERSITY LAKES MINES TEST BORINGS

<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-7	
0 - 29	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, minor silt and shell.
29 - 78	LIMESTONE, no returns, loss of circulation. Drills like rock. Test boring SB-7 has the worse loss of circulation conditions of any of the borings.
78 - 88	LIMESTONE/CLAY, soft, no returns.
88 - 97	CLAY, drills like stiff clay.
Test boring SB-8 (and immediately adjoining SB-8B)	
0 - 23	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, minor silt and shell.
23 - 65	LIMESTONE, light olive (5 Y 6/1) fossil wackestone, moderately hard to hard, very high macroporosity (moldic, vuggy, and intergranular), mollusks (bivalves and gastropods).
65 - 72/74	LIMESTONE, pale olive (10Y 6/2), grainstone, soft to hard, very high intergranular macroporosity, sandy, very silty, oyster shells.
72/74 - 77	CLAY, dark greenish gray (5GY 4/1), stiff.

LITHOLOGIC LOGS (Continued)
UNIVERSITY LAKES MINES TEST BORINGS

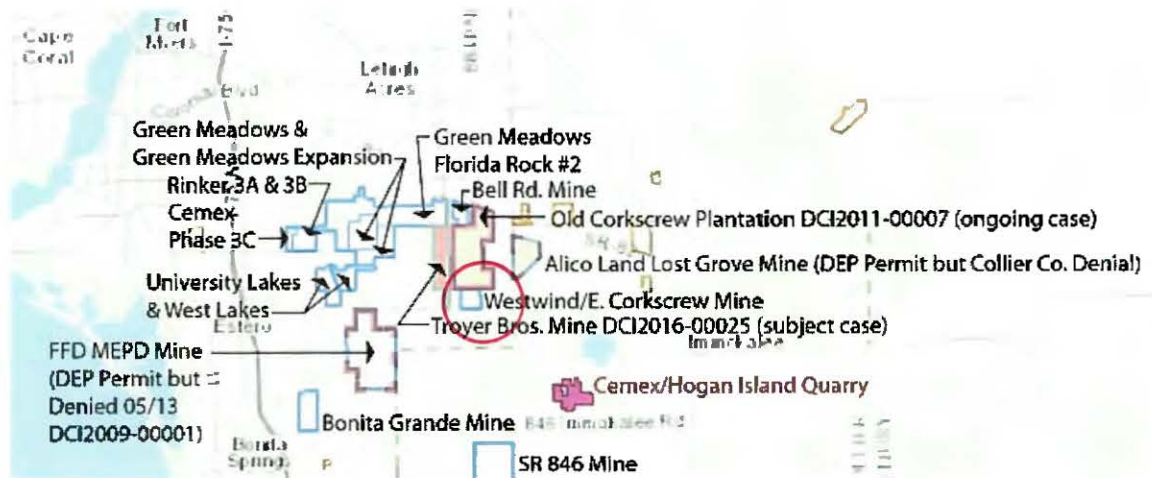
<u>Depth (feet)</u>	<u>Lithology</u>
Test boring SB-9	
0 - 20	SAND, light olive brown (5Y 5/6), quartz, fine-grained, well-sorted, bivalves.
20 - 30	LIMESTONE, yellowish gray (5 Y 8/1), fossil wackestone, hard, very high macroporosity (moldic and vuggy), mollusks.
30 - 72	LIMESTONE, no returns, drills like rock.
72 - 75	SILT, pale olive (10Y 6/2), soft, sand and clay.
75 - 86	SILT?, No returns, drill like silt.
86 - 92	CLAY, dark greenish gray (5GY 4/1), stiff

Appendix C.6

The Westwind / East Corkscrew Mine

Appendix C.6

The Westwind/East Corkscrew Mine



Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Westwind (E. Corkscrew Mine) (6) DCI2002-00066 DCI2000-00057 Z-01-016 DOS2012-00010	299	24,926,000	16,113,973	4,259,200	3,407,360	44	50	83.6			0.82	5,749,920	4,599,936

Note 6: Westwind/East Corkscrew Mine _ Waldrop estimated based on 60 available acres @ 44-ft. rock thickness; actual available acreage at 81-acres and a yield of 5.7MM cyd.. 10/2002 CDM Missimer soil borings (14) with 18.6% average overburden & 83.6-ft. average lime rock thickness. Though total available lime rock resources @ 17.3MM cyd., because of the 50-ft. IPD mine depth limitation, the maximum potential 17.3MM yield is not factored into update.

Westwind Mine (E. Corkscrew Mine) _ Lee Co.

	Project Area	Mine Acres (Waldrop 2016)	Correct Mine Acres
Site Area	602.9	287	308
Waldrop Existing Excavation Area		227	
Waldrop Available Excavation Area		60	81
C.Yd. of Excavation Authorized	24,926,000		

	Regulatory Depth	Waldrop 09/16 Est. Limerock Thickness	Actual Limerock Thickness (09/17 Stuart)	% Difference
Mine Depth	50	44		

Waldrop Study 09/16			
Est. Limerock Excavation To-date (2015)	16,113,973 C.Yd.		
Est. Limerock Remaining (Pre-excavation)	4,259,200 C.Yd.		5,749,920 C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	3,407,360 C.Yd.		4,599,936 C.Yd.

The Westwind / East Corkscrew Mine

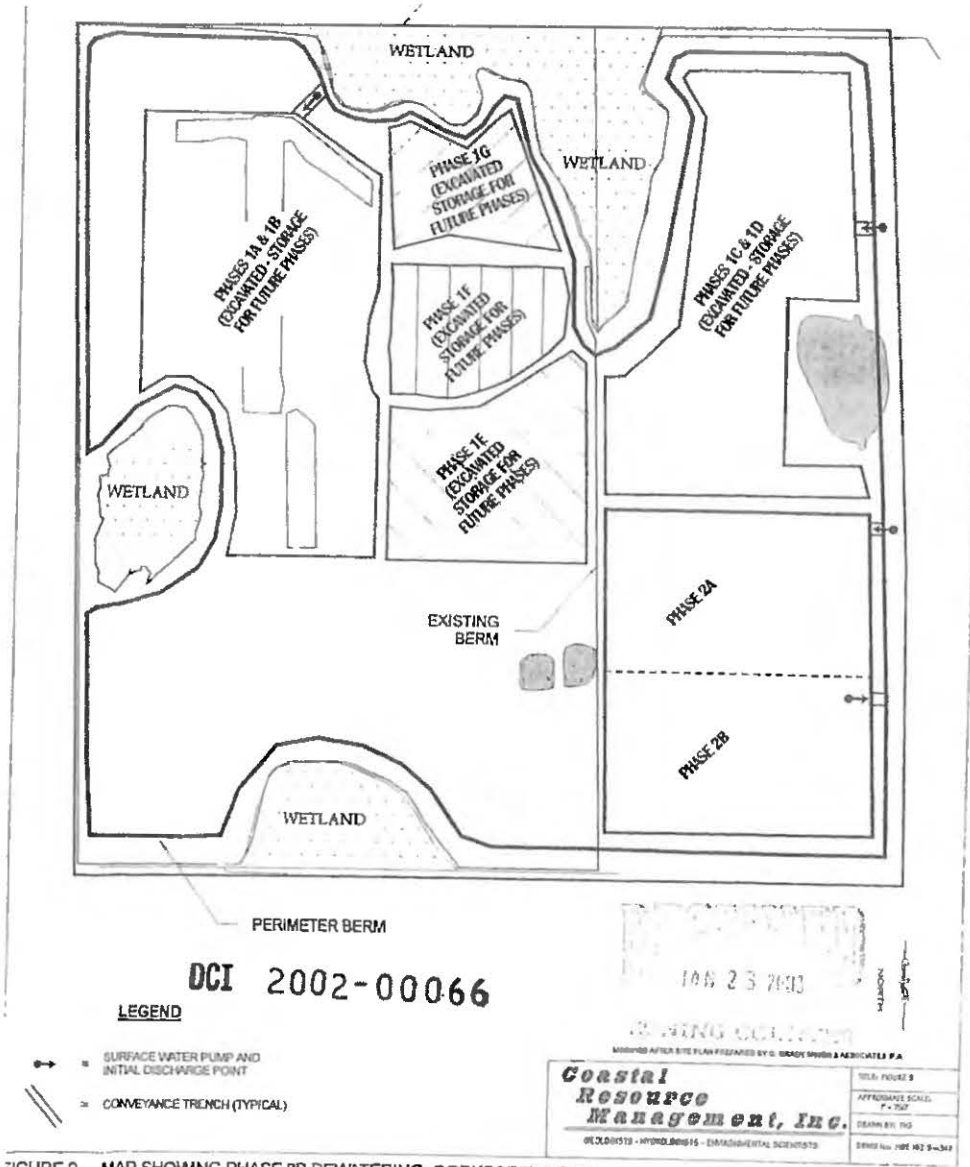
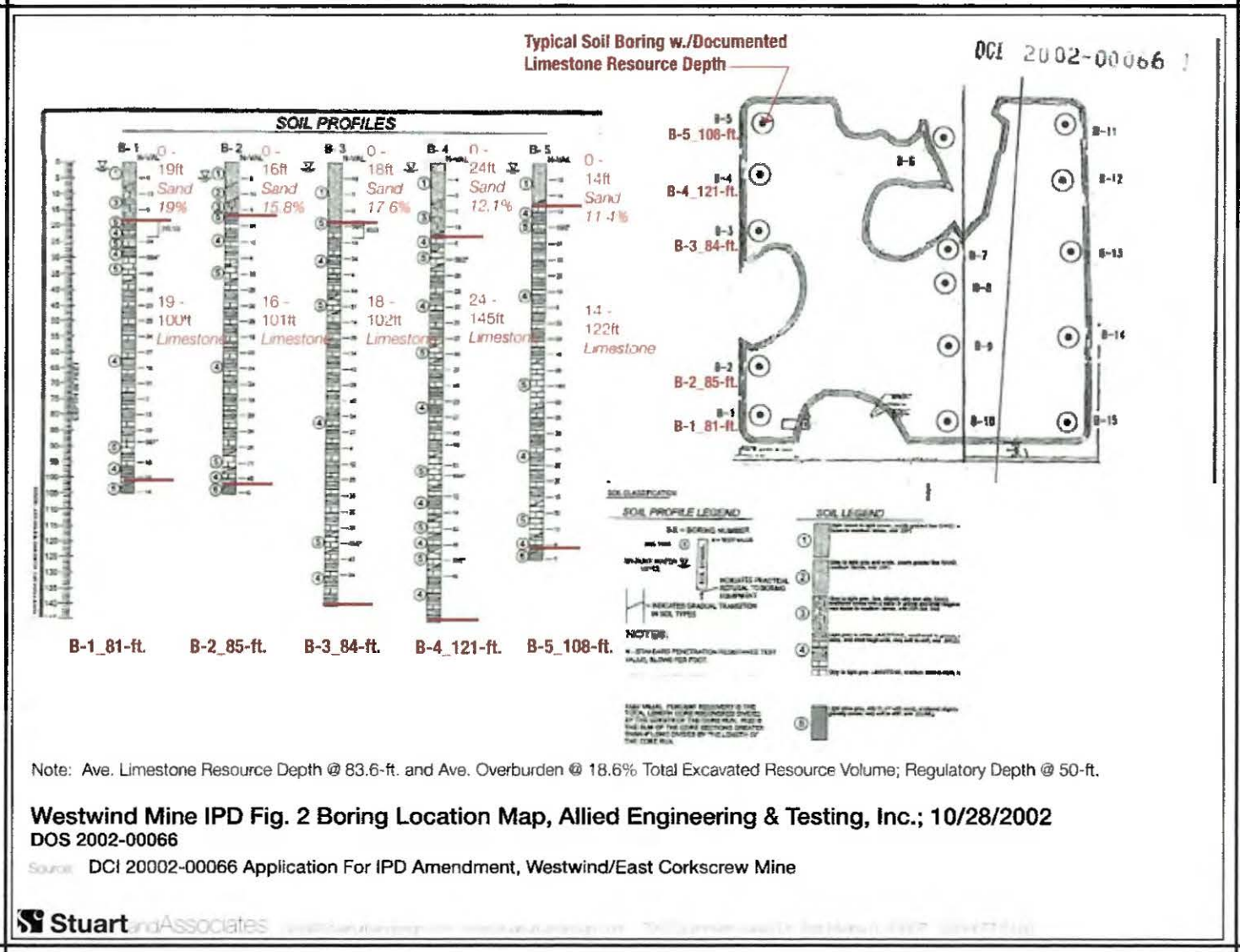


FIGURE 9. MAP SHOWING PHASE 2B DEWATERING, CORKSCREW MINE.

The Westwind/East Corkscrew Mine _ Excavation Area Update

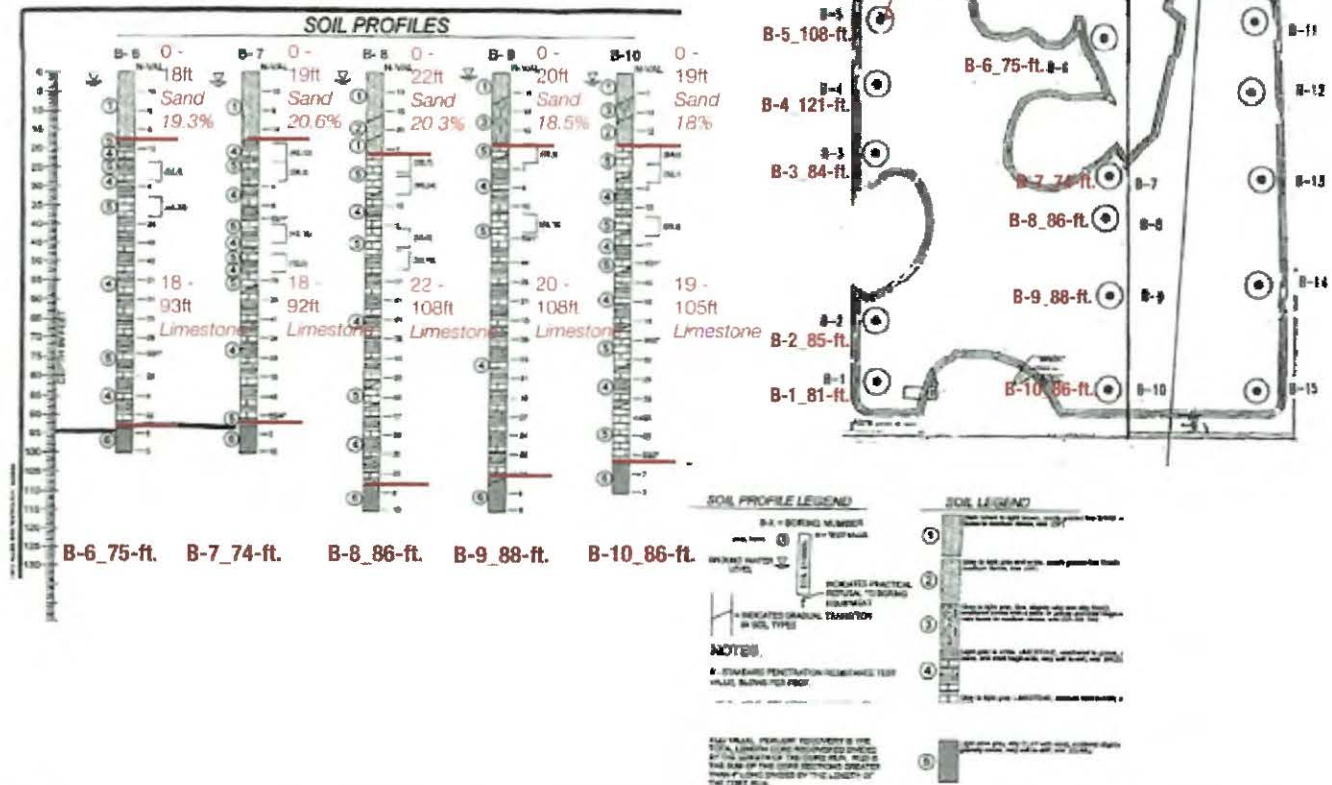


The Westwind/East Corkscrew Mine _ Geotechnical Data



Typical Soil Boring w./Documented Limestone Resource Depth

DCI 2002-00066



Note: Ave. Limestone Resource Depth @ 83.6-ft. and Ave. Overburden @ 18.6% Total Excavated Resource Volume; Regulatory Depth @ 50-ft.

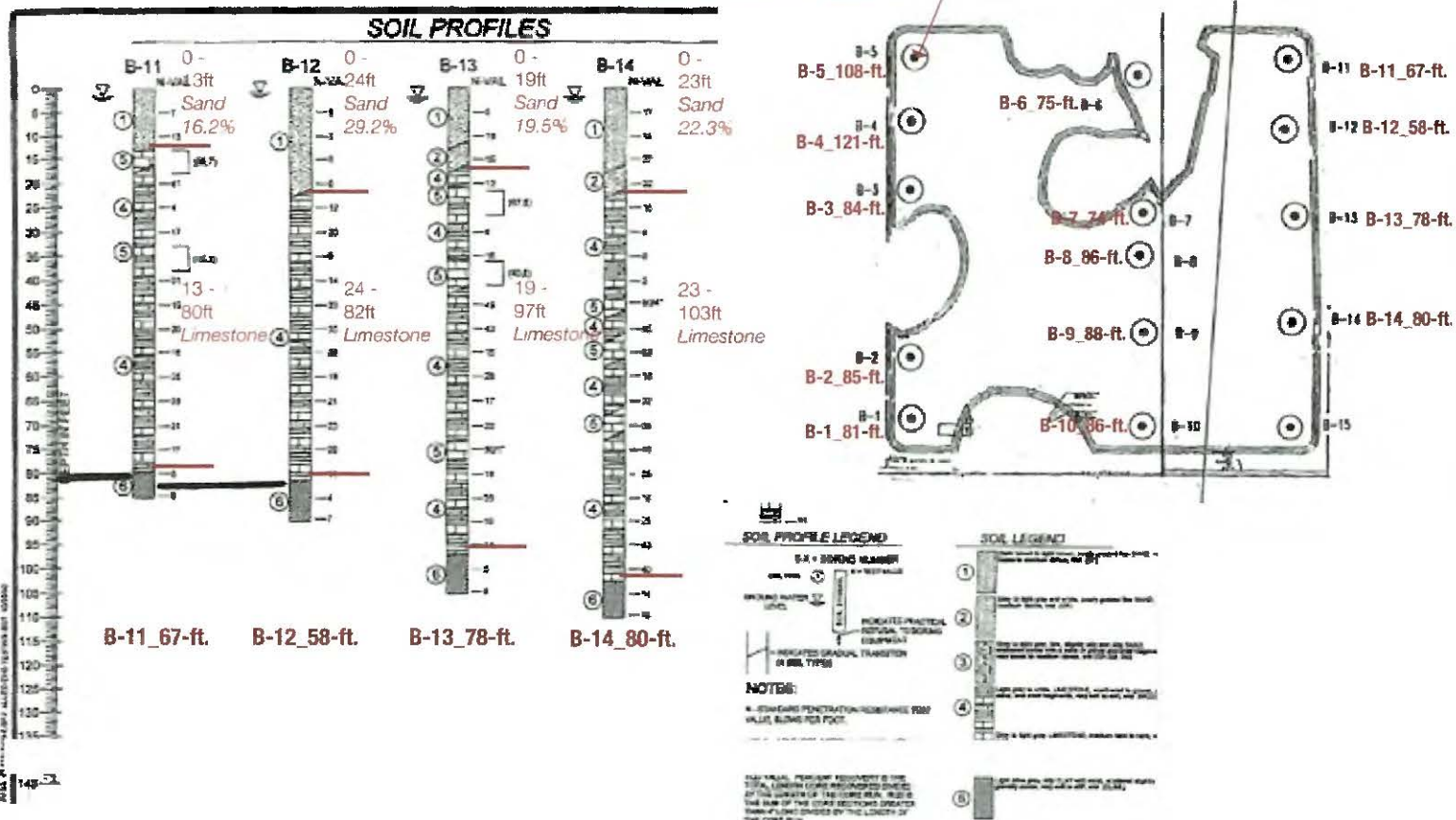
Westwind Mine IPD Fig. 2 Boring Location Map, Allied Engineering & Testing, Inc.; 10/28/2002
 DOS 2002-00066

Source: DCI 20002-00066 Application For IPD Amendment, Westwind/East Corkscrew Mine



Typical Soil Boring w./Documented Limestone Resource Depth

DCI 2002-00066



Note: Ave. Limestone Resource Depth @ 83.6-ft. and Ave. Overburden @ 18.6% Total Excavated Resource Volume; Regulatory Depth @ 50-ft.

Westwind Mine IPD Fig. 2 Boring Location Map, Allied Engineering & Testing, Inc.; 10/28/2002
 DOS 2002-00066

Source: DCI 20002-00066 Application For IPD Amendment, Westwind/East Corkscrew Mine

Stuart and Associates Greg@stuartandassociates.com www.stuartandassociates.com 19113 Summer Lakes Dr. Fort Meade, FL 33507 238.887.4100

Westwind/East Corkscrew Mine DCI2002-00066 Soil Borings

Core ID #	Limestone Core Percentage		50-ft Regulator 50-ft Regulatory	
	Resource Depth	Overburden	Resource Depth	% Overburden
B-1	81	19.0%	31	38.0%
B-2	85	15.8%	34	32.0%
B-3	84	17.6%	32	36.0%
B-4	121	12.1%	26	48.0%
B-5	108	11.4%	36	28.0%
B-6	75	19.3%	32	36.0%
B-7	74	20.6%	31	38.0%
B-8	86	20.3%	28	44.0%
B-9	88	18.5%	30	40.0%
B-10	86	18.0%	31	38.0%
B-11	67	16.2%	37	26.0%
B-12	58	29.2%	26	48.0%
B-13	78	19.5%	31	38.0%
B-14	80	22.3%	27	46.0%

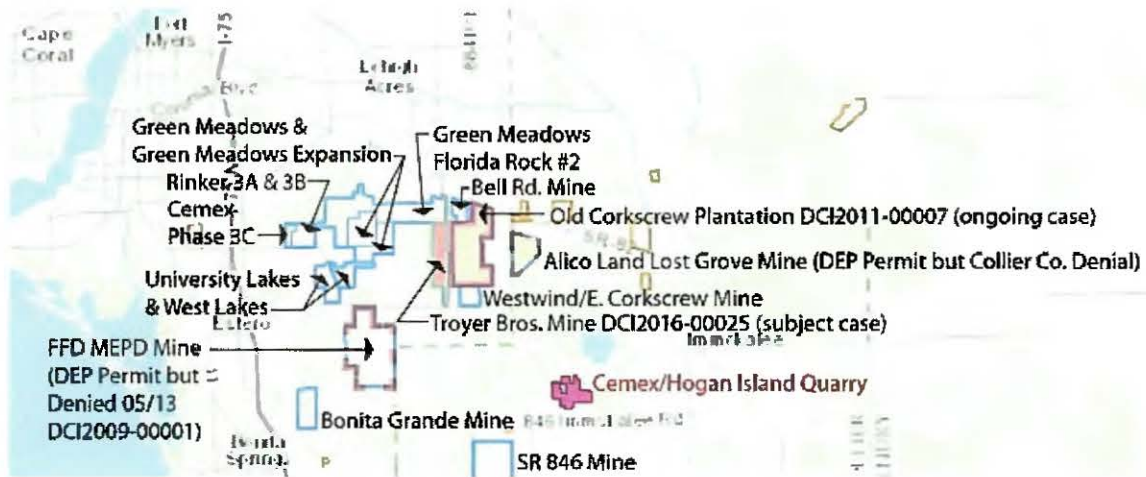
Total # Cores	14
Average Depth	83.6
Average Overburden %	18.6%
Ave. 50-ft. Regulatory Resource Depth	30.9
Ave. 50-ft. Regulatory % Overburden	38.3%

Appendix C.7

The Plumosa Farms Mine

Appendix C.7

The Plumosa Farms Mine



Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Plumosa Farms LDO2007-00063 DCI2000-00056 IPD Res Z-01-004 33-47-26-00-00001.002A	30	1,306,800	161,333	322,677	258,134	10	30					322,677	258,134

The 04/30/97 ASC Geosciences, Inc. prepared an geotechnical report that identified and evaluated subsurface soil and ground-water conditions; the Geotechnical Exploration and Engineering Services Report, ASC Project# 97F2050 (see Plumosa Farms DCI2000-00056 pdg page 91)

Plumosa Farms Mine _ Lee Co.

	Project Area	Mine Acres
Site Area	39	30

C.Yd. of Excavation Authorized 1,306,800

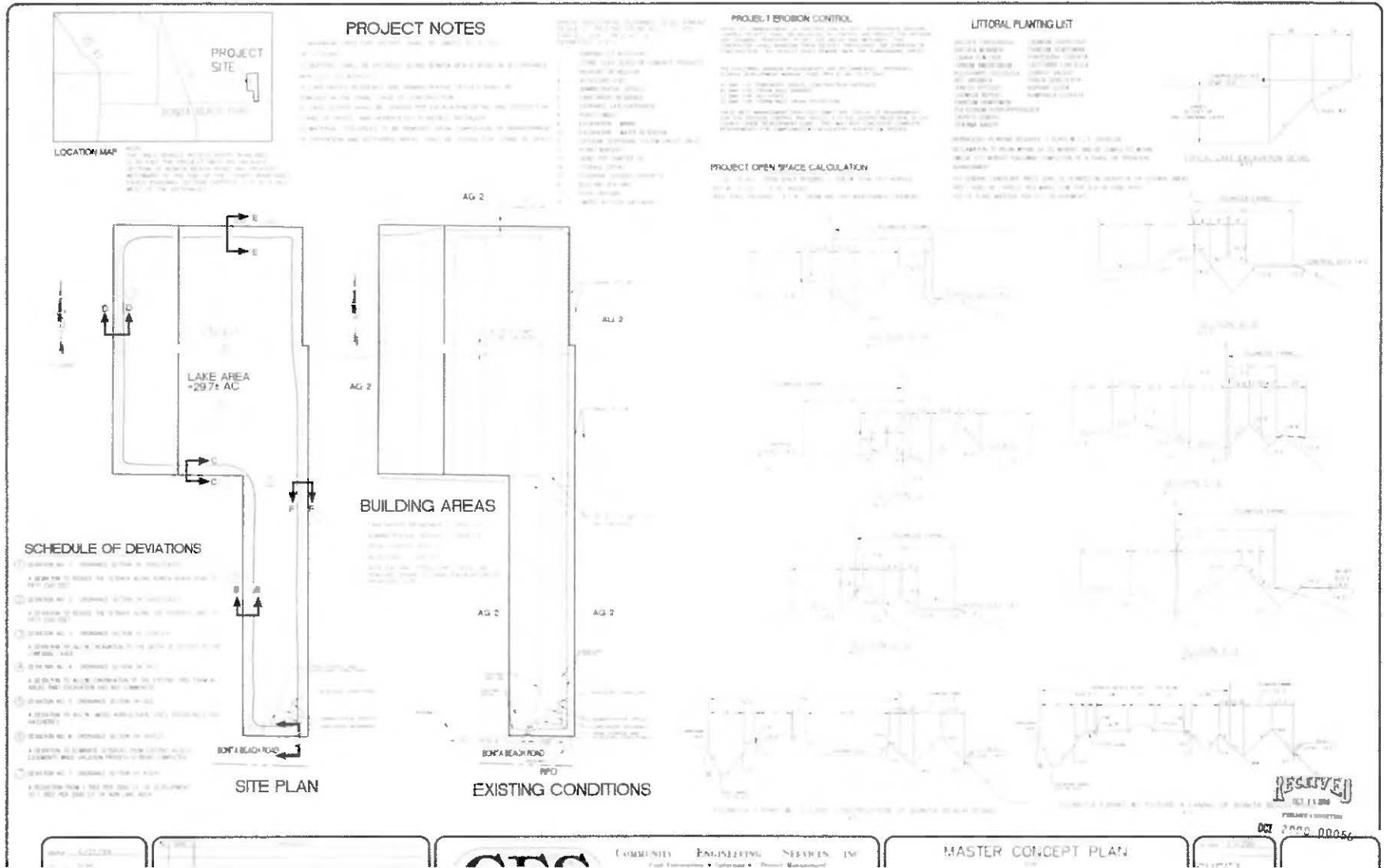
	Regulatory Depth	Waldrop 09/16 Est. Limerock Thickness
Mine Depth	30	10

Waldrop Study 09/16

Est. Limerock Excavation To-date (2015)	161,333 C.Yd.
Est, Limerock Remaining (Pre-excavation)	322,677 C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	258,134 C.Yd.

The Plumosa Farms Mine





The Plumosa Farms Mine _

Geotechnical Exploration and Engineering Services Report, 04/30/97 ASC Geosciences, Inc.

ASC Project# 97F2050

Appendix C.8

The Bonita Grande Mine

Appendix C.8

The Bonita Grande Mine



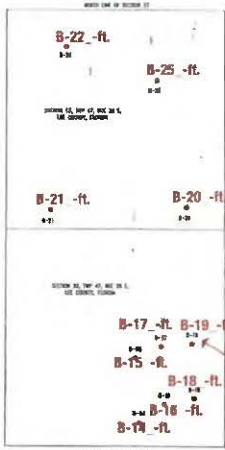
Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extraction To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Bonita Grande Mine (7) DCI2001-00065 LDO2000-00058 & IPD Z-02-047	557	20,000,000	--	20,000,000	16,000,000	30	90	29			0.80	20,000,000	16,000,000

Note 7: Bonita Grande Mine _ Geotechnical data provided by the 06/14/2000 Allied Engineering and Testing report (10 soil borings) with 29-ft. average lime rock thickness.

Bonita Grande Mine _ Lee Co.

	Project Area	Mine Acres
Site Area	1321	557
C.Yd. of Excavation Authorized	20,000,000	
	Regulatory Depth	Waldrop 09/16 Est. Limerock Thickness
Mine Depth	90	30
<u>Waldrop Study 09/16</u>		
Est. Limerock Excavation To-date (2015)		C.Yd.
Est. Limerock Remaining (Pre-excavation)	20,000,000	C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	16,000,000	C.Yd.
<u>Lee Co. Mine Monitoring Reports/Stuart 09/17</u>		
Mine Monitoring Reports Excavation To-date (2015)	NA	C.Yd.
Correct Limerock Remaining (No Alt. Data)	NA	C.Yd.
Overburden Adjustment Coefficient	NA	
Corrected Limerock Remaining (Pre-excavation)	NA	C.Yd.
Corrected Limerock Remaining (Post-excavation)	NA	C.Yd.

The Bonita Grande Mine _ Geotechnical Data

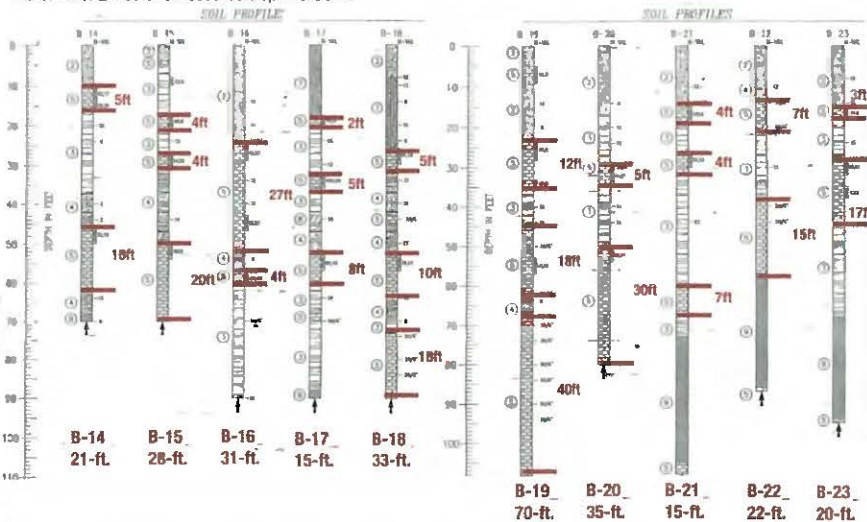


Typical Soil Boring w./Documented Limestone Resource Depth

Subsurface Material Evaluation Bonita Grande Pit

Figure 2 Soil Boring Location Map ; 06/13/2000

Note: Ave. Limestone Resource Depth @ 29-ft.



Source: Report of Geotechnical Exploration and Recommendations, Subsurface Material Evaluation Bonita Grande Pit, 06/14/2000; Allied Engineering & Testing _ DCI2001-00065

Stuart Associates Greg@Stuartbandesign.com www.stuartbandesign.com

Bonita Grande Mine DCI20041-00065 Soil Borings

<u>Core ID #</u>	<u>Limestone Core Percentage Resource Depth Overburden</u>
B-14	21
B-15	28
B-16	31
B-17	15
B-18	33
B-19	70
B-20	35
B-21	15
B-22	22
B-23	20

Total # Cores	10
Average Depth	29

The Bonita Grande Mine _

Subsurface Material Evaluation of the Bonita Grande Pit, Report Of Geotechnical Exploration and Recommendations; Allied Engineering and Testing Report; 06/14/2000

**REPORT OF GEOTECHNICAL EXPLORATION
AND RECOMMENDATIONS**

**SUBSURFACE MATERIAL EVALUATION
BONITA GRANDE PIT**

Bonita Springs, Florida

RECEIVED

OCT. 05 2001

COMMUNITY DEVELOPMENT

Allied Project No.00-5504

Prepared for:

**Mr. Sam Hubschman
Bonita Grande Sand Company
25001 Bonita Grande
Bonita Springs, Florida 34135**

June 14, 2000

A
E
T

DCI 2001-00065

ALLIED ENGINEERING & TESTING, INC.



Allied Engineering
& Testing, Inc.

Providing Geotechnical Engineering,
Materials Testing, Surveying, and
Environmental Assessments

5300-A Lee Boulevard
Post Office Box 754
Lehigh Acres, Florida 33970-0754
941/334-6833 • Fax 941/334-6614

June 14, 2000

Mr. Sam Hubschman
Bonita Grande Sand Company
25001 Bonita Grande
Bonita Springs, Florida 34135

**SUBJECT: Report of Geotechnical Exploration and Recommendations
Bonita Grande Pit
Bonita Springs, Florida
Allied Project No. 00-5504**

Dear Mr. Hubschman:

Allied Engineering & Testing, Inc. is pleased to submit this report of our geotechnical exploration for your project referenced above. The scope of our services was discussed with you and authorized by you. The following report presents the project information made available to us, our observations of the existing site conditions, the subsurface geotechnical information obtained during this exploration, and our recommendations. Also included with this report are a site vicinity map, a boring location plan, and the results of our field and laboratory testing. The assessment of site environmental conditions for the presence of pollutants in the soil, rock and groundwater at this site was not included as a part of our services.

We appreciate the opportunity to provide these services to you. If you have any questions regarding this report or if we may be of further service to you, please do not hesitate to call.

Very truly yours,

Allied Engineering & Testing, Inc.

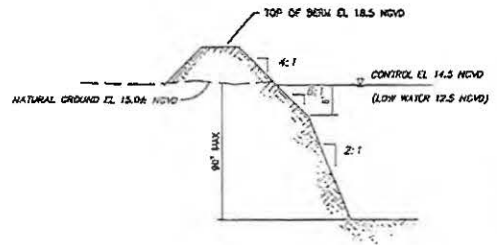
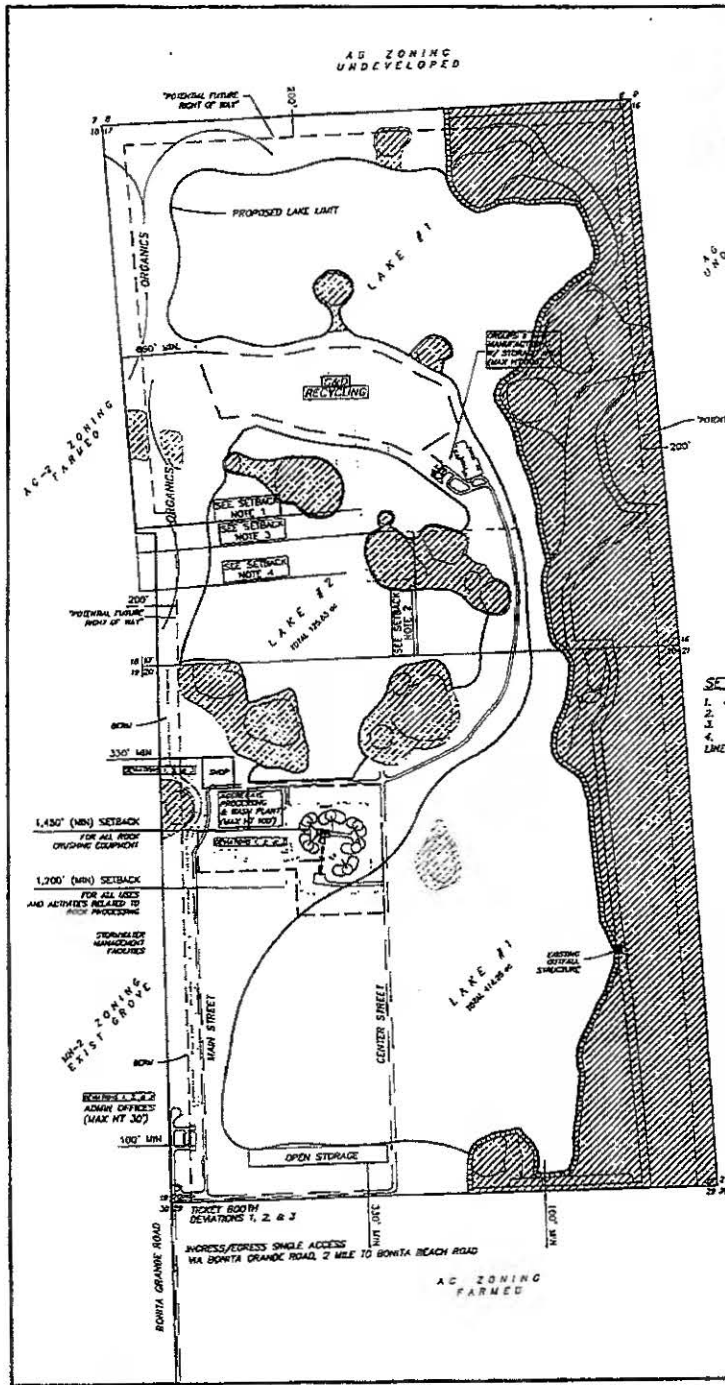
Gary B. Hull
Gary B. Hull / 58
Vice President

R. Morgan Dickinson
R. Morgan Dickinson, P.E.
Principal Geotechnical Engineer
Florida Registration No. 37557

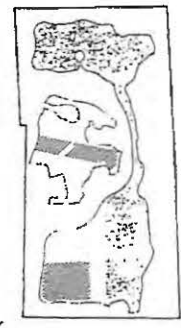
Copies Submitted: (3) Addressee

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LAKE AND DIKE SECTION



[Hatched] PHASE A - EXISTING OPERATION
 [Dotted] PHASE B - YEARS 0-10
 [White] PHASE C - YEARS 10-20
PHASING MAP

- SETBACK NOTES:**
- GROUP # MFG USES - 2,200 FT W. PROPERTY LINE SETBACK
 - GROUP # MFG USES - 1,200 FT SECTION LINE SETBACK
 - GROUP # MFG STRUCTURES - 2,500 FT W. PROPERTY LINE SETBACK
 - ON-SITE DEWATERING (SECTION 17 ONLY) PUMPS - 2,000 FT W. PROPERTY LINE SETBACK

SCHEDULE OF USES:
 SEE APPROVED RESOLUTION.

DEVIATIONS:
 SEE APPROVED RESOLUTION.

MAINTENANCE AND RECLAMATION PLAN
 EXOTIC REMOVAL: THE SITE SHALL BE MAINTAINED FREE OF MELALEUCA, AUSTRALIAN PINE, BRAZILIAN PEPPER, SAR LEAF, ACACIA, DOWNY ROSE, MYRTLE & TROPICAL SODA APPLE INTO PERPETUITY.

 RECLAMATION PLAN: RECLAMATION WILL BE SECURED AND WILL BEGIN WITHIN 6 MONTHS AFTER COMPLETION IN ANY AREA THAT WILL NOT BE DISTURBED BY FUTURE OPERATIONS AND WILL BE COMPLETED WITHIN 12 MONTHS OR WHICHEVER THE OPERATIONS HAVE BEEN ABANDONED OR UPON EXCAVATION PERMIT EXPIRATION, WHICHEVER COMES FIRST.



LAND USE

CATEGORY	TOTAL
A LAKES	
B ROADS	
C CAD RECYCLING	
D ORGANIC RECYCLING	
E BATCH PLANTS	
F OPEN STORAGE	
G OFFICE/ADMIN/KITCHEN	
H PRESERVES	
I OTHER	
TOTAL	

PERCENT IMPERVIOUS

OPEN SPACE (AC)
 REQUIRED (20%): 1
 PROVIDED: 370 AC

INDIGENOUS NATIVE VEG
 REQUIRED: 127 AC
 PROVIDED: 263 AC

LEGAL DESCRIPTION
 SECTION 17 AND 20, TOWNSHIP 4;
 LEE COUNTY, FLORIDA.

OWNERSHIP
 SAM AND CONNIE HUBSCHMAR, JR
 25501 BONITA GRANDE DRIVE
 BONITA SPRINGS, FLORIDA 34135

ZONING NOTES
 1.-PROJECT & ADJOINING PARCEL
 2.-AREA IS LEVEL 2 ARCHAEOLOG
 3.-SEE ATTACHED WISSEMER STUD
 4.-MONITORING WELLS LOCATIONS
 5.-RECLAMATION TO BEGIN WITHIN
 FOLLOWING COMPLETION OF PH
 6.-MAXIMUM DEPTH, INCLUDING DE
 OPERATION MAY NOT EXCEED 5
 WHICHEVER OCCURS FIRST, THE
 APPLY TO MONITORING WELLS 0

PROJECT INFORMATION

The proposed development at this site will include mining of soil and rock. The purpose of this study is to evaluate the suitability of the subsurface materials for use as fill and base course material, and for possible FDOT certification as roadway base course material. This report contains an evaluation of the second series of soil borings drilled on the subject property. Several additional borings are planned throughout the life of the project.

The scope of this preliminary study consists of performing 10 additional Standard Penetration Test (SPT) borings at the proposed development site, obtaining rock cores of the limestone strata, description of SPT soil and rock core samples by a geotechnical engineer, and discussion of the suitability of the soil materials for use as a fill material.

SITE CONDITIONS

The following information is based upon site reconnaissance work performed by our field crew and geotechnical engineer during June, 2000. The site visits were made to observe the existing site condition and to note any conditions that might affect our recommendations.

Most of the site is generally level, open and currently being mined. Drilling locations were accessed by following existing roads and dikes scattered through the mined out areas.

The approximate location of the proposed development site is indicated on Figure 1, Site Vicinity Map.

SUBSURFACE EXPLORATION

The subsurface geotechnical conditions were explored by drilling 10 Standard Penetration Test (SPT) borings. When the harder rock strata were encountered, some of the borings were advanced with an NX Carbide Bit and core barrel. The SPT borings were drilled to depths of about 70 to 140 feet below the existing ground surface. The SPT soil borings were performed in general accordance with the procedures described in Appendix A. The number, depth and locations were designated by Allied in consultation with the client.

The Boring Location Plan (Figure 2) illustrates the approximate location of the borings. These borings were performed at locations designated by the client. They were subsequently mapped on aerial photographs by our drilling crew who measured from the existing site features. If a more precise location is desired, we can provide a registered land surveyor to locate the borings. The subsurface geotechnical conditions encountered at the test boring locations are presented on the Soil Boring Profiles (Figures 3, 4, & 5). The soil profiles represent our interpretation of the subsurface soil conditions encountered based on the driller's field logs and visual examination of the soil samples obtained by a geotechnical engineer. The stratification lines representing the interface between various changes in soil conditions/types are approximate. The actual transition between strata may be gradual.

LABORATORY TESTING

The soil samples obtained from the field exploration were returned to our laboratory. Each sample was visually classified in general accordance with the Unified Soil Classification System (ASTM D-2487).

SUBSURFACE GEOTECHNICAL CONDITIONS

The subsurface conditions encountered at the test boring locations are illustrated on the Soil Profiles (Figures 3, 4, & 5). The subsurface soils have been grouped into 9 strata, similar to the groupings presented in the 2nd progress report dated October 11, 1999 (Allied File No. 99-5382). The strata groupings are based on soil classifications and our evaluation of the engineering properties of the soil types encountered.

Generally, the subsurface materials encountered by Allied include slightly silty, fine-grained sands at the surface, underlain by limestone. The limestone has varying degrees of hardness and composition as is discussed below. At depth, beneath the limestone, we encountered clay. These materials have been assigned to a specific stratum based on the composition and hardness of each material encountered. We have thus far identified nine strata for this project. Refer to the Soil Boring Profile on Figures 4 & 5 for the approximate depths each was encountered.

Strata 1 is a moist, light brown and brown, fine-grained sand. It is medium dense based on SPT N-Values. Stratum 1 soils were not encountered in borings B-14 through B-23.

Stratum 2 is a light gray, clean to slightly silty fine-grained sand with a trace to some gravel size limestone pieces. The SPT N-values indicate the soil is loose to medium dense. The stratum 2 sands were encountered at the ground surface at Borings B-14 to B-23, and extend to depths of about 3.5 to 12.5 feet.

Stratum 3 was encountered at various depths, between approximately 10 to 90 feet beneath the existing ground surface. This soil is a white and light gray slightly sandy limestone. It appears in the SPT sample as a limestone gravel with a trace to some sand, and a trace to some fossil shell. It is soft to medium hard. It is also interbedded with the harder, Stratum 5 limestone.

Stratum 4 is a sandy, shelly weathered limestone. It appears in the SPT sample as a slightly silty, fine-grained sand with trace to some gravel and trace to some fossil shell. Stratum 4 was generally encountered below about 32 feet although a shallower layer was encountered at a depth of about 8 feet in boring B-22.

Stratum 5 is a medium hard to hard, gray limestone with trace to some fossil shell. This limestone was sampled by rock coring methods at most depths where it was encountered. Stratum 5 is very similar in composition to the strata 3 and 4 limestone and weathered limestone, but is primarily identified as a separate stratum based on its hardness. It contains more carbonate cement than the other limestone strata. It was encountered between approximately 5 to 8 feet below the surface at various depth intervals and thicknesses. Stratum 5 limestone was encountered in all of the borings. Due to the similarity of the Stratum 3, 4 and 5 materials, fracturing of the harder stratum 5 materials could result in these materials being classified as either stratum 3 or 4 limestone.

Stratum 6 is a light brown and brown fine-grained sand and shell, with a trace of gravel. It is medium dense to dense. The stratum was not encountered during the field exploration performed for this report. These soils were encountered in the borings drilled for the 2nd progress report, and are described in the report dated October 11, 1999.

Stratum 7 soils are wet and consist of a gray, slightly silty, fine to coarse grained sand and shell. It is dense. This stratum was encountered in boring B-18 at a depth of about 8 feet and extended to a depth of about 26 feet.

Stratum 8 is a gray, slightly silty clayey sand, with a trace of gravel and shell. It was encountered in boring B-17, at a depth of about 42.5 feet below the existing ground surface. This stratum was about 1 foot thick. It is medium dense and wet.

Stratum 9 is a dark gray clay that was encountered in borings B-14, B-17 and B-21 through B-23. Stratum 9 is firm based on the SPT N-values. This layer is a confining layer encountered at various depths. It was encountered in 5 borings at depths of about 58 feet to about 108 feet. The stratum was not encountered to the depths drilled in borings B-15, B-16, B-18, or B-20. Boring B-19 was drilled to a depth of 140 feet to extend through the confining layer. It is about 32 feet thick at this location. The confining layer was also penetrated at boring locations B-21, B-22, and B-23. The layer ranged in thickness from about 30 to 32 feet in each location.

The groundwater level was measured in each soil boring at a depth of about 4 feet at the time of drilling. The groundwater level recorded for each boring is presented on the soil profiles in Figure 3. Fluctuations in the groundwater level may occur due to rainfall patterns, construction activity, surface water runoff, and other site specific drainage characteristics.

GEOTECHNICAL EVALUATION

The geotechnical evaluations for this project are based on the subsurface soil and groundwater conditions encountered during this study, the project information made available, our site observations, and our experience in the vicinity. The test data has been evaluated using established correlations between N-values and rock core measurements similar with those recorded at this site and the observed performance of similar soil types.

The strata 1, 2, 6, and 7 soils are suitable for use as embankment and structural fill material. Roots and other organic material encountered during site development and excavation should be removed from proposed fill material. The soils extend below the water table and should be allowed to dry prior to placement and compaction. This can be accomplished by stockpiling the material and allowing it to drain, or by spreading it in relatively thin lifts on the surface to be filled, and allowing it to dry prior to compaction.

The strata 3, 4, and 5 materials are limestone strata that are either weathered or very well cemented and hard, as in the case of strata 5. Visually, this limestone material appear to be satisfactory sources of a base course. Laboratory testing will be required to confirm this. The necessary laboratory testing is proposed for the second phase of this project, when authorization is obtained. We note that a sufficient sample must be available for testing. Because additional borings are expected for this project. We anticipate that sufficient material will become available for the necessary testing to determine the limestone is FDOT grade base course.

The strata 8 and 9 materials contain significant clay fines. In general, clay material is not economically feasible for use as fill material in southwest Florida because of the extensive moisture conditioning and processing required to obtain compaction. It may be placed in landscaping berms or other areas where strength and compressibility are not concerns. There is also a potential for this material to be placed as landfill liner or landfill cap material.

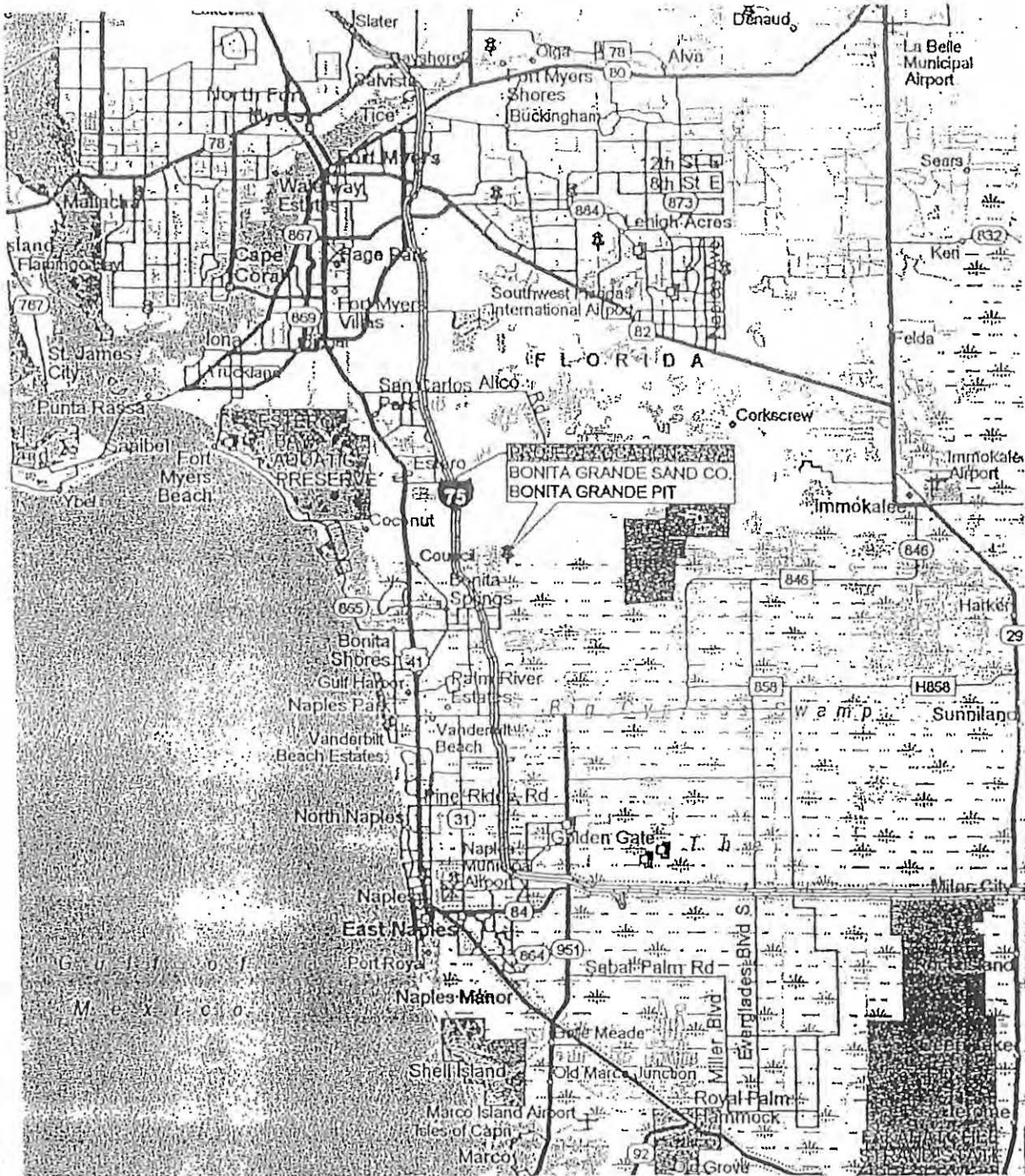
BASIS FOR EVALUATION AND RECOMMENDATIONS

The evaluation and recommendations of this report are based on the information provided and the soil conditions encountered at the specific boring locations. These recommendations apply only to the specific project and site. If there are any changes to the project information discussed in this report we should be contacted to review the changes and modify our recommendations, if necessary.

The construction procedures and geotechnical conditions encountered should be observed by experienced geotechnical personnel. This is necessary since the conditions encountered in the soil borings performed for this study could change between the borings and the conditions may not be the same as those anticipated by the designers or contractors. Additionally, the soils could be altered by the construction process. If changes in the soil conditions are encountered or if the procedures are not adequate, this information should be reported to the design team so that timely recommendations can be prepared to solve the problem. Based on Allied Engineering & Testing's familiarity with the project, the subsurface geotechnical conditions, and the intent of the recommendations, we recommend the owner retain our firm to provide the necessary site observations and testing.

We wish to remind you that our exploration services include storing collected samples and making them available for inspection of 60 days after submittal of our report. The samples are then discarded unless you request otherwise.

Figure No. 1 - Site Vicinity Map



NORTH
NOT TO SCALE

NOTE: MAP OBTAINED FROM STREETS & TRIPS 2000, MICROSOFT EXPEDIA 1988-1999, MICROSOFT CORPORATION



ALLIED ENGINEERING AND TESTING, INC.

6300 Lee Boulevard, Lehigh Acres, Florida

P.O. BOX 754, LEHIGH ACRES, FL 33970-0754 841-334-8833

Client: BONITA GRANDE SAND CO.

Date: 6/13/2000

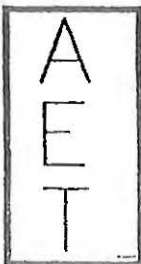
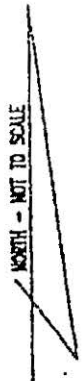
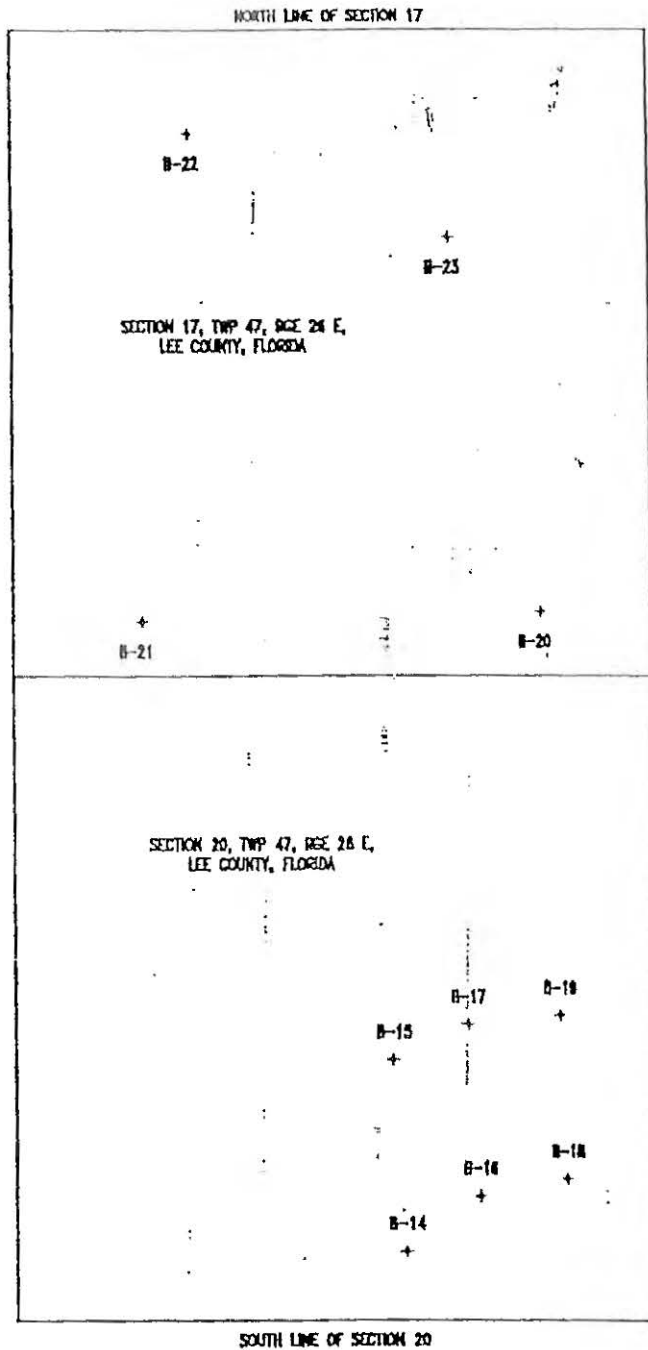
Project: BONITA GRANDE PIT

Job No.: 00-5504

Approved By: R.M.D.

Drawn By: CB

Figure No. 2 – Soil Boring Location Map



ALLIED ENGINEERING AND TESTING, INC.

6300 Lee Boulevard, Lehigh Acres, Florida

P.O. BOX 754, LEHIGH ACRES, FL 33970-0754 941-334-8833

Client: BONITA GRANDE SAND CO.

Date: 6/13/2000

Project: Bonita Grande PH

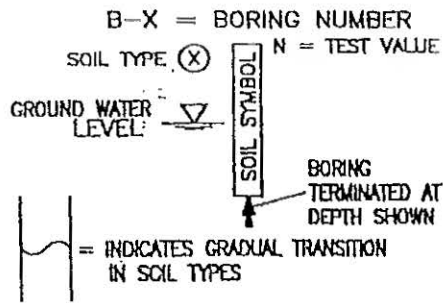
Job No.: 00-5504

Approved By: R.M.D.

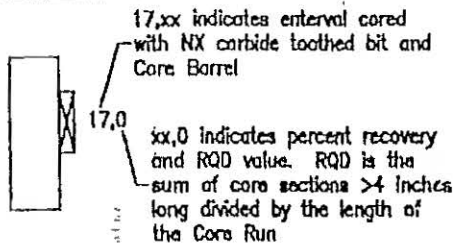
Drawn By: GBH/CB

FIGURE 3
Soil Boring Notes

SOIL PROFILE LEGEND



CORING LEGEND



NOTES:
N - STANDARD PENETRATION RESISTANCE TEST VALUE, BLOWS PER FOOT

CORRELATION OF N - VALUES AND RELATIVE DENSITY FOR COHESION LESS SOILS

N - VALUE	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 30	MEDIUM DENSE
30 - 50	DENSE
OVER 50	VERY DENSE

MODIFIERS

APPROXIMATE FINES CONTENT

5% TO 12%
12% TO 30%
30% TO 50%

MODIFIERS

SLIGHTLY SILTY OR SLIGHTLY CLAYEY
SILTY OR CLAYEY
VERY SILTY OR VERY CLAYEY

APPROXIMATE ROCK/SHELL/ROOT CONTENT

5% - 10%
10% - 20%
20% - 40%
40% - 60%

MODIFIERS

TRACE
TRACE TO SOME
SOME
AND

SOILS LEGEND

1. Brown/light brown, fine-grained SAND, loose to medium dense, moist (SP)
2. Light gray, slightly silty, fine-grained SAND, trace to some GRAVEL trace to some fossil shell (gravel size pieces are weathered limestone), very soft to soft (SP-CP)
3. White/light gray, slightly sandy limestone, trace to some fossil shell, soft to medium hard. (LS)
4. Dark gray, slightly silty, sandy, very shelly, weathered limestone, trace to some fossil shell, very soft to soft (WLS)
5. White/gray limestone, trace to some fossil shell, medium hard to hard. (LS)
6. Light brown/brown, fine-grained SAND and shell, trace gravel, very soft to medium dense, wet (SP)
7. Gray, slightly silty, fine to coarse grained SAND and shell, dense, wet (SM-SC)
8. Gray, slightly silty, clayey SAND, trace gravel, trace shell, medium dense, wet (SM-SC)
9. Dark gray clay, firm (CL)



Allied Engineering & Testing, Inc.

5300 Lee Boulevard Lehigh Acres, Florida Post Office Box 754 Lehigh Acres, Florida 33970-0754 (941) 334-6833

Client: BONITA GRANDE SAND CO.

Date: 6/14/00

Project: BONITA GRANDE PIT

Job No.: 00-5504

Approved By: RMD

Drawn By: BC

SOIL CLASSIFICATION

N-VALUE - STANDARD PENETRATION RESISTANCE TEST VALUES, BLOWS PER FOOT

CLASSIFICATION

CORRELATION OF N-VALUES
 WITH RELATIVE DENSITY AND CONSISTENCY

CORRELATION OF N-VALUES WITH
 HARDNESS DESCRIPTION

COHESION LESS SOILS

SILTS AND CLAYS

LIMESTONE

<u>N-VALUE</u>	<u>RELATIVE DENSITY</u>	<u>N-VALUE</u>	<u>RELATIVE DENSITY</u>	<u>N-VALUE</u>	<u>RELATIVE DENSITY</u>
0-4	VERY LOOSE	0-2	VERY SOFT	0-19	VERY SOFT
5-10	LOOSE	3-4	SOFT	20-49	SOFT
11-30	MEDIUM DENSE	5-8	FIRM	50-100	MEDIUM HARD
		9-15	STIFF	50 FOR 2 TO 5 INCHES	MODERATELY HARD
31-50	DENSE	16-30	VERY STIFF	50 FOR 0 TO 2 INCHES	HARD
OVER 50	VERY DENSE	31-50	HARD		
		OVER 50	VERY HARD		

MODIFIERS

APPROXIMATE FINES CONTENTS

MODIFIERS

APPROXIMATE ROCK/SHELL/ROOT CONTENT

MODIFIERS

5%-12%	SLIGHTLY SILTY OR SLIGHTLY CLAYEY	5%-10%	TRACE
12%-30%	SILTY OR CLAYEY	10%-20%	TRACE TO SOME
30%-50%	VERY SILTY OR VERY CLAYEY	20%-40%	SOME
		40%-60%	AND

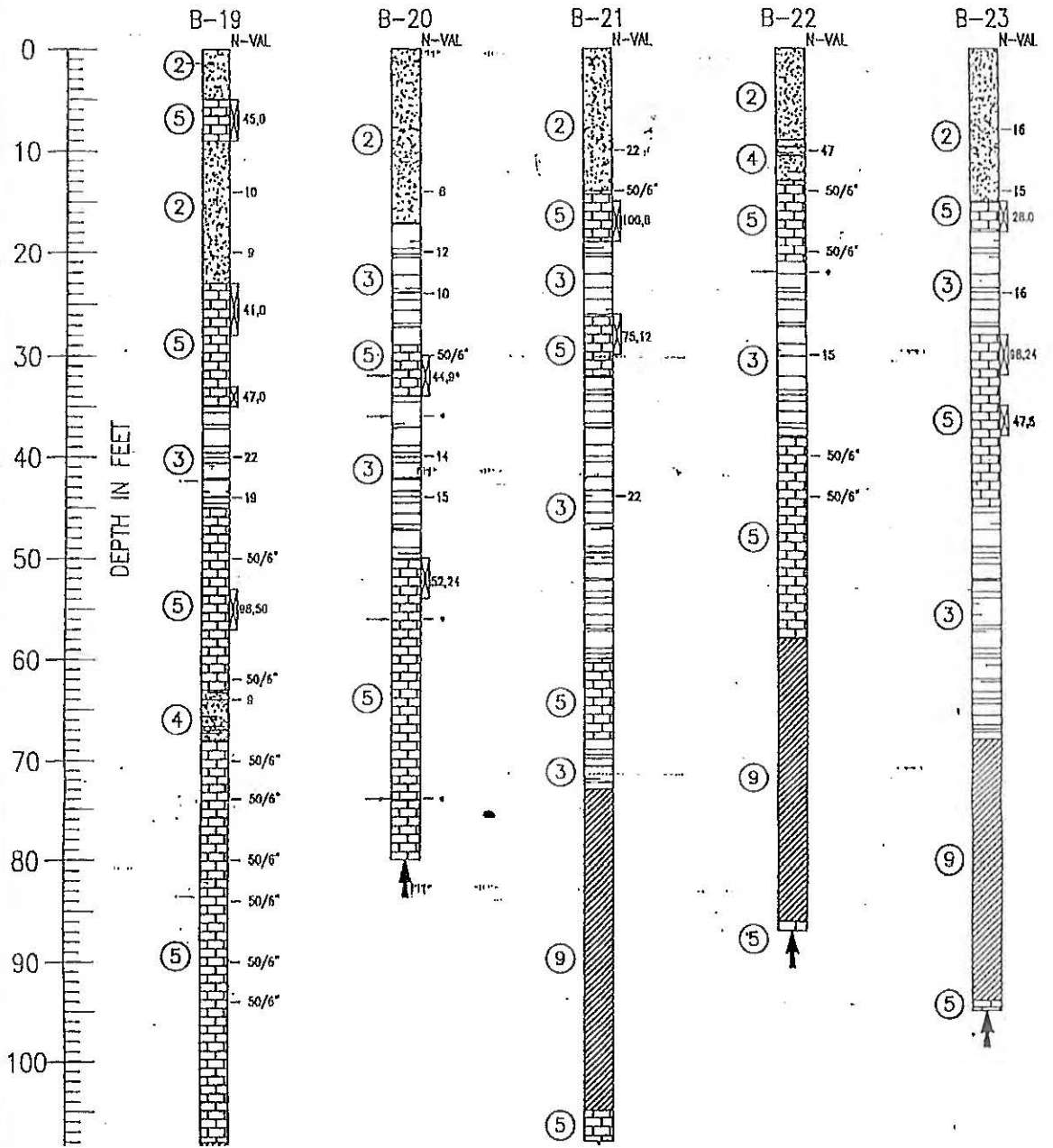
SOIL TEST BORING PROCEDURES

The soil test borings for this geotechnical study were performed in general accordance with ASTM D-1586 standard specifications. In the Standard Penetration Test a 1.4 inch I.D., 2.0 inch O.D., splitbarrel sampler is driven into the soil at the test depth with a 140-pound hammer falling 30 inches. Dependent upon the soil conditions encountered, the boring is advanced by rotary drilling procedures or continuous sampling. With either method the borehole is stabilized with a viscous bentonite drilling fluid. The number of blows necessary to drive the hammer 18 inches or until 50 blows results in less than 6 inches of penetration is designated as the Standard Penetration Test. The number of blows for each 6 inches of penetration is recorded. The first 6 inches of penetration is considered to be a seating drive and the remaining 12 inches is the Standard Penetration Resistance Test Value (N-Value).

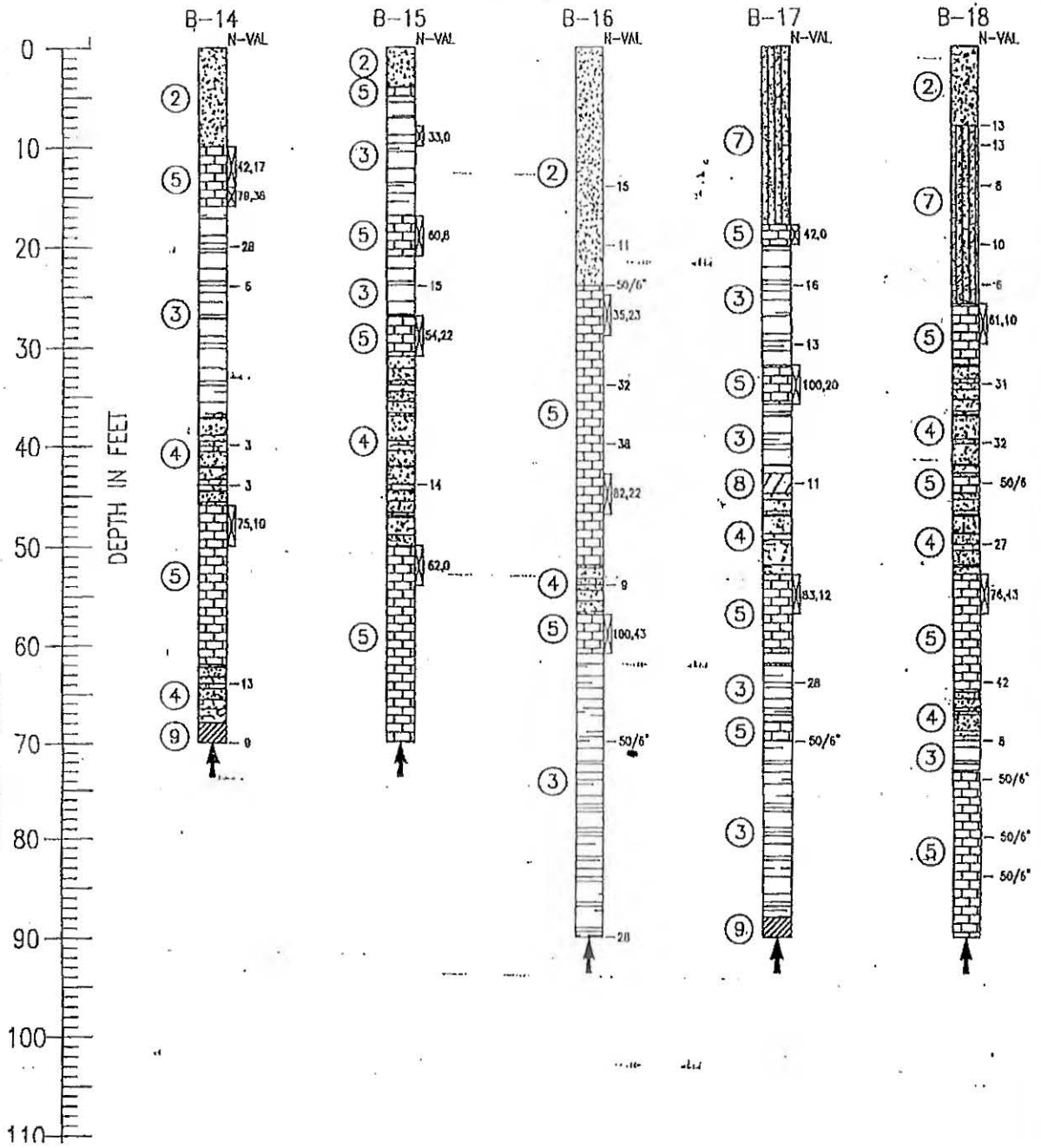
Upon completion of the penetration test, the sample retrieved from the split barrel sampler is classified in the field by the driller and a representative portion is placed in a sealed glass jar. The samples are then transported to the laboratory for visual classification by a geotechnical engineer and further laboratory testing, if necessary.

APPENDIX

SOIL PROFILES



SOIL PROFILES



Appendix C.9

The Bell Road Mine

Appendix C.9

The Bell Road Mine



Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports Extractor To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction (Note #13)	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Bell Road (8) LDO2003-00403 IPD Z-04-047	265	16,907,733	1,000,000	15,165,333	12,132,266	40	40		1,000,000	15,000,000		12,000,000	12,000,000

Note 8: Bell Road Mine _ 07/22/16 Inge and Associates Monitoring Report (LDO2003-00403).

Bell Road Mine _ Lee Co.

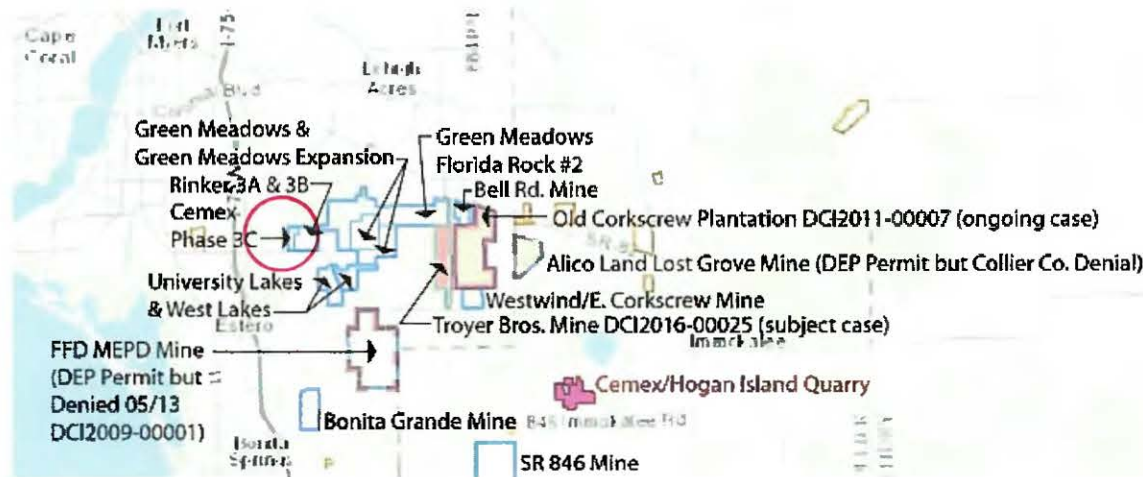
	Project Area	Mine Acres
Site Area	504	265
C.Yd. of Excavation Authorized	16,907,733	
	Regulatory Depth	Waldrop 09/16 Est. Limerock Thickness
Mine Depth	40	40
Waldrop Study 09/16		
Est. Limerock Excavation To-date (2015)	1,000,000	C.Yd.
Est. Limerock Remaining (Pre-excavation)	15,165,333	C.Yd.
Est. Limerock (Post-excavation)	12,132,266	C.Yd.
Lee Co. Mine Monitoring Reports/Stuart 09/17		
Mine Monitoring Reports Excavation To-date (2015)	1,000,000	C.Yd.
Correct Limerock Remaining (No Alt. Data)	15,000,000	C.Yd.
Overburden Adjustment Coefficient	NA	
Corrected Limerock Remaining (Pre-excavation)	15,000,000	C.Yd.
Corrected Limerock Remaining (Post-excavation)	12,000,000	C.Yd.

Appendix C.10

The CEMEX North Quarry #3 Mine

Appendix C.10

The CEMEX North Quarry #3 Mine



Mine Name	Approved Mine Acres	Excavation Authorized Cyd.	Waldrop Est. Cyd. of Limerock Excavated to Date (2015)	Waldrop Est. Limerock Remaining Pre-excavation Cyd.	Waldrop Est. Cyd. Of Limerock Remaining Post-excavation	Waldrop: Est. Ave. Limerock Thick. (ft)	Lee Co. Approved Mine Depth	Corrected Soil Profile Ave. Limerock Thickness (ft.) (Note #11)	Lee Co. Monitoring Reports To Date 2015 (Note#12)	Lee Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coefficient (Note #13)	Stuart Remaining Pre-excavation Limerock	Stuart Remaining Post-excavation Limerock (Note #14)
Cemex North Quarry 3 (9) DOS2015-00078 Sec. 6 Expansion Phase 3C DCI2010-00012 & MEPD 2-13-026	203	14,737,800	0	14,737,800	11,863,044			45				5,266,667	4,213,334

Note 9: CEMEX North Quarry 3 _ DOS2015-00078 Sec. 6, Phase 3C identifies 7,110,000 finished tons, equal to 5,266,667 cyd.; The 06 Waldrop Report estimated 11,863,044, which overestimates the resource by 6,596,377 cyd.

Cemex North Quarry 3 _ Lee Co.

	Project Area	Mine Acres
Site Area	263	203

C.Yd. of Excavation Authorized	14,737,800
--------------------------------	------------

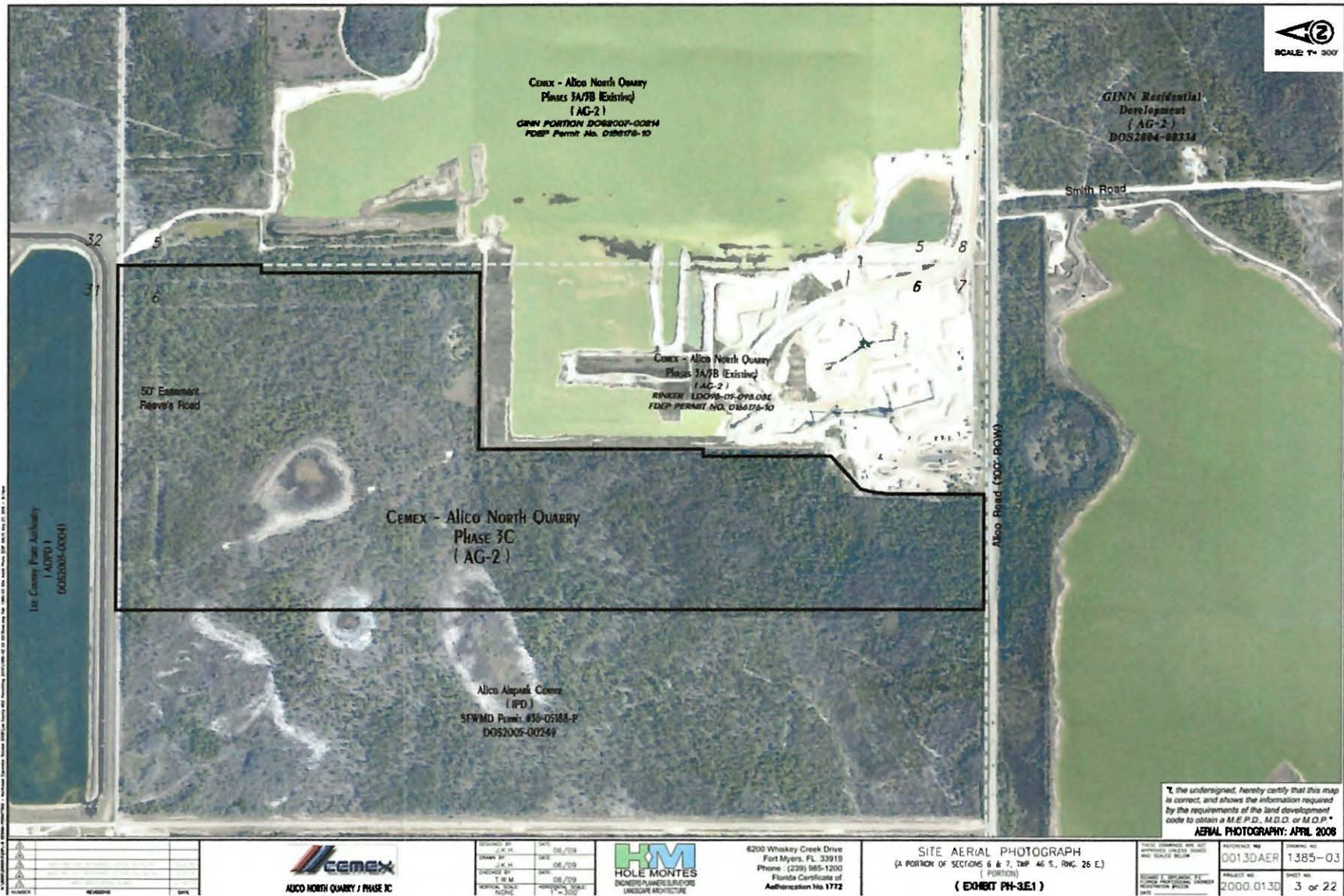
	Regulatory Depth	Waldrop 09/16 Est. Limerock Thickness
Mine Depth	45	0

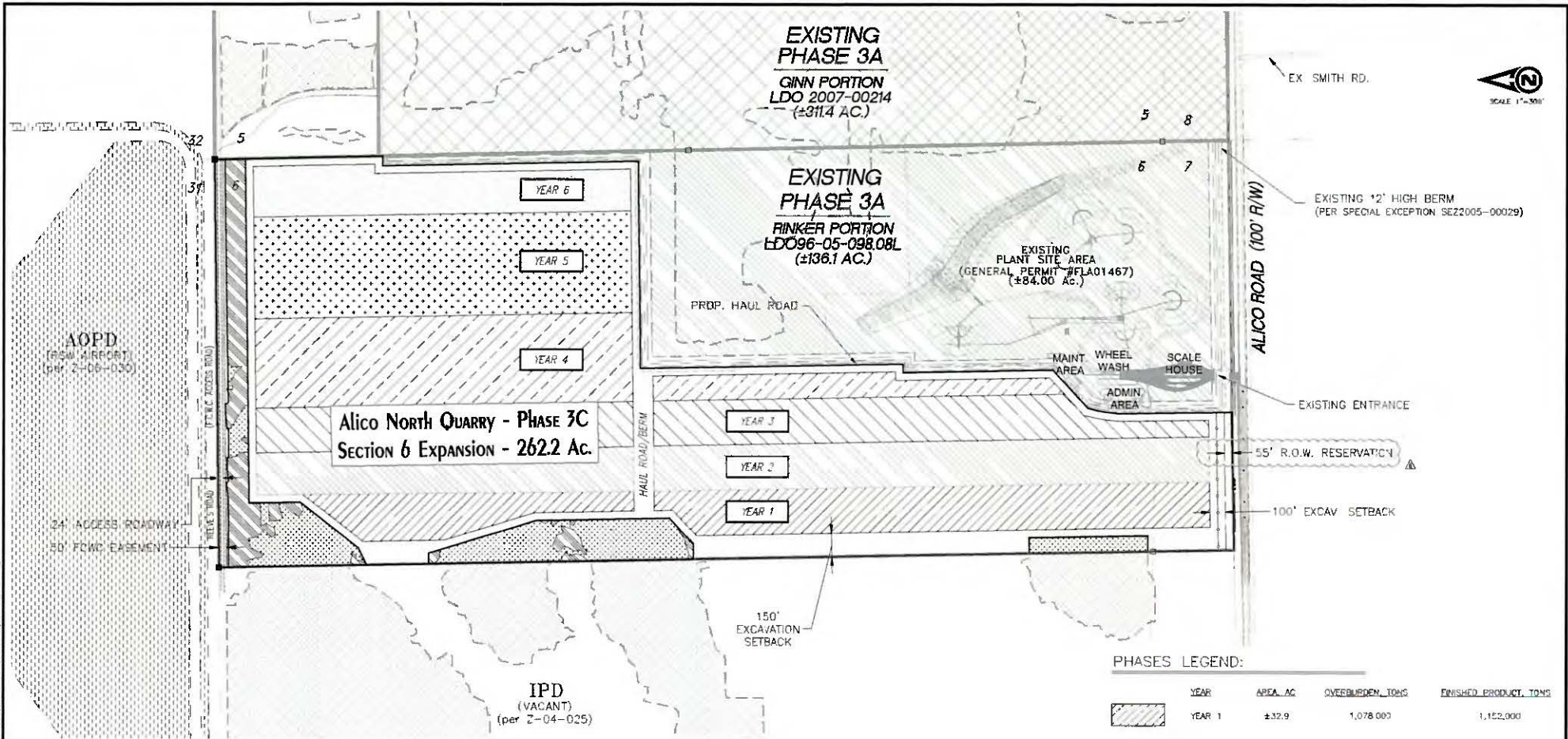
Waldrop Study 09/16

Est. Limerock Excavation To-date (2015)	0 C.Yd.
Est. Limerock Remaining (Pre-excavation)	14,737,800 C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	11,863,044 C.Yd.

The CEMEX North Quarry #3 Mine Plan







PHASES LEGEND:

YEAR	AREA AC.	OVERBURDEN TONS	FINISHED PRODUCT TONS
YEAR 1	±32.9	1,078,000	1,152,000
YEAR 2	±39.6	1,295,000	1,356,000
YEAR 3	±38.6	1,195,000	1,281,000
YEAR 4	±40.9	1,335,000	1,432,000
YEAR 5	±37.0	1,209,000	1,295,000
YEAR 6	±18.1	528,000	564,000

"I, the undersigned, hereby certify that this map is correct, and shows the information required by the requirements of the land development code to obtain a M.E.P.D., M.D.O. or M.O.P."

REMOVED BOUNDARY FOR DAILY COMPRESSION AT ALICO ROAD R/W

REVISION	REVISIONS	DATE
1	MDO RIN 002 RESPONSE LETTER	6-2-16
2	MDO RIN 001 RESPONSE LETTER	3-4-16
3	MDO APPROVAL PLAN	9-16-15
4	REVISED PER COUNTY COMMENTS	2-21-15
5	REVISED PER COUNTY COMMENTS	8-31-13
6	REVISED PER COUNTY COMMENTS	5-05-11



DESIGNED BY	DATE
J.K.H.	10/08
DRAWN BY	DATE
J.K.H.	10/08
CHECKED BY	DATE
T.W.M.	10/08
VERTICAL SCALE	HORIZONTAL SCALE
NONE	1" = 300'



6200 Whiskey Creek Drive
Fort Myers, FL, 33919
Phone (239) 985-1200
Florida Certificate of
Authorization No.1772

PHASE 3C MINE PHASING PLAN

DESIGNED BY	DATE	REFERENCE NO.	DRAWING NO.
J.K.H.	10/08	00130PHS	1262-16
PROJECT NO.	SHEET NO.	2000.013D	16 of 22

Appendix D

Collier Co. Lime Rock Supply and Demand Evaluation

Appendix D.1

The East Naples Mine

Appendix D.1

The East Naples Mine



Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Cyd. Limerock Authorized Excavation	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction
East Naples Mine (Golden Gate #59.814-2)	12/5/05	209749	716.3	257.3	21 & 22-49-27	25,325,300	25,325,300	20,260,240

Note 1: East Naples Mine (ERP #209749; Collier Permit #59.814-2); no additional data and update from 2016.

East Naples Mine _ Collier Co.

	Project Area	Mine Acres
Site Area	716.3	257.3

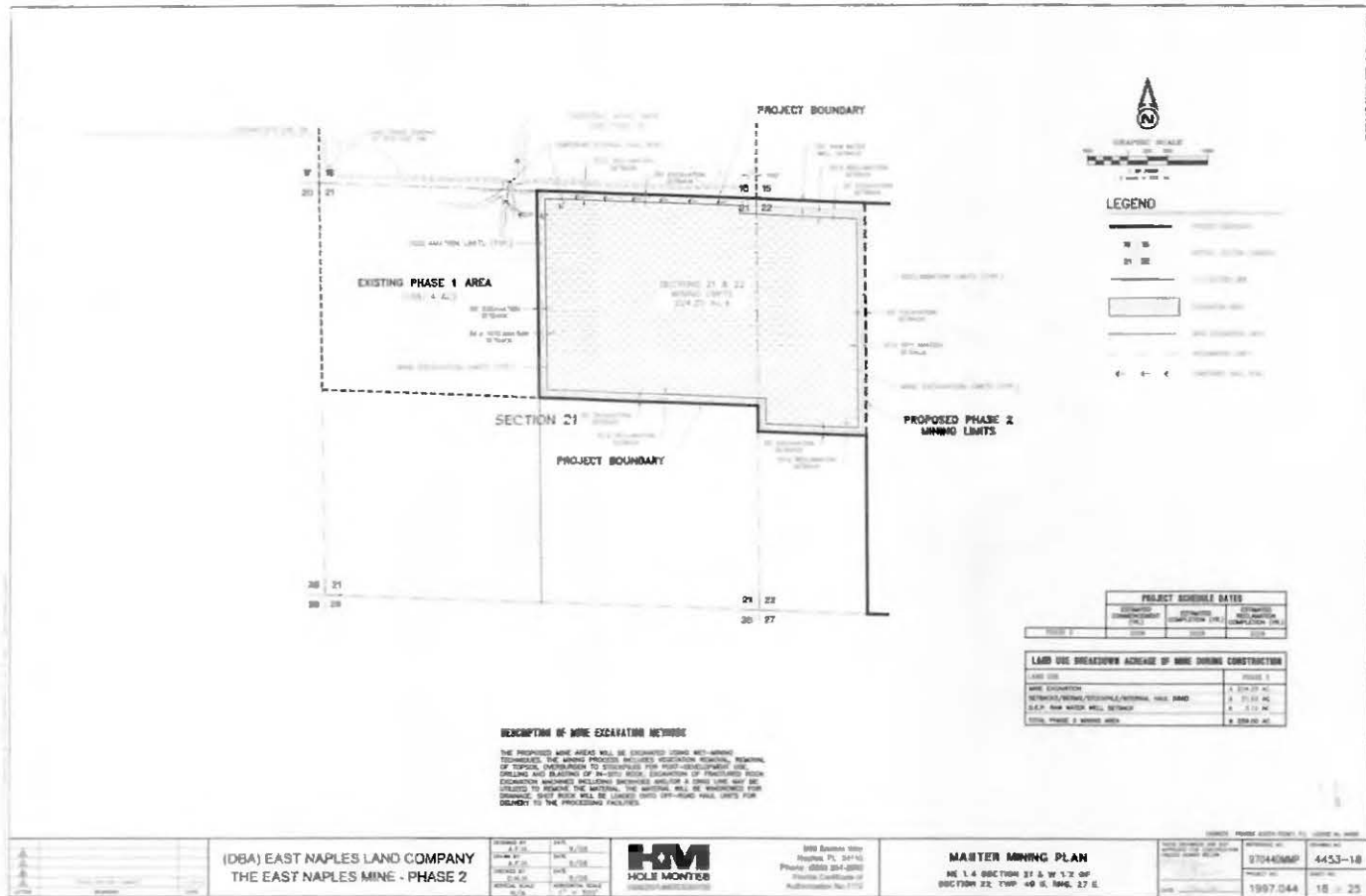
C.Yd. of Excavation Authorized	25,325,300
--------------------------------	------------

Regulatory Mine Depth

Waldrop Study 09/16

Est. Limerock Excavation To-date (2015)	NA	C.Yd.
Est, Limerock Remaining (Pre-excavation)		C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	25,325,300	C.Yd.


The East Naples Mine Plan




The East Naples Mine FDEP Site # 200965

Map Direct: Mandatory Non-Phosphate (mannon) 10/10/17, 12:54 PM

Show Legend

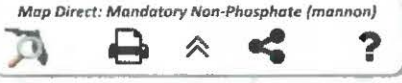


Mandatory Non-Phos...



More Data...

Map Direct: Mandatory Non-Phosphate (mannon)



10th Ave NE

5th Ave NE

Search Box 1003 feet wide at
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 26°11'19.1834" x -81°35'2.8054"

Drop Marker What's nearby?

Zoom To this selected feature Clear Print Table

Download

Mandatory Non-Phosphate Sites 2016

- EAST NAPLES LAND COMPANY - EAST NAPLES MINE
- Site# 200965
- Documents
- Limestone
- Marketable Resource
- Rule 36
- Florida Department of Environmental Protection's Reclamation Rule
- BMMR
- Permitting Agency
- N/A
- Start Grade
- After 2004
- The date the mining company reported mining

21st St SW 17th St SW 15th St SW 13th St SW 11th St SW 9th St SW 7th St SW 5th St SW

14th Ave SW 12th Ave SW 10th Ave SW 8th Ave SW 6th Ave SW 4th Ave SW 2nd Ave SW

Golden Gate Blvd E

Franklin Ave

Down Loop St


1st Ave

36th Ave SE 38th Ave SE 40th Ave SE 42nd Ave SE

Show Imagery Slider

1:72,223

0 0.5 1mi



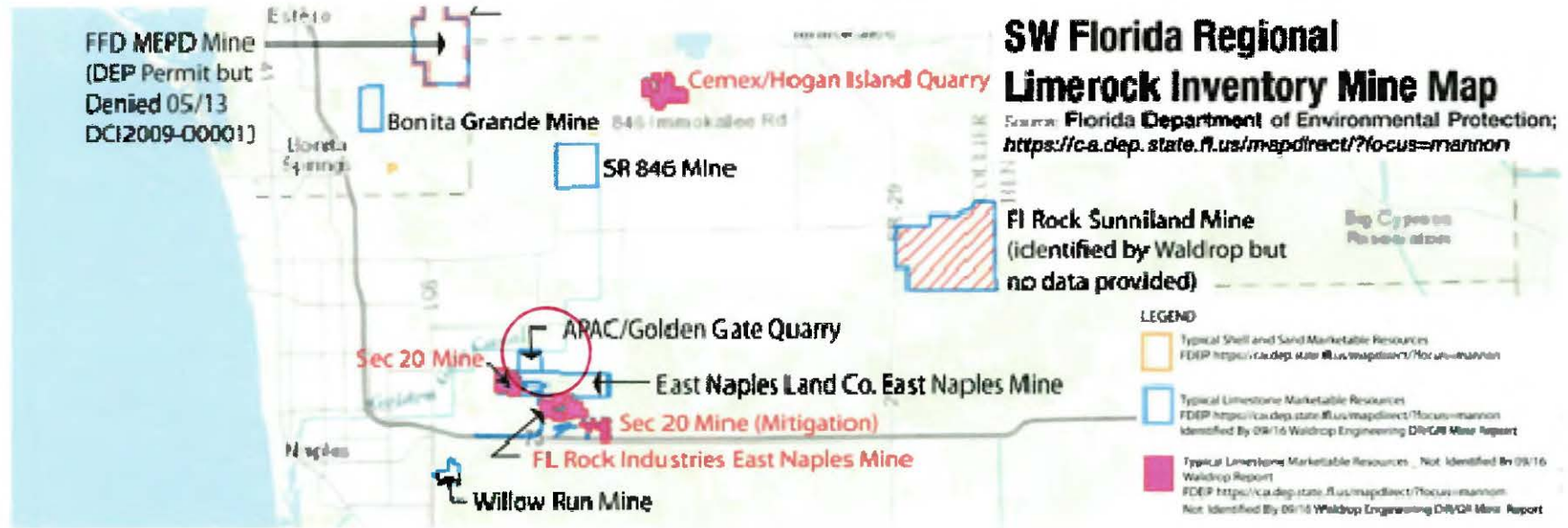
<https://ca.dep.state.fl.us/mapdirect/?focus=mannon> Page 1 of 1

Appendix D.2

The Golden Gate Quarry

Appendix D.2

The Golden Gate Quarry



Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction
Golden Gate Quarry Collier Permit#59.814)		200965-002			21-49-27	7,800,000	1,843,254	1,474,603

Note 2: Golden Gate Quarry (ERP #200965-002; Collier Co. Permit # 59.814); no additional data & update from 2016.

Golden Gate Quarry Phase II _ Collier Co.

Site Area	Project Area Area	Mine Acres Area
C.Yd. of Excavation Authorized	7,800,000	
<hr/>		
Regulatory Mine Depth		
<hr/>		
Waldrop Study 09/16		
Est. Limerock Excavation To-date (2015)		C.Yd.
Est, Limerock Remaining (Pre-excavation)		C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	1,843,254	C.Yd.

The Golden Gate Quarry Mine Plan

ERP MMR_209749 and MMR_200965
Received February 22, 2017



↑ [Show Legend](#)

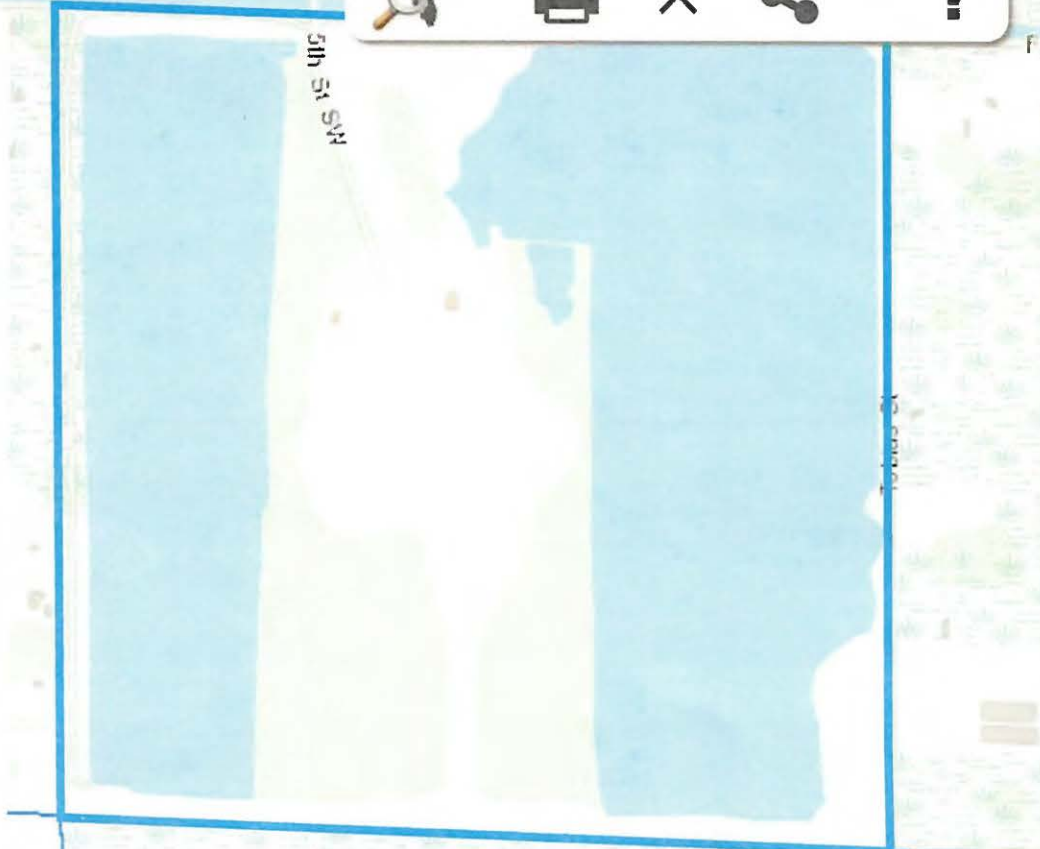


Mandatory Non-Phos...



More Data...

Map Direct: Mandatory Non-Phosphate (mannon)



Search Box 1003 feet wide at
26.20727770 x -81.61304741
26°12'26.1997" x -81°36'46.9707"

Drop Marker

What's nearby?

Zoom To this selected feature

Clear Print Table Download

Mandatory Non-Phosphate Sites 2016

OLDCASTLE SOUTHERN GROUP, INC - APAC MINE/GOLDEN GATE QUARRY

Site# 209749

[Documents](#)

Limestone
Marketable Resource

Rule 36
Florida Department of Environmental Protection's Reclamation Rule

BMMR
Permitting Agency

N/A
Sort Grade

Wetland Mitigation Not Required

Show Imagery Slider



1:18,055

0 0.15 0.3mi



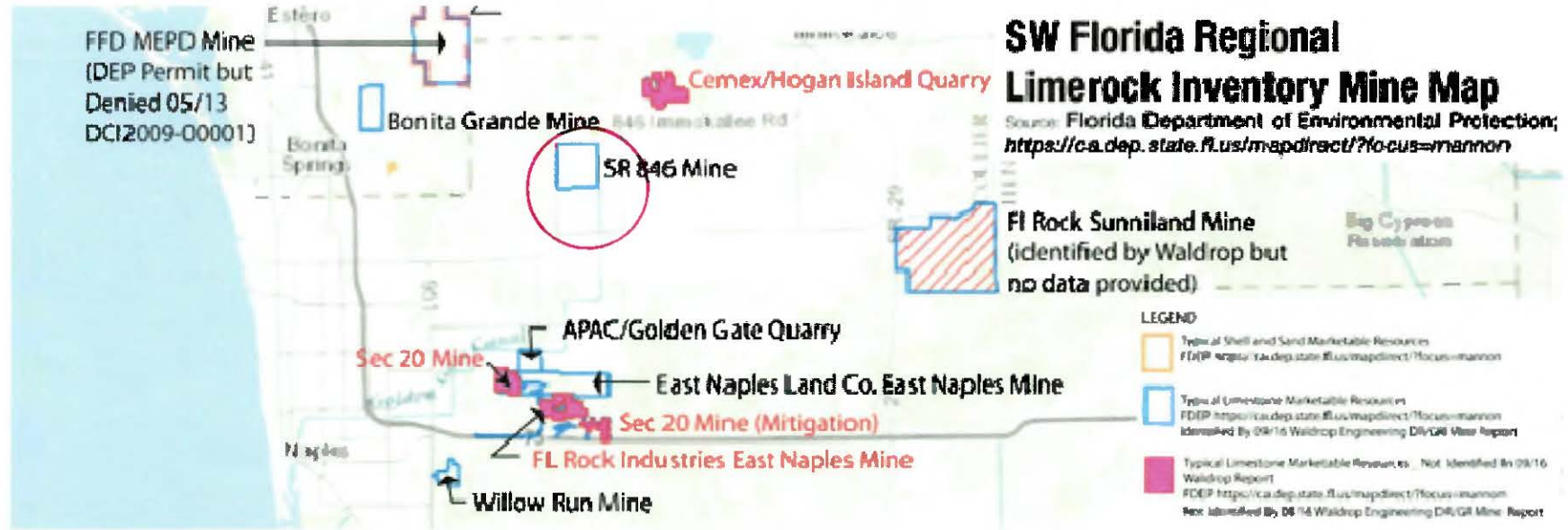
--Show County--

Appendix D.3

The SR 846 Earth Mine

Appendix D.3

The SR 846 Earth Mine



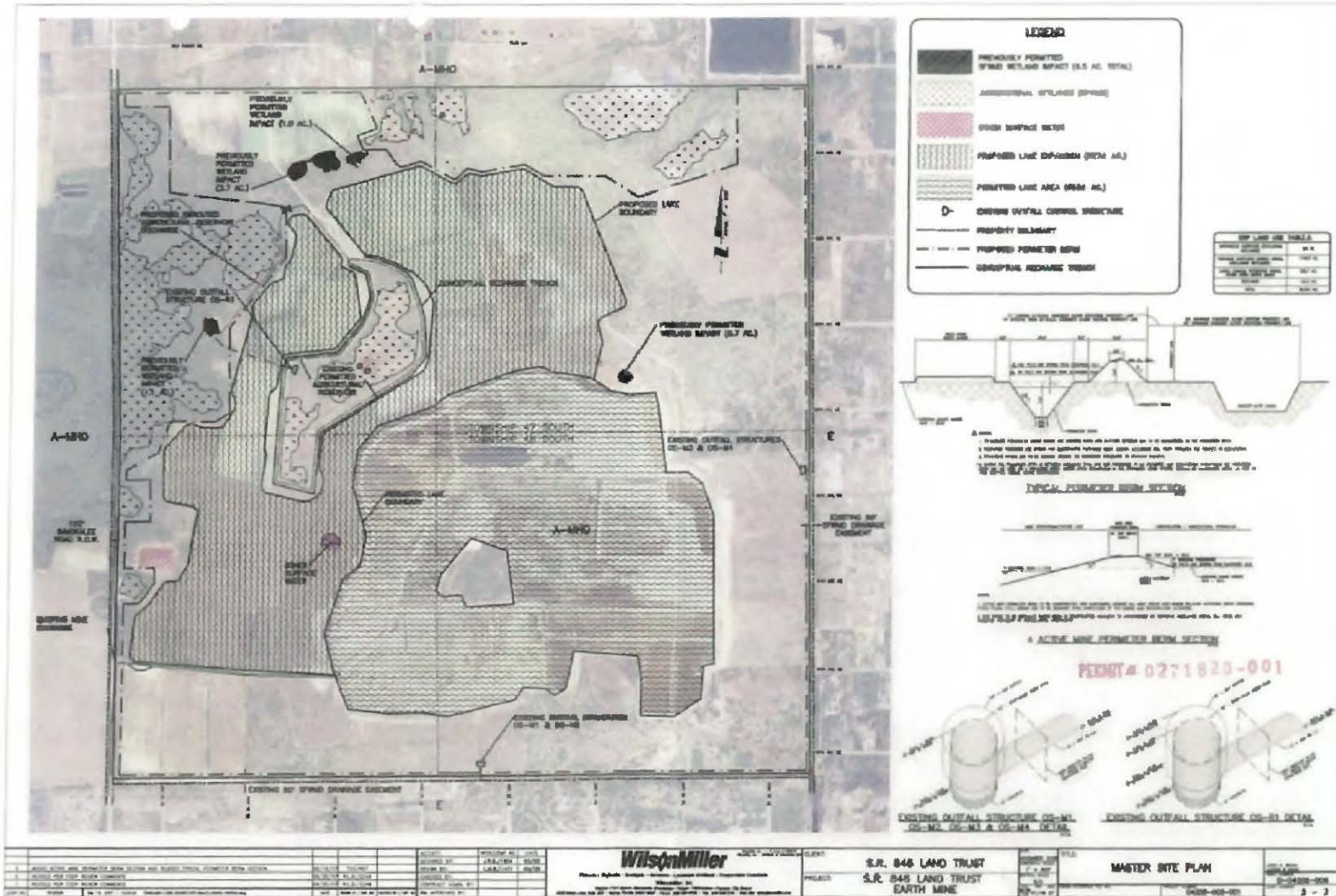
Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction
SR 846 Earth Mine (Collier Permit#59.703-3)	4/29/09	0271820-001	2576	1106.3	35 & 36-47-27 1 & 2-48-27	33,620,000	23,722,588	18,978,070

Note 3: Golden Gate Quarry (ERP #0271820-001; Collier Co. Permit # 59.703-3); no additional data & update from 2016.

SR 846 Earth Mine _ Collier Co.

	Project Area	Mine Acres
Site Area	2576	1106.3
C.Yd. of Excavation Authorized	33,620,000	
Regulatory Mine Depth	26.6	
<hr/> Waldrop Study 09/16		
Est. Limerock Excavation To-date (2015)		C.Yd.
Est, Limerock Remaining (Pre-excavation)		C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	23,722,588	C.Yd.

The SR 846 Earth Mine Plan



The SR 846 Earth Mine Plan FDEP Site #271820

Map Direct Mandatory Non-Phosphate (mannon) 10/10/17, 12:57 PM

Show Legend

Mandatory Non-Phos.

More Data.

Search Box 4012 feet wide at
 26°33'48.83072" x -81°58'15.3768"
 26°20'5" 3906" x 81°34'53" 5357"

Drop Marker What's nearby?

Zoom To this selected feature Clear Print Table Download

Mandatory Non-Phosphate Sites 2016

- SR-846 LAND TRUST - SR-846 LAND TRUST EARTH MINE
- Site# 271820
- Documents**
- Shell
- Alertable Resource
- Rule 36
- Florida Department of Environmental Protection's Reclamation Rule
- BMMR
- Permitting Agency
- N/A
- Soil Grade
- After 1999
- The date the mining company reported mining operations began
- Wetland Mitigation Not Required
- Does Not contain Non-Mandatory Areas
- Mine Reclamation W/In Not Include Sheer Walls
- Only applicable to mines subject to Chapter 62C-36, F.A.C.

Nearby Zoom Pan Remove

Show Imagery Slider

1:144,447

Show County

https://ca.dep.state.fl.us/mapdirect/?locus=mannon Page 1 of 1

Appendix D.4

The Willow Run Mine

Appendix D.4

The Willow Run Mine



Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction
Willow Run (Collier Permit#59.206-1)		11-0134951-004			11, 12, 13 & 14-50-26	8,900,000	4,077,000	3,261,600

Note 4: Willow Run (ERP #11-0134951-004; Collier Co. Permit # 59.206-1); no additional data & update from 2016.

Willow Run _ Collier Co.

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	0	0
<u>C.Yd. of Excavation Authorized</u>	8,900,000	C.Yd.
<u>Regulatory Mine Depth</u>		
<u>Waldrop Study 09/16</u>		
Est. Limerock Excavation To-date (2015)		C.Yd.
Est, Limerock Remaining (Pre-excavation)		C.Yd.
Est. Limerock (Post-excavation as per Waldrop)	4,077,000	C.Yd.

Appendix D.5

The Sunniland Mine

Appendix D.5

The Sunniland Mine



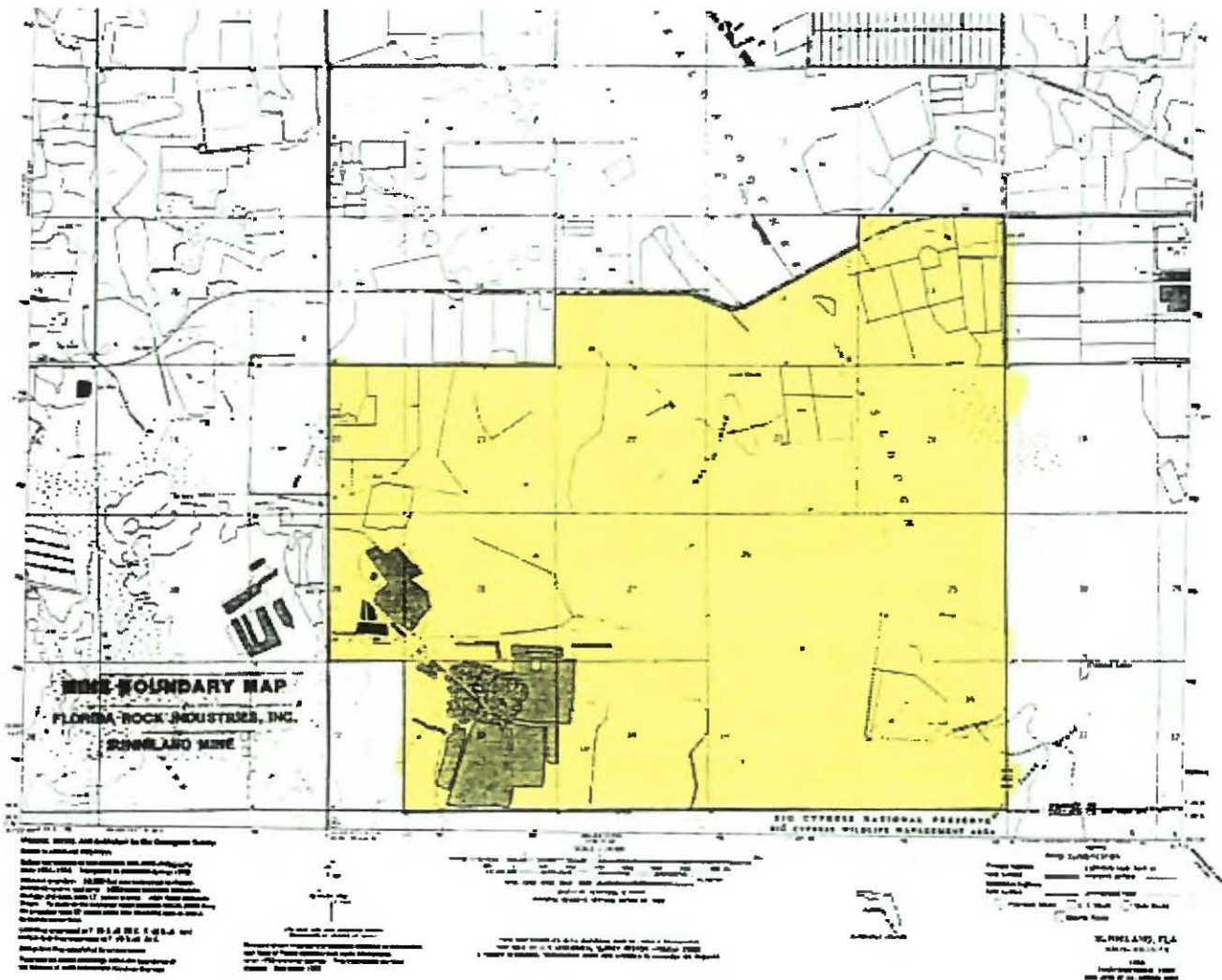
Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction
Sunniland Mine (5)	ERP MMR_50741	12,285	640	40	17.5% 7,214,827	0.77	5,555,417	4,473,19

Note 5: Sunniland Mine (FDEP ERP MMR_50741; Collier Co. Permit # 59.251); total project area @ 12,285 ac., mined area @ 640 ac.. 2015 remaining area @ 111 ac. +/- (est. 7,214,827 cyd. excavation authorized); 40-ft. depth based on permit excavation drawing and 0.77 overburden adjustment coefficient based on regional average and permit information.

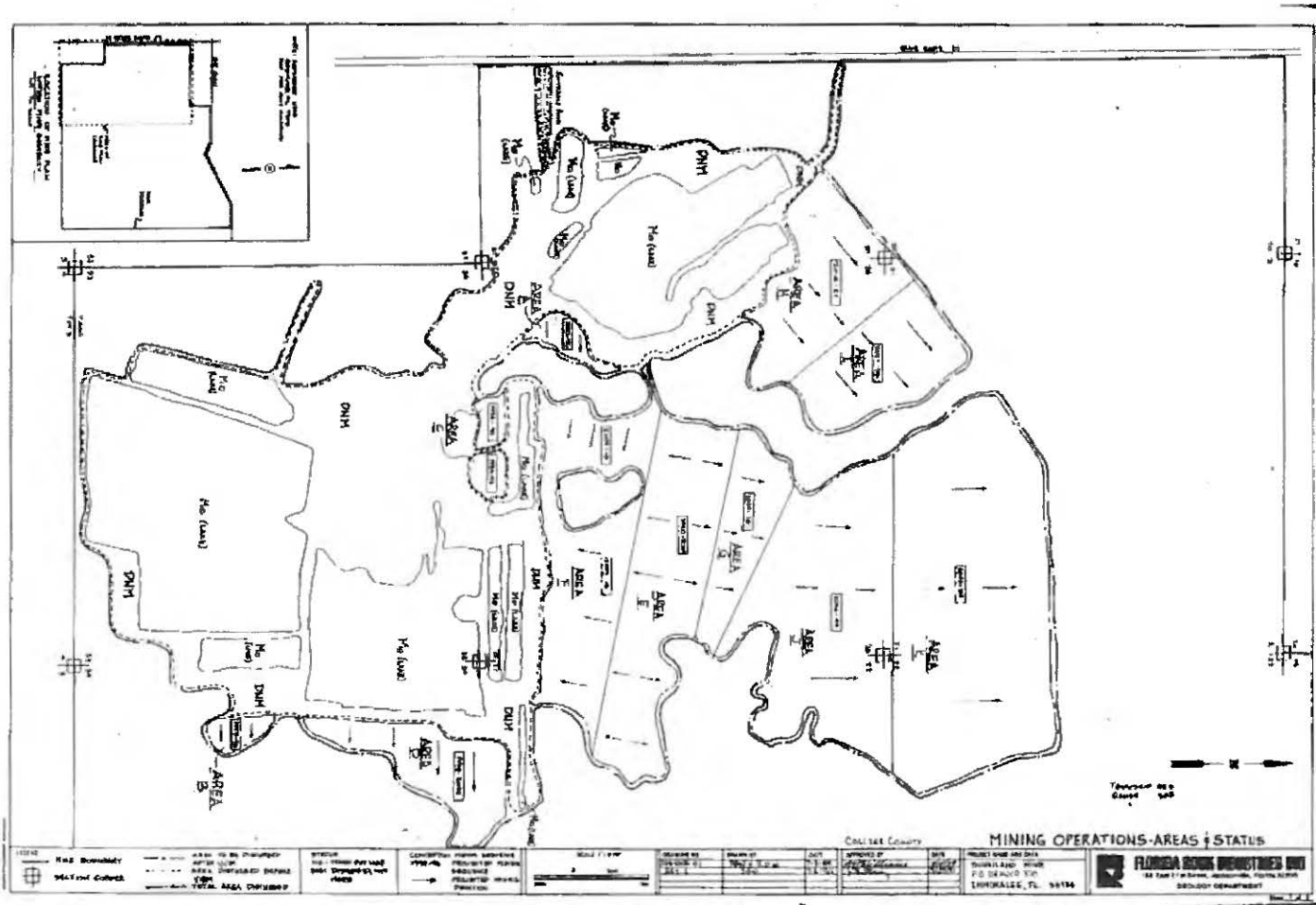
Sunniland Mine _ Collier Co.

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	12,285	640
<u>C.Yd. of Excavation Authorized</u>	7,214,827	
<u>Regulatory Mine Depth</u>	40	
<u>Stuart Study 05/16</u>		
Overburden Coefficient	77%	
Est, Limerock Remaining (Pre-excavation)	5,555,417 C.Yd.	
Est. Limerock (Post-excavation)	4,473,193 C.Yd.	

The Sunniland Mine Plan Project & Reclamation Area Map



The Sunniland Mine & Reclamation Plan

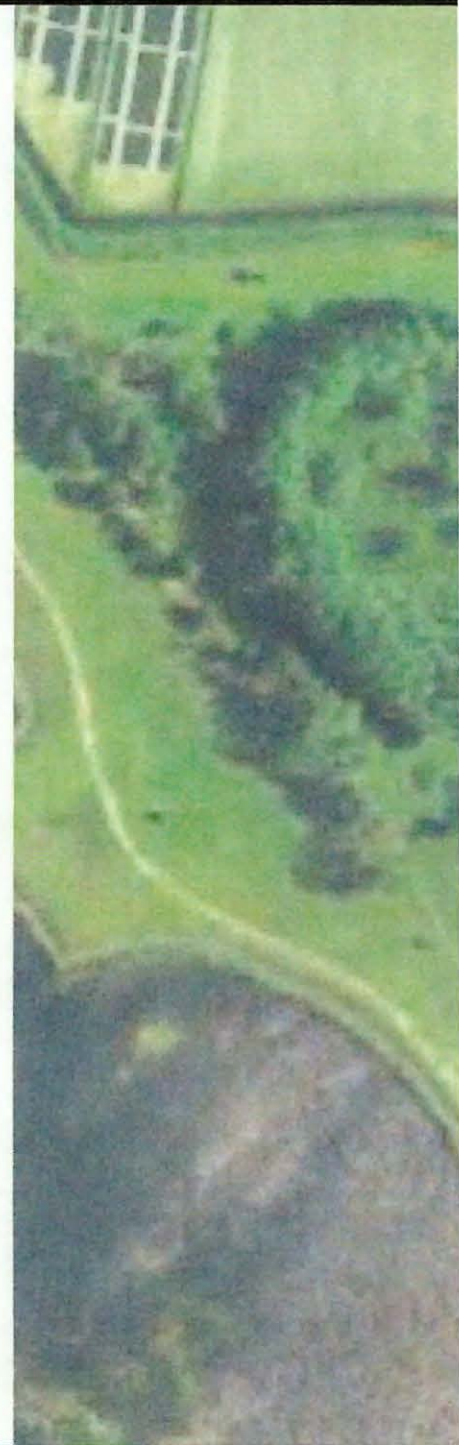
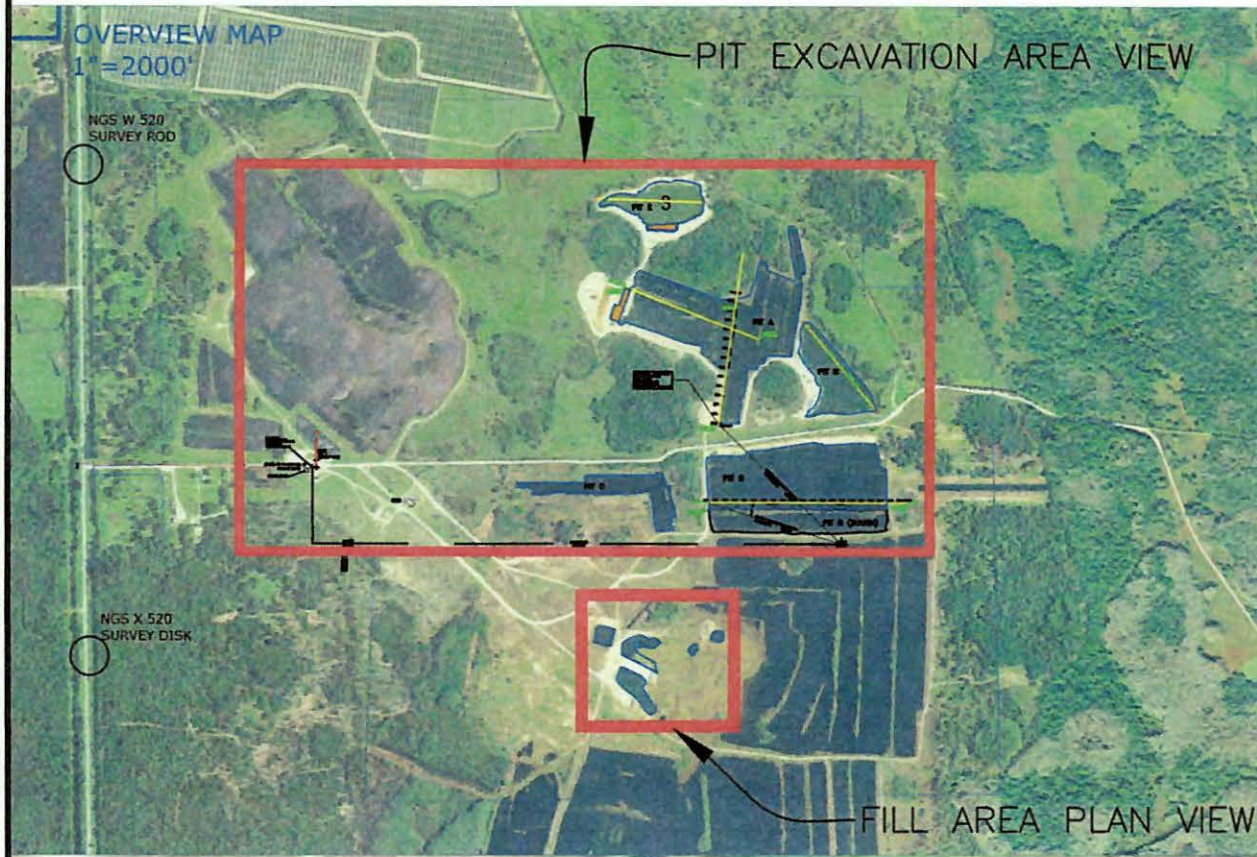


NOTES:

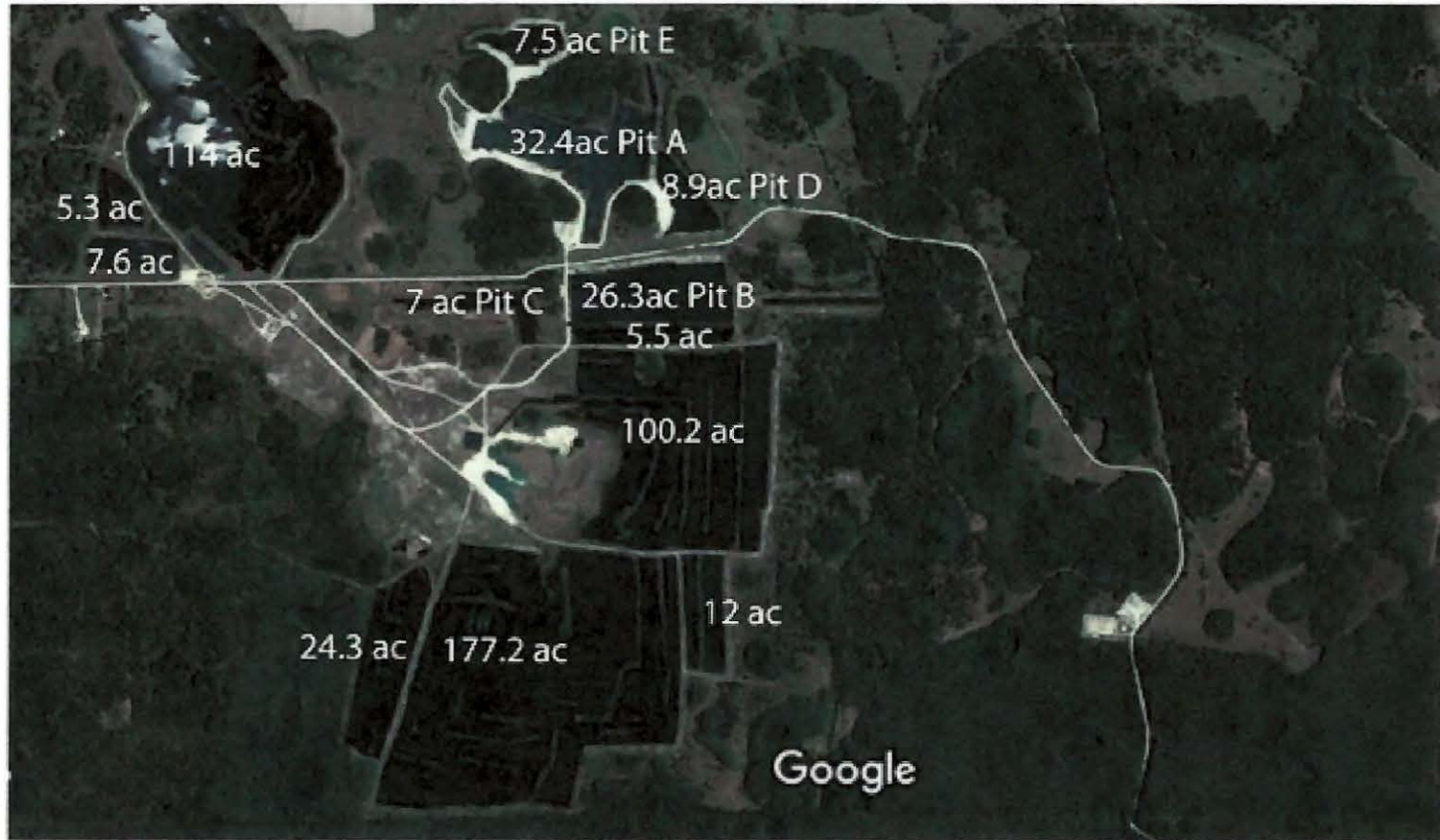
1. STATE PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83). OLD CONTROL POINTS SHOWN FOR REFERENCE WITH ORIGINAL COORDINATES IN STATE PLANE WEST.
2. BEARINGS SHOWN HEREON ARE BASED UPON GRID NORTH.
3. ALL STATIONING REFERS TO THE SURVEY BASELINE.
4. CURRENT PIT BOUNDARY BASED ON GPS COORDINATES OFFSET OF AREA MINED. PREVIOUS REPORT BOUNDARY USED FOR PIT EDGES WITH NO EVIDENCE OF NEW MINING.
5. PHOTO 2015 USDA NAIP.
6. CURRENT PIT EDGES WERE UPDATED BY TRIMBLE GEOXH GPS UNIT ON 8/10/2016.
7. THIS MAP IS NOT VALID WITHOUT THE SIGNATURE AND RAISED SEAL OF THE LICENSED ENGINEER.

ENGINEER'S CERTIFICATION:

THE AERIAL REPRODUCED ON THIS PRINT WAS MADE BY OTHERS. THE INFORMATION SUPERIMPOSED ON THE AERIAL IS FROM PREVIOUS SURVEYS, LIDAR, AND GPS POINTS. SLIGHT ERRORS IN SCALED DISTANCES CAN OCCUR DUE TO DISTORTIONS THAT ARE INHERENT WITH AERIALS. THE CERTIFICATION IS FOR ASSEMBLING THE INFORMATION AND DISPLAYING IT ON THIS DRAWING TO THE BEST KNOWLEDGE OF THE ENGINEER.

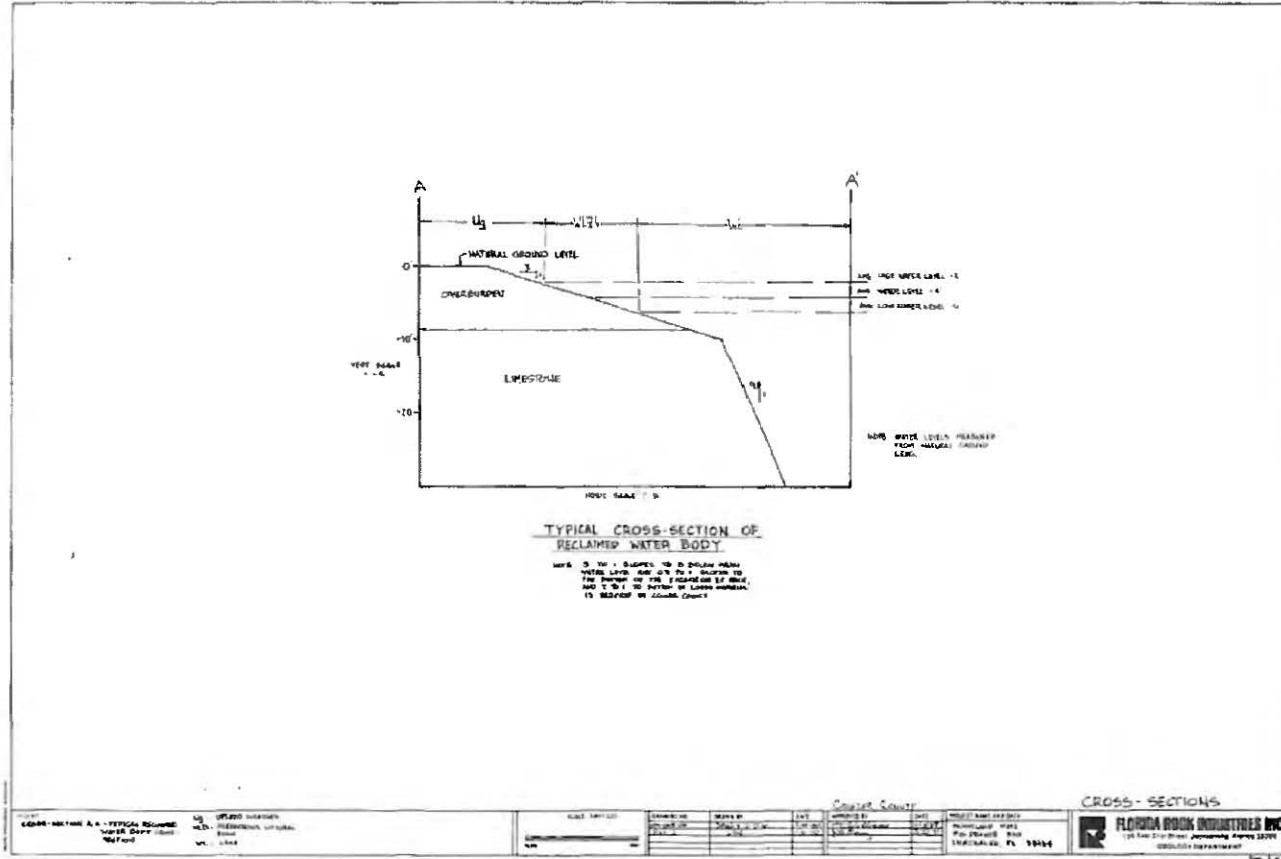


The Sunniland Mine Plan Air Photo & Lake Area Excavation Calculations



Sunniland Mine Collier County, FL
Est. Total Mined Area _

The Sunniland Mine Plan Lake Cross Section



Appendix D.6

The CEMEX/Hogan Island Mine

Appendix D.6

The CEMEX/Hogan Island Mine



Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction		
Cemex/Hogan Island Quarry (2)	2/1/10	0286236-001	2757	650.45	40	100%	41,975,706	0.7	29,382,994	23,506,395

Note 6: CEMEX/Hogan Island(ERP 0286236-001); total project area @ 2,757 ac., mined area @ 650 ac.. 2015 remaining area @ 650- ac. (est. 41,975,706 cyd. excavation authorized); 40-ft. depth based on permit Activity Description, 0.7 overburden adjustment coefficient based on regional average.

Cemex/Hogan Island Quarry _ Collier Co. (Omitted From Waldrop 09/16)

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	2,757	650.45

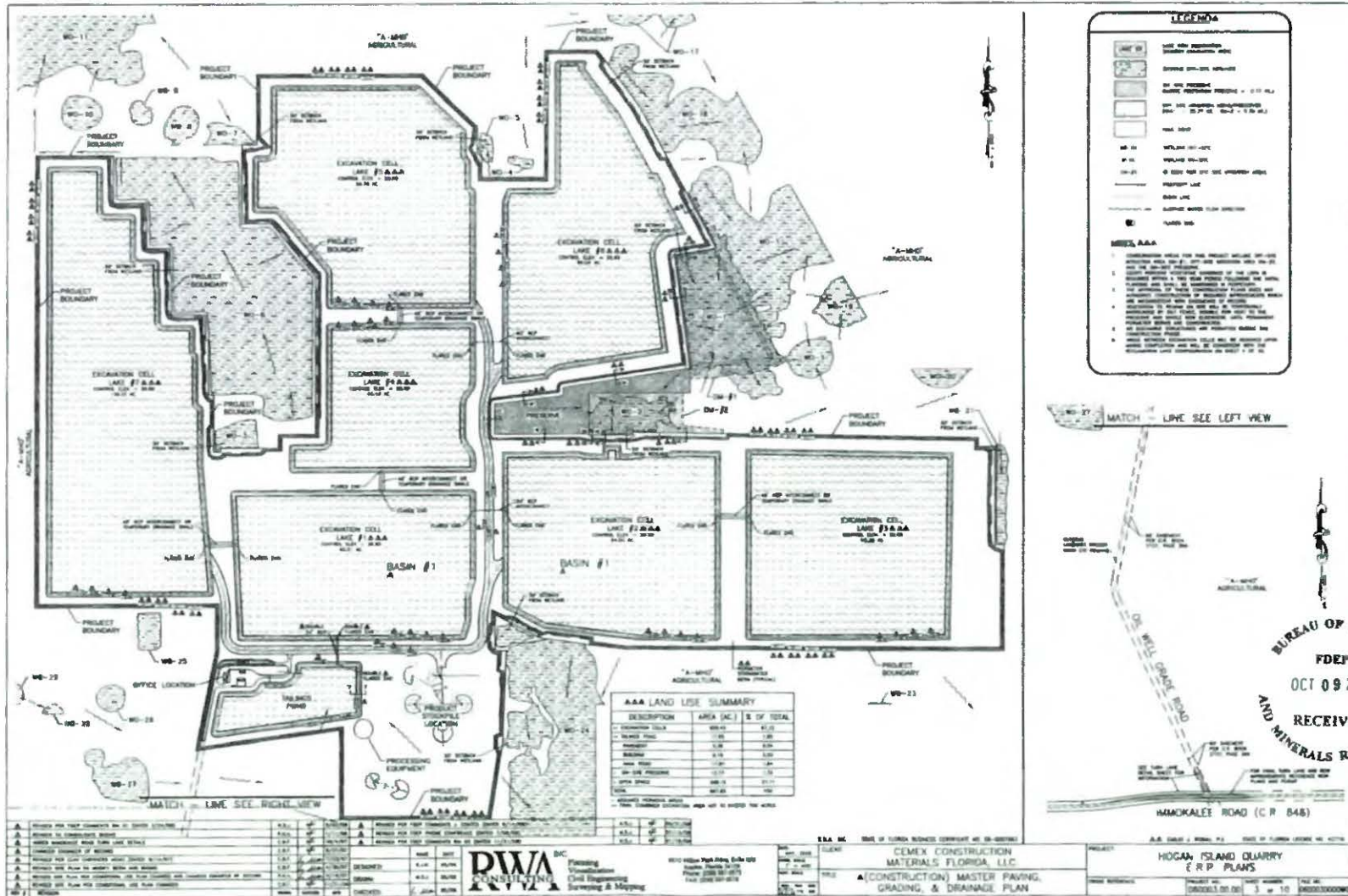
C.Yd. of Excavation Authorized 41,975,706

Regulatory Mine Depth 40

Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.70	
Corrected Limerock Remaining (Pre-excavation)	29,382,994	C.Yd.
Corrected Limerock Remaining (Post-excavation)	23,506,395	C.Yd.

The CEMEX/Hogan Island Mine Plan



The CEMEX/Hogan Island Mine FDEP Site #286236

Map Direct: Mandatory Non-Phosphate (mannon)

10/10/17, 1:00 PM

Show Legend



Mandatory Non-Phos...



More Data...

Map Direct: Mandatory Non-Phosphate (mannon)



Search Box 1003 feet wide at
26.38287718 x -81.51720972
26°22'58.3578" x -81°31'1.9550"

Drop Marker

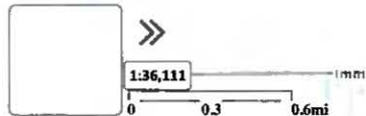
What's nearby?

Zoom To this selected feature
Clear Print Table
Download

Mandatory Non-Phosphate Sites 2016

- CEMEX CONSTRUCTION MATERIALS FLORIDA - HOGAN ISLAND QUARRY
- Site# 286236
- Documents
- Limestone
Marketable Resource
- Rule 36
Florida Department of Environmental Protection's Reclamation Rule
- BMMR
Permitting Agency
- N/A
Sort Grade
- Wetland Mitigation Required

Show Imagery Slider



--Show County--

<https://ca.dep.state.fl.us/mapdirect/?focus=mannon>

Page 1 of 1



Florida Department of Environmental Protection

Bureau of Mine Reclamation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

SENT VIA FEDEX

February 1, 2010

Mr. Matt Mouncey
Cemex Construction Materials Florida, LLC
100 Lem Carnes Road
Davenport, Florida 33837

FILE COPY

Dear Mr. Mouncey:

RE: File No. 0286236-001, Collier County
Hogan Island Quarry

Enclosed is Individual Environmental Resource Permit, Permit No. 0286236-001 issued pursuant to Part IV of Chapter 373, Florida Statutes, and Title 62, Florida Administrative Code. Any party to the Order (Permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Please review this document carefully to ensure compliance with both the general and specific conditions contained herein. If you have any questions about this document, please contact me at (850) 488-8217.

Sincerely,

Gary J. Hardie
Environmental Specialist

CC: USACOE, Jacksonville (Application No. SAJ-2008-00615)
DEP, South District, Environmental Resource Permitting, Lucy Blair

ENVIRONMENTAL RESOURCE PERMIT

PERMITTEE/AUTHORIZED ENTITY:
Cemex Construction Materials Florida, LLC
100 Lem Carnes Road
Davenport, Florida 33837

Permit/ Authorization No. 0286236-001
Date of Issue: February 1, 2010
Expiration Date of Construction Phase:
February 1, 2025
County: Collier
Project: Hogan Island Quarry

AGENT:
Mr. Matt Mouncey
Cemex Construction Materials Florida, LLC
100 Lem Carnes Road
Davenport, Florida 33837

This permit is issued under the authority of Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). The activity is not exempt from the requirement to obtain an Environmental Resource Permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity. This permit also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Management Act. This permit also constitutes certification of compliance with water quality standards under Section 404 of the Clean Water Act, 33 U.S.C. 1344.

A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

The above-named permittee is hereby authorized to construct the work shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the attached General Conditions and Specific Conditions, which are a binding part of this permit.** You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities. Failure to comply with

all drawings and conditions shall constitute grounds for revocation of the permit and appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and with the general and specific conditions of this permit/certification, as specifically described below.

ACTIVITY DESCRIPTION

The applicant, Cemex Construction Materials Florida, LLC (formerly Rinker Materials of Florida, Inc.), applied on February 7, 2008, to the Department of Environmental Protection for a permit/water quality certification to construct a surface water management system for a new limestone mine. The project area will be approximately 1,000.12 acres within a contiguous area under the control of the landowner consisting of approximately 2,757.47 acres. The project area includes 967.65 acres mining operations, on-site preserve and open space, and 32.47 acres of off-site mitigation.

The project area for many years has primarily been used for agriculture. Construction will primarily occur within uplands impacted by agricultural operations. At five locations (W-1, W-2, W-3, W-4, and W-5), permanent dredging or filling will occur within approximately 10.95 acres of mixed forested and herbaceous wetlands. Permanent dredging and filling will also occur within approximately 44.57 acres of surface waters (S1 through S40) which are agricultural ditches. In addition, temporary dredging or filling will occur at two locations within the wetland mitigation areas (WO-1 and WO-2) totaling approximately 16.77 acres.

Excavation will be accomplished using typical equipment such as draglines, drill rigs, excavators, front-end loaders, and dump trucks. Extraction will occur in a maximum of seven cells totaling 650.45 acres. The maximum depth of mining is expected to be no more than 40 feet below the control water elevation (20.6 feet NAVD88), which is no deeper than (-) 19.4 feet NAVD. The cells will be connected to form three lakes totaling 681.50 acres. It is estimated that blasting will occur up to three times a week to access the resource. In addition to the extraction areas, a 17.95-acre tailings pond will be created for mining operations and will remain after reclamation is complete. Approximately 18.33 acres of additional impervious surfaces are proposed by the construction of paved areas, buildings and haul roads. The impervious areas will be removed during reclamation.

No off-site discharges are authorized below the design storm. The mine is designed to store all stormwater up to the 25-year, 72-hour storm event on site. Hydrologic monitoring will be provided in adjacent wetlands and wetland mitigation areas.

Wetland mitigation includes the preservation of 45.24 acres of uplands and wetlands (On-site Preserve, OM-1, and OM-2) under a conservation easement. Within the preservation areas, approximately 17.12 acres of upland forests will be created, enhanced or restored; approximately 9.25 acres of wetland forests will be created or restored; approximately 0.34 of an acre of herbaceous uplands, 0.47 of an acre of wetland scrub will be created or enhanced; and approximately 18.06 acres herbaceous wetlands will be created, restored or enhanced. **Construction authorized by this permit shall not begin until after the permittee has provided an acceptable recorded conservation easement and access easement to the Department.**

This project does not propose alterations to Oil Well Grade Road. Oil Well Grade Road, outside of the containment system for mining operations, and Immokalee Road are not part of this project. Alterations of these structures may require an additional environmental resource permit.

The predominant post-reclamation land use will be four lakes (FLUCCS 521) totaling 699.45 acres. In addition, littoral plantings will be created around each lake which will not be part of the wetland mitigation plan. As required by the Collier County zoning ordinances and to provide additional wetland area for wood storks, a broad littoral shelf will be constructed in the vicinity of the preservation areas. All mine landforms disturbed by mining and the reclaimed lake will be re-contoured to a maximum of 4H:1V (horizontal:vertical) slope to a depth of six feet below the average water level. The shorelines will be revegetated with a mix of native herbaceous plants and trees. The estimated life of the mine, including reclamation, is 15 years.

The applicant, Cemex Construction Materials Florida, LLC, will be responsible for the operation and maintenance of the proposed surface water management system until the permit is transferred to an acceptable operating entity.

ACTIVITY LOCATION

This project is located at 7570 Oil Well Grade Road approximately one mile north of Immokalee Road in the northwest corner of the northeast portion of Sections 9, 10, 15, 16, 21, and 22, Township 47 South, Range 28 East, in rural Collier County.

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any

- b. Complete the baseline water quality sampling at all wells (shallow and deep). Baseline sampling parameters shall include chlorides, sulfates, phosphorous, total dissolved solids, iron oxides, cadmium, gross alpha, radium 226 and 228.
- c. Thereafter, sampling shall be conducted on an annual basis at all wells for phosphorous, iron oxides, cadmium, gross alpha, radium 226 and 228. Sampling for sulfates, total dissolved solids, chlorides shall be conducted on a quarterly basis. The monitoring report detailing the results of all the sampling along with the certified laboratory analysis work sheets shall be submitted with the annual narrative report. The report shall include a map showing monitoring locations. The monitoring may be discontinued after all extraction has ended on the site.

57. **Groundwater Quality Protection.** At each water quality monitoring well, the permittee shall establish a baseline value for each monitored parameter by calculating average measured values at each of the two depth intervals. The baseline value for each depth interval at each well shall be calculated as the average of the first four quarterly readings. After the first year of monitoring, levels of each parameter at each depth interval at each well shall not exceed the baseline values for more than two consecutive quarters. If baseline values are exceeded for more than two consecutive quarters, the permittee shall contact the Department within seven days of the analysis. At the shallow monitoring wells, if any value exceeds or is trending toward exceeding the standards set in Chapter 62-550, F.A.C., the permittee shall contact the Department within seven days of the analysis. The Department shall review the data at each well location, and determine a remedial course of action. Possible remedial actions may include additional monitoring at new well locations, restrictions on mining depth or on mining locations, or the suspension or revocation of the permit with restoration of the disturbed areas.

58. **Bottom Depth.** Mining is being permitted to a maximum excavation depth of (-)19.4 feet NAVD.
- a. The permittee shall install and maintain one or more permanent bench marks at known elevations. These bench marks shall be located such that survey crews can use the bench marks to determine the pit bottom elevations. The bench marks may be periodically replaced as the operations area expands.
 - b. The permittee shall provide pit bottom elevations referenced to NAVD within the areas of the pit where excavation occurred during the previous calendar year. The pit bottom elevations shall be measured in a 50-foot grid. The survey shall include a statement testifying to accuracy, signed and sealed by an

ENVIRONMENTAL RESOURCE PERMIT

PERMITTEE/AUTHORIZED ENTITY:
Cemex Construction Materials Florida, LLC
100 Lem Carnes Road
Davenport, Florida 33837

Permit/ Authorization No. 0286236-001
Date of Issue: February 1, 2010
Expiration Date of Construction Phase:
February 1, 2025
County: Collier
Project: Hogan Island Quarry

AGENT:
Mr. Matt Mouncey
Cemex Construction Materials Florida, LLC
100 Lem Carnes Road
Davenport, Florida 33837

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A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

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ACTIVITY LOCATION

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ENVIRONMENTAL RESOURCE PERMIT

PERMITTEE/AUTHORIZED ENTITY:
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100 Lem Carnes Road
Davenport, Florida 33837

Permit/ Authorization No. 0286236-001
Date of Issue: February 1, 2010
Expiration Date of Construction Phase:
February 1, 2025
County: Collier
Project: Hogan Island Quarry

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The applicant, Cemex Construction Materials Florida, LLC, will be responsible for the operation and maintenance of the proposed surface water management system until the permit is transferred to an acceptable operating entity.

ACTIVITY LOCATION

This project is located at 7570 Oil Well Grade Road approximately one mile north of Immokalee Road in the northwest corner of the northeast portion of Sections 9, 10, 15, 16, 21, and 22, Township 47 South, Range 28 East, in rural Collier County.

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any

Appendix D.7

The Bell Meade Partners Section 20 Mine

Appendix D.7

The Bell Meade Partners Section 20 Mine



Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction	
Belle Meade Partners Sec. 20 Mine (3)	9/7/11	0299365-001	670.9	510	100%	59,793,263	0.7	41,855,284	33,484,227

Note 7: Belle Meade Partners Section 20 Mine (ERP 0299365-001); total project area @ 670.9 ac., mined area @ 510 ac.. 2015 remaining area @ 510- ac. (est. 59,793,263 cyd. excavation authorized 0299365-001-005 page 24 of 44 & Sec. 20.

Belle Meade Partners Sec. 20 Mine _ Collier Co. (Not Reported Waldrop 09/16)

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	671	510

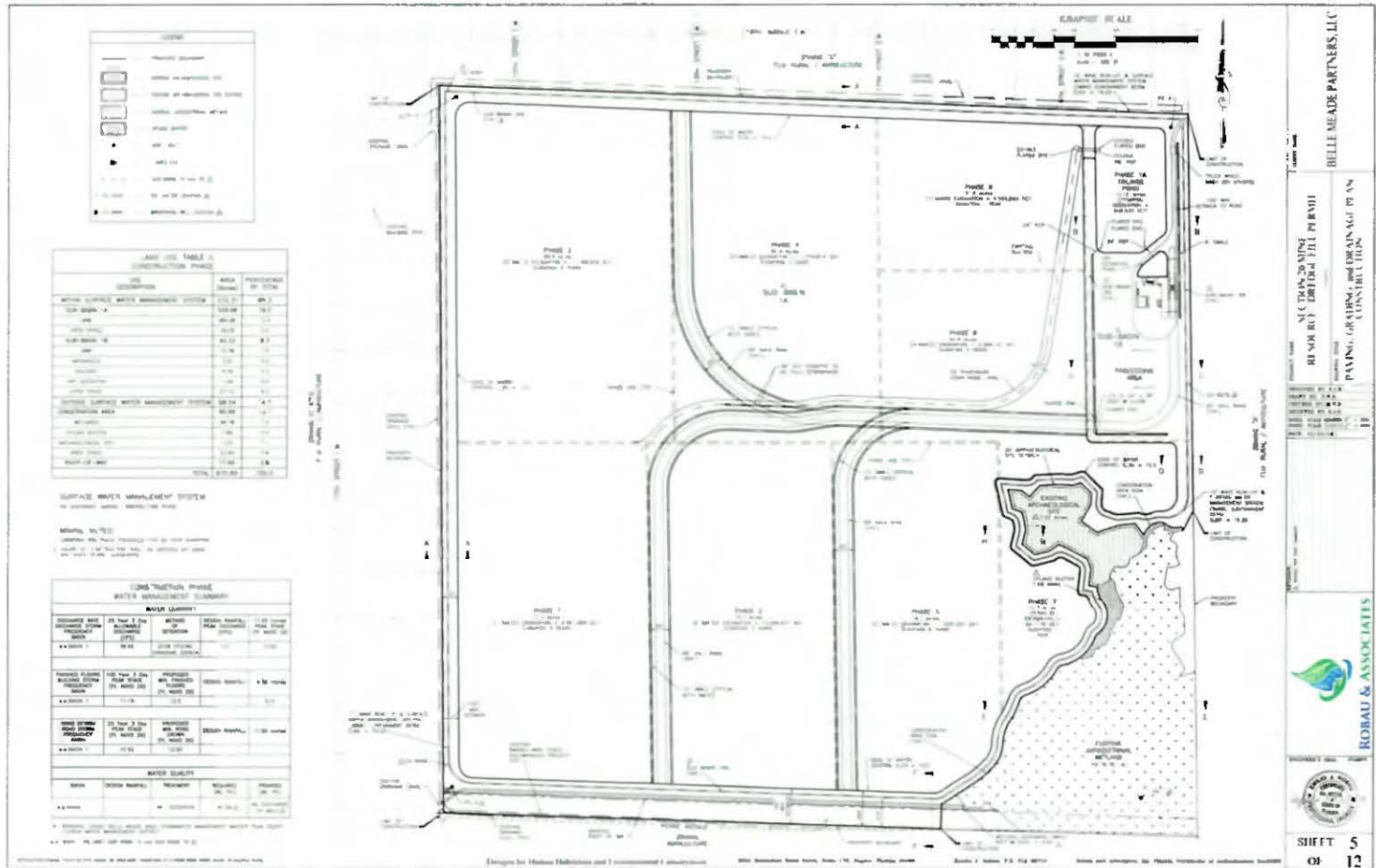
C.Yd. of Excavation Authorized 59,793,263

Regulatory Mine Depth 0

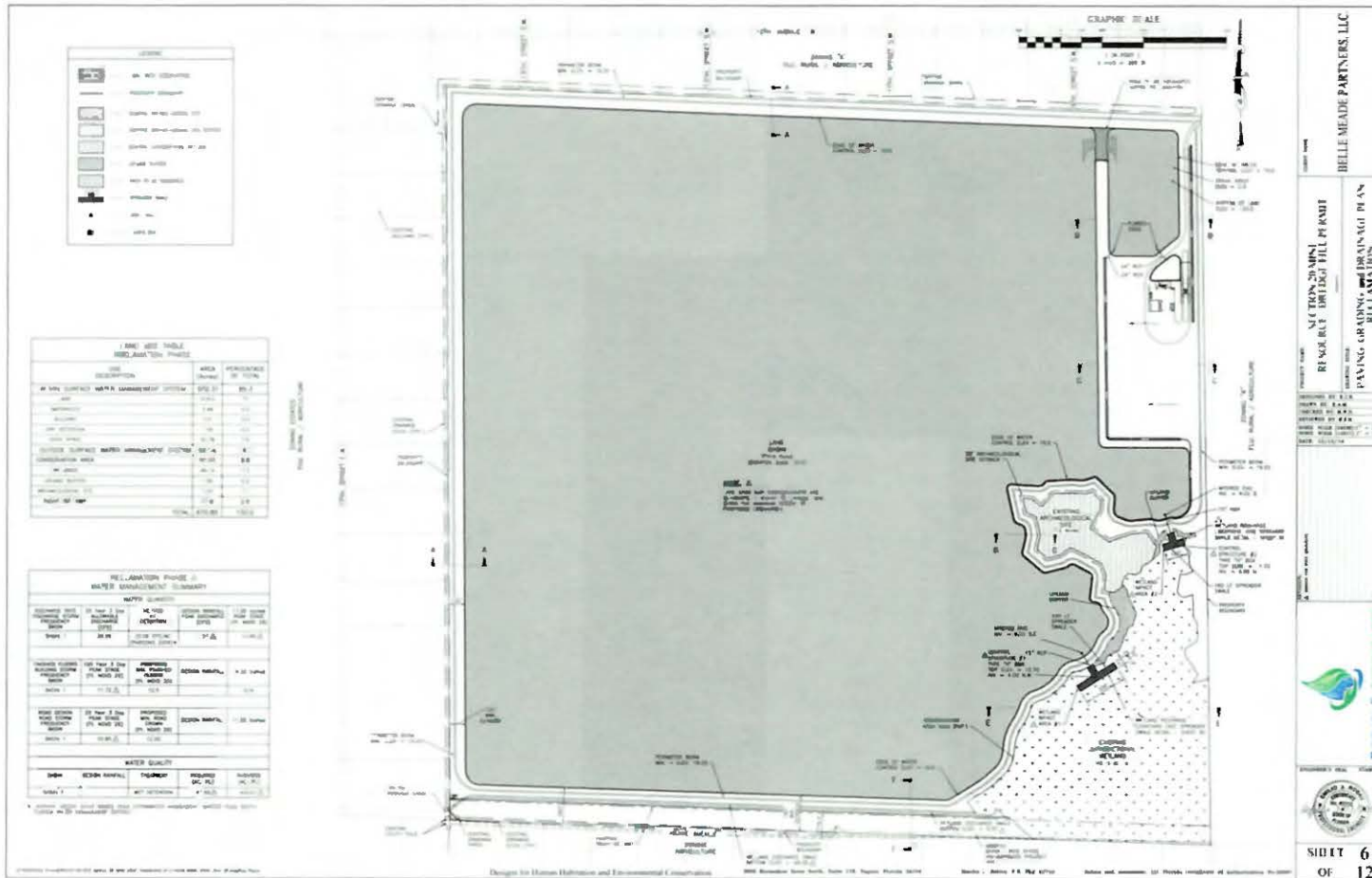
Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.70	
Corrected Limerock Remaining (Pre-excavation)	41,855,284	C.Yd.
Corrected Limerock Remaining (Post-excavation)	33,484,227	C.Yd.

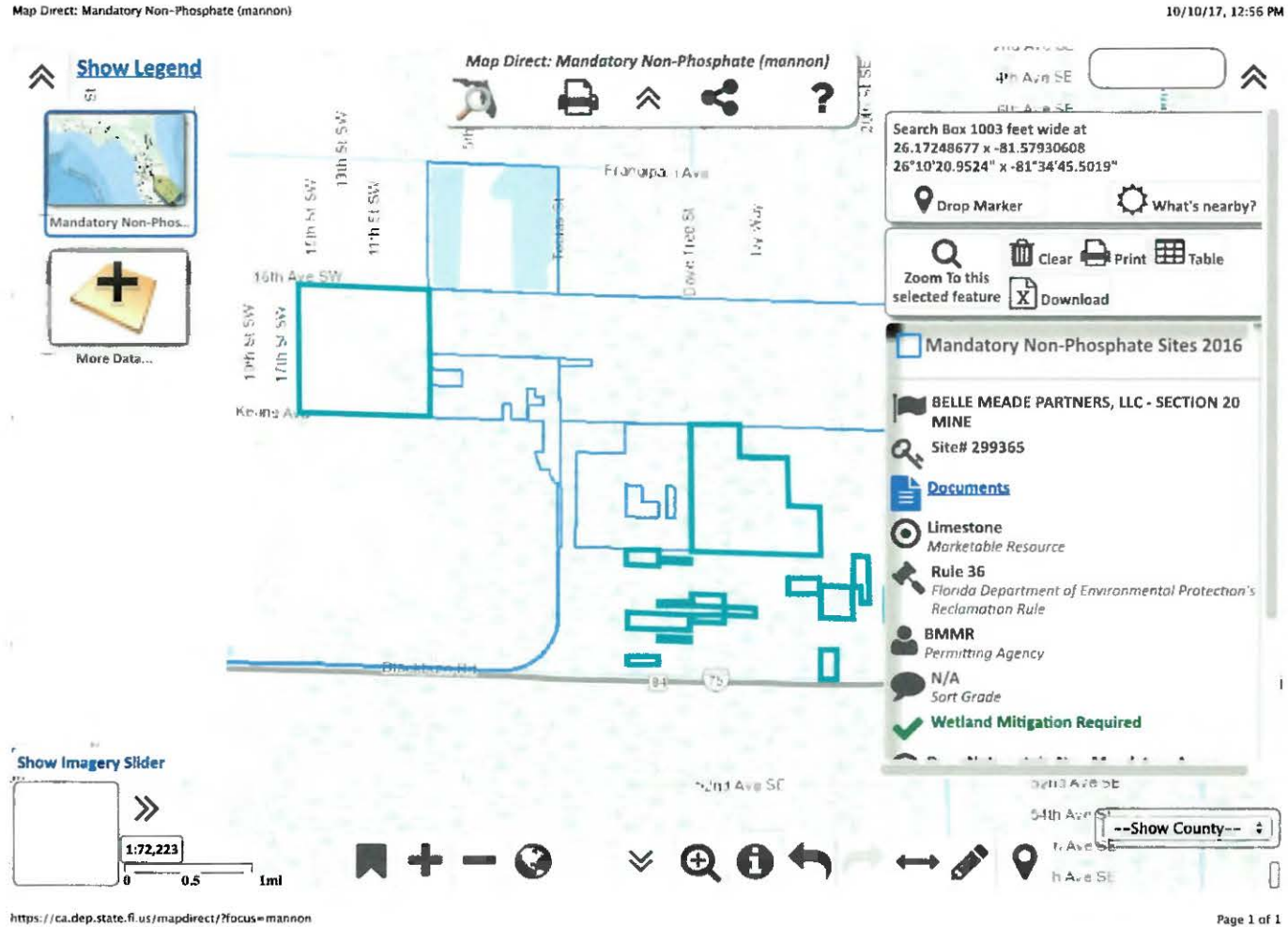
The Bell Meade Partners Section 20 Mine Plan



The Bell Meade Partners Section 20 Mine Restoration Plan



The Bell Meade Partners Section 20 Mine FDEP Site #299365



Additional Collier Mines	Year	ERP Permit	Project	Mined	Mine	%
Belle Meade Partners Sec. 20 Mine	2015	0299365-001		670.9	510	100%
Phase 1 77.2 ac						
Phase 2 75.7 ac.						
Phase 3 89.8 ac.						
Phase 4 83.4 ac.					482.2	
Phase 5 74.7 ac.						
Phase 6 37.8 ac.						
Phase 8 43.6 ac.						
Total Est. Bcyd. Material						
Est. Cyd. Material Minus Overburden						
Est. Cyd. Material Minus Loss/Compact.						

SOURCE: Permit 299365-005 pg. 24 of 44; Sec. 20 Mine Resource D&F Permit Robau and Associates sheet 5 of 12;



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

BOB MARTINEZ CENTER
2600 BLAIR STONE ROAD MS 3577
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

JONATHAN P. STEVERSON
SECRETARY

April 21, 2015

Darin McMurray
Managing Member
Belle Meade Partners, LLC
10481 Six Mile Cypress Parkway
Fort Myers, FL 33966
Email: Russell.r.smith@lennar.com

**RE: Permit Modification- Reduction of Impacts, FDEP #299365-005
Belle Meade Partners, LLC Section 20 Mine
Collier County, Florida**

Dear Mr. McMurray,

On December 12, 2014, your request to modify the reference environmental resource permit (Permit Number 0299365-001) was received by the Department of Environmental Protection (Department), and assigned File Number 299365-005. A request for additional information was sent by the Department on January 9, 2015, and a response to this request was received on March 13, 2015. The modification was requested to further reduce wetland impacts and to eliminate impacts in a portion of the project area that was recently documented to contain an archaeological site. This modification also changes the permittee from Lennar Homes, LLC to Belle Meade Partners, LLC.

This site was originally permitted under Environmental Resource Permit (ERP) Number 299365-001 on September 7, 2011 for a sand and limestone mine. The Department issued two subsequent modifications (ERP #299365-003 and #299365-004) extending the permit expiration date to November 5, 2032.

This modification does not change the Project site total area which remains approximately 670.85 acres in Section 20, Township 49 South, Range 27 East, Collier County. The wetland impacts are reduced from approximately 82.64 acres to 35.76 acres. The 35.76 acres of wetland impacts are composed of approximately 6.92 acres of other surface waters in the form of agricultural ditches and approximately 28.99 acres of wetlands. Mitigation for the proposed impacts also remains unchanged with approximately 928.42 acres of offsite preservation.

The transfer from Lennar Homes, LLC to Belle Meade Partners, LLC is hereby approved.

Since the proposed modification is not expected to result in any adverse environmental impact or water quality degradation, the permit modification #0299365-005 to modify previously existing permit # 299365-001 is hereby modified as requested, provided that the following Specific

Conditions (SC) and figures of ERP #299365-001 are added or modified to adopt the following changes as noted:

SC 10. Dredging and Filling. This permit authorizes dredging or filling in ~~75.72~~ 28.99 acres of wetlands and 6.92 acres of agricultural ditches which are non-wetland surface waters. These impacts are depicted on Sheet E-5, FDEP Wetlands Impact Map (dated November 18, 2014.)

SC 11. Maximum Excavation Limits. Expansion of the extraction areas beyond the limits identified as Minimum Setback on Sheet 5 of ~~44~~ 12, Paving, Grading and Draining Plan (Construction signed and sealed March 24, 2015), is not authorized.

SC 32. Financial Assurance for Wetland Mitigation. This permit duration is greater than five years from the date of issuance in order to allow for the completion of the project. The permittee shall do the following as part of the reasonable assurance that the impacts of the activity, considering its nature, the size of the systems, and any required mitigation, can be accurately assessed and offset where appropriate, and the terms of the permit can be met for the duration of the permit:

- a. Prior to the initiation of mining operations, the final version of the financial responsibility mechanism for the mitigation costs shall be provided to and approved by the Department as required by Section 10.3.7.4(a), Applicant's Handbook (A.H.). No work shall be initiated on any area authorized until the Department has approved, in writing, the executed final version of the financial responsibility mechanism. The financial responsibility mechanism shall be equal to 110 percent (%) of the estimated mitigation costs for wetlands and other surface waters affected by operations covered under this permit. The amount shall be adjusted to reduce the financial responsibility, for areas complete through revegetation, to the amount covering the remaining monitoring and maintenance costs for that area. Financial responsibility amounts shall no longer be required for individual wetlands and other surface waters that have been released by the Department, as described in Specific Condition 63. Adjustments shall be submitted with the annual status report required in Specific Condition 57.

- b. The mitigation cost per acre for the wetland types shall be adjusted annually either by recalculating the cost of constructing, managing and monitoring the mitigation in current dollars or using an inflation factor based on the annual Construction Cost Index, as presented in the first issue of the Engineering News Record published in December of each year. Adjustments shall be submitted with the annual status report required in Specific Condition 57.

- ~~a. The permittee shall provide an approved financial assurance mechanism that meets the requirements of Section 4.3.7.6, B.O.R., with updated wetland mitigation cost estimates meeting the requirements of Sections 4.3.7 through 4.3.7.9, B.O.R.~~
 - ~~1) Pursuant to subsections 373.414(19), F.S., the initial financial responsibility demonstration shall be in an amount equal to 110 percent of~~

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Florida Rock Industries, Inc.

East Naples Mine

File No. 258805-001

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19. The permittee shall immediately notify the Department in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIFIC CONDITIONS:

1. **Permit Compliance.** The purpose of this permit is to authorize the creation of a surface water management system on certain described lands within the jurisdiction of the Department. In exchange for this authorization, the permittee is obligated to perform certain acts that are described herein. A material part of the reasonable assurances the Department is relying upon in issuing this permit is that the permittee will timely and completely implement all of the conditions of this permit. The permittee understands that its failure to completely and timely comply with all of the conditions of this permit may result in a revocation or suspension of the permit and, if appropriate, that the area be restored.
2. **Listed Species.** Permits shall be obtained from the Florida Fish and Wildlife Conservation Commission prior to the "taking" of any listed animal species. Listed animal species are those animal species listed in Rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C. Taking means: taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any listed species, their nests or eggs, by any means, whether or not such actions result in obtaining possession.
3. **"Good Cause Rule."** The permittee is hereby advised that Rule 62-343.100(1)(c), F.A.C., provides that for good cause and after notice to the permittee, the Department may require the permittee to conform to new or additional conditions to this permit. Circumstances that constitute "good cause" shall include any of the situations listed in the referenced rule.
4. **Wetland Jurisdictional Determination.** The applicant received a formal jurisdictional determination from the Department on June 8, 2009, File No. 271311-001.

Construction

5. **Drawing Conflicts.** The project shall be conducted in compliance with the permit drawings, plans, figures, and narratives which identify location, schedule, notification, and reclamation and mitigation activities. If the approved permit

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Florida Rock Industries, Inc.
East Naples Mine
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drawings conflict with the specific conditions, then the specific conditions shall prevail.

6. **Dredging and Filling Limits.** All wetland and surface water areas to be dredged or filled shall be in accordance with the attached permit drawings and shall not exceed the locations, areas and depths indicated on those drawings.
7. **Extraction Limits.** Expansion of the extraction area(s) beyond the limits identified as extraction areas, as shown in the Master Mining Plan, Sheet 1106-7, is not authorized.
8. **Extraction Depth.** Mining shall not extend below -60 feet National Geodetic Vertical Datum (NGVD) or five feet above the confining layer, as determined at the site, whichever is shallower.
9. **Stormwater Containment.** Mining and mining-related activities shall be conducted at all times within a stormwater system capable of containing a 100-year, 72-hour storm. All construction, operation, and maintenance of the stormwater system shall be as set forth in the plans, specifications, and performance criteria contained in the Department file and approved by this permit.
10. **Hazardous Materials Containment.** A separate containment area for equipment maintenance and the storage of petroleum and hazardous substances shall be constructed on site. Any storm water captured within the containment area that becomes contaminated with petroleum or hazardous substances shall not be allowed to discharge. The containment area shall be built to confine any spilled petroleum or hazardous materials and stormwater to the volumetric requirements of Section 5.2 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District.
11. **Stormwater Discharge.** This permit does not authorize the discharge of stormwater below the design storm.
12. **Surface Water Storage Structures.**
 - a. On-site dams, including stormwater ponds, dredge pond dikes, or tailings disposal area dikes shall not store flowable liquid more than 4 feet above natural grade.

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Florida Rock Industries, Inc.
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- b. All water management structures shall be constructed of clean fill, devoid of materials or vegetation that could allow water to be piped through the structure. Earthen material should be placed in lifts no greater in depth than one foot and compacted until the density meets or exceeds a 95 percent Modified Proctor test. A minimum of three feet of freeboard should be provided above the expected high water level within the containment system. Tops of containment berms should provide a five- to ten-foot top width and should be sloped downward at one to two percent toward the interior of the containment system. Interior and exterior sides of berms should be sloped no steeper than three horizontal to one vertical.
 - c. Vegetated surface water containment structures shall be mowed annually to control woody vegetation.
 - d. Topsoil storage piles or berms constructed as safety barriers shall not be utilized to store flowable liquid, but may be used to divert stormwater to sumps. Water deeper than one foot above grade shall be pumped away from these structures as expeditiously as possible.
13. **System Changes.** No modifications or additions shall be made to this facility which could alter the stormwater management and storage characteristics of the facility, without prior modification of this permit. The stormwater treatment facility shall at all times be maintained in good working order and operate as efficiently as practicable. All installed treatment facilities shall be operated to achieve the highest practical level of treatment and efficiency.
14. **Training.** The permittee shall provide permit compliance training.
- a. Training shall be provided to the staff of the permittee and contractors who will be supervising construction, modification, alteration, or removal of the surface water management system, or conducting inspections of the surface water management system.
 - b. Training shall be conducted for newly hired staff or contractors within the first three months of their starting date.
 - c. Refresher training shall be conducted annually for all permittee staff and



Florida Department of Environmental Protection

Bureau of Mining and Minerals Regulation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Rick Scott
Governor

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Herschel T. Vinyard Jr.
Secretary

DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF FLORIDA

In the Matter of an
Application for Permit/Water Quality Certification, by:

APPLICANT:
Florida Rock Industries, Inc.
155 East 21st Street
Jacksonville, Florida 32206

PROJECT NAME:
East Naples Mine
File No. 258805-001
County: Collier

AGENT:
Frank Joseph Feeney, P.E.
Hole Montes, Inc.
950 Encore Way
Naples, Florida 34110

NOTICE OF INTENT TO ISSUE ENVIRONMENTAL RESOURCE PERMIT

The Department of Environmental Protection gives notice of its intent to issue an environmental resource permit under Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.) (draft copy of permit attached). Issuance of the environmental resource permit also constitutes certification of compliance with state water quality standards pursuant to Section 404 of the Clean Water Act, 33 U.S.C. 1344. Where applicable (such as activities in coastal counties), issuance of this environmental resource permit also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Management Act.

I. DESCRIPTION OF THE PROPOSED ACTIVITY

The applicant, Florida Rock Industries, Inc., applied on December 14, 2005, to establish a surface water management system for a new sand and limestone mine on 1,416.19 acres. The project boundary was subsequently reduced to 716.36 acres on May 3, 2012. The proposed mining will result in the excavation of a 257.36-acre lake

(including 26.41 acres of littoral zone shorelines) and the construction of an onsite haul road and processing plant site.

The construction will result in adverse impacts to 60.29 acres of isolated wetlands and 0.64 of an acre of other surface waters previously degraded by hydrological draw-down from a regional network of drainage canals and by an infestation of melaleuca (*Melaleuca quinquenervia*). As mitigation for the adverse impacts to wetlands, the permittee will protect 371.23 acres of natural lands (wetlands 261.85 acres, uplands 109.11 acres, other surface waters 0.27 of an acre) by a conservation easement, and enhance the vegetation therein by controlling nuisance and exotic plants. The mitigation lands are located in an area designated by the Collier County Comprehensive Plan as "Sending Lands," whereby Transfers of Development Rights (TDR) allow development rights to be relocated to "Receiving Lands," such as the mine property.

The total area served by the mine surface water management system will be 345.13 acres. The maximum depth of mining will be approximately 72 feet below the existing grade which is about 66 feet below the average water table elevation, or five feet above the top of the confining layer, whichever is shallower.

Hydrologic monitoring will be provided within the mitigation area and in the wetlands adjacent to the mining operations. A total of 43 acres of impervious area (mostly facilities and haul roads) will be created by the construction. Stormwater up to the 100-year, 3-day storm will be contained within the surface water management system.

Prior to the initiation of mining activities, the permittee will apply for an Environmental Resource Permit (ERP) for a new mine access road which would allow the material to be transported within the right-of-way of a proposed southern extension of Wilson Boulevard and which will extend southward from the mine and then west, paralleling Interstate 75. This will allow truck traffic to avoid the more densely populated areas to the north. Initially, the extracted resource will be processed on-site using a portable processing plant. As mining progresses, the processing will be transferred to the new plant site located just south of the excavation area.

The post-reclamation land cover types will be pasture, herbaceous wetlands and lake. All final shorelines subject to the reclamation requirements of Chapter 62C-36, F.A.C., will be constructed with a 4:1 (horizontal:vertical) slope to ten feet below the average water table, and revegetated with native wetlands plants. The shoreline wetlands will

not be considered as wetland mitigation. The estimated life of the mine is 20 years. The construction phase of this permit expires in 20 years.

This project is located in Sections 21, 27, and 28, Township 49 South, Range 27 East, just south of Golden Gates Estates, and two miles north of Alligator Alley (I-75), Collier County. The affected wetlands are isolated wetlands in the watershed of Corkscrew Swamp, Faka Union Bay and Rookery Bay, West Collier Drainage District, Class III waters.

II. AUTHORITY FOR REVIEW

The Department has permitting authority under Part IV of Chapter 373, F.S., and Chapters 62-330, 62-341 and 62-343, F.A.C. The activity is not exempt from the requirement to obtain an environmental resource permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing this application.

III. BACKGROUND

On December 14, 2005, an application for a permit was submitted to allow the establishment of a surface water management system at a new limestone mine in Collier County. The project area was inspected on February 7, 2002, and April 17, 2004. The excavation area (230.95 acres) consists of most of the south half of Section 21. This property is located directly to the south of the East Naples Land Company's East Naples Mine. The majority of the habitats are pasturelands and upland woodland areas, along with wetland forests and isolated wetland depressions.

Land drainage activities, begun in southwest Florida with the diversion and channelization of the Caloosahatchee River, accelerated in the Golden Gate Estates area during the 1920 to 1950 period. The resulting hydrologic effects of this canal system are severe over-drainage of the area and large point source freshwater discharges to the estuarine systems downstream. Adverse changes to vegetative communities have also been noted. It is estimated that the Golden Gate and Faka Union Canal systems in the vicinity of the East Naples Mine have increased drainage by 16 times faster than historic conditions, lowered water tables by two to four feet, and have reduced the hydroperiod by 2 to 4 months, resulting in a dramatic increase in forest fires and annual runoff (Gore, 1988). Most of this drainage is discharged into the waters of Rookery Bay and

Faka Union Bay estuary as a point source flow.¹

The subject property is located approximately four miles east of State Road 951, two miles north of Interstate 75, within an area known as North Belle Meade. The large Golden Gate Estates drainage canals are within 1.5 miles to the north (Golden Gate Main Canal and Connector Canal), extending in a westerly direction for 2.5 miles before turning south, while the Miller Canal is located to the east. Also, the Interstate 75 drainage canal is located two miles to the south.

The surrounding landscape has been divided into a rectangular grid of primary canals, roads and feeder ditches that are part of the Golden Gate Estates. The Golden Gate Estates began in the early 1960's when private interests planned to develop a 173-square-mile (111,000-acre) residential subdivision.

Due to long term drainage influences of the Golden Gate canal drainage system, this entire area has suffered from surface hydrology reduction, which in turn has impacted all of the wetlands. The once large cypress flow-ways have become isolated and dehydrated, with a dominance of upland vegetation encroaching in all but a few isolated depressions. Extensive melaleuca and Brazilian pepper (*Schinus terebinthifolius*) have invaded much of the historic cypress areas, following several severe wildfires that killed almost all of the cypress trees. Cabbage palm (*Sabal palmetto*) and fox grape (*Vitex spp.*) are becoming a dominant plant community. Wetland communities have been altered from once having 75 to 85 percent overall coverage, consisting of large cypress forested flow-ways, to now having greatly reduced coverage, frequently consisting of isolated depressions.

Portions of the property were cleared of underbrush, melaleuca, and trees less than four inches in diameter, via the use of a hydro-axe, due to significant impacts related to wildfires and the melaleuca invasion. Within Section 21, old stumps and fallen logs were collected in large wood debris piles to simplify future maintenance for cattle grazing. Much of the proposed mining area within Section 21 has been converted to pasture and predominantly herbaceous wetlands. Most of the open rangeland has been annually maintained by bush-hogging to reduce melaleuca and shrub re-growth, and to improve cattle grazing.

1

Gore, R.H. 1988. Natural resources management in the coastal, inland, and upland zones of Collier County: summary of data analyses and program recommendations. Technical Report No. 88-1. Natural Resources Management Department, Collier County, Florida

Forested areas are more extensive in the eastern portion of Section 21. The primary overall canopy vegetation consists of cabbage palms, slash pines (*Pinus eliottii*), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), and cypress (*Taxodium distichum*). The midstory vegetation is dominated by lantana (*Lantana sp.*), melaleuca, beautyberry (*Callicarpa americana*), Brazilian pepper, and wax myrtle (*Morella cerifera*, syn. *Myrica cerifera*), with lantana being the most dominant. The groundcover is dominated by various native and exotics grasses and forbs.

Non-forested wetlands consists of seasonal ponds and marshes with most of the cypress trees burned, dead, and fallen, with scattered remnant clusters of buttonbush (*Cephalanthus occidentalis*), swamp dogwood (*Cornus amomum*), popash (*Fraxinus caroliniana*), and willow (*Salix sp.*).

In summary, a large portion of the site identified for mining has been cleared for cattle grazing and the vegetative communities that historically were wetland have lost the required annual surface water hydrology. With the exception of a few deeper depressions, the wetlands have revegetated with transitional wetland species, which were already established and grow under less hydric conditions, and opportunistic upland species, which typically move into stressed or altered habitats. Upland species will not invade into viable wetland habitats unless the natural hydrology has been removed. It is evident that facultative and upland species such as cabbage palms, lantana, beautyberry, bahia grass and grape vines are becoming dominant species in both the uplands and the historic wetlands, which clearly demonstrate the effects of long-term drainage.

The applicant received a formal jurisdictional determination from the Department on June 8, 2009, File No. 271311-001. The new excavation will result in adverse impacts to 60.29 acres of isolated wetlands and 0.64 of an acre of other surface waters. Dredging and filling at twenty-five locations will impact 6.66 acres of cypress forest (*Taxodium distichum*) with melaleuca and Brazilian pepper (*Schinus terebinthefolius*), 48.27 acres of herbaceous wetlands and wet pastures, 1.8 acres of wetland mixed forest, 2.26 acres of cabbage palm (*Serenoa repens*), 0.69 of an acre of hydric pine (*Pinus serotina*), and 0.61 of an acre of willows (*Salix sp.*).

It is expected that the mine will be accessed from the south, through a future haul road that will run just north of Interstate 75. This future access road received a binding jurisdictional determination from the Department on February 6, 2012, File No. 271311-002. It is expected that an application for construction of this road will be provided to the Department at a later date.

As mitigation for the adverse wetland impacts under this permit, the applicant proposes to vegetatively enhance 371.23 acres (261.85 acres wetlands, 109.11 acres uplands, 0.27 of an acre other surface waters) and protect these lands under a conservation easement. The mitigation lands are located in Section 27, in an area designated by the Collier County Comprehensive Plan as "Sending Lands," whereby Transfers of Development Rights (TDR) allow development rights to be relocated to "Receiving lands," such as the mine. It is expected other Sending Lands in the vicinity of the mitigation lands will also be largely protected by the County, or preserved as mitigation for other activities within the Receiving Lands. Access to the mitigation property will be provided by an access easement to the Department. An additional access easement (7.17 acres) partly traverses the mitigation lands to provide access for two out-parcels.

The project site has moderate potential for Florida panther (*Puma concolor coryi*) habitat, although this value is diminishing as the surrounding lands have been subdivided and developed into 10-acre mini-ranchettes, within a matrix of roads and canals. Movement of panthers into the area from the south is also restricted by Alligator Alley (I-75).

At the completion of mining activities within the mining phase, the resulting land forms will be reclaimed in accordance with Chapter 62C-36, F.A.C. The resulting lake will feature a sloped (4:1) (horizontal:vertical) shoreline which will provide habitat (26.41 acres) for fish and wading birds. The wetland shorelines are not considered mitigation for the wetland impacts under this permit.

IV. BASIS FOR ISSUANCE

The applicant has provided reasonable assurance that the construction, alteration, operation, maintenance, removal or abandonment of the surface water management system will not cause adverse flooding to on-site or off-site property. Water will not be used in any on-site processing. Berms around the operating areas will contain a 100-year, 72-hour storm. There are no flow-ways crossing the mining operations areas that can be blocked by the berms. The project is not expected to cause adverse impacts to existing surface water storage and conveyance capabilities. No adverse secondary impacts to water resources are expected. There is no special basin or geographic area criteria applicable to this area. The project will not involve Works of the District.

The project is not expected to adversely affect the quality of receiving waters such that the water quality standards set forth in Chapters 62-3, 62-4, 62-302, 62-520, 62-522, and 62-550, F.A.C., including any antidegradation provisions of Sections 62-4.242 (1)(a) and (b),

Appendix D.8

The Florida Rock Industries East Naples Mine

Appendix D.8

The Florida Rock Industries East Naples Mine



Collier Co. Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Sec-Twn-Rng Mine Acres	Authorized Excavation	Remaining Pre-extraction	Remaining Post-extraction	
Florida Rock Industries East Naples Mine (4)	10/1/12	258805-001	345	257	72	100% 29,853,120	0.7	20,897,184	16,717,747

Note 8: Florida Rock East Naples Mine (ERP 258805-001); total project area @ 345 ac., mined area @ 257 ac.. 2015 remaining area @ 257- ac. (est. 29,853,120 cyd. excavation authorized); authorized excavation and mine depth as per ERP Activity Description; 0.7 overburden adjustment coefficient based on regional average.

Florida Rock Industries East Naples Mine _ Collier Co. (Not Reported Waldrop 09/16)

	<u>Project Area</u>	<u>Mine Acres</u>
Site Area	345	257

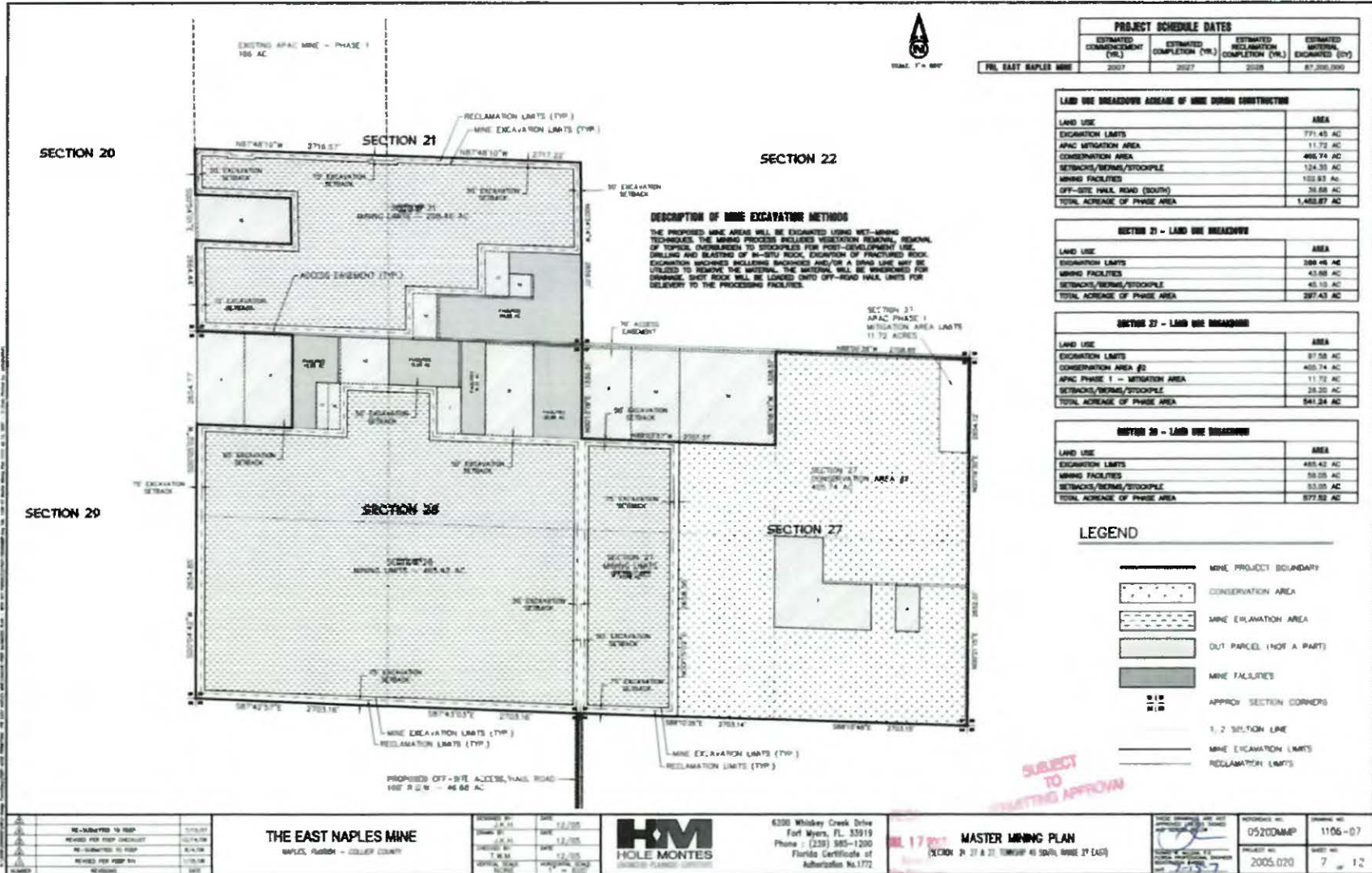
C.Yd. of Excavation Authorized 29,853,120

Regulatory Mine Depth 72

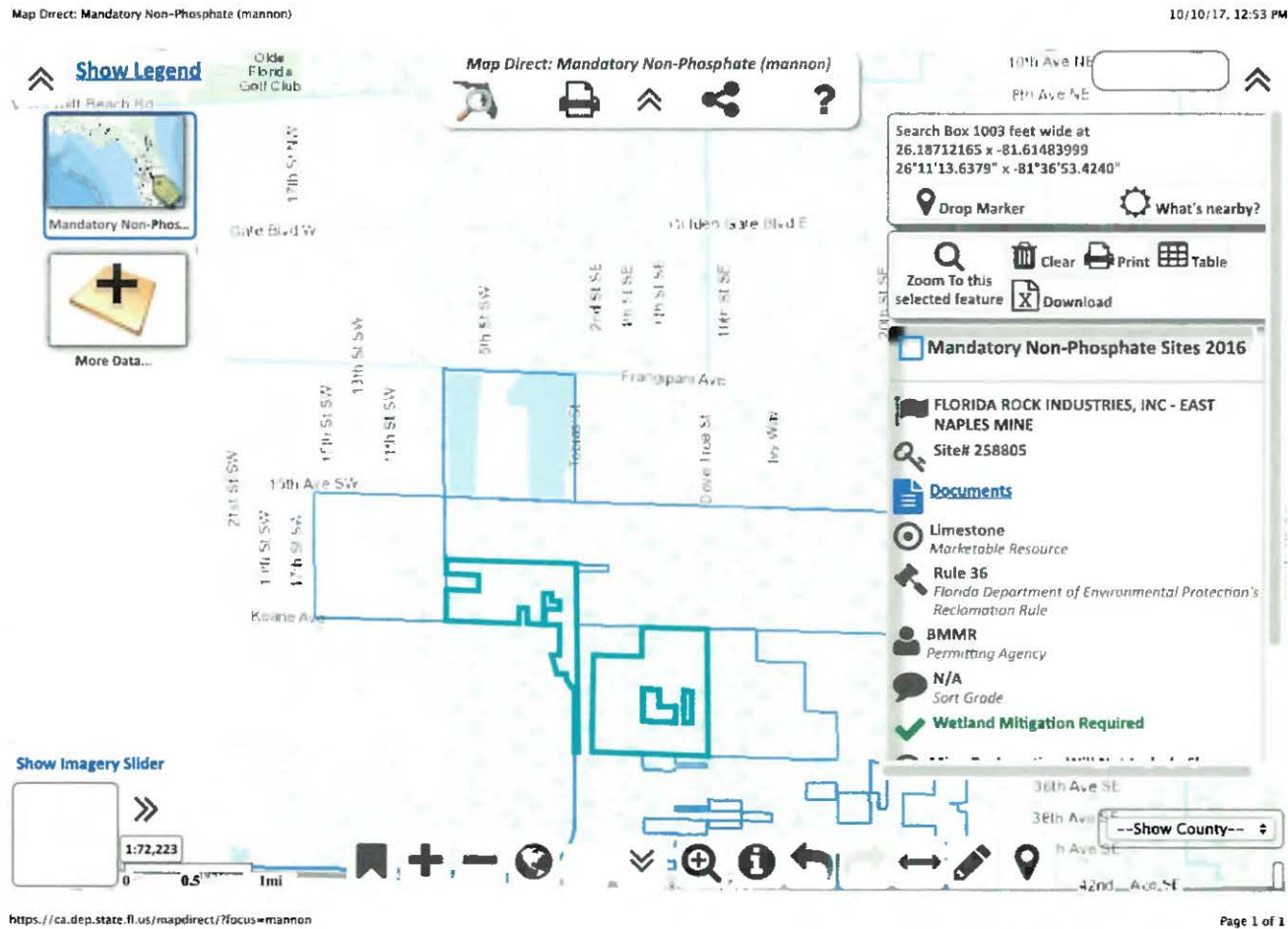
Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.75	
Corrected Limerock Remaining (Pre-excavation)	20,897,184	C.Yd.
Corrected Limerock Remaining (Post-excavation)	16,717,747	C.Yd.

The Florida Rock Industries East Naples Mine Plan



The Florida Rock Industries East Naples Mine FDEP Site#258805



Additional Collier Mines	Year Permitted	ERP Permit #	Project Area	Mined Area	Mine Depth	% Remaining
Florida Rock Industries East Naples Mine	2013		716.36	257.36	72-ft	100%

Existing Phase One 166 ac.

Total New Phase Site Area	345
Excavation Limits	257
Ave. Depth	72
Total Lake Acres	257
Total Lake Excavation Sq.Ft.	806,034,240
Total Lake Excavation Volume	29,853,120
Total Est. Cyd. Material Gross	29,853,120
Est. Cyd. Material Minus Overburden	20,897,184
Est. Cyd. Material Minus Loss/Compact.	16,717,747



Florida Department of Environmental Protection

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DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF FLORIDA

In the Matter of an
Application for Permit/Water Quality Certification, by:

APPLICANT:

Florida Rock Industries, Inc.
155 East 21st Street
Jacksonville, Florida 32206

PROJECT NAME:

East Naples Mine
File No. 258805-001
County: Collier

AGENT:

Frank Joseph Feeney, P.E.
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950 Encore Way
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The post-reclamation land cover types will be pasture, herbaceous wetlands and lake. All final shorelines subject to the reclamation requirements of Chapter 62C-36, F.A.C., will be constructed with a 4:1 (horizontal:vertical) slope to ten feet below the average water table, and revegetated with native wetlands plants. The shoreline wetlands will

not be considered as wetland mitigation. The estimated life of the mine is 20 years. The construction phase of this permit expires in 20 years.

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III. BACKGROUND

On December 14, 2005, an application for a permit was submitted to allow the establishment of a surface water management system at a new limestone mine in Collier County. The project area was inspected on February 7, 2002, and April 17, 2004. The excavation area (230.95 acres) consists of most of the south half of Section 21. This property is located directly to the south of the East Naples Land Company's East Naples Mine. The majority of the habitats are pasturelands and upland woodland areas, along with wetland forests and isolated wetland depressions.

Land drainage activities, begun in southwest Florida with the diversion and channelization of the Caloosahatchee River, accelerated in the Golden Gate Estates area during the 1920 to 1950 period. The resulting hydrologic effects of this canal system are severe over-drainage of the area and large point source freshwater discharges to the estuarine systems downstream. Adverse changes to vegetative communities have also been noted. It is estimated that the Golden Gate and Faka Union Canal systems in the vicinity of the East Naples Mine have increased drainage by 16 times faster than historic conditions, lowered water tables by two to four feet, and have reduced the hydroperiod by 2 to 4 months, resulting in a dramatic increase in forest fires and annual runoff (Gore, 1988). Most of this drainage is discharged into the waters of Rookery Bay and

Faka Union Bay estuary as a point source flow.¹

The subject property is located approximately four miles east of State Road 951, two miles north of Interstate 75, within an area known as North Belle Meade. The large Golden Gate Estates drainage canals are within 1.5 miles to the north (Golden Gate Main Canal and Connector Canal), extending in a westerly direction for 2.5 miles before turning south, while the Miller Canal is located to the east. Also, the Interstate 75 drainage canal is located two miles to the south.

The surrounding landscape has been divided into a rectangular grid of primary canals, roads and feeder ditches that are part of the Golden Gate Estates. The Golden Gate Estates began in the early 1960's when private interests planned to develop a 173-square-mile (111,000-acre) residential subdivision.

Due to long term drainage influences of the Golden Gate canal drainage system, this entire area has suffered from surface hydrology reduction, which in turn has impacted all of the wetlands. The once large cypress flow-ways have become isolated and dehydrated, with a dominance of upland vegetation encroaching in all but a few isolated depressions. Extensive melaleuca and Brazilian pepper (*Schinus terebinthifolius*) have invaded much of the historic cypress areas, following several severe wildfires that killed almost all of the cypress trees. Cabbage palm (*Sabal palmetto*) and fox grape (*Vitis spp.*) are becoming a dominant plant community. Wetland communities have been altered from once having 75 to 85 percent overall coverage, consisting of large cypress forested flow-ways, to now having greatly reduced coverage, frequently consisting of isolated depressions.

Portions of the property were cleared of underbrush, melaleuca, and trees less than four inches in diameter, via the use of a hydro-axe, due to significant impacts related to wildfires and the melaleuca invasion. Within Section 21, old stumps and fallen logs were collected in large wood debris piles to simplify future maintenance for cattle grazing. Much of the proposed mining area within Section 21 has been converted to pasture and predominantly herbaceous wetlands. Most of the open rangeland has been annually maintained by bush-hogging to reduce melaleuca and shrub re-growth, and to improve cattle grazing.

1

Gore, R.H. 1988. Natural resources management in the coastal, inland, and upland zones of Collier County: summary of data analyses and program recommendations. Technical Report No. 88-1. Natural Resources Management Department, Collier County, Florida

Forested areas are more extensive in the eastern portion of Section 21. The primary overall canopy vegetation consists of cabbage palms, slash pines (*Pinus eliottii*), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), and cypress (*Taxodium distichum*). The midstory vegetation is dominated by lantana (*Lantana sp.*), melaleuca, beautyberry (*Callicarpa americana*), Brazilian pepper, and wax myrtle (*Morella cerifera*, syn. *Myrica cerifera*), with lantana being the most dominant. The groundcover is dominated by various native and exotics grasses and forbs.

Non-forested wetlands consists of seasonal ponds and marshes with most of the cypress trees burned, dead, and fallen, with scattered remnant clusters of buttonbush (*Cephalanthus occidentalis*), swamp dogwood (*Cornus amomum*), popash (*Fraxinus caroliniana*), and willow (*Salix sp.*).

In summary, a large portion of the site identified for mining has been cleared for cattle grazing and the vegetative communities that historically were wetland have lost the required annual surface water hydrology. With the exception of a few deeper depressions, the wetlands have revegetated with transitional wetland species, which were already established and grow under less hydric conditions, and opportunistic upland species, which typically move into stressed or altered habitats. Upland species will not invade into viable wetland habitats unless the natural hydrology has been removed. It is evident that facultative and upland species such as cabbage palms, lantana, beautyberry, bahia grass and grape vines are becoming dominant species in both the uplands and the historic wetlands, which clearly demonstrate the effects of long-term drainage.

The applicant received a formal jurisdictional determination from the Department on June 8, 2009, File No. 271311-001. The new excavation will result in adverse impacts to 60.29 acres of isolated wetlands and 0.64 of an acre of other surface waters. Dredging and filling at twenty-five locations will impact 6.66 acres of cypress forest (*Taxodium distichum*) with melaleuca and Brazilian pepper (*Schinus terebinthifolius*), 48.27 acres of herbaceous wetlands and wet pastures, 1.8 acres of wetland mixed forest, 2.26 acres of cabbage palm (*Serenoa repens*), 0.69 of an acre of hydric pine (*Pinus serotina*), and 0.61 of an acre of willows (*Salix sp.*).

It is expected that the mine will be accessed from the south, through a future haul road that will run just north of Interstate 75. This future access road received a binding jurisdictional determination from the Department on February 6, 2012, File No. 271311-002. It is expected that an application for construction of this road will be provided to the Department at a later date.

As mitigation for the adverse wetland impacts under this permit, the applicant proposes to vegetatively enhance 371.23 acres (261.85 acres wetlands, 109.11 acres uplands, 0.27 of an acre other surface waters) and protect these lands under a conservation easement. The mitigation lands are located in Section 27, in an area designated by the Collier County Comprehensive Plan as "Sending Lands," whereby Transfers of Development Rights (TDR) allow development rights to be relocated to "Receiving lands," such as the mine. It is expected other Sending Lands in the vicinity of the mitigation lands will also be largely protected by the County, or preserved as mitigation for other activities within the Receiving Lands. Access to the mitigation property will be provided by an access easement to the Department. An additional access easement (7.17 acres) partly traverses the mitigation lands to provide access for two out-parcels.

The project site has moderate potential for Florida panther (*Puma concolor coryi*) habitat, although this value is diminishing as the surrounding lands have been subdivided and developed into 10-acre mini-ranchettes, within a matrix of roads and canals. Movement of panthers into the area from the south is also restricted by Alligator Alley (I-75).

At the completion of mining activities within the mining phase, the resulting land forms will be reclaimed in accordance with Chapter 62C-36, F.A.C. The resulting lake will feature a sloped (4:1) (horizontal:vertical) shoreline which will provide habitat (26.41 acres) for fish and wading birds. The wetland shorelines are not considered mitigation for the wetland impacts under this permit.

IV. BASIS FOR ISSUANCE

The applicant has provided reasonable assurance that the construction, alteration, operation, maintenance, removal or abandonment of the surface water management system will not cause adverse flooding to on-site or off-site property. Water will not be used in any on-site processing. Berms around the operating areas will contain a 100-year, 72-hour storm. There are no flow-ways crossing the mining operations areas that can be blocked by the berms. The project is not expected to cause adverse impacts to existing surface water storage and conveyance capabilities. No adverse secondary impacts to water resources are expected. There is no special basin or geographic area criteria applicable to this area. The project will not involve Works of the District.

The project is not expected to adversely affect the quality of receiving waters such that the water quality standards set forth in Chapters 62-3, 62-4, 62-302, 62-520, 62-522, and 62-550, F.A.C., including any antidegradation provisions of Sections 62-4.242 (1)(a) and (b),

62-4.242(2) and (3), and 62-302.300, F.A.C., will be violated. The applicant also provided reasonable assurance that the secondary impacts from the project, and the intended or reasonable uses of the site, will not cause violations of water quality standards. The mining and the processing of materials does not use chemicals that would violate surface or groundwater quality standards. Within 180 days of permit issuance, the permittee will complete baseline groundwater quality sampling at four well locations. The tested parameters will include pH, specific conductivity, temperature, arsenic, chloride, iron, sulfate, nitrate/nitrite, total dissolved solids (TDS) and background radionuclides (gross alpha and combined radium (radium²²⁶+radium²²⁸)). Thereafter, sampling shall be conducted at the four wells on an annual basis. The project is designed to direct stormwater to onsite pits up to the 100-year, 72-hour storm. Best management practices will be used to control turbidity and sedimentation at avoided wetlands and other surface waters, and immediately adjacent property lines. At the completion of mining, the reclaimed lake will not be connected to offsite wetlands or other surface waters below the 25-year, 24-hour storm. The mine lake is entirely owned by one person and will not be considered waters of the state.

The applicant has provided reasonable assurance that the project, which is located in, on, or over wetlands or other surface waters, will not be contrary to the public interest. The project will not adversely affect the public health, safety, or welfare or the property of others. There will be no adverse effect on navigation, the flow of water, or harmful erosion or shoaling. The intended land use does not specifically identify fishing or recreation uses; however, the creation of a quarry lake and wetland enhancements could provide fishing and recreational benefits. The project is not in an area that will affect marine productivity. There are no known significant historical and archaeological resources within the project area. There will be no unacceptable cumulative impacts upon wetlands and other surface waters.

The project site has moderate potential for Florida panther (*Puma concolor coryi*) habitat. Red-cockaded woodpeckers (*Picoides borealis*) have occasionally been observed on the site, but no nesting cavities have been located on the property. The site is occasionally used by wood storks (*Mycteria americana*) for rest and foraging.

This project is not expected to adversely impact the value of functions provided by wetlands and other surface waters to fish and wildlife and listed species or their habitats. Elimination and reduction of adverse impacts was used during the development of the project. The wetlands to be dredged are highly degraded as a result of historic alterations of hydrology and the infestation by exotic plants, and provide limited benefits to wetland dependent species. Wetlands were assessed using the Uniform Mitigation Assessment Methodology (UMAM). The mitigation area includes preservation and enhancement of 371.23 acres of uplands, wetlands and other surface

waters. A Department UMAM analysis of this property has concluded that the mitigation is sufficient to offset the net functional loss.

The creation of a large lake on the project site and the enhancement and preservation of habitat within Section 27 are expected to provide compensatory benefits to fish, wildlife and listed species. The creation of littoral zone wetland shorelines around the mine pit and the enhancement of wetlands throughout the mitigation property should provide compensatory foraging benefits to wood storks and other listed species of wading birds. The applicant will provide a conservation easement over the wetland mitigation areas prior to the beginning of mining.

The project provides for the creation of sloped shorelines. Adverse impacts to the maintenance of surface or ground water levels or surface water flows are not expected. The alteration of water levels from pumping is not part of this project. The project provides for the monitoring of water levels in preserved wetlands to ensure that the mining activity has no adverse impacts.

The project will be conducted by an entity with the financial, legal, and administrative capability of ensuring that the activity will be undertaken in accordance with the terms and conditions of the permit. The applicant, Florida Rock Industries, Inc., will be responsible for the operation and maintenance of the proposed surface water management system, the required monitoring of the project, and the submittal of record drawings for the project. The applicant will provide a letter of credit or bond as financial assurance that the proposed wetland mitigation will be completed prior to issuance of the permit. The applicant has provided reasonable assurance that the system will be capable, based on generally accepted engineering and scientific principles, of being performed and of functioning as proposed. The project includes the reclamation of areas mined and disturbed by mining operations.

The proposed permit will have a duration of greater than five years from the date of issuance in order to allow completion of the project. The applicant has provided reasonable assurance that the impacts of the activity, considering its nature, the size of the system, and any required mitigation, can be accurately assessed and offset where appropriate, and the terms of the permit can be met for the duration of the permit. Monitoring of water elevations is part of this project.

Through the above and based on the general/limiting and specific conditions to the permit, the applicant has provided affirmative reasonable assurance that the construction and operation of the activity, considering the direct, secondary and cumulative impacts, will comply with the provisions of Part IV of Chapter 373, F.S., and the rules adopted thereunder, including the Conditions for Issuance or Additional

Conditions for Issuance of an environmental resource permit, pursuant to Part IV of Chapter 373, F.S., Chapters 62-330, and Rules 40E-4.301 and 40E-4.302, F.A.C. The construction and operation of the activity will not result in violations of water quality standards and will not degrade ambient water quality in Outstanding Florida Waters, pursuant to Rule 62-4.242, F.A.C. The applicant has also demonstrated that the construction of the activity, including a consideration of the direct, secondary, and cumulative impacts, is not contrary to the public interest, pursuant to Section 373.414(1)(a), F.S.

IV. PUBLICATION OF NOTICE

The Department has determined that the proposed activity, because of its size, potential effect on the environment or the public, controversial nature, or location, is likely to have a heightened public concern or likelihood of request for administrative proceedings. Therefore, pursuant to Section 373.413(4), F.S., and Rule 62-343.090(2)(k), F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue. The notice is required to be published one time within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to:

Department of Environmental Protection
Bureau of Mining and Minerals Regulation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

The proof of publication shall be provided to the above address within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time shall be grounds for denial of the permit.

V. RIGHTS OF AFFECTED PARTIES

Under this intent to issue, the permit is hereby granted subject to the applicant's compliance with any requirement in this intent to publish notice of this intent in a newspaper of general circulation and to provide proof of such publication in accordance with Section 50.051, F.S. This action is final and effective on the date filed with the Clerk of the Department unless a sufficient petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., as provided below. If a sufficient petition for an administrative hearing is timely filed, this intent to issue

automatically becomes only proposed agency action on the application, subject to the result of the administrative review process. Therefore, on the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. When proof of publication is provided, if required by this intent, and if a sufficient petition is not timely filed, the permit will be issued as a ministerial action. Because an administrative hearing may result in the reversal or substantial modification of this action, the applicant is advised not to commence construction or other activities until the deadlines noted below, for filing a petition for an administrative hearing or request for an extension of time, have expired and until the permit has been executed and delivered. Mediation is not available.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

If a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be permitted only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition for an administrative hearing within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S..

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C. Under Sections 120.569(2)(c) and (d), F.S., a petition for administrative hearing must be dismissed by the agency if the petition does not substantially comply with the above requirements or is untimely filed.

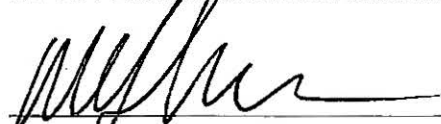
This intent to issue constitutes an order of the Department. Subject to the provisions of Section 120.68(7)(a), F.S., which may require a remand for an administrative hearing,

the applicant has the right to seek judicial review of the order under Section 120.68, F.S., by the filing of a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the order is filed with the Clerk of the Department. The applicant, or any party within the meaning of Section 373.114(1)(a) or Section 373.4275, F.S., may also seek appellate review of the order before the Land and Water Adjudicatory Commission under Section 373.114(1) or Section 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when the order is filed with the Clerk of the Department.

The Department's file on this matter is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Florida Department of Environmental Protection, Bureau of Mining and Minerals Regulation, 2051 East Paul Dirac Drive, Tallahassee, Florida 32310-3760, Telephone: (850) 488-8217.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Mark Thomasson, P.E., Director
Division of Water Resource Management
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760
(850) 488-8217

Copies furnished to:

USACOE, Fort Myers Regulatory Office
DEP, South District SLERP
DEP, South District IW Permitting
Florida Fish and Wildlife Conservation Commission, Tim King
South Florida Water Management District, Collier Co. Service Center

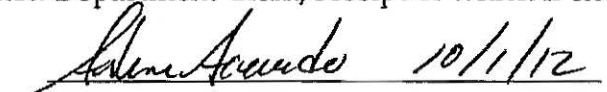
Collier County, Natural Resources Management
Lampl Herbert Consultants, Inc., Gregory M. Hitz, P.G.
Mitigation Marketing, LLC, Lynn M. Zenczak
Florida Wildlife Federation, Nancy Payton
Collier Audubon, Audubon of Florida, Brad Cornell
Audubon of Florida, Eric Draper
Hopping Green & Sams, Susan L. Stephens
Jerry Potter
Sienna Bass

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this Notice of Intent
to Issue,
including all copies, was mailed before the
close of business on Oct. 1st, 2012, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52(7), Florida Statutes,
with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk Date

Prepared by Alan Whitehouse

22 pages attached.

DRAFT

Type of Permit: Environmental Resource, Individual
County: Collier
Department: Mining and Minerals Regulation
Permit/ Authorization No. 258805-001
Applicant: Florida Rock Industries, Inc.
Applicant Address: 155 East 21st Street
Jacksonville, Florida 32206
Agent: Frank J. Feeney
Agent Address: Hole Montes, Inc.
950 Encore Way
Naples, Florida 34110
COE No. None
Chapters (F.S.): Part IV of 373
Chapters (F.A.C.): 62-4, 62-302, 62-330, 62-343
Public Law: 92-500
Sections (F.S.): 373.413 and 373.414
Application Date: December 15, 2005
Name of Project: East Naples Mine
Acres Owned/Leased: 1,568.60
Project Acreage: 716.36 (Excavation and haul road 345.13, Mitigation 371.23)

PROJECT DESCRIPTION:

The project is a permit/water quality certification to establish a surface water management system for a new sand and limestone mine on 1,416.19 acres. The project boundary was subsequently reduced to 716.36 acres on May 3, 2012. The proposed mining will result in the excavation of a 257.36-acre lake (including 26.41 acres of littoral zone shorelines) and the construction of an onsite haul road and processing plant site.

The construction will result in adverse impacts to 60.29 acres of isolated wetlands and 0.64 of an acre of other surface waters previously degraded by hydrological draw-down from a regional network of drainage canals and by an infestation of melaleuca (*Melaleuca quinquenervia*). As mitigation for the adverse impacts to wetlands, the permittee will protect 371.23 acres of natural lands (wetlands 261.85 acres, uplands 109.11 acres, other surface waters 0.27 of an acre) by a conservation easement, and enhance the vegetation therein by controlling nuisance and exotic plants. The mitigation lands are located in an area designated by the Collier County Comprehensive Plan as "Sending Lands," whereby Transfers of Development Rights (TDR) allow development rights to be relocated to "Receiving Lands," such as the mine property.

DRAFT

Florida Rock Industries, Inc.
East Naples Mine
File No. 258805-001
Page 2

The total area served by the mine surface water management system will be 345.13 acres. The maximum depth of mining will be approximately 72 feet below the existing grade which is about 66 feet below the average water table elevation, or five feet above the top of the confining layer, whichever is shallower.

Hydrologic monitoring will be provided within the mitigation area and in the wetlands adjacent to the mining operations. A total of 43 acres of impervious area (mostly facilities and haul roads) will be created by the construction. Stormwater up to the 100-year, 3-day storm will be contained within the surface water management system.

Prior to the initiation of mining activities, the permittee will apply for an Environmental Resource Permit (ERP) for a new mine access road which would allow the material to be transported within the right-of-way of a proposed southern extension of Wilson Boulevard and which will extend southward from the mine and then west, paralleling Interstate 75. This will allow truck traffic to avoid the more densely populated areas to the north. Initially, the extracted resource will be processed on-site using a portable processing plant. As mining progresses, the processing will be transferred to the new plant site located just south of the excavation area.

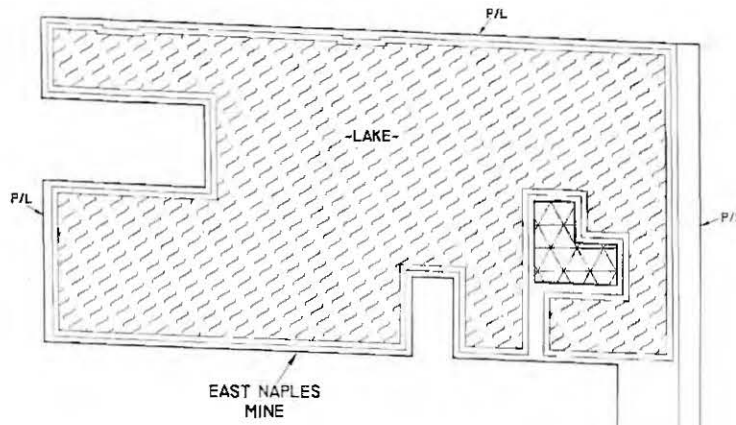
The post-reclamation land cover types will be pasture, herbaceous wetlands and lake. All final shorelines subject to the reclamation requirements of Chapter 62C-36, F.A.C., will be constructed with a 4:1 (horizontal:vertical) slope to ten feet below the average water table, and revegetated with native wetlands plants. The shoreline wetlands will not be considered as wetland mitigation. The estimated life of the mine is 20 years. The construction phase of this permit expires in 20 years.

LOCATION:





This project is located in Sections 21, 27, and 28, Township 49 South, Range 27 East, just south of Golden Gate Estates, and two miles north of Alligator Alley (I-75), Collier County. The affected wetlands are isolated wetlands in the watershed of Corkscrew Swamp, Faka Union Bay and Rookery Bay, West Collier Drainage District, Class III waters.



SCALE: 1" = 1000'



EAST NAPLES MINE

- LEGEND
-  LAKE
 -  CONSERVATION AREAS
 -  MITIGATION AREA FOR OTHER PROJECTS
 -  LAND NOT INCLUDED IN PROJECT AREA

NOTES

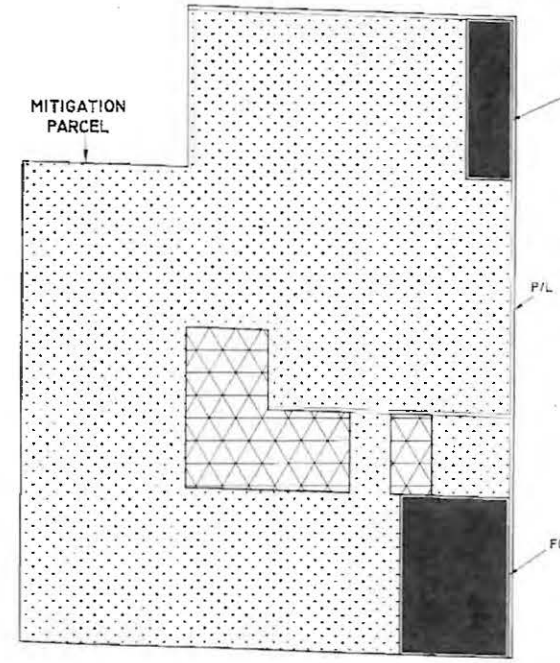
SITE PLAN PER HOLE MONTES AND ASSOCIATES, INC.
DRAWING No. 0502CBSE0.DWG DATED MARCH 28, 2012.

* HAUL ROAD TO BE PERMITTED UNDER SEPARATE ERP APPLICATION.

PLANT SITE

ON-SITE HAUL ROAD

EAST NAPLES MINE HAUL ROAD *



MITIGATION PARCEL

MITIGATION AREA FOR FDEP PERMIT NO. 0200965-001

MITIGATION AREA FOR EAST NAPLES MINE HAUL ROAD *



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REVISIONS	DATE	DRAWN BY	DATE	APPROVED BY	DATE
		D.B.	4/17/12		
		A.D.	4/17/12		
		K.C.P.	4/17/12		

13620 Metropolis Avenue
Suite 200
Fort Myers, Florida 33912
Phone (239) 274-0067
Fax (239) 274-0069



FLORIDA ROCK INDUSTRIES, INC.
EAST NAPLES MINE
MINE PLAN

DRAWING NO.	05PR11310
SHEET NO.	E-2

Appendix E

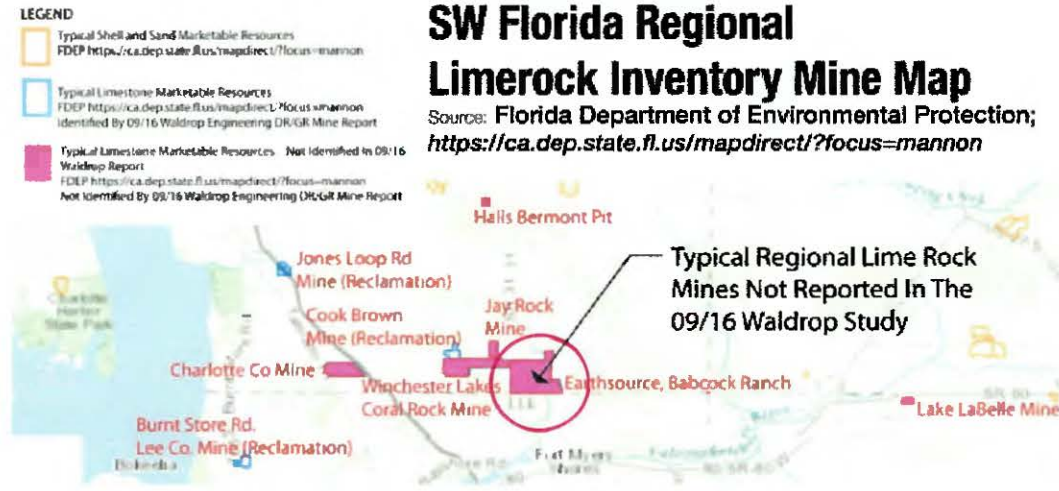
Charlotte Co. Lime Rock Supply and Demand Evaluation

Appendix E.1

The Earthsource Babcock Ranch Mine

Appendix E.1

The Earthsource Babcock Ranch Mine



Stuart 05/18
Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co. Dept. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coef. (6)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (7)
Earthsource Babcock Ranch (1)	07/0611	0184047-007	3471	126	28,000,000	27,004,562	0.7	18,903,193	15,122,555

Note 1: Earthsource/Babcock total project area @ 3471 ac., mined area @ 126 ac.. 2015 remaining extraction @ 27,004,562 cyd. (28,000,000 cyd. excavation authorized); 2012 to 2015 excavation @ 750,000 cyd.; 0.7 overburden adjustment coefficient based on regional average.

Earthsource, Babcock Ranch _ Charlotte Co. (Not Reported Waldrop 09/16)

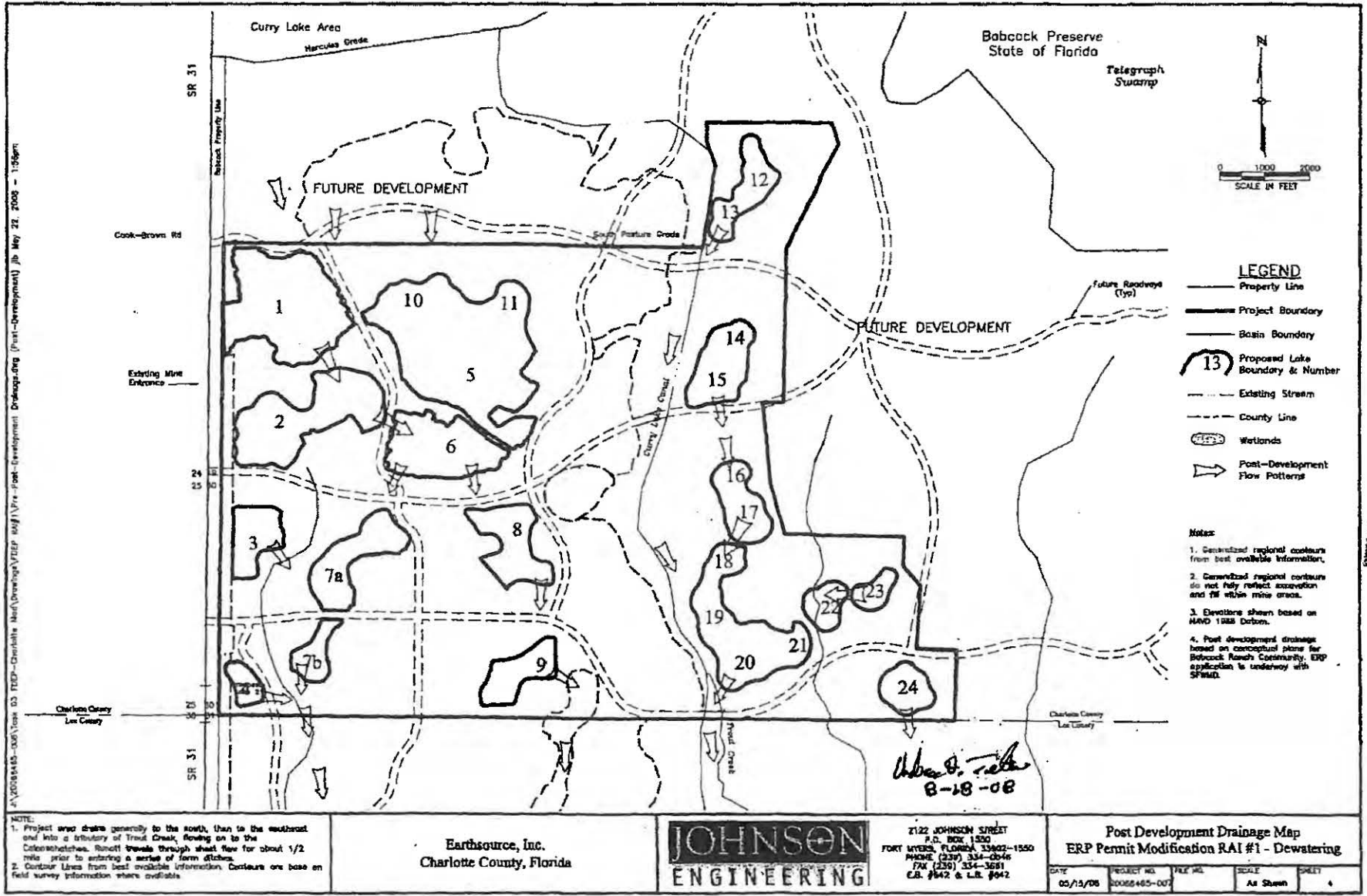
	Project Area	Mine Acres
Site Area	3,471	126

C.Yd. of Excavation Authorized 28,000,000

Regulatory Mine Depth

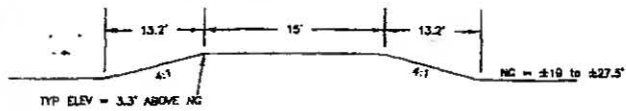
Stuart 09/17

Est. Excavation To-date (2015)	C.Yd.
Overburden Adjustment Coefficient	
Corrected Limerock Remaining (Pre-excavation)	18,903,193 C.Yd.
Corrected Limerock Remaining (Post-excavation)	15,122,555 C.Yd.



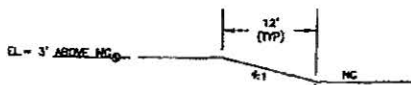
A:\2006\465-007\Task 03 ERP-Charlotte Marc\Drawings\ERP 007\1\Pre-Post-Development Drainage.dwg (Post-Development) jh May 22, 2008 - 1:56pm

PERMIT # U104 U 41 - 0 U 3



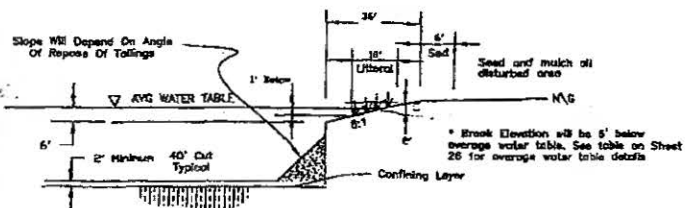
**TYPICAL ACCESS ROAD
SECTION R-R**

N.T.S.



**TYPICAL STORAGE AREA
SECTION S-S**

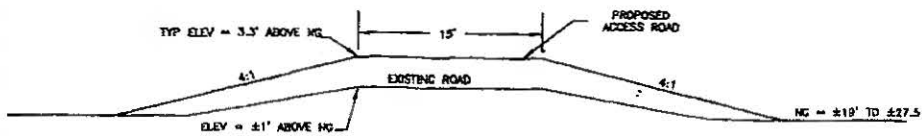
N.T.S.



**RECLAIMED LAKE
TYPICAL SECTION C-C**

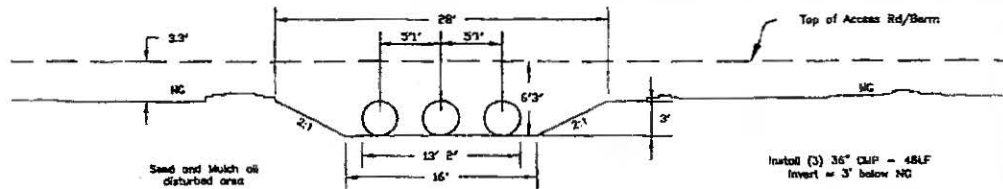
N.T.S.

This section applies to final reclaimed lakes



**TYPICAL ACCESS ROAD
SECTION R3-R3**

SCALE: 1" = 10'

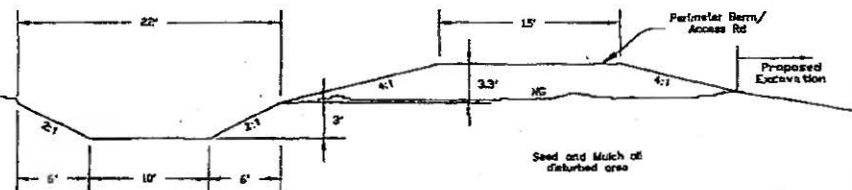


**ACCESS RD CROSSING AT DIVERSION SCALE
SECTION T-T**

SCALE: 1" = 10'

Install (3) 36" CMP - 48LF
Invert = 3' below NG

Note: See sheet 14 for location

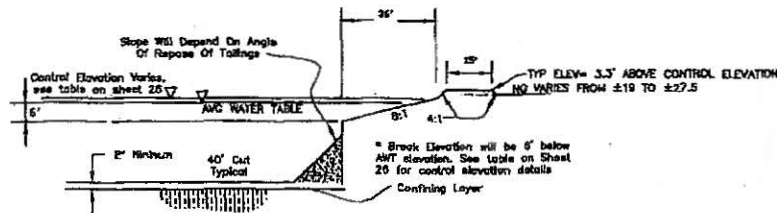


DIVERSION SCALE SECTION N-N

SCALE: 1" = 10'

Seed and Mulch of disturbed area

Note: See sheet 14 for scale location



**TYPICAL LAKE WITH PERIMETER BERM
SECTION L-L**

N.T.S.

This section applies to operational phase.

Edward D. With
6-28-07

J:\2006\455-04\ERP_S&T\Vol_1_S&T\Details & Typical\Typical (Details & Typical) 20 Jun 28, 2007 - 4:48pm

Revised 03/20/07 to change Control Elevation to AVG WATER TABLE.
Added sections for diversion scale.
Revised 06/28/07 to change reference sheet to "sheet 26"

Earthsource Inc.
Charlotte County, Florida

**JOHNSON
ENGINEERING**

2156 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE (239) 334-0046
FAX (239) 334-3681
E.B. #042 & L.B. #042

Details and Typical Sections
ERP Application

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
05/23/07	20060455-04	00-00-00	As Shown	25

PERMIT # 04040007-003

The Earthsource Babcock Ranch Mine FDEP Permit #0184047



Florida Department of Environmental Protection

Bureau of Mine Reclamation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

SENT VIA FEDEX

August 31, 2009

 FILE COPY

Charles W. DeSanti,
Managing Member
Earthsources, Inc.
17837 Murdock Circle
Port Charlotte, Florida 33948

Dear Mr. Desanti:

RE: File No. 0184047-003, Charlotte County
Earthsources, Inc. - Earthsources Mine, Expansion

Enclosed is Individual Environmental Resource Permit, Permit No. 0184047-003 issued pursuant to Part IV of Chapter 373, Florida Statutes, and Title 62, Florida Administrative Code. Any party to the Order (Permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Please review this document carefully to ensure compliance with both the general and specific conditions contained herein. If you have any questions about this document, please contact me at (850) 488-8217 or via email at gary.hardie@dep.state.fl.us.

Sincerely,



Gary J. Hardie
Environmental Specialist

cc: USACOE, Jacksonville
DEP, South District, Environmental Resource Permitting
DEP, South District, Industrial Wastewater Section
South Florida Water Management District, Ed Cronyn
Florida Fish & Wildlife Conservation Commission, Lee Taylor
Florida Fish & Wildlife Conservation Commission, Tim King
Charlotte County Growth Management, Jeff Ruggieri

ENVIRONMENTAL RESOURCE PERMIT

PERMITTEE/AUTHORIZED ENTITY:

Earthsource, Incorporated
17837 Murdock Circle
Port Charlotte, Florida 33948

Permit/ Authorization No. 0184047-003

Date of Issue: August 31, 2009

Expiration Date of Construction Phase:
August 31, 2029

County: Charlotte

Project: Earthsource Mine, Expansion
Dewatering

AGENT:

None

This permit is issued under the authority of Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). The activity is not exempt from the requirement to obtain an Environmental Resource Permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity. This permit also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Management Act. This permit also constitutes certification of compliance with water quality standards under Section 404 of the Clean Water Act, 33 U.S.C. 1344.

A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

The above-named permittee is hereby authorized to construct the work shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the attached General Conditions and Specific Conditions, which are a binding part of this permit.** You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities. Failure to comply with

all drawings and conditions shall constitute grounds for revocation of the permit and appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and with the general and specific conditions of this permit/certification, as specifically described below.

ACTIVITY DESCRIPTION

The applicant, Earthsource, Inc., applied on March 19, 2008, to the Department of Environmental Protection for a permit/water quality certification to modify a surface water management system for an operating limestone mine. This modification includes the addition of dewatering to extract resource in dry conditions. For dewatering activities, hydraulic recharge trenches will be constructed between the berm and adjacent wetlands. Additional hydrologic monitoring within the wetlands will be required during dewatering activities. A silt fence will be installed around these wetlands during earth-disturbing activities.

The proposed modification does not change the authorized maximum extraction depth, the extent of the areas to be mined, the containment capacity of the system, the areas of wetlands or other surface waters to be impacted, wetland mitigation, water quality monitoring or other activities authorized by Permit No. 0184047-002. Permit No. 0184047-003 will replace and supersede Permit No. 0184047-002.

The previous permit included an expansion with the addition of 1,563 acres of pine flatwoods, pastures and marshlands within a total 3,471-acre project area. Previously approved mining-related disturbances include 0.3 of an acre of wetlands and 0.65 of an acre of surface waters in the Trout Creek Drainage of the Caloosahatchee River. As mitigation for these previous impacts, the permittee will create 10.47 acres of herbaceous littoral zone wetlands around the reclaimed mine pits. Mining within the expansion area will excavate an additional 4.71 acres of wetland prairie. Mitigation will be provided through multiple enhancement and restoration activities within a 75.47-acre area that was recently acquired by the state from the parent company, the Babcock Florida Company. The restoration and enhancement activities within the mitigation area [the Babcock Ranch Overlay District (BROD) Mitigation Park] are included under a separate South Florida Water Management District (SFWMD) permit, File No. 08-00119-P. This modification will not affect these aspects of the previous permit.

All other mining activities will be limited to upland areas only. Surface waters occurring on site are limited to the active mining pits. Approximately 12 percent of the

mine was disturbed prior to 1989, and therefore is not subject to the mandatory reclamation requirements of the state of Florida. The on-going mining will result in 17 lakes totaling 925 acres. And, the average lake depth will be 40 feet.

The mine permit is consistent with the long-term master planning that is ongoing for the surrounding future development of the Babcock Ranch Community. A separate environmental resource permit application for the residential development is currently under review by the SFWMD (Application No. 070330-5).

The mine is designed to recycle and store all dewatering, process wastewater and runoff from rainfall up to a 25-year, 72-hour storm. The estimated life of the mine is 20 years. The post-reclamation land types include lakes, wetlands, grasslands, and planted forest, until permits for the residential development are approved.

ACTIVITY LOCATION

The project is located just east of State Road 31, immediately north of the Lee County line in Charlotte County, Sections 21 and 28 through 34, Township 42 South, Range 26 East.

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by the Department staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within seven days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is

completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in rule 40E-4.091, F.A.C., unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. The permittee shall submit construction status reports to the Department on an annual basis utilizing an Annual Status Report Form. Status Report Forms shall be submitted the following January 31 of each year.
5. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the supplied Environmental Resource Permit Construction Completion/Construction Certification Form No. 62-343.900(5). The statement of completion and certification shall be based on on-site observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the Department that the system is ready for inspection. Additionally, if deviation from the approved drawings is discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawing. All surveyed dimensions and elevations shall be certified by a registered surveyor.
6. The operation phase of this permit shall not become effective: until: the permittee has complied with the requirements of General Condition No. 5 above, has submitted a Request for Conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 62-343.900(7); the Department determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the Department in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District - August 1995, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the Department, the permittee shall initiate

transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to rule 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

7. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.
8. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the Department along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District - August 1995, prior to lot or unit sales or prior to the completion of the system, whichever occurs first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State where appropriate. For those systems which are proposed to be maintained by the county or municipal entities, final operation and maintenance documents must be received by the Department when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.
9. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the Department in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.
10. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C.

11. The permittee is hereby advised that section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
12. The permittee must obtain a water use permit prior to construction dewatering, unless the work qualifies for a general permit, pursuant to rule 40E-20.302(4), F.A.C., also known as the "No Notice" rule.
13. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.
14. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under subsection 373.421(2), F.S., provides otherwise.
15. The permittee shall notify the Department in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of rules 40E-1.6105 and 40E-1.6107, F.A.C. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.
16. Upon reasonable notice to the permittee, Department authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.
17. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the Department.
18. The permittee shall immediately notify the Department in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIFIC CONDITIONS

1. **Superseded Permits.** This permit supersedes and replaces the individual environmental resource Permit No. 0184047-002, which was issued by the Department on October 19, 2007. The terms and conditions of the new permit incorporate appropriate terms and conditions of the existing permit and thereby terminate the effectiveness of the existing permit.
2. **State Lands.** The permittee is hereby advised that Florida law states: "No person shall commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund or the Department of Environmental Protection under Chapter 253, F.S., until such person has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use." Pursuant to Chapter 18-14, F.A.C., if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to \$10,000 per offense.
3. **Listed Species.** Permits shall be obtained from the Florida Fish and Wildlife Conservation Commission, prior to the "taking" of any listed animal species. Listed animal species are those animal species listed in rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C. Taking means: taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any listed species, their nests or eggs, by any means, whether or not such actions result in obtaining possession.
4. **Good Cause Rule.** The permittee is hereby advised that rule 62-343.100(1)(c), F.A.C., provides that for good cause and after notice to the permittee, the Department may require the permittee to conform to new or additional conditions to this permit. Circumstances that constitute "good cause" shall include any of the situations listed in the referenced rule.

Construction

5. **Drawing Conflicts.** The project shall be conducted in compliance with the permit drawings, plans, figures, and narratives which identify location, schedule, notification, and reclamation and mitigation activities. If the approved permit drawings conflict with the specific conditions, then the specific conditions shall prevail.

Appendix E.2

The Coral Rock Mine

Appendix E.2

The Coral Rock Mine



Stuart 05/18
Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co. Dept. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coef. (e)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (f)
Coral Rock Mine (2)	1/13/09	182147-002	1015	267	14,900,000	14,900,000	0.7	10,430,000	8,344,300

Note 2: Coral Rock Mine total project area @ 1015 ac., mined area @ 267 ac.. 2015 remaining extraction @ 14,900,000 cyd. (14,900,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average.

Winchester Lakes Coral Rock Mine _ Charlotte Co. (Not Reported Waldrop 09/16)

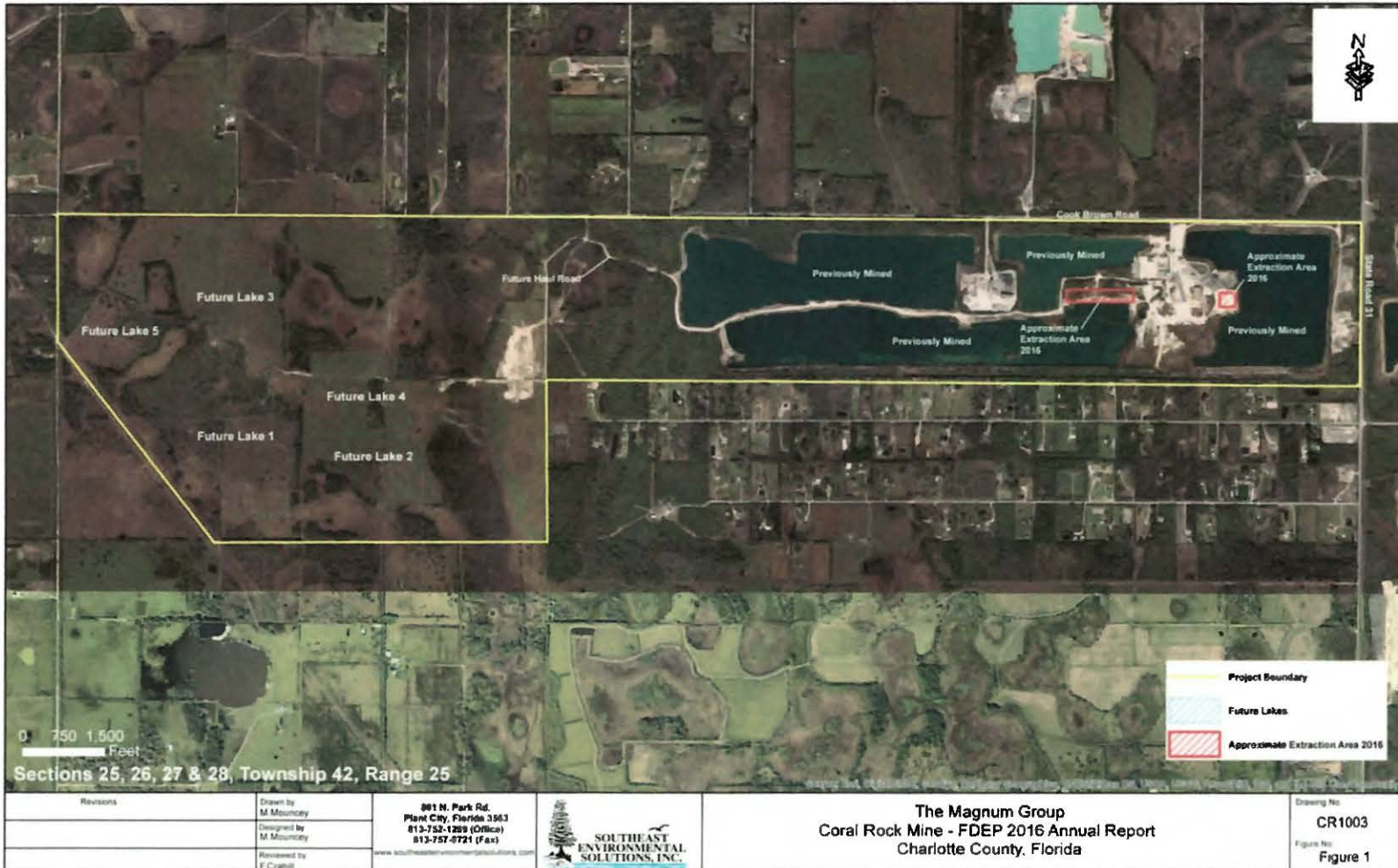
Site Area	Project Area	Mine Acres
	Project	Mined
	1015	267
C.Yd. of Excavation Authorized	14,900,000	

Regulatory Mine Depth

Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.70	
Corrected Limerock Remaining (Pre-excavation)	10,430,000	C.Yd.
Corrected Limerock Remaining (Post-excavation)	8,344,000	C.Yd.

The Coral Rock Mine Plan



Revisions	Drawn by M. Mountray
	Designed by M. Mountray
	Reviewed by E. Crabb

801 N. Park Rd.
Plant City, Florida 3563
813-752-1229 (Office)
813-757-0721 (Fax)



The Magnum Group
Coral Rock Mine - FDEP 2016 Annual Report
Charlotte County, Florida

Drawing No.
CR1003
Figure No.
Figure 1

The Coral Rock Mine FDEP Permit # 182147



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road MS 3577
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

February 14, 2017

The Magnum Group
c/o Lew Smyrnios
13391 State Road 31
Punta Gorda, FL 33982
Email: LSmyrnios@MagnumMaterials.net

**RE: Coral Rock Mine, 2015 and 2016 Annual Reports Deemed Complete
File # MMR_182147-005, Charlotte County**

Dear Mr. Smyrnios:

The 2016 Annual Report for Coral Rock Mine was received by the Florida Department of Environmental Protection (Department) on January 31, 2017. In accordance with Chapter 120, Florida Statutes, this letter serves as notification that the 2016 Annual Report is hereby deemed complete by the Department. The 2016 Annual Report also addressed the outstanding items in the 2015 Annual Report. The 2015 Annual Report is also hereby deemed complete by the Department. Noting that Coral Rock Mine is in the process of undergoing a permit transfer and updating the mitigation plan. The Hydrological Monitoring must be reported to and reviewed by the Department before excavation begins in the expansion area. The permit should also be transferred to the current mine operators before excavation begins in the expansion area.

If you have any questions or comments, please contact me at (850) 245-7569 or Laura.Kellam@dep.sate.fl.us.

Sincerely,

A handwritten signature in cursive script that reads "Laura Kellam".

Laura Kellam
Environmental Specialist
Mining and Mitigation Program
Florida Department of Environmental Protection

cc (email): Matt Mouncey, Southeast Environmental Solutions, Inc., mmouncey@sesi.cc



**SOUTHEAST
ENVIRONMENTAL
SOLUTIONS, INC.**

January 25, 2017

Florida Department of Environmental Protection
Mining and Mitigation Program
2600 Blair Stone Road, MS 3577
Tallahassee, FL 32399

Attention: Laura Kellam, Environmental Specialist III

Reference: 2016 Annual Status Report
ERP #182147-005
The Magnum Group – Coral Rock Mine
Charlotte County, Florida

Dear Ms. Kellam:

On behalf of The Magnum Group and in compliance with the Specific Conditions found in FDEP Permit No. 182147-005, issued October 8, 2009, we provide the attached Annual Report, form and data.

This report represents a true and accurate description of the activities conducted during the period covered by this report.

The project is located at the southeast corner of Cook Brown Road and State Road 31 in Sections 25, 26, 27 and 28, Township 42 South, Range 25 East in Charlotte County, Florida. The Coral Rock Mine consists of 1,743.02 acres in a two-mile long rectangular shaped property running from east to west. The mining operation includes stripping and stockpiling of overburden materials, prior to excavation of sand, rock, and limestone. The materials are hauled from the site by way of an internal haul road to Cook Brown Road and ultimately north or south along State Road 31. The material processing infrastructure includes crushing, sorting, washing and stockpiling by product specification.

At the present time, the mine site is made up of two portions. The original eastern portion consists of 869.6 acres. Mining began in the eastern portion in 1981 and has been largely disturbed or mined out, creating four mine lakes. The +/- 873-acre Coral Rock expansion area was approved in 2008 and makes up the western portion of mine site. Due to the economic downturn and slow economic and housing recovery of previous years, the approved expansion area realized minimal activity and has not been developed for mining as of the end of this reporting period.

The Magnum Group - Coral Rock Mine
ERP #182147-005 Annual Report
January 25, 2017

This reporting period will encompass the activities from January 1, 2016 through December 31, 2016.

During the period from January 1, 2016 through December 31, 2016, +/- 82,084 tons of material was mined from the existing "Three Lakes" mining area that makes up the eastern portion of site. No additional material is estimated to be excavated during the 2017 calendar year from the existing "Three Lakes" area that makes up the eastern portion of mine site. No reclamation was completed in 2016.

As economic conditions continue to improve and market demand increases, the Coral Rock expansion area that makes up the western portion of mine site will begin to be developed. The development will begin with upgrades to the haul roads that provide the necessary access to the western expansion portion of the mine operation. The only activities that have occurred in the expansion area to date include excavation of a small test pit, maintenance of dirt access roads and staging of equipment for a future processing plant.


Due to the delay of mine development of the +/- 873-acre Coral Rock expansion area and since mining activity has yet take place in these parcels, selective permit conditions have no data to be reported. These activities will be completed 3 to 6 months prior to excavation in the new mining area. This applies to the following specific conditions:

- *ERP #182147-005 Specific Condition 24 Reporting*
- *ERP #182147-005 Specific Condition 28 Turbidity Monitoring*
- *ERP #182147-005 Specific Condition 31b Stormwater System Inspection Reports*
- *ERP #182147-005 Specific Condition 33 Additional Water Quality Screening*
- *ERP #182147-005 Specific Condition 34 Wetland Hydrological Monitoring*
- *ERP #182147-005 Specific Condition 39 Mitigation Enhancement*
- *ERP #182147-005 Specific Condition 40 Additional Mitigation Enhancement.*

The access easement and fire plan were submitted to FDEP in 2011. The protected on-site wetlands and flow ways are protected under a previously recorded conservation easement.

Should you have any questions or comments once you have had the opportunity to review these items, please do not hesitate to contact us.

Sincerely,


Matt Mouncey, LEP
Vice President

Electronic cc: Lew Smyrnios, Magnum Group

Form # 62-343.900(4)
Form Title: Annual Status Report
Effective Date: October 3, 1995

Environmental Resource Permit Annual Status Report

Florida Department of Environmental Protection

Mining Program
2600 Blair Stone Road, MS 3577
Tallahassee, FL 32399

PERMIT NUMBER: 182147-005

COUNTY: Charlotte

PROJECT NAME: Coral Rock Mine

PHASE: Not applicable

The following activity has occurred at the above referenced project during the past year, between January 01 and December 31, 2016.

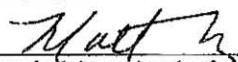
<u>Permit Condition/Activity</u>	<u>% of Completion</u>	<u>Date of Anticipated Completion</u>	<u>Date of Completion</u>
<u>See attached letter/narrative</u>	45%	2028	

(Use Additional Sheets As Necessary)

Benchmark Description (one per major control structure): _____

Matt Mouncey, Vice President
Print Name

1-813-752-1289
Phone


Permittee's or Authorized Agent's Signature

Southeast Environmental Solutions, Inc.
Title and Company

January 25, 2017
Date

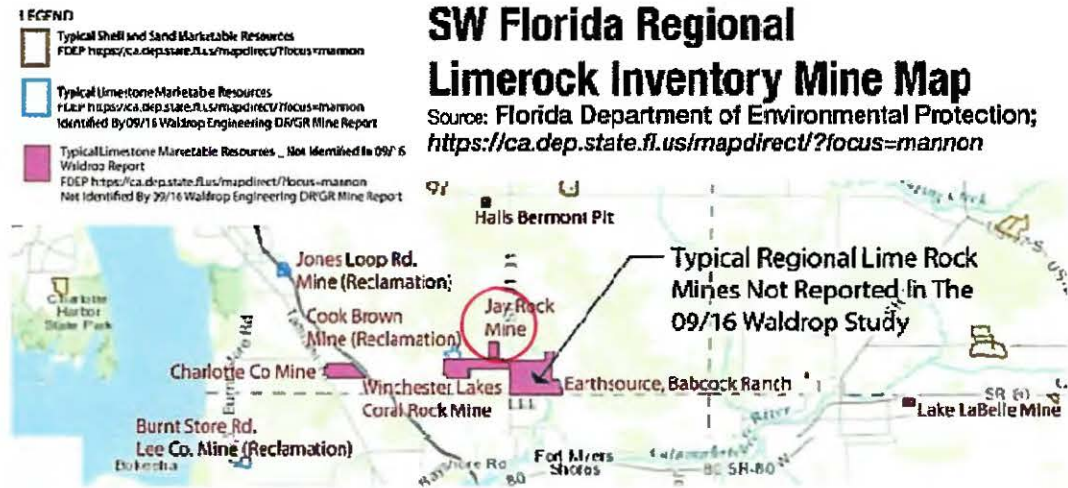
This form shall be submitted to the above referenced Department Office during June of each year for activities whose duration of construction exceeds one year.

Appendix E.3

The Jay Rock Mine

Appendix E.3

The Jay Rock Mine



Stuart 05/18
Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co. Dep. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coef. (6)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (7)
Jay Rock Mine (3)	11/21/05	1950046-006	320	154	12,500,000	10,904,637	0.7	7,633,246	5,106,597

Note 3: Jay Rock Mine total project area @ 320 ac., mined area @ 194 ac.. 2015 remaining extraction @ 10,904,637 cyd. (12,600,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average and 2012 to 2015 3 year excavation of 150,000 cyd. per year.

Ajax Paving Industries Jay Rock Mine _ Charlotte Co. (Not Reported Waldrop 09/16)

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	320	194

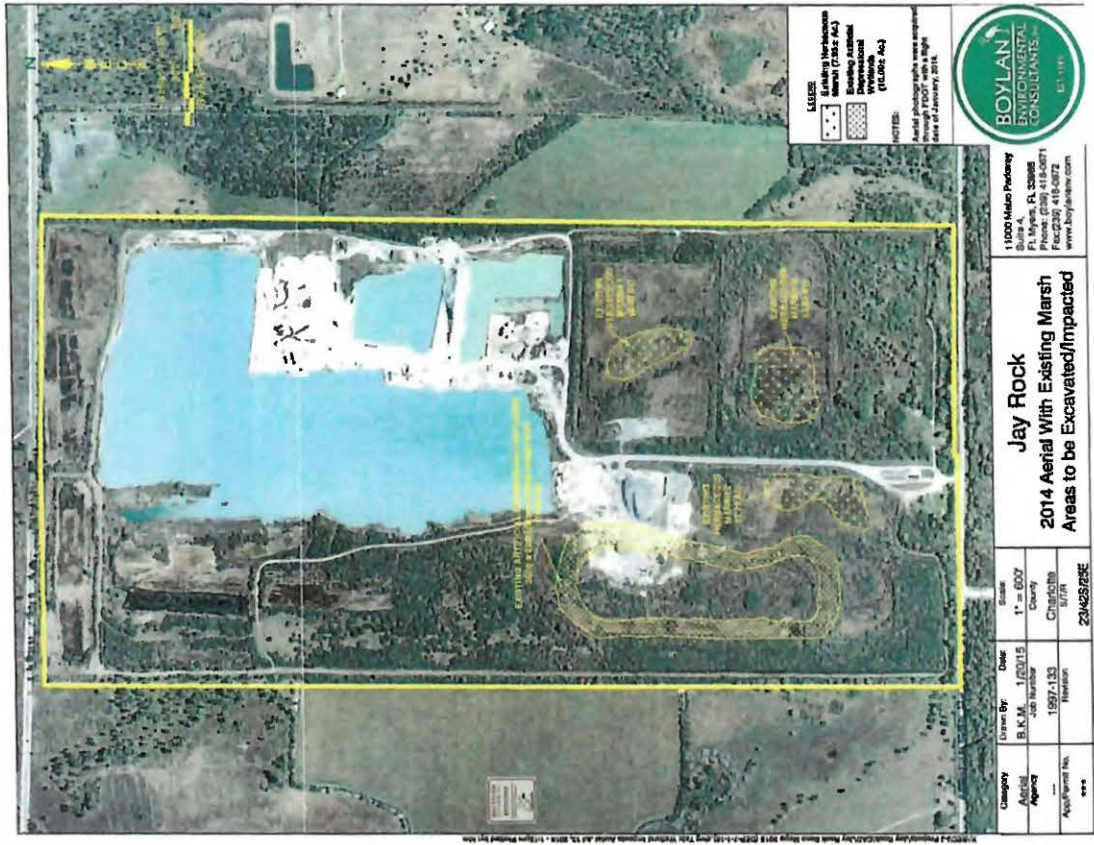
C.Yd. of Excavation Authorized 12,600,000

Regulatory Mine Depth #REF!

Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.70	
Corrected Limerock Remaining (Pre-excavation)	7,633,246	C.Yd.
Corrected Limerock Remaining (Post-excavation)	6,106,597	C.Yd.

The Jay Rock Mine Plan



LEGEND
 Excavated Areas
 Impacted Areas
 Existing Infrastructure
 Wetlands
 (USFWS AC)
 (FLGAC AC)

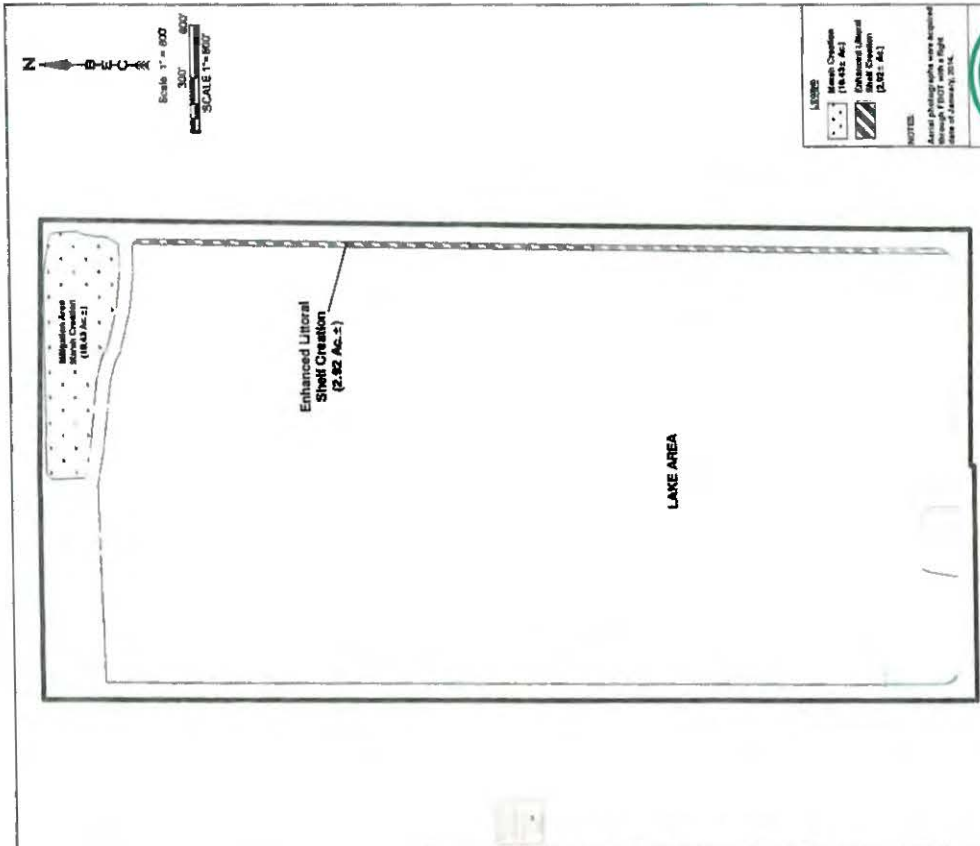
NOTES:
 Aerial photography was taken on 1/21/15.
 Date of January, 2015.



11005 Major Parkway
 Suite A
 Ft. Myers, FL 33908
 Phone: (888) 413-0871
 Fax: (239) 336-1000
 www.boylen.com

Jay Rock
2014 Aerial With Existing Marsh
Areas to be Excavated/Impacted

Category	Drawn By	Date	Scale
Aerial	B.K.M.	1/20/15	1" = 600'
Agency	Job Number		County
	1897433	Charlotte	
Applicant No.	Revision		SLR
***			23426/25E



LEGEND

- Marsh Creation (18.42 Ac.±)
- ▨ Enhanced Littoral Shelf Creation (2.82 Ac.±)

NOTES:
 All wetland shading shall comply with the requirements of the Florida Department of Environmental Protection (FDEP) and the Florida Department of Agriculture and Consumer Services (FDACS).
 Date of January 2014.



11000 Metro Parkway
 Suite 4
 Ft. Myers, FL 33909
 Phone (888) 418-0871
 Fax (239) 433-9999
 www.boyland.com

Jay Rock
2014 Aerial With Proposed
Mitigation - Creation Areas

Company	Date	Scale
April	1/2015	1" = 600'
Agency	JOB NUMBER	County
	1997-133	Charlotte
App/Permit No.	Revision	Sheet
***		23/425/25E

The Jay Rock Mine FDEP Permit # 199046



Florida Department of Environmental Protection

Mining and Mitigation Program
Bob Martinez Center
2600 Blair Stone Road, MS 3577
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

By Email: ls@ddai-engineers.com

September 14, 2015

Jay Rock Mine, Inc.
c/o Mr. David L. Douglas, P.E.
Principal
David Douglas Associates, Inc.
1821 Victoria Avenue
Ft. Myers, Florida 33901

Dear Mr. Douglas:

RE: Permit No.: 199046-006, Jay Rock Mine, Inc. – Jay Rock Mine, Charlotte County

On August 15, 2014, the Department of Environmental Protection (Department) received an application to modify the permit for the Jay Rock Mine. Additional information for the application was received on February 20, June 4, July 27, and September 3, 2015. The application requested an extension of the construction phase of the permit. The application also requested authorization to extract limestone from a 5.89-acre area along the east side of the mine pit within the existing project area. The schedule for the dredging/filling of wetlands and the construction of the wetland mitigation has been revised. This includes a redesign of the wetland mitigation areas. The estimated mitigation costs required for the financial assurance is modified to take into consideration that some of the wetland mitigation work has been completed, much of the authorized dredging/filling has not occurred, and the provisions of Section 373.414(19)(a), Florida Statutes (F.S.).

As a result of an agency reorganization, the Department office to receive notices and reports required by the permit has changed. The permit is modified to identify the current office to receive notices and reports, and to provide for electronic submittal.

No additional wetland impacts are planned or authorized under this modification. This modification does not alter the General Conditions of the permit. Since the proposed modification is not expected to result in any adverse environmental impact or water quality degradation, the permit is hereby modified with the following changes to the Specific Conditions:

The expiration date of the construction phase of the permit is extended to August 18, 2019.

ACTIVITY DESCRIPTION:

The second, third and fourth paragraphs of the Activity Description are modified as follows:

The project site contains a former limerock mining operation, fallow farm fields, pine flatwoods, ruderal lands, and ~~three~~ two isolated freshwater marshes totaling ~~7.95~~ 5.95 acres. All of these wetlands have been altered by previous drainage and excavation activities. A 10-acre artificially-created depressional wetland area also exists on site that was created by a former mud-bogging track. The project as proposed will dredge or fill the existing natural wetlands and the 10-acre depressional area. Wetland mitigation will be provided through the creation of a 10.43-acre ~~an 8.95-acre marsh and a 2.0-acre marsh~~ near the reclaimed lake, and by revegetation of an enhanced littoral shelf totaling approximately 2.92 ~~2.4~~ acres.

The mining will create a 260.48-acre ~~275.55-acre~~ reclaimed lake with gently sloped shorelines. On the East side, the lake will feature a 28-foot ~~20-foot~~ wide, approximately 4,600 feet in length, littoral shelf planted in native wetland plants. The lake will average about 45 feet deep. At the completion of mining, all of the lake shorelines and uplands will be subject to the mandatory reclamation requirements of Chapter 62C-36, F.A.C.

The mine pit will be dewatered to a maximum depth of 10 feet below the ground surface, or 20 feet NGVD, during the removal of overburden. This dewatering activity will be completed no more than 12 months after receiving all approvals from the county. Stormwater falling on the site will be contained behind a system of perimeter berms that will contain up to a 25-year, 3-day storm event. ~~The estimated life of the mine is ten years. The construction phase of this permit expires in ten years.~~ The postreclamation land types will include lake, marshes and vegetated uplands and horticultural cropland.

ACTIVITY LOCATION:

The project is located on the north side of Cook Brown Road, one mile west of State Highway 31, in Charlotte County, two miles north of the Lee County Line, Sections 23 and 24, Township 42 South, Range 25 East.

SPECIFIC CONDITIONS:

- ~~5~~ **Muck Relocation and Stockpiling.** ~~Prior to mining the 3.2-acre wetland located in the southeast portion of the mine, all wetland topsoil located therein down to a depth of eighteen inches shall be relocated and stockpiled at the 2.0 and the 8.95-acre mitigation areas. The muck may be stockpiled for no more than two years, after which it must be spread evenly across the mitigation area to create a desirable growing medium for wetland plants.~~
9. **Shoreline Treatments.** In accordance with the reclamation standards of Chapter 62C-36, F.A.C., the permittee shall create sloped littoral zone wetlands around the north, south and west sides of the mine pit. The east side of the lake shall be reclaimed to a flat littoral shelf

totaling approximately 2.92 ~~2.4~~ acres. These lake shorelines shall be created in the following manner:

- a. No change.
- b. The shorelines shall be constructed in accordance with the plans and planting specifications shown in Cross Sections A-A, ~~and B-B,~~ and C-C, depicted on Drawing Sheet No. 3, Proposed Reclamation Plan 4.
- c. No change.

10. **Submittals.** Unless otherwise specified, all notices, plans, draft easements, reports or other documents or information required to be submitted to the Department in this permit shall be submitted to:

Florida Department of Environmental Protection
Mining and Mitigation Program
2600 Blair Stone Road, Mail Station 3577
Tallahassee, Florida 32399-2400
or in electronic format to MiningAndMitigation@dep.state.fl.us.
~~Bureau of Mine Reclamation~~
~~2051 East Dirac Drive, Tallahassee, Florida 32310-3760~~
~~(850) 488-8217, facsimile (850) 488-1254.~~

15. **Water Quality Reports.** The permittee shall provide the Department ~~Bureau of Mine Reclamation~~ with copies of any groundwater quality monitoring reports required by the Water Management District or the Department's Industrial Wastewater Permitting Program.

20. **Wetlands Release Criteria.** The ~~two~~ wetland creation areas and the enhanced littoral shelf zone created on the east side of the pit shall meet the following criteria for a period of at least three years, without intervention in the form of irrigation, dewatering, or removal of undesirable vegetation, or replanting of desirable vegetation:

- a. through b. No change.
- c. The ground cover within the ~~two~~ mitigation areas shall be vegetated with five or more appropriate wetland species, each with at least 2 percent aerial coverage. Vegetation density shall be sufficient to control erosion and turbidity. At least 10.43 ~~10.95~~ acres in the ~~two~~ mitigation areas and 2.92 acres of the enhanced littoral shelf shall be deemed jurisdictional wetlands in accordance with Chapter 62-340, F.A.C.

21. **Permit Release Procedures.** The procedures for requesting a release determination and guidelines for the Department's response are provided herein:

a. The permittee may notify the Department whenever the permittee believes the permit conditions have been met. ~~This notice shall be sent by certified mail addressed to Chief, Bureau of Mine Reclamation.~~

b. through d. No change.

22. **Conversion to Operations Phase.** The procedures for requesting a conversion of this permit from the construction phase to the operation phase and guidelines for the Department's response are provided herein. All documentation shall be submitted to the Department ~~by certified mail addressed to Chief, Bureau of Mine Reclamation.~~

a. through c. No change.

23. **Dewatering.** Dewatering activities refer to continuous pumping of water from an active extraction site of 24 continuous hours, or more, in order to maintain workable conditions. Water Use Permit No. 08-00117-W was issued by the South Florida Water Management District for dewatering. Dewatering may be utilized in order to facilitate the extraction of surface sands and other material, however all dewatering shall be completed no more than 12 months after receiving all approvals from the county. The dewatering shall be limited to the sand layers within ten feet of the mine surface (no deeper than 20 feet National Geodetic Vertical Datum (NGVD)). The extracted water shall be contained within the mine, utilizing the existing mine pit and ~~the bermed storage cells depicted on Figure 9 (attached)~~ a hydraulic trench. Prior to dewatering, the permittee shall construct a hydraulic trench between the dewatered area and the property line. The trench shall have aboveground berms which will constantly maintain a minimum of four feet of water in the trench and no more than two feet of positive head above the land surface. Water levels within the dewatering cells shall be limited to less than four feet above the surrounding land surface.

~~A system of hydrological recharge trenches depicted on Figure 9 shall be constructed to act as a hydraulic barrier buffering nearby wetlands and adjacent properties. Water levels within the trenches shall be kept between 32.0 and 33.0 feet NGVD.~~

24. **Hydrological Monitoring.** Water levels within the hydrological recharge trenches and the 10.43-acre ~~8.95-acre~~ marsh creation area shall be monitored. By May 1, 2006, a staff gauge shall be installed within the perimeter recharge trench near the created wetland. A piezometer well shall also be installed at that time near the edge of the created wetland located nearest to the staff gauge. Water level elevations of the staff gauge and the piezometer well shall be monitored on a weekly basis, at a minimum. Whenever possible, all water levels shall be measured on the same day of the week. A monthly summary report shall be provided to the Department which clearly illustrates that mine dewatering is not causing any significant hydrologic impacts on the local water table and/or nearby wetlands.

25. Financial Assurance.

- a. The permittee shall provide an acceptable financial responsibility mechanism within 60 days of permit issuance. Acceptable financial responsibility mechanisms are listed in Section 4.3.7.6 of the Basis of Review For Environmental Resource Permit Applications for the South Florida Water Management District. No dredging or filling shall occur within the three isolated freshwater marshes until the Department has approved the financial assurance mechanism.
- b. The permittee shall update the financial responsibility demonstration each year with the annual narrative report in accordance with Section 373.414(19), F.S. The initial financial responsibility demonstration must equal 110 percent of the estimated mitigation costs for wetlands and other surface waters affected in the first 3 years of operation under the permit. For each year thereafter, the financial responsibility demonstration must be updated, including providing an amount equal to 110 percent of the estimated mitigation costs for the next year of operations under the permit for which financial responsibility has not already been demonstrated and to release portions of the financial responsibility mechanisms in accordance with applicable rules. The permittee shall maintain a financial responsibility mechanism that meets the requirements of Section 373.414(19)(b), F.S. The form and content of all financial responsibility mechanisms shall be approved by the Department.

26. Operation and Maintenance. The surface water management system approved in this permit shall meet the following requirements:

- a. All construction, operation and maintenance shall be as set forth in the plans, specifications, and performance criteria approved by this permit;
- b. If revisions or modifications to the permitted project are required by other regulatory agencies, the Department shall be notified of the revisions so that a determination can be made whether a permit modification is required;
- c. Within ninety days after removal of the berm and separation of the surface water management system of a reclamation parcel from lands that report to any surface water discharges permitted under Chapter 62-620, F.A.C., the permittee shall submit one set of certified record drawings of the surface water management system as actually constructed and notify the Department that the facilities are ready for inspection and approval.
- d. Within thirty days after sale or conveyance of the permitted surface water management system, the land on which the system is located, or portions thereof, the owner in whose name the permit was granted shall notify the Department of such change of ownership. Transfer of this permit or portions thereof, shall be in accordance with the provisions of Chapter 373, F.S., and Sections 6.2 and 6.3, of the Applicant's Handbook I. All terms and conditions of this permit shall be binding upon transfer.

- e. The operational phase applies to those lands disturbed by mining operations, where reclamation has been complete, that no longer report to any surface water discharges permitted under Chapter 62-620, F.A.C., but have not been released in accordance with Specific Conditions Nos. 20. and 21. above, and the reclamation requirements of Chapter 62C-36, F.A.C., as applicable.
- f. Pursuant to rule 62-330.310(7)(a), F.A.C., the operation phase of mining activities subject to the land reclamation requirements of Chapter 378, F.S., shall terminate, without the need to apply for abandonment of the permit, after the mine, or its subunits as applicable:
1. Has been successfully reclaimed in accordance with Chapter 378, F.S., other than lands disturbed by mining operations that are not subject to the requirements of Chapter 378, F.S.;
 2. Has met all success requirements of the individual permit issued under Part IV of Chapter 373, F.S.; when the construction phase of the permit includes all phases of construction, abandonment, reclamation, and final success determination over reclaimed lands; and
 3. Does not contain components that require long-term operation or maintenance, such as: stormwater management systems; achievement of mitigation success criteria; work in conservation easements requiring a permit under this chapter; state-owned submerged lands authorizations; dams; above-grade impoundments; works; water control structures; erosion and sedimentation controls; or dewatering pits.

LIST OF ATTACHMENTS

The following plan and figures are hereby attached to, and become part of this permit:

1. Stormwater Pollution Prevention Plan for Construction Activities ~~Best Management Practices Plan~~, as submitted on December 18, 2002. (11 Pages)
2. Invasive and Exotic Vegetation Treatment and Management Plan by Boylan Environmental Consultants, Inc., as received on July 27, 2015. (15 Pages)

Drawing

Number Description

~~COVER SHEET, as signed and sealed on July 1, 2004.~~

1. of 6 AERIAL PHOTOGRAPH, as signed and sealed on July 1, 2004.

Appendix E.4

The Charlotte County Mine

Appendix E.4

The Charlotte County Mine



Stuart 05/18
Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co Dept. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coef. (6)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (7)
Charlotte County Mine (4)	7/29/03		1031	421	8,200,000	1,625,942	0.7	1,138,599	910,528

Note 4: Charlotte County Mine total project area @ 1031 ac., mined area @ 421 ac.. 2015 remaining extraction @ 1,625,942 cyd. (8,200,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average and 2012 to 2015 3 year excavation of 812,970 cyd. per year.

Charlotte County Mine _ Charlotte Co. (Not Reported Waldrop 09/16)

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	1,031	421

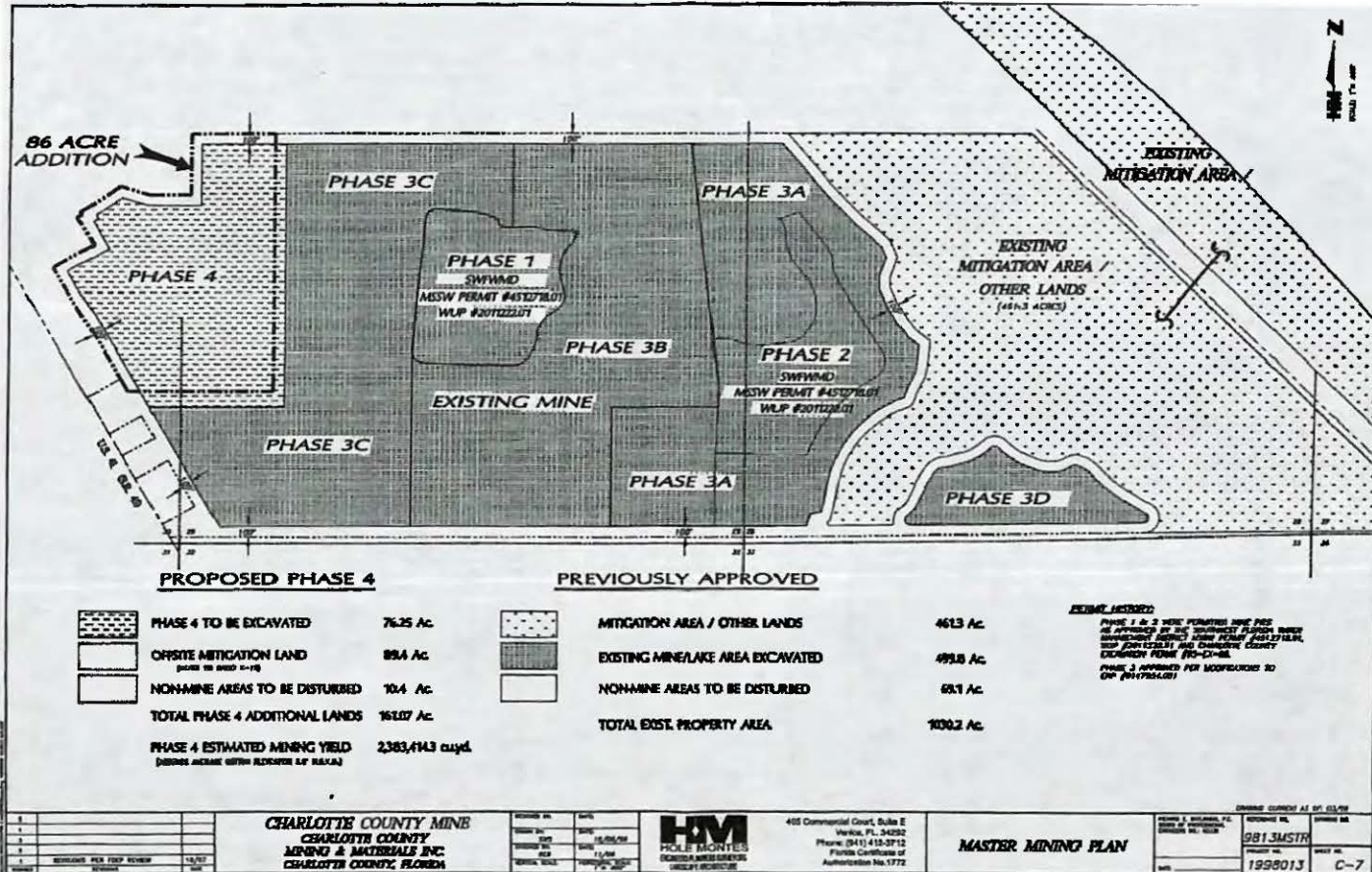
C.Yd. of Excavation Authorized 8,200,000

Regulatory Mine Depth

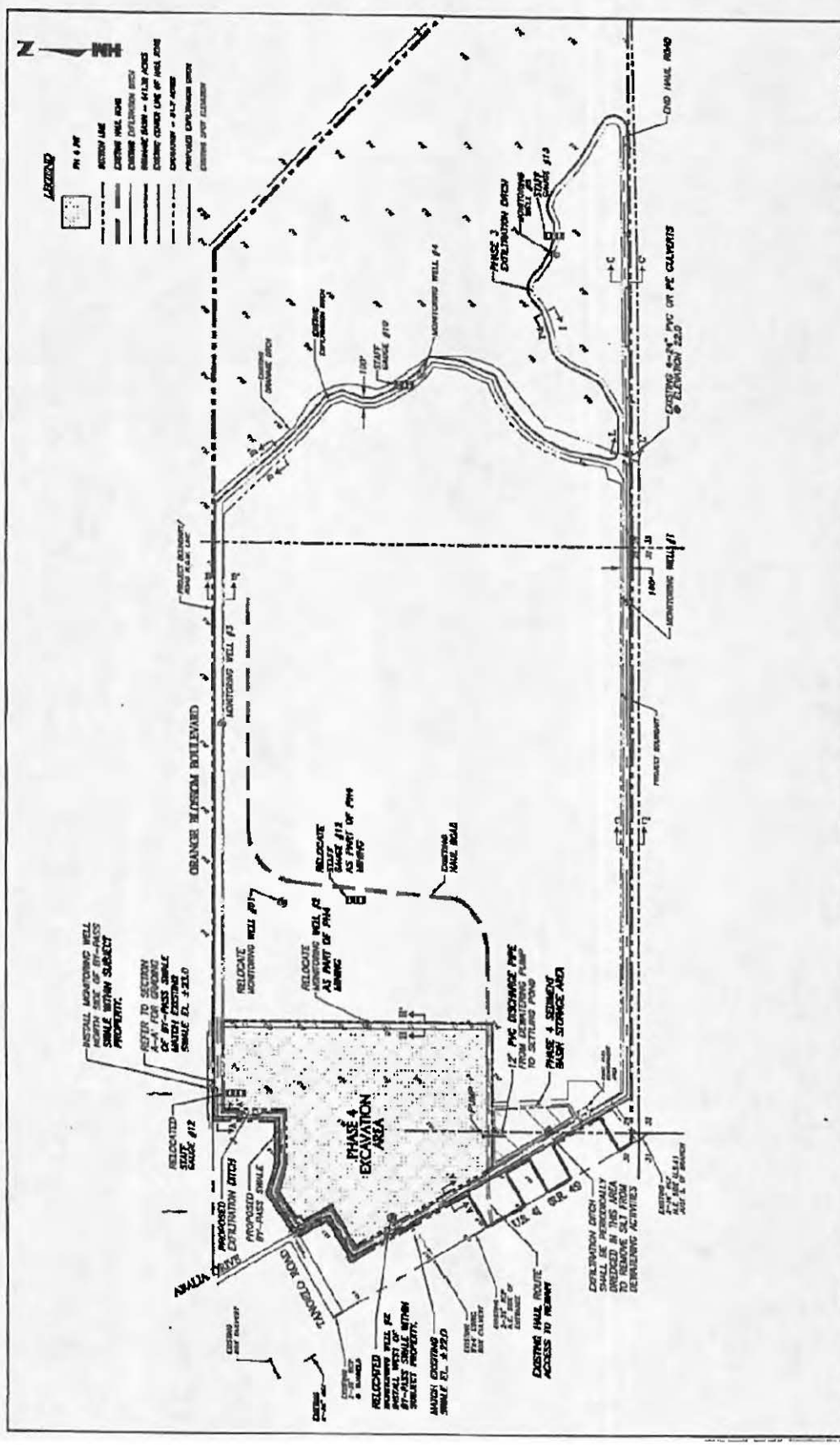
Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.70	
Corrected Limerock Remaining (Pre-excavation)	1,138,159	C.Yd.
Corrected Limerock Remaining (Post-excavation)	910,528	C.Yd.

The Charlotte County Mine



PERMIT # 0147954-003



LEGEND

PHASE IV

SECTION LINE

EXISTING WALL BOUNDARY

EXISTING EXCAVATION DITCH

BRANCH BOUNDARY - 61.13 ACRES

EXISTING CENTER LINE OF HALL ROAD

PROPOSED EXCAVATION DITCH

EXISTING DITCH EXCAVATION

NO. 1	DATE	ISSUED BY	SCALE	PROJECT NO.	DATE	PROJECT NAME	PROJECT NO.	DATE
1	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
2	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
3	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
4	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
5	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
6	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
7	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
8	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
9	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
10	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78

APPROVED EXCAVATION PLAN AS SHOWN

EXCAVATION NO.

9813PH4

PROJECT NO.

1998013

DATE

C-8

PHASE IV EXCAVATION PLAN

AM Commercial Chart, Scale 1/8" = 1'-0" (1/4" = 1'-0")
 Project No. 9813PH4
 Project Name: PHASE IV EXCAVATION PLAN
 Project Location: CHARLOTTE COUNTY, FLORIDA
 Authorization No. 1172



DATE: 12/1/78
 DRAWN BY: J. MONTES
 CHECKED BY: J. MONTES
 PROJECT NO.: 1998013
 PROJECT NAME: PHASE IV EXCAVATION PLAN

CHARLOTTE COUNTY MINE
 CHARLOTTE COUNTY
 MINING & MATERIALS INC.
 CHARLOTTE COUNTY, FLORIDA

NO. 1	DATE	ISSUED BY	SCALE	PROJECT NO.	DATE	PROJECT NAME	PROJECT NO.	DATE
1	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
2	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
3	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
4	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
5	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
6	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
7	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
8	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
9	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78
10	12/1/78	J. MONTES	AS SHOWN	1998013	12/1/78	PHASE IV EXCAVATION PLAN	1998013	12/1/78

The Charlotte County Mine FDEP Permit # 147954



Florida Department of Environmental Protection

Bureau of Mine Reclamation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

SENT VIA FEDEX

April 13, 2009

FILE COPY

Richard E. Brylanski, P.E.
Hole, Montes & Associates, Inc.
2100 South Tamiami Trail, Suite B
Venice, Florida 34293

Dear Mr. Brylanski:

RE: File No. 147954-003, Charlotte County
Charlotte County Mining and Materials, Inc. - Charlotte County Mine

Enclosed is the Individual Environmental Resource Permit, Permit No. 147954-003, issued pursuant to Part IV of Chapter 373, Florida Statutes, and Title 62, Florida Administrative Code. Any party to the Order (Permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Please review this document carefully to ensure compliance with both the general and specific conditions contained herein. If you have any questions about this document, please contact me at (850) 488-8217.

Sincerely,

Alan Whitehouse
Environmental Specialist



Florida Department of Environmental Protection

Bureau of Mining and Minerals Regulation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

ENVIRONMENTAL RESOURCE PERMIT

PERMITTEE/AUTHORIZED ENTITY:

Charlotte County Mining and Materials, Inc.
16070 Tamiami Trail South
Punta Gorda, Florida 33955

Permit/ Authorization No. 147954-003

Date of Issue: April 10, 2009

Expiration Date of Construction Phase:
April 10, 2029

County: Charlotte

Project: Charlotte County Mine

AGENT:

Richard E. Brylanski, P.E.
Hole, Montes & Associates, Inc.
2100 South Tamiami Trail, Suite B
Venice, Florida 34293

This permit is issued under the authority of Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). The activity is not exempt from the requirement to obtain an Environmental Resource Permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity. This permit also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Management Act. This permit also constitutes certification compliance with water quality standards under Section 404 of the Clean Water Act, 33 U.S.C. 1344.

A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

The above-named permittee is hereby authorized to construct the work shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the attached General Conditions and Specific Conditions, which are a**



Florida Department of Environmental Protection

Bureau of Mine Reclamation
2051 East Paul Dirac Drive
Tallahassee, Florida 32310-3760

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

SENT VIA FEDEX

April 13, 2009

FILE COPY

Richard E. Brylanski, P.E.
Hole, Montes & Associates, Inc.
2100 South Tamiami Trail, Suite B
Venice, Florida 34293
Dear Mr. Pellerito:

RE: File No. 147954-003, Charlotte County
Charlotte County Mining and Materials, Inc. - Charlotte County Mine

Enclosed is the Individual Environmental Resource Permit, Permit No. 147954-003, issued pursuant to Part IV of Chapter 373, Florida Statutes, and Title 62, Florida Administrative Code. Any party to the Order (Permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Please review this document carefully to ensure compliance with both the general and specific conditions contained herein. If you have any questions about this document, please contact me at (850) 488-8217.

Sincerely,

Alan Whitehouse
Environmental Specialist

binding part of this permit. You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities. Failure to comply with all drawings and conditions shall constitute grounds for revocation of the permit and appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and with the general and specific conditions of this permit/certification, as specifically described below.

ACTIVITY DESCRIPTION

The activity is a modification to a permit/water quality certification that will result in an expansion of the surface water management system and additional adverse wetland impacts at an operating limestone mine. The existing permit, (Permit No. 147954-002) authorizes the disturbance of 133.91 acres of wetlands and other surface waters within Department jurisdiction, including 9.09 acres of forested wetlands and 112.19 acres of herbaceous and shrubby wetlands and 12.63 acres of other surface waters. This modification will increase the total adverse impacts to wetlands by 68.24 acres and to other surface waters by 1.05 acres. The total area served by the surface water management system will be increased by 86.7 acres to 655.6 acres.

The proposed expansion will not increase impervious area beyond the existing 15 acres. Water levels will be lowered in the active extraction area. Pumped water will remain on site within the older extraction area and a recharge ditch. The current pumping is conducted in accordance with water use permit from the Southwest Florida Water Management District. No water discharges from the project area are authorized below the design storm. The maximum depth of extraction is to four feet, National Geodetic Vertical Datum (NGVD), which is 18.5 feet below the average water elevation.

The total area of the mine, including the Conservation Lands will be 1,191.28 acres. The total area served by the surface water management system for the extraction area will be 655.6 acres. The permit, as modified, authorizes the disturbance of approximately 203.2 acres of wetlands and other surface waters within Department jurisdiction. At 16 locations, approximately 64.38 acres of forested wetlands, 124.90 acres of herbaceous and shrubby wetlands, and 13.92 acres of other surface waters will be dredged or filled by mining operations. Mitigation for dredging and filling include:

- Approximately 576.05 acres of new surface waters will be created.

- Approximately 41.4 acres of herbaceous wetlands will be created.
- Approximately 10.65 acres of enhanced herbaceous littoral shelves will be created.
- Approximately 311.71 acres of forested and herbaceous wetlands will be enhanced by exotic tree and shrub control.
- Approximately 65.6 acres of uplands immediately east of the mine will be restored by mechanical grading and the replanting of native vegetation.
- Approximately 563.67 acres of uplands and wetlands (the Conservation Lands) will be preserved by conservation easement.

Within the system, approximately 576.05 acres will be mined by the creation of two lakes. The average depth of mining will be 20 feet below the existing natural grade. Mining will progress in three phases, with dewatering of the active mining areas into temporary stormwater ponds or into the existing mine pits.

Mining operations shall not expand into Phase 4 until the permittee has recorded an acceptable conservation easement over the two new mitigation areas (74 acres and 15 acres) depicted on Mitigation Plan Sheets F-7 and F-8.

Hydrologic monitoring will be provided in the adjacent wetlands. Stormwater up to the 25-year, 3-day storm event will be contained within the surface water management system. The postreclamation land use will be agriculture, woodlands or conservation. The estimated life of the mine is twenty years.

ACTIVITY LOCATION

The activity site is located on the east side of U.S. Highway 41, 1.4 miles north of the Lee County line, Township 42 South, Range 24 East, Sections 21, 27, 28, 29, 30, 34 and 35, Class III waters.

GENERAL CONDITIONS

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by Department staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within seven days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the Department as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.
5. Department staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in off-site discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the Department as a permit prior to the dewatering event as a permit modification. A water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.
6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven days after the construction activity in that portion of the site has temporarily or permanently ceased.

7. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operating schedules satisfactory to the Department.
8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading, mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.
9. The following shall be properly abandoned and/or removed in accordance with the applicable regulations:
 - a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.
 - b. Any existing septic tanks on site shall be abandoned at the beginning of construction.
 - c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.
10. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of off-site property.
11. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.
12. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Department forms. Additionally, if deviations from the

approved drawings are discovered during the certification process the certification must be accompanied by a copy of the approved permit drawings with deviations noted.

13. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area, may constitute grounds for revocation or enforcement action by the Department, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.
14. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the permitted plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the Department until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the Department, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the Department, if different from the permittee. Until a transfer is approved by the Department, the permittee shall be liable for compliance with the terms of the permit.
15. Should any other regulatory agency require changes to the permitted system, the Department shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.
16. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.
17. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.

18. The permittee is hereby advised that section 253.77, F.S., states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
19. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
20. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under subsection 373.421(2), F.S., provides otherwise.
21. The permittee shall notify the Department in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
22. Upon reasonable notice to the permittee, Department authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with Department rules, regulations and conditions of the permits.
23. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the Department and the Florida Department of State, Division of Historical Resources.
24. The permittee shall immediately notify the Department in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIFIC CONDITIONS

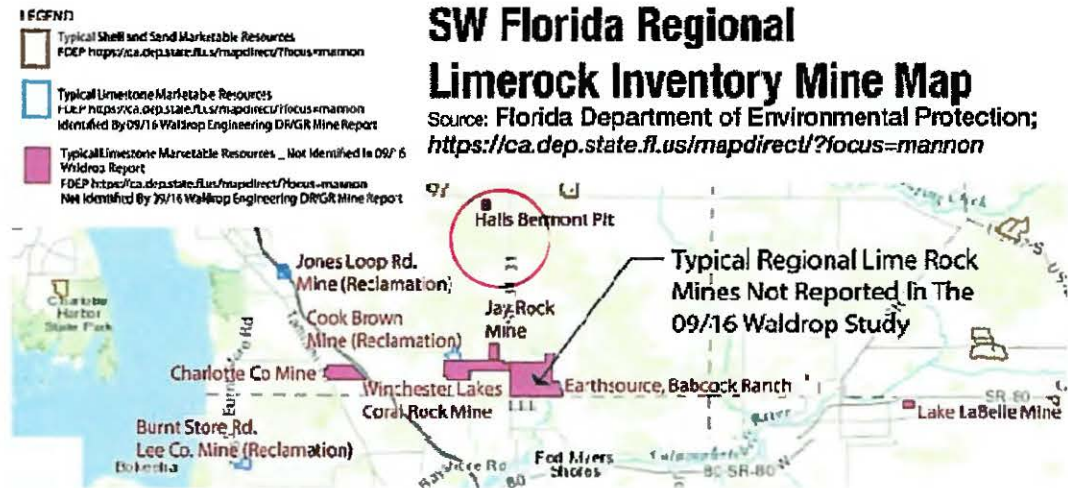
- 1. Superseded Permits.** This permit supersedes and replaces the Environmental Resources Permit No. 147954-002, which was issued by the Department on November 14, 2002. The terms and conditions of the new permit incorporate appropriate terms and conditions of the existing permit and thereby terminate the effectiveness of the existing permit.
- 2. Permit Compliance.** The purpose of this permit is to authorize the creation of a surface water management system on certain described lands within the jurisdiction of the Department. In exchange for this authorization, the permittee is obligated to perform certain acts that are described herein. A material part of the reasonable assurances the Department is relying upon in issuing this permit is that the permittee will timely and completely implement all of the conditions of this permit. The permittee understands that its failure to completely and timely comply with all of the conditions of this permit may result in a revocation or suspension of the permit and, if appropriate, that the area be restored.
- 3. Listed Species.** Permits shall be obtained from the Florida Fish and Wildlife Conservation Commission prior to the "taking" of any listed animal species. Listed animal species are those animal species listed in rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C. Taking means: taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any listed species, their nests or eggs, by any means, whether or not such actions result in obtaining possession.
- 4. "Good Cause Rule".** The permittee is hereby advised that rule 62-343.100(1)(c), F.A.C., provides that for good cause and after notice to the permittee, the Department may require the permittee to conform to new or additional conditions to this permit. Circumstances that constitute "good cause" shall include any of the situations listed in the referenced rule.
- 5. Wetland Jurisdictional Determination.** For this application, the permittee and Department identified a line that may be upland to the presumed landward extent of the wetlands and other surface waters. Any delineation of the extent of a wetland or other surface waters submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under subsection 373.421(2), F.S., provides otherwise.

Appendix E.5

The T & M Mining Halls Bermont Pit Mine

Appendix E.5

The T & M Mining Halls Bermont Pit Mine



Charlotte County Mines

Non-reported 2015 Charlotte Co. Mines Group III Active Permit Table, Charlotte Co. Dept. of Community Development	Year Permitted	ERP Permit #	Project Area	Mined Area	Cyd. Excavation Authorized	Charlotte Co. Monitoring Report Remaining Extraction	Overburden Adjustment Coeff. (6)	Cyd. Limerock Remaining Pre-extraction	Cyd. Limerock Remaining Post-extraction (7)
Halls Bermont Pit (5)	3/28/07	44008676	8000	50	2,015,000	1,815,000	0.7	1,270,500	1,015,400

Note 5: Halls Bermont Road Pit total project area @ 8000 ac., mined area @ 50 ac.. 2015 remaining extraction @ 1,815,000 cyd. (2,015,000 cyd. excavation authorized); 0.7 overburden adjustment coefficient based on regional average and 2012 to 2015 3 year excavation of 50,000 cyd. per year.

T & M Mining Halls Bermont Pit _ Charlotte Co. (Not Reported Waldrop 09/16)

	<u>Project Area</u>	<u>Mine Acres</u>
<u>Site Area</u>	8,000	50

<u>C.Yd. of Excavation Authorized</u>	2,015,000
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Regulatory Mine Depth

Stuart 09/17

Est. Excavation To-date (2015)		C.Yd.
Overburden Adjustment Coefficient	0.70	
Corrected Limerock Remaining (Pre-excavation)	1,270,500	C.Yd.
Corrected Limerock Remaining (Post-excavation)	1,016,400	C.Yd.

