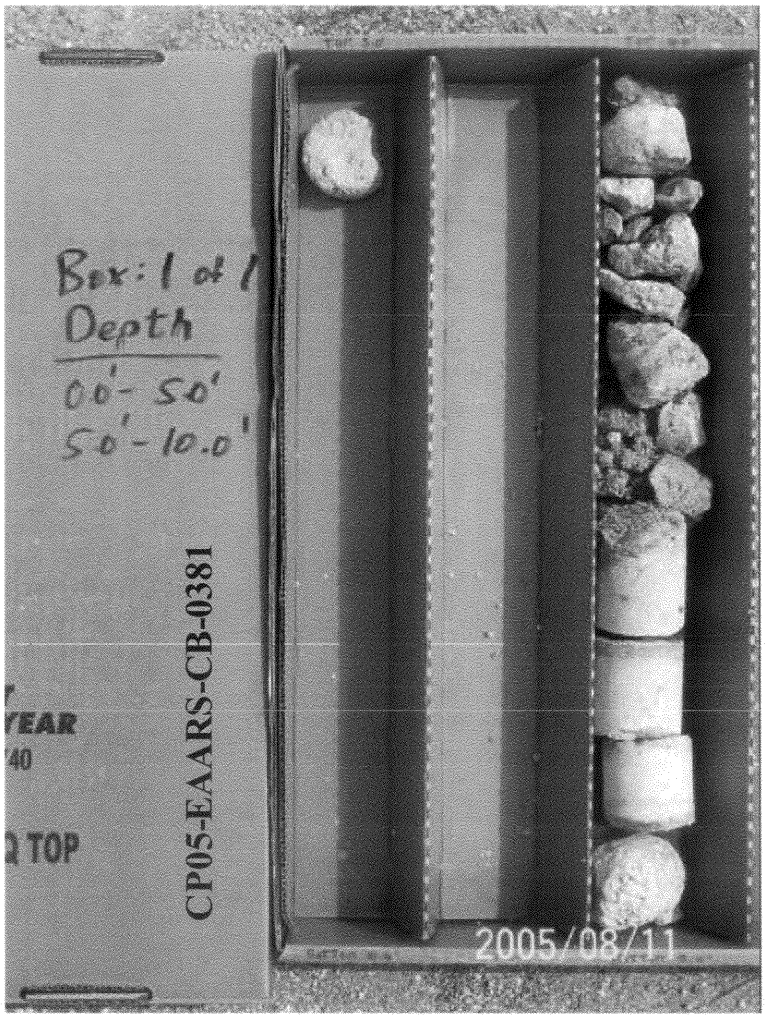
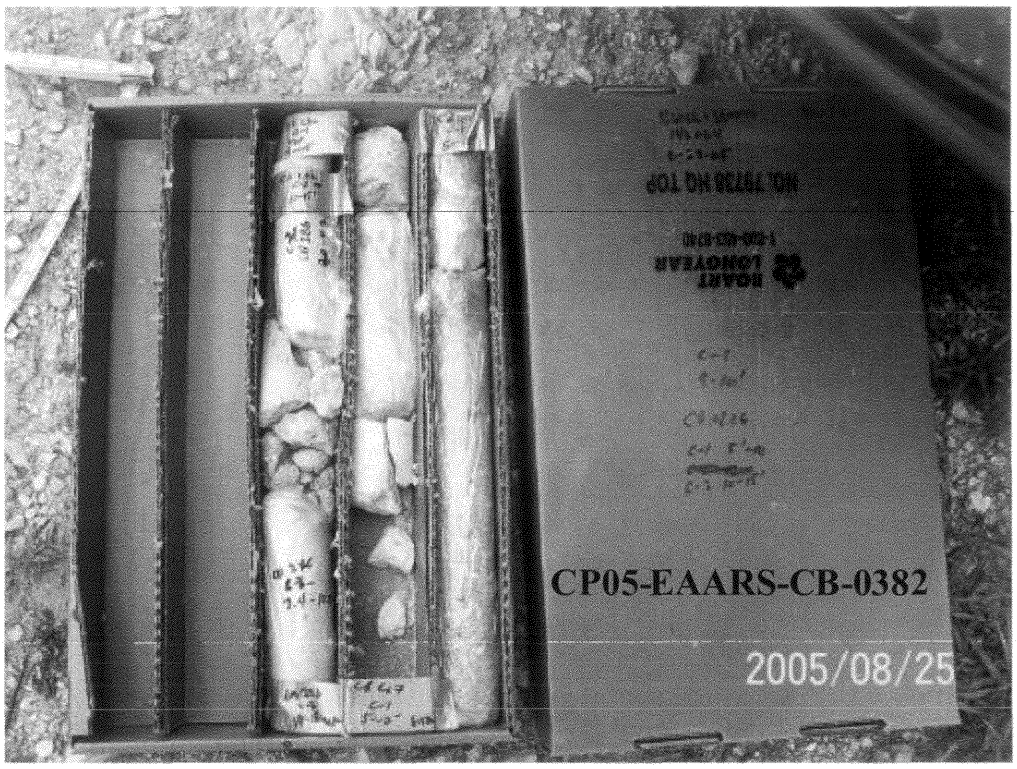
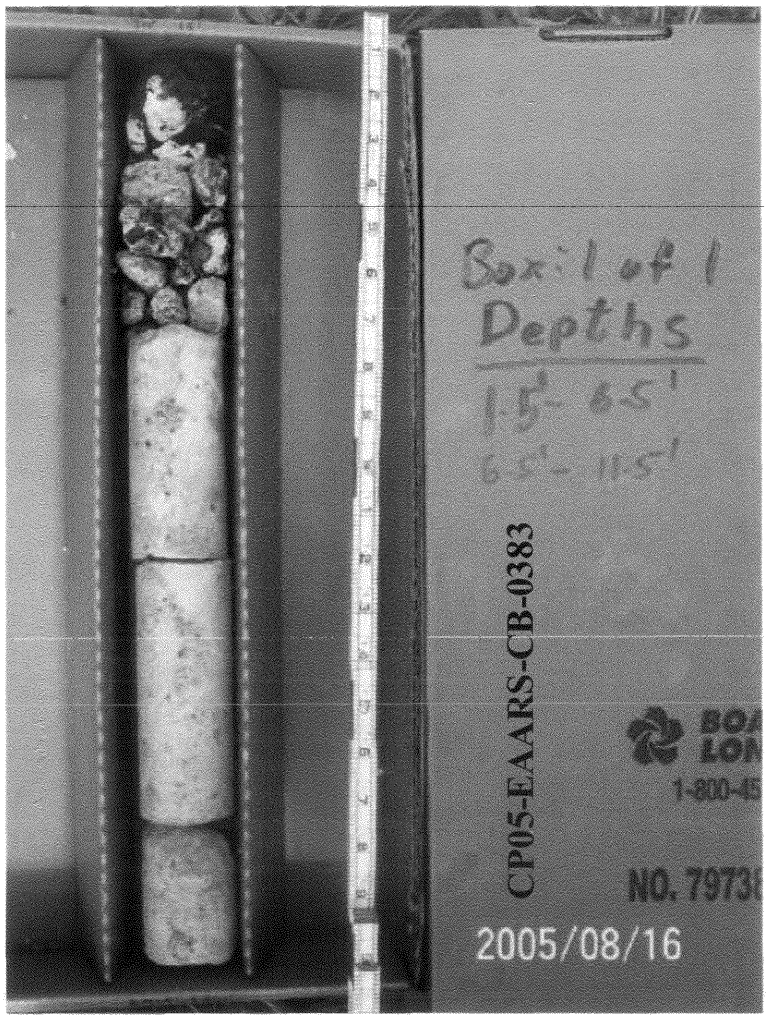
# APPENDIX 3
# ROCK CORES AND OTHER PHOTOGRAPHS: 381-416




| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0381 | |
| Location | East of Test Cell 1 | |
| Depth (feet) | Percentage Recovery | RQD |
| 0.00 to 5.00 | 38.00 | 0 |
| 5.00 to 10.00 | 1.00 | 0 |

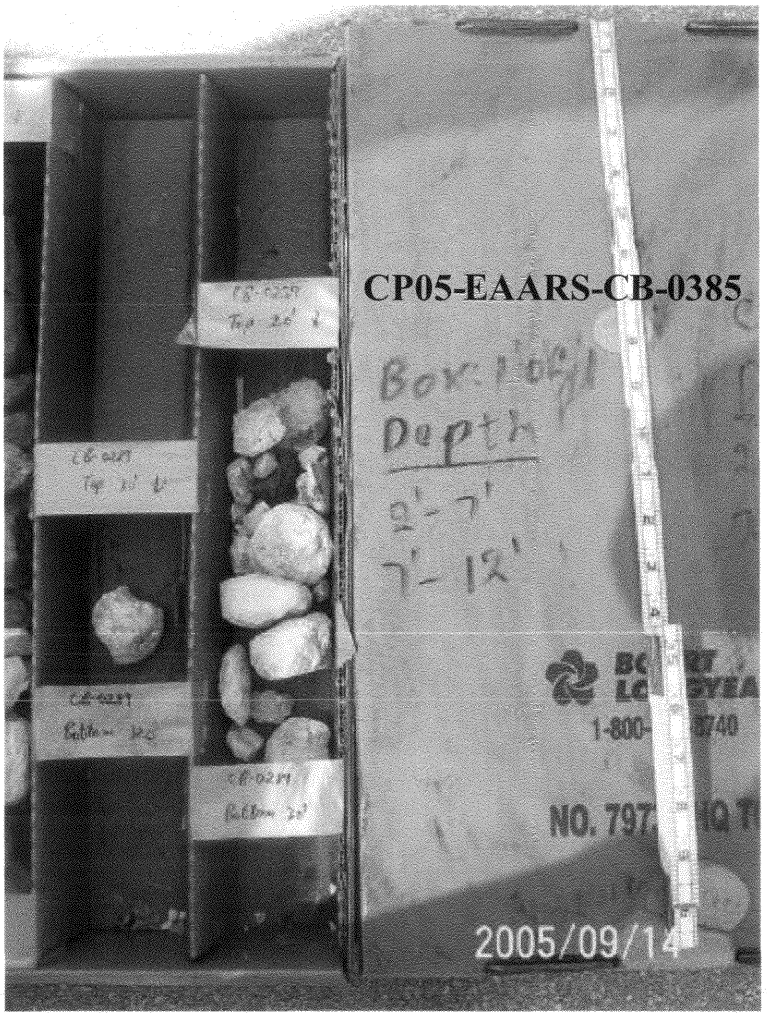



| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0382 | |
| Location | South Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 5.50 to 10.00 | 5.00 | 0 |
| 10.00 to 15.00 | 30.00 | 26.00 |

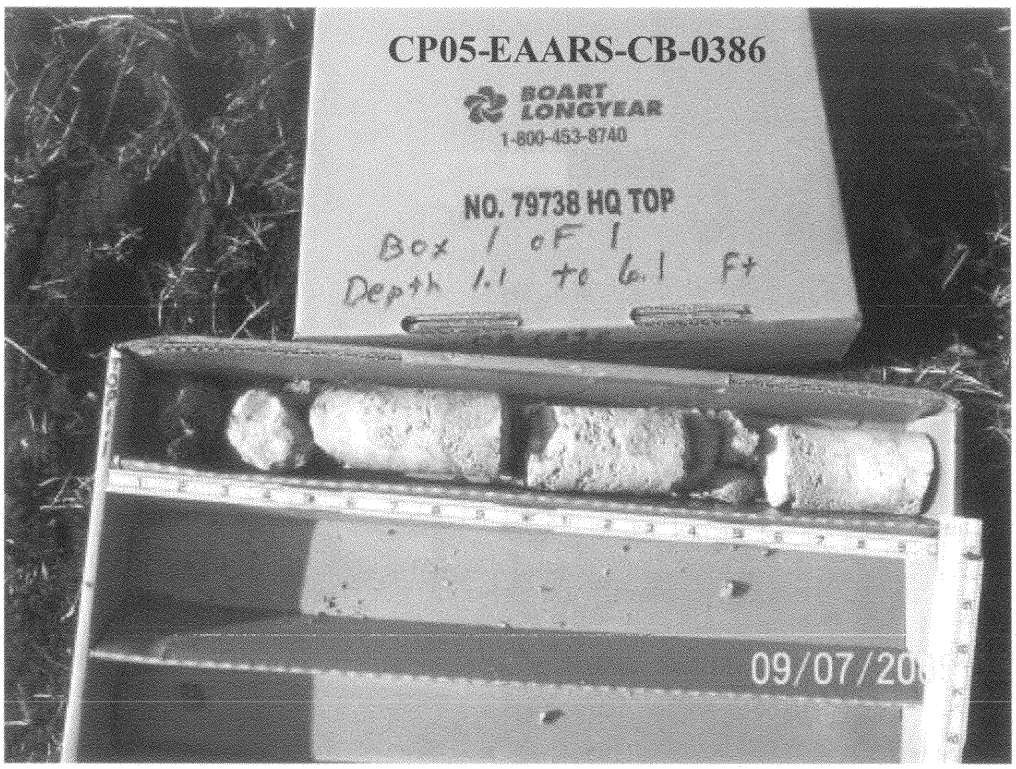



| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0383 | |
| Location | West Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 1.50 to 6.50 | 38.00 | 20.00 |
| 6.50 to 11.50 | 0 | 0 |

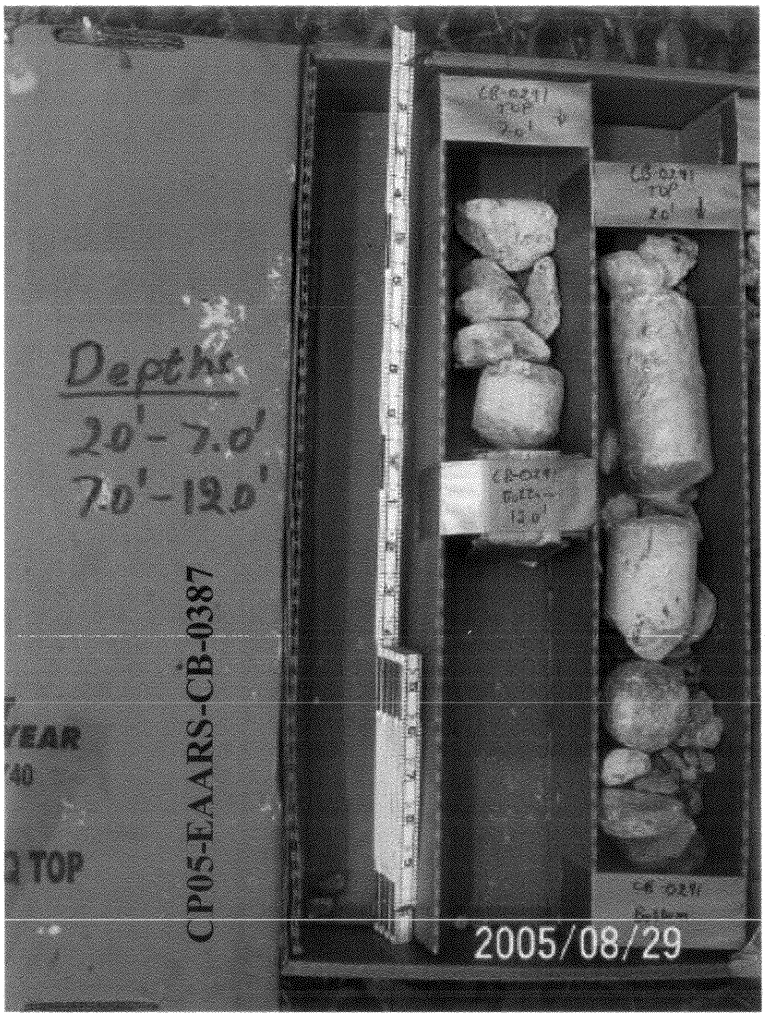
| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0384 | |
| Location | East Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 2.00 to 7.00 | 24.00 | 10.00 |
| 7.00 to 12.00 | 24.00 | 0 |



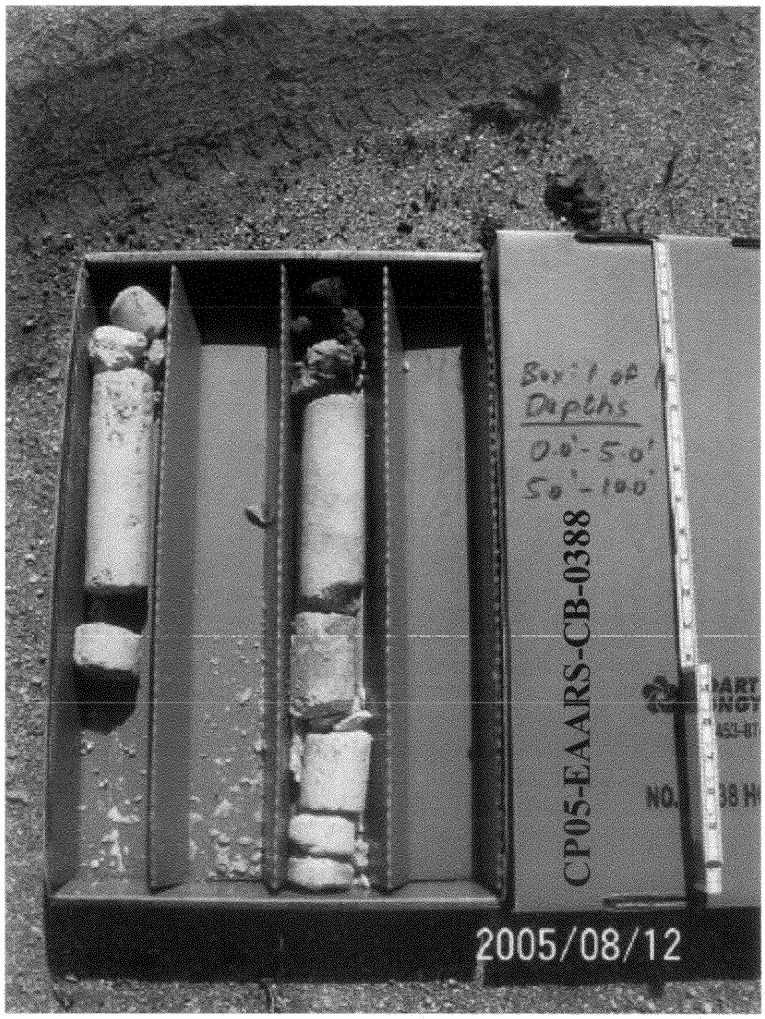

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0385 | |
| Location | Interior | |
| Depth (feet) | Percentage Recovery | RQD |
| 2.00 to 7.00 | 16.00 | 0 |
| 7.00 to 12.00 | 2.00 | 0 |



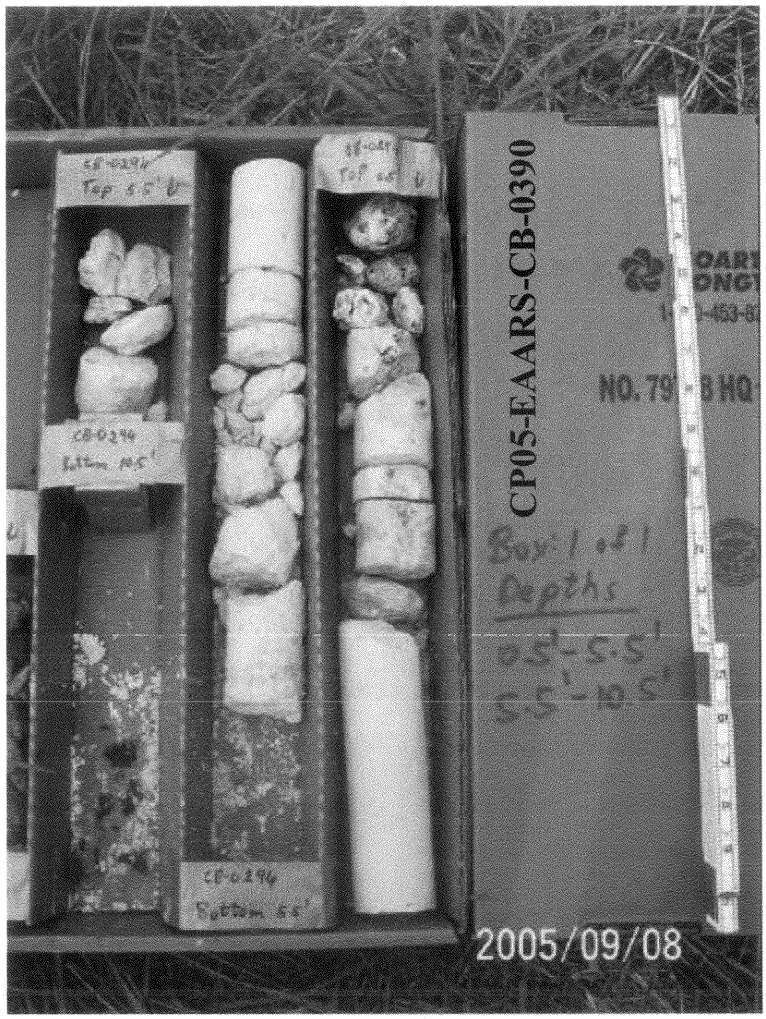

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0386 | |
| Location | West Side Interior | |
| Depth (feet) | Percentage Recovery | RQD |
| 1.10 to 6.10 | 36.00 | 7.00 |




| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0387 | |
| Location | North-East Section Interior | |
| Depth (feet) | Percentage Recovery | RQD |
| 2.00 to 7.00 | 28.00 | 8.00 |
| 7.00 to 12.00 | 12.00 | 0 |

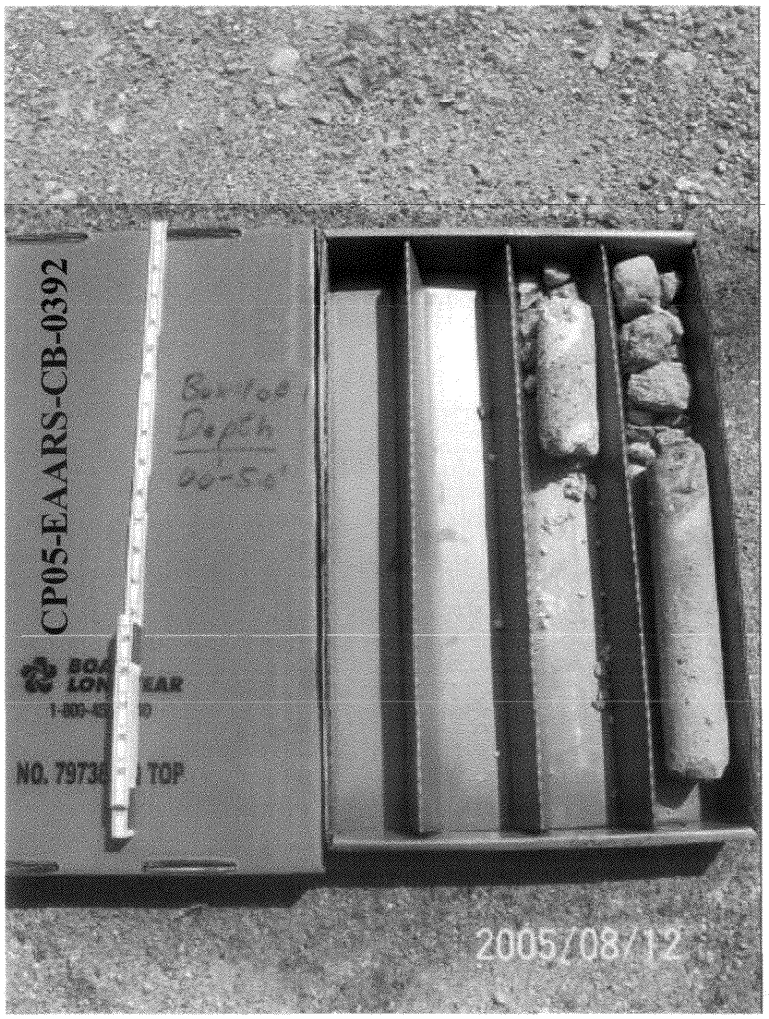



| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0388 | |
| Location | West of Test Cell 1 | |
| Depth (feet) | Percentage Recovery | RQD |
| 0.00 to 5.00 | 38.00 | 13.00 |
| 5.00 to 10.00 | 24.00 | 14.00 |

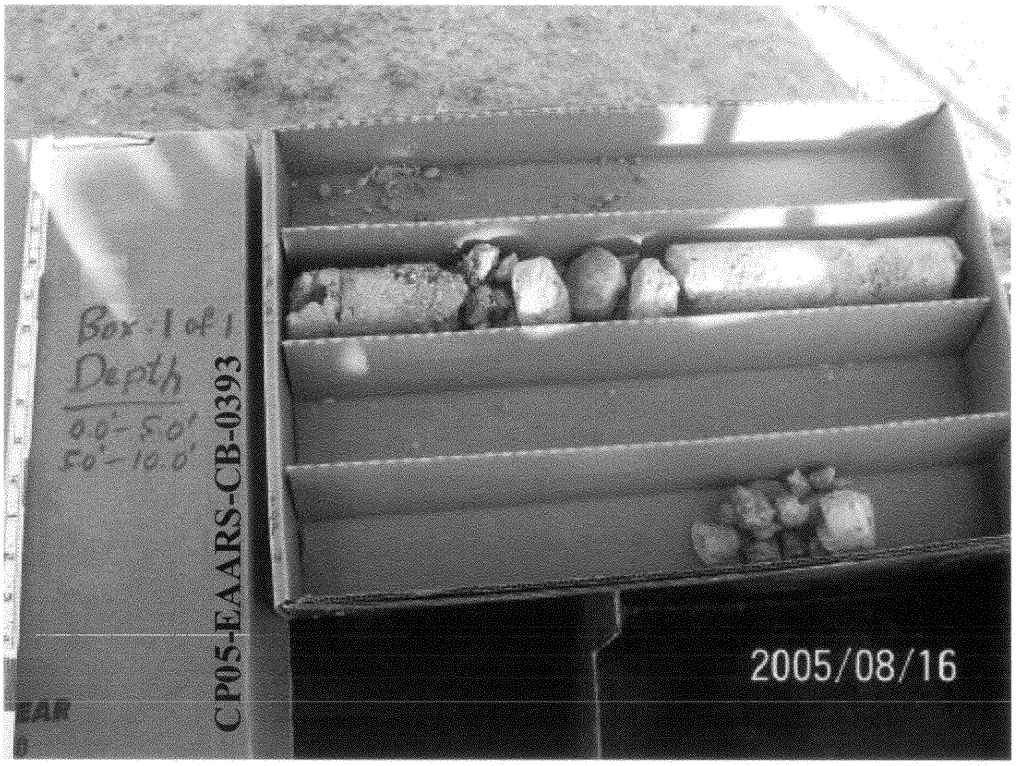



| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0390 | |
| Location | North West Section | |
| Depth (feet) | Percentage Recovery | RQD |
| 0.50 to 5.50 | 68.00 | 20.00 |
| 5.50 to 10.50 | 12.00 | 0 |

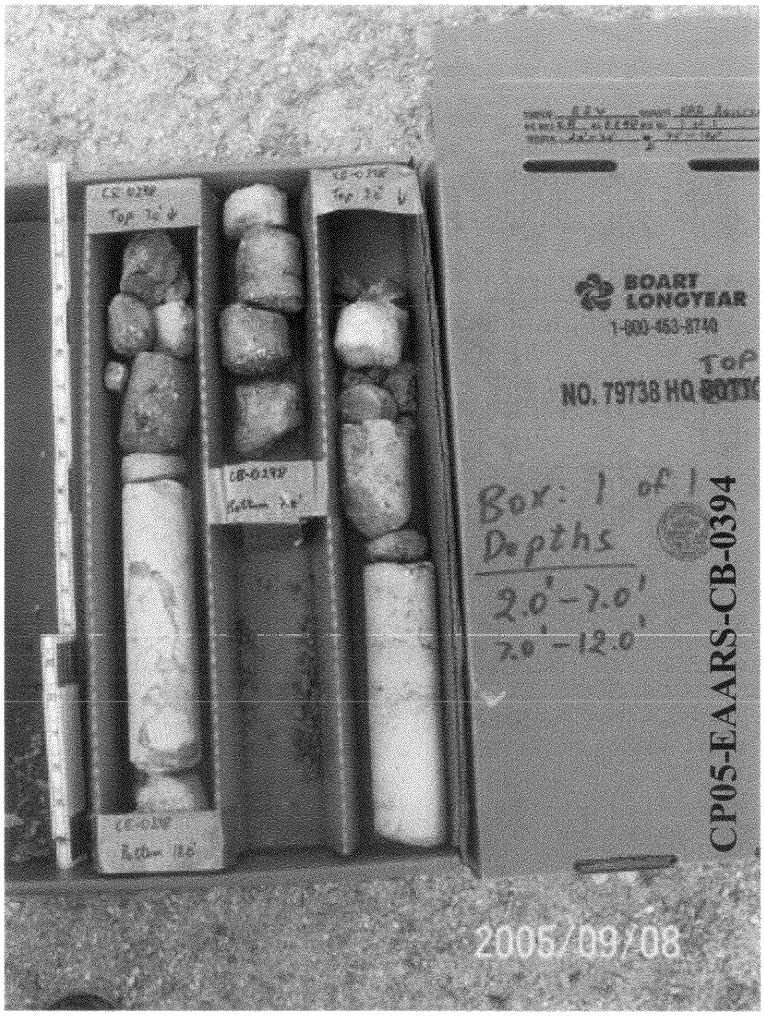
| | | |
|---|---|---|
| **Project** | Everglades Agricultural Area | |
| **Boring Number** | CP05-EAARS-CB-0391 | |
| **Location** | South Side | |
| **Depth (feet)** | **Percentage Recovery** | **RQD** |
| 5.50 to 10.50 | 20.00 | 0 |



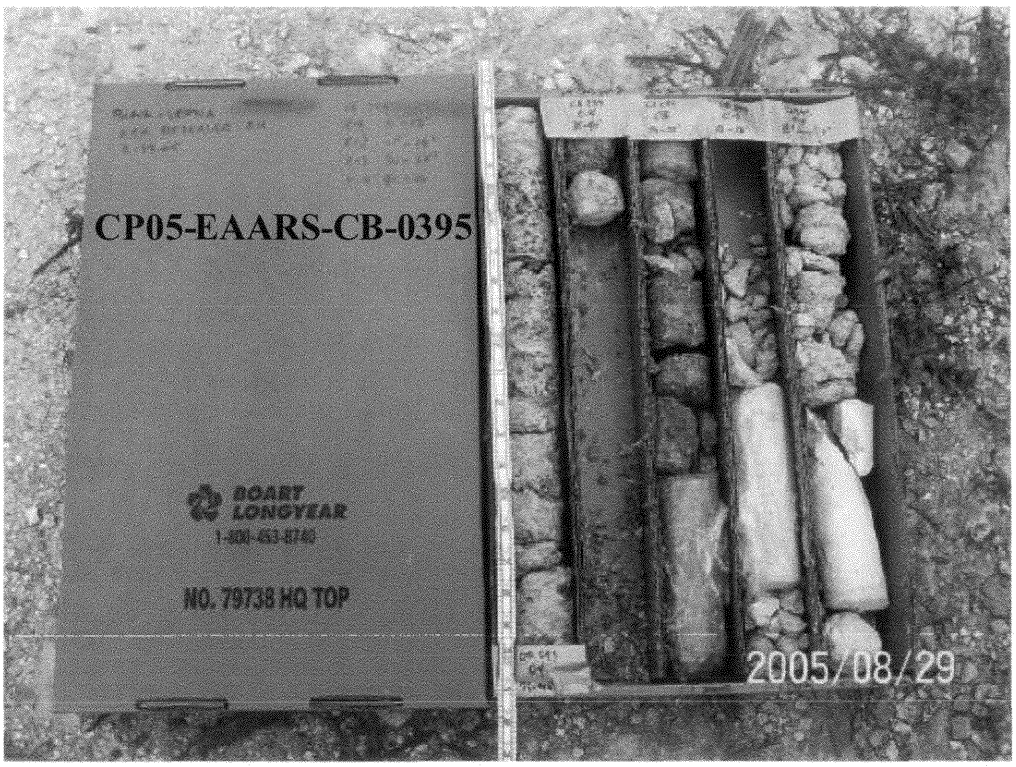

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0392 | |
| Location | North of Test Cell 1 | |
| Depth (feet) | Percentage Recovery | RQD |
| 0.00 to 5.00 | 48.00 | 30.00 |
| 5.00 to 10.00 | 0 | 0 |




| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0393 | |
| Location | South of Test Cell 2 | |
| Depth (feet) | Percentage Recovery | RQD |
| 0.00 to 5.00 | 40.00 | 22.00 |
| 5.00 to 10.00 | 6.00 | 0 |

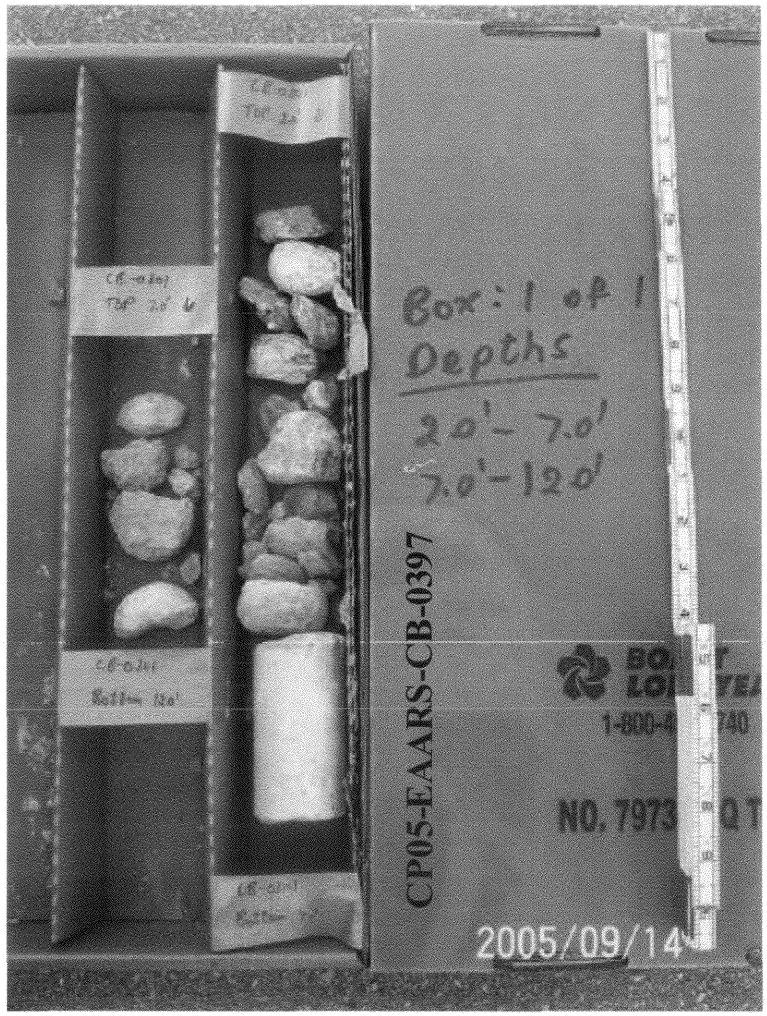



| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0394 | |
| Location | East Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 2.00 to 7.00 | 50.00 | 15.00 |
| 7.00 to 12.00 | 38.00 | 15.00 |

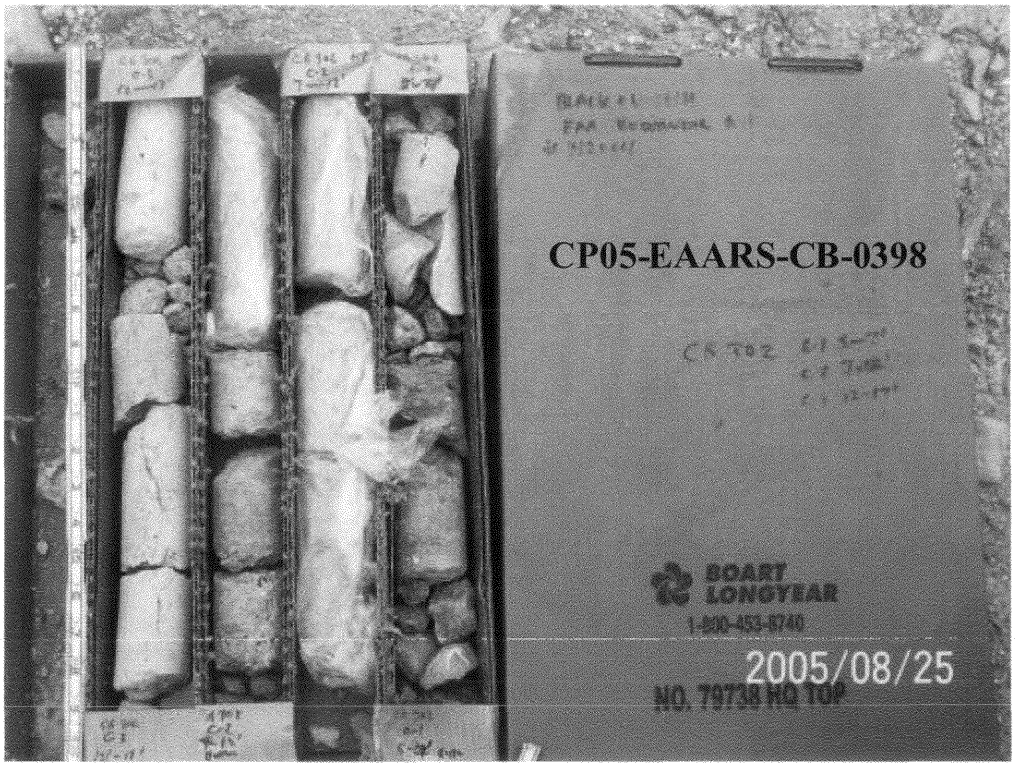



| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0395 | |
| Location | North-East Interior | |
| **Depth (feet)** | **Percentage Recovery** | **RQD** |
| 8.00 to 13.00 | 36.00 | 20.00 |
| 13.00 to 18.00 | 18.00 | 13.00 |
| 30.00 to 35.00 | 29.00 | 13.00 |
| 35.00 to 40.00 | 40.00 | 24.00 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0396 | |
| Location | East Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 3.00 to 8.00 | 80.00 | 28.00 |
| 25.00 to 30.00 | 11.00 | 0 |
| 30.00 to 35.00 | 26.00 | 10.00 |



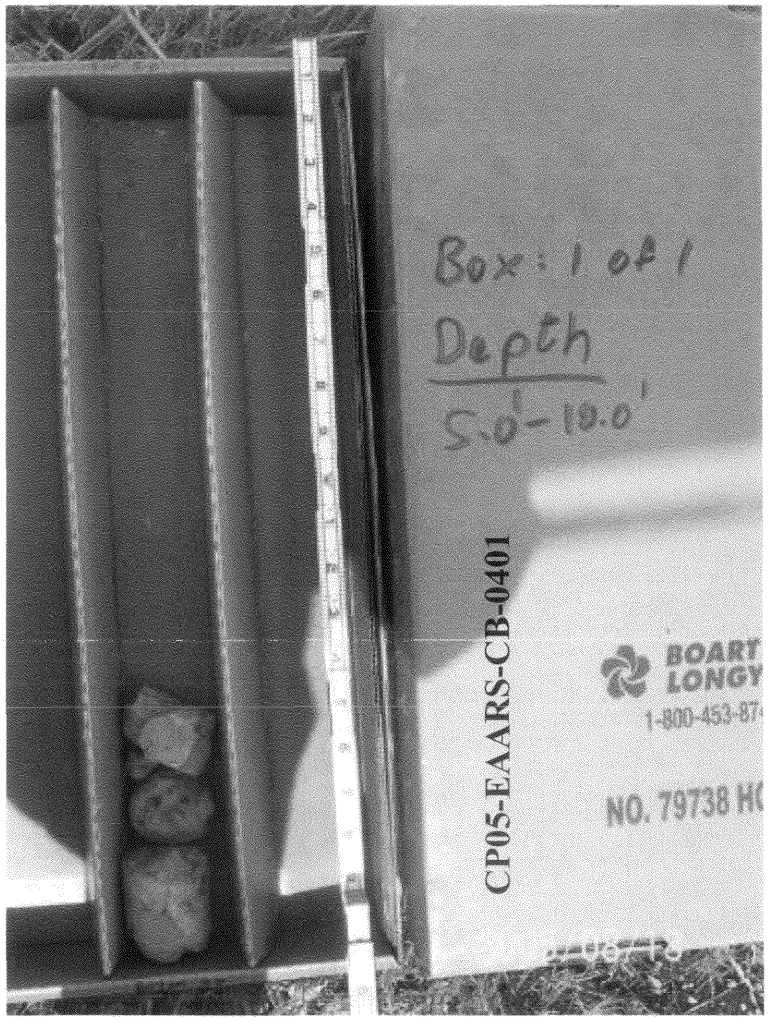

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0397 | |
| Location | Interior | |
| Depth (feet) | Percentage Recovery | RQD |
| 2.00 to 7.00 | 24.00 | 8.00 |
| 7.00 to 12.00 | 6.00 | 0 |



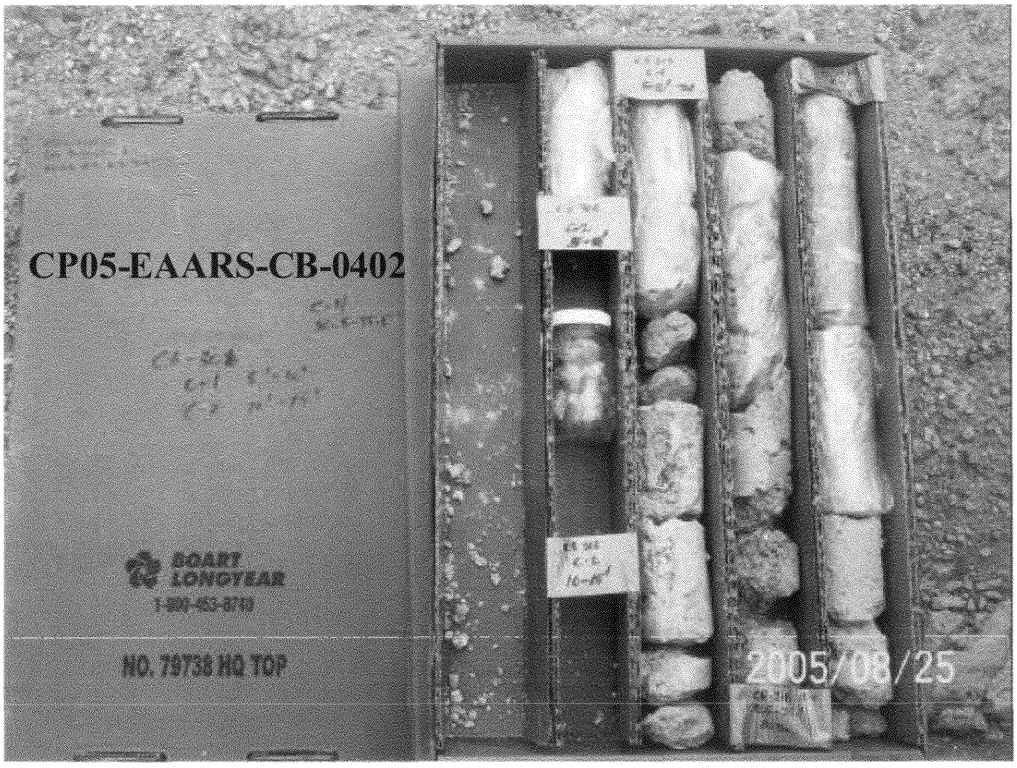

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0398 | |
| Location | South Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 5.00 to 7.00 | 25.00 | 0 |
| 7.00 to 12.00 | 60.00 | 45.00 |
| 12.00 to 17.00 | 29.00 | 19.00 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0399 | |
| Location | South-West Corner | |
| Depth (feet) | Percentage Recovery | RQD |
| 6.00 to 9.00 | 66.67 | 19.44 |
| 9.00 to 13.00 | 31.25 | 12.50 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0400 | |
| Location | West Central Farm Road | |
| Depth (feet) | Percentage Recovery | RQD |
| 4.00 to 9.00 | 40.00 | 0 |
| 9.00 to 15.00 | 45.00 | 13.33 |
| 15.00 to 20.00 | 80.00 | 25.00 |
| 20.00 to 25.00 | 20.00 | 0 |




| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0401 | |
| Location | West Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 5.00 to 10.00 | 10.00 | 0 |




| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0402 | |
| Location | South Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 5.00 to 10.00 | 44.00 | 32.00 |
| 10.00 to 15.00 | 10.00 | 0 |

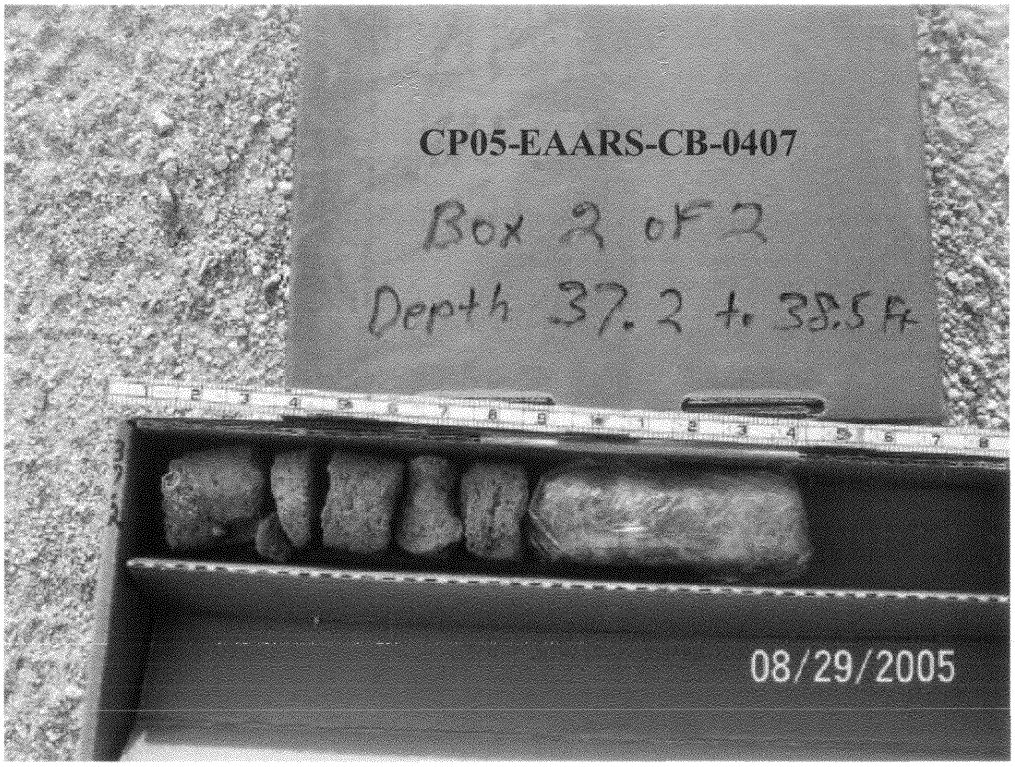
| | | |
|---|---|---|
| **Project** | Everglades Agricultural Area | |
| **Boring Number** | CP05-EAARS-CB-0403 | |
| **Location** | West Central Side | |
| **Depth (feet)** | **Percentage Recovery** | **RQD** |
| 5.00 to 10.00 | 55.00 | 25.00 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0404 | |
| Location | West Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 1.50 to 6.50 | 42.00 | 28.00 |
| 6.50 to 11.50 | 6.00 | 0 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0405 | |
| Location | Interior | |
| Depth (feet) | Percentage Recovery | RQD |
| 4.00 to 9.00 | 45.00 | 13.00 |
| 9.00 to 14.00 | 34.00 | 9.00 |
| 25.00 to 30.00 | 10.00 | 0 |
| 30.00 to 35.00 | 0 | 0 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0406 | |
| Location | North Section Interior | |
| Depth (feet) | Percentage Recovery | RQD |
| 0.00 to 5.00 | 46.00 | 30.00 |
| 5.00 to 10.00 | 52.00 | 35.00 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0407 (Box 1 of 2) | |
| Location | East Side | |
| **Depth (feet)** | **Percentage Recovery** | **RQD** |
| 5.50 to 10.50 | 50.00 | 18.00 |
| 28.50 to 33.50 | 28.00 | 14.00 |
| 33.50 to 38.50 | 74.00 | 48.00 |




| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0407 (Box 2 of 2) | |
| Location | East Side | |
| Depth (feet) | Percentage Recovery | RQD |
| 5.50 to 10.50 | 50.00 | 18.00 |
| 28.50 to 33.50 | 28.00 | 14.00 |
| 33.50 to 38.50 | 74.00 | 48.00 |

| Project | Everglades Agricultural Area | |
|---|---|---|
| Boring Number | CP05-EAARS-CB-0416 | |
| Location | South Levee Road | |
| Depth (feet) | Percentage Recovery | RQD |
| 12.00 to 17.00 | 61.67 | 49.17 |

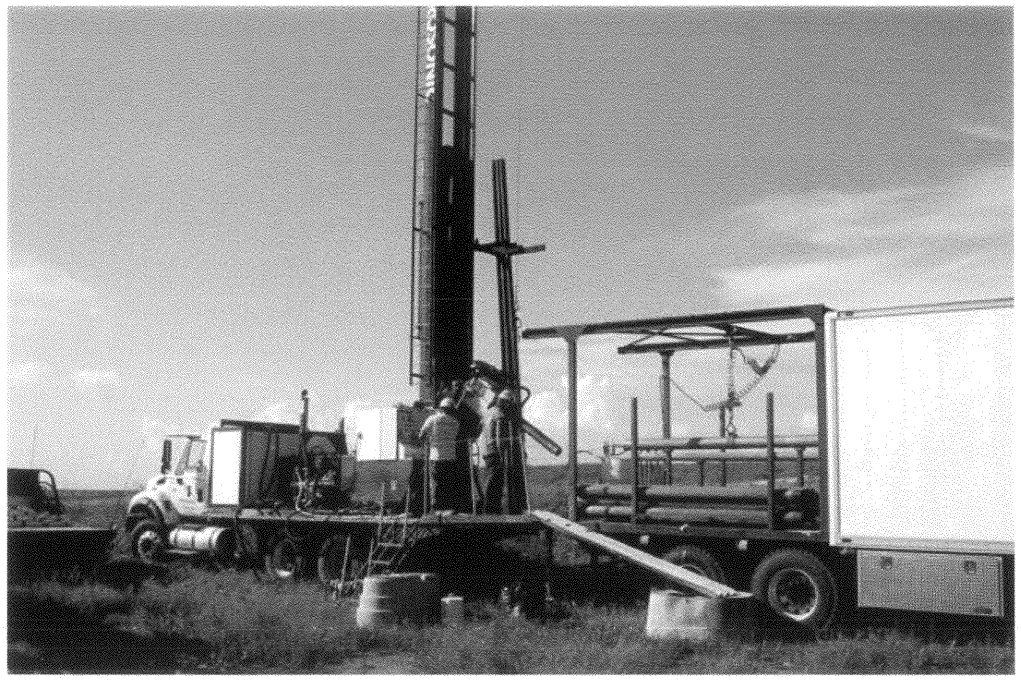
# APPENDIX 3
# OTHER PHOTOGRAPHS

## Rotosonic Drilling Technique

Setup of the Rotosonic Drill Rig

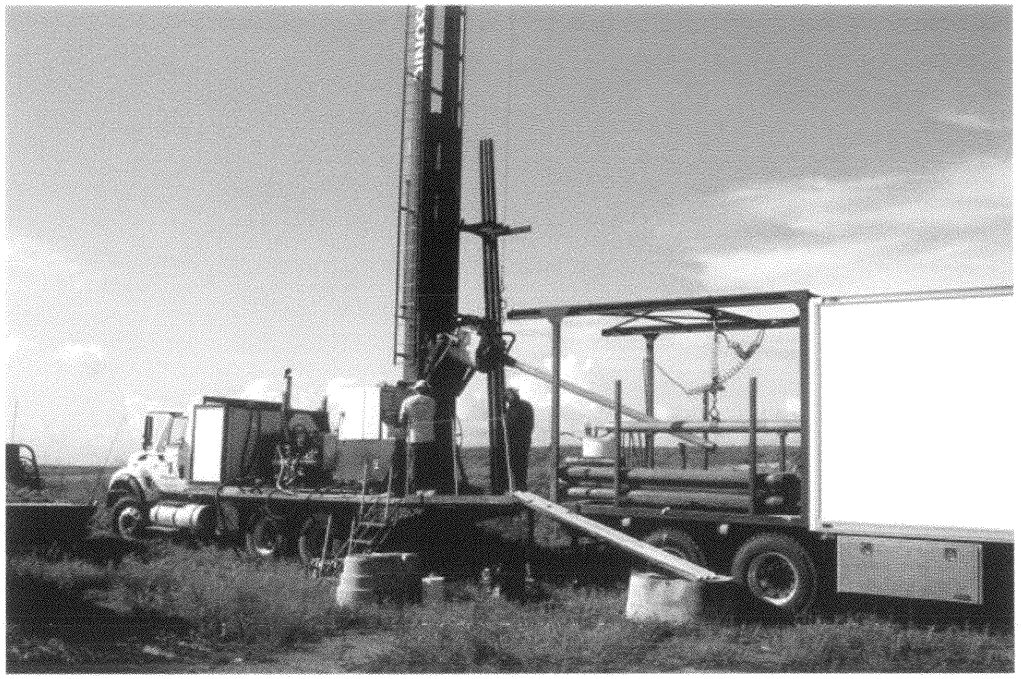
Setup of the Rotosonic Drill Rig

Hydraulic arm used for lifting



Attaching the next core barrel extension

Using the hydraulics to lift the core barrel extension piece



Lowering casing into the borehole

Core Recovery in Progress

Core after bagging

Core recovered from the Rotosonic drilling

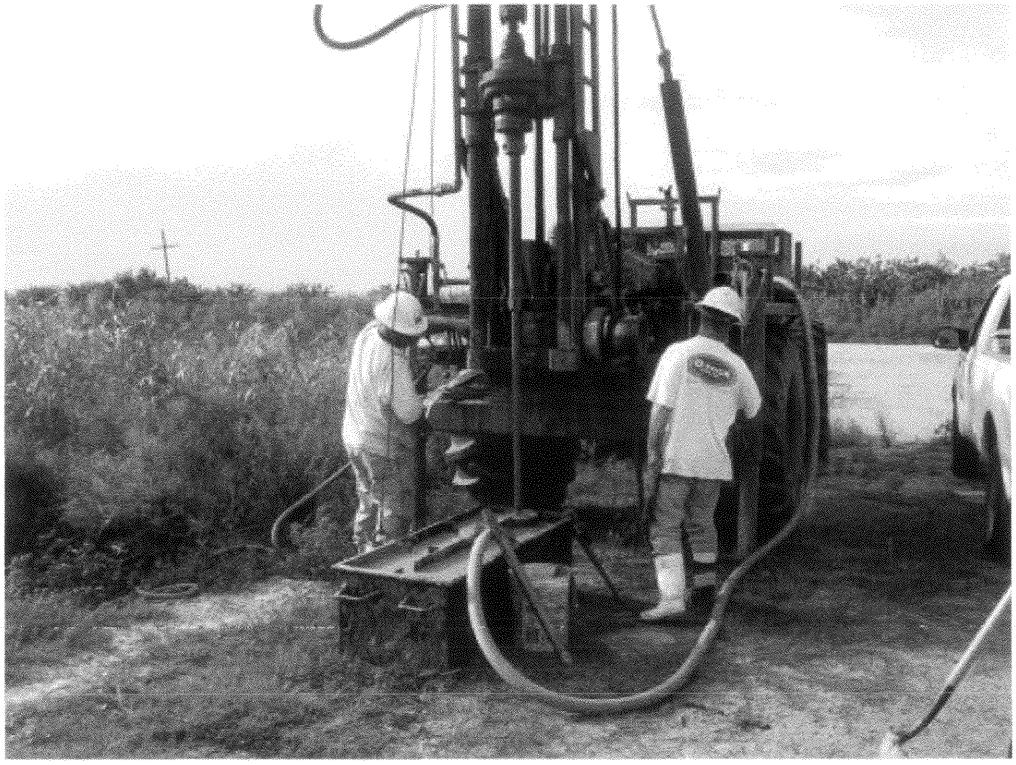
2B
3B
2005/08/04

Hydraulic Testing

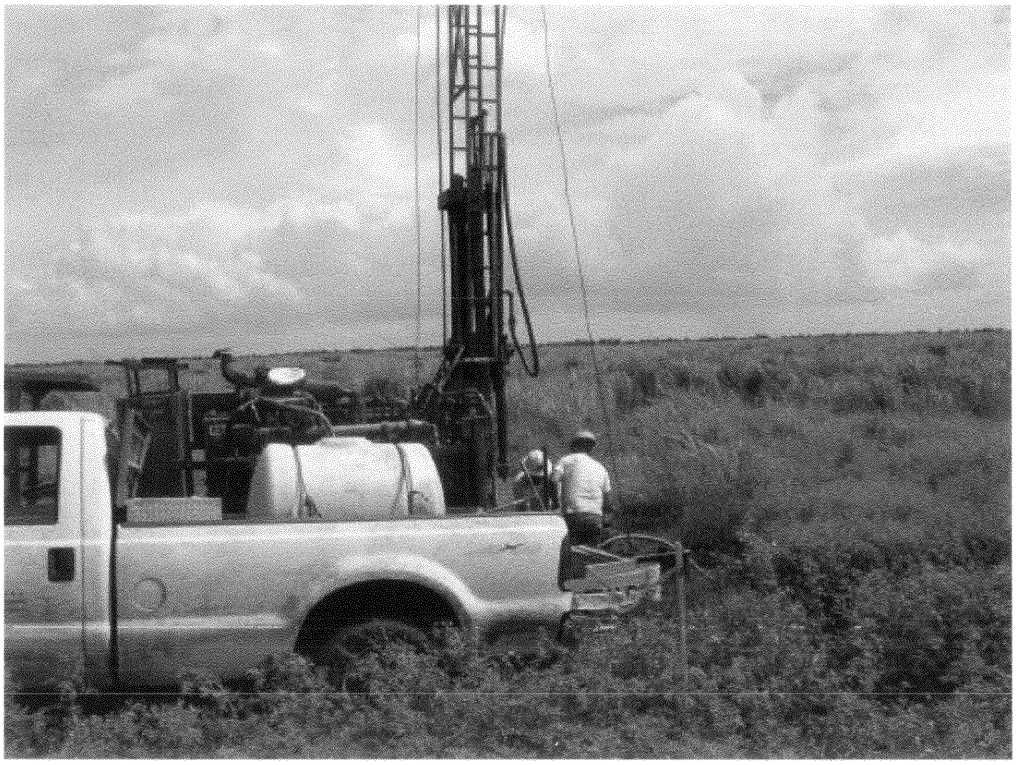
## Rotary Wash Boring

Setting up a Diedrich D-50 drill rig

Drilling with bentonite mud



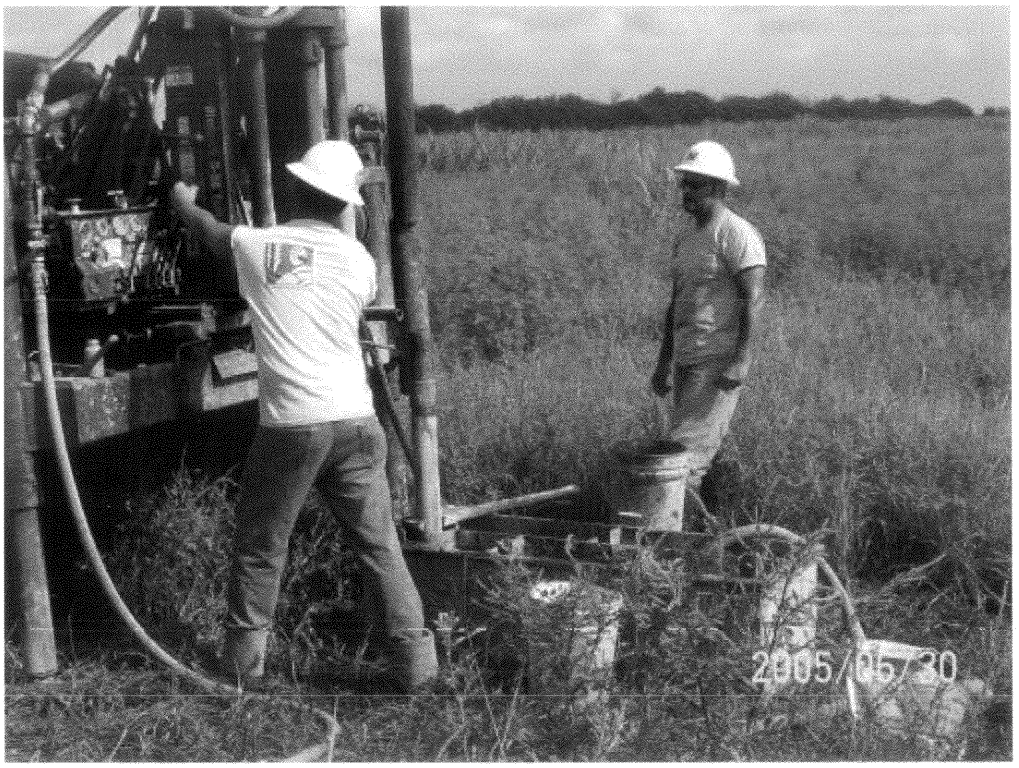
Diedrich D-50 drill rig with water supply tank



Grouting a hole

Pulling drill rods

Setting up for coring



# APPENDIX 4

# APPENDIX 4
# HYDRAULIC INTERVAL TESTS

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0282 |
| **Project No.** | 142204 | | |
| **Client** | SFWMD | **Interval Test** From | 60 |
| | | To | 70 |

Sheet 1 of 2

| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 60 | | Reference Point | Drilling Platform | | | |
| Open Hole Depth | 64 | After test | Height Above Ground Level | 5ft | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 20 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 15gpm | | Volume Tank | Yes |
| Static Water Level | 8.2 | | Generator | 6000 | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 07/30/2005 | 9 | 51 | 0.00 | 8.2 | 0 | | 0 | |
| | | | 0.25 | 10 | 1.8 | | | |
| | | | 0.50 | 10.33 | 2.13 | | | |
| | | | 0.75 | 10.44 | 2.24 | | | |
| | | | 1.00 | 10.49 | 2.29 | | | |
| | | | 1.50 | 10.52 | 2.32 | | | |
| | | | 2.00 | 10.55 | 2.35 | | | |
| | | | 2.50 | 10.58 | 2.38 | | | |
| | | | 3.00 | 10.58 | 2.38 | | | |
| | | | 3.50 | 10.59 | 2.39 | | | |
| | | | 4.00 | 10.59 | 2.39 | | | |
| | | | 4.50 | 10.6 | 2.4 | | | |
| | | | 5.00 | 10.6 | 2.4 | | | |
| | | | 5.50 | 10.6 | 2.4 | | | |
| | | | 6.00 | 10.61 | 2.41 | | | |
| | | | 8.00 | 10.64 | 2.44 | | | |
| | | | 10.00 | 10.65 | 2.45 | | 18 | Check Flow Rate |
| | | | 12.00 | 10.66 | 2.46 | | | 2 minutes for 36 gallons |
| | | | 14.00 | 10.65 | 2.45 | | | |
| | | | 16.00 | 10.68 | 2.48 | | | |
| | | | 18.00 | 10.68 | 2.48 | | | |
| | | | 20.00 | 10.66 | 2.46 | | 18 | Check Flow Rate |
| | | | 25.00 | 10.64 | 2.44 | | | 3 minutes for 54 gallons |
| | | | 30.00 | 10.64 | 2.44 | | | Check Flow Rate |
| | | | 35.00 | 10.66 | 2.46 | | | |
| | | | 40.00 | 10.5 | 2.3 | | | |
| | | | 45.00 | 10.48 | 2.28 | | | |
| | | | 50.00 | 10.46 | 2.26 | | | |
| | | | 55.00 | 10.46 | 2.26 | | | |
| | | | 60.00 | 10.46 | 2.26 | | 18 | Check Flow Rate |
| | | | 75.00 | 10.45 | 2.25 | | | 1 minute for 18 gallons |
| | 11 | 21 | 90.00 | 10.45 | 2.25 | | | |

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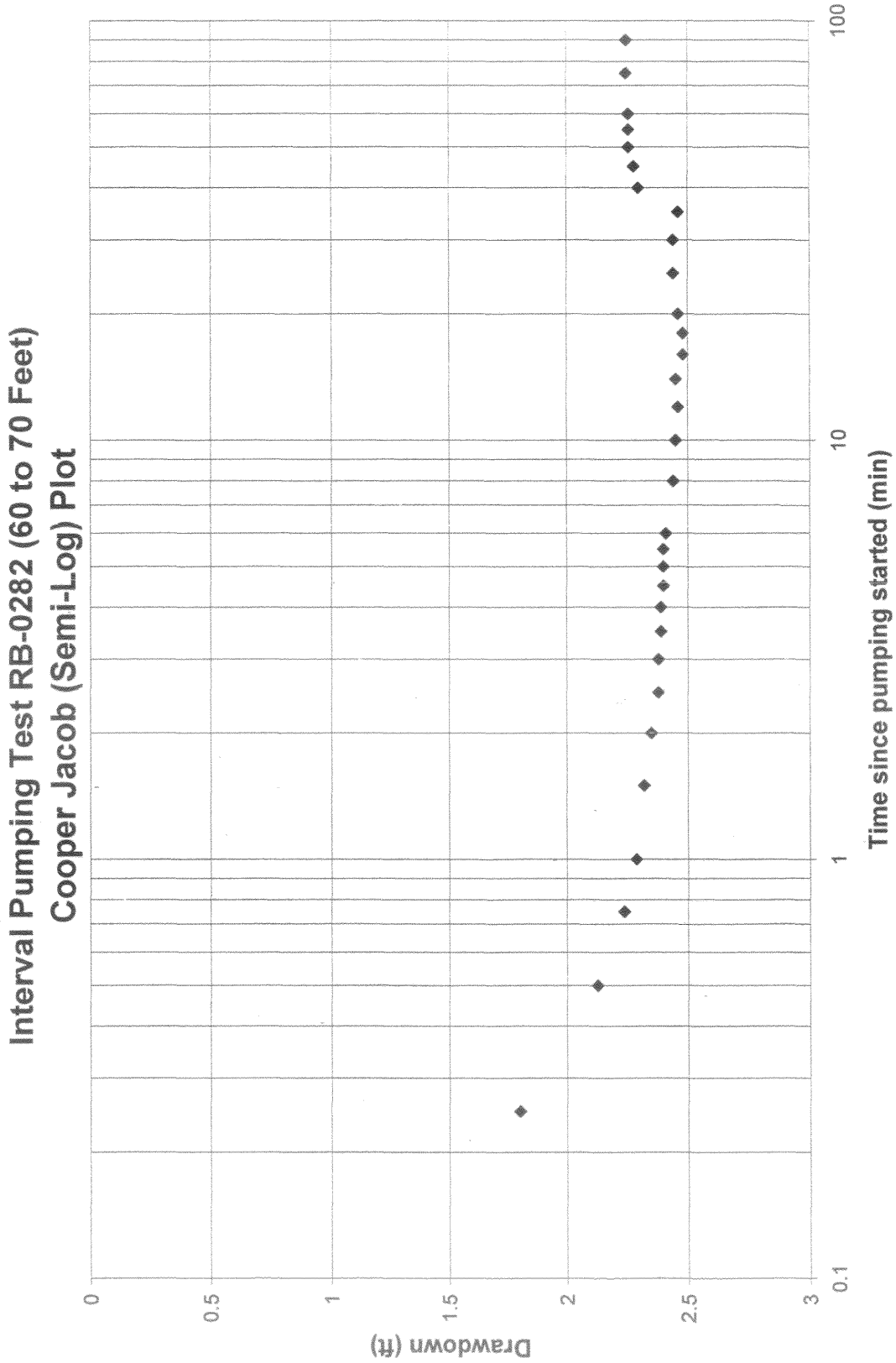
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0282** |
| **Project No.** | 142204 | | |
| **Client** | SFWMD | **Interval Test** From | 60 |
| | | To | 70 |

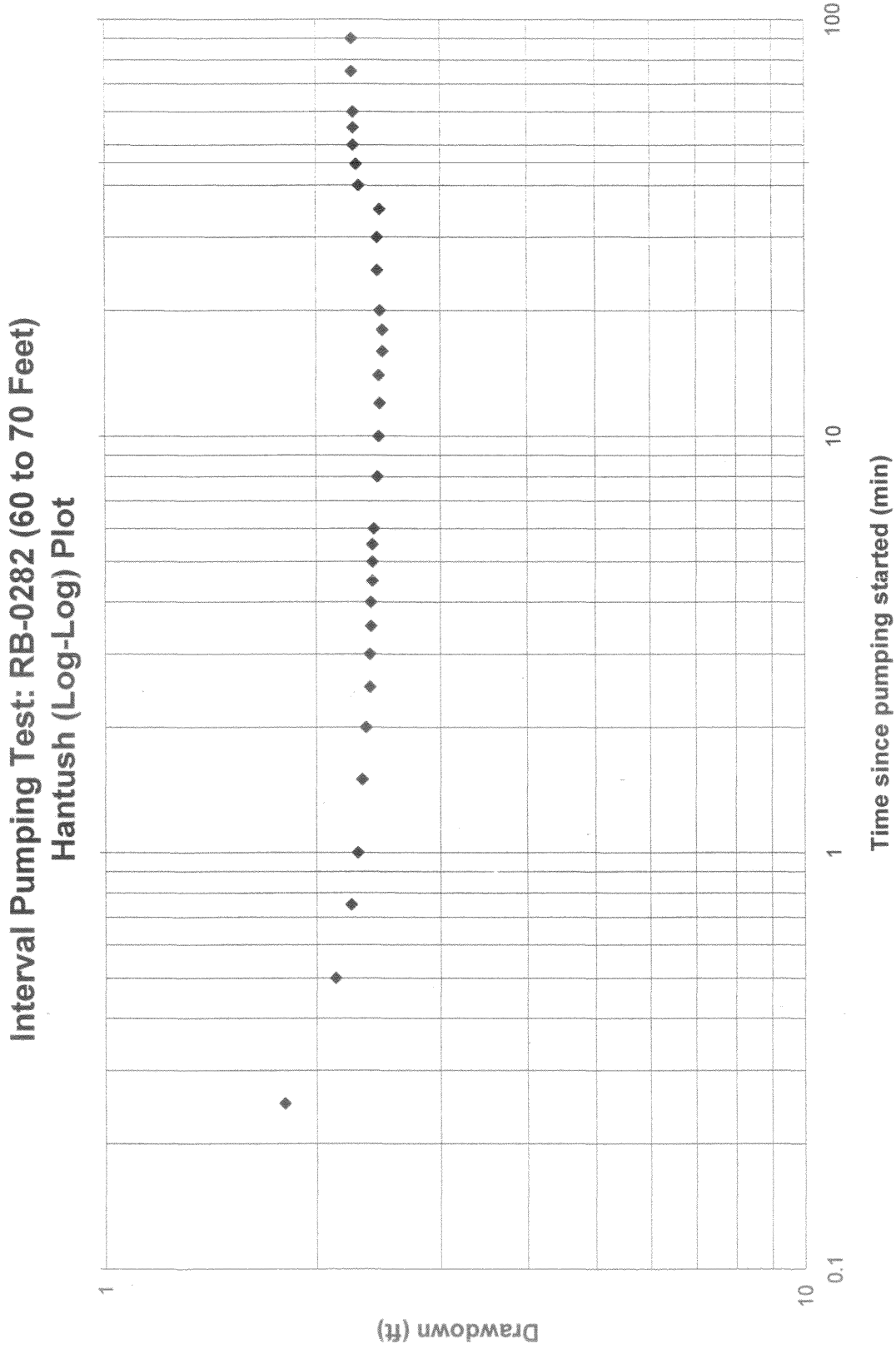
Sheet 2 of 2

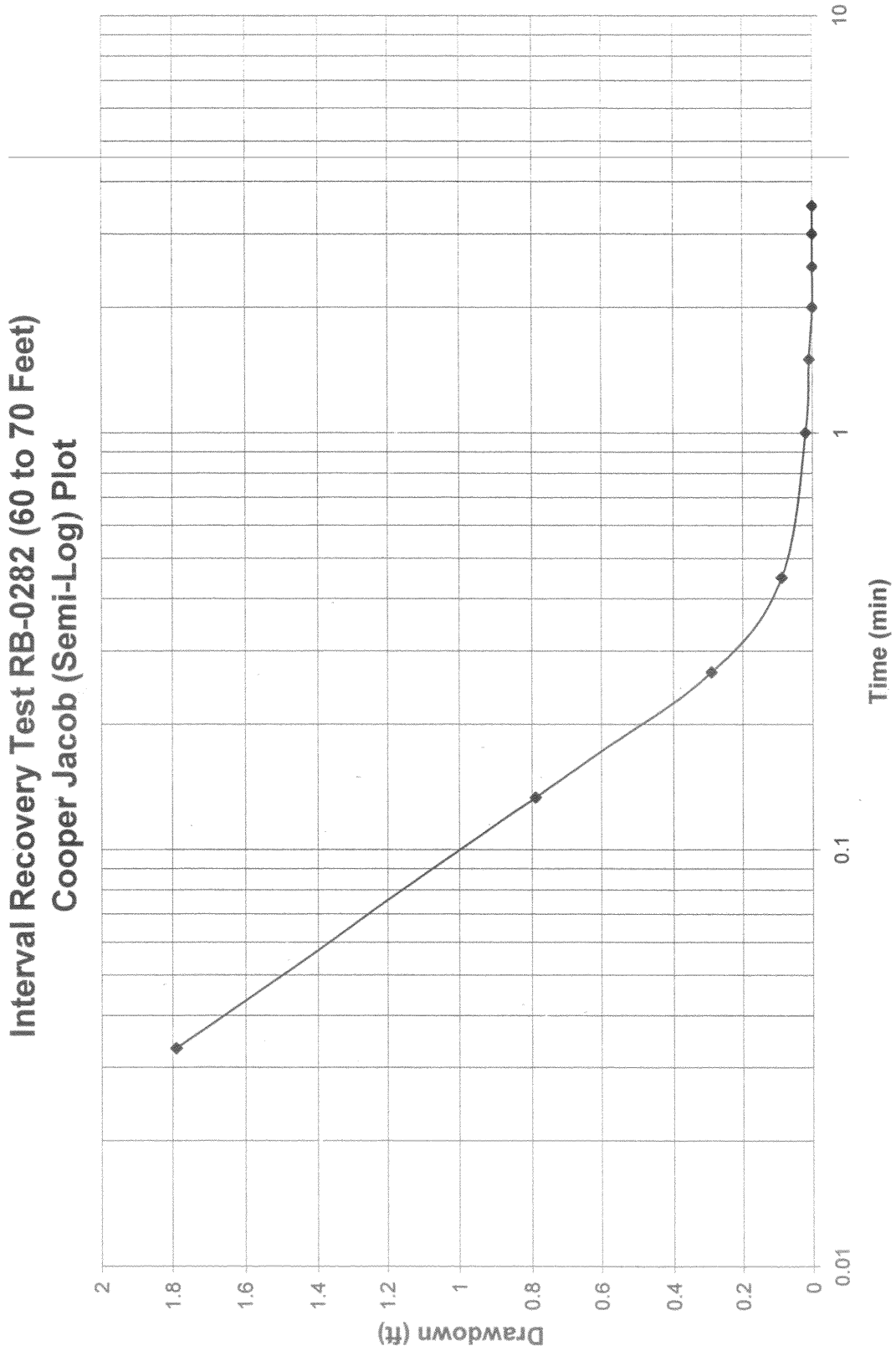
| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 60 | | Reference Point | Drilling Platform | | | |
| Open Hole Depth | 64 | After test | Height Above Ground Level | 5ft | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 20 | | Pump Details | Diameter | 3" | Discharge | Flowmeter: No |
| | | | | Capacity | 15gpm | | Volume Tank: Yes |
| Static Water Level | 8.2 | | | Generator | | Water Level | Transducer: Yes |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 07/30/2005 | 11 | 21 | 0.00 | 10.45 | 2.25 | | 18 | Last Flow Rate |
| | | | 0.03 | 10 | 1.8 | | | |
| | | | 0.13 | 9 | 0.8 | | | |
| | | | 0.26 | 8.5 | 0.3 | | | |
| | | | 0.45 | 8.3 | 0.1 | | | |
| | | | 1.00 | 8.23 | 0.03 | | | |
| | | | 2.00 | 8.22 | 0.02 | | | |
| | | | 3.00 | 8.21 | 0.01 | | | |
| | | | 4.00 | 8.205 | 0.005 | | | |
| | | | 5.00 | 8.21 | 0.01 | | | |
| | | | 6.00 | 8.21 | 0.01 | | | |
| | | | 7.00 | 8.21 | 0.01 | | | |
| | | | 8.00 | 8.21 | 0.01 | | | |
| | | | 9.83 | 8.21 | 0.01 | | | |
| | | | 10.00 | 8.21 | 0.01 | | | |
| | | | 12.00 | 8.21 | 0.01 | | | |
| | 11 | 35 | 14.00 | 8.21 | 0.01 | | | |
| | | | 16.83 | | | | | |
| | | | 18.83 | | | | | |
| | | | 20.00 | | | | | |
| | | | 25.00 | | | | | |
| | | | 30.00 | | | | | |


Interval Pumping Test RB-0282 (60 to 70 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
3
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test: RB-0282 (60 to 70 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0282 (60 to 70 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.01
0.1
1
10
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0282 |
| **Project No.** | 142204 | | |
| **Client** | SFWMD | **Interval Test** From | 80 |
| | | To | 90 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | East 778268 | North 766996 | Sheet 1 of 2 | | |
| Casing Depth | 80 | Reference Point | Drilling Platform | | | | |
| Open Hole Depth | 87 After test | Height Above Ground Level | 5ft | | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 20 | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 15gpm | | Volume Tank | Yes |
| Static Water Level | 8.21 | | Generator | 6000 | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 07/30/2005 | 13 | 14 | 0.00 | 8.21 | 0 | | 0 | |
| | | | 0.16 | 8.4 | 0.19 | | | |
| | | | 0.25 | 8.46 | 0.25 | | | |
| | | | 0.50 | 8.46 | 0.25 | | | |
| | | | 0.75 | 8.47 | 0.26 | | | |
| | | | 1.00 | 8.47 | 0.26 | | | |
| | | | 1.50 | 8.48 | 0.27 | | | |
| | | | 2.00 | 8.49 | 0.28 | | | |
| | | | 2.50 | 8.49 | 0.28 | | | |
| | | | 3.00 | 8.49 | 0.28 | | | |
| | | | 3.50 | 8.49 | 0.28 | | | |
| | | | 4.00 | 8.49 | 0.28 | | | $H_2S$ smell, |
| | | | 4.50 | 8.49 | 0.28 | | | turns black on |
| | | | 5.00 | 8.49 | 0.28 | | | exposure to air |
| | | | 5.50 | 8.49 | 0.28 | | | |
| | | | 6.00 | 8.49 | 0.28 | | | |
| | | | 8.00 | 8.49 | 0.28 | | | |
| | | | 10.00 | 8.5 | 0.29 | | 18 | Check Flow Rate |
| | | | 12.00 | 8.5 | 0.29 | | | 1 minute for 18 gallons |
| | | | 14.00 | 8.5 | 0.29 | | | |
| | | | 16.00 | 8.5 | 0.29 | | | |
| | | | 18.00 | 8.5 | 0.29 | | | |
| | | | 20.00 | 8.5 | 0.29 | | 18 | Check Flow Rate |
| | | | 25.00 | 8.51 | 0.3 | | | 2 minutes for 36 gallons |
| | | | 30.00 | 8.5 | 0.29 | | | Check Flow Rate |
| | | | 35.00 | 8.51 | 0.3 | | | |
| | | | 40.00 | 8.51 | 0.3 | | | |
| | | | 45.00 | 8.51 | 0.3 | | | |
| | | | 50.00 | 8.51 | 0.3 | | | |
| | | | 55.00 | | | | | |
| | | | 60.00 | | | | | Check Flow Rate |

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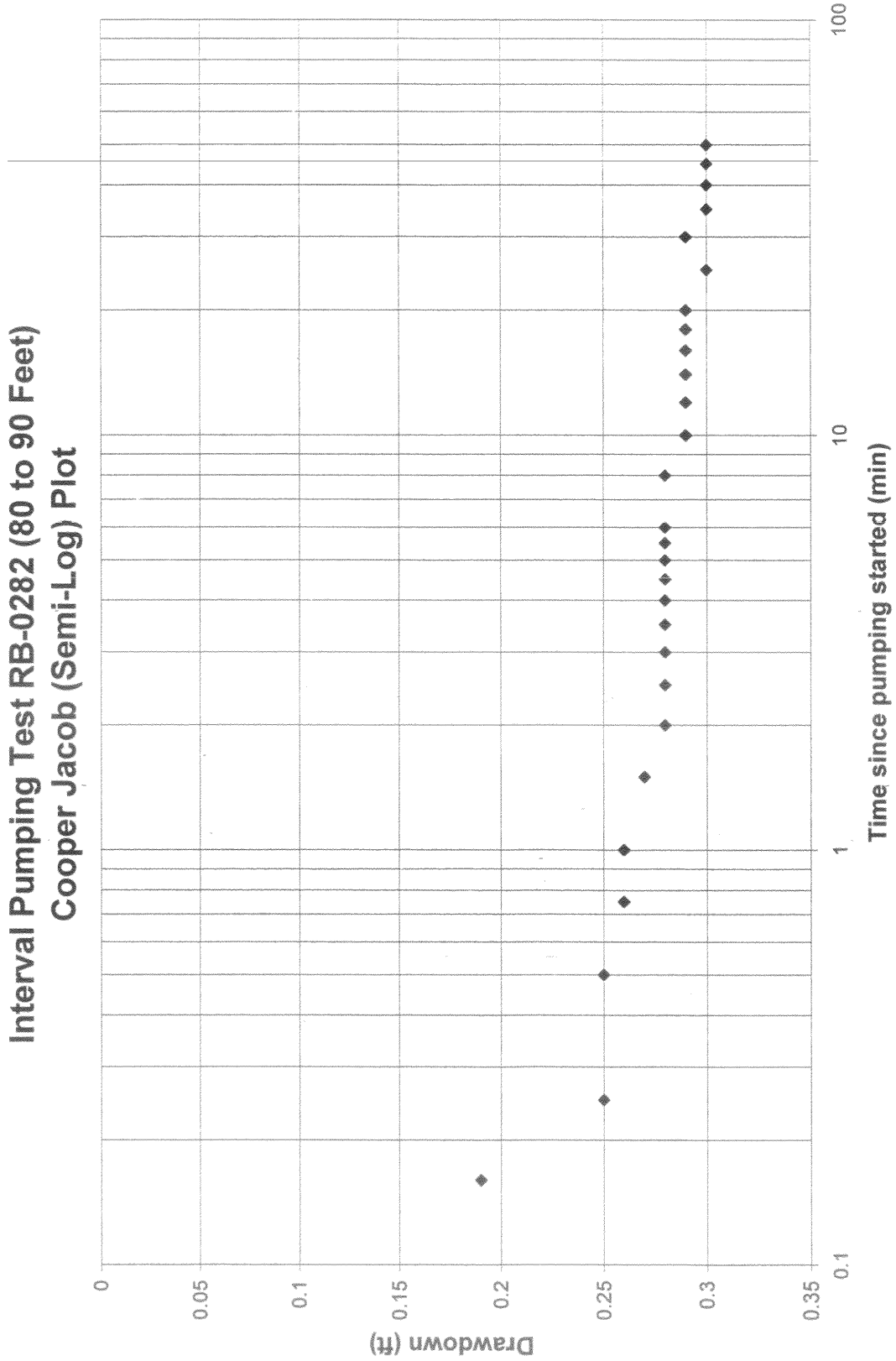
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0282** |
| **Project No.** | 142204 | | |
| **Client** | SFWMD | **Interval Test** From | 80 |
| | | To | 90 |

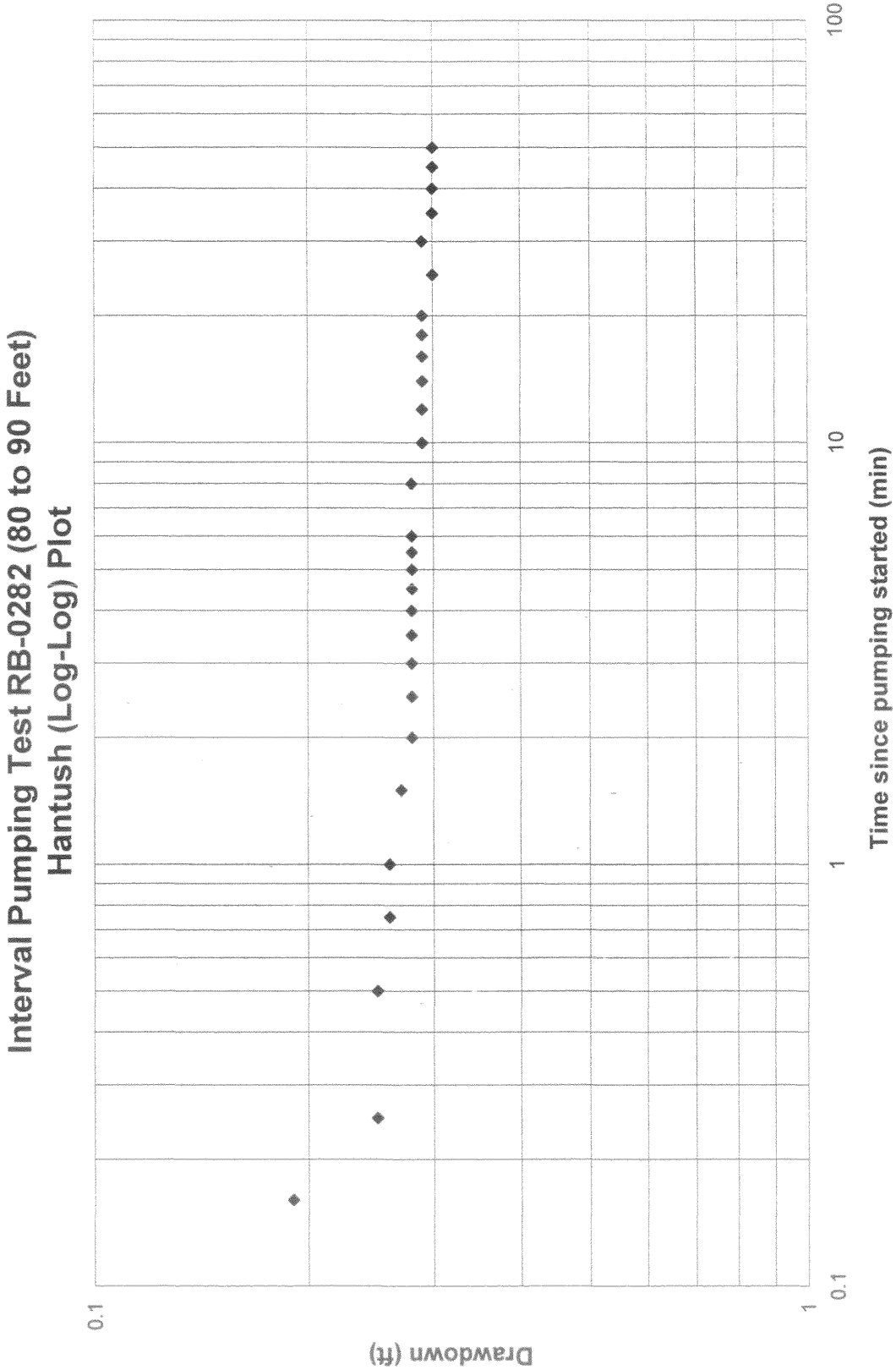
Sheet 2 of 2

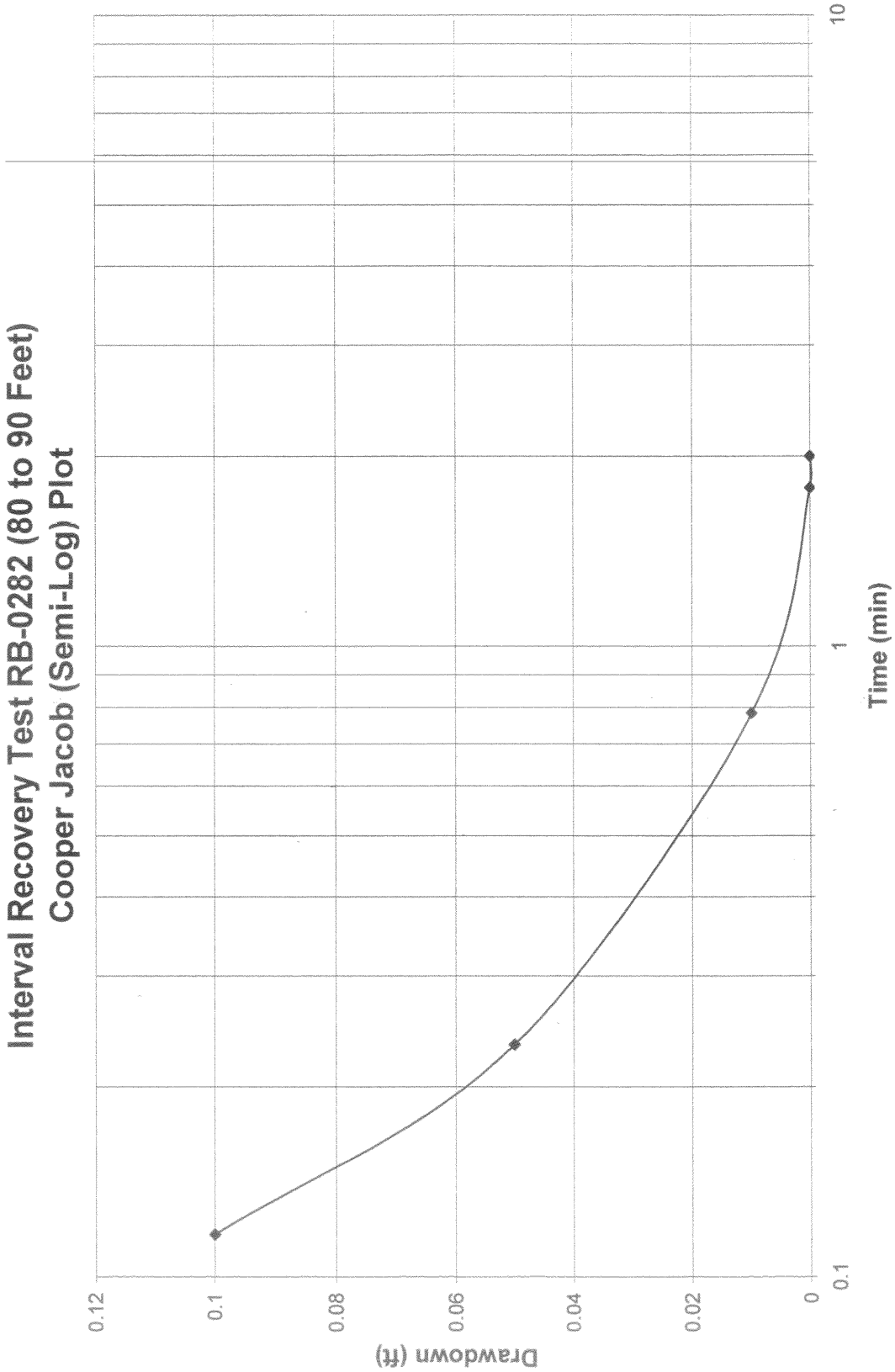
| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 80 | | Reference Point | Drilling Platform | | | |
| Open Hole Depth | 87 | After test | Height Above Ground Level | 5ft | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 20 | | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | | Capacity | 15gpm | | Volume Tank | Yes |
| Static Water Level | 8.21 | | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 07/30/2005 | | | 0.00 | 8.51 | 0.3 | | 18 | Last Flow Rate |
| | | | 0.01 | 8.4 | 0.19 | | | |
| | | | 0.11 | 8.35 | 0.14 | | | |
| | | | 0.23 | 8.3 | 0.09 | | | |
| | | | 0.78 | 8.26 | 0.05 | | | |
| | | | 1.66 | 8.25 | 0.04 | | | |
| | | | 2.00 | 8.25 | 0.04 | | | |
| | | | 3.00 | 8.25 | 0.04 | | | |
| | | | 4.00 | 8.25 | 0.04 | | | |
| | | | 5.00 | 8.24 | 0.03 | | | |
| | | | 6.00 | 8.24 | 0.03 | | | |
| | | | 7.00 | 8.24 | 0.03 | | | |
| | | | 8.00 | 8.24 | 0.03 | | | |
| | | | 9.83 | 8.24 | 0.03 | | | |
| | | | 10.00 | 8.24 | 0.03 | | | |
| | | | 12.00 | 8.25 | 0.04 | | | |
| | | | 14.00 | 8.25 | 0.04 | | | |
| | | | 16.83 | 8.25 | 0.04 | | | |
| | | | 18.83 | 8.25 | 0.04 | | | |
| | | | 20.00 | 8.25 | 0.04 | | | |
| | | | 25.00 | 8.25 | 0.04 | | | |
| | | | 30.00 | 8.25 | 0.04 | | | |


Interval Pumping Test RB-0282 (80 to 90 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0282 (80 to 90 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.1
1
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0282 (80 to 90 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.12
0.1
0.08
0.06
0.04
0.02
0
0.1
1
10
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0282** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** | From 120ft |
| | | | To 130ft |

Sheet 1 of 3

| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 120 | | Reference Point | Breakout | | | |
| Open Hole Depth | 130 | After test | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 50 | | Pump Details | Diameter | 2" | Discharge | Flowmeter | No |
| | | | | Capacity | 2gpm | | Volume Tank | Yes |
| Static Water Level | 8.21 | | | Generator | 12 volt | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| Jul-31 | 10 | 24 | 0.00 | 8.19 | 0 | | 0 | |
| | | | 0.33 | 8.93 | 0.74 | | | |
| | | | 0.66 | 9.62 | 1.43 | | | |
| | | | 0.75 | | | | | |
| | | | 1.00 | 10.28 | 2.09 | | | |
| | | | 1.50 | 11.33 | 3.14 | | | |
| | | | 2.00 | 12.47 | 4.28 | | | |
| | | | 2.50 | 13.43 | 5.24 | | | |
| | | | 3.00 | 14.06 | 5.87 | | | |
| | | | 3.50 | 14.81 | 6.62 | | | |
| | | | 4.00 | 15.54 | 7.35 | | | |
| | | | 4.50 | 16.16 | 7.97 | | | |
| | | | 5.00 | 16.79 | 8.6 | | | |
| | | | 5.50 | 17.37 | 9.18 | | | |
| | | | 6.00 | 17.92 | 9.73 | | | |
| | | | 8.00 | 19.83 | 11.64 | | | 9' to 13.5' for 10 gallons |
| | | | 10.00 | 21.45 | 13.26 | | 2.22 | Check Flow Rate |
| | | | 12.00 | 22.77 | 14.58 | | | |
| | | | 14.00 | 23.69 | 15.5 | | | |
| | | | 16.00 | 24.42 | 16.23 | | | |
| | | | 18.00 | 25.02 | 16.83 | | 2.42 | 9' to 17:15 for 20 gallons |
| | | | 20.00 | 25.49 | 17.3 | | | Check Flow Rate |
| | | | 25.00 | 26.3 | 18.11 | | 2.44 | 9' to 21:15 for 30 gallons |
| | | | 30.00 | 26.71 | 18.52 | | | Check Flow Rate |
| | | | 35.00 | 27.1 | 18.91 | | 2.44 | 9' to 29:30 for 50 gallons |
| | | | 40.00 | 27.38 | 19.19 | | | |
| | | | 45.00 | 27.53 | 19.34 | | | |
| | | | 50.00 | 27.68 | 19.49 | | | |
| | | | 55.00 | 27.75 | 19.56 | | 2.42 | 1:08:00 to 1:16:15 for 20 gallons |
| | | | 60.00 | 27.81 | 19.62 | | | Check Flow Rate |
| | | | 75.00 | 27.98 | 19.79 | | | |
| | | | 90.00 | 27.94 | 19.75 | | | |
| | | | 105.00 | 27.91 | 19.72 | | | |
| | | | 120.00 | 27.82 | 19.63 | | | |

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0282 |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** | From 120ft |
| | | | To 130ft |

Sheet 2 of 3

| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 120 | | Reference Point | Breakout | | | |
| Open Hole Depth | 130 | After test | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 50 | | Pump Details | Diameter | 2" | Discharge | Flowmeter: No |
| | | | | Capacity | 2gpm | | Volume Tank: Yes |
| Static Water Level | 8.21 | | | Generator | 12 volt | Water Level | Transducer: No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| | 12 | 25 | 0.00 | 27.82 | 19.63 | | | Last Flow Rate |
| | | | 0.30 | 27.00 | 18.81 | | | |
| | | | 0.60 | 26.50 | 18.31 | | | |
| | | | 0.85 | 26.00 | 17.81 | | | |
| | | | 1.15 | 25.50 | 17.31 | | | |
| | | | 1.47 | 25.00 | 16.81 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 2.00 | 24.05 | 15.86 | | | |
| | | | 3.00 | 22.50 | 14.31 | | | |
| | | | 4.00 | 20.80 | 12.61 | | | |
| | | | 5.00 | 19.55 | 11.36 | | | |
| | | | 6.00 | 18.41 | 10.22 | | | |
| | | | 7.00 | 17.37 | 9.18 | | | |
| | | | 8.00 | 16.41 | 8.22 | | | |
| | | | 9.00 | 15.57 | 7.38 | | | |
| | | | 10.00 | 14.80 | 6.61 | | | |
| | | | 12.00 | 13.46 | 5.27 | | | |
| | | | 14.00 | 12.39 | 4.20 | | | |
| | | | 16.00 | 11.36 | 3.17 | | | |
| | | | 18.00 | 10.62 | 2.43 | | | |
| | | | 20.00 | 10.12 | 1.93 | | | |
| | | | 25.00 | 9.24 | 1.05 | | | |
| | | | 30.00 | 8.76 | 0.57 | | | |
| | | | 35.00 | 8.50 | 0.31 | | | |
| | | | 40.00 | 8.37 | 0.18 | | | |
| | | | 50.00 | 8.27 | 0.08 | | | |
| | | | | | | | | |
| | 14 | | 119.00 | 8.25 | 0.06 | | | |

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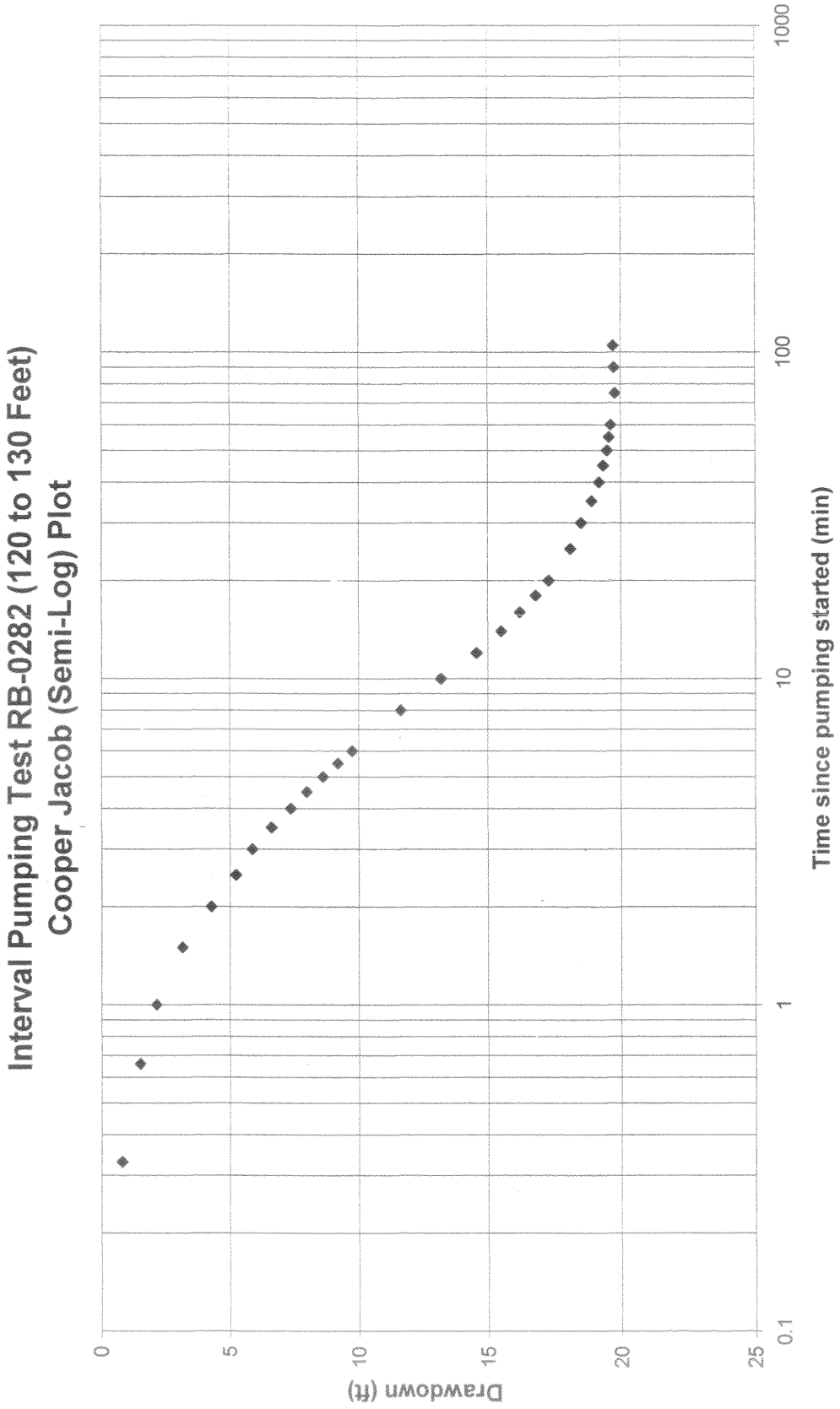
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0282** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** | From 120ft |
| | | | To 130ft |

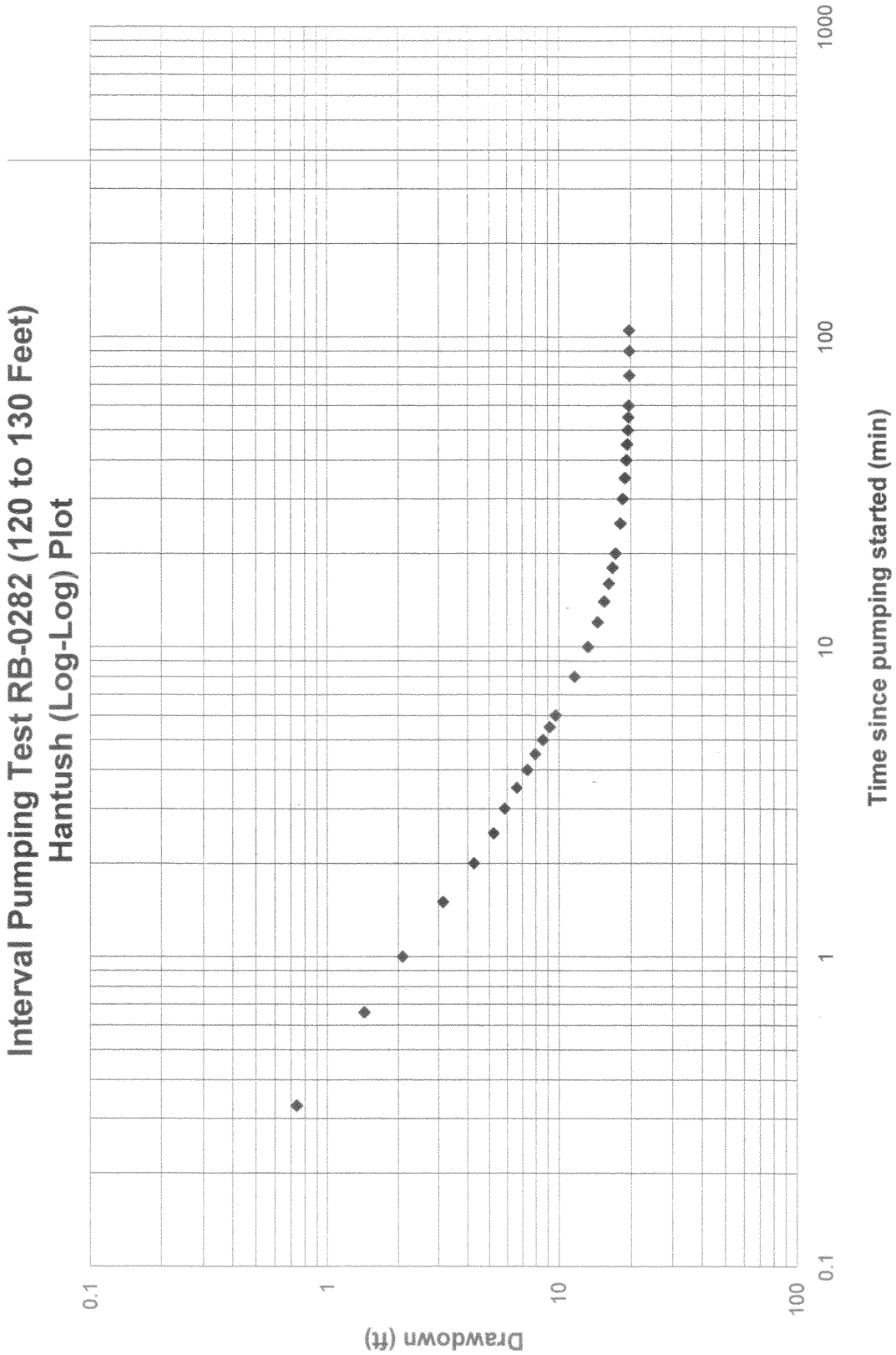
Sheet 3 of 3

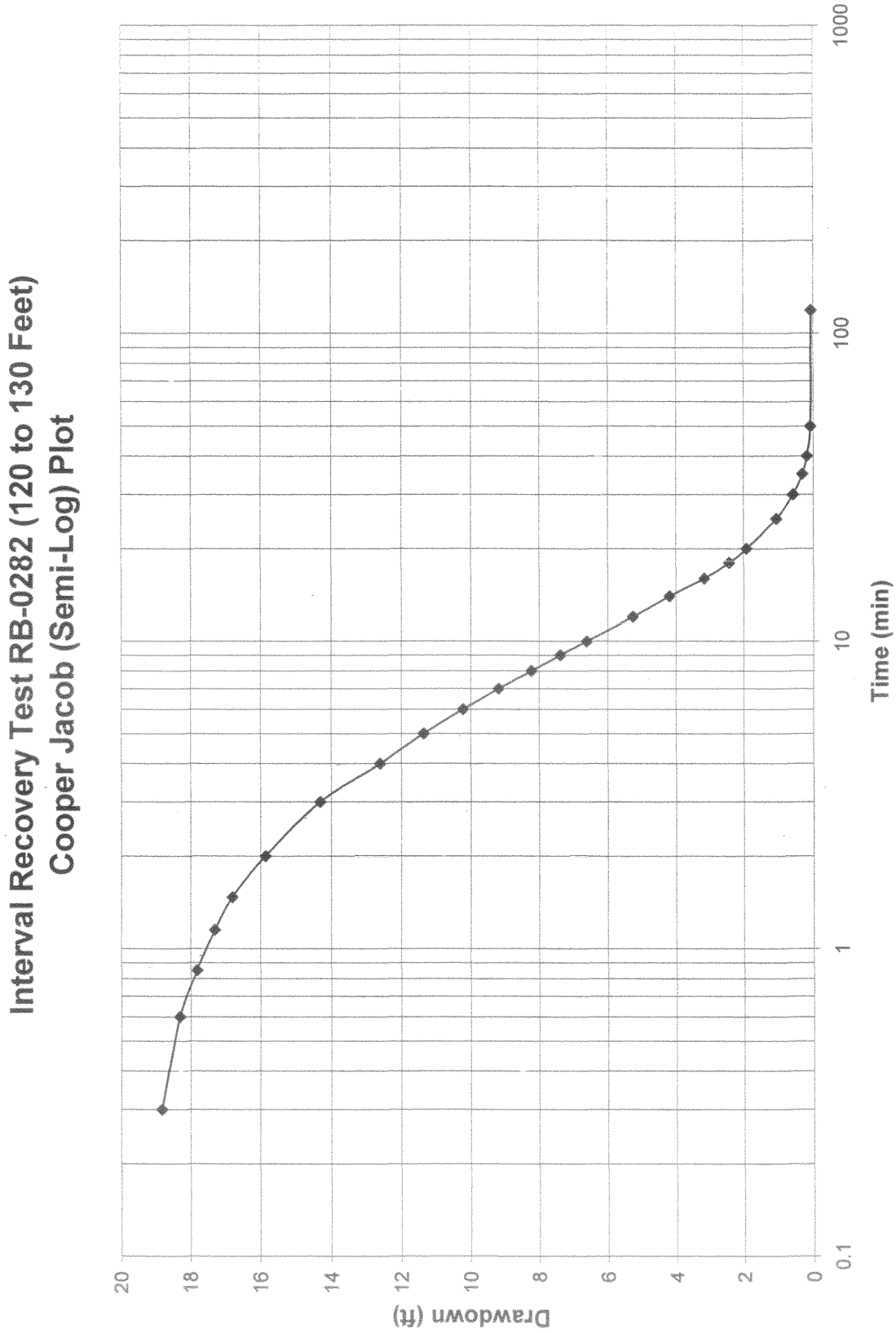
| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 120 | | Reference Point | Breakout | | | |
| Open Hole Depth | 130 | After test | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 50 | | Pump Details | Diameter | 2" | Discharge | Flowmeter | No |
| | | | | Capacity | 2gpm | | Volume Tank | Yes |
| Static Water Level | 8.21 | | | Generator | 12 volt | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 7/31/05 | 9 | 45 | 0.00 | 28.88 | | | | Last Flow Rate |
| | | | 4.00 | | | | | |
| | | | 6.00 | | | | | |
| | | | 6.83 | | | | | |
| | | | 9.01 | | | | | |
| | | | 10.27 | | | | | |
| | | | 11.70 | | | | | |
| | | | 13.45 | | | | | |
| | | | 15.35 | | | | | |
| | | | 17.58 | | | | | |
| | | | 21.15 | | | | | |
| | | | 27.70 | | | | | |


Interval Pumping Test RB-0282 (120 to 130 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
5
10
15
20
25
0.1
1
10
100
1000
Time since pumping started (min)


Interval Pumping Test RB-0282 (120 to 130 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.1
1
10
100
Time since pumping started (min)
0.1
1
10
100
1000


Interval Recovery Test RB-0282 (120 to 130 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
20
18
16
14
12
10
8
6
4
2
0
0.1
1
10
100
1000
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0282 |
| **Project No.** | 142204 | | |
| **Client** | SFWMD | **Interval Test** From | 150 |
| | | To | 160 |

Sheet 1 of 2

| | | | East | North |
|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 150 | | Reference Point | Drilling Platform | | | |
| Open Hole Depth | 156 | After test 156 | Height Above Ground Level | 5ft | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 20 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.95 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 1/8/2005 | 9 | 0 | 0.00 | 7.95 | 0 | | 0 | |
| | | | 0.25 | 8.85 | 0.9 | | | |
| | | | 0.50 | 8.89 | 0.94 | | | |
| | | | 0.75 | 8.89 | 0.94 | | | |
| | | | 1.00 | 8.9 | 0.95 | | | |
| | | | 1.50 | 8.91 | 0.96 | | | |
| | | | 2.00 | 8.92 | 0.97 | | | |
| | | | 2.50 | 8.93 | 0.98 | | | |
| | | | 3.00 | 8.94 | 0.99 | | | |
| | | | 3.50 | 8.94 | 0.99 | | | |
| | | | 4.00 | 8.94 | 0.99 | | | $H_2S$ smell, |
| | | | 4.50 | 8.945 | 0.995 | | | turns black on |
| | | | 5.00 | 8.95 | 1 | | | exposure to air |
| | | | 5.50 | 8.95 | 1 | | | |
| | | | 6.00 | 8.95 | 1 | | | |
| | | | 8.00 | 8.95 | 1 | | | |
| | | | 10.00 | 8.96 | 1.01 | | | Check Flow Rate |
| | | | 12.00 | 8.96 | 1.01 | | | |
| | | | 14.00 | 8.95 | 1 | | | |
| | | | 16.00 | 8.95 | 1 | | 18 | 2 minutes for 36 gallons |
| | | | 18.00 | 8.95 | 1 | | | |
| | | | 20.00 | 8.95 | 1 | | | Check Flow Rate |
| | | | 25.00 | 8.955 | 1.005 | | | |
| | | | 30.00 | 8.96 | 1.01 | | | Check Flow Rate |
| | | | 35.00 | 8.95 | 1 | | 18 | 2 minutes for 36 gallons |
| | | | 40.00 | 8.95 | 1 | | | |
| | | | 45.00 | 8.96 | 1.01 | | | |
| | | | 50.00 | 8.95 | 1 | | | |
| | | | 55.00 | 8.95 | 1 | | 18 | 2 minutes for 36 gallons |
| | | | 60.00 | 8.95 | 1 | | | Check Flow Rate |

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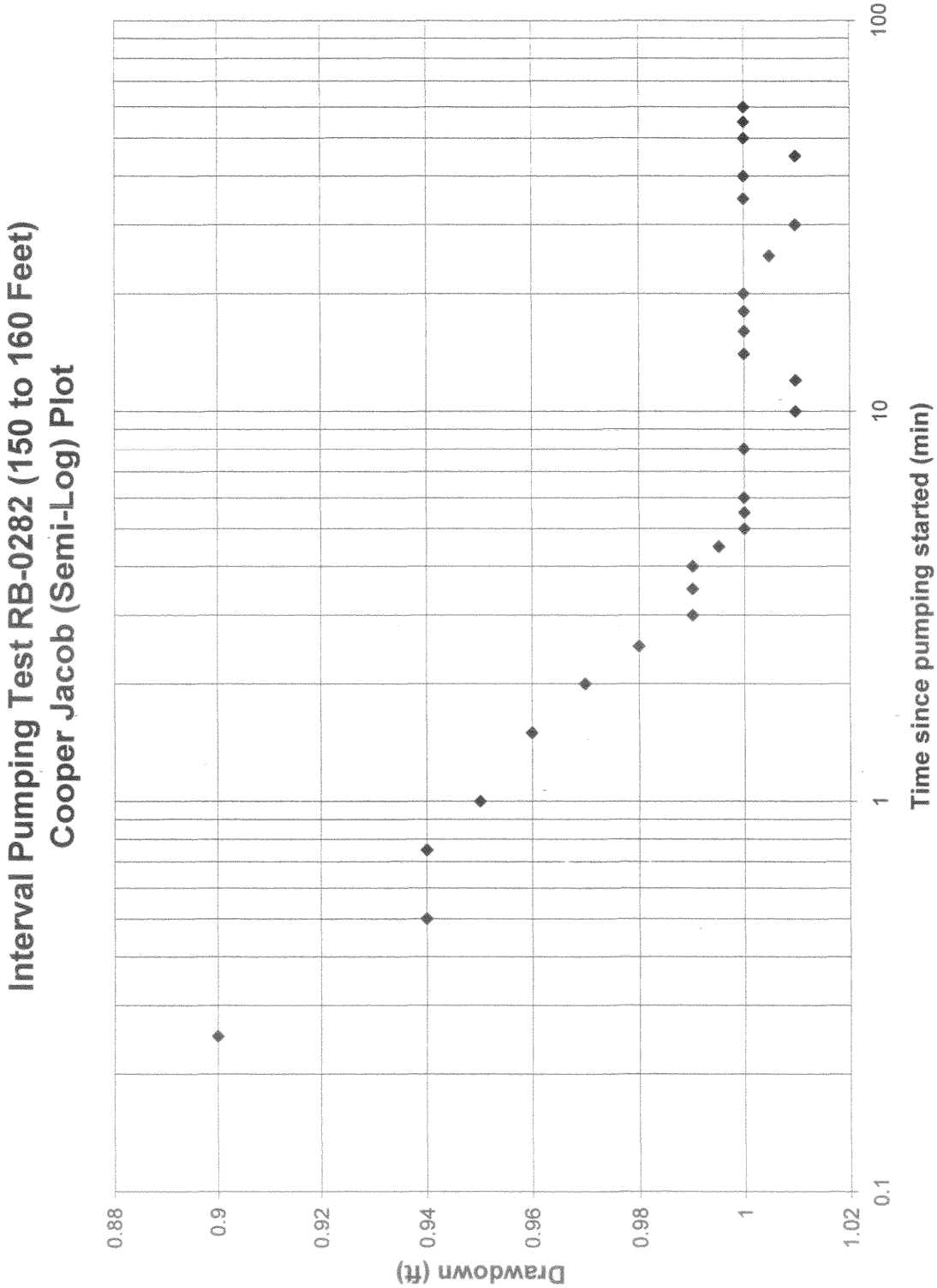
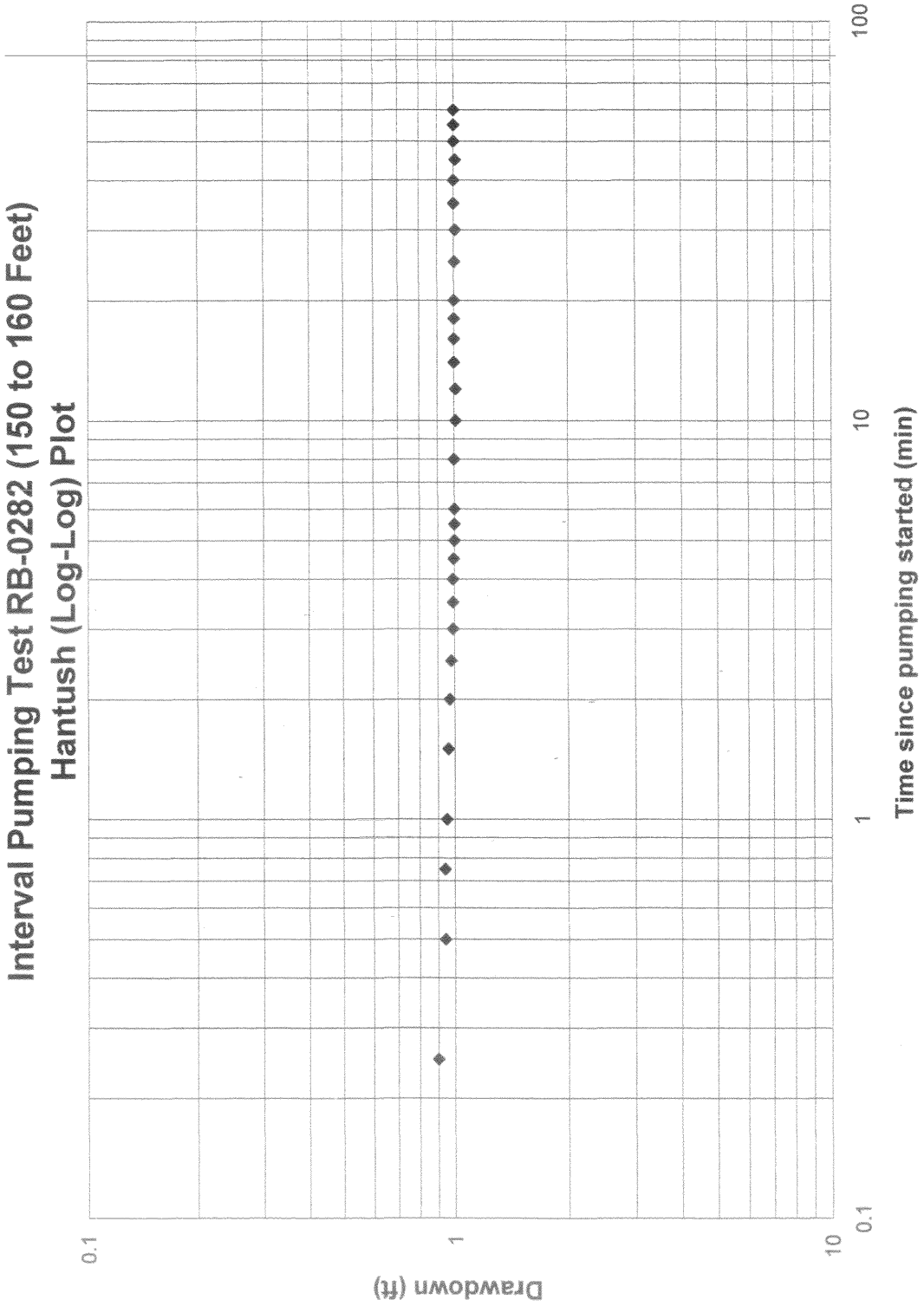
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0282 |
| **Project No.** | 142204 | | |
| **Client** | SFWMD | **Interval Test** From | 150 |
| | | To | 160 |

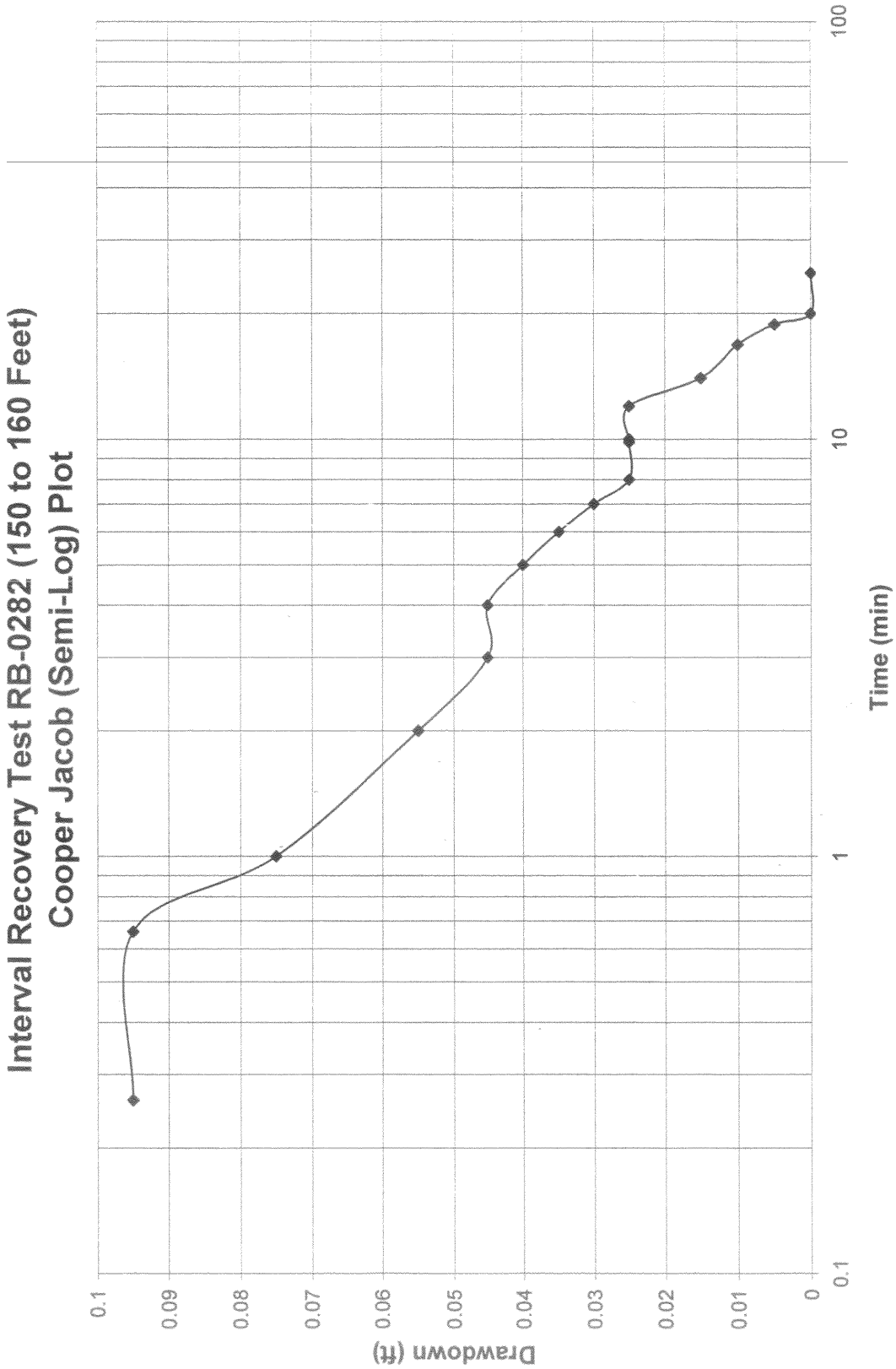
| | | | East | North | Sheet 2 of 2 |
|---|---|---|---|---|---|
| **Location** | Eastside | **Coordinates** | 778268 | 766996 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 150 | | Reference Point | Drilling Platform | | | |
| Open Hole Depth | 156 | After test 156 | Height Above Ground Level | 5ft | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 20 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.95 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 1/8/2005 | 10 | 0 | 0.00 | 8.95 | 1 | | 18 | Last Flow Rate |
| | | | 0.26 | 8 | 0.05 | | | |
| | | | 0.66 | 8 | 0.05 | | | |
| | | | 1.00 | 7.98 | 0.03 | | | |
| | | | 2.00 | 7.96 | 0.01 | | | |
| | | | 3.00 | 7.95 | 0 | | | |
| | | | 4.00 | 7.95 | 0 | | | |
| | | | 5.00 | 7.945 | -0.005 | | | |
| | | | 6.00 | 7.94 | -0.01 | | | |
| | | | 7.00 | 7.935 | -0.015 | | | |
| | | | 8.00 | 7.93 | -0.02 | | | |
| | | | 9.83 | 7.93 | -0.02 | | | |
| | | | 10.00 | 7.93 | -0.02 | | | |
| | | | 12.00 | 7.93 | -0.02 | | | |
| | | | 14.00 | 7.92 | -0.03 | | | |
| | | | 16.83 | 7.915 | -0.035 | | | |
| | | | 18.83 | 7.91 | -0.04 | | | |
| | | | 20.00 | 7.905 | -0.045 | | | |
| | | | 25.00 | 7.905 | -0.045 | | | |
| | | | 30.00 | 7.905 | -0.045 | | | |
| | | | 35.00 | 7.9 | -0.05 | | | |
| | | | 40.00 | 7.905 | -0.045 | | | |
| | | | 45.00 | 7.905 | -0.045 | | | |


Interval Pumping Test RB-0282 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.88
0.9
0.92
0.94
0.96
0.98
1
1.02
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0282 (150 to 160 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.1
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0282 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0283** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 40 |
| | | To | 50 |

| | | | | | |
|---|---|---|---|---|---|
| **Location** | Southside, centre | **Coordinates** | East 773034 | North 750069 | Sheet1 of 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 40 | | Reference Point | Breakout | | | |
| Open Hole Depth | 49 | After test 49 | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 6.39 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 12/8/2005 | 9 | 0 | 0.00 | 6.39 | 0 | | 0 | |
| | | | 0.33 | 6.35 | -0.04 | | | |
| | | | 0.56 | 6.42 | 0.03 | | | |
| | | | 0.83 | 6.43 | 0.04 | | | |
| | | | 1.00 | 6.43 | 0.04 | | | |
| | | | 1.50 | 6.425 | 0.035 | | | |
| | | | 2.00 | 6.43 | 0.04 | | | |
| | | | 2.50 | 6.43 | 0.04 | | | |
| | | | 3.00 | 6.43 | 0.04 | | | |
| | | | 3.50 | 6.43 | 0.04 | | | |
| | | | 4.00 | 6.43 | 0.04 | | | |
| | | | 4.50 | 6.43 | 0.04 | | | |
| | | | 5.00 | 6.43 | 0.04 | | | |
| | | | 5.50 | 6.43 | 0.04 | | | |
| | | | 6.00 | 6.43 | 0.04 | | | |
| | | | 8.00 | 6.43 | 0.04 | | 18.5 | 2 minutes for 37 gallons |
| | | | 10.00 | 6.43 | 0.04 | | | Check Flow Rate |
| | | | 12.00 | 6.43 | 0.04 | | | pH=7.63, 25.1°C,EC=927 microS |
| | | | 14.00 | 6.43 | 0.04 | | | |
| | | | 16.00 | 6.44 | 0.05 | | | |
| | | | 18.00 | 6.44 | 0.05 | | 18.75 | 2 minutes for 37.5 gallons |
| | | | 20.00 | 6.44 | 0.05 | | | Check Flow Rate |
| | | | 25.00 | 6.44 | 0.05 | | | pH=7.43, 25.0°C,EC=892 microS |
| | 9 | 30 | 30.00 | 6.44 | 0.05 | | | Check Flow Rate |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | Check Flow Rate |
| | | | | | | | | |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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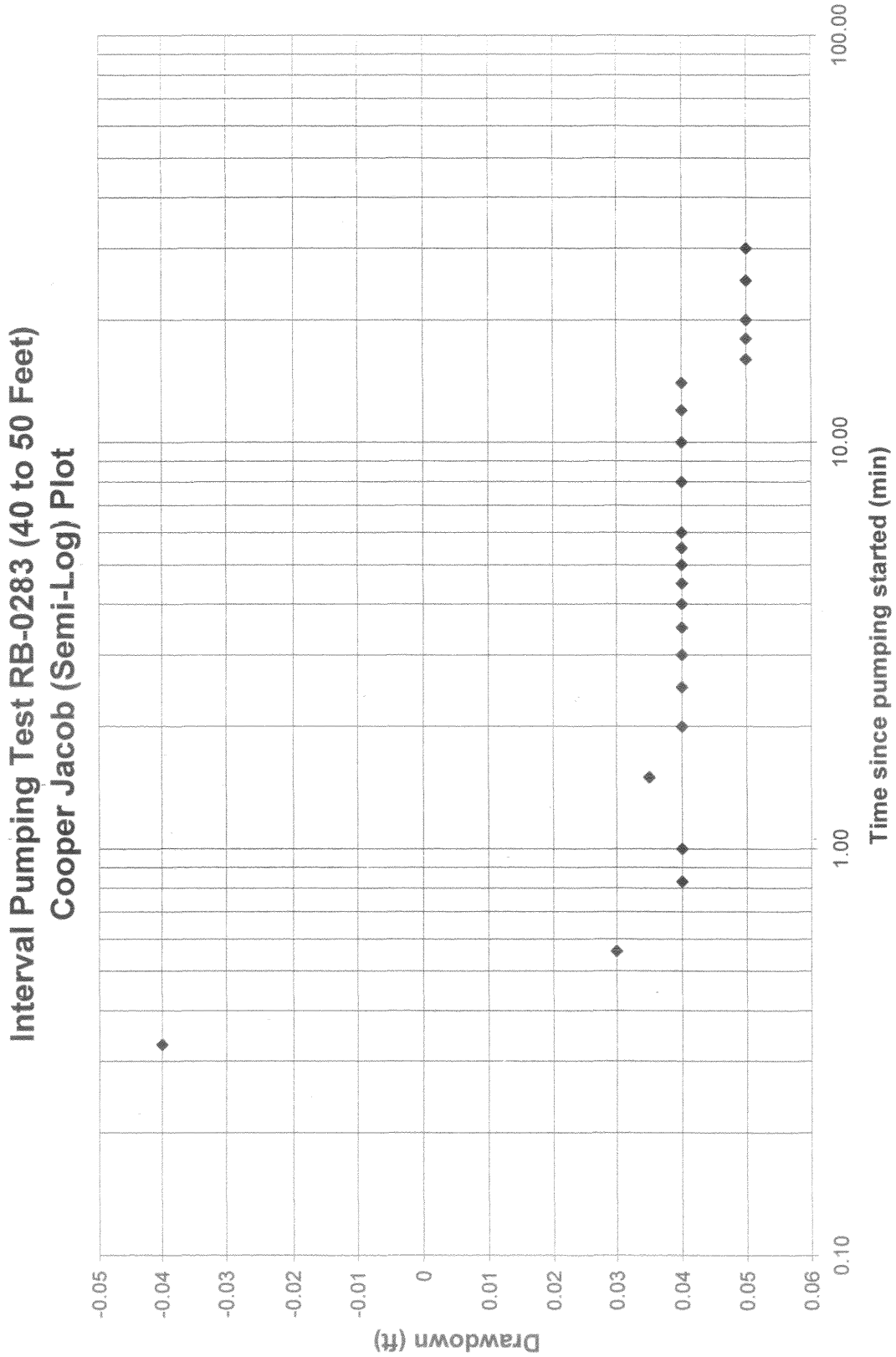
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0283 |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 40 |
| | | To | 50 |

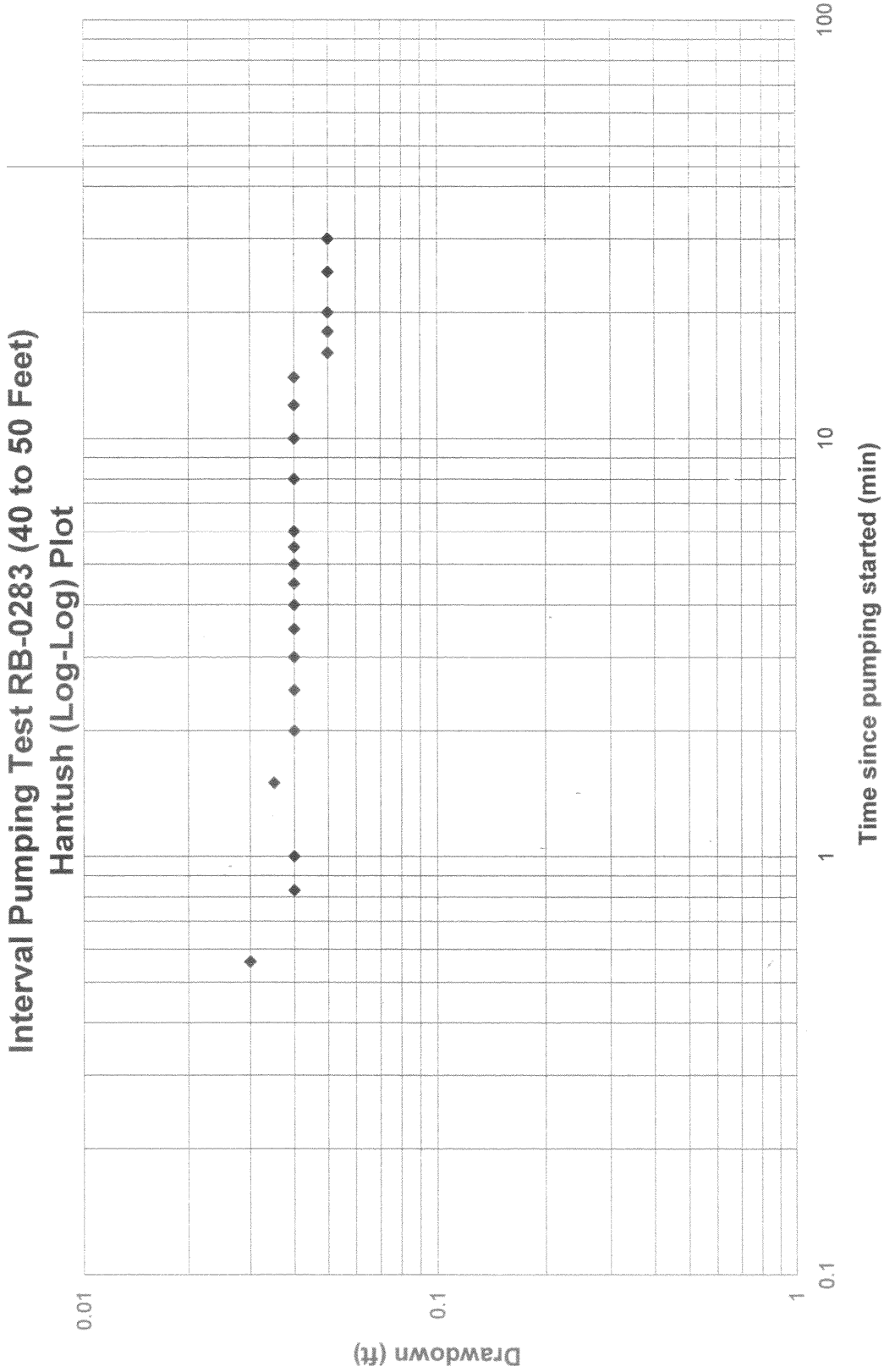
Sheet 2 of 2

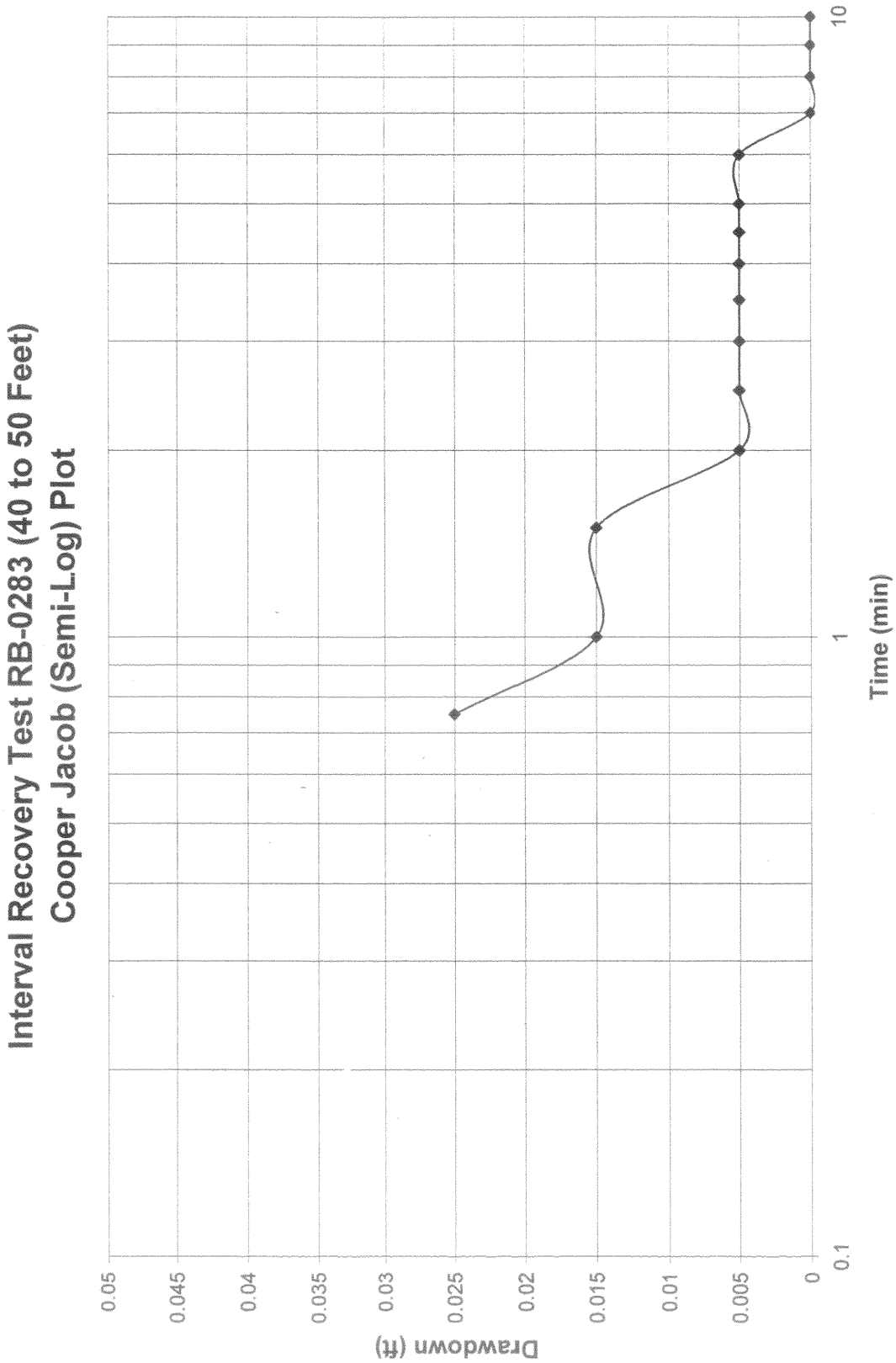
| | | | East | North |
|---|---|---|---|---|
| **Location** | Southside, centre | **Coordinates** | 773034 | 750069 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 40 | | Reference Point | Breakout | | | |
| Open Hole Depth | 49 | After test 49 | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 6.39 | | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 12/8/2005 | 9 | 30 | 0.00 | 6.44 | 0.05 | | 18.5 | Last Flow Rate |
| | | | 0.25 | 6.4 | 0.01 | | | |
| | | | 0.50 | 6.44 | 0.05 | | | |
| | | | 0.75 | 6.41 | 0.02 | | | |
| | | | 1.00 | 6.4 | 0.01 | | | |
| | | | 1.50 | 6.4 | 0.01 | | | |
| | | | 2.00 | 6.39 | 0 | | | |
| | | | 2.50 | 6.39 | 0 | | | |
| | | | 3.00 | 6.39 | 0 | | | |
| | | | 3.50 | 6.39 | 0 | | | |
| | | | 4.00 | 6.39 | 0 | | | |
| | | | 4.50 | 6.39 | 0 | | | |
| | | | 5.00 | 6.39 | 0 | | | |
| | | | 6.00 | 6.39 | 0 | | | |
| | | | 7.00 | 6.385 | -0.005 | | | |
| | | | 8.00 | 6.385 | -0.005 | | | |
| | | | 9.00 | 6.385 | -0.005 | | | |
| | 9 | 40 | 10.00 | 6.385 | -0.005 | | | |


Interval Pumping Test RB-0283 (40 to 50 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
-0.05
-0.04
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
0.04
0.05
0.06
0.10
1.00
10.00
100.00
Time since pumping started (min)


Interval Pumping Test RB-0283 (40 to 50 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.01
0.1
1
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0283 (40 to 50 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0.1
1
10
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0283** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 70 |
| | | To | 80 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Southside, centre | **Coordinates** | 773034 | 750069 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 70 | | Reference Point | Breakout | | | |
| Open Hole Depth | 80 | After test | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.44 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 12/8/2005 | 12 | 17 | 0.00 | 7.44 | 0 | | 0 | |
| | | | 0.25 | 9.15 | 1.71 | | | |
| | | | 0.50 | 9.48 | 2.04 | | | |
| | | | 0.75 | 9.57 | 2.13 | | | |
| | | | 1.00 | 9.6 | 2.16 | | | |
| | | | 1.50 | 9.61 | 2.17 | | | |
| | | | 2.00 | 9.625 | 2.185 | | | |
| | | | 2.50 | 9.63 | 2.19 | | | |
| | | | 3.00 | 9.64 | 2.2 | | | |
| | | | 3.50 | 9.645 | 2.205 | | | |
| | | | 4.00 | 9.65 | 2.21 | | | |
| | | | 4.50 | 9.645 | 2.205 | | | |
| | | | 5.00 | 9.645 | 2.205 | | | |
| | | | 5.50 | 9.64 | 2.2 | | | |
| | | | 6.00 | 9.64 | 2.2 | | | |
| | | | 8.00 | 9.645 | 2.205 | | 18.5 | 2 minutes for 37 gallons |
| | | | 10.00 | 9.65 | 2.21 | | | Check Flow Rate |
| | | | 12.00 | 9.655 | 2.215 | | | pH=7.43, 25.0°C,EC=2.41 milliS |
| | | | 14.00 | 9.66 | 2.22 | | | |
| | | | 16.00 | 9.645 | 2.205 | | | |
| | | | 18.00 | 9.68 | 2.24 | | 18.5 | 2 minutes for 37 gallons |
| | | | 20.00 | 9.69 | 2.25 | | | Check Flow Rate |
| | | | 25.00 | 9.705 | 2.265 | | | pH=7.52, 24.8°C,EC=2.44 milliS |
| | | | 32.00 | 9.725 | 2.285 | | | Check Flow Rate |
| | | | 35.00 | 9.72 | 2.28 | | | |
| | | | 40.00 | 9.72 | 2.28 | | | |
| | | | 45.00 | 9.72 | 2.28 | | | |
| | | | 50.00 | 9.72 | 2.28 | | | |
| | | | 55.00 | 9.72 | 2.28 | | 18.5 | 2 minutes for 37 gallons |
| | | | 60.00 | 9.72 | 2.28 | | | Check Flow Rate |
| | 13 | 32 | 75.00 | 9.72 | 2.28 | | | pH=7.39, 24.9°C,EC=2.44 milliS |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |

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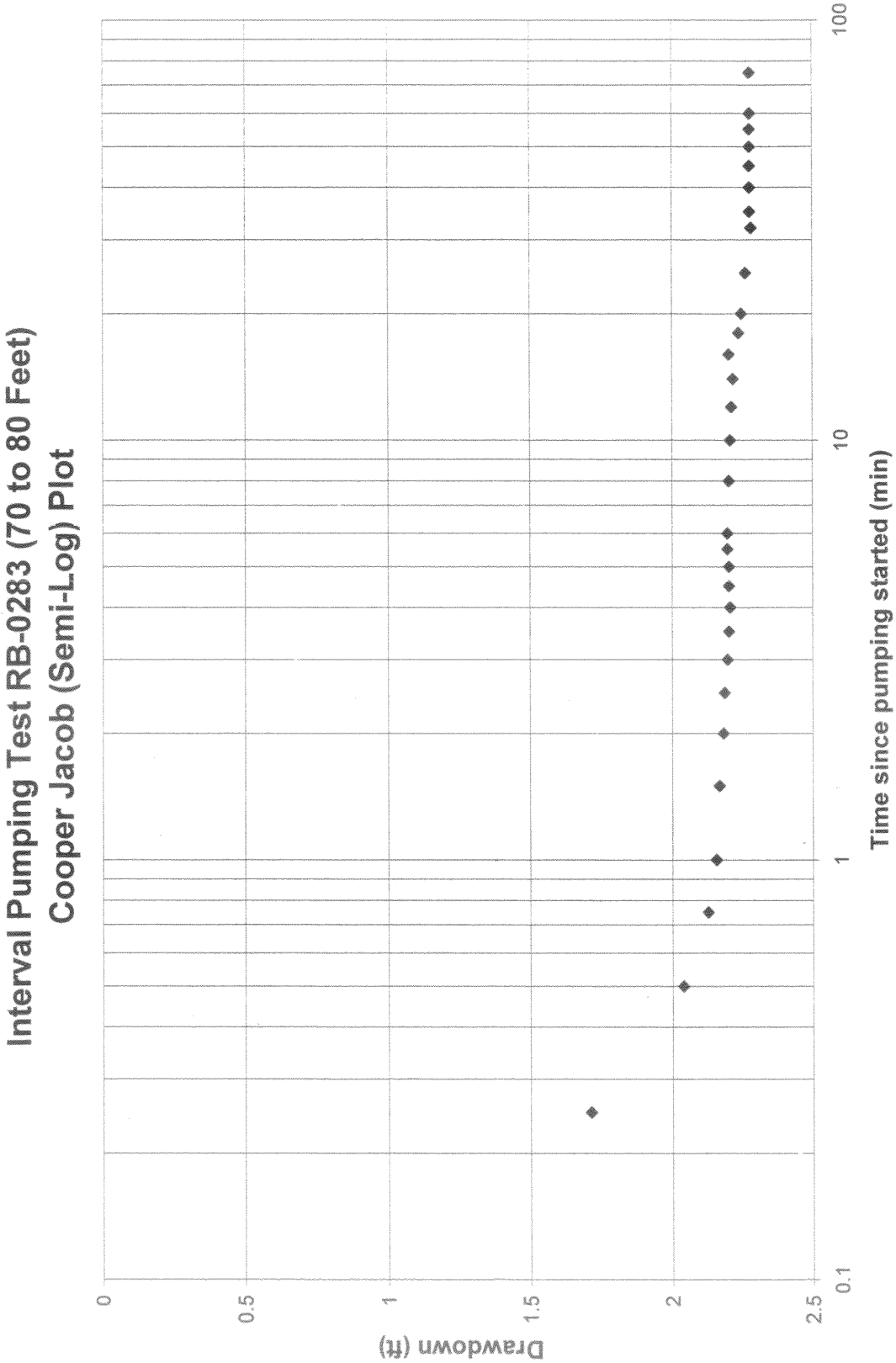
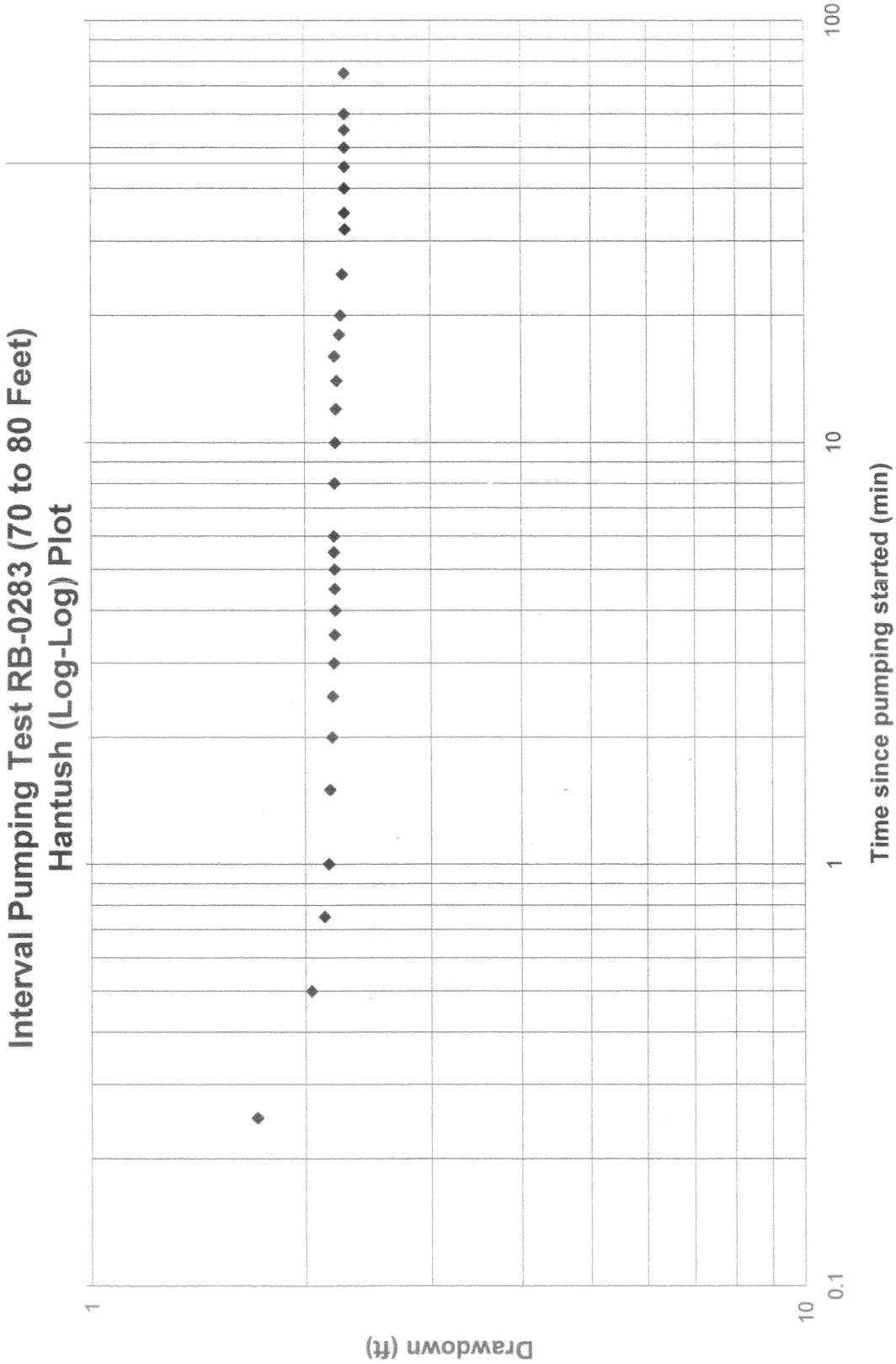
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0283 |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 70 |
| | | To | 80 |

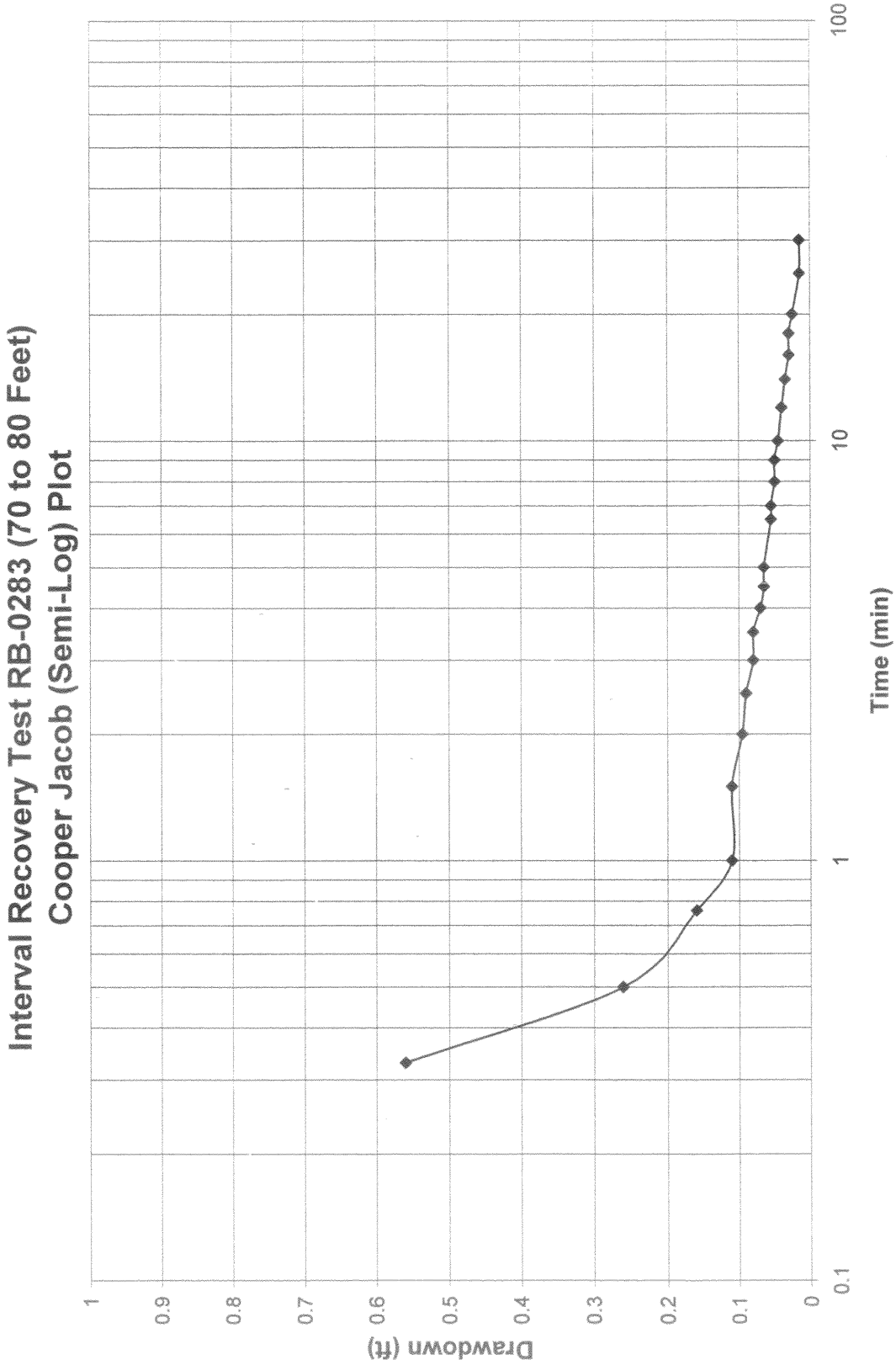
| | | | East | North | Sheet 2 of 2 |
|---|---|---|---|---|---|
| **Location** | Southside, centre | **Coordinates** | 773034 | 750069 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 70 | | Reference Point | Breakout | | | |
| Open Hole Depth | 80 | After test | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.44 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 12/8/2005 | 13 | 32 | 0.00 | 9.72 | 2.28 | | 18.5 | Last Flow Rate |
| | | | 0.16 | 9 | 1.56 | | | |
| | | | 0.26 | 8.2 | 0.76 | | | |
| | | | 0.33 | 8 | 0.56 | | | |
| | | | 0.50 | 7.7 | 0.26 | | | |
| | | | 0.76 | 7.6 | 0.16 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 1.00 | 7.55 | 0.11 | | | |
| | | | 1.50 | 7.55 | 0.11 | | | |
| | | | 2.00 | 7.535 | 0.095 | | | |
| | | | 2.50 | 7.53 | 0.09 | | | |
| | | | 3.00 | 7.52 | 0.08 | | | |
| | | | 3.50 | 7.52 | 0.08 | | | |
| | | | 4.00 | 7.51 | 0.07 | | | |
| | | | 4.50 | 7.505 | 0.065 | | | |
| | | | 5.00 | 7.505 | 0.065 | | | |
| | | | 6.50 | 7.495 | 0.055 | | | |
| | | | 7.00 | 7.495 | 0.055 | | | |
| | | | 8.00 | 7.49 | 0.05 | | | |
| | | | 9.00 | 7.49 | 0.05 | | | |
| | | | 10.00 | 7.485 | 0.045 | | | |
| | | | 12.00 | 7.48 | 0.04 | | | |
| | | | 14.00 | 7.475 | 0.035 | | | |
| | | | 16.00 | 7.47 | 0.03 | | | |
| | | | 18.00 | 7.47 | 0.03 | | | |
| | | | 20.00 | 7.465 | 0.025 | | | |
| | | | 25.00 | 7.455 | 0.015 | | | |
| | 14 | 2 | 30.00 | 7.455 | 0.015 | | | |


Interval Pumping Test RB-0283 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0283 (70 to 80 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0283 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0283** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 110 |
| | | To | 120 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Southside, centre | **Coordinates** | 773034 | 750069 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 110 | | Reference Point | Breakout | | | |
| Open Hole Depth | 115 | After test 113 | Height Above Ground Level | 4.66 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.58 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 08/13/2005 | 9 | 15 | 0.00 | 7.58 | 0 | | 0 | |
| | | | 0.25 | 9.5 | 1.92 | | | |
| | | | 0.50 | 10.55 | 2.97 | | | |
| | | | 0.75 | 10.9 | 3.32 | | | |
| | | | 1.00 | 11.04 | 3.46 | | | |
| | | | 1.50 | 11.145 | 3.565 | | | |
| | | | 2.00 | 11.17 | 3.59 | | | |
| | | | 2.50 | 11.195 | 3.615 | | | |
| | | | 3.00 | 11.205 | 3.625 | | | |
| | | | 3.50 | 11.21 | 3.63 | | | |
| | | | 4.00 | 11.22 | 3.64 | | | |
| | | | 4.50 | 11.235 | 3.655 | | | |
| | | | 5.00 | 11.255 | 3.675 | | | |
| | | | 5.50 | 11.255 | 3.675 | | | |
| | | | 6.00 | 11.26 | 3.68 | | | |
| | | | 8.00 | 11.27 | 3.69 | | | |
| | | | 10.00 | 11.27 | 3.69 | | | Check Flow Rate |
| | | | 12.00 | 11.295 | 3.715 | | | |
| | | | 14.00 | 11.345 | 3.765 | | 19 | |
| | | | 16.00 | 11.37 | 3.79 | | | |
| | | | 18.00 | 11.385 | 3.805 | | | |
| | | | 20.00 | 11.38 | 3.8 | | | Check Flow Rate |
| | | | 25.00 | 11.38 | 3.8 | | 19 | |
| | | | 30.00 | 11.38 | 3.8 | | | Check Flow Rate |
| | | | 35.00 | 11.375 | 3.795 | | | pH=7.65, 24.8°C,EC=2.69 milliS |
| | | | 40.00 | 11.36 | 3.78 | | | |
| | | | 45.00 | 11.355 | 3.775 | | | |
| | | | 50.00 | 11.35 | 3.77 | | | |
| | | | 55.00 | 11.345 | 3.765 | | | |
| | | | 60.00 | 11.345 | 3.765 | | 19.5 | Check Flow Rate |
| | | | 65.00 | 11.345 | 3.765 | | | pH=7.44, 24.9°C,EC=2.68 milliS |
| | 10 | 25 | 70.00 | 11.345 | 3.765 | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |

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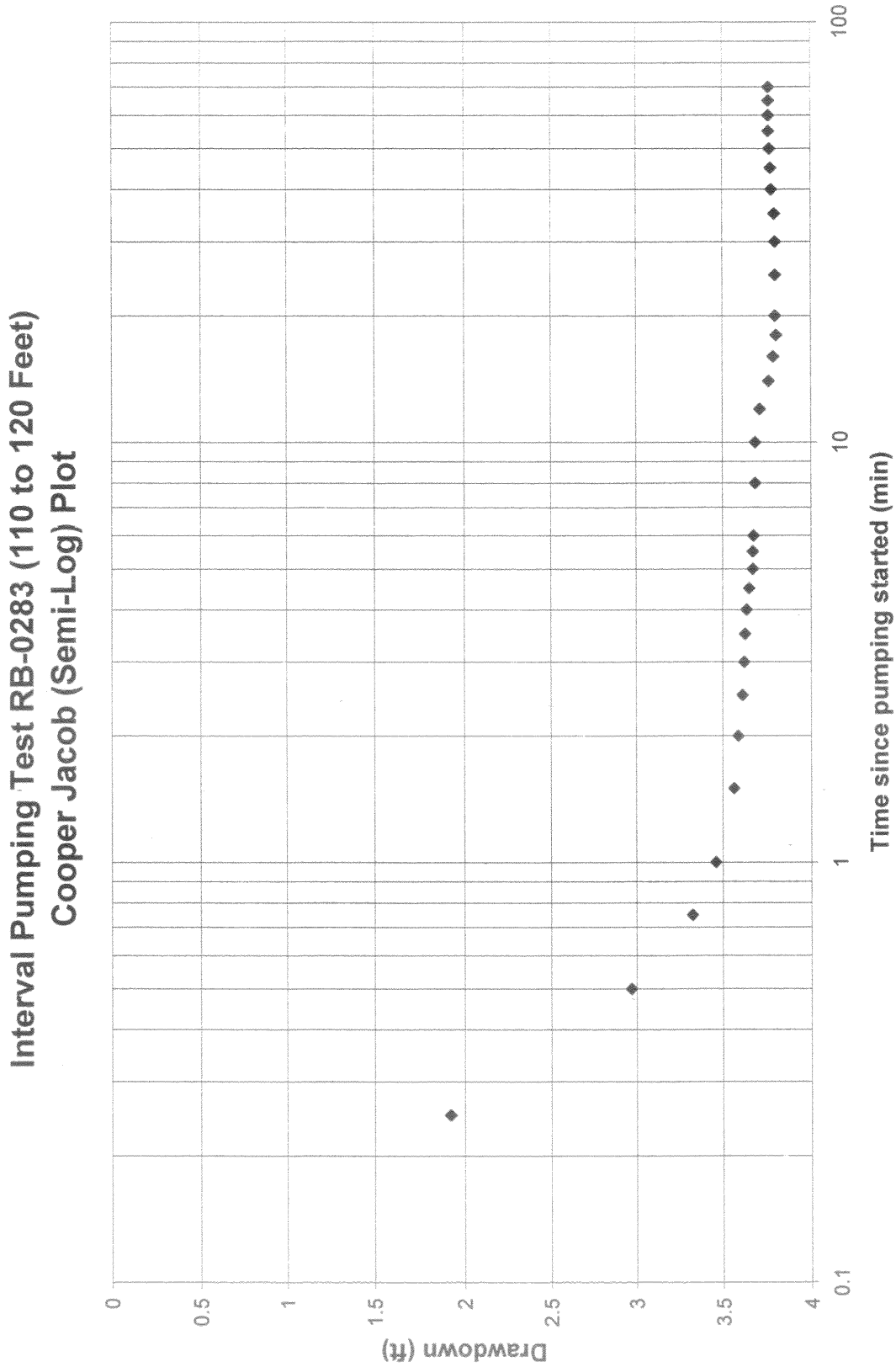
| | | | |
|---|---|---|---|
| Project | Everglades AA Reservoir A-1 | Pumping Test Well | RB-0283 |
| Project No. | 142004 | | |
| Client | SFWMD | Interval Test From | 110 |
| | | To | 120 |

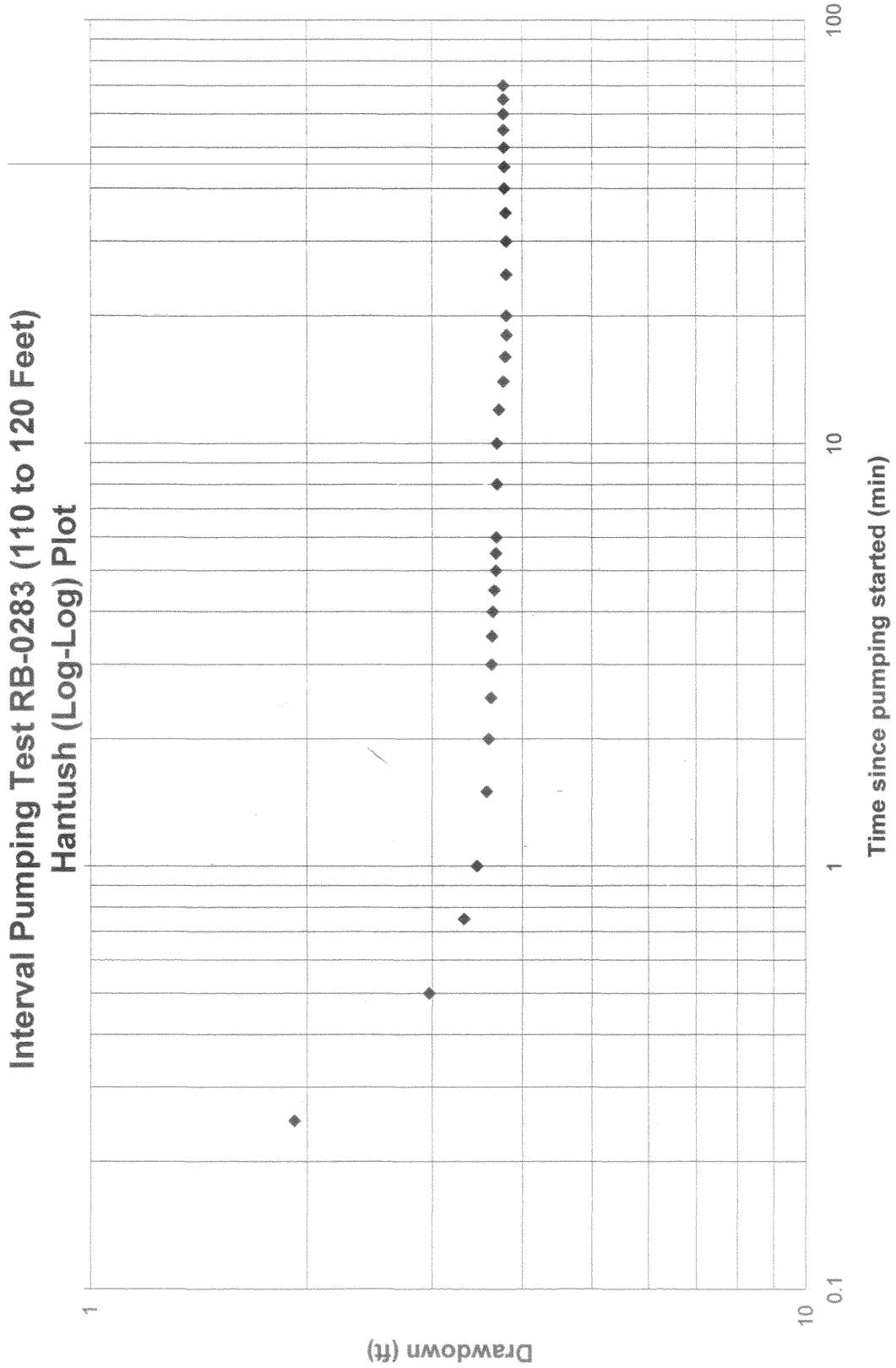
Sheet 2 of 2

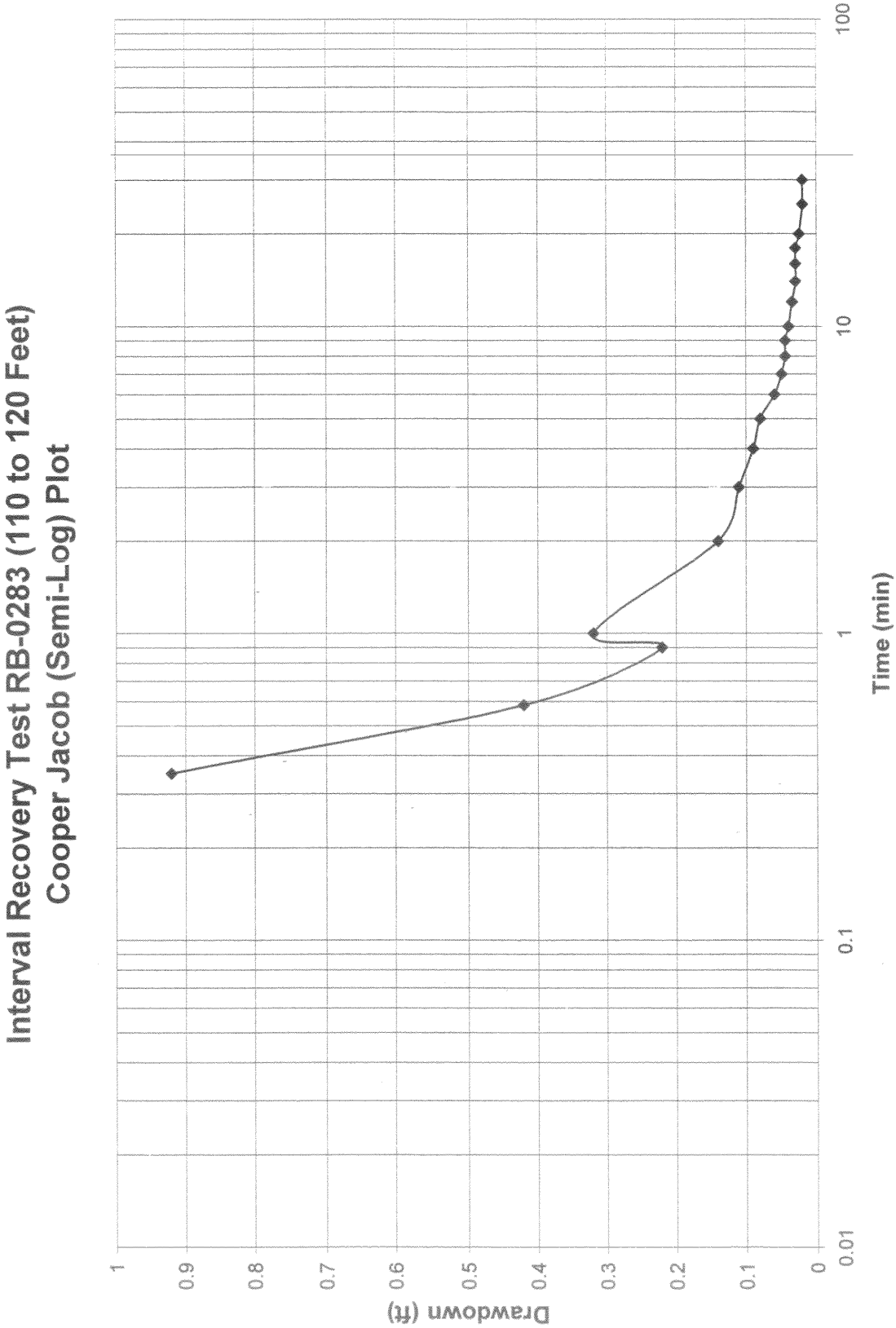
| | | | East | North |
|---|---|---|---|---|
| Location | Southside, centre | Coordinates | 773034 | 750069 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 110 | | Reference Point | Breakout | | | |
| Open Hole Depth | 115 | After test 113 | Height Above Ground Level | 4.66 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter: No |
| | | | | Capacity | 18gpm | | Volume Tank: Yes |
| Static Water Level | 7.58 | | | Generator | | Water Level | Transducer: No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 08/13/2005 | 10 | 25 | 0.00 | 11.345 | 3.765 | | 19.5 | Last Flow Rate |
| | | | 0.05 | 11 | 3.42 | | | |
| | | | 0.13 | 10 | 2.42 | | | |
| | | | 0.35 | 8.5 | 0.92 | | | |
| | | | 0.58 | 8 | 0.42 | | | |
| | | | 0.90 | 7.8 | 0.22 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 1.00 | 7.9 | 0.32 | | | |
| | | | 1.50 | 7.74 | 0.16 | | | |
| | | | 2.00 | 7.72 | 0.14 | | | |
| | | | 2.50 | 7.7 | 0.12 | | | |
| | | | 3.00 | 7.69 | 0.11 | | | |
| | | | 3.50 | 7.68 | 0.1 | | | |
| | | | 4.00 | 7.67 | 0.09 | | | |
| | | | 4.50 | 7.66 | 0.08 | | | |
| | | | 5.00 | 7.66 | 0.08 | | | |
| | | | 7.00 | 7.63 | 0.05 | | | |
| | | | 8.00 | 7.625 | 0.045 | | | |
| | | | 9.00 | 7.625 | 0.045 | | | |
| | | | 10.00 | 7.62 | 0.04 | | | |
| | | | 12.00 | 7.615 | 0.035 | | | |
| | | | 14.00 | 7.61 | 0.03 | | | |
| | | | 16.00 | 7.61 | 0.03 | | | |
| | | | 18.00 | 7.61 | 0.03 | | | |
| | | | 20.00 | 7.605 | 0.025 | | | |
| | | | 25.00 | 7.6 | 0.02 | | | |
| | 10 | 55 | 30.00 | 7.6 | 0.02 | | | |


Interval Pumping Test RB-0283 (110 to 120 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
3
3.5
4
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0283 (110 to 120 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0283 (110 to 120 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.01
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0283** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 150 |
| | | To | 160 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Southside, centre | **Coordinates** | 773034 | 750069 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 150 | | Reference Point | Breakout | | | |
| Open Hole Depth | 160 | After test 160 | Height Above Ground Level | 4.66 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.67 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs | Time Min | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 08/13/2005 | 13 | 15 | 0.00 | 7.67 | 0 | | 0 | |
| | | | 0.25 | 9.45 | 1.78 | | | |
| | | | 0.50 | 9.95 | 2.28 | | | |
| | | | 0.75 | 10.08 | 2.41 | | | |
| | | | 1.00 | 10.13 | 2.46 | | | |
| | | | 1.50 | 10.16 | 2.49 | | | |
| | | | 2.00 | 10.18 | 2.51 | | | |
| | | | 2.50 | 10.185 | 2.515 | | | |
| | | | 3.00 | 10.19 | 2.52 | | | |
| | | | 3.50 | 10.2 | 2.53 | | | |
| | | | 4.00 | 10.2 | 2.53 | | | |
| | | | 4.50 | 10.21 | 2.54 | | | |
| | | | 5.00 | 10.21 | 2.54 | | | |
| | | | 5.50 | 10.22 | 2.55 | | | |
| | | | 6.00 | 10.22 | 2.55 | | | |
| | | | 8.00 | 10.23 | 2.56 | | | |
| | | | 10.00 | 10.24 | 2.57 | | | Check Flow Rate |
| | | | 12.00 | 10.245 | 2.575 | | | |
| | | | 14.00 | 10.25 | 2.58 | | | |
| | | | 16.00 | 10.25 | 2.58 | | | |
| | | | 18.00 | 10.155 | 2.485 | | | |
| | | | 20.00 | 10.26 | 2.59 | | 18.5 | Check Flow Rate |
| | | | 25.00 | 10.265 | 2.595 | | | pH=7.50, 25.1°C,EC=4.68 milliS |
| | | | 30.00 | 10.265 | 2.595 | | | Check Flow Rate |
| | | | 35.00 | 10.285 | 2.615 | | 18.5 | pH=7.43, 24.9°C,EC=4.70milliS |
| | | | 40.00 | 10.28 | 2.61 | | | |
| | | | 45.00 | 10.185 | 2.515 | | | |
| | | | 50.00 | 10.29 | 2.62 | | | |
| | | | 55.00 | 10.29 | 2.62 | | | |
| | | | 60.00 | 10.29 | 2.62 | | 18.5 | Check Flow Rate |
| | 14.2 | 20 | 65.00 | 10.29 | 2.62 | | | |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |

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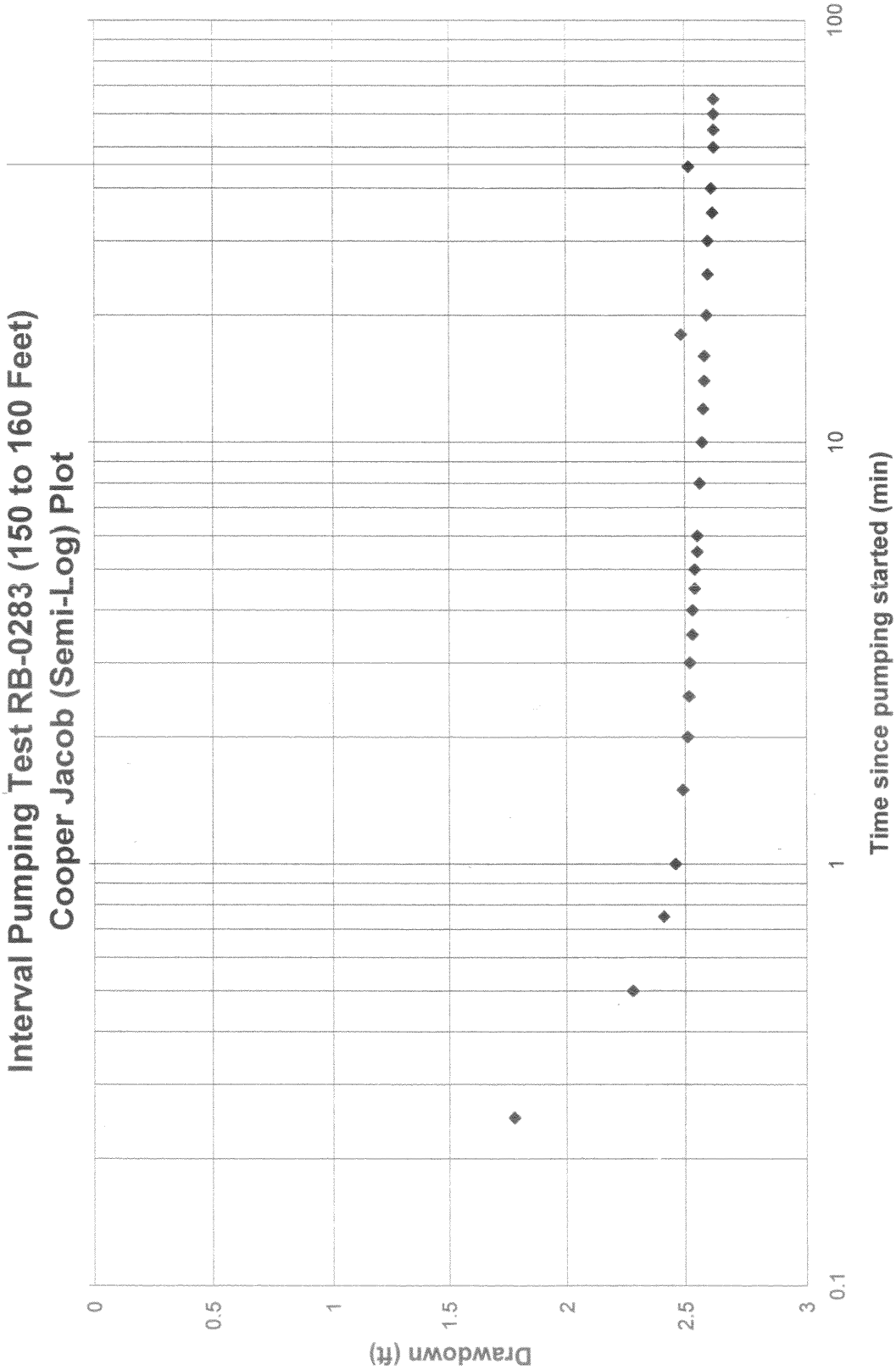
| | | | |
|---|---|---|---|
| Project | Everglades AA Reservoir A-1 | Pumping Test Well | RB-0283 |
| Project No. | 142004 | | |
| Client | SFWMD | Interval Test From | 150 |
| | | To | 160 |

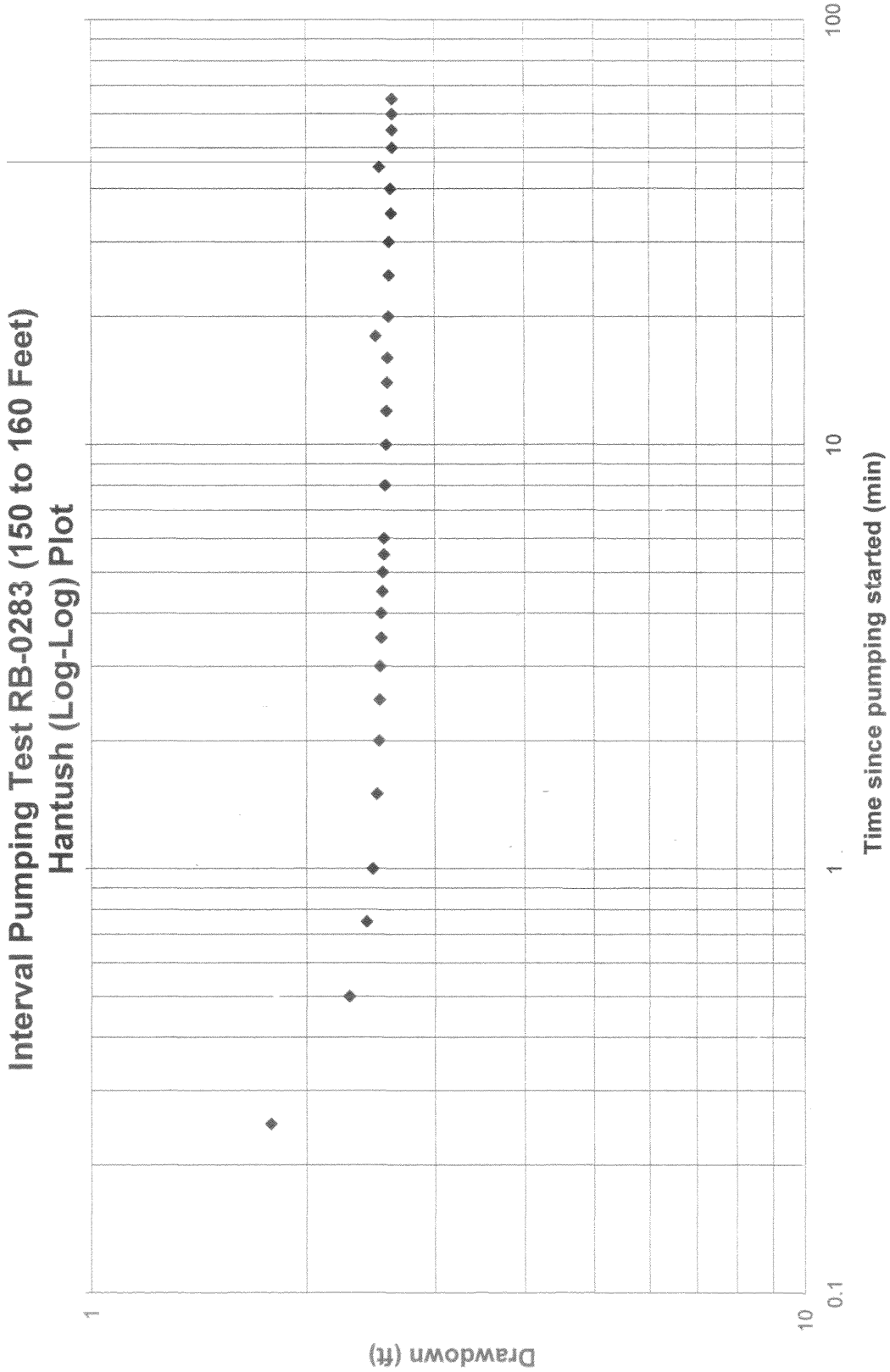
Sheet 2 of 2

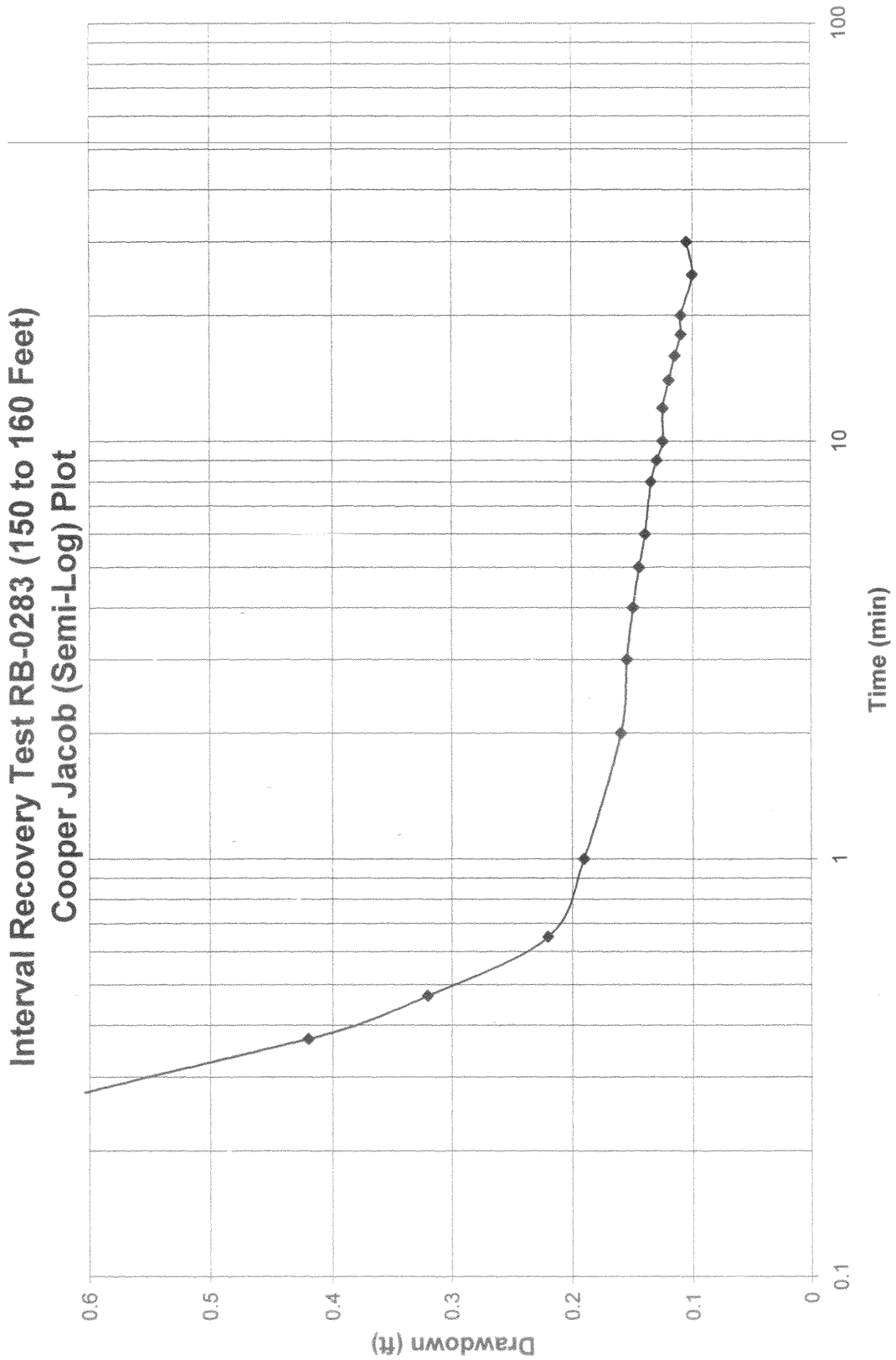
| | | | East | North |
|---|---|---|---|---|
| Location | Southside, centre | Coordinates | 773034 | 750069 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 150 | | Reference Point | Breakout | | | |
| Open Hole Depth | 160 | After test 160 | Height Above Ground Level | 4.66 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter: No |
| | | | | Capacity | 18gpm | | Volume Tank: Yes |
| Static Water Level | 7.67 | | | Generator | | Water Level | Transducer: No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 08/13/2005 | 14 | 20 | 0.00 | 10.29 | 2.62 | | 18.5 | Last Flow Rate |
| | | | 0.13 | 9 | 1.33 | | | |
| | | | 0.21 | 8.5 | 0.83 | | | |
| | | | 0.36 | 8 | 0.33 | | | |
| | | | 0.46 | 7.9 | 0.23 | | | |
| | | | 0.65 | 7.8 | 0.13 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 1.00 | 7.77 | 0.1 | | | |
| | | | 1.50 | 7.775 | 0.105 | | | |
| | | | 2.00 | 7.74 | 0.07 | | | |
| | | | 2.50 | 7.74 | 0.07 | | | |
| | | | 3.00 | 7.735 | 0.065 | | | |
| | | | 3.50 | 7.735 | 0.065 | | | |
| | | | 4.00 | 7.73 | 0.06 | | | |
| | | | 4.50 | 7.725 | 0.055 | | | |
| | | | 5.00 | 7.72 | 0.05 | | | |
| | | | 6.00 | 7.72 | 0.05 | | | |
| | | | 8.00 | 7.715 | 0.045 | | | |
| | | | 9.00 | 7.71 | 0.04 | | | |
| | | | 10.00 | 7.705 | 0.035 | | | |
| | | | 12.00 | 7.705 | 0.035 | | | |
| | | | 14.00 | 7.7 | 0.03 | | | |
| | | | 16.00 | 7.695 | 0.025 | | | |
| | | | 18.00 | 7.69 | 0.02 | | | |
| | | | 20.00 | 7.69 | 0.02 | | | |
| | | | 25.00 | 7.68 | 0.01 | | | |
| | 14 | 50 | 30.00 | 7.685 | 0.015 | | | |


Interval Pumping Test RB-0283 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
3
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0283 (150 to 160 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0283 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.6
0.5
0.4
0.3
0.2
0.1
0
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0284** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 40 |
| | | To | 50 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Westside, centre | **Coordinates** | 758050 | 764456 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 40 | | Reference Point | Breakout | | | |
| Open Hole Depth | 46 | After test 46 | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.62 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 9/8/2005 | 13 | 15 | 0.00 | | 0 | | 0 | |
| | | | 0.33 | 7.72 | 0.1 | | | |
| | | | 0.56 | 7.73 | 0.11 | | | |
| | | | 0.83 | 7.73 | 0.11 | | | |
| | | | 1.00 | 7.73 | 0.11 | | | |
| | | | 1.50 | 7.73 | 0.11 | | | |
| | | | 2.00 | 7.73 | 0.11 | | | |
| | | | 2.50 | 7.73 | 0.11 | | | |
| | | | 3.00 | 7.725 | 0.105 | | | |
| | | | 3.50 | 7.725 | 0.105 | | | |
| | | | 4.00 | 7.725 | 0.105 | | | |
| | | | 4.50 | 7.725 | 0.105 | | | |
| | | | 5.00 | 7.725 | 0.105 | | | |
| | | | 5.50 | 7.72 | 0.1 | | | |
| | | | 6.00 | 7.725 | 0.105 | | | |
| | | | 8.00 | 7.725 | 0.105 | | 19 | 2 minutes for 38 gallons |
| | | | 10.00 | 7.72 | 0.1 | | | Check Flow Rate |
| | | | 12.00 | 7.72 | 0.1 | | | |
| | | | 14.00 | 7.73 | 0.11 | | | |
| | | | 16.00 | 7.72 | 0.1 | | | |
| | | | 18.00 | 7.72 | 0.1 | | | pH=6.6, 25.4°C,EC=653 microS |
| | | | 20.00 | 7.72 | 0.1 | | | Check Flow Rate |
| | | | 25.00 | 7.725 | 0.105 | | | pH=7.3, 24.9°C,EC=644 microS |
| | 13 | 45 | 30.00 | 7.725 | 0.105 | | | Check Flow Rate |
| | | | | | | | 18.5 | 2 minutes for 37 gallons |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | Check Flow Rate |
| | | | | | | | | |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |

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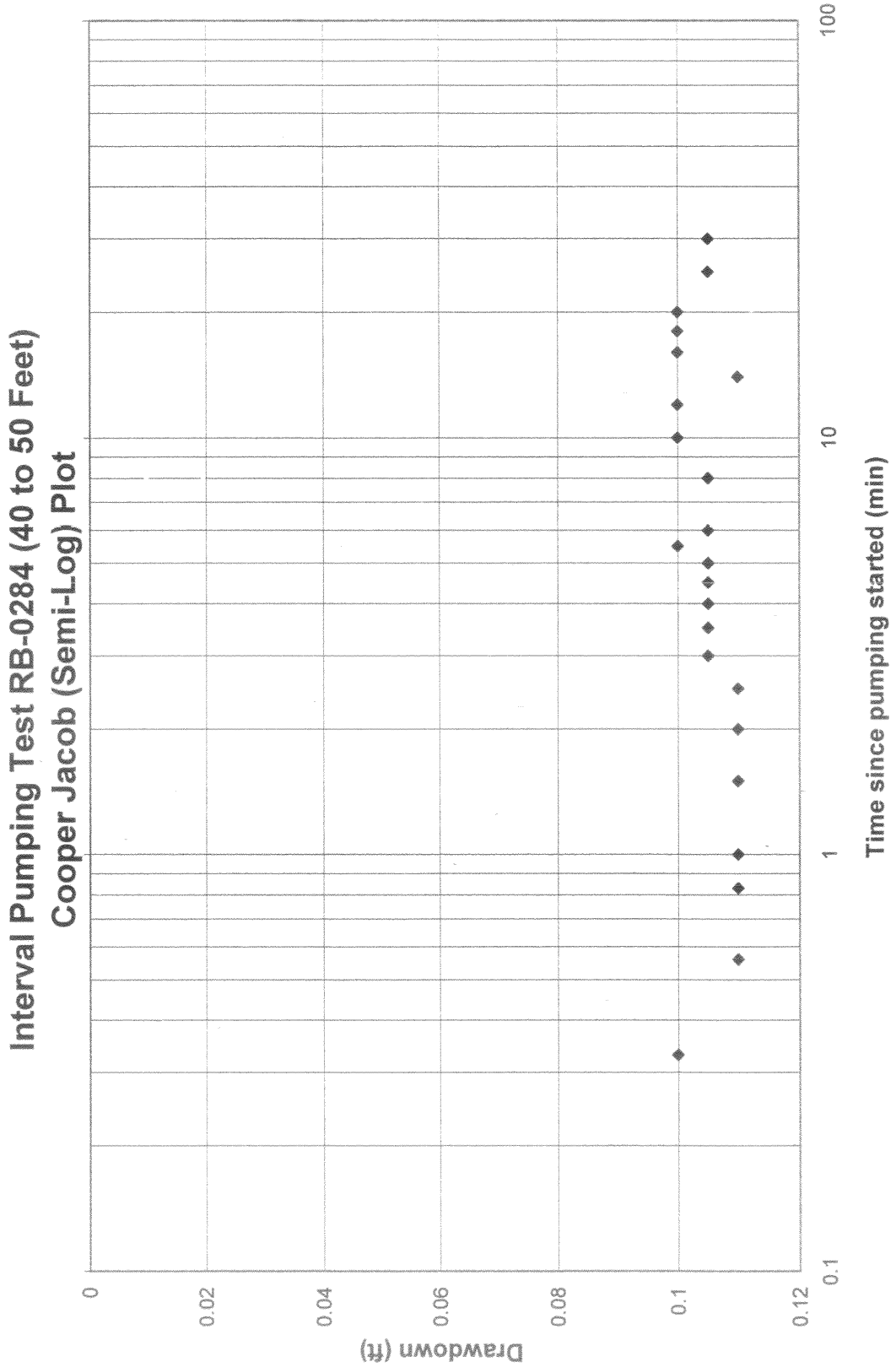
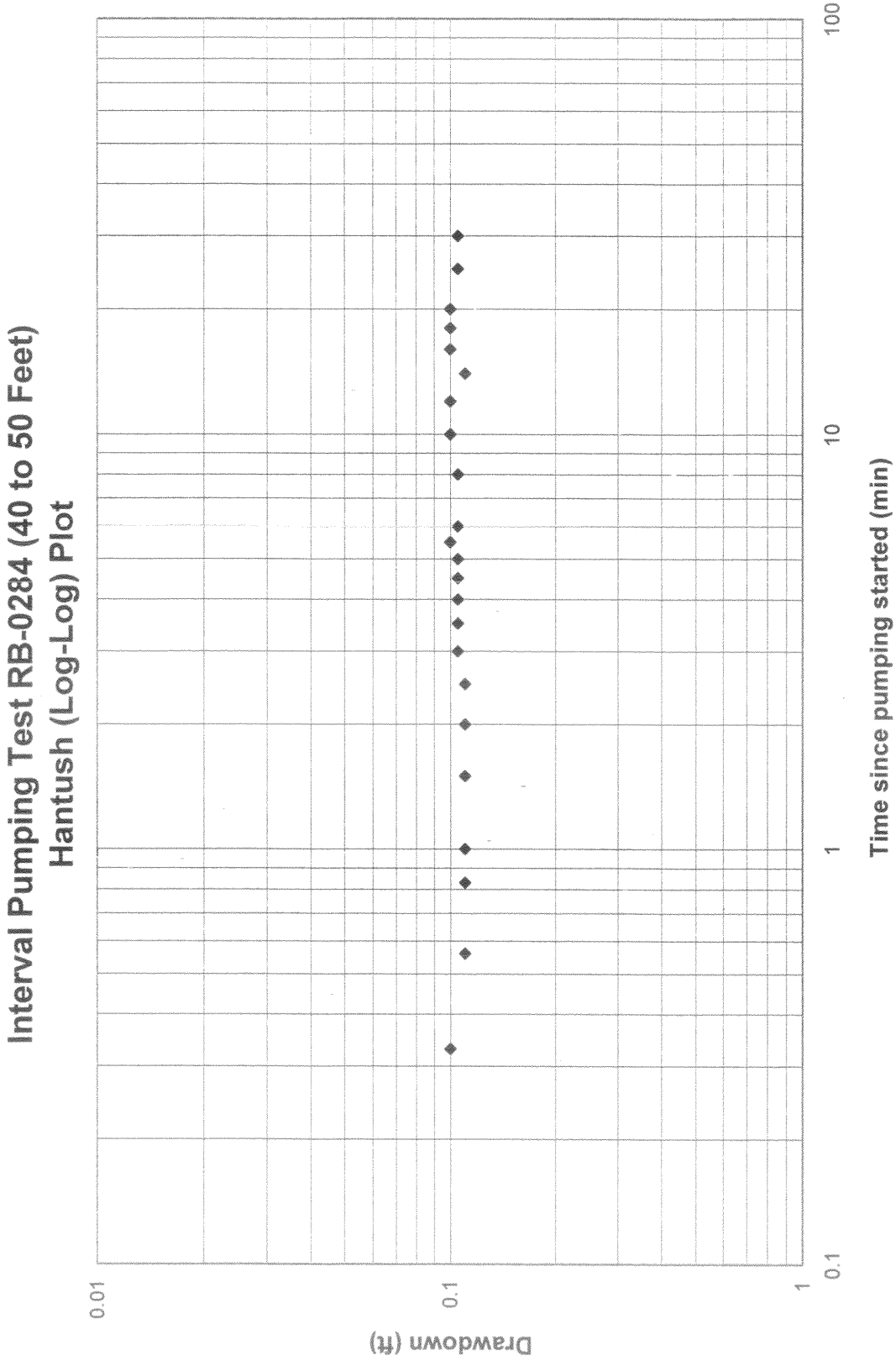
| | | | |
|---|---|---|---|
| Project | Everglades AA Reservoir A-1 | Pumping Test Well | RB-0284 |
| Project No. | 142004 | | |
| Client | SFWMD | Interval Test From | 40 |
| | | To | 50 |

| | | | East | North | Sheet 2 of 2 |
|---|---|---|---|---|---|
| Location | Westside, centre | Coordinates | 758050 | 764456 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 40 | | Reference Point | Breakout | | | |
| Open Hole Depth | 46 | After test 46 | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.62 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 9/8/2005 | 13 | 45 | 0.00 | 7.725 | 0.125 | | 18.5 | Last Flow Rate |
| | | | 0.10 | 7.6 | 0 | | | |
| | | | 0.50 | 7.6 | 0 | | | |
| | | | 1.00 | 7.6 | 0 | | | |
| | | | 1.50 | 7.6 | 0 | | | |
| | | | 2.00 | 7.6 | 0 | | | |
| | | | 2.50 | 7.6 | 0 | | | |
| | | | 3.00 | 7.6 | 0 | | | |
| | | | 3.50 | 7.6 | 0 | | | |
| | | | 4.00 | 7.6 | 0 | | | |
| | | | 4.50 | 7.6 | 0 | | | |
| | | | 5.00 | 7.6 | 0 | | | |
| | | | 6.00 | 7.6 | 0 | | | |
| | | | 7.00 | 7.6 | 0 | | | |
| | | | 8.00 | 7.6 | 0 | | | |
| | | | 9.00 | 7.6 | 0 | | | |
| | | | 10.00 | 7.6 | 0 | | | |


Interval Pumping Test RB-0284 (40 to 50 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.02
0.04
0.06
0.08
0.1
0.12
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0284 (40 to 50 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.01
0.1
1
0.1
1
10
100
Time since pumping started (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0284** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 70 |
| | | To | 80 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Westside, centre | **Coordinates** | 758050 | 764456 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 70 | | Reference Point | Breakout | | | |
| Open Hole Depth | 77 | After test 77 | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.45 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 9/8/2005 | 15 | 15 | 0.00 | 7.45 | 0 | | 0 | |
| | | | 0.25 | 8.04 | 0.59 | | | |
| | | | 0.50 | 8.06 | 0.61 | | | |
| | | | 0.75 | 8.07 | 0.62 | | | |
| | | | 1.00 | 8.07 | 0.62 | | | |
| | | | 1.50 | 8.075 | 0.625 | | | |
| | | | 2.00 | 8.08 | 0.63 | | | |
| | | | 2.50 | 8.08 | 0.63 | | | |
| | | | 3.00 | 8.085 | 0.635 | | | |
| | | | 3.50 | 8.085 | 0.635 | | | |
| | | | 4.00 | 8.085 | 0.635 | | | |
| | | | 4.50 | 8.085 | 0.635 | | | |
| | | | 5.00 | 8.085 | 0.635 | | | |
| | | | 5.50 | 8.085 | 0.635 | | | |
| | | | 6.00 | 8.09 | 0.64 | | | |
| | | | 8.00 | 8.09 | 0.64 | | 18.75 | 2 minutes for 37.5 gallons |
| | | | 10.00 | 8.09 | 0.64 | | | Check Flow Rate |
| | | | 12.00 | 8.09 | 0.64 | | | |
| | | | 14.00 | 8.095 | 0.645 | | | pH=7.28, 25.7°C,EC=993 microS |
| | | | 16.00 | | | | | |
| | | | 18.00 | 8.095 | 0.645 | | 18.5 | 2 minutes for 37 gallons |
| | | | 21.00 | 8.105 | 0.655 | | | Check Flow Rate |
| | | | 25.00 | 8.1 | 0.65 | | | pH=7.29, 25.8°C,EC=999 microS |
| | | | 30.00 | 8.1 | 0.65 | | | Check Flow Rate |
| | | | 35.00 | 8.105 | 0.655 | | | |
| | | | 40.00 | 8.105 | 0.655 | | | |
| | | | 45.00 | 8.11 | 0.66 | | | |
| | | | 50.00 | 8.11 | 0.66 | | | pH=7.41, 25.7°C,EC=1017 microS |
| | | | 55.00 | 8.11 | 0.66 | | | 2 minutes for 37 gallons |
| | 16 | 15 | 60.00 | 8.11 | 0.66 | | | Check Flow Rate |
| | | | | | | | | |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |

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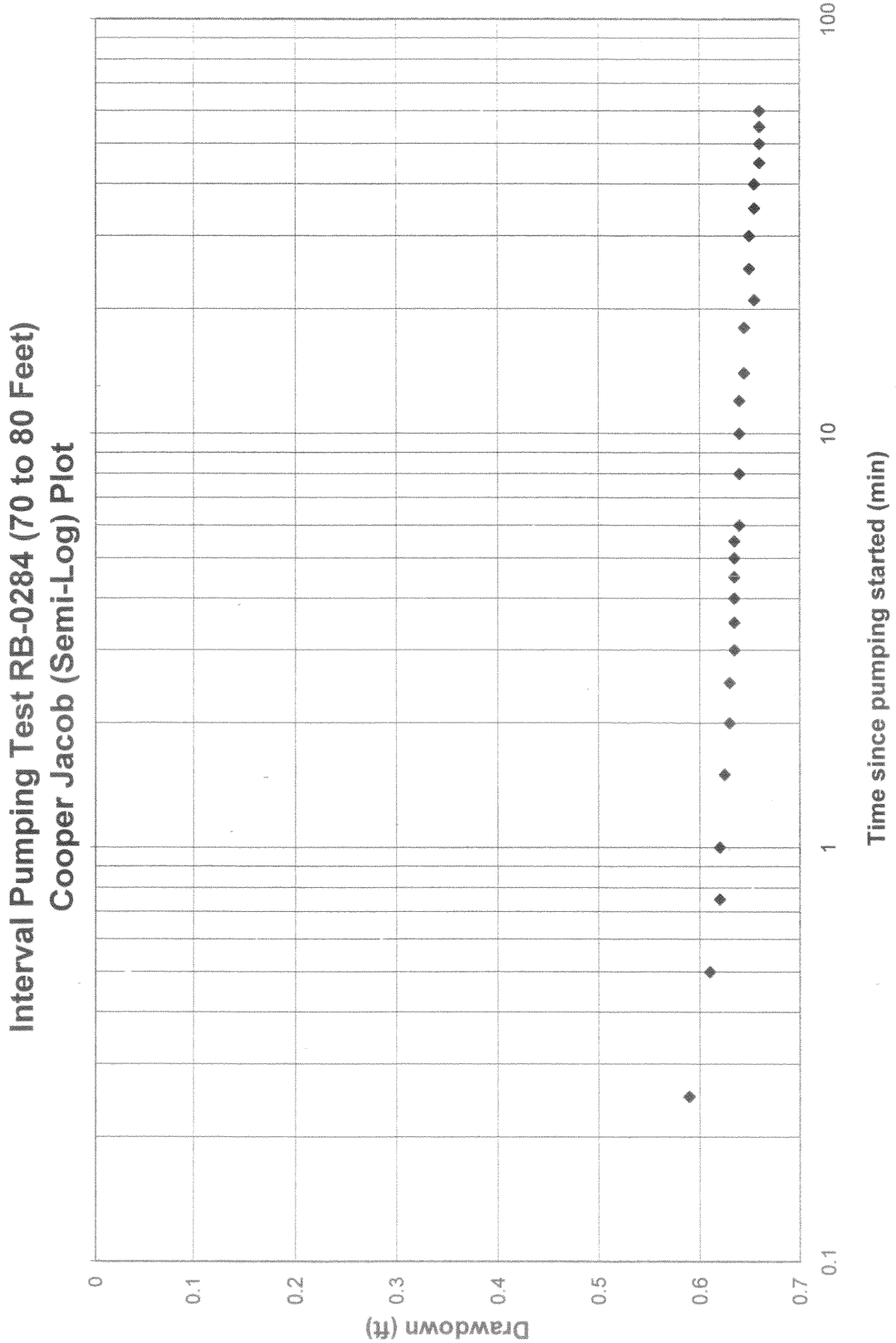
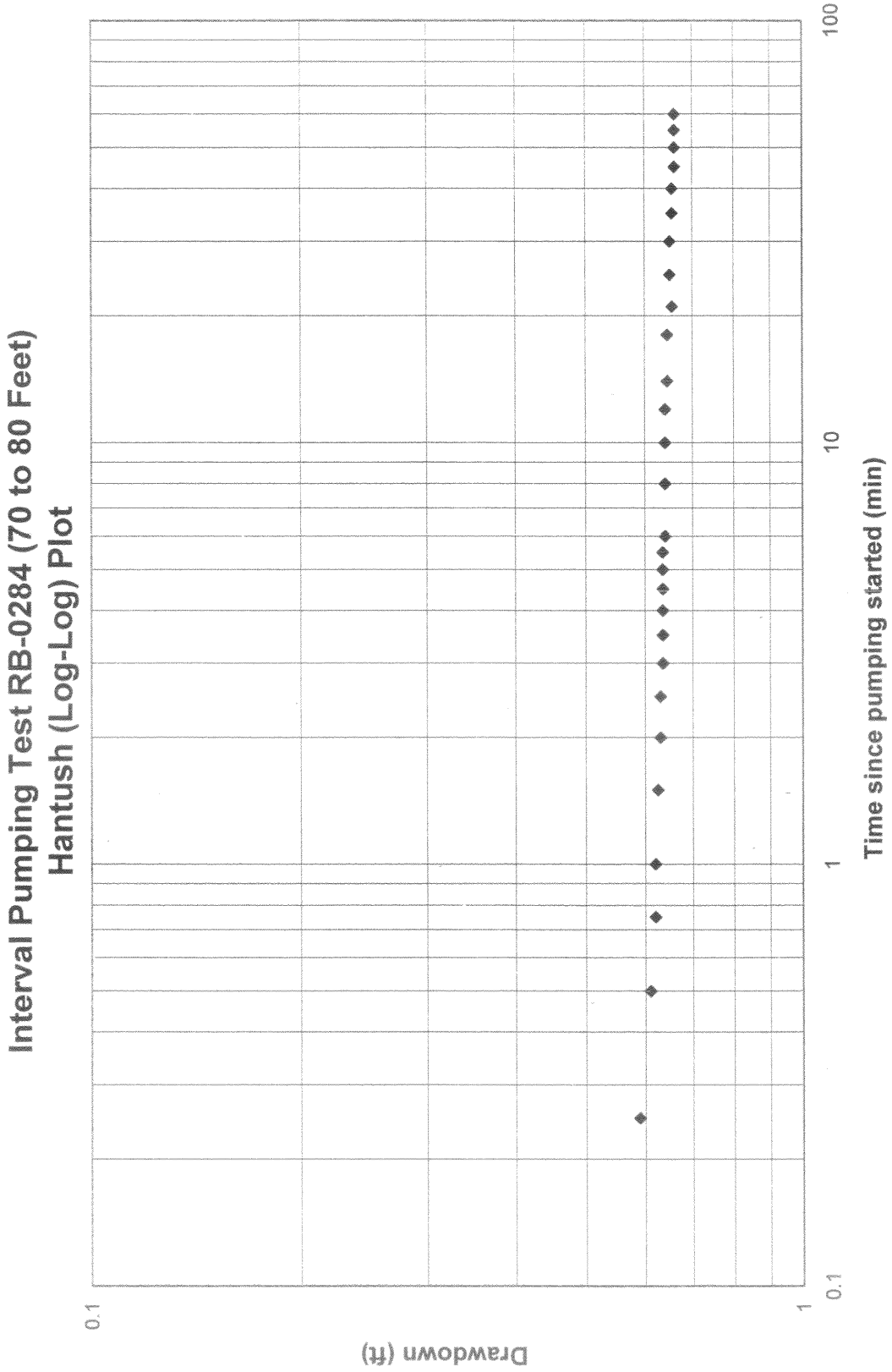
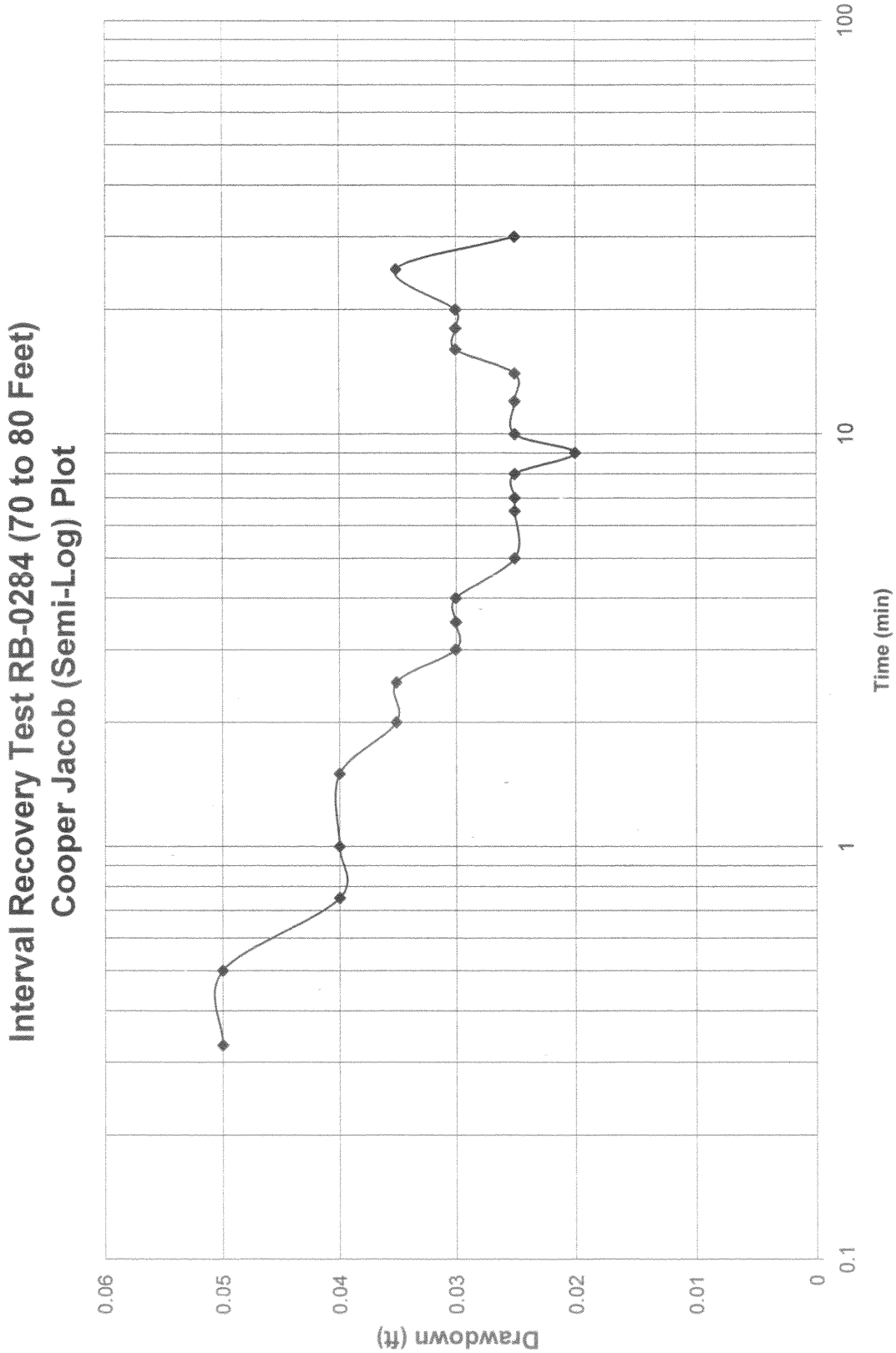
| | | | |
|---|---|---|---|
| Project | Everglades AA Reservoir A-1 | Pumping Test Well | RB-0284 |
| Project No. | 142004 | | |
| Client | SFWMD | Interval Test | From 70 |
| | | | To 80 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Location | Westside, centre | Coordinates | East 758050 | North 764456 | Sheet 2 of 2 | | |
| Casing Depth | 70 | | Reference Point | Breakout | | | |
| Open Hole Depth | 77 | After test 77 | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.45 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 9/8/2005 | 16 | 15 | 0.00 | 8.11 | 0.66 | | 18.5 | Last Flow Rate |
| | | | 0.33 | 7.5 | 0.05 | | | |
| | | | 0.50 | 7.5 | 0.05 | | | |
| | | | 0.75 | 7.49 | 0.04 | | | |
| | | | 1.00 | 7.49 | 0.04 | | | |
| | | | 1.50 | 7.49 | 0.04 | | | |
| | | | 2.00 | 7.485 | 0.035 | | | |
| | | | 2.50 | 7.485 | 0.035 | | | |
| | | | 3.00 | 7.48 | 0.03 | | | |
| | | | 3.50 | 7.48 | 0.03 | | | |
| | | | 4.00 | 7.48 | 0.03 | | | |
| | | | 4.50 | | | | | |
| | | | 5.00 | 7.475 | 0.025 | | | |
| | | | 6.50 | 7.475 | 0.025 | | | |
| | | | 7.00 | 7.475 | 0.025 | | | |
| | | | 8.00 | 7.475 | 0.025 | | | |
| | | | 9.00 | 7.47 | 0.02 | | | |
| | | | 10.00 | 7.475 | 0.025 | | | |
| | | | 12.00 | 7.475 | 0.025 | | | |
| | | | 14.00 | 7.475 | 0.025 | | | |
| | | | 16.00 | 7.48 | 0.03 | | | |
| | | | 18.00 | 7.48 | 0.03 | | | |
| | | | 20.00 | 7.48 | 0.03 | | | |
| | | | 25.00 | 7.485 | 0.035 | | | |
| | 16 | 45 | 30.00 | 7.475 | 0.025 | | | |


Interval Pumping Test RB-0284 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0284 (70 to 80 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.1
1
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0284 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.06
0.05
0.04
0.03
0.02
0.01
0
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0284** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 110 |
| | | To | 120 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Westside, centre | **Coordinates** | 758050 | 764456 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 110 | | Reference Point | Breakout | | | |
| Open Hole Depth | 118.5 | After test 118 | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.655 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 10/8/2005 | 8 | 35 | 0.00 | 7.655 | 0 | | 0 | |
| | | | 0.25 | 9.13 | 1.475 | | | |
| | | | 0.50 | 9.3 | 1.645 | | | |
| | | | 0.75 | 9.33 | 1.675 | | | |
| | | | 1.00 | 9.34 | 1.685 | | | |
| | | | 1.50 | 9.35 | 1.695 | | | |
| | | | 2.00 | 9.36 | 1.705 | | | |
| | | | 2.50 | 9.36 | 1.705 | | | |
| | | | 3.00 | 9.365 | 1.71 | | | |
| | | | 3.50 | 9.365 | 1.71 | | | |
| | | | 4.00 | 9.37 | 1.715 | | | |
| | | | 4.50 | 9.37 | 1.715 | | | |
| | | | 5.00 | 9.375 | 1.72 | | | |
| | | | 5.50 | 9.375 | 1.72 | | | |
| | | | 6.00 | 9.375 | 1.72 | | | |
| | | | 8.00 | 9.38 | 1.725 | | 18.5 | 2 minutes for 37 gallons |
| | | | 10.00 | 9.385 | 1.73 | | | Check Flow Rate |
| | | | 12.00 | 9.38 | 1.725 | | | |
| | | | 14.00 | 9.385 | 1.73 | | | pH=7.31, 25.3°C,EC=4.66 milliS |
| | | | 16.00 | 9.39 | 1.735 | | | |
| | | | 18.00 | 9.39 | 1.735 | | | |
| | | | 21.00 | 9.39 | 1.735 | | | Check Flow Rate |
| | | | 25.00 | 9.395 | 1.74 | | | pH=7.46, 25.2°C,EC=4.70 milliS |
| | 9 | 5 | 30.00 | 9.395 | 1.74 | | | Check Flow Rate |
| | | | | | | | 18.5 | 2 minutes for 37 gallons |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | Check Flow Rate |
| | | | | | | | | |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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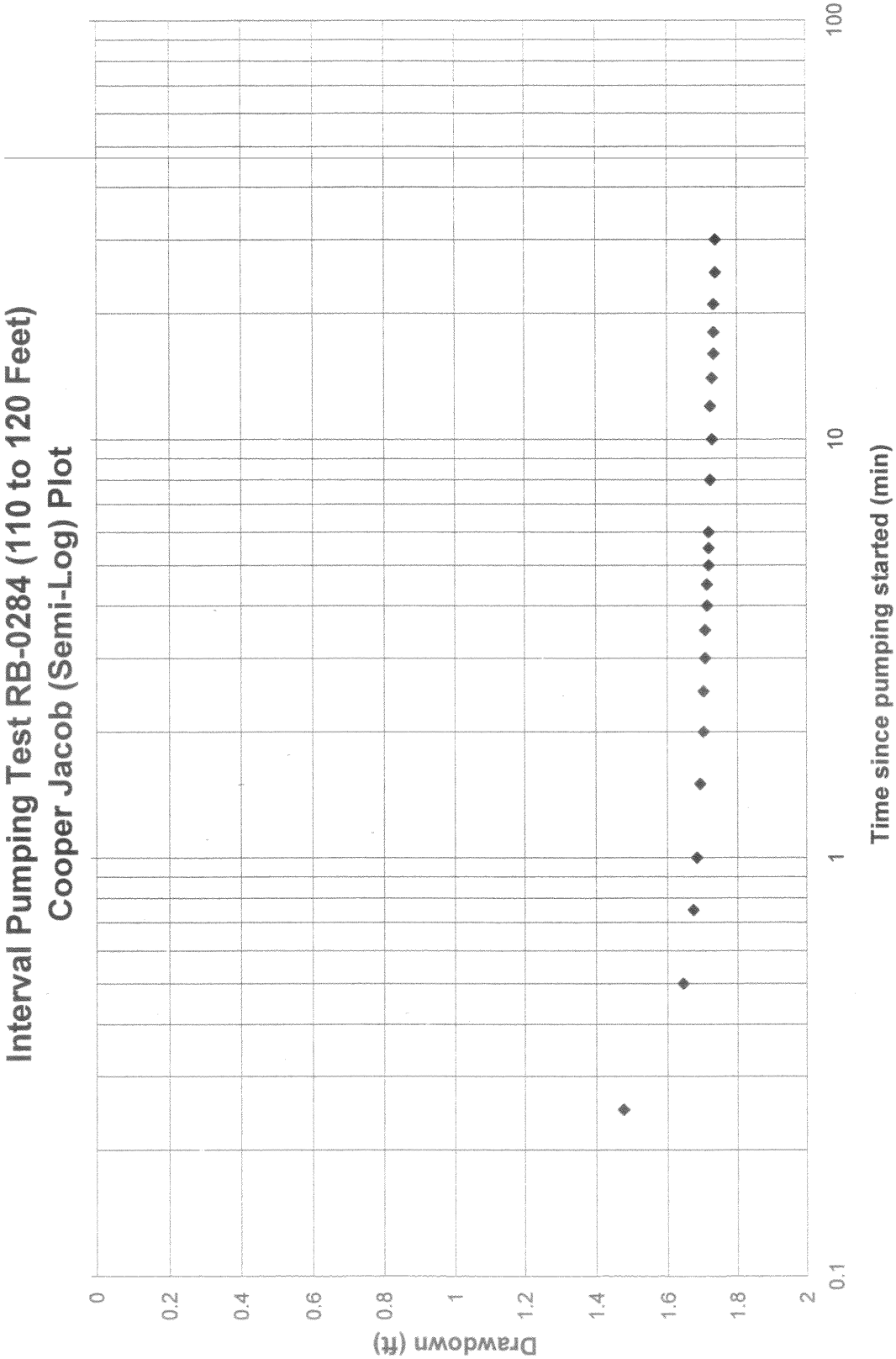
| | | | |
|---|---|---|---|
| Project | Everglades AA Reservoir A-1 | Pumping Test Well | RB-0284 |
| Project No. | 142004 | | |
| Client | SFWMD | Interval Test | From 110 |
| | | | To 120 |

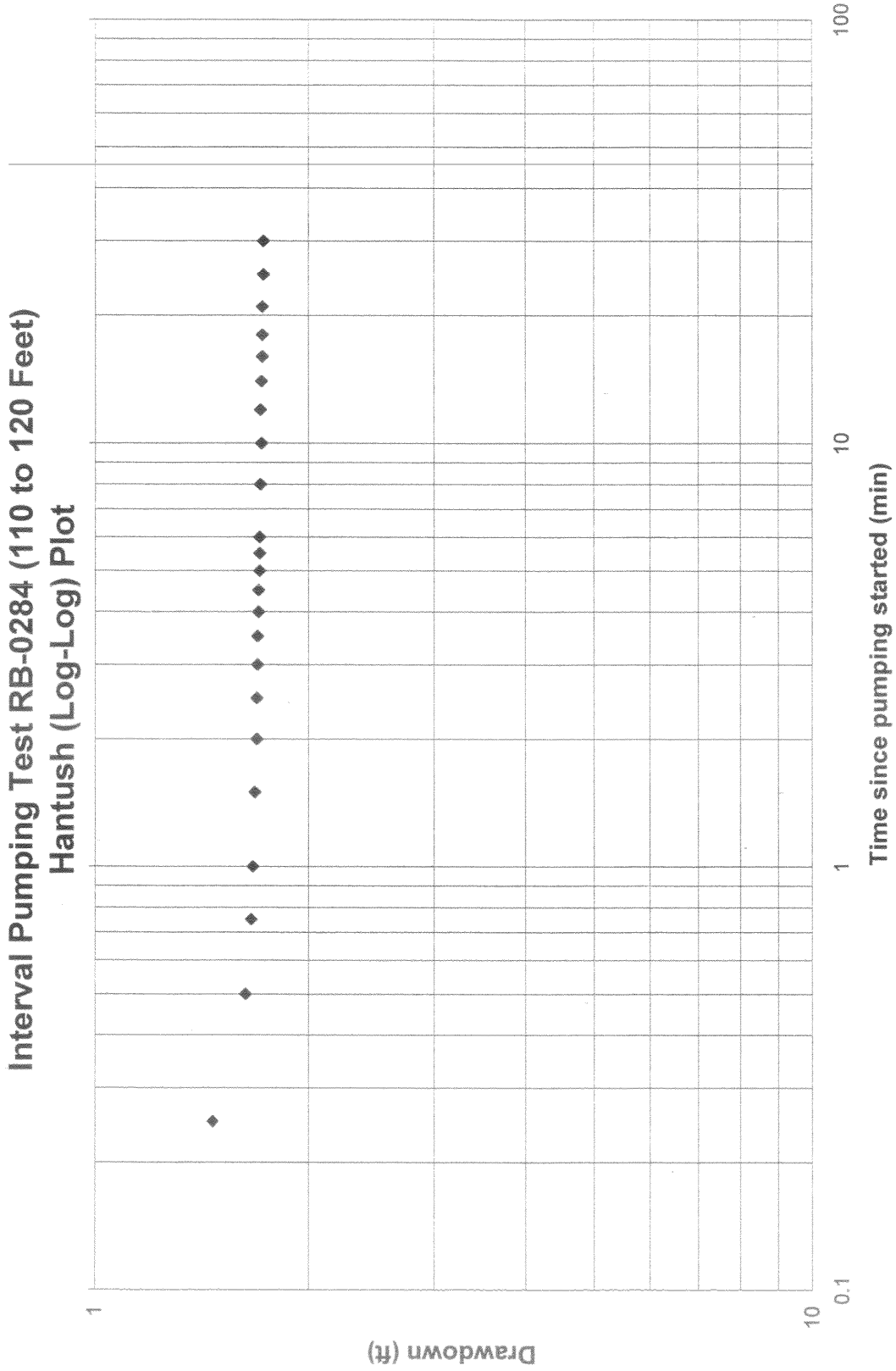
Sheet 2 of 2

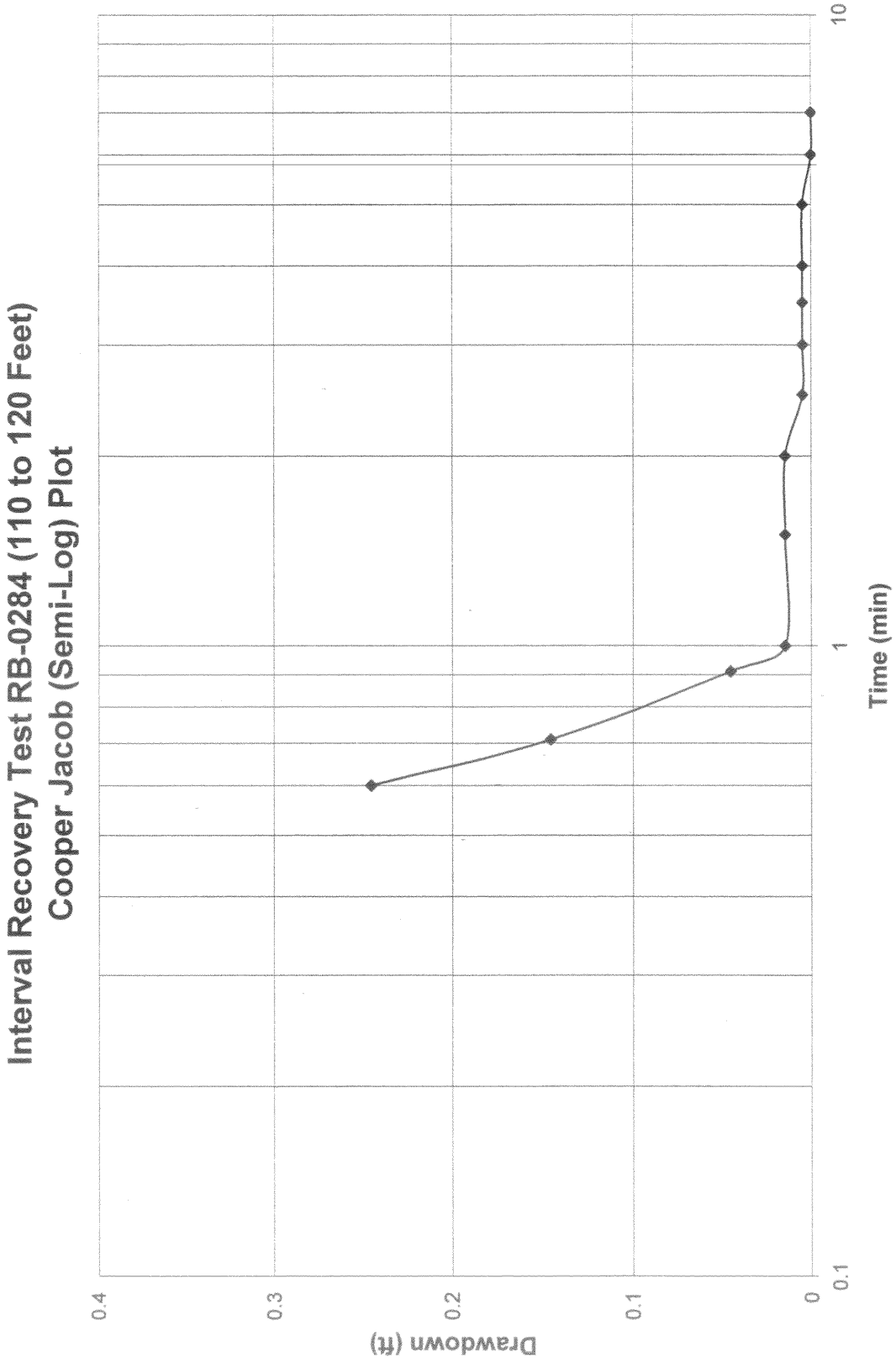
| | | | East | North |
|---|---|---|---|---|
| Location | Westside, centre | Coordinates | 758050 | 764456 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 110 | | Reference Point | Breakout | | | |
| Open Hole Depth | 118.5 | After test 118 | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.655 | | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 10/8/2005 | 9 | 5 | 0.00 | 9.395 | 1.74 | | 18.5 | Last Flow Rate |
| | | | 0.53 | 9 | 1.345 | | | |
| | | | 0.60 | 7.9 | 0.245 | | | |
| | | | 0.71 | 7.8 | 0.145 | | | |
| | | | 0.91 | 7.7 | 0.045 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 1.00 | 7.67 | 0.015 | | | |
| | | | 1.50 | 7.67 | 0.015 | | | |
| | | | 2.00 | 7.67 | 0.015 | | | |
| | | | 2.50 | 7.66 | 0.005 | | | |
| | | | 3.00 | 7.66 | 0.005 | | | |
| | | | 3.50 | 7.66 | 0.005 | | | |
| | | | 4.00 | 7.66 | 0.005 | | | |
| | | | 5.00 | 7.66 | 0.005 | | | |
| | | | 6.00 | 7.655 | 0 | | | |
| | | | 7.00 | 7.655 | 0 | | | |
| | | | 8.00 | 7.655 | 0 | | | |
| | | | 9.00 | 7.655 | 0 | | | |
| | 9 | 15 | 10.00 | 7.655 | 0 | | | |
| | | | 12.00 | | | | | |
| | | | 14.00 | | | | | |
| | | | 16.00 | | | | | |
| | | | 18.00 | | | | | |
| | | | 20.00 | | | | | |
| | | | 25.00 | | | | | |
| | | | 30.00 | | | | | |


Interval Pumping Test RB-0284 (110 to 120 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0284 (110 to 120 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0284 (110 to 120 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.4
0.3
0.2
0.1
0
0.1
1
10
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0284** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 150 |
| | | To | 160 |

| | | | East | North | Sheet1 of 2 |
|---|---|---|---|---|---|
| **Location** | Westside, centre | **Coordinates** | 758050 | 764456 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 150 | | Reference Point | Breakout | | | |
| Open Hole Depth | 160 | After test 159 | Height Above Ground Level | 4.8 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.79 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 10/8/2005 | 11 | 40 | 0.00 | 7.79 | 0 | | 0 | 1hr25' development |
| | | | 0.25 | 9.75 | 1.96 | | | |
| | | | 0.50 | 10.18 | 2.39 | | | |
| | | | 0.75 | 10.32 | 2.53 | | | |
| | | | 1.00 | 10.35 | 2.56 | | | |
| | | | 1.50 | 10.38 | 2.59 | | | |
| | | | 2.00 | 10.4 | 2.61 | | | |
| | | | 2.50 | 10.4 | 2.61 | | | |
| | | | 3.00 | 10.405 | 2.62 | | | |
| | | | 3.50 | 10.41 | 2.62 | | | |
| | | | 4.00 | 10.415 | 2.63 | | | |
| | | | 4.50 | 10.42 | 2.63 | | | |
| | | | 5.00 | 10.42 | 2.63 | | | |
| | | | 5.50 | 10.43 | 2.64 | | | |
| | | | 6.00 | 10.43 | 2.64 | | | |
| | | | 8.00 | 10.445 | 2.66 | | | |
| | | | 10.00 | 10.445 | 2.66 | | | Check Flow Rate |
| | | | 12.00 | 10.45 | 2.66 | | | |
| | | | 14.00 | 10.45 | 2.66 | | 18.75 | 2 minutes for 37.5 gallons |
| | | | 16.00 | 10.46 | 2.67 | | | |
| | | | 18.00 | | | | | pH=7.32, 25.3°C,EC=7.24 milliS |
| | | | 21.00 | 10.45 | 2.66 | | | Check Flow Rate |
| | | | 25.00 | 10.455 | 2.67 | | | |
| | | | 30.00 | 10.46 | 2.67 | | | Check Flow Rate |
| | | | 35.00 | 10.47 | 2.68 | | 18.5 | 2 minutes for 37 gallons |
| | | | 40.00 | 10.47 | 2.68 | | | pH=7.49, 25.2°C,EC=7.26 milliS |
| | | | 45.00 | 10.47 | 2.68 | | | |
| | | | 50.00 | 10.47 | 2.68 | | | pH=7.55, 25.1°C,EC=7.29 milliS |
| | | | 55.00 | 10.47 | 2.68 | | 18.5 | 2 minutes for 37 gallons |
| | 12 | 40 | 60.00 | 10.47 | 2.68 | | | Check Flow Rate |
| | | | | | | | | |
| | | | | | | | | Solution reading |
| | | | | | | | EC | 1500 1527 |
| | | | | | | | pH | 4 4.16 |
| | | | | | | | pH | 7 6.94 |

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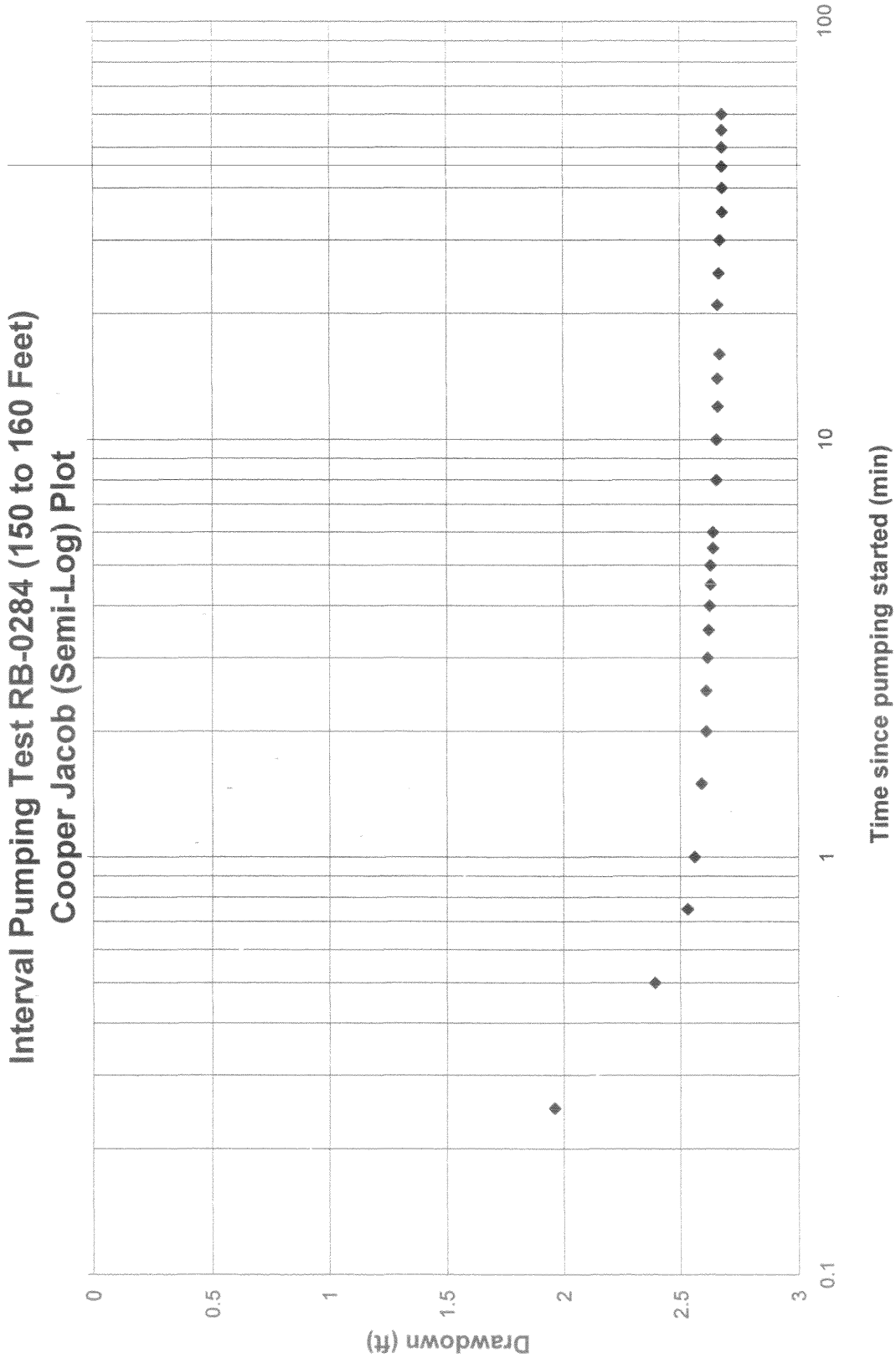
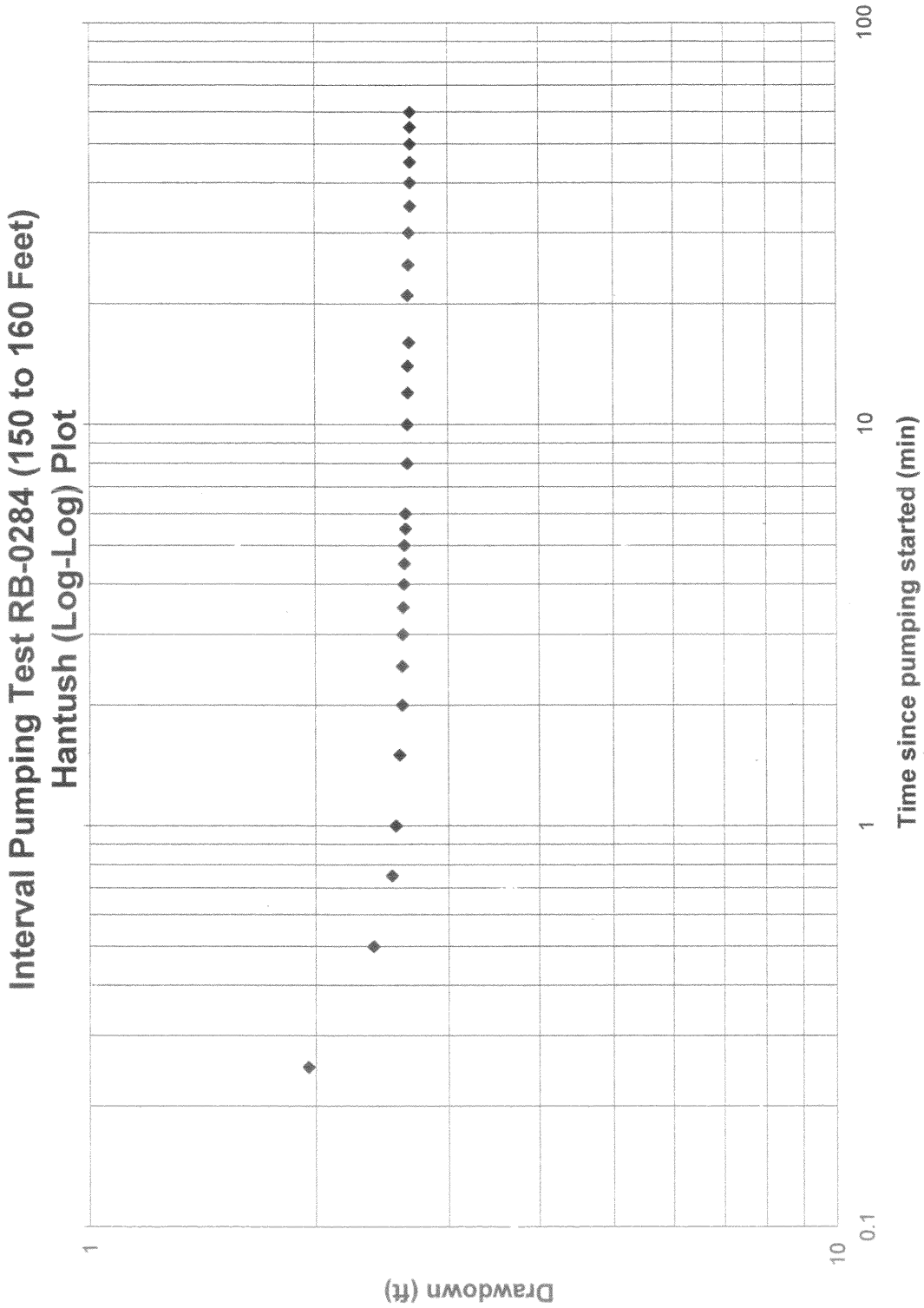
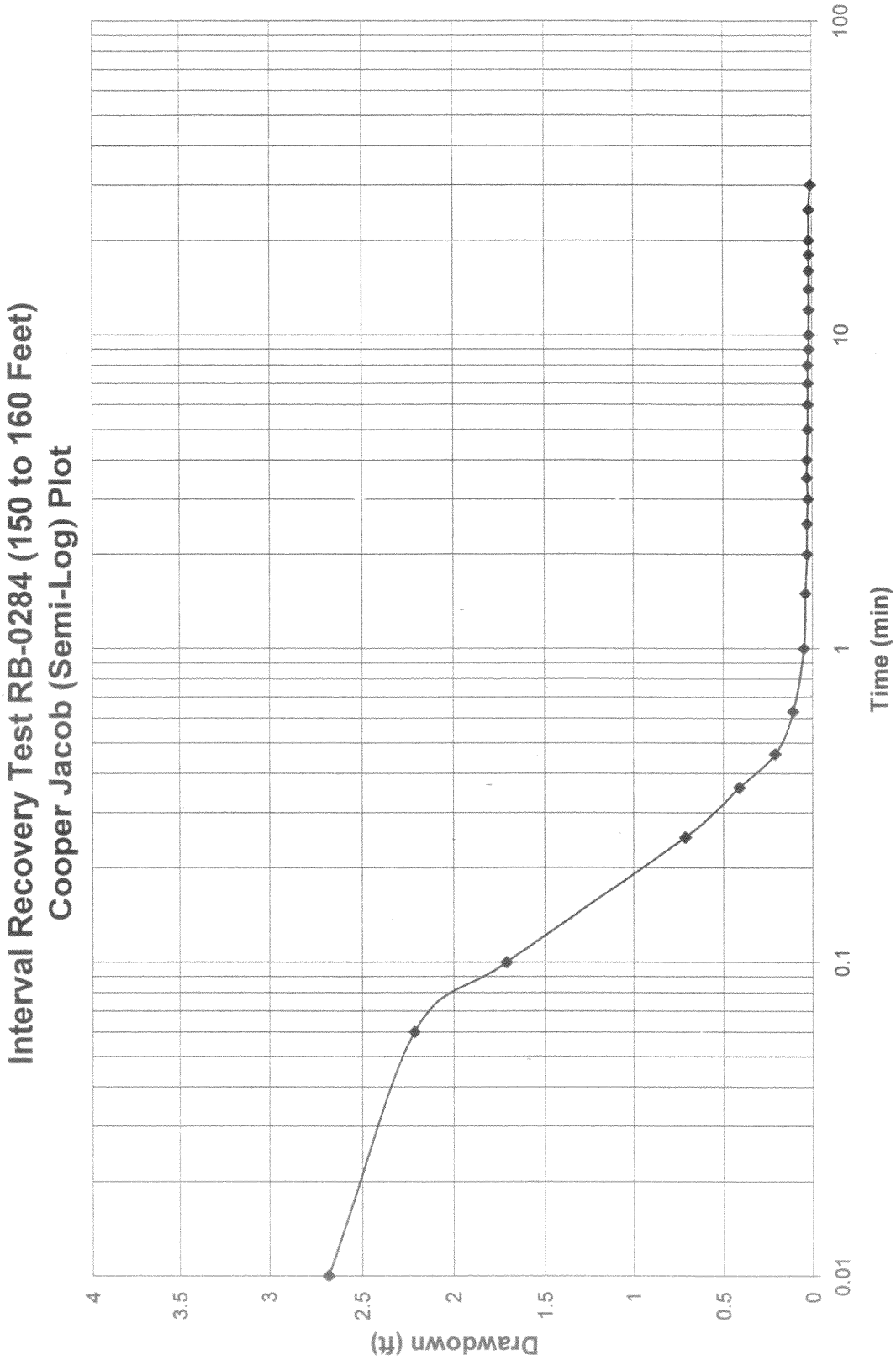
| | | | |
|---|---|---|---|
| Project | Everglades AA Reservoir A-1 | Pumping Test Well | RB-0284 |
| Project No. | 142004 | | |
| Client | SFWMD | Interval Test From | 150 |
| | | To | 160 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Location | Westside, centre | Coordinates | East 758050 | North 764456 | | | Sheet 2 of 2 |
| Casing Depth | 150 | Reference Point | Breakout | | | | |
| Open Hole Depth | 160 After test 159 | Height Above Ground Level | 4.8 | | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 7.79 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 10/8/2005 | 12 | 40 | 0.00 | 10.47 | 2.68 | | 18.5 | Last Flow Rate |
| | | | 0.06 | 10 | 2.21 | | | |
| | | | 0.10 | 9.5 | 1.71 | | | |
| | | | 0.25 | 8.5 | 0.71 | | | |
| | | | 0.36 | 8.2 | 0.41 | | | |
| | | | 0.46 | 8 | 0.21 | | | |
| | | | 0.63 | 7.9 | 0.11 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 1.00 | 7.84 | 0.05 | | | |
| | | | 1.50 | 7.83 | 0.04 | | | |
| | | | 2.00 | 7.82 | 0.03 | | | |
| | | | 2.50 | 7.82 | 0.03 | | | |
| | | | 3.00 | 7.815 | 0.025 | | | |
| | | | 3.50 | 7.82 | 0.03 | | | |
| | | | 4.00 | 7.82 | 0.03 | | | |
| | | | 5.00 | 7.815 | 0.025 | | | |
| | | | 6.00 | 7.815 | 0.025 | | | |
| | | | 7.00 | 7.815 | 0.025 | | | |
| | | | 8.00 | 7.815 | 0.025 | | | |
| | | | 9.00 | 7.81 | 0.02 | | | |
| | | | 10.00 | 7.81 | 0.02 | | | |
| | | | 12.00 | 7.81 | 0.02 | | | |
| | | | 14.00 | 7.81 | 0.02 | | | |
| | | | 16.00 | 7.81 | 0.02 | | | |
| | | | 18.00 | 7.81 | 0.02 | | | |
| | | | 20.00 | 7.81 | 0.02 | | | |
| | | | 25.00 | 7.81 | 0.02 | | | |
| | 13 | 10 | 30.00 | 7.8 | 0.01 | | | |


Interval Pumping Test RB-0284 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
3
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0284 (150 to 160 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0284 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
4
3.5
3
2.5
2
1.5
1
0.5
0
0.01
0.1
1
10
100
Time (min)

EAA-1 Reservoir
Well: RB-0285
250' boring with Interval Testing  Rig Floor Measuring Point: 4.70' above ground level.

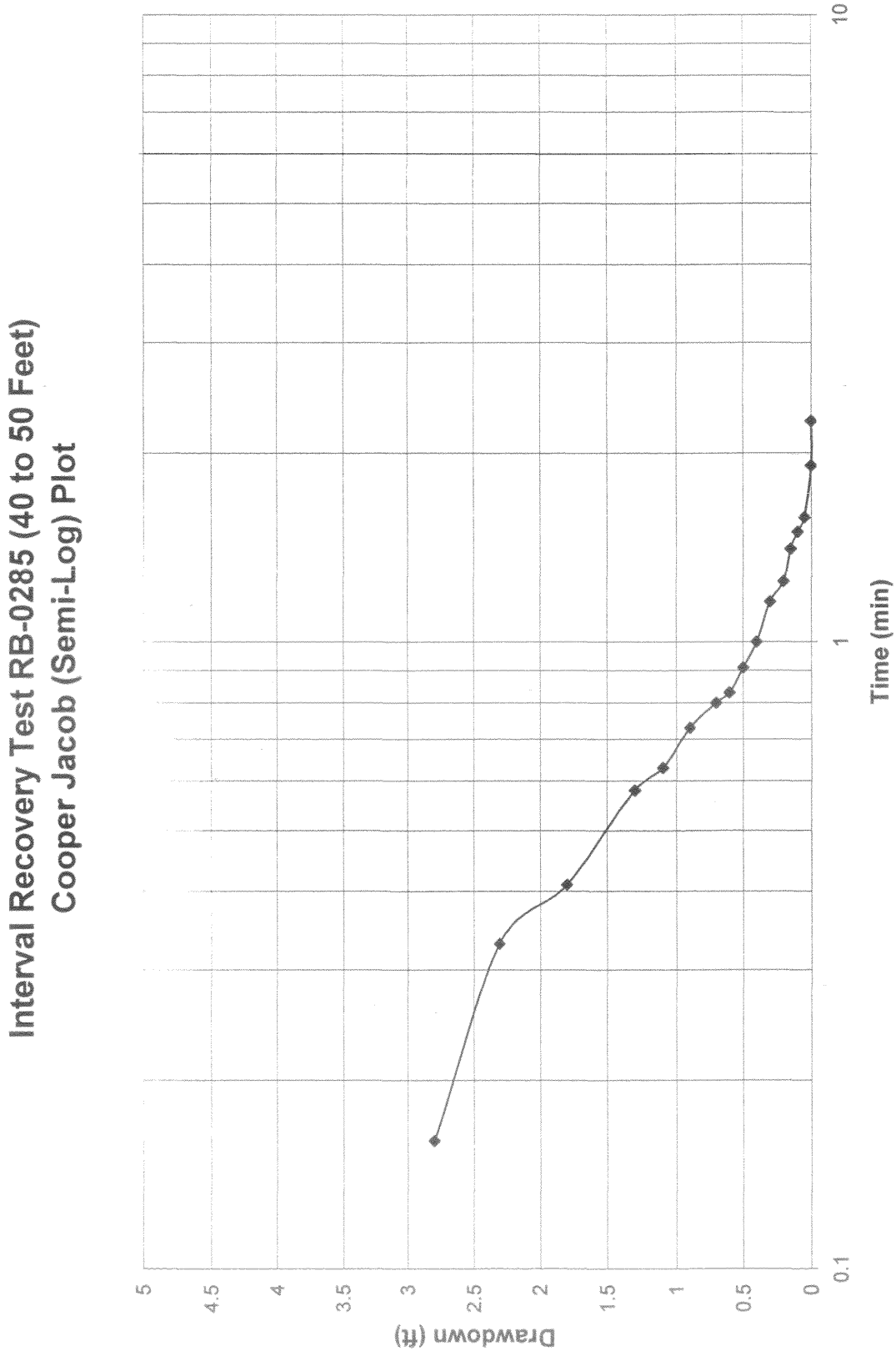
Water Levels if Feet, measured form the Rig Floor.
Time is minutes

**First Interval Test**
**40' - 50' openhole section**

Static Water Level: 11.70

| Flow Rate | 1st Step 4.8 gpm | Drawdown | 2nd Step 9.3 gpm | Drawdown | 3rd Step 13.8 gpm | Drawdown | 4th Step 16 gpm | Drawdown | Recovery | | Recovery |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Time (min.) | Water Levels | Feet | Water Levels | Feet | Water Levels | Feet | Water Levels | Feet | Time (min.) | Water Levels | Feet |
| 0.33 | 13.10 | 1.40 | 14.39 | 2.69 | 16.00 | 4.30 | 16.90 | 5.20 | 0.00 | 17.05 | 5.35 |
| 0.66 | 13.25 | 1.55 | 14.75 | 3.05 | 16.27 | 4.57 | 16.96 | 5.26 | 0.16 | 14.50 | 2.80 |
| 1.00 | 13.40 | 1.70 | 14.89 | 3.19 | 16.40 | 4.70 | 17.00 | 5.30 | 0.33 | 14.00 | 2.30 |
| 1.33 | 13.48 | 1.78 | 14.95 | 3.25 | 16.48 | 4.78 | 17.03 | 5.33 | 0.41 | 13.50 | 1.80 |
| 1.66 | 13.50 | 1.80 | 14.96 | 3.26 | 16.50 | 4.80 | 17.02 | 5.32 | 0.58 | 13.00 | 1.30 |
| 2.00 | 13.52 | 1.82 | 14.99 | 3.29 | 16.52 | 4.82 | 17.00 | 5.30 | 0.63 | 12.80 | 1.10 |
| 2.33 | 13.54 | 1.84 | 14.98 | 3.28 | 16.62 | 4.92 | 17.01 | 5.31 | 0.73 | 12.60 | 0.90 |
| 2.66 | 13.54 | 1.84 | 14.99 | 3.29 | 16.66 | 4.96 | 17.02 | 5.32 | 0.80 | 12.40 | 0.70 |
| 3.00 | 13.54 | 1.84 | 14.99 | 3.29 | 16.70 | 5.00 | 17.03 | 5.33 | 0.83 | 12.30 | 0.60 |
| 3.33 | 13.54 | 1.84 | 14.98 | 3.28 | 16.76 | 5.06 | 17.05 | 5.35 | 0.91 | 12.20 | 0.50 |
| 3.60 | 13.54 | 1.84 | 14.98 | 3.28 | 16.80 | 5.10 | 17.05 | 5.35 | 1.00 | 12.10 | 0.40 |
| 4.00 | 13.55 | 1.85 | 15.00 | 3.30 | 16.82 | 5.12 | 17.07 | 5.37 | 1.16 | 12.00 | 0.30 |
| 4.33 | 13.55 | 1.85 | 15.00 | 3.30 | 16.79 | 5.09 | 17.07 | 5.37 | 1.25 | 11.90 | 0.20 |
| 4.66 | 13.55 | 1.85 | 15.02 | 3.32 | 16.75 | 5.05 | 17.07 | 5.37 | 1.41 | 11.85 | 0.15 |
| 5.00 | 13.54 | 1.84 | 15.03 | 3.33 | 16.70 | 5.00 | 17.07 | 5.37 | 1.50 | 11.80 | 0.10 |
| 5.33 | 13.53 | 1.83 | 15.03 | 3.33 | 16.66 | 4.96 | 17.07 | 5.37 | 1.58 | 11.75 | 0.05 |
| 5.66 | 13.53 | 1.83 | 15.04 | 3.34 | 16.64 | 4.94 | 17.07 | 5.37 | 1.91 | 11.70 | 0.00 |
| 6.00 | 13.53 | 1.83 | 15.04 | 3.34 | 16.63 | 4.93 | 17.07 | 5.37 | 2.25 | 11.70 | 0.00 |
| 8.00 | 13.53 | 1.83 | 15.02 | 3.32 | 16.60 | 4.90 | 17.08 | 5.38 | | | |
| 10.00 | 13.53 | 1.83 | 14.98 | 3.28 | 16.54 | 4.84 | 17.08 | 5.38 | | | |
| 12.00 | 13.53 | 1.83 | 14.99 | 3.29 | 16.46 | 4.76 | 17.08 | 5.38 | | | |
| 14.00 | 13.53 | 1.83 | 14.99 | 3.29 | 16.44 | 4.74 | 17.08 | 5.38 | | | |
| 15.00 | 13.53 | 1.83 | 15.00 | 3.30 | 16.44 | 4.74 | 17.08 | 5.38 | | | |
| 20.00 | 13.53 | 1.83 | 15.00 | 3.30 | 16.44 | 4.74 | 17.08 | 5.38 | | | |
| 25.00 | 13.53 | 1.83 | 15.00 | 3.30 | 16.44 | 4.74 | 17.08 | 5.38 | | | |
| 30.00 | 13.53 | 1.83 | 14.92 | 3.22 | 16.44 | 4.74 | 17.04 | 5.34 | | | |
| 35.00 | | | 14.98 | 3.28 | 16.44 | 4.74 | 17.05 | 5.35 | | | |
| 40.00 | | | 14.99 | 3.29 | | | | | | | |
| 45.00 | | | 15.00 | 3.30 | | | | | | | |
| 50.00 | | | | | | | | | | | |
| 55.00 | | | | | | | | | | | |
| 60.00 | | | | | | | | | | | |

* Generator out of fuel, at the 30 min. mark, down one minute.


Interval Recovery Test RB-0285 (40 to 50 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0.1
1
10
Time (min)

EAA-1 Reservoir
Well: RB-0285
250' boring with Interval Testing  Rig Floor Measuring Point: 4.70' above ground level.

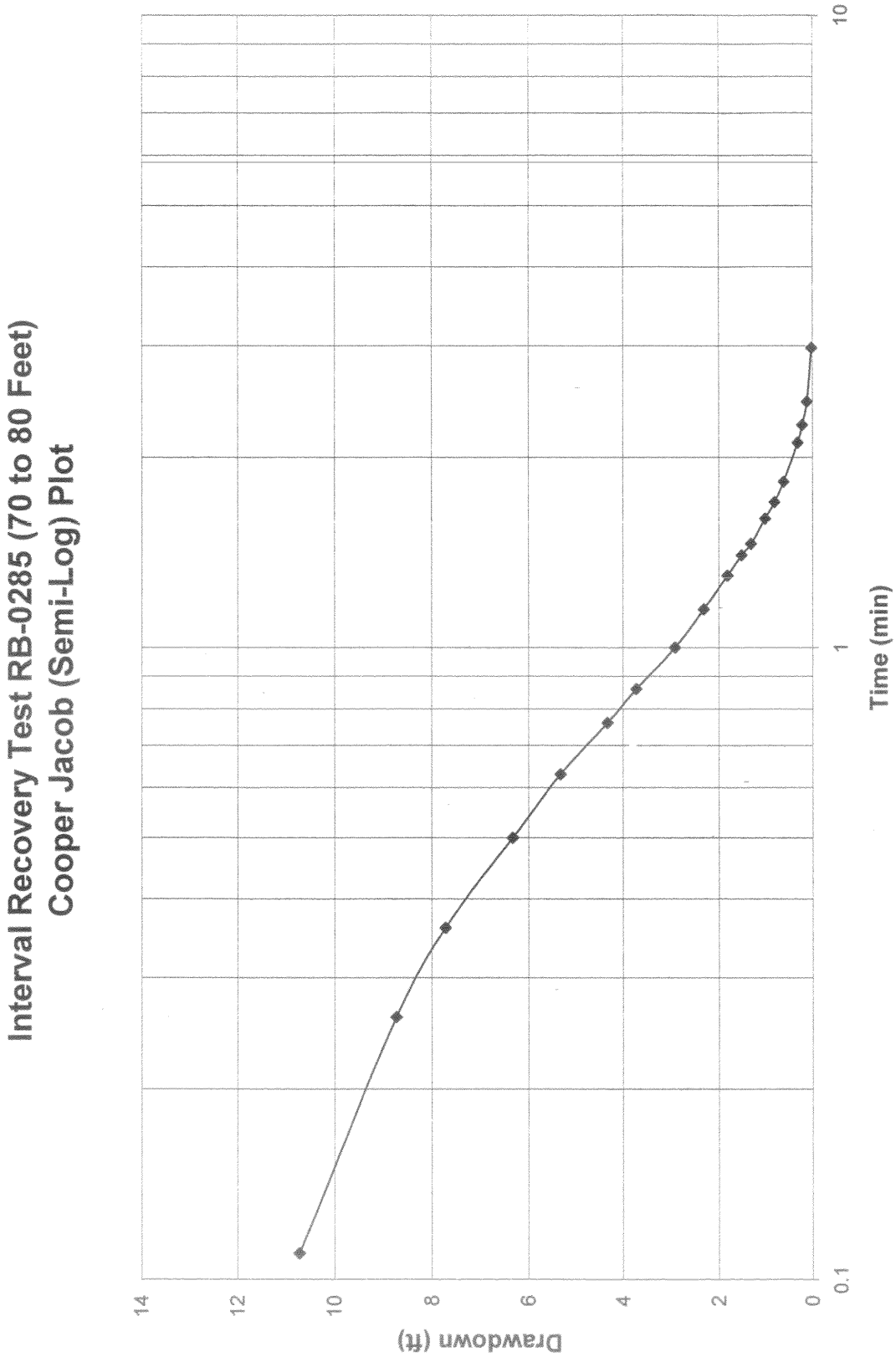
Water Levels if Feet, measured form the Rig Floor.
Time is minutes

**Second Interval Test**
**70' - 80' openhole section**

Static Water Level: 11.68

| | 1st Step | | 2nd Step | | 3rd Step | | 4th Step | |
|---|---|---|---|---|---|---|---|---|
| Flow Rate | 4.8 gpm | Drawdown | 10.2 gpm | Drawdown | 12.7 gpm | Drawdown | 15.7 gpm | Drawdown |
| Time (min.) | Vater Level | Feet | Vater Level | Feet | Vater Level | Feet | Vater Level | Feet |
| 0.33 | 12.35 | 0.67 | 13.35 | 1.67 | 17.10 | 5.42 | 20.10 | 8.42 |
| 0.66 | 12.40 | 0.72 | 13.95 | 2.27 | 17.50 | 5.82 | 20.65 | 8.97 |
| 1.00 | 12.43 | 0.75 | 14.03 | 2.35 | 17.70 | 6.02 | 21.00 | 9.32 |
| 1.33 | 12.43 | 0.75 | 14.50 | 2.82 | 17.84 | 6.16 | 21.28 | 9.60 |
| 1.66 | 12.43 | 0.75 | 14.70 | 3.02 | 17.95 | 6.27 | 21.50 | 9.82 |
| 2.00 | 12.43 | 0.75 | 14.90 | 3.22 | 18.07 | 6.39 | 21.70 | 10.02 |
| 2.33 | 12.44 | 0.76 | 15.08 | 3.40 | 18.16 | 6.48 | 21.84 | 10.16 |
| 2.66 | 12.44 | 0.76 | 15.14 | 3.46 | 18.24 | 6.56 | 21.95 | 10.27 |
| 3.00 | 12.44 | 0.76 | 15.20 | 3.52 | 18.31 | 6.63 | 22.09 | 10.41 |
| 3.33 | 12.44 | 0.76 | 15.27 | 3.59 | 18.38 | 6.70 | 22.18 | 10.50 |
| 3.60 | 12.44 | 0.76 | 15.35 | 3.67 | 18.42 | 6.74 | 22.24 | 10.56 |
| 4.00 | 12.44 | 0.76 | 15.40 | 3.72 | 18.48 | 6.80 | 22.32 | 10.64 |
| 4.33 | 12.44 | 0.76 | 15.45 | 3.77 | 18.50 | 6.82 | 22.35 | 10.67 |
| 4.66 | 12.44 | 0.76 | 15.48 | 3.80 | 18.53 | 6.85 | 22.42 | 10.74 |
| 5.00 | 12.45 | 0.77 | 15.51 | 3.83 | 18.57 | 6.89 | 22.47 | 10.79 |
| 5.33 | 12.45 | 0.77 | 15.55 | 3.87 | 18.60 | 6.92 | 22.53 | 10.85 |
| 5.66 | 12.45 | 0.77 | 15.58 | 3.90 | 18.64 | 6.96 | 22.58 | 10.90 |
| 6.00 | 12.45 | 0.77 | 15.62 | 3.94 | 18.68 | 7.00 | 22.61 | 10.93 |
| 8.00 | 12.45 | 0.77 | 15.66 | 3.98 | 18.88 | 7.20 | 22.82 | 11.14 |
| 10.00 | 12.45 | 0.77 | 15.75 | 4.07 | 18.91 | 7.23 | 23.05 | 11.37 |
| 12.00 | 12.45 | 0.77 | 15.89 | 4.21 | 18.98 | 7.30 | 23.14 | 11.46 |
| 14.00 | 12.45 | 0.77 | 15.95 | 4.27 | 19.02 | 7.34 | 23.22 | 11.54 |
| 15.00 | 12.45 | 0.77 | 16.00 | 4.32 | 19.04 | 7.36 | 23.30 | 11.62 |
| 20.00 | 12.45 | 0.77 | 16.09 | 4.41 | 19.13 | 7.45 | 23.54 | 11.86 |
| 25.00 | 12.45 | 0.77 | 16.24 | 4.56 | 19.21 | 7.53 | 23.72 | 12.04 |
| 30.00 | | | 16.28 | 4.60 | 19.28 | 7.60 | 23.75 | 12.07 |
| 35.00 | | | 16.33 | 4.65 | 19.30 | 7.62 | 23.81 | 12.13 |
| 40.00 | | | 16.39 | 4.71 | 19.32 | 7.64 | 23.74 | 12.06 |
| 45.00 | | | | | | | 23.86 | 12.18 |
| 50.00 | | | | | | | 23.95 | 12.27 |
| 55.00 | | | | | | | 23.96 | 12.28 |
| 60.00 | | | | | | | 24.04 | 12.36 |

| Recovery | Recovery |
|---|---|
| Time (min.) Vater Level | Feet |
| 0.11 22.40 | 10.72 |
| 0.26 20.40 | 8.72 |
| 0.36 19.40 | 7.72 |
| 0.50 18.00 | 6.32 |
| 0.63 17.00 | 5.32 |
| 0.76 16.00 | 4.32 |
| 0.86 15.40 | 3.72 |
| 1.00 14.60 | 2.92 |
| 1.15 14.00 | 2.32 |
| 1.30 13.50 | 1.82 |
| 1.40 13.20 | 1.52 |
| 1.46 13.00 | 1.32 |
| 1.60 12.70 | 1.02 |
| 1.70 12.50 | 0.82 |
| 1.83 12.30 | 0.62 |
| 2.11 12.00 | 0.32 |
| 2.25 11.90 | 0.22 |
| 2.45 11.80 | 0.12 |
| 2.98 11.70 | 0.02 |


Interval Recovery Test RB-0285 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
14
12
10
8
6
4
2
0
0.1
1
10
Time (min)

# EAA-1 Resvoir Project

Page 1

Well Number: RB-0285

Date: July 28,2005

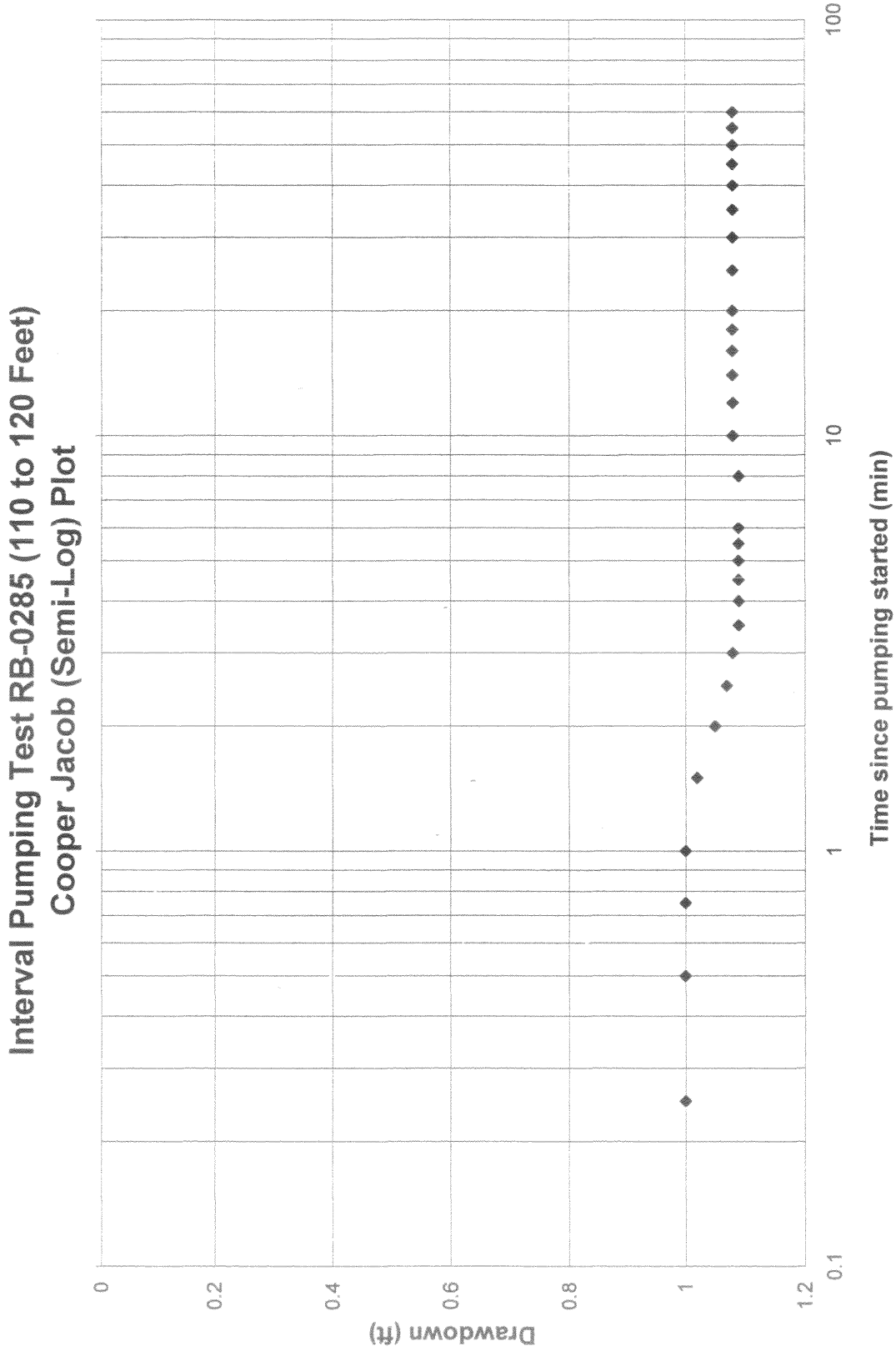
Static Water Level 11.40

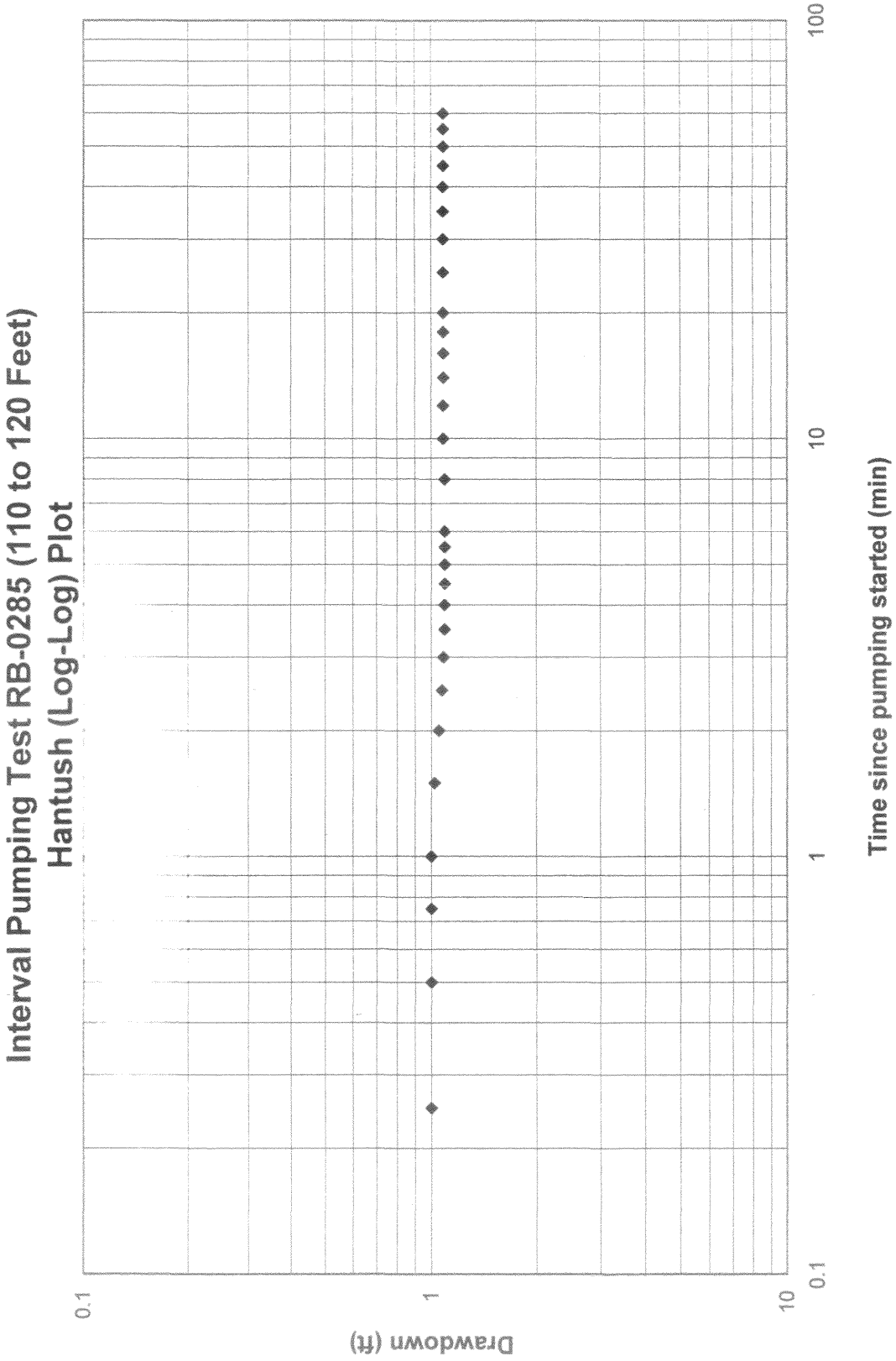
| | From | To |
|---|---|---|
| **Test Interval** | **110** | **120** |
| Flow Rate | 20.2 | gpm |

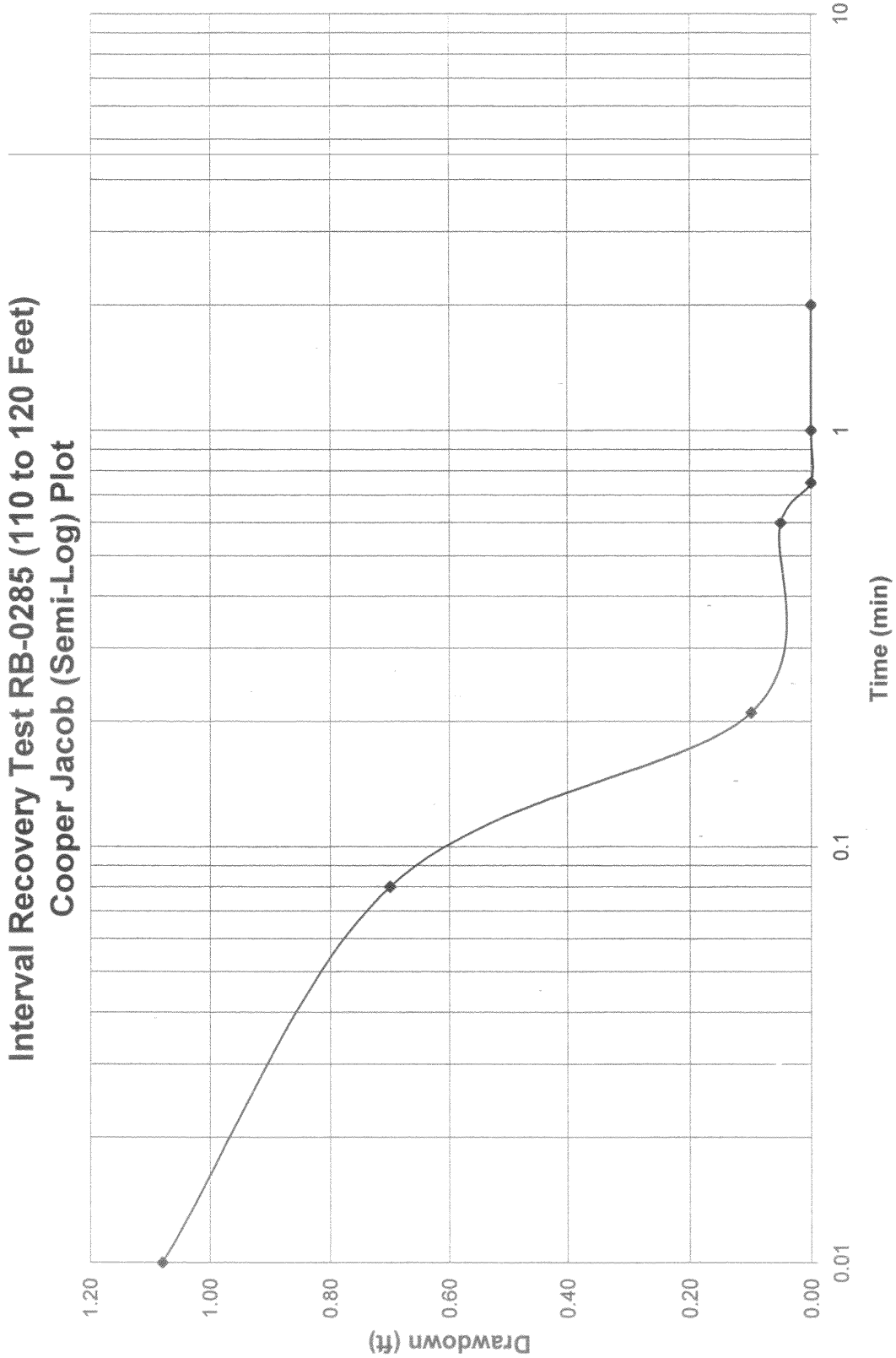
B&V Engineer: Paul Petrey

| Drawdown Test | | |
|---|---|---|
| Time Minutes | Water Level Feet | Drawdown Feet |
| 0.00 | 12.35 | |
| 0.25 | 12.40 | 1.00 |
| 0.50 | 12.40 | 1.00 |
| 0.75 | 12.40 | 1.00 |
| 1.00 | 12.40 | 1.00 |
| 1.50 | 12.42 | 1.02 |
| 2.00 | 12.45 | 1.05 |
| 2.50 | 12.47 | 1.07 |
| 3.00 | 12.48 | 1.08 |
| 3.50 | 12.49 | 1.09 |
| 4.00 | 12.49 | 1.09 |
| 4.50 | 12.49 | 1.09 |
| 5.00 | 12.49 | 1.09 |
| 5.50 | 12.49 | 1.09 |
| 6.00 | 12.49 | 1.09 |
| 8.00 | 12.49 | 1.09 |
| 10.00 | 12.48 | 1.08 |
| 12.00 | 12.48 | 1.08 |
| 14.00 | 12.48 | 1.08 |
| 16.00 | 12.48 | 1.08 |
| 18.00 | 12.48 | 1.08 |
| 20.00 | 12.48 | 1.08 |
| 25.00 | 12.48 | 1.08 |
| 30.00 | 12.48 | 1.08 |
| 35.00 | 12.48 | 1.08 |
| 40.00 | 12.48 | 1.08 |
| 45.00 | 12.48 | 1.08 |
| 50.00 | 12.48 | 1.08 |
| 55.00 | 12.48 | 1.08 |
| 60.00 | 12.48 | 1.08 |
| 75.00 | | |
| 90.00 | | |
| 105.00 | | |
| 120.00 | | |
| 135.00 | | |
| 150.00 | | |
| 165.00 | | |
| 180.00 | | |

| Recovery Test | | |
|---|---|---|
| Time Minutes | Water Level Feet | Drawdown Feet |
| 0.00 | 12.48 | 1.08 |
| 0.08 | 12.10 | 0.70 |
| 0.21 | 11.50 | 0.10 |
| 0.60 | 11.45 | 0.05 |
| 0.75 | 11.40 | 0.00 |
| | | |
| | | |
| | | |
| 1.00 | 11.40 | 0.00 |
| 2.00 | 11.40 | 0.00 |
| 3.00 | 11.40 | 0.00 |
| 4.00 | 11.40 | 0.00 |
| 5.00 | 11.40 | 0.00 |
| 6.00 | 11.40 | 0.00 |
| 7.00 | 11.40 | 0.00 |
| 8.00 | 11.40 | 0.00 |
| 9.00 | 11.40 | 0.00 |
| | | |
| | | |
| 10.00 | 11.40 | 0.00 |
| 12.00 | 11.40 | 0.00 |
| 14.00 | 11.40 | 0.00 |
| 16.00 | | |
| 18.00 | | |
| 20.00 | | |
| 22.00 | | |
| 24.00 | | |
| 26.00 | | |
| 28.00 | | |
| 30.00 | | |


Interval Pumping Test RB-0285 (110 to 120 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.2
0.4
0.6
0.8
1
1.2
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0285 (110 to 120 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.1
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0285 (110 to 120 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.01
0.1
1
10
Time (min)

# EAA-1 Resvoir Project

Page 1

Well Number: RB-0285

Date: July 28,2005

Static Water Level 11.44

| | From | To |
|---|---|---|
| **Test Interval** | **150** | **160** |
| Flow Rate | 22.5 | gpm |

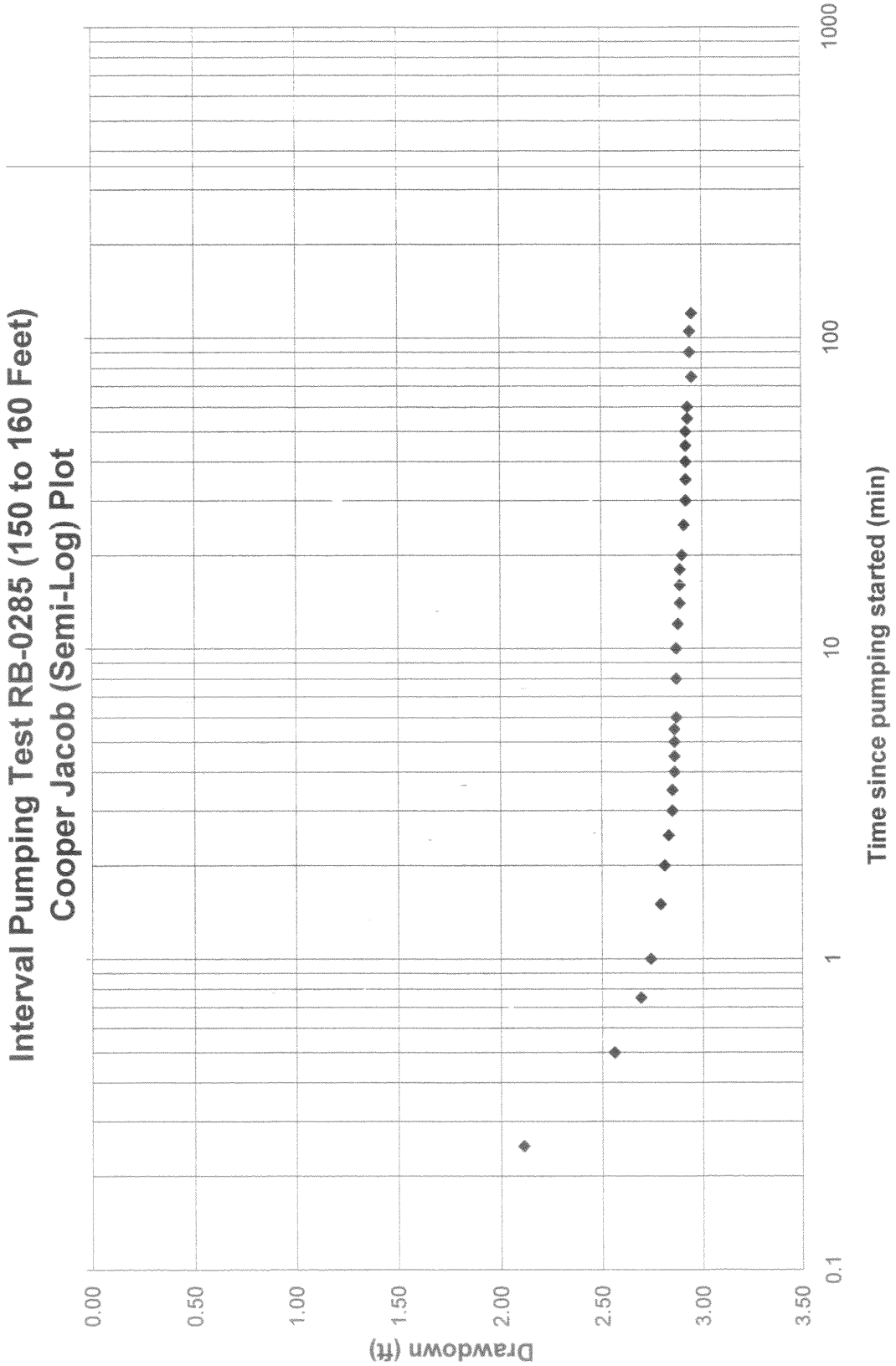
B&V Engineer: Paul Petrey

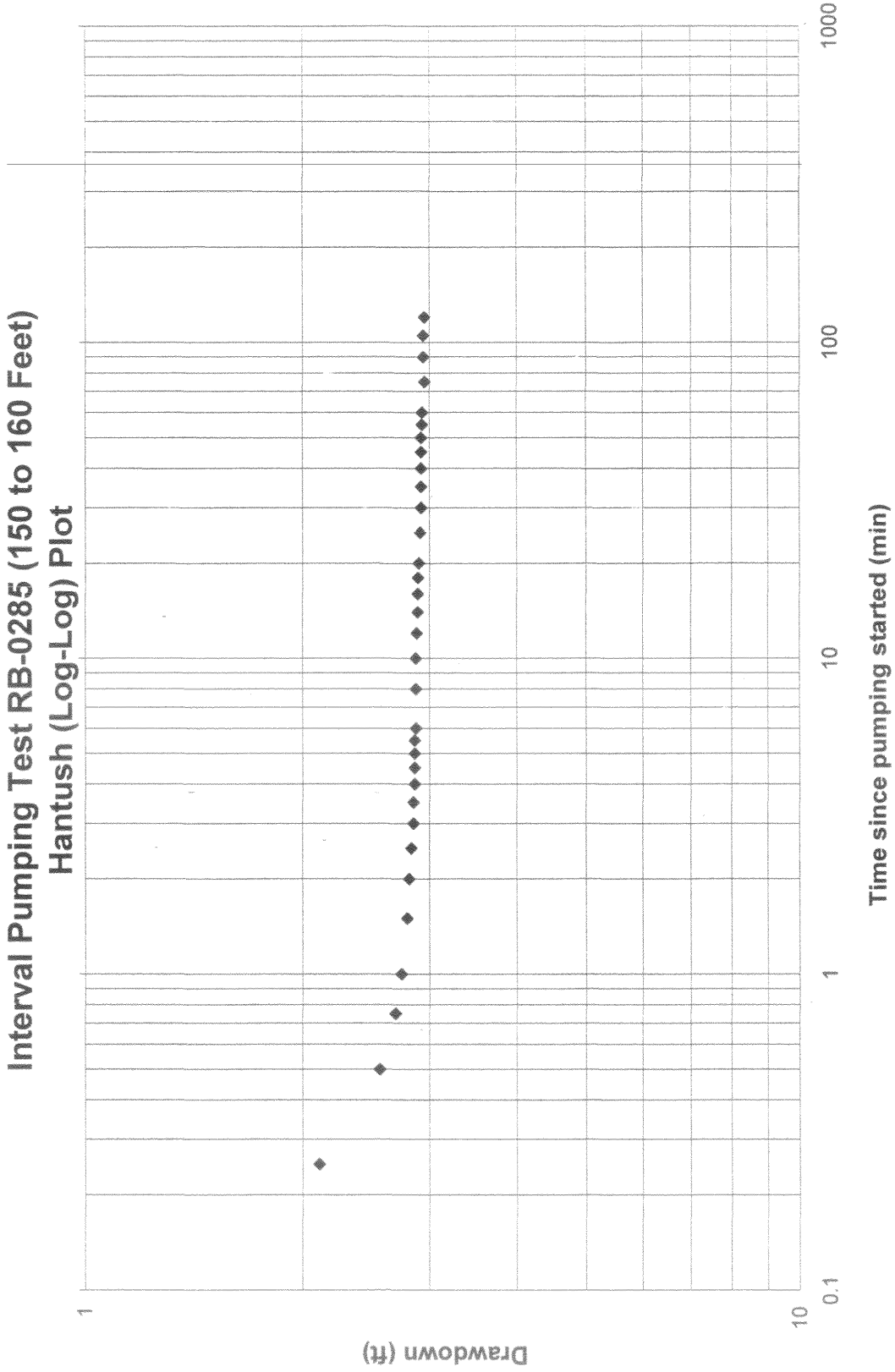
## Drawdown Test

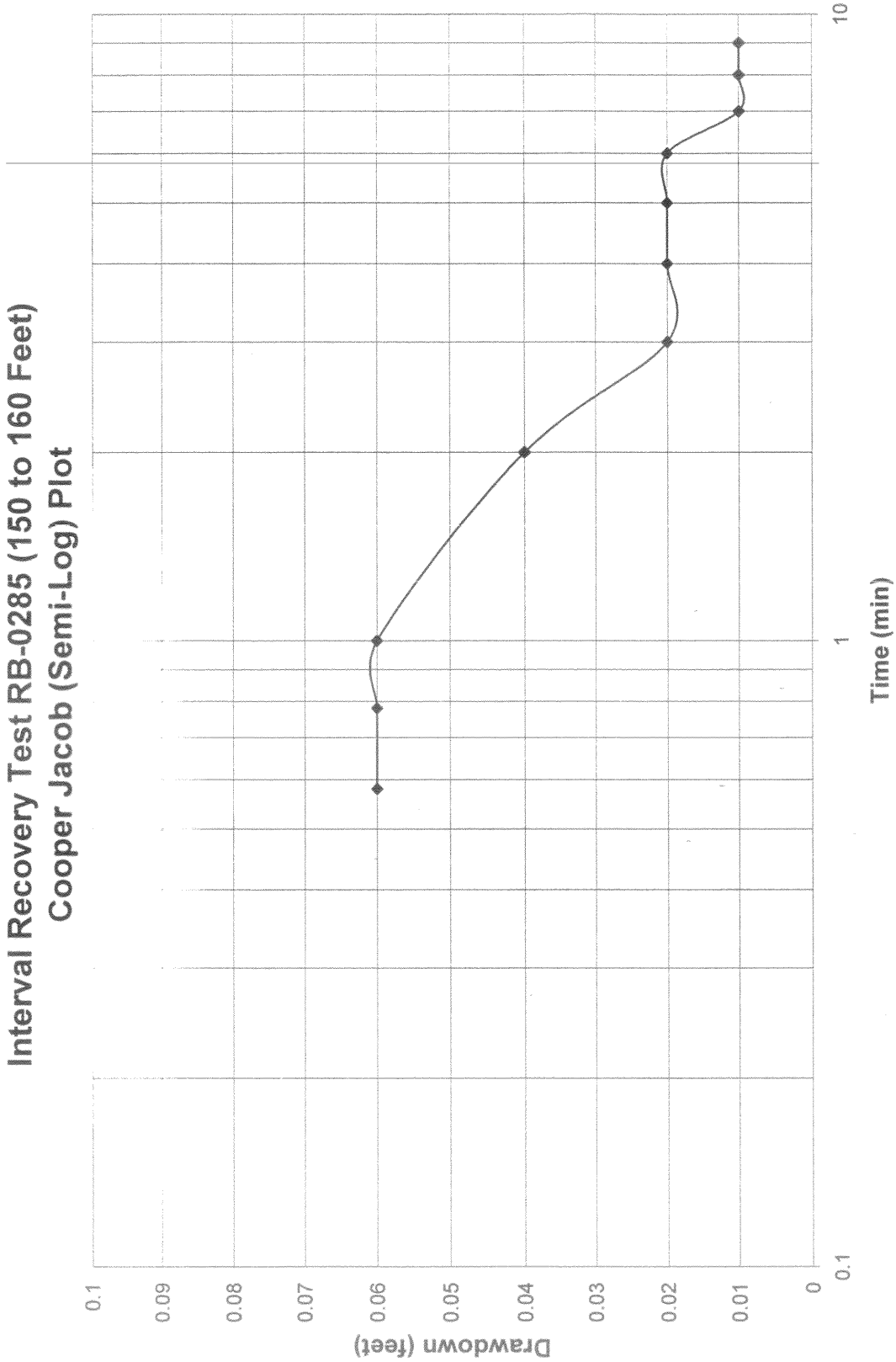
| Time Minutes | Water Level Feet | Drawdown Feet |
|---|---|---|
| 0.00 | 11.44 | |
| 0.25 | 13.55 | 2.11 |
| 0.50 | 14.00 | 2.56 |
| 0.75 | 14.13 | 2.69 |
| 1.00 | 14.18 | 2.74 |
| 1.50 | 14.23 | 2.79 |
| 2.00 | 14.25 | 2.81 |
| 2.50 | 14.27 | 2.83 |
| 3.00 | 14.29 | 2.85 |
| 3.50 | 14.29 | 2.85 |
| 4.00 | 14.30 | 2.86 |
| 4.50 | 14.30 | 2.86 |
| 5.00 | 14.30 | 2.86 |
| 5.50 | 14.30 | 2.86 |
| 6.00 | 14.31 | 2.87 |
| 8.00 | 14.31 | 2.87 |
| 10.00 | 14.31 | 2.87 |
| 12.00 | 14.32 | 2.88 |
| 14.00 | 14.33 | 2.89 |
| 16.00 | 14.33 | 2.89 |
| 18.00 | 14.33 | 2.89 |
| 20.00 | 14.34 | 2.90 |
| 25.00 | 14.35 | 2.91 |
| 30.00 | 14.36 | 2.92 |
| 35.00 | 14.36 | 2.92 |
| 40.00 | 14.36 | 2.92 |
| 45.00 | 14.36 | 2.92 |
| 50.00 | 14.36 | 2.92 |
| 55.00 | 14.37 | 2.93 |
| 60.00 | 14.37 | 2.93 |
| 75.00 | 14.39 | 2.95 |
| 90.00 | 14.38 | 2.94 |
| 105.00 | 14.38 | 2.94 |
| 120.00 | 14.39 | 2.95 |
| 135.00 | | |
| 150.00 | | |
| 165.00 | | |
| 180.00 | | |

## Recovery Test

| Time Minutes | Water Level Feet | Drawdown Feet |
|---|---|---|
| 0.00 | 14.39 | 2.95 |
| 0.60 | 12.00 | 0.56 |
| 0.26 | 11.70 | 0.26 |
| 0.58 | 11.50 | 0.06 |
| 0.78 | 11.50 | 0.06 |
| | | |
| | | |
| | | |
| 1.00 | 11.50 | 0.06 |
| 2.00 | 11.48 | 0.04 |
| 3.00 | 11.46 | 0.02 |
| 4.00 | 11.46 | 0.02 |
| 5.00 | 11.46 | 0.02 |
| 6.00 | 11.46 | 0.02 |
| 7.00 | 11.45 | 0.01 |
| 8.00 | 11.45 | 0.01 |
| 9.00 | 11.45 | 0.01 |
| | | |
| | | |
| 10.00 | 11.45 | 0.01 |
| 12.00 | 11.45 | 0.01 |
| 14.00 | 11.45 | 0.01 |
| 16.00 | | |
| 18.00 | | |
| 20.00 | | |
| 22.00 | | |
| 24.00 | | |
| 26.00 | | |
| 28.00 | | |
| 30.00 | | |


Interval Pumping Test RB-0285 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
0.1
1
10
100
1000
Time since pumping started (min)


Interval Pumping Test RB-0285 (150 to 160 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
1000
Time since pumping started (min)


Interval Recovery Test RB-0285 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (feet)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.1
1
10
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0286** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 40 |
| | | To | 50 |

Sheet1 of 2

| | | | East | North |
|---|---|---|---|---|
| **Location** | Centre of site | **Coordinates** | 768550 | 764359 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 40 | | Reference Point | Breakout | | | |
| Open Hole Depth | 52 | After test 52 | Height Above Ground Level | 5 | | | |
| Screen Depth | 52 | | | | | | |
| Pump Setting Depth | 30 | | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 8.2 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 2/8/2005 | 10 | 5 | 0.00 | | 0 | | 0 | |
| | | | 0.33 | 12 | 3.8 | | | |
| | | | 0.56 | 14.5 | 6.3 | | | |
| | | | 0.83 | 16.5 | 8.3 | | | |
| | | | 1.00 | 17.6 | 9.4 | | | |
| | | | 1.50 | 19.5 | 11.3 | | | |
| | | | 2.00 | 20.8 | 12.6 | | | |
| | | | 2.50 | 21.45 | 13.25 | | | |
| | | | 3.00 | 21.75 | 13.55 | | | |
| | | | 3.50 | 21.95 | 13.75 | | | |
| | | | 4.00 | 22.05 | 13.85 | | | |
| | | | 4.50 | 22.12 | 13.92 | | | |
| | | | 5.00 | 22.16 | 13.96 | | | |
| | | | 5.50 | 22.19 | 13.99 | | | |
| | | | 6.00 | 22.2 | 14 | | | |
| | | | 8.00 | 22.23 | 14.03 | | 18 | 2 minutes for 36 gallons |
| | | | 10.00 | 22.23 | 14.03 | | | Check Flow Rate |
| | | | 12.00 | 22.23 | 14.03 | | | |
| | | | 14.00 | 22.24 | 14.04 | | | |
| | | | 16.00 | 22.24 | 14.04 | | | |
| | | | 18.00 | 22.25 | 14.05 | | | |
| | | | 20.00 | 22.25 | 14.05 | | | Check Flow Rate |
| | | | 25.00 | 22.26 | 14.06 | | 18 | 2 minutes for 36 gallons |
| | | | 30.00 | 22.26 | 14.06 | | | Check Flow Rate |
| | | | 35.00 | 22.27 | 14.07 | | | |
| | | | 40.00 | 22.275 | 14.075 | | 18 | 2 minutes for 36 gallons |
| | | | 45.00 | 22.285 | 14.085 | | | |
| | | | 50.00 | 22.3 | 14.1 | | | |
| | | | 55.00 | 22.305 | 14.105 | | | |
| | | | 60.00 | 22.31 | 14.11 | | | Check Flow Rate |
| | | | 75.00 | 22.31 | 14.11 | | 18 | 2 minutes for 36 gallons |
| | | | 90.00 | 22.33 | 14.13 | | | |
| | | | 105.00 | 22.34 | 14.14 | | 18 | 2 minutes for 36 gallons |
| | 12 | 5 | 120.00 | 22.355 | 14.155 | | | |

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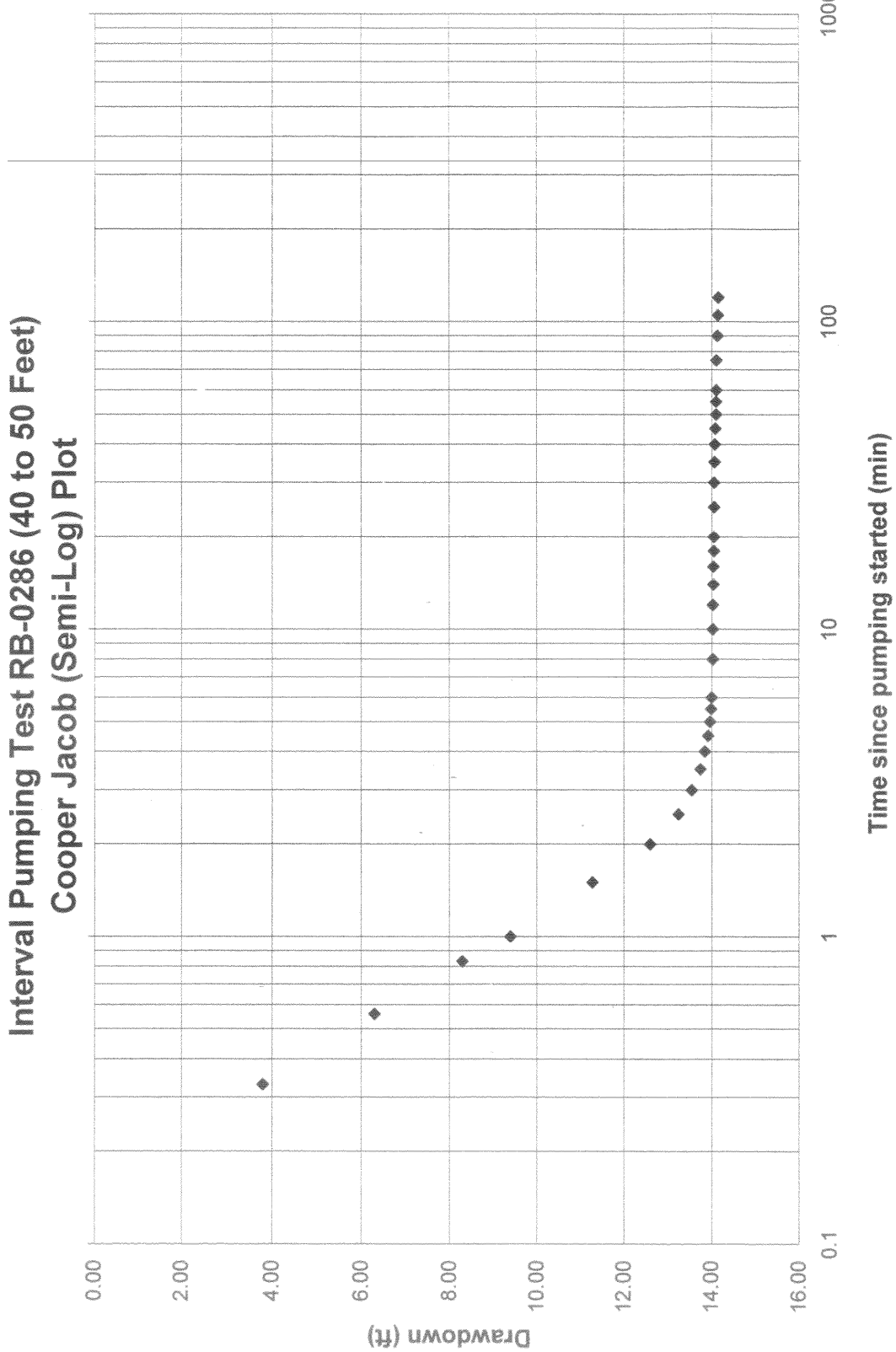
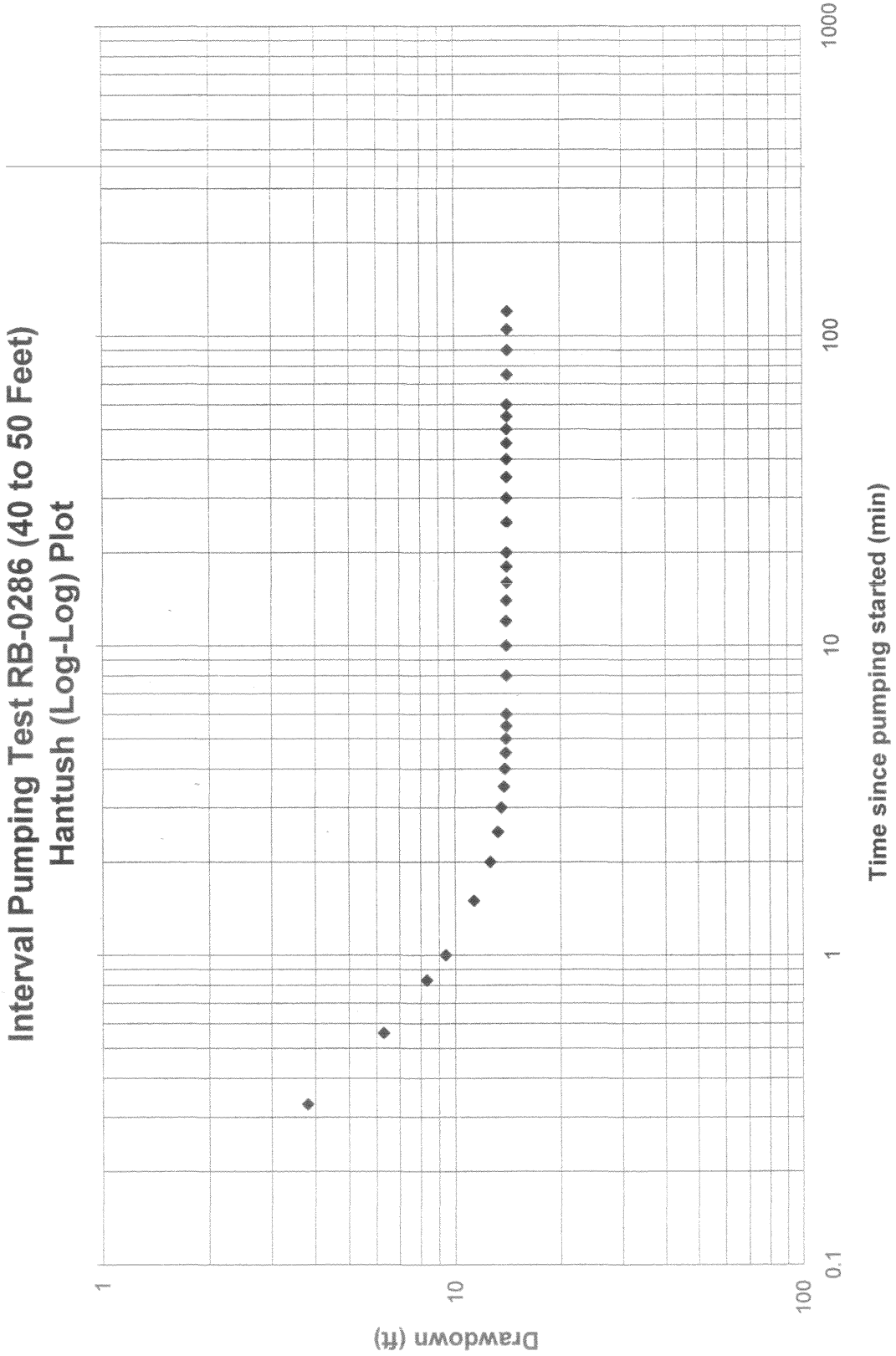
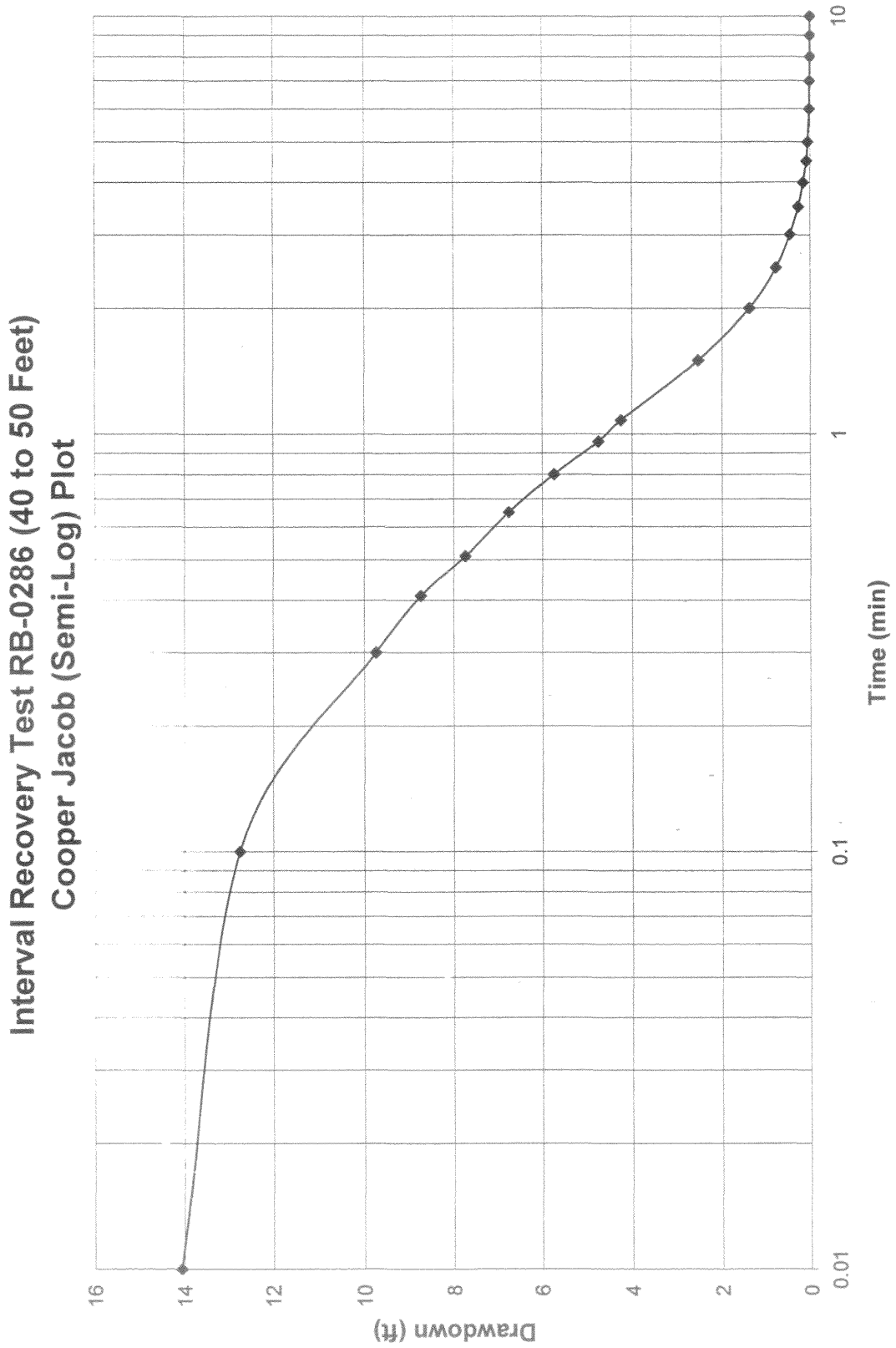
| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0286 |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 40 |
| | | To | 50 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Location** | Centre of site | **Coordinates** | East 768550 | North 764359 | Sheet 2 of 2 | |
| Casing Depth | 40 | Reference Point | Breakout | | | |
| Open Hole Depth | 52 After test 52 | Height Above Ground Level | 5 | | | |
| Screen Depth | 52 | | | | | |
| Pump Setting Depth | 30 | Pump Details Diameter | 3" | Discharge | Flowmeter | No |
| | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 8.2 | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| | 12 | 5 | 0.00 | 22.325 | 14.125 | | | Last Flow Rate |
| | | | 0.10 | 21 | 12.8 | | | |
| | | | 0.30 | 18 | 9.8 | | | |
| | | | 0.41 | 17 | 8.8 | | | |
| | | | 0.51 | 16 | 7.8 | | | |
| | | | 0.65 | 15 | 6.8 | | | |
| | | | 0.80 | 14 | 5.8 | | | |
| | | | 0.96 | 13 | 4.8 | | | |
| | | | | | | | | |
| | | | 1.08 | 12.5 | 4.3 | | | |
| | | | 1.50 | 10.8 | 2.6 | | | |
| | | | 2.00 | 9.65 | 1.45 | | | |
| | | | 2.50 | 9.05 | 0.85 | | | |
| | | | 3.00 | 8.73 | 0.53 | | | |
| | | | 3.50 | 8.53 | 0.33 | | | |
| | | | 4.00 | 8.42 | 0.22 | | | |
| | | | 4.50 | 8.35 | 0.15 | | | |
| | | | 5.00 | 8.32 | 0.12 | | | |
| | | | 6.00 | 8.28 | 0.08 | | | |
| | | | 7.00 | 8.27 | 0.07 | | | |
| | | | 8.00 | 8.26 | 0.06 | | | |
| | | | 9.00 | 8.26 | 0.06 | | | |
| | | | 10.00 | 8.26 | 0.06 | | | |
| | | | 12.00 | 8.26 | 0.06 | | | |
| | | | 14.00 | 8.26 | 0.06 | | | |
| | | | 16.00 | 8.26 | 0.06 | | | |
| | | | 18.00 | 8.26 | 0.06 | | | |
| | | | 20.00 | 8.26 | 0.06 | | | |
| | | | 25.00 | 8.26 | 0.06 | | | |
| | 12 | 35 | 30.00 | 8.26 | 0.06 | | | |


Interval Pumping Test RB-0286 (40 to 50 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
0.1
1
10
100
1000
Time since pumping started (min)


Interval Pumping Test RB-0286 (40 to 50 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
100
Time since pumping started (min)
0.1
1
10
100
1000


Interval Recovery Test RB-0286 (40 to 50 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
16
14
12
10
8
6
4
2
0
0.01
0.1
1
10
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | **RB-0286** |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 70 |
| | | To | 80 |

| | | | East | North | Sheet 1 of 2 |
|---|---|---|---|---|---|
| **Location** | Centre of site | **Coordinates** | 768550 | 764359 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 70 | | Reference Point | Breakout | | | |
| Open Hole Depth | 78.5 | After test | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 8.3 | | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 2/8/2005 | 15.2 | 20 | 0.00 | | 0 | | 0 | |
| | | | 0.25 | 10.15 | 1.85 | | | |
| | | | 0.50 | 10.8 | 2.5 | | | |
| | | | 0.75 | 11 | 2.7 | | | |
| | | | 1.00 | 11.11 | 2.81 | | | |
| | | | 1.50 | 11.22 | 2.92 | | | |
| | | | 2.00 | 11.27 | 2.97 | | | |
| | | | 2.50 | 11.3 | 3 | | | |
| | | | 3.00 | 11.32 | 3.02 | | | |
| | | | 3.50 | 11.34 | 3.04 | | | |
| | | | 4.00 | 11.35 | 3.05 | | | |
| | | | 4.50 | 11.37 | 3.07 | | | |
| | | | 5.00 | 11.37 | 3.07 | | | |
| | | | 5.50 | 11.38 | 3.08 | | | |
| | | | 6.00 | 11.38 | 3.08 | | | |
| | | | 8.00 | 11.38 | 3.08 | | 18 | 2 minutes for 38 gallons |
| | | | 10.00 | 11.39 | 3.09 | | | Check Flow Rate |
| | | | 13.00 | 11.41 | 3.11 | | | |
| | | | 14.00 | 11.43 | 3.13 | | | |
| | | | 16.00 | 11.46 | 3.16 | | | |
| | | | 18.00 | 11.47 | 3.17 | | | |
| | | | 20.00 | 11.5 | 3.2 | | | Check Flow Rate |
| | | | 25.00 | 11.51 | 3.21 | | 18 | 2 minutes for 38 gallons |
| | | | 30.00 | 11.52 | 3.22 | | | Check Flow Rate |
| | | | 35.00 | 11.59 | 3.29 | | 18 | 2 minutes for 38 gallons |
| | | | 40.00 | 11.585 | 3.285 | | | |
| | | | 45.00 | 11.61 | 3.31 | | | |
| | | | 50.00 | 11.66 | 3.36 | | | |
| | | | 55.00 | 11.625 | 3.325 | | 18 | 2 minutes for 38 gallons |
| | | | 60.00 | 11.65 | 3.35 | | | Check Flow Rate |
| | | | 75.00 | 11.675 | 3.375 | | | Thunderstorm approaching |

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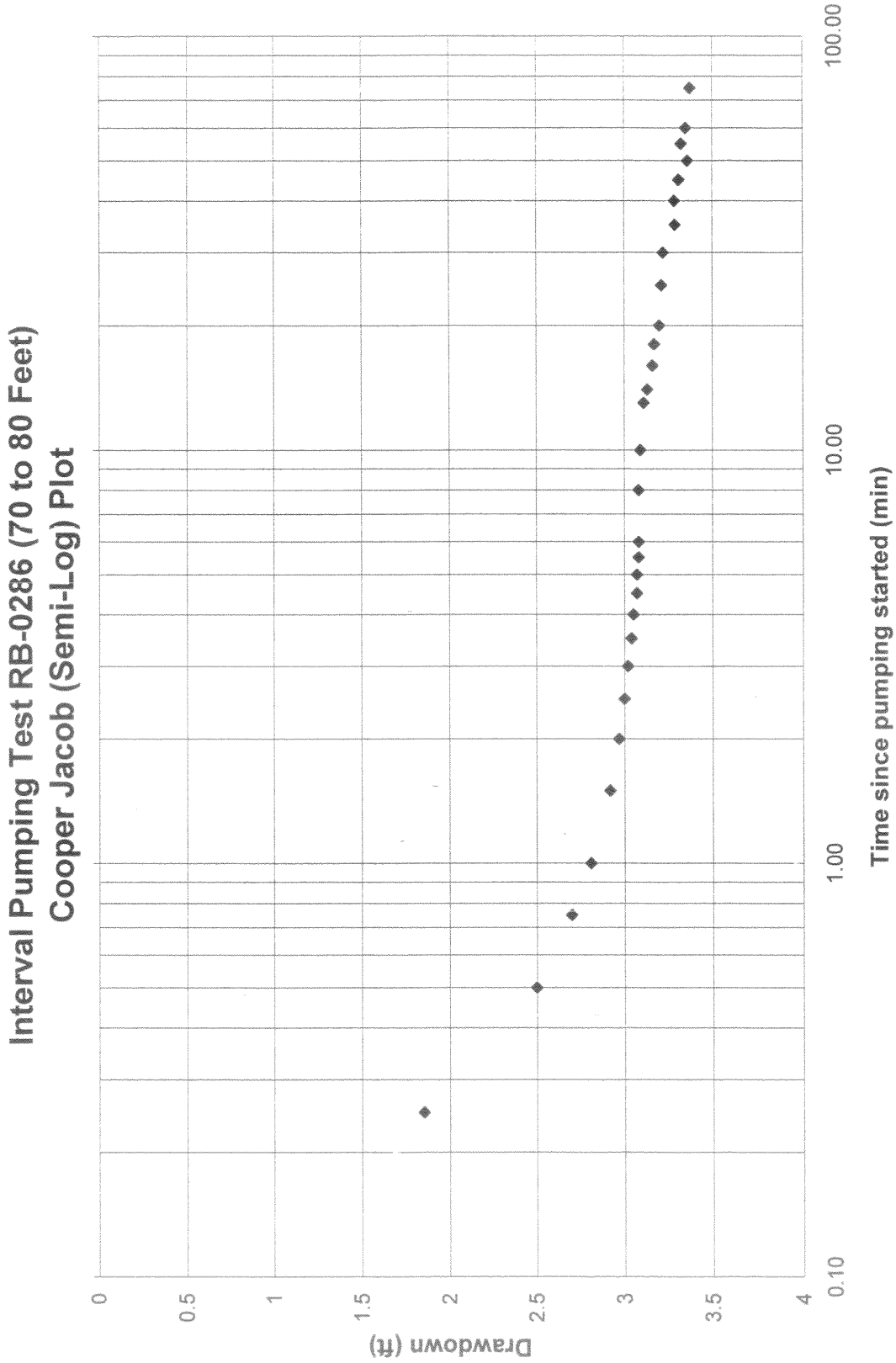
| | | | |
|---|---|---|---|
| Project | | Pumping Test Well | RB-0286 |
| Project No. | | | |
| Client | | Interval Test | From 70 |
| | | | To 80 |

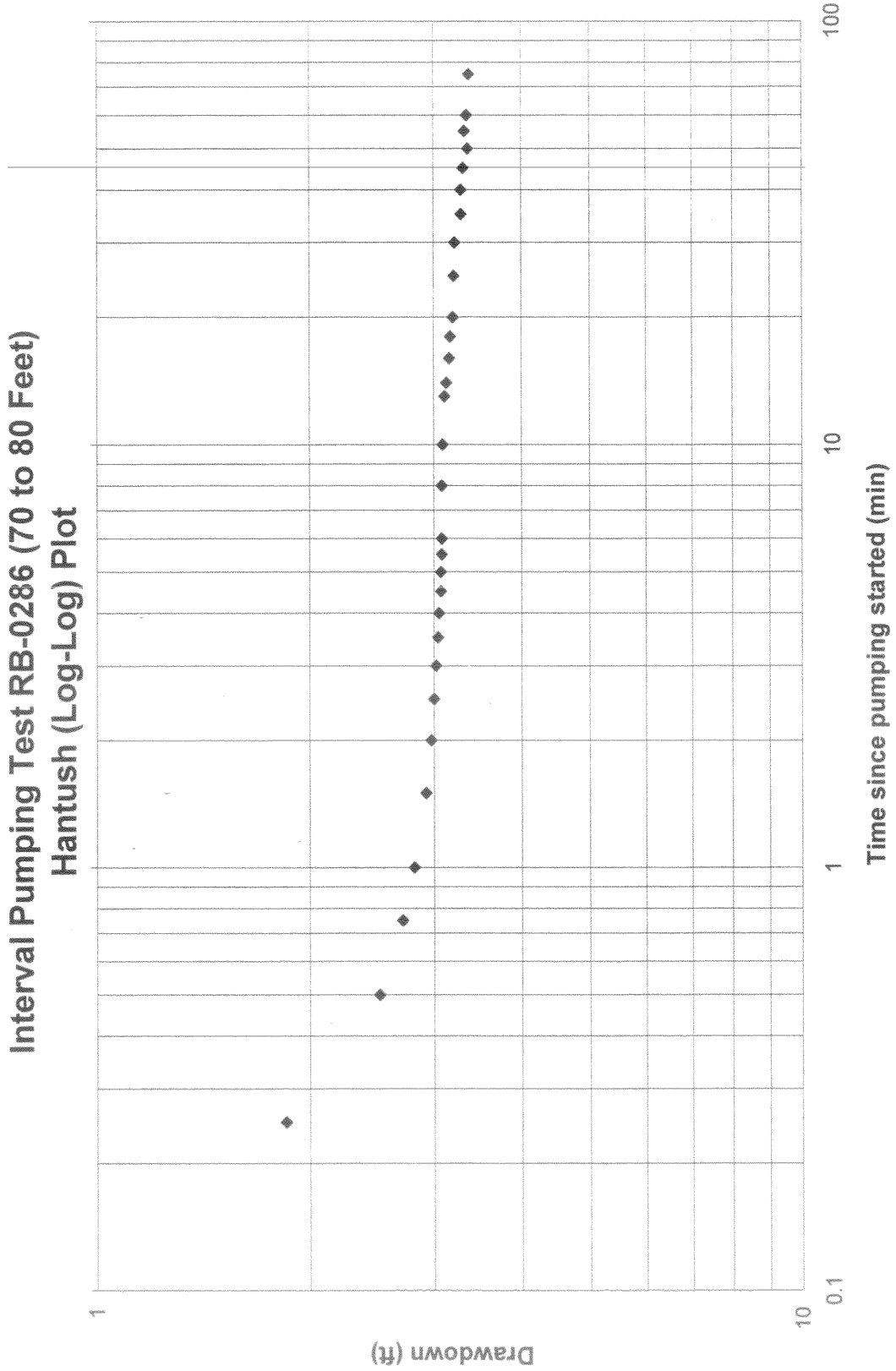
Sheet 2 of 2

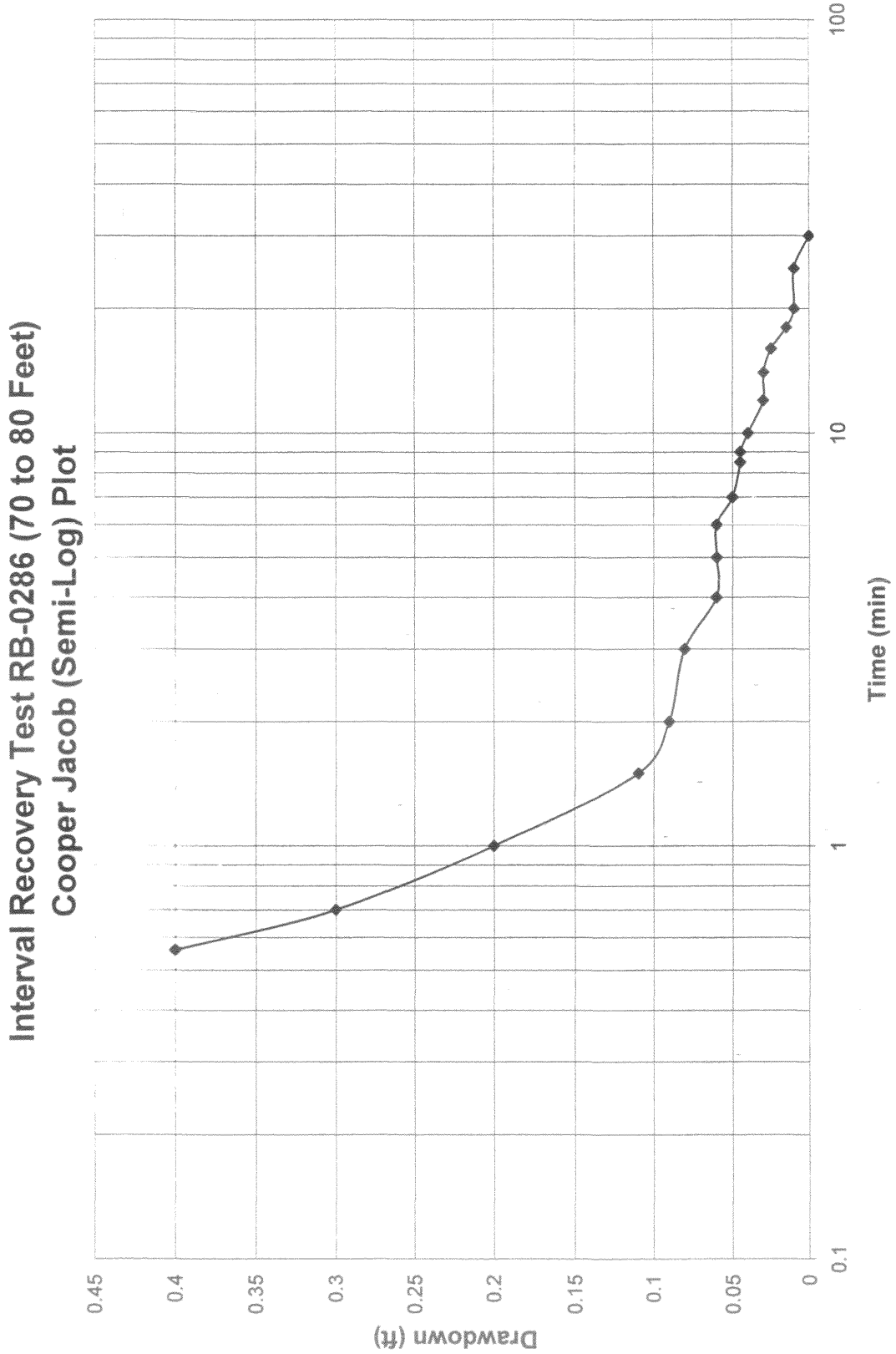
| | | | East | North |
|---|---|---|---|---|
| Location | Centre of site | Coordinates | 768550 | 764359 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 70 | Reference Point | Breakout | | | | |
| Open Hole Depth | 78.5 After test | Height Above Ground Level | 5 | | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 8.3 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 2/8/2005 | 16 | 36 | 0.00 | 11.675 | 3.375 | | | Last Flow Rate |
| | | | 0.08 | 11 | 2.7 | | | |
| | | | 0.16 | 10 | 1.7 | | | |
| | | | 0.23 | 9.5 | 1.2 | | | |
| | | | 0.38 | 9 | 0.7 | | | |
| | | | 0.50 | 8.8 | 0.5 | | | |
| | | | 0.56 | 8.7 | 0.4 | | | |
| | | | 0.70 | 8.6 | 0.3 | | | |
| | | | | | | | | |
| | | | 1.00 | 8.5 | 0.2 | | | |
| | | | 1.50 | 8.41 | 0.11 | | | |
| | | | 2.00 | 8.39 | 0.09 | | | |
| | | | 3.00 | 8.38 | 0.08 | | | |
| | | | 4.00 | 8.36 | 0.06 | | | |
| | | | 5.00 | 8.36 | 0.06 | | | |
| | | | 6.00 | 8.36 | 0.06 | | | |
| | | | 7.00 | 8.35 | 0.05 | | | |
| | | | 8.50 | 8.345 | 0.045 | | | |
| | | | 9.00 | 8.345 | 0.045 | | | |
| | | | 10.00 | 8.34 | 0.04 | | | |
| | | | 12.00 | 8.33 | 0.03 | | | |
| | | | 14.00 | 8.33 | 0.03 | | | |
| | | | 16.00 | 8.325 | 0.025 | | | |
| | | | 18.00 | 8.315 | 0.015 | | | |
| | | | 20.00 | 8.31 | 0.01 | | | |
| | | | 25.00 | 8.31 | 0.01 | | | |
| | | | 30.00 | 8.3 | 0 | | | |


Interval Pumping Test RB-0286 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
3
3.5
4
0.10
1.00
10.00
100.00
Time since pumping started (min)


Interval Pumping Test RB-0286 (70 to 80 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0286 (70 to 80 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0286 |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** | From 110 |
| | | | To 120 |

Sheet 1 of 2

| | | | East | North |
|---|---|---|---|---|
| **Location** | Centre of site | **Coordinates** | 768550 | 764359 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 110 | | Reference Point | Breakout | | | |
| Open Hole Depth | 120 | After test 120 | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter: No |
| | | | | Capacity | 18gpm | | Volume Tank: Yes |
| Static Water Level | 8.45 | | | Generator | | Water Level | Transducer: No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 3/8/2005 | 9 | 7 | 0.00 | 8.45 | 0 | | 0 | |
| | | | 0.33 | 10.9 | 2.45 | | | |
| | | | 0.50 | 11.9 | 3.45 | | | |
| | | | 0.75 | 12.3 | 3.85 | | | |
| | | | 1.00 | 12.42 | 3.97 | | | |
| | | | 1.50 | 12.5 | 4.05 | | | |
| | | | 2.00 | 12.5 | 4.05 | | | |
| | | | 2.50 | 12.53 | 4.08 | | | |
| | | | 3.00 | 12.54 | 4.09 | | | |
| | | | 3.50 | 12.55 | 4.1 | | | |
| | | | 4.00 | 12.56 | 4.11 | | | |
| | | | 4.50 | 12.56 | 4.11 | | | |
| | | | 5.00 | 12.57 | 4.12 | | | |
| | | | 5.50 | 12.58 | 4.13 | | | |
| | | | 6.00 | 12.58 | 4.13 | | | |
| | | | 8.00 | 12.6 | 4.15 | | | |
| | | | 10.00 | 12.61 | 4.16 | | | Check Flow Rate |
| | | | 13.00 | 12.61 | 4.16 | | 18.75 | 2 minutes for 37.5 gallons |
| | | | 14.00 | 12.62 | 4.17 | | | |
| | | | 16.00 | 12.65 | 4.2 | | | |
| | | | 18.00 | 12.66 | 4.21 | | | |
| | | | 20.00 | 12.665 | 4.215 | | | Check Flow Rate |
| | | | 25.00 | 12.715 | 4.265 | | | |
| | | | 30.00 | 12.73 | 4.28 | | | Check Flow Rate |
| | | | 35.00 | 12.74 | 4.29 | | 18.75 | 2 minutes for 37.5 gallons |
| | | | 40.00 | 12.75 | 4.3 | | | |
| | | | 45.00 | 12.755 | 4.305 | | | |
| | | | 50.00 | 12.76 | 4.31 | | | |
| | | | 55.00 | 12.76 | 4.31 | | | |
| | | | 60.00 | 12.76 | 4.31 | | | Check Flow Rate |
| | | | 75.00 | 12.76 | 4.31 | | 18.75 | 2 minutes for 37.5 gallons |
| | | | 90.00 | | | | | |
| | | | 105.00 | | | | | |
| | | | 120.00 | | | | | |

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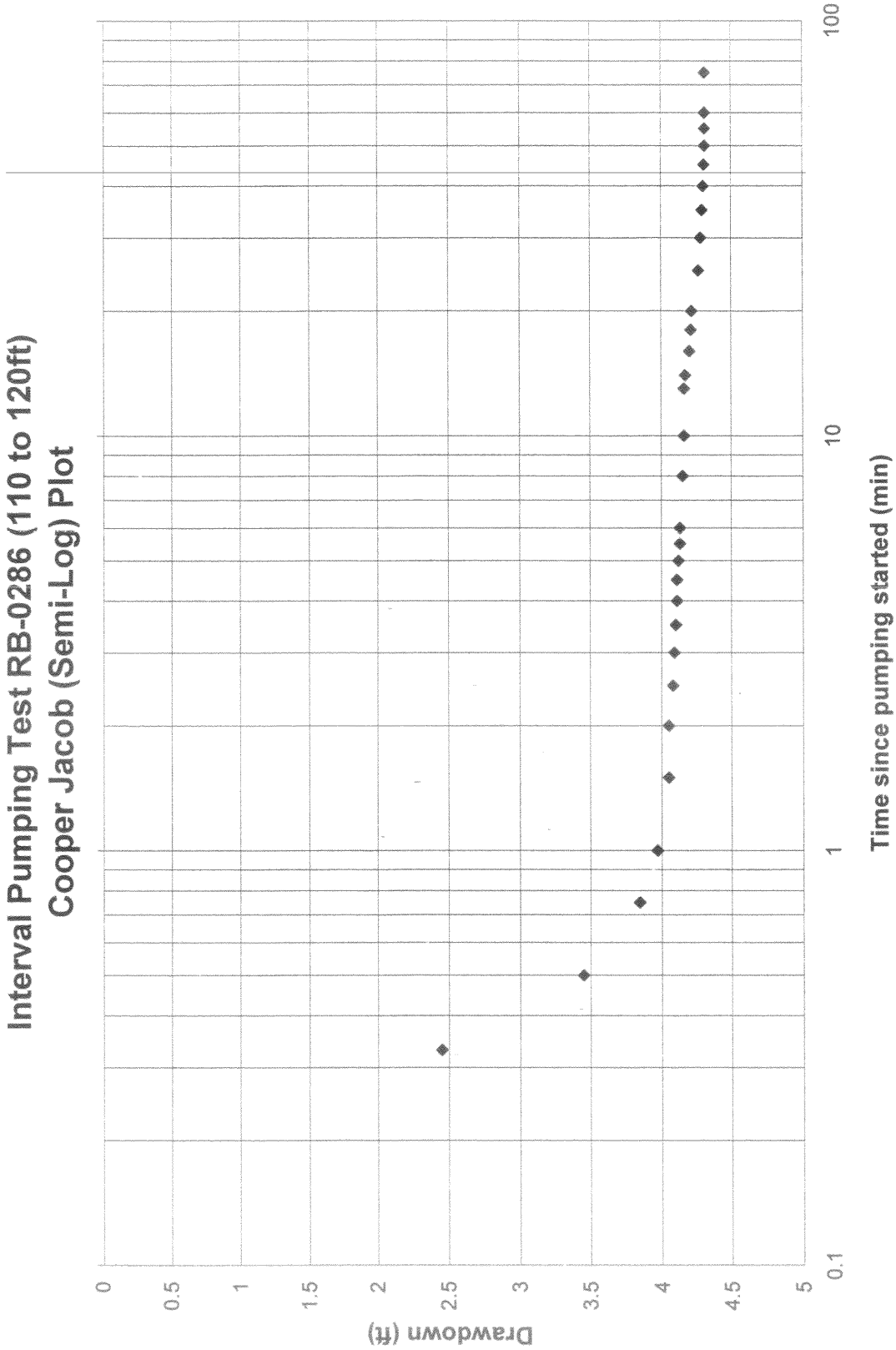
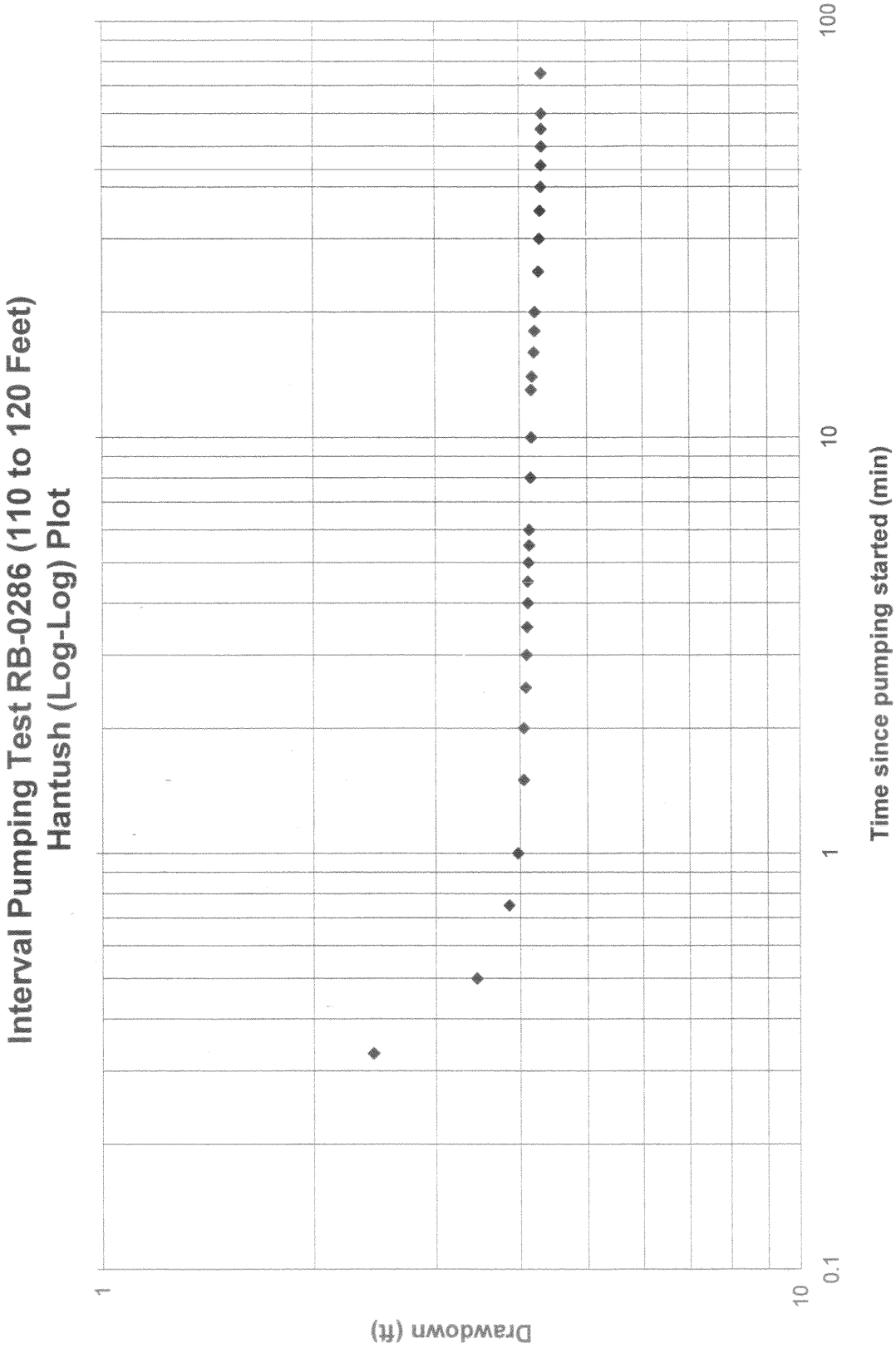
| | | | |
|---|---|---|---|
| Project | | Pumping Test Well | RB-0286 |
| Project No. | | | |
| Client | | Interval Test | From 110 |
| | | | To 120 |

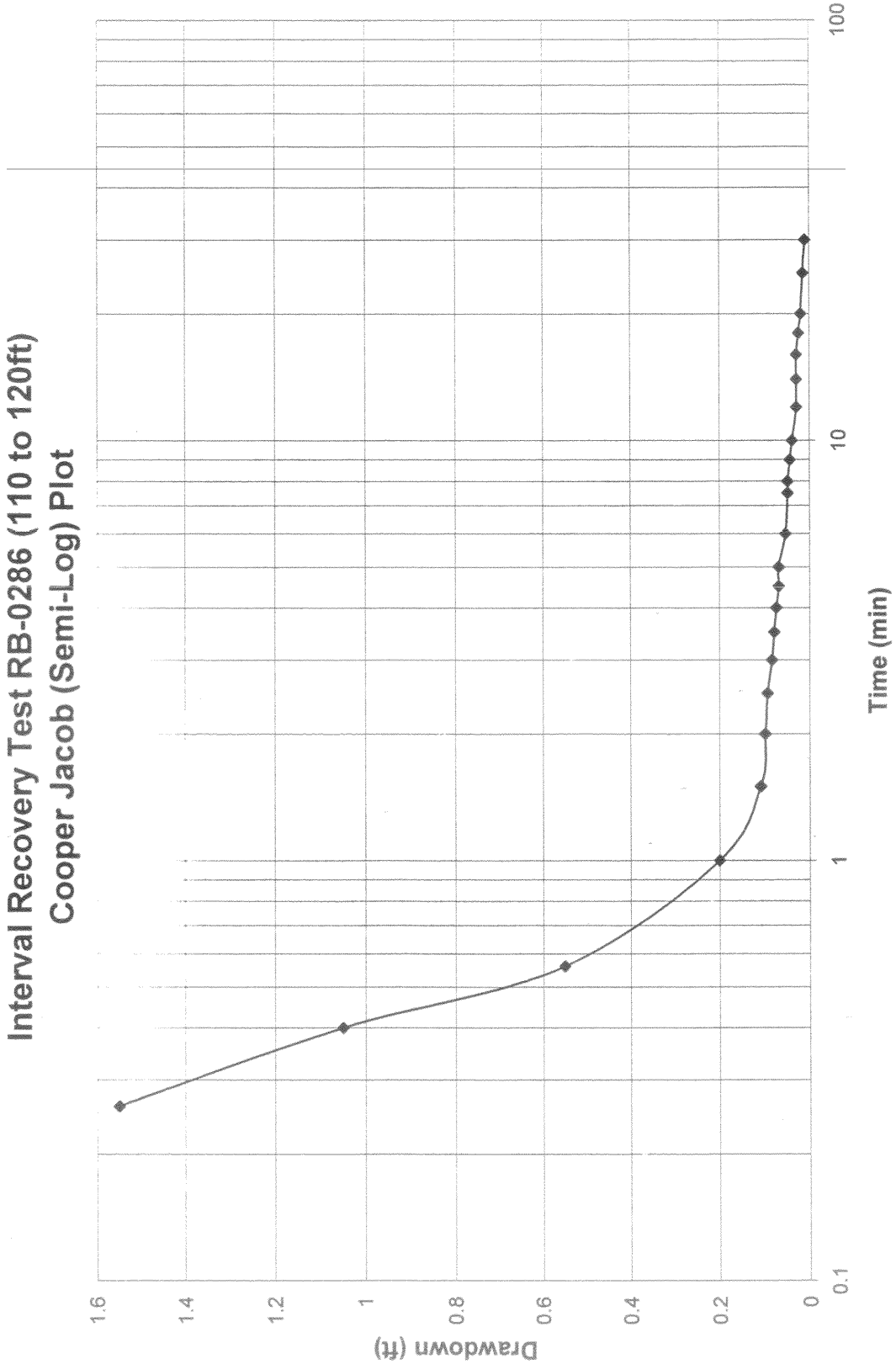
| | | | | | |
|---|---|---|---|---|---|
| Location | Centre of site | Coordinates | East 768550 | North 764359 | Sheet 2 of 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Casing Depth | 110 | Reference Point | Breakout | | | | |
| Open Hole Depth | 120 After test 120 | Height Above Ground Level | 5 | | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 8.45 | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 2/8/2005 | 16 | 36 | 0.00 | 12.76 | 4.31 | | 18.75 | Last Flow Rate |
| | | | 0.26 | 10 | 1.55 | | | |
| | | | 0.40 | 9.5 | 1.05 | | | |
| | | | 0.56 | 9 | 0.55 | | | |
| | | | 1.00 | 8.65 | 0.2 | | | |
| | | | 1.50 | 8.56 | 0.11 | | | |
| | | | 2.00 | 8.55 | 0.1 | | | |
| | | | 2.50 | 8.545 | 0.095 | | | |
| | | | 3.00 | 8.535 | 0.085 | | | |
| | | | 3.50 | 8.53 | 0.08 | | | |
| | | | 4.00 | 8.525 | 0.075 | | | |
| | | | 4.50 | 8.52 | 0.07 | | | |
| | | | 5.00 | 8.52 | 0.07 | | | |
| | | | 6.00 | 8.505 | 0.055 | | | |
| | | | 7.50 | 8.5 | 0.05 | | | |
| | | | 8.00 | 8.5 | 0.05 | | | |
| | | | 9.00 | 8.495 | 0.045 | | | |
| | | | 10.00 | 8.49 | 0.04 | | | |
| | | | 12.00 | 8.48 | 0.03 | | | |
| | | | 14.00 | 8.48 | 0.03 | | | |
| | | | 16.00 | 8.48 | 0.03 | | | |
| | | | 18.00 | 8.475 | 0.025 | | | |
| | | | 20.00 | 8.47 | 0.02 | | | |
| | | | 25.00 | 8.465 | 0.015 | | | |
| | | | 30.00 | 8.46 | 0.01 | | | |


Interval Pumping Test RB-0286 (110 to 120ft)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0286 (110 to 120 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
1
10
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0286 (110 to 120ft)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.1
1
10
100
Time (min)

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| | | | |
|---|---|---|---|
| **Project** | Everglades AA Reservoir A-1 | **Pumping Test Well** | RB-0286 |
| **Project No.** | 142004 | | |
| **Client** | SFWMD | **Interval Test** From | 150 |
| | | To | 160 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Location** | Centre of site | **Coordinates** | East 768550 | North 764359 | Sheet 1 of 2 | | |
| Casing Depth | 150 | | Reference Point | Breakout | | | |
| Open Hole Depth | 160 | After test 160 | Height Above Ground Level | 5 | | | |
| Screen Depth | | | | | | | |
| Pump Setting Depth | 30 | | Pump Details | Diameter | 3" | Discharge | Flowmeter | No |
| | | | | Capacity | 18gpm | | Volume Tank | Yes |
| Static Water Level | 8.53 | | | Generator | | Water Level | Transducer | No |

| Reference Clock Time | | | Data from when the pumping started | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Drawdown Feet | Flow Meter Reading | Discharge | Notes |
| 3/8/2005 | 12 | 36 | 0.00 | 8.53 | 0 | | 0 | |
| | | | 0.25 | 9.3 | 0.77 | | | |
| | | | 0.50 | 9.3 | 0.77 | | | |
| | | | 0.75 | 9.32 | 0.79 | | | |
| | | | 1.00 | 9.33 | 0.8 | | | |
| | | | 1.50 | 9.33 | 0.8 | | | |
| | | | 2.00 | 9.345 | 0.815 | | | |
| | | | 2.50 | 9.35 | 0.82 | | | |
| | | | 3.00 | 9.355 | 0.825 | | | |
| | | | 3.50 | 9.36 | 0.83 | | | |
| | | | 4.00 | 9.36 | 0.83 | | | |
| | | | 4.50 | 9.365 | 0.835 | | | |
| | | | 5.00 | 9.37 | 0.84 | | | |
| | | | 5.50 | 9.37 | 0.84 | | | |
| | | | 6.00 | 9.375 | 0.845 | | | |
| | | | 8.00 | 9.38 | 0.85 | | | |
| | | | 10.00 | 9.39 | 0.86 | | | Check Flow Rate |
| | | | 12.00 | 9.39 | 0.86 | | 18 | 2 minutes for 36 gallons |
| | | | 14.00 | 9.4 | 0.87 | | | |
| | | | 17.00 | 9.405 | 0.875 | | | |
| | | | 18.00 | 9.405 | 0.875 | | | |
| | | | 20.00 | 9.41 | 0.88 | | | Check Flow Rate |
| | | | 25.00 | 9.41 | 0.88 | | 18.5 | 2 minutes for 37 gallons |
| | | | 30.00 | 9.415 | 0.885 | | | Check Flow Rate |
| | | | 35.00 | 9.425 | 0.895 | | | |
| | | | 40.00 | 9.425 | 0.895 | | | |
| | | | 45.00 | 9.43 | 0.9 | | 18 | 2 minutes for 36 gallons |
| | | | 50.00 | 9.43 | 0.9 | | | |
| | | | 55.00 | 9.43 | 0.9 | | | |
| | | | 60.00 | 9.43 | 0.9 | | | Check Flow Rate |
| | | | 75.00 | 9.44 | 0.91 | | 18 | 2 minutes for 36 gallons |

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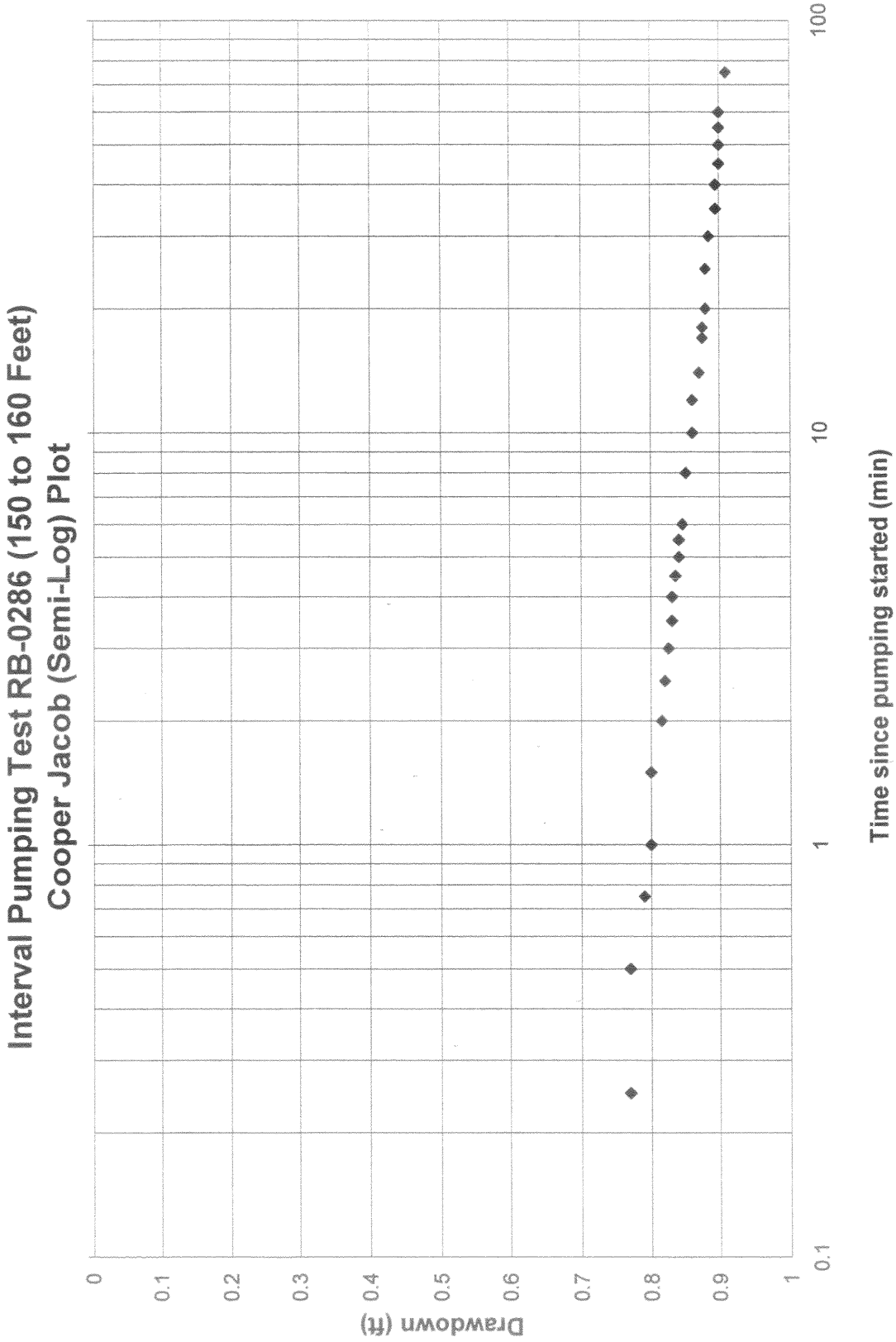
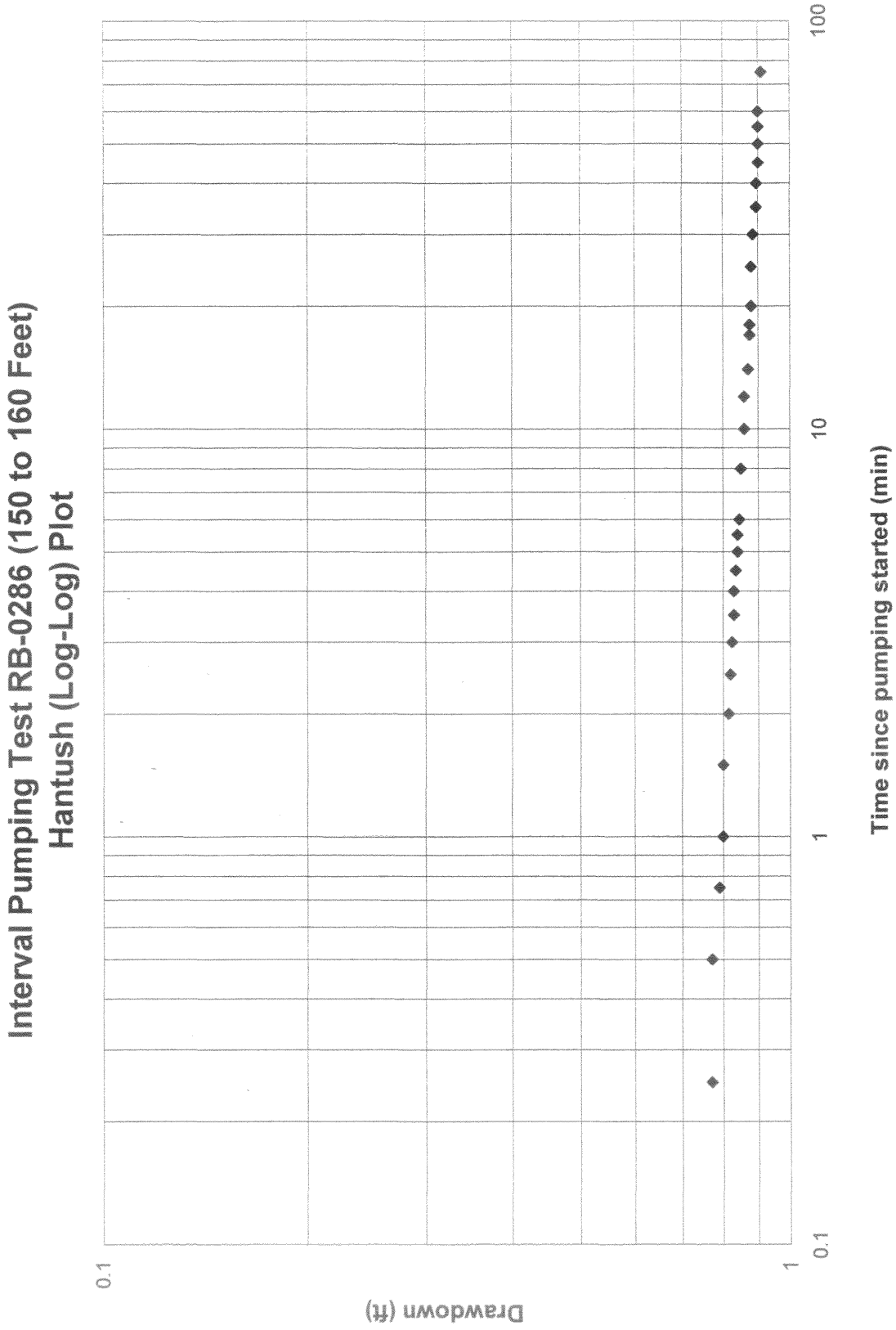
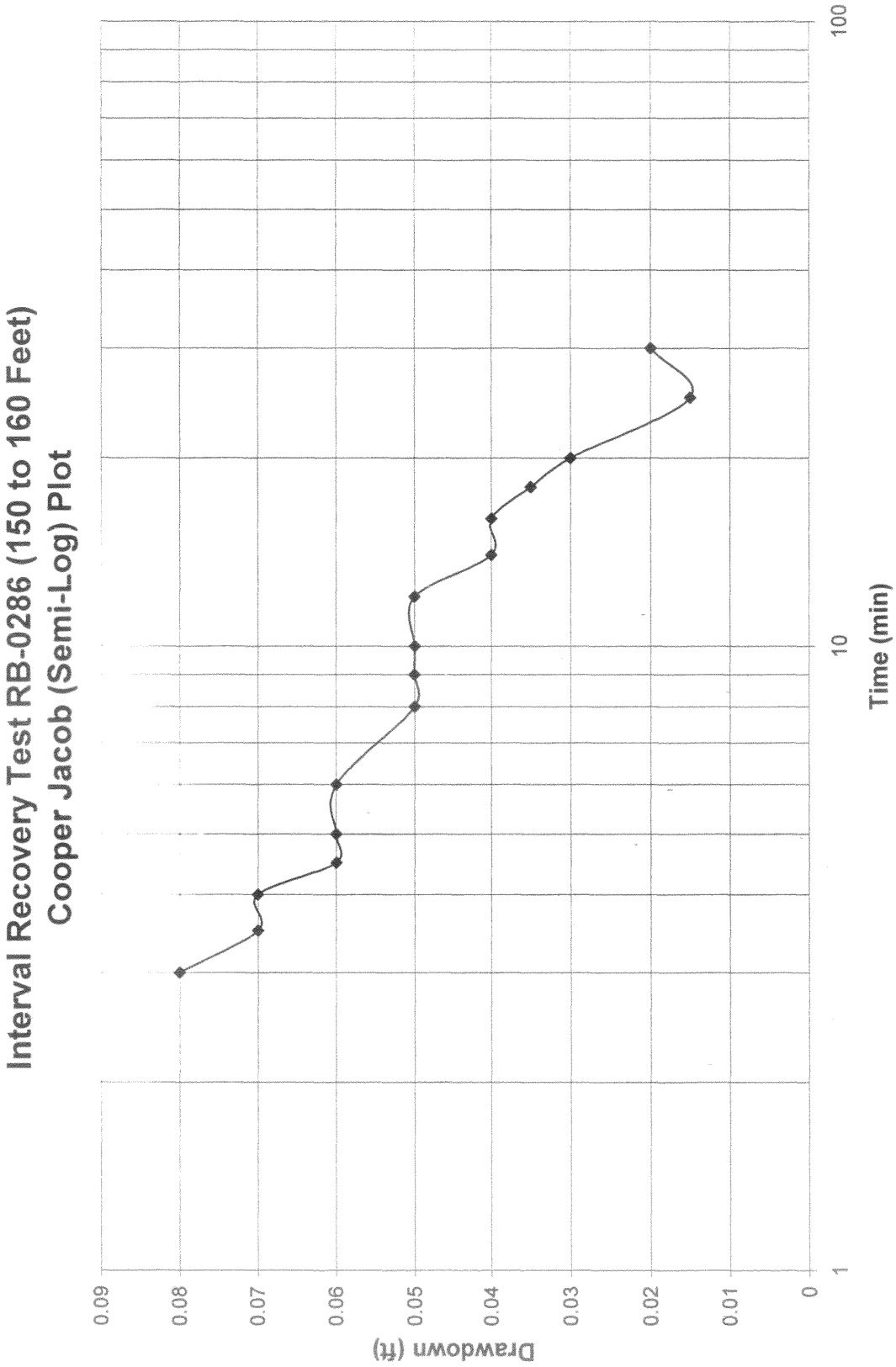
| | | | |
|---|---|---|---|
| Project | | Pumping Test Well | RB-0286 |
| Project No. | | | |
| Client | | Interval Test | From 150 |
| | | | To 160 |

| | | | | | |
|---|---|---|---|---|---|
| Location | Centre of site | Coordinates | East 768550 | North 764359 | Sheet 2 of 2 |
| Casing Depth | 150 | Reference Point | Breakout | | |
| Open Hole Depth | 160 After test 160 | Height Above Ground Level | 5 | | |
| Screen Depth | | | | | |
| Pump Setting Depth | 30 | Pump Details | Diameter 3" | Discharge | Flowmeter No |
| | | | Capacity 18gpm | | Volume Tank Yes |
| Static Water Level | 8.53 | | Generator | Water Level | Transducer No |

| Reference Clock Time | | | Data from when the pumping stopped. | | | Not Applicable | | |
|---|---|---|---|---|---|---|---|---|
| Date | Time Hrs. | Time Min. | Elapsed Time Minutes | Water Level Feet | Recovery Feet | Flow Meter Reading | Discharge | Notes |
| 2/8/2005 | 16 | 36 | 0.00 | 9.44 | 0.91 | | 18 | Last Flow Rate |
| | | | 0.41 | 8.65 | 0.12 | | | |
| | | | 0.80 | 8.6 | 0.07 | | | |
| | | | 1.00 | 8.63 | 0.1 | | | |
| | | | 1.50 | 8.62 | 0.09 | | | |
| | | | 2.00 | 8.61 | 0.08 | | | |
| | | | 3.00 | 8.61 | 0.08 | | | |
| | | | 3.50 | 8.6 | 0.07 | | | |
| | | | 4.00 | 8.6 | 0.07 | | | |
| | | | 4.50 | 8.59 | 0.06 | | | |
| | | | 5.00 | 8.59 | 0.06 | | | |
| | | | 6.00 | 8.59 | 0.06 | | | |
| | | | 7.00 | | | | | |
| | | | 8.00 | 8.58 | 0.05 | | | |
| | | | 9.00 | 8.58 | 0.05 | | | |
| | | | 10.00 | 8.58 | 0.05 | | | |
| | | | 12.00 | 8.58 | 0.05 | | | |
| | | | 14.00 | 8.57 | 0.04 | | | |
| | | | 16.00 | 8.57 | 0.04 | | | |
| | | | 18.00 | 8.565 | 0.035 | | | |
| | | | 20.00 | 8.56 | 0.03 | | | |
| | | | 25.00 | 8.545 | 0.015 | | | |
| | | | 30.00 | 8.55 | 0.02 | | | |


Interval Pumping Test RB-0286 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.1
1
10
100
Time since pumping started (min)


Interval Pumping Test RB-0286 (150 to 160 Feet)
Hantush (Log-Log) Plot
Drawdown (ft)
0.1
1
0.1
1
10
100
Time since pumping started (min)


Interval Recovery Test RB-0286 (150 to 160 Feet)
Cooper Jacob (Semi-Log) Plot
Drawdown (ft)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
1
10
100
Time (min)

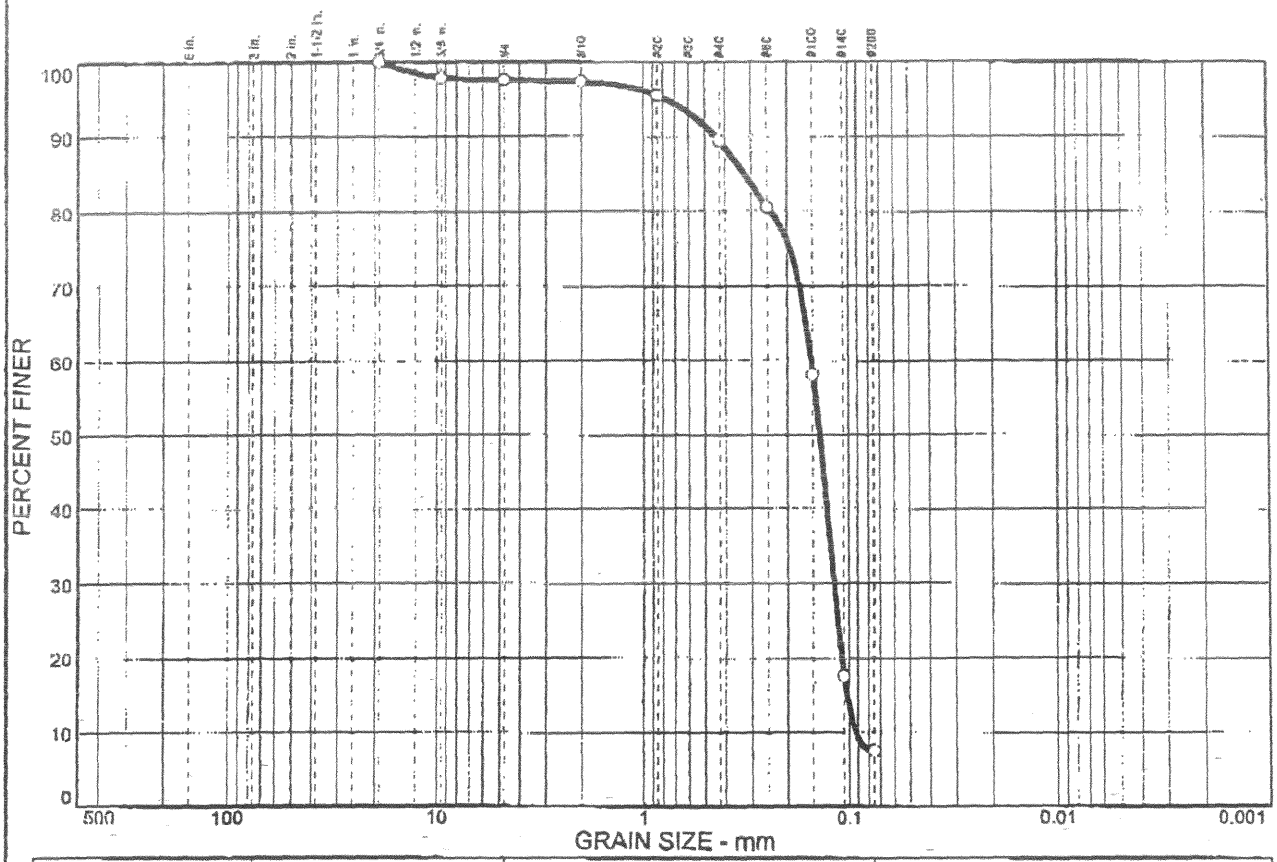
# APPENDIX 5

# APPENDIX 5
# LABORATORY TEST RESULTS
# GRAIN SIZE ANALYSIS

**Note**: The borings at the Test Cell Site and the supplemental borings were assigned temporary identification numbers prior to drilling. These temporary boring numbers are referred to as old boring numbers in the report text. After completion of the test cell and supplemental borings, a block of new boring numbers was received from the USACE Jacksonville District office. Software used for the test results from the summer 2005 borings did not permit the old boring number to be altered. Therefore, the test results for the supplemental borings contain both the old boring number and its corresponding new number. The new boring number was inserted in the remarks column of the test results for the supplemental borings. The laboratory test results for the Test Cell borings contain only the old boring numbers. For ease of reference, the table below shows the old boring numbers for the Test Cell boring and the corresponding new boring number.

| Test Cell Borings | |
|---|---|
| Old Boring Number | New Boring Number |
| BA-01 | CP05-EAARS-CB-0168 |
| BA-02 | CP05-EAARS-CB-0169 |
| BA-03 | CP05-EAARS-CB-0170 |
| BA-04 | CP05-EAARS-CB-0171 |
| BA-05 | CP05-EAARS-CB-0172 |
| BA-06 | CP05-EAARS-CB-0173 |
| BA-07 | CP05-EAARS-CB-0174 |
| BA-08 | CP05-EAARS-CB-0175 |
| BA-09 | CP05-EAARS-CB-0176 |
| BA-10 | CP05-EAARS-CB-0177 |
| TC-01 | CP05-EAARS-CB-0178 |
| TC-02 | CP05-EAARS-CB-0179 |
| TC-03 | CP05-EAARS-CB-0180 |
| TC-04 | CP05-EAARS-CB-0181 |
| TC-05 | CP05-EAARS-CB-0182 |
| TC-06 | CP05-EAARS-CB-0183 |
| TC-07 | CP05-EAARS-CB-0184 |
| TC-08 | CP05-EAARS-CB-0185 |
| TC-09 | CP05-EAARS-CB-0186 |
| TC-10 | CP05-EAARS-CB-0187 |
| TC1-E | CP05-EAARS-CB-0188 |
| TC1-N | CP05-EAARS-CB-0189 |
| TC1-W | CP05-EAARS-CB-0190 |
| TC1-S | CP05-EAARS-CB-0191 |
| TC2-E | CP05-EAARS-CB-0192 |
| TC2-N | CP05-EAARS-CB-0193 |
| TC2-W | CP05-EAARS-CB-0194 |
| TC2-S | CP05-EAARS-CB-0195 |

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 2.4 | 0.2 | 8.0 | 81.9 | 7.5 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 97.9 | | |
| #4 | 97.6 | | |
| #10 | 97.4 | | |
| #20 | 95.5 | | |
| #40 | 89.4 | | |
| #60 | 80.6 | | |
| #100 | 58.1 | | |
| #140 | 17.5 | | |
| #200 | 7.5 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.324 $D_{60}$= 0.153 $D_{50}$= 0.140
$D_{30}$= 0.119 $D_{15}$= 0.103 $D_{10}$= 0.0926
$C_u$= 1.65 $C_c$= 1.01

**Classification**

USCS= AASHTO=

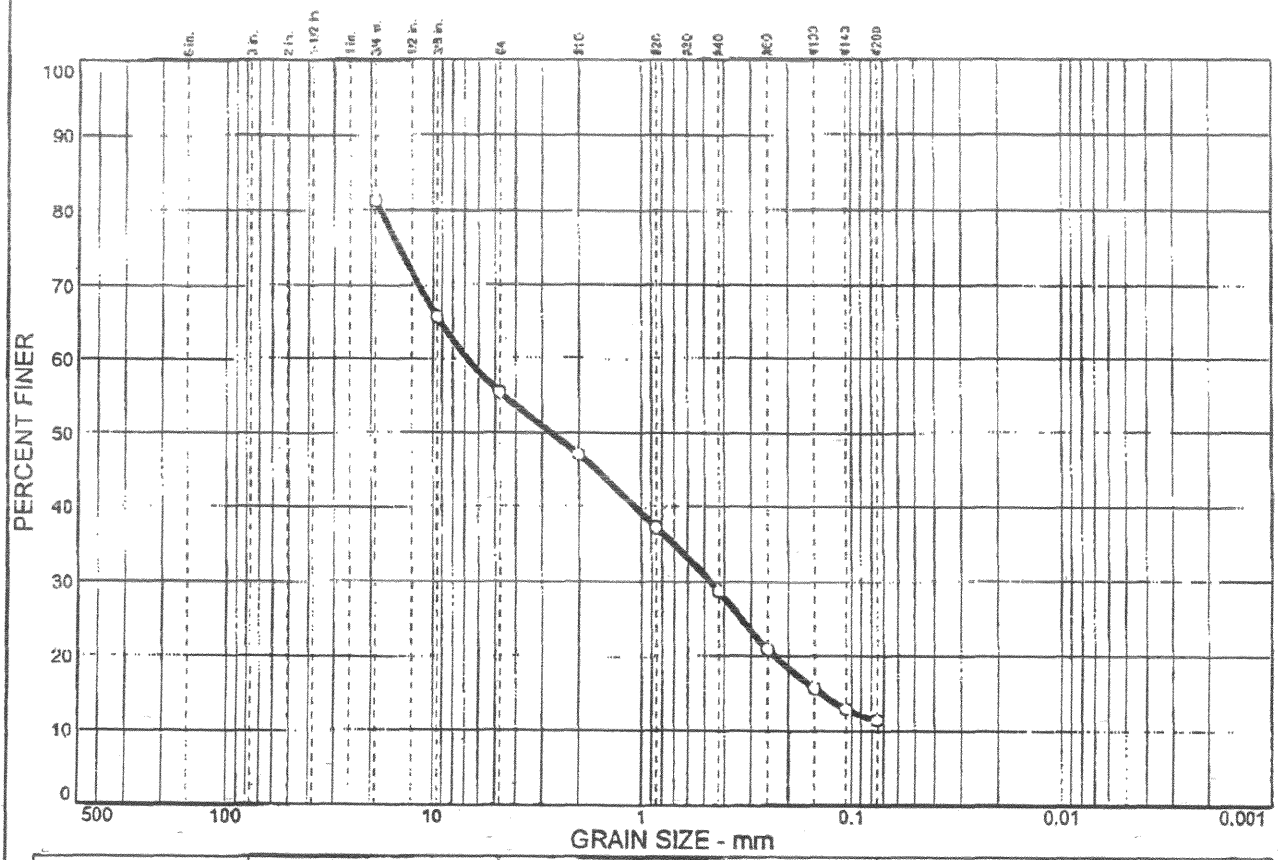
**Remarks**

Sample No.: B234 Source of Sample: Date:
Location: BA-01 Elev./Depth: 48.5-50.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| | | 25.9 | 8.3 | 18.4 | 17.3 | 11.4 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 81.3 | | |
| 3/8 in. | 65.6 | | |
| #4 | 55.4 | | |
| #10 | 47.1 | | |
| #20 | 37.3 | | |
| #40 | 28.7 | | |
| #60 | 20.9 | | |
| #100 | 15.7 | | |
| #140 | 12.9 | | |
| #200 | 11.4 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= $D_{60}$= 6.82 $D_{50}$= 2.72
$D_{30}$= 0.466 $D_{15}$= 0.139 $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

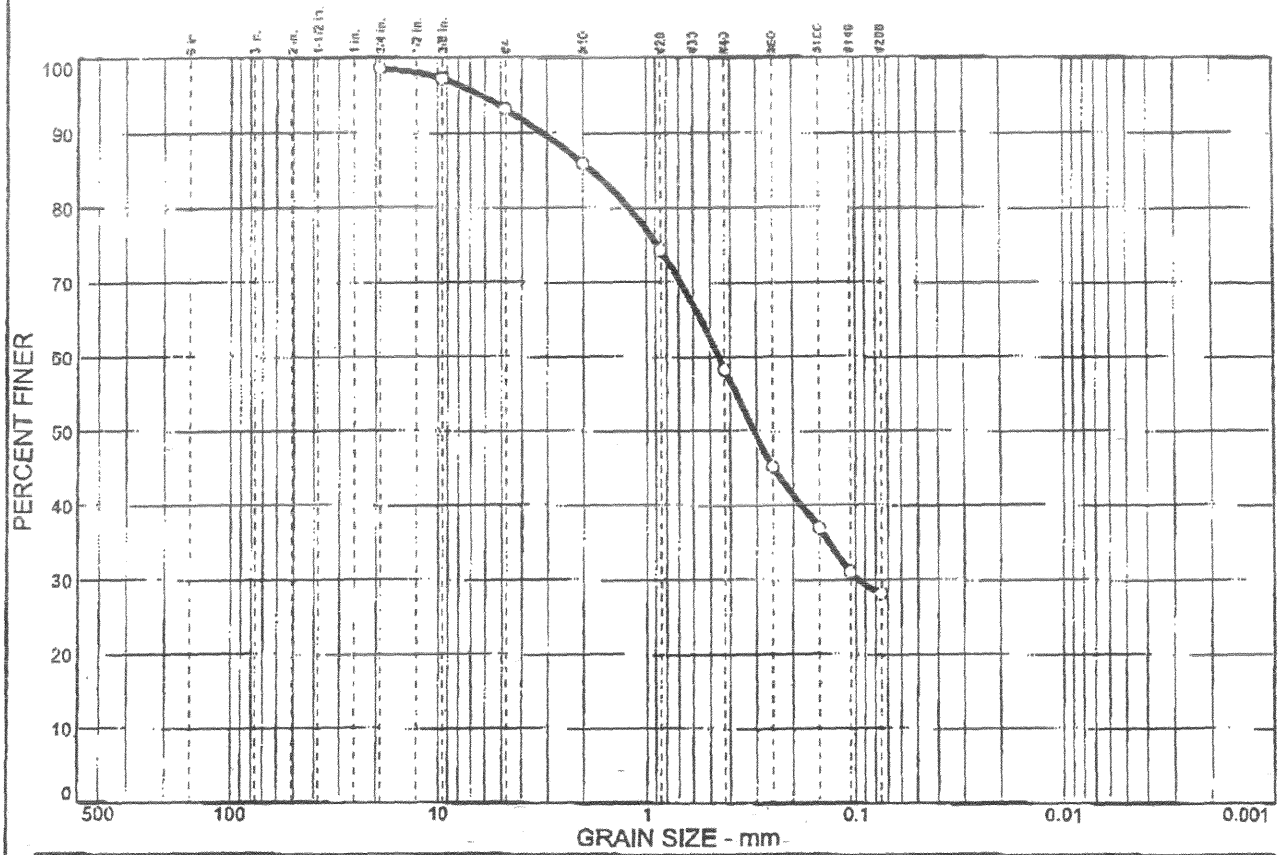
**Remarks**

Sample No.: B801 Source of Sample: Date:
Location: BA-02 Elev./Depth: 18.5-20.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| | | 5.5 | 7.2 | 27.6 | 30.2 | 28.1 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 98.6 | | |
| 3/8 in. | 97.2 | | |
| #4 | 93.1 | | |
| #10 | 85.9 | | |
| #20 | 74.3 | | |
| #40 | 58.3 | | |
| #60 | 45.2 | | |
| #100 | 36.9 | | |
| #140 | 31.0 | | |
| #200 | 28.1 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 1.83 $D_{60}$= 0.454 $D_{50}$= 0.309
$D_{30}$= 0.0972 $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

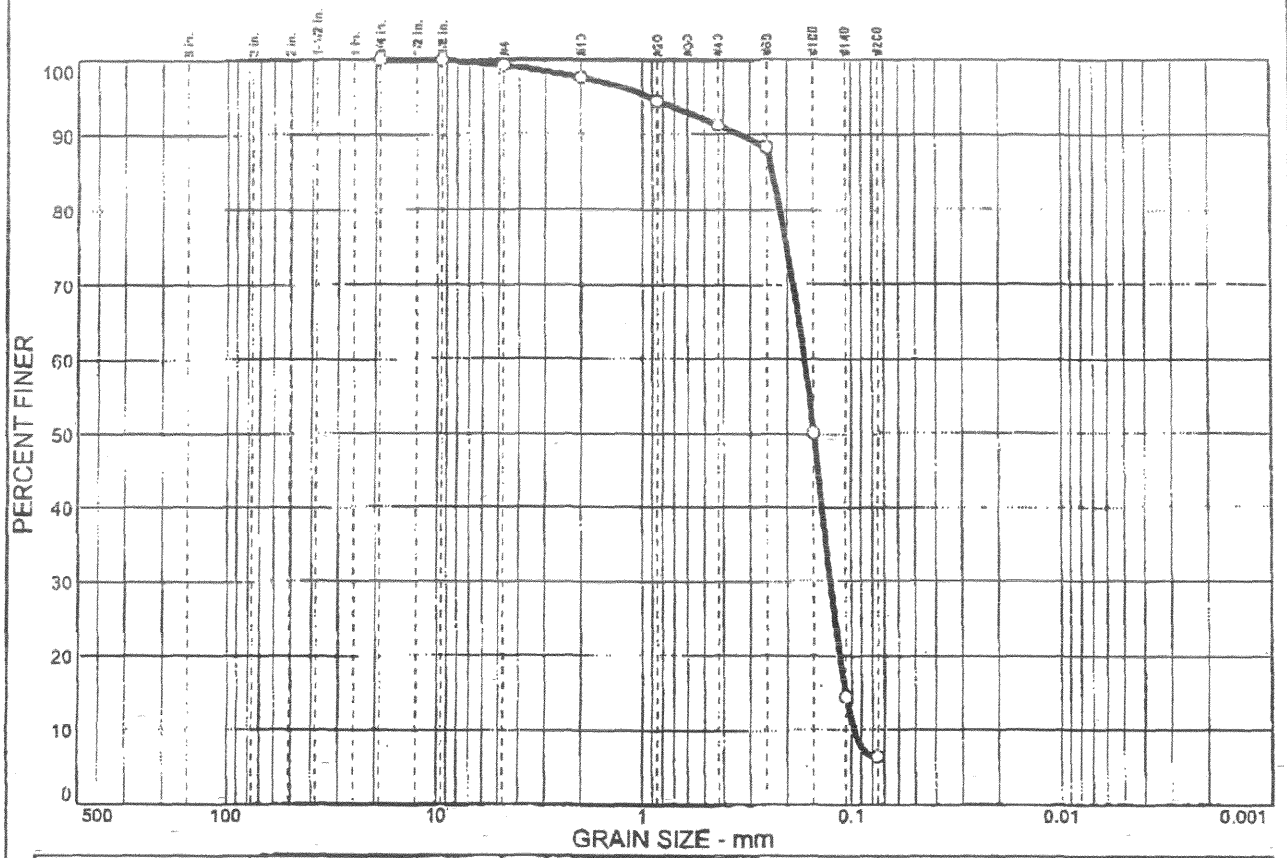
**Remarks**

Sample No.: B280 Source of Sample: Date:
Location: BA-03 Elev./Depth: 13.5-15.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 0.7 | 1.6 | 6.4 | 84.9 | 6.4 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 100.0 | | |
| #4 | 99.3 | | |
| #10 | 97.7 | | |
| #20 | 94.5 | | |
| #40 | 91.3 | | |
| #60 | 88.3 | | |
| #100 | 50.1 | | |
| #140 | 14.5 | | |
| #200 | 6.4 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.237 $D_{60}$= 0.166 $D_{50}$= 0.150
$D_{30}$= 0.125 $D_{15}$= 0.107 $D_{10}$= 0.0973
$C_u$= 1.71 $C_c$= 0.97

**Classification**

USCS= AASHTO=

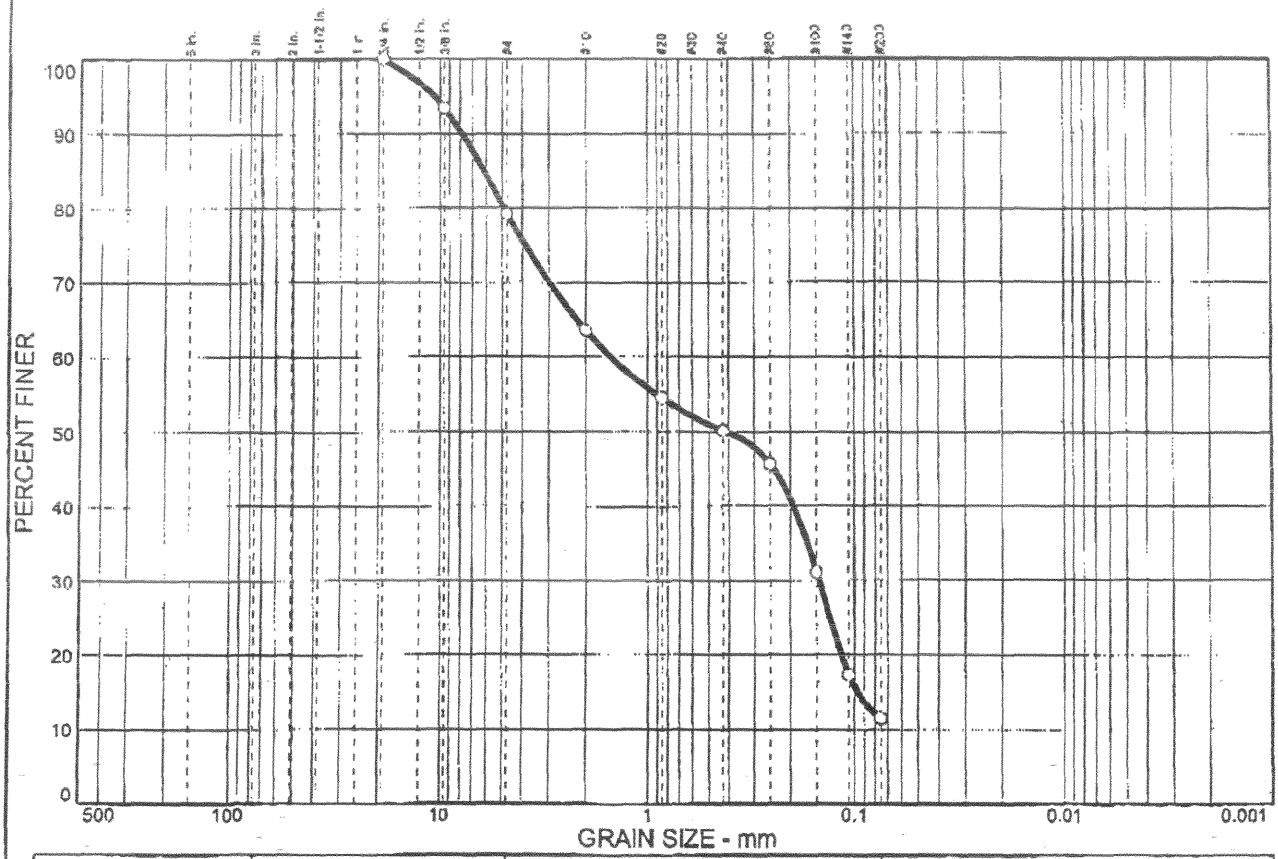
**Remarks**

Sample No.: B262 Source of Sample: Date:
Location: BA-04 Elev./Depth: 48.5-50.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 20.8 | 15.7 | 13.3 | 38.8 | 11.4 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 93.4 | | |
| #4 | 79.2 | | |
| #10 | 63.5 | | |
| #20 | 54.6 | | |
| #40 | 50.2 | | |
| #60 | 45.7 | | |
| #100 | 31.1 | | |
| #140 | 17.2 | | |
| #200 | 11.4 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 6.18 $D_{60}$= 1.52 $D_{50}$= 0.408
$D_{30}$= 0.146 $D_{15}$= 0.0972 $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

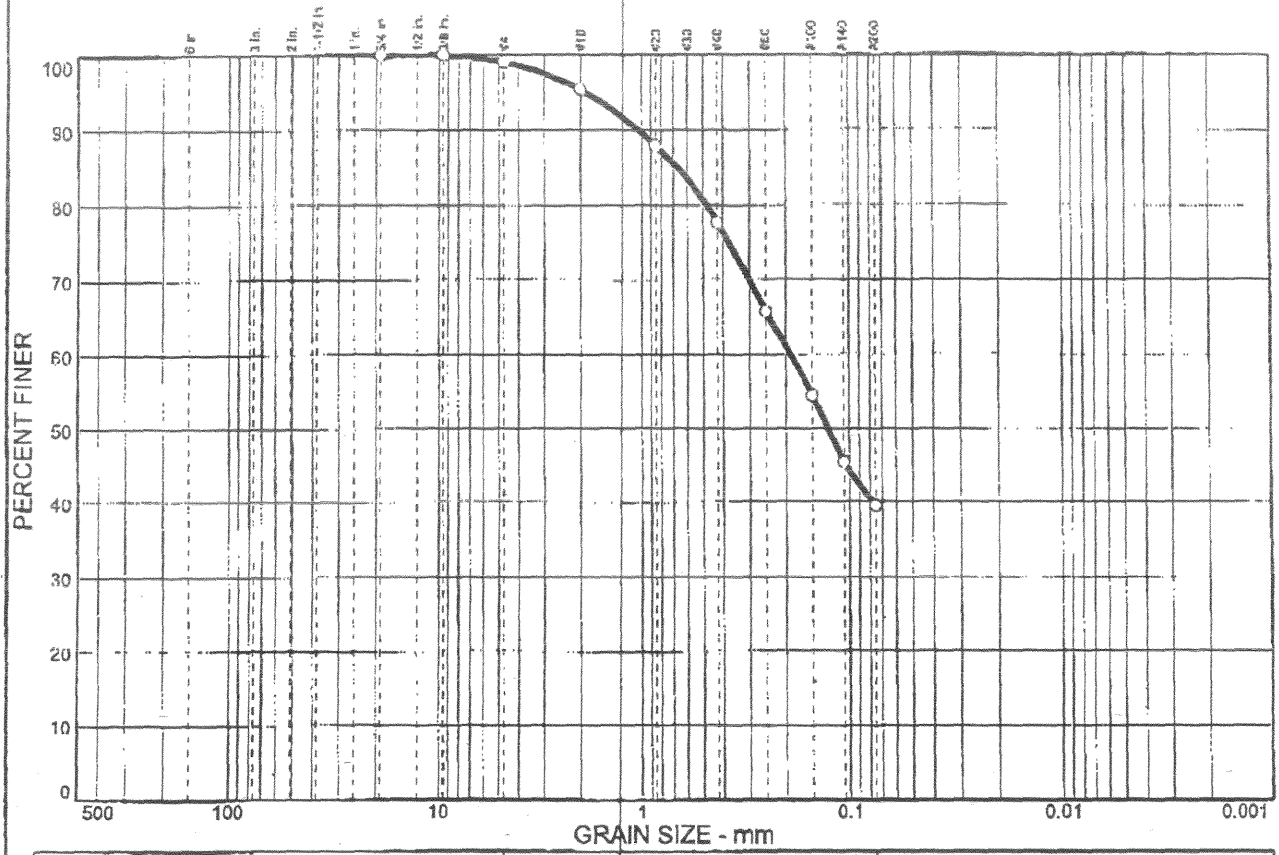
**Remarks**

Sample No.: BCBR Source of Sample: Date:
Location: BA-05 Elev./Depth: 28.5-30.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 0.9 | 3.7 | 17.8 | 38.1 | 39.5 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 100.0 | | |
| #4 | 99.1 | | |
| #10 | 95.4 | | |
| #20 | 87.9 | | |
| #40 | 77.6 | | |
| #60 | 65.7 | | |
| #100 | 54.4 | | |
| #140 | 45.4 | | |
| #200 | 39.5 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.669 $D_{60}$= 0.191 $D_{50}$= 0.127
$D_{30}$= $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

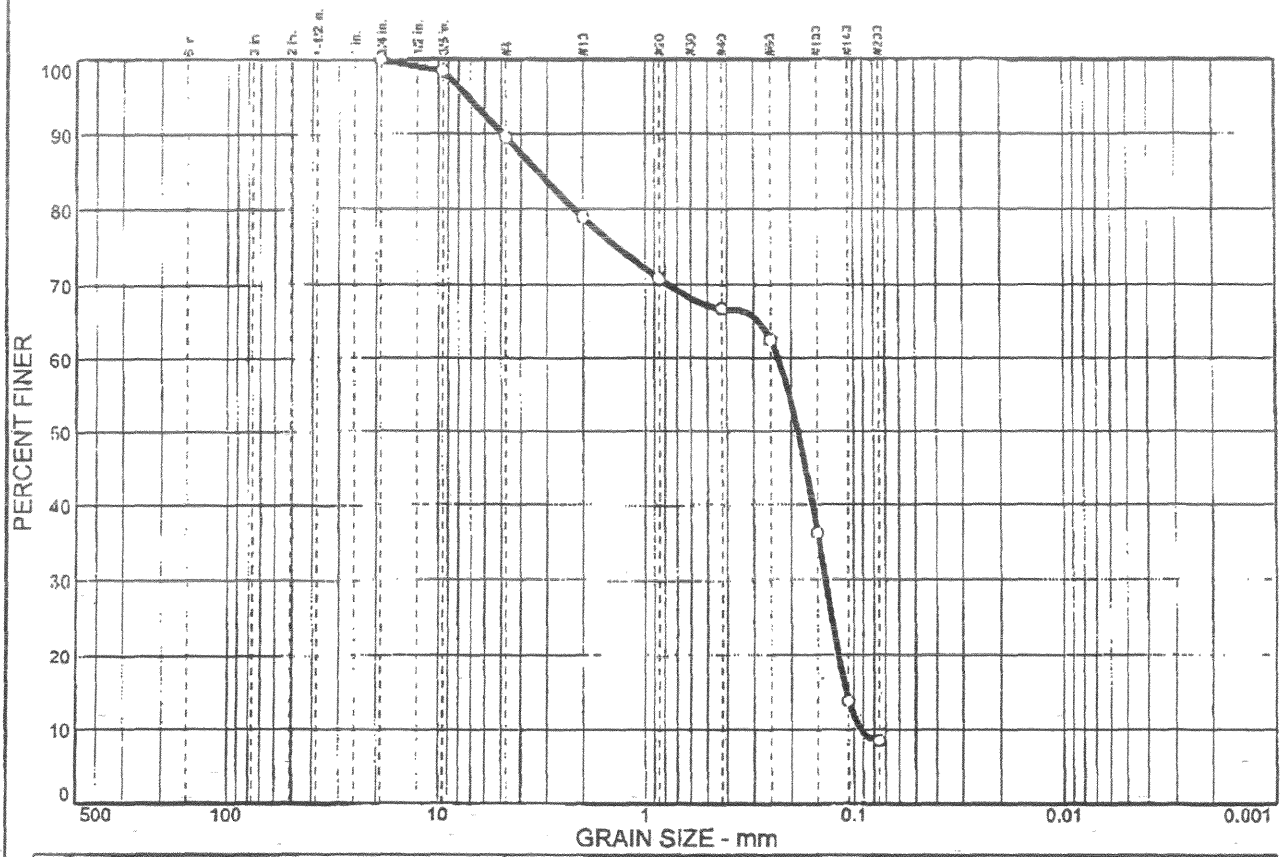
**Remarks**

Sample No.: B237 Source of Sample: Date:
Location: BA-06 Elev./Depth: 13.5-15.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 10.4 | 10.7 | 12.2 | 58.3 | 8.4 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 98.5 | | |
| #4 | 89.6 | | |
| #10 | 78.9 | | |
| #20 | 70.8 | | |
| #40 | 66.7 | | |
| #60 | 62.4 | | |
| #100 | 36.3 | | |
| #140 | 13.8 | | |
| #200 | 8.4 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 3.32 $D_{60}$= 0.231 $D_{50}$= 0.186
$D_{30}$= 0.138 $D_{15}$= 0.109 $D_{10}$= 0.0929
$C_u$= 2.49 $C_c$= 0.88

**Classification**

USCS= AASHTO=

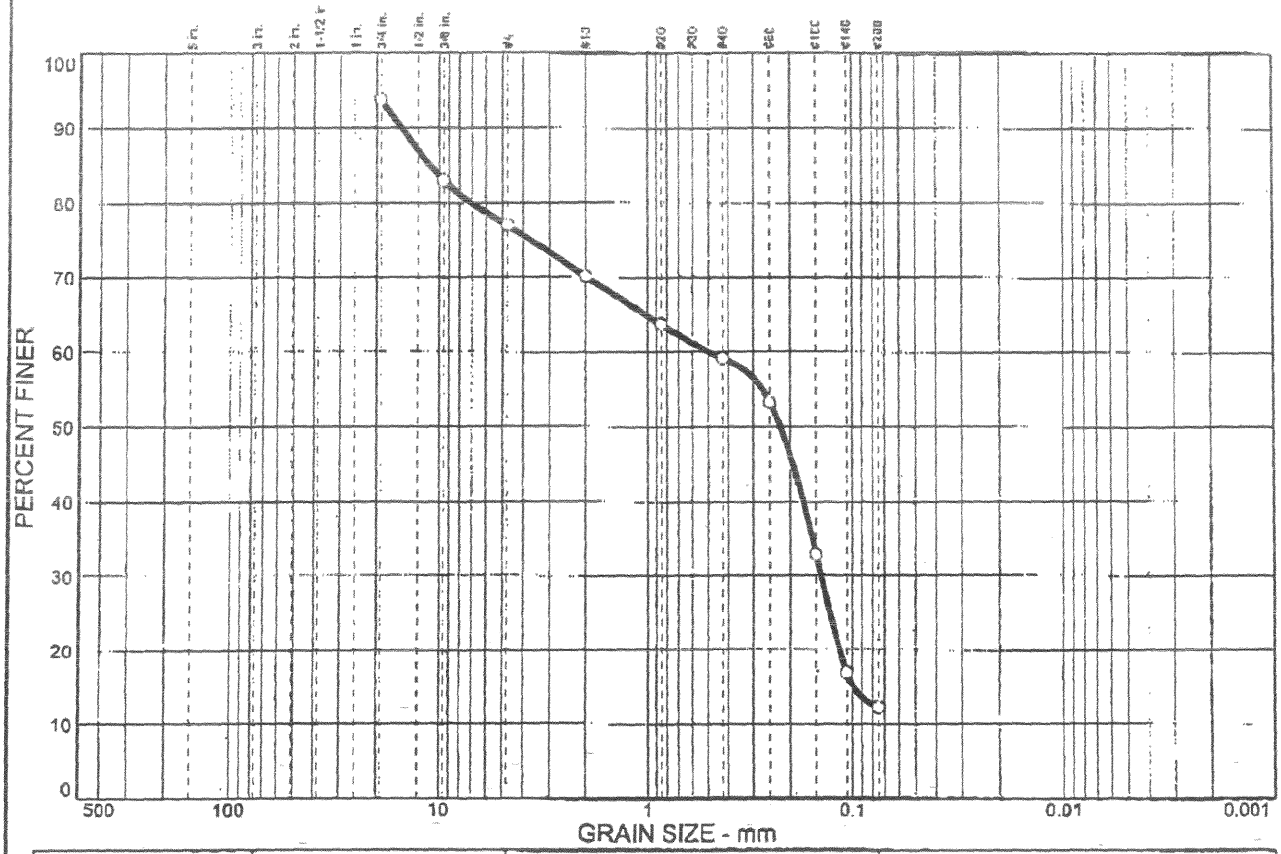
**Remarks**

Sample No.: B259 Source of Sample: Date:
Location: BA-07 Elev./Depth: 43.5-45.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| | | 16.9 | 6.9 | 11.0 | 46.9 | 12.2 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 93.9 | | |
| 3/8 in. | 83.0 | | |
| #4 | 77.0 | | |
| #10 | 70.1 | | |
| #20 | 63.6 | | |
| #40 | 59.1 | | |
| #60 | 53.2 | | |
| #100 | 32.9 | | |
| #140 | 16.9 | | |
| #200 | 12.2 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 11.1 $D_{60}$= 0.499 $D_{50}$= 0.223
$D_{30}$= 0.142 $D_{15}$= 0.0984 $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

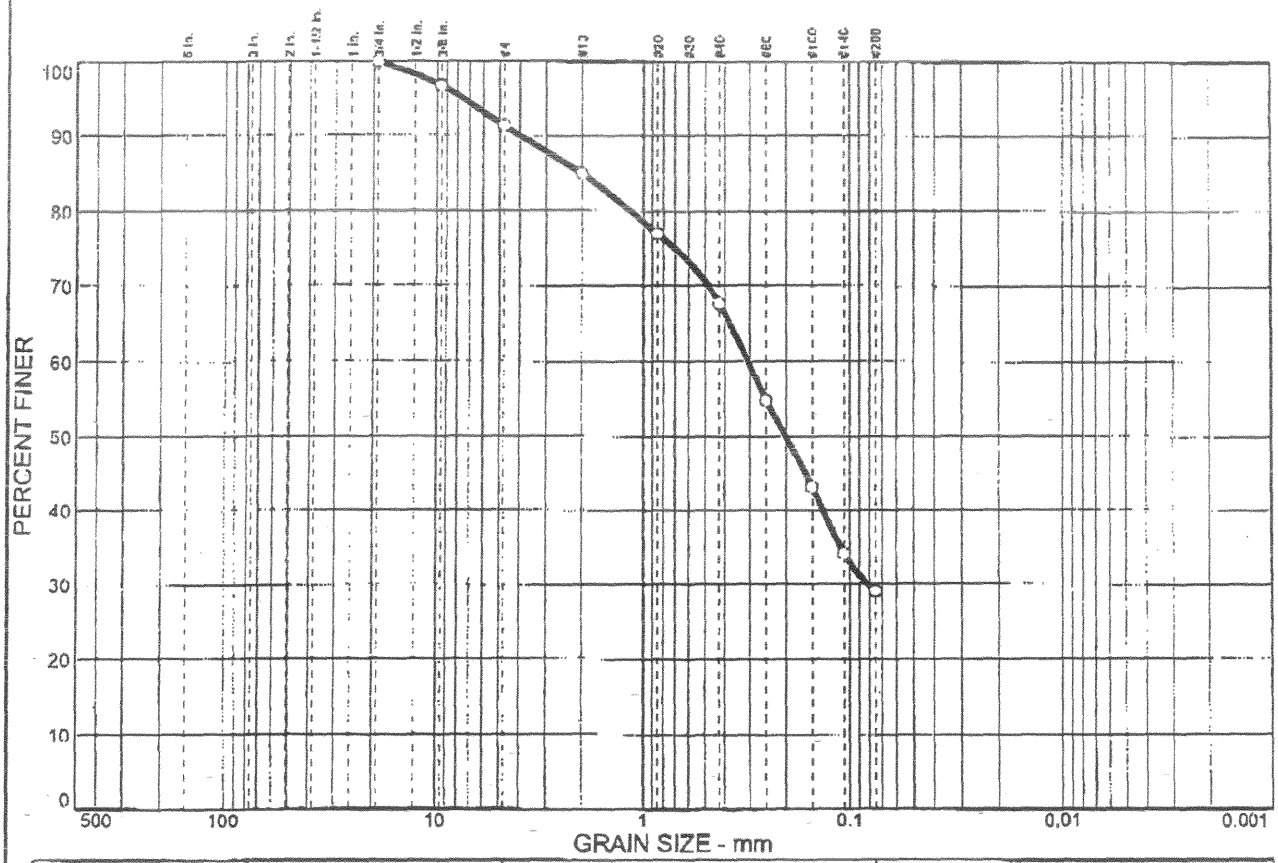
**Remarks**

Sample No.: B300 Source of Sample: Date:
Location: BA-08 Elev./Depth: 28.5-30.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 8.7 | 6.4 | 17.3 | 38.6 | 29.0 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 96.7 | | |
| #4 | 91.3 | | |
| #10 | 84.9 | | |
| #20 | 76.9 | | |
| #40 | 67.6 | | |
| #60 | 54.8 | | |
| #100 | 43.1 | | |
| #140 | 34.1 | | |
| #200 | 29.0 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 2.02 $D_{60}$= 0.308 $D_{50}$= 0.202
$D_{30}$= 0.0817 $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

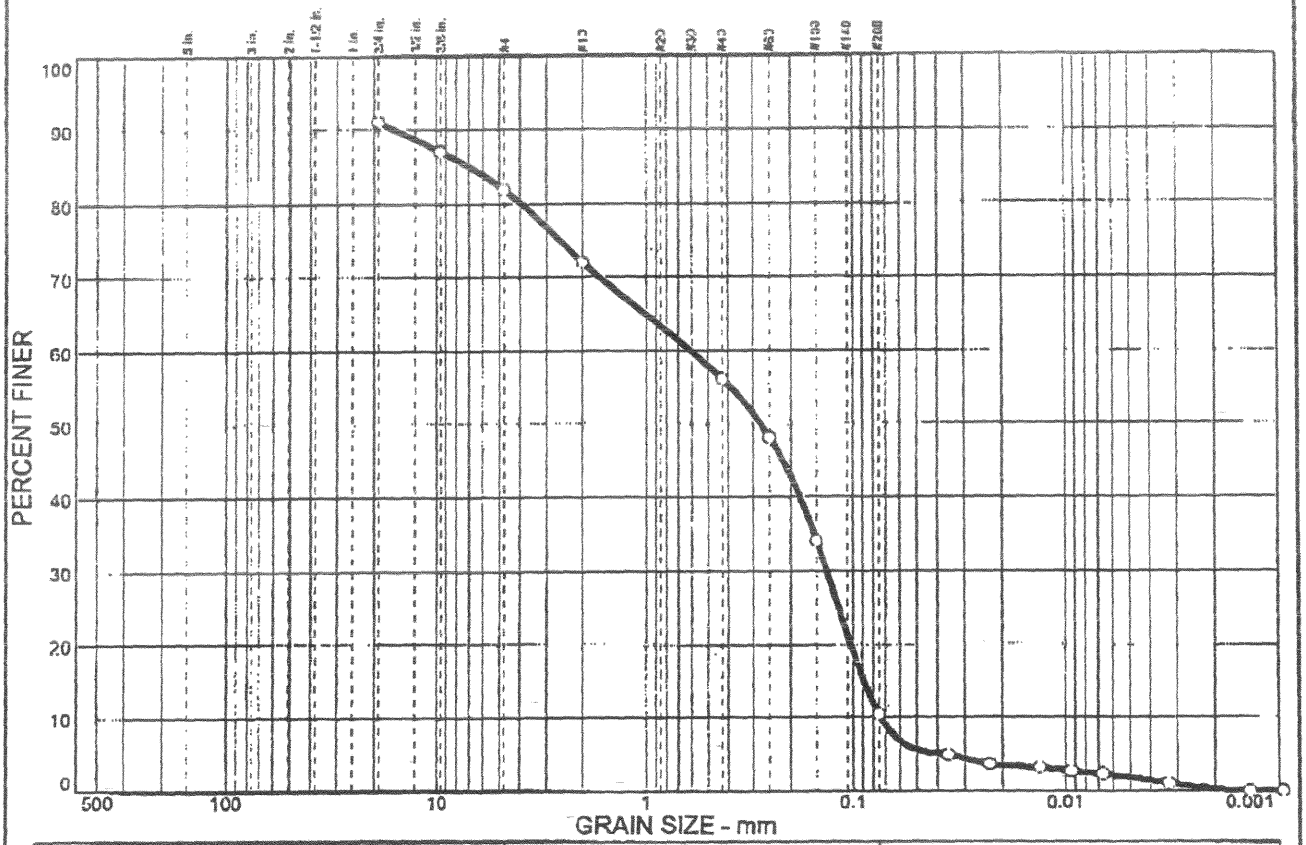
**Remarks**

Sample No.: B305 Source of Sample: Date:
Location: BA-09 Elev./Depth: 13.5-15.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| | | 9.2 | 9.9 | 15.9 | 45.7 | 8.5 | 1.9 |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 91.1 | | |
| 3/8 in. | 87.0 | | |
| #4 | 81.9 | | |
| #10 | 72.0 | | |
| #40 | 56.1 | | |
| #60 | 48.1 | | |
| #100 | 34.1 | | |
| #200 | 10.4 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 6.97 $D_{60}$= 0.607 $D_{50}$= 0.276
$D_{30}$= 0.134 $D_{15}$= 0.0888 $D_{10}$= 0.0736
$C_u$= 8.24 $C_c$= 0.40

**Classification**

USCS= AASHTO=

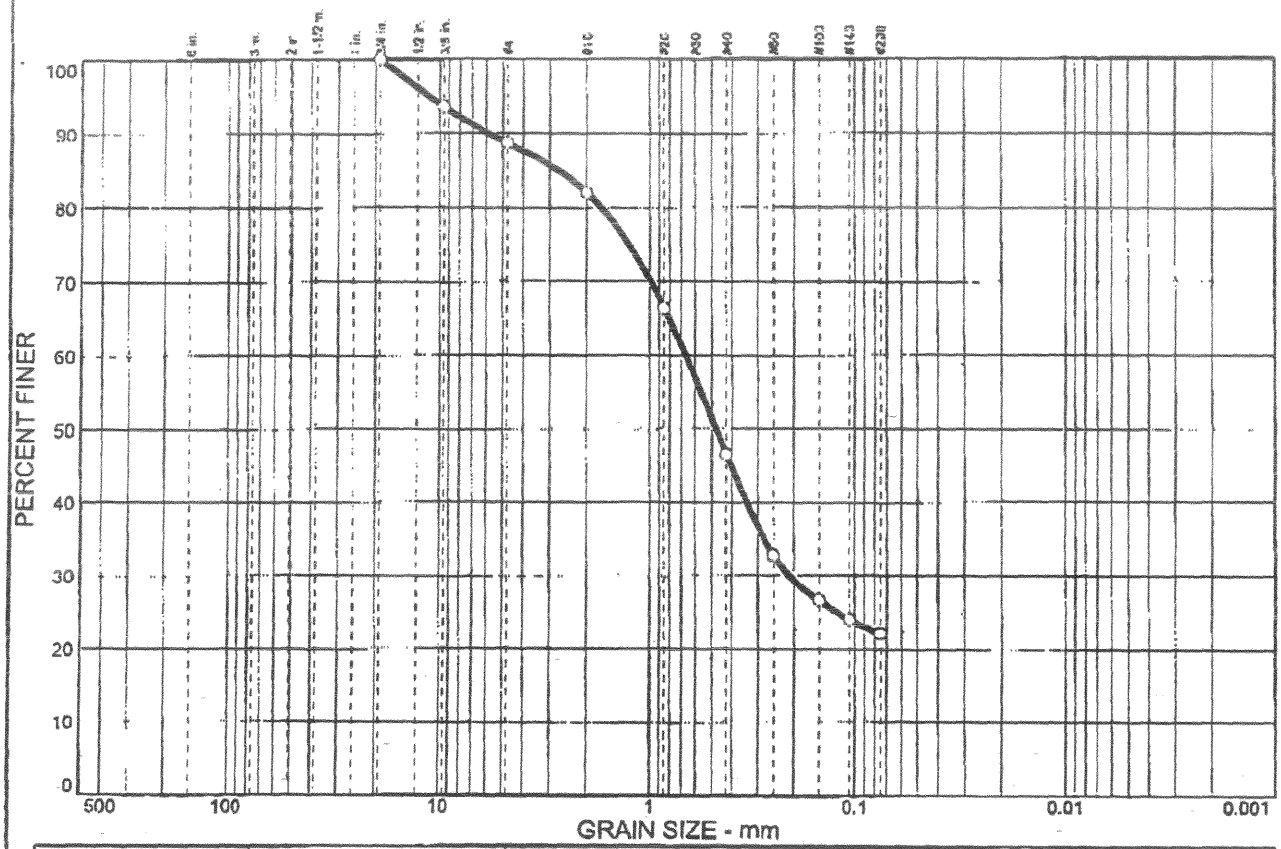
**Remarks**

Sample No.: T Source of Sample: Date:
Location: TC-1-11 Elev./Depth: 48.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 11.3 | 6.7 | 35.5 | 24.4 | 22.1 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 93.6 | | |
| #4 | 88.7 | | |
| #10 | 82.0 | | |
| #20 | 66.4 | | |
| #40 | 46.5 | | |
| #60 | 32.8 | | |
| #100 | 26.7 | | |
| #140 | 24.0 | | |
| #200 | 22.1 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 2.72 $D_{60}$= 0.670 $D_{50}$= 0.478
$D_{30}$= 0.209 $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

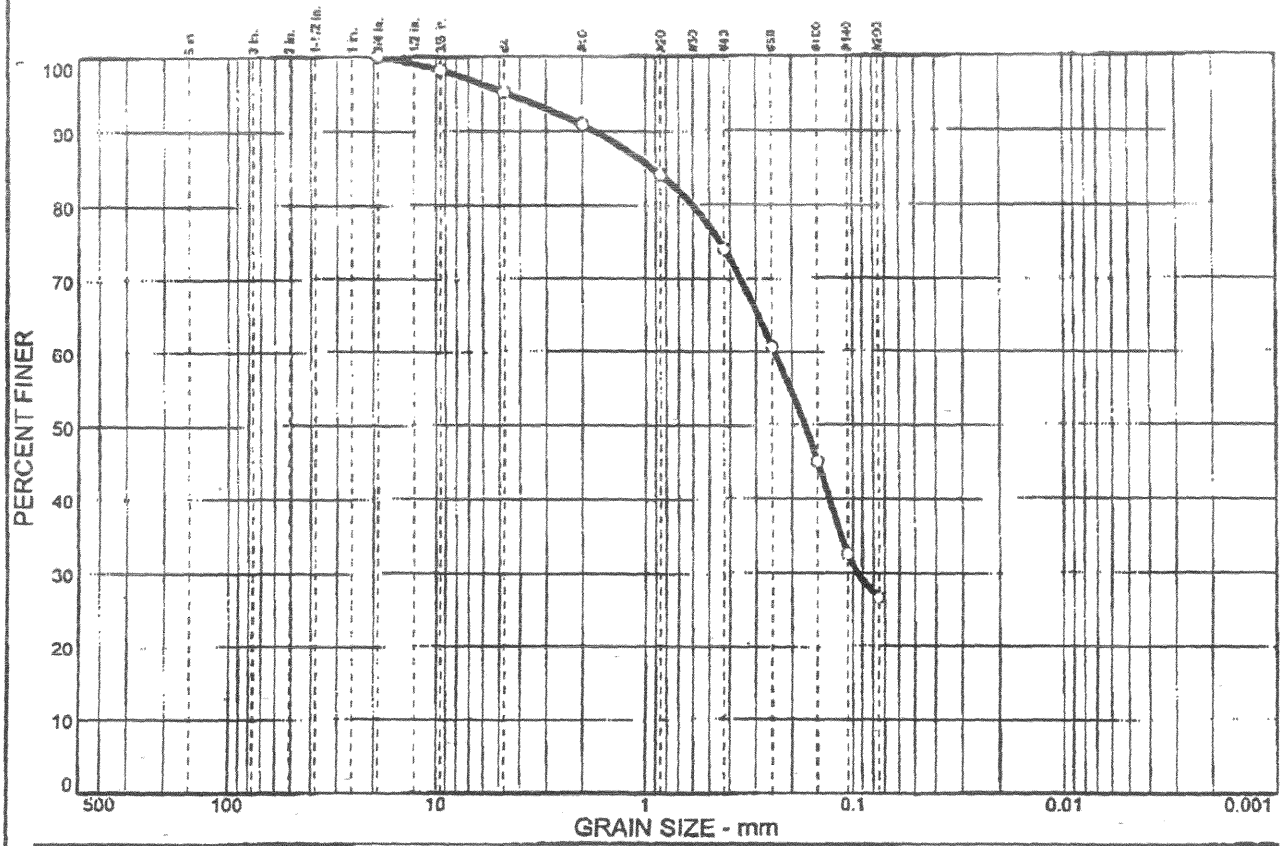
**Remarks**

Sample No.: 999 Source of Sample: Date:
Location: TC-2-2 Elev./Depth: 8.3'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 4.8 | 4.4 | 16.8 | 47.4 | 26.6 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 98.2 | | |
| #4 | 95.2 | | |
| #10 | 90.8 | | |
| #20 | 84.1 | | |
| #40 | 74.0 | | |
| #60 | 60.6 | | |
| #100 | 45.1 | | |
| #140 | 32.6 | | |
| #200 | 26.6 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.931 $D_{60}$= 0.245 $D_{50}$= 0.173
$D_{30}$= 0.0948 $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

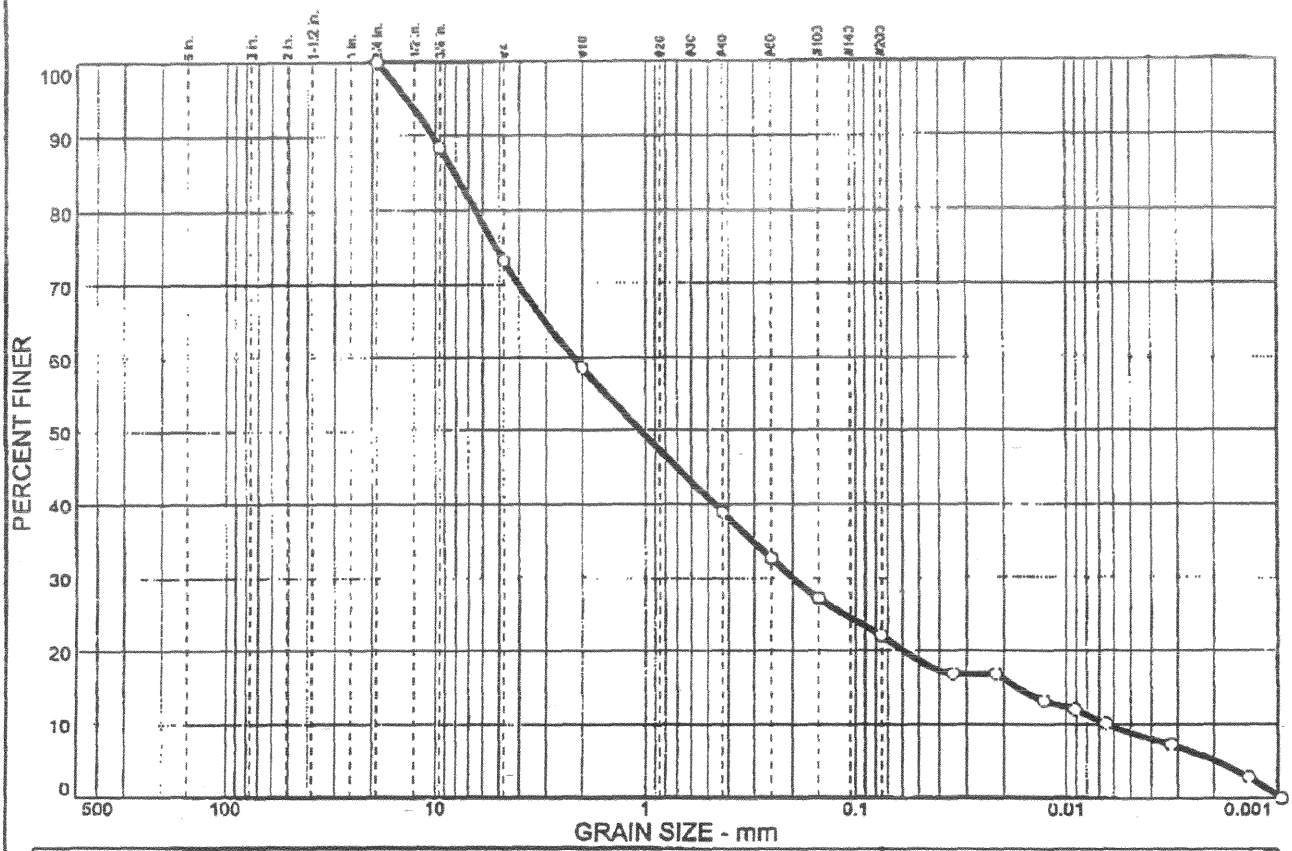
**Remarks**

Sample No.: 211 Source of Sample: Date:
Location: TC-3-3 Elev./Depth: 13.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 26.8 | 14.6 | 19.7 | 16.8 | 13.3 | 8.8 |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 88.4 | | |
| #4 | 73.2 | | |
| #10 | 58.6 | | |
| #40 | 38.9 | | |
| #60 | 32.6 | | |
| #100 | 27.2 | | |
| #200 | 22.1 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 8.10 $D_{60}$= 2.20 $D_{50}$= 1.05
$D_{30}$= 0.199 $D_{15}$= 0.0171 $D_{10}$= 0.0064
$C_u$= 346.52 $C_c$= 2.82

**Classification**

USCS= AASHTO=

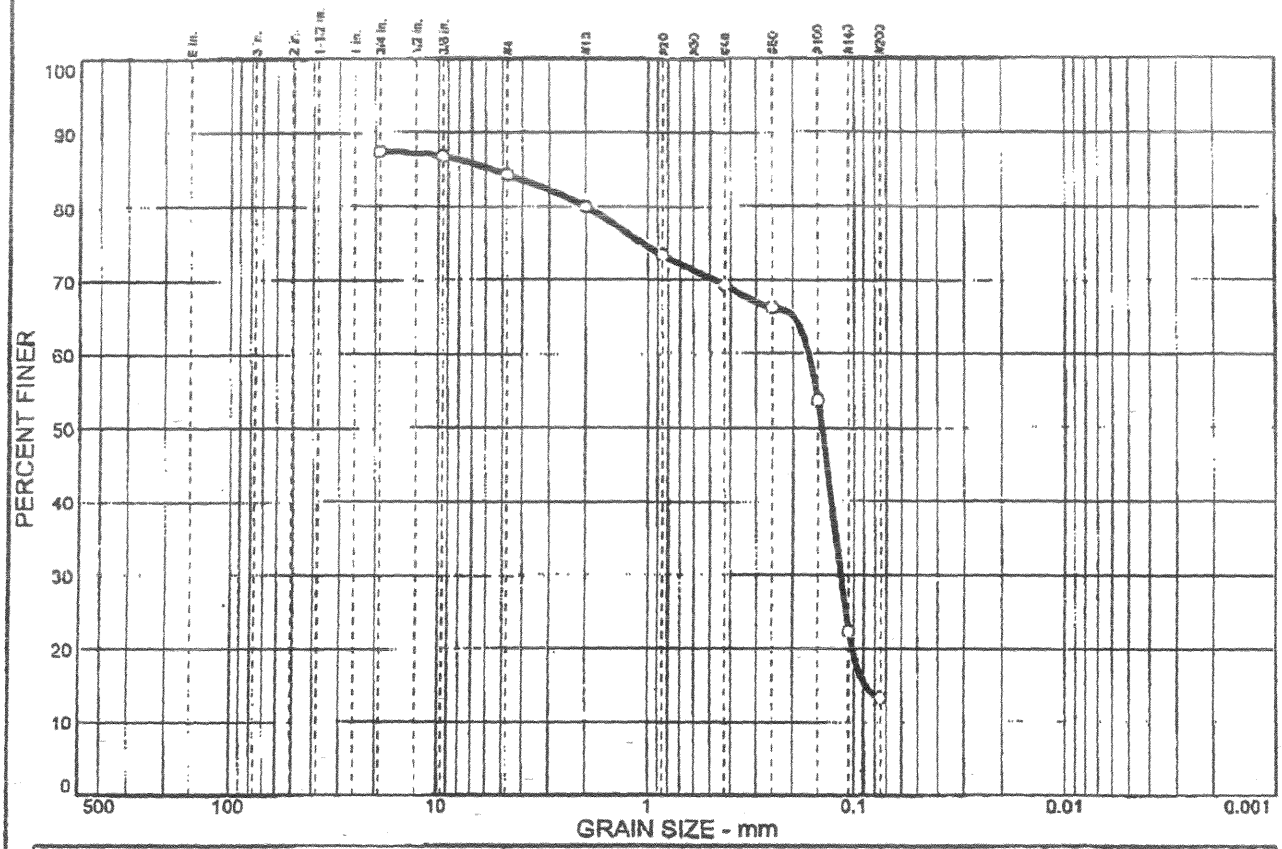
**Remarks**

Sample No.: A Source of Sample: Date:
Location: TC-4-2 Elev./Depth: 7.4'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| | | 3.1 | 4.4 | 10.6 | 56.1 | 13.2 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 87.4 | | |
| 3/8 in. | 86.8 | | |
| #4 | 84.3 | | |
| #10 | 79.9 | | |
| #20 | 73.4 | | |
| #40 | 69.3 | | |
| #60 | 66.3 | | |
| #100 | 53.7 | | |
| #140 | 22.3 | | |
| #200 | 13.2 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 5.61 $D_{60}$= 0.167 $D_{50}$= 0.143
$D_{30}$= 0.117 $D_{15}$= 0.0888 $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

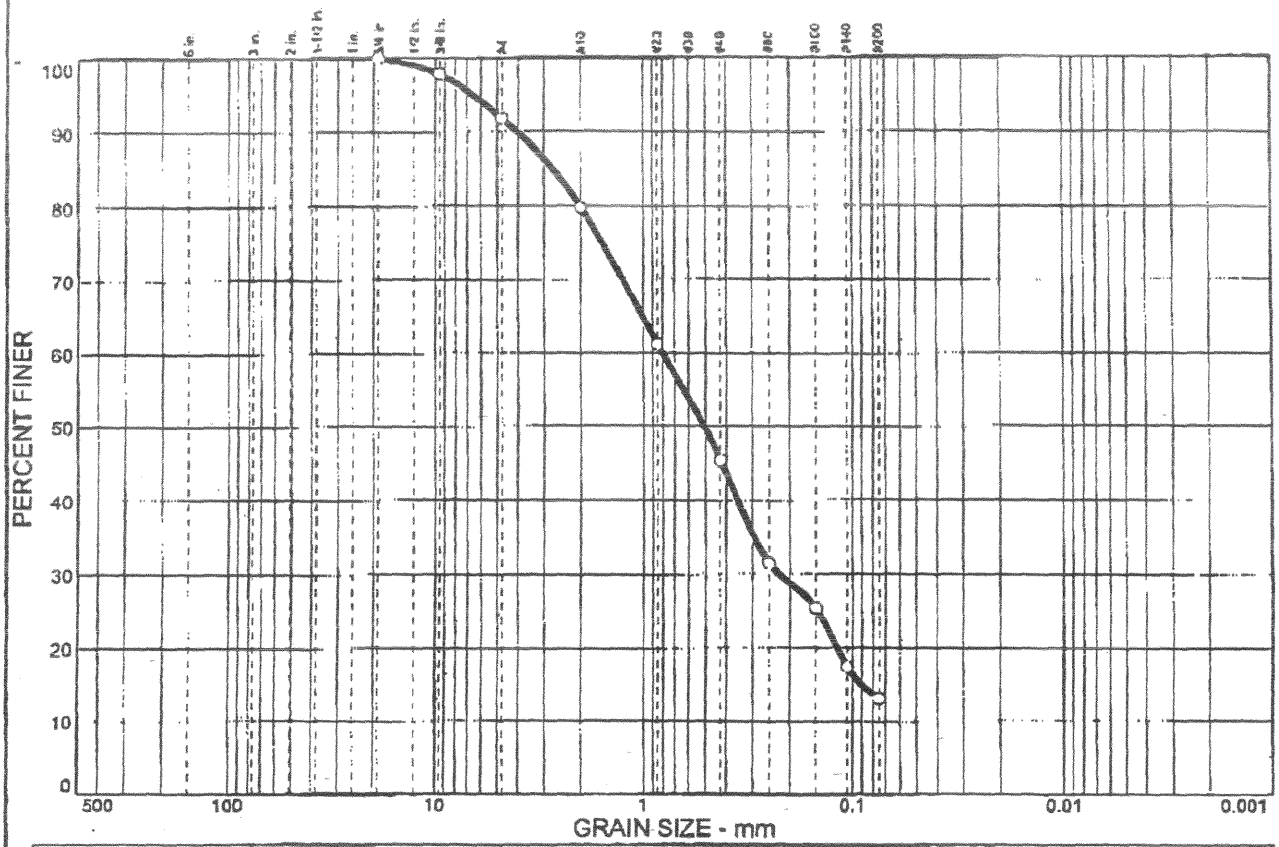
**Remarks**

Sample No.: 269 Source of Sample: Date:
Location: TC-5-10 Elev./Depth: 48.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 8.2 | 12.0 | 34.4 | 32.3 | 13.1 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 97.8 | | |
| #4 | 91.8 | | |
| #10 | 79.8 | | |
| #20 | 61.2 | | |
| #40 | 45.4 | | |
| #60 | 31.5 | | |
| #100 | 25.4 | | |
| #140 | 17.4 | | |
| #200 | 13.1 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 2.74 $D_{60}$= 0.804 $D_{50}$= 0.509
$D_{30}$= 0.225 $D_{15}$= 0.0909 $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

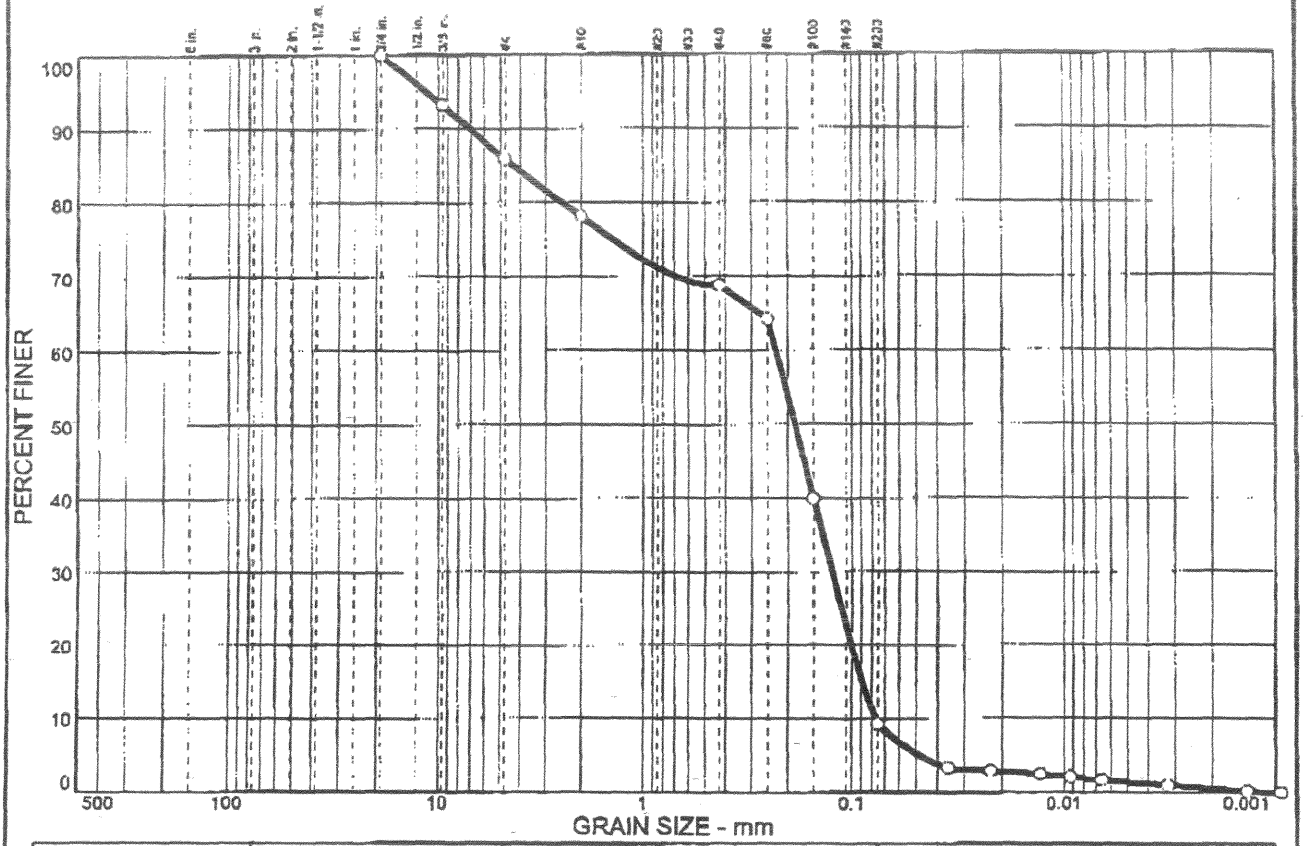
**Remarks**

Sample No.: 307 Source of Sample: Date:
Location: TC-6-4 Elev./Depth: 18.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 14.1 | 7.8 | 9.4 | 59.5 | 7.8 | 1.4 |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 93.2 | | |
| #4 | 85.9 | | |
| #10 | 78.1 | | |
| #40 | 68.7 | | |
| #60 | 64.2 | | |
| #100 | 39.9 | | |
| #200 | 9.2 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 4.33 $D_{60}$= 0.228 $D_{50}$= 0.184
$D_{30}$= 0.123 $D_{15}$= 0.0892 $D_{10}$= 0.0772
$C_u$= 2.96 $C_c$= 0.87

**Classification**

USCS= AASHTO=

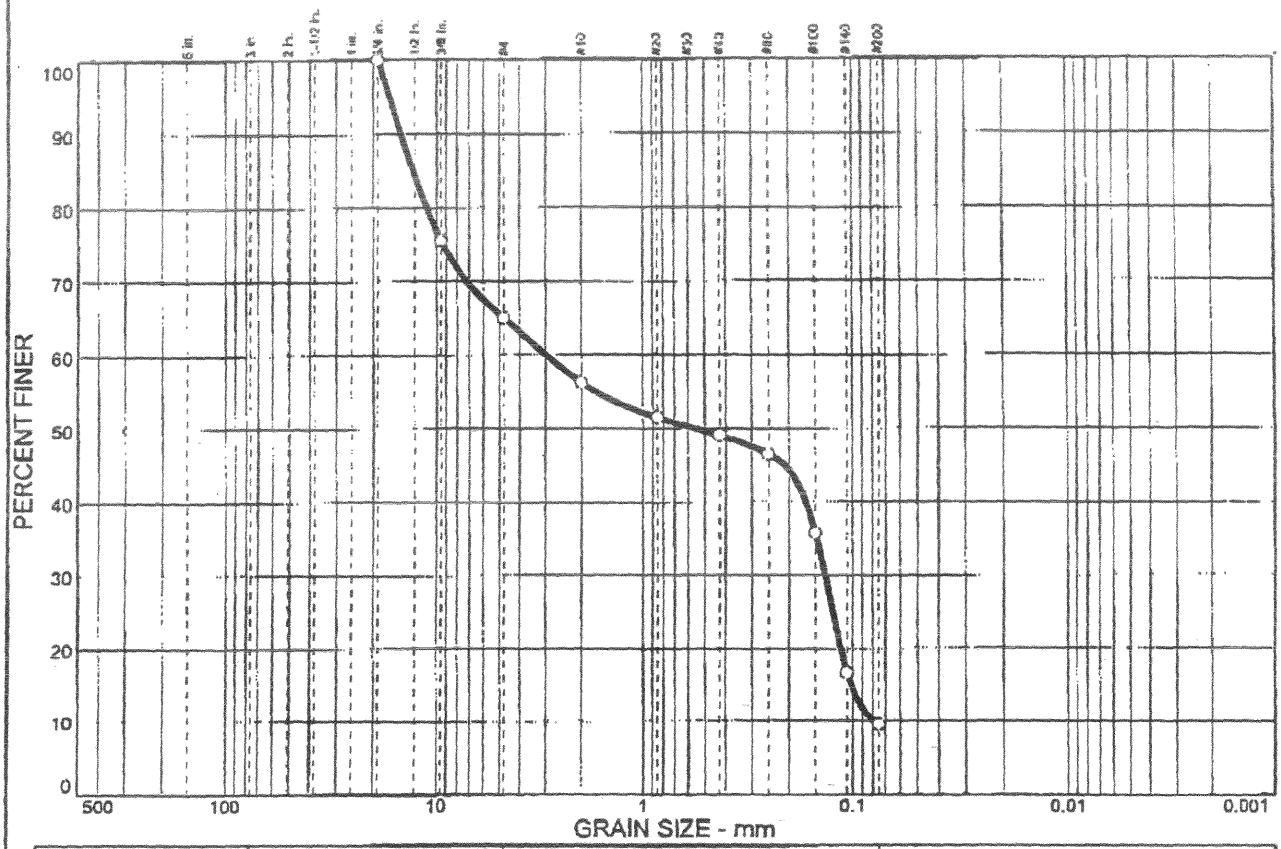
**Remarks**

Sample No.: AS Source of Sample: Date:
Location: TC-6-6 Elev./Depth: 28.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 35.0 | 8.8 | 7.2 | 39.5 | 9.5 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 75.5 | | |
| #4 | 65.0 | | |
| #10 | 56.2 | | |
| #20 | 51.5 | | |
| #40 | 49.0 | | |
| #60 | 46.5 | | |
| #100 | 35.8 | | |
| #140 | 16.6 | | |
| #200 | 9.5 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 13.0 $D_{60}$= 2.99 $D_{50}$= 0.561
$D_{30}$= 0.135 $D_{15}$= 0.102 $D_{10}$= 0.0789
$C_u$= 37.83 $C_c$= 0.08

**Classification**

USCS= AASHTO=

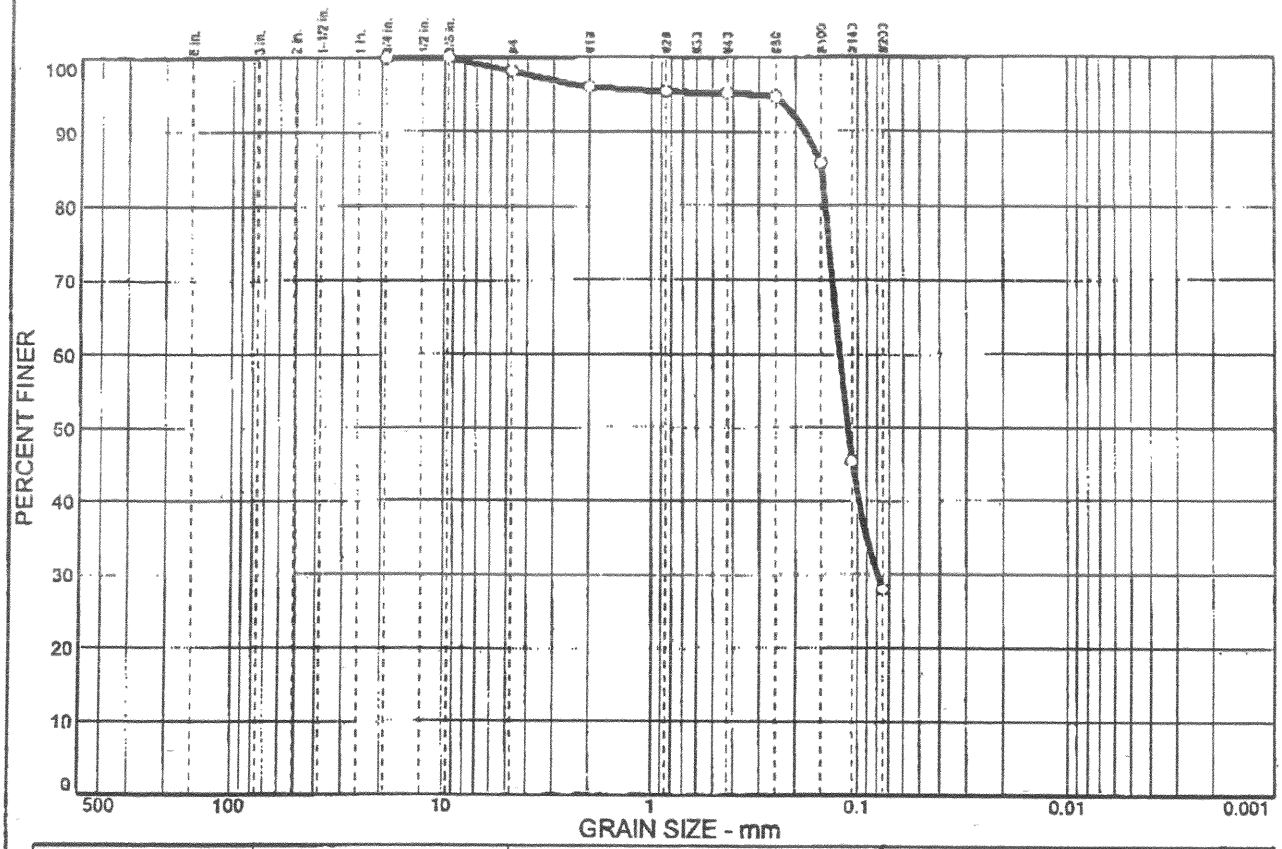
**Remarks**

Sample No.: 254 Source of Sample: Date:
Location: TC-7-6 Elev./Depth: 28.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 1.8 | 2.2 | 0.8 | 67.2 | 28.0 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 100.0 | | |
| #4 | 98.2 | | |
| #10 | 96.0 | | |
| #20 | 95.4 | | |
| #40 | 95.2 | | |
| #60 | 94.7 | | |
| #100 | 85.8 | | |
| #140 | 45.4 | | |
| #200 | 28.0 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.149 $D_{60}$= 0.122 $D_{50}$= 0.111
$D_{30}$= 0.0796 $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

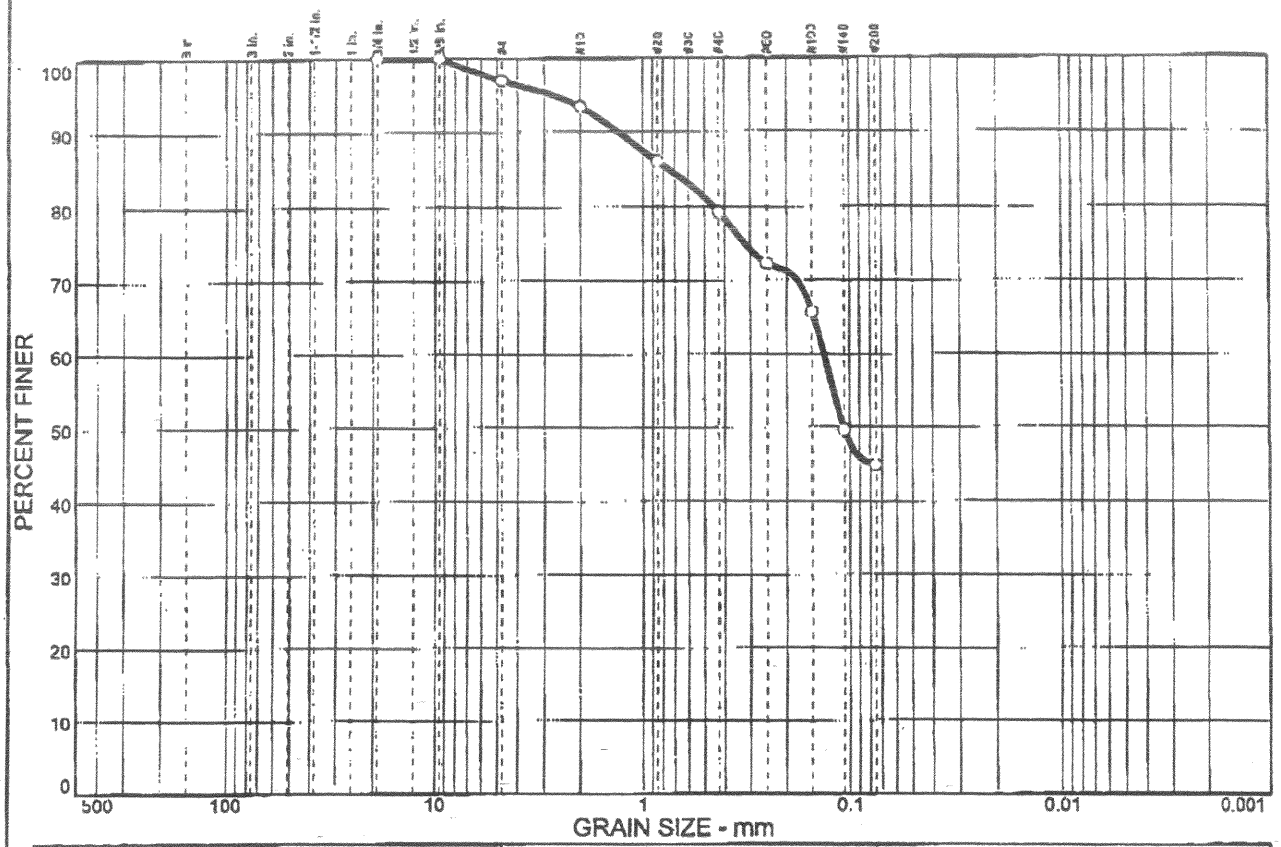
**Remarks**

Sample No.: 203 Source of Sample: Date:
Location: TC-8-9 Elev./Depth: 43.5-45.0'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 3.0 | 3.6 | 14.2 | 34.3 | 44.9 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 100.0 | | |
| #4 | 97.0 | | |
| #10 | 93.4 | | |
| #20 | 86.0 | | |
| #40 | 79.2 | | |
| #60 | 72.3 | | |
| #100 | 65.8 | | |
| #140 | 49.6 | | |
| #200 | 44.9 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.755 $D_{60}$= 0.132 $D_{50}$= 0.107
$D_{30}$= $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

**Remarks**

Sample No.: 249 Source of Sample: Date:
Location: TC-10-4 Elev./Depth: 18.5'

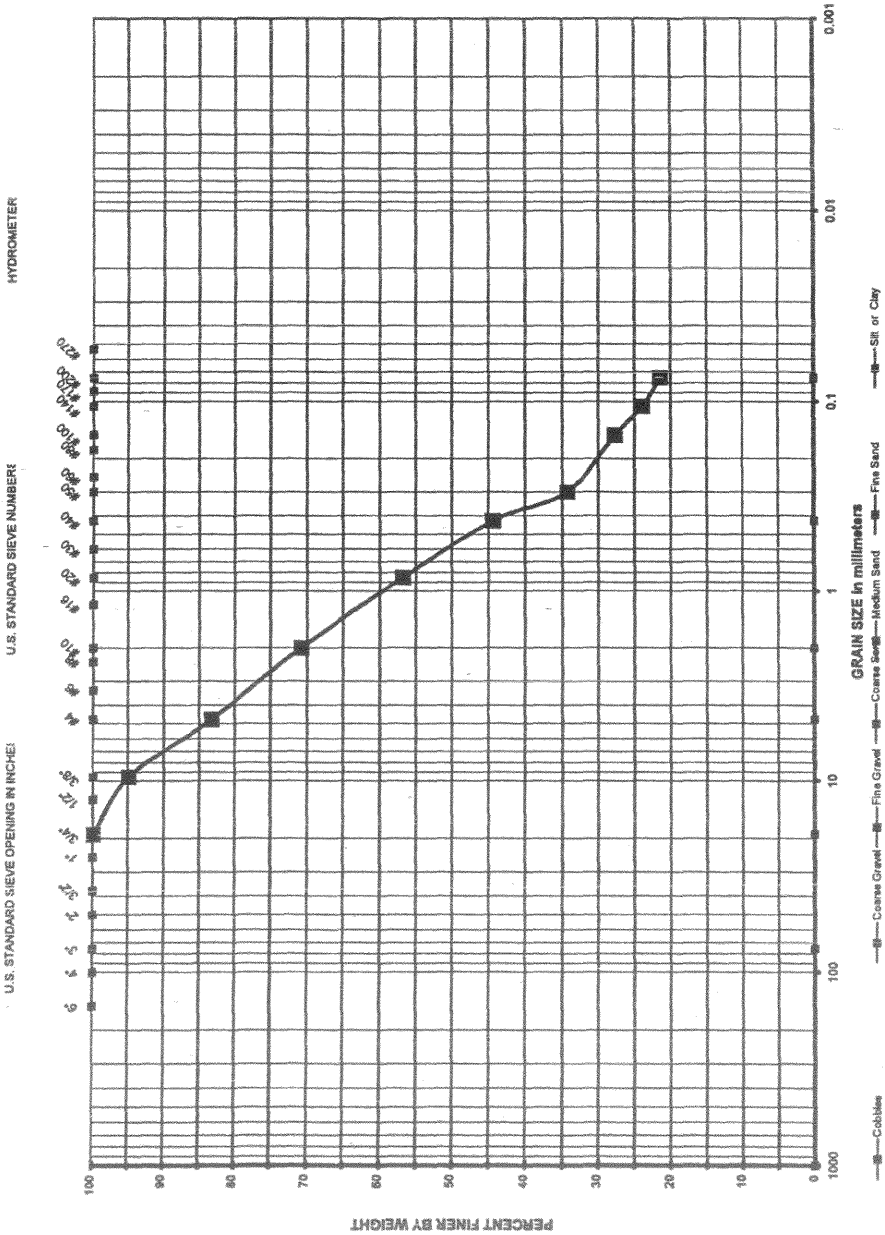
NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

**LABORATORY TEST RESULTS FOR**
**EAA RESERVOIR**
**PROJECT No: 05-05-0013-101.**
**N&A**

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 40 | 60 | 100 | 200 | | | LL | PI | | |
| TC1-N | 5.5' | 71 | 44 | 34 | 28 | 22 | 15 | - | - | - | | |
| TC1-N | 33.5' | 96 | 85 | 73 | 31 | 6 | 26 | - | - | - | | |
| TC1-N | 53.5' | 53 | 35 | 27 | 20 | 13 | 15 | - | - | - | | |
| TC1-N | 68.5' | 55 | 29 | 22 | 16 | 11 | 18 | - | - | - | | |
| TC1-N | 73.5' | 63 | 30 | 20 | 11 | 8 | 24 | - | - | - | | |
| TC1-N | 88.5' | 76 | 50 | 37 | 21 | 17 | 25 | - | - | - | | |
| TC1-E | 13.5' | 69 | 53 | 44 | 35 | 25 | 21 | - | - | - | | |
| TC1-E | 53.5' | 50 | 28 | 22 | 18 | 14 | 17 | - | - | - | | |
| TC1-E | 58.5' | 79 | 43 | 30 | 20 | 15 | 25 | - | - | - | | |
| TC1-E | 83.5' | 60 | 34 | 23 | 13 | 10 | 22 | - | - | - | | |
| TC1-E | 88.5' | 82 | 49 | 29 | 14 | 12 | 21 | - | - | - | | |
| TC1-E | 98.5' | 73 | 35 | 25 | 16 | 12 | 15 | - | - | - | | |
| TC1-W | 13.5' | 69 | 55 | 46 | 36 | 23 | 26 | - | - | - | | |
| TC1-W | 48.5' | 88 | 79 | 75 | 53 | 15 | 26 | - | - | - | | |

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 40 | 60 | 100 | 200 | | | LL | PI | | |
| TC1-W | 68.5' | 56 | 29 | 22 | 15 | 12 | 19 | - | - | - | | |
| TC1-W | 78.5' | 69 | 37 | 25 | 15 | 12 | 22 | - | - | - | | |
| TC1-W | 93.5' | 84 | 39 | 23 | 17 | 14 | 22 | - | - | - | | |
| TC1-S | 13.5' | 84 | 68 | 57 | 43 | 25 | 21 | - | - | - | | |
| TC1-S | 33.5' | 82 | 53 | 34 | 19 | 6 | 20 | - | - | - | | |
| TC1-S | 68.5' | 63 | 33 | 25 | 17 | 13 | 20 | - | - | - | | |
| TC1-S | 93.5' | 82 | 39 | 22 | 14 | 12 | 23 | - | - | - | | |




Project: EAA Reservoirs

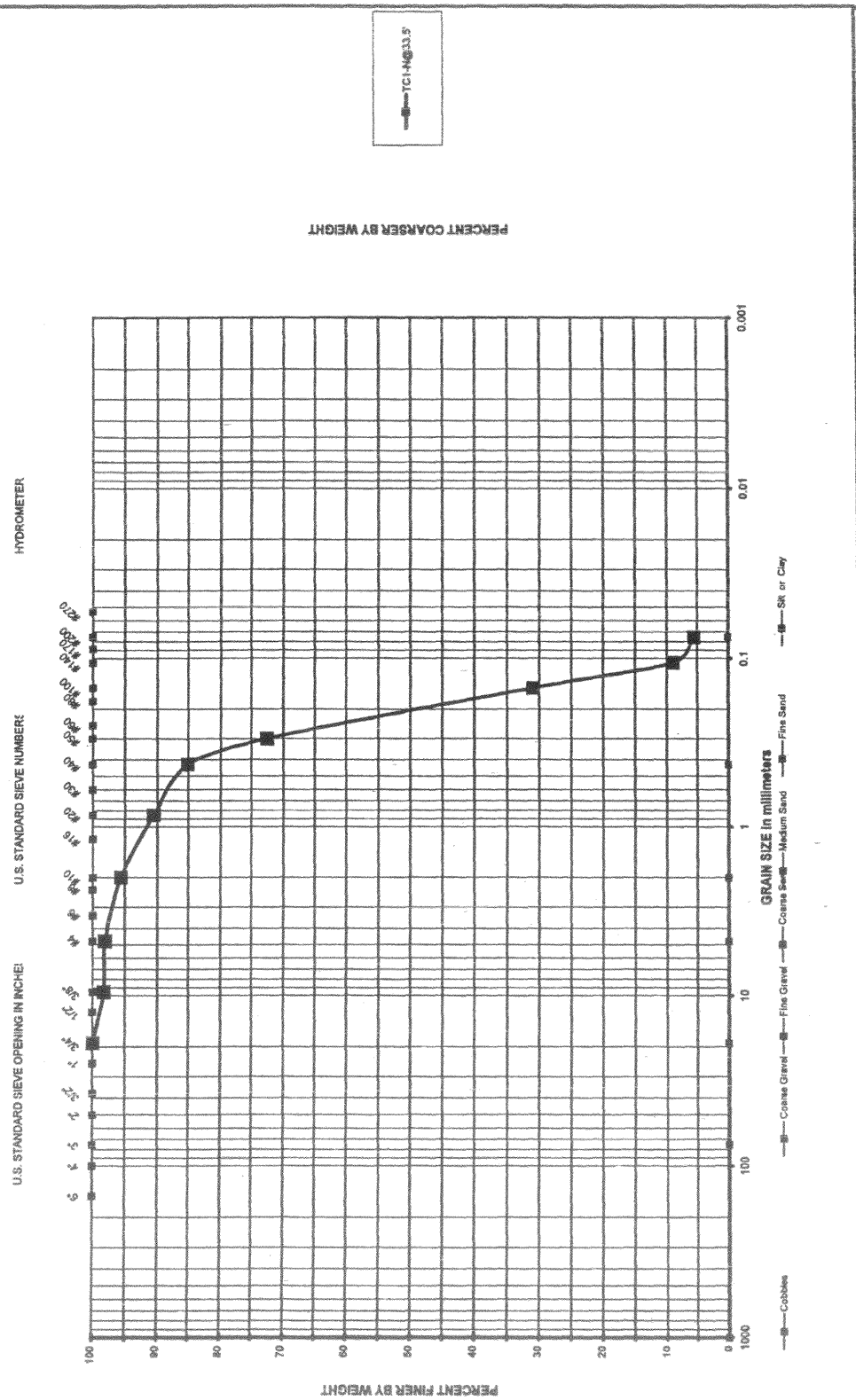
Date: 4/13/2005 N&A Project No. 05-05-0013-1

Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-N@5.5' | | 15 | - | - | - |




Project: EAA Reservoirs

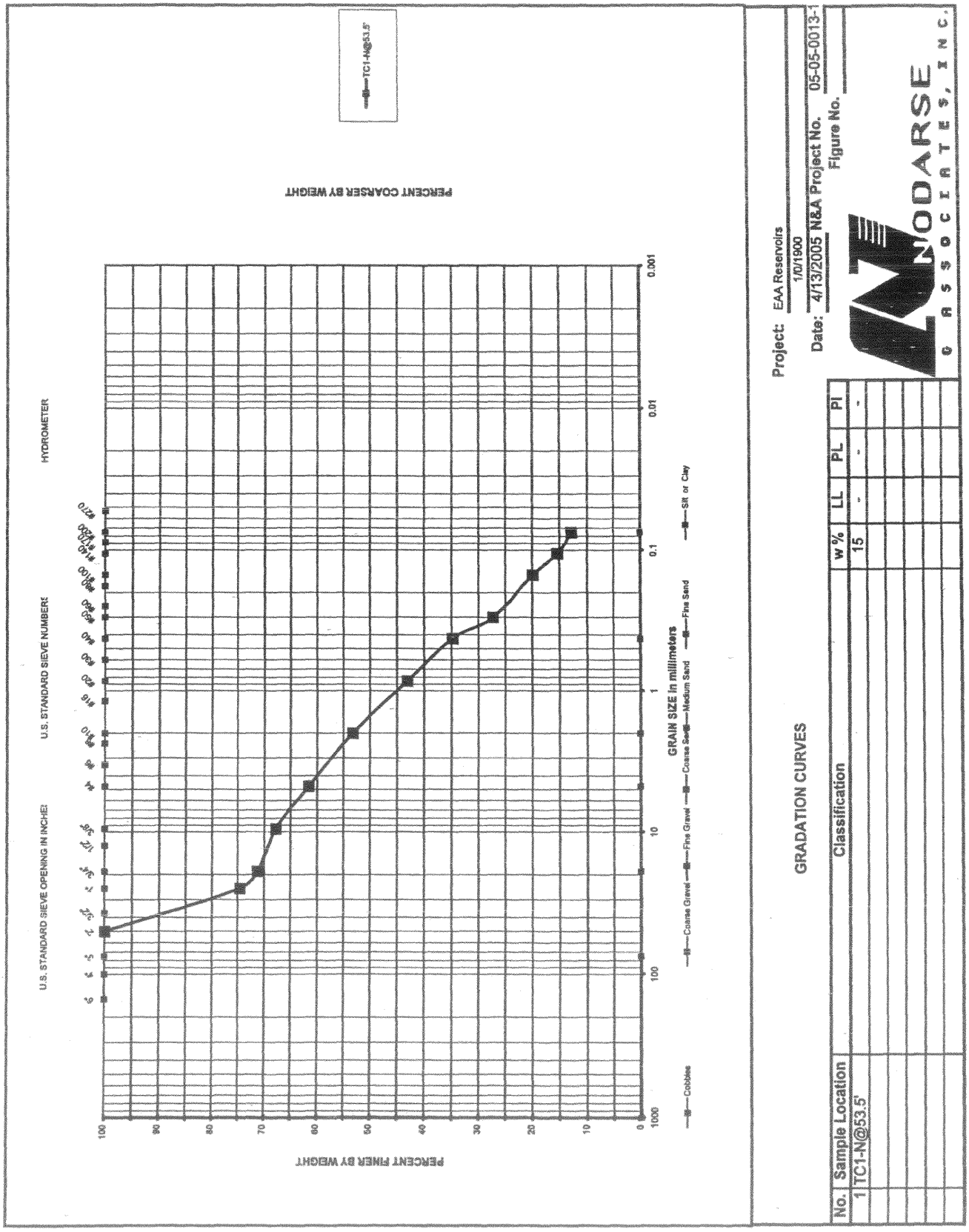
Date: 4/13/2005 N&A Project No. 05-05-0013-1

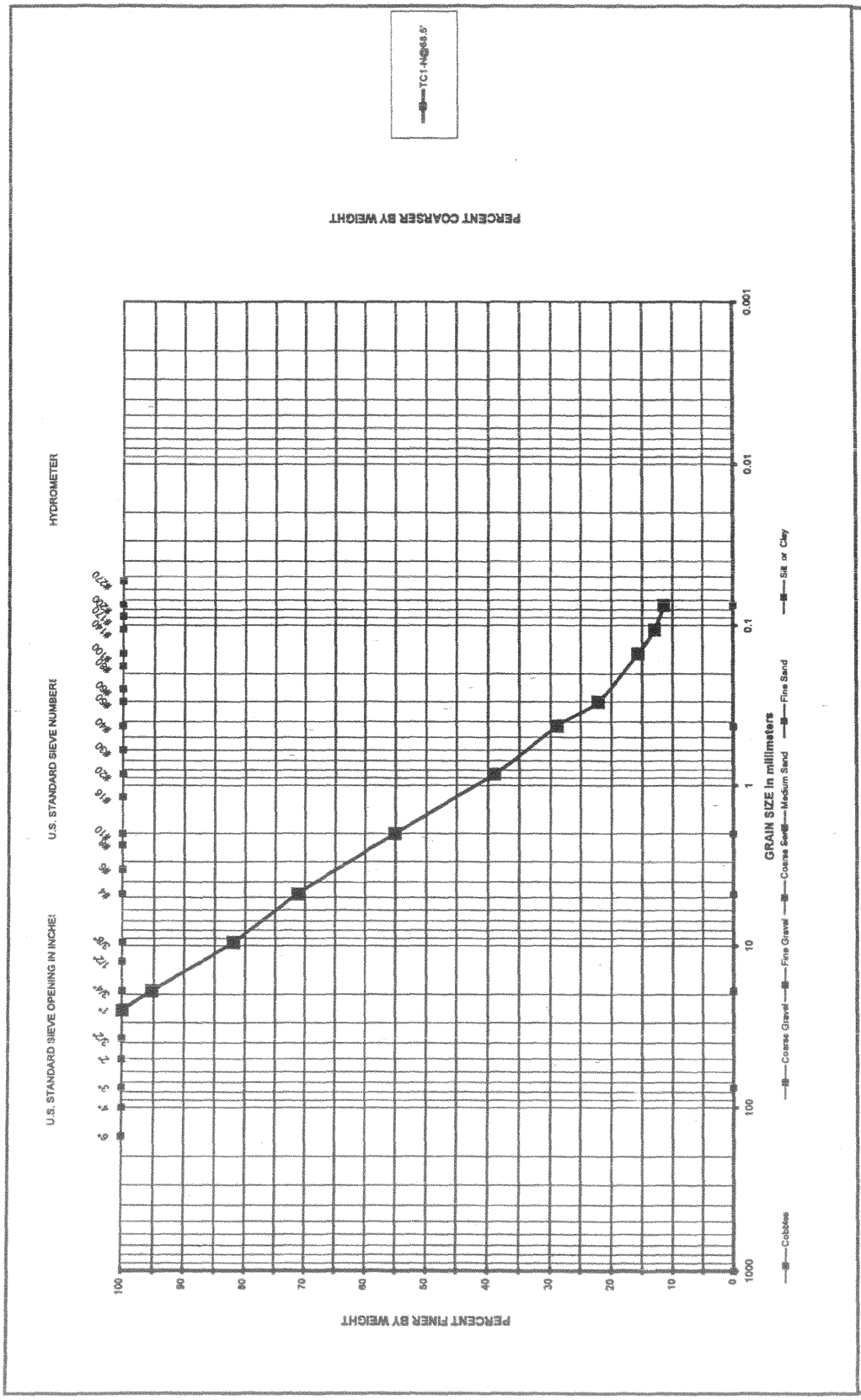
Figure No.

MODARSE ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-N@33.5' | | 26 | - | - | - |


U.S. STANDARD SIEVE OPENING IN INCHES
U.S. STANDARD SIEVE NUMBERS
HYDROMETER
PERCENT FINER BY WEIGHT
PERCENT COARSER BY WEIGHT
GRAIN SIZE in millimeters
Cobbles
Coarse Gravel
Fine Gravel
Coarse Sand
Medium Sand
Fine Sand
Silt or Clay
TC1-N@53.5'
Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.
NODARSE & ASSOCIATES, INC.
GRADATION CURVES
No. Sample Location Classification w % LL PL PI
1 TC1-N@53.5' 15 - - -

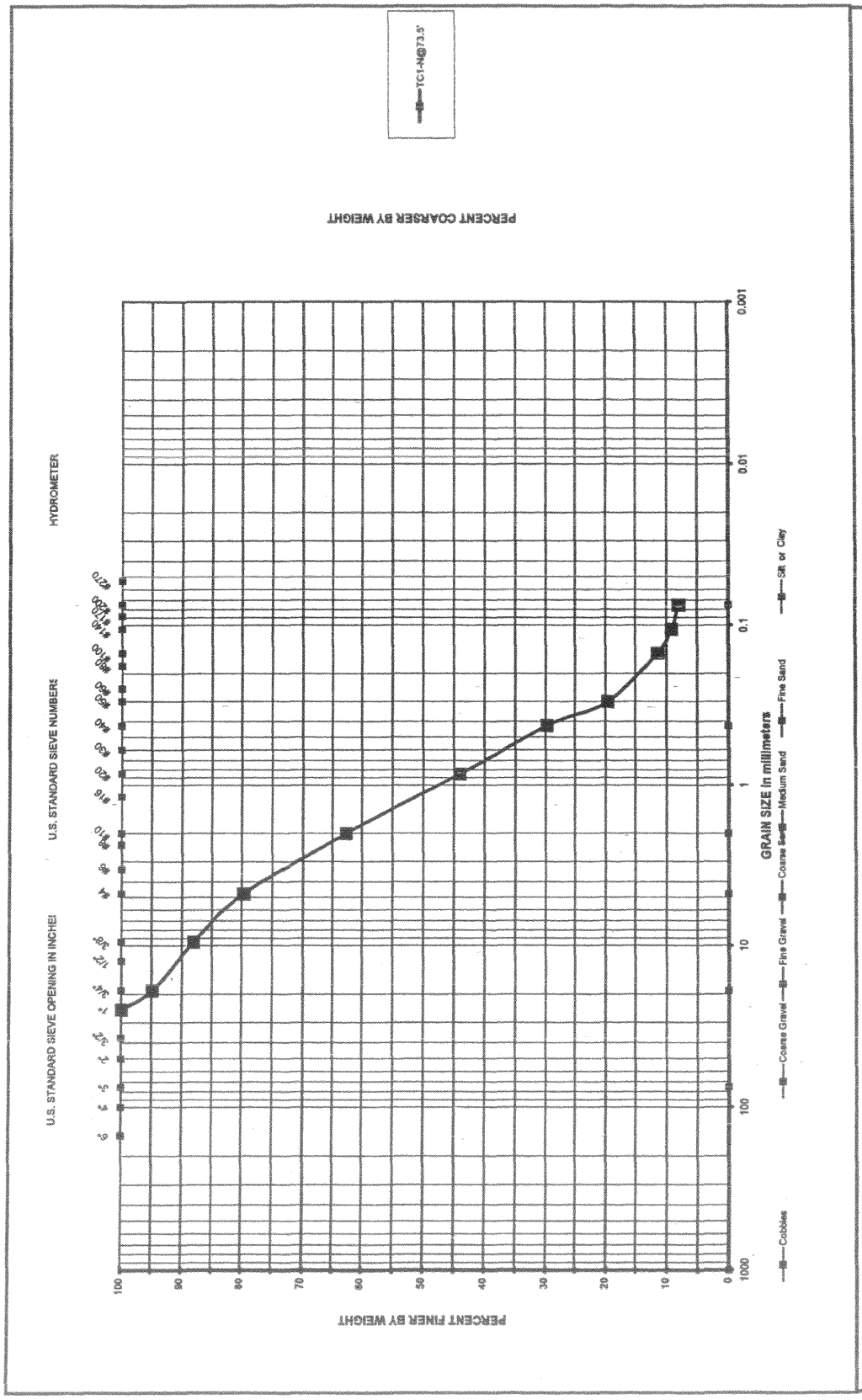



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-N@68.5' | | 18 | - | - | - |

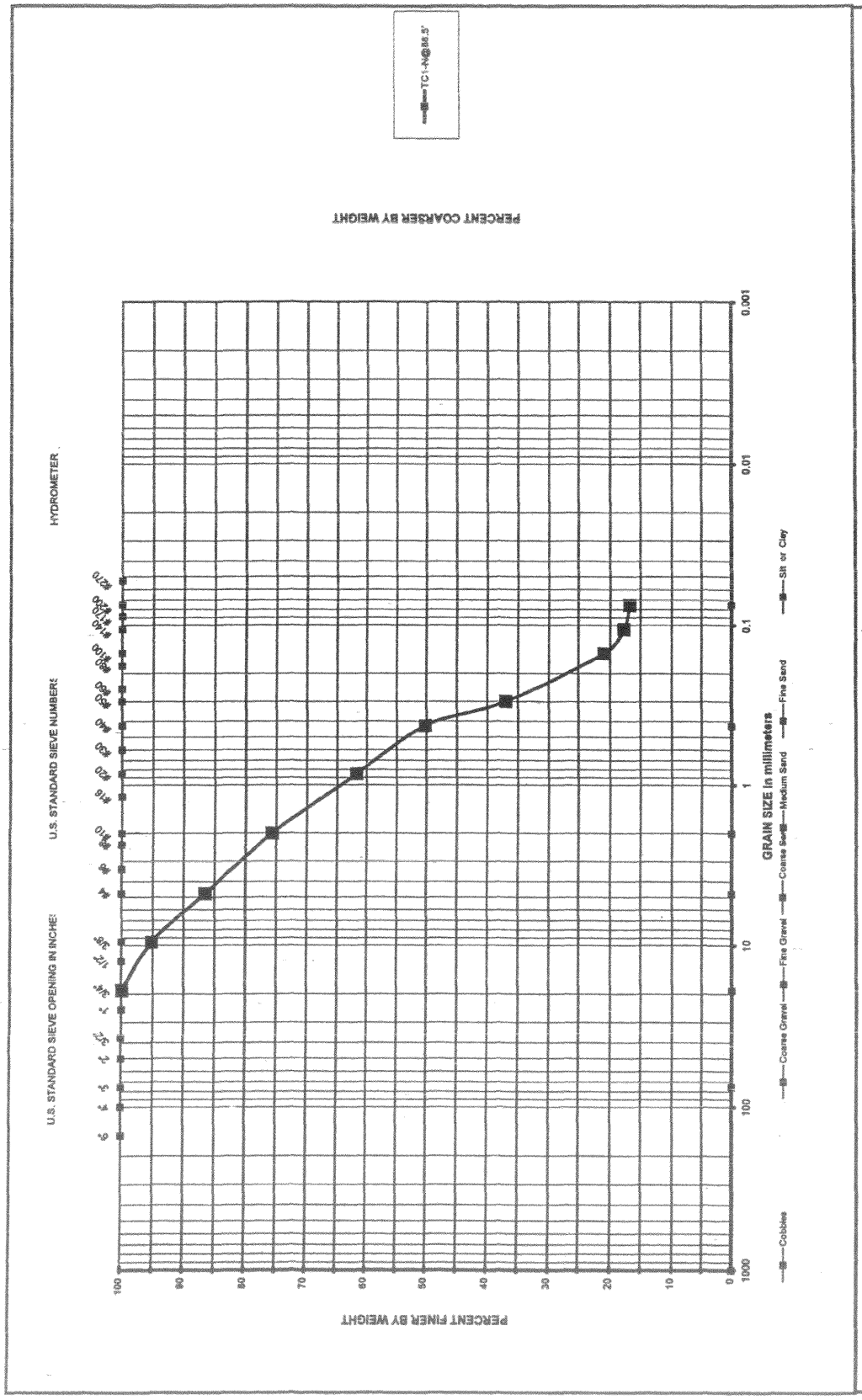



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-N@73.5' | | 24 | - | - | - |




Project: EAA Reservoirs

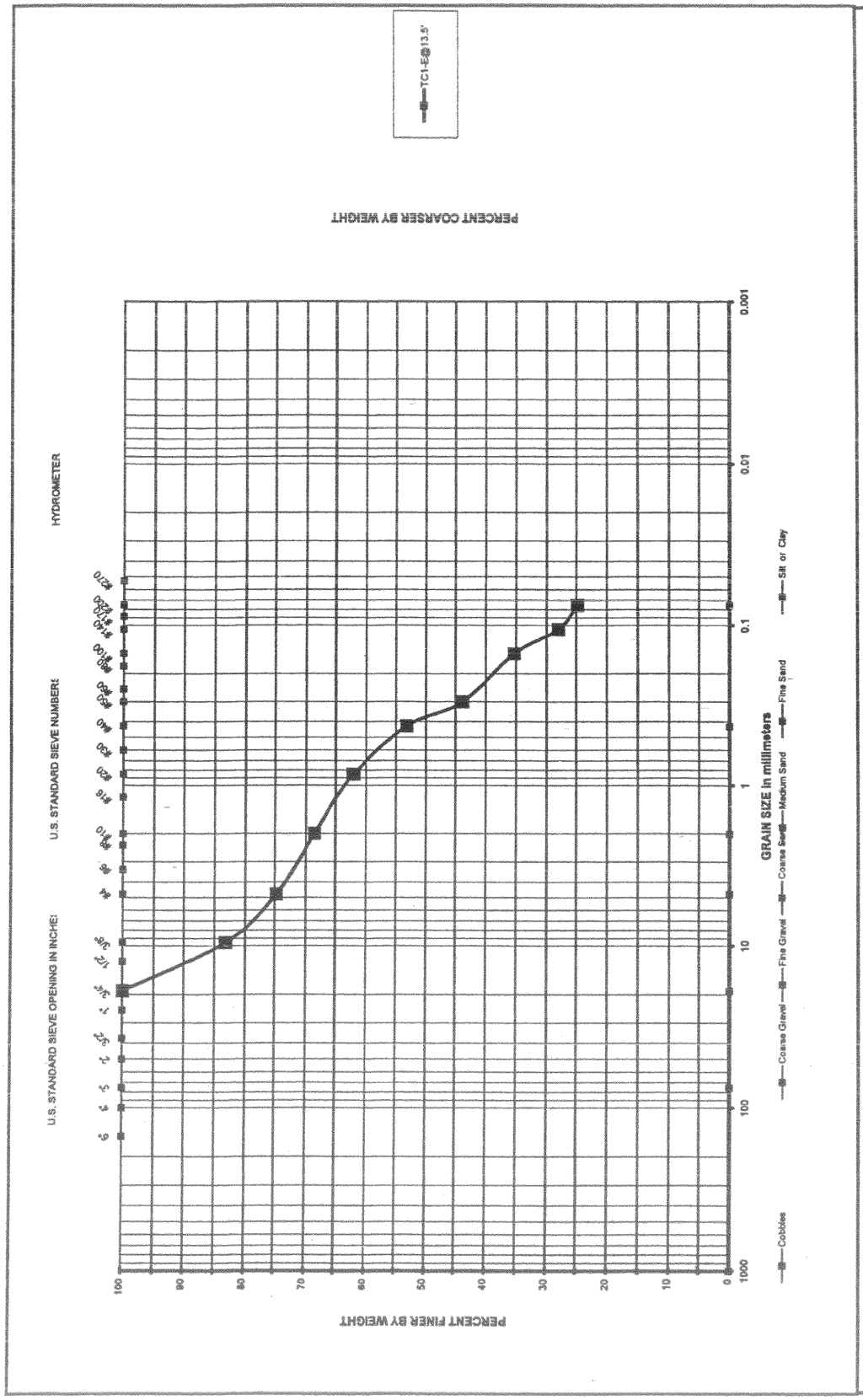
Date: 4/13/2005 N&A Project No. 05-05-0013-1

Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-N@88.5' | | 25 | - | - | - |

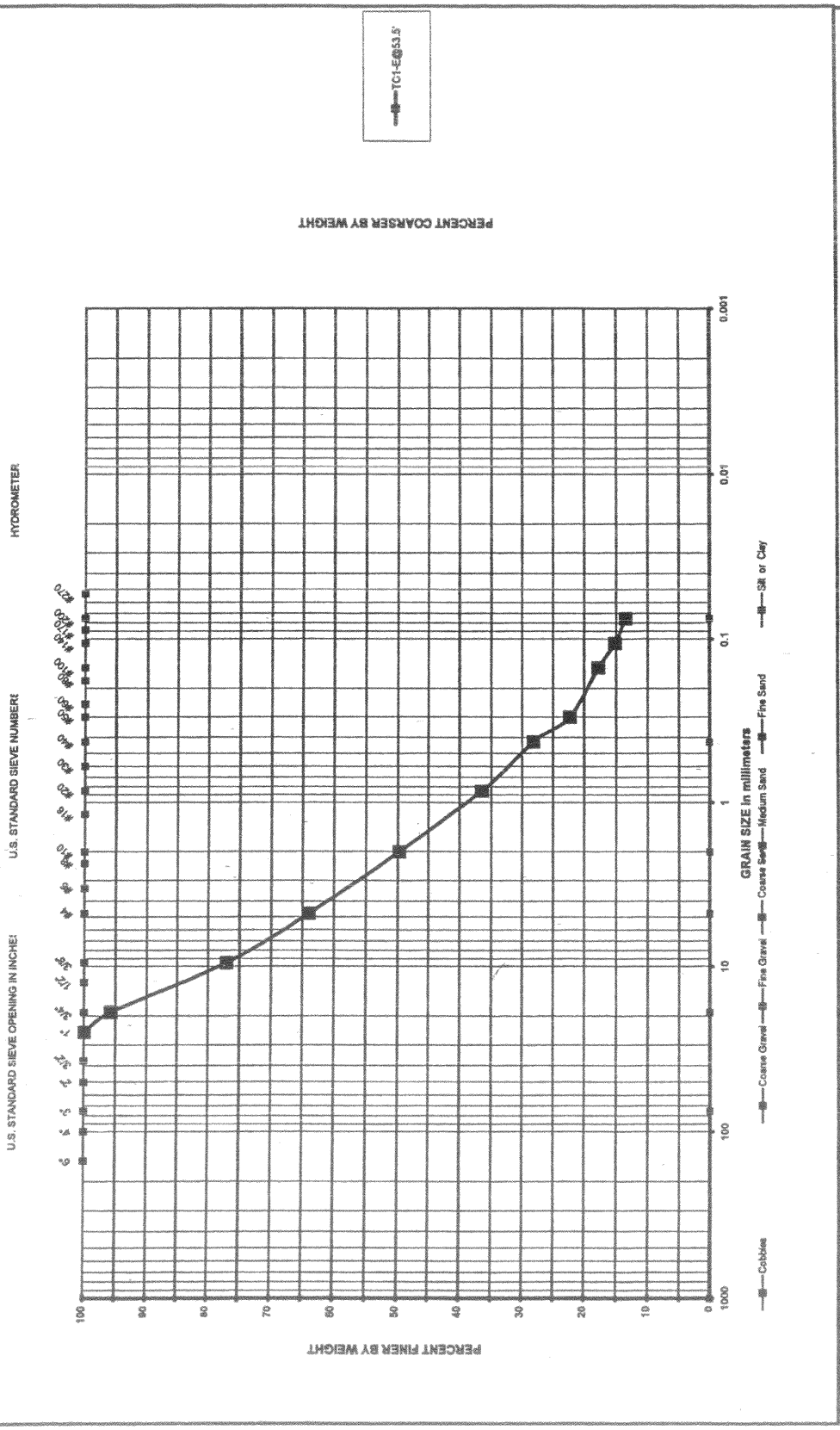



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-E@13.5' | | 21 | - | - | - |

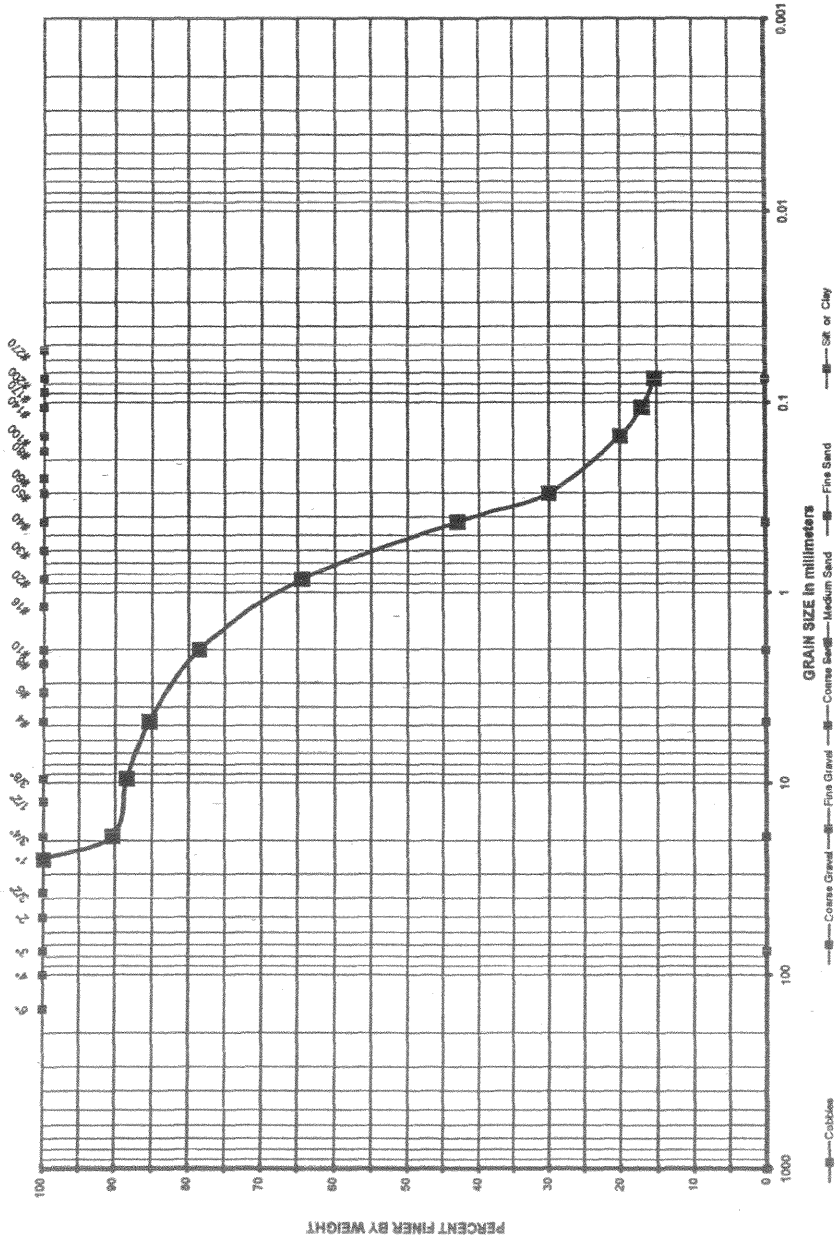



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-E@53.5' | | 17 | - | - | - |




Project: EAA Reservoirs

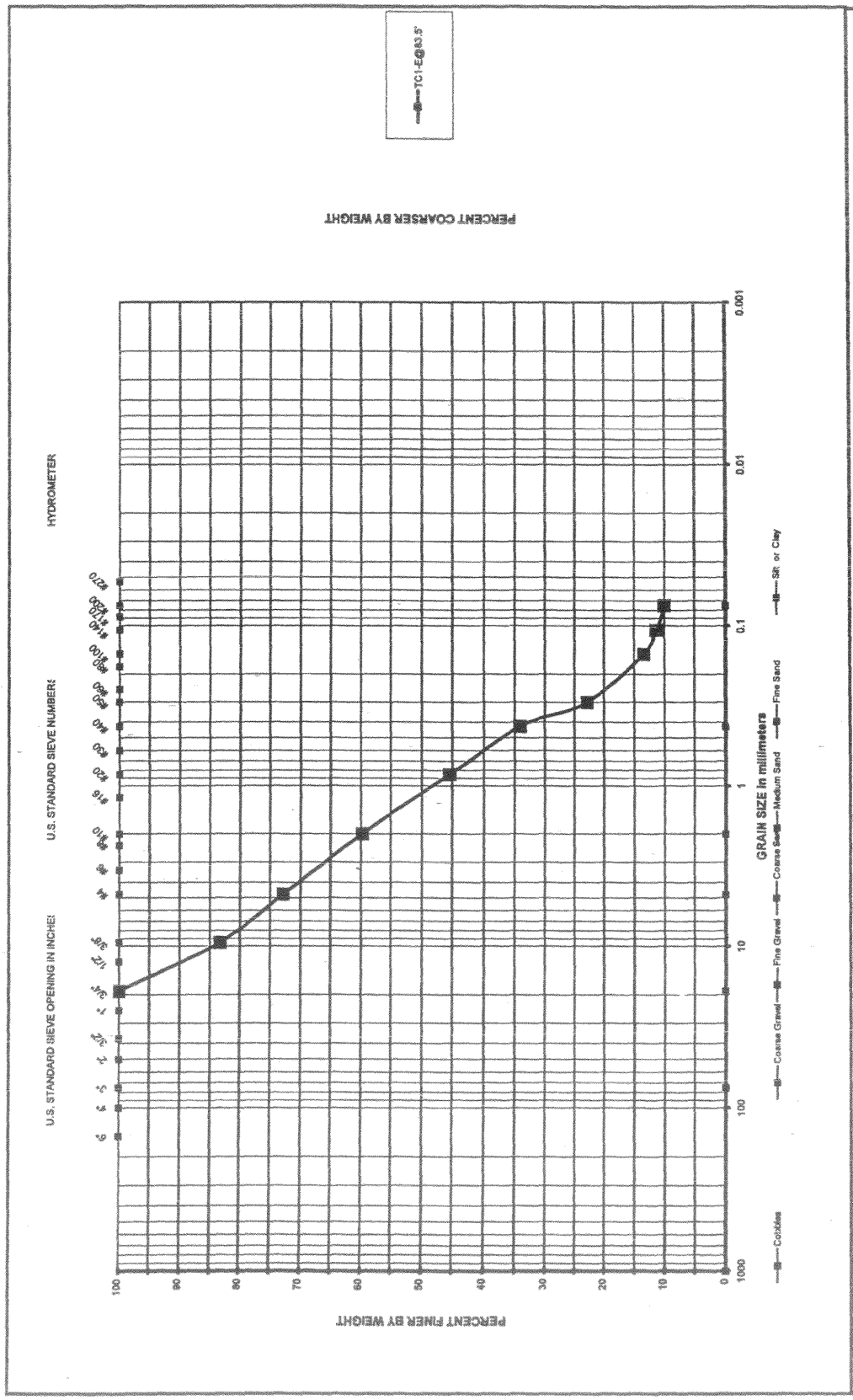
Date: 4/13/2005 N&A Project No. 05-05-0013-1

Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-E@58.5' | | 25 | - | - | - |

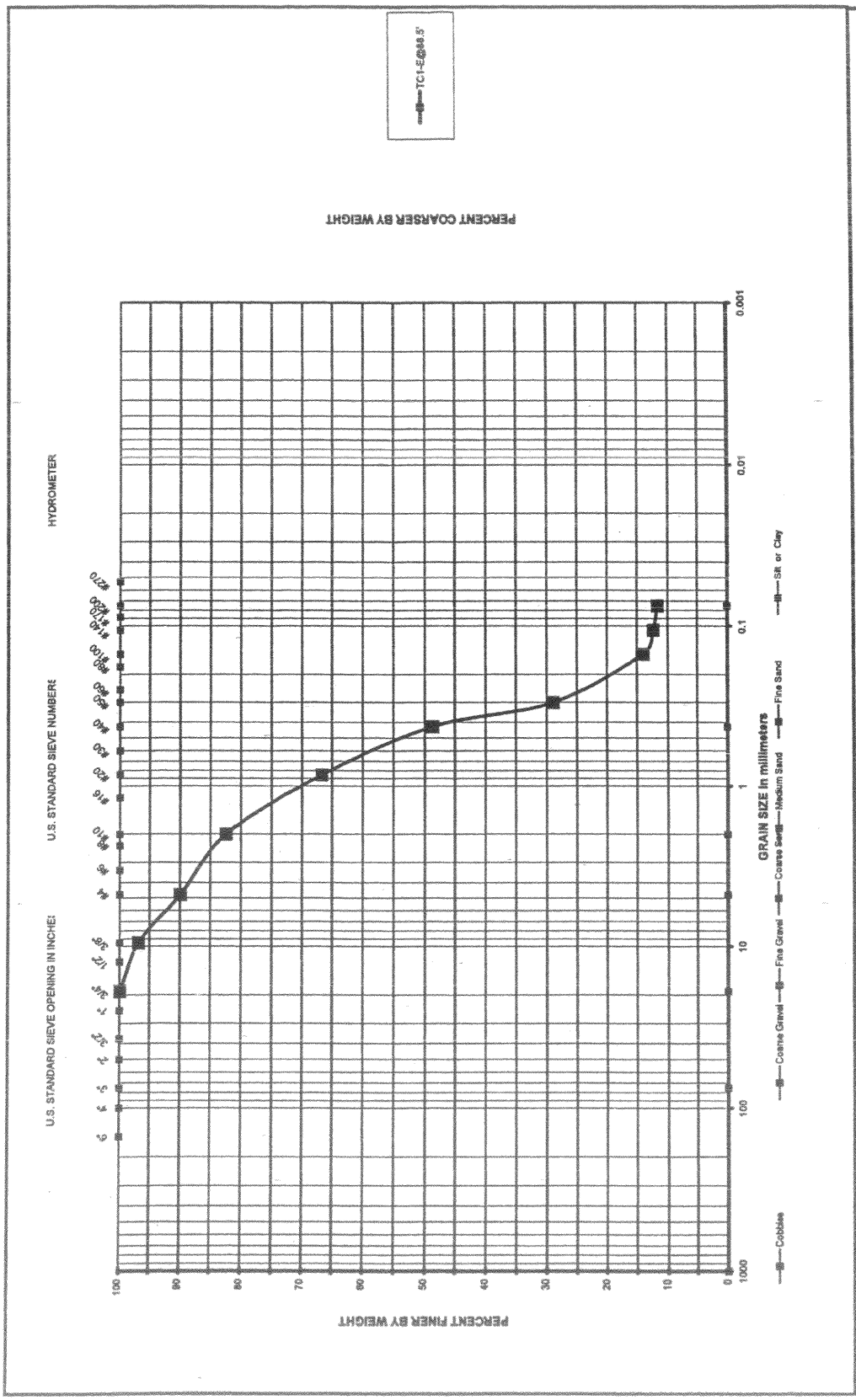



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

MODARSE ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-E@83.5' | | 22 | - | - | - |

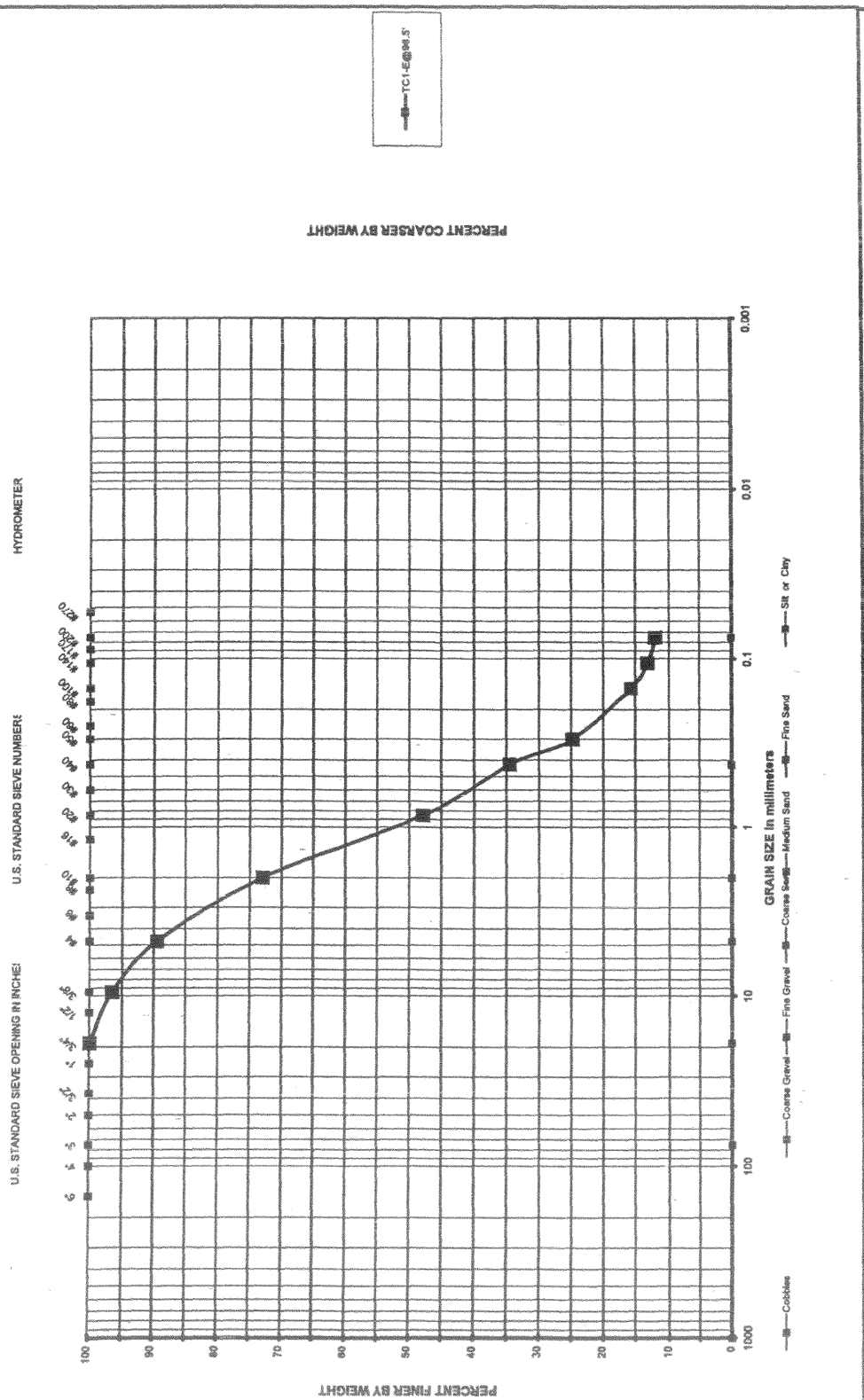



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-E@88.5' | | 21 | - | - | - |

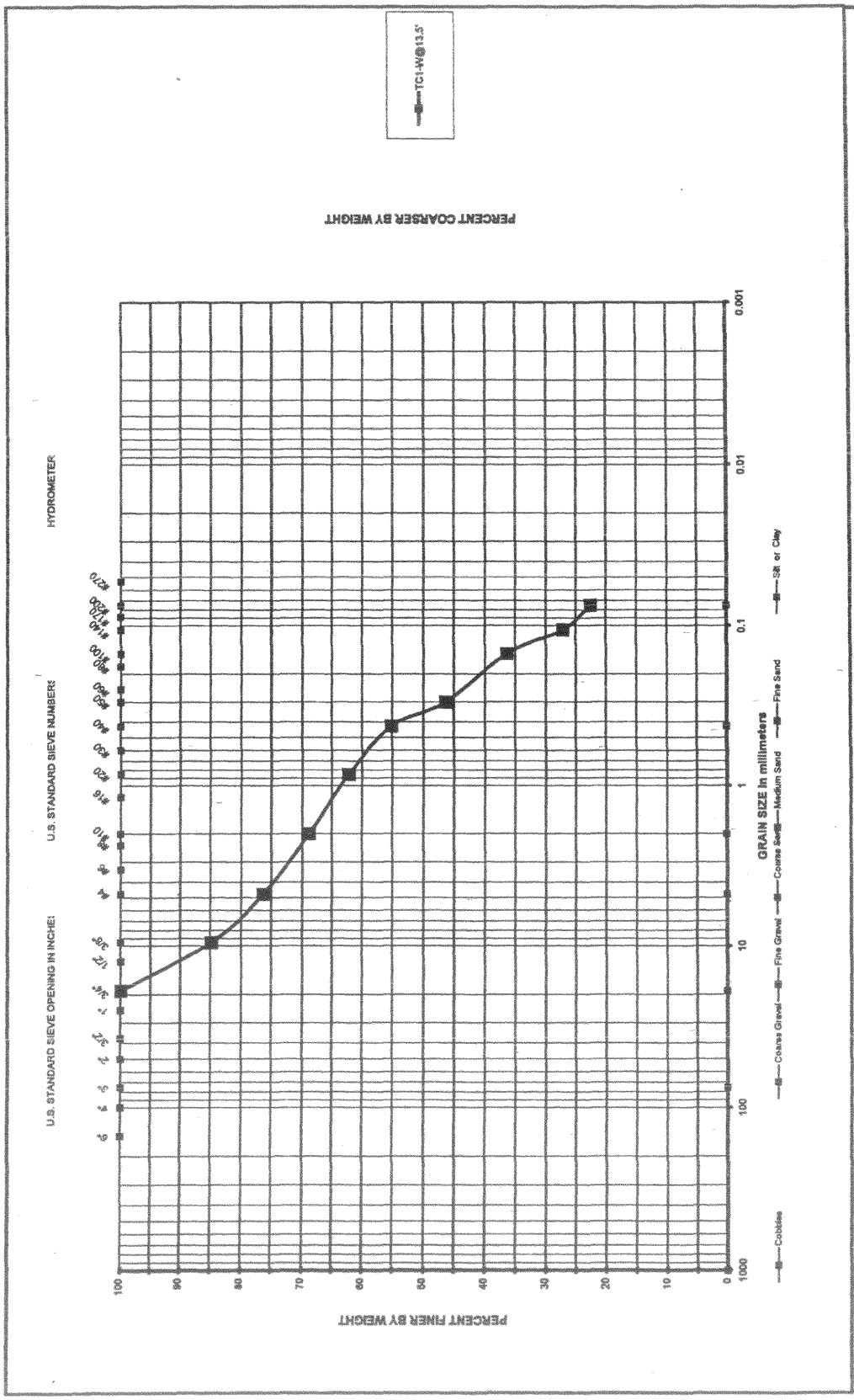



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-E@98.5' | | 15 | - | - | - |

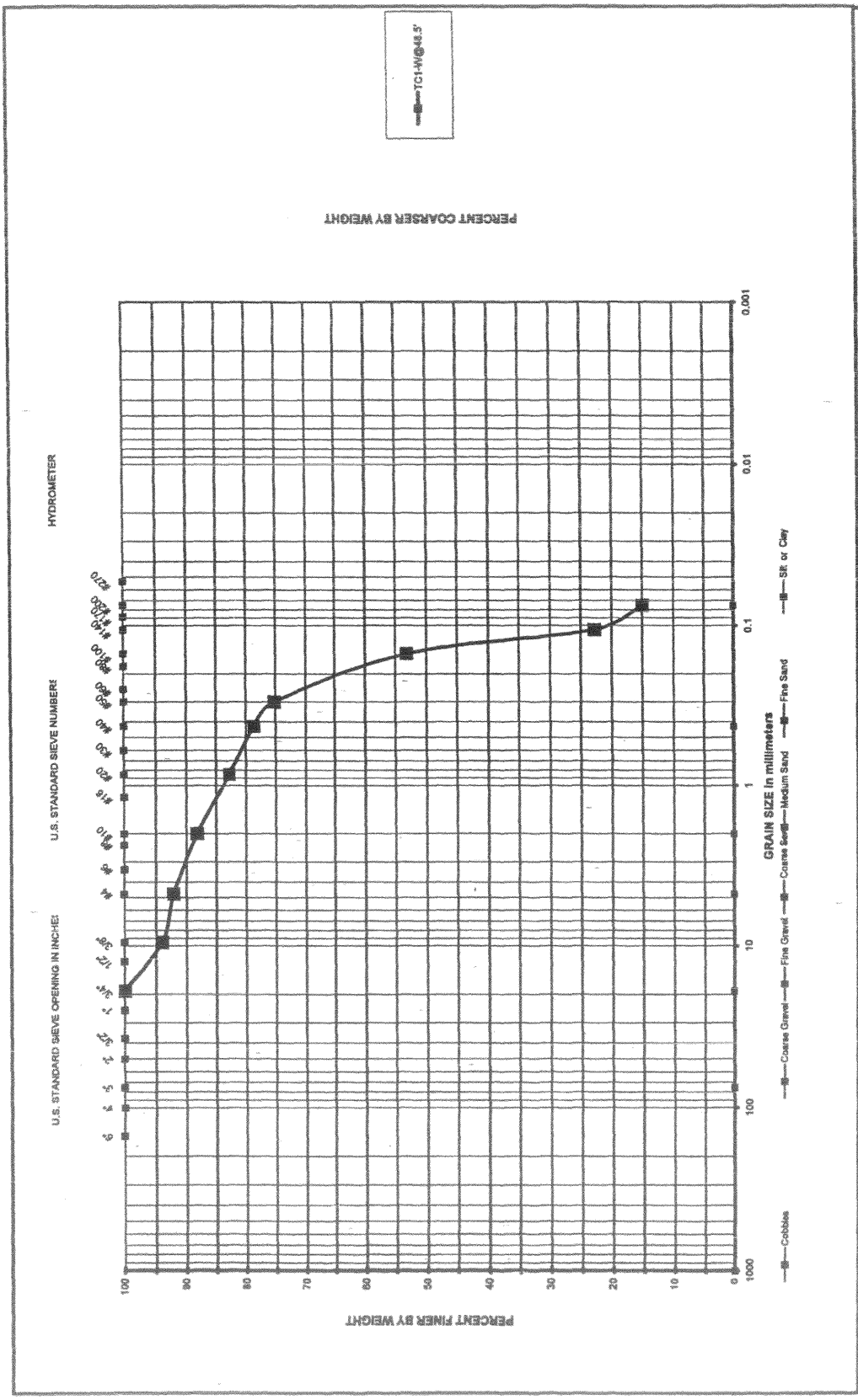



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-W@13.5' | | 26 | - | - | - |

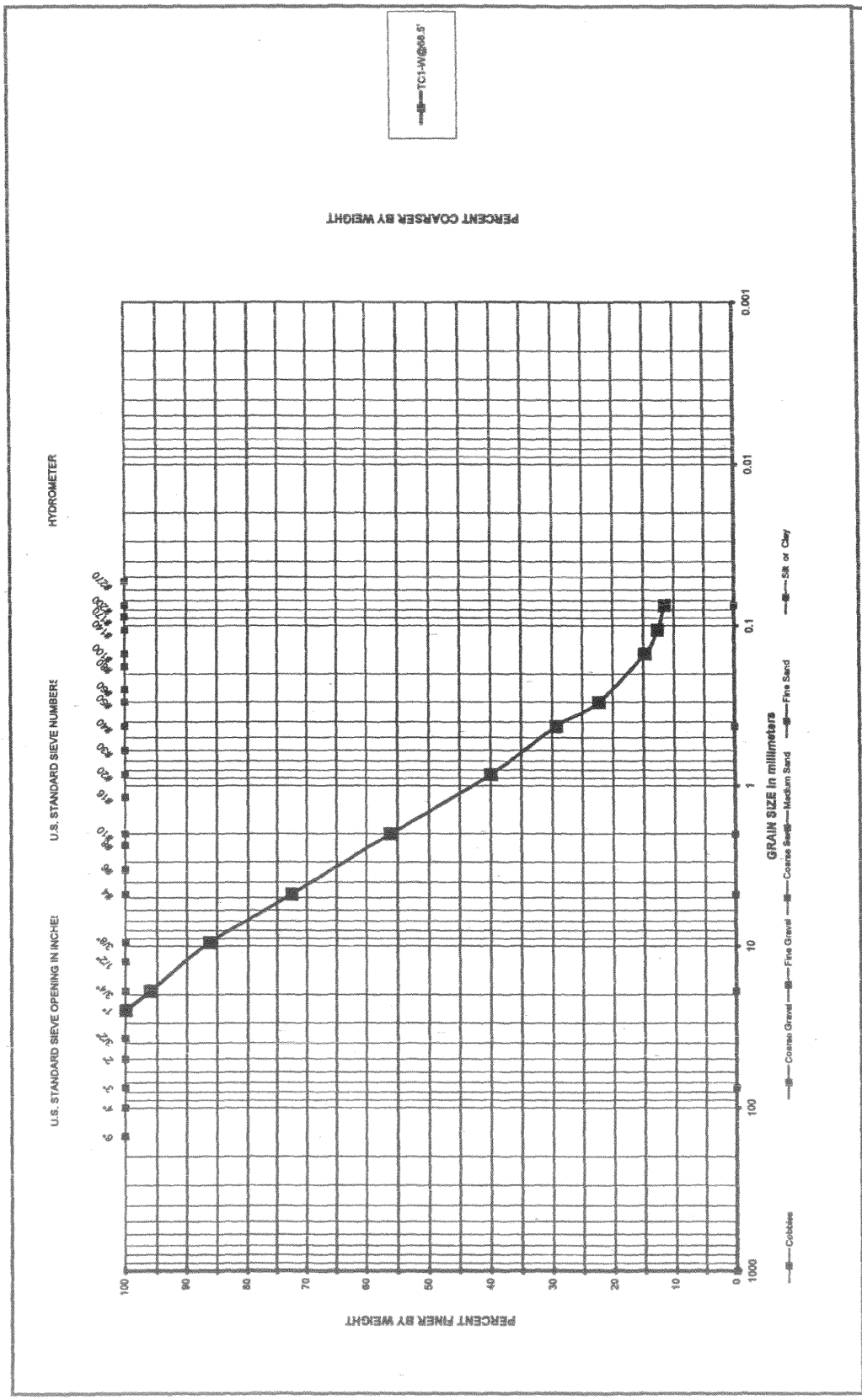



GRADATION CURVES

Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-W@48.5' | | 26 | - | - | - |

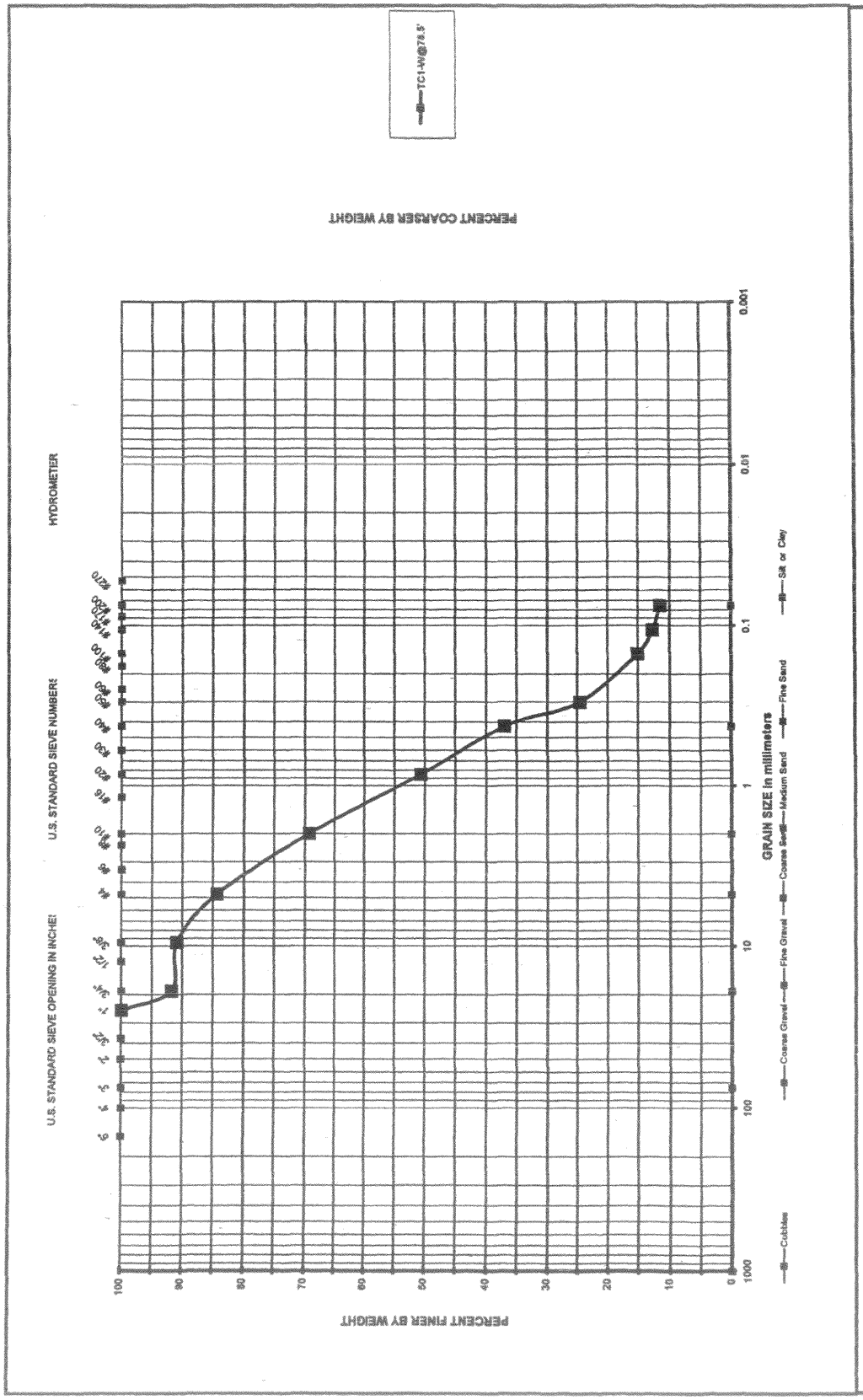



GRADATION CURVES

Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

| No. | Sample Location | Classification | W % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-W@68.5' | | 19 | - | - | - |

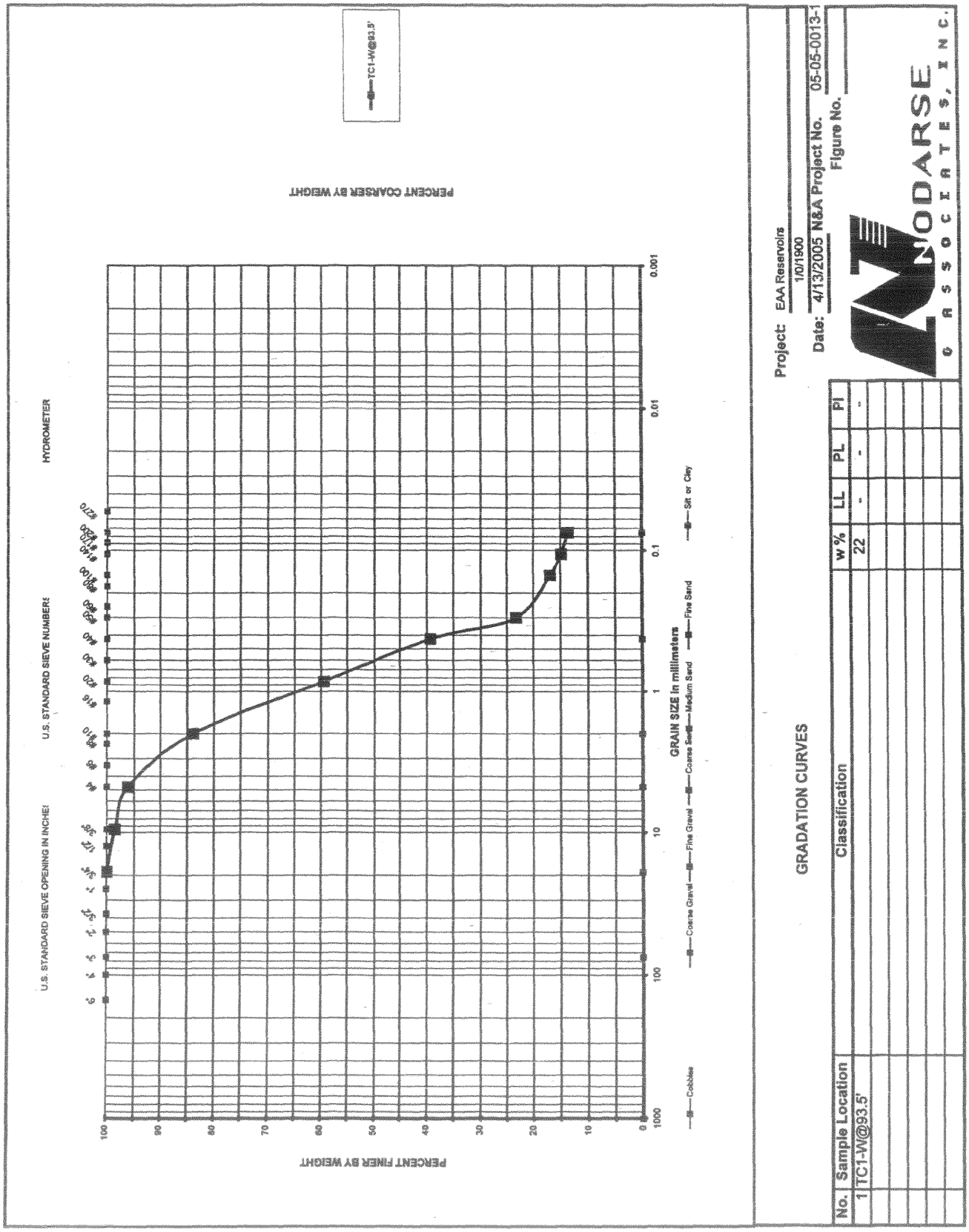


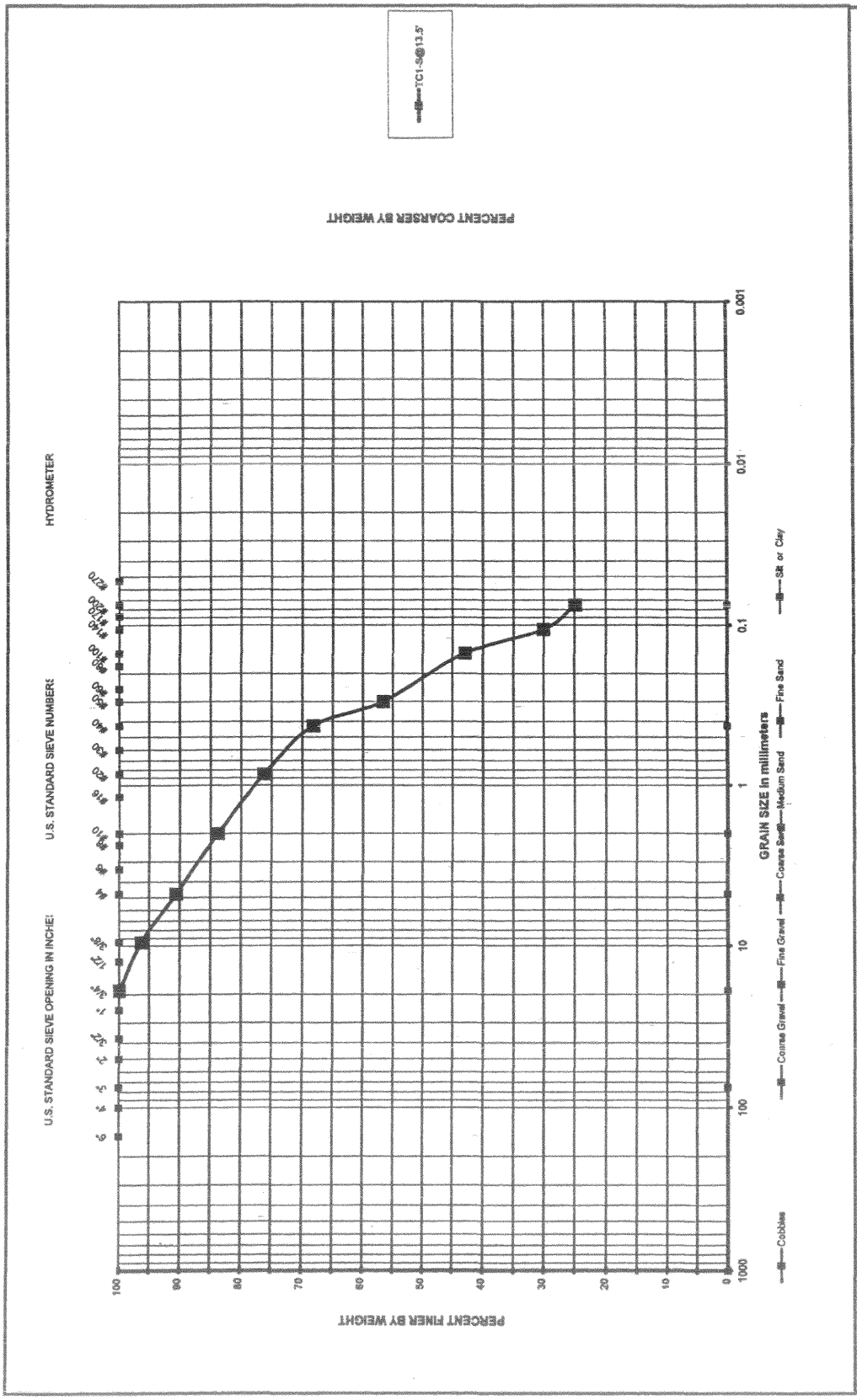

Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-W@78.5' | | 22 | - | - | - |


TC1-W@93.5'
PERCENT COARSER BY WEIGHT
PERCENT FINER BY WEIGHT
U.S. STANDARD SIEVE OPENING IN INCHES
U.S. STANDARD SIEVE NUMBERS
HYDROMETER
GRAIN SIZE in millimeters
Cobbles
Coarse Gravel
Fine Gravel
Coarse Sand
Medium Sand
Fine Sand
Silt or Clay
GRADATION CURVES
Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.
NODARSE & ASSOCIATES, INC.
No. Sample Location Classification w % LL PL PI
1 TC1-W@93.5' 22 - - -

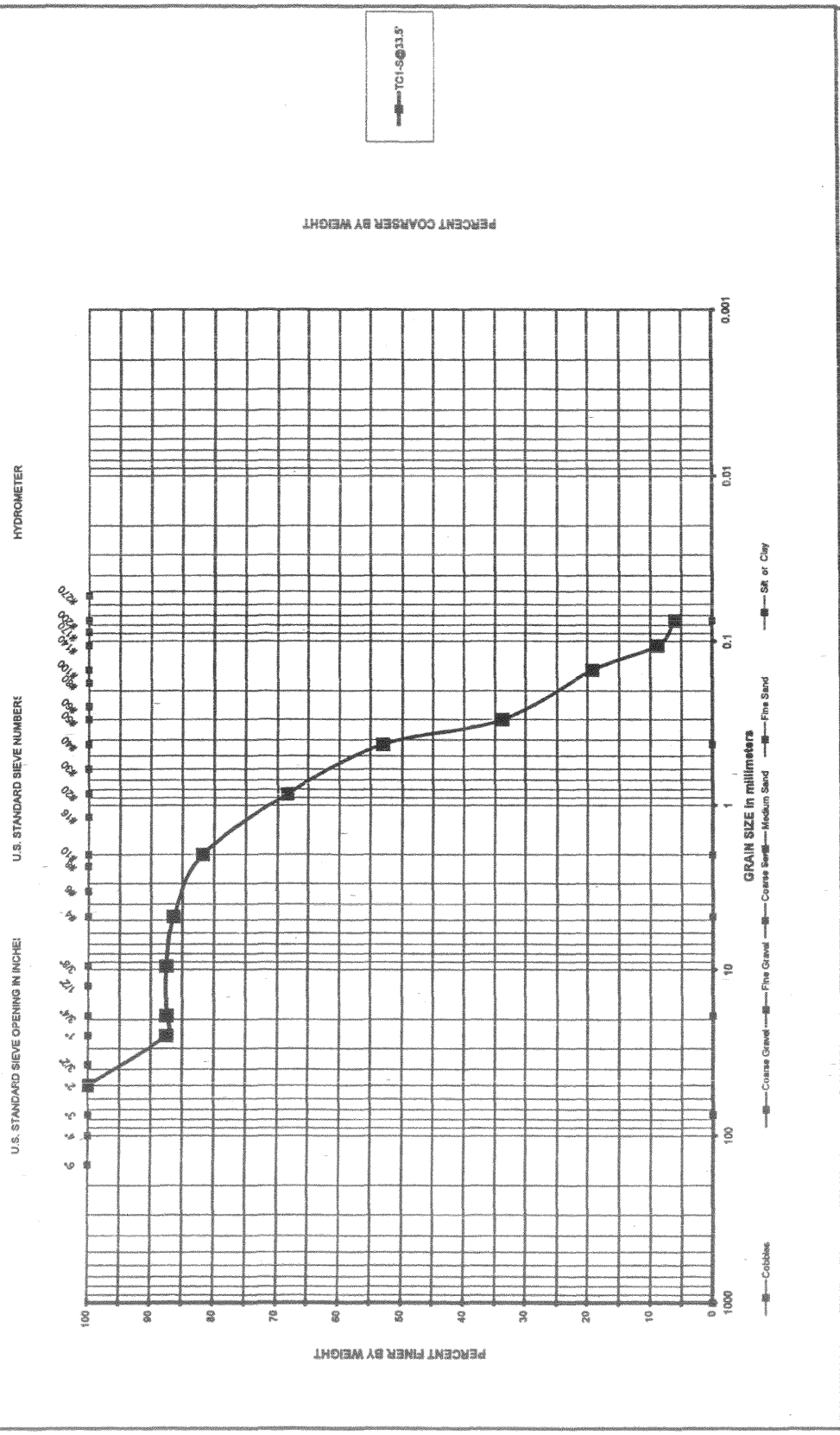



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-S@13.5' | | 21 | - | - | - |

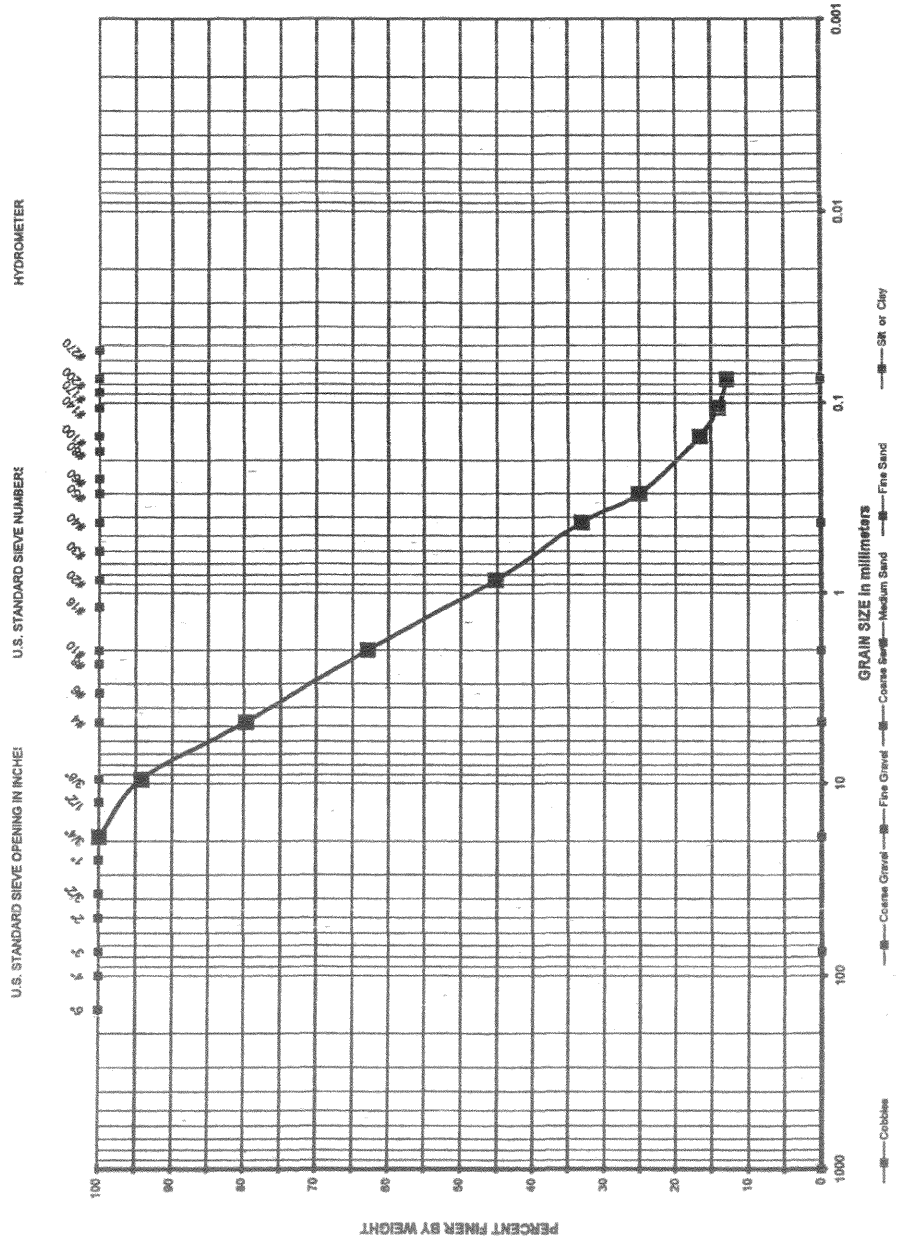



Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-S@33.5' | | 20 | - | - | - |




Project: EAA Reservoirs

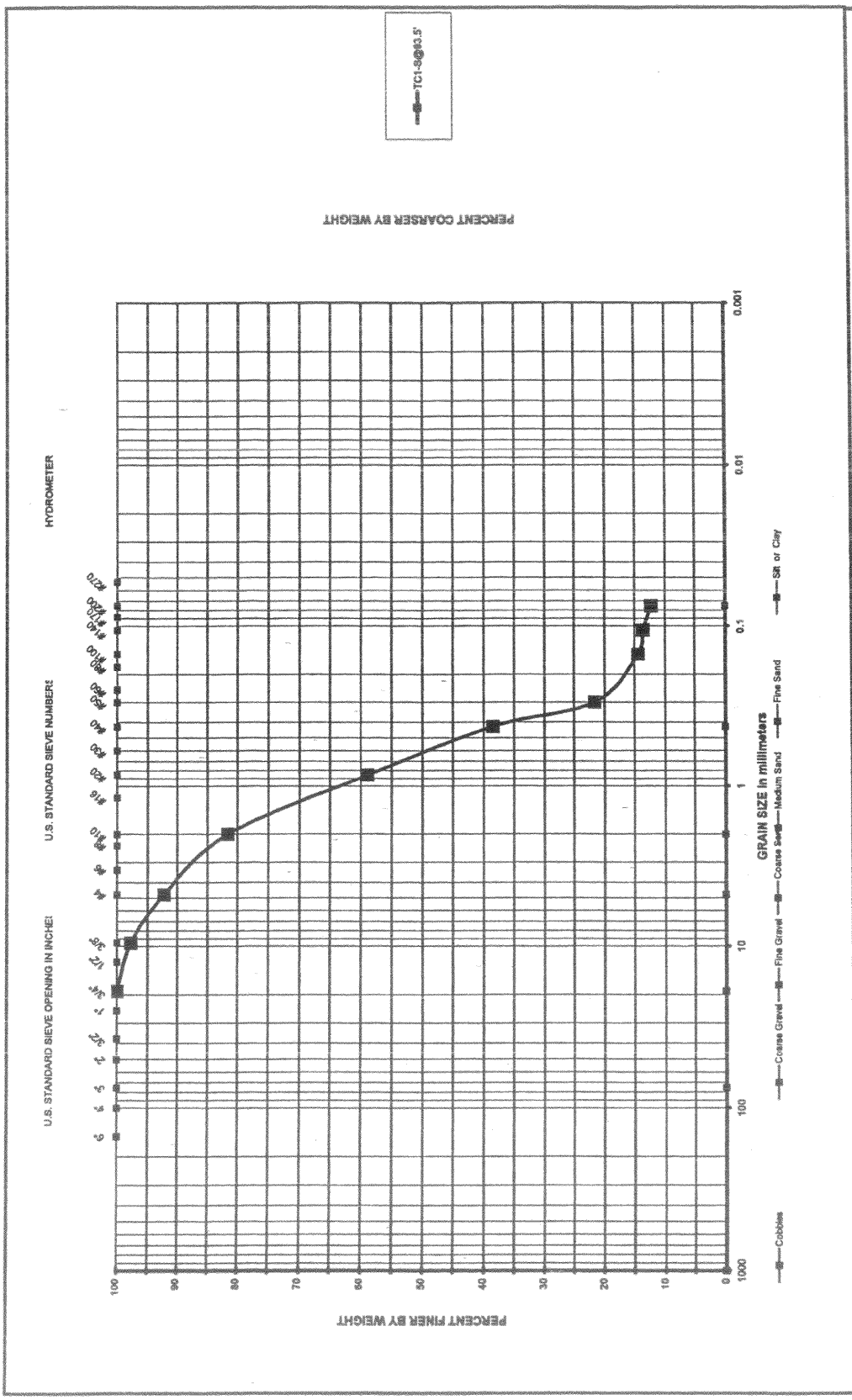
Date: 4/13/2005 N&A Project No. 05-05-0013-1

Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-S@68.5' | | 21 | - | - | - |



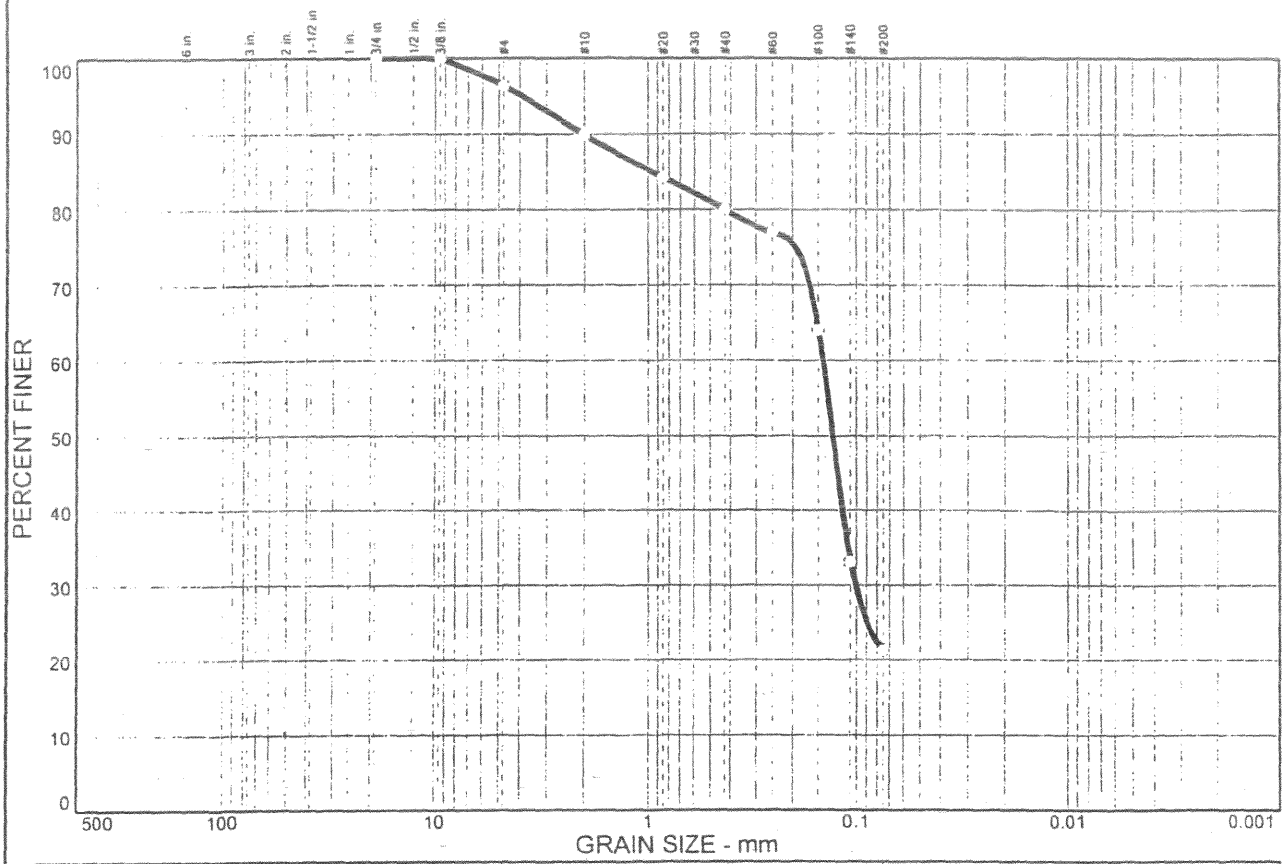

Project: EAA Reservoirs
1/0/1900
Date: 4/13/2005 N&A Project No. 05-05-0013-1
Figure No.

NODARSE & ASSOCIATES, INC.

GRADATION CURVES

| No. | Sample Location | Classification | w % | LL | PL | PI |
|---|---|---|---|---|---|---|
| 1 | TC1-S@13.5' | | 21 | - | - | - |

# Particle Size Distribution Report




| % COBBLES | % GRAVEL | | % SAND | | | % FINES | |
|---|---|---|---|---|---|---|---|
| | CRS. | FINE | CRS. | MEDIUM | FINE | SILT | CLAY |
| 0.0 | 0.0 | 3.6 | 6.5 | 9.9 | 58.8 | 21.2 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 3/4 in. | 100.0 | | |
| 3/8 in. | 100.0 | | |
| #4 | 96.4 | | |
| #10 | 89.9 | | |
| #20 | 84.3 | | |
| #40 | 80.0 | | |
| #60 | 77.0 | | |
| #100 | 64.0 | | |
| #140 | 33.1 | | |
| #200 | 21.2 | | |

* (no specification provided)

**Soil Description**

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{85}$= 0.954 $D_{60}$= 0.143 $D_{50}$= 0.128
$D_{30}$= 0.101 $D_{15}$= $D_{10}$=
$C_u$= $C_c$=

**Classification**

USCS= AASHTO=

**Remarks**

Sample No.: 282 Source of Sample: Date:
Location: TC1S-10 Elev./Depth: 48.5'

NODARSE & ASSOCIATES, INC.

Client:
Project: EAA
Project No: W04-G-487 Plate

# LABORATORY TEST RESULTS FOR
## EAA RESERVOIR - WO#2
## PROJECT No: 05-05-0013-101
## N&A

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 20 | 60 | 100 | 200 | | | LL | PI | | |
| CB-157 CP05-EAARS-CB-0255 | 9.0' | 74 | 44 | 35 | 29 | 24 | 33 | - | - | - | SM | Silty sand with gravel |
| CB-157 CP05-EAARS-CB-0255 | 13.5' | 81 | 66 | 57 | 47 | 32 | 27 | - | - | - | SM | Silty sand with gravel |
| CB-157 CP05-EAARS-CB-0255 | 18.5' | 54 | 35 | 27 | 20 | 11 | 19 | - | - | - | SW-SM | Well graded sand with silt+gravel |
| CB-158 CP05-EAARS-CB-0256 | 50.5' | 75 | 46 | 32 | 17 | 10 | 19 | - | - | - | SW-SM | Well graded sand with silt+gravel |
| CB-158 CP05-EAARS-CB-0256 | 55.0' | 97 | 61 | 39 | 17 | 8 | 23 | - | - | - | SP-SM | Poorly graded sand with silt |
| CB-158 CP05-EAARS-CB-0256 | 65.5' | 74 | 49 | 34 | 21 | 14 | 21 | - | - | - | SW-SM | Well graded sand with gravel |
| CB-158 CP05-EAARS-CB-0256 | 70.0' | 93 | 83 | 67 | 35 | 13 | 28 | - | - | - | SP-SM | Poorly graded sand with silt |
| CB-158 CP05-EAARS-CB-0256 | 38.5' | 86 | 81 | 79 | 59 | 22 | 28 | - | - | - | SM | Silty sand |
| CB-158 CP05-EAARS-CB-0256 | 44.5' | 99 | 97 | 92 | 27 | 8 | 29 | - | - | - | SP-SM | Poorly graded sand with silt |

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 20 | 60 | 100 | 200 | | | LL | PI | | |
| CB-158 CP05-EAARS-CB-0256 | 23.5' | 72 | 43 | 33 | 26 | 19 | 29 | - | - | - | SM | Silty sand with gravel |
| CB-158 CP05-EAARS-CB-0256 | 21.5' | 65 | 41 | 34 | 30 | 23 | 21 | - | - | - | SM | Silty sand with gravel |
| CB-158 CP05-EAARS-CB-0256 | 76.0' | 54 | 29 | 21 | 16 | 11 | 28 | - | - | - | SP-SM | Poorly graded sand with gravel |
| CB-158 CP05-EAARS-CB-0256 | 80.5' | 55 | 26 | 18 | 12 | 10 | 26 | - | - | - | SP-SM | Poorly graded sand with silt |
| CB-158 CP05-EAARS-CB-0256 | 85.0' | 55 | 26 | 18 | 12 | 10 | 26 | - | - | - | SW-SM | Well graded sand with silt+gravel |
| CB-158 CP05-EAARS-CB-0256 | 89.5' | 53 | 27 | 14 | 11 | 9 | 22 | - | - | - | SW-SM | Well graded sand with silt+gravel |
| CB-158 CP05-EAARS-CB-0256 | 91.0' | 57 | 43 | 38 | 23 | 17 | 21 | - | - | - | SM | Silty sand with gravel |
| CB-158 CP05-EAARS-CB-0256 | 98.5' | 71 | 61 | 56 | 34 | 20 | 22 | - | - | - | SM | Silty sand with gravel |

# LABORATORY TEST RESULTS FOR
# EAA RESERVOIR - WO#4
# PROJECT No: 05-05-0013-101
# N&A

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 20 | 60 | 100 | 200 | | | LL | PI | | |
| CB-0168 CP05-EAARS -CB0265 | 4.5-9.5' | 32 | 20 | 6 | 5 | 1 | - | - | - | - | Well graded gravel with sand. | (GW) |

# LABORATORY TEST RESULTS FOR
## EAA RESERVOIR - WO#3
## PROJECT No: 05-05-0013-101
## N&A

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 20 | 60 | 100 | 200 | | | LL | PI | | |
| CB-0169 CP05-EAARS-CB-0266 | 5.5' | 37 | 25 | 14 | 11 | 8 | 13 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 11.5' | 72 | 59 | 39 | 33 | 28 | 24 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0169 CP05-EAARS-CB-0266 | 14.5' | 48 | 36 | 22 | 18 | 14 | 34 | - | - | - | Well graded sand with silt and gravel. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 16' | 81 | 65 | 41 | 32 | 25 | 36 | - | - | - | Silty sand. | (SM) |
| CB-0169 CP05-EAARS-CB-0266 | 20.5' | 87 | 76 | 54 | 42 | 27 | 28 | - | - | - | Silty sand. | (SM) |
| CB-0169 CP05-EAARS-CB-0266 | 26.5' | 87 | 72 | 48 | 35 | 13 | 22 | - | - | - | Well graded sand with silt. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 31.0' | 81 | 71 | 53 | 41 | 25 | 22 | - | - | - | Silty sand. | (SM) |
| CB-0169 CP05-EAARS-CB-0266 | 37.0' | 75 | 60 | 39 | 27 | 9 | 27 | - | - | - | Well graded sand with silt. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 44.5' | 99 | 94 | 22 | 8 | 3 | 25 | - | - | - | Poorly graded sand. | (SP) |
| CB-0169 CP05-EAARS-CB-0266 | 49.0' | 57 | 47 | 20 | 13 | 7 | 21 | - | - | - | Well graded sand with silt and gravel. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 55.0' | 86 | 81 | 75 | 59 | 22 | 30 | - | - | - | Silty sand. | (SM) |
| CB-0169 CP05-EAARS-CB-0266 | 61.0' | 44 | 36 | 23 | 17 | 11 | 30 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-0169 CP05-EAARS-CB-0266 | 65.5' | 94 | 81 | 35 | 18 | 9 | 22 | - | - | - | Well graded sand with silt. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 68.5' | 62 | 50 | 26 | 18 | 8 | 22 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 73.0' | 64 | 56 | 38 | 19 | 10 | 21 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 76.0' | 56 | 48 | 29 | 17 | 11 | 18 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0169 CP05-EAARS-CB-0266 | 85.0' | 33 | 25 | 12 | 8 | 6 | 14 | - | - | - | Well graded gravel with silt and sand. | (GW-GM) |
| CB-0169 CP05-EAARS-CB-0266 | 89.5' | 52 | 39 | 13 | 10 | 8 | 14 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0171 CP05-EAARS-CB-0268 | 13.5' | 84 | 71 | 46 | 37 | 27 | 30 | - | - | - | Silty sand. | (SM) |
| CB-0171 CP05-EAARS-CB-0268 | 18.5' | 42 | 38 | 25 | 18 | 9 | 22 | - | - | - | Poorly graded gravel with silt and sand. | (GP-GM) |
| CB-0171 CP05-EAARS-CB-0268 | 33.5' | 76 | 66 | 47 | 30 | 9 | 18 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0172 CP05-EAARS-CB-0269 | 0.0' | 76 | 72 | 35 | 21 | 14 | 137 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0172 CP05-EAARS-CB-0269 | 8.5' | 57 | 39 | 21 | 16 | 12 | 24 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0172 CP05-EAARS-CB-0269 | 13.5' | 78 | 71 | 49 | 38 | 25 | 32 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0172 CP05-EAARS-CB-0269 | 18.5' | 85 | 68 | 40 | 27 | 10 | 23 | - | - | - | Well graded sand with silt. | (SW-SM) |
| CB-0172 CP05-EAARS-CB-0269 | 33.5' | 56 | 51 | 40 | 28 | 3 | 16 | - | - | - | Poorly graded sand with gravel. | (SP) |
| CB-0172 CP05-EAARS-CB-0269 | 38.5' | 74 | 65 | 52 | 22 | 6 | 21 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0173 CP05-EAARS-CB-0270 | 1.5' | 45 | 31 | 15 | 10 | 7 | 158 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0173 CP05-EAARS-CB-0270 | 3.5' | 26 | 22 | 18 | 16 | 14 | 27 | - | - | - | Silty gravel with sand | (GM) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-0173 CP05-EAARS-CB-0270 | 13.5' | 77 | 65 | 47 | 41 | 35 | 36 | - | - | - | Silty sand. | (SM) |
| CB-0173 CP05-EAARS-CB-0270 | 18.5' | 46 | 37 | 24 | 18 | 11 | 26 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0175 CP05-EAARS-CB-0271 | 0.0' | 58 | 47 | 33 | 28 | 22 | 12 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0175 CP05-EAARS-CB-0271 | 2.0' | 60 | 50 | 36 | 29 | 22 | 20 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0175 CP05-EAARS-CB-0271 | 10.5' | 46 | 37 | 26 | 21 | 18 | 24 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0175 CP05-EAARS-CB-0271 | 18.5' | 82 | 73 | 51 | 37 | 25 | 25 | - | - | - | Silty sand. | (SM) |
| CB-0175 CP05-EAARS-CB-0271 | 23.5' | 67 | 59 | 39 | 26 | 12 | 22 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0175 CP05-EAARS-CB-0271 | 38.5' | 82 | 77 | 55 | 25 | 10 | 24 | - | - | - | Poorly graded sand with silt and gravel. | (SP-SM) |
| CB-0176 CP05-EAARS-CB-0272 | 5.1' | 45 | 33 | 21 | 18 | 15 | 19 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0176 CP05-EAARS-CB-0272 | 10.0' | 79 | 69 | 55 | 39 | 24 | 29 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0176 CP05-EAARS-CB-0272 | 18.5' | 52 | 46 | 36 | 22 | 9 | 11 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0176 CP05-EAARS-CB-0272 | 23.5' | 47 | 42 | 37 | 22 | 7 | 15 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0176 CP05-EAARS-CB-0272 | 28.5' | 98 | 97 | 94 | 38 | 5 | 29 | - | - | - | Poorly graded sand. | (SP) |
| CB-0176 CP05-EAARS-CB-0272 | 33.5' | 53 | 48 | 27 | 16 | 5 | 16 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 5.5' | 41 | 30 | 17 | 13 | 10 | 24 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 7.5' | 58 | 46 | 27 | 21 | 17 | 25 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0179 CP05-EAARS-CB-0275 | 13.5' | 50 | 40 | 26 | 23 | 19 | 18 | - | - | - | Silty sand with gravel. | (SM) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-0179 CP05-EAARS-CB-0275 | 23.5' | 38 | 29 | 22 | 14 | 5 | 14 | - | - | - | Well graded sand with gravel. | (SW) |
| CB-0179 CP05-EAARS-CB-0275 | 28.5' | 52 | 48 | 39 | 21 | 7 | 15 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 33.5' | 91 | 91 | 86 | 27 | 7 | 25 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 38.5' | 72 | 71 | 49 | 15 | 4 | 21 | - | - | - | Poorly graded sand with gravel. | (SP) |
| CB-0179 CP05-EAARS-CB-0275 | 48.5' | 83 | 83 | 75 | 17 | 6 | 21 | - | - | - | Poorly graded sand with silt+gravel. | (SP-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 58.5' | 61 | 53 | 35 | 20 | 9 | 23 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 63.5' | 57 | 48 | 33 | 16 | 7 | 28 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 73.5' | 99 | 96 | 70 | 15 | 10 | 22 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 83.5' | 57 | 38 | 20 | 14 | 11 | 20 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0179 CP05-EAARS-CB-0275 | 93.5' | 64 | 42 | 21 | 16 | 12 | 18 | - | - | - | Well graded sand with silt. | (SW-SM) |
| CB-0180 CP05-EAARS-CB-0276 | 8.0' | 43 | 32 | 21 | 17 | 12 | 17 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0180 CP05-EAARS-CB-0276 | 13.5' | 54 | 43 | 27 | 21 | 13 | 25 | - | - | - | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0180 CP05-EAARS-CB-0276 | 18.5' | 88 | 84 | 76 | 29 | 9 | 26 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0180 CP05-EAARS-CB-0276 | 23.5' | 87 | 81 | 58 | 19 | 4 | 25 | - | - | - | Poorly graded sand. | (SP) |
| CB-0180 CP05-EAARS-CB-0276 | 28.5' | 99 | 97 | 82 | 22 | 6 | 27 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0180 CP05-EAARS-CB-0276 | 33.5' | 96 | 95 | 92 | 44 | 9 | 27 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0181 CP05-EAARS-CB-0277 | 23.5' | 82 | 74 | 63 | 44 | 16 | 25 | - | - | - | Silty sand. | (SM) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-0181 CP05-EAARS-CB-0277 | 28.5' | 83 | 82 | 80 | 59 | 13 | 24 | - | - | - | Poorly graded sand with silt and gravel. | (SP-SM) |
| CB-0181 CP05-EAARS-CB-0277 | 33.5' | 93 | 84 | 71 | 50 | 16 | 30 | - | - | - | Silty sand. | (SM) |
| CB-0183 CP05-EAARS-CB-0278 | 18.5' | 57 | 43 | 25 | 19 | 14 | 21 | | | | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0183 CP05-EAARS-CB-0278 | 23.5' | 81 | 64 | 40 | 29 | 19 | 24 | | | | Silty sand with gravel. | (SM) |
| CB-0183 CP05-EAARS-CB-0278 | 28.5' | 52 | 45 | 37 | 24 | 9 | 12 | | | | Well graded sand with silt+gravel. | (SW-SM) |
| CB-0183 CP05-EAARS-CB-0278 | 33.5' | 93 | 93 | 91 | 26 | 6 | 24 | | | | Poorly graded sand with silt. | (SP-SM) |

# LABORATORY TEST RESULTS FOR
# EAA RESERVOIR - WO#5
# PROJECT No: 05-05-0013-101
# N&A

| Boring Number | Approximate Sample Depth (feet) | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | Classification | Stratum Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 20 | 60 | 100 | 200 | | | LL | PI | | |
| CB-0174 CP05-EAARS-VB-0283 | 5-10' | 71 | 63 | 50 | 45 | 39 | 10 | - | - | - | Sandy silty clay with gravel. | (CL-ML) |
| CB-0174 CP05-EAARS-VB-0283 | 10-15' | 69 | 61 | 50 | 46 | 41 | 23 | - | - | - | Sandy silty clay with gravel. | (CL-ML) |
| CB-0174 CP05-EAARS-VB-0283 | 100-105' | 85 | 49 | 13 | 11 | 9 | 11 | - | - | - | Poorly graded sand with silt. | (SP-SM) |
| CB-0174 CP05-EAARS-VB-0283 | 110-115' | 81 | 52 | 22 | 17 | 14 | 18 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0174 CP05-EAARS-VB-0283 | 115-120' | 66 | 46 | 20 | 15 | 12 | 16 | - | - | - | Well graded sand with silt and gravel. | (SW-SM) |
| CB-0174 CP05-EAARS-VB-0283 | 125-130' | 41 | 28 | 15 | 10 | 7 | 13 | - | - | - | Well graded sand with silt and gravel. | (SW-SM) |
| CB-0174 CP05-EAARS-VB-0283 | 140-145' | 76 | 63 | 45 | 15 | 10 | 19 | - | - | - | Poorly graded sand with silt and gravel. | (SP-SM) |
| CB-0174 CP05-EAARS-VB-0283 | 150-155' | 53 | 37 | 22 | 12 | 8 | 13 | - | - | - | Well graded sand with silt and gravel. | (SW-SM) |
| CB-0174 CP05-EAARS-VB-0283 | 160-165' | 50 | 35 | 21 | 15 | 9 | 14 | - | - | - | Well graded sand with silt and gravel. | (SW-SM) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-0174 CP05-EAARS-VB-0283 | 165-170' | 92 | 87 | 78 | 40 | 23 | 20 | - | - | - | Silty sand. | (SM) |
| CB-0174 CP05-EAARS-VB-0283 | 180-185' | 92 | 92 | 88 | 55 | 29 | 20 | - | - | - | Silty sand. | (SM) |
| CB-0174 CP05-EAARS-VB-0283 | 185-190' | 90 | 85 | 82 | 66 | 41 | 20 | - | - | - | Silty sandy with gravel. | (SM) |
| CB-0174 CP05-EAARS-VB-0283 | 195-200' | 89 | 86 | 81 | 70 | 27 | 17 | - | - | - | Silty sand with gravel. | (SM) |
| CB-0174 CP05-EAARS-VB-0283 | 200-205' | - | - | 100 | 100 | 22 | 25 | - | - | - | Silty sand. | (SM) |
| CB-0174 CP05-EAARS-VB-0283 | 205-210' | - | - | 100 | 100 | 25 | 26 | - | - | - | Silty sand. | (SM) |
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LABORATORY TEST RESULTS FOR
PROJECT NAME: EAA RESERVOIR (BLACK AND VEATCH) Work Order No. 6
PROJECT No: 05-05-0013-101
PALM BEACH COUNTY, FLORIDA
N&A

| Boring No | Approximate Sample Depth (feet0 | Passing Sieve Number (%) | | | | | Moisture Content (%) | Organic Content (%) | Atterberg Limits | | AASHTO or U.S.C.S. Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 40 | 60 | 100 | 200 | | | LL | PI | |
| CB-164 CP05-EAARS-VB-0282 | 5.0-10.0 | 37 | 24 | 20 | 17 | 14 | 6 | - | - | - | GM |
| CB-164 CP05-EAARS-VB-0282 | 10.0-15.0 | 70 | 46 | 38 | 33 | 27 | 21 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 30.0-35.0 | 50 | 39 | 34 | 26 | 17 | 8 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 45.0-50.0 | 78 | 21 | 9 | 5 | 2 | 14 | - | - | - | SP |
| CB-164 CP05-EAARS-VB-0282 | 55.0-60.0 | 51 | 30 | 20 | 15 | 8 | 10 | - | - | - | SP-SM |
| CB-164 CP05-EAARS-VB-0282 | 70.0-75.0 | 31 | 22 | 17 | 12 | 7 | 7 | - | - | - | GP-GM |
| CB-164 CP05-EAARS-VB-0282 | 95.0-100.0 | 78 | 36 | 17 | 8 | 6 | 22 | - | - | - | SP-SM |
| CB-164 CP05-EAARS-VB-0282 | 115.0-120.0 | 67 | 56 | 53 | 42 | 27 | 20 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 120.0-125.0 | 77 | 67 | 64 | 46 | 26 | 22 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 130.0-135.0 | 89 | 84 | 83 | 40 | 25 | 21 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 135.0-140.0 | 64 | 51 | 49 | 30 | 21 | 21 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 145.0-150.0 | 60 | 43 | 39 | 18 | 11 | 13 | - | - | - | SP-SM |
| CB-164 CP05-EAARS-VB-0282 | 165.0-170.0 | 37 | 21 | 18 | 12 | 7 | 14 | - | - | - | GP-GM |
| CB-164 CP05-EAARS-VB-0282 | 180.0-185.0 | 81 | 68 | 65 | 51 | 20 | 20 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 200.0-205.0 | 99 | 98 | 97 | 72 | 34 | 20 | - | - | - | SM |

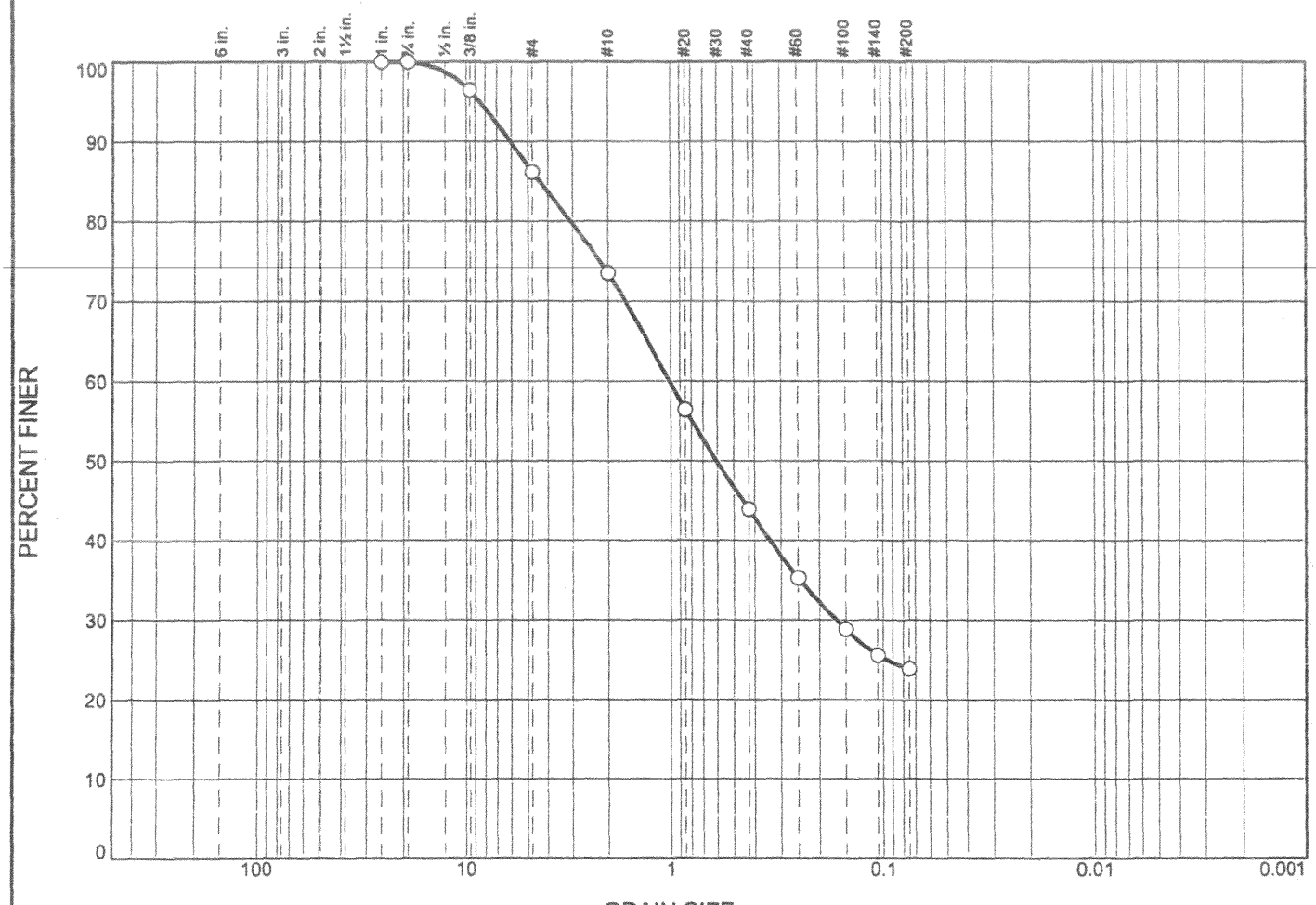
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-164 CP05-EAARS-VB-0282 | 215.0-220.0 | 100 | 100 | 100 | 100 | 29 | 28 | - | - | - | SM |
| CB-164 CP05-EAARS-VB-0282 | 225.0-230.0 | 100 | 100 | 99 | 98 | 75 | 36 | - | - | - | ML |
| CB-170 CP05-EAARS-CB-0267 | 88.5-90.0 | 96 | 85 | 75 | 46 | 29 | 21 | - | - | - | SM |
| CB-171 CP05-EAARS-CB-0268 | 78.5-80.0 | 99 | 92 | 86 | 65 | 39 | 26 | - | - | - | SM |
| CB-174 CP05-EAARS-VB-0283 | 40.0-45.0 | 88 | 82 | 79 | 43 | 6 | 17 | - | - | - | SP-SM |
| CB-174 CP05-EAARS-VB-0283 | 60.0-65.0 | 46 | 34 | 26 | 15 | 8 | 8 | - | - | - | SP-SM |
| CB-176 CP05-EAARS-CB-0272 | 58.5-60.0 | 64 | 40 | 31 | 18 | 5 | 21 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 10.0-15.0 | 63 | 52 | 46 | 39 | 26 | 18 | - | - | - | SM |
| CB-182 CP05-EAARS-VB-0284 | 20.0-25.0 | 97 | 95 | 91 | 31 | 4 | 26 | - | - | - | SP |
| CB-182 CP05-EAARS-VB-0284 | 40.0-45.0 | 31 | 20 | 13 | 8 | 4 | 2 | - | - | - | GP |
| CB-182 CP05-EAARS-VB-0284 | 55.0-60.0 | 50 | 39 | 31 | 18 | 9 | 16 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 70.0-75.0 | 53 | 20 | 14 | 10 | 7 | 9 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 90.0-95.0 | 65 | 25 | 15 | 9 | 7 | 15 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 100.0-105.0 | 49 | 17 | 11 | 8 | 6 | 11 | - | - | - | GP-GM |
| CB-182 CP05-EAARS-VB-0284 | 120.0-125.0 | 53 | 30 | 25 | 19 | 13 | 13 | - | - | - | SM |
| CB-182 CP05-EAARS-VB-0284 | 125.0-130.0 | 40 | 19 | 14 | 11 | 8 | 10 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 140.0-145.0 | 54 | 29 | 10 | 8 | 7 | 9 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 155.0-160.0 | 63 | 50 | 46 | 19 | 11 | 12 | - | - | - | SP-SM |
| CB-182 CP05-EAARS-VB-0284 | 175.0-180.0 | 78 | 66 | 63 | 52 | 22 | 17 | - | - | - | SM |
| CB-182 CP05-EAARS-VB-0284 | 185.0-190.0 | 93 | 83 | 82 | 75 | 35 | 15 | - | - | - | SM |
| CB-182 CP05-EAARS-VB-0284 | 205.0-210.0 | 100 | 100 | 100 | 100 | 45 | 23 | - | - | - | ML |
| CB-182 CP05-EAARS-VB-0284 | 210.0-215.0 | 100 | 100 | 100 | 99 | 43 | 26 | - | - | - | ML |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-182 CP05-EAARS-VB-0284 | 225.0-230.0 | 100 | 100 | 100 | 99 | 99 | 75 | - | - | - | ML |
| CB-190 CP05-EAARS-VB-0285 | 215.0-220.0 | 100 | 97 | 95 | 91 | 71 | 43 | - | - | - | CL |
| CB-190 CP05-EAARS-VB-0285 | 220.0-225.0 | 100 | 90 | 80 | 71 | 62 | 88 | - | - | - | CL |
| CB-190 CP05-EAARS-VB-0285 | 225.0-230.0 | 100 | 95 | 92 | 89 | 86 | 148 | - | 127 | 66 | CH |
| CB-205 CP05-EAARS-VB-0286 | 5.0-10.0 | 52 | 31 | 25 | 21 | 16 | 14 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 15.0-20.0 | 67 | 49 | 40 | 31 | 20 | 18 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 30.0-35.0 | 77 | 56 | 43 | 25 | 6 | 16 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 35.0-40.0 | 100 | 97 | 93 | 46 | 5 | 24 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 60.0-65.0 | 49 | 31 | 23 | 16 | 11 | 14 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 65.0-70.0 | 91 | 79 | 71 | 45 | 16 | 21 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 75.0-80.0 | 52 | 33 | 24 | 16 | 13 | 13 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 80.0-85.0 | 40 | 21 | 15 | 8 | 7 | 12 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 95.0-100.0 | 87 | 48 | 24 | 11 | 8 | 17 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 105.0-110.0 | 52 | 16 | 12 | 9 | 7 | 14 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 110.0-115.0 | 62 | 46 | 43 | 37 | 30 | 20 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 125.0-130.0 | 50 | 25 | 20 | 16 | 12 | 17 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 140.0-145.0 | 58 | 38 | 32 | 13 | 7 | 15 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 160.0-165.0 | 58 | 39 | 35 | 24 | 12 | 20 | - | - | - | SP-SM |
| CB-205 CP05-EAARS-VB-0286 | 175.0-180.0 | 77 | 67 | 66 | 56 | 19 | 18 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 180.0-185.0 | 96 | 91 | 90 | 82 | 37 | 21 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 195.0-200.0 | 95 | 90 | 89 | 74 | 31 | 19 | - | - | - | SM |
| CB-205 CP05-EAARS-VB-0286 | 215.0-200.0 | 100 | 100 | 100 | 100 | 53 | 25 | - | - | - | ML |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-219 CP05-EAARS-CB-0317 | 14.0-15.5 | 94 | 77 | 70 | 64 | 52 | 23 | - | - | - | ML |
| CB-219 CP05-EAARS-CB-0317 | 34.0-35.5 | 95 | 77 | 47 | 25 | 12 | 25 | - | - | - | SP-SM |
| CB-228 CP05-EAARS-CB-0326 | 4.0-5.5 | 23 | 11 | 8 | 6 | 4 | 5 | - | - | - | GP |
| CB-228 CP05-EAARS-CB-0326 | 14.0-15.5 | 74 | 44 | 32 | 24 | 11 | 23 | - | - | - | SP-SM |
| CB-231 CP05-EAARS-CB-0329 | 8.5-10.0 | 61 | 32 | 25 | 20 | 14 | 17 | - | - | - | SM |
| CB-231 CP05-EAARS-CB-0329 | 13.5-15.0 | 88 | 60 | 50 | 38 | 14 | 22 | - | - | - | SM |
| CB-231 CP05-EAARS-CB-0329 | 18.5-20.0 | 54 | 38 | 32 | 22 | 12 | 13 | - | - | - | SP-SM |
| CB-231 CP05-EAARS-CB-0329 | 23.5-25.0 | 87 | 69 | 54 | 18 | 6 | 26 | - | - | - | SP-SM |
| CB-231 CP05-EAARS-CB-0329 | 33.5-35.0 | 65 | 60 | 58 | 40 | 8 | 16 | - | - | - | SP-SM |
| CB-235 CP05-EAARS-CB-0333 | 8.5-10.0 | 63 | 38 | 32 | 29 | 24 | 24 | - | - | - | SM |
| CB-248 CP05-EAARS-CB-0346 | 10.0-11.5 | 55 | 29 | 20 | 14 | 9 | 10 | - | - | - | SP-SM |
| CB-260 CP05-EAARS-CB-0358 | 13.0-14.5 | 70 | 40 | 31 | 26 | 20 | 21 | - | - | - | SM |
| CB-262 CP05-EAARS-CB-0360 | 8.5-10.0 | 38 | 21 | 15 | 11 | 8 | 26 | - | - | - | GP-GM |
| CB-262 CP05-EAARS-CB-0360 | 13.5-15.0 | 82 | 59 | 53 | 49 | 46 | 31 | - | - | - | SM |
| CB-262 CP05-EAARS-CB-0360 | 18.5-20.0 | 89 | 67 | 55 | 45 | 32 | 24 | - | - | - | SM |
| CB-262 CP05-EAARS-CB-0360 | 23.5-25.0 | 69 | 46 | 38 | 29 | 15 | 22 | - | - | - | SM |
| CB-268 CP05-EAARS-CB-0365 | 0.0-1.5 | 72 | 48 | 38 | 31 | 24 | 10 | - | - | - | SM |
| CB-268 CP05-EAARS-CB-0365 | 1.5-3.0 | 60 | 41 | 35 | 30 | 24 | 13 | - | - | - | SM |
| CB-268 CP05-EAARS-CB-0365 | 3.5-5.0 | 68 | 33 | 22 | 15 | 9 | 88 | - | - | - | SP-SM |
| CB-268 CP05-EAARS-CB-0365 | 5.0-6.5 | 37 | 17 | 13 | 10 | 7 | 13 | - | - | - | SP-SM |
| CB-268 CP05-EAARS-CB-0365 | 11.5-13.0 | 75 | 48 | 39 | 29 | 19 | 29 | - | - | - | SM |
| CB-268 CP05-EAARS-CB-0365 | 18.5-20.0 | 96 | 82 | 71 | 59 | 41 | 23 | - | - | - | SM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CB-268 CP05-EAARS-CB-0365 | 23.5-25.0 | 90 | 68 | 57 | 48 | 36 | 23 | - | - | - | SM |
| CB-268 CP05-EAARS-CB-0365 | 28.5-30.0 | 86 | 63 | 55 | 46 | 31 | 21 | - | - | - | SM |
| CB-268 CP05-EAARS-CB-0365 | 33.5-35.0 | 53 | 30 | 26 | 20 | 11 | 13 | - | - | - | SP-SM |
| CB-276 CP05-EAARS-CB-0372 | 14.5-16.0 | 93 | 75 | 68 | 62 | 53 | 19 | - | - | - | ML |
| CB-277 CP05-EAARS-CB-0373 | 19.0-20.5 | 83 | 67 | 56 | 41 | 21 | 25 | - | - | - | SM |
| CB-277 CP05-EAARS-CB-0373 | 29.0-30.5 | 66 | 49 | 40 | 28 | 19 | 22 | - | - | - | SM |
| CB-277 CP05-EAARS-CB-0373 | 34.0-35.5 | 100 | 98 | 95 | 37 | 5 | 26 | - | - | - | SP |
| CB-281 CP05-EAARS-CB-0377 | 15.5-17.0 | 79 | 42 | 32 | 26 | 19 | 18 | - | - | - | SM |
| CB-281 CP05-EAARS-CB-0377 | 19.0-20.5 | 92 | 68 | 54 | 40 | 25 | 26 | - | - | - | SM |
| CB-281 CP05-EAARS-CB-0377 | 24.0-25.5 | 67 | 43 | 35 | 28 | 18 | 19 | - | - | - | SM |
| CB-281 CP05-EAARS-CB-0377 | 29.0-30.5 | 72 | 49 | 41 | 31 | 17 | 15 | - | - | - | SM |
| CB-310 CP05-EAARS-CB-0406 | 23.5-25.0 | 85 | 64 | 52 | 41 | 28 | 26 | - | - | - | SM |
| CB-310 CP05-EAARS-CB-0406 | 33.5-35.0 | 53 | 34 | 30 | 21 | 9 | 13 | - | - | - | SP-SM |

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 14 | 12 | 30 | 20 | 24 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.3800 | 1.0135 | 0.6025 | 0.1656 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-157 **Depth:** 9.0' **Sample Number:** 4

**Date:** ○

**Remarks:**
○ Moisture Content % 32.6 CP05-EAARS-CB-0255 @ 9.0'

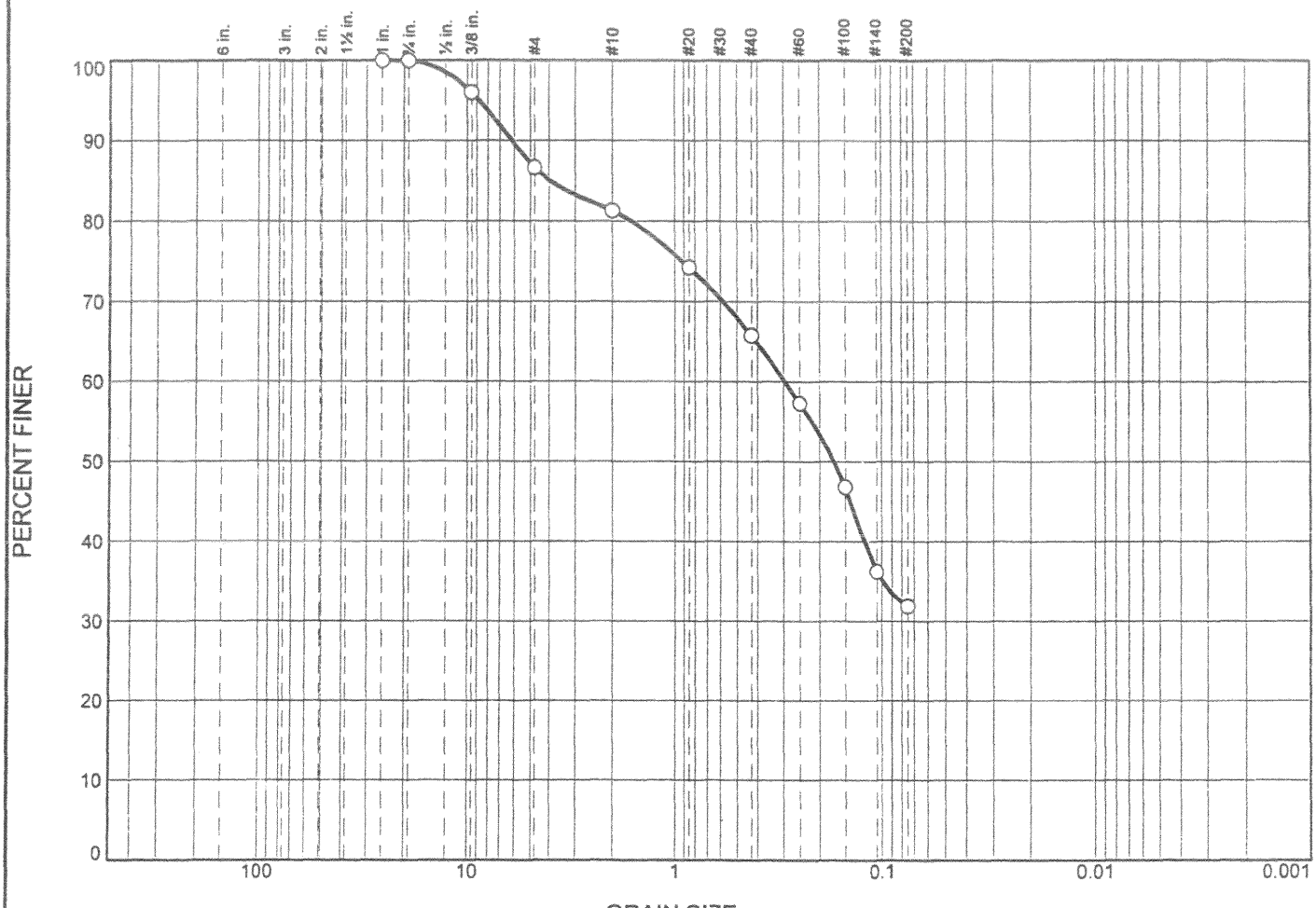
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 13 | 6 | 15 | 34 | 32 | |

| ╳ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.9736 | 0.2950 | 0.1690 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-157 **Depth:** 13.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 27.1 CP05-EAARS-CB-0255 @ 13.5'

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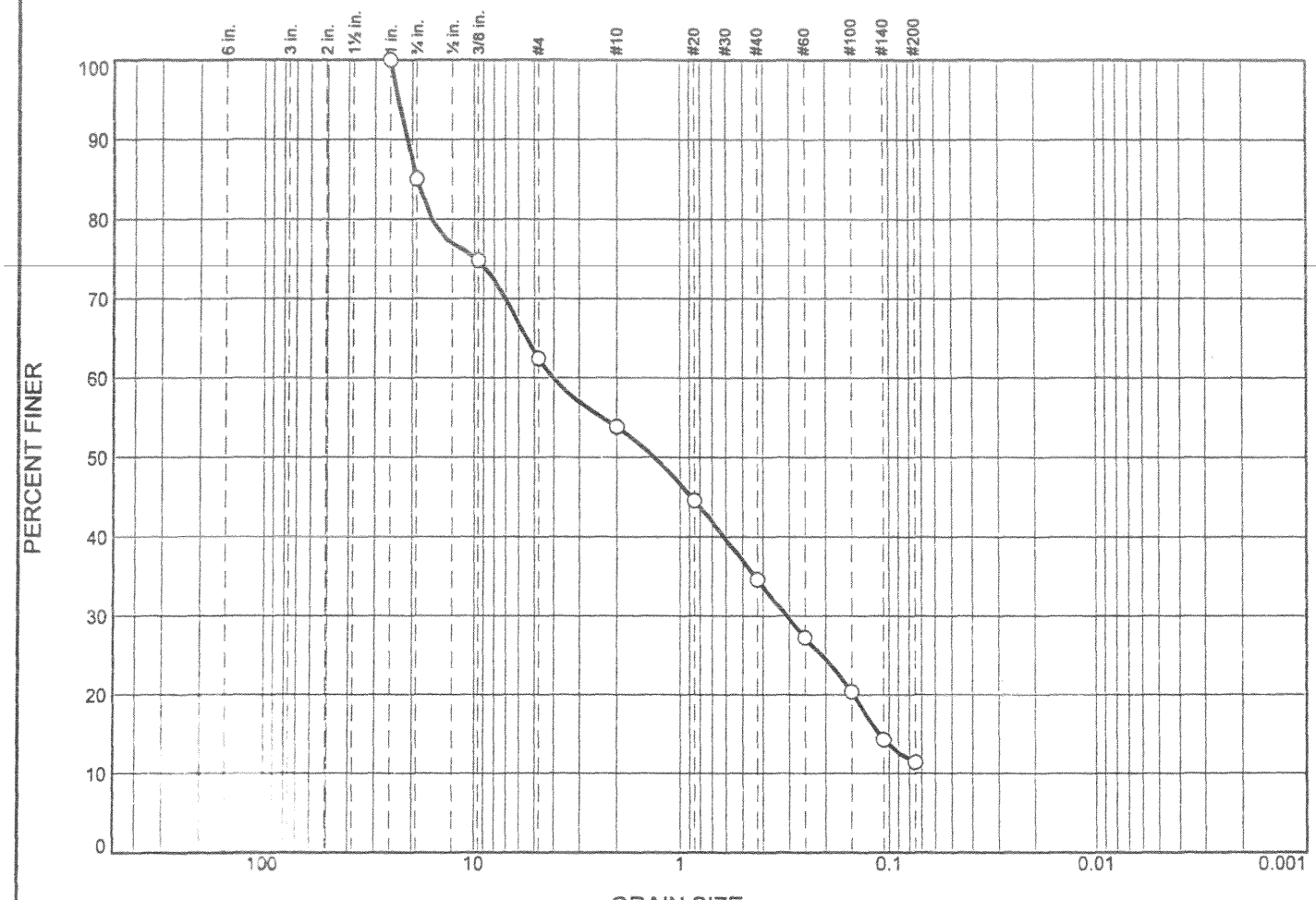
Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 15 | 23 | 8 | 19 | 24 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 19.0162 | 4.0228 | 1.3320 | 0.3078 | 0.1113 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-157 **Depth:** 18.5' **Sample Number:** 6

**Date:** ○

**Remarks:**

○ Moisture Content % 19.3 CP05-EAARS-CB-0255 @ 18.5'

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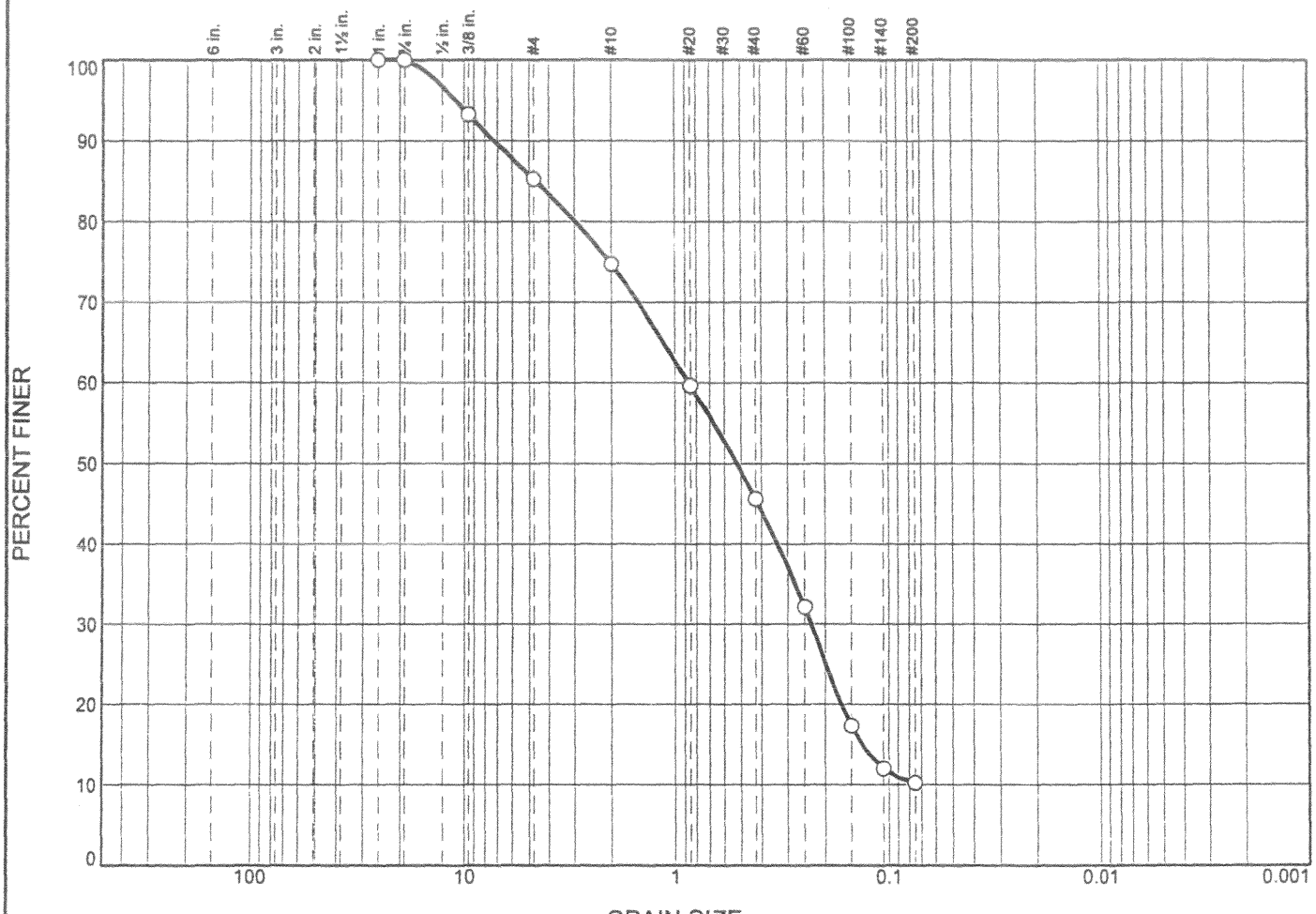
Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 15 | 10 | 29 | 36 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.6208 | 0.8654 | 0.5214 | 0.2327 | 0.1338 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 50.5' **Sample Number:** 32

**Date:** ○

**Remarks:**
○ Moisture Content % 18.6 CP05-EAARS-CB-0256 @ 50.5'

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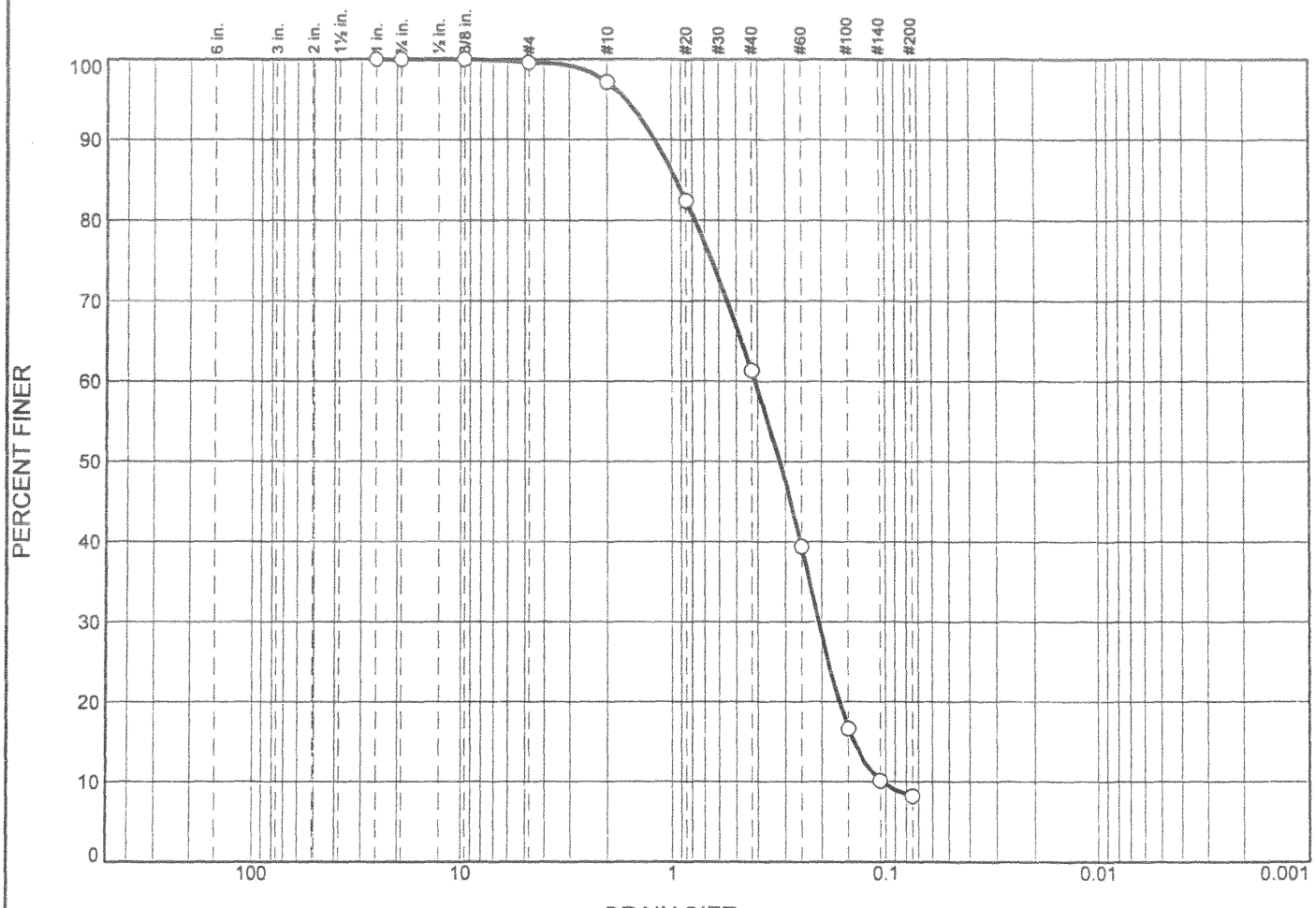
Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 3 | 36 | 53 | 8 | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.9438 | 0.4093 | 0.3169 | 0.2063 | 0.1419 | 0.1048 | 0.99 | 3.91 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 55.0' **Sample Number:** 35

**Date:** ○

**Remarks:**
○ Moisture Content % 23.1 CP05-EAARS-CB-0256 @ 55.0'

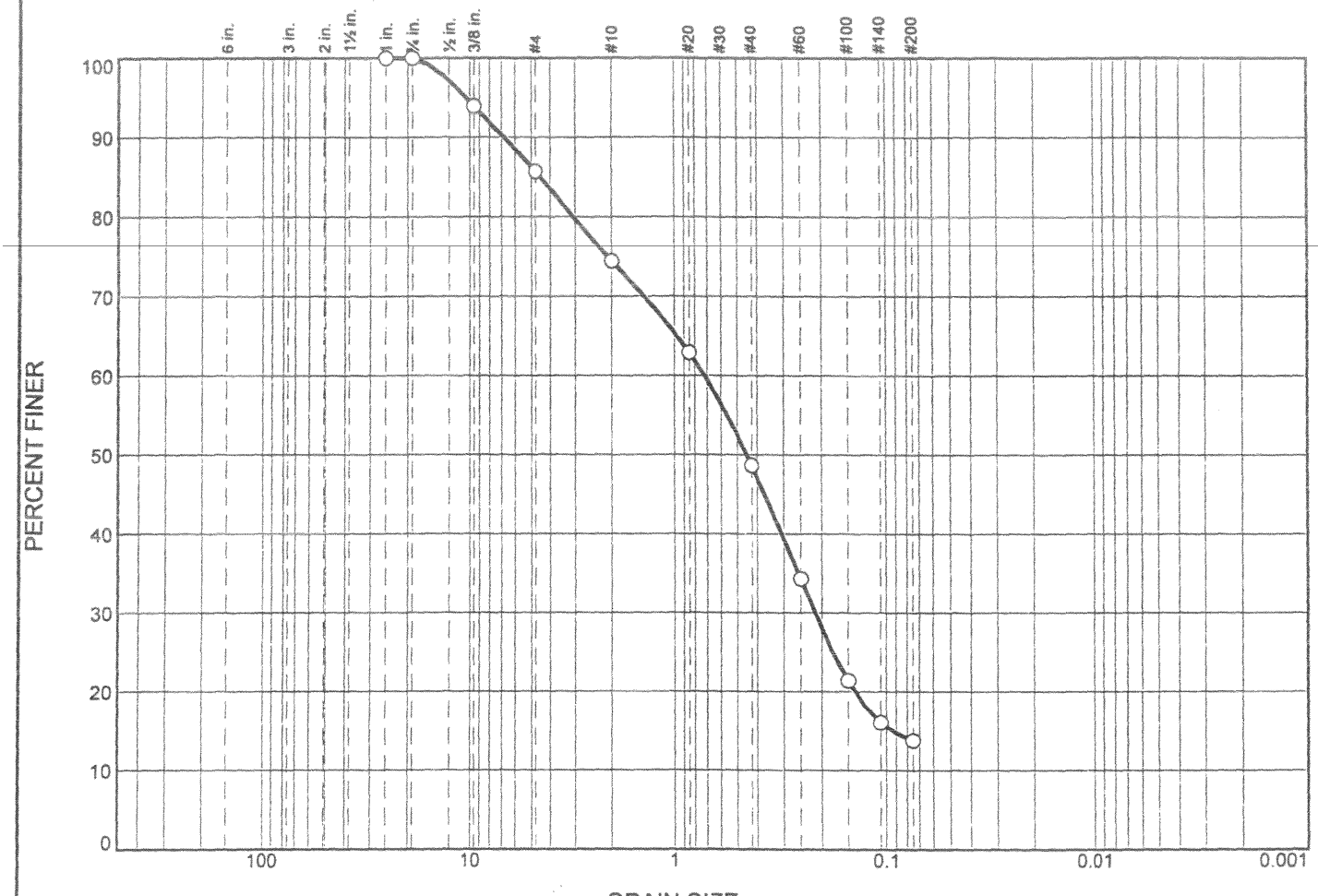
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 14 | 12 | 25 | 35 | 14 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.4869 | 0.7184 | 0.4491 | 0.2138 | 0.0931 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 65.5' **Sample Number:** 42

**Date:** ○

**Remarks:**
○ Moisture Content % 21.2 CP05-EAARS-CB-0256 @ 65.5'

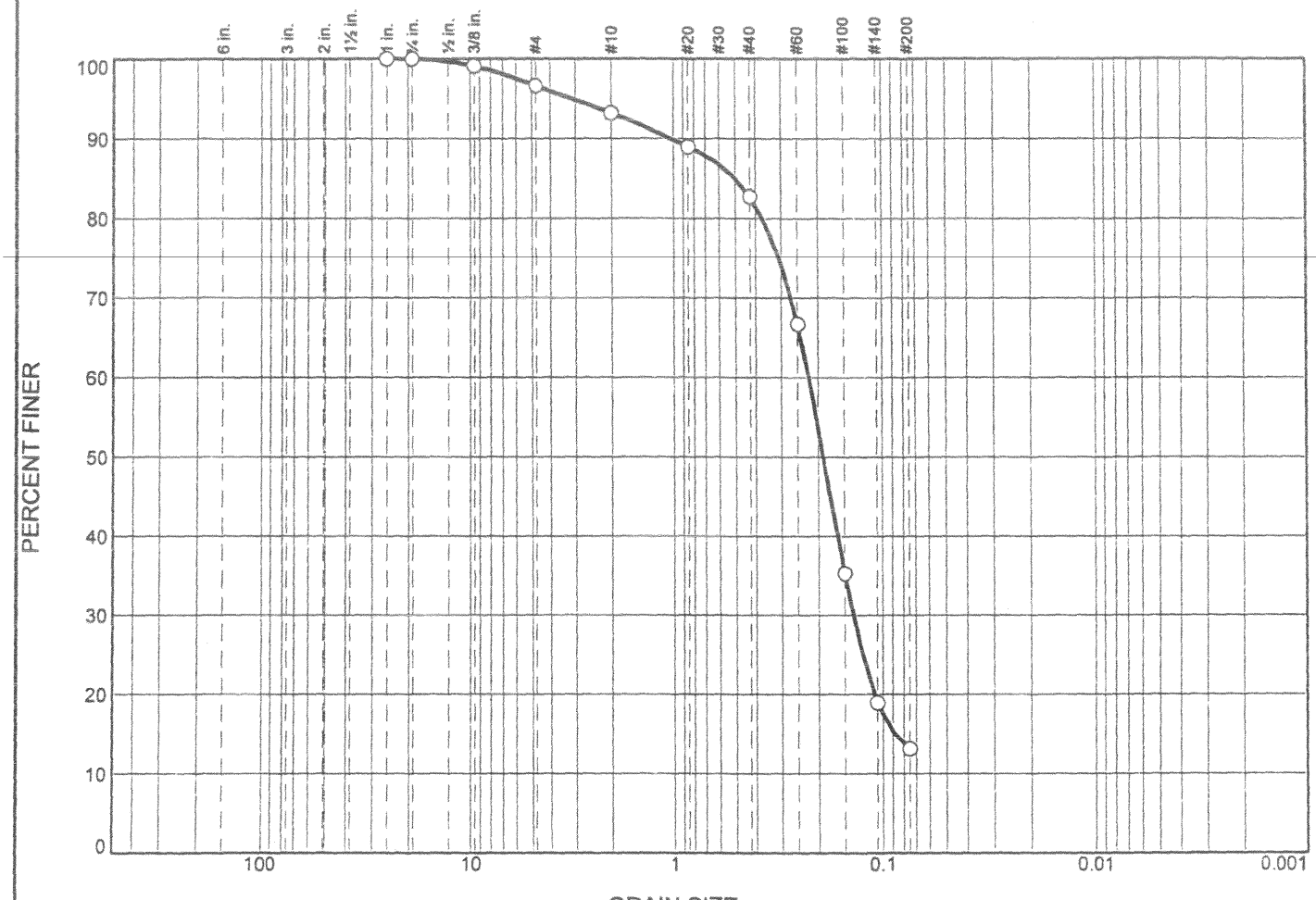
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 3 | 4 | 10 | 70 | 13 | |
| | | | | | | | | |
| | | | | | | | | |

| X | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.5005 | 0.2212 | 0.1887 | 0.1368 | 0.0883 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 70.0' **Sample Number:** 45

**Date:** ○

**Remarks:**
○ Moisture Content % 27.6 CP05-EAARS-CB-0256 @ 70.0'

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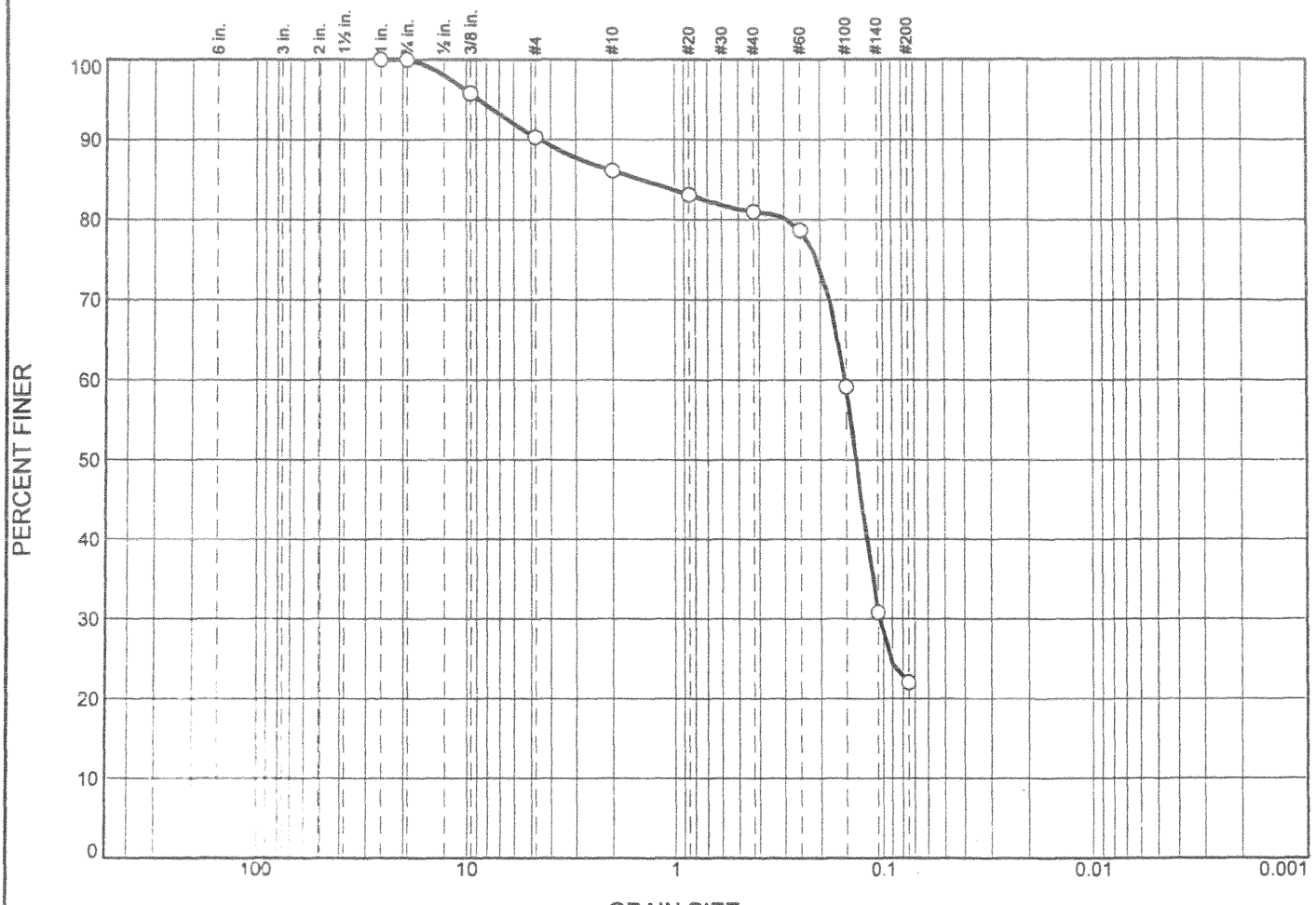
Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 10 | 4 | 5 | 59 | 22 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.4588 | 0.1516 | 0.1344 | 0.1044 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-158 **Depth:** 38.5' **Sample Number:** 24

**Date:** ○

**Remarks:**

○ Moisture Content % 27.7 CP05-EAARS-CB-0256 @ 38.5'

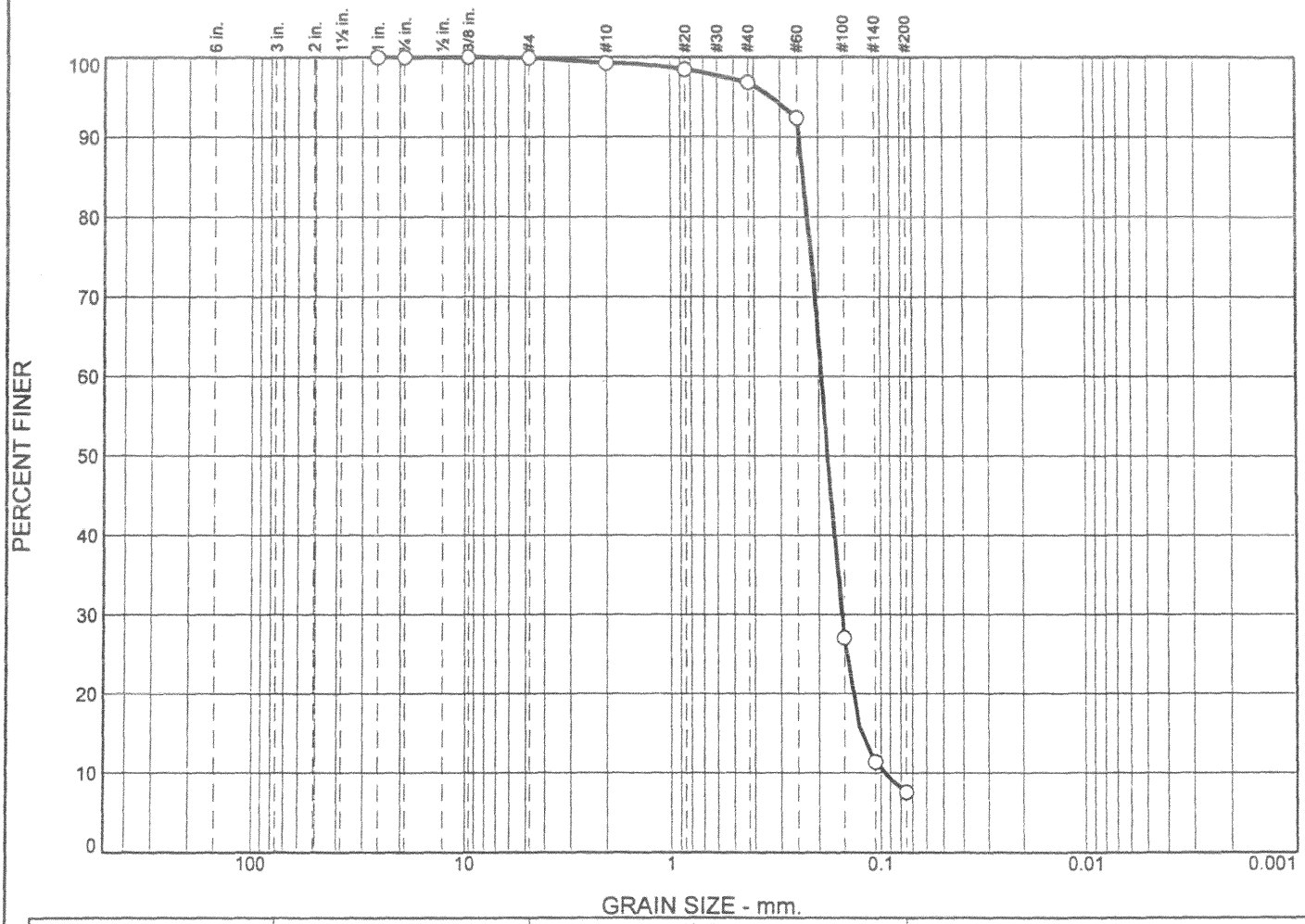
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 1 | 2 | 89 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2321 | 0.1930 | 0.1802 | 0.1544 | 0.1237 | 0.0959 | 1.29 | 2.01 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 44.5' **Sample Number:** 28

**Date:** ○

**Remarks:**
○ Moisture Content % 31.2 CP05-EAARS-CB-0256 @ 44.5'

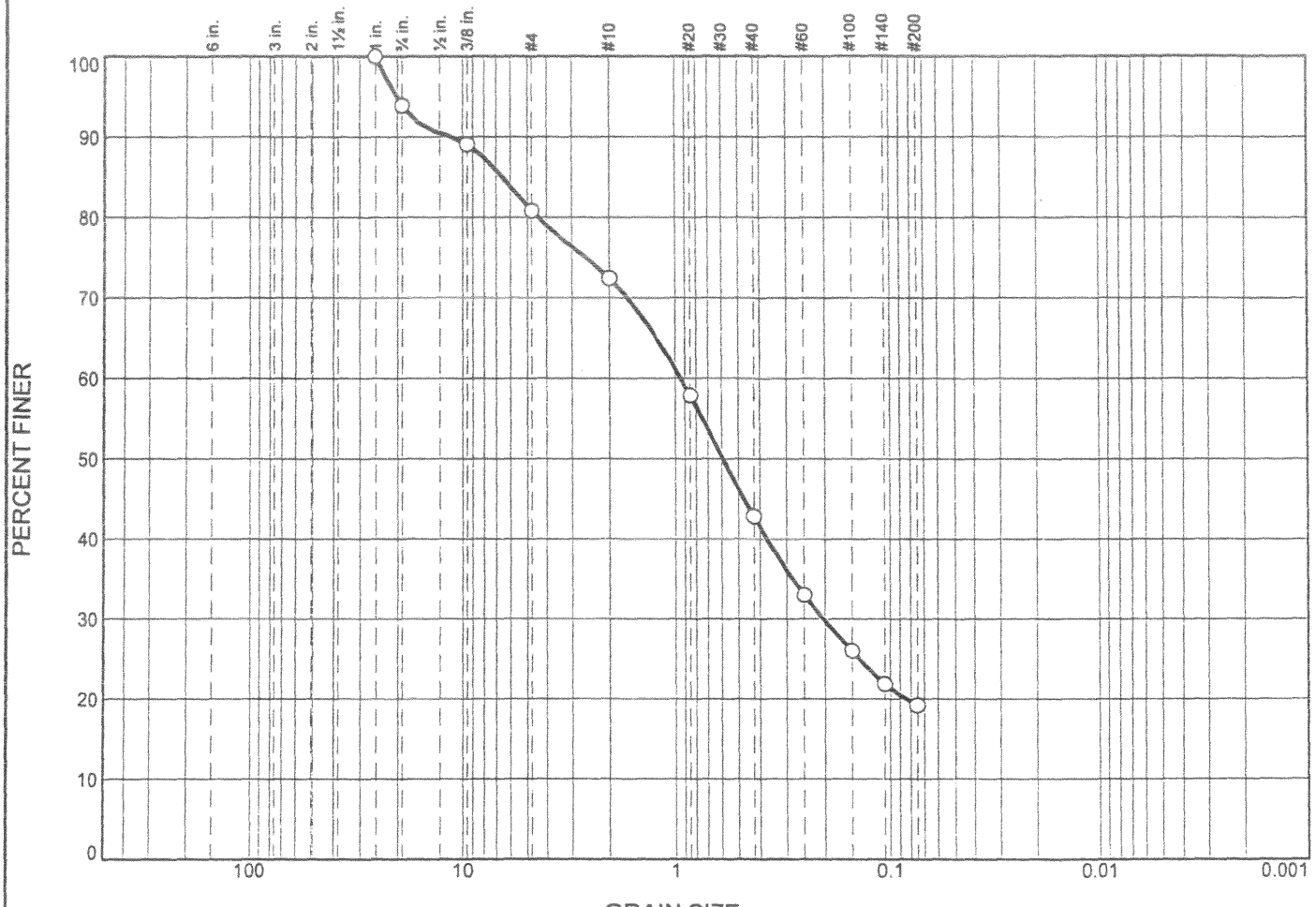
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pedro Carraraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 13 | 9 | 29 | 24 | 19 | |
| | | | | | | | | |
| | | | | | | | | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.5563 | 0.9411 | 0.5912 | 0.2037 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 23.5' **Sample Number:** 14

**Date:** ○

**Remarks:**
○ Moisture Content % 29.3 CP05-EAARS-CB-0256 @ 23.5'

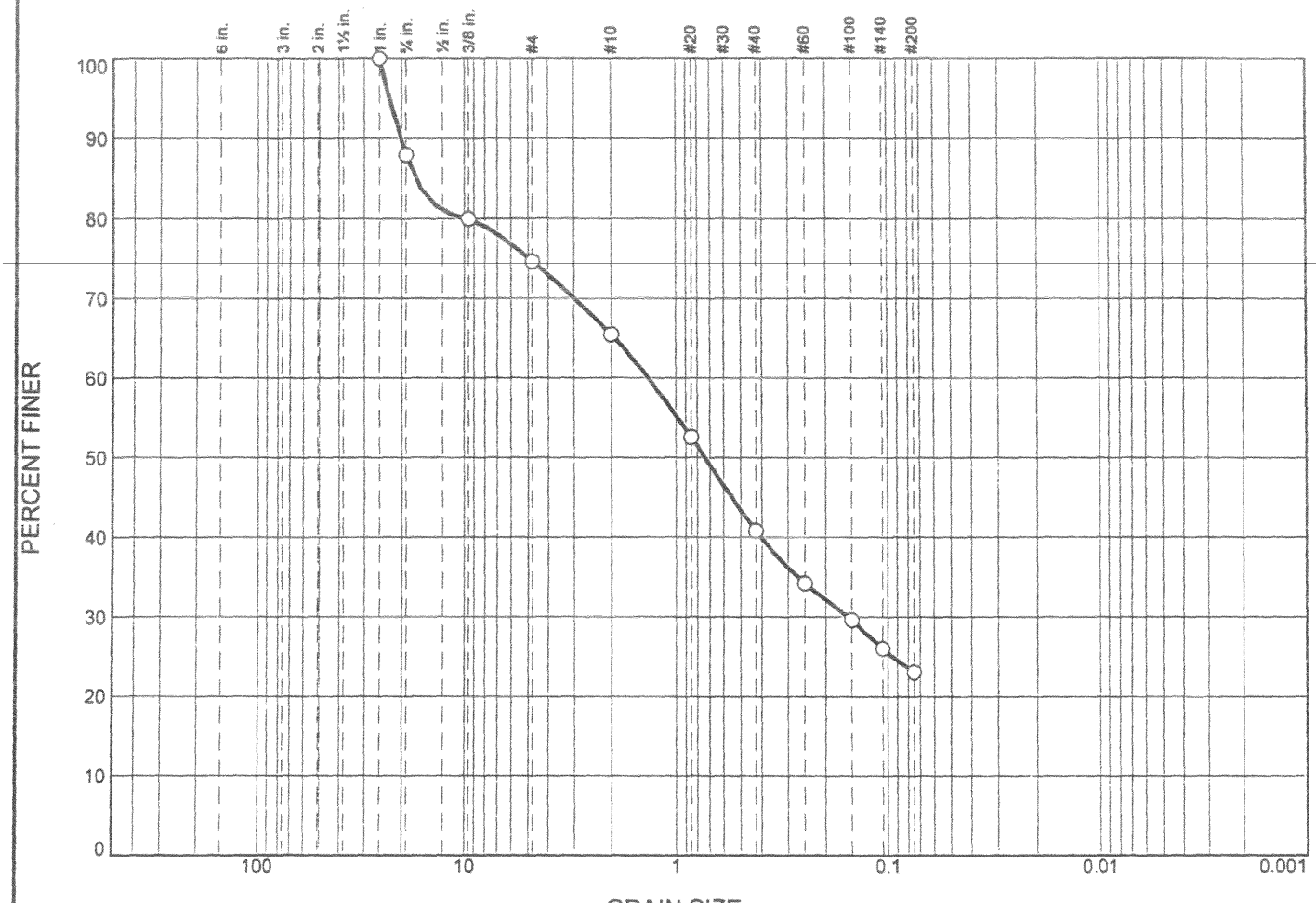
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 12 | 13 | 10 | 24 | 18 | 23 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.0853 | 1.3499 | 0.7341 | 0.1557 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 21.5' **Sample Number:** 16

**Date:** ○

**Remarks:**
○ Moisture Content % 21.4 CP05-EAARS-CB-0256 @ 21.5'

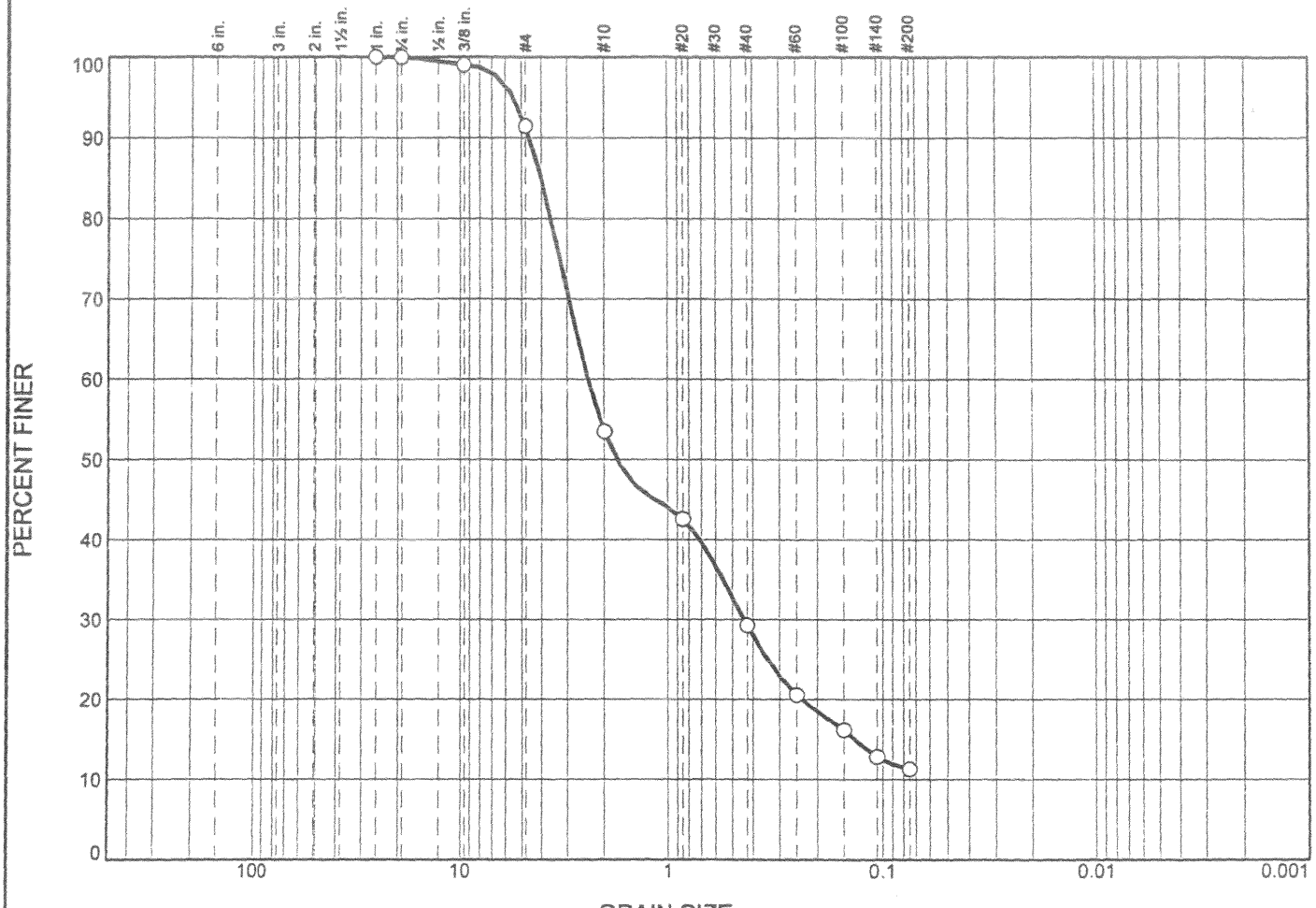
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 9 | 38 | 24 | 18 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.9995 | 2.3726 | 1.7525 | 0.4401 | 0.1335 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-158 **Depth:** 76.0' **Sample Number:** 49

**Date:** ○

**Remarks:**

○ Moisture Content % 27.5 CP05-EAARS-CB-0256 @ 76.0'

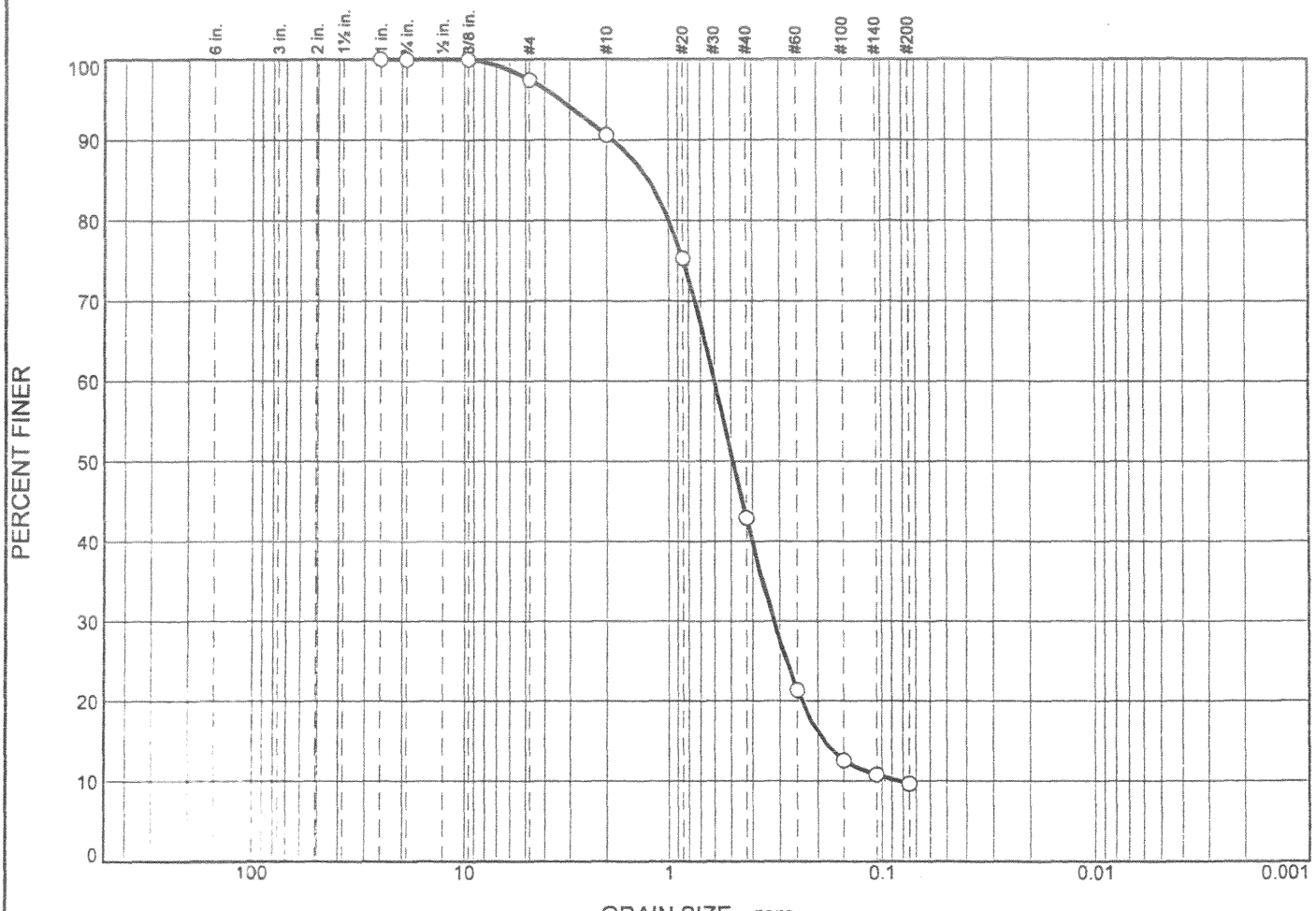
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 3 | 6 | 48 | 33 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.2481 | 0.5969 | 0.4892 | 0.3196 | 0.1861 | 0.0836 | 2.05 | 7.14 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-158 **Depth:** 80.5' **Sample Number:** 52

**Date:** ○

**Remarks:**

○ Moisture Content % 19.9 CP05-EAARS-CB-0256 @ 80.5'

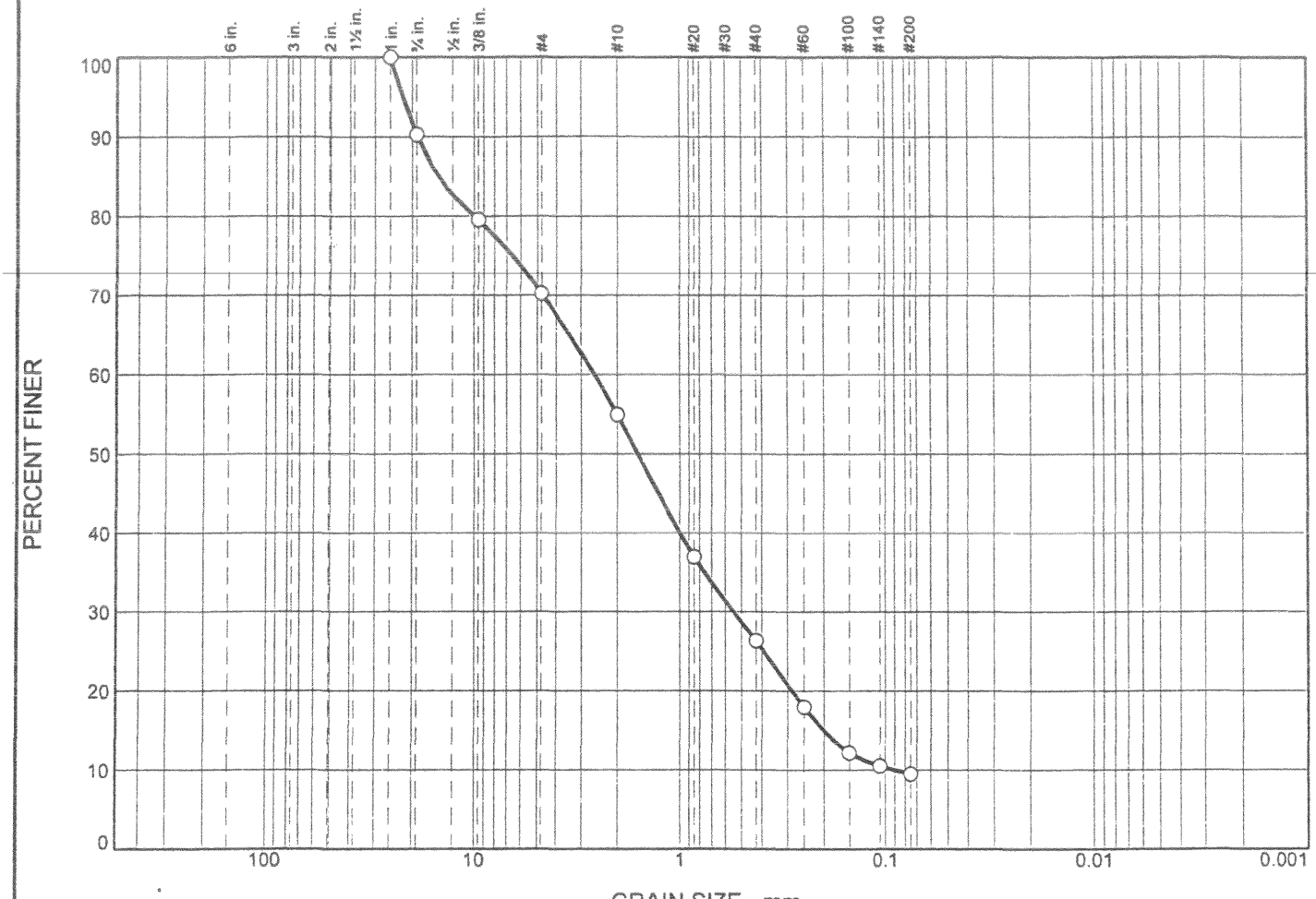
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 10 | 20 | 15 | 29 | 17 | 9 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.9592 | 2.5838 | 1.5875 | 0.5455 | 0.2004 | 0.0896 | 1.29 | 28.85 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 85.0' **Sample Number:** 55

**Date:** ○

**Remarks:**
○ Moisture Content % 26.2 CP05-EAARS-CB-0256 @ 85.0'

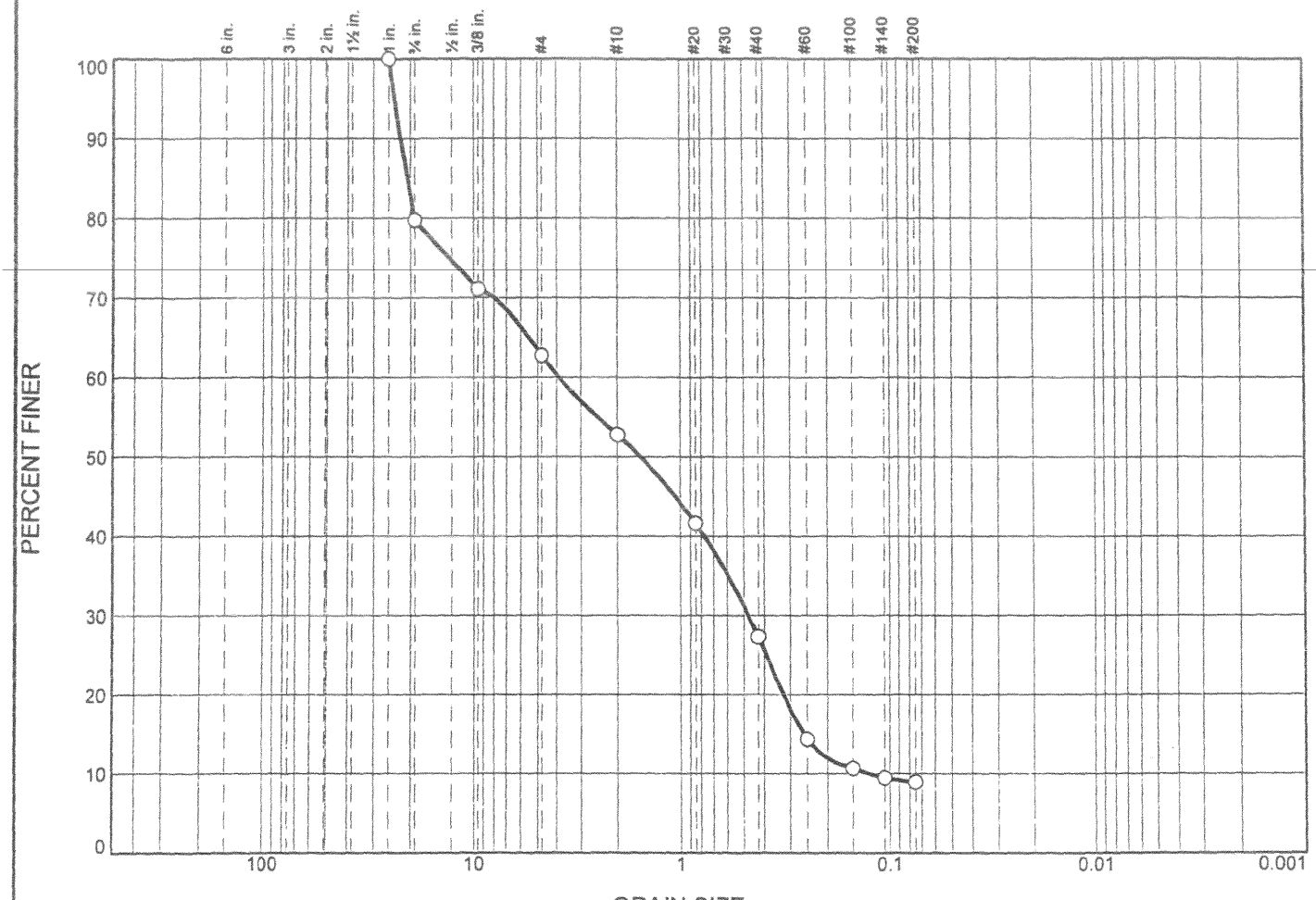
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 20 | 17 | 10 | 26 | 18 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 20.8086 | 3.8827 | 1.5585 | 0.4729 | 0.2594 | 0.1252 | 0.46 | 31.01 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 89.5' **Sample Number:** 58

**Date:** ○

**Remarks:**
○ Moisture Content % 26.2 CP05-EAARS-CB-0256 @ 85.0'

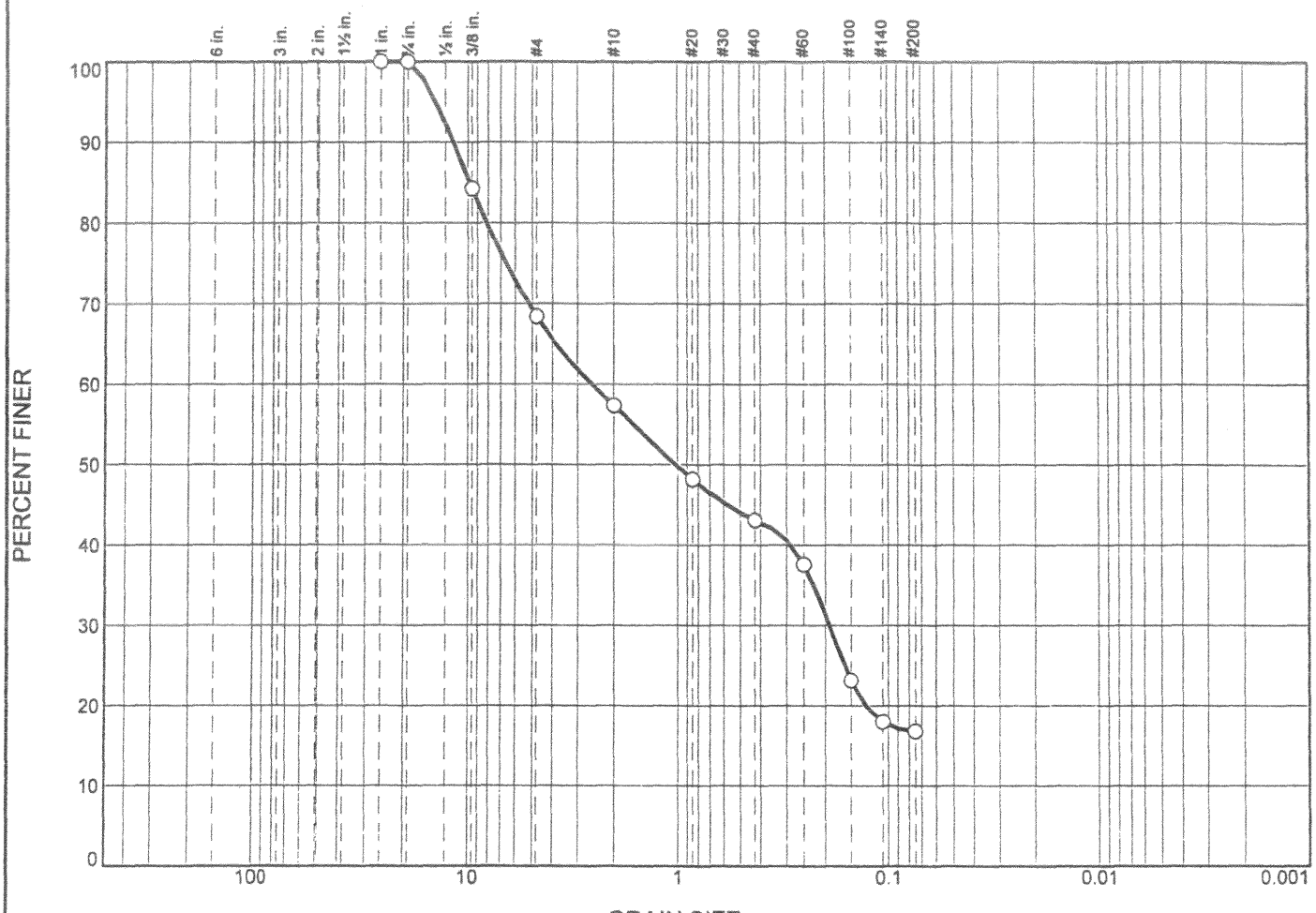
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 32 | 11 | 14 | 26 | 17 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.7706 | 2.5428 | 1.0211 | 0.1905 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 91.0' **Sample Number:** 59

**Date:** ○

**Remarks:**
○ Moisture Content % 21.1 CP05-EAARS-CB-0256 @ 91.0'

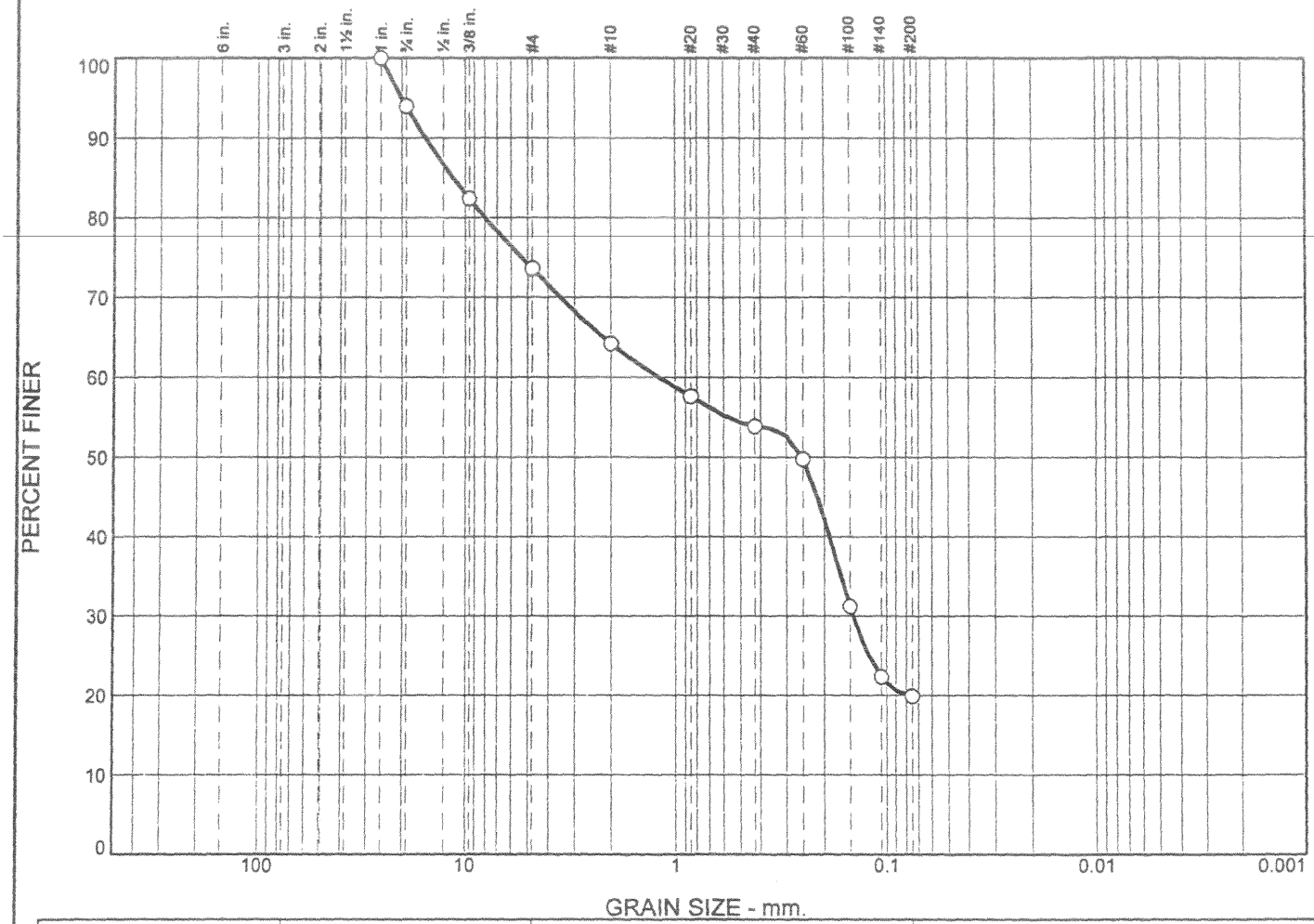
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 20 | 10 | 10 | 34 | 20 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.3755 | 1.1886 | 0.2525 | 0.1450 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-158 **Depth:** 95.5' **Sample Number:** 62

**Date:** ○

**Remarks:**

○ Moisture Content % 19.3 CP05-EAARS-CB-0256 @ 95.5'

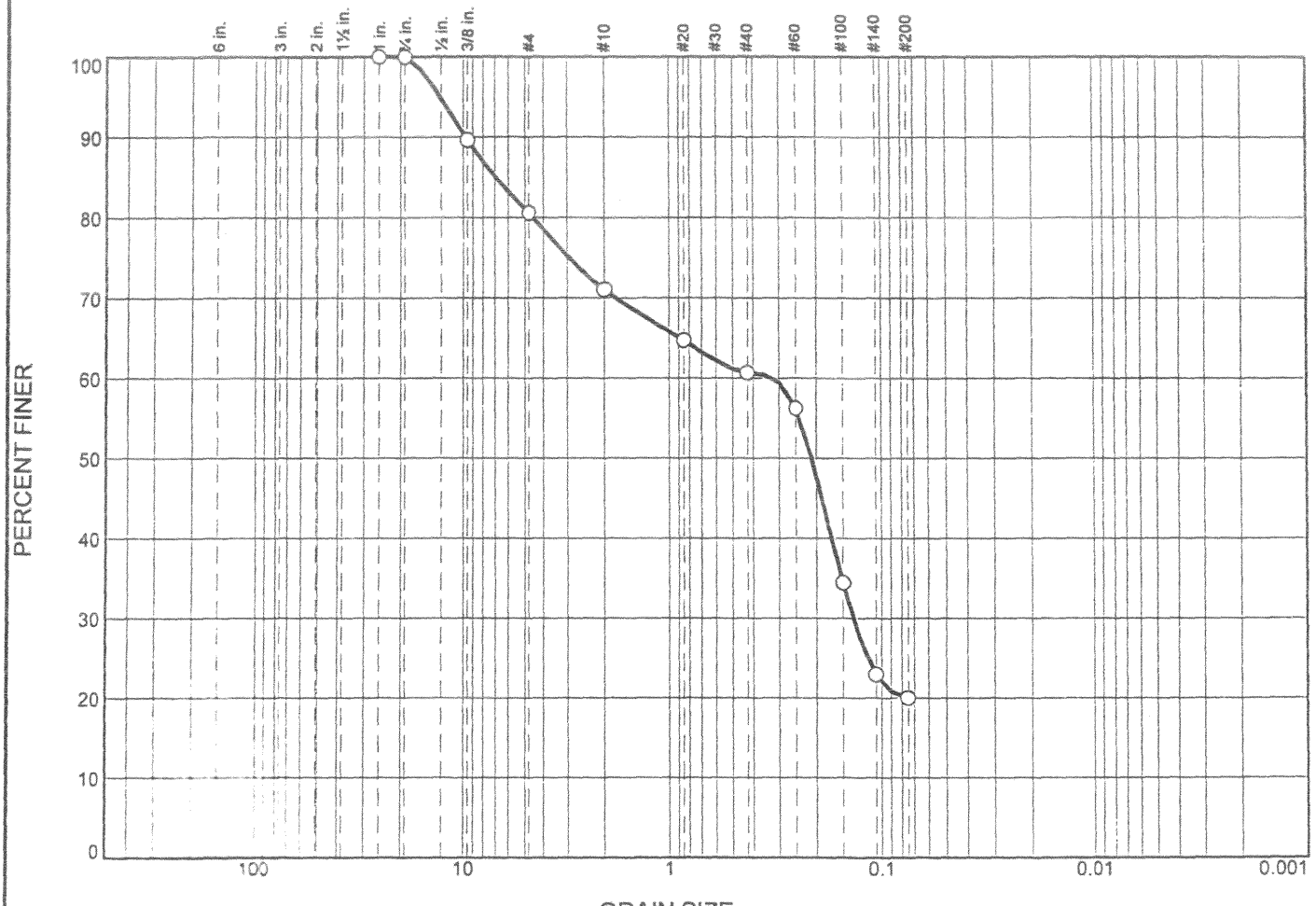
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Carraraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 19 | 10 | 10 | 41 | 20 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.9231 | 0.3181 | 0.2097 | 0.1346 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 98.5' **Sample Number:** 69

**Date:** ○

**Remarks:**
○ Moisture Content % 21.6 CP05-EAARS-CB-0256 @ 98.5'

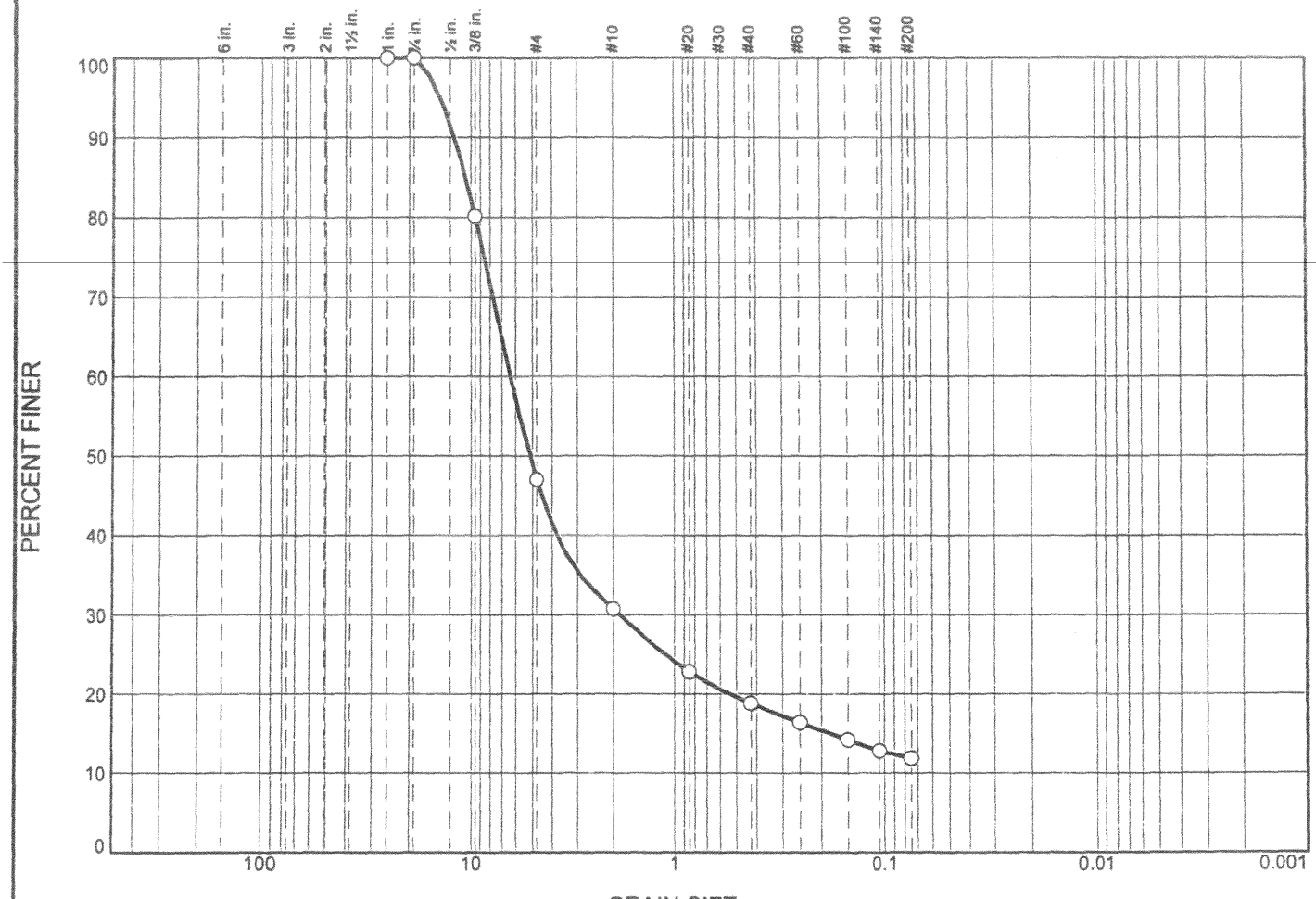
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Cesaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 53 | 16 | 12 | 7 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 10.6373 | 6.3584 | 5.1205 | 1.8548 | 0.1816 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-158 **Depth:** 14.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 62.9 CP05-EAARS-CB-0256 @ 14.5'

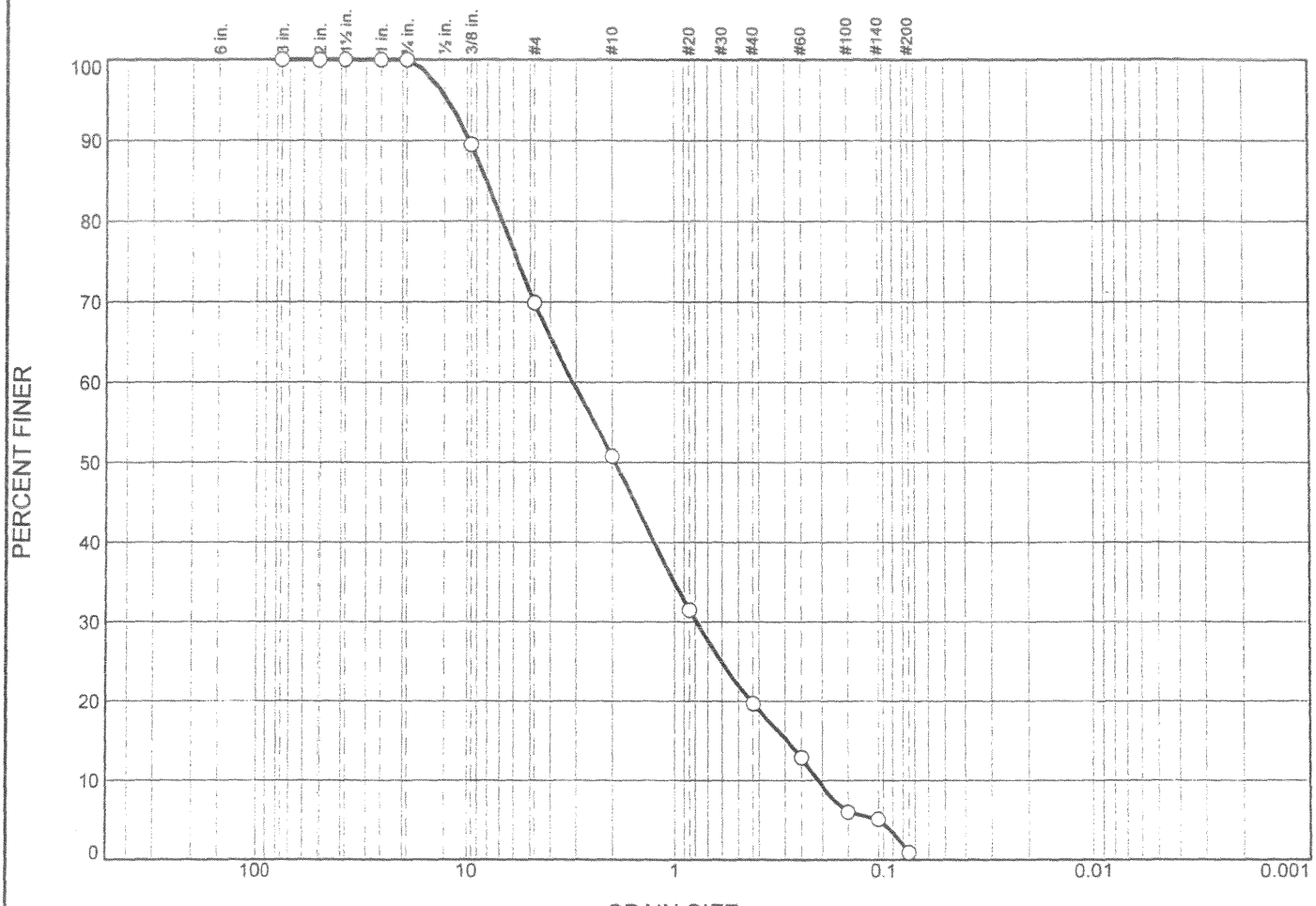
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 30.1 | 19.1 | 31.1 | 18.8 | 0.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.0475 | 3.1055 | 1.9281 | 0.7896 | 0.2908 | 0.2084 | 0.96 | 14.90 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ WELL GRADED SAND WITH GRAVEL | SW | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A(Reservoir) W/O #4

○ **Depth:** 4.5-9.5' **Sample Number:** CB-0168

**Remarks:**
○ Moisture Content % 13 CP05-EAARS-CB-0256 @ 4.5'-9.5'

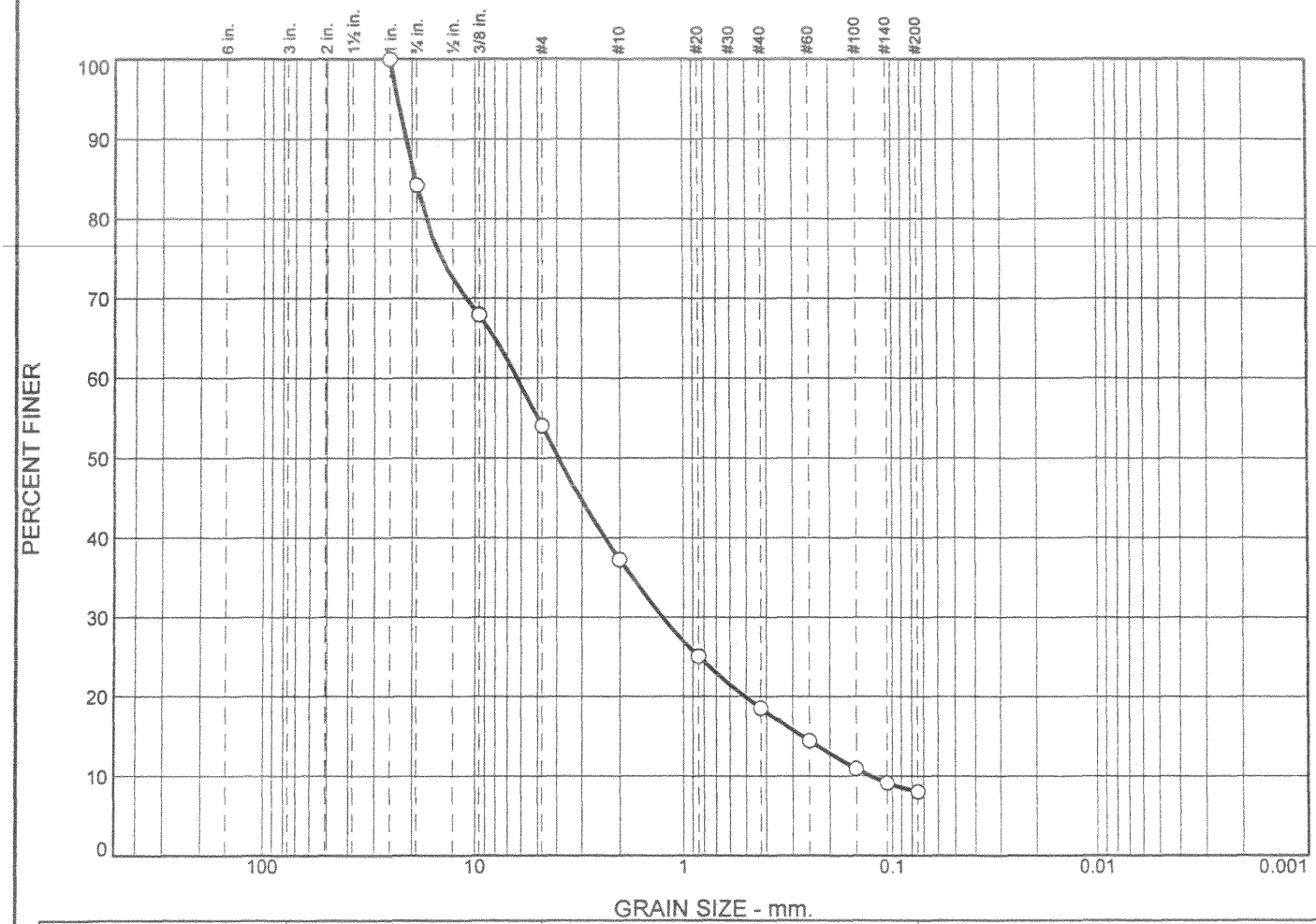
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Camaraza **Checked By:** M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 16 | 30 | 17 | 18 | 11 | 8 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 19.3721 | 6.2672 | 3.9118 | 1.2546 | 0.2694 | 0.1274 | 1.97 | 49.20 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 5.5' **Sample Number:** 3

**Date:** ○

**Remarks:**
○ Moisture Content % 13.4
CP05-EAARS-CB-0266

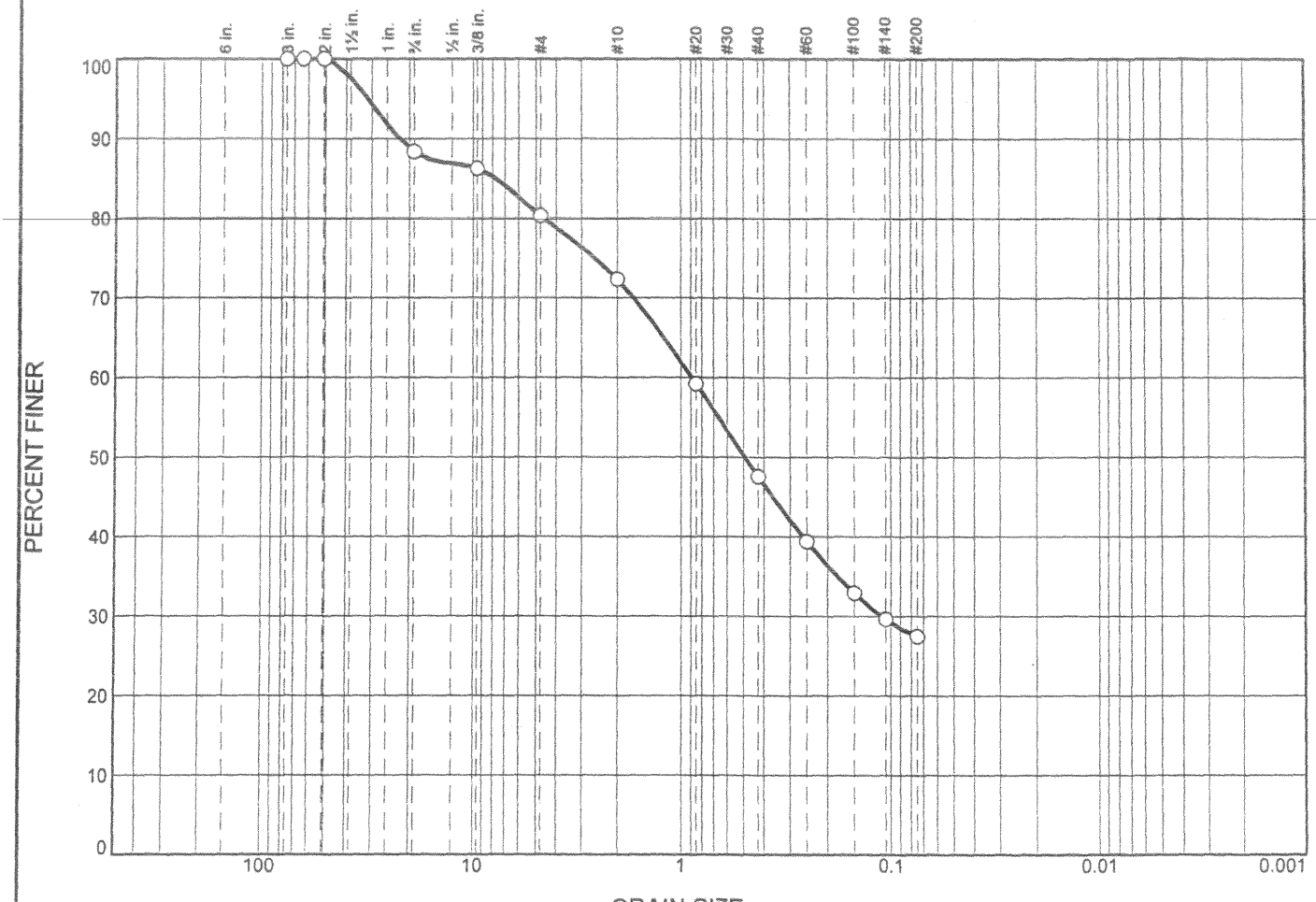
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 12 | 8 | 8 | 24 | 21 | 27 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.7404 | 0.8895 | 0.4916 | 0.1110 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 11.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 24.0
CP05-EAARS-CB-0266

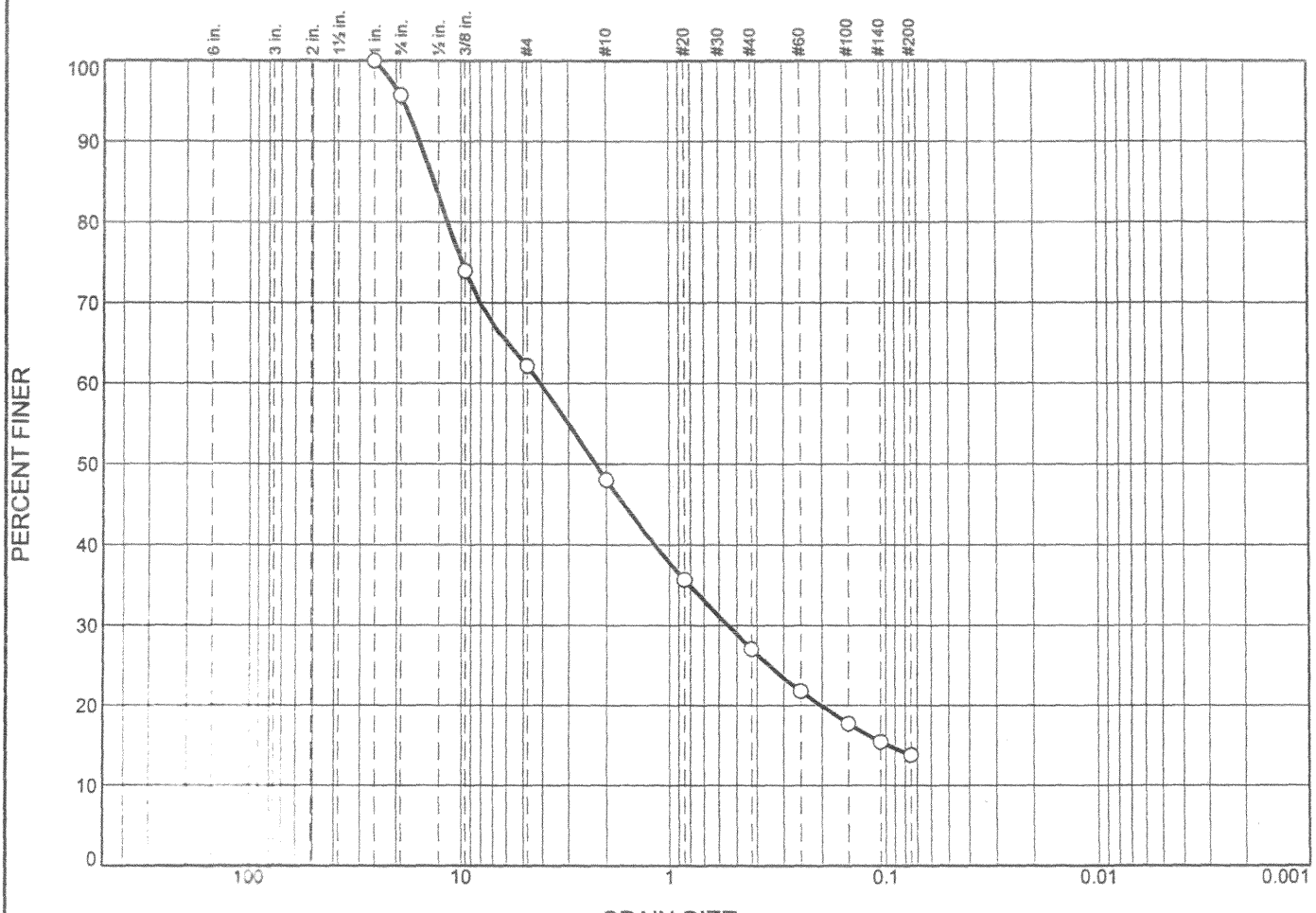
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 34 | 14 | 21 | 13 | 14 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 13.3363 | 4.0871 | 2.2470 | 0.5460 | 0.0976 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 14.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 34.3 CP05-EAARS-CB-0266

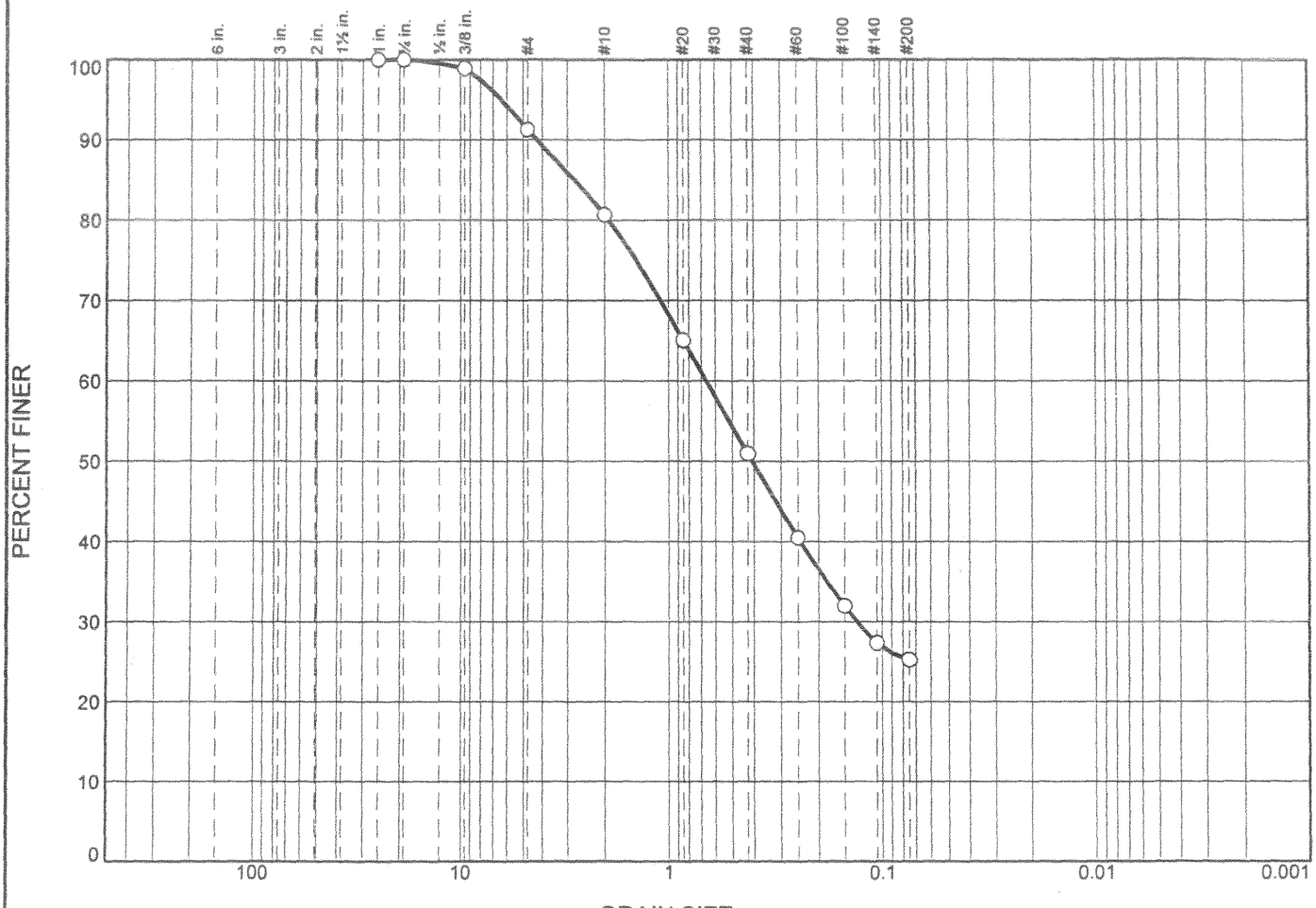
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 9 | 10 | 30 | 26 | 25 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.7798 | 0.6608 | 0.4050 | 0.1312 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 16.0' **Sample Number:** 10

**Date:** ○

**Remarks:**
○ Moisture Content % 36.2
CP05-EAARS-CB-0266

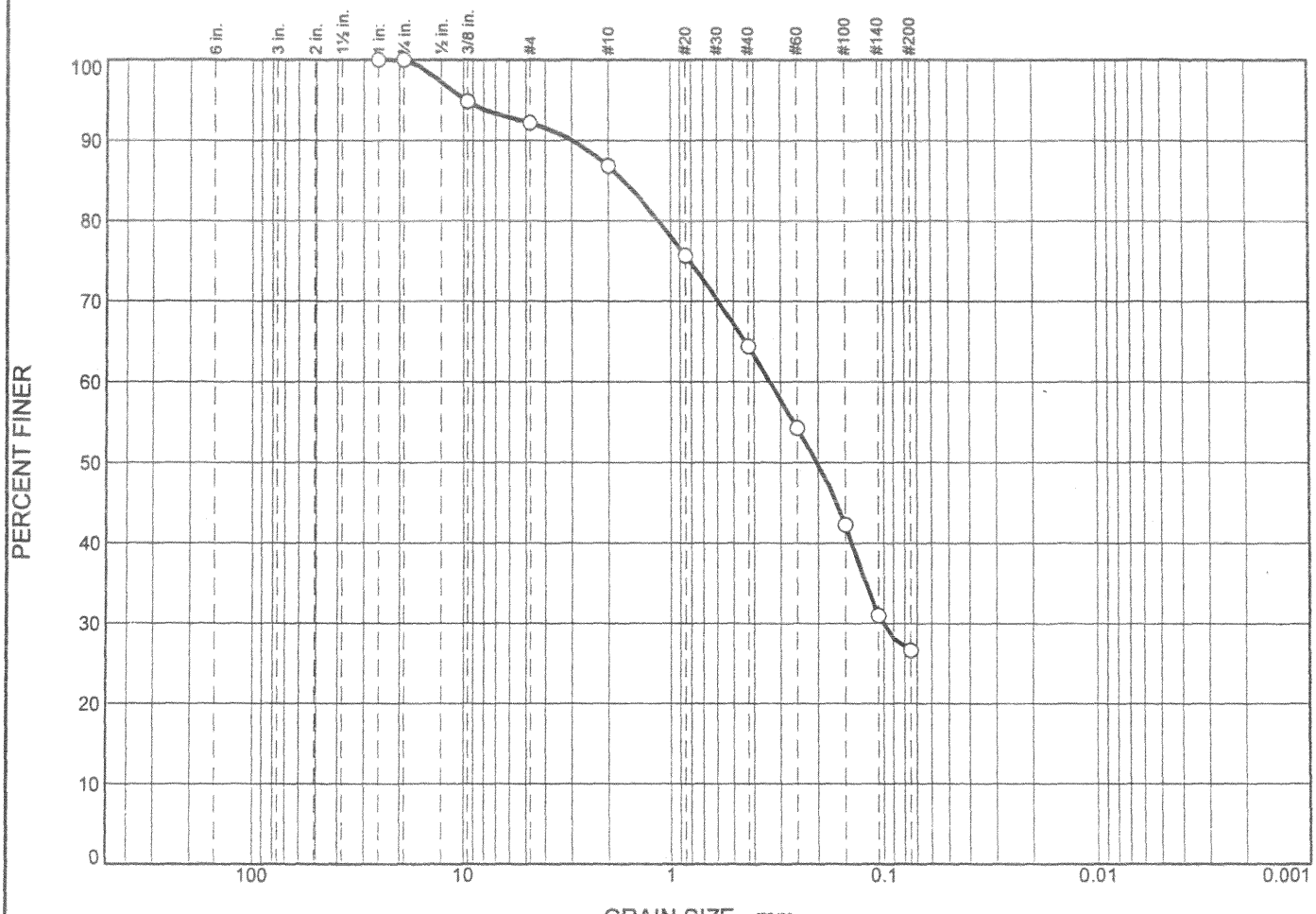
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 8 | 5 | 23 | 37 | 27 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.6852 | 0.3360 | 0.2016 | 0.1011 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 20.5' **Sample Number:** 13

**Date:** ○

**Remarks:**
○ Moisture Content % 27.5
CP05-EAARS-CB-0266

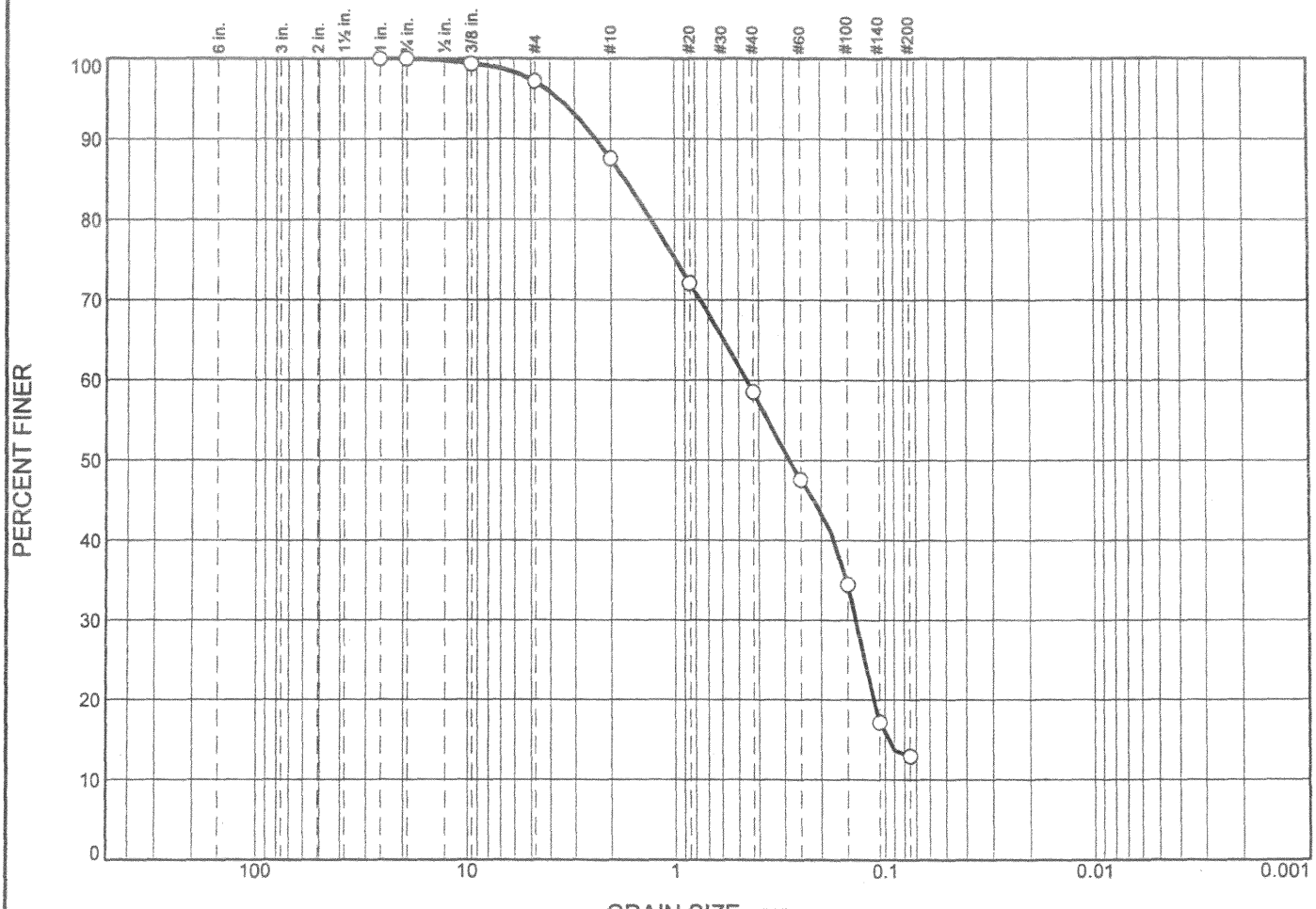
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 3 | 9 | 29 | 46 | 13 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.7068 | 0.4558 | 0.2839 | 0.1373 | 0.0979 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 26.5' **Sample Number:** 17

**Date:** ○

**Remarks:**
○ Moisture Content % 22.0 CP05-EAARS-CB-0266

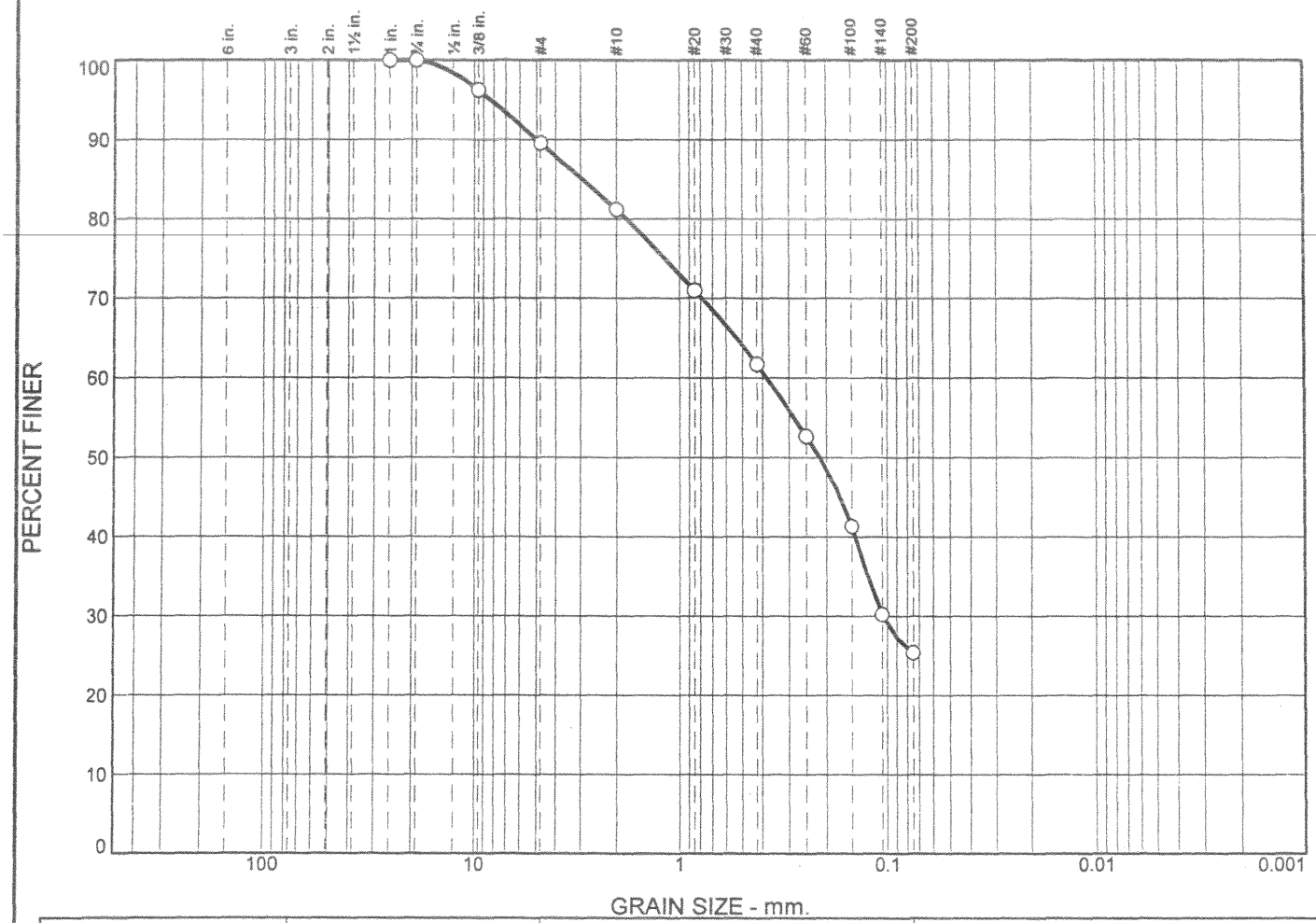
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 10 | 9 | 19 | 37 | 25 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.9309 | 0.3809 | 0.2156 | 0.1050 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 31.0' **Sample Number:** 20

**Date:** ○

**Remarks:**
○ Moisture Content % 22.0 CP05-EAARS-CB-0266

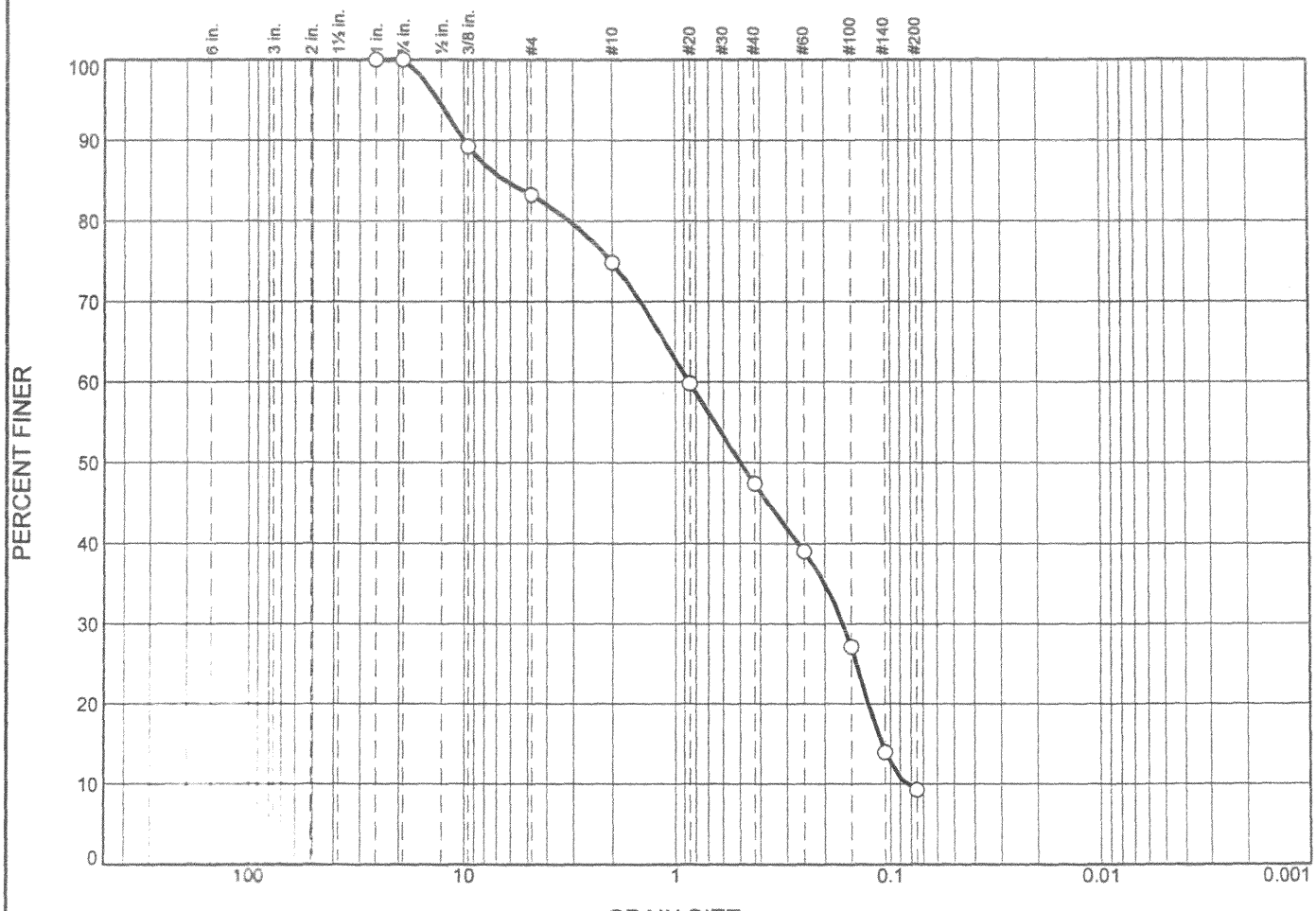
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 17 | 8 | 28 | 38 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.3126 | 0.8590 | 0.4962 | 0.1634 | 0.1098 | 0.0835 | 0.37 | 10.28 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 37.0' **Sample Number:** 24

**Date:** ○

**Remarks:**
○ Moisture Content % 26.6
CP05-EAARS-CB-0266

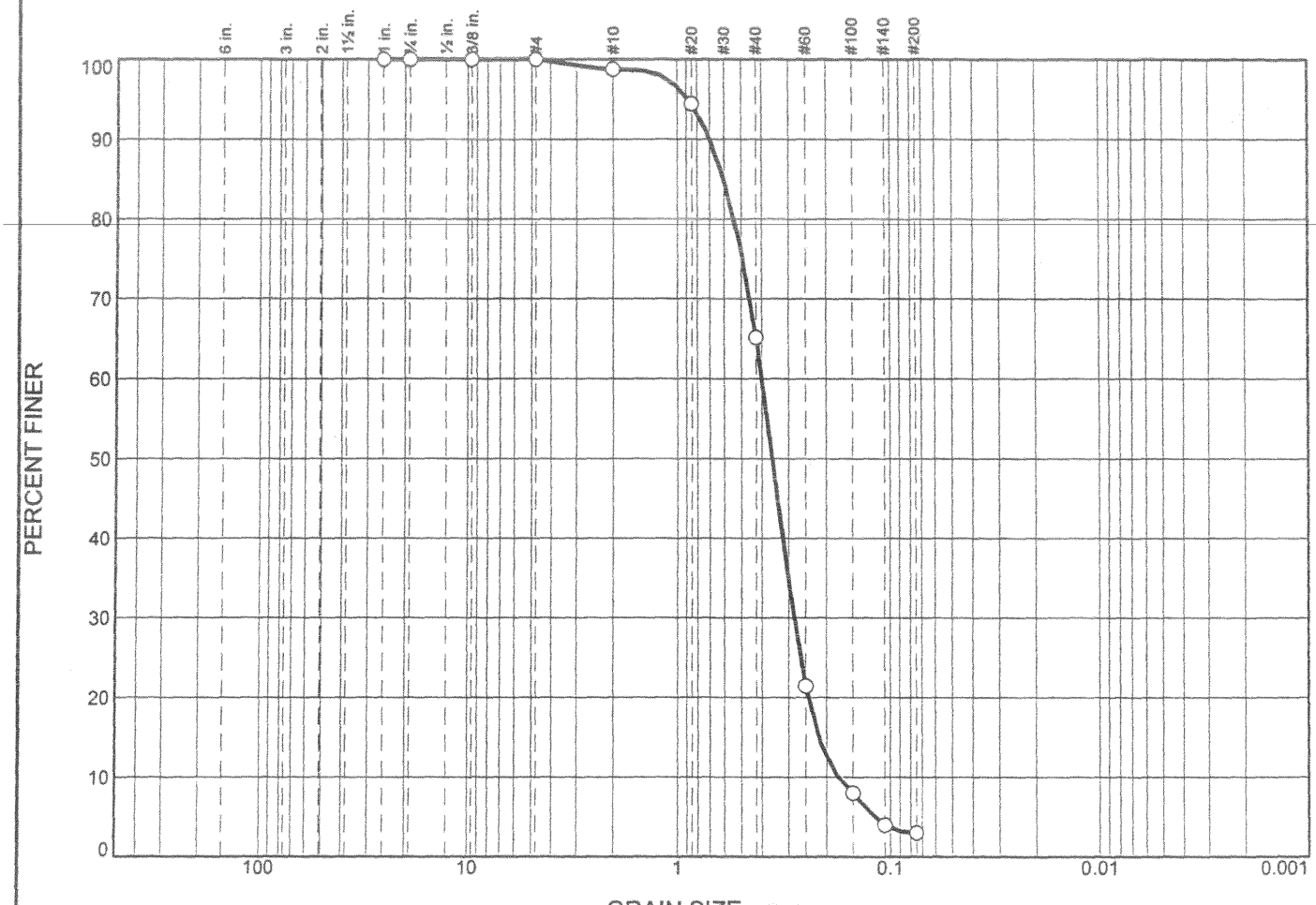
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 1 | 34 | 62 | 3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.6013 | 0.3988 | 0.3559 | 0.2827 | 0.2173 | 0.1756 | 1.14 | 2.27 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 44.5' **Sample Number:** 29

**Date:** ○

**Remarks:**
○ Moisture Content % 24.9
CP05-EAARS-CB-0266

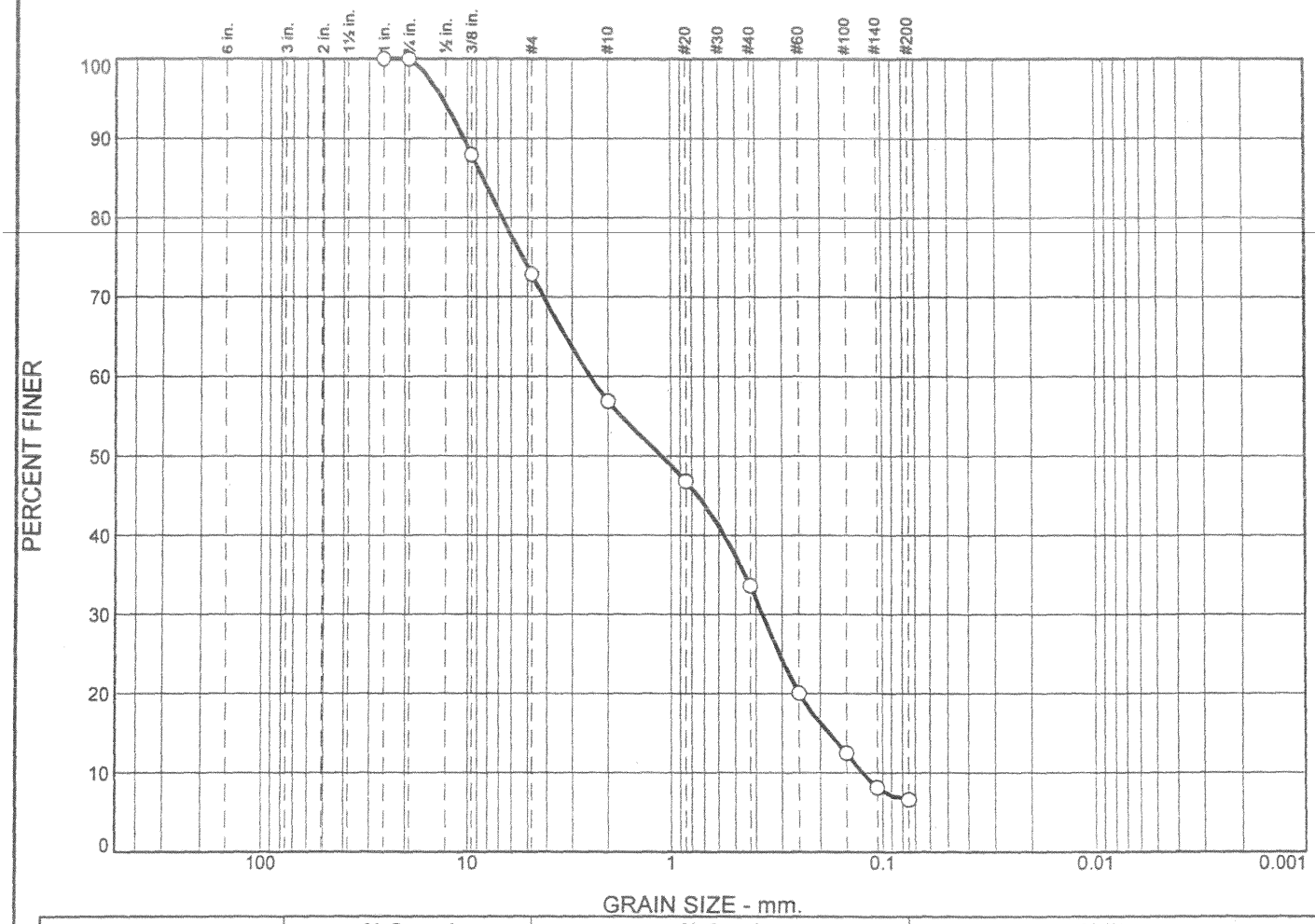
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 27 | 16 | 23 | 27 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.3569 | 2.4481 | 1.1035 | 0.3709 | 0.1820 | 0.1251 | 0.45 | 19.58 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 49.0' **Sample Number:** 32

**Date:** ○

**Remarks:**
○ Moisture Content % 20.9
CP05-EAARS-CB-0266

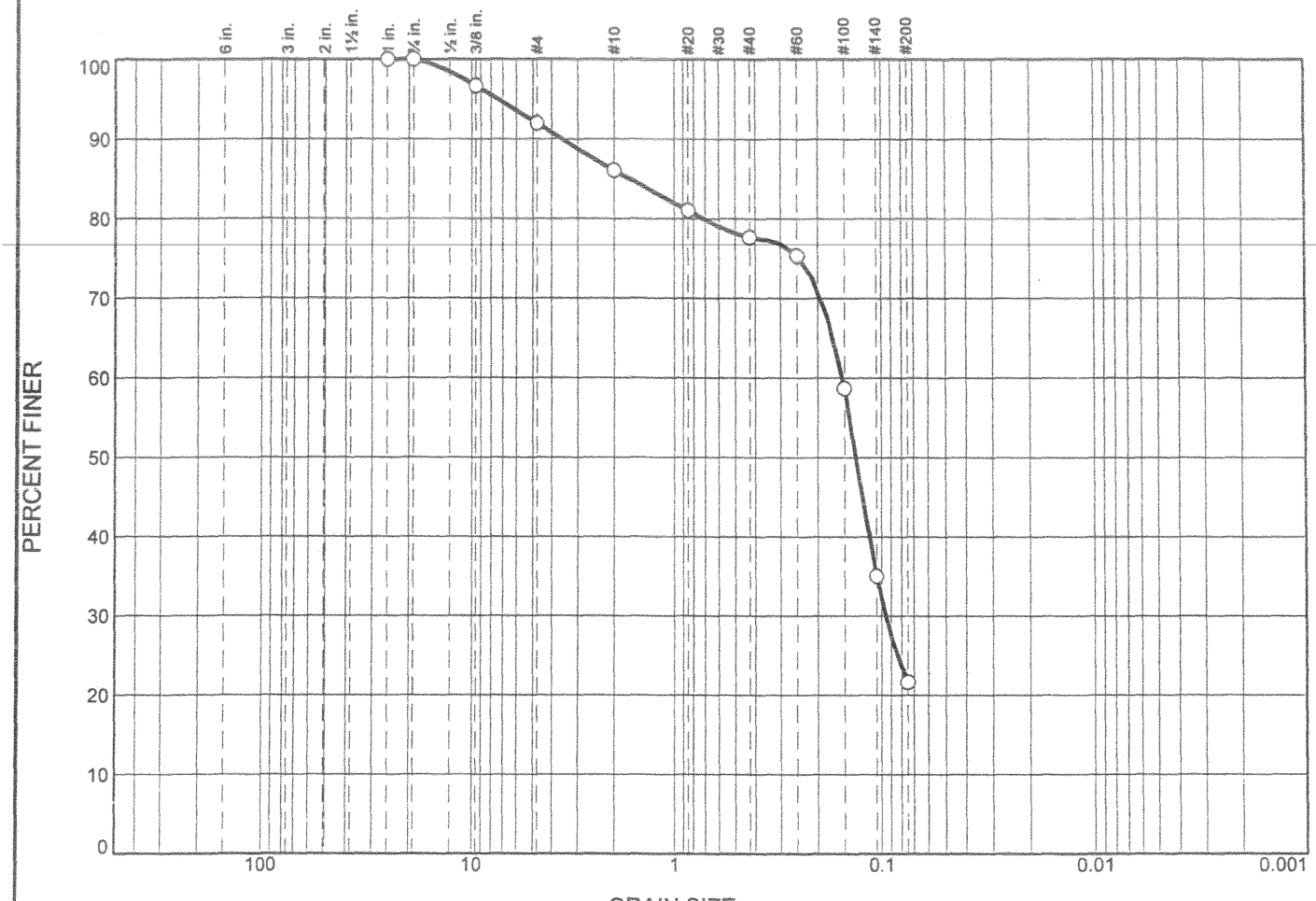
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Eduardo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 8 | 6 | 8 | 56 | 22 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.6787 | 0.1533 | 0.1319 | 0.0959 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 55.0' **Sample Number:** 36

**Date:** ○

**Remarks:**
○ Moisture Content % 30.4
CP05-EAARS-CB-0266

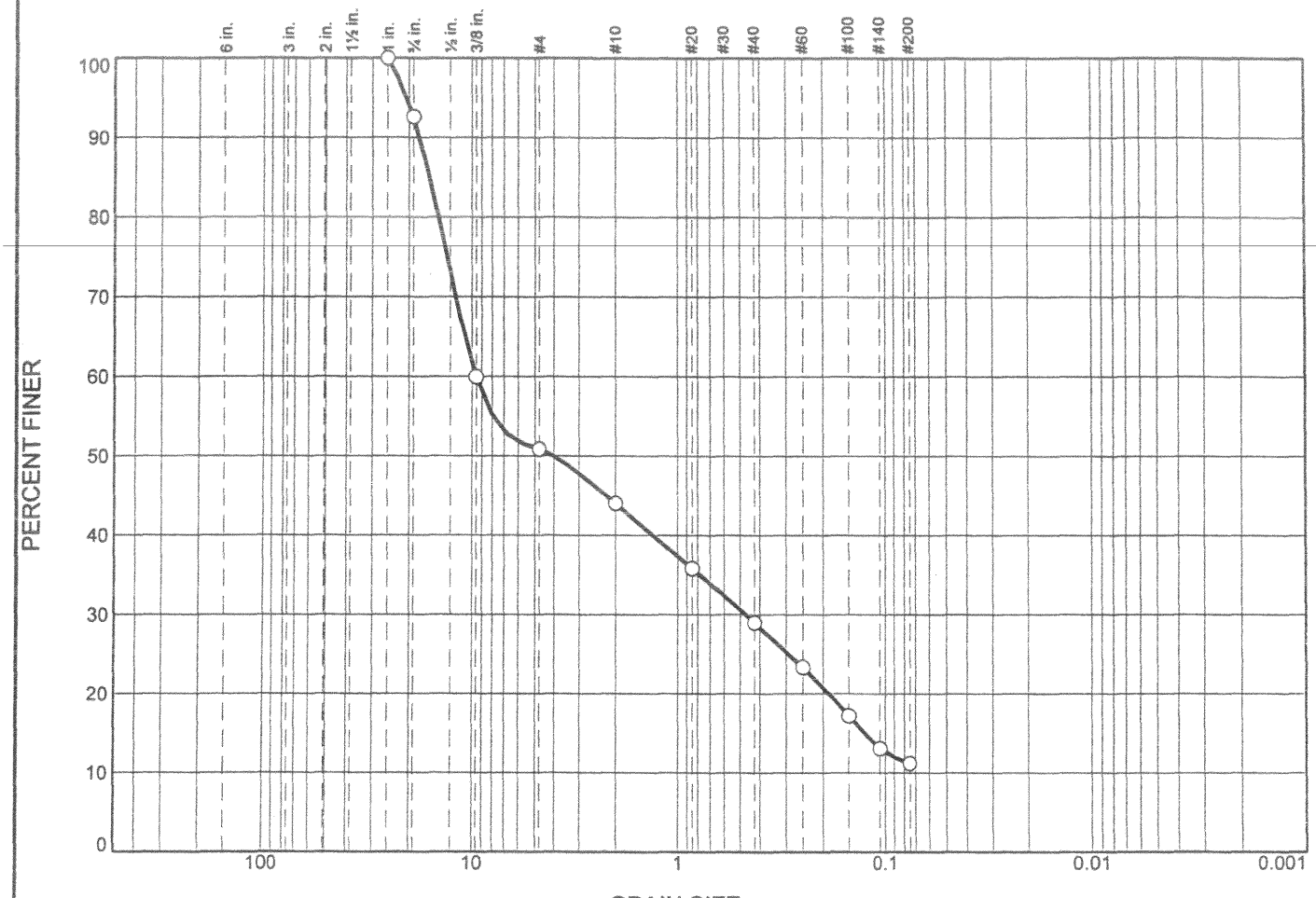
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 7 | 42 | 7 | 15 | 18 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 15.9470 | 9.5331 | 4.0274 | 0.4704 | 0.1263 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 61.0' **Sample Number:** 40

**Date:** ○

**Remarks:**
○ Moisture Content % 29.9
CP05-EAARS-CB-0266

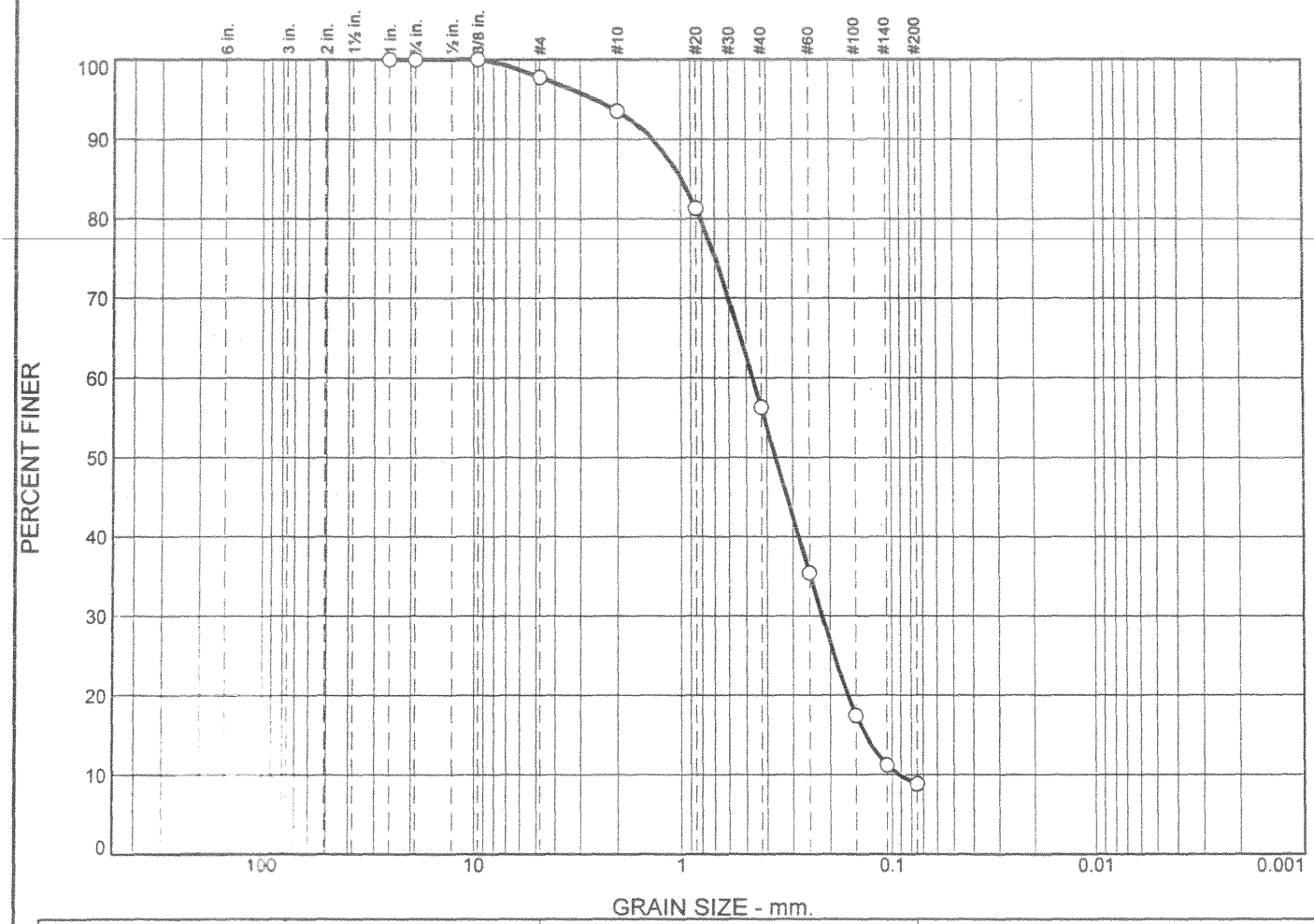
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pablo Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 2 | 4 | 38 | 47 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.9915 | 0.4660 | 0.3624 | 0.2177 | 0.1352 | 0.0926 | 1.10 | 5.03 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 65.5' **Sample Number:** 43

**Date:** ○

**Remarks:**
○ Moisture Content % 21.6
CP05-EAARS-CB-0266

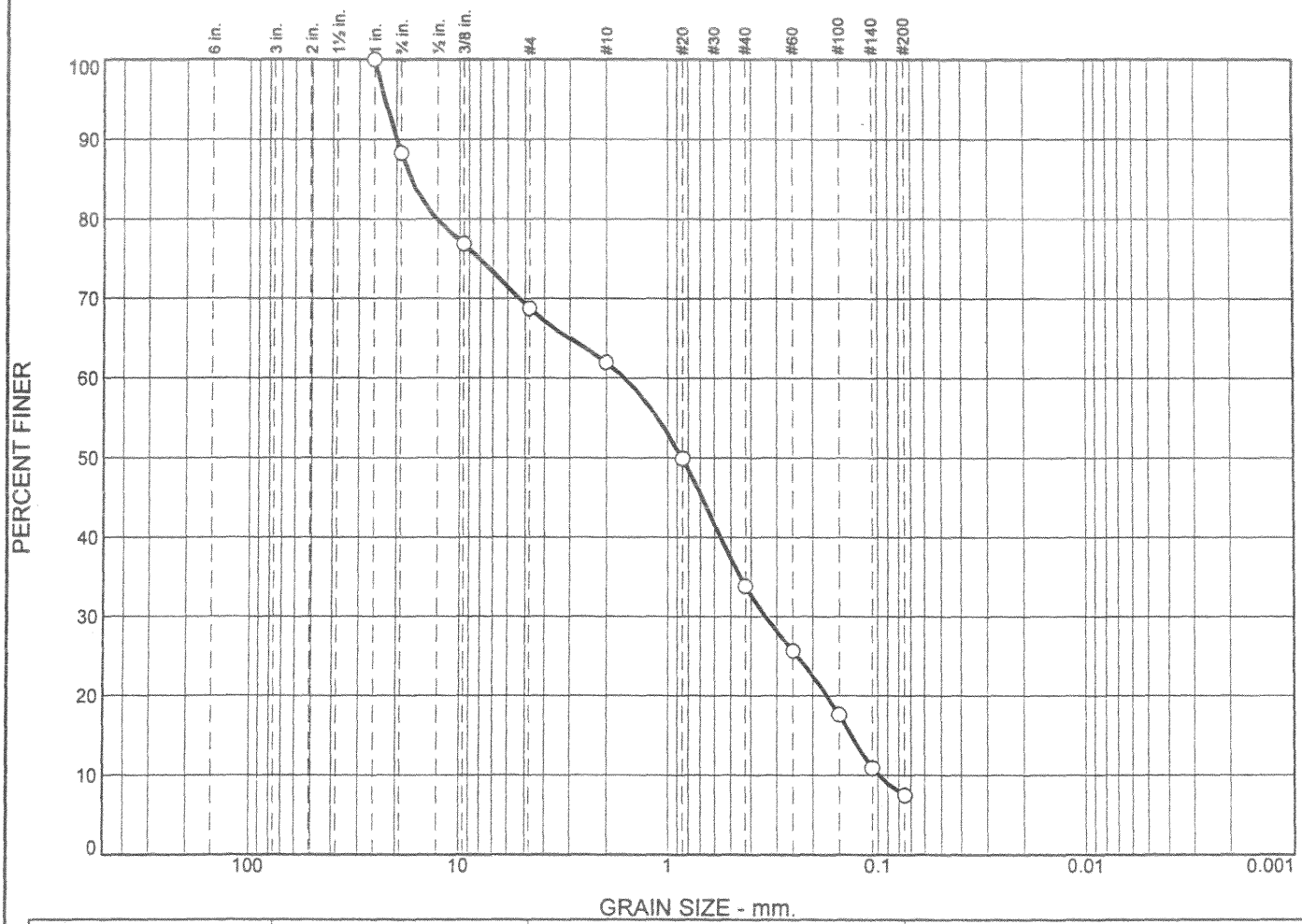
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 12 | 19 | 7 | 28 | 27 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 16.9881 | 1.6324 | 0.8528 | 0.3402 | 0.1320 | 0.0994 | 0.71 | 16.43 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 68.5' **Sample Number:** 45

**Date:** ○

**Remarks:**
○ Moisture Content % 22.3
CP05-EAARS-CB-0266

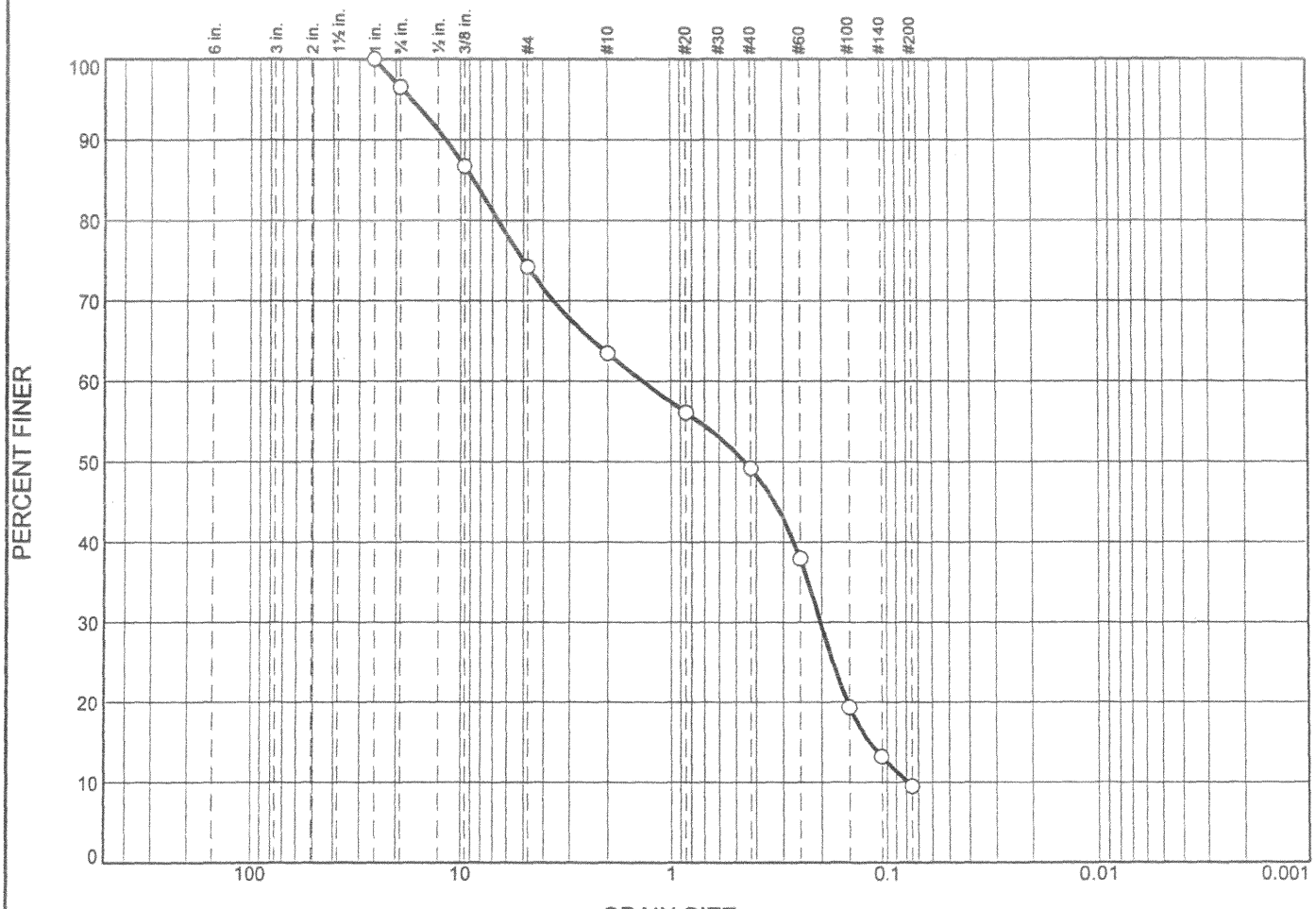
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 3 | 23 | 11 | 14 | 40 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.6203 | 1.3627 | 0.4514 | 0.2021 | 0.1215 | 0.0788 | 0.38 | 17.29 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 73.0' **Sample Number:** 48

**Date:** ○

**Remarks:**
○ Moisture Content % 21.3
CP05-EAARS-CB-0266

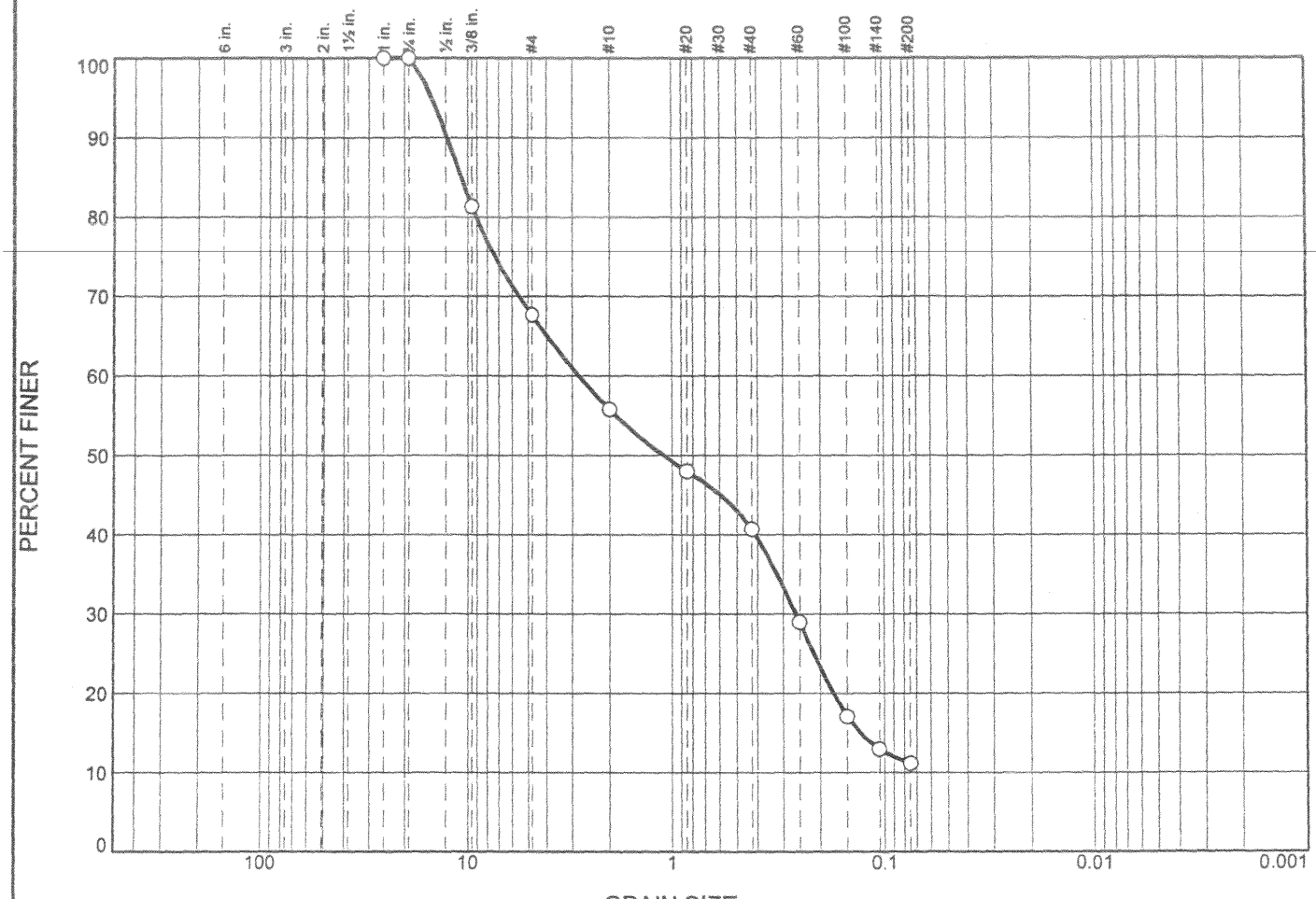
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pablo Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 32 | 12 | 15 | 30 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 10.7289 | 2.7914 | 1.0931 | 0.2603 | 0.1303 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 76.0' **Sample Number:** 50

**Date:** ○

**Remarks:**
○ Moisture Content % 18.3 CP05-EAARS-CB-0266

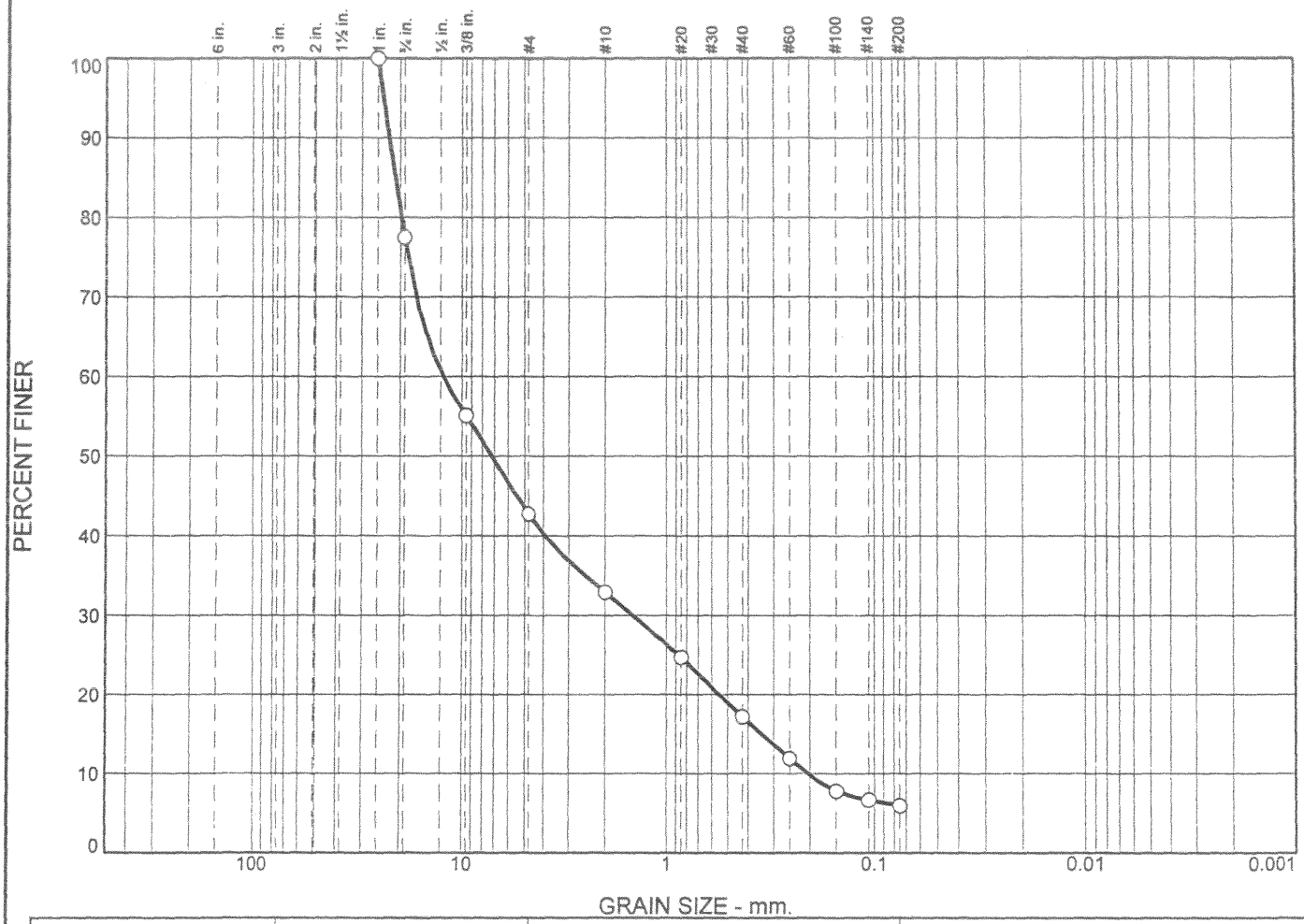
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 23 | 34 | 10 | 16 | 11 | 6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.1728 | 12.3387 | 7.2008 | 1.4580 | 0.3425 | 0.2034 | 0.85 | 60.65 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded gravel with silt and sand | GW-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 85.0' **Sample Number:** 56

**Date:** ○

**Remarks:**
○ Moisture Content % 18.4 CP05-EAARS-CB-0266

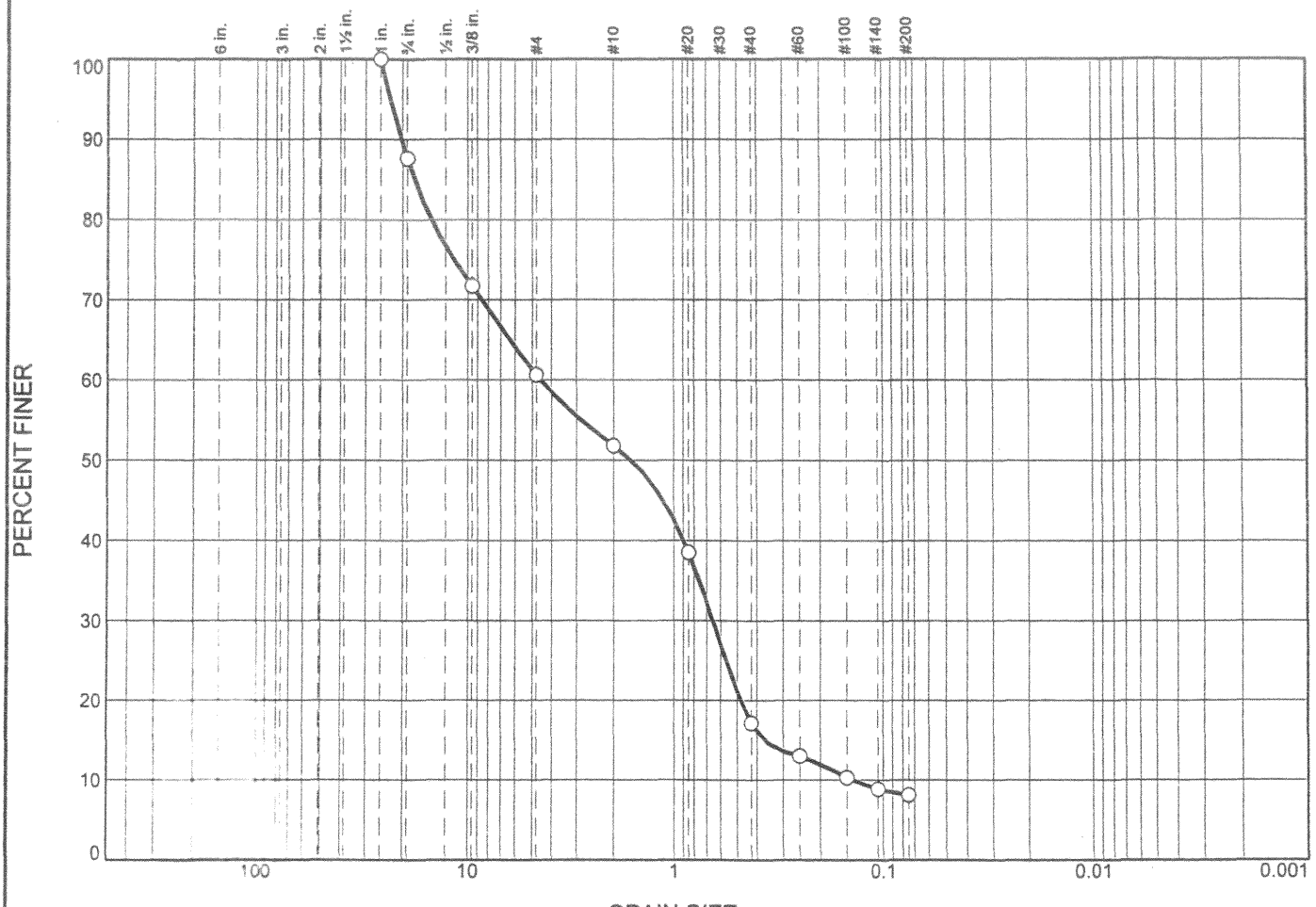
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown July 2014

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 12 | 27 | 9 | 35 | 9 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.6613 | 4.5220 | 1.6420 | 0.6544 | 0.3675 | 0.1408 | 0.67 | 32.11 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0169 **Depth:** 89.5' **Sample Number:** 59

**Date:** ○

**Remarks:**
○ Moisture Content % 14.2
CP05-EAARS-CB-0266

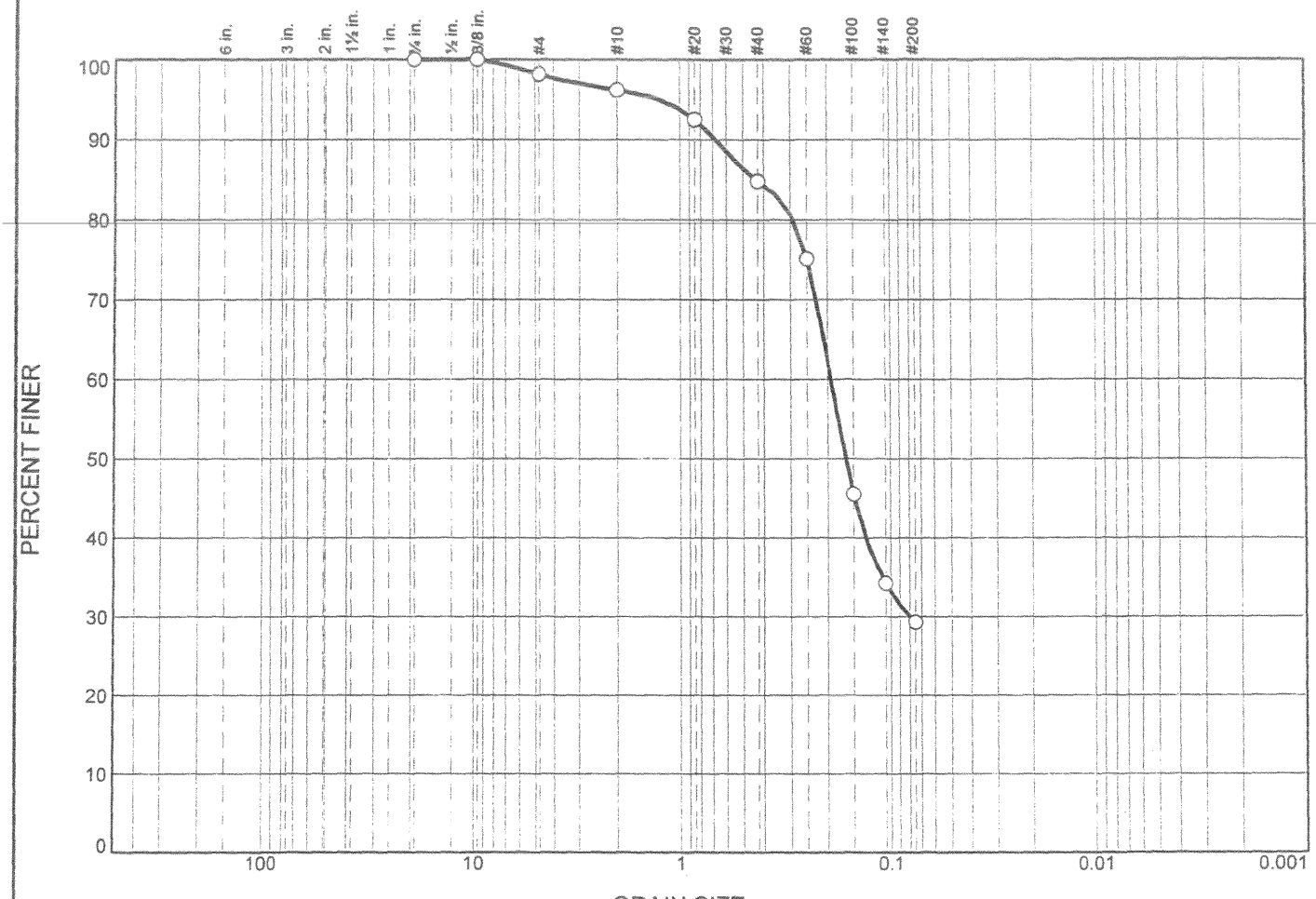
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 1.9 | 1.9 | 11.4 | 55.5 | 29.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.4344 | 0.1915 | 0.1630 | 0.0796 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty Sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB170 **Depth:** 88.5'-90.0' **Sample Number:** CB170

**Remarks:**

○ Moisture Content % 21.4 CP05-EAARS-CB-0267

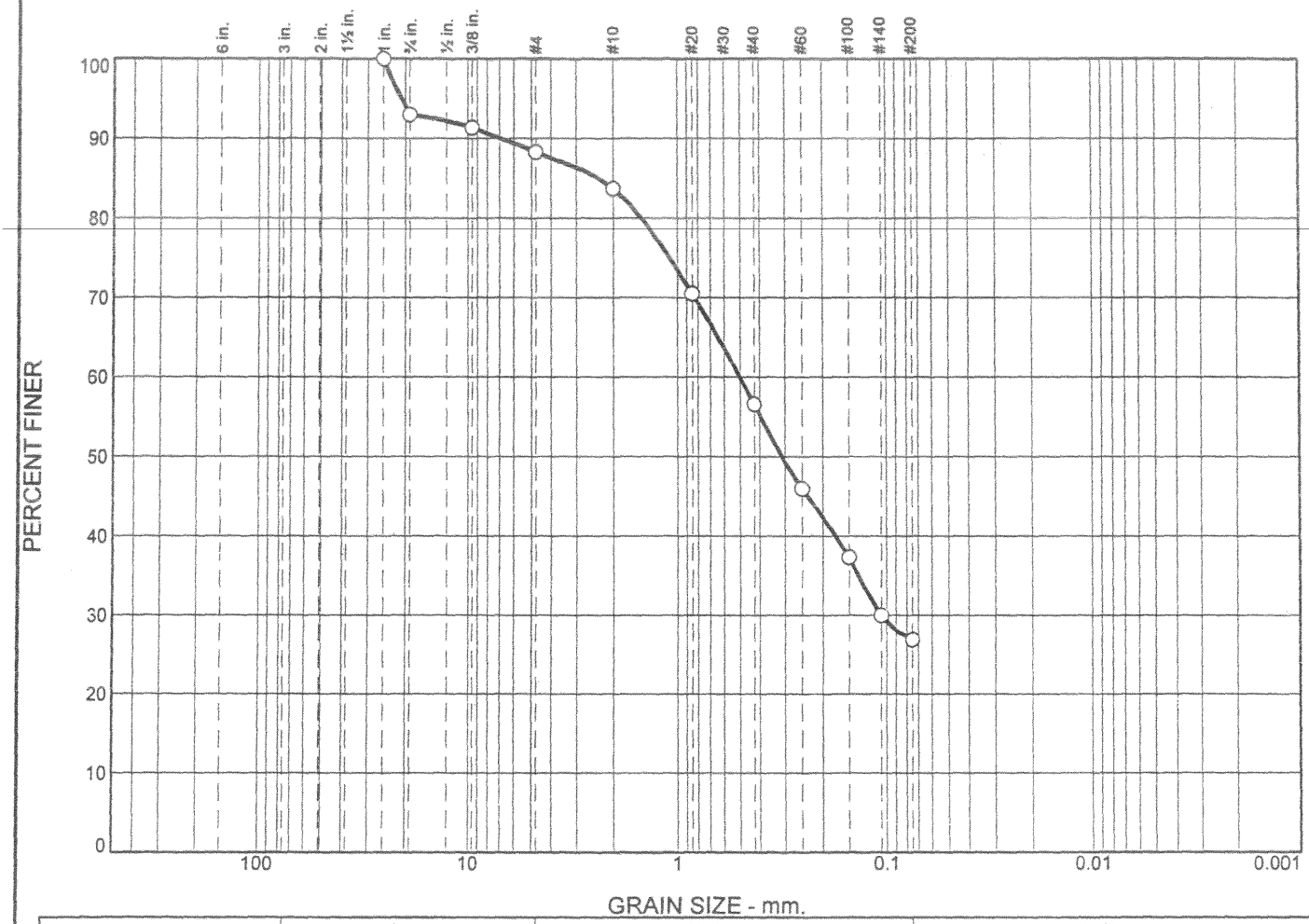
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 7 | 5 | 4 | 27 | 30 | 27 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.3383 | 0.5011 | 0.3099 | 0.1060 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0171 **Depth:** 13.5' **Sample Number:** 4

**Date:** ○

**Remarks:**
○ Moisture Content % 30.2 CP05-EAARS-CB-0268

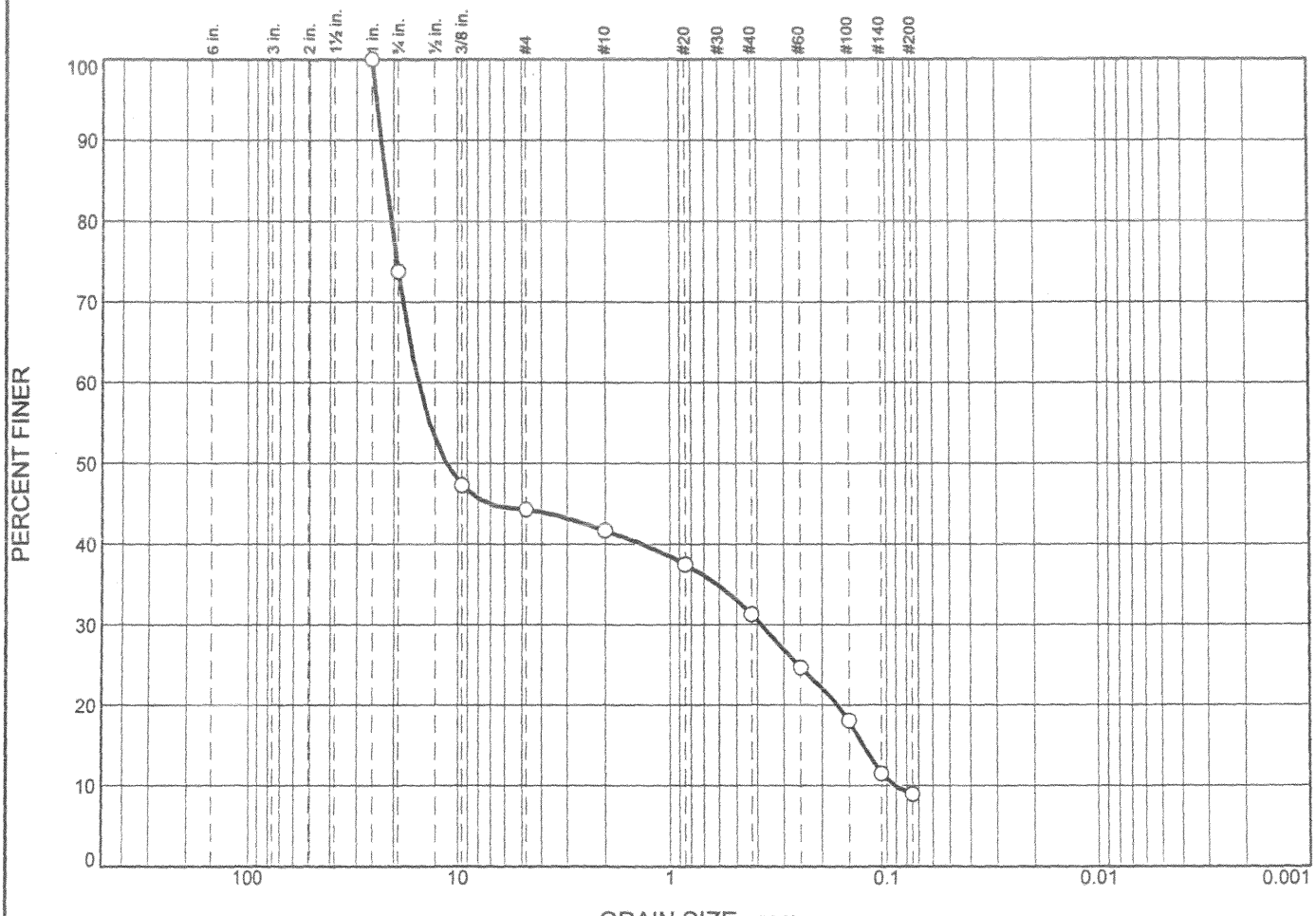
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Cabaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 26 | 30 | 2 | 11 | 22 | 9 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.7308 | 15.2316 | 11.2605 | 0.3823 | 0.1285 | 0.0919 | 0.10 | 165.72 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0171 **Depth:** 18.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 21.5 CP05-EAARS-CB-0268

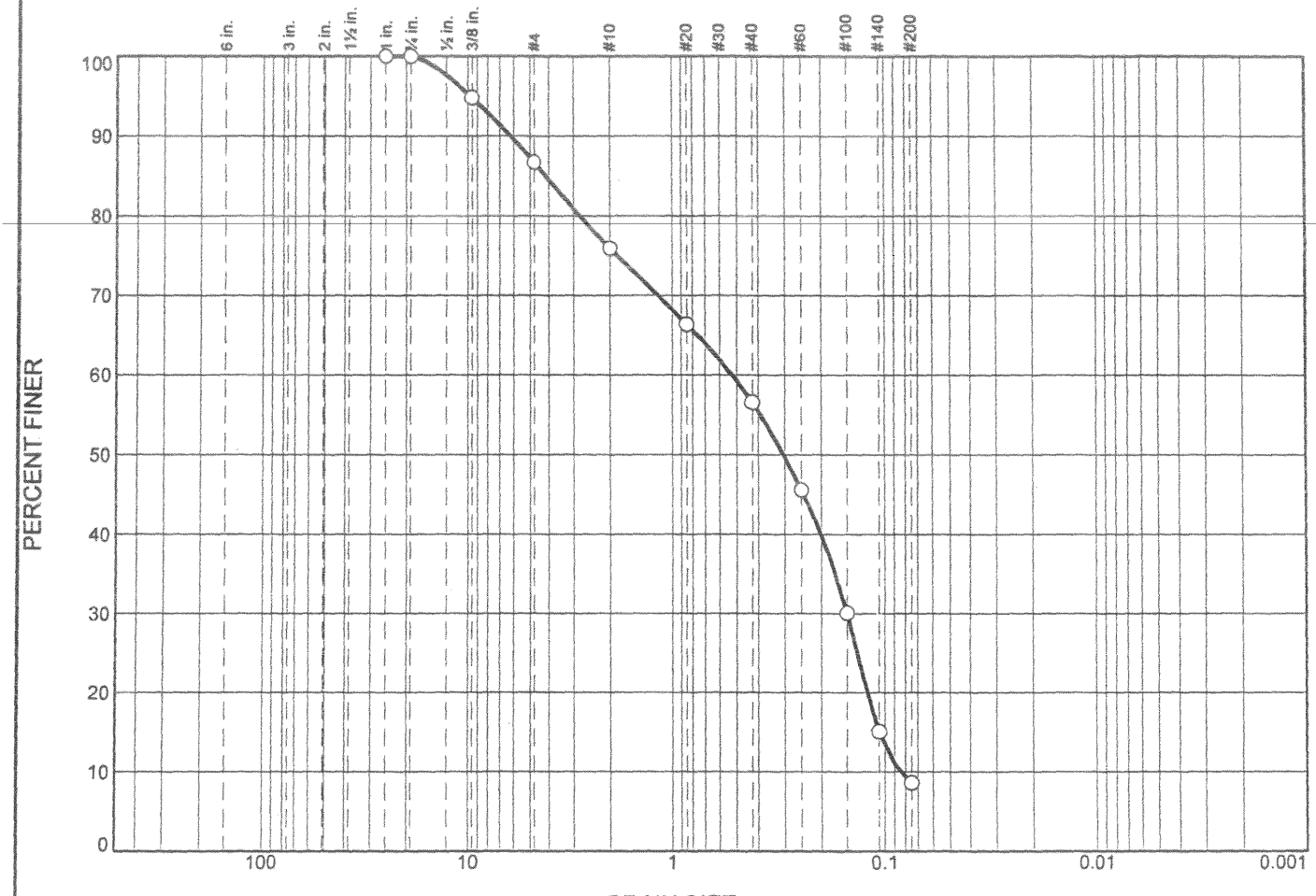
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 13 | 11 | 19 | 48 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.1445 | 0.5239 | 0.3043 | 0.1497 | 0.1058 | 0.0839 | 0.51 | 6.24 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0171 **Depth:** 33.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 17.7 CP05-EAARS-CB-0268

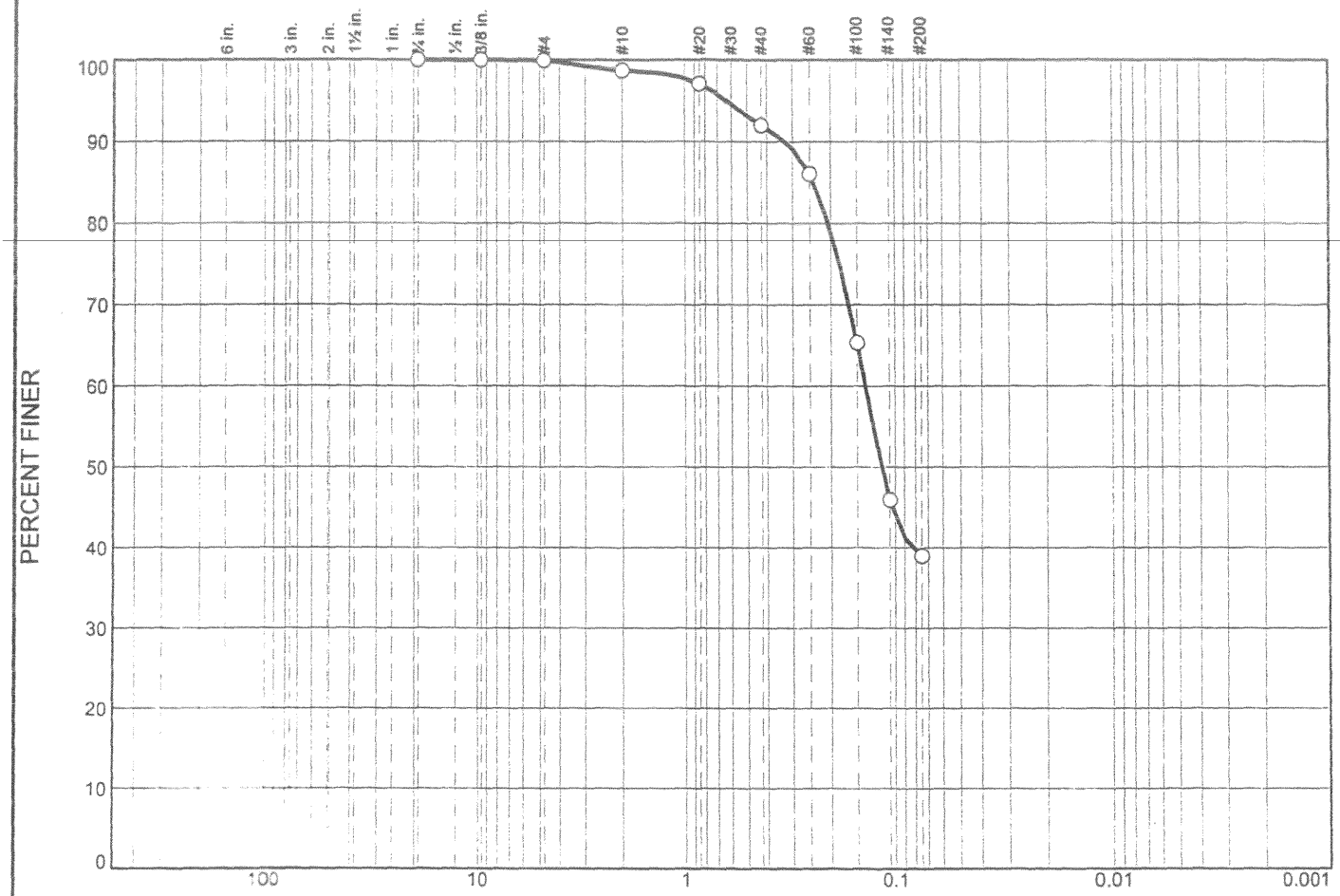
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.1 | 1.2 | 6.7 | 53.0 | 39.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2395 | 0.1373 | 0.1157 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB171 **Depth:** 78.5'-80.0 **Sample Number:** CB171

**Remarks:**

○ Moisture Content % 26.4 CP05-EAARS-CB-0268

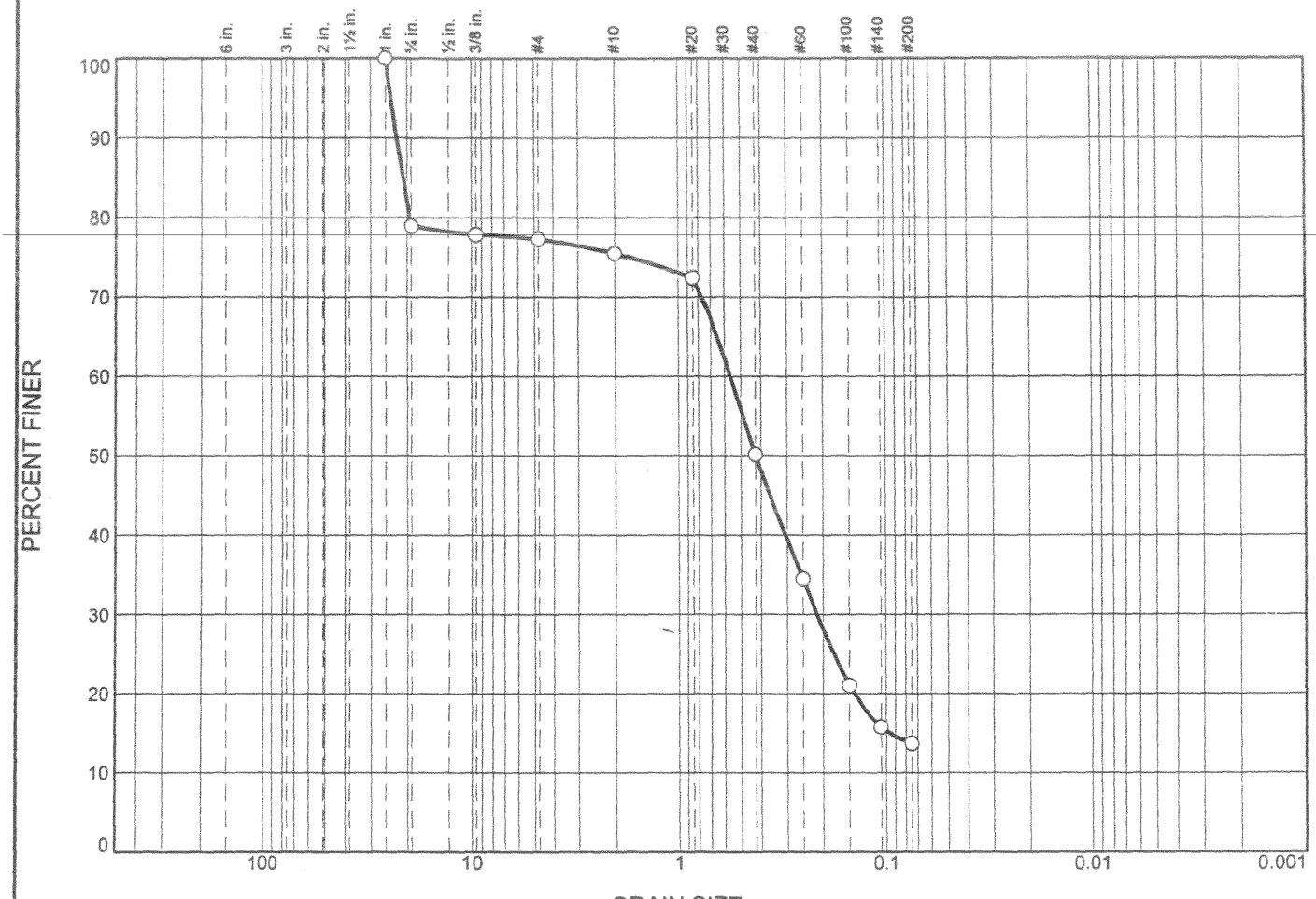
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 21 | 2 | 2 | 25 | 36 | 14 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.0463 | 0.5610 | 0.4232 | 0.2134 | 0.0963 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0172 **Depth:** 0.0' **Sample Number:** 1

**Date:** ○

**Remarks:**
○ Moisture Content % 136.8 CP05-EAARS-CB-0269

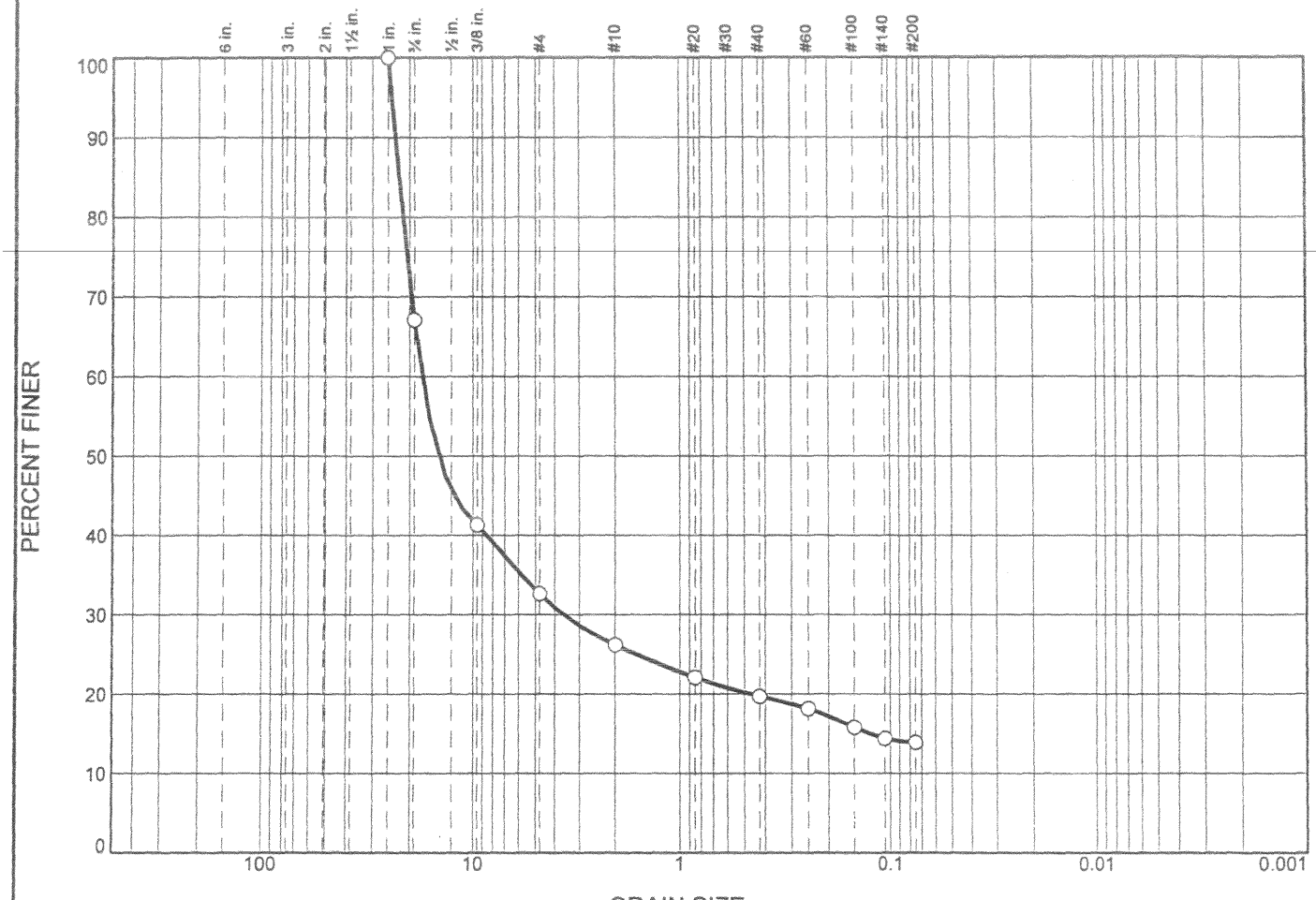
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 33 | 34 | 7 | 6 | 6 | 14 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 22.5022 | 17.4618 | 14.5600 | 3.5945 | 0.1253 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty gravel with sand | GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0173 **Depth:** 3.5' **Sample Number:** 3

**Date:** ○

**Remarks:**
○ Moisture Content % 27 CP05-EAARS-CB-0269

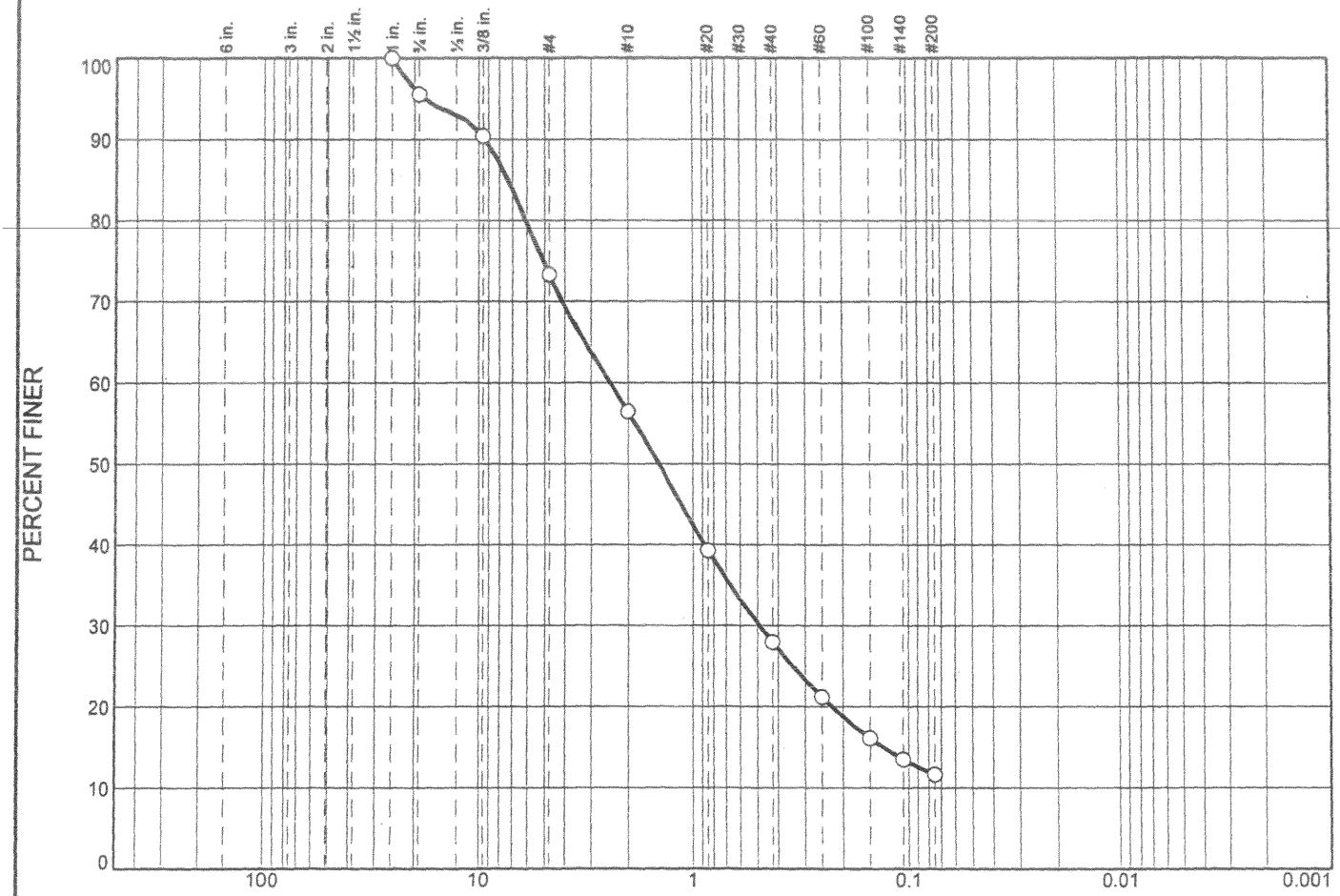
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 23 | 17 | 28 | 16 | 12 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.3316 | 2.4333 | 1.4431 | 0.4882 | 0.1307 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0172 **Depth:** 8.5' **Sample Number:** 3

**Date:** ○

**Remarks:**
○ Moisture Content % 23.8 CP05-EAARS-CB-0269

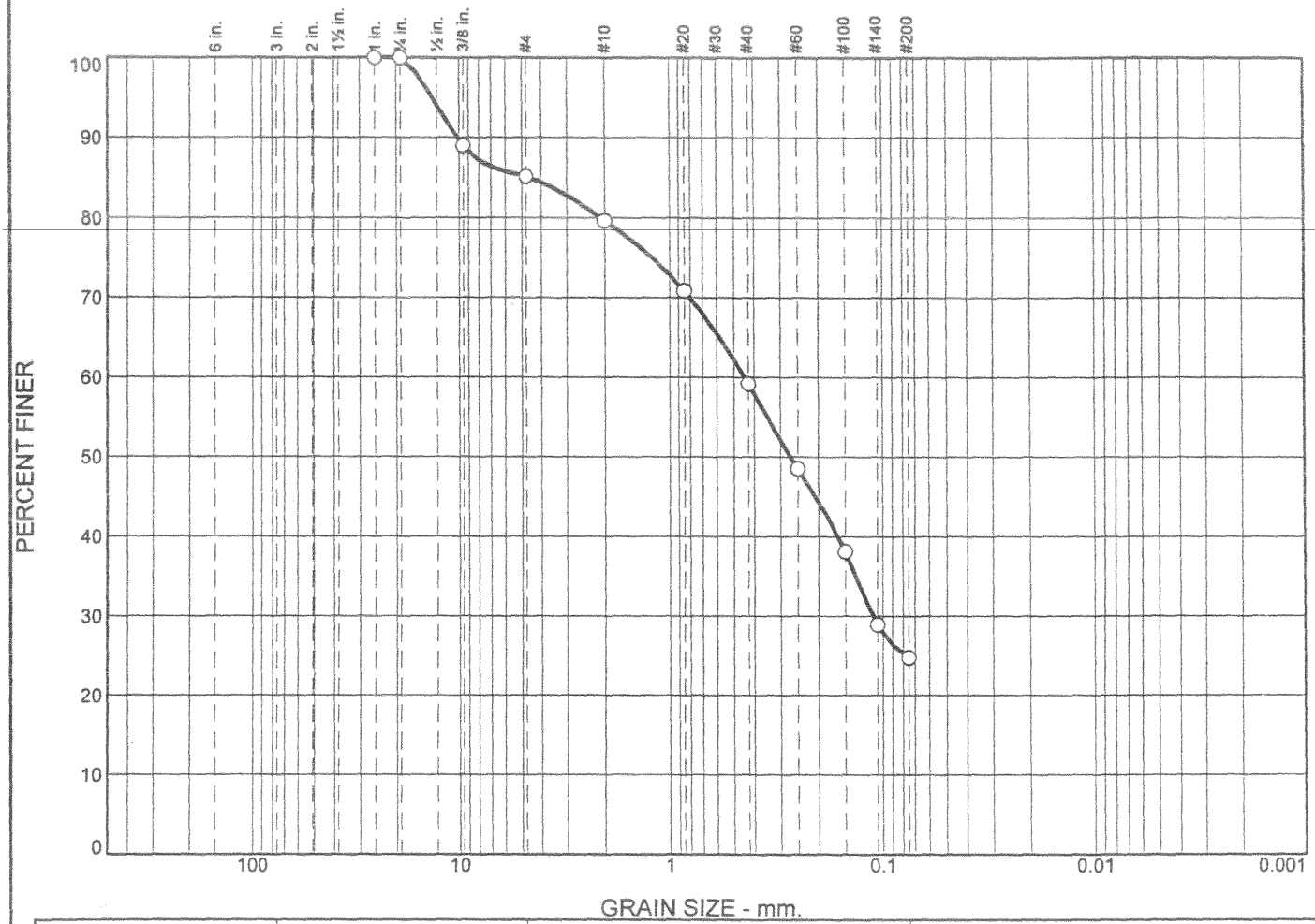
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 15 | 5 | 21 | 34 | 25 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.5605 | 0.4425 | 0.2697 | 0.1114 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0172 **Depth:** 13.5' **Sample Number:** 4

**Date:** ○

**Remarks:**
○ Moisture Content % 31.9 CP05-EAARS-CB-0269

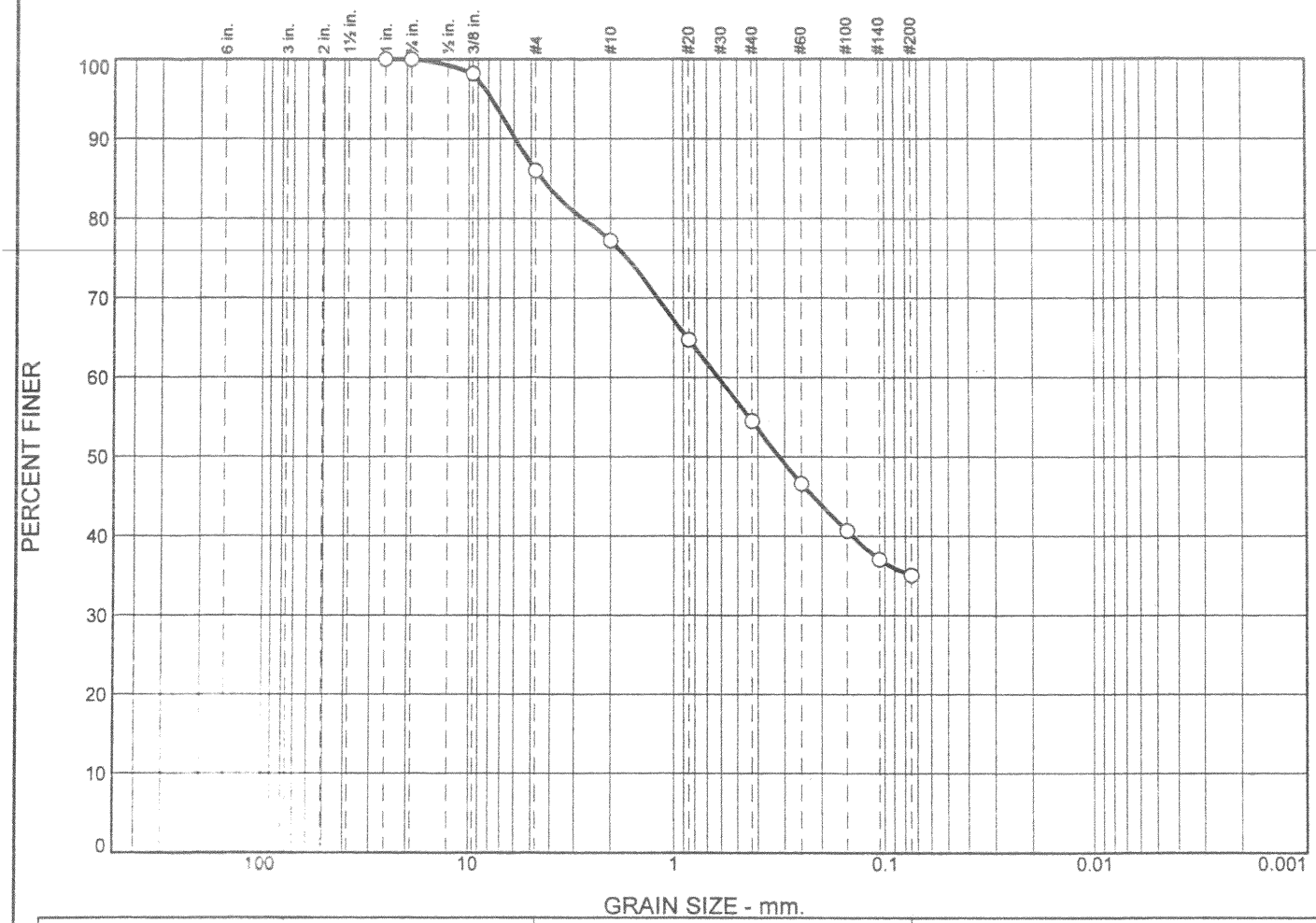
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 14 | 9 | 23 | 19 | 35 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.4426 | 0.6188 | 0.3170 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0173 **Depth:** 13.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 36.4 CP05-EAARS-CB-0269

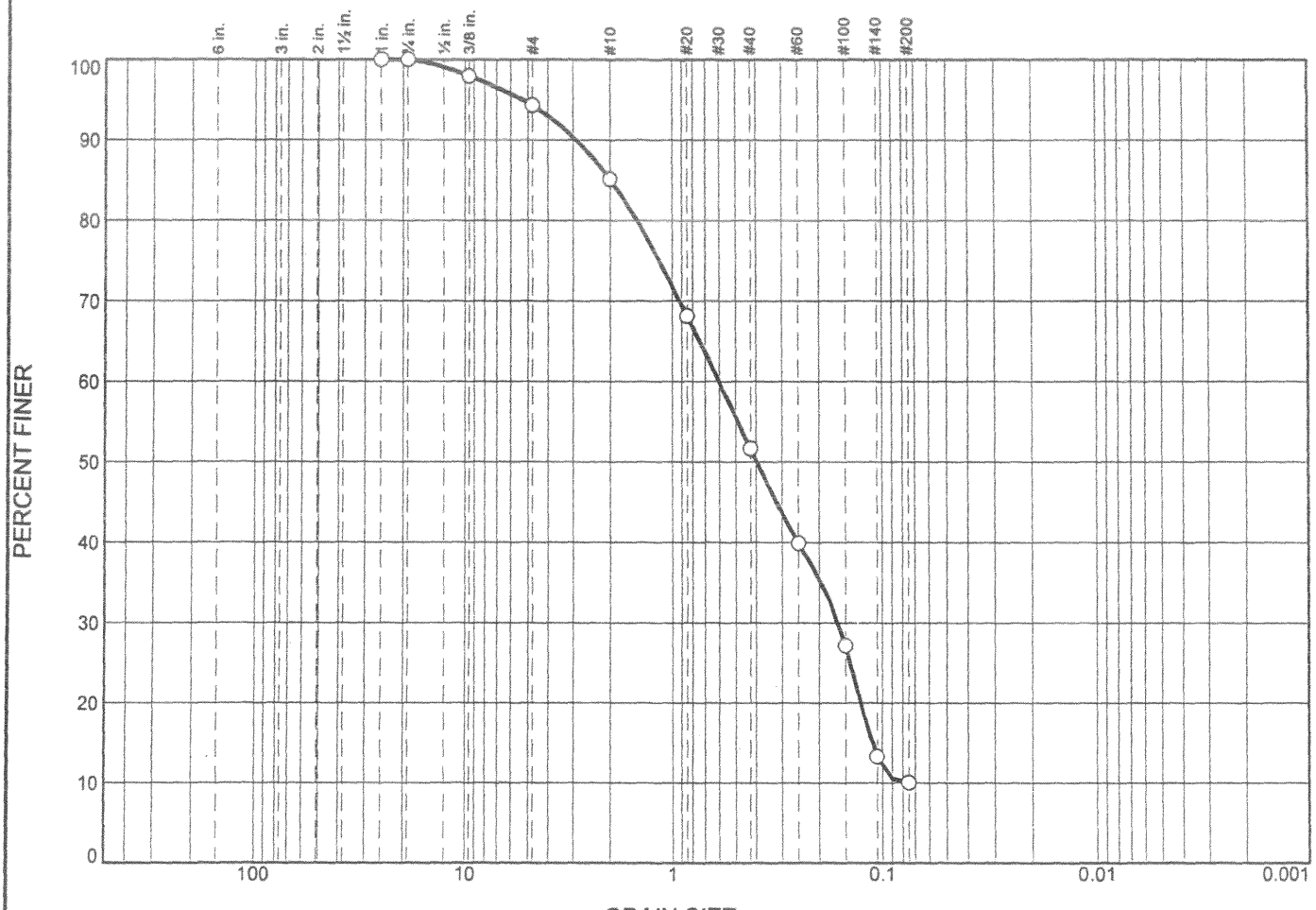
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 6 | 9 | 33 | 42 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.9799 | 0.6016 | 0.3958 | 0.1623 | 0.1119 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0172 **Depth:** 18.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 22.7 CP05-EAARS-CB-0269

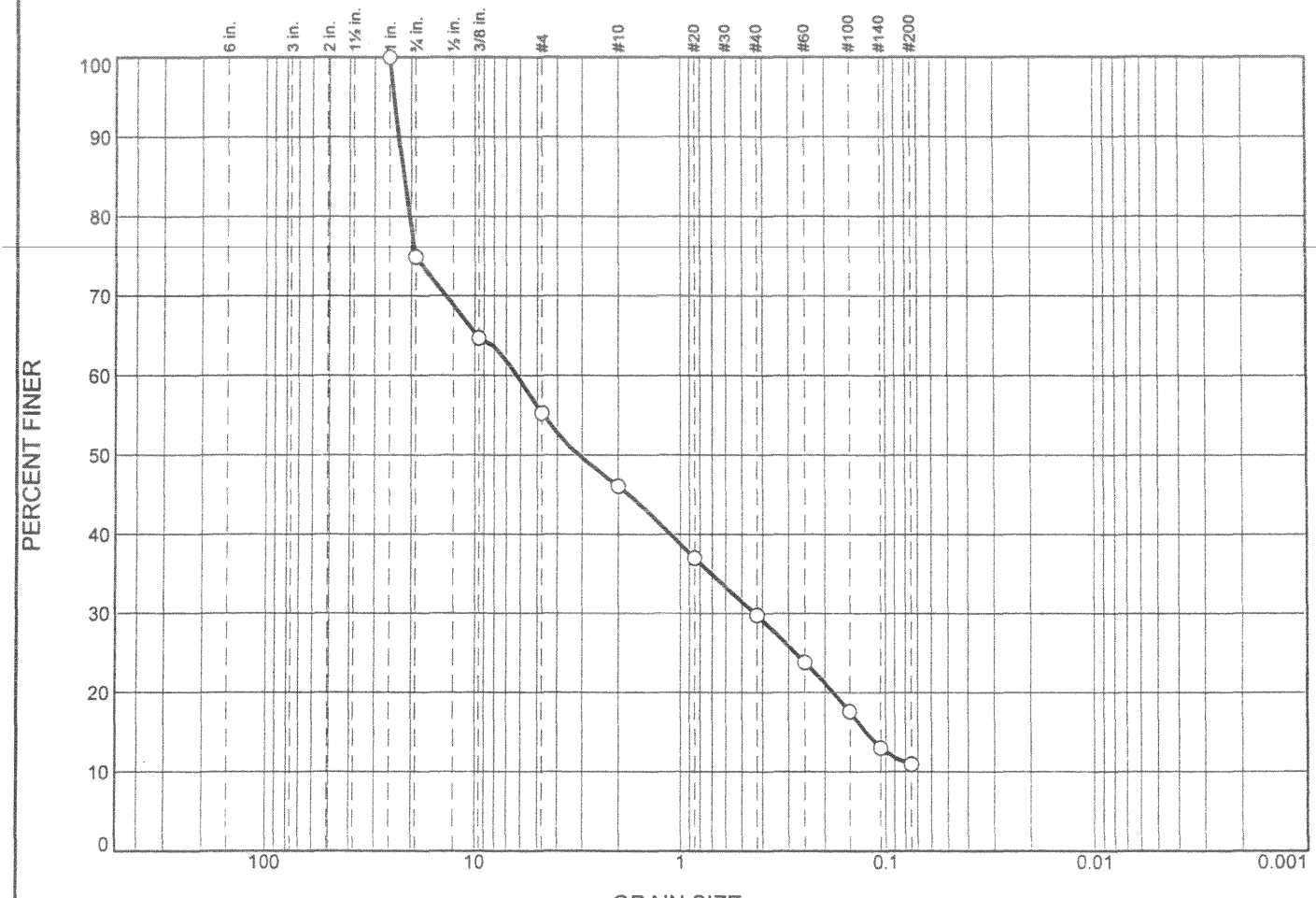
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 25 | 20 | 9 | 16 | 19 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.7109 | 6.2377 | 3.1064 | 0.4346 | 0.1251 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0173 **Depth:** 18.5' **Sample Number:** 6

**Date:** ○

**Remarks:**
○ Moisture Content % 26.0 CP05-EAARS-CB-0269

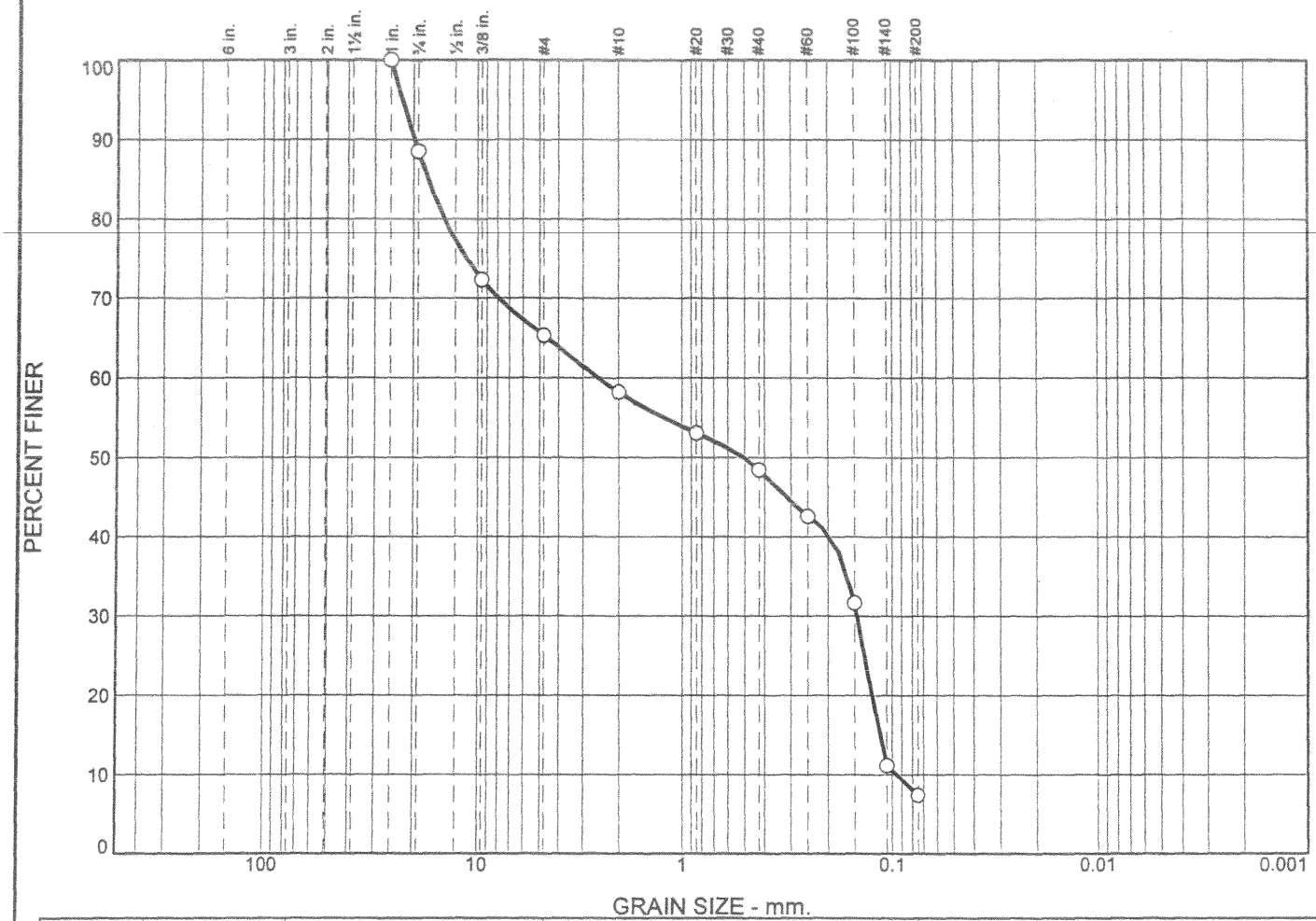
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 11 | 24 | 7 | 10 | 41 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.1489 | 2.5176 | 0.5043 | 0.1455 | 0.1146 | 0.0952 | 0.09 | 26.45 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with gravel | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0172 **Depth:** 33.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 16.4 CP05-EAARS-CB-0269

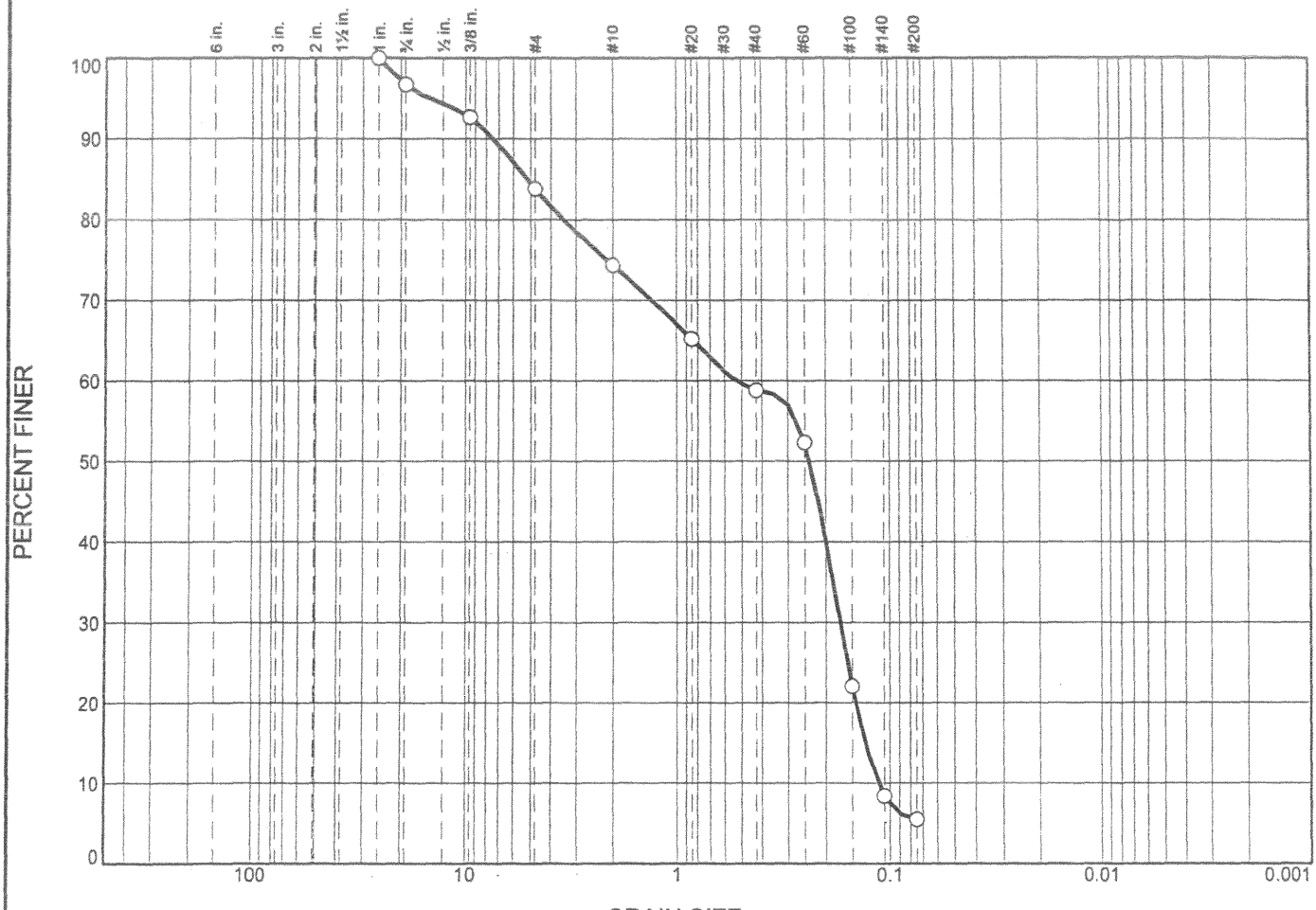
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 3 | 13 | 10 | 15 | 54 | 5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.1746 | 0.5272 | 0.2369 | 0.1706 | 0.1302 | 0.1130 | 0.49 | 4.66 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0172 **Depth:** 38.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 20.9 CP05-EAARS-CB-0269

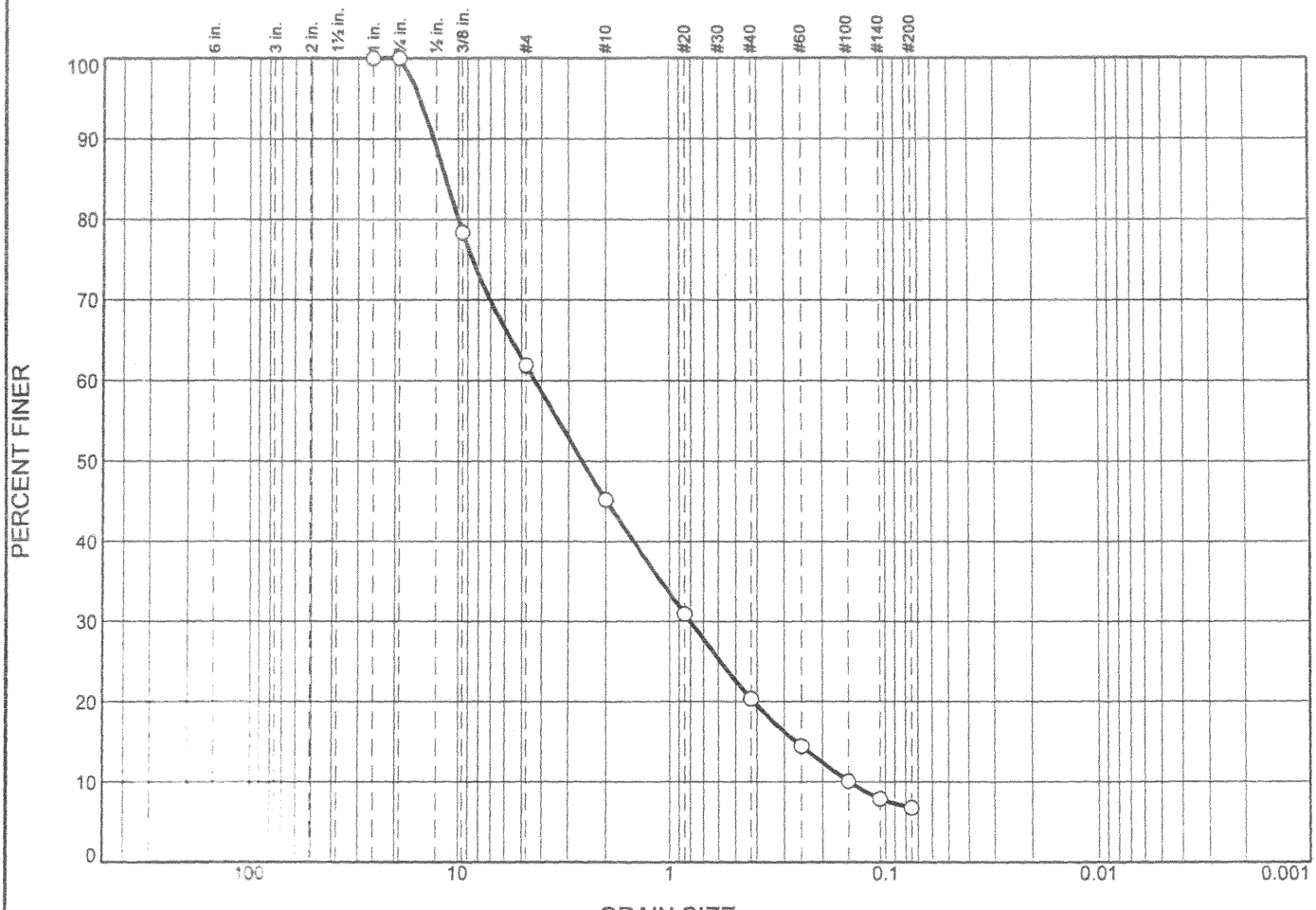
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Pedro Casaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 38 | 17 | 25 | 13 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.4156 | 4.3044 | 2.5799 | 0.8016 | 0.2641 | 0.1486 | 1.00 | 28.98 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0173 **Depth:** 1.5' **Sample Number:** 2

**Date:** ○

**Remarks:**
○ Moisture Content % 157.6 CP05-EAARS-CB-0270

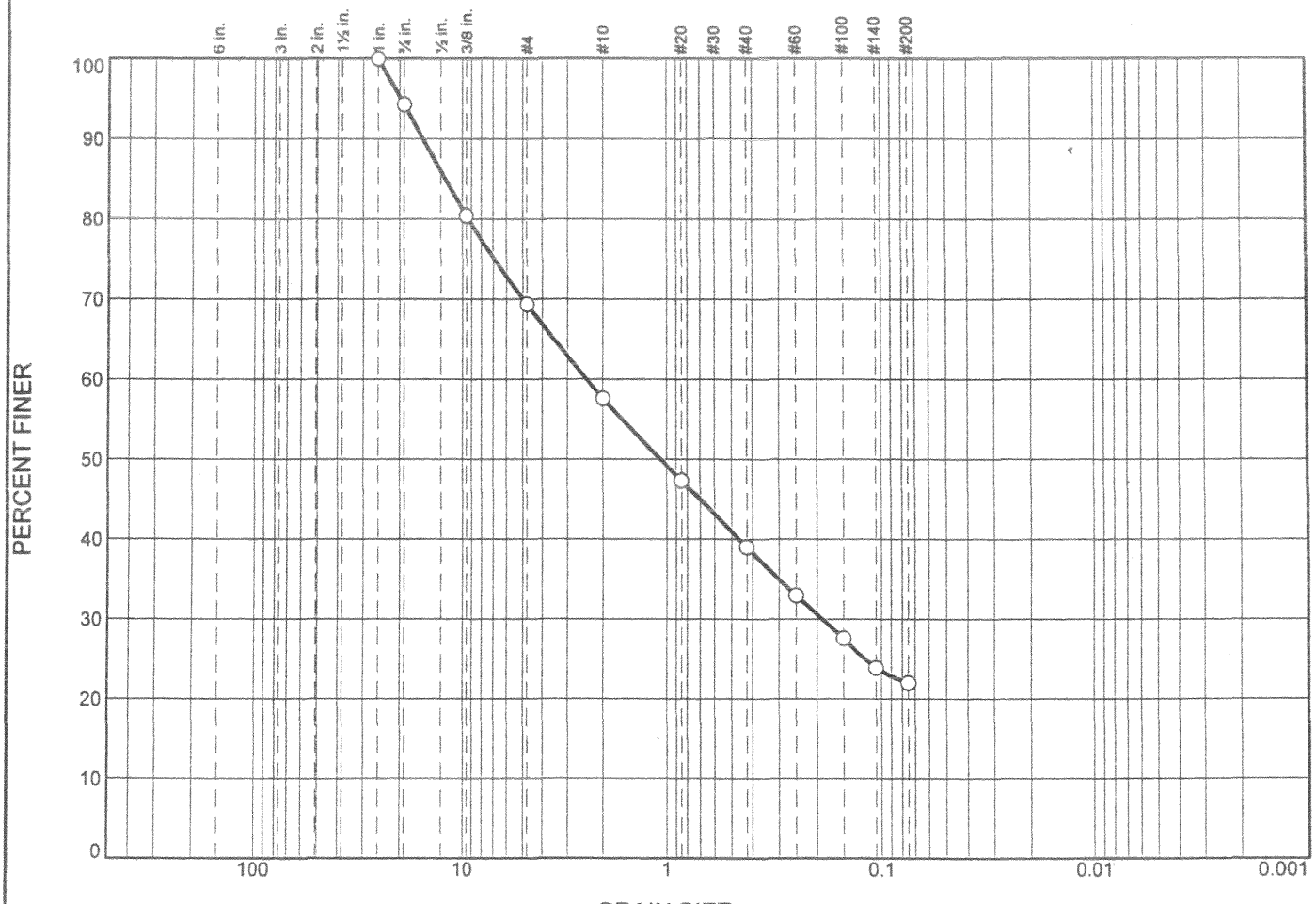
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 25 | 11 | 19 | 17 | 22 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.0906 | 2.4134 | 1.0653 | 0.1880 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0175 **Depth:** 0.0' **Sample Number:** 1

**Date:** ○

**Remarks:**
○ Moisture Content % 12.3 CP05-EAARS-CB-0271

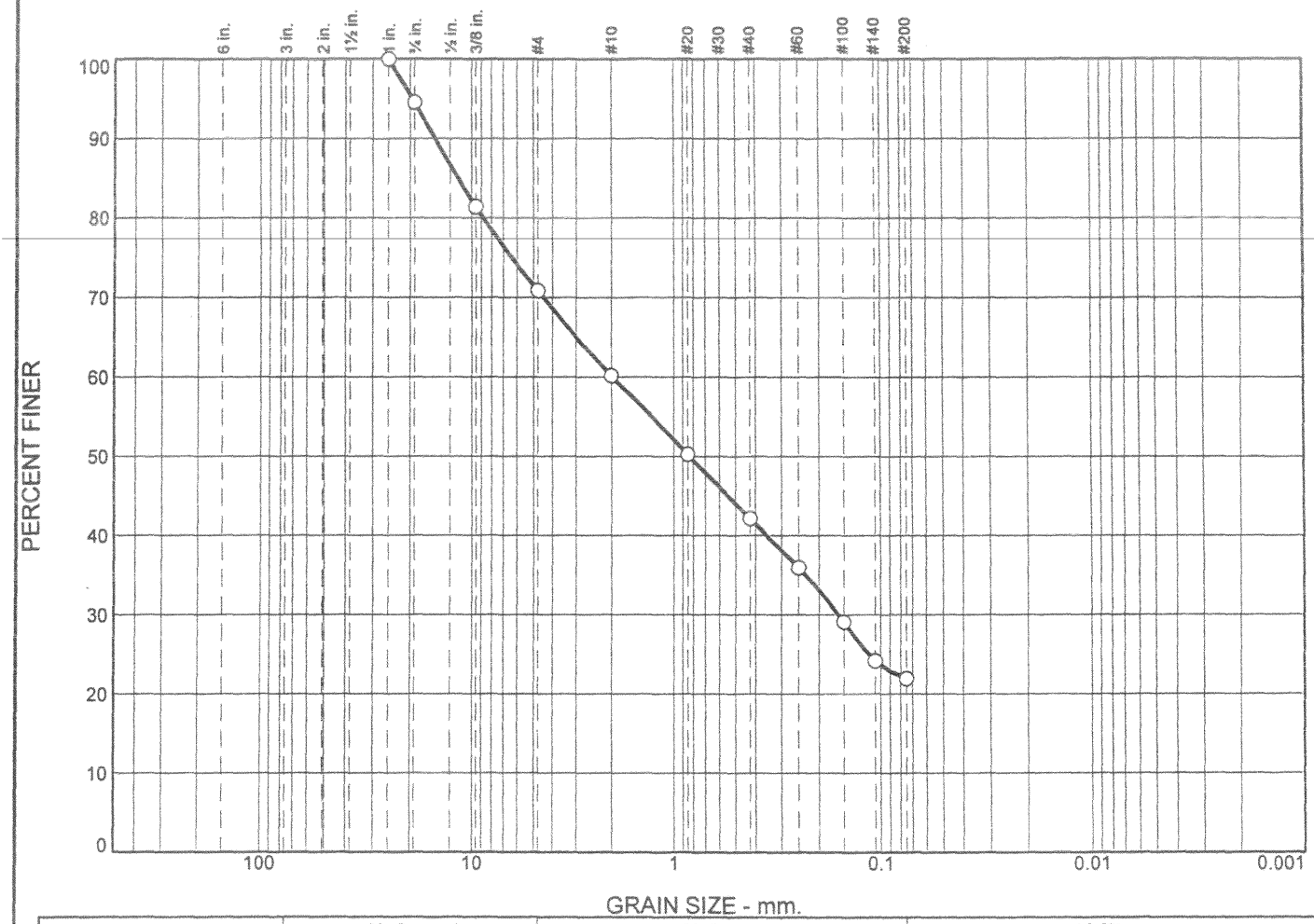
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 5 | 24 | 11 | 18 | 20 | 22 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.6299 | 1.9706 | 0.8308 | 0.1595 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0175 **Depth:** 2.0' **Sample Number:** 2

**Date:** ○

**Remarks:**
○ Moisture Content % 20.4 CP05-EAARS-CB-0271

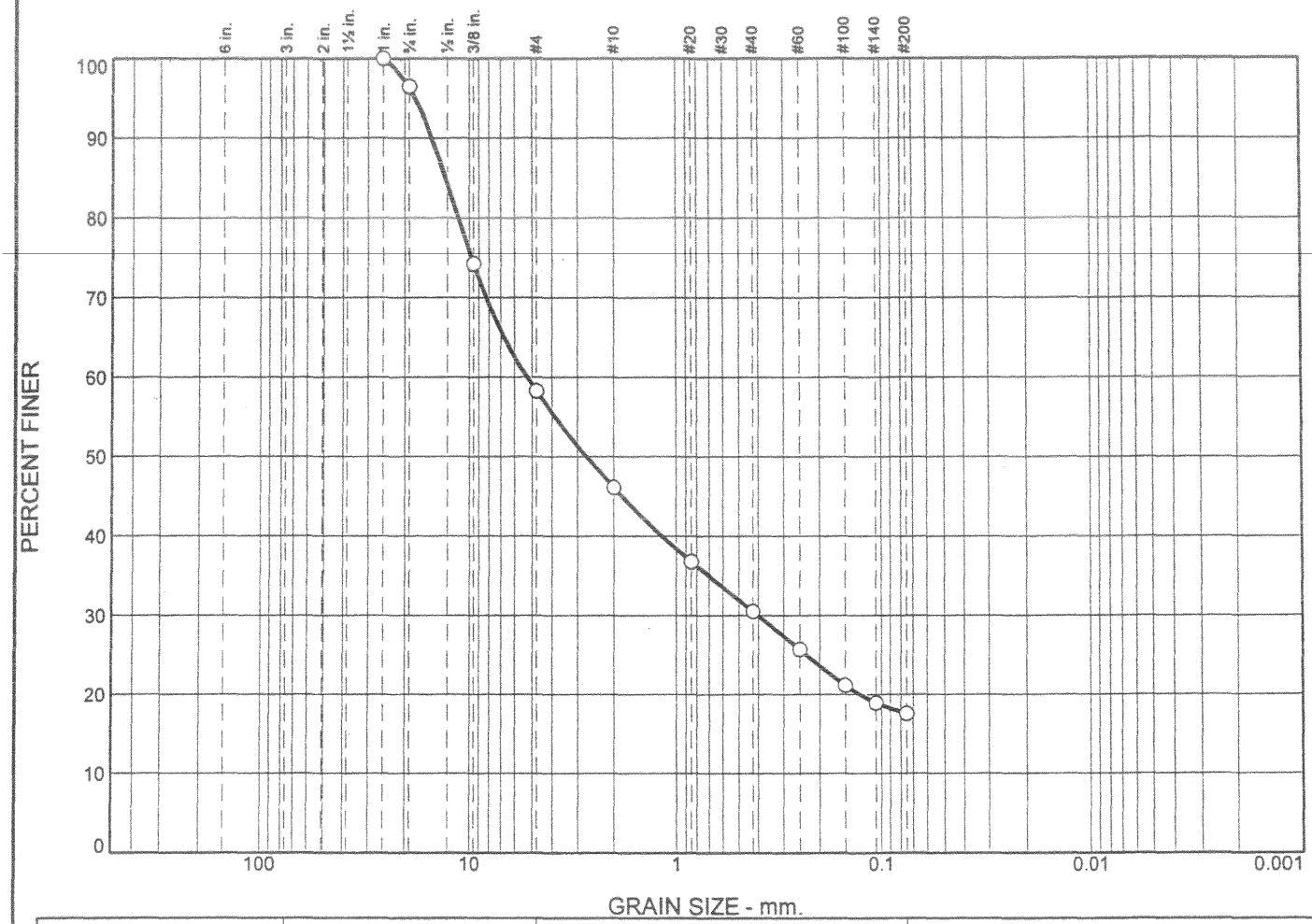
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 38 | 12 | 15 | 13 | 18 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.9138 | 5.2460 | 2.7193 | 0.4005 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0175 **Depth:** 10.5' **Sample Number:** 4

**Date:** ○

**Remarks:**
○ Moisture Content % 24.0 CP05-EAARS-CB-0271

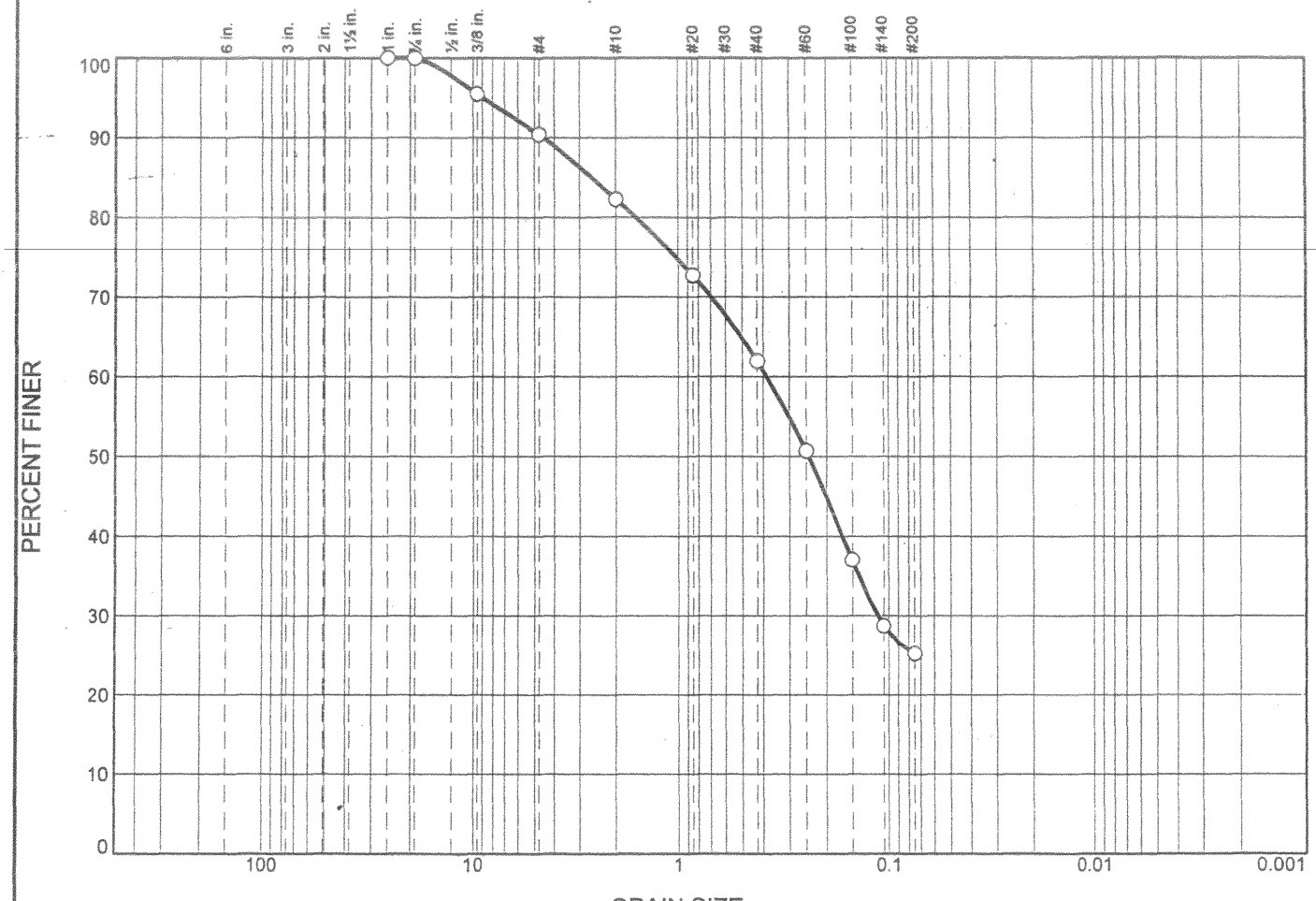
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 10 | 8 | 20 | 37 | 25 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.6123 | 0.3832 | 0.2430 | 0.1135 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0175 **Depth:** 18.5' **Sample Number:** 6

**Date:** ○

**Remarks:**
○ Moisture Content % 25.3 CP05-EAARS-CB-0271

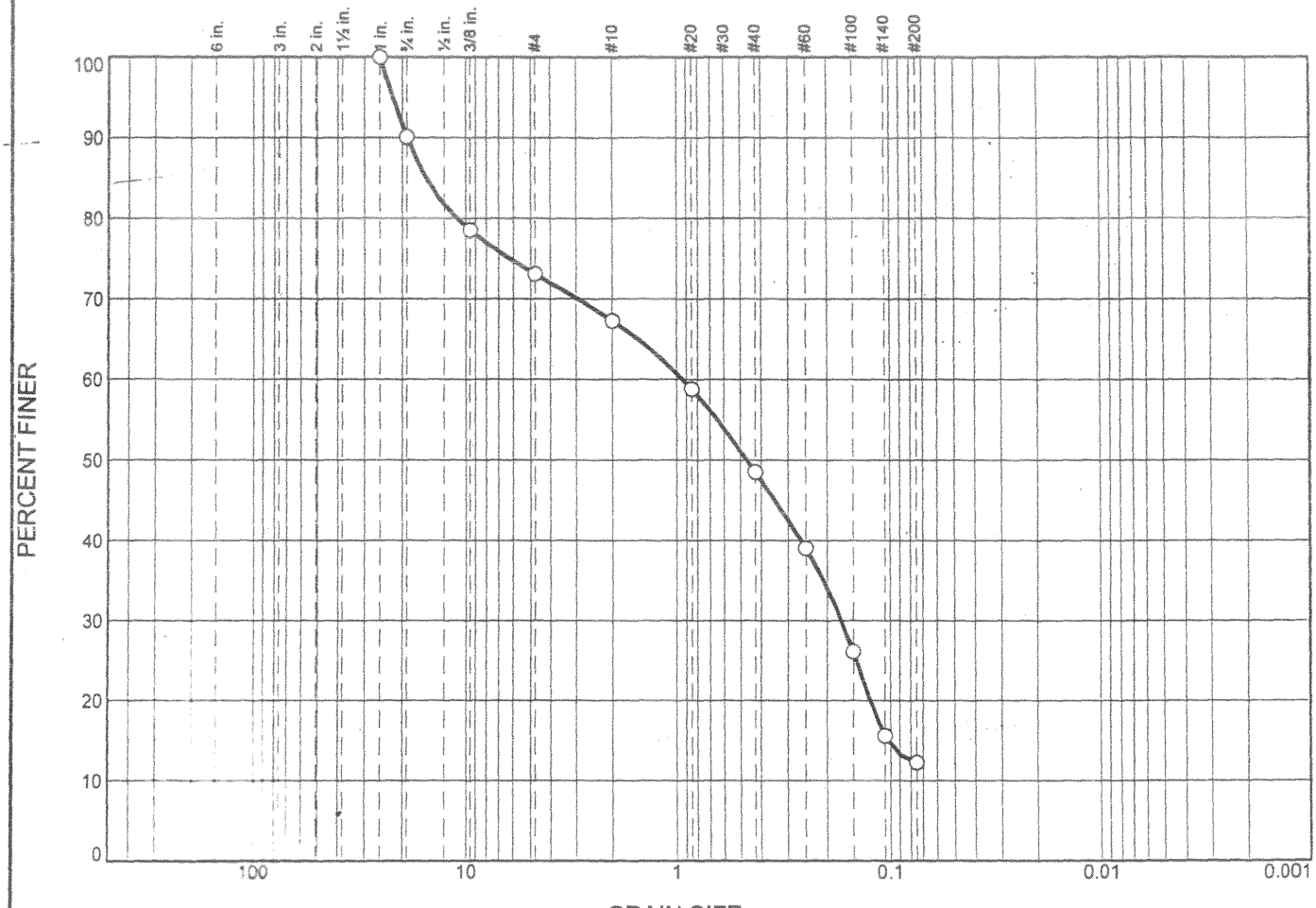
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 10 | 17 | 6 | 18 | 37 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 15.4527 | 0.9369 | 0.4658 | 0.1706 | 0.1028 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0175 **Depth:** 23.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 21.5 CP05-EAARS-CB-0271

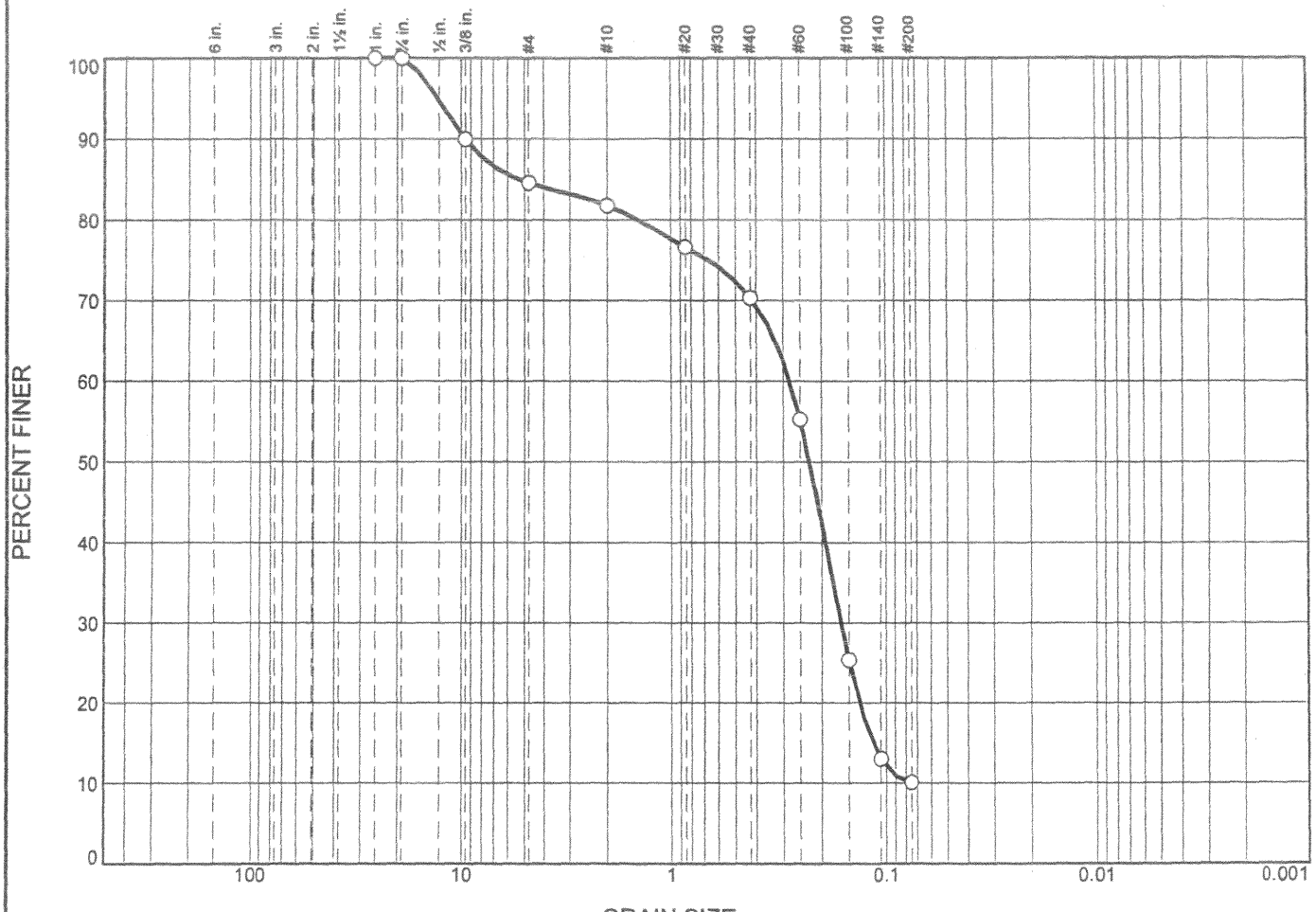
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Casaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 15 | 3 | 12 | 60 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.2820 | 0.2788 | 0.2265 | 0.1632 | 0.1154 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0175 **Depth:** 38.5' **Sample Number:** 10

**Date:** ○

**Remarks:**
○ Moisture Content % 24.3 CP05-EAARS-CB-0271

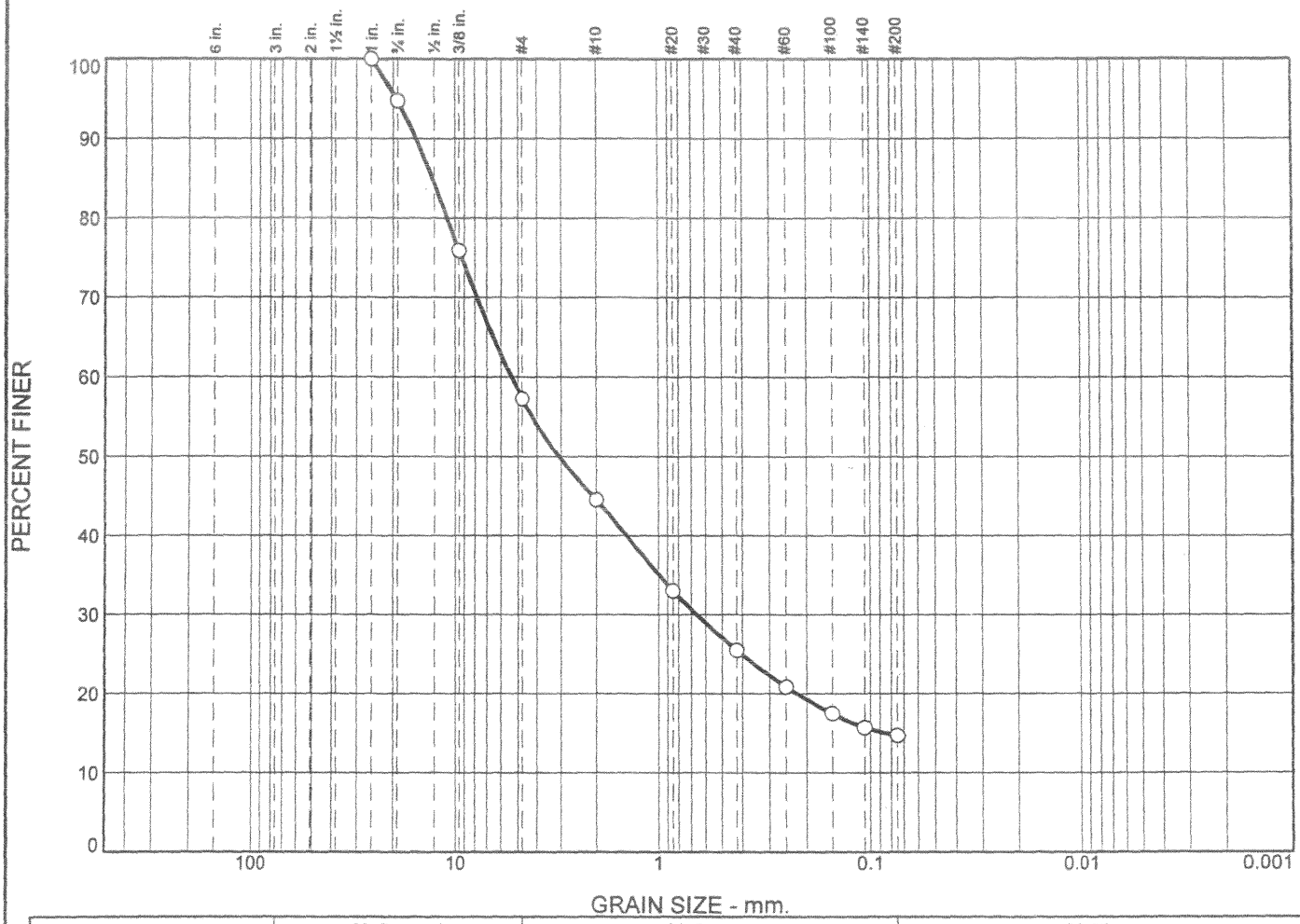
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 5 | 38 | 12 | 20 | 10 | 15 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.9561 | 5.3701 | 3.0774 | 0.6588 | 0.0847 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0176 **Depth:** 5.1' **Sample Number:** 2

**Date:** ○

**Remarks:**
○ Moisture Content % 19.0 CP05-EAARS-CB-0272

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Miami Lakes, FL

Figure

Tested By: Pablo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report

| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 8 | 7 | 6 | 18 | 37 | 24 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.8044 | 0.4006 | 0.2281 | 0.1135 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0176 **Depth:** 10.0' **Sample Number:** 4

**Date:** ○

**Remarks:**
○ Moisture Content % 29.1
CP05-EAARS-CB-0272

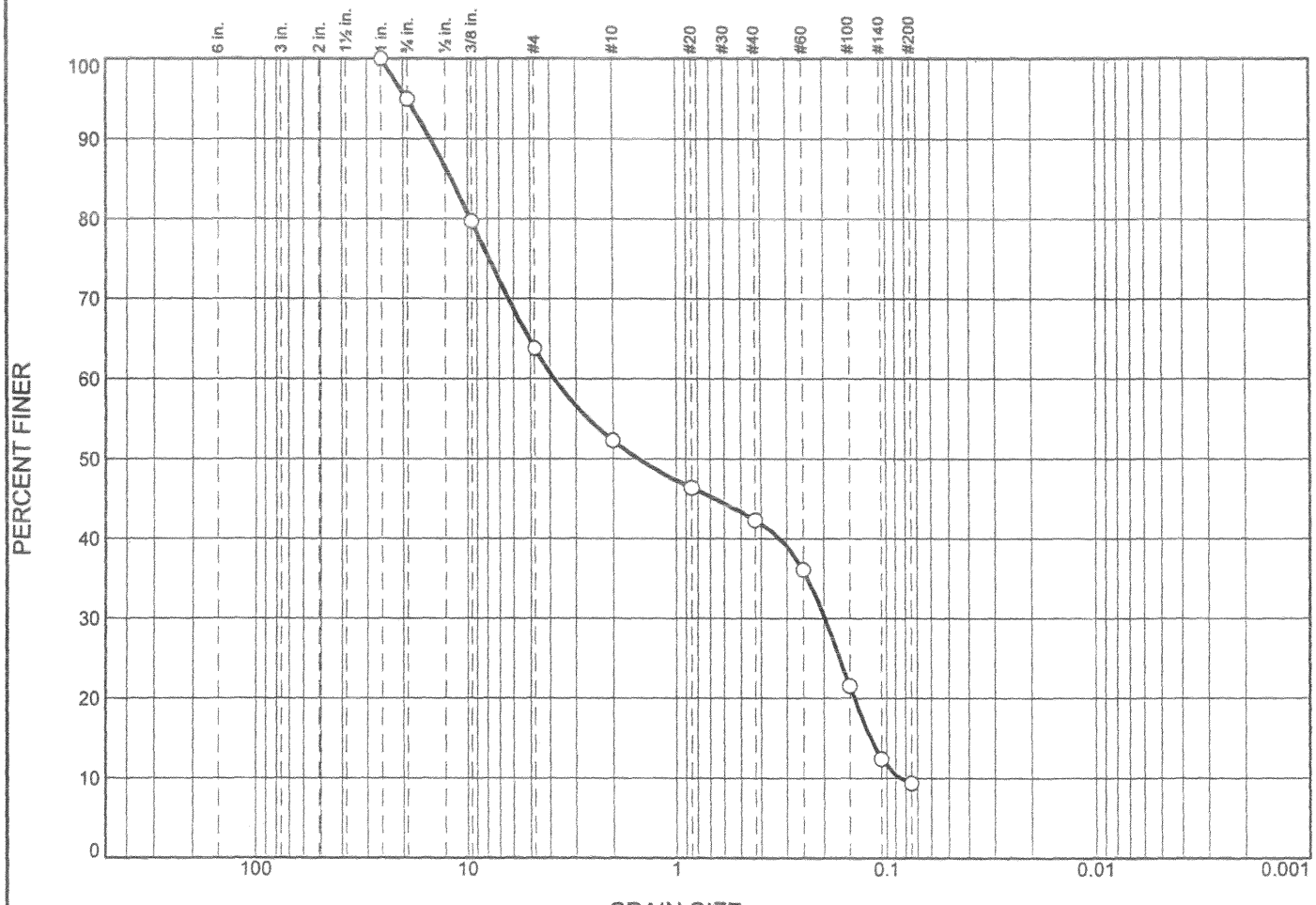
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 5 | 31 | 12 | 10 | 33 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.9080 | 3.8204 | 1.5043 | 0.1970 | 0.1197 | 0.0851 | 0.12 | 44.89 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0176 **Depth:** 18.5' **Sample Number:** 6

**Date:** ○

**Remarks:**
○ Moisture Content % 10.6
CP05-EAARS-CB-0272

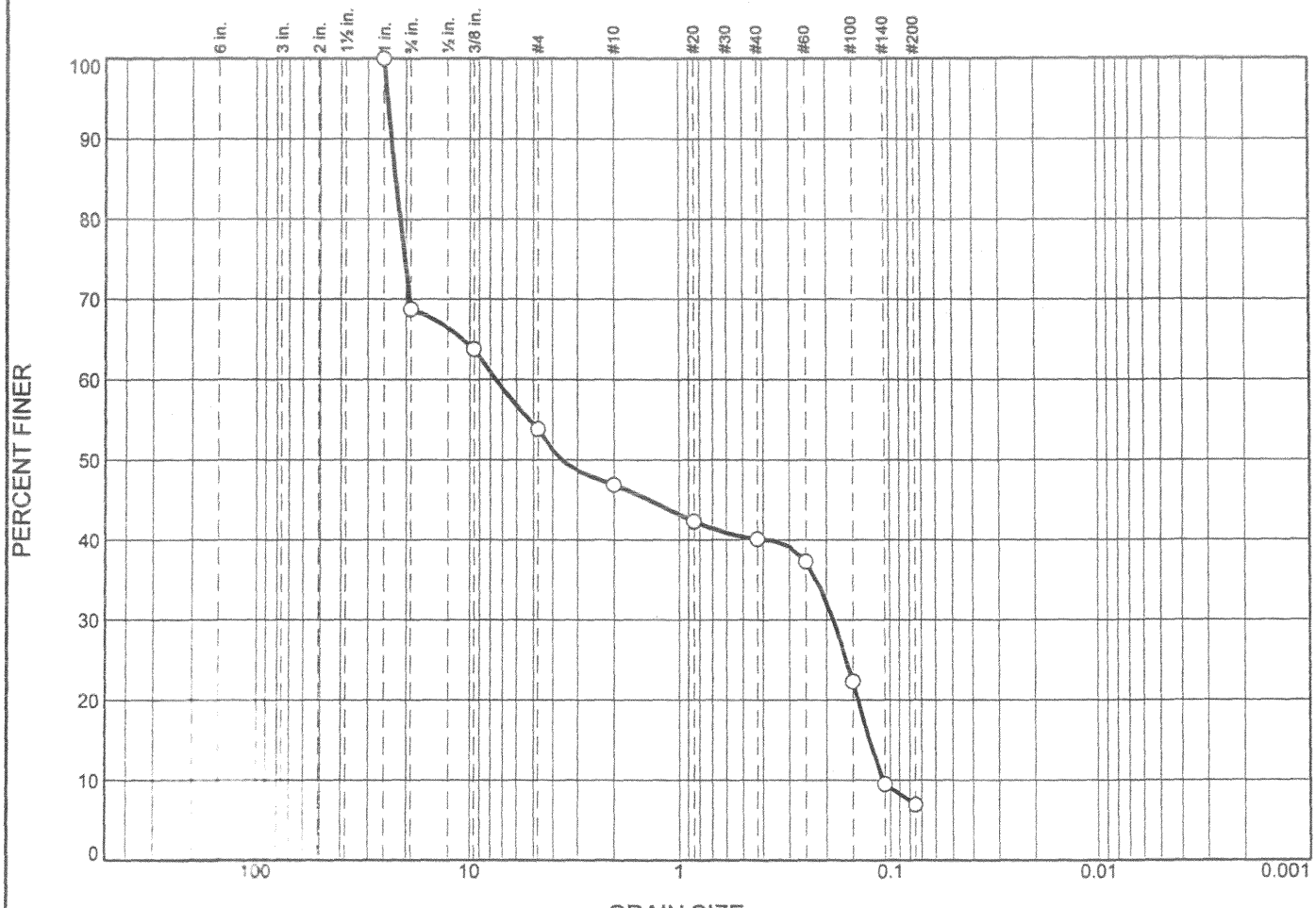
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 31 | 15 | 7 | 7 | 33 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 22.4677 | 7.5320 | 3.5705 | 0.1851 | 0.1256 | 0.1081 | 0.04 | 69.67 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0176 **Depth:** 23.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 14.5
CP05-EAARS-CB-0272

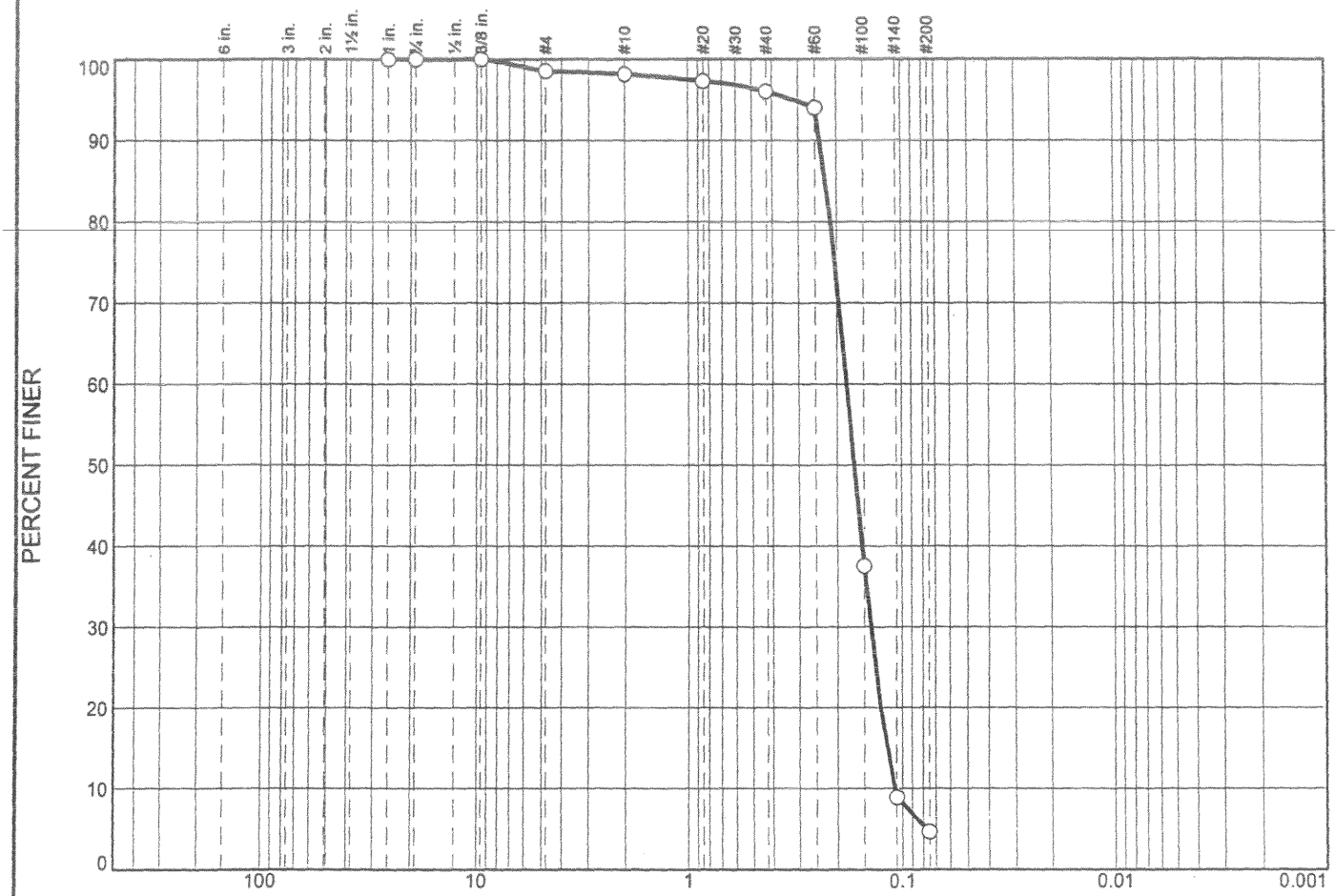
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pablo Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 1 | 1 | 2 | 91 | 5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2233 | 0.1798 | 0.1661 | 0.1400 | 0.1180 | 0.1085 | 1.01 | 1.66 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0176 **Depth:** 28.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 29.2
CP05-EAARS-CB-0272

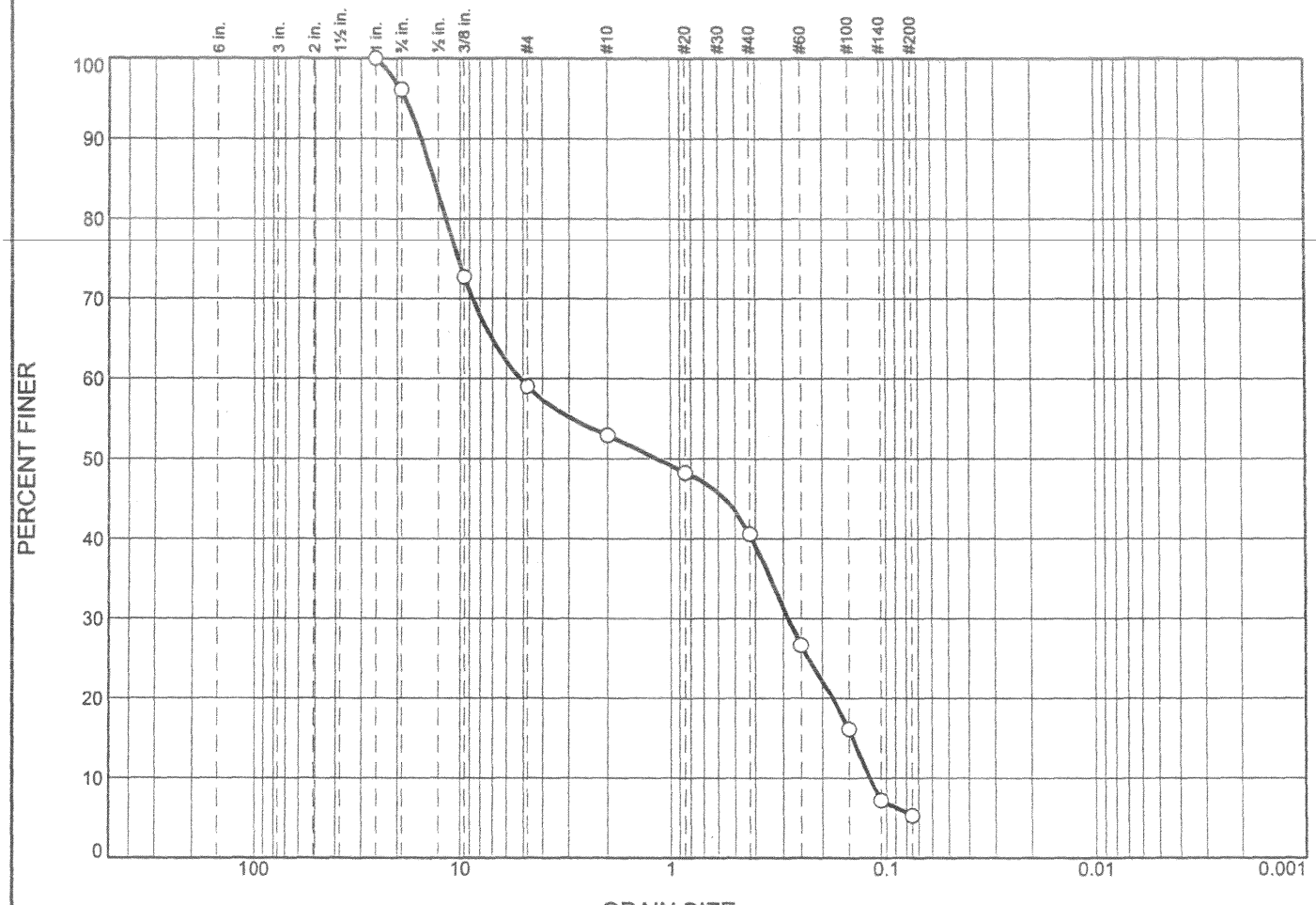
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Pablo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 37 | 6 | 12 | 36 | 5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 13.3245 | 5.1638 | 1.1584 | 0.2854 | 0.1436 | 0.1202 | 0.13 | 42.96 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0176 **Depth:** 33.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 15.6 CP05-EAARS-CB-0272

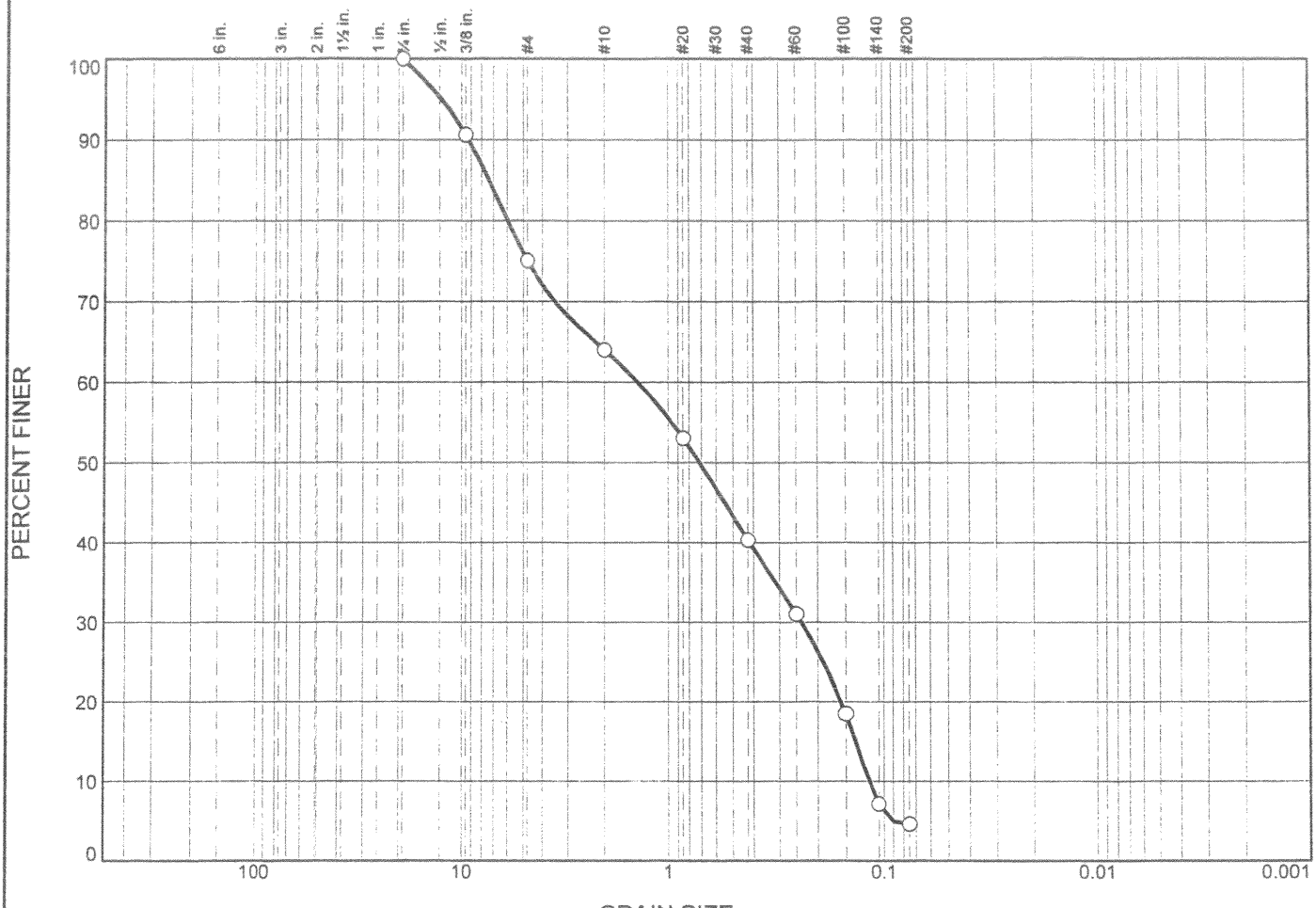
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 24.9 | 11.1 | 23.6 | 35.8 | 4.6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.3567 | 1.3892 | 0.7137 | 0.2365 | 0.1360 | 0.1179 | 0.34 | 11.78 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB176 **Depth:** 58.5'-60.0 **Sample Number:** CB176

**Remarks:**
○ Moisture Content % 21.4 CP05-EAARS-CB-0272

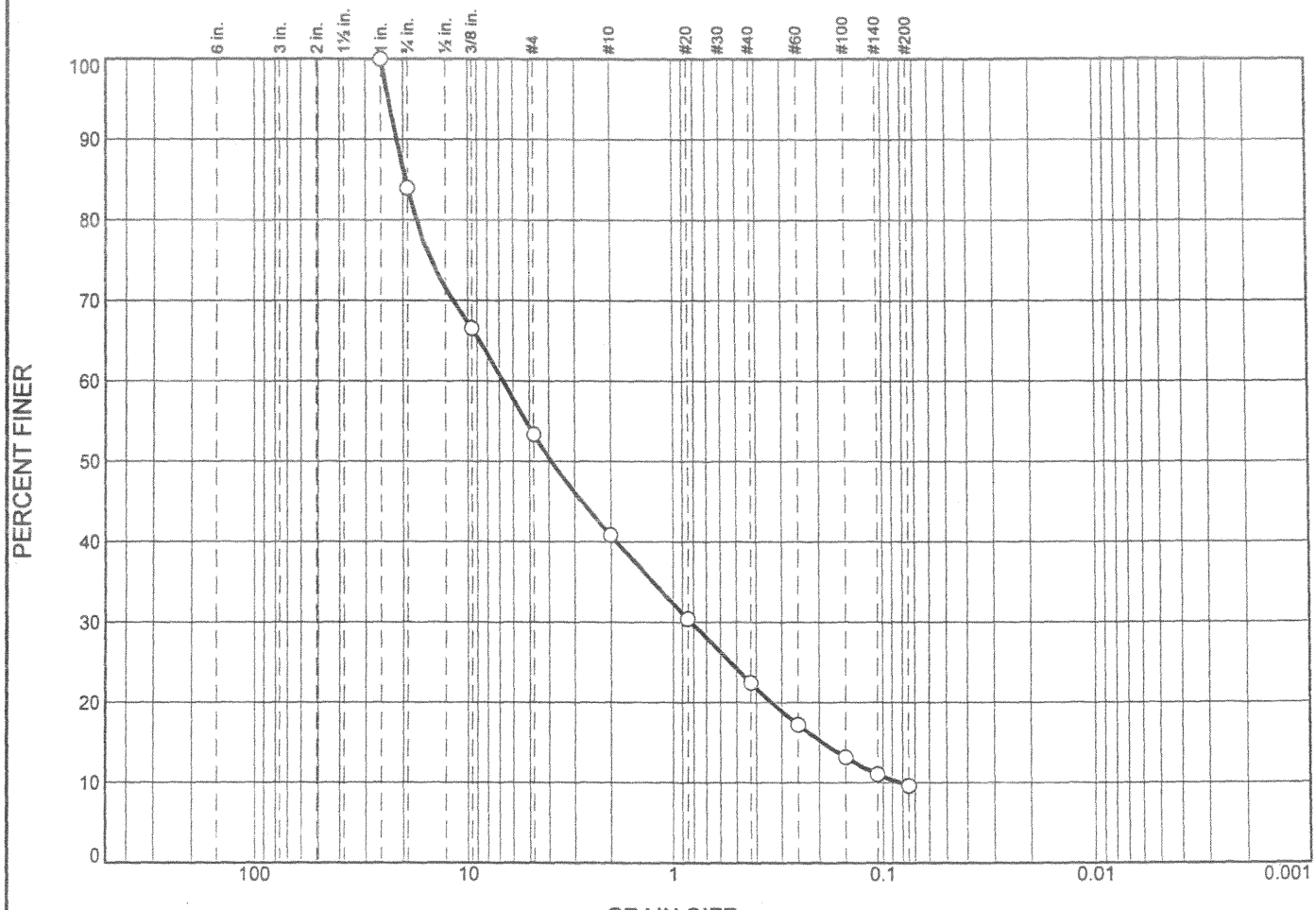
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 16 | 31 | 12 | 19 | 12 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 19.4681 | 6.7137 | 3.8994 | 0.8206 | 0.1921 | 0.0831 | 1.21 | 80.82 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 5.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 24.3 CP05-EAARS-CB-0275

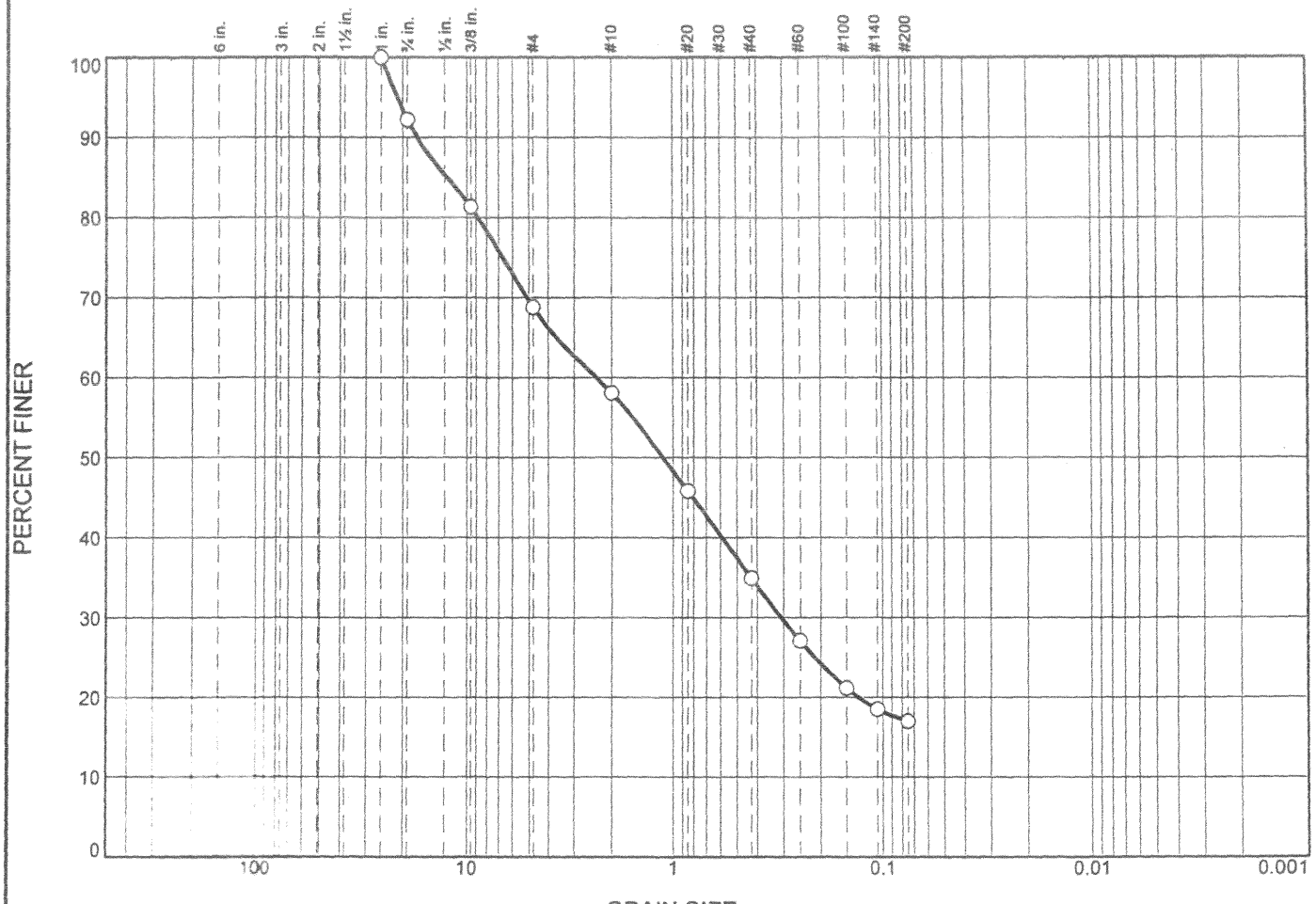
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 8 | 23 | 11 | 23 | 18 | 17 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.3808 | 2.3590 | 1.1147 | 0.3071 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 7.5' **Sample Number:** 3

**Date:** ○

**Remarks:**
○ Moisture Content % 25.0 CP05-EAARS-CB-0275

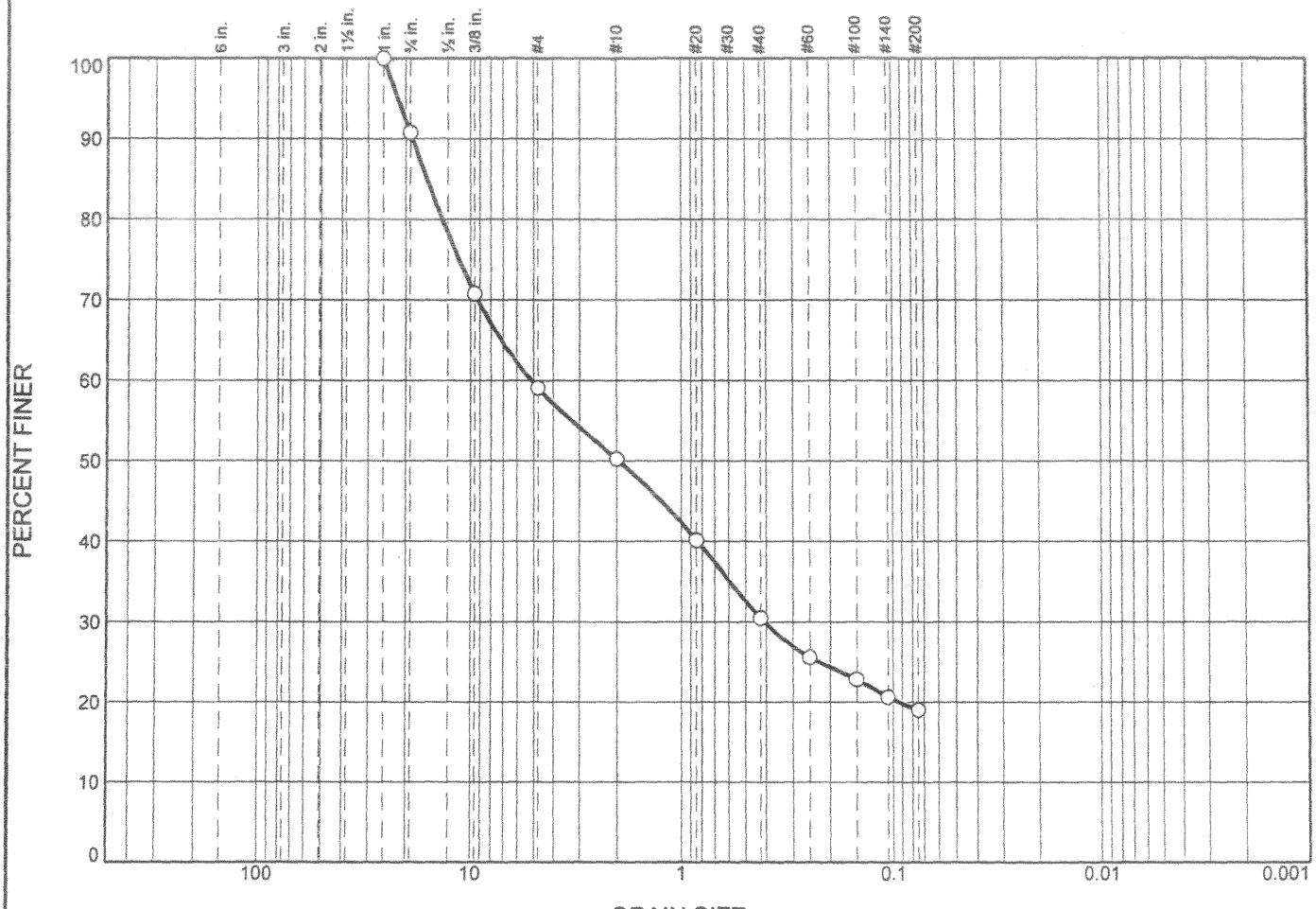
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 9 | 32 | 9 | 20 | 11 | 19 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 15.8645 | 5.1109 | 1.9488 | 0.4078 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 13.5' **Sample Number:** 4

**Date:** ○

**Remarks:**
○ Moisture Content % 17.7 CP05-EAARS-CB-0275

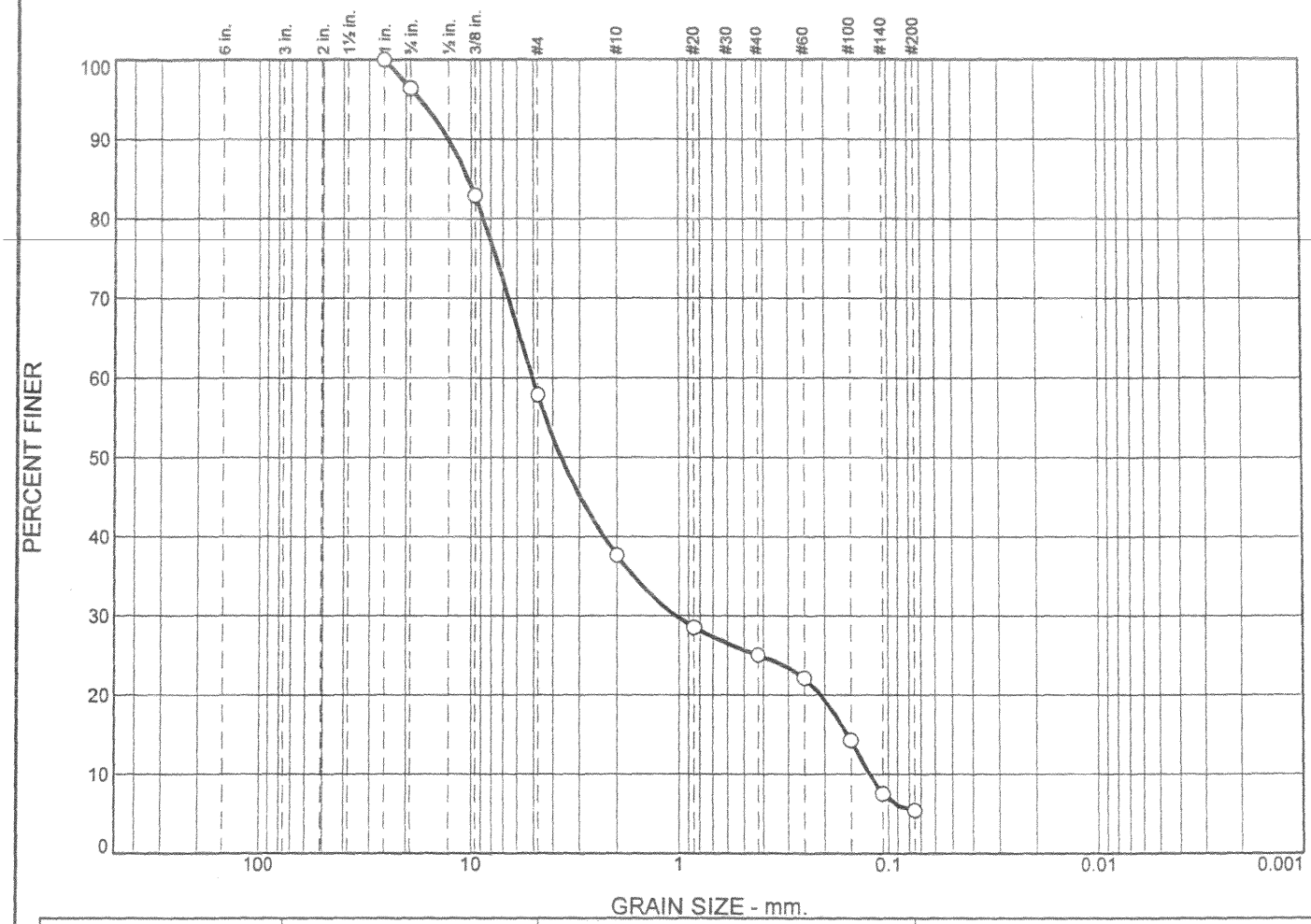
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pablo Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 38 | 20 | 13 | 20 | 5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 10.2470 | 5.0457 | 3.6562 | 1.0304 | 0.1554 | 0.1226 | 1.72 | 41.14 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with gravel | SW | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 23.5' **Sample Number:** 6

**Date:** ○

**Remarks:**
○ Moisture Content % 14.2 CP05-EAARS-CB-0275

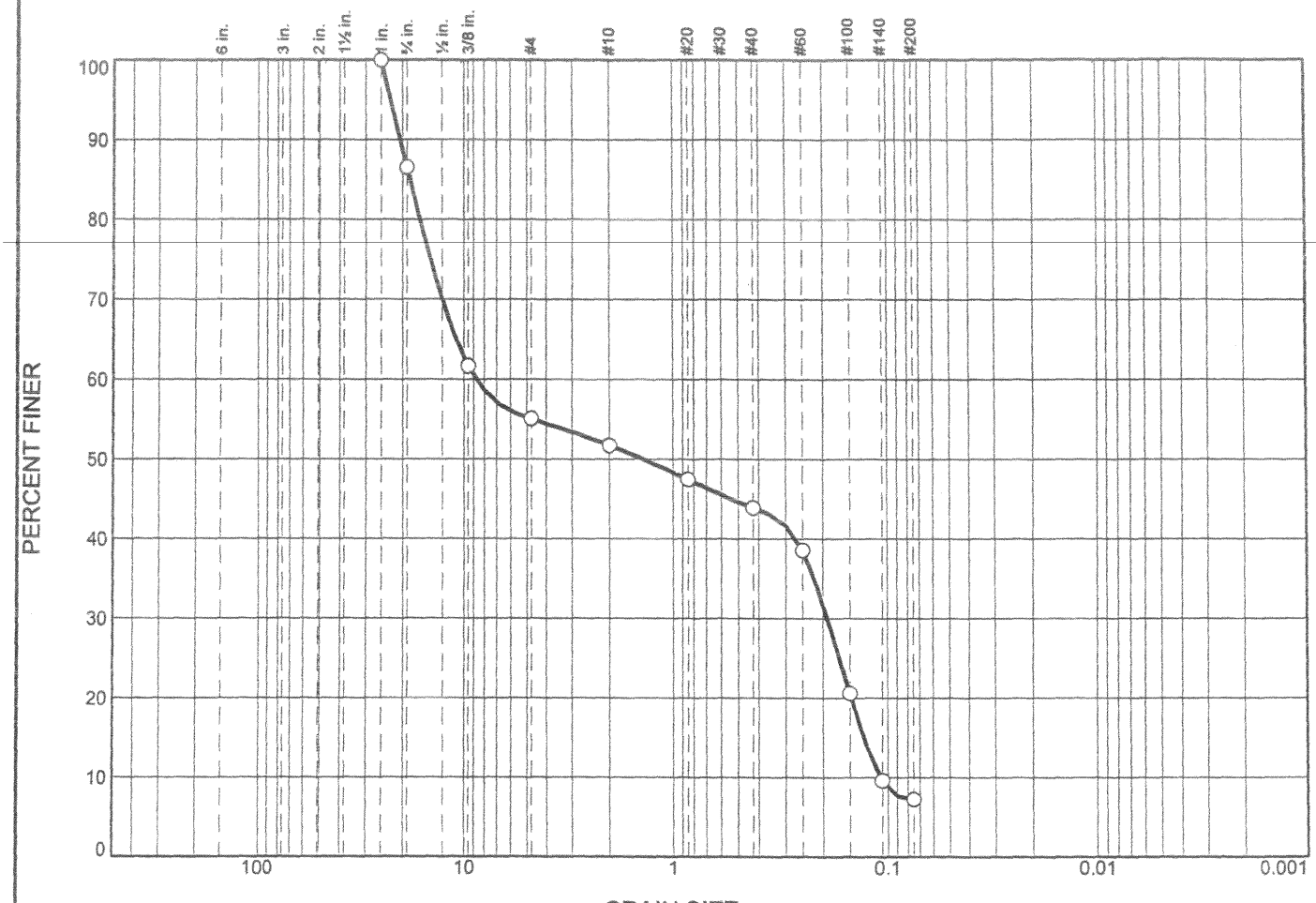
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 13 | 32 | 3 | 8 | 37 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 18.4152 | 8.7349 | 1.3774 | 0.1906 | 0.1291 | 0.1081 | 0.04 | 80.82 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 28.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 15.1 CP05-EAARS-CB-0275

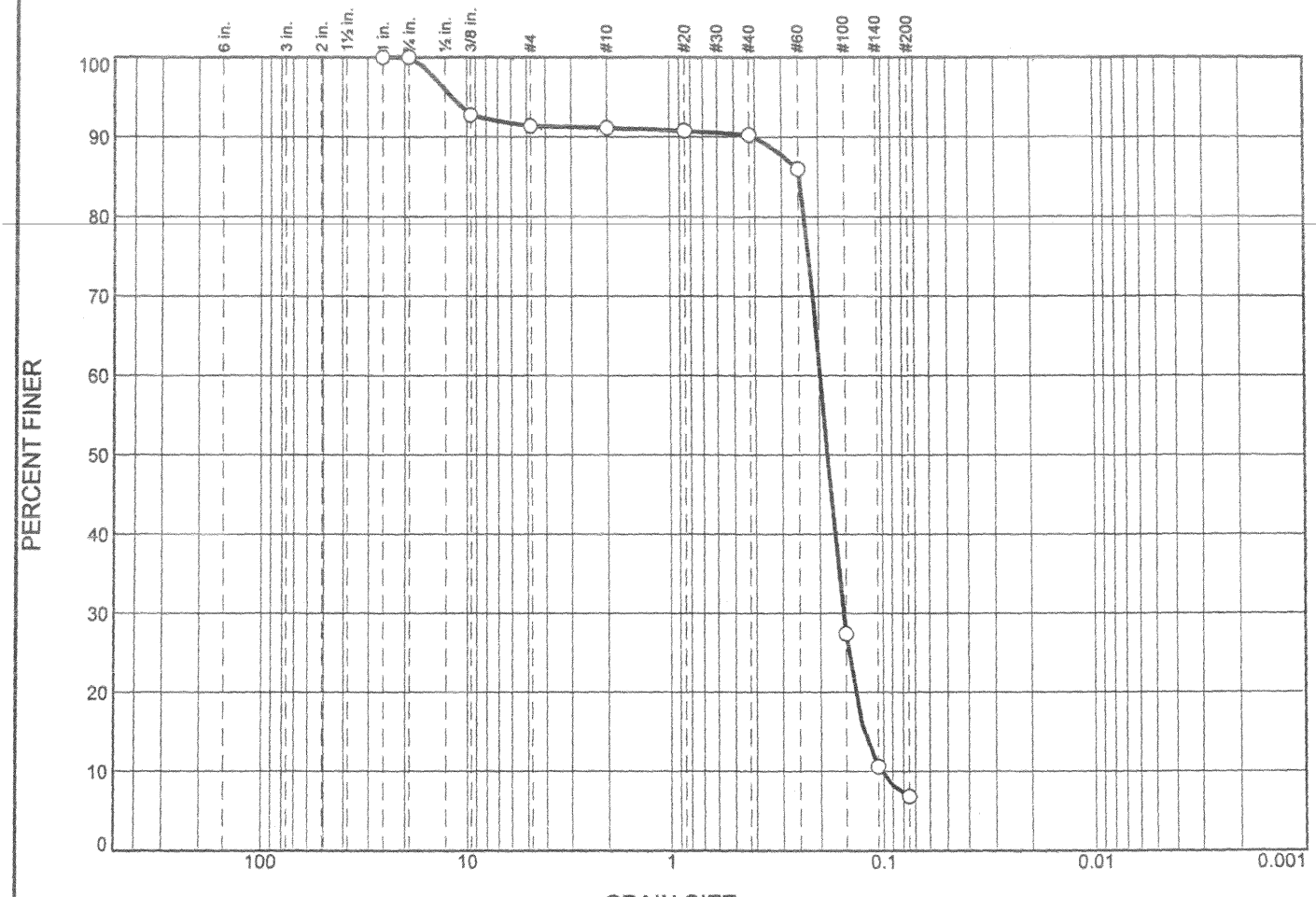
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 9 | 0 | 1 | 83 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2469 | 0.1969 | 0.1824 | 0.1541 | 0.1236 | 0.1027 | 1.17 | 1.92 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 33.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 25.2 CP05-EAARS-CB-0275

Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report

| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 19 | 8 | 1 | 6 | 62 | 4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 20.3903 | 0.3211 | 0.2542 | 0.1906 | 0.1509 | 0.1325 | 0.85 | 2.42 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with gravel | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 38.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 20.9 CP05-EAARS-CB-0275

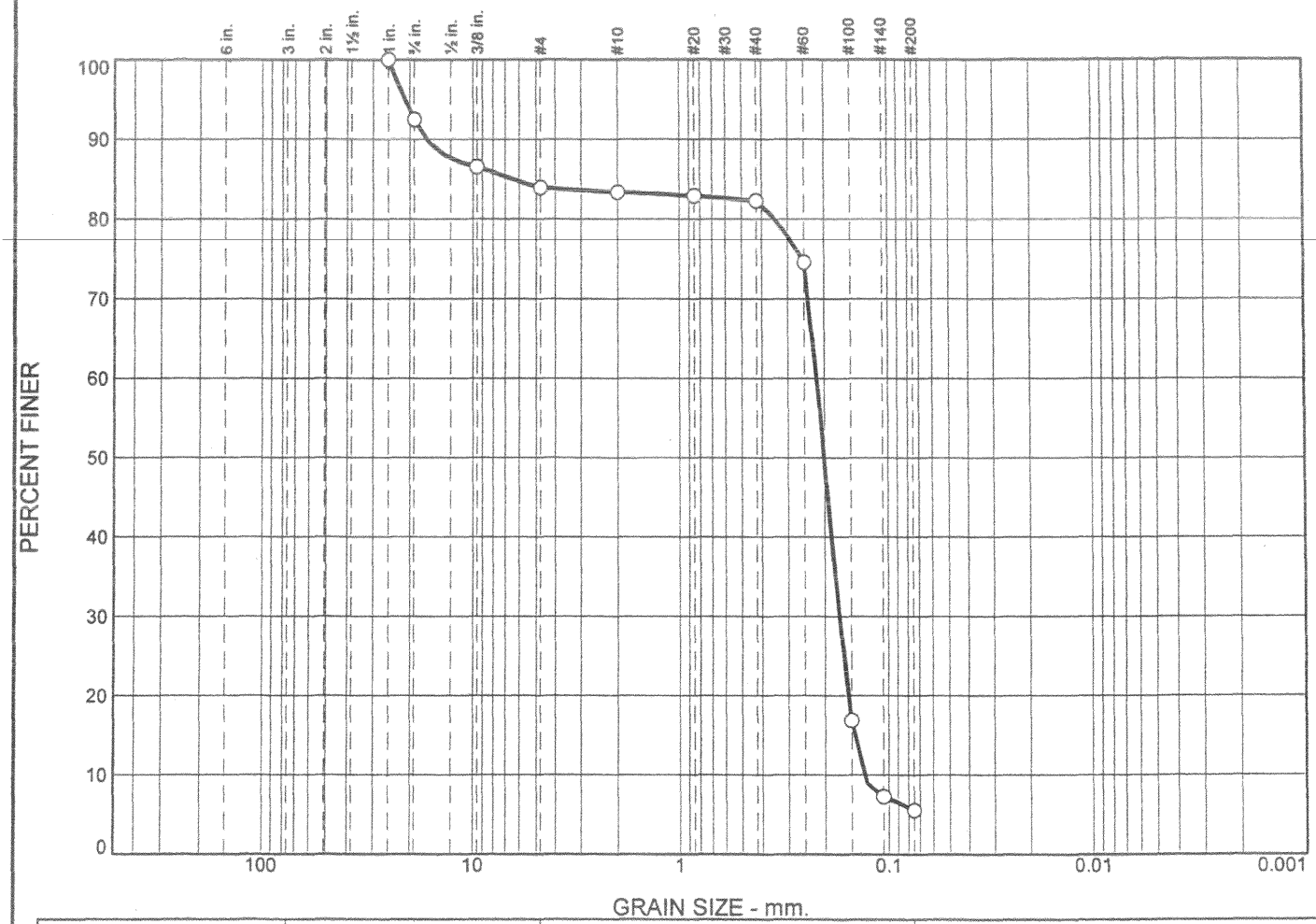
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 8 | 8 | 1 | 1 | 76 | 6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.4523 | 0.2171 | 0.2006 | 0.1713 | 0.1460 | 0.1312 | 1.03 | 1.65 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 48.5' **Sample Number:** 11

**Date:** ○

**Remarks:**
○ Moisture Content % 20.7 CP05-EAARS-CB-0275

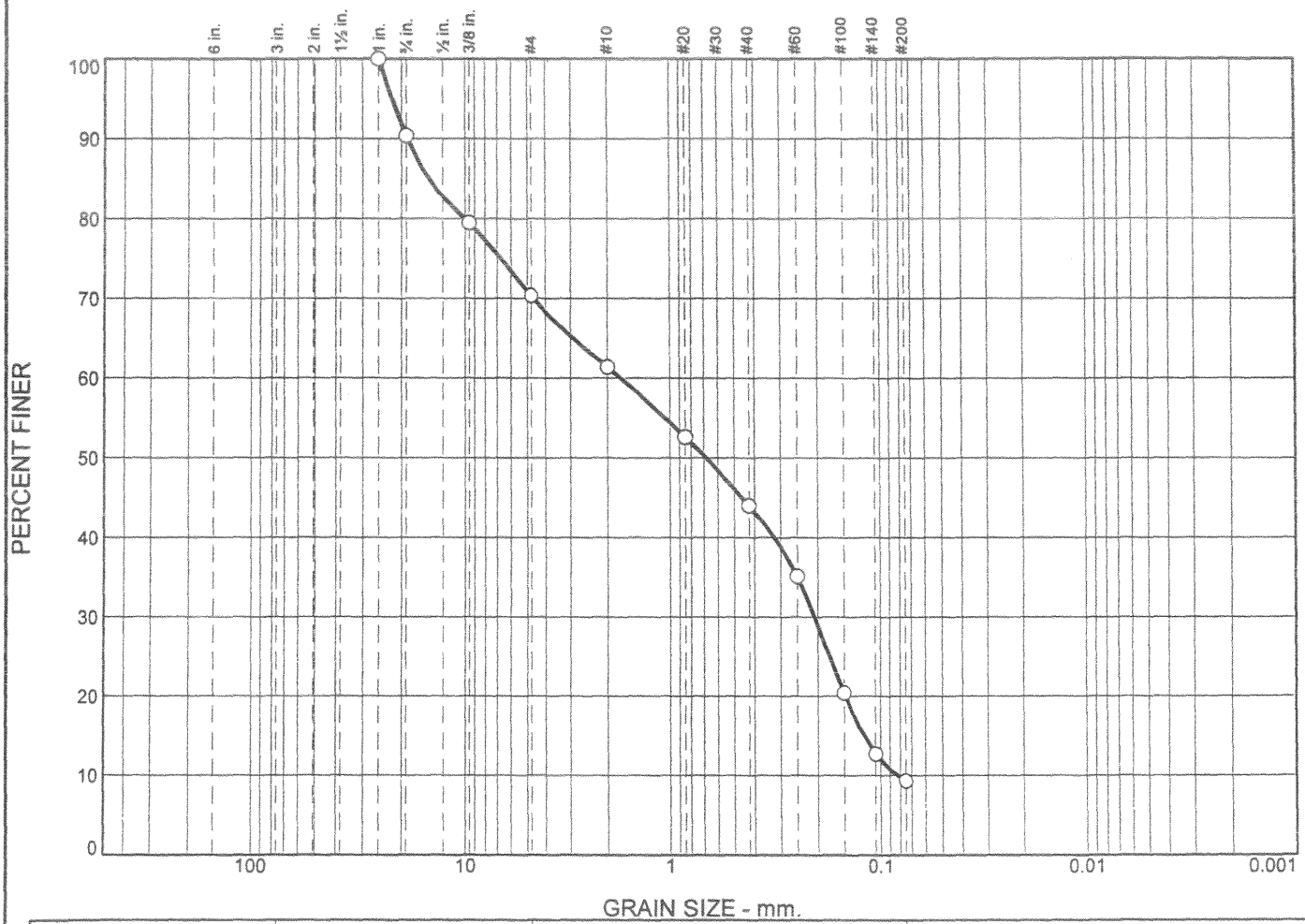
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 10 | 20 | 9 | 17 | 35 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.8821 | 1.7256 | 0.6803 | 0.2069 | 0.1204 | 0.0825 | 0.30 | 20.91 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 58.5' **Sample Number:** 13

**Date:** ○

**Remarks:**
○ Moisture Content % 22.7 CP05-EAARS-CB-0275

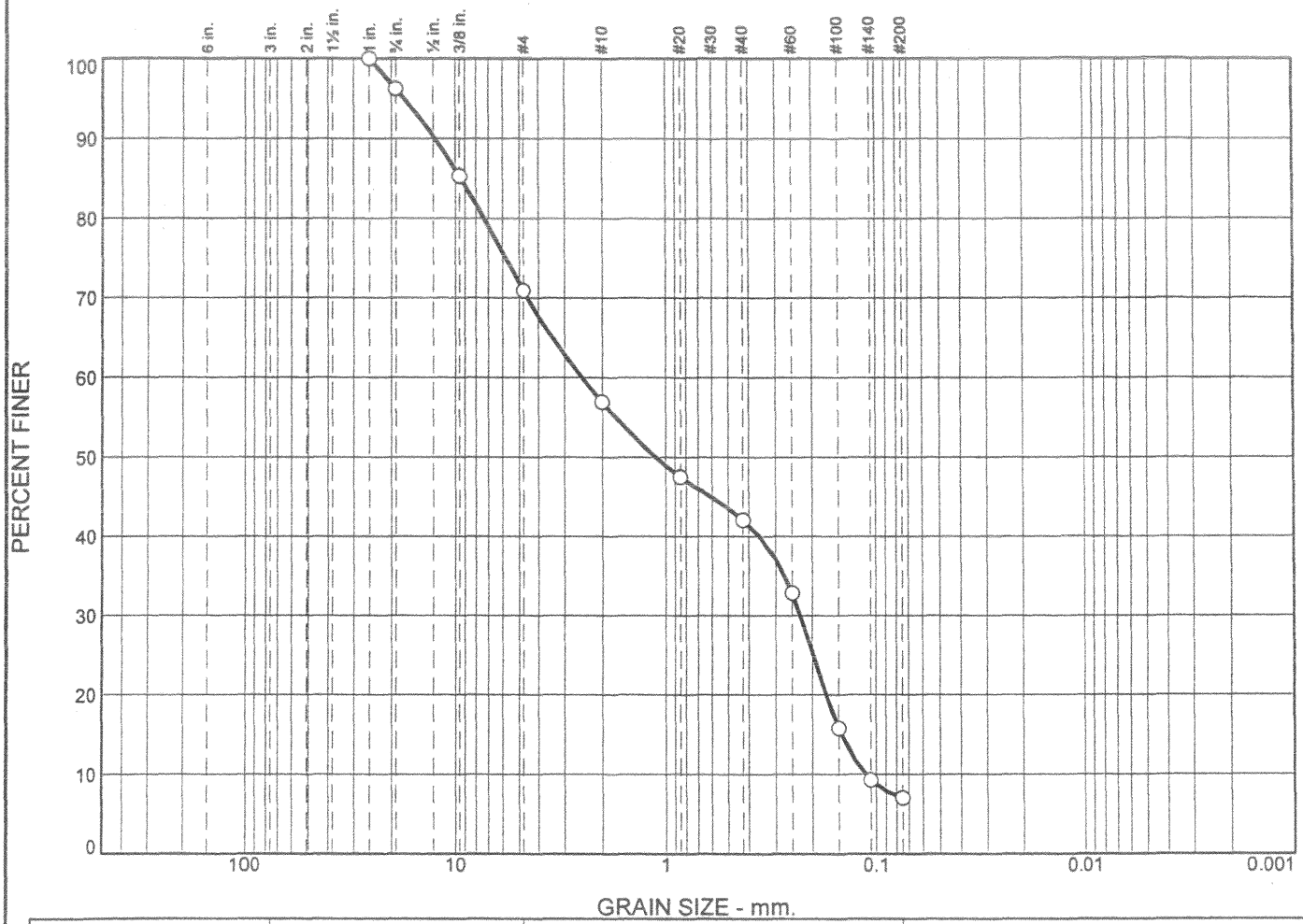
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 25 | 14 | 15 | 35 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.3797 | 2.4919 | 1.1159 | 0.2280 | 0.1457 | 0.1125 | 0.19 | 22.16 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 63.5' **Sample Number:** 14

**Date:** ○

**Remarks:**
○ Moisture Content % 28.1 CP05-EAARS-CB-0275

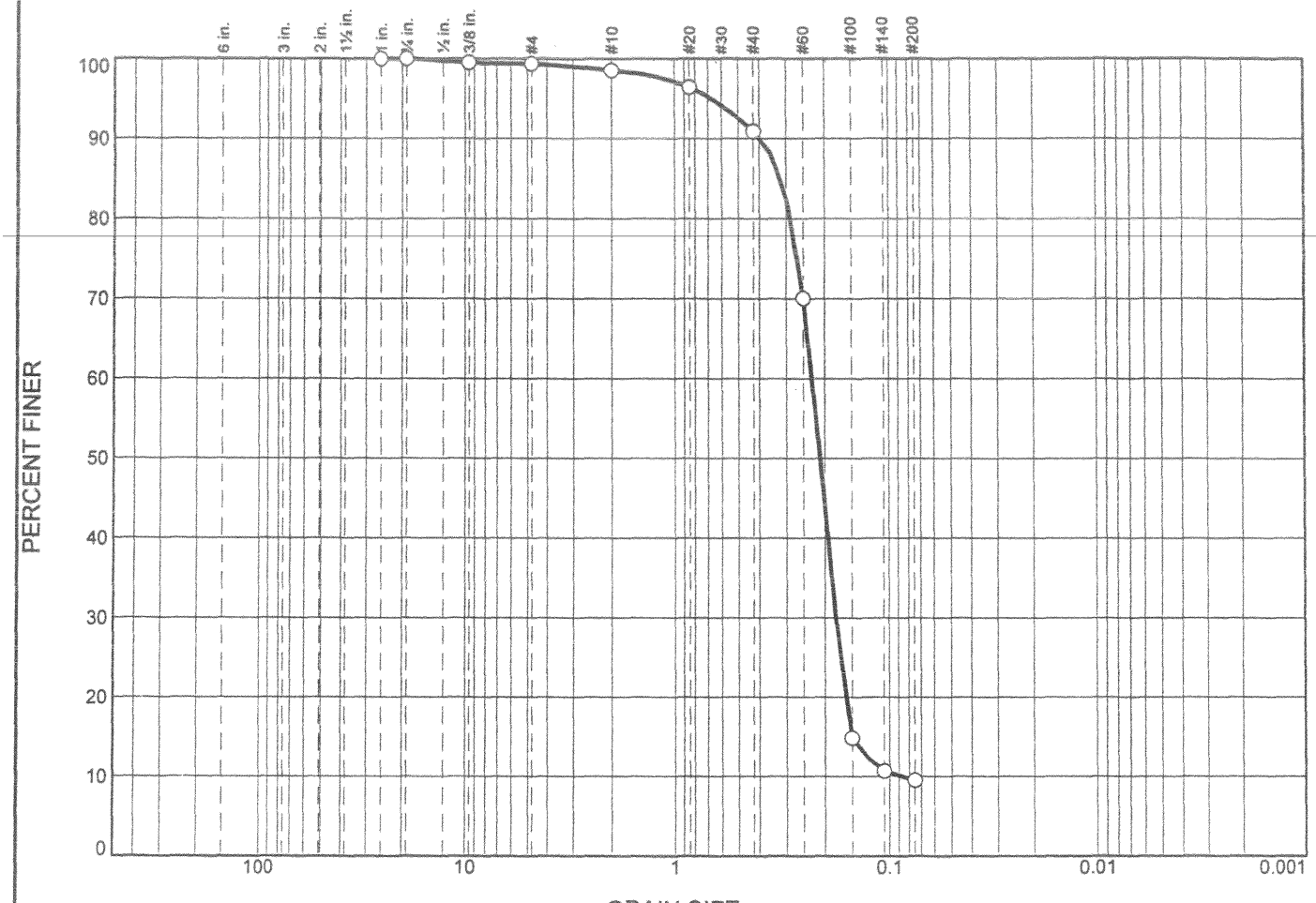
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Peter Carraraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 1 | 0 | 8 | 81 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.3171 | 0.2274 | 0.2094 | 0.1777 | 0.1504 | 0.0868 | 1.60 | 2.62 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 73.5' **Sample Number:** 16

**Date:** ○

**Remarks:**
○ Moisture Content % 22.3 CP05-EAARS-CB-0275

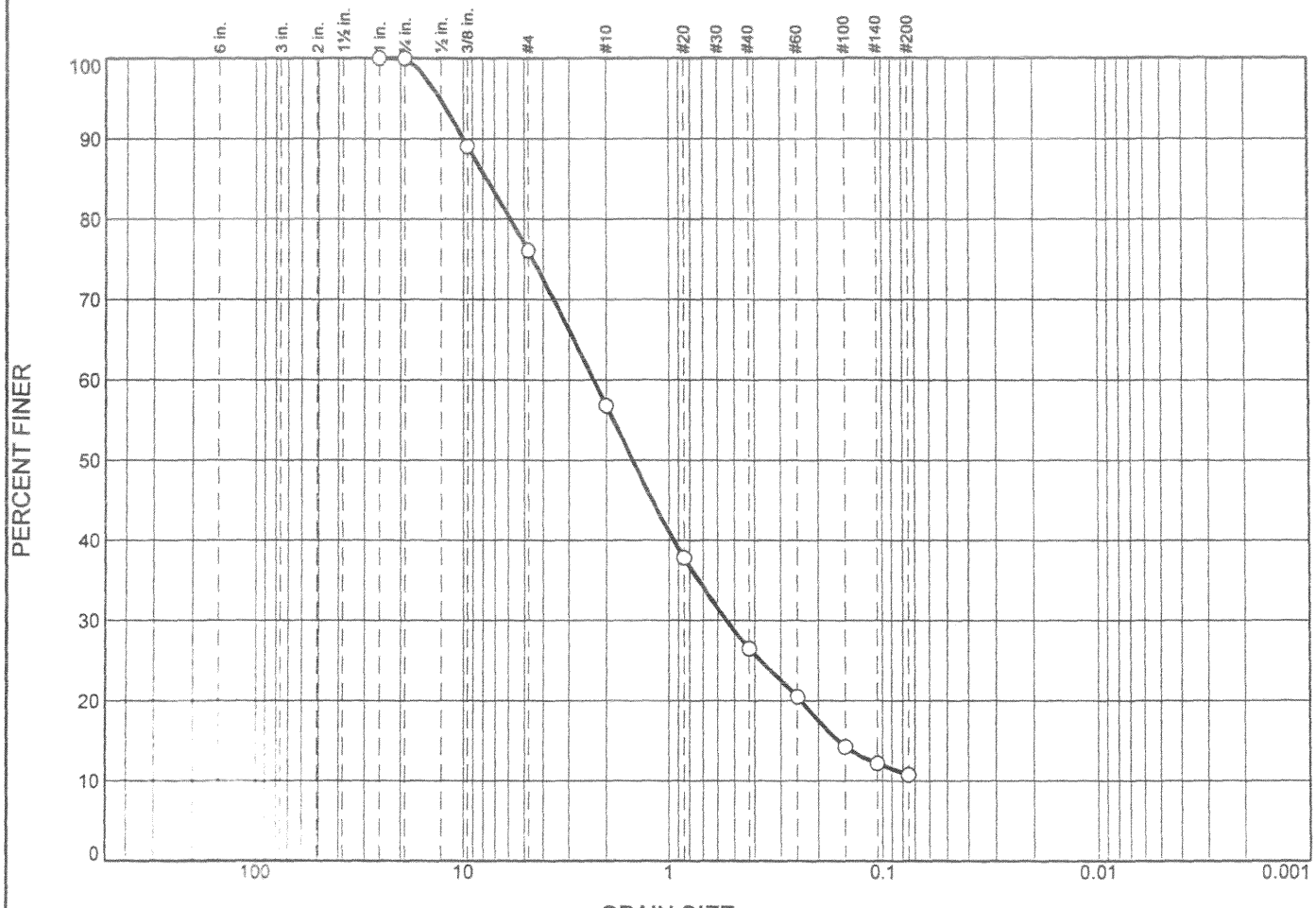
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 24 | 19 | 30 | 16 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.6741 | 2.2908 | 1.4926 | 0.5453 | 0.1619 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 83.5' **Sample Number:** 18

**Date:** ○

**Remarks:**
○ Moisture Content % 20.0 CP05-EAARS-CB-0275

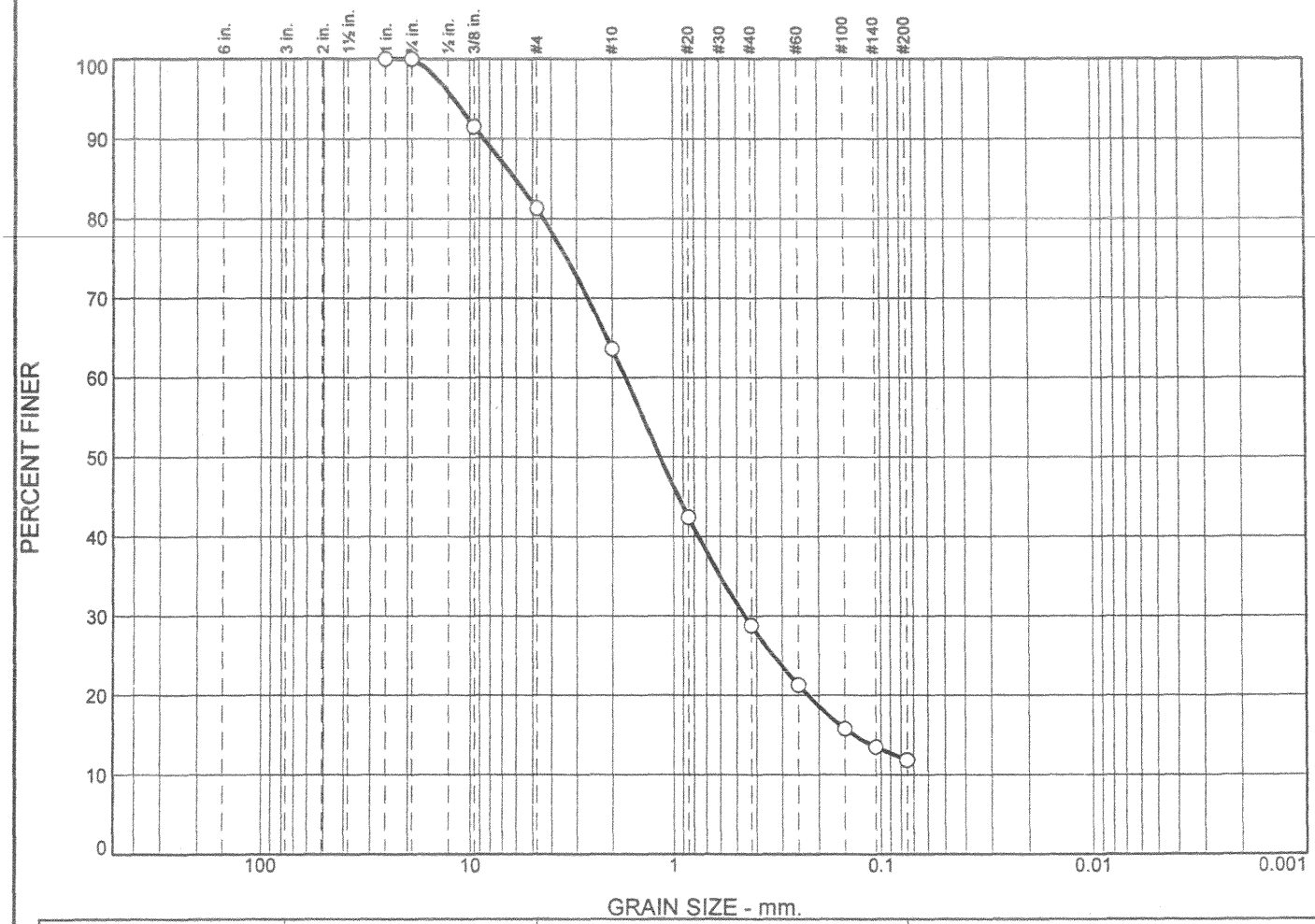
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 19 | 17 | 35 | 17 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.0425 | 1.7226 | 1.1603 | 0.4570 | 0.1355 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0179 **Depth:** 93.5' **Sample Number:** 20

**Date:** ○

**Remarks:**
○ Moisture Content % 17.7 CP05-EAARS-CB-0275

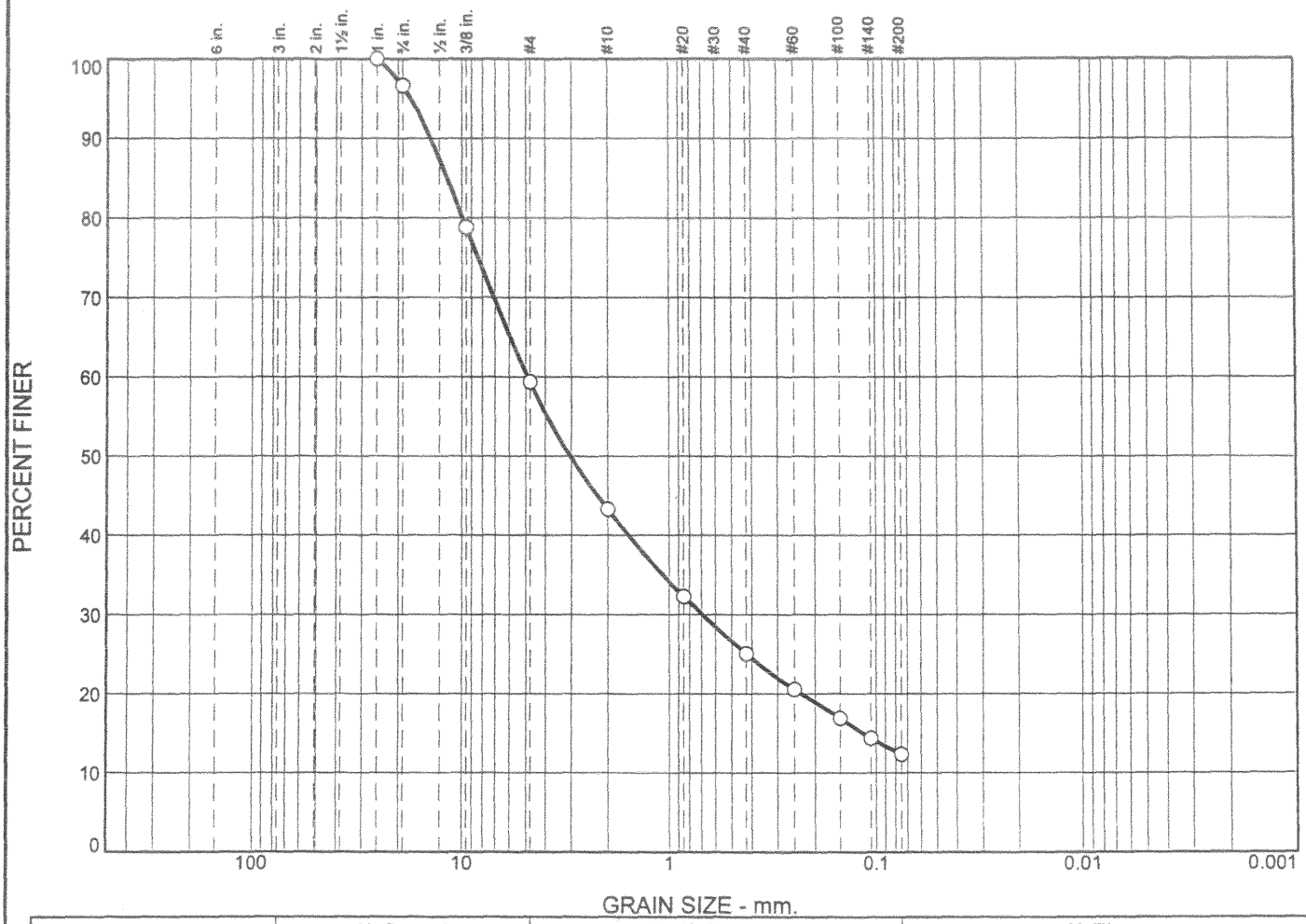
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 3 | 38 | 16 | 18 | 13 | 12 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.6913 | 4.8791 | 3.0291 | 0.6926 | 0.1158 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0180 **Depth:** 8.0' **Sample Number:** 3

**Date:** ○

**Remarks:**
○ Moisture Content % 16.7 CP05-EAARS-CB-0276

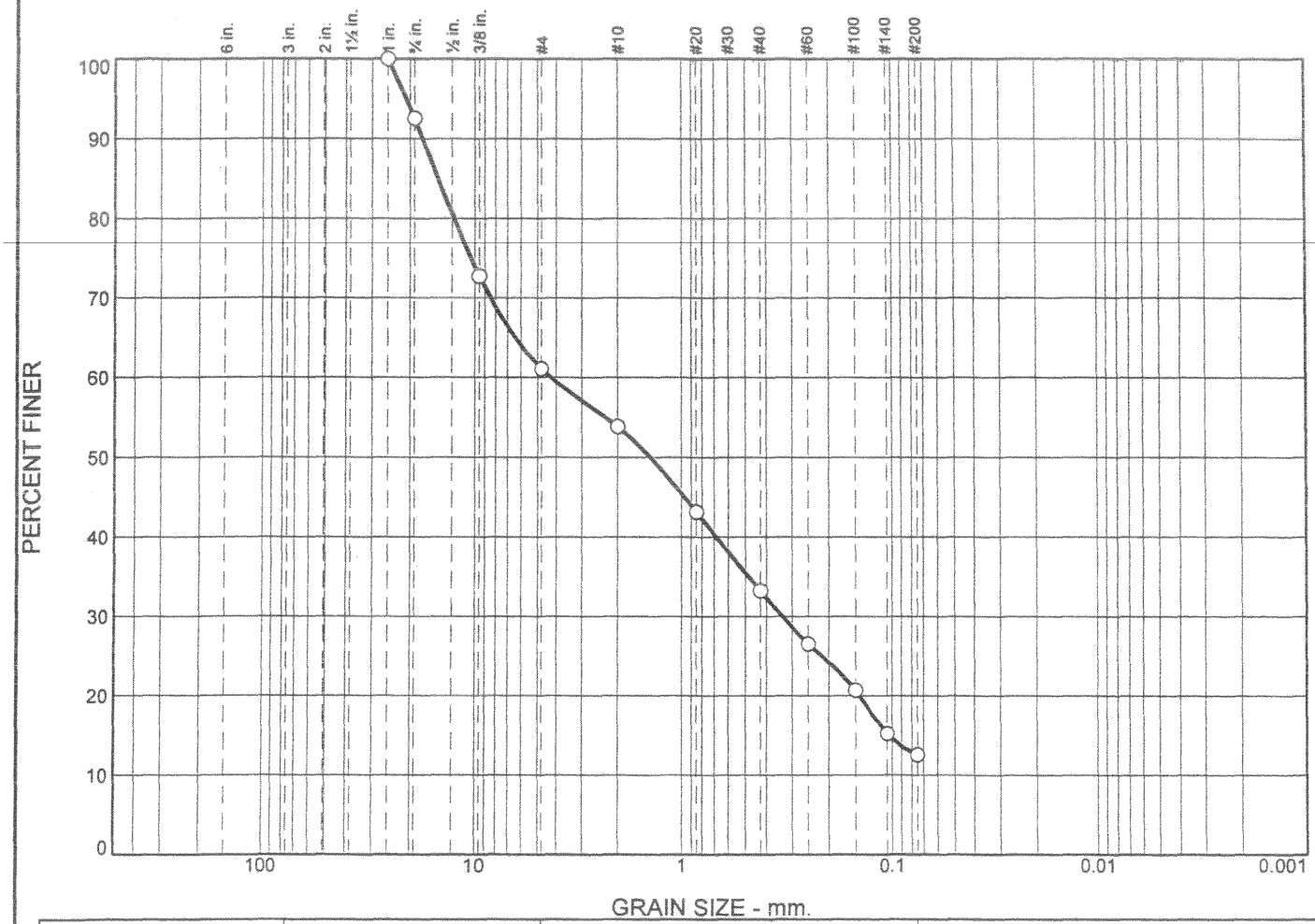
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 7 | 32 | 7 | 21 | 20 | 13 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.6956 | 4.2654 | 1.4109 | 0.3341 | 0.1042 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0180 **Depth:** 13.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 24.8 CP05-EAARS-CB-0276

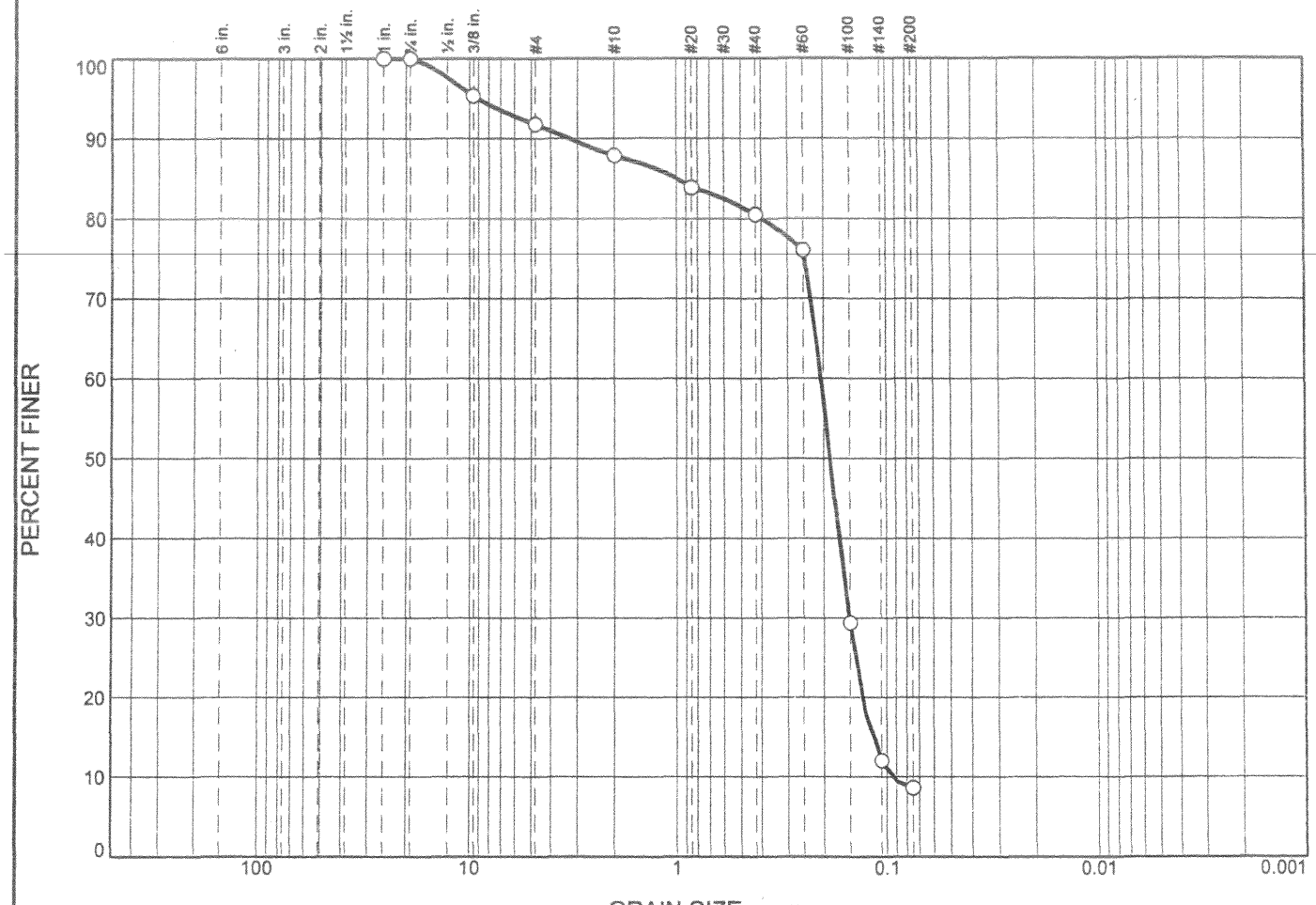
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Brian Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 8 | 4 | 8 | 71 | 9 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.9899 | 0.2050 | 0.1858 | 0.1511 | 0.1170 | 0.0946 | 1.18 | 2.17 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0180 **Depth:** 18.5' **Sample Number:** 6

**Date:** ○

**Remarks:**
○ Moisture Content % 25.5 CP05-EAARS-CB-0276

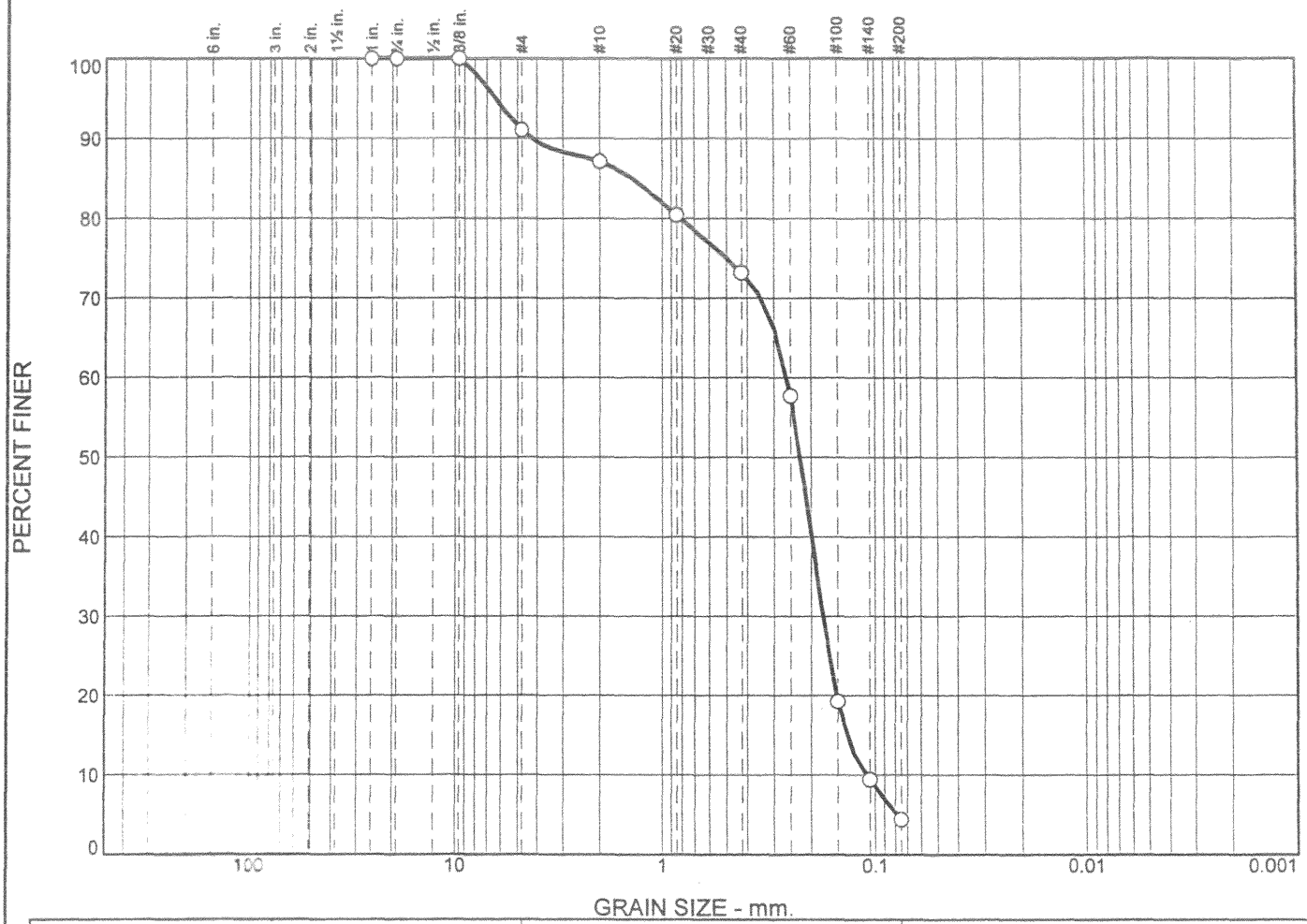
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 9 | 4 | 14 | 69 | 4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.4049 | 0.2599 | 0.2242 | 0.1758 | 0.1363 | 0.1099 | 1.08 | 2.36 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0180 **Depth:** 23.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 24.6
CP05-EAARS-CB-0276

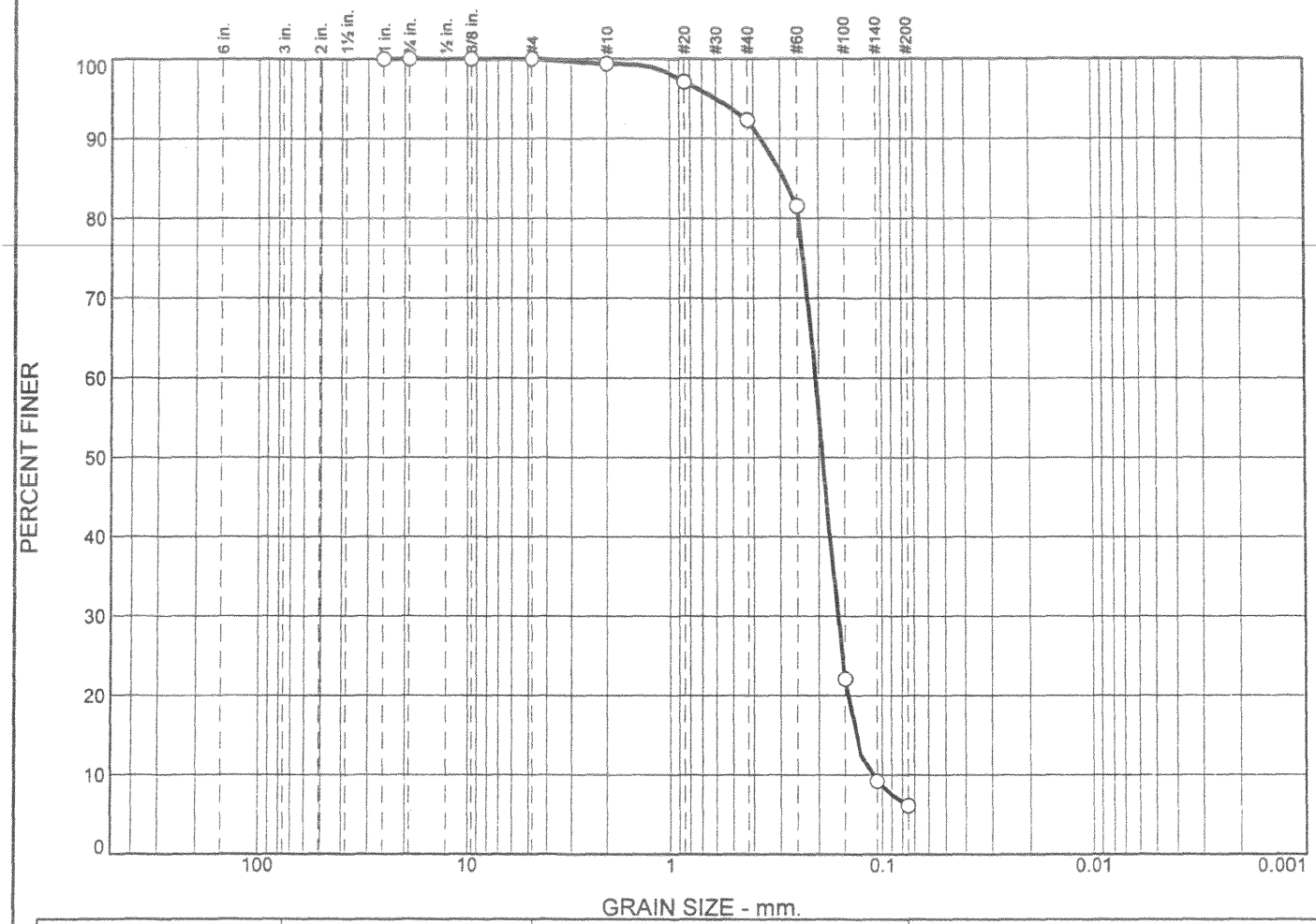
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 1 | 7 | 86 | 6 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2876 | 0.2060 | 0.1910 | 0.1627 | 0.1343 | 0.1126 | 1.14 | 1.83 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0180 **Depth:** 28.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 26.5
CP05-EAARS-CB-0276

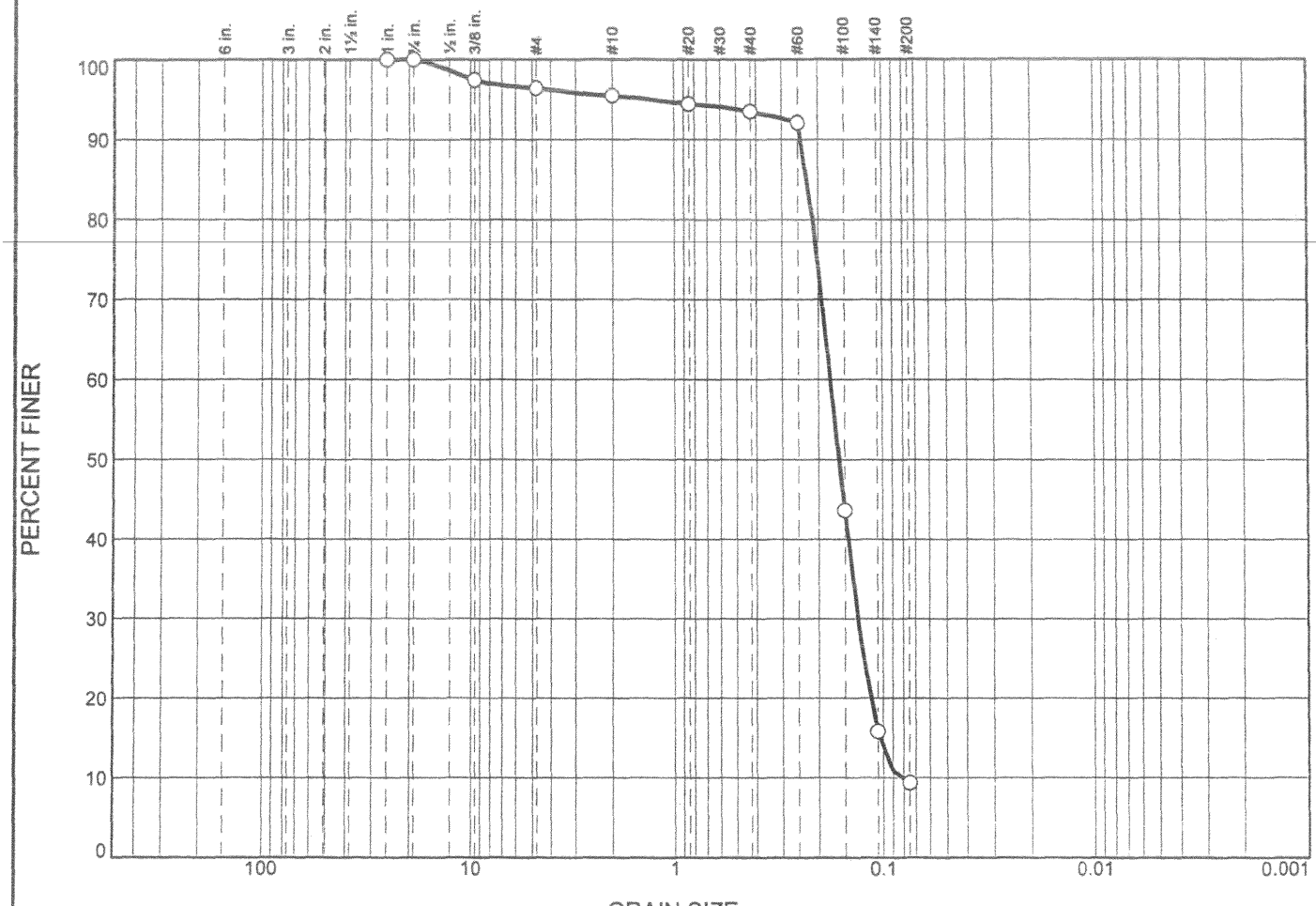
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 4 | 1 | 2 | 84 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2244 | 0.1743 | 0.1591 | 0.1303 | 0.1041 | 0.0835 | 1.17 | 2.09 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0180 **Depth:** 33.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 27.4
CP05-EAARS-CB-0276

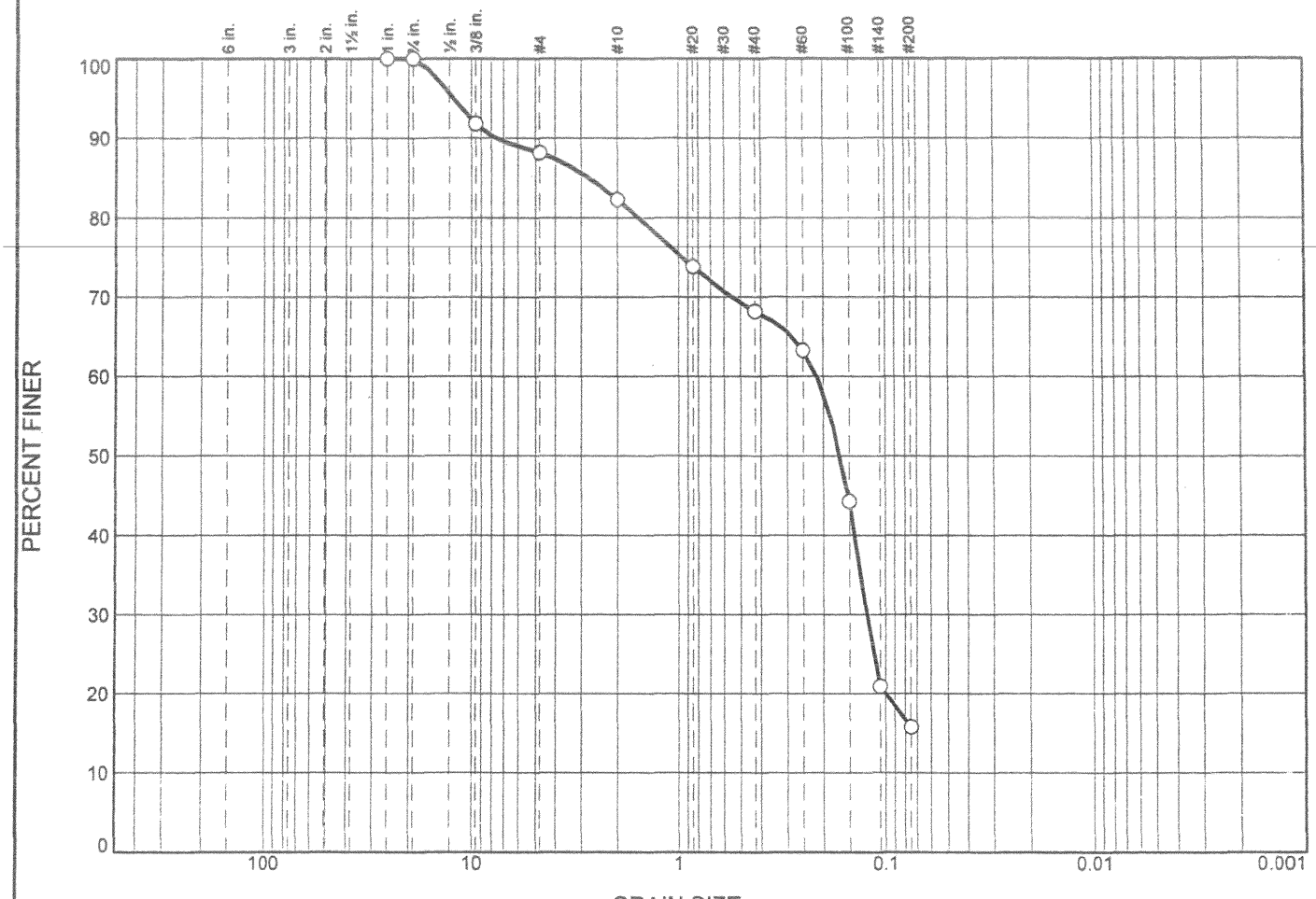
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Pablo Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 12 | 6 | 14 | 52 | 16 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.7524 | 0.2145 | 0.1653 | 0.1231 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0181 **Depth:** 23.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 24.7 CP05-EAARS-CB-0277

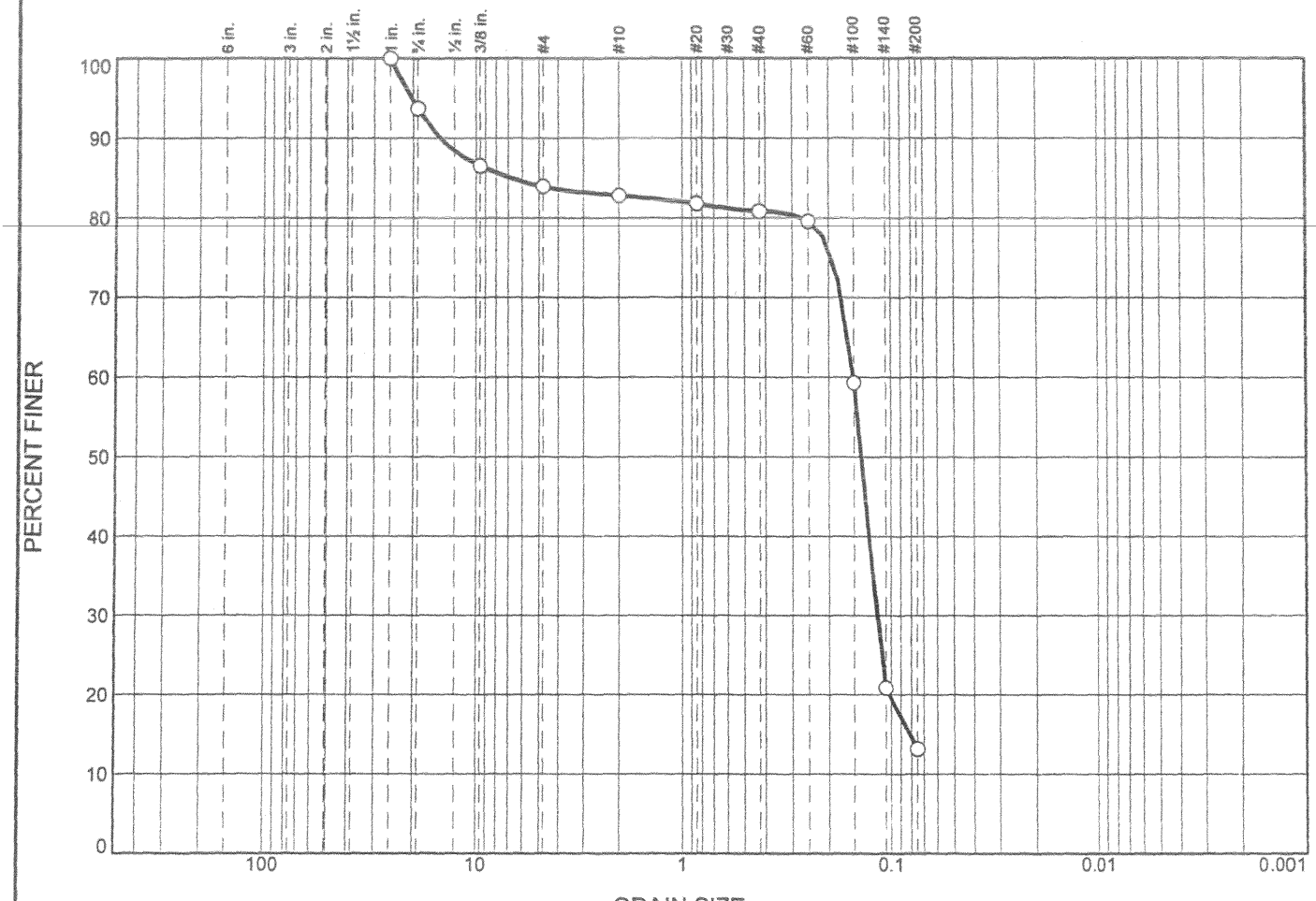
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Osmaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 10 | 1 | 2 | 68 | 13 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.7701 | 0.1510 | 0.1378 | 0.1167 | 0.0814 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0181 **Depth:** 28.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 24.1 CP05-EAARS-CB-0277

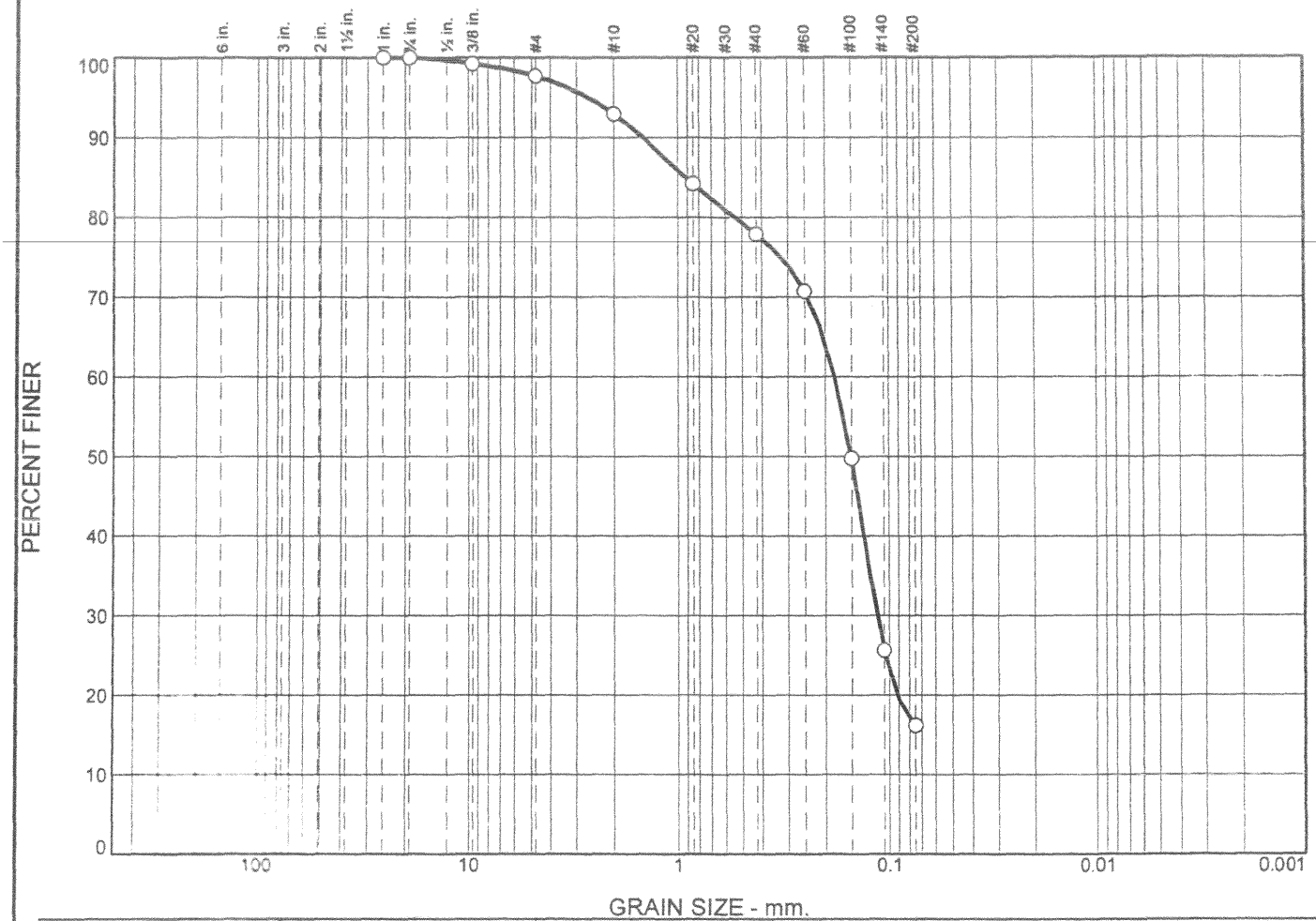
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Zamaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 2 | 5 | 15 | 62 | 16 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.9169 | 0.1799 | 0.1505 | 0.1141 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0181 **Depth:** 33.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 29.5 CP05-EAARS-CB-0277

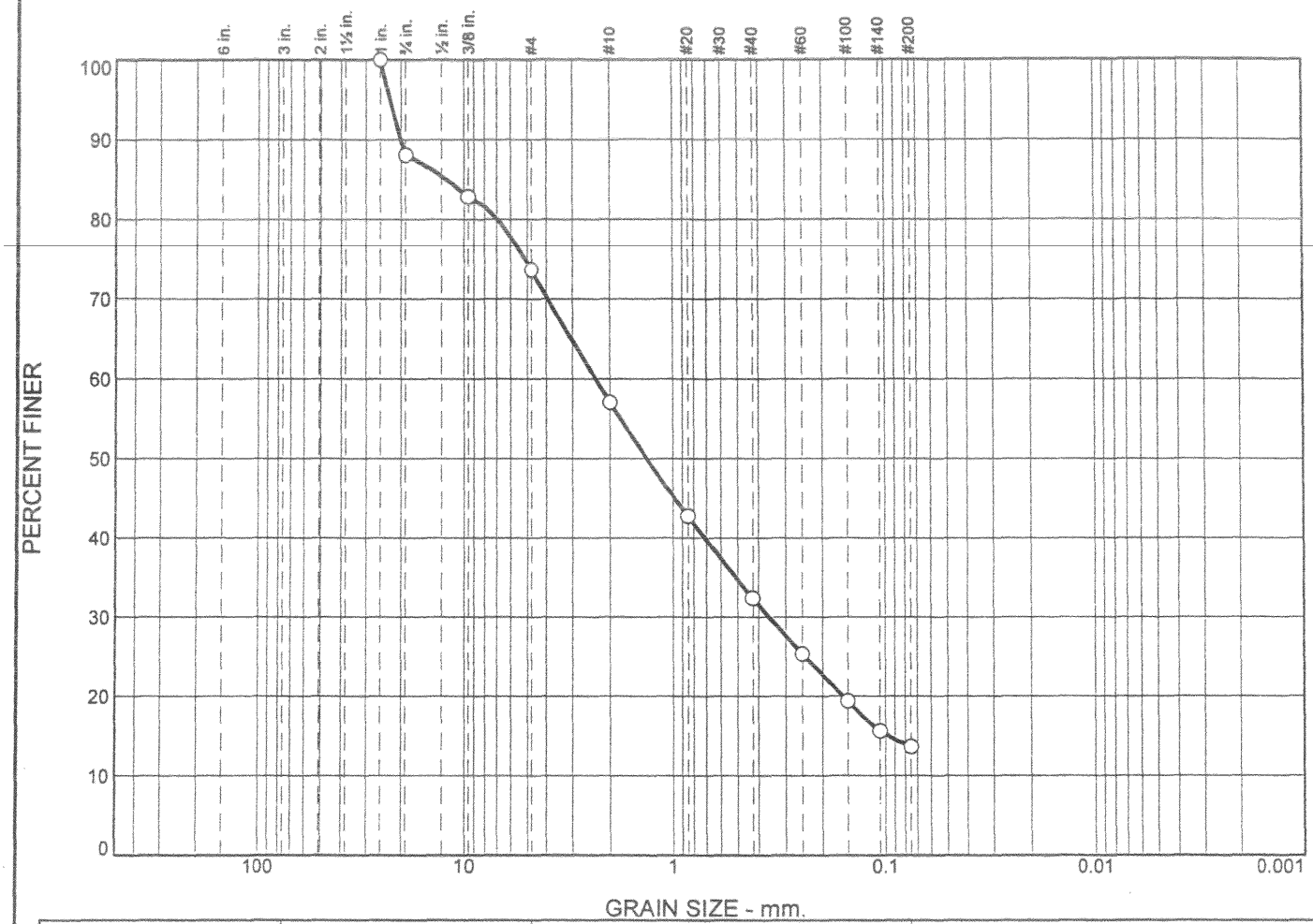
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 12 | 14 | 17 | 25 | 18 | 14 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.0142 | 2.3406 | 1.3329 | 0.3577 | 0.0975 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0183 **Depth:** 18.5' **Sample Number:** 5

**Date:** ○

**Remarks:**
○ Moisture Content % 21.2 CP05-EAARS-CB-0278

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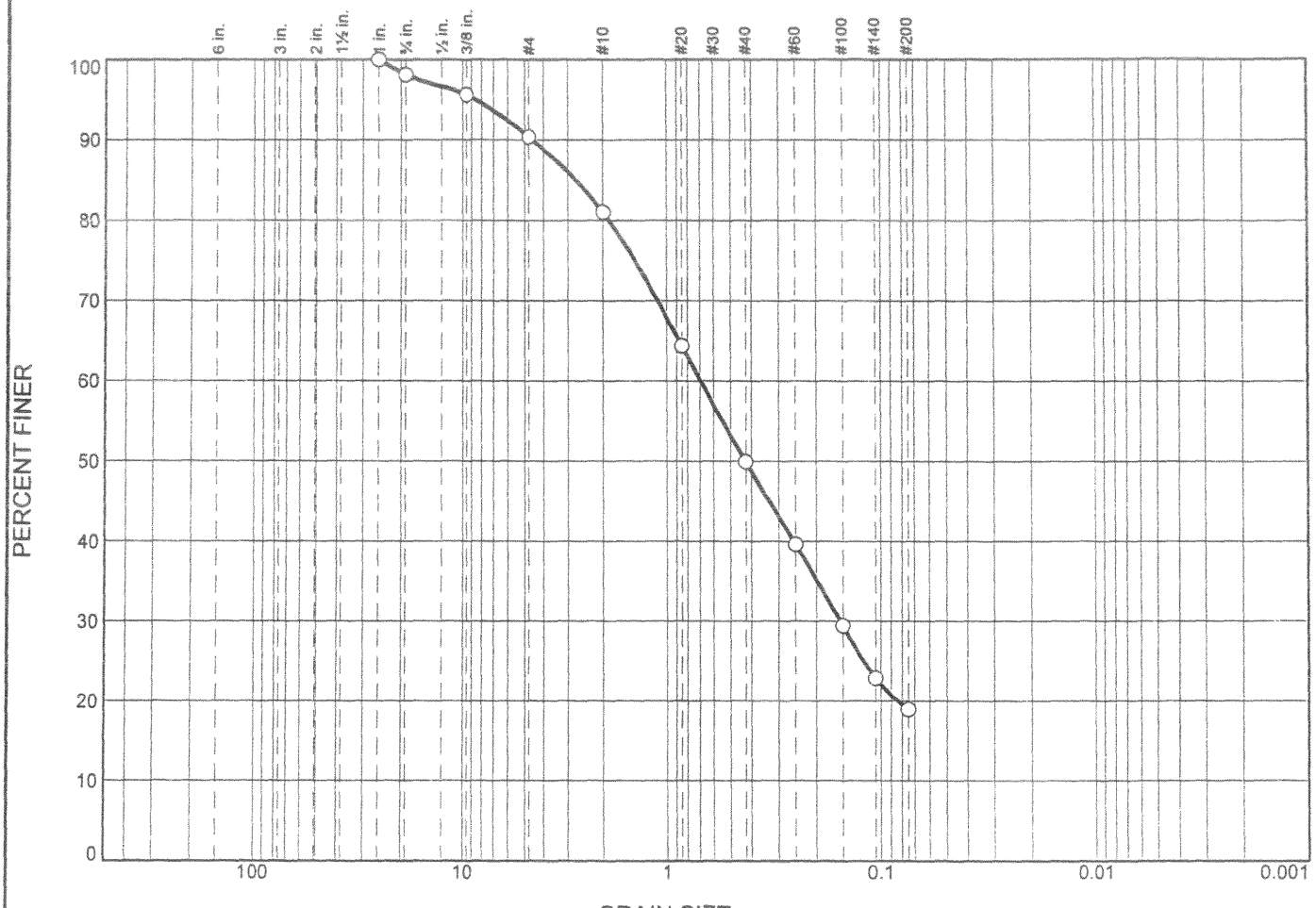
**Miami Lakes, FL**

Figure

Tested By: [illegible] Zamaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 2 | 8 | 9 | 31 | 31 | 19 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.7026 | 0.6923 | 0.4269 | 0.1541 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0183 **Depth:** 23.5' **Sample Number:** 6

**Date:** ○

**Remarks:**
○ Moisture Content % 24.2 CP05-EAARS-CB-0278

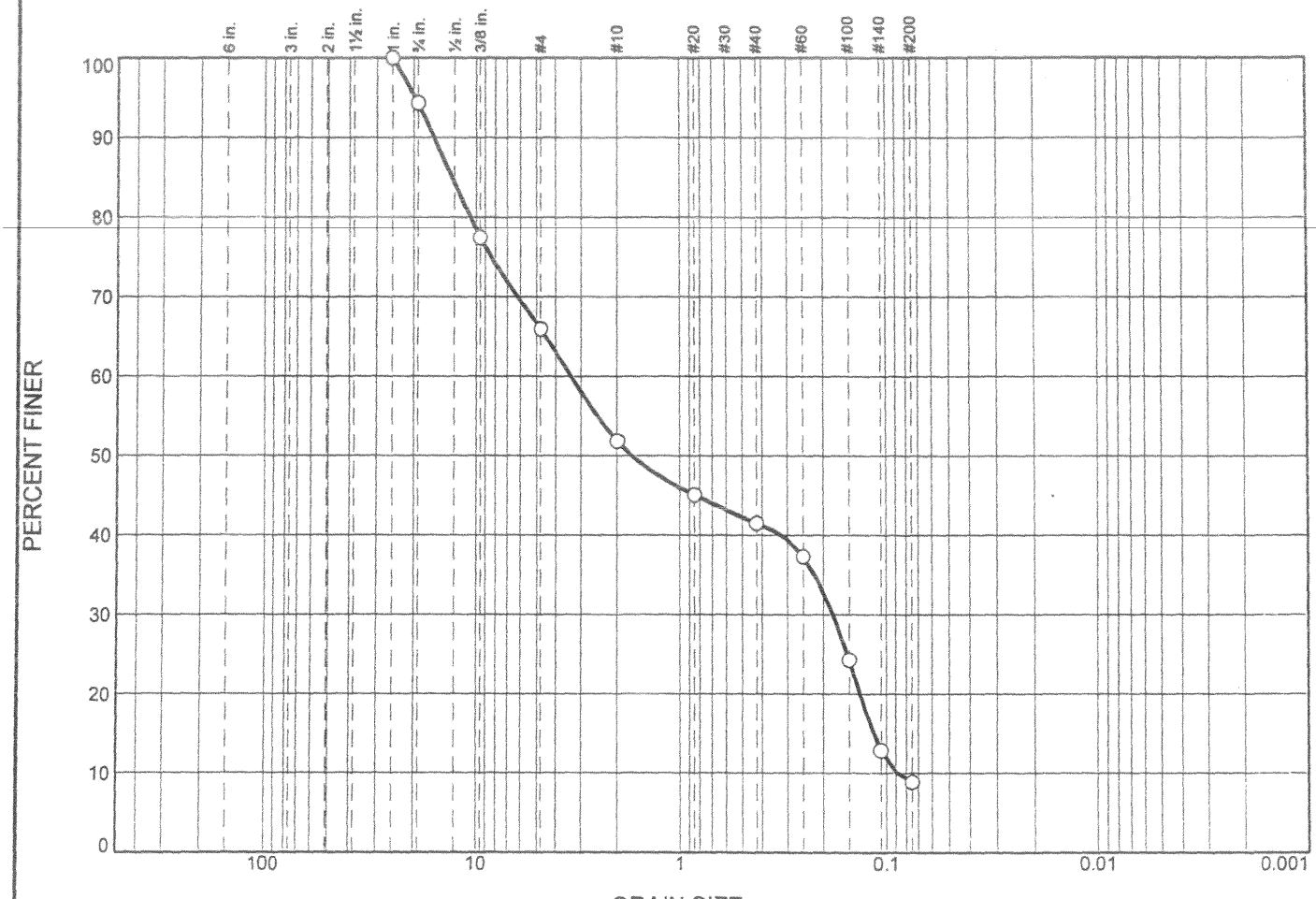
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 28 | 14 | 10 | 33 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 13.0387 | 3.3463 | 1.7055 | 0.1794 | 0.1149 | 0.0883 | 0.11 | 37.90 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0183 **Depth:** 28.5' **Sample Number:** 7

**Date:** ○

**Remarks:**
○ Moisture Content % 12.3 CP05-EAARS-CB-0278

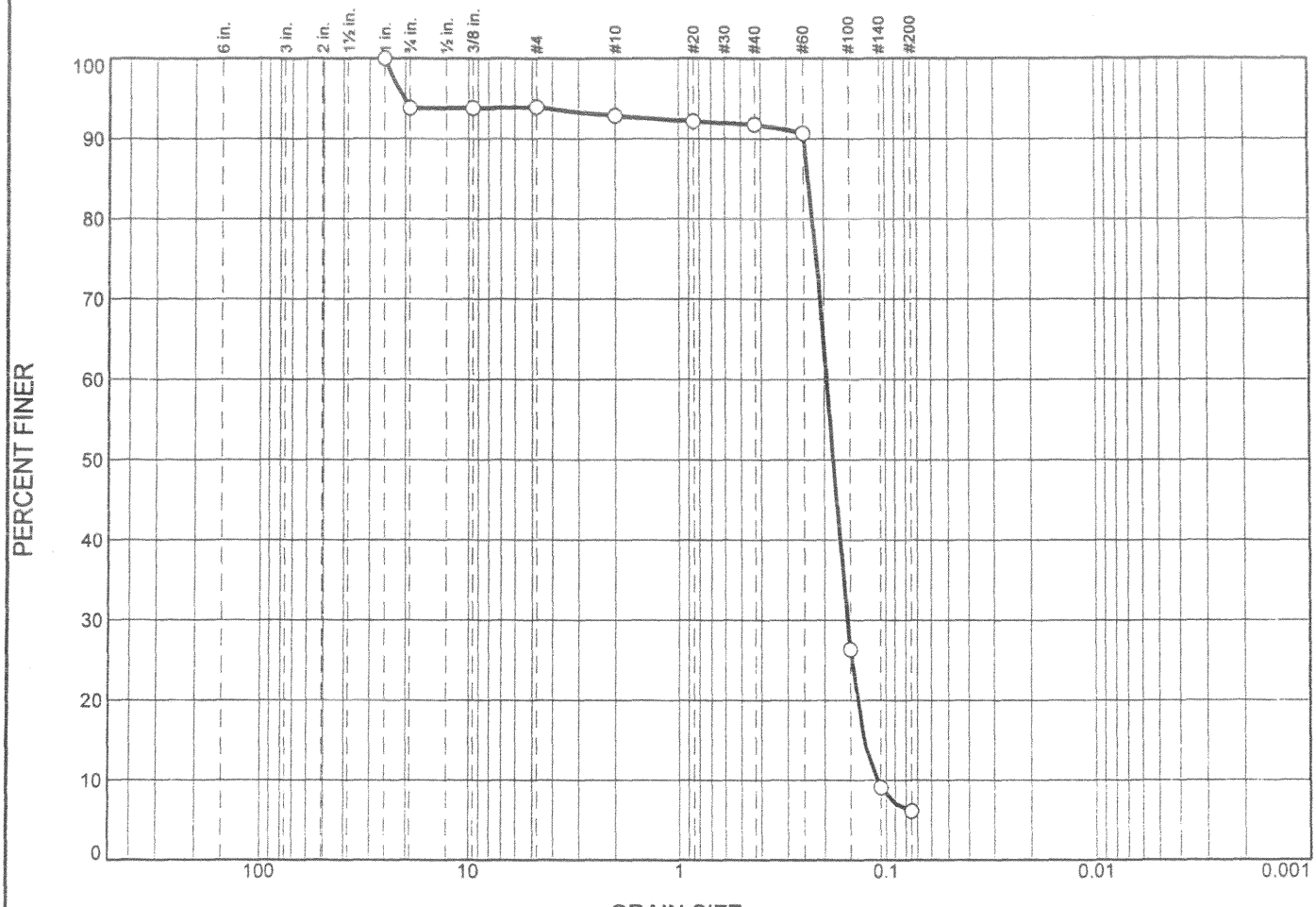
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 0 | 1 | 1 | 86 | 6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2350 | 0.1937 | 0.1808 | 0.1552 | 0.1283 | 0.1110 | 1.12 | 1.75 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0183 **Depth:** 33.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 24.0 CP05-EAARS-CB-0278

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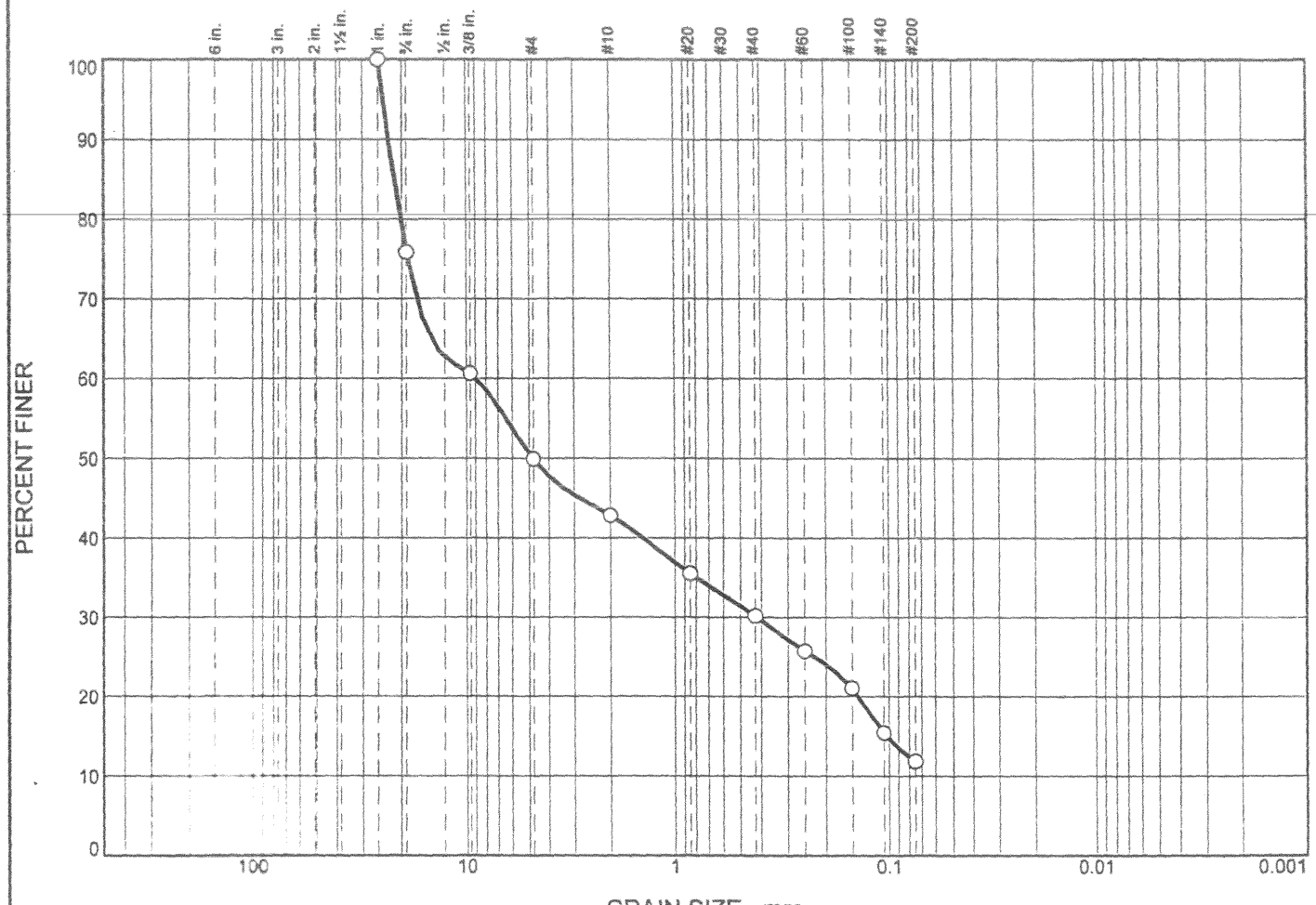
Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 24 | 26 | 7 | 13 | 18 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.5191 | 8.9225 | 4.7754 | 0.4160 | 0.1026 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0184 **Depth:** 0.0' **Sample Number:** 1

**Date:** ○

**Remarks:**
○ Moisture Content %11.0 CP05-EAARS-CB-0279 @ 0.0'

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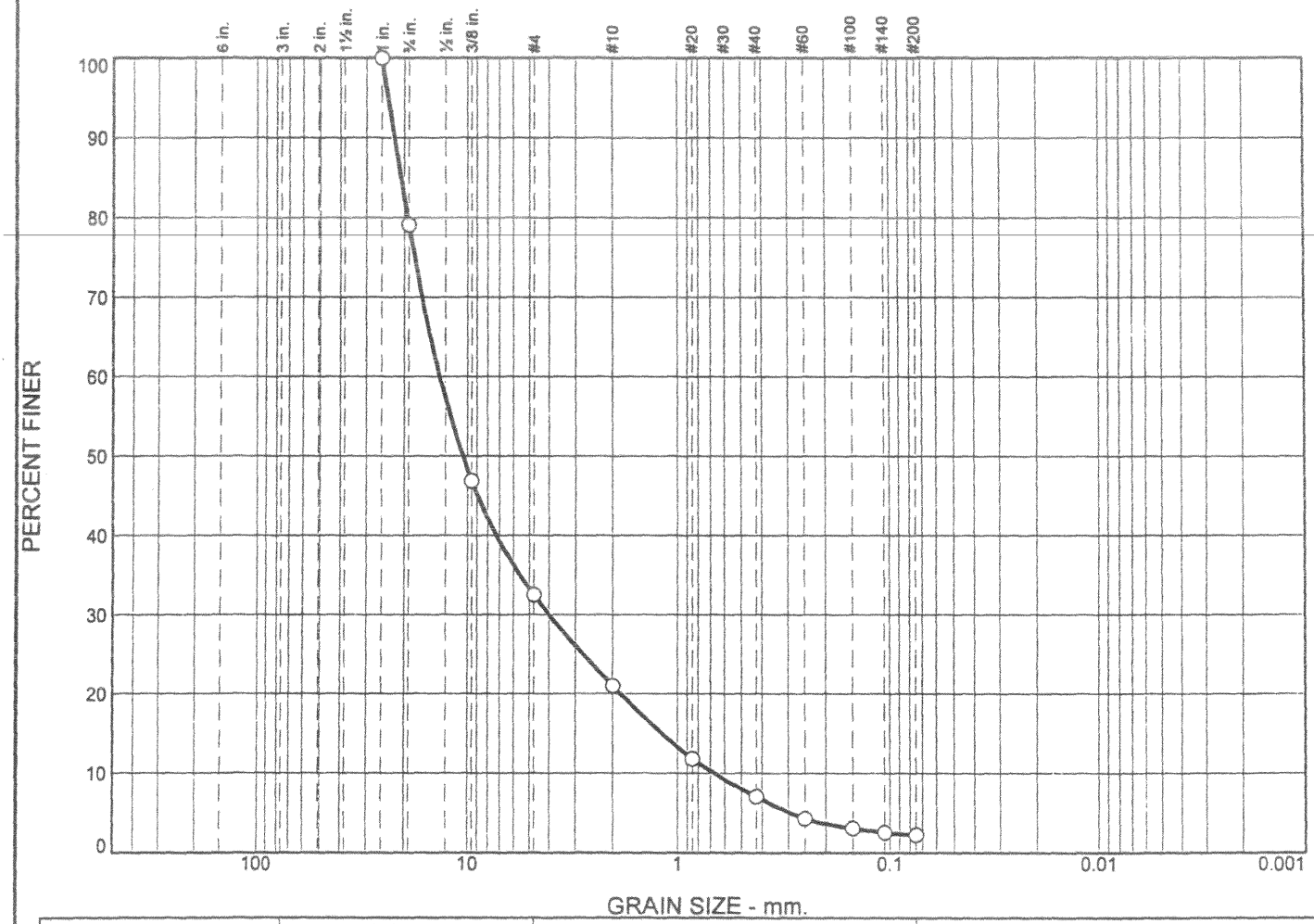
Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 21 | 46 | 12 | 14 | 5 | 2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 20.7582 | 13.5168 | 10.5011 | 3.9928 | 1.1866 | 0.6733 | 1.75 | 20.08 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded gravel with sand | GW | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 7.0' **Sample Number:** 3

**Date:** ○

**Remarks:**
○ Moisture Content % 18.1 CP05-EAARS-CB-0280 @ 7.0'

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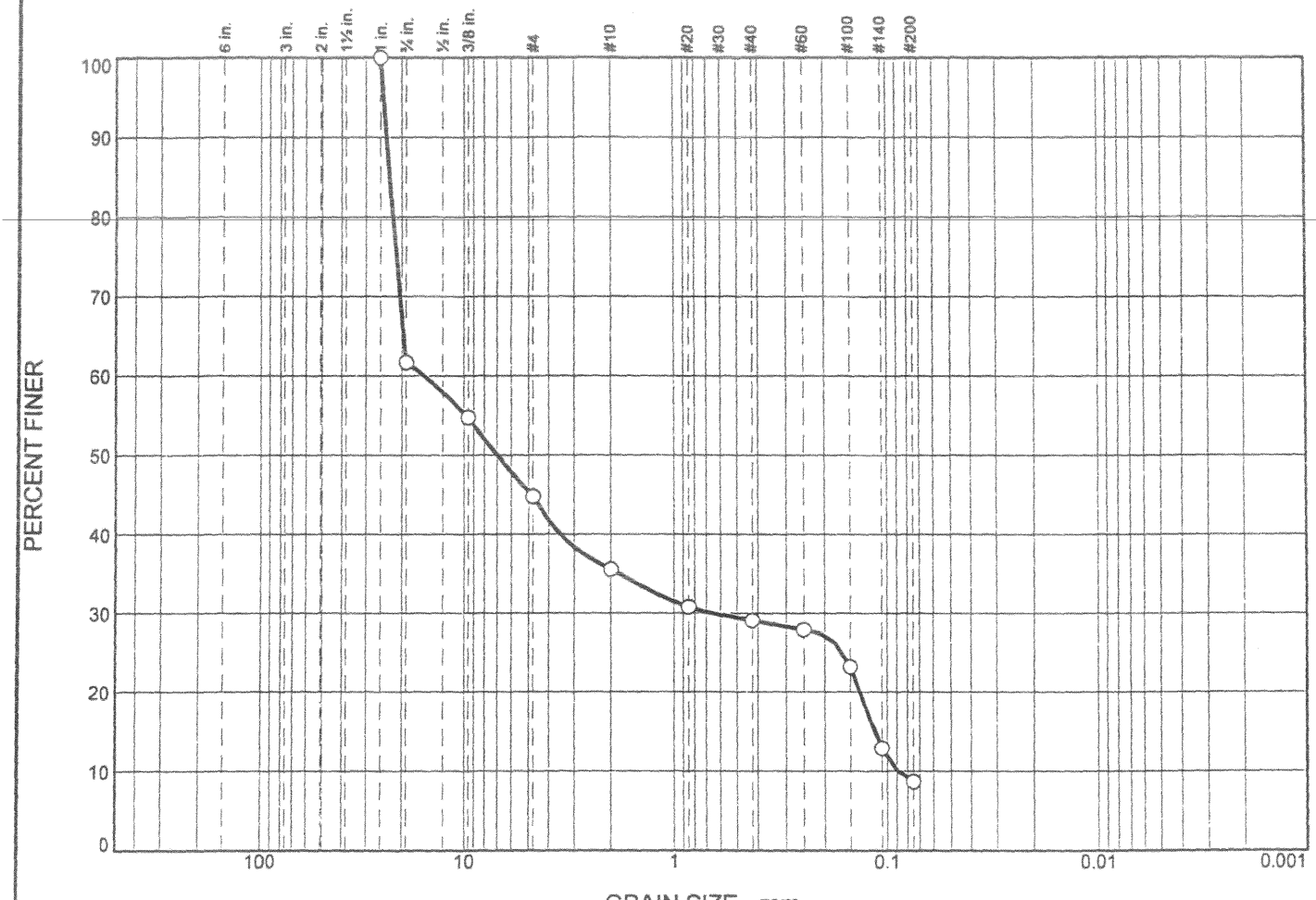
Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 38 | 17 | 9 | 7 | 20 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 22.9953 | 15.6024 | 6.9816 | 0.6584 | 0.1147 | 0.0888 | 0.31 | 175.63 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-0185 **Depth:** 28.5' **Sample Number:** 7

**Date:** ○

**Remarks:**

○ Moisture Content % 13.4 CP05-EAARS-CB-0280 @ 28.5'

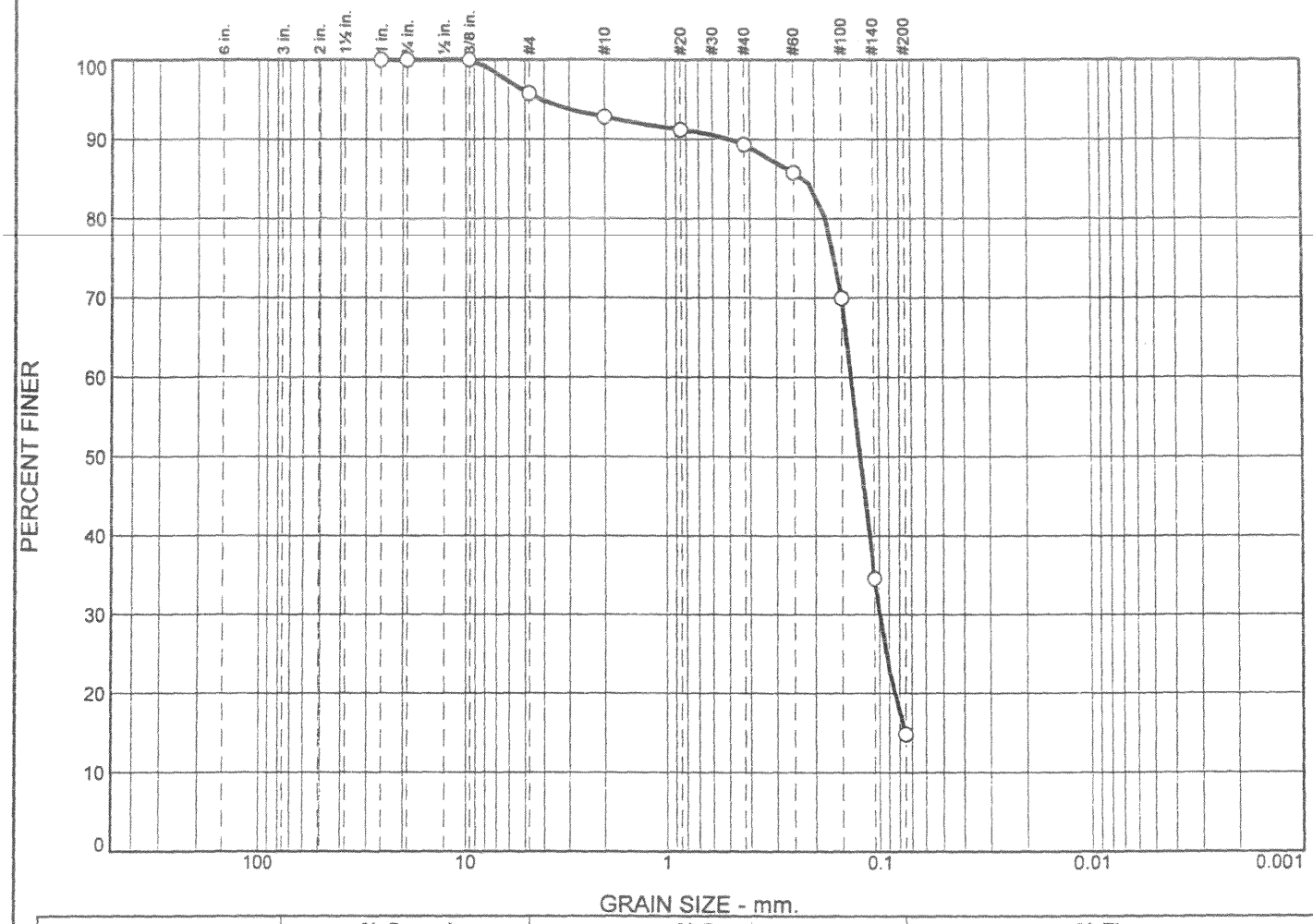
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 4 | 3 | 4 | 74 | 15 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2232 | 0.1351 | 0.1232 | 0.1002 | 0.0753 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 33.5' **Sample Number:** 8

**Date:** ○

**Remarks:**
○ Moisture Content % 28.0 CP05-EAARS-CB-0280 @ 33.5'

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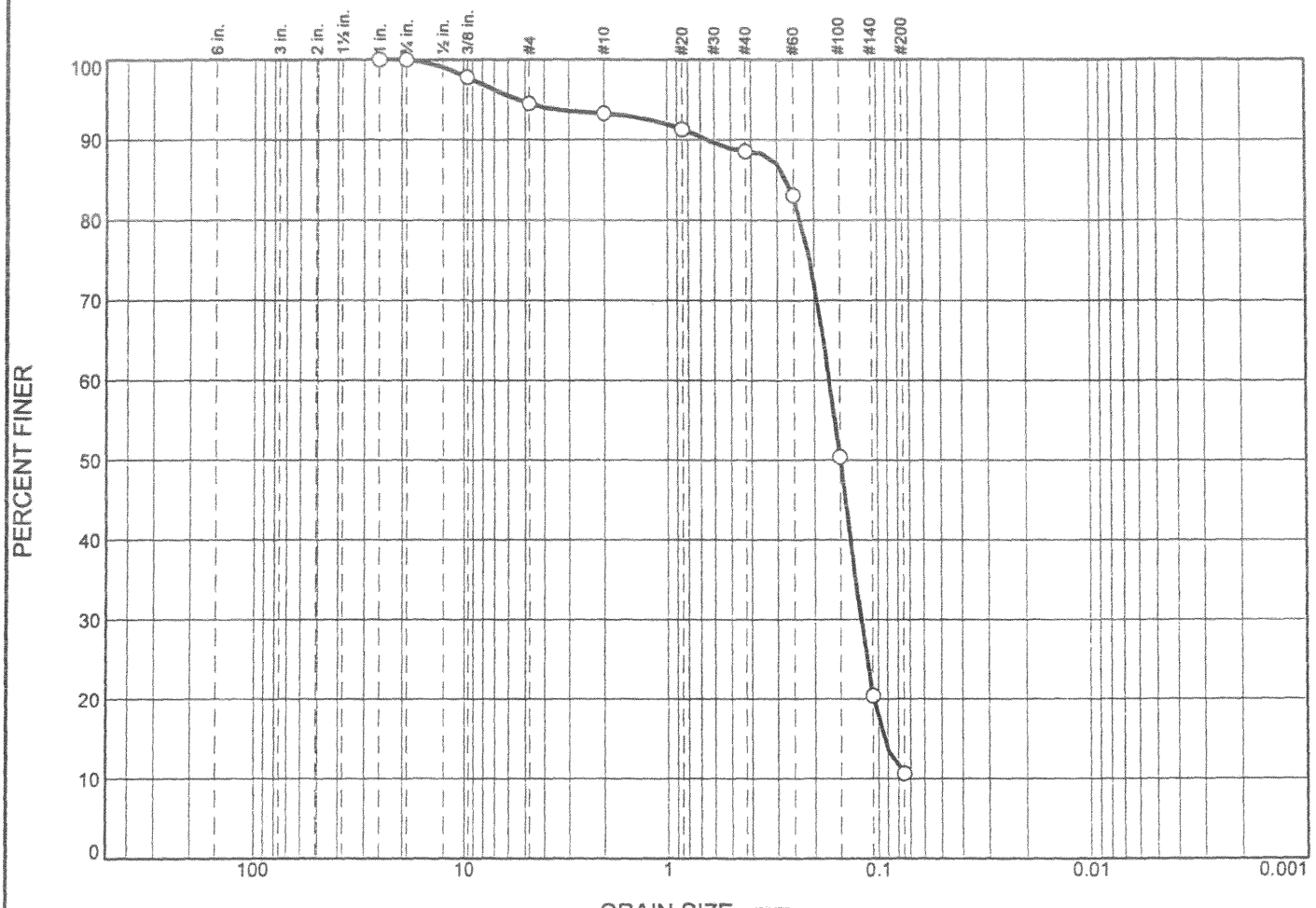
Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 5 | 2 | 4 | 78 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2674 | 0.1677 | 0.1493 | 0.1205 | 0.0941 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 38.5' **Sample Number:** 9

**Date:** ○

**Remarks:**
○ Moisture Content % 24.3 CP05-EAARS-CB-0280 @ 38.5'

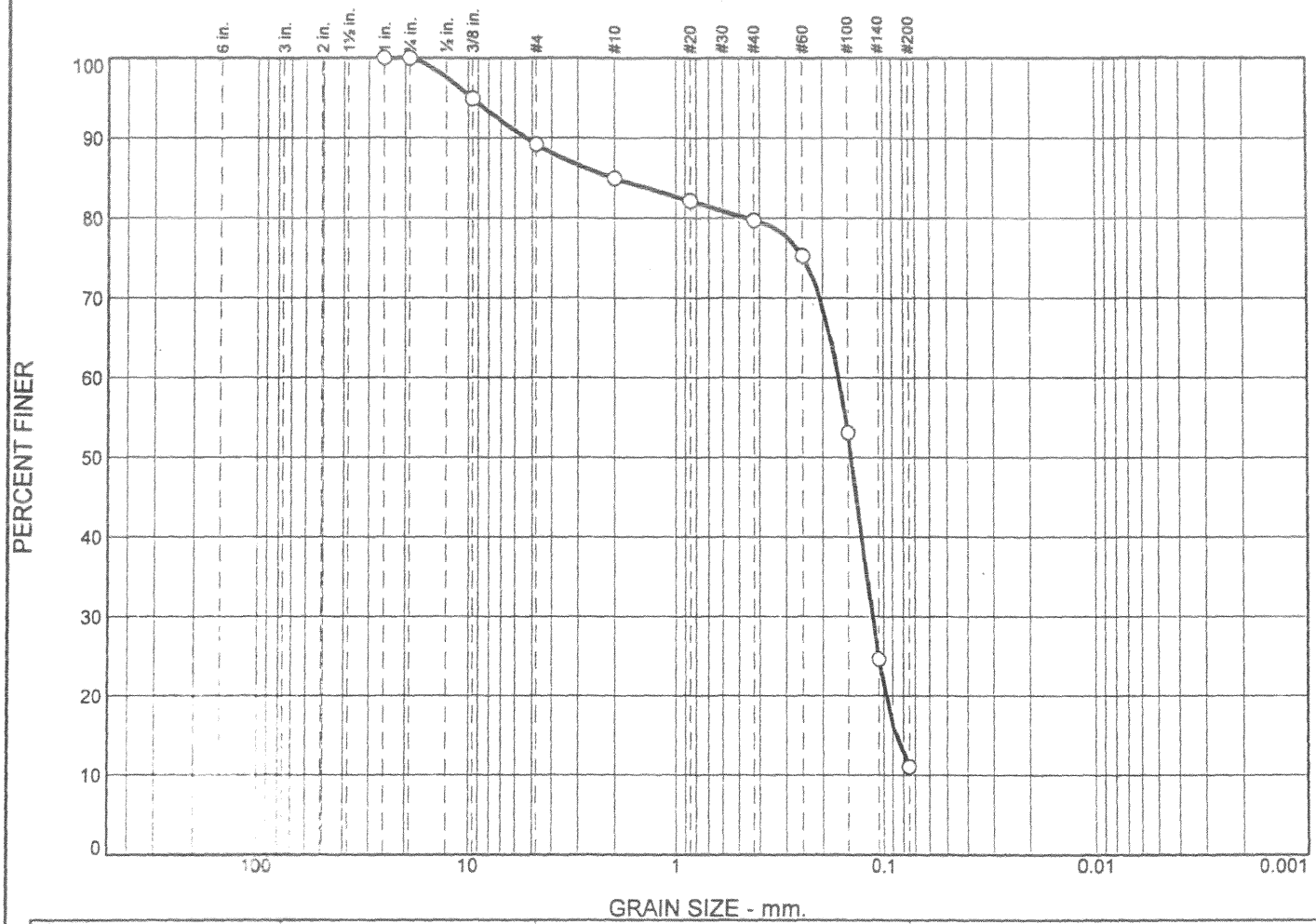
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 11 | 4 | 5 | 69 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.0119 | 0.1659 | 0.1442 | 0.1142 | 0.0862 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 43.5' **Sample Number:** 10

**Date:** ○

**Remarks:**
○ Moisture Content % 25.3 CP05-EAARS-CB-0280 @ 43.5'

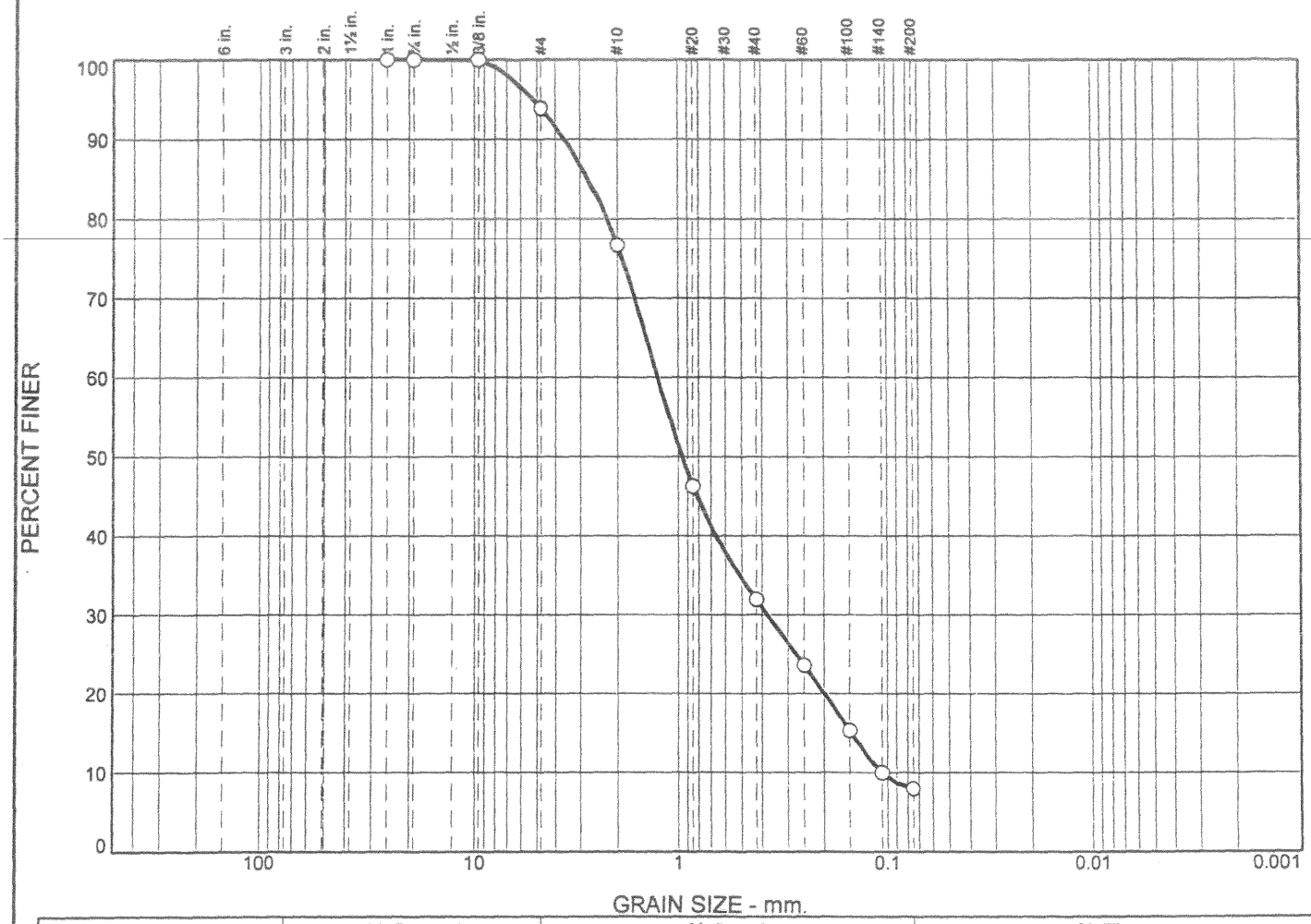
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 6 | 17 | 45 | 24 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.7478 | 1.2579 | 0.9556 | 0.3757 | 0.1471 | 0.1066 | 1.05 | 11.81 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 48.5' **Sample Number:** 11

**Date:** ○

**Remarks:**
○ Moisture Content % 28.9 CP05-EAARS-CB-0280 @ 48.5'

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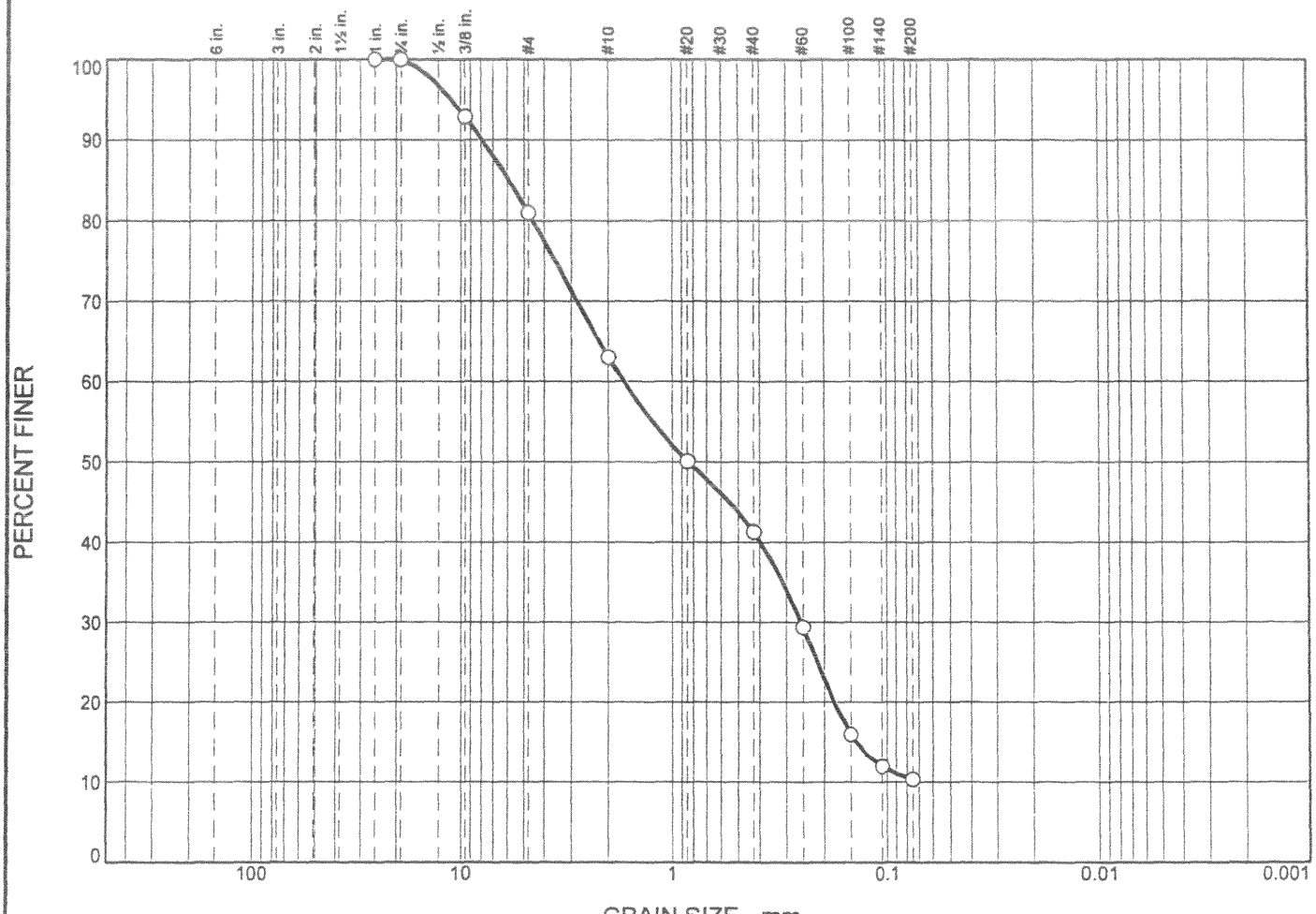
Miami Lakes, FL

Figure

Tested By: Pedro Carraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 19 | 18 | 22 | 31 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.8773 | 1.6915 | 0.8432 | 0.2557 | 0.1419 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 68.5' **Sample Number:** 15

**Date:** ○

**Remarks:**
○ Moisture Content % 23.2 CP05-EAARS-CB-0280 @ 68.5'

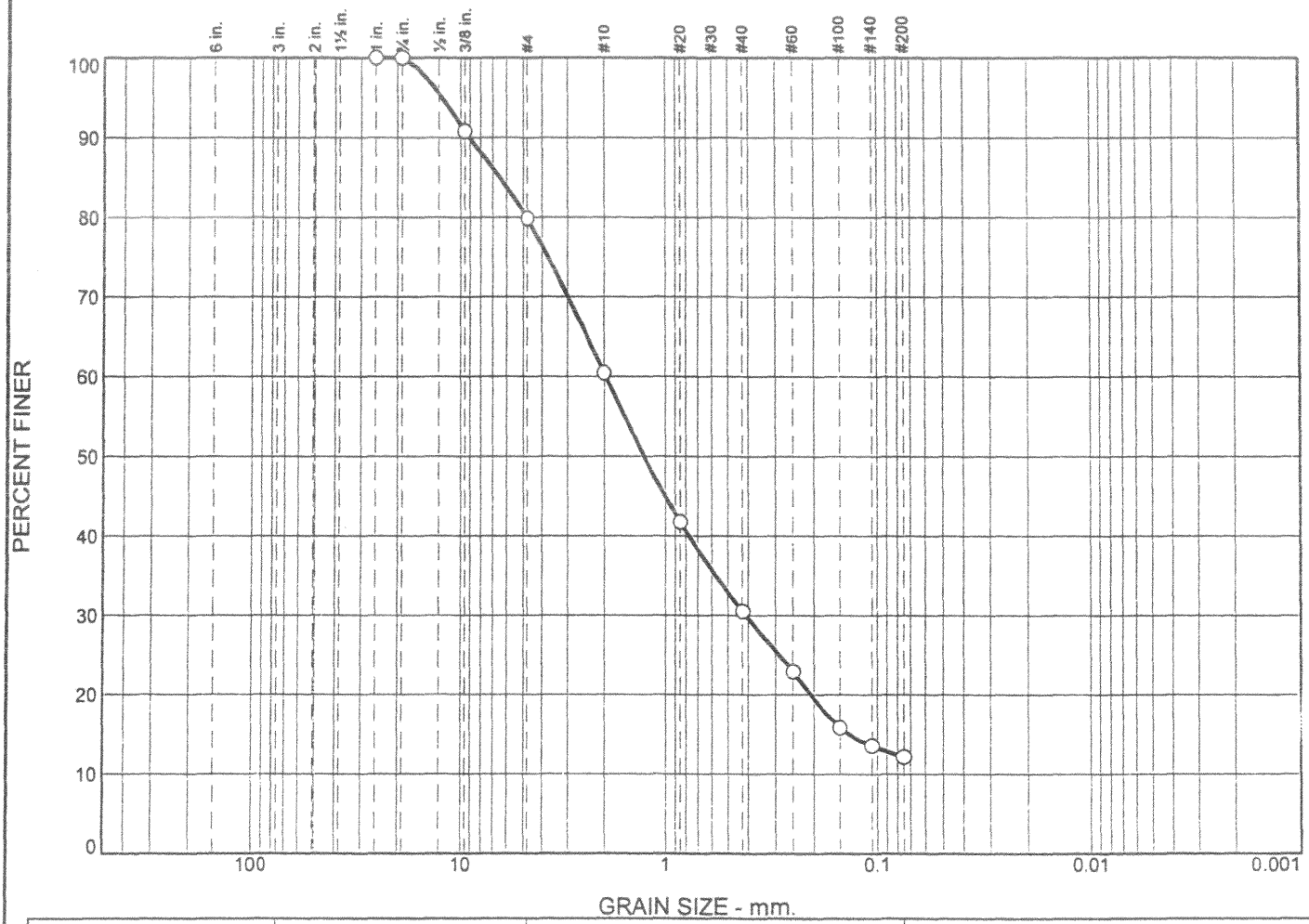
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 20 | 20 | 29 | 19 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.4837 | 1.9618 | 1.2715 | 0.4095 | 0.1360 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 73.5' **Sample Number:** 16

**Date:** ○

**Remarks:**
○ Moisture Content % 25.7 CP05-EAARS-CB-0280 @ 73.5'

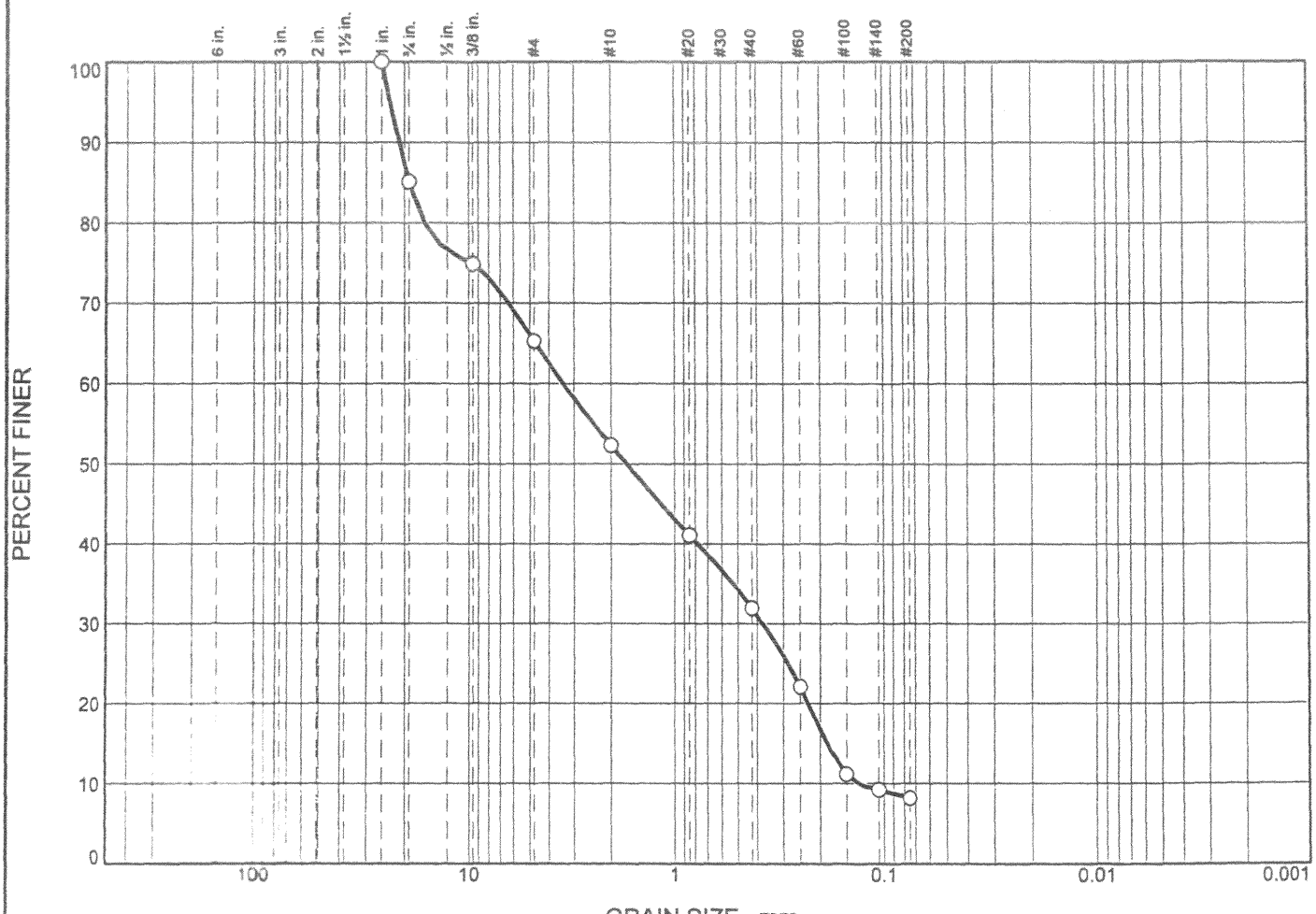
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Samaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 15 | 20 | 13 | 20 | 24 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 18.9695 | 3.3903 | 1.6902 | 0.3753 | 0.1857 | 0.1322 | 0.31 | 25.64 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-0185 **Depth:** 78.5' **Sample Number:** 17

**Date:** ○

**Remarks:**

○ Moisture Content % 19.4 CP05-EAARS-CB-0280 @ 78.5'

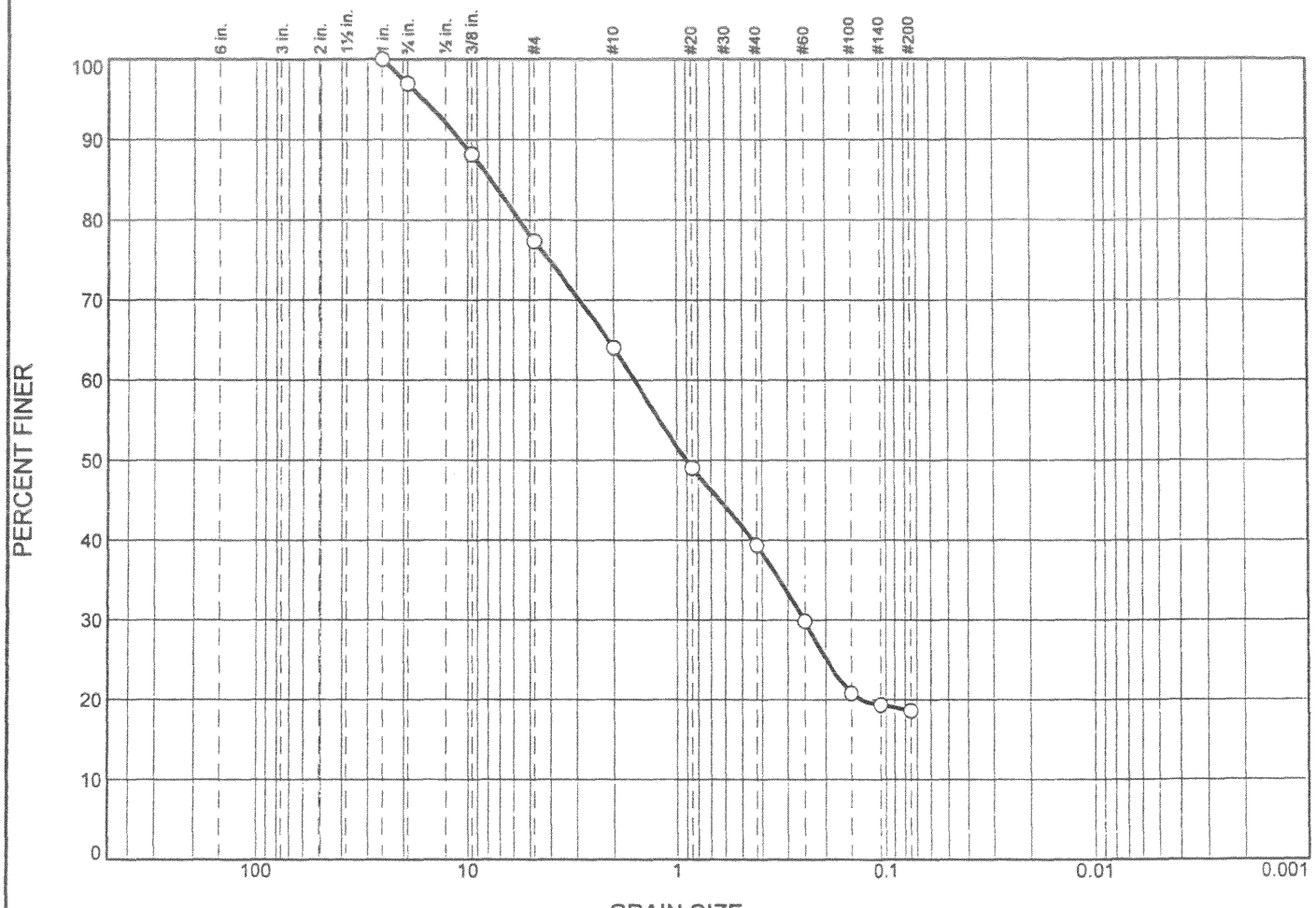
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 3 | 20 | 13 | 25 | 20 | 19 | |
| | | | | | | | | |
| | | | | | | | | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.7115 | 1.5914 | 0.9036 | 0.2518 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 83.5' **Sample Number:** 18

**Date:** ○

**Remarks:**
○ Moisture Content % 21.9 CP05-EAARS-CB-0280 @ 83.5'

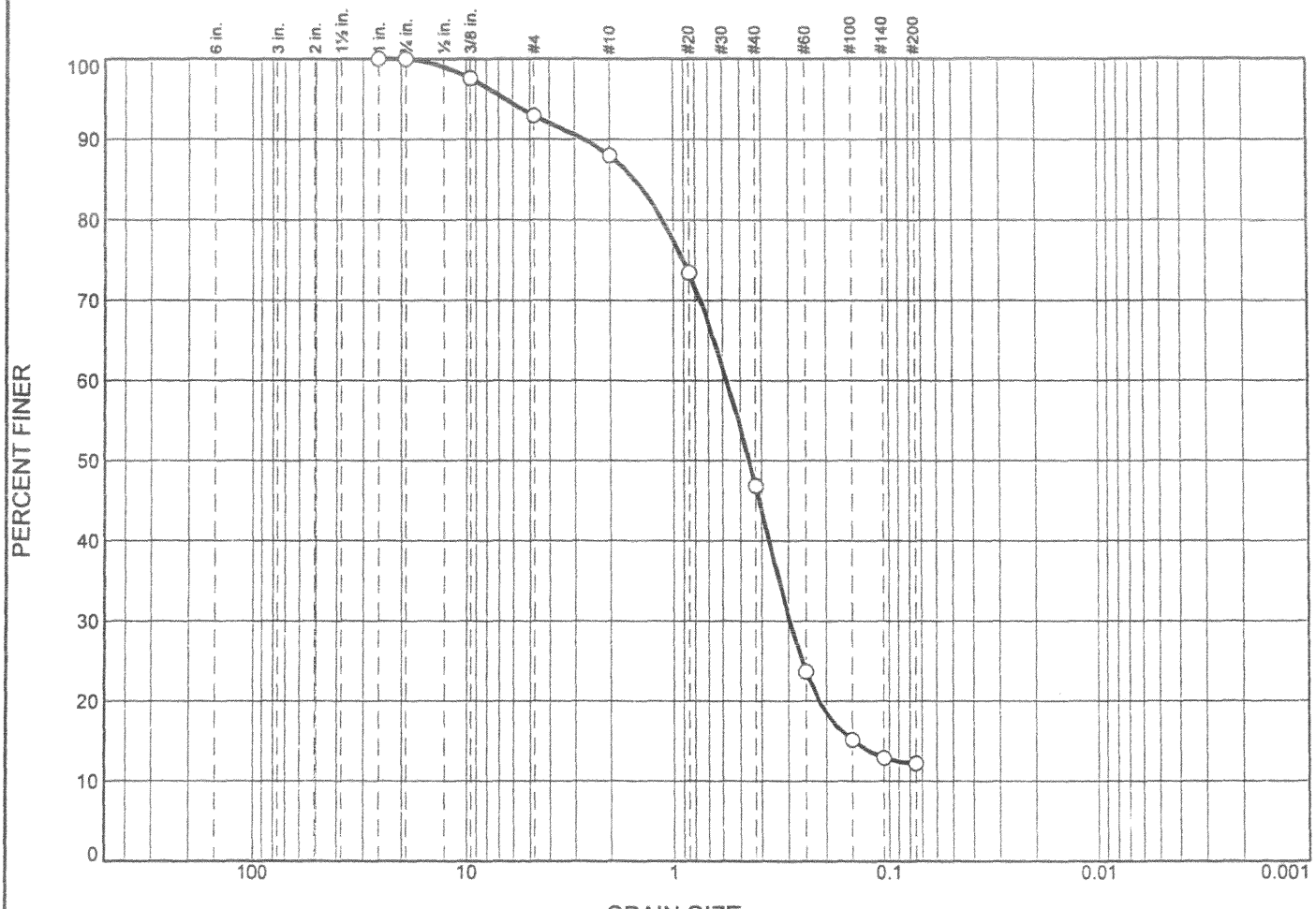
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 7 | 5 | 41 | 35 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.5091 | 0.5746 | 0.4550 | 0.2965 | 0.1471 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 88.5' **Sample Number:** 19

**Date:** ○

**Remarks:**
○ Moisture Content % 23.1 CP05-EAARS-CB-0280 @ 88.5'

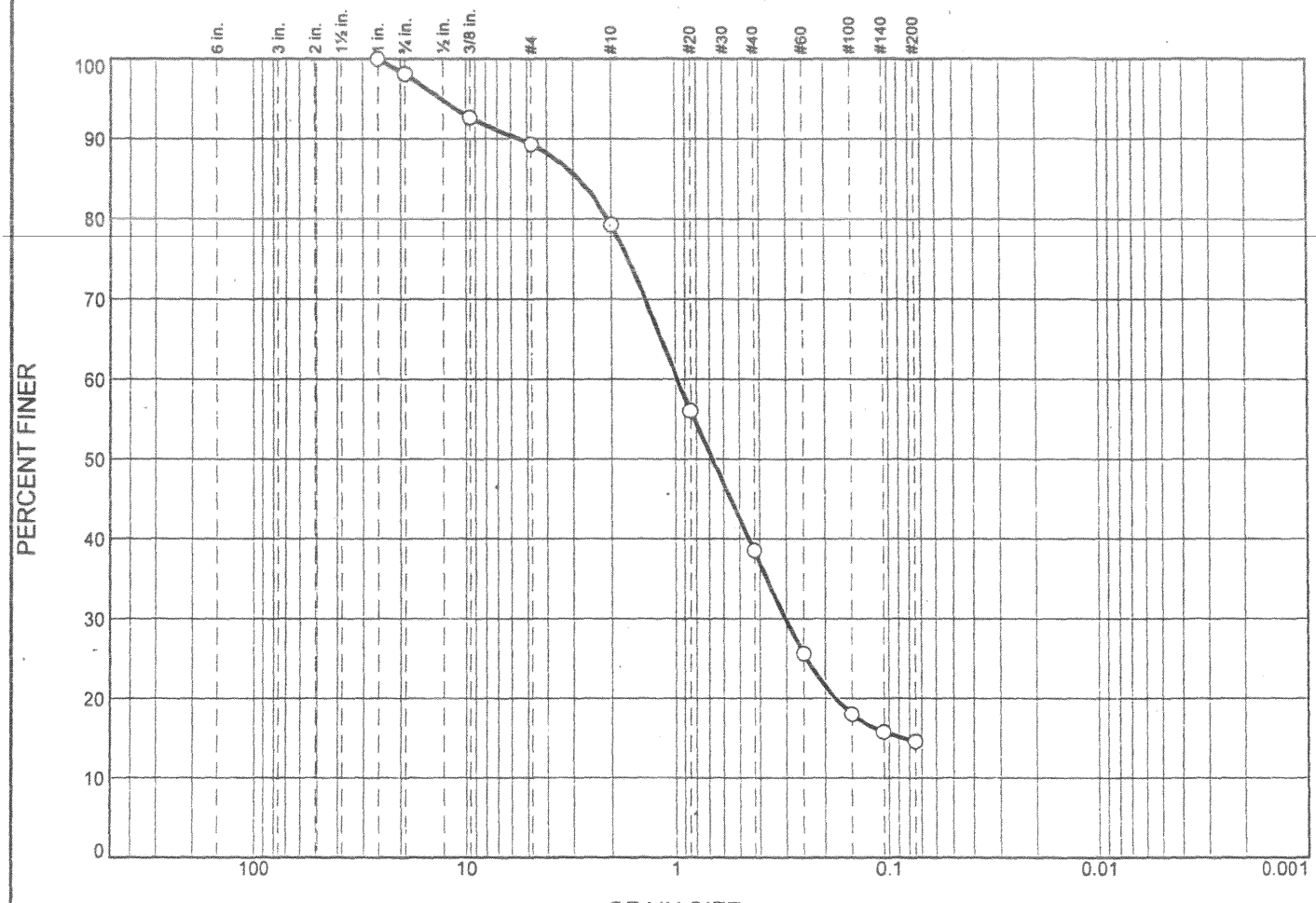
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 2 | 9 | 10 | 40 | 24 | 15 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.8337 | 0.9776 | 0.6751 | 0.3031 | 0.0858 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 93.5' **Sample Number:** 20

**Date:** ○

**Remarks:**
○ Moisture Content % 24.1 CP05-EAARS-CB-0280 @ 93.5'

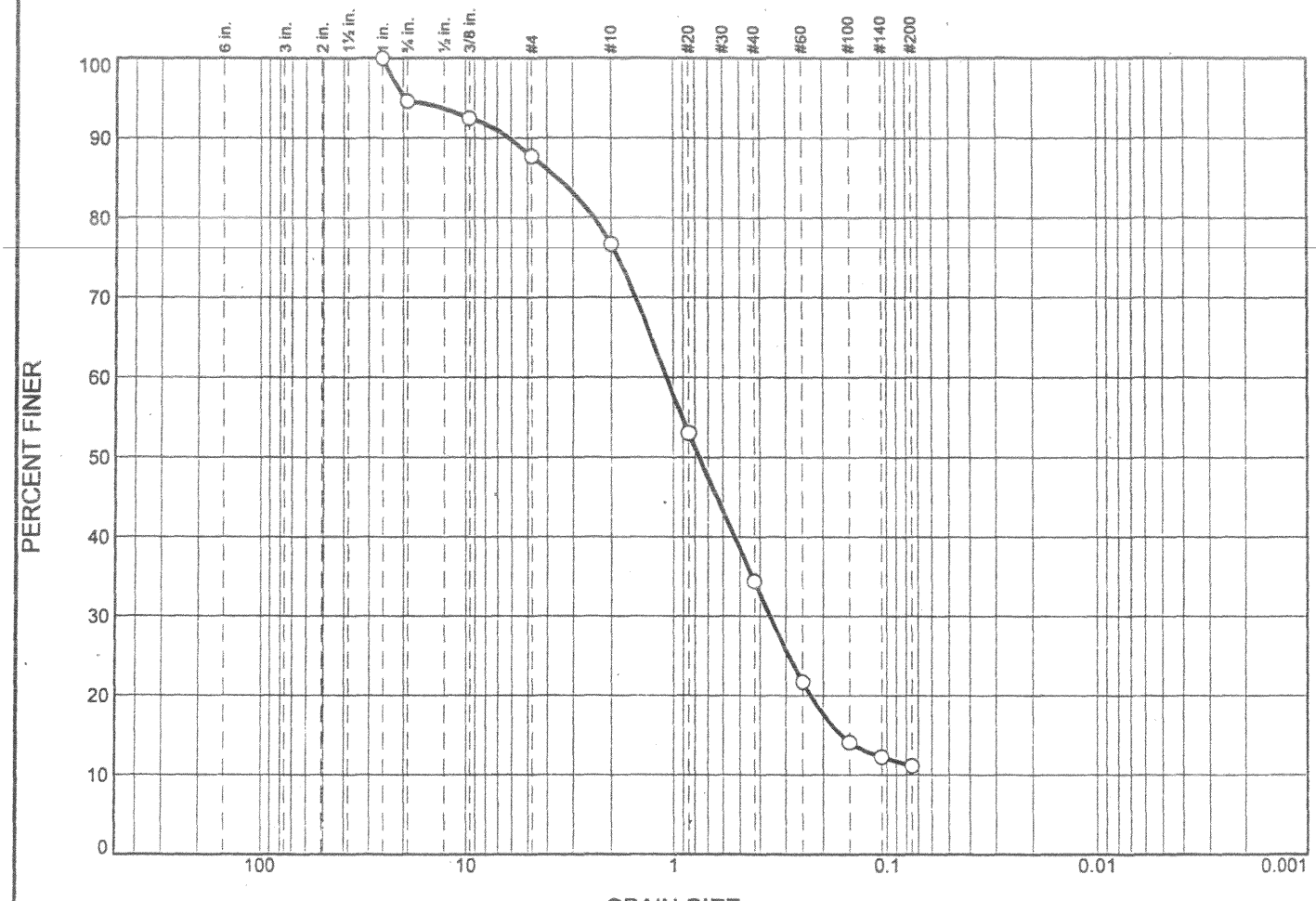
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 5 | 7 | 11 | 43 | 23 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.5493 | 1.0734 | 0.7647 | 0.3575 | 0.1642 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 98.5' **Sample Number:** 21

**Date:** ○

**Remarks:**
○ Moisture Content % 23.8 CP05-EAARS-CB-0280 @ 98.5'

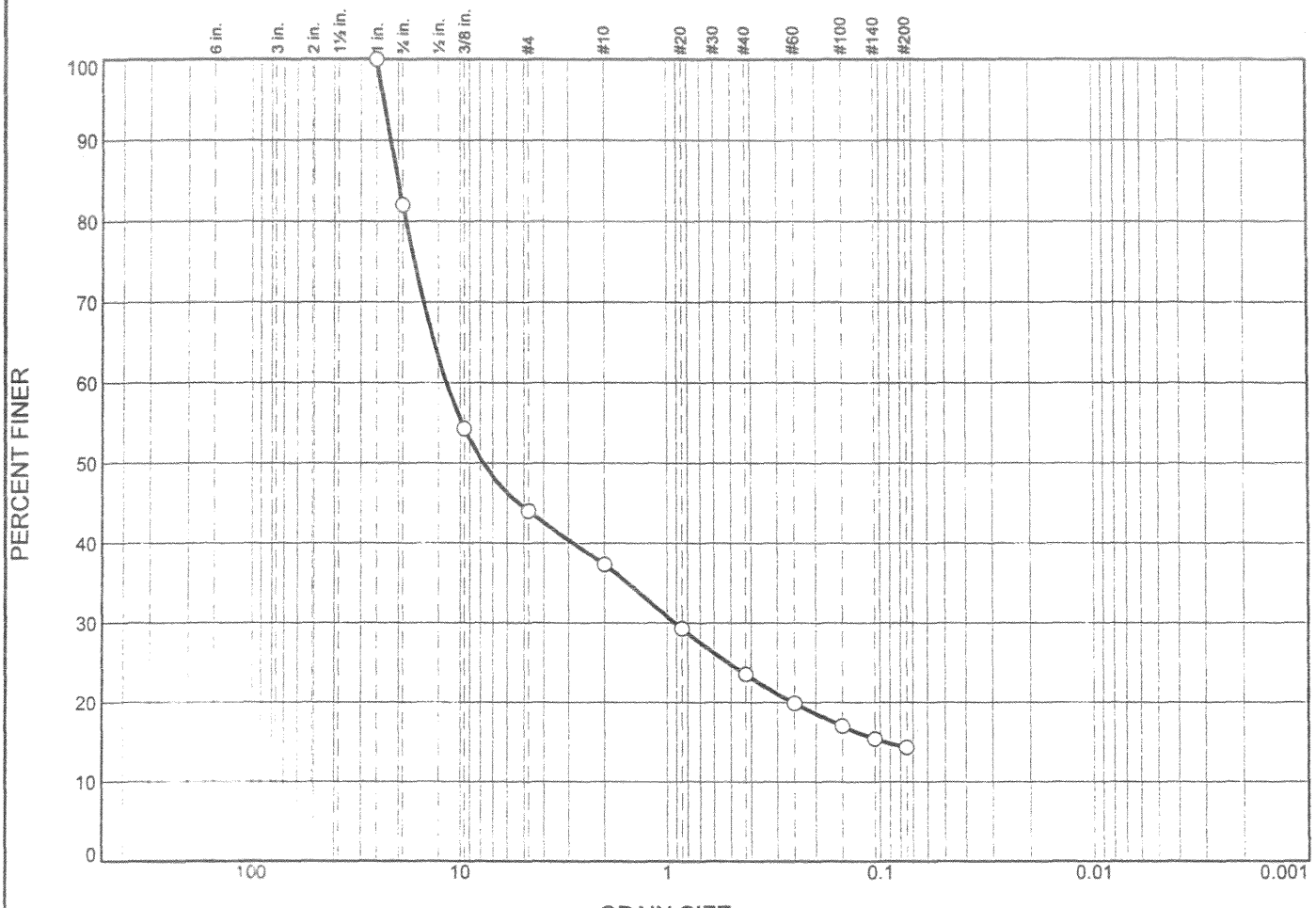
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: [illegible] Zamaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 18.0 | 38.0 | 6.7 | 13.8 | 9.2 | 14.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 20.0393 | 11.6207 | 7.7570 | 0.9163 | 0.0948 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty gravel with sand | GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 5.0'-10.0' **Sample Number:** CB164

**Remarks:**
○ Moisture Content % 5.7 CP05-EAARS-VB-0282

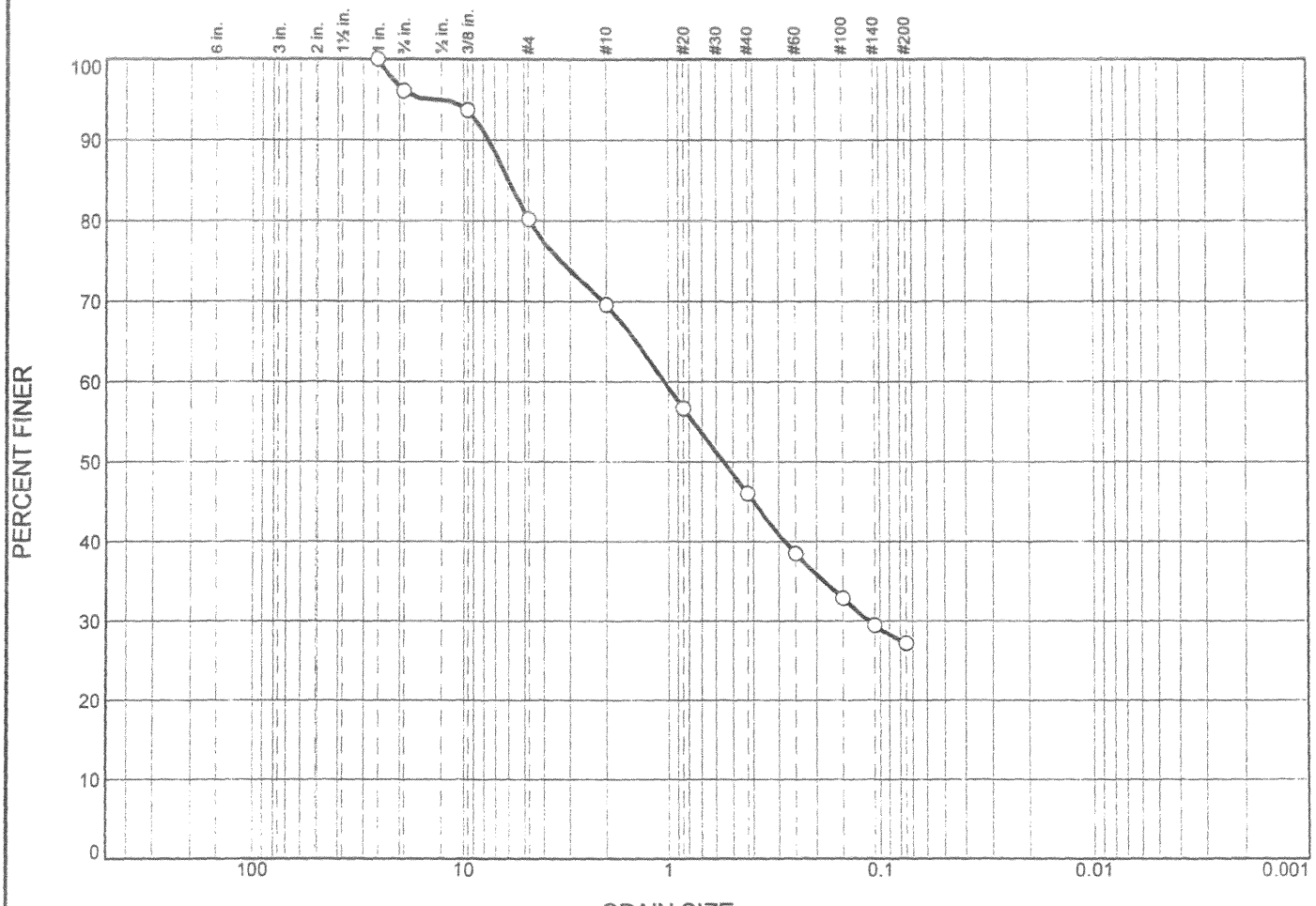
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 3.9 | 15.9 | 10.6 | 23.5 | 18.9 | 27.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.9549 | 1.0430 | 0.5522 | 0.1128 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 10.0'-15.0' **Sample Number:** CB164

**Remarks:**

○Moisture Content % 21.4 CP05-EAARS-VB-0282

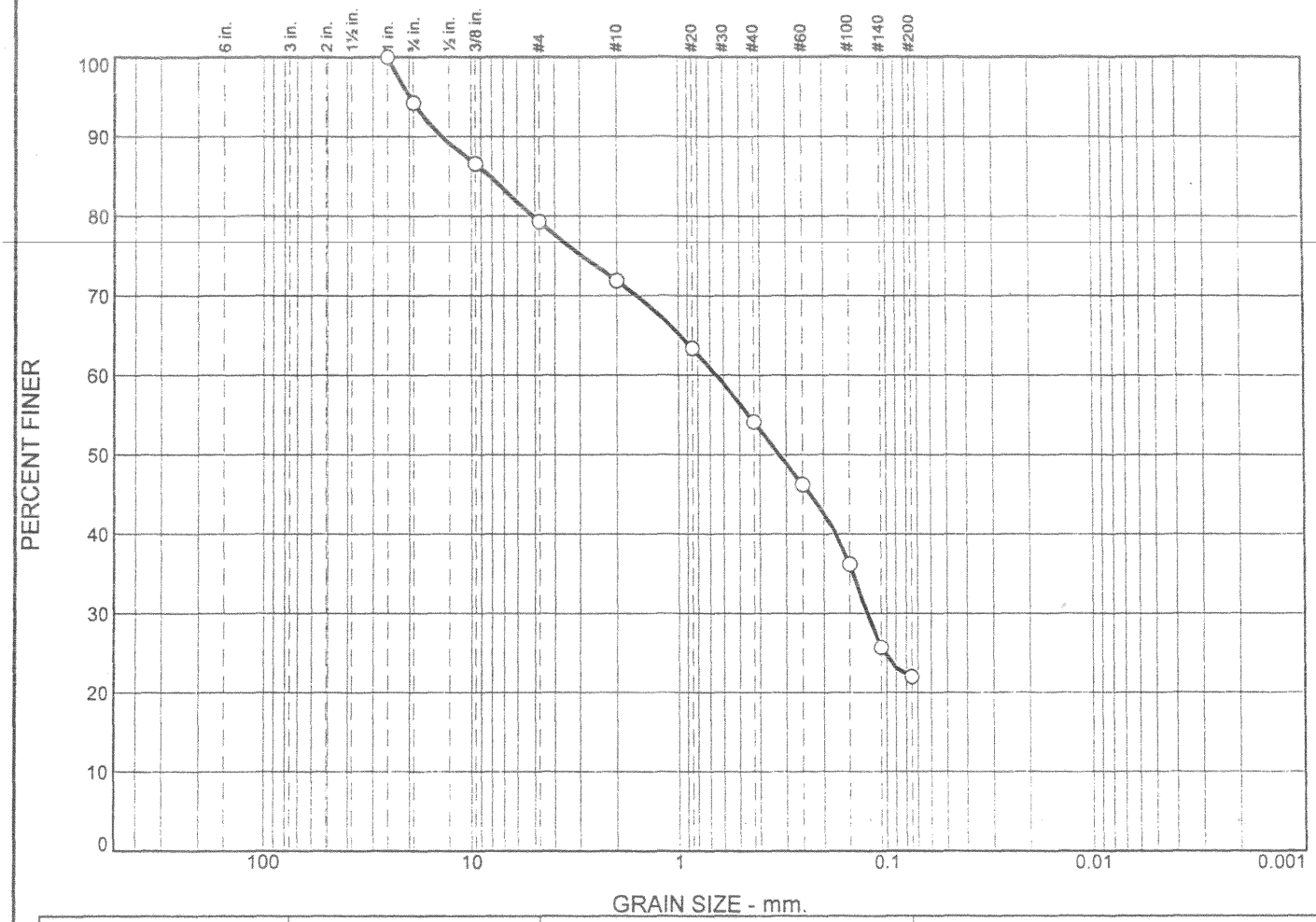
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 15 | 7 | 18 | 32 | 22 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.1303 | 0.6480 | 0.3215 | 0.1237 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 15' to 30'

**Date:** ○

**Remarks:**
○ Moisture Content %20.0 CP05-EAARS-VB-0282

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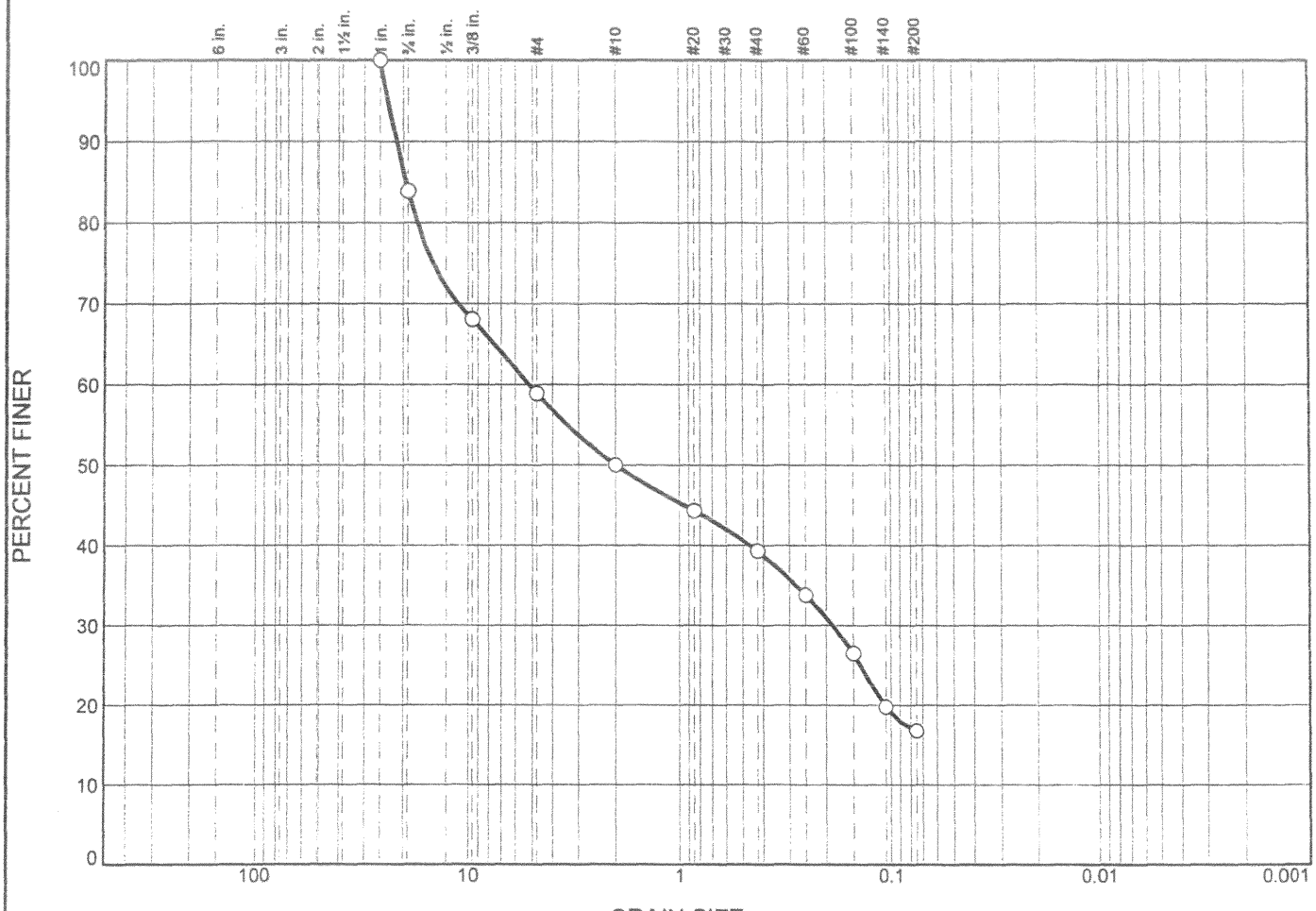
Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 16.1 | 25.0 | 8.9 | 10.7 | 22.5 | 16.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 19.4947 | 5.1674 | 1.9899 | 0.1850 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 30.0'-35.0 **Sample Number:** CB164

**Remarks:**
○ Moisture Content % 7.5 CP05-EAARS-VB-0282

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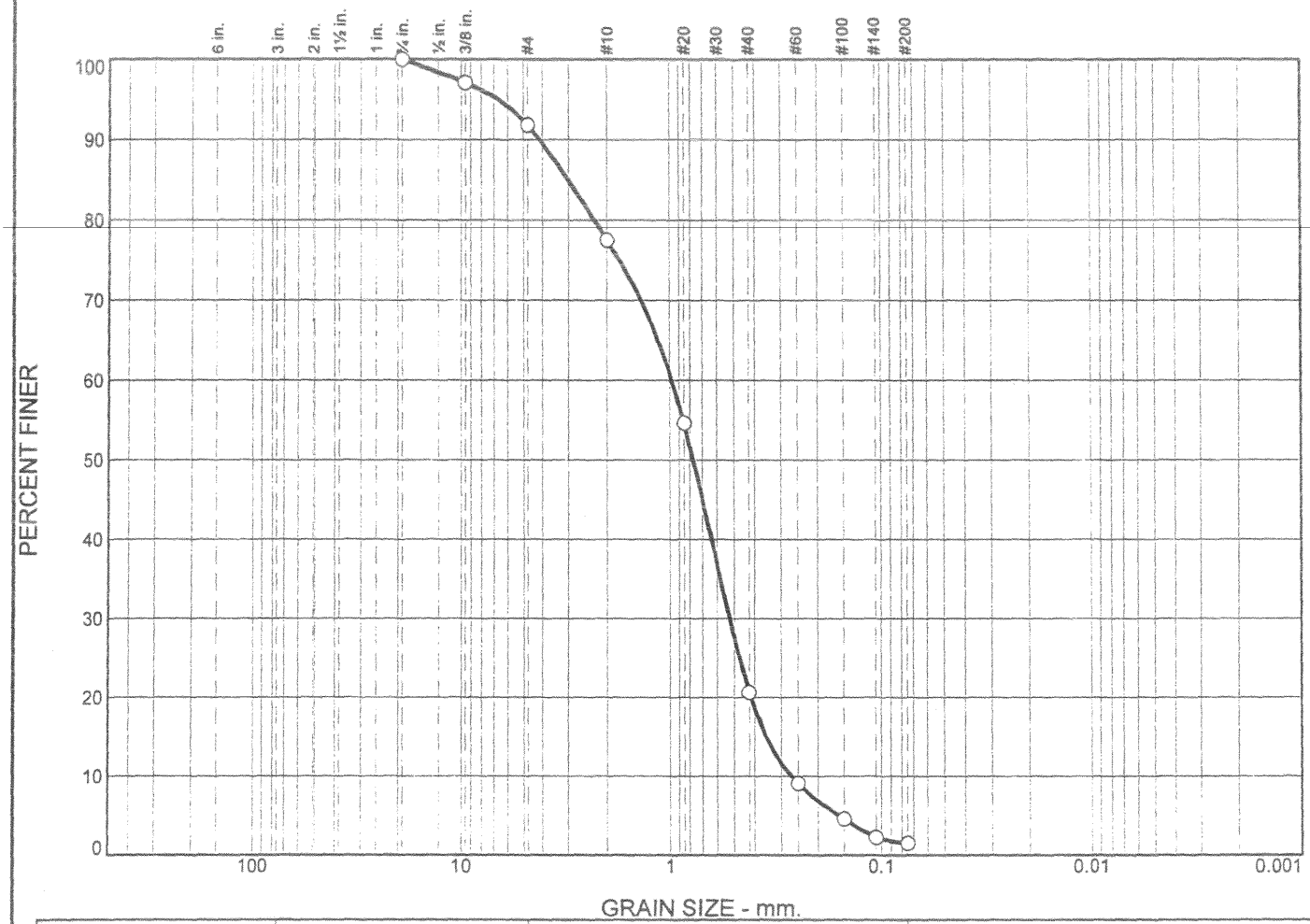
Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 8.1 | 14.4 | 56.9 | 19.1 | 1.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.0098 | 0.9722 | 0.7703 | 0.5245 | 0.3541 | 0.2694 | 1.05 | 3.61 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand | SW | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 45.0'-50.0' **Sample Number:** CB164

**Remarks:**
○ Moisture Content % 14.0 CP05-EAARS-VB-0282

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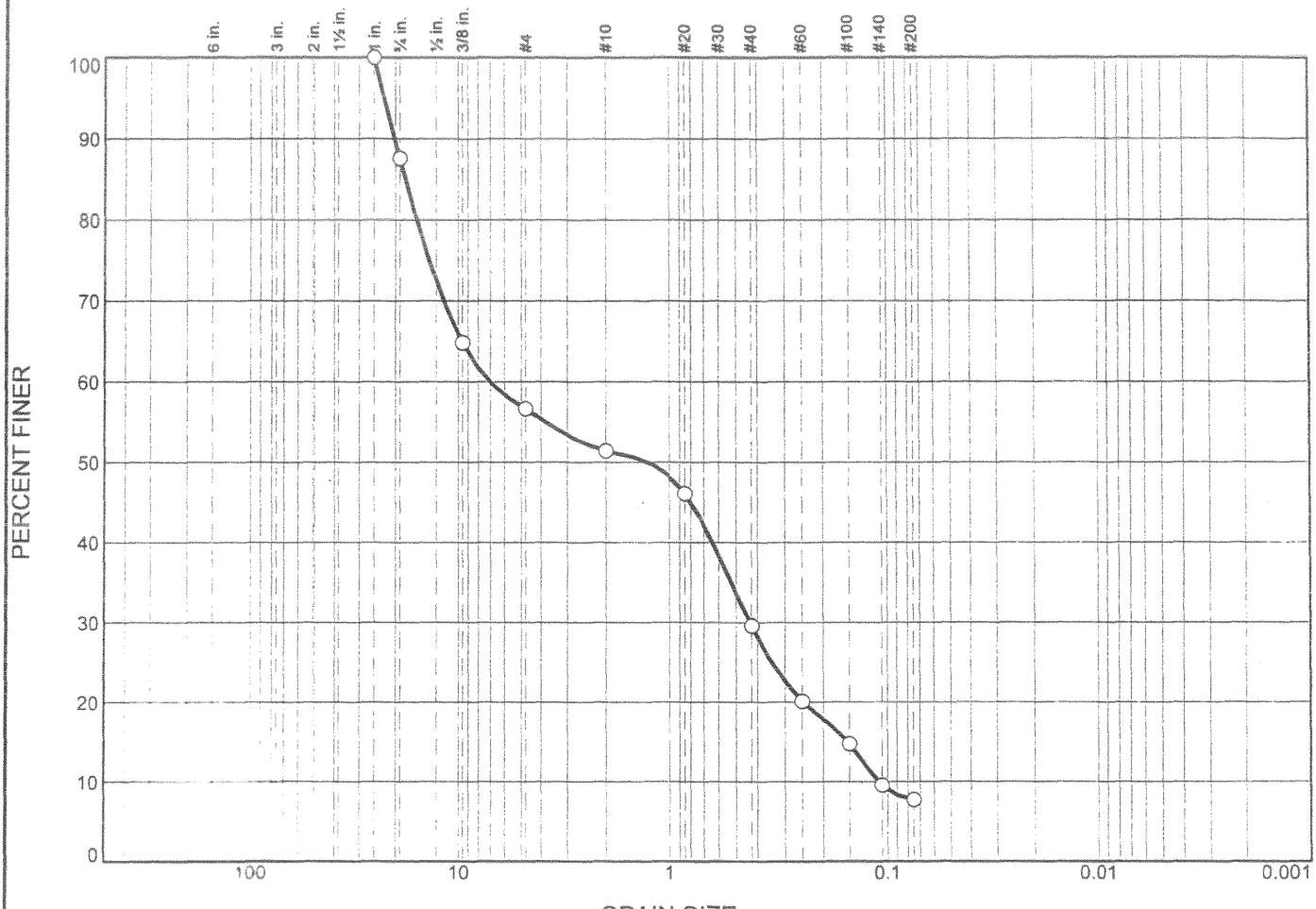
Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 12.4 | 31.0 | 5.2 | 21.8 | 21.9 | 7.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.8777 | 7.0260 | 1.2499 | 0.4323 | 0.1524 | 0.1100 | 0.24 | 63.87 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 55.0'-60.0' **Sample Number:** CB164

**Remarks:**
○ Moisture Content % 10.2 CP05-EAARS-VB-0282

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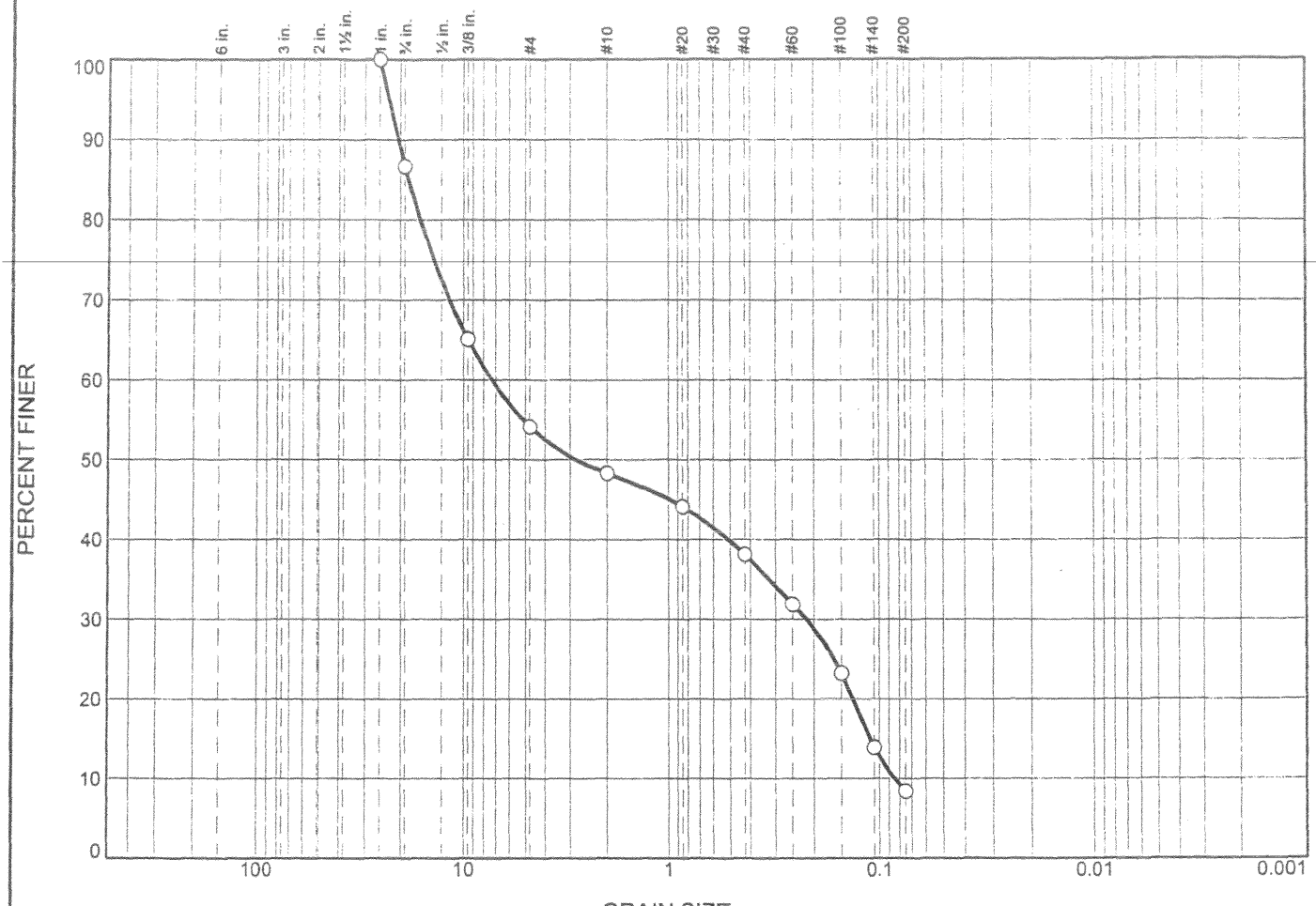
Miami Lakes, FL

Figure

Tested By: Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 13 | 33 | 6 | 10 | 30 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 18.2916 | 7.3217 | 2.8133 | 0.2167 | 0.1109 | 0.0847 | 0.08 | 86.41 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 60' to 65'

**Date:** ○

**Remarks:**
○ Moisture Content % 11.7
CP05-EAARS-VB-0282

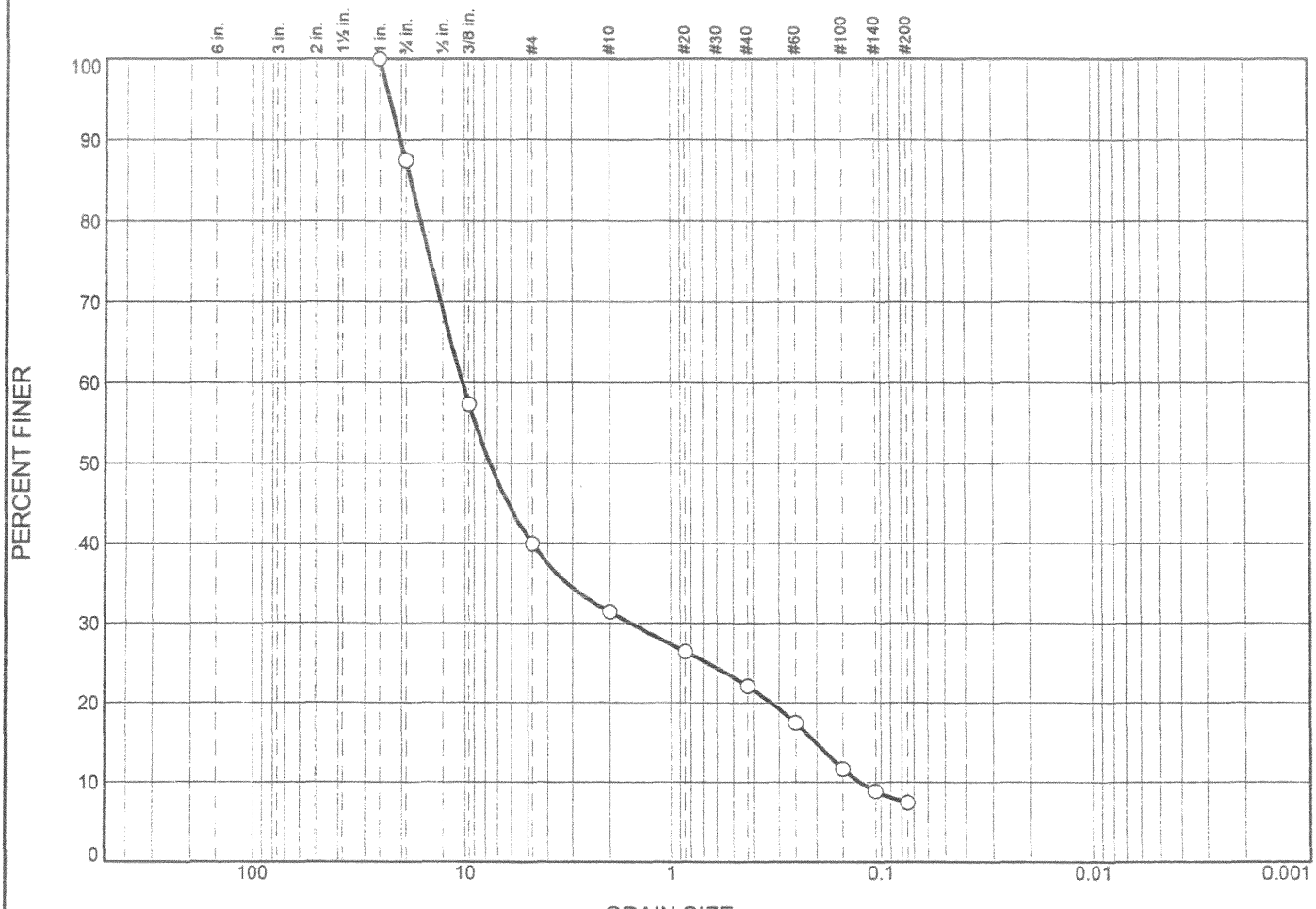
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 12.4 | 47.6 | 8.6 | 9.3 | 14.7 | 7.4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 18.0005 | 10.2300 | 7.5847 | 1.5879 | 0.2011 | 0.1252 | 1.97 | 81.68 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 70.0'-75.0' **Sample Number:** CB164

**Remarks:**

○ Moisture Content % 7.0 CP05-EAARS-VB-0282

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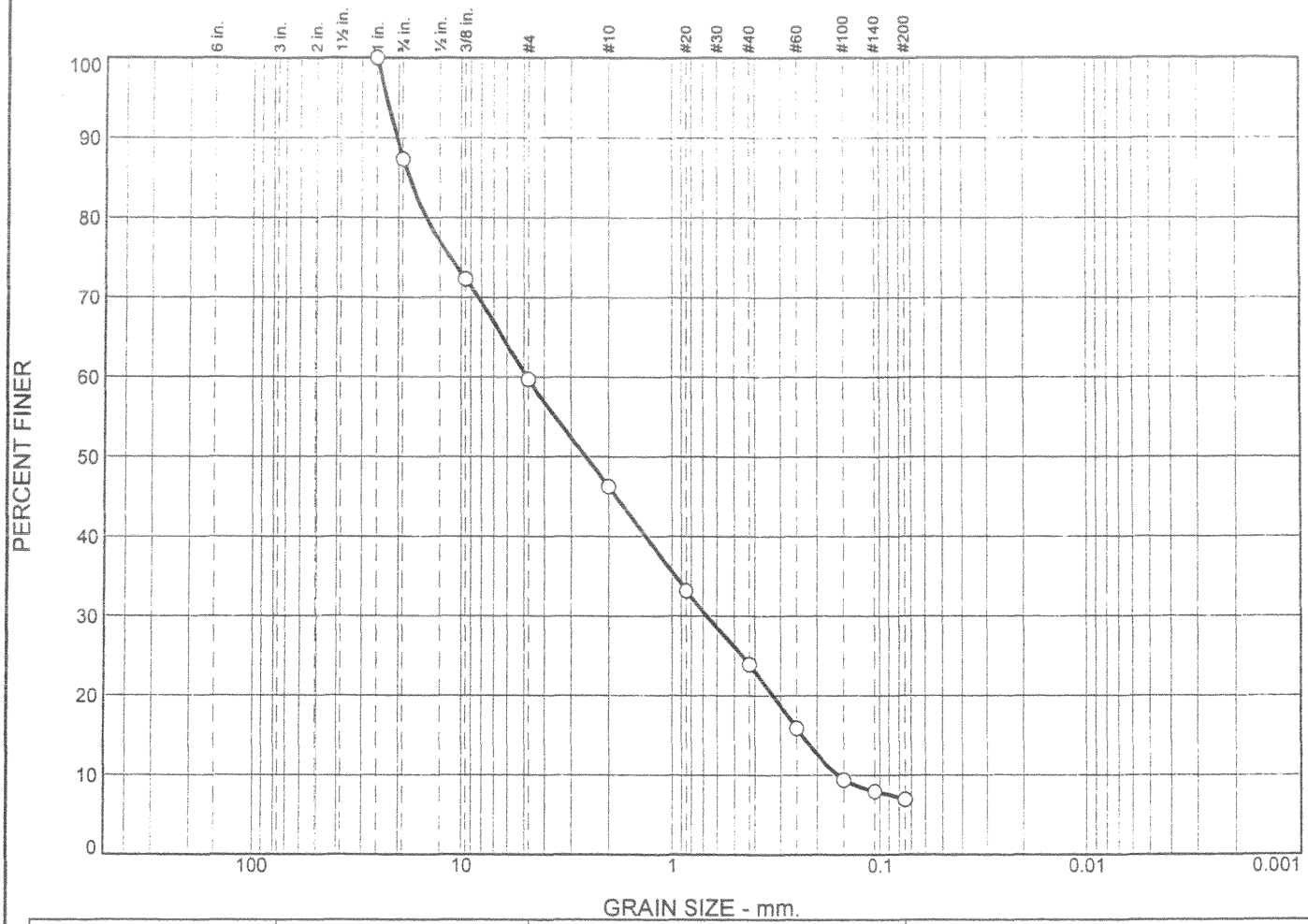
Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 13 | 27 | 14 | 22 | 17 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.8046 | 4.8353 | 2.5699 | 0.6715 | 0.2356 | 0.1609 | 0.58 | 30.06 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 80' to 85'

**Date:** ○

**Remarks:**
○ Moisture Content % 11.0 CP05-EAARS-VB-0282

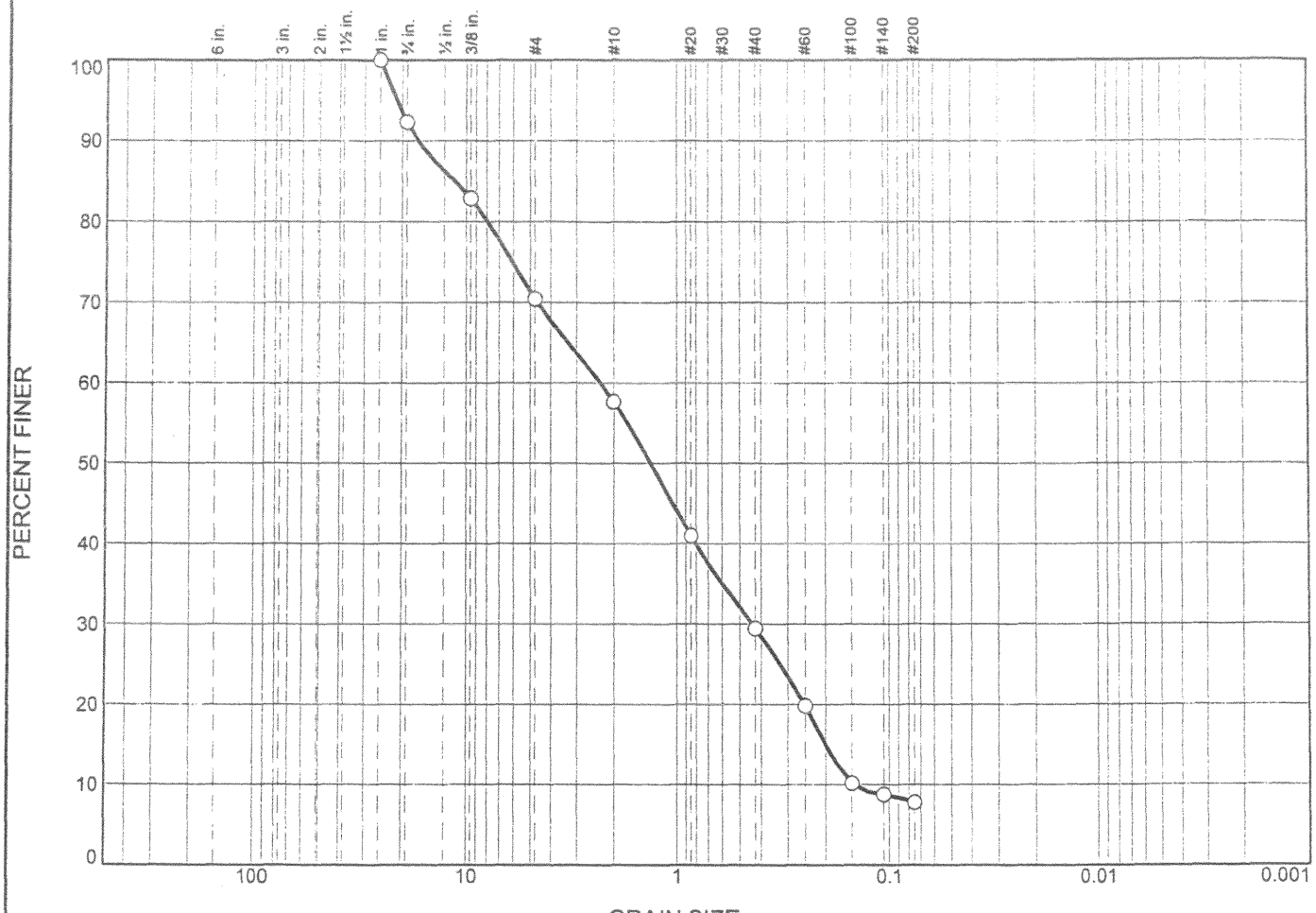
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 8 | 22 | 12 | 29 | 21 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.3124 | 2.3166 | 1.3336 | 0.4398 | 0.2004 | 0.1478 | 0.56 | 15.67 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 85' to 90'

**Date:** ○

**Remarks:**
○ Moisture Content % 11.3
CP05-EAARS-VB-0282

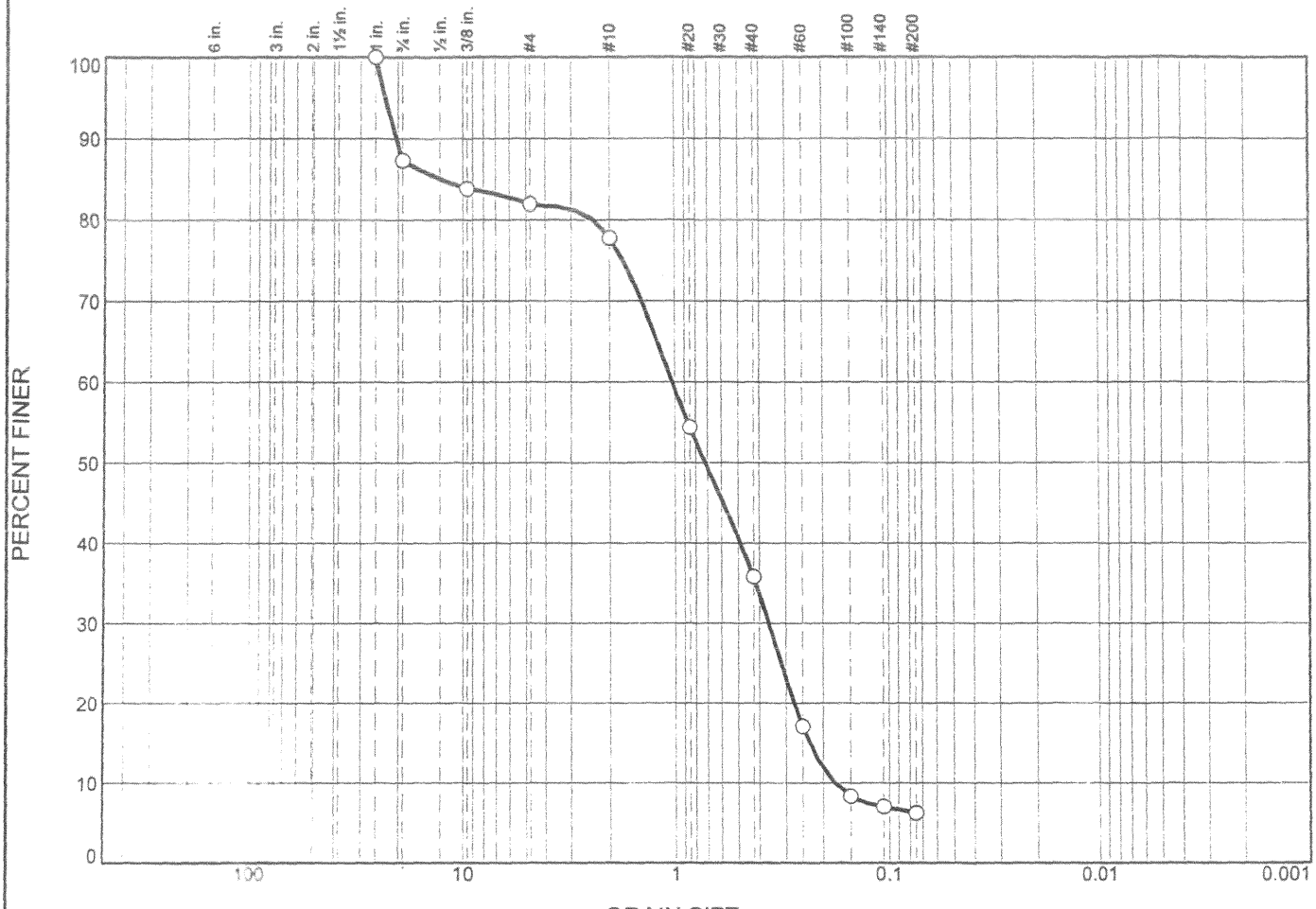
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 12.7 | 5.3 | 4.2 | 42.0 | 29.6 | 6.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.4963 | 1.0282 | 0.7182 | 0.3608 | 0.2311 | 0.1767 | 0.72 | 5.82 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 95.0'-100.0' **Sample Number:** CB164

**Remarks:**

○ Moisture Content % 21.9 CP05-EAARS-VB-0282

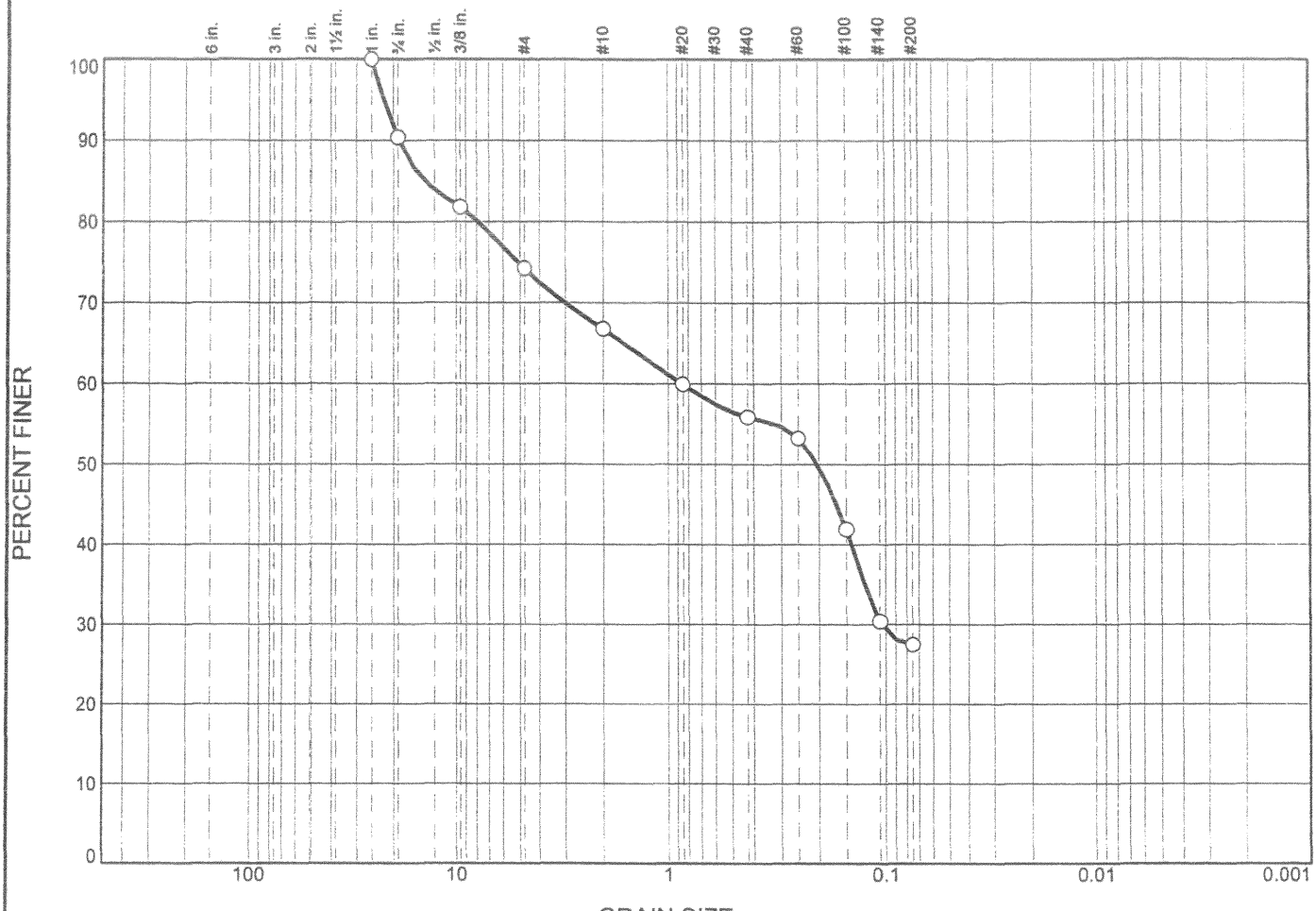
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 9.6 | 16.2 | 7.4 | 11.0 | 28.3 | 27.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.1219 | 0.8574 | 0.2026 | 0.1039 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 115.0'-120.0' **Sample No.:** CB164

**Remarks:**
○ Moisture Content % 19.7 CP05-EAARS-VB-0282

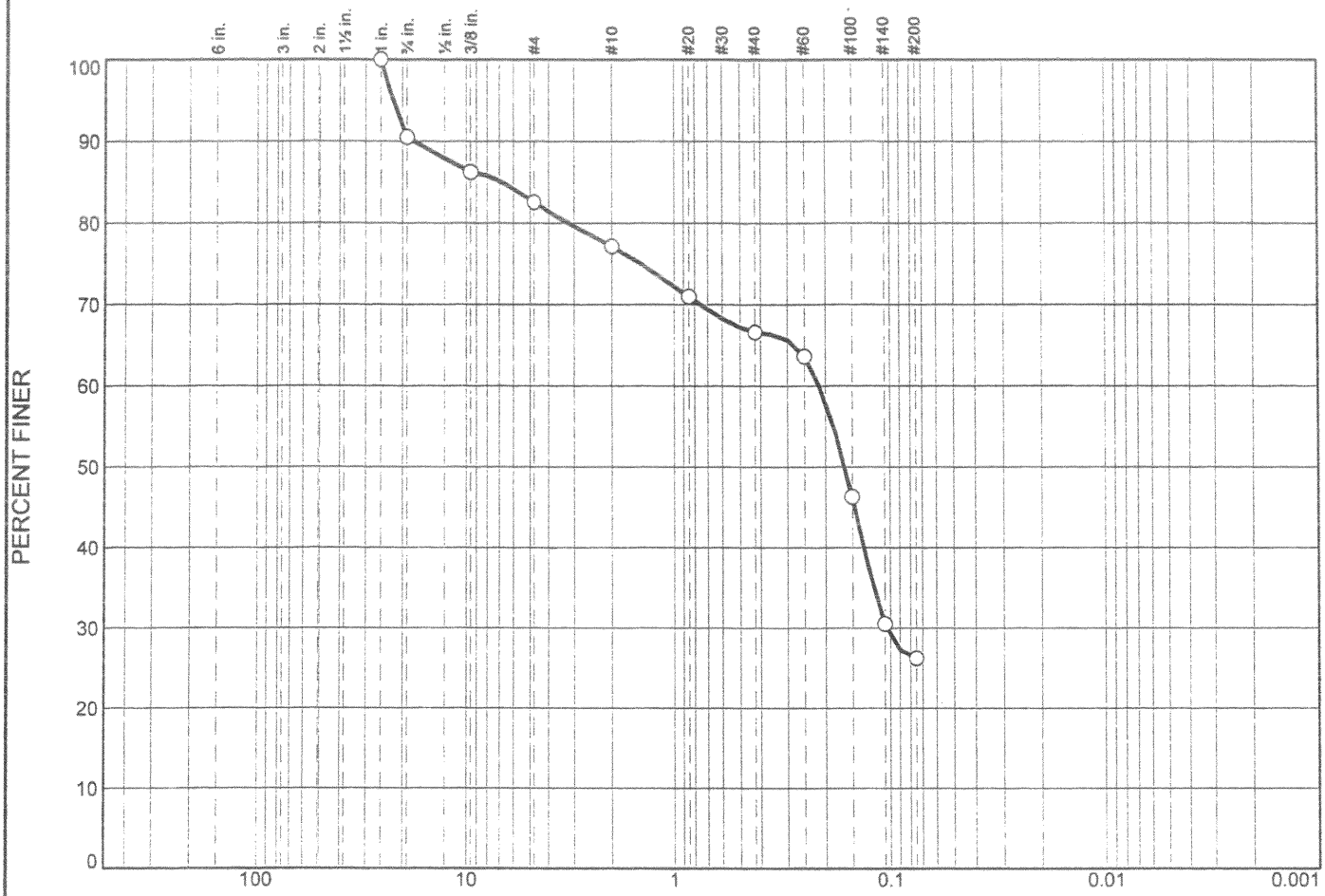
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 9.5 | 7.9 | 5.5 | 10.5 | 40.3 | 26.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.8095 | 0.2131 | 0.1623 | 0.1041 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 120.0'-125.0' **Sample No.:** CB164

**Remarks:**

○ Moisture Content % 22.0 CP05-EAARS-VB-0282

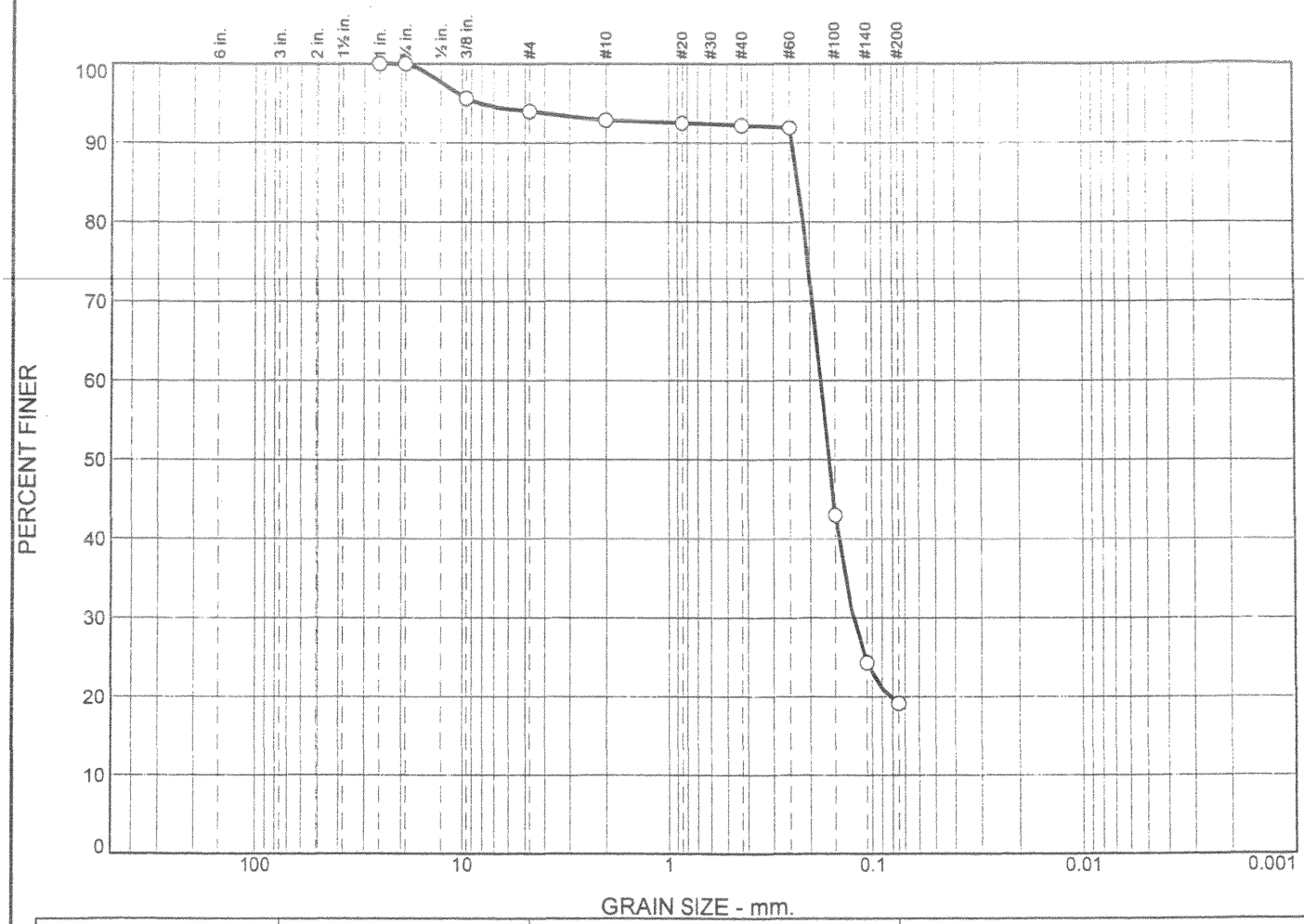
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 6 | 1 | 1 | 73 | 19 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2266 | 0.1776 | 0.1616 | 0.1233 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 125' to 130'

**Date:** ○

**Remarks:**
○ Moisture Content % 18.7
CP05-EAARS-VB-0282

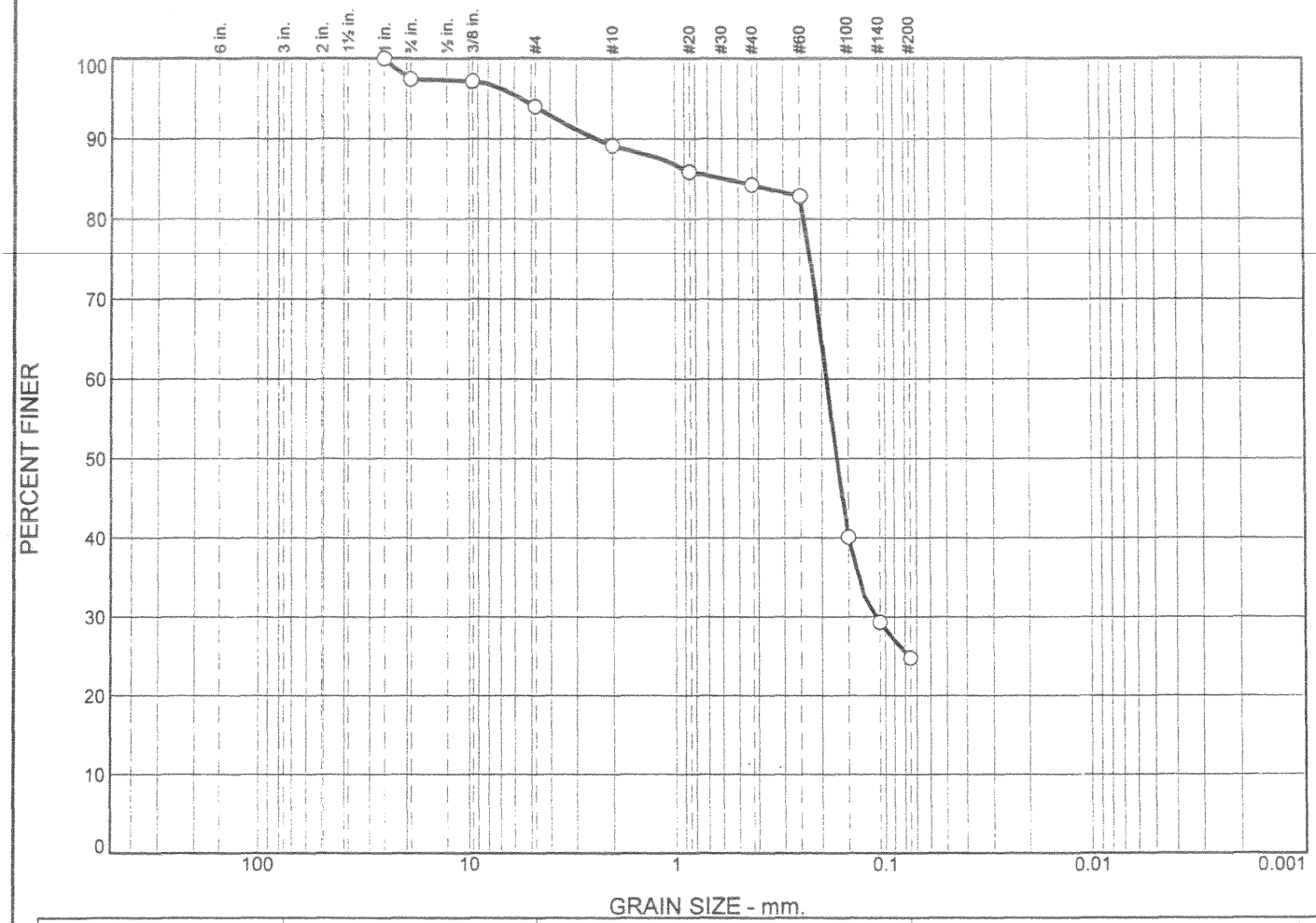
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 2.6 | 3.4 | 4.8 | 4.9 | 59.5 | 24.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.5734 | 0.1893 | 0.1702 | 0.1111 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 130'-135' **Sample Number:** CB164

**Remarks:**

○ Moisture Content % 21.1 CP05-EAARS-VB-0282

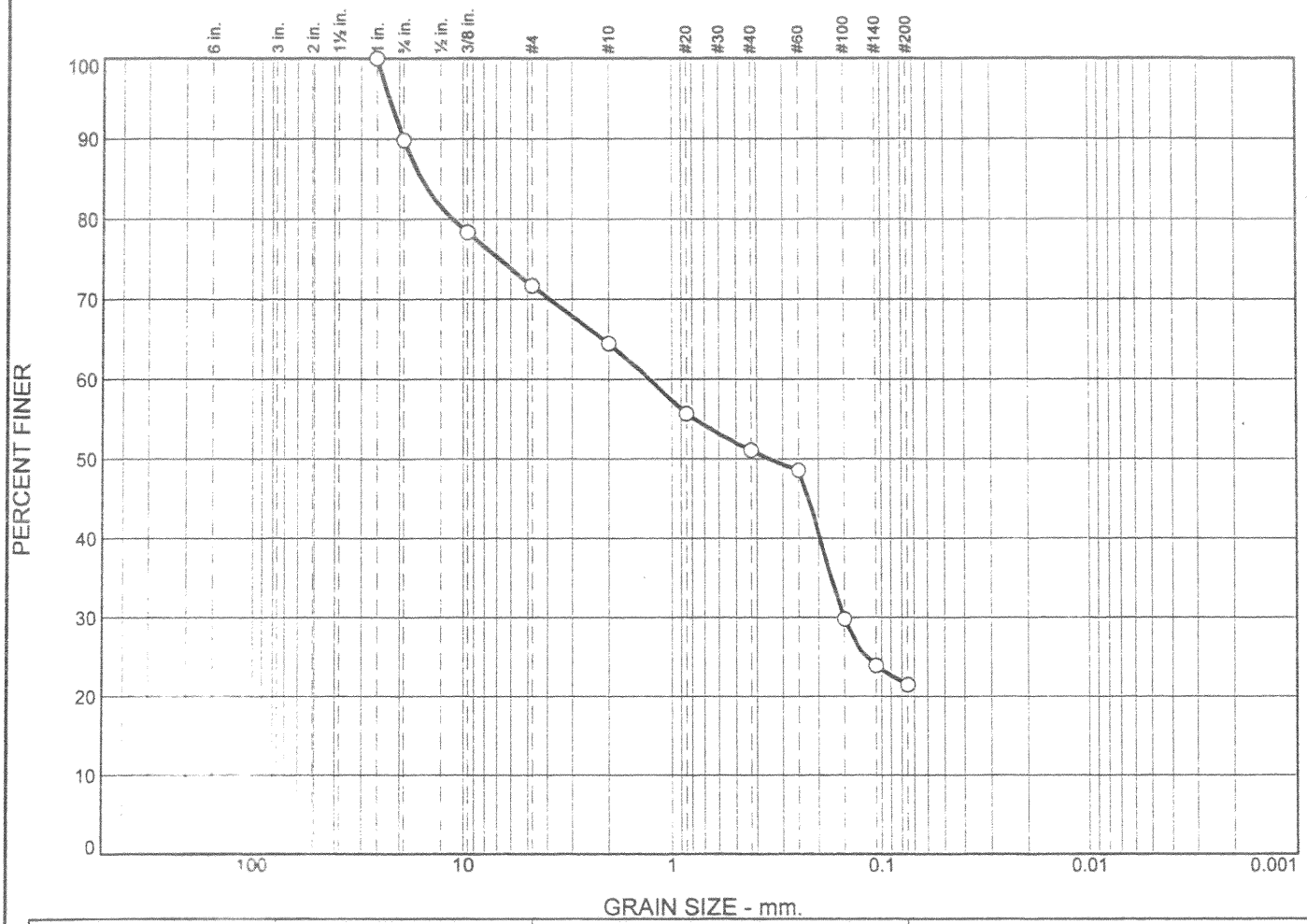
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bulocki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 10.2 | 18.1 | 7.2 | 13.4 | 29.6 | 21.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 15.6596 | 1.2777 | 0.3461 | 0.1510 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 135.0'-140.0' **Sample No.:** CB164

**Remarks:**

○ Moisture Content % 20.9 CP05-EAARS-VB-0282

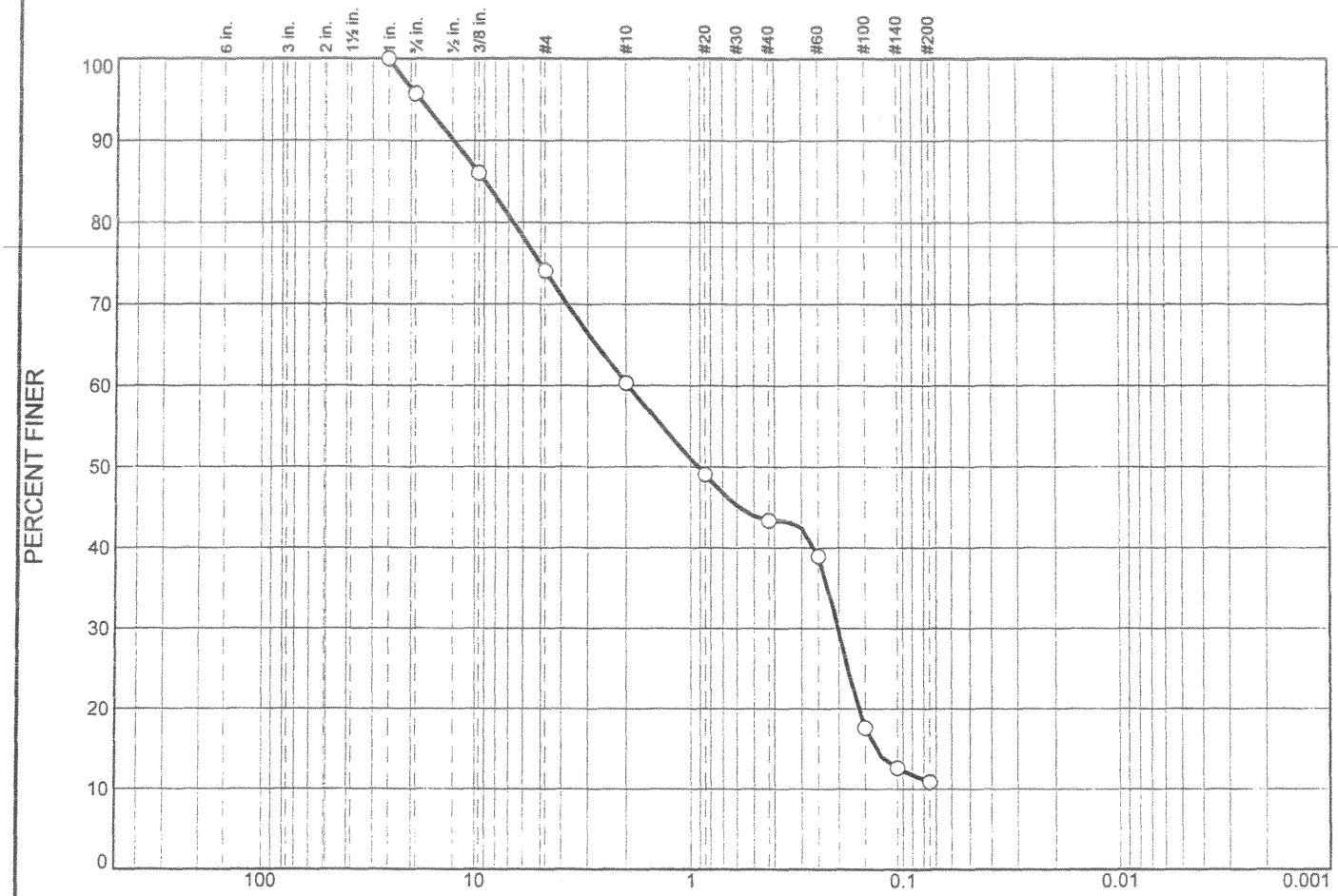
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bobski Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 4.3 | 21.6 | 13.8 | 16.9 | 32.5 | 10.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.9081 | 1.9524 | 0.9175 | 0.2006 | 0.1342 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 145.0'-150.0' **Sample No.:** CB164

**Remarks:**

○ Moisture Content % 12.7 CP05-EAARS-VB-0282

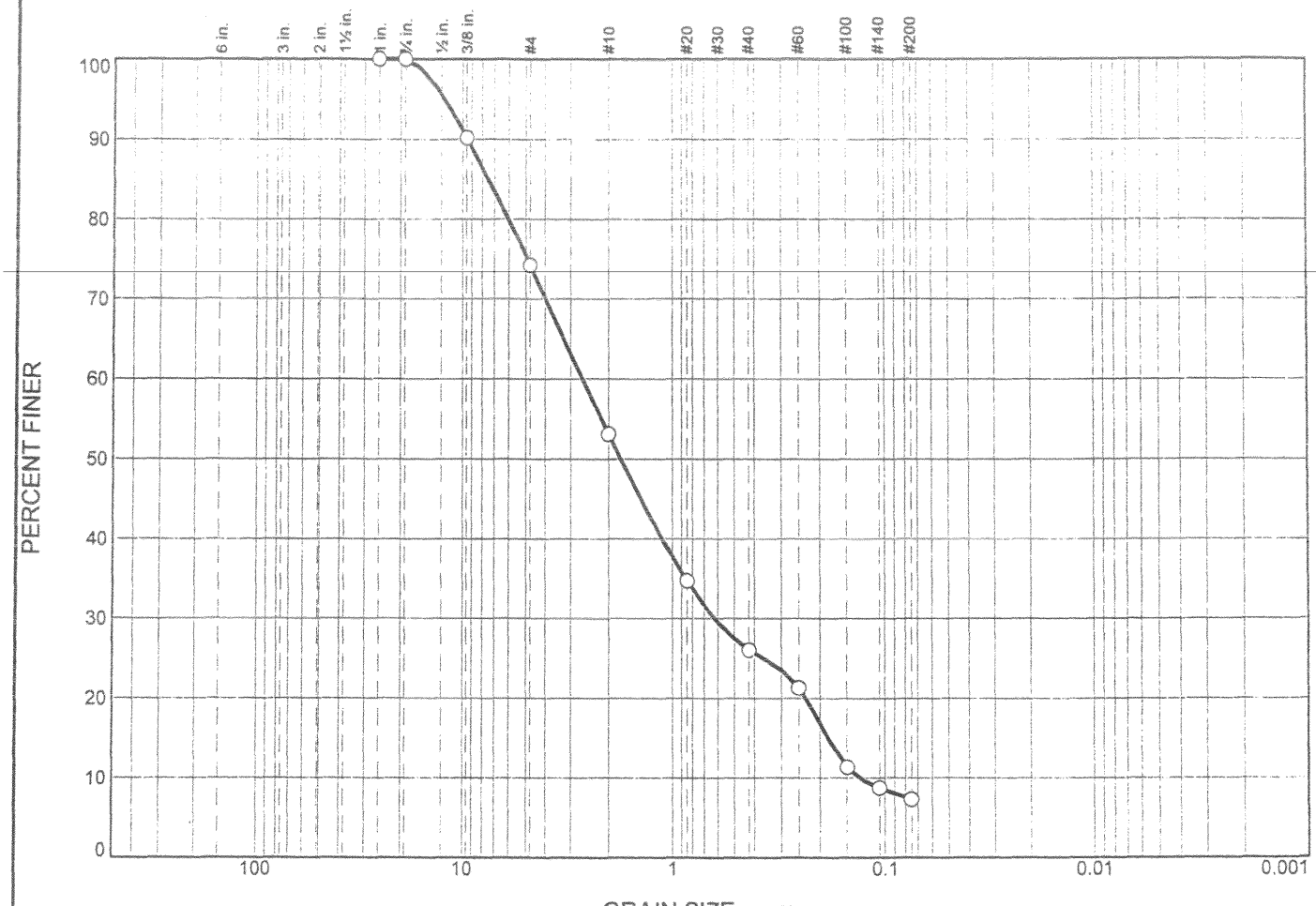
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Bolcoki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 26 | 21 | 27 | 19 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.5015 | 2.6549 | 1.7533 | 0.6233 | 0.1832 | 0.1324 | 1.10 | 20.04 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 150' to 155'

**Date:** ○

**Remarks:**
○ Moisture Content % 14.9
CP05-EAARS-VB-0282

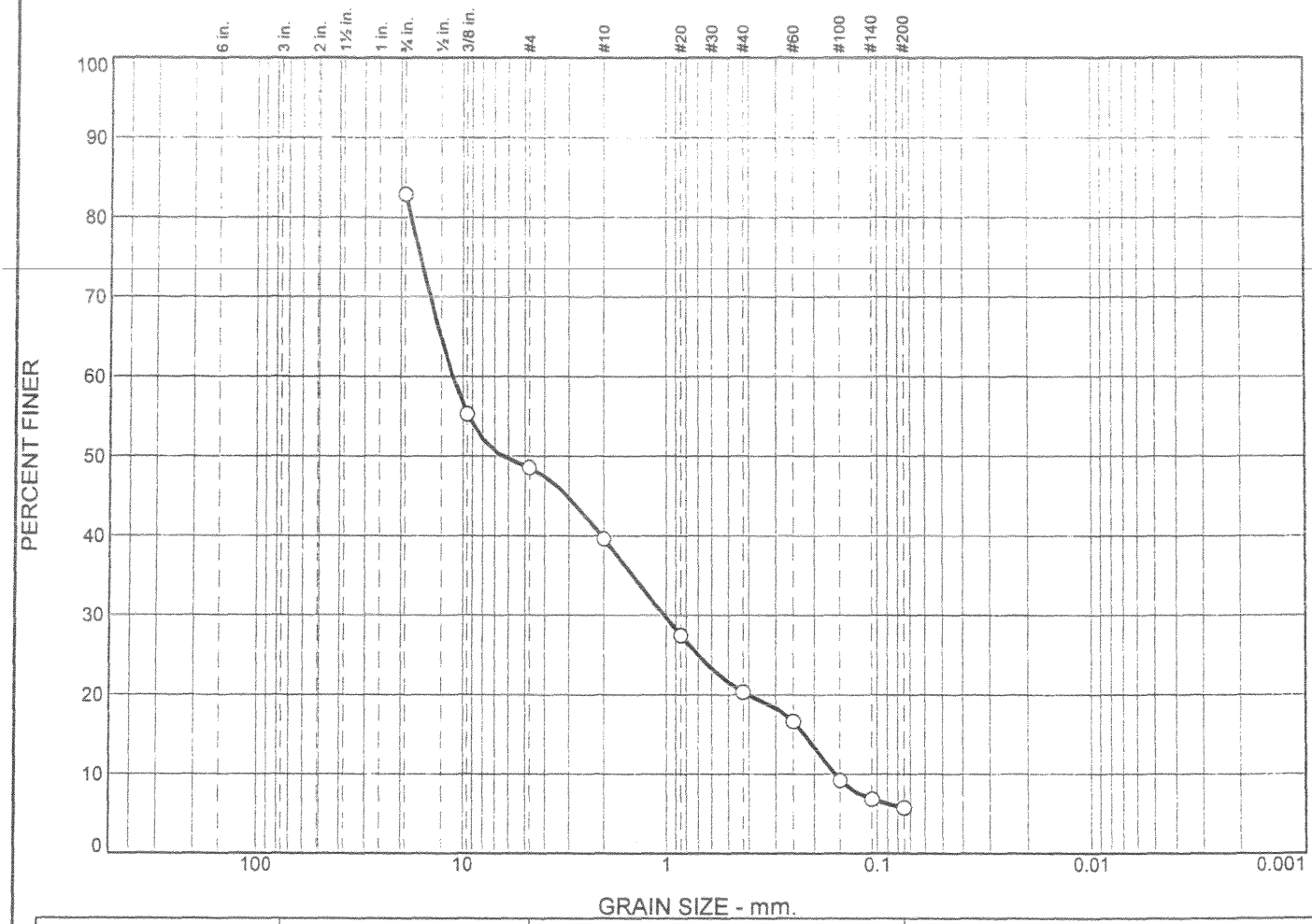
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 34 | 9 | 20 | 14 | 6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | | 11.1963 | 6.4125 | 1.0235 | 0.2215 | 0.1599 | 0.59 | 70.03 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0164 **Depth:** 155' to 160'

**Date:** ○

**Remarks:**
○ Moisture Content % 9.9
CP05-EAARS-VB-0282

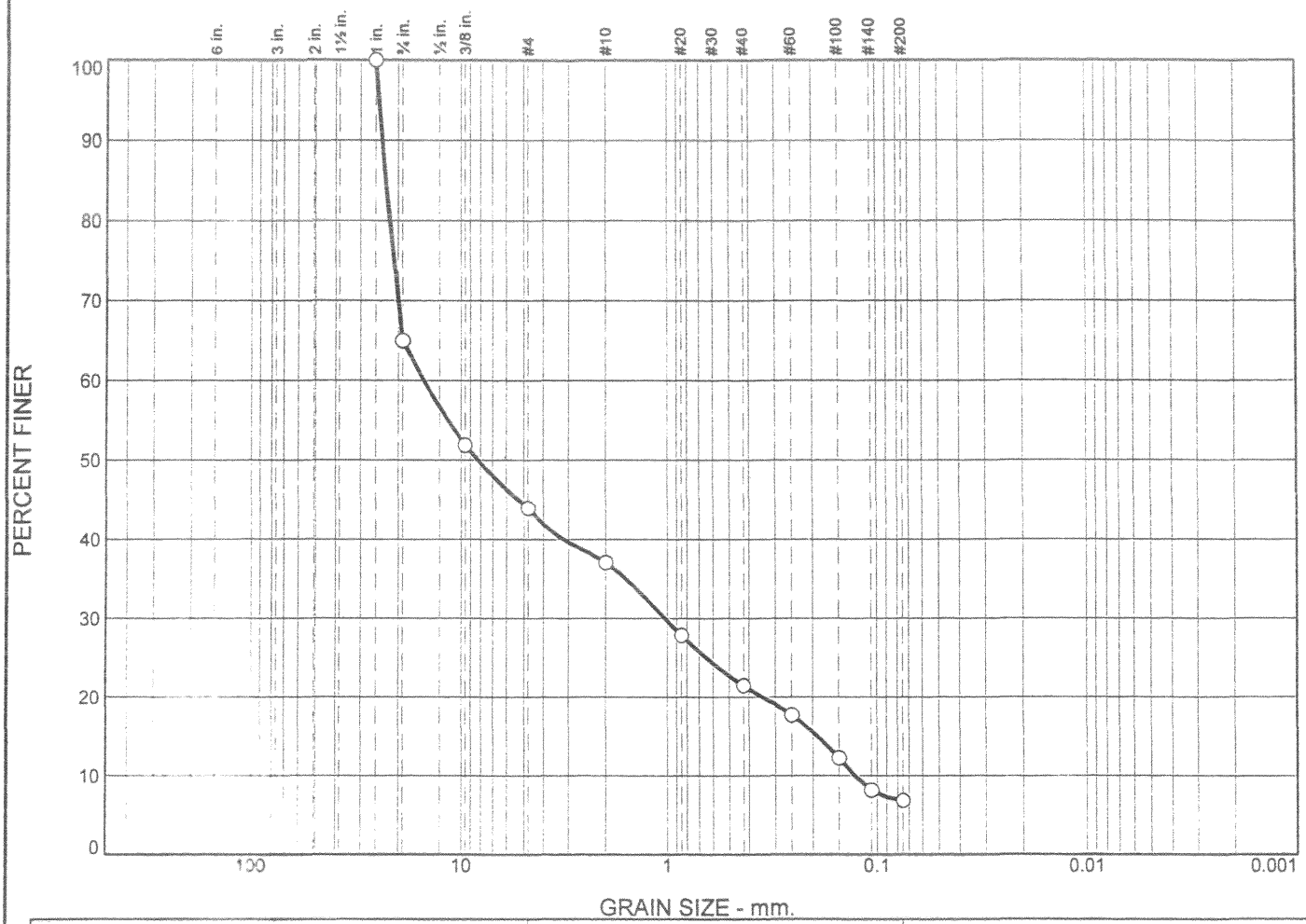
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 35.0 | 21.1 | 6.8 | 15.6 | 14.7 | 6.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 22.7402 | 15.0819 | 8.2175 | 1.0253 | 0.1889 | 0.1262 | 0.55 | 119.52 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 165.0'-170.0' **Sample No.:** CB164

**Remarks:**
○ Moisture Content % 13.8 CP05-EAARS-VB-0282

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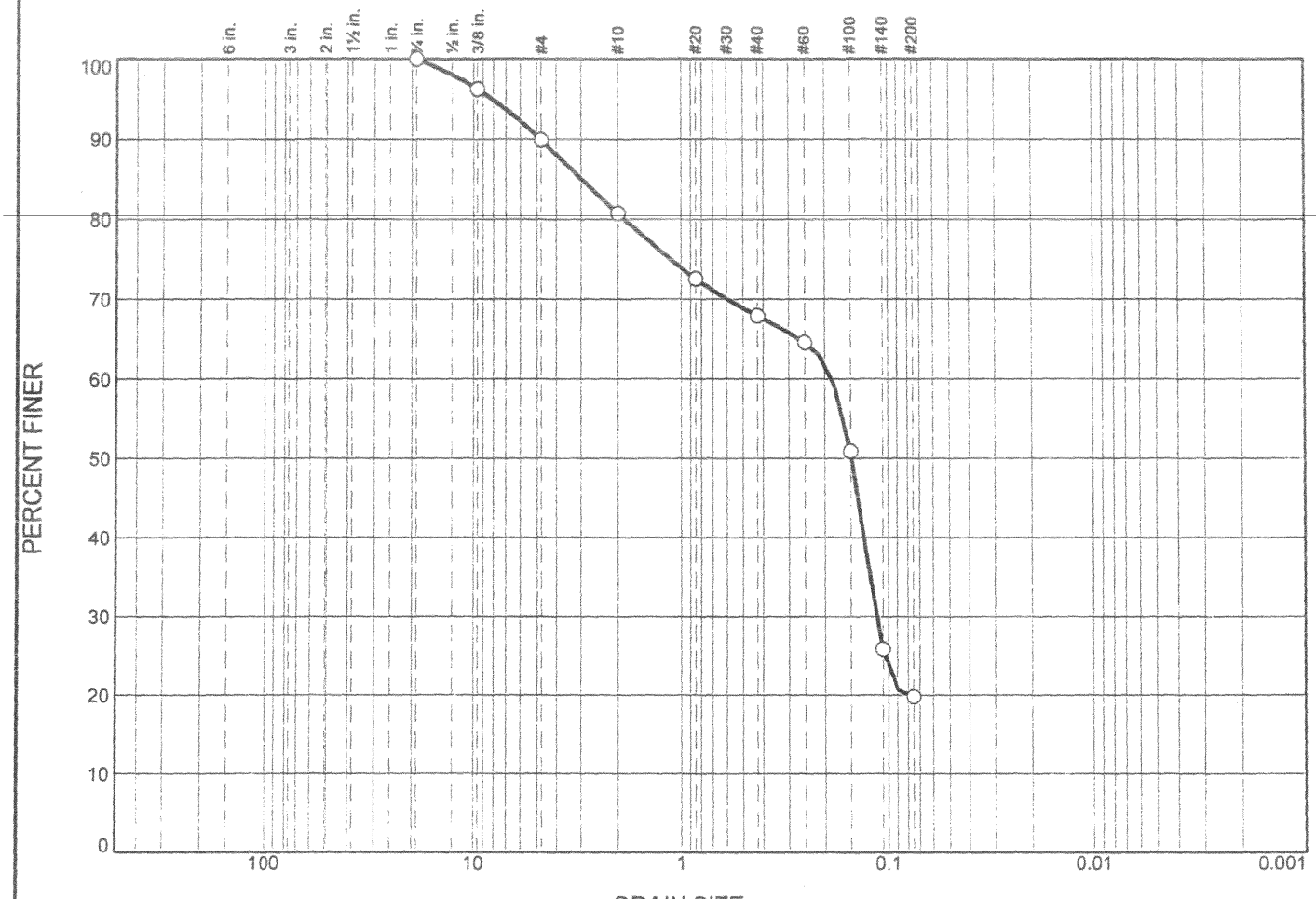
Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 10.1 | 9.1 | 12.9 | 48.1 | 19.8 | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.9826 | 0.1836 | 0.1480 | 0.1136 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 180.0'-185.0' **Sample No.:** CB164

**Remarks:**
○ Moisture Content % 19.6 CP05-EAARS-VB-0282

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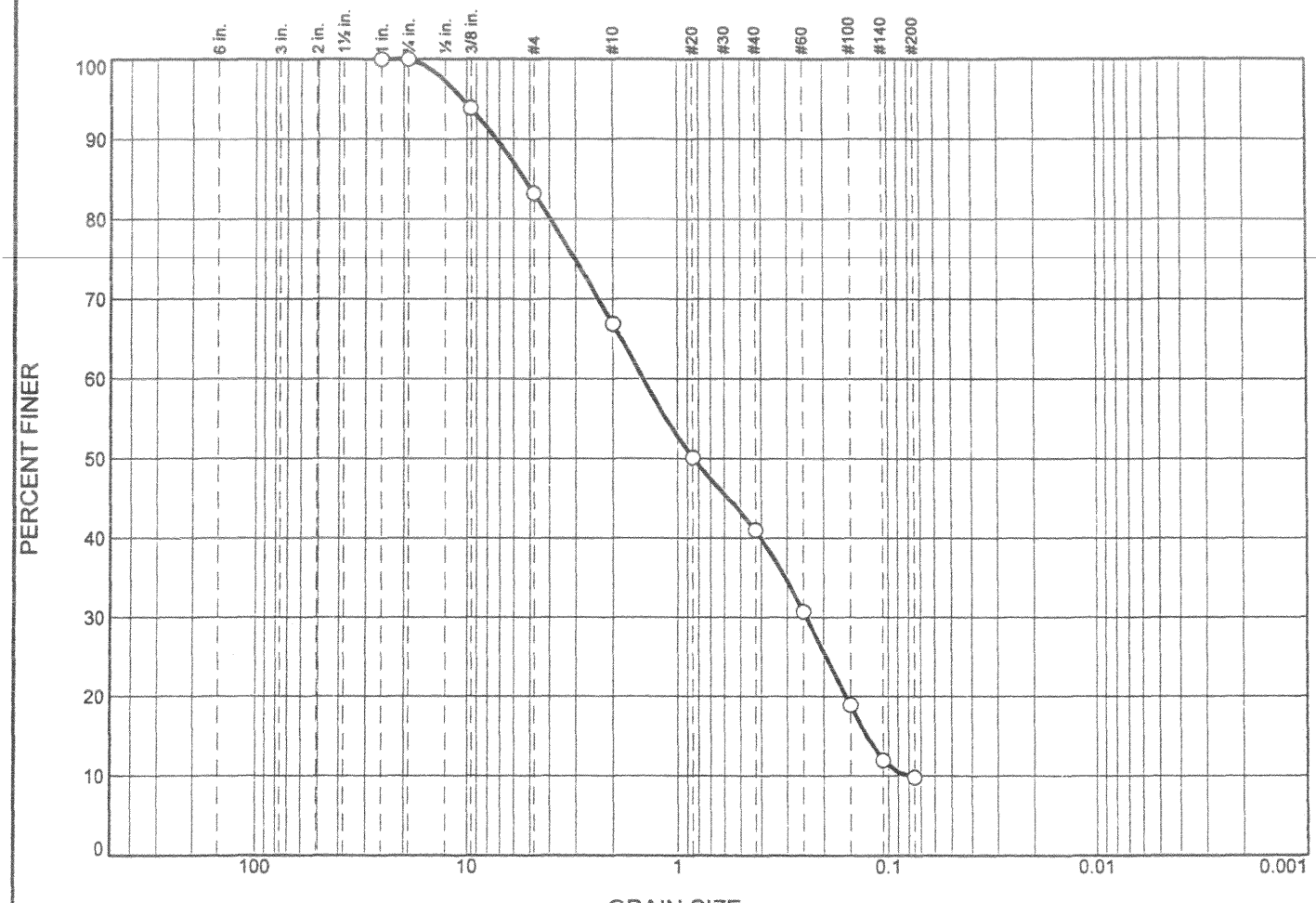
Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 17 | 16 | 26 | 31 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.2765 | 1.4443 | 0.8436 | 0.2419 | 0.1263 | 0.0804 | 0.50 | 17.96 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0185 **Depth:** 53.5' **Sample Number:** 12

**Date:** ○

**Remarks:**
○ Moisture Content % 22.6 CP05-EAARS-CB-0280 @ 53.5'

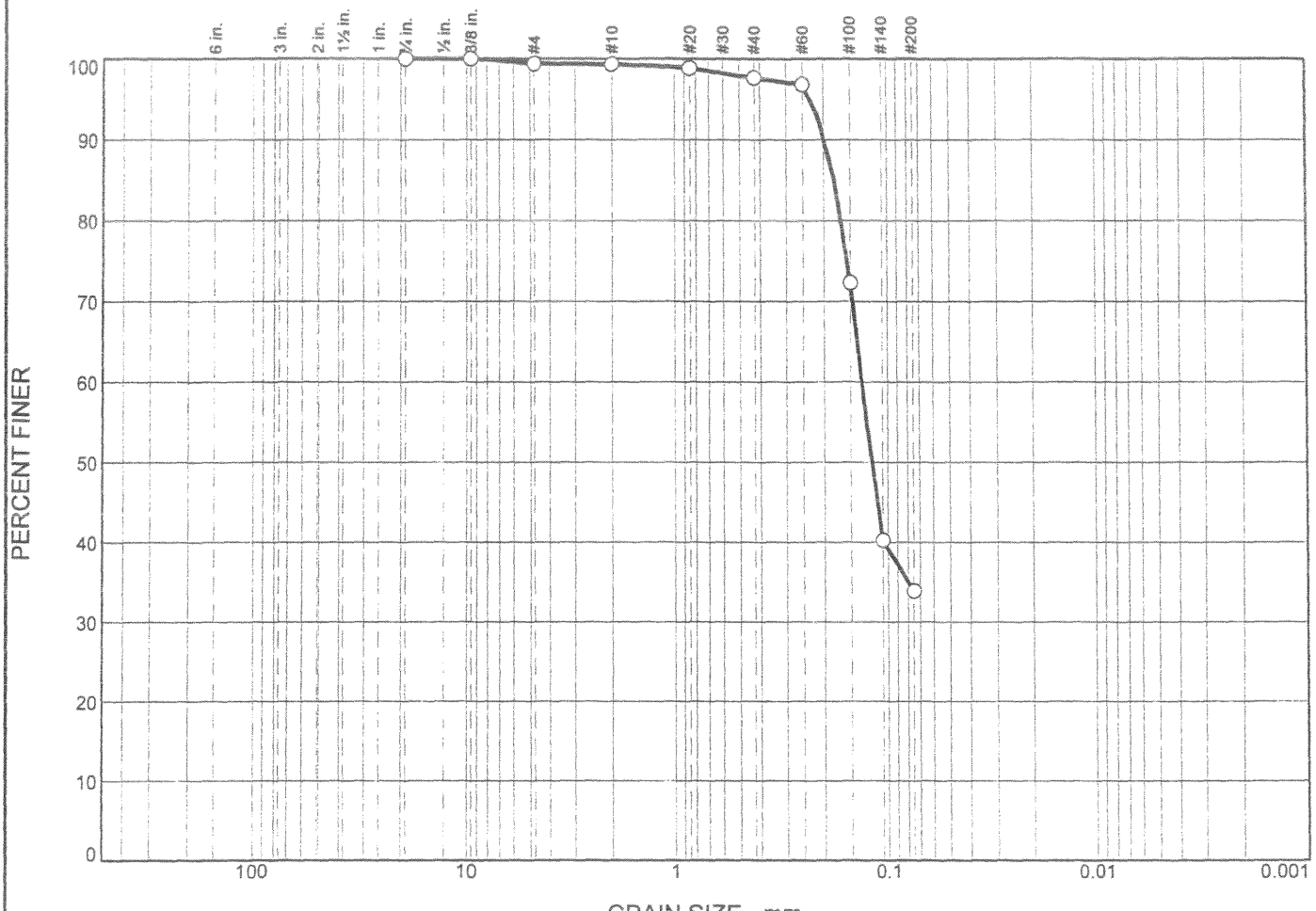
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Juan Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.6 | 0.1 | 1.6 | 63.8 | 33.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1781 | 0.1324 | 0.1198 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silt | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 200.0'-205.0' **Sample No.:** CB164

**Remarks:**
○ Moisture Content % 20.2 CP05-EAARS-VB-0282

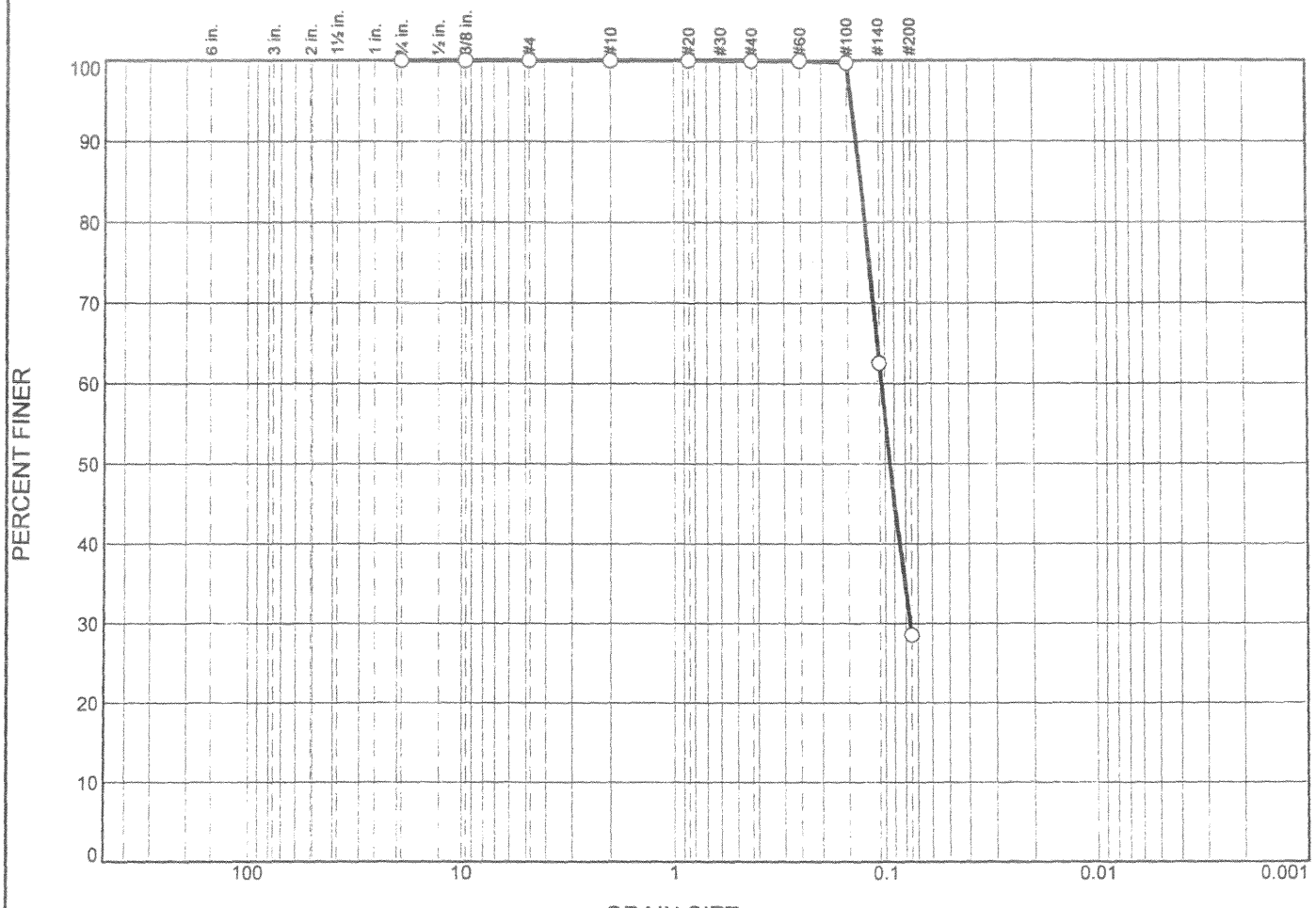
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.5 | 28.5 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1280 | 0.1037 | 0.0943 | 0.0762 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB164 **Depth:** 215.0'-220.0' **Sample No.:** CB164

**Remarks:**

○ Moisture Content % 27.5 CP05-EAARS-VB-0282

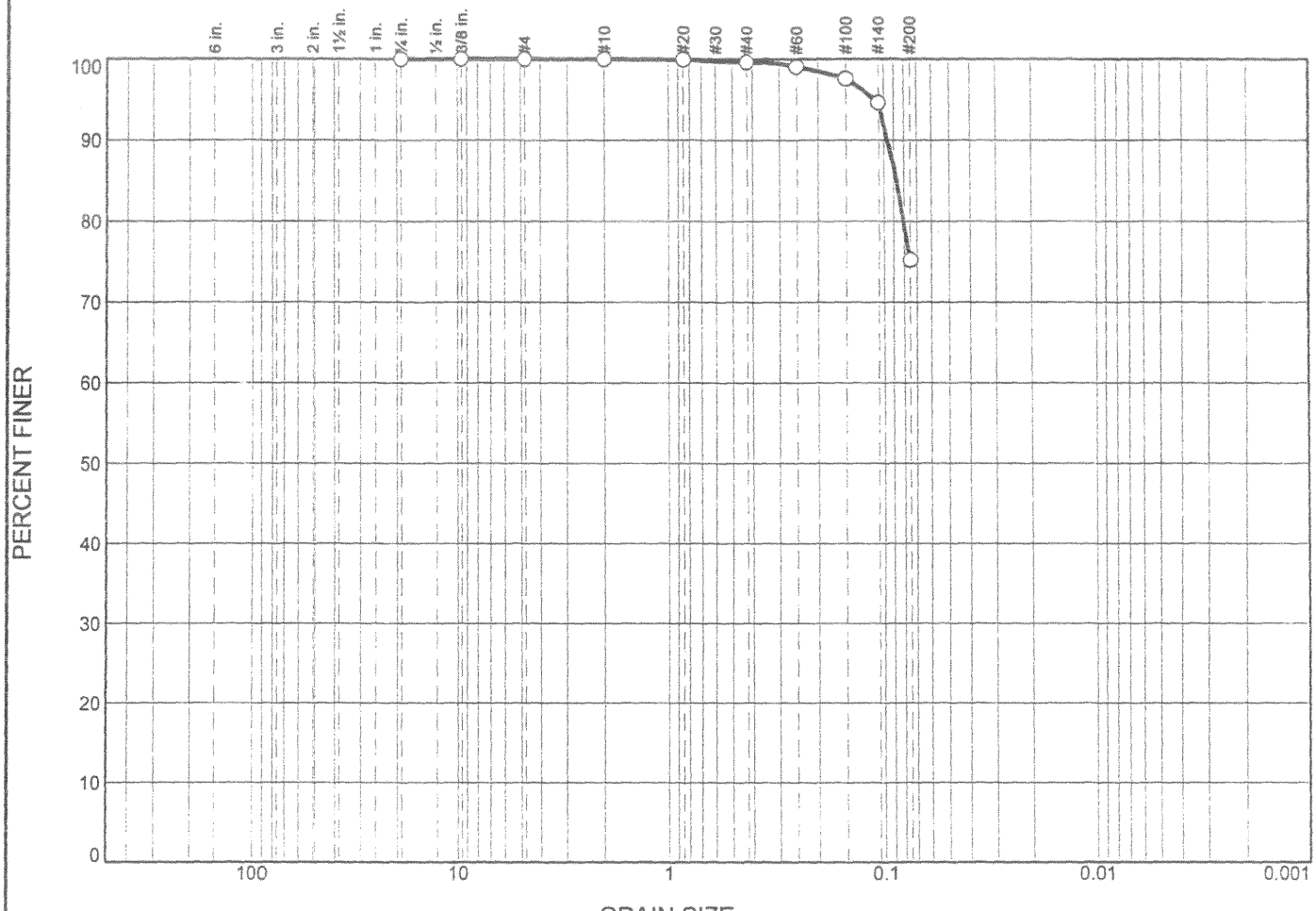
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 24.4 | 75.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.0870 | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Inorganic silts and very fine sand | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB164 **Depth:** 225.0'-230.0 **Sample Number:** CB164

**Remarks:**
○ Moisture Content % 36.0 CP05-EAARS-VB-0282

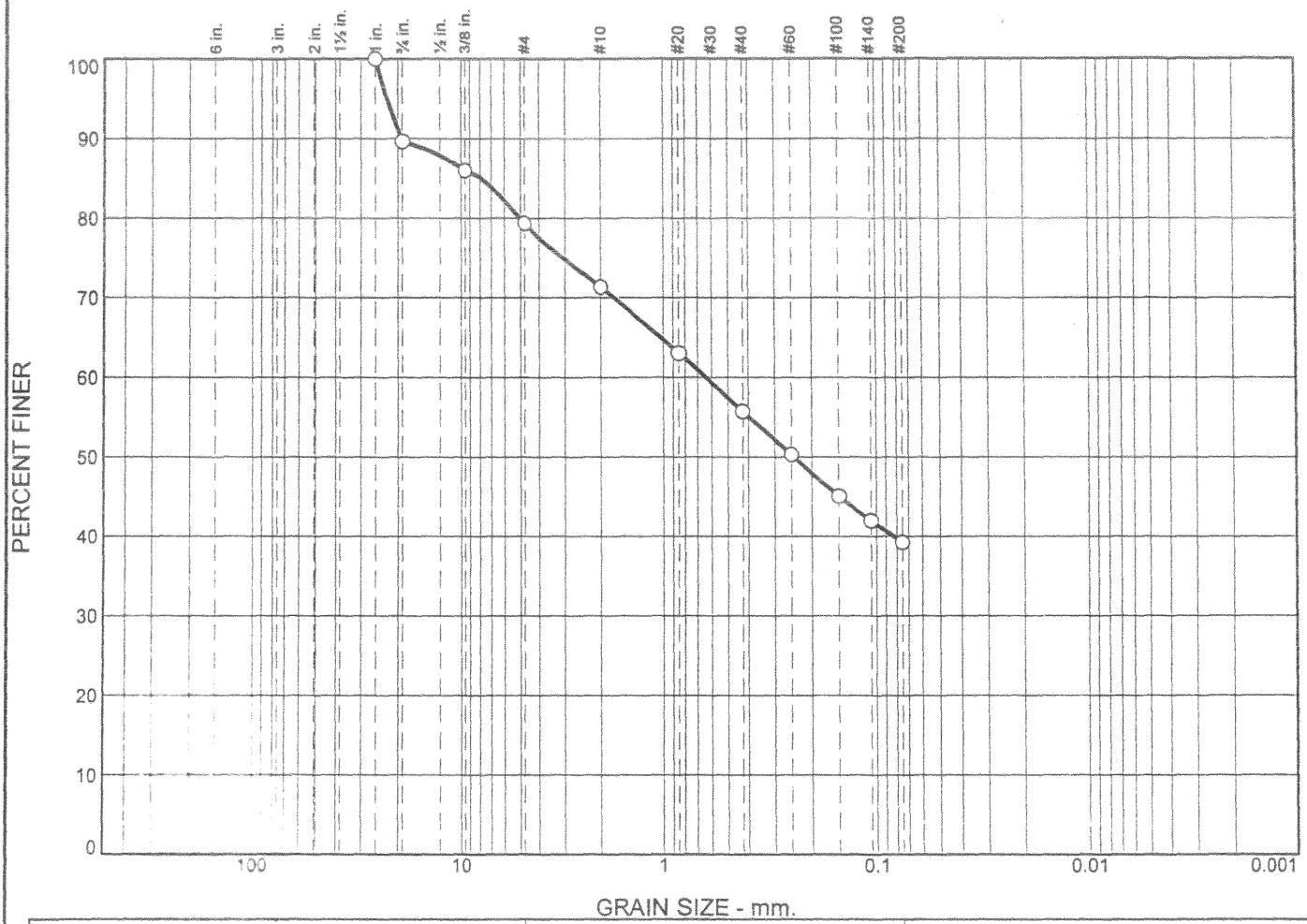
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 10 | 11 | 8 | 15 | 17 | 39 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.8183 | 0.6365 | 0.2417 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silty clay with gravel | CL-ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 5'-10'

**Date:** ○

**Remarks:**
○ Moisture Content % 9.81 CP05-EAARS-VB-0283

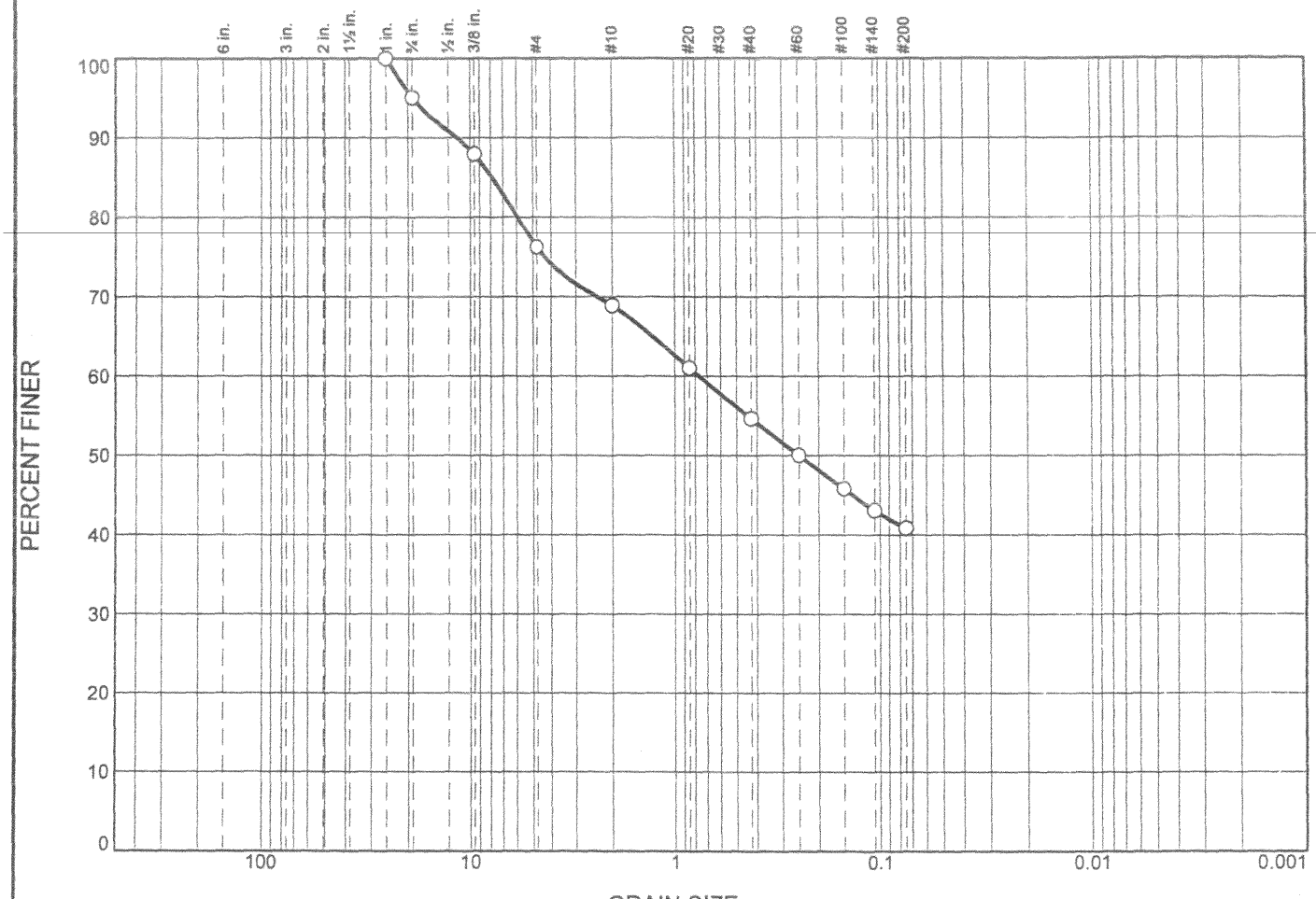
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Ricardo Samaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 5 | 19 | 7 | 14 | 14 | 41 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.8572 | 0.7648 | 0.2494 | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silty clay with gravel | CL-ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 10'-15'

**Date:** ○

**Remarks:**
○ Moisture Content % 22.8 CP05-EAARS-VB-0283

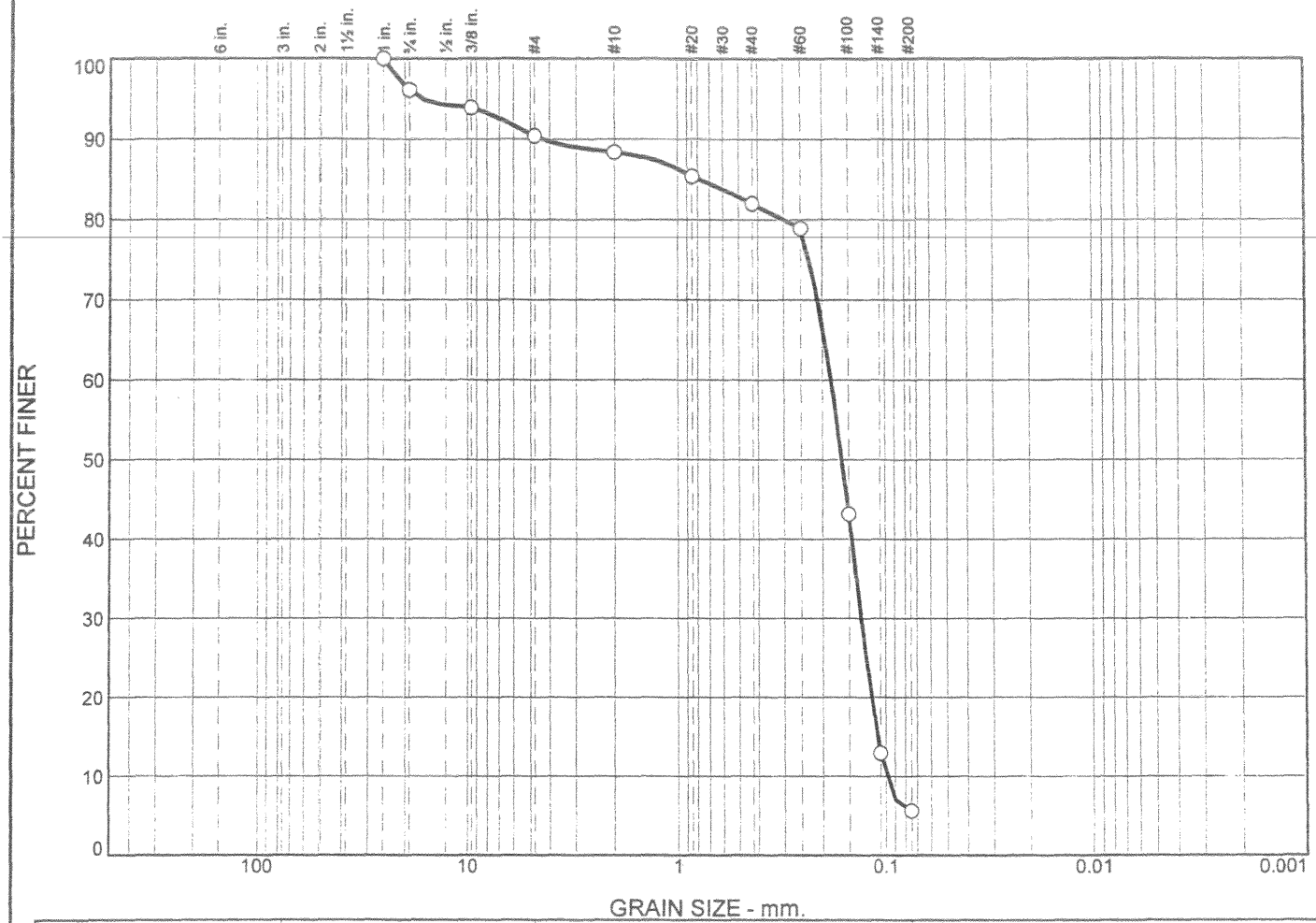
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 3.9 | 5.7 | 2.0 | 6.4 | 76.4 | 5.6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.7798 | 0.1812 | 0.1613 | 0.1312 | 0.1097 | 0.0996 | 0.95 | 1.82 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB174 **Depth:** 40.0'-45.0' **Sample Number:** CB174

**Remarks:**
○ Moisture content % 17.1 CP05-EAARS-VB-0283

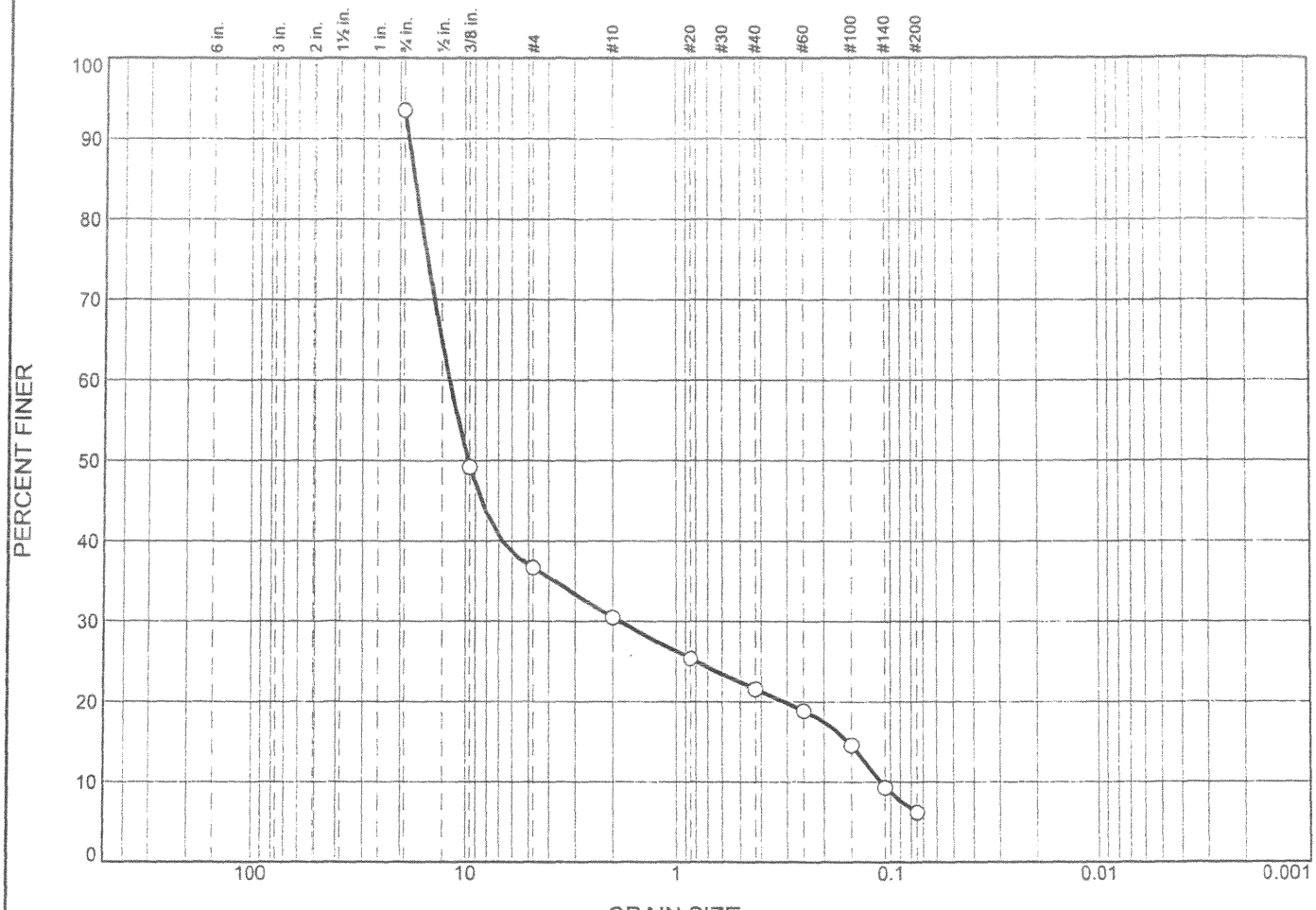
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: L Mazo **Checked By:** M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 57 | 7 | 8 | 16 | 6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.0084 | 11.7946 | 9.7039 | 1.8617 | 0.1550 | 0.1113 | 2.64 | 105.93 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 45' to 50'

**Date:** ○

**Remarks:**
○ Moisture Content % 4.0
CP05-EAARS-VB-0283

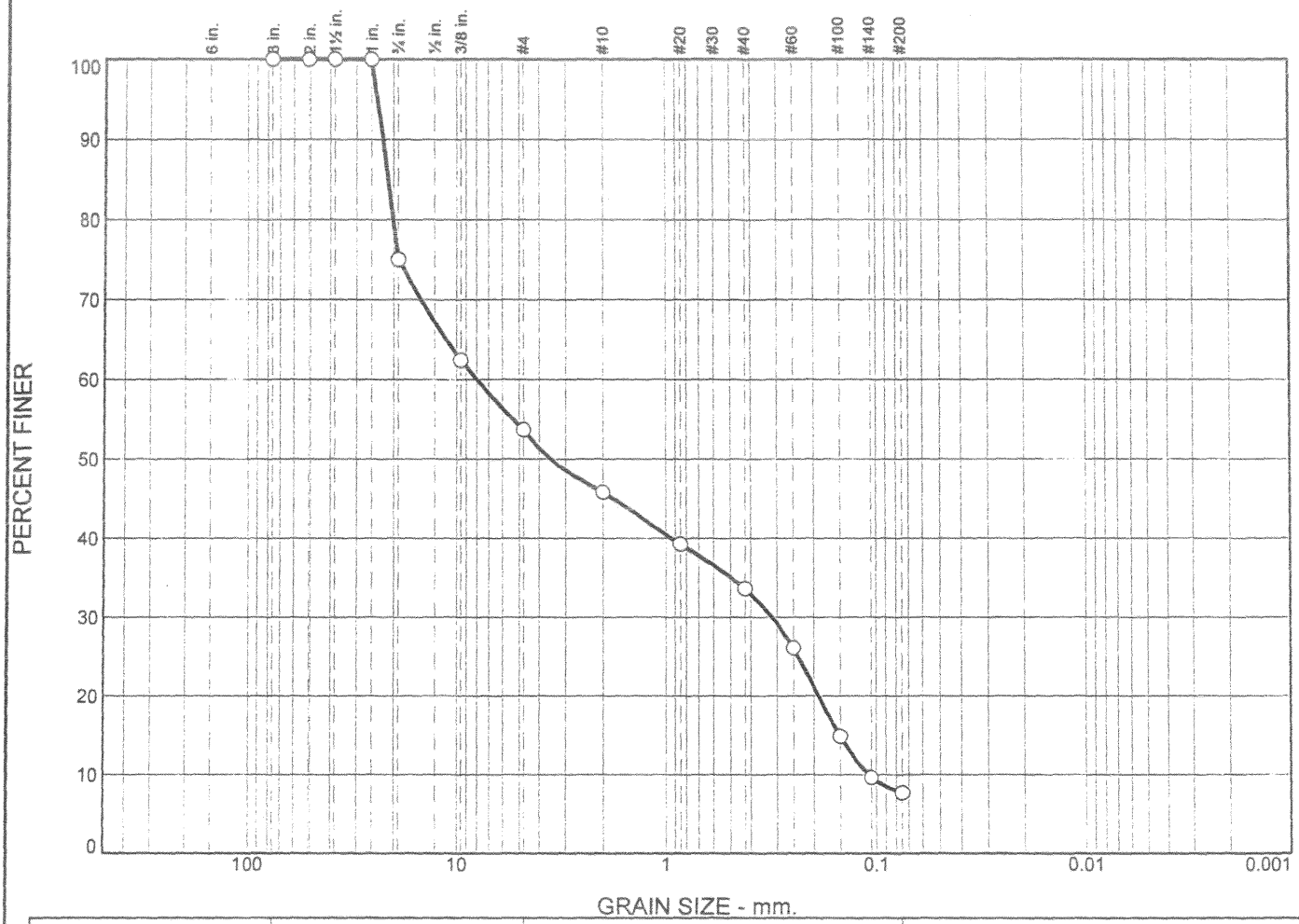
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 25.0 | 21.3 | 7.9 | 12.2 | 25.9 | 7.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.2325 | 7.9734 | 3.5183 | 0.3143 | 0.1510 | 0.1096 | 0.11 | 72.78 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB174 **Depth:** 60.0'-65.0' **Sample Number:** CB174

**Remarks:**
○ Moisture content % 7.6 CP05-EAARS-VB-0283

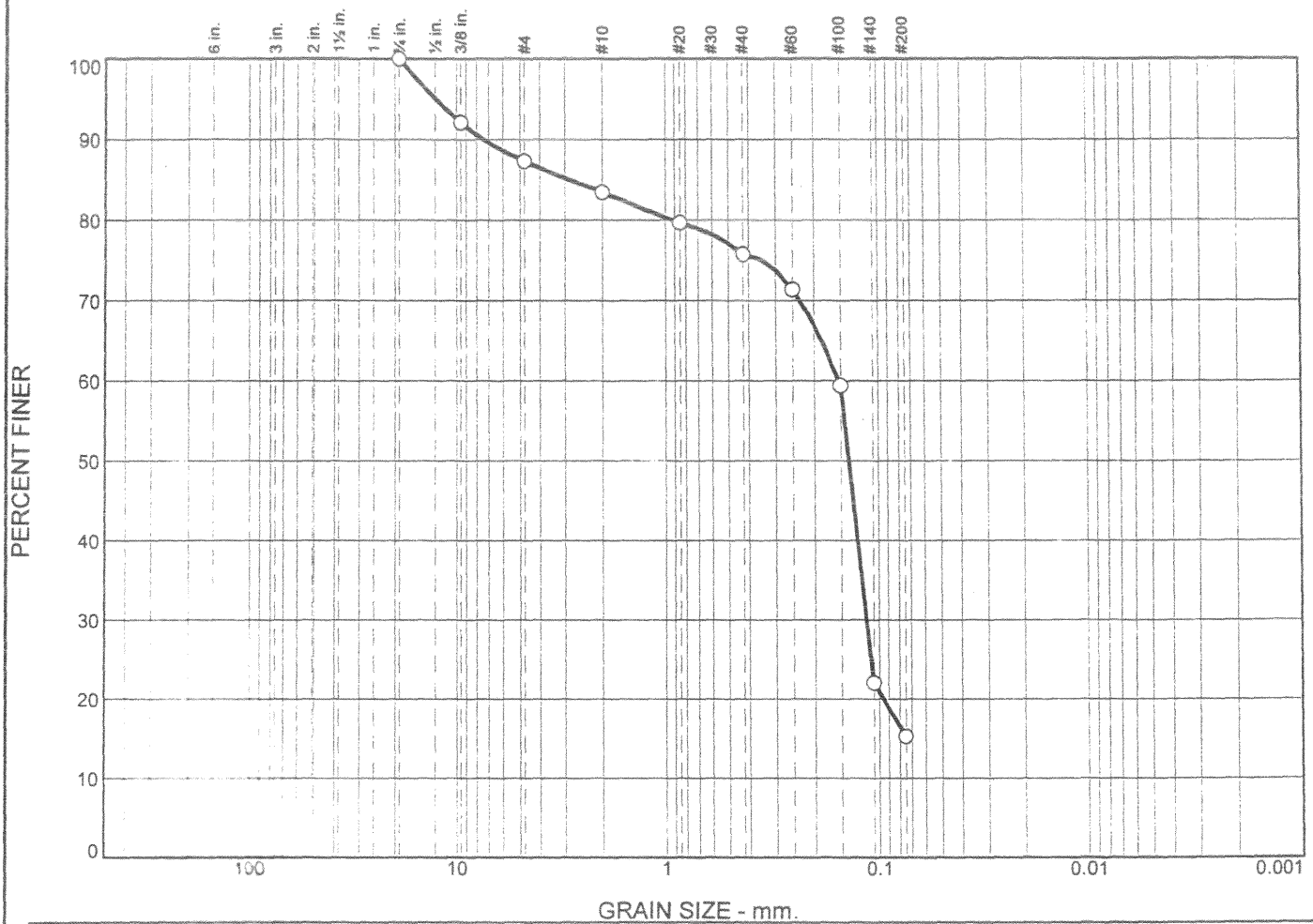
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: L Mazo Checked By: M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 12.7 | 3.8 | 7.7 | 60.5 | 15.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.8557 | 0.1528 | 0.1369 | 0.1154 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB174 **Depth:** 70'-75.0' **Sample Number:** CB174

**Remarks:**
○ Moisture content % 14.82 CP05-EAARS-VB-0283

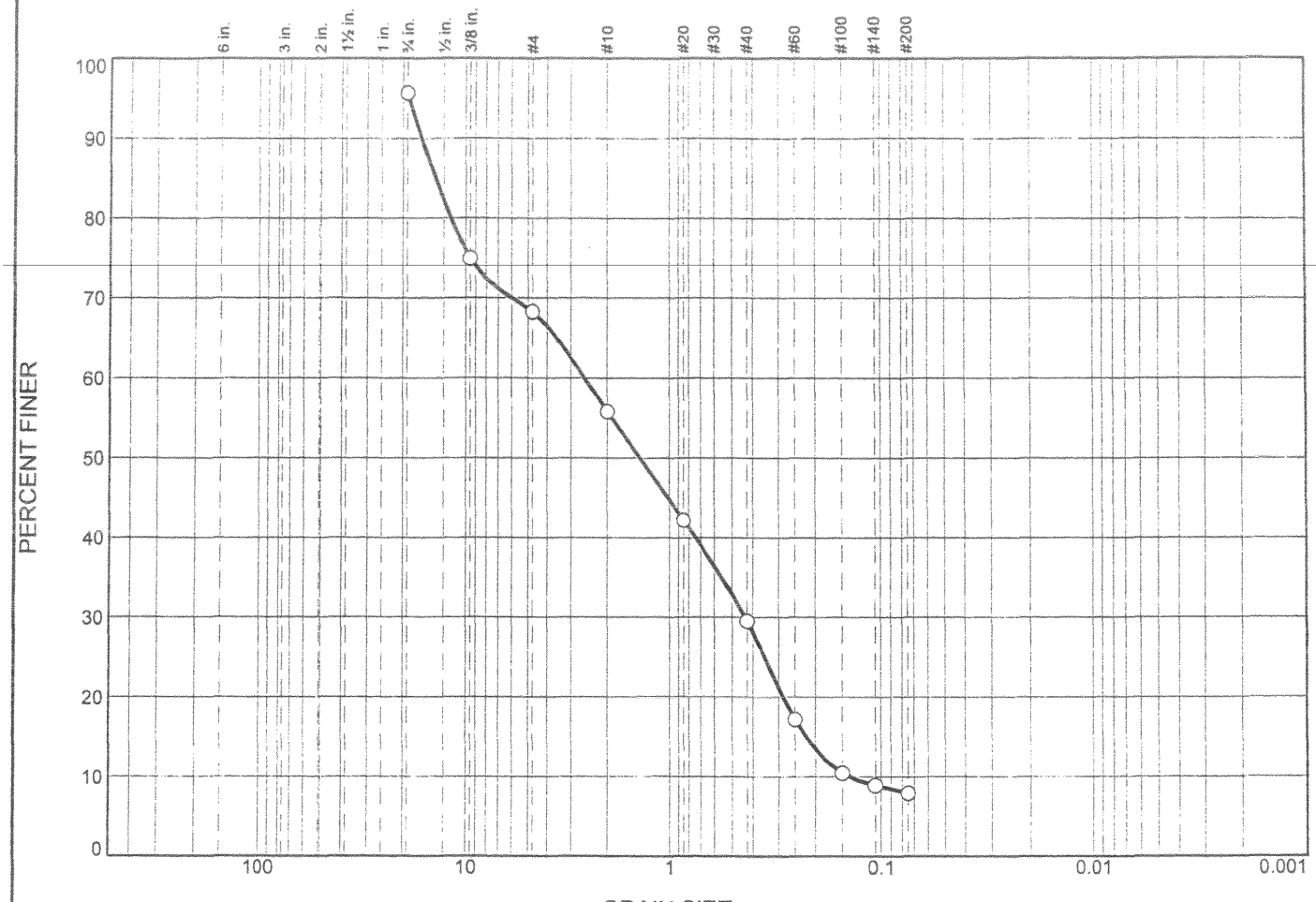
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** L Mazo **Checked By:** M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 28 | 12 | 27 | 21 | 8 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 13.9640 | 2.5708 | 1.3924 | 0.4347 | 0.2217 | 0.1394 | 0.53 | 18.45 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 75' to 80'

**Date:** ○

**Remarks:**
○ Moisture Content % 11.6
CP05-EAARS-VB-0283

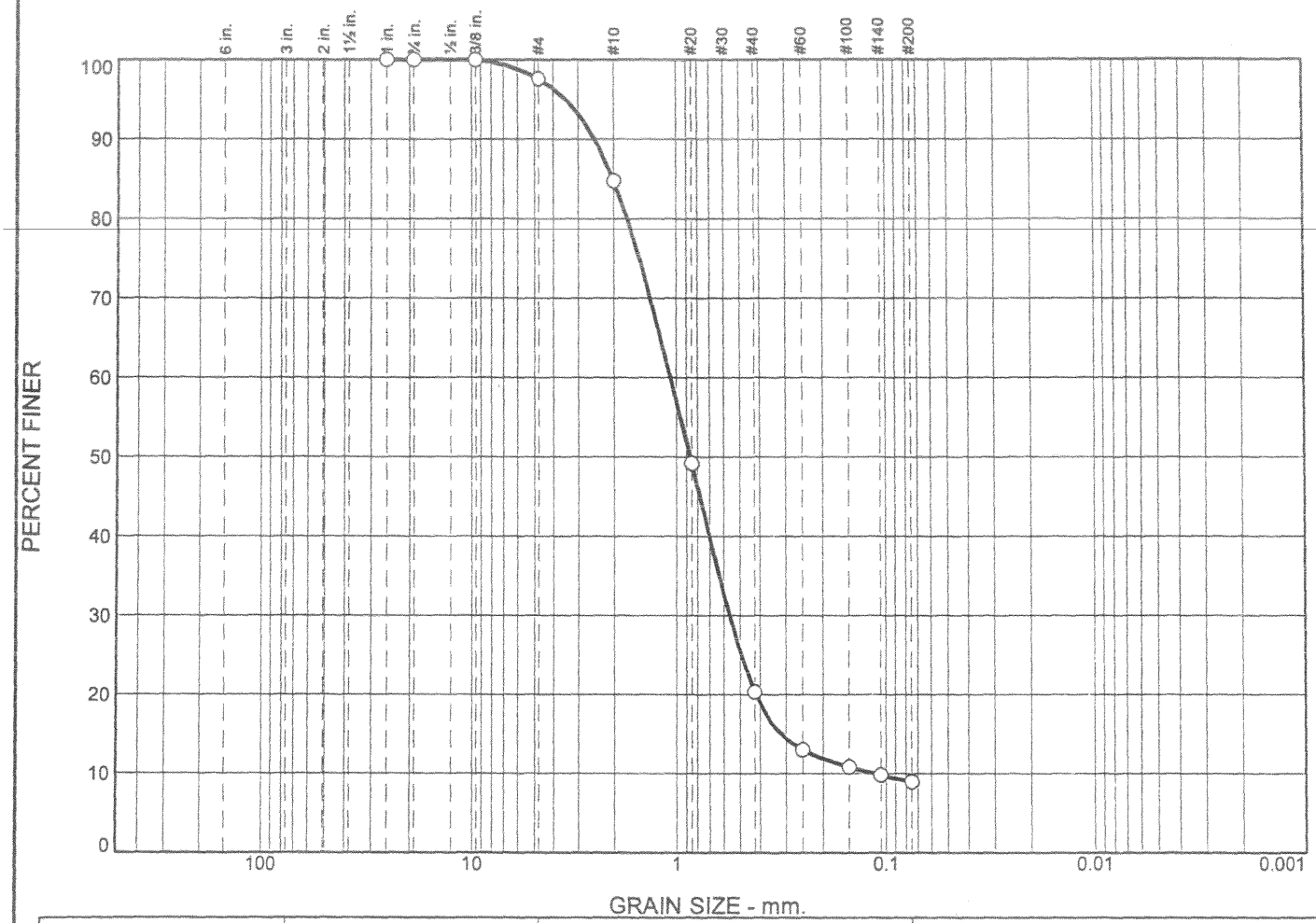
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 2 | 13 | 65 | 11 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.0168 | 1.0644 | 0.8638 | 0.5621 | 0.3178 | 0.1144 | 2.59 | 9.30 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 100'-105'

**Date:** ○

**Remarks:**
○ Moisture Content % 10.6 CP05-EAARS-VB-0283

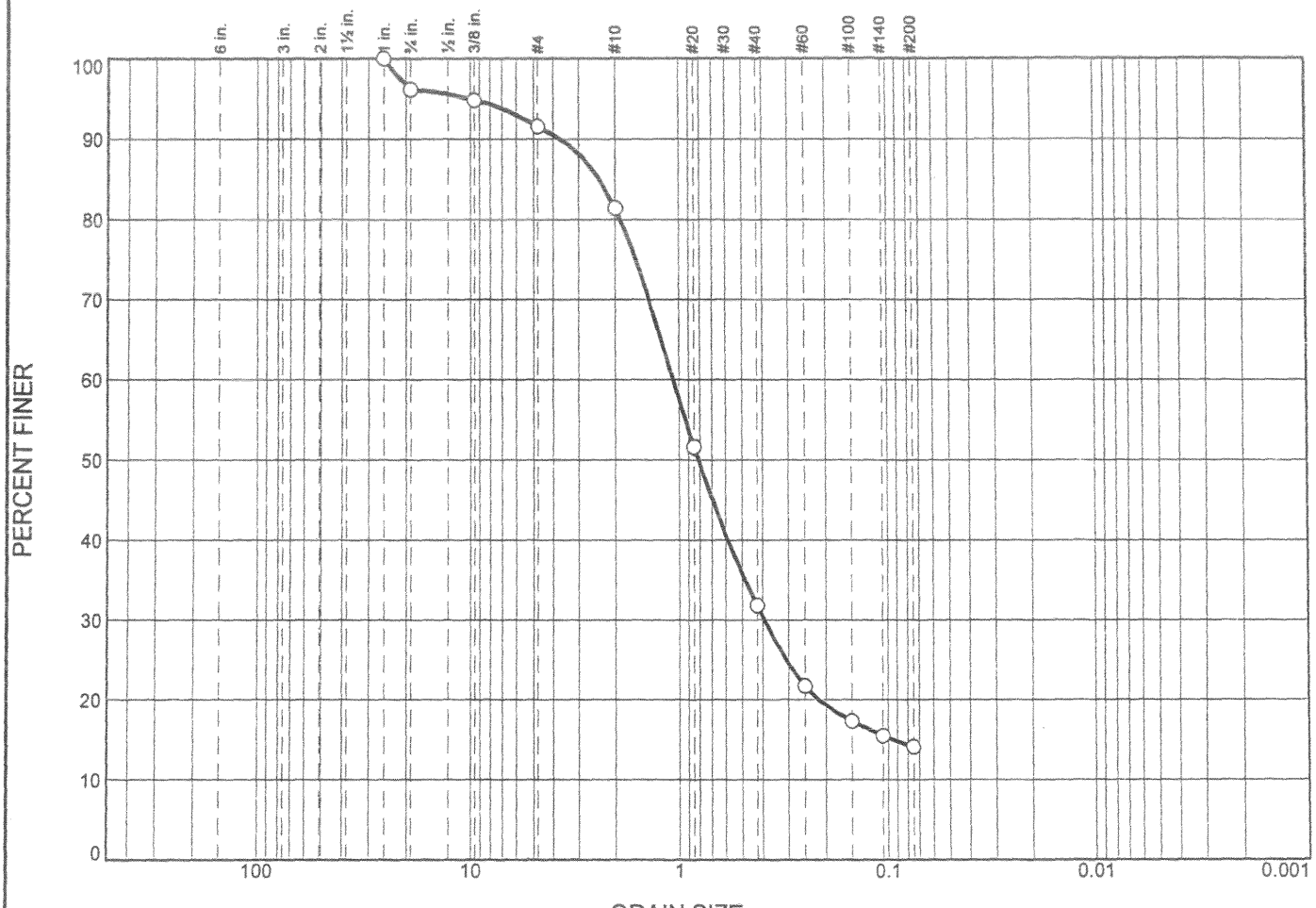
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 4 | 11 | 49 | 18 | 14 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.3691 | 1.0654 | 0.8100 | 0.3921 | 0.0946 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 110'-115'

**Date:** ○

**Remarks:**
○ Moisture Content % 18.1 CP05-EAARS-VB-0283

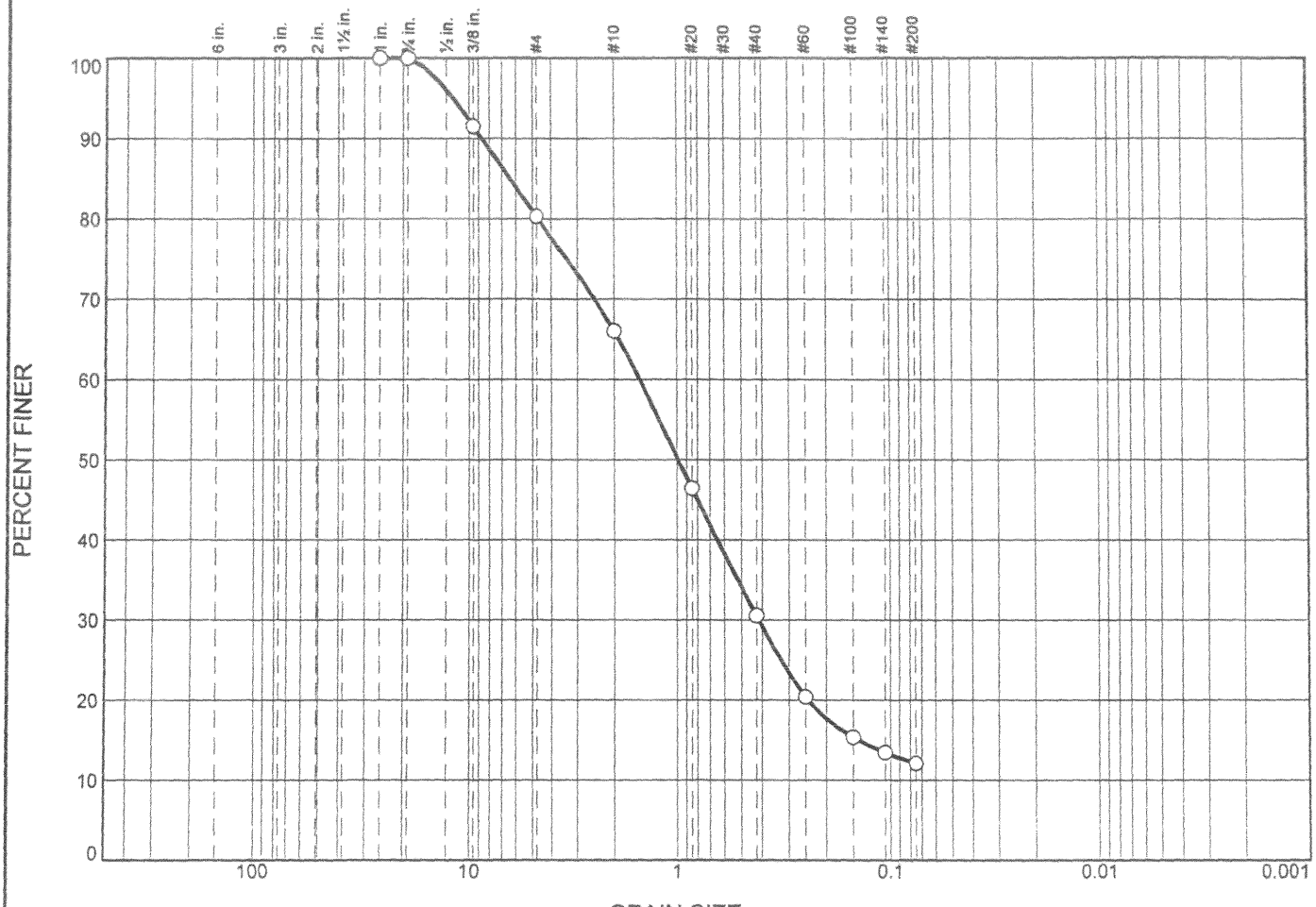
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 20 | 14 | 35 | 19 | 12 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.3892 | 1.5030 | 0.9841 | 0.4144 | 0.1415 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 115'-120'

**Date:** ○

**Remarks:**
○ Moisture Content % 16.1 CP05-EAARS-VB-0283

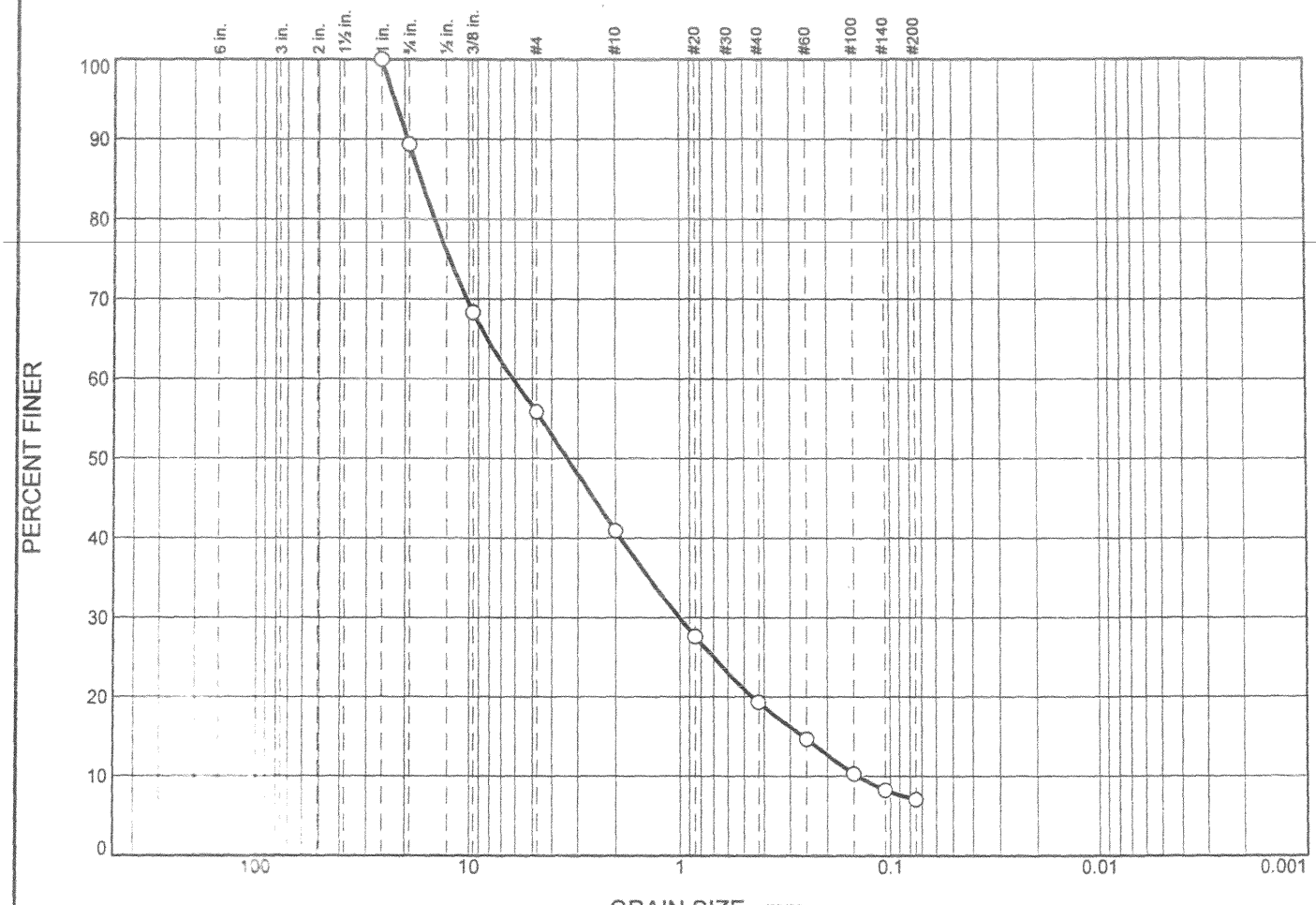
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Carraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 11 | 33 | 15 | 22 | 12 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 16.8310 | 6.1458 | 3.3574 | 1.0027 | 0.2585 | 0.1435 | 1.14 | 42.82 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 125'-130'

**Date:** ○

**Remarks:**
○ Moisture Content % 12.9 CP05-EAARS-VB-0283

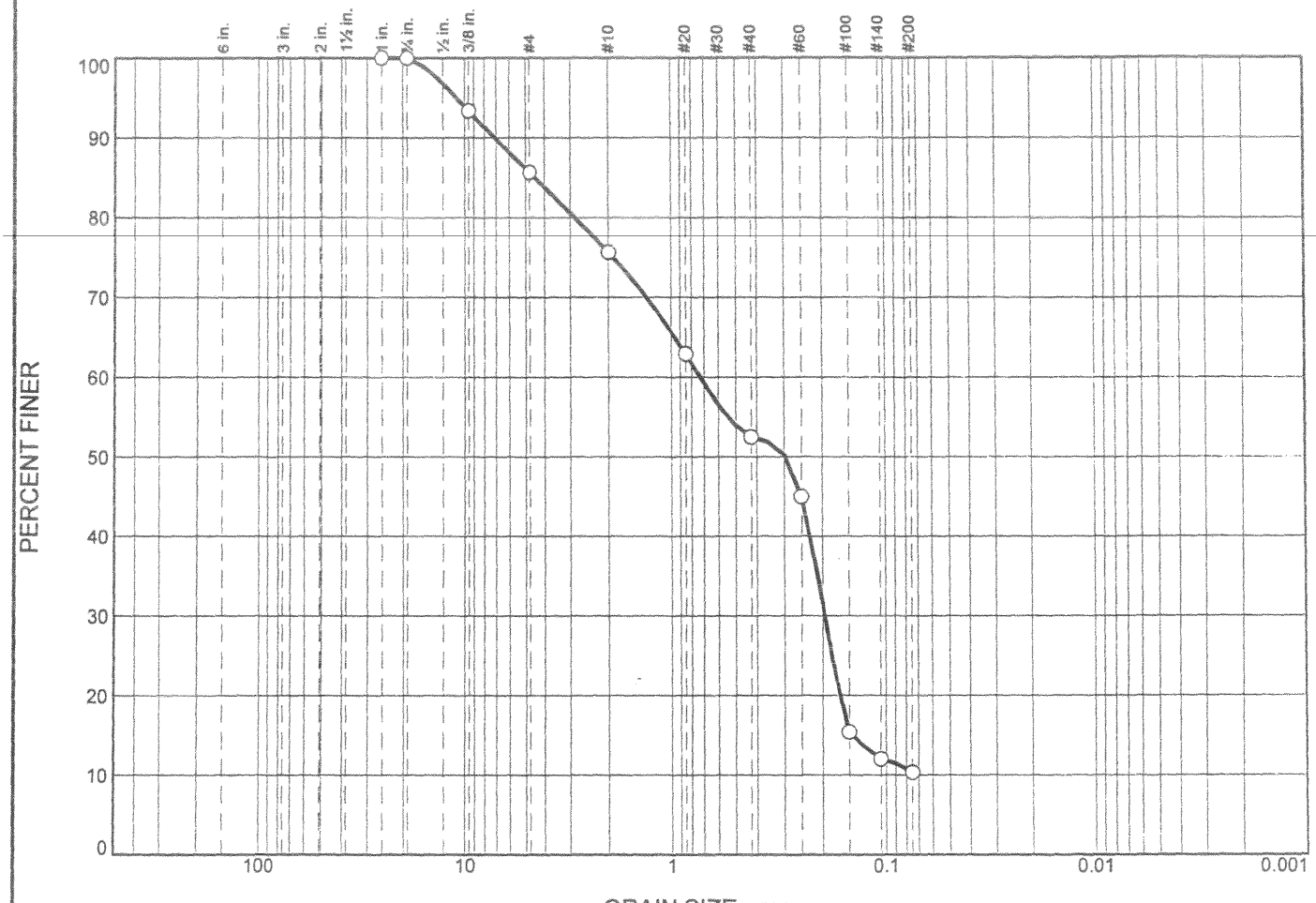
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 14 | 10 | 23 | 43 | 10 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.4573 | 0.7266 | 0.2944 | 0.1949 | 0.1448 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 140'-145'

**Date:** ○

**Remarks:**
○ Moisture Content % 18.9 CP05-EAARS-VB-0283

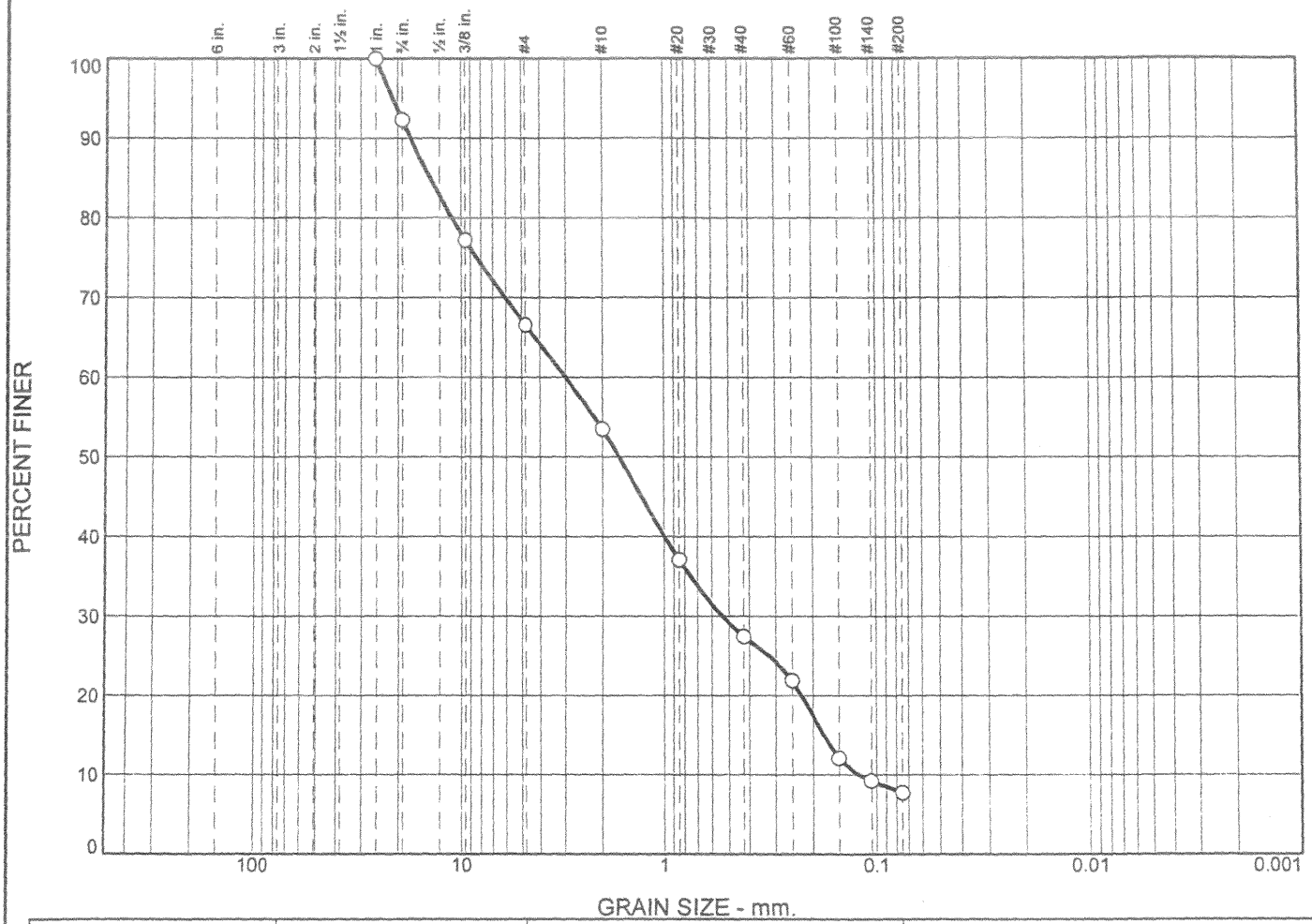
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 8 | 25 | 14 | 26 | 19 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.0549 | 2.9872 | 1.6578 | 0.5359 | 0.1771 | 0.1213 | 0.79 | 24.63 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 150'-155'

**Date:** ○

**Remarks:**
○ Moisture Content % 12.9 CP05-EAARS-VB-0283

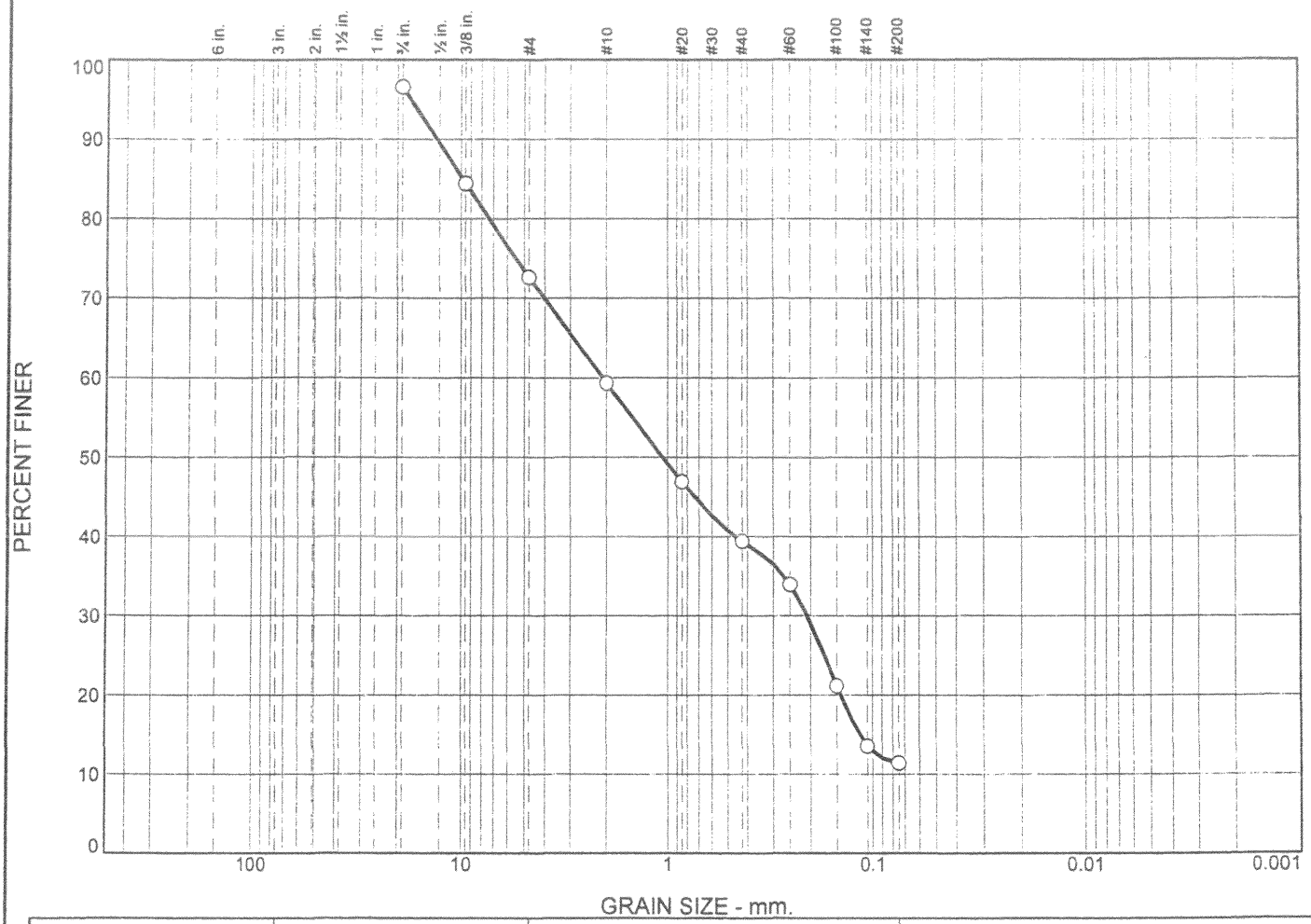
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 24 | 14 | 20 | 28 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.8196 | 2.0871 | 1.0603 | 0.2081 | 0.1157 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 155' to 160'

**Date:** ○

**Remarks:**
○ Moisture Content % 15.1
CP05-EAARS-VB-0283

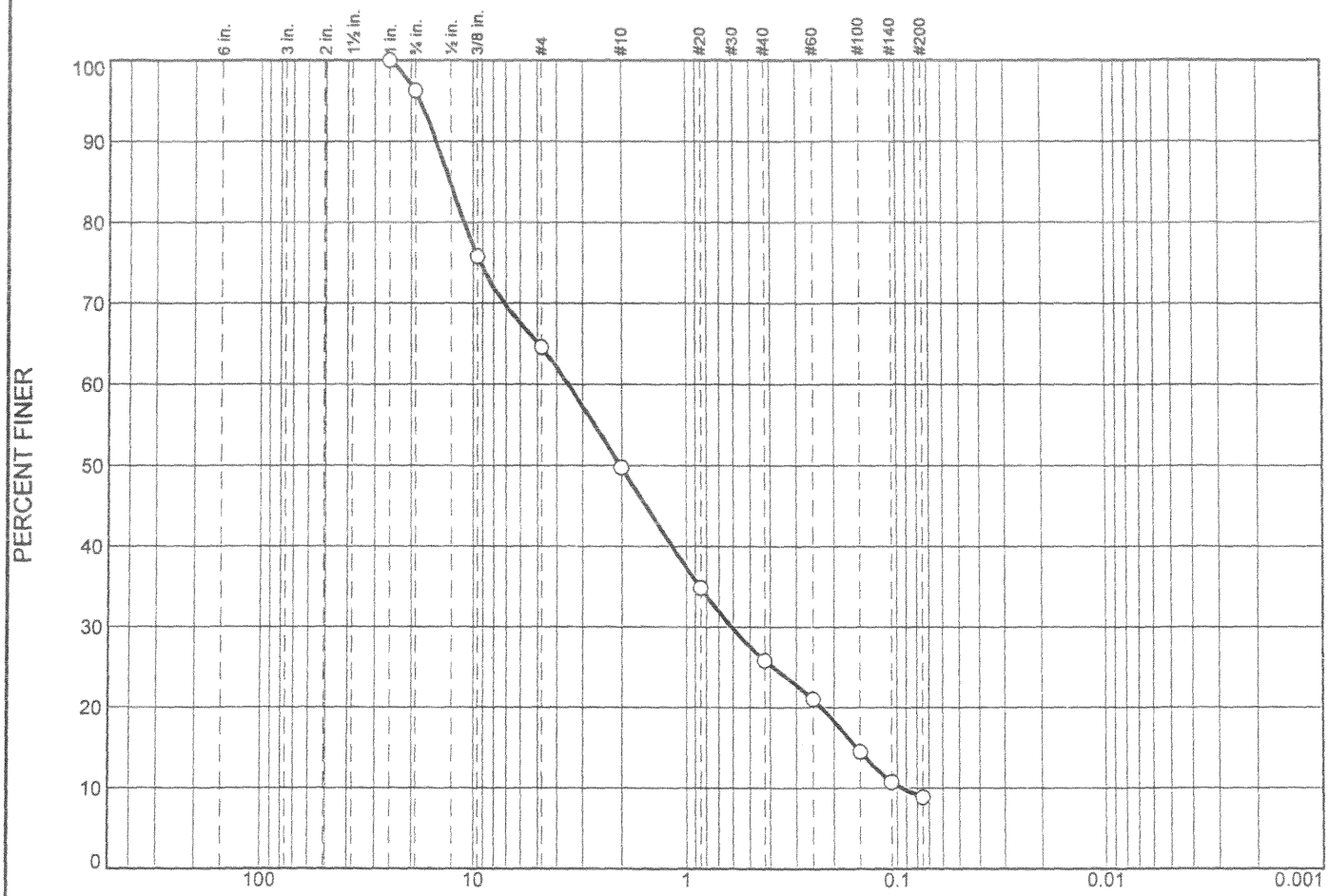
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 4 | 31 | 15 | 24 | 17 | 9 | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.8381 | 3.5135 | 2.0262 | 0.6095 | 0.1557 | 0.0949 | 1.11 | 37.04 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 160'-165'

**Date:** ○

**Remarks:**
○ Moisture Content % 14.3 CP05-EAARS-VB-0283

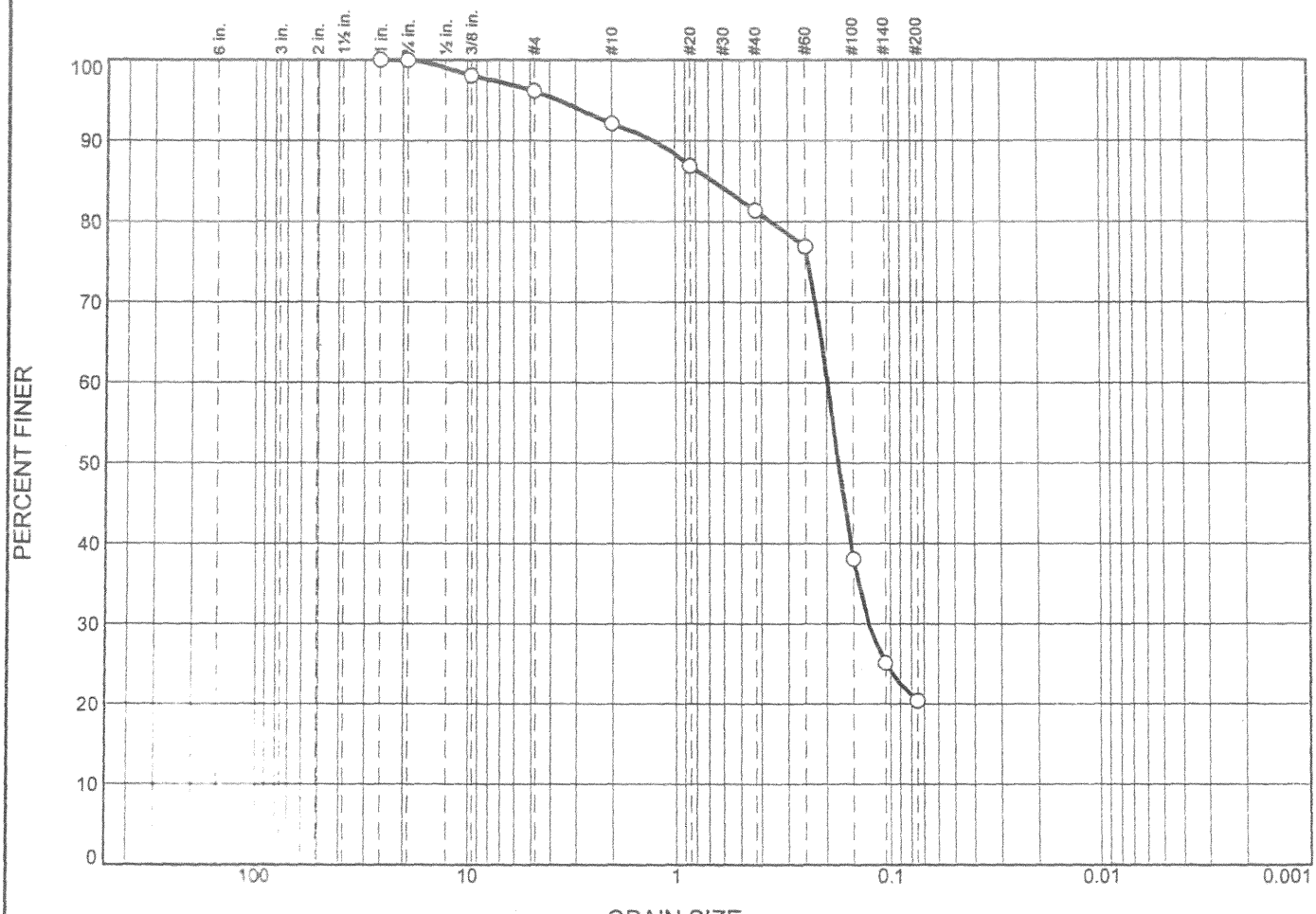
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 4 | 4 | 11 | 61 | 20 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.6669 | 0.1972 | 0.1755 | 0.1272 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 165'-170'

**Date:** ○

**Remarks:**
○ Moisture Content % 20.3 CP05-EAARS-VB-0283

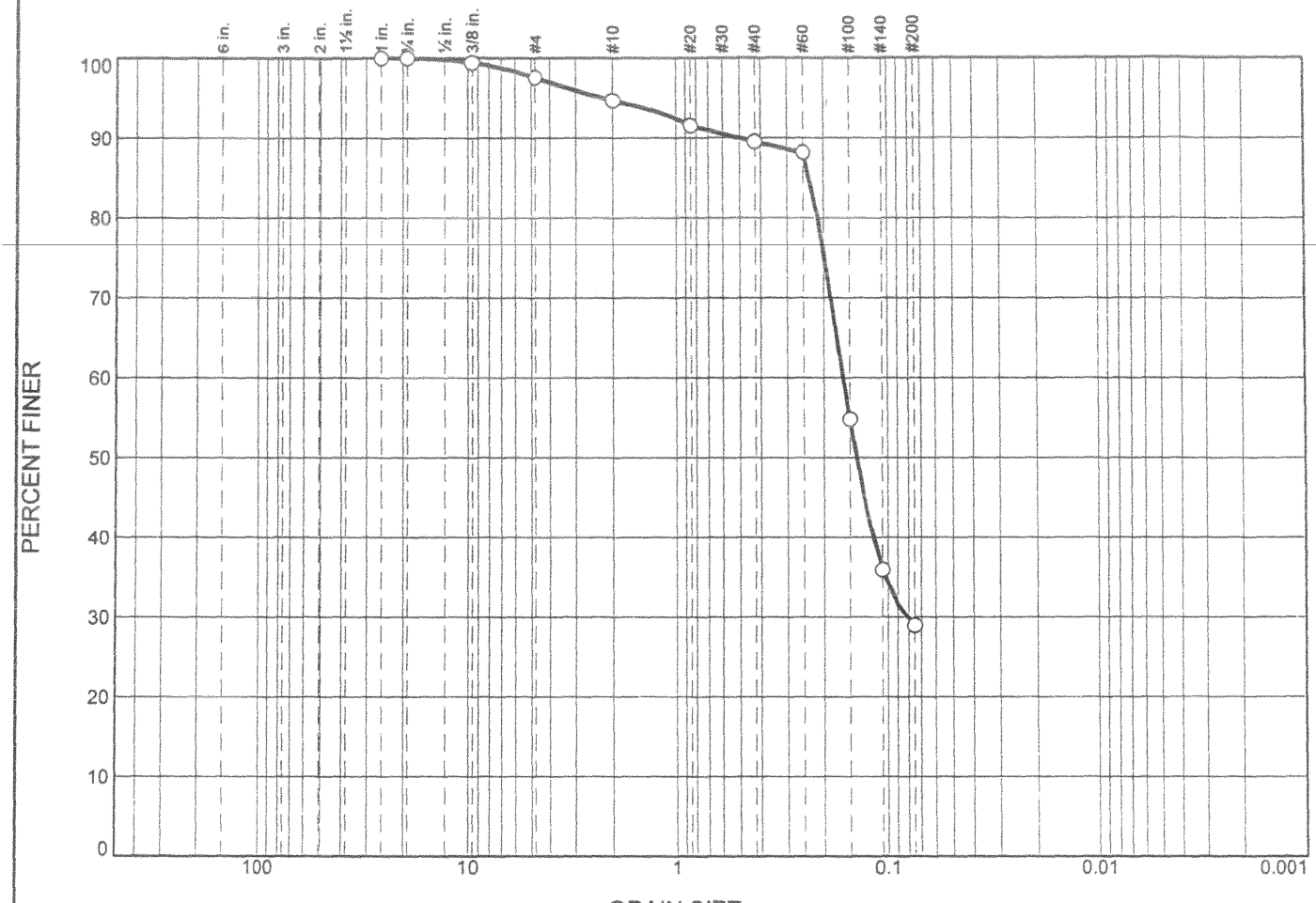
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Carlos Zaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 2 | 3 | 5 | 61 | 29 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2321 | 0.1611 | 0.1397 | 0.0812 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 180'-185'

**Date:** ○

**Remarks:**
○ Moisture Content % 19.7 CP05-EAARS-VB-0283

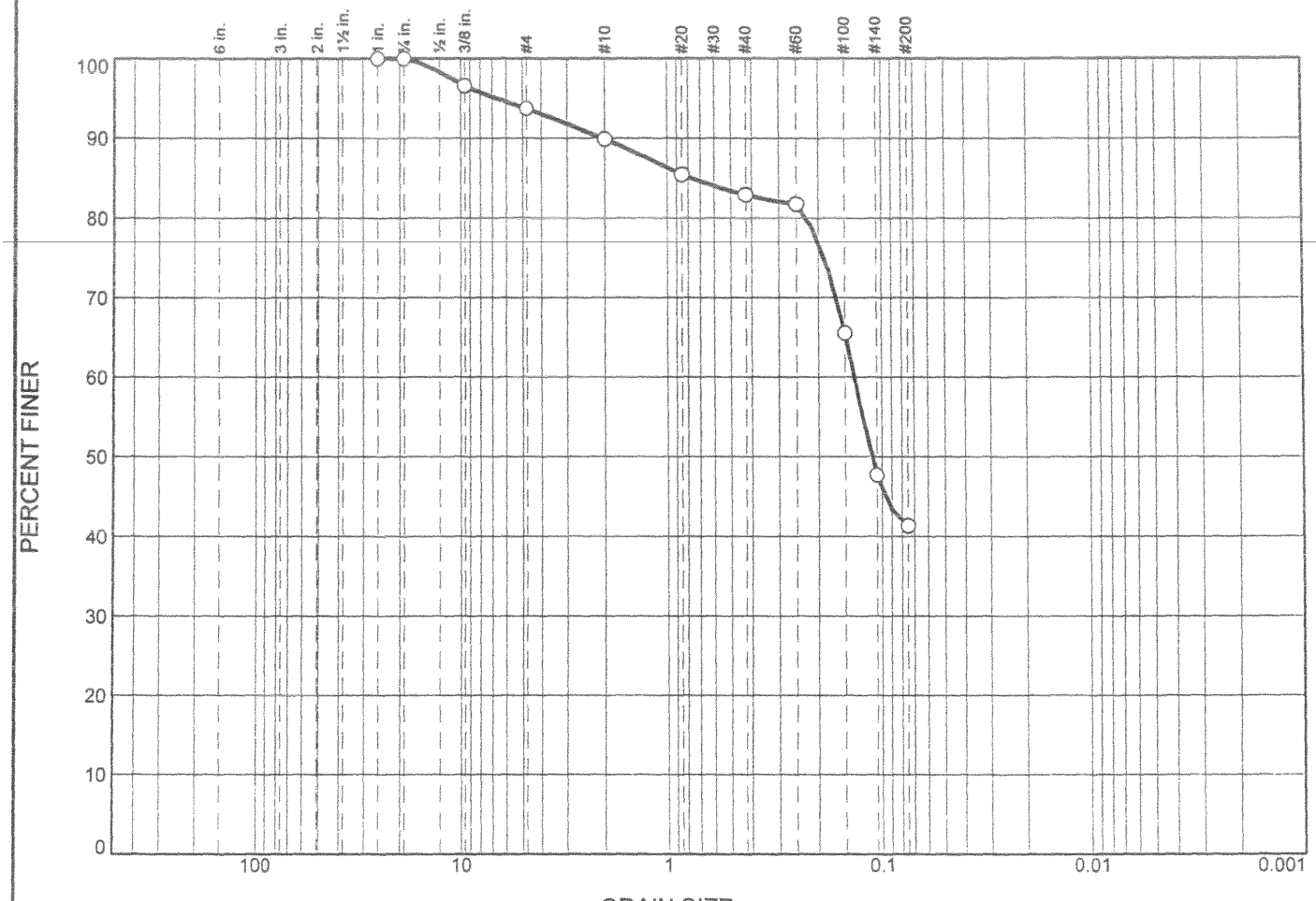
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 6 | 4 | 7 | 42 | 41 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.7647 | 0.1355 | 0.1120 | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 185'-190'

**Date:** ○

**Remarks:**
○ Moisture Content % 20.4 CP05-EAARS-VB-0283

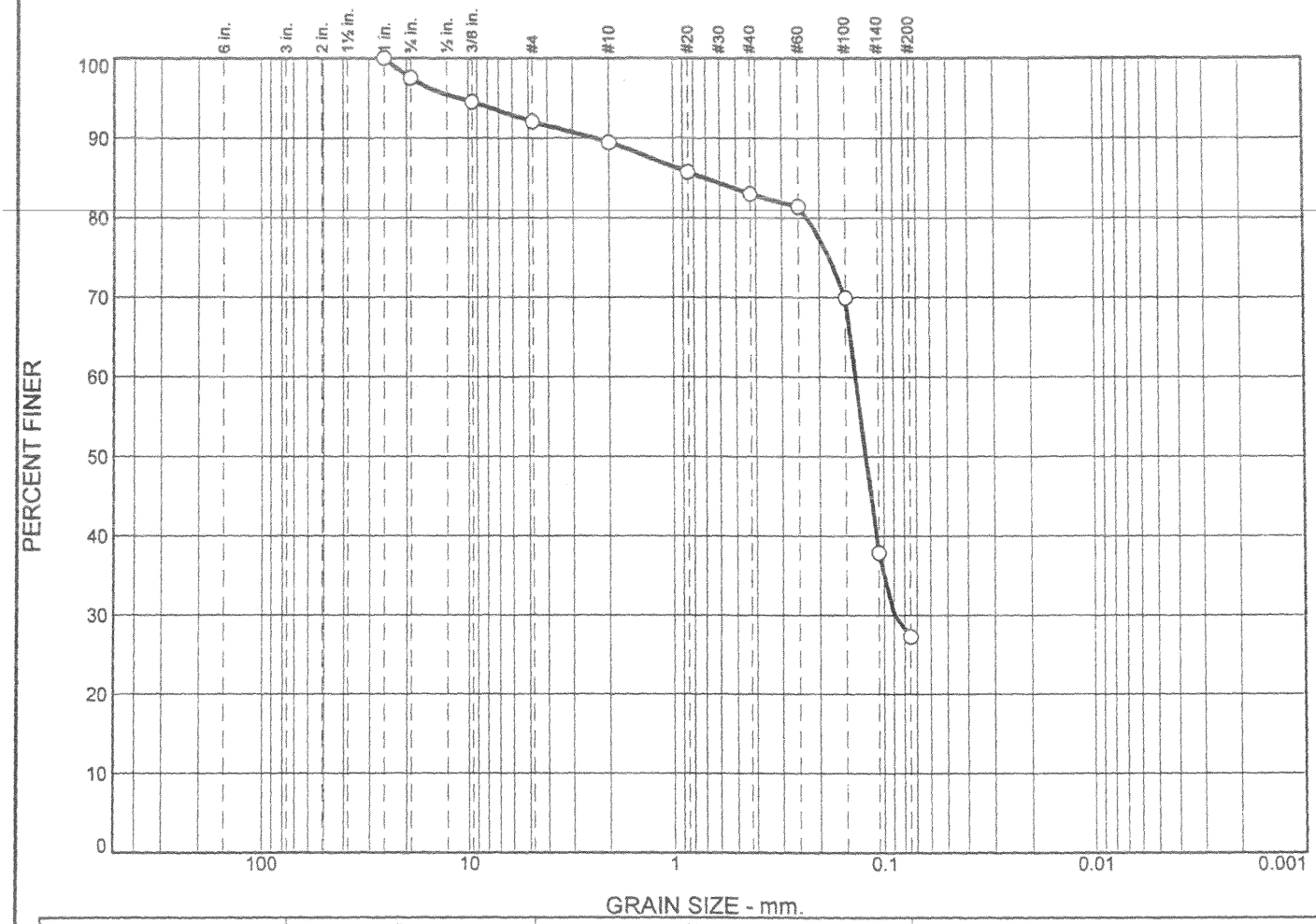
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 2 | 6 | 3 | 6 | 56 | 27 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.7053 | 0.1341 | 0.1215 | 0.0892 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 195'-200'

**Date:** ○

**Remarks:**
○ Moisture Content % 16.8 CP05-EAARS-VB-0283

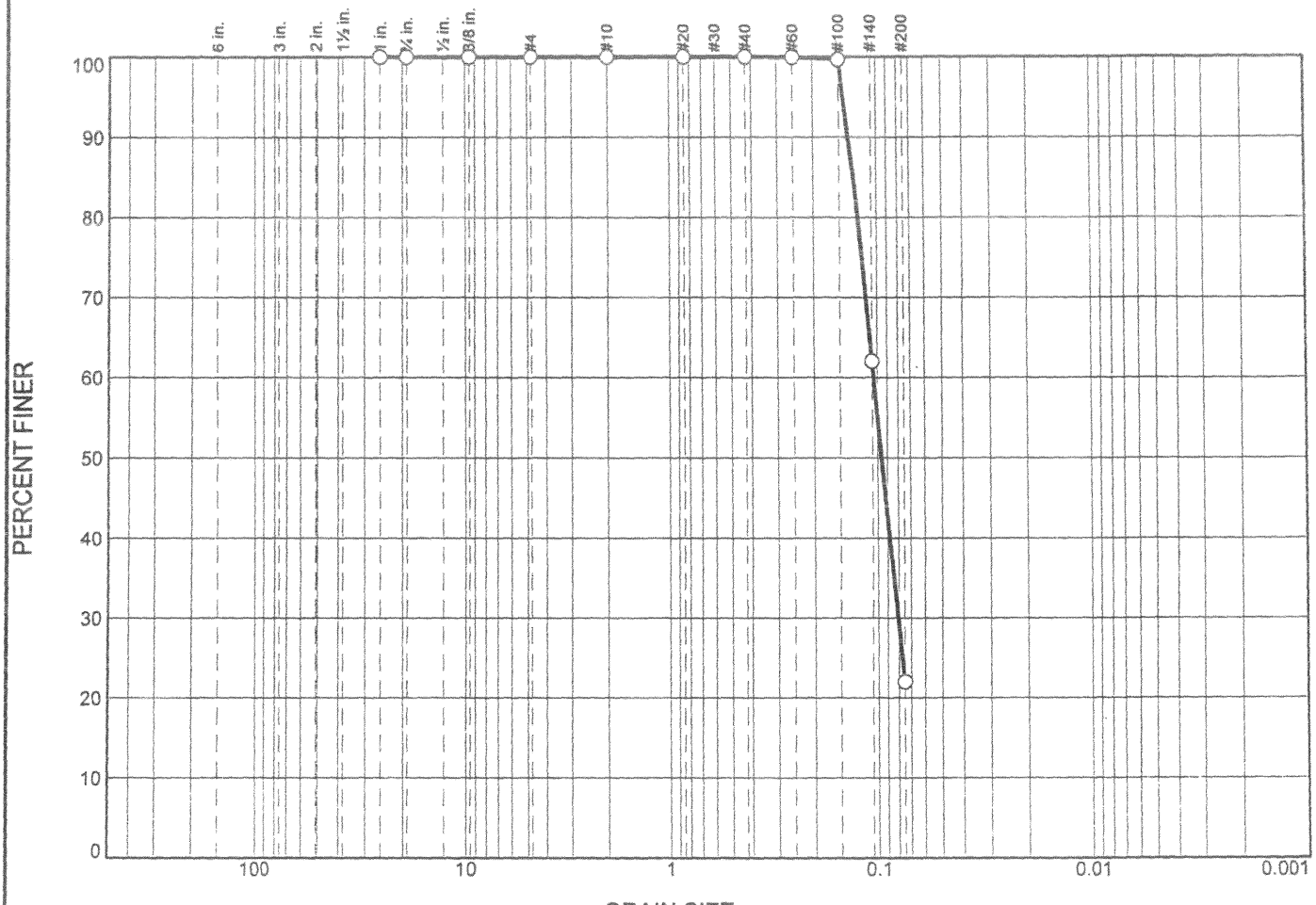
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Camaraza Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 0 | 78 | 22 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1278 | 0.1043 | 0.0960 | 0.0806 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 200'-205'

**Date:** ○

**Remarks:**
○ Moisture Content % 24.8 CP05-EAARS-VB-0283

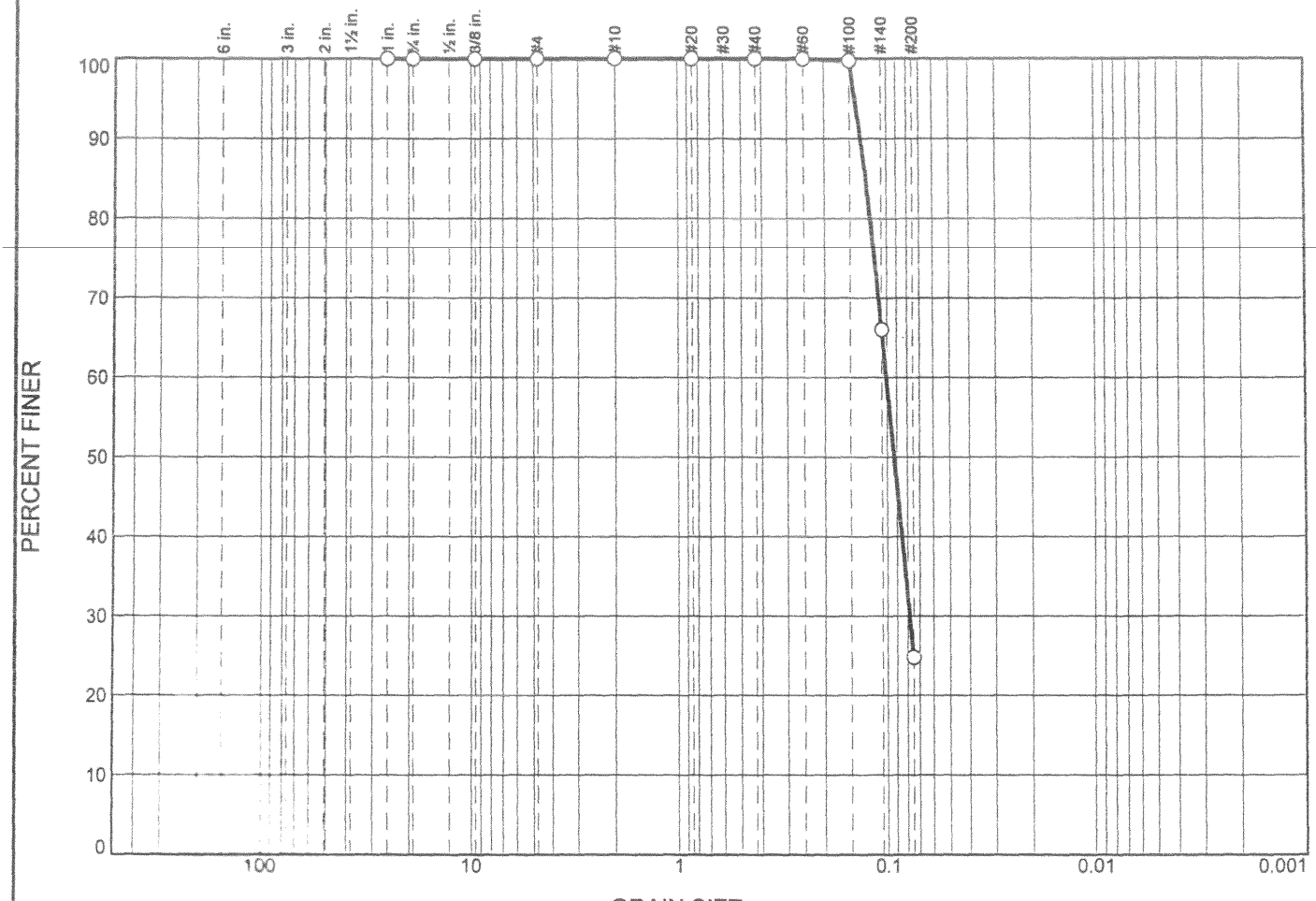
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pedro Zamaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 0 | 75 | 25 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1253 | 0.1007 | 0.0926 | 0.0783 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0174 **Depth:** 205'-210'

**Date:** ○

**Remarks:**
○ Moisture Content % 25.7 CP05-EAARS-VB-0283

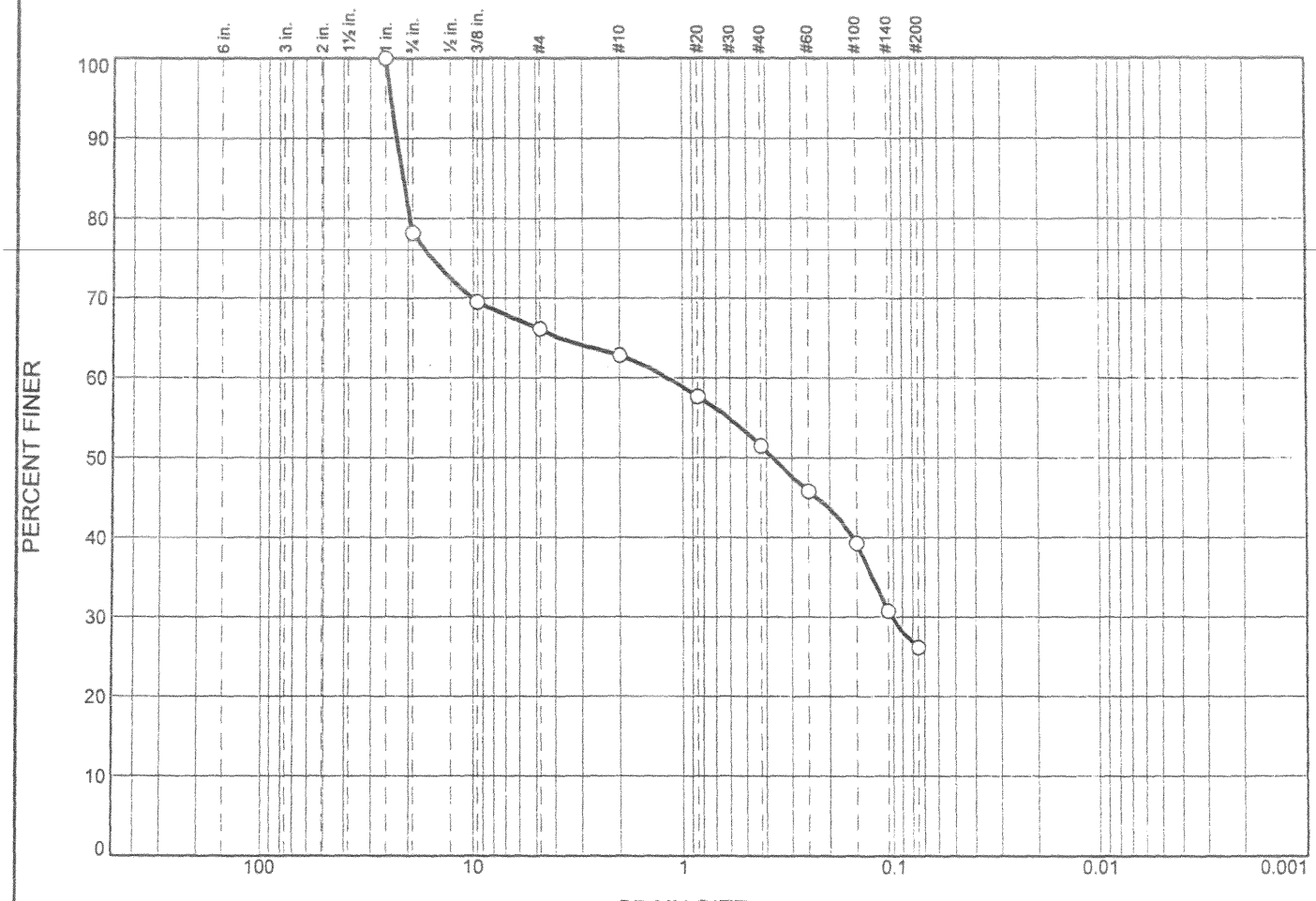
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 22 | 12 | 3 | 11 | 26 | 26 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 21.1419 | 1.1763 | 0.3693 | 0.1020 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 10' to 15'

**Date:** ○

**Remarks:**
○ Moisture Content % 18.3 CP05-EAARS-VB-0284

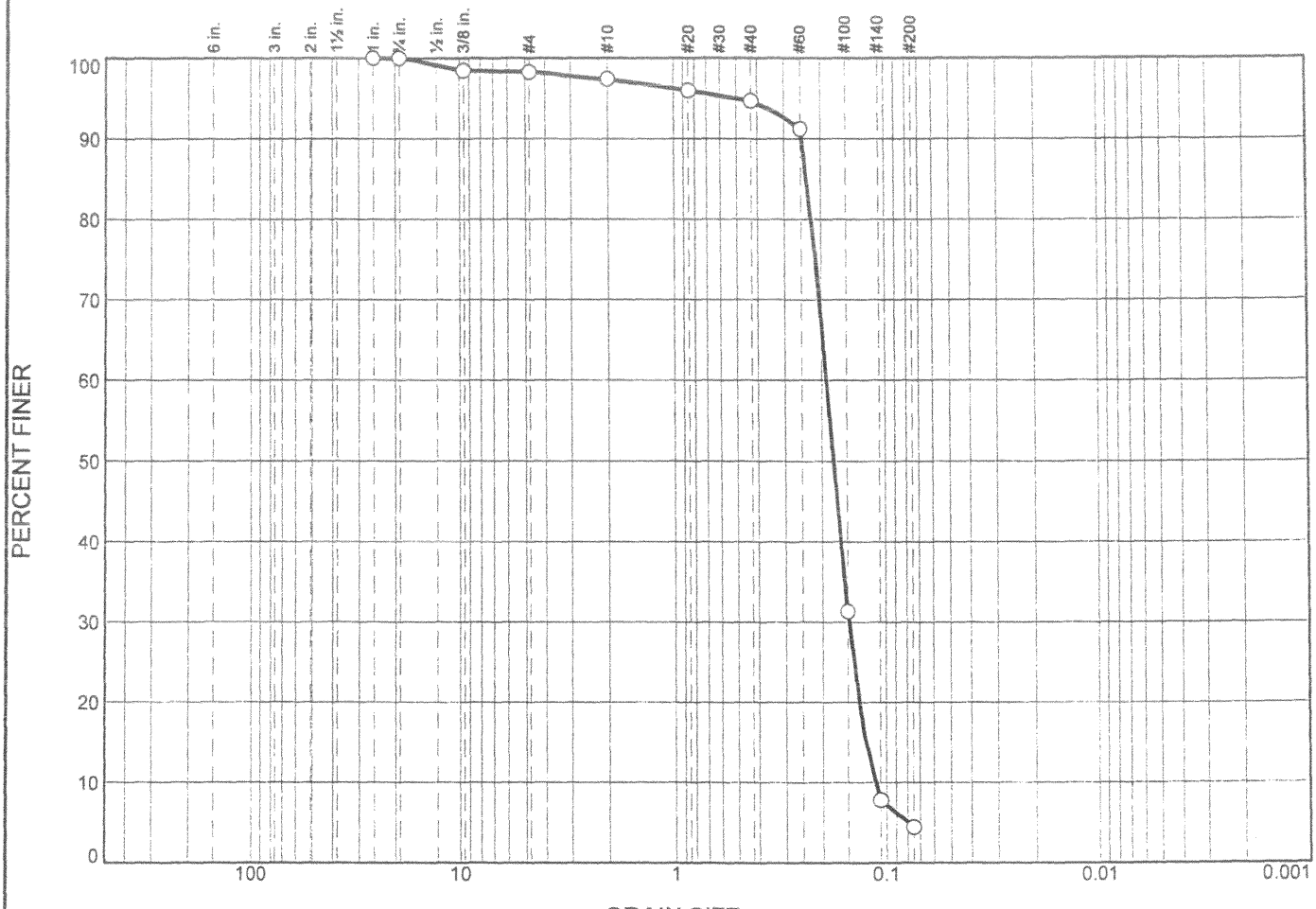
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 2 | 1 | 2 | 91 | 4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2321 | 0.1883 | 0.1746 | 0.1481 | 0.1237 | 0.1125 | 1.04 | 1.67 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 20' to 25'

**Date:** ○

**Remarks:**
○ Moisture Content % 25.9 CP05-EAARS-VB-0284

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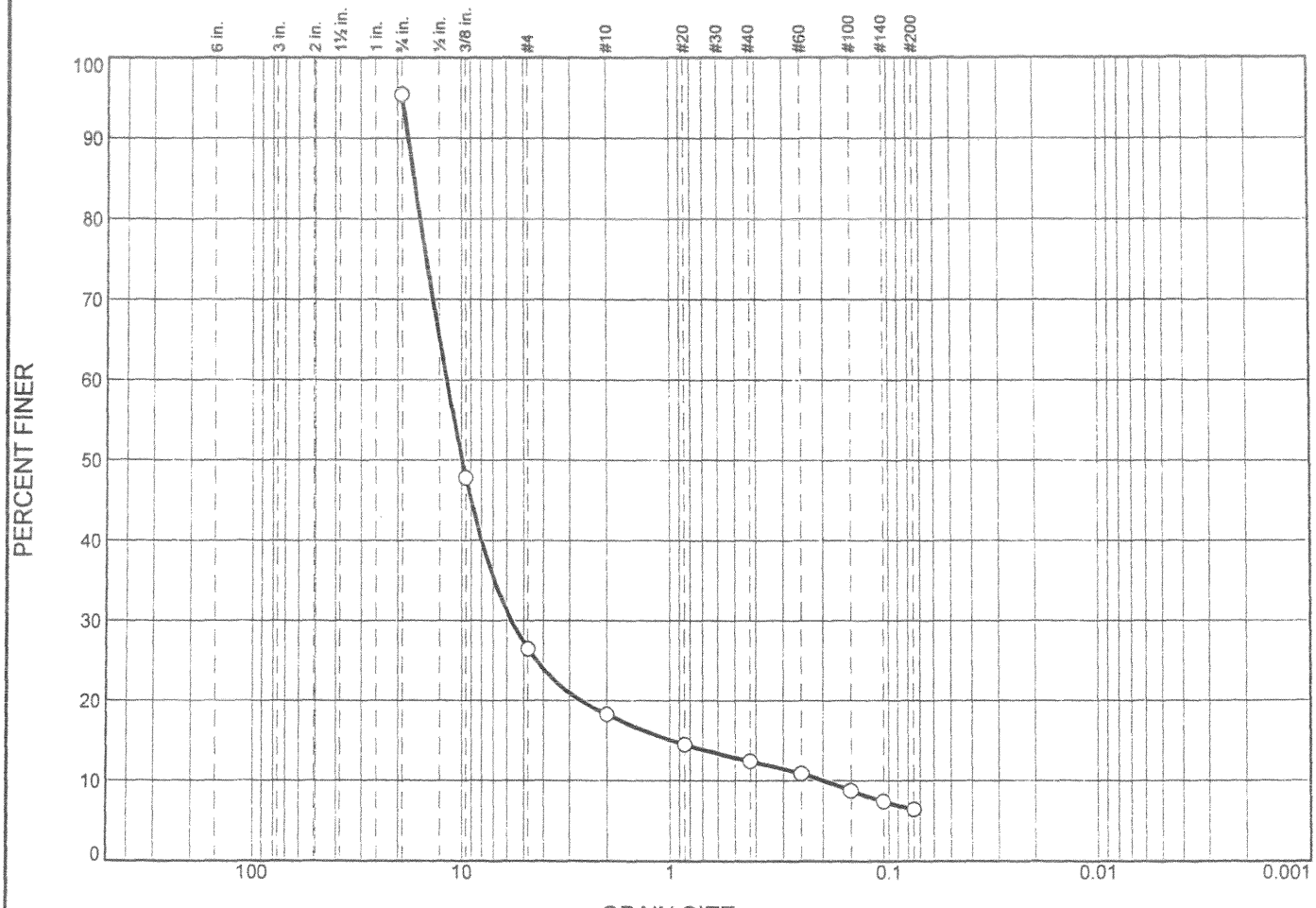
Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 69 | 8 | 6 | 6 | 6 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 16.6441 | 11.7433 | 9.9304 | 5.7187 | 0.9693 | 0.1985 | 14.03 | 59.17 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 45' to 50'

**Date:** ○

**Remarks:**
○ Moisture Content CP05-EAARS-VB-0284

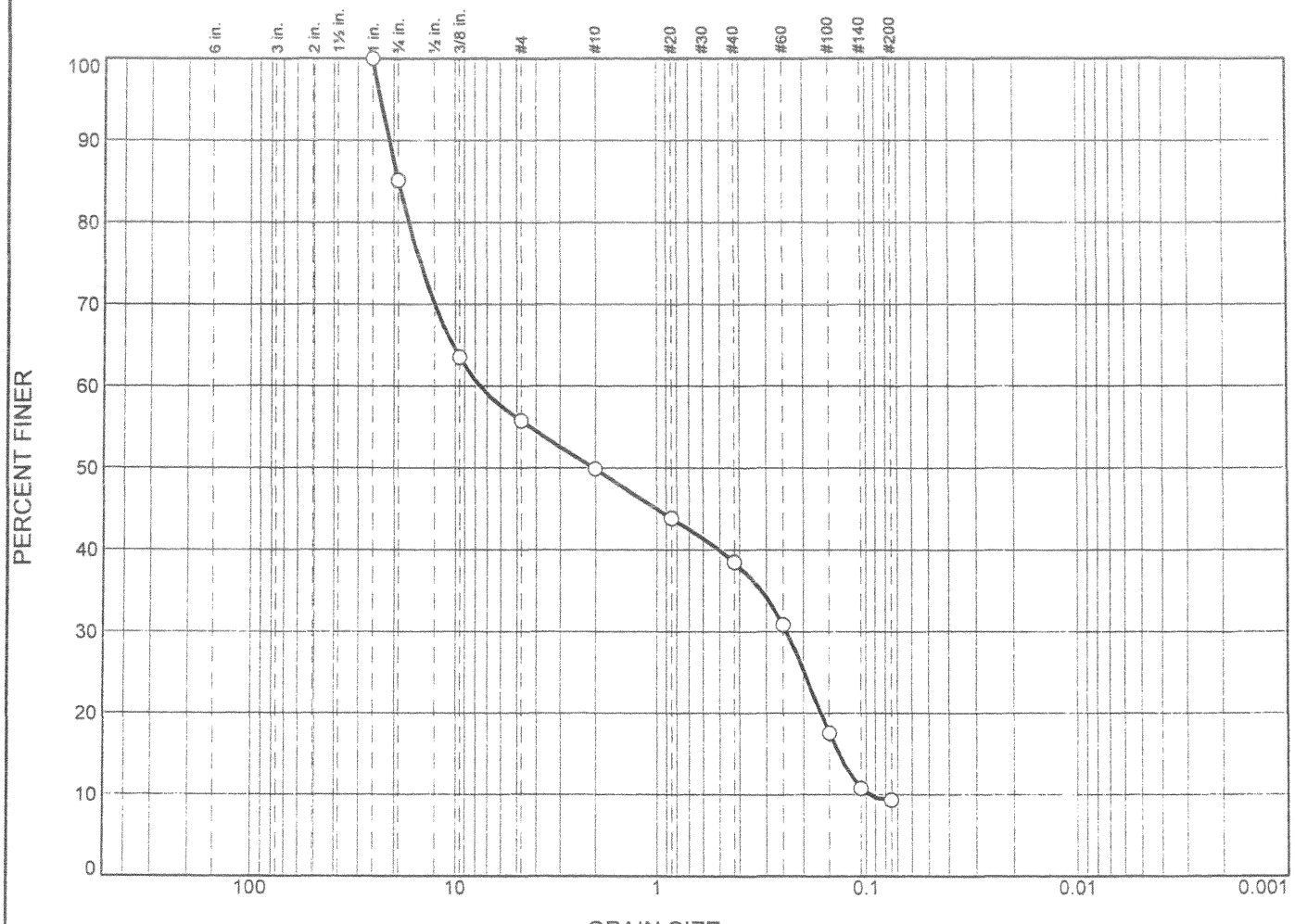
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 15 | 29 | 6 | 11 | 30 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 18.9898 | 7.5526 | 2.0365 | 0.2402 | 0.1348 | 0.0972 | 0.08 | 77.72 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 55' to 60'

**Date:** ○

**Remarks:**
○ Moisture Content % 16.2 CP05-EAARS-VB-0284

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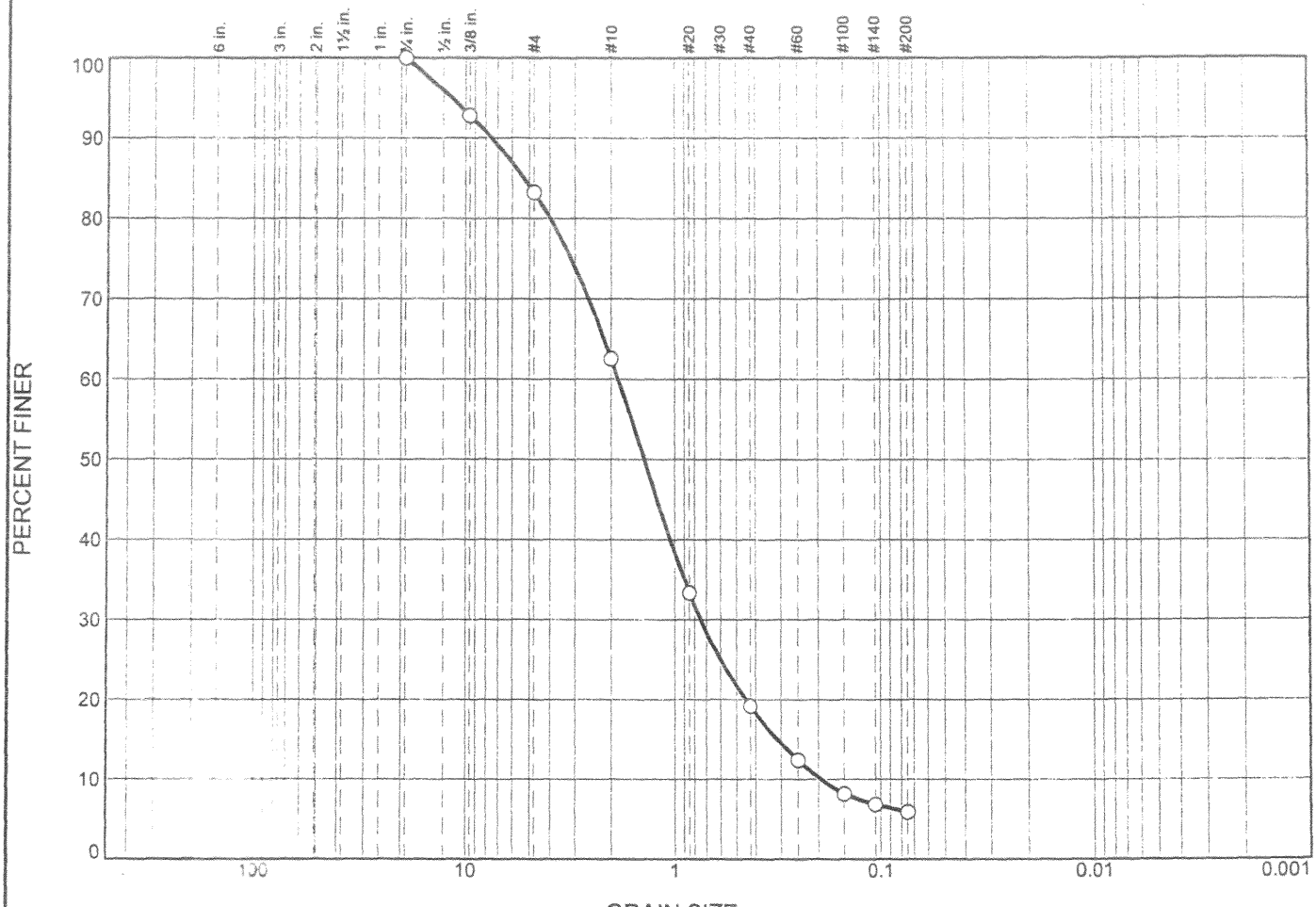
Miami Lakes, FL

Figure

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 17 | 20 | 44 | 13 | 6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.2877 | 1.8502 | 1.3945 | 0.7504 | 0.3130 | 0.1950 | 1.56 | 9.49 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 75' to 80'

**Date:** ○

**Remarks:**
○ Moisture Content % 11.1
CP05-EAARS-VB-0284

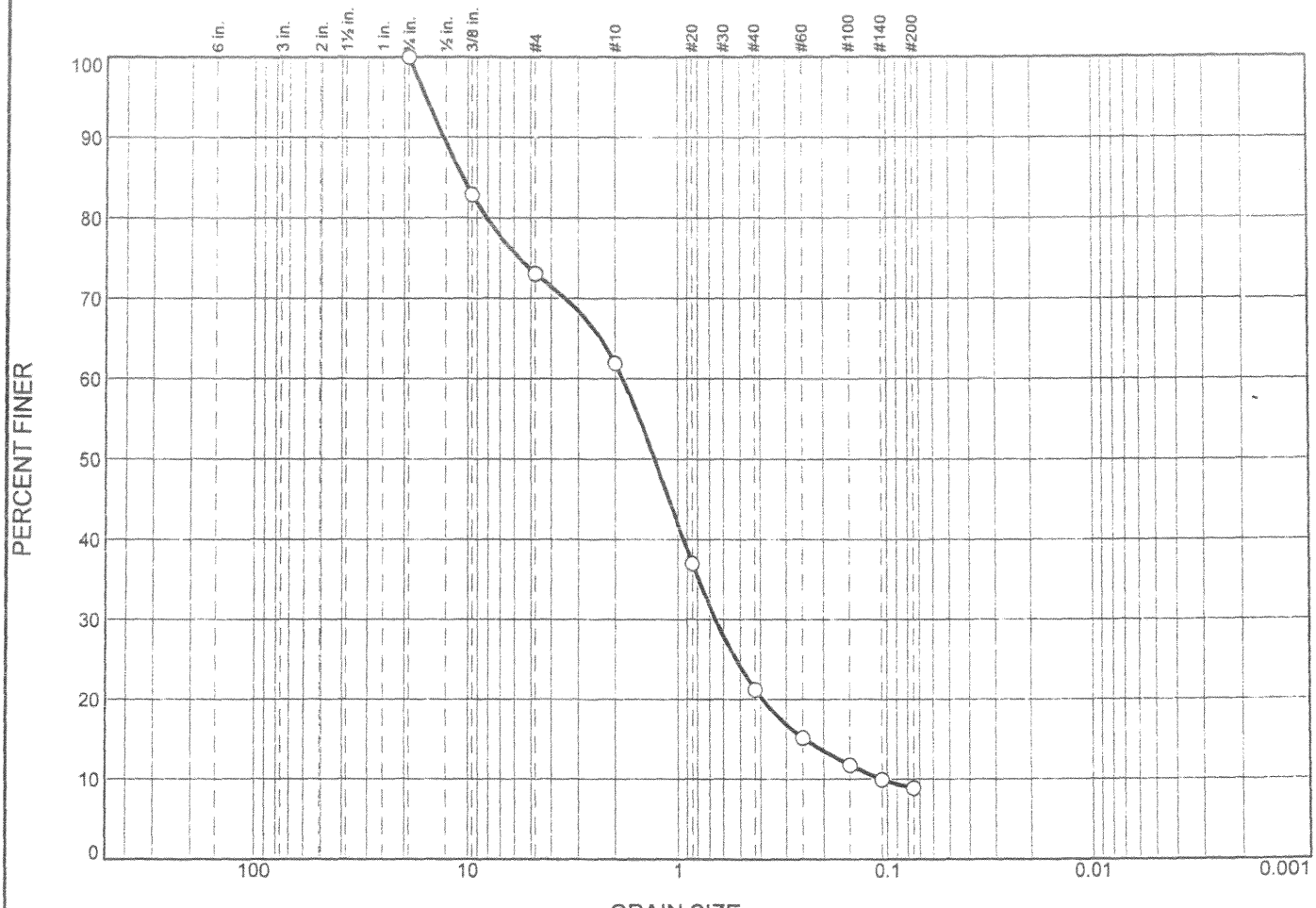
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 27 | 11 | 41 | 12 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 10.5341 | 1.8396 | 1.2933 | 0.6557 | 0.2449 | 0.1083 | 2.16 | 16.98 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 110' to 115'

**Date:** ○

**Remarks:**
○ Moisture Content % 16.1
CP05-EAARS-VB-0284

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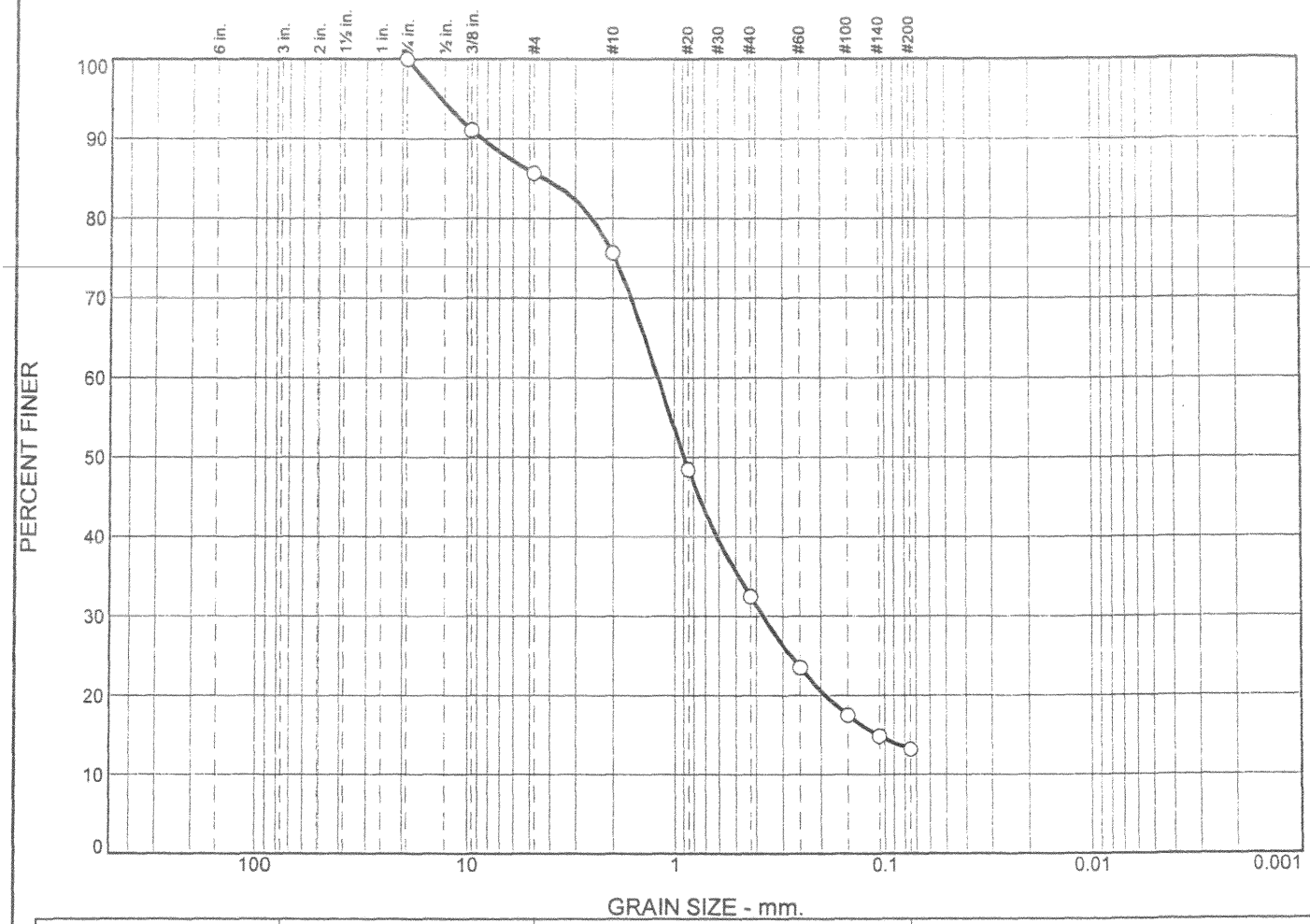
**Miami Lakes, FL**

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 14 | 10 | 44 | 19 | 13 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.2449 | 1.2042 | 0.8939 | 0.3714 | 0.1087 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 115' to 120'

**Date:** ○

**Remarks:**
○ Moisture Content % 15.8
CP05-EAARS-VB-0284

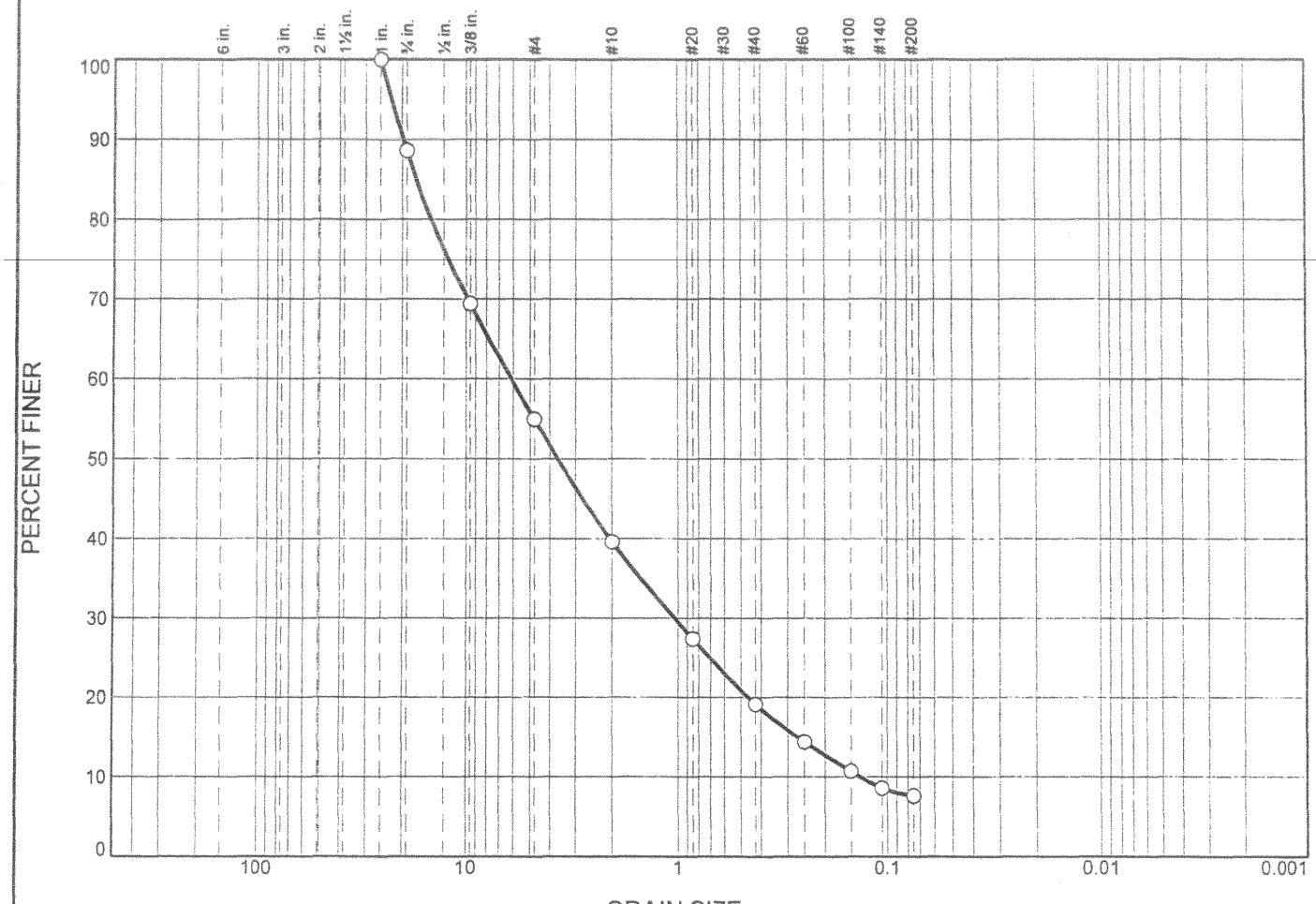
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 11 | 34 | 15 | 21 | 11 | 8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.1668 | 6.1287 | 3.6565 | 1.0348 | 0.2701 | 0.1350 | 1.29 | 45.40 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)

○ **Source of Sample:** CB-0182 **Depth:** 125' to 130'

**Date:** ○

**Remarks:**

○ Moisture Content % 9.5 CP05-EAARS-VB-0284

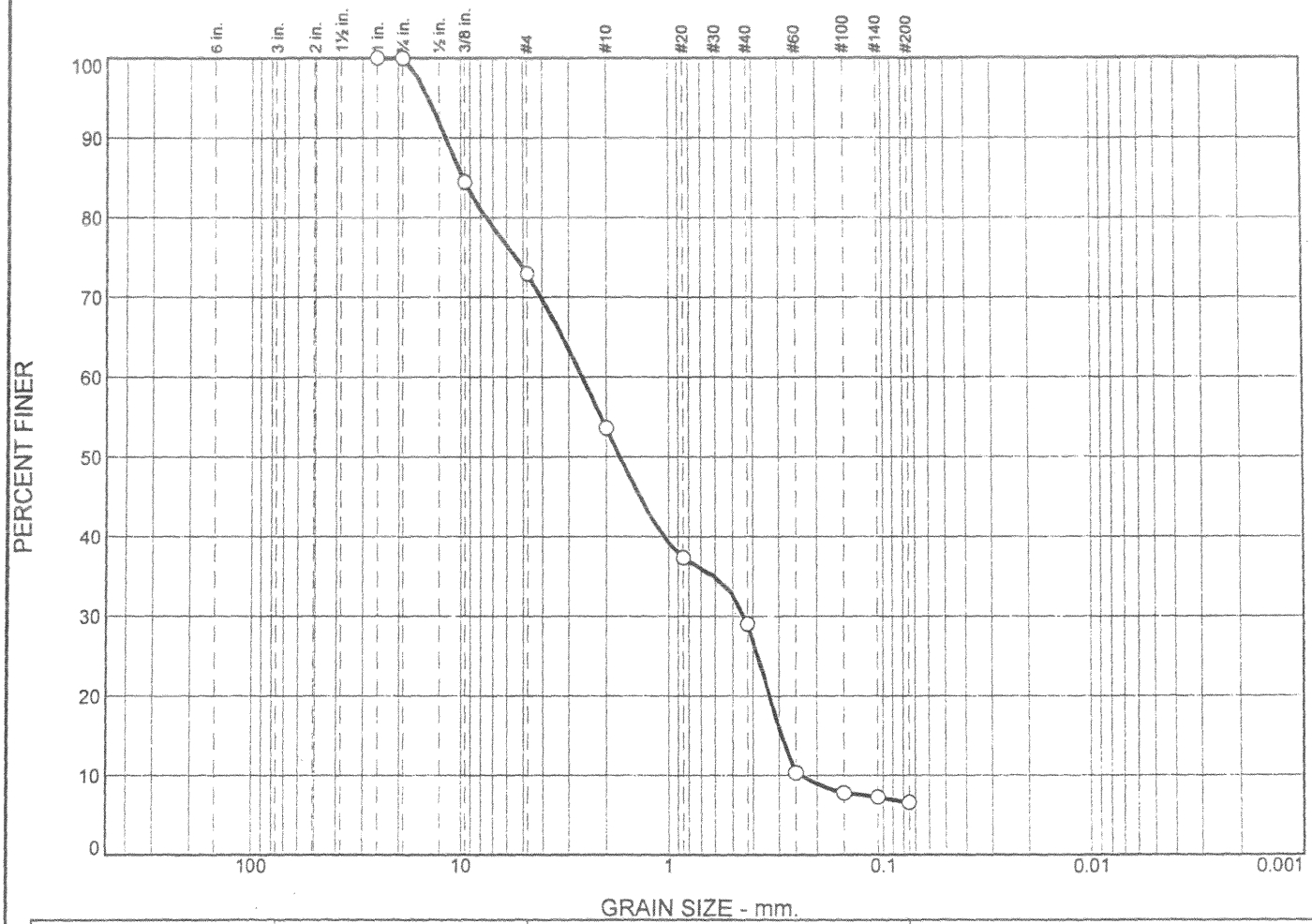
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 27 | 19 | 25 | 22 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.7354 | 2.5953 | 1.7240 | 0.4399 | 0.2916 | 0.2374 | 0.31 | 10.93 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 140' to 145'

**Date:** ○

**Remarks:**
○ Moisture Content % 9.0 CP05-EAARS-VB-0284

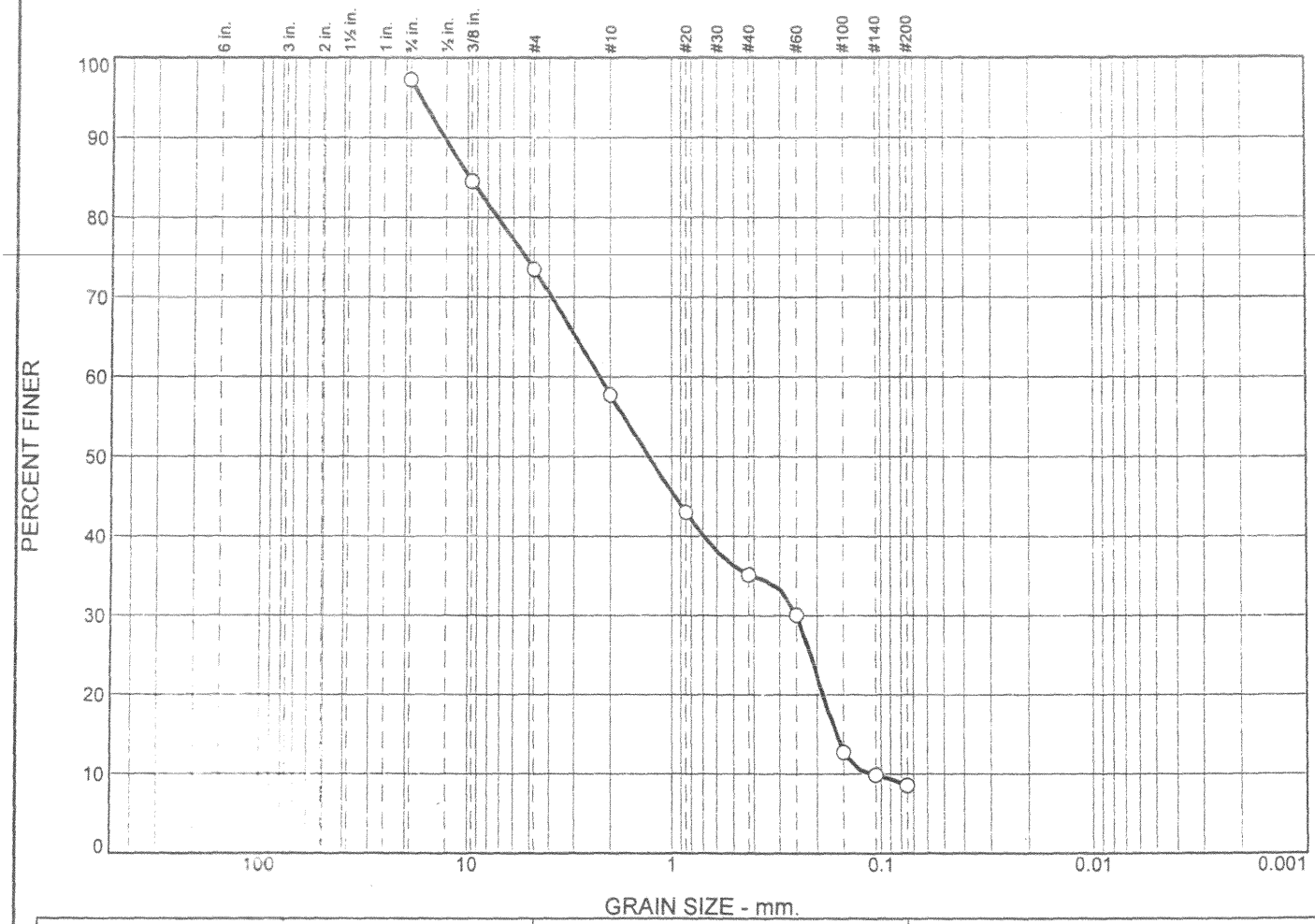
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Carraraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 24 | 15 | 23 | 26 | 9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.7852 | 2.2565 | 1.3000 | 0.2495 | 0.1632 | 0.1116 | 0.25 | 20.21 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 150' to 155'

**Date:** ○

**Remarks:**
○ Moisture Content % 10.0
CP05-EAARS-VB-0284

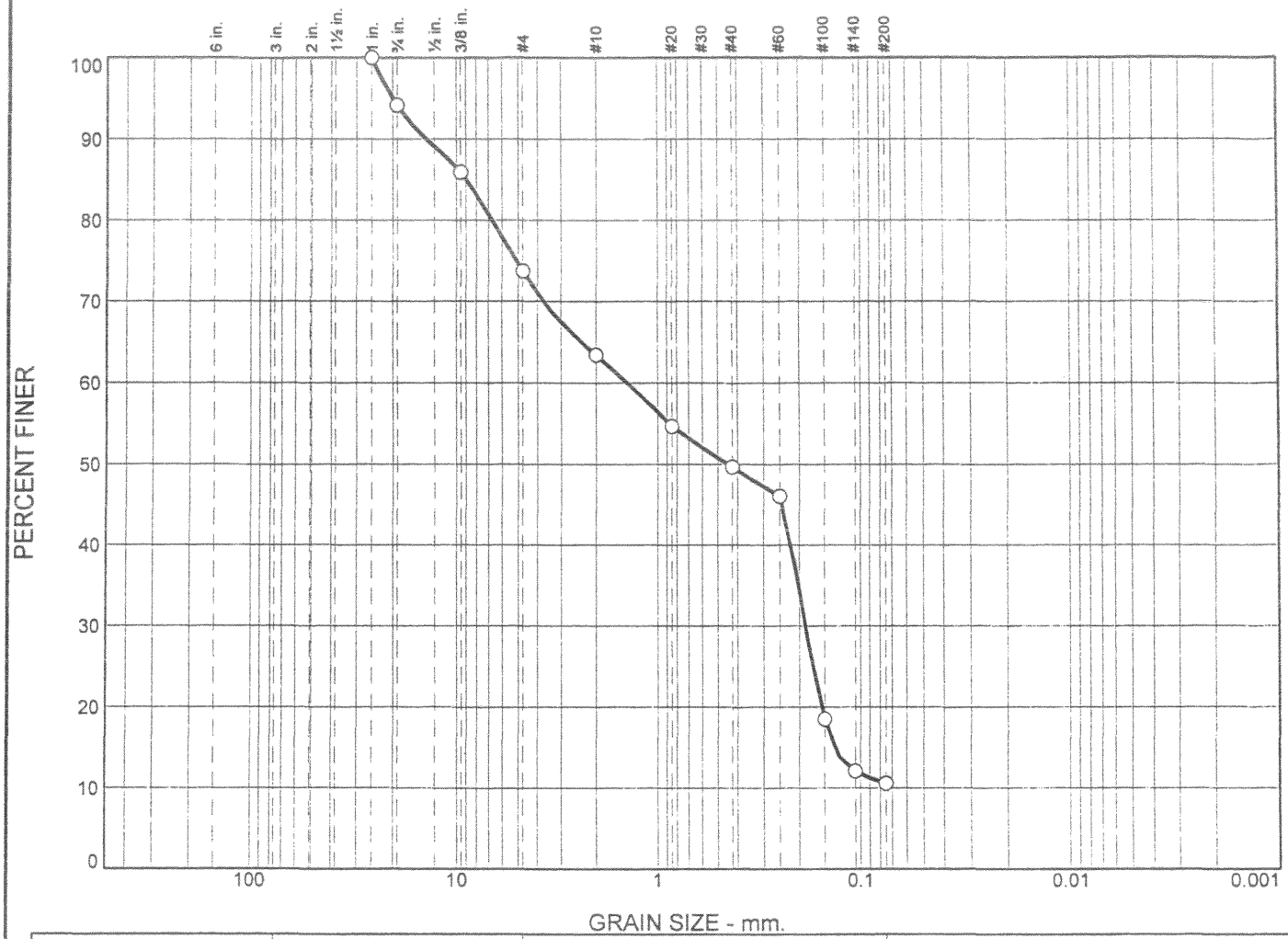
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 6 | 20 | 11 | 13 | 39 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.9346 | 1.4083 | 0.4471 | 0.1859 | 0.1338 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 155' to 160'

**Date:** ○

**Remarks:**
○ Moisture Content % 12.0 CP05-EAARS-VB-0284

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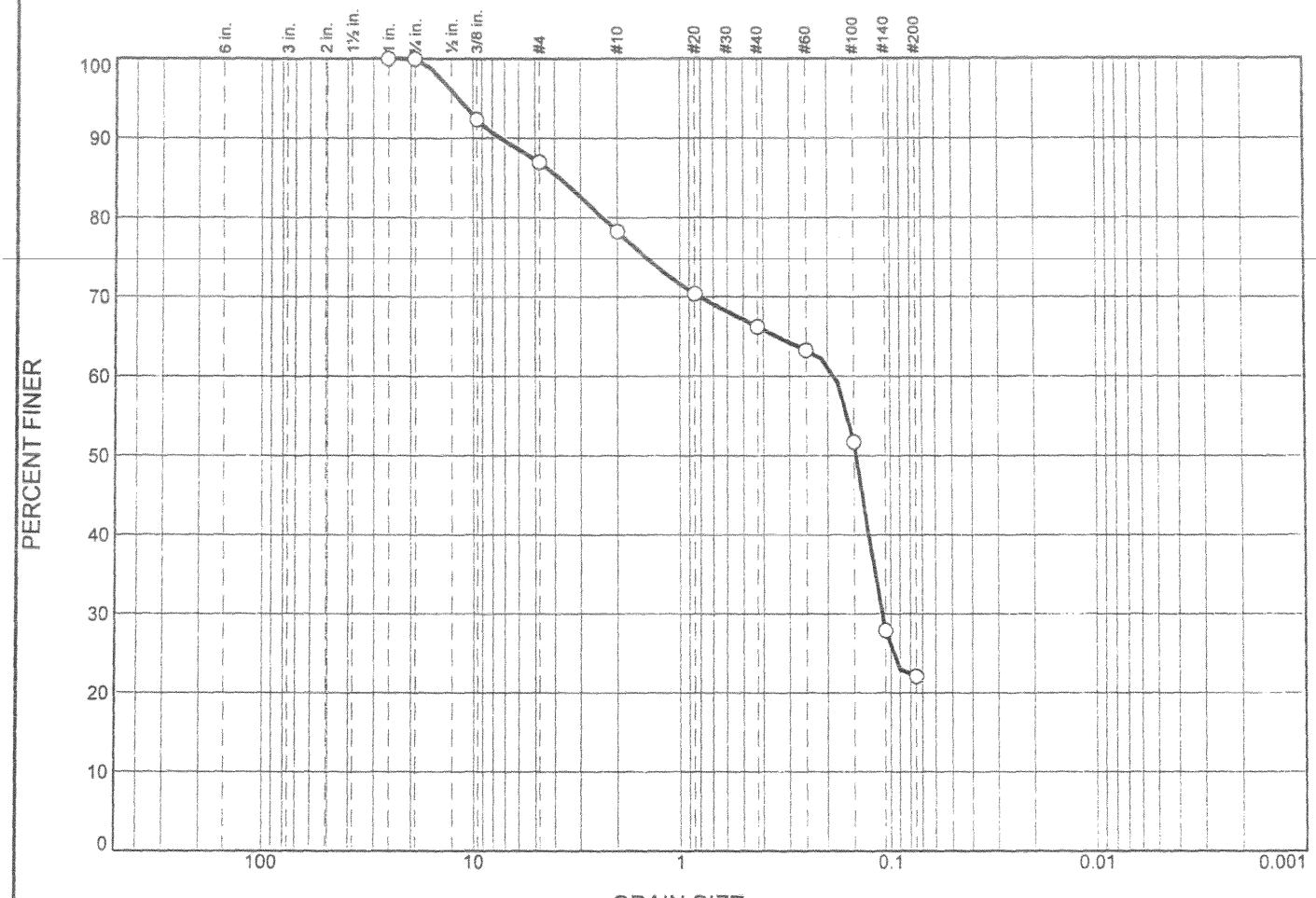
Miami Lakes, FL

Figure

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 13 | 9 | 12 | 44 | 22 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.7710 | 0.1845 | 0.1459 | 0.1102 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 175' to 180'

**Date:** ○

**Remarks:**
○ Moisture Content % 16.5 CP05-EAARS-VB-0284

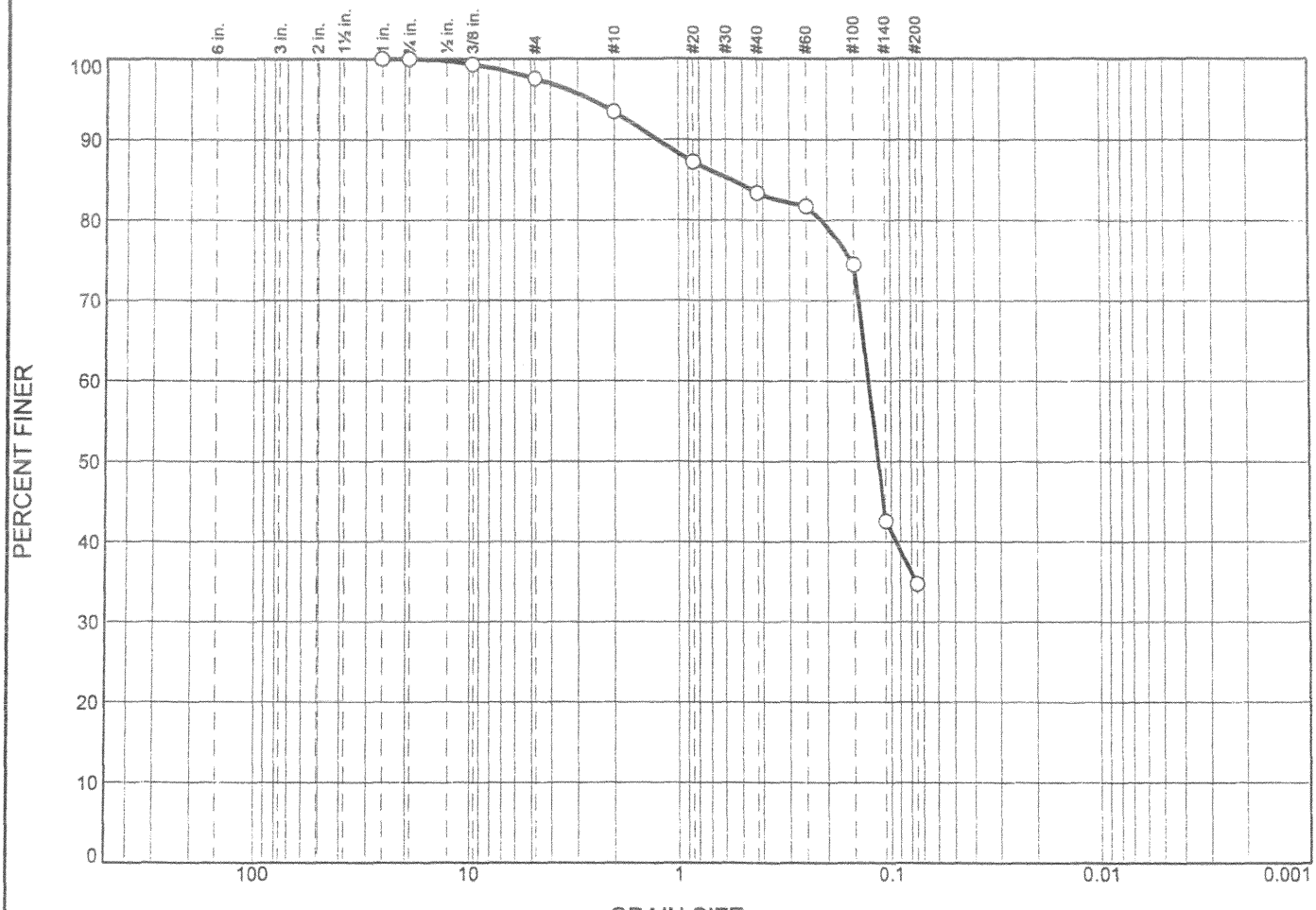
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 2 | 5 | 10 | 48 | 35 | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.5563 | 0.1281 | 0.1160 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 185' to 190'

**Date:** ○

**Remarks:**
○ Moisture Content % 14.5 CP05-EAARS-VB-0284

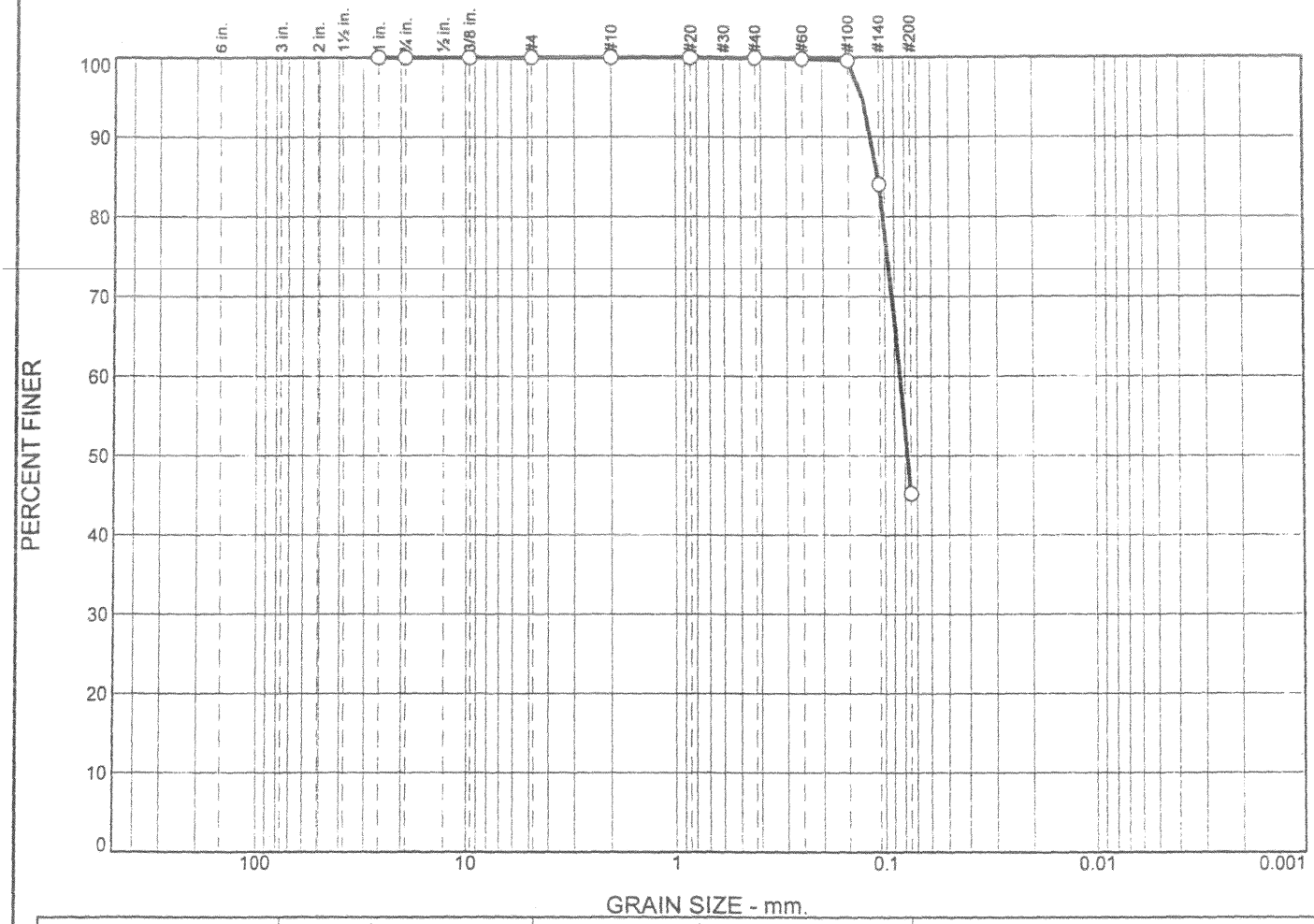
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 0 | 55 | 45 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1073 | 0.0844 | 0.0779 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silt | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 205' to 210'

**Date:** ○

**Remarks:**
○ Moisture Content % 23.1 CP05-EAARS-VB-0284

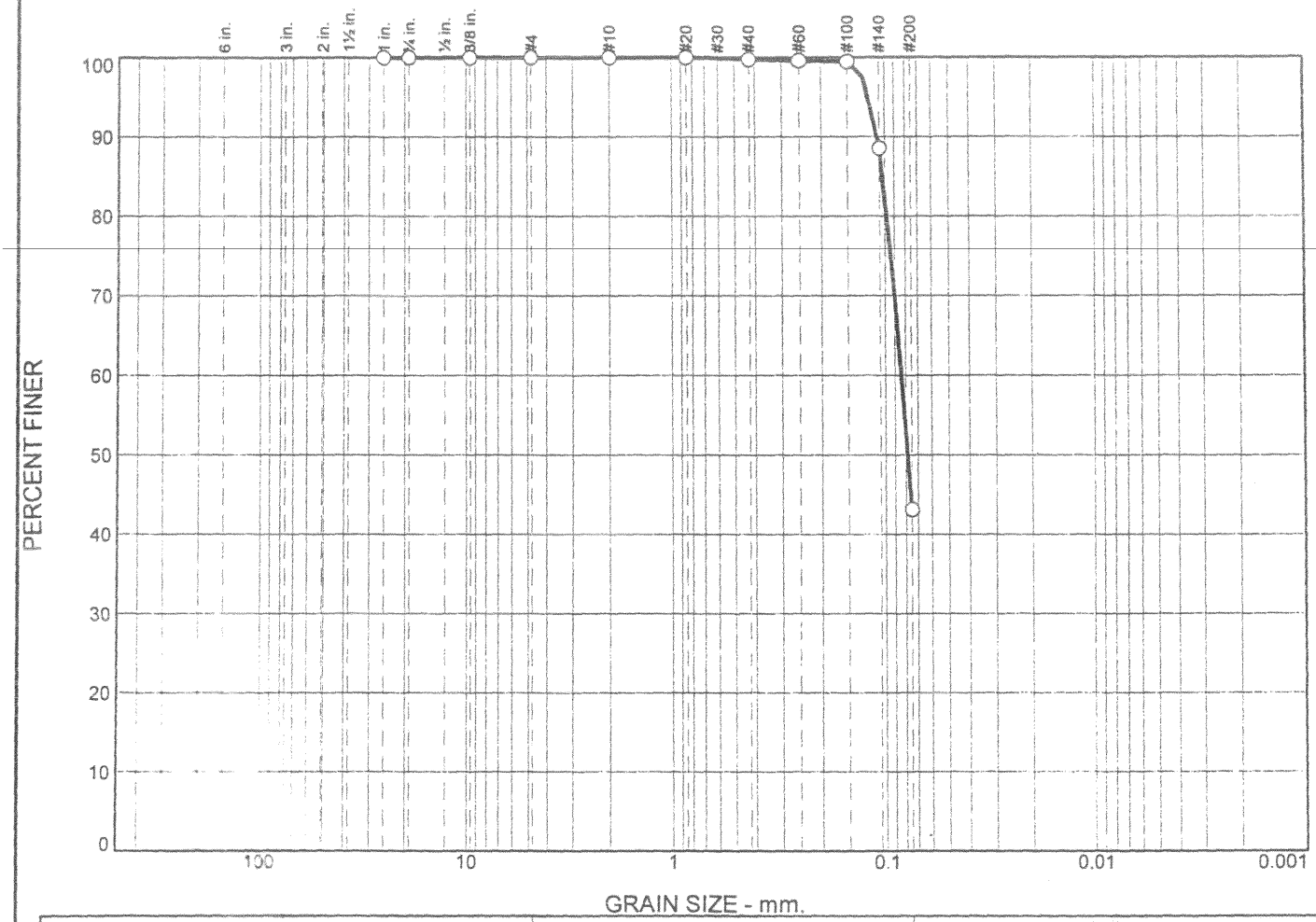
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 0 | 57 | 43 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1019 | 0.0837 | 0.0784 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silt | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 210' to 215'

**Date:** ○

**Remarks:**
○ Moisture Content % 25.7 CP05-EAARS-VB-0284

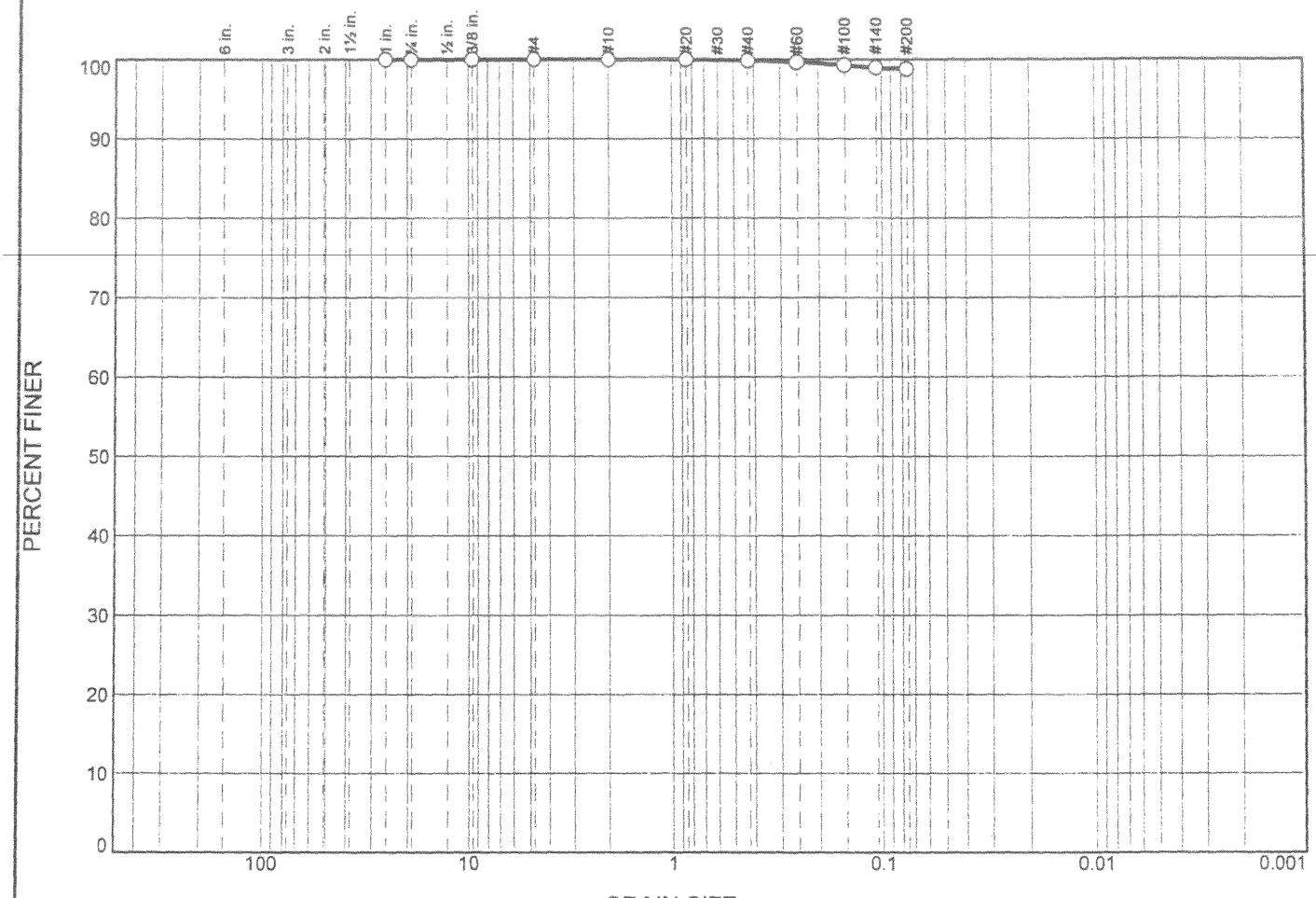
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 0 | 1 | 99 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silt | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0182 **Depth:** 225' to 230'

**Date:** ○

**Remarks:**
○ Moisture Content % 75.1 CP05-EAARS-VB-0284

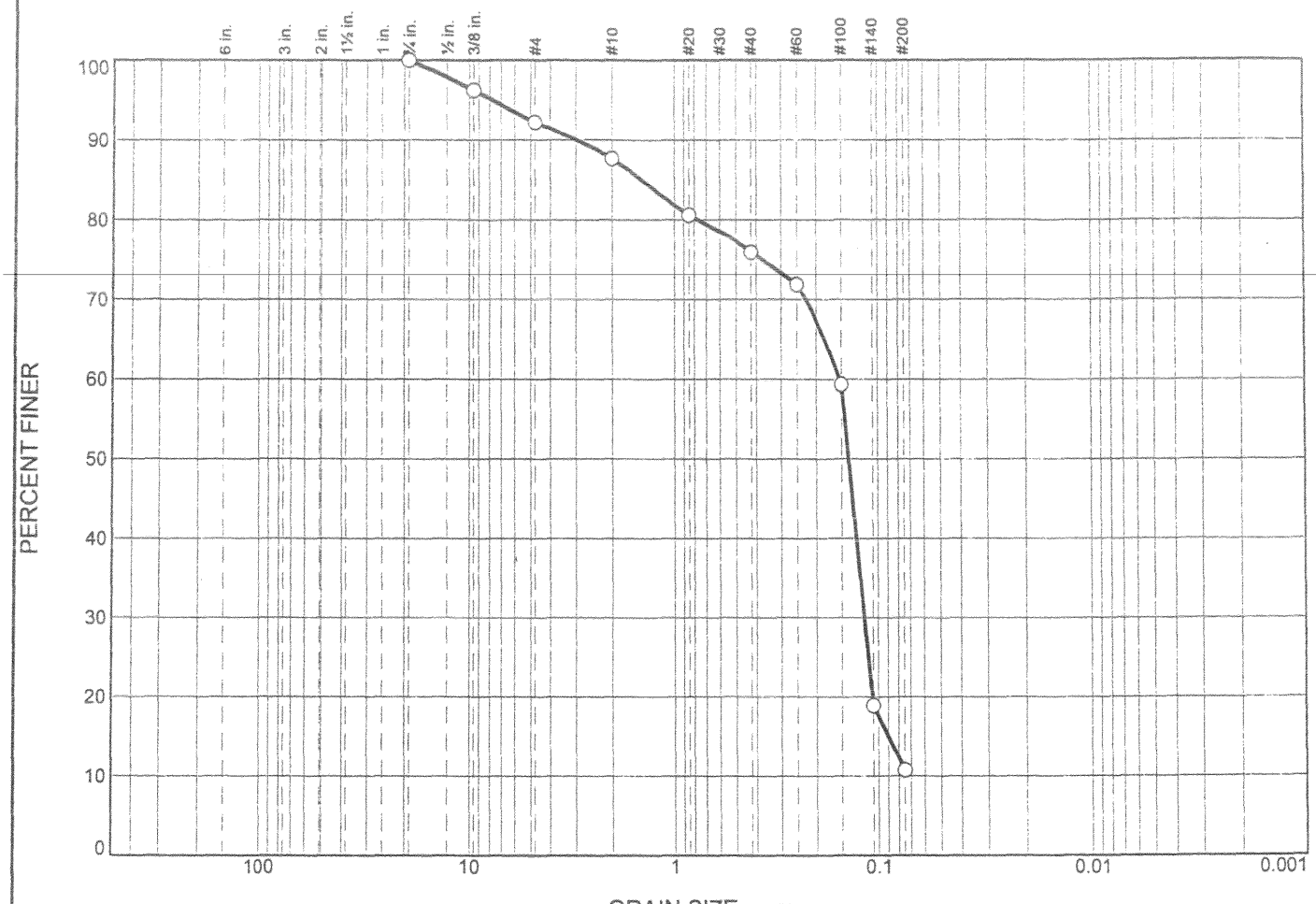
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 8 | 4 | 12 | 65 | 11 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.4423 | 0.1530 | 0.1378 | 0.1178 | 0.0898 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0190 **Depth:** 40' to 45'

**Date:** ○

**Remarks:**
○ Moisture Content % 21.5
CP05-EAARS-VB-0285

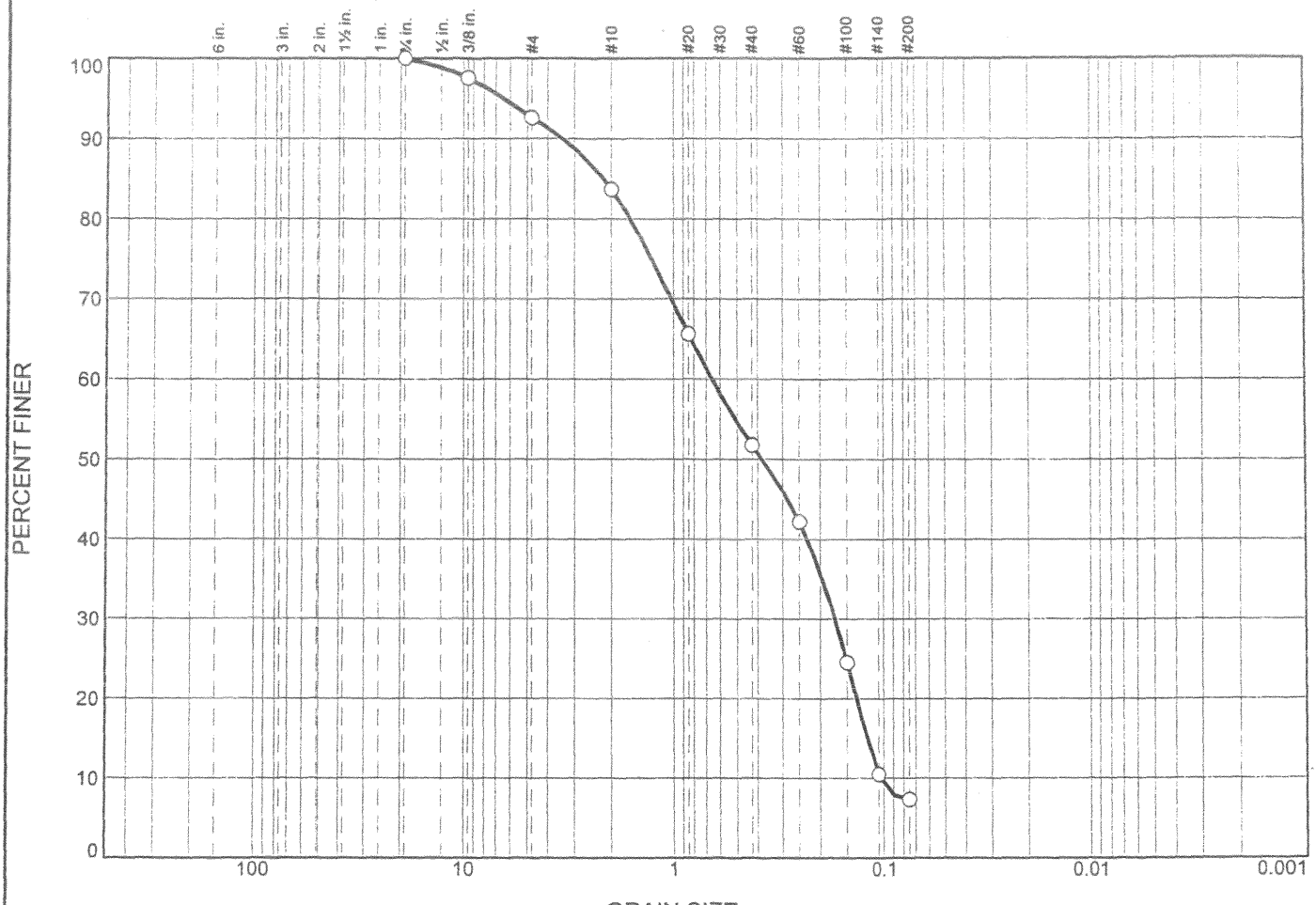
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 7 | 9 | 32 | 45 | 7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.1781 | 0.6560 | 0.3805 | 0.1708 | 0.1210 | 0.1039 | 0.43 | 6.32 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0190 **Depth:** 45' to 50'

**Date:** ○

**Remarks:**
○ Moisture Content % 18.6
CP05-EAARS-VB-0285

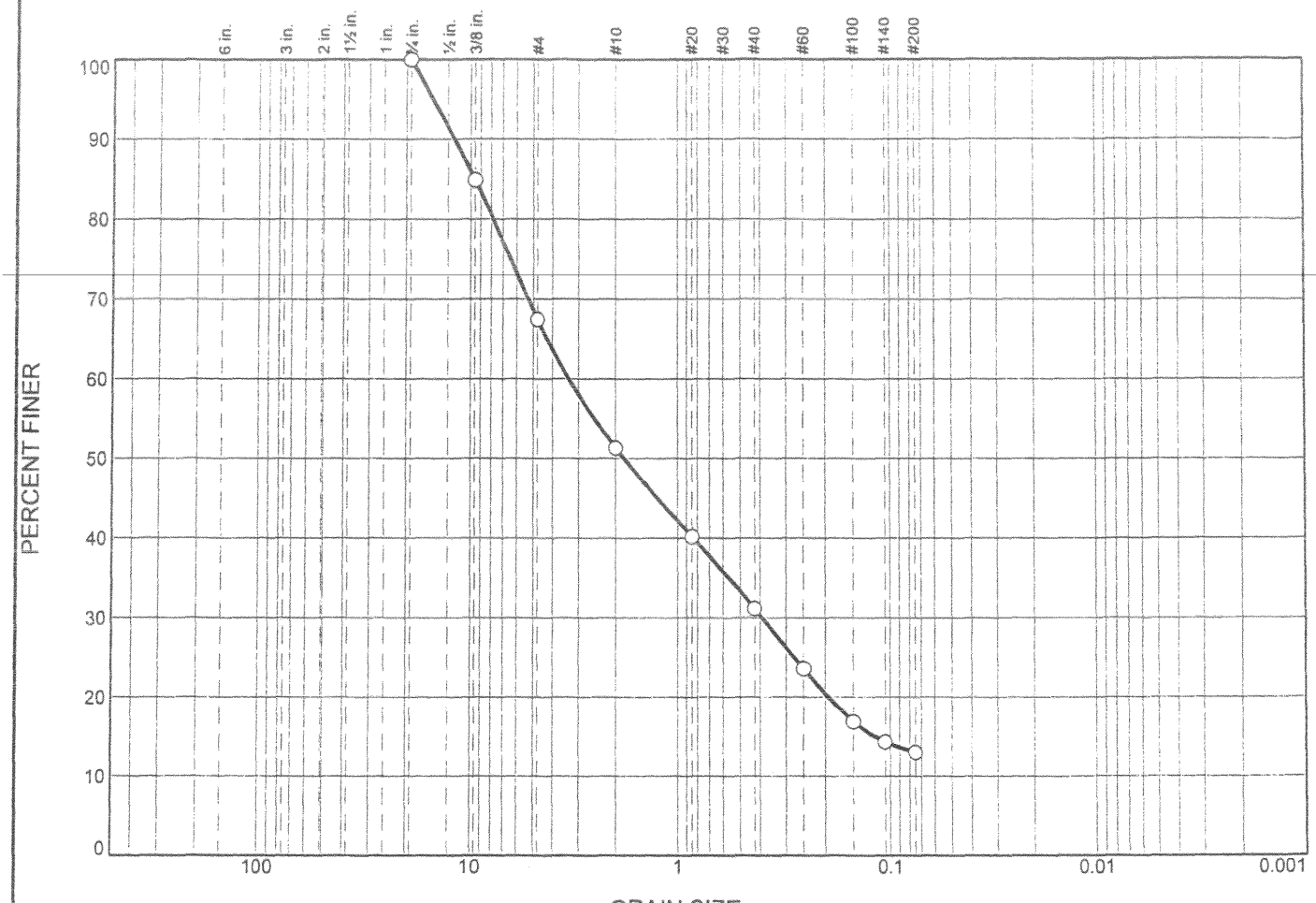
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 33 | 16 | 20 | 18 | 13 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.5740 | 3.3432 | 1.8251 | 0.3909 | 0.1189 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0190 **Depth:** 70' to 75'

**Date:** ○

**Remarks:**
○ Moisture Content % 14.8
CP05-EAARS-VB-0285

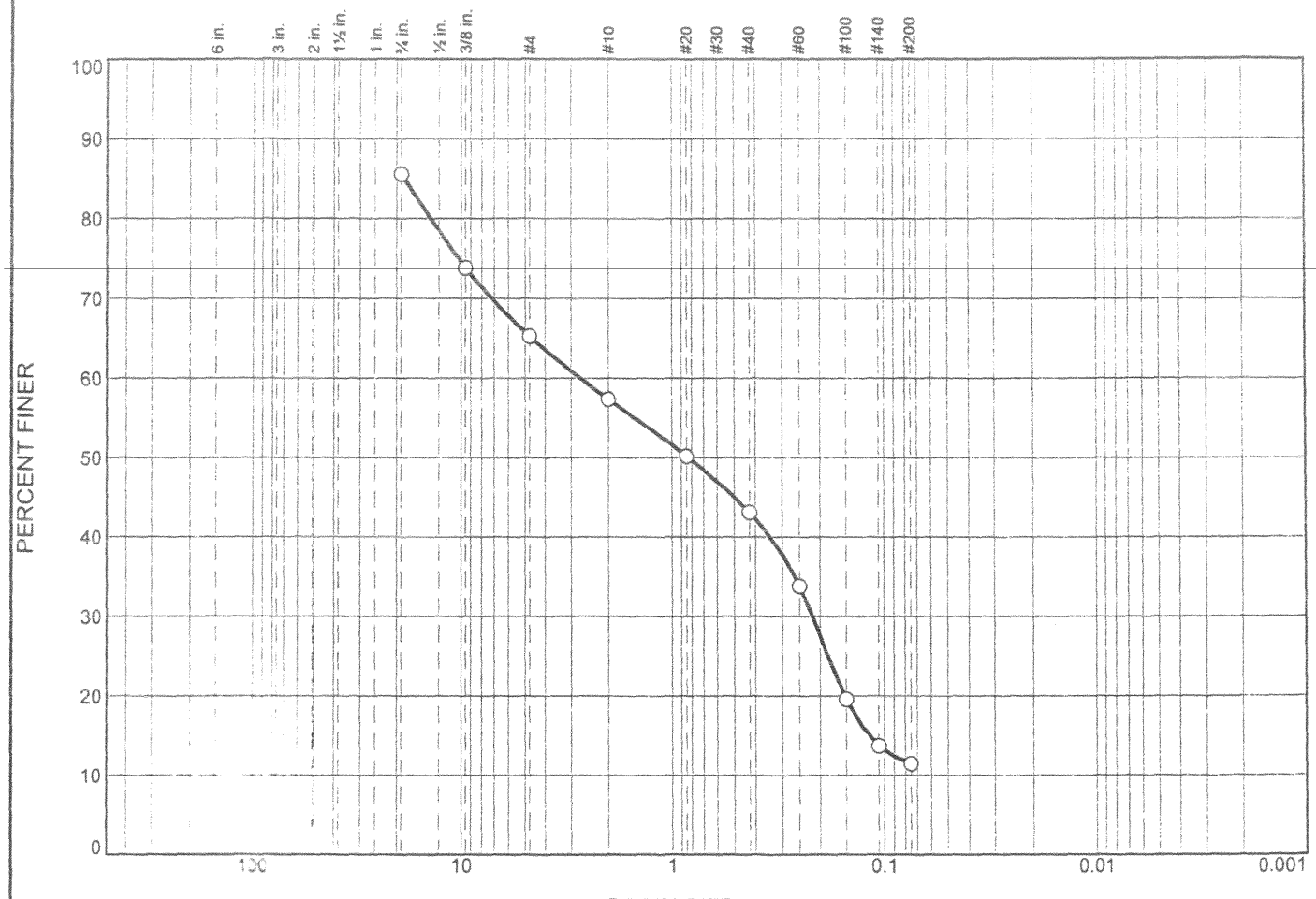
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 21 | 8 | 14 | 32 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 18.4096 | 2.7228 | 0.8308 | 0.2172 | 0.1177 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0190 **Depth:** 75' to 80'

**Date:** ○

**Remarks:**
○ Moisture Content % 17.1
CP05-EAARS-VB-0285

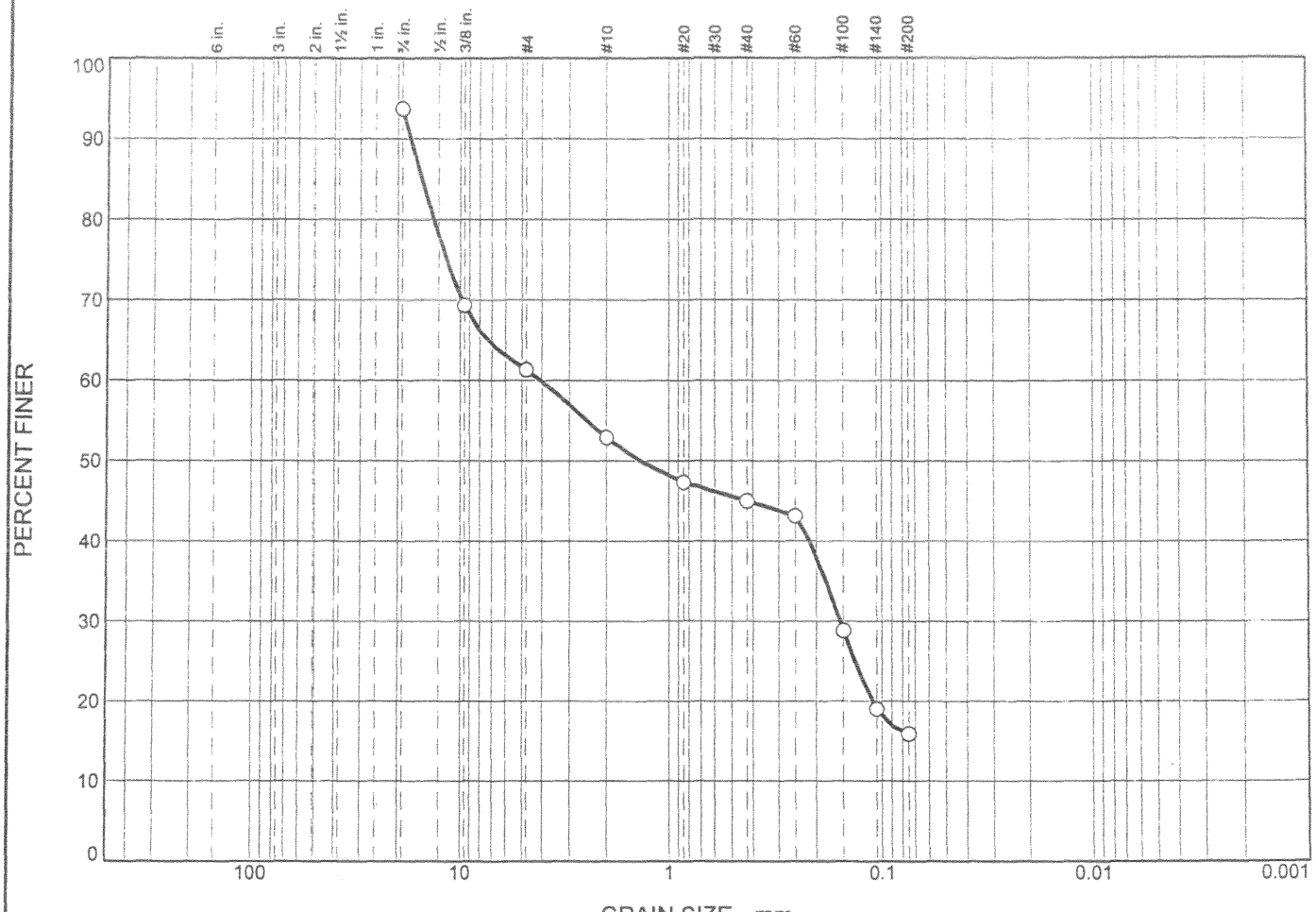
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 33 | 8 | 8 | 29 | 16 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 15.3817 | 4.0643 | 1.3624 | 0.1553 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0190 **Depth:** 110' to 115'

**Date:** ○

**Remarks:**
○ Moisture Content % 13.5
CP05-EAARS-VB-0285

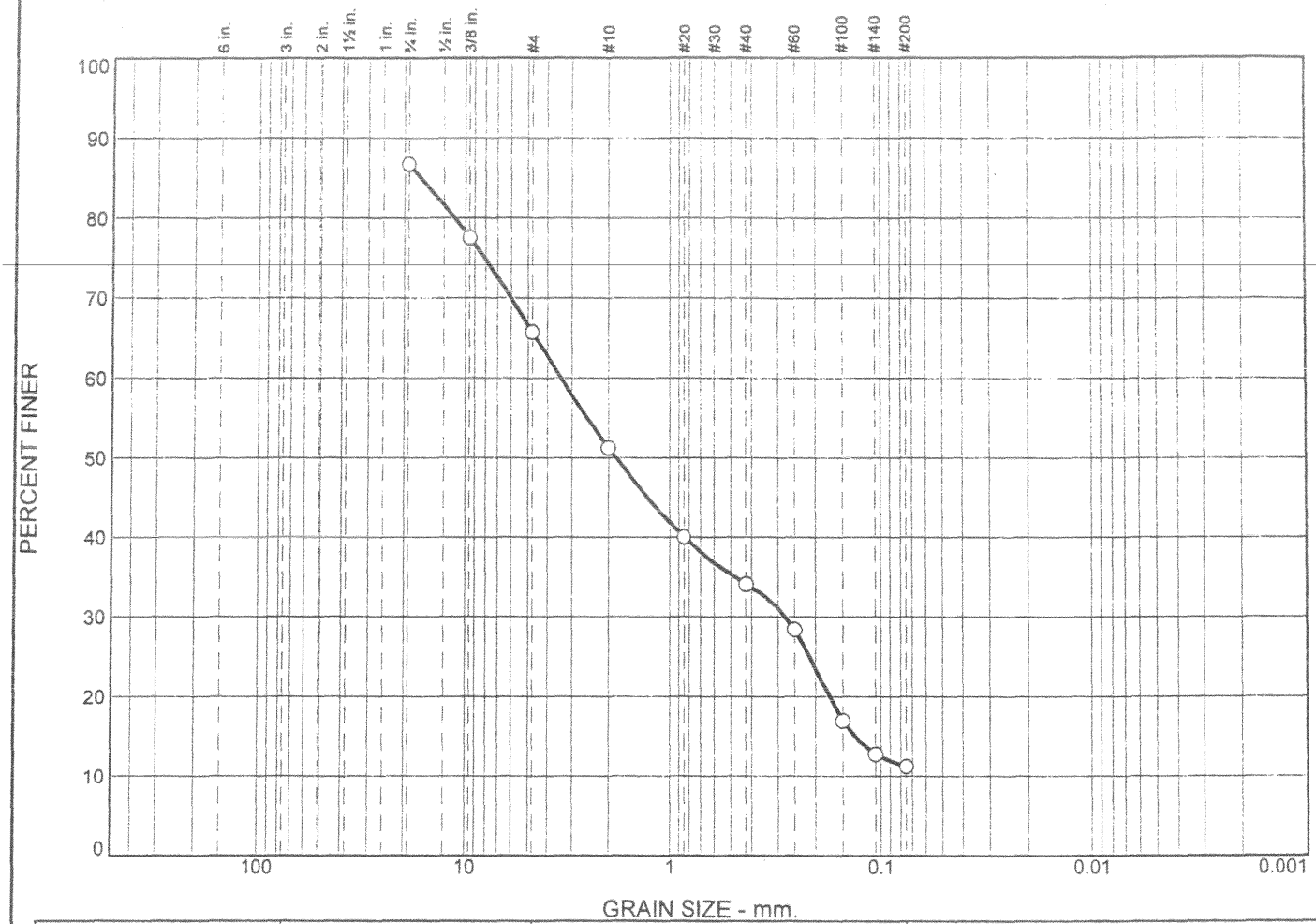
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 21 | 15 | 17 | 23 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 16.5258 | 3.4175 | 1.8409 | 0.2754 | 0.1326 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0190 **Depth:** 115' to 120'

**Date:** ○

**Remarks:**
○ Moisture Content % 11.6
CP05-EAARS-VB-0285

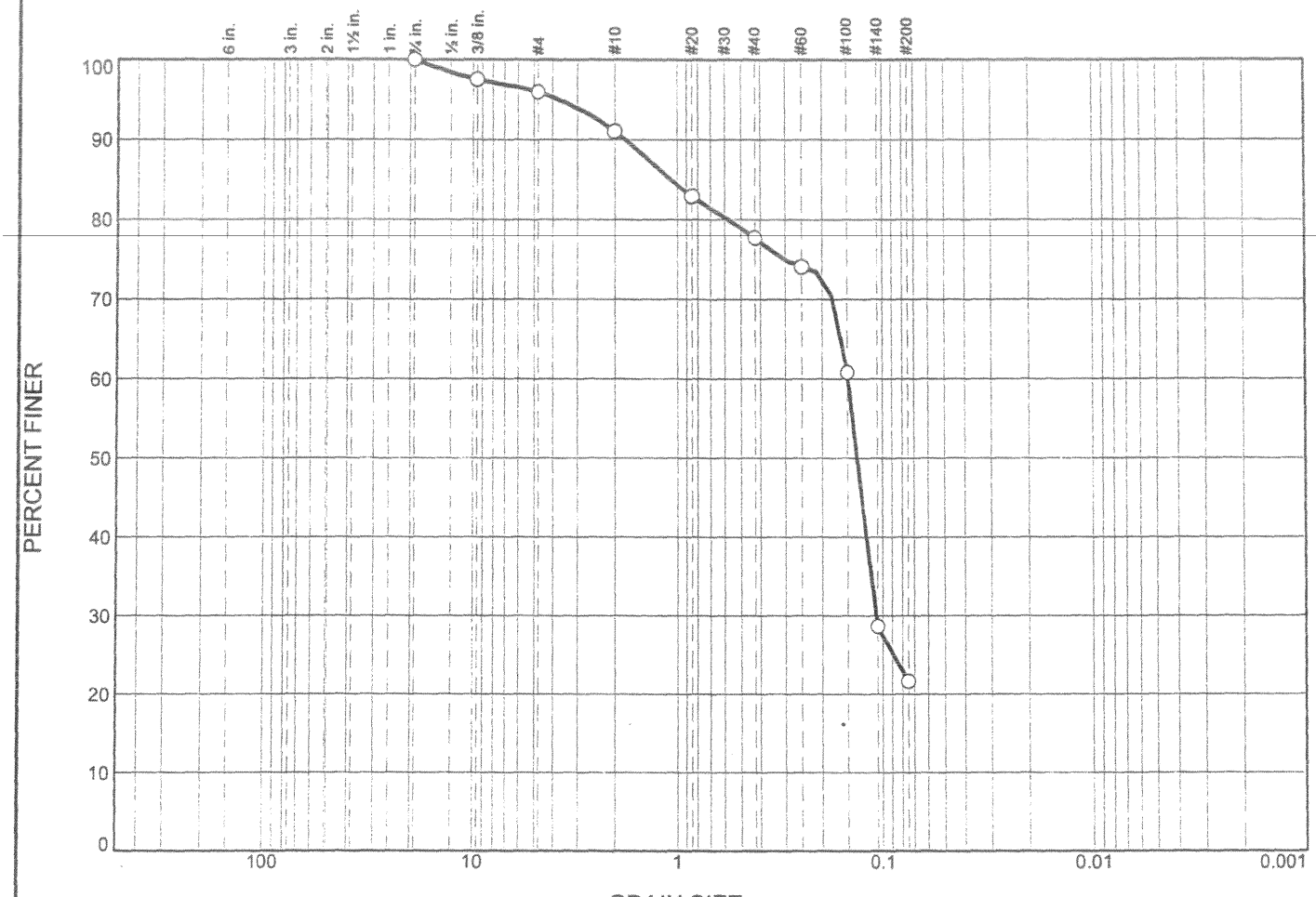
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 4.0 | 4.9 | 13.4 | 56.0 | 21.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.0644 | 0.1485 | 0.1334 | 0.1081 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB-0190 **Depth:** 150.0'-155.0' **Sample No.:** CB190

**Remarks:**

○ Moisture Content % 18.75 CP05-EAARS-VB-285

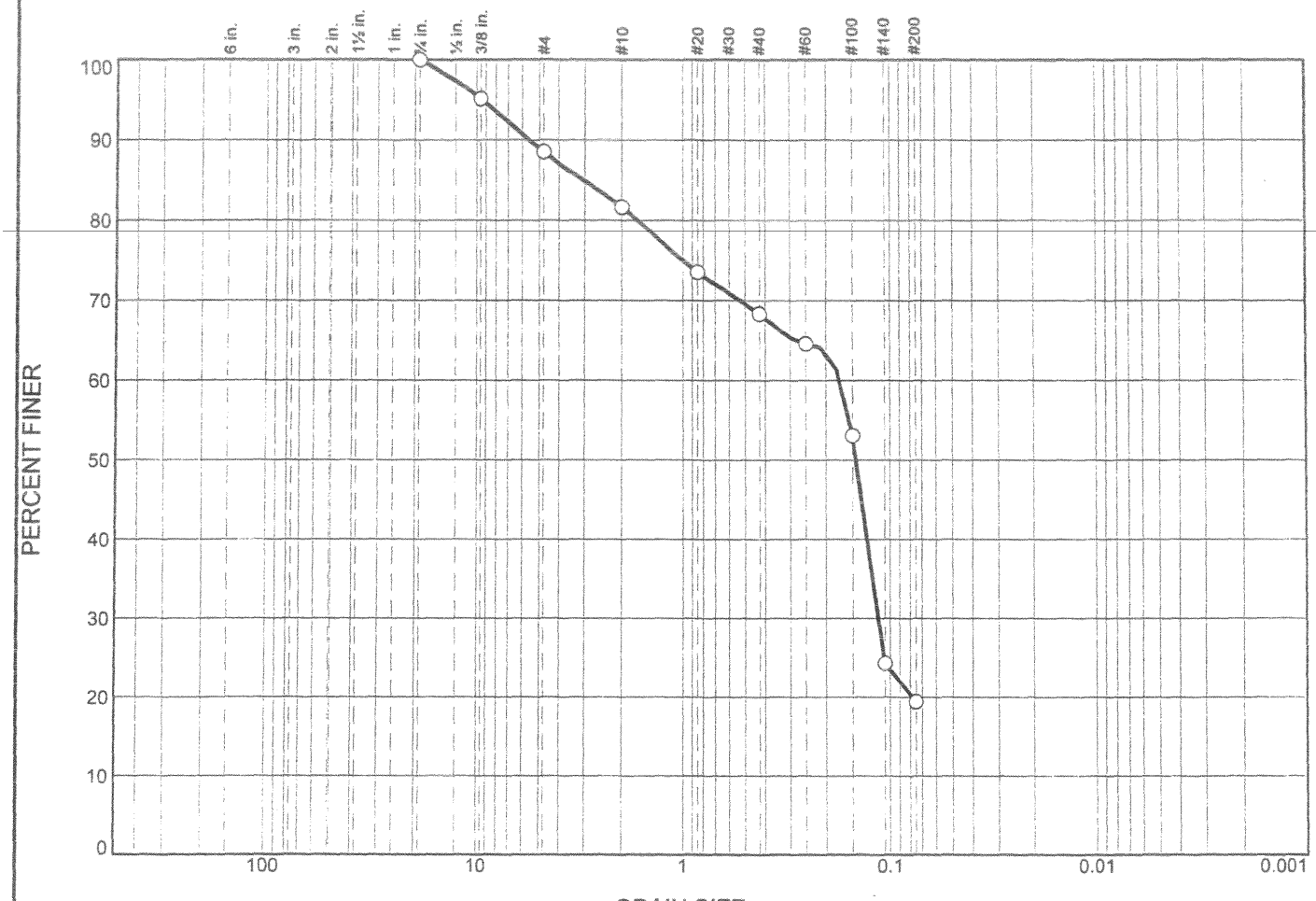
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 11.5 | 6.8 | 13.4 | 48.9 | 19.4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.0457 | 0.1711 | 0.1440 | 0.1150 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB-0190 **Depth:** 155.0'-160.0' **Sample No.:** CB190

**Remarks:**
○ Moisture Content % 18.11 CP05-EAARS-VB-285

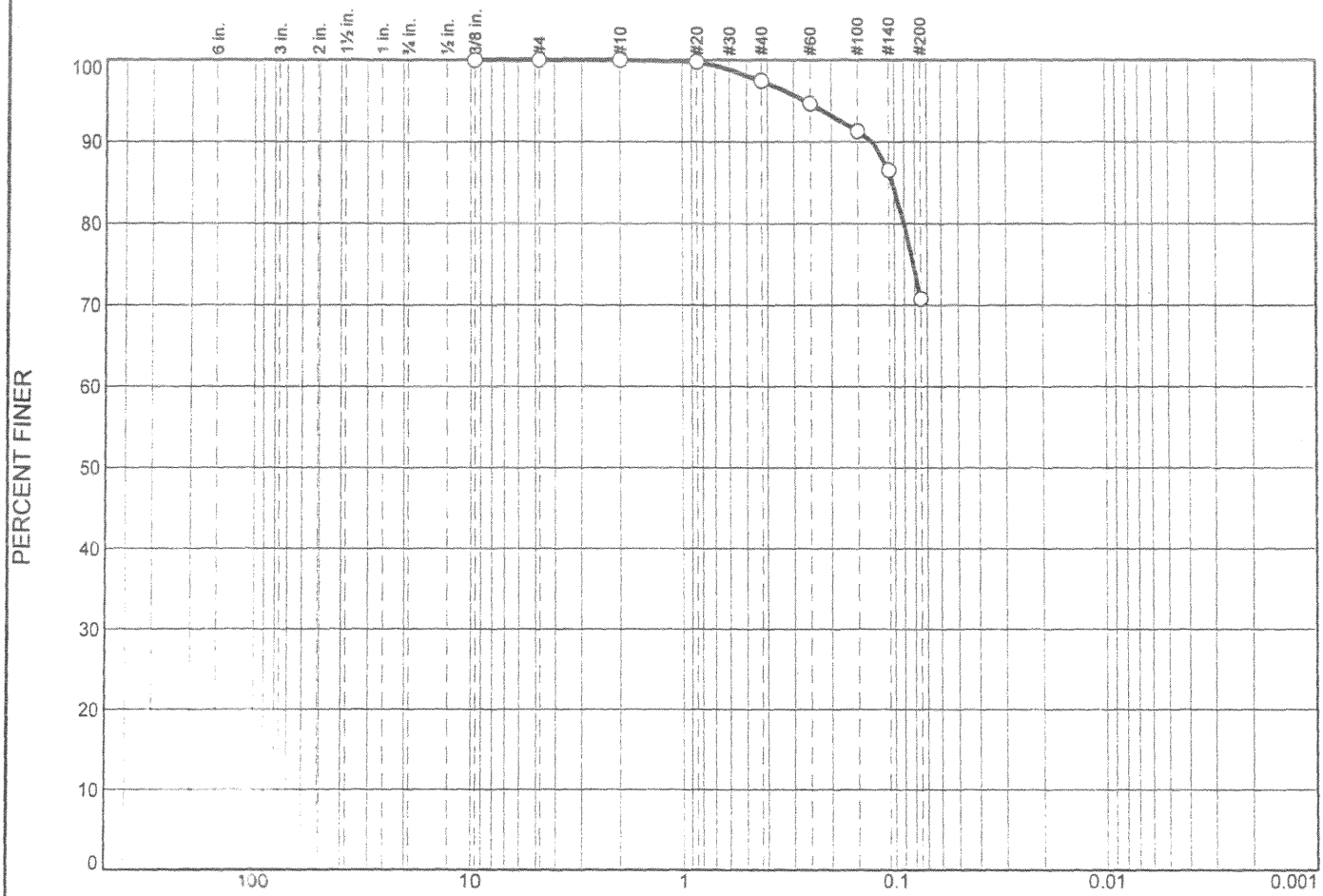
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: LMAZO Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 26.6 | 70.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1011 | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB-0190 **Depth:** 215.0'-220.0' **Sample No.:** CB190

**Remarks:**
○ Moisture Content %43.4 CPO5-EAARS-VB-0285

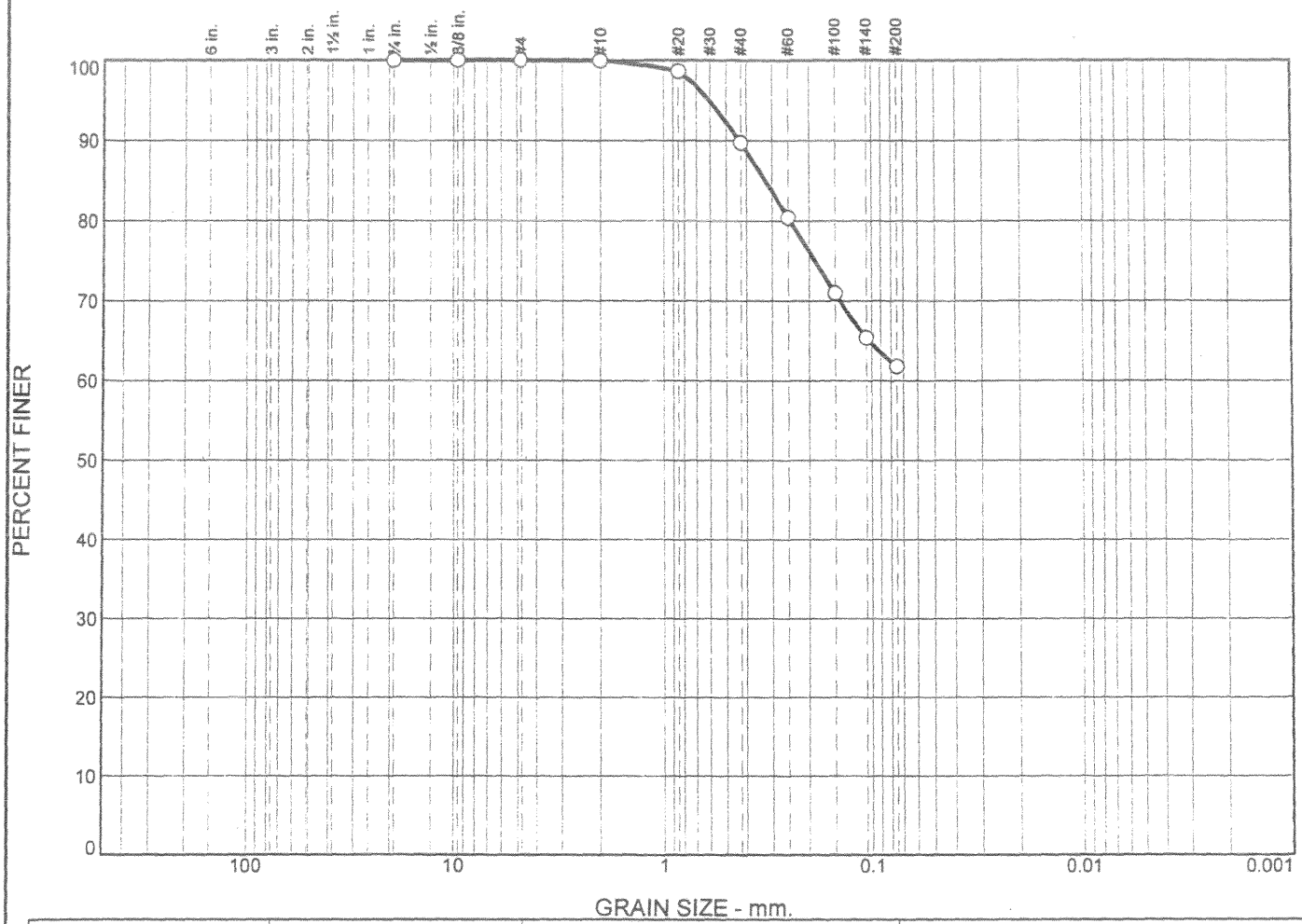
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: J MAZO **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.0 | 10.2 | 28.0 | 61.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.3214 | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB-0190 **Depth:** 220.0'-225.0' **Sample No.:** CB190

**Remarks:**

○ Moisture Content % 88.1 CP05-EAARS-VB-285

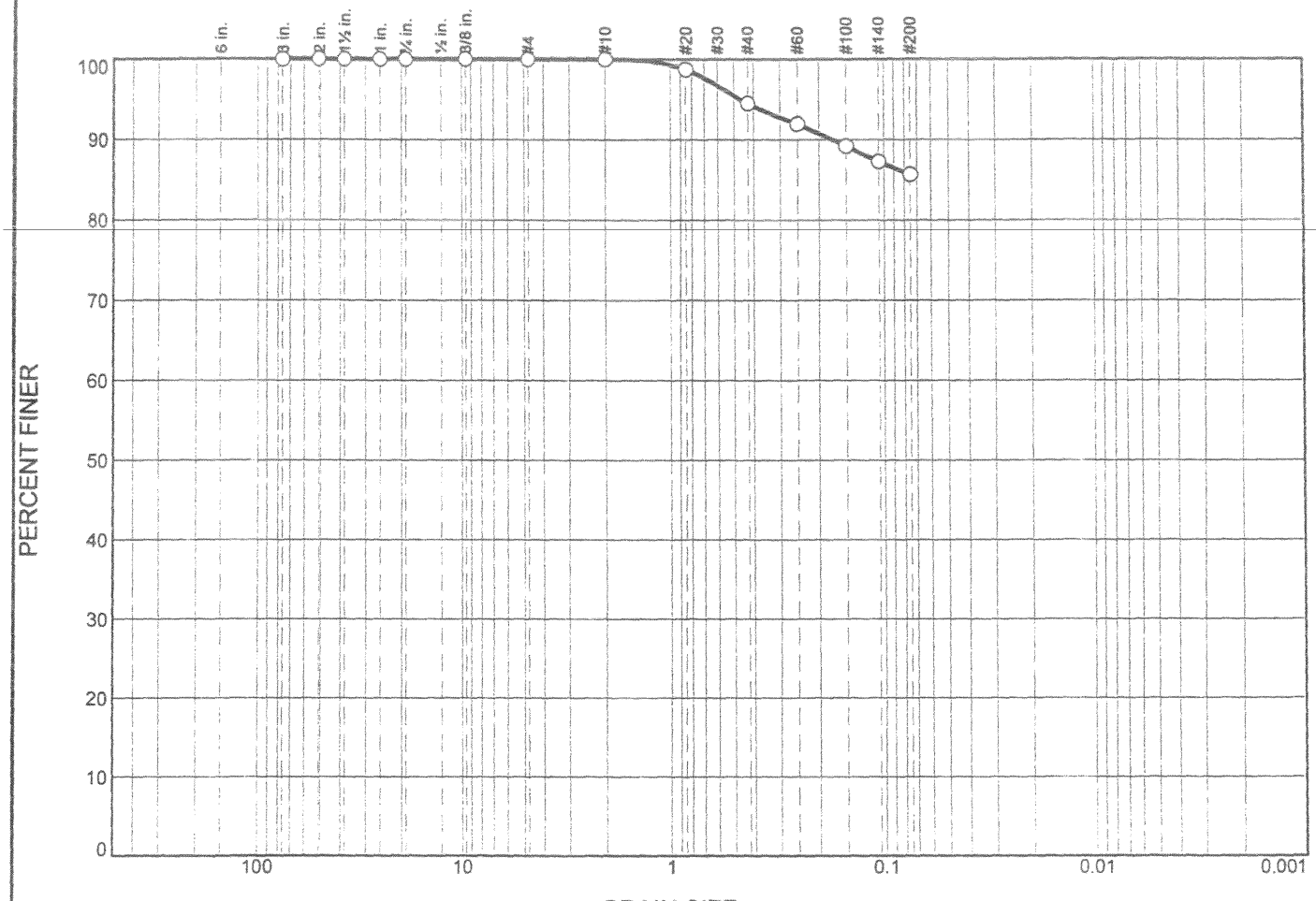
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: J. MAZO **Checked By:** Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 8.8 | 85.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | 127 | 66 | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB-0190 **Depth:** 225'-230' **Sample Number:** CB190

**Remarks:**

○ Moisture Content % 148.3 CP05-EAARS-VB0285

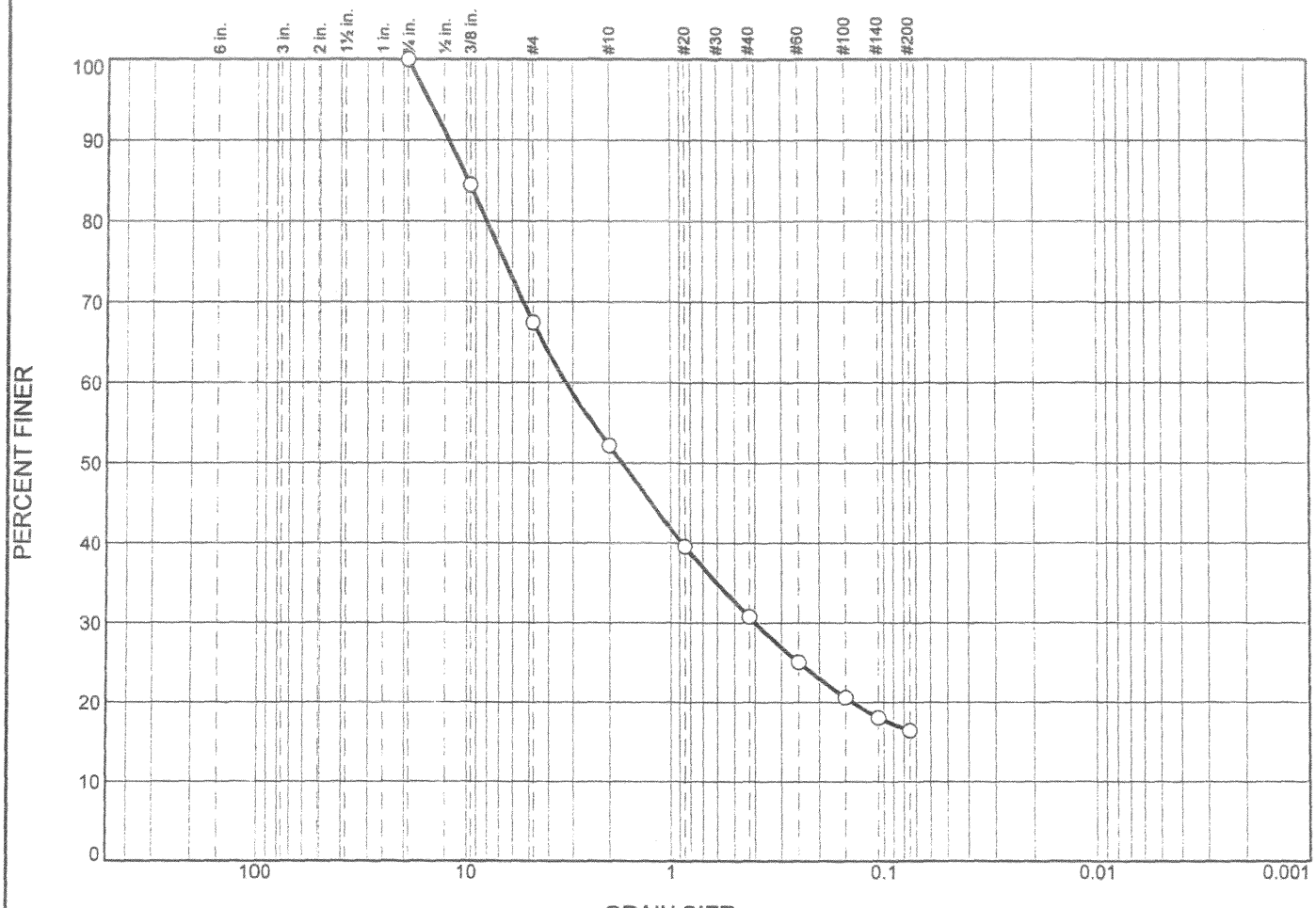
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: Michael Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 32.5 | 15.3 | 21.4 | 14.4 | 16.4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.7174 | 3.2447 | 1.7354 | 0.3970 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 5.0'-10.0' **Sample Number:** CB205

**Remarks:**
○ Moisture Content %13.5 CP05-EAARS-VB-0286

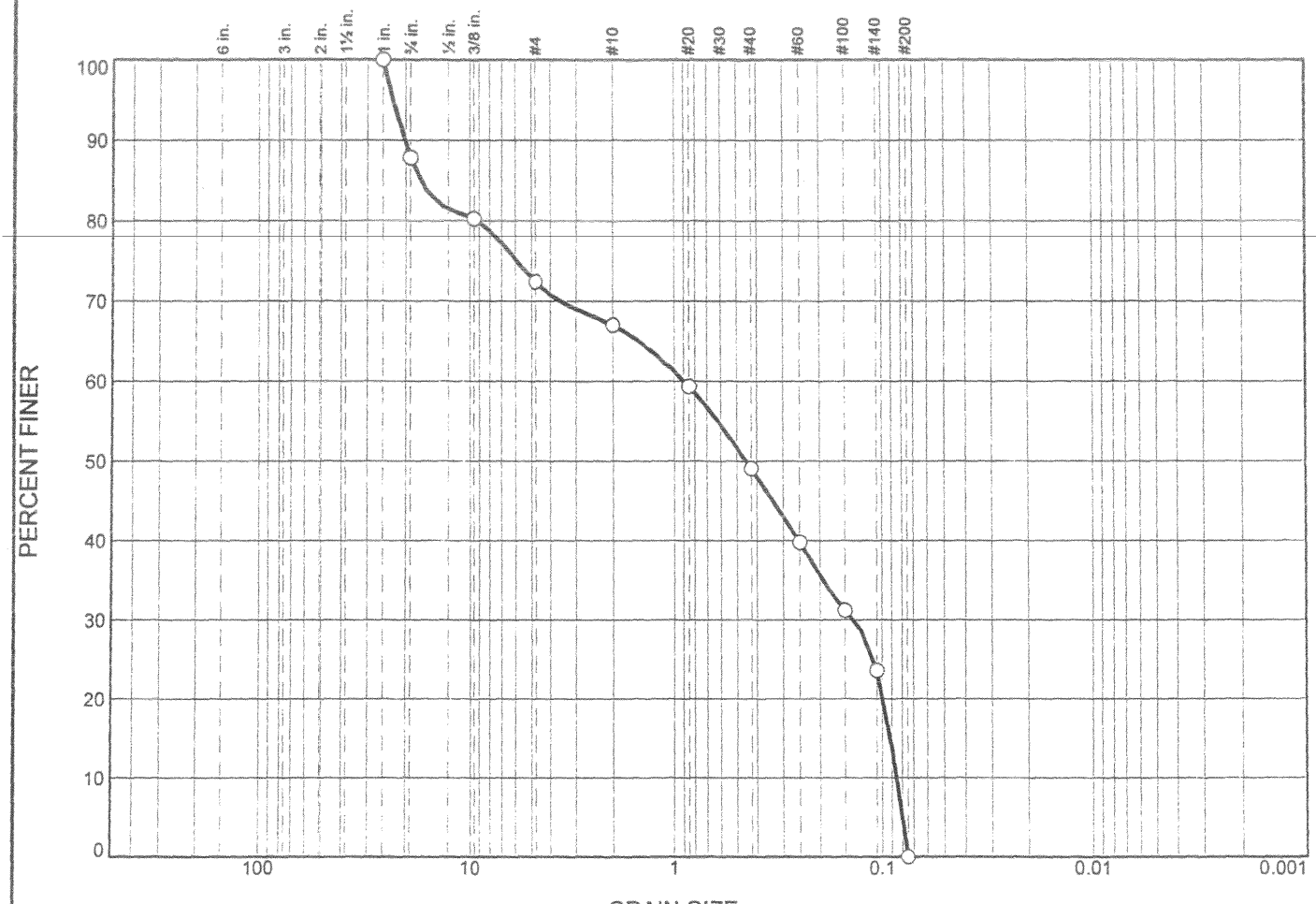
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Belooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 12.2 | 15.4 | 5.4 | 17.9 | 49.1 | 0.0 | 0.0 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.1241 | 0.8955 | 0.4494 | 0.1364 | 0.0913 | 0.0852 | 0.24 | 10.51 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 15.0'-20.0' **Sample Number:** CB205

**Remarks:**
○ Moisture Content % 18.1 CP05-EAARS-VB-0286

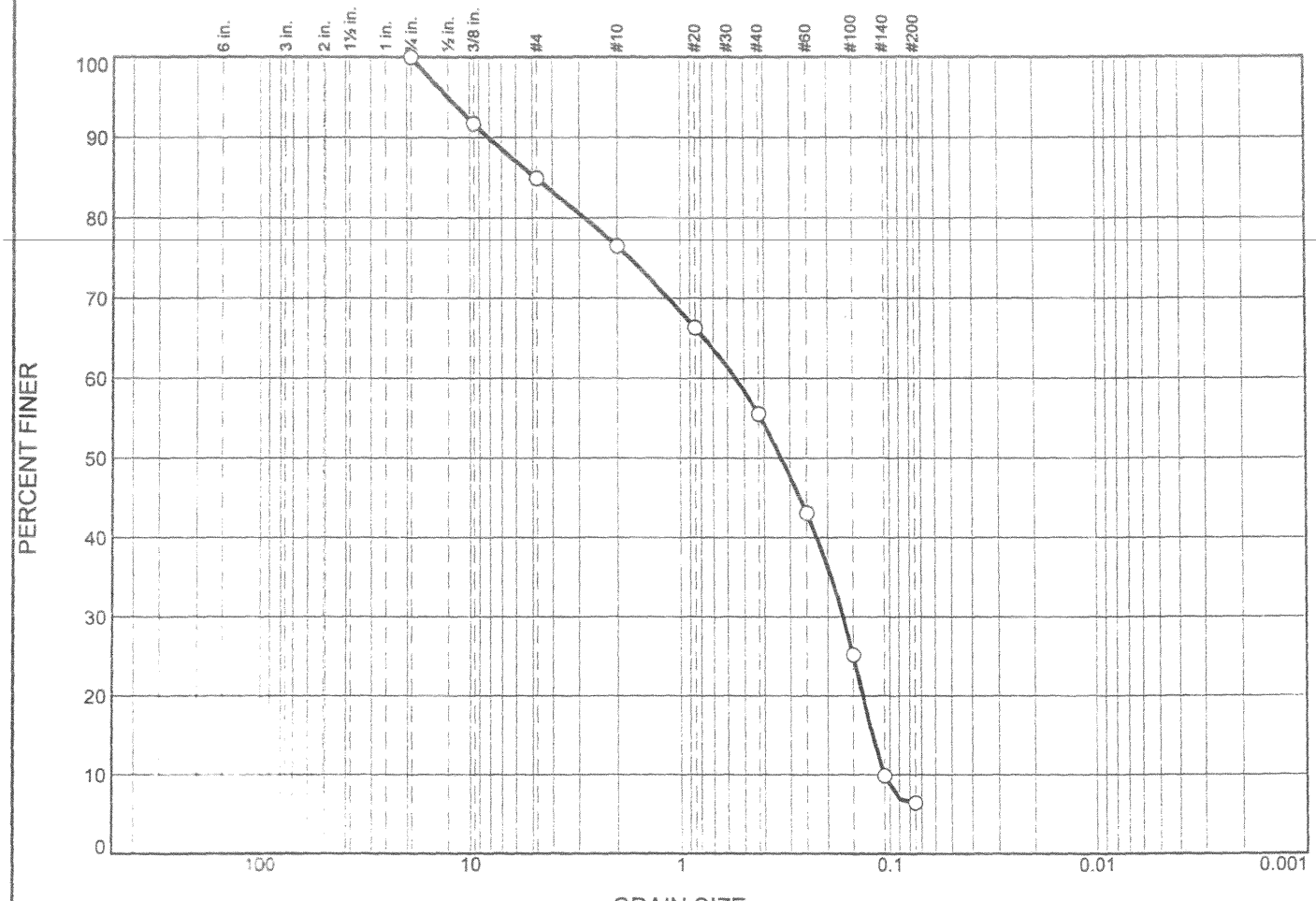
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 15.1 | 8.4 | 21.0 | 49.1 | 6.4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.7979 | 0.5468 | 0.3284 | 0.1675 | 0.1215 | 0.1066 | 0.48 | 5.13 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 30.0'-35.0 **Sample Number:** CB205

**Remarks:**

○ Moisture Content % 16.2 CP05-EAARS-VB-0286

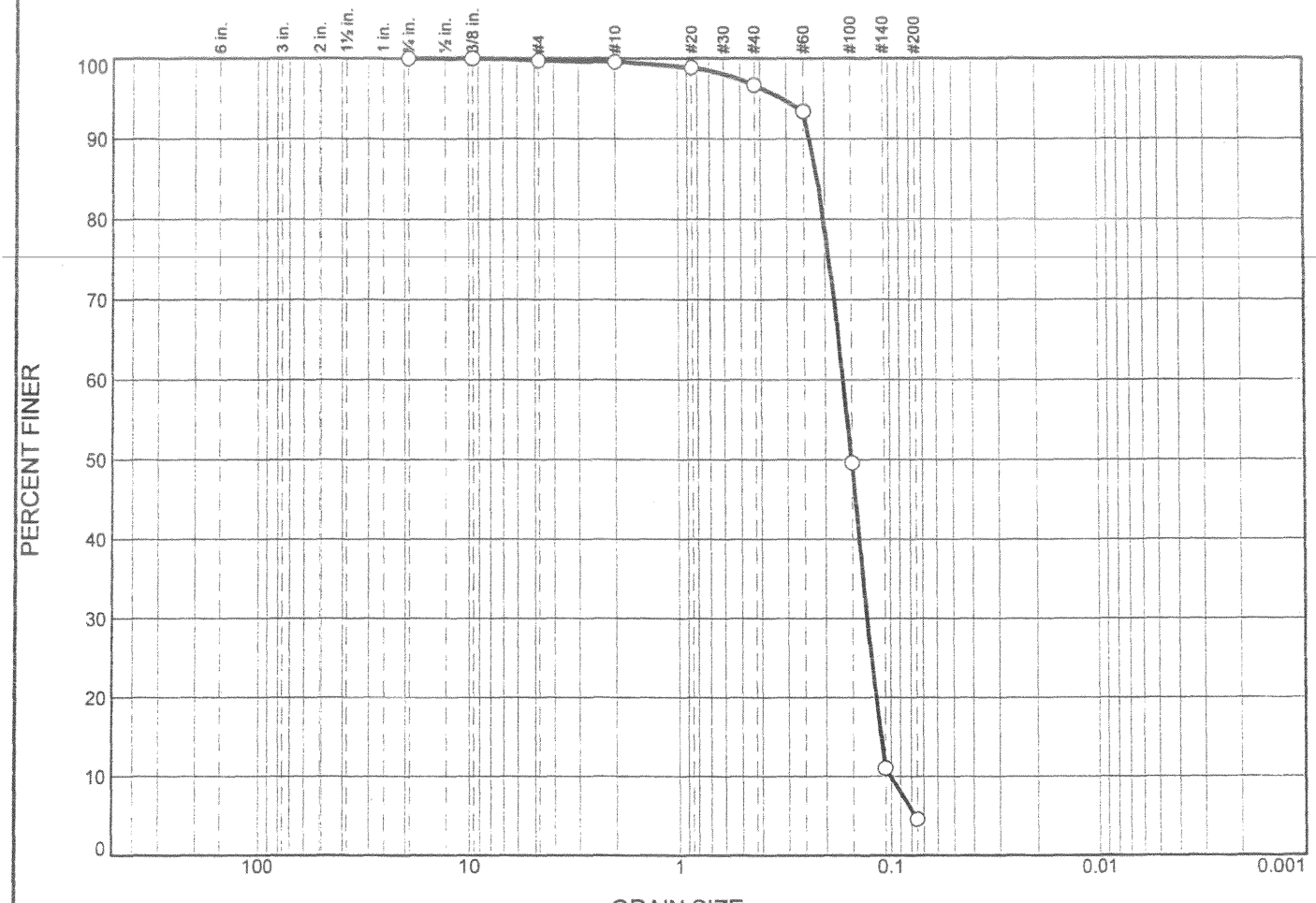
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Rolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.3 | 0.1 | 2.9 | 92.1 | 4.6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2147 | 0.1638 | 0.1504 | 0.1282 | 0.1115 | 0.1002 | 1.00 | 1.64 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 35.0'-40.0' **Sample Number:** CB205

**Remarks:**

○ Moisture Content % 23.8 CP05-EAARS-VB-0286

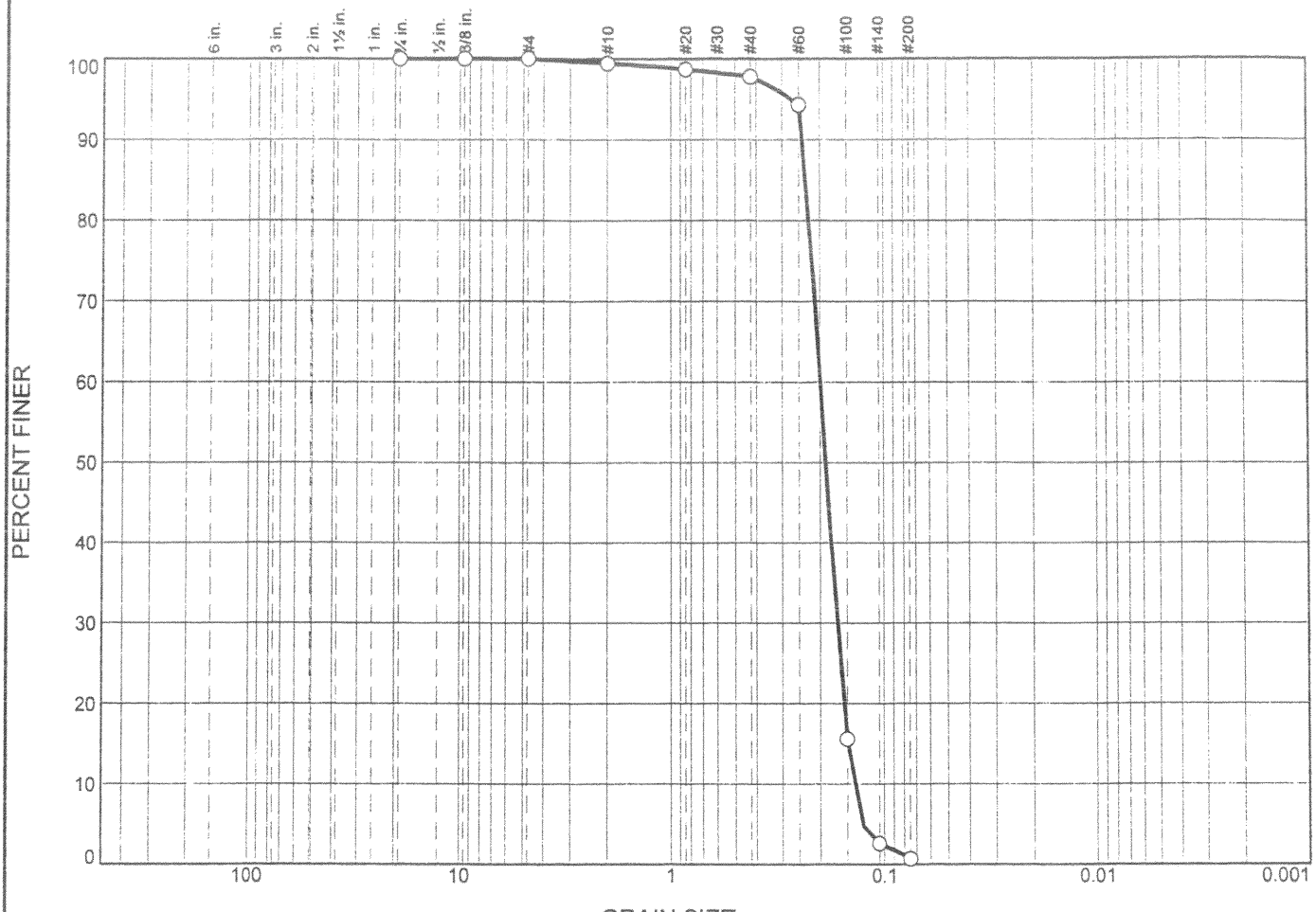
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 1 | 1 | 97 | 1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2317 | 0.1989 | 0.1881 | 0.1672 | 0.1492 | 0.1407 | 1.00 | 1.41 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0205 **Depth:** 40' to 45'

**Date:** ○

**Remarks:**
○ Moisture Content % 25.2
CP05-EAARS-VB-0286

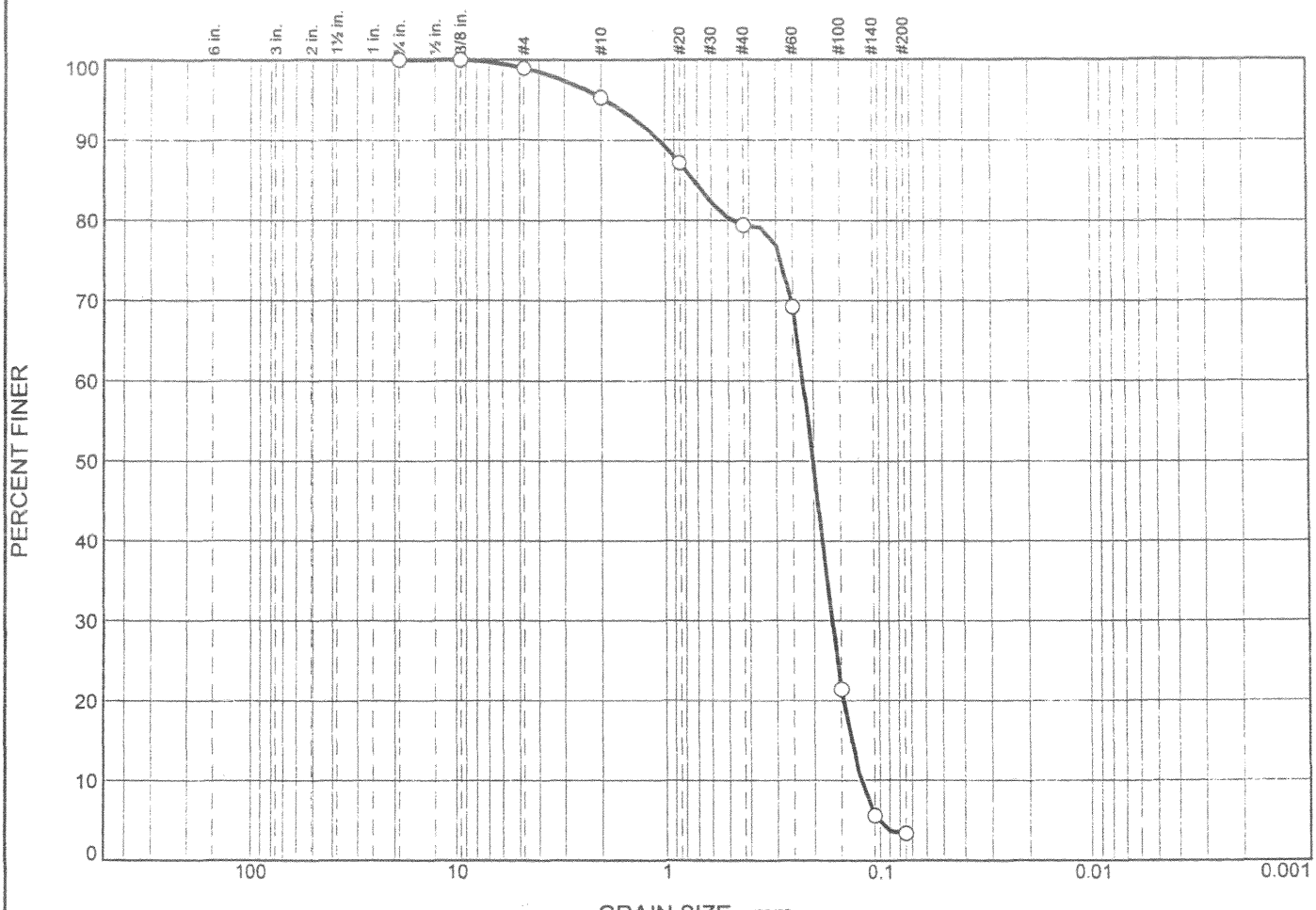
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 1 | 4 | 16 | 76 | 3 | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.7273 | 0.2225 | 0.2009 | 0.1653 | 0.1365 | 0.1232 | 1.00 | 1.81 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0205 **Depth:** 45' to 50'

**Date:** ○

**Remarks:**
○ Moisture Content % 22.5
CP05-EAARS-VB-0286

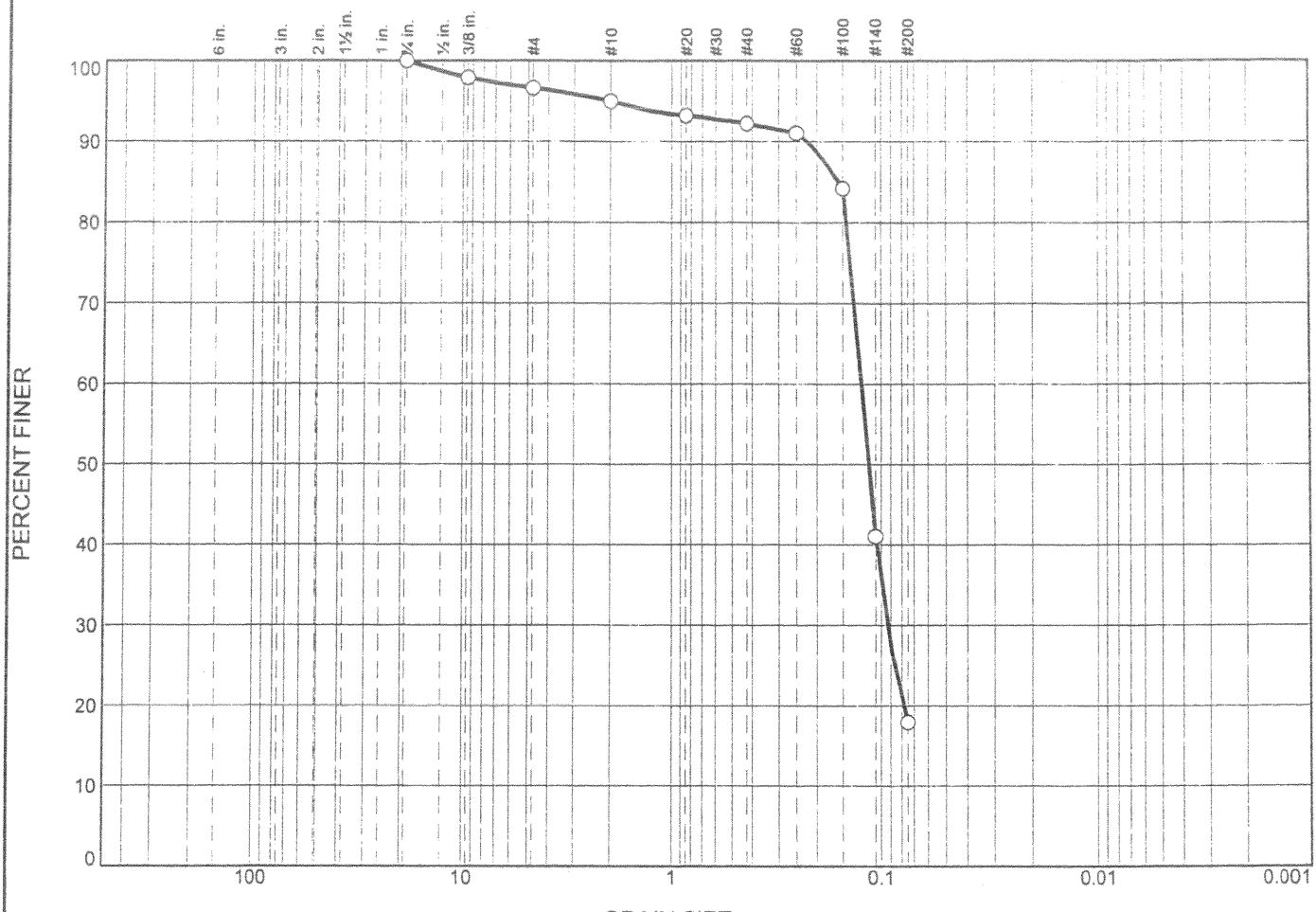
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 3 | 2 | 3 | 74 | 18 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1566 | 0.1229 | 0.1141 | 0.0937 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0205 **Depth:** 50' to 55'

**Date:** ○

**Remarks:**
○ Moisture Content % 27.7
CP05-EAARS-VB-0286

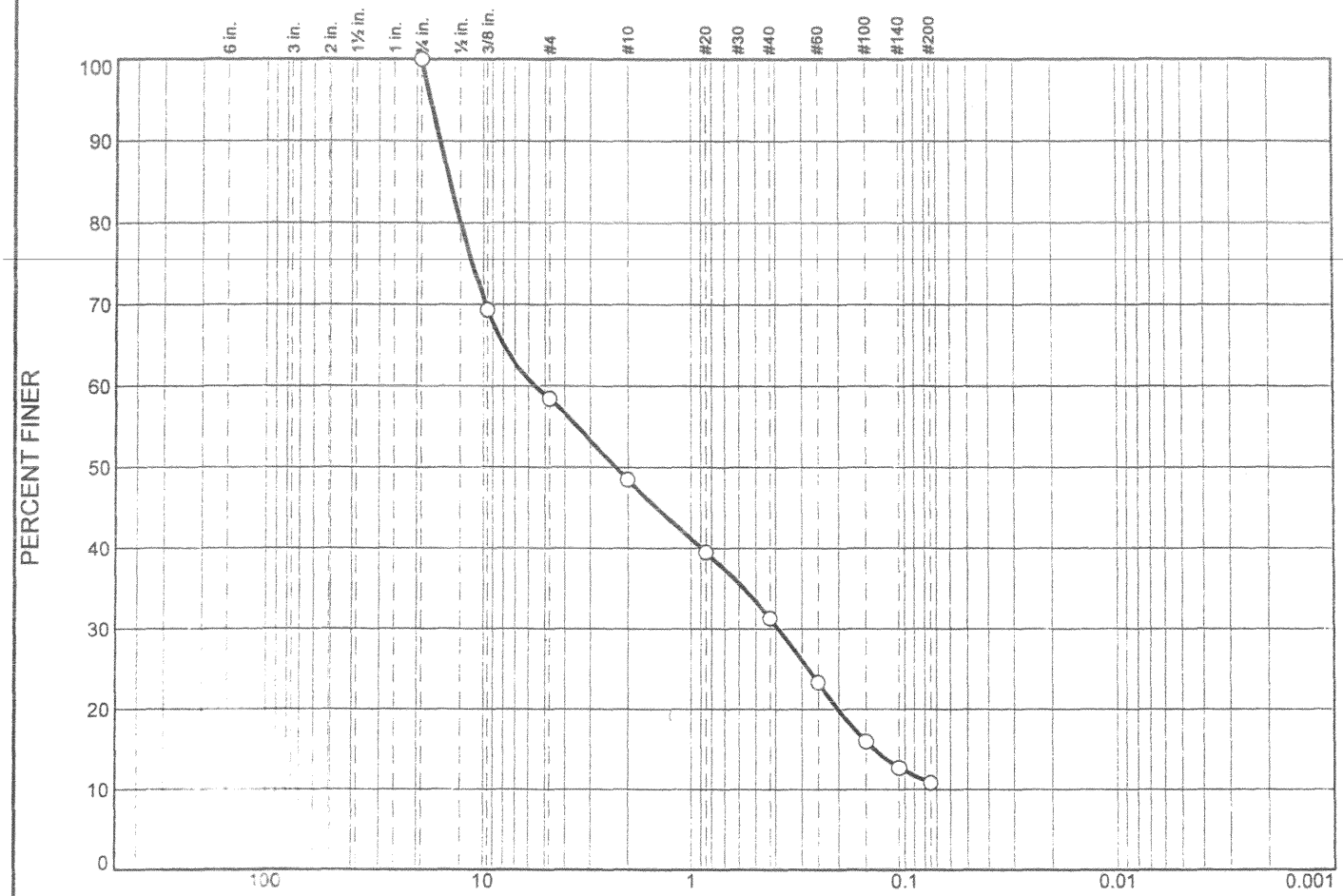
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 41.5 | 10.0 | 17.2 | 20.5 | 10.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.1250 | 5.5497 | 2.2752 | 0.3869 | 0.1374 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 60.0'-65.0' **Sample Number:** CB205

**Remarks:**

○ Moisture Content % 14.2 CP05-EAARS-VB-0286

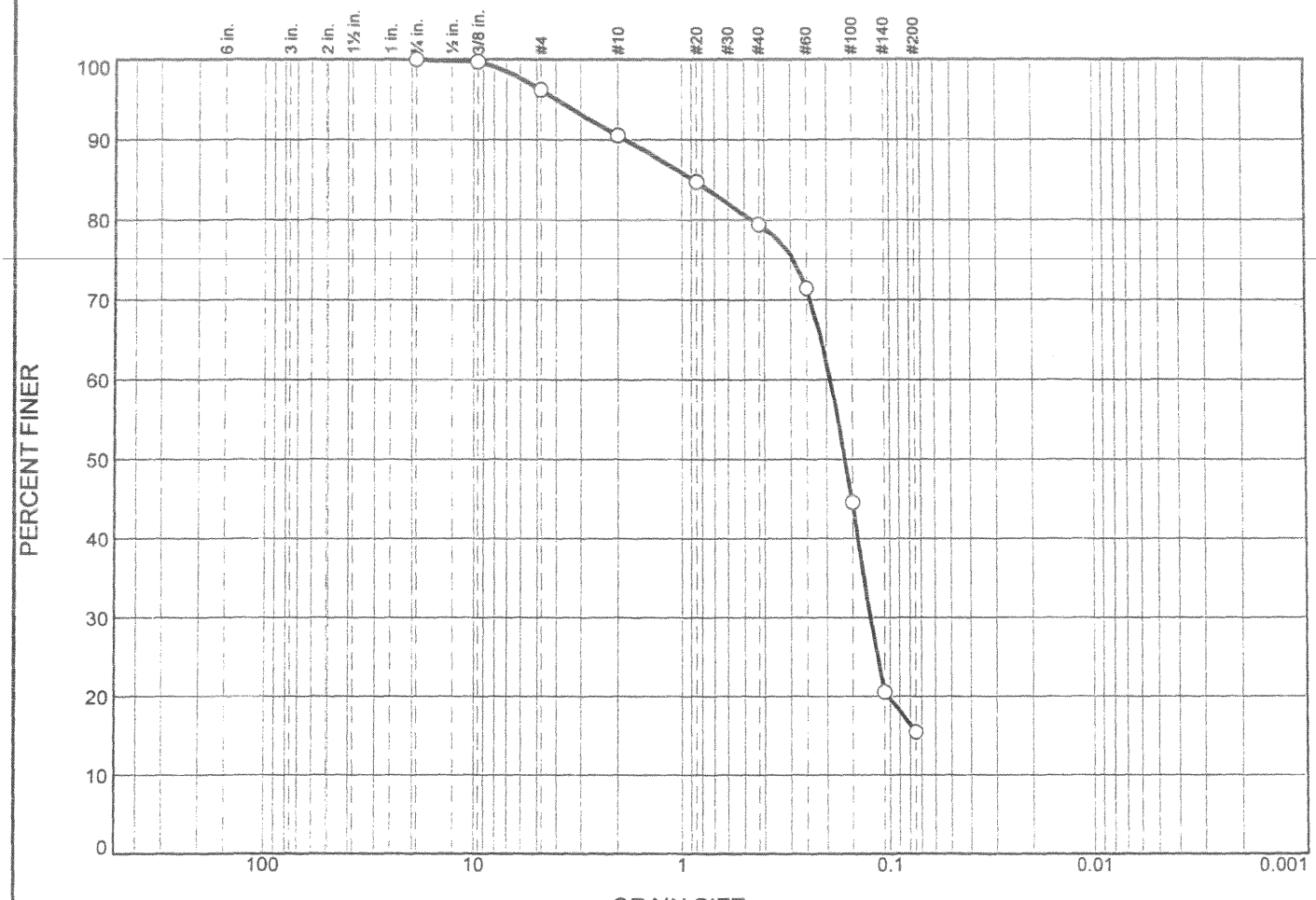
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Rolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 3.8 | 5.7 | 11.1 | 63.9 | 15.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.8815 | 0.1907 | 0.1619 | 0.1239 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 65.0'-70.0' **Sample Number:** CB205

**Remarks:**
○ Moisture Content % 20.6 CP05-EAARS-VB-0286

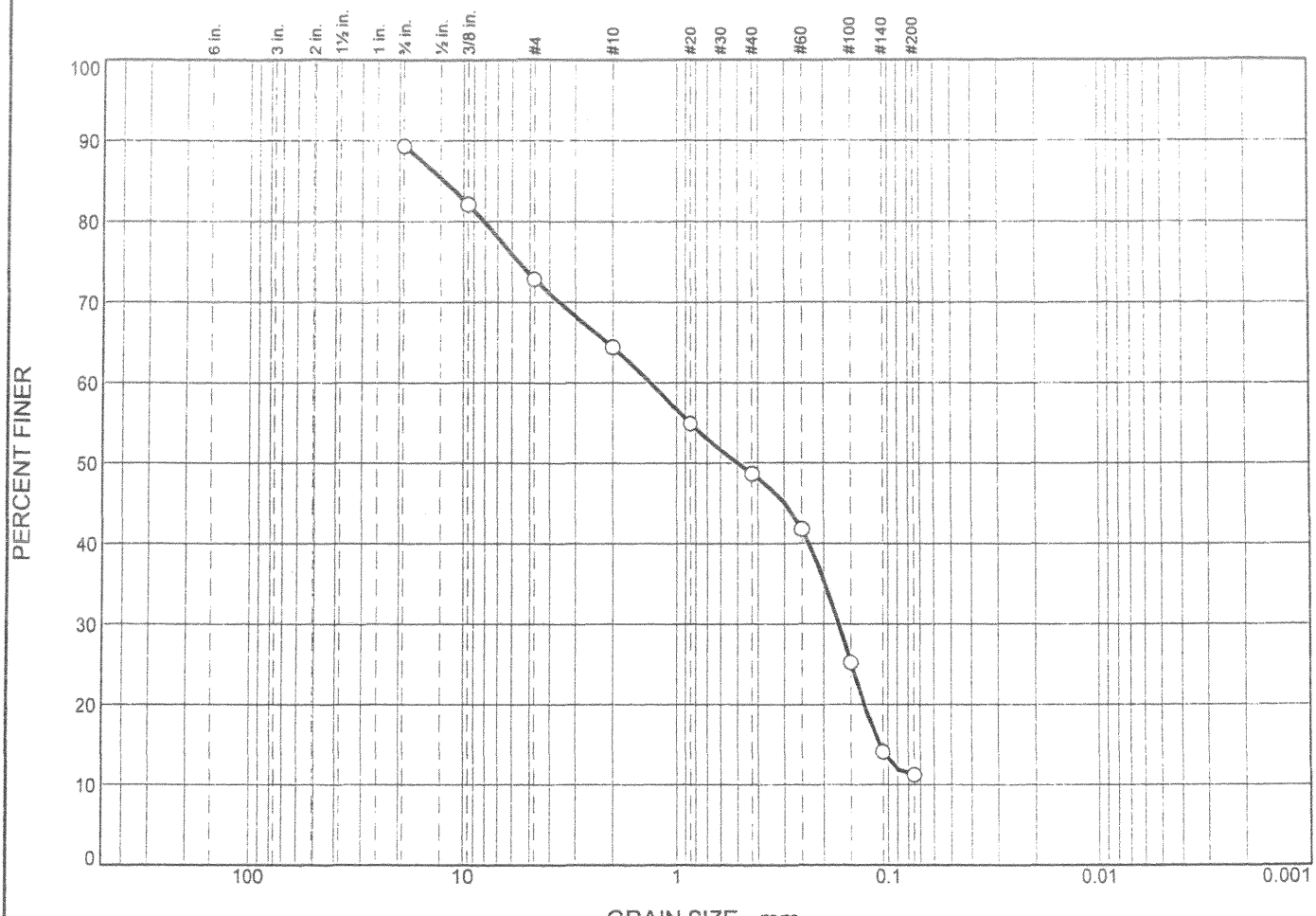
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Bolocki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 16 | 9 | 15 | 38 | 11 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.2562 | 1.3364 | 0.4978 | 0.1704 | 0.1104 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0205 **Depth:** 70' to 75'

**Date:** ○

**Remarks:**
○ Moisture Content % 17.5
CP05-EAARS-VB-0286

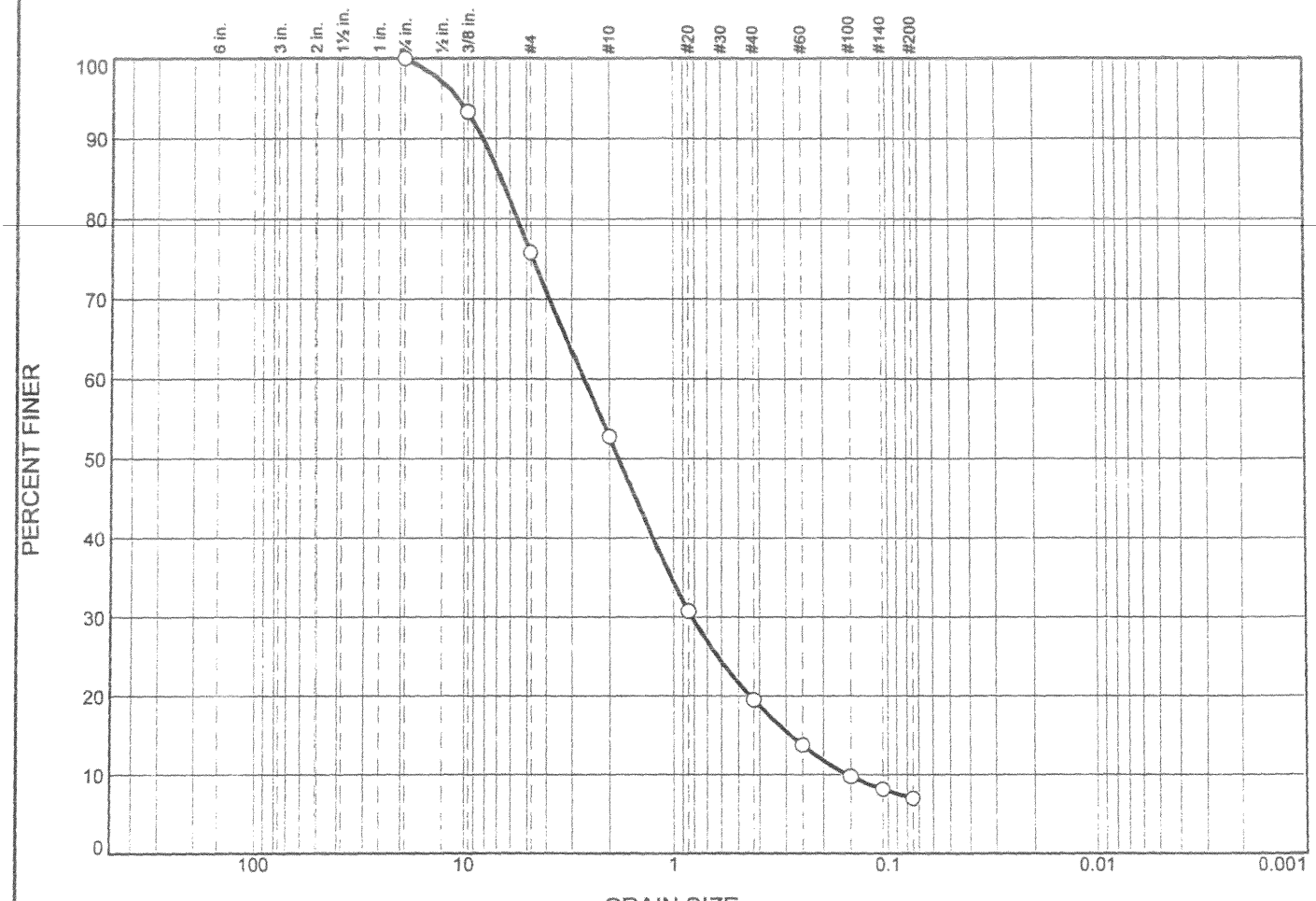
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 24.2 | 23.0 | 33.3 | 12.5 | 7.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.6065 | 2.6252 | 1.8071 | 0.8197 | 0.2840 | 0.1554 | 1.65 | 16.89 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 70.0'-75.0' **Sample Number:** CB205

**Remarks:**
○ Moisture Content % 9.3 CP05-EAARS-VB-0286

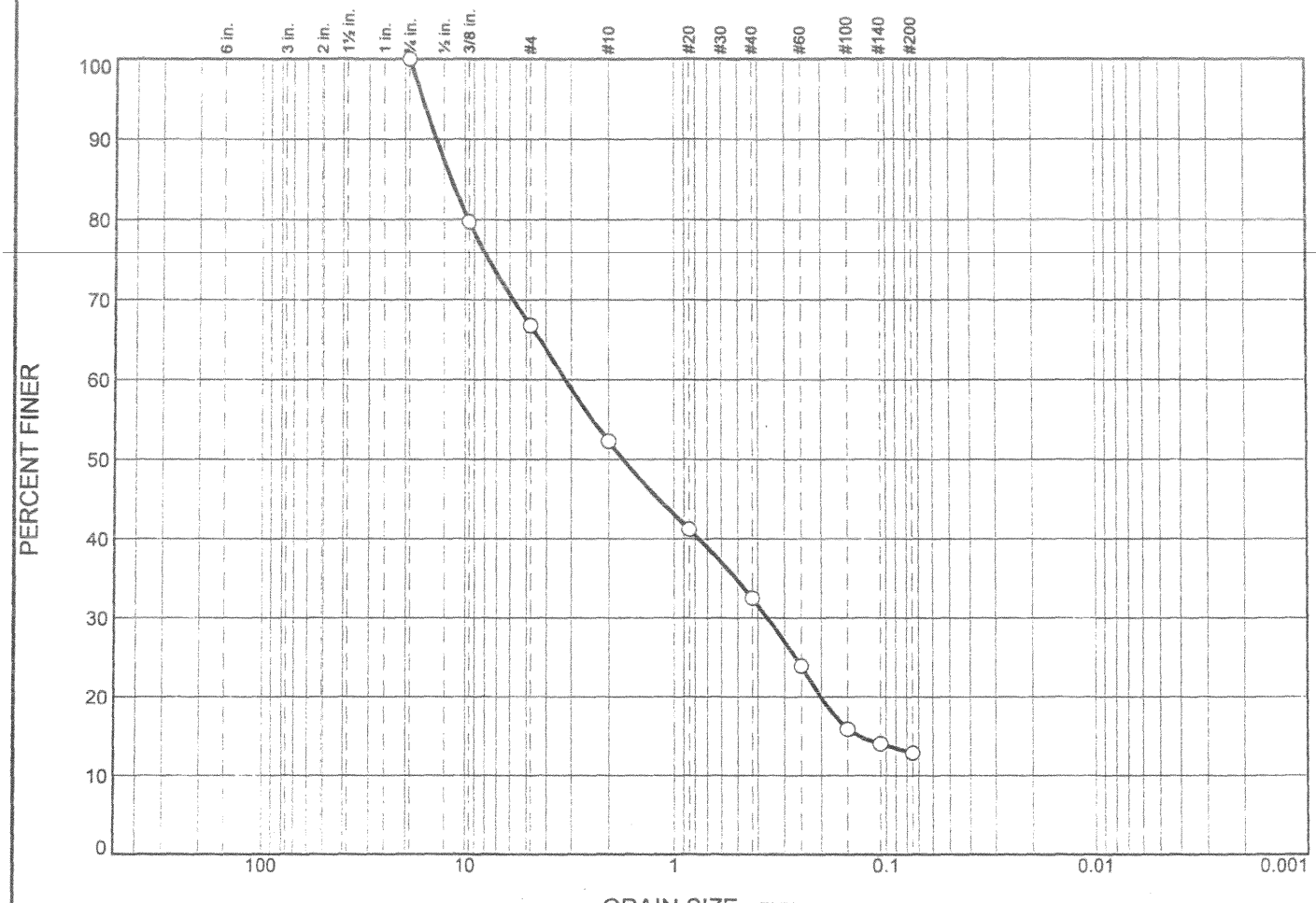
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 33.2 | 14.5 | 19.8 | 19.7 | 12.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.6744 | 3.1951 | 1.7104 | 0.3590 | 0.1333 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 75.0'-80.0' **Sample Number:** CB205

**Remarks:**

○ Moisture Content % 13.4 CP05-EAARS-VB-0286

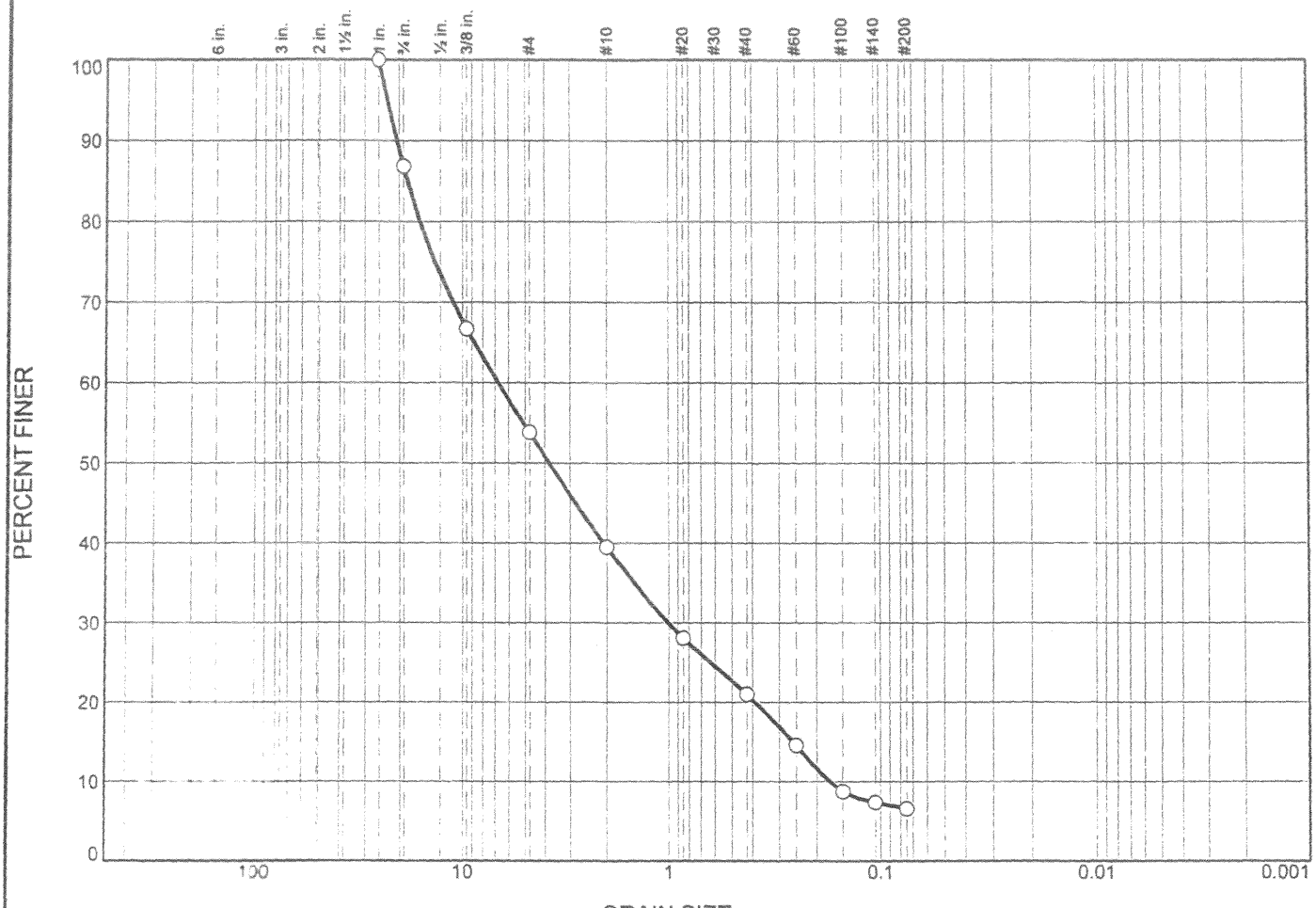
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| 0.0 | 13.2 | 33.0 | 14.3 | 18.5 | 14.4 | 6.6 | |

| LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|
| | | 18.2007 | 6.7382 | 3.7962 | 1.0033 | 0.2582 | 0.1729 | 0.86 | 38.97 |

| Material Description | USCS | AASHTO |
|---|---|---|
| Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

**Source of Sample:** CB205 **Depth:** 80.0'-85.0' **Sample Number:** CB205

**Remarks:**

Moisture Content % 11.7 CP05-EAARS-VB-0286

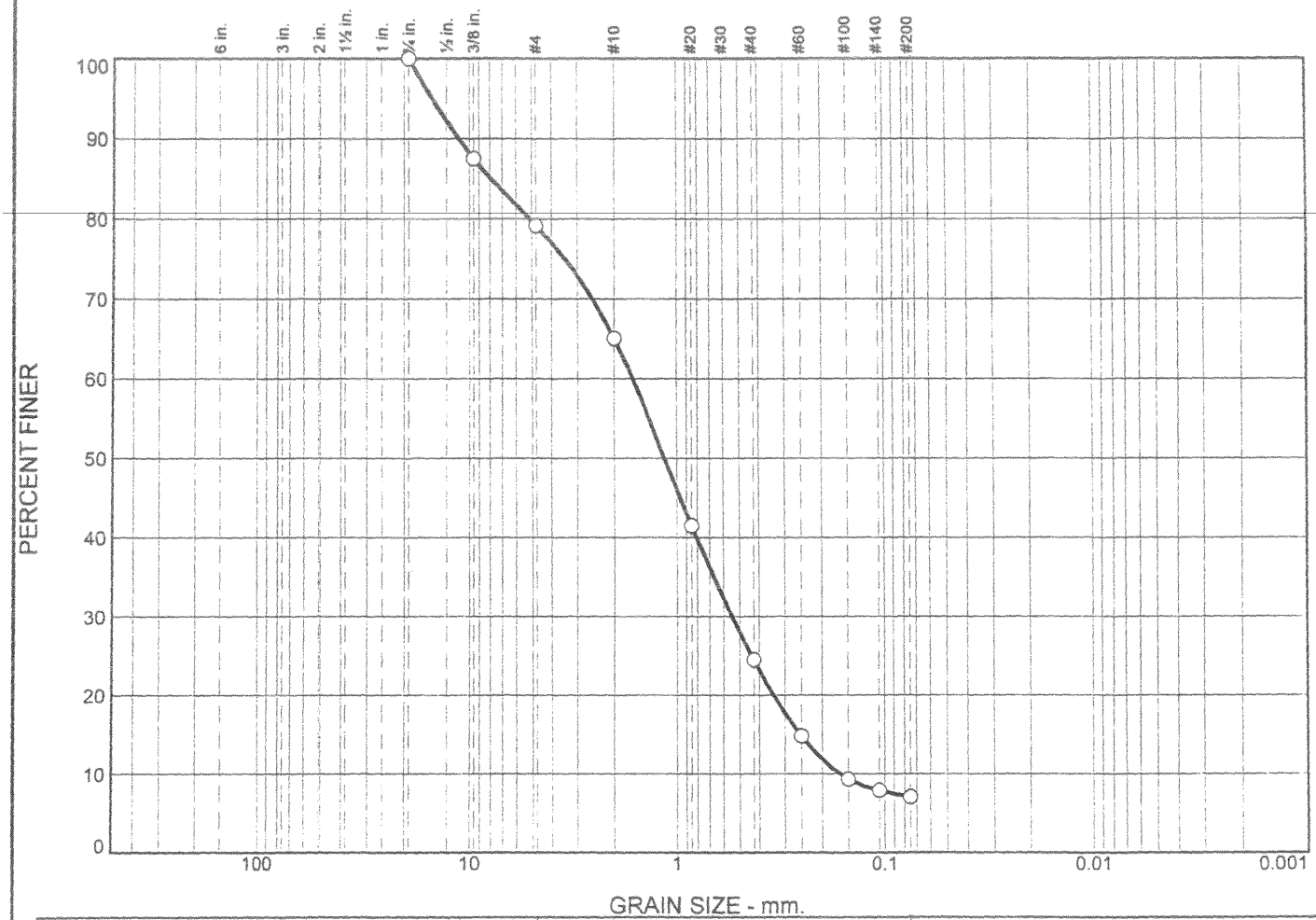
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pelcoki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 20.8 | 14.1 | 40.6 | 17.4 | 7.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.9074 | 1.6310 | 1.1437 | 0.5431 | 0.2533 | 0.1649 | 1.10 | 9.89 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 90.0'-95.0' **Sample Number:** CB205

**Remarks:**
○ Moisture Content % 15.1 CP05-EAARS-VB-0286

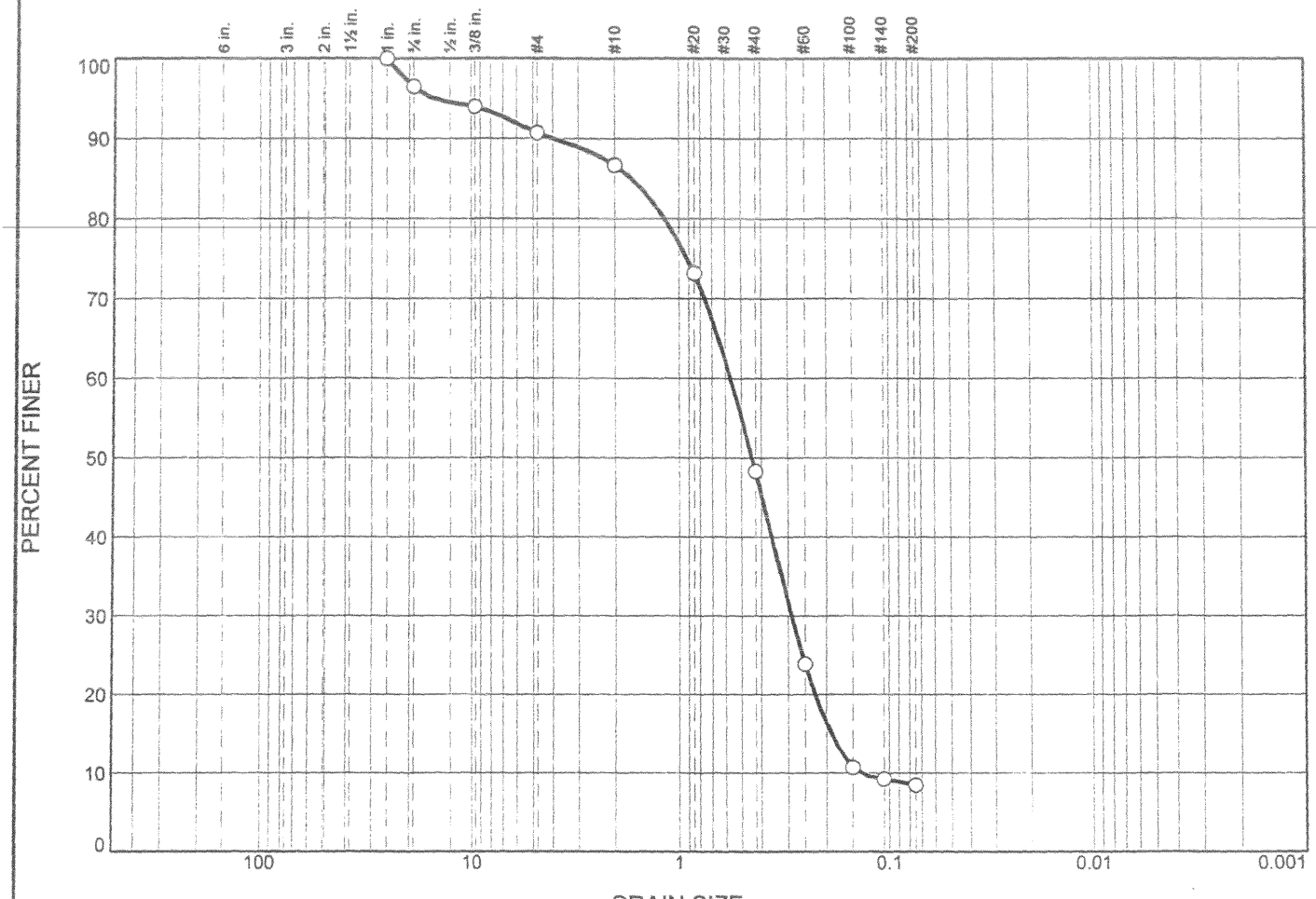
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 3.5 | 5.8 | 4.0 | 38.4 | 39.8 | 8.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.6646 | 0.5627 | 0.4413 | 0.2885 | 0.1900 | 0.1379 | 1.07 | 4.08 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 95.0'-100.0' **Sample Number:** CB205

**Remarks:**
○ Moisture Content % 16.8 CP05-EAARS-VB-0286

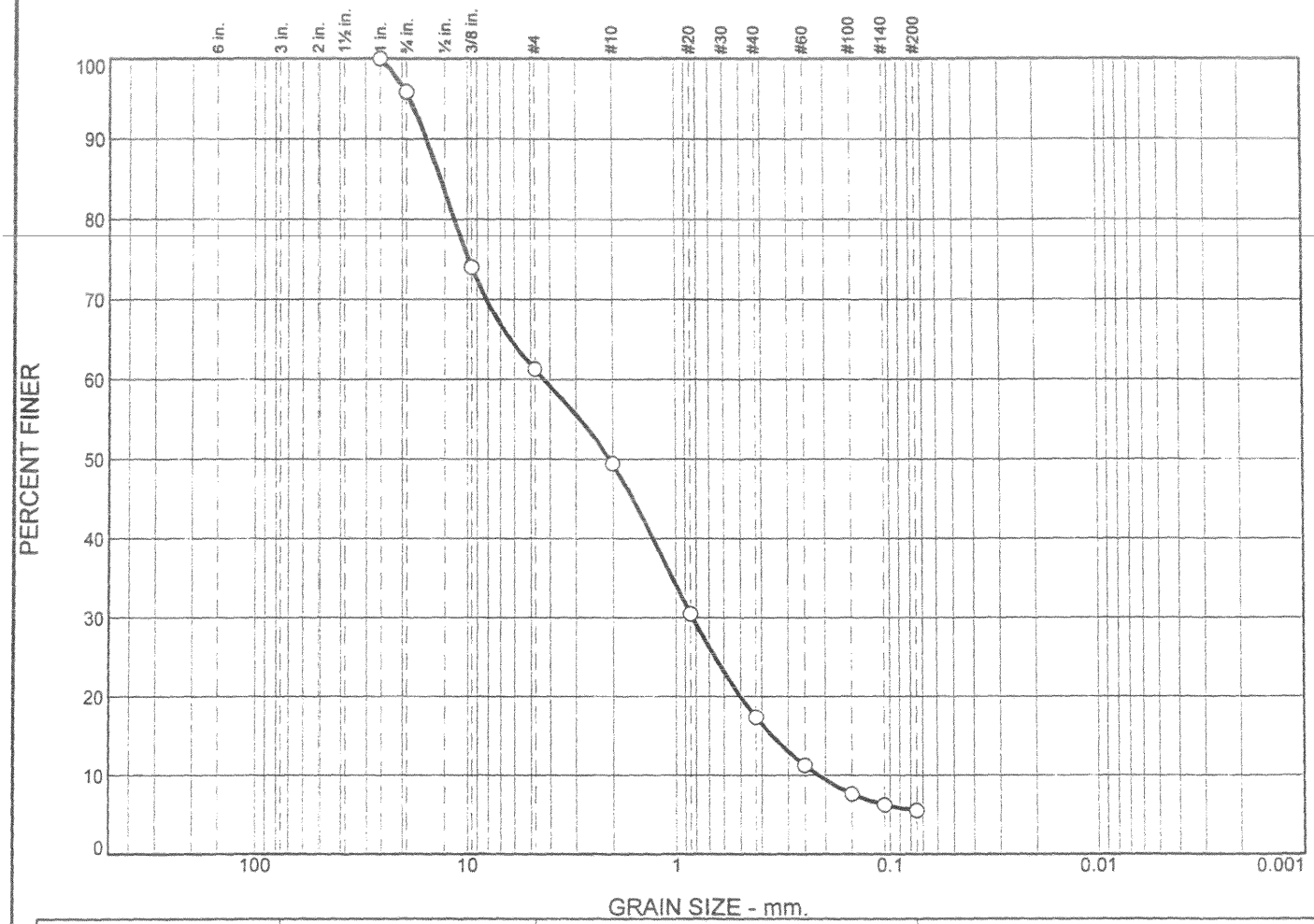
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pelaski Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 4.1 | 34.6 | 11.9 | 32.0 | 11.9 | 5.5 | |
| | | | | | | | | |
| | | | | | | | | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 13.2217 | 4.2709 | 2.0650 | 0.8318 | 0.3563 | 0.2152 | 0.75 | 19.84 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 100.0'-105.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 10.9 CP05-EAARS-VB-0286

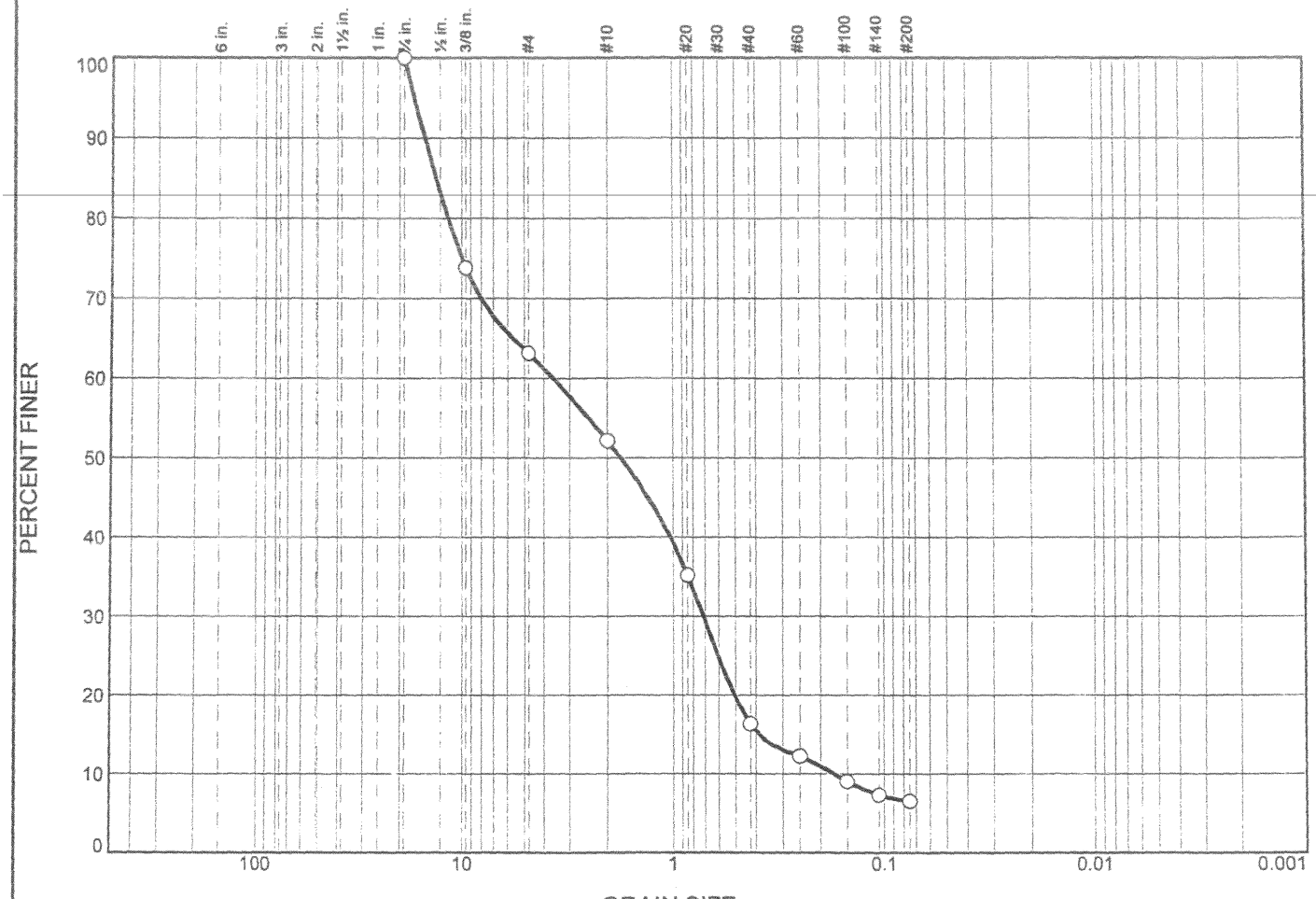
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Pelecki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 36.8 | 11.0 | 35.9 | 9.8 | 6.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 13.3199 | 3.5918 | 1.7351 | 0.7133 | 0.3870 | 0.1729 | 0.82 | 20.78 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 105.0'-110.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 13.5 CP05-EAARS-VB-0286

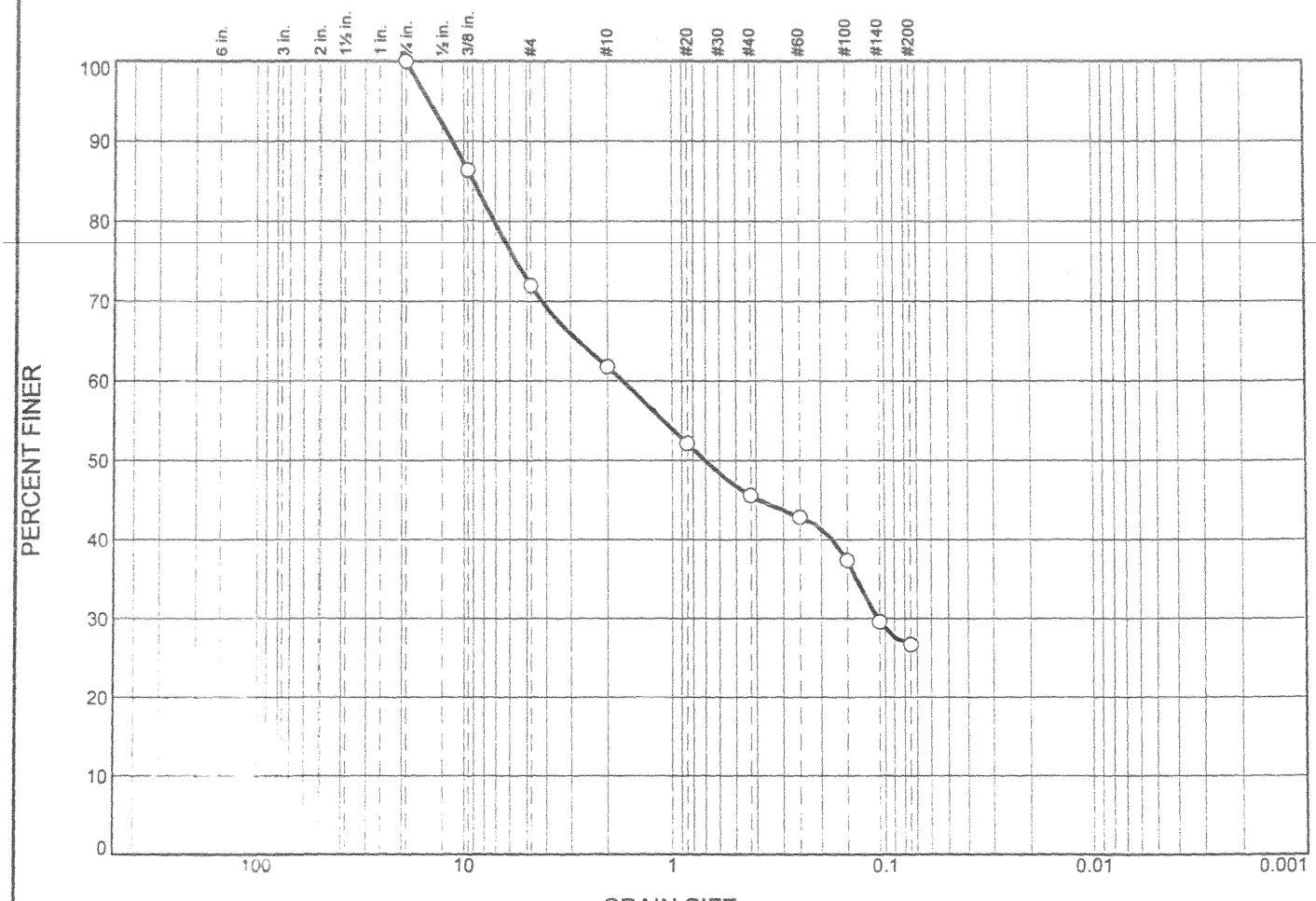
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bojooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 28.0 | 10.2 | 16.2 | 18.9 | 26.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.9228 | 1.6878 | 0.7005 | 0.1086 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 110.0'-115.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 19.8 CP05-EAARS-VB-0286

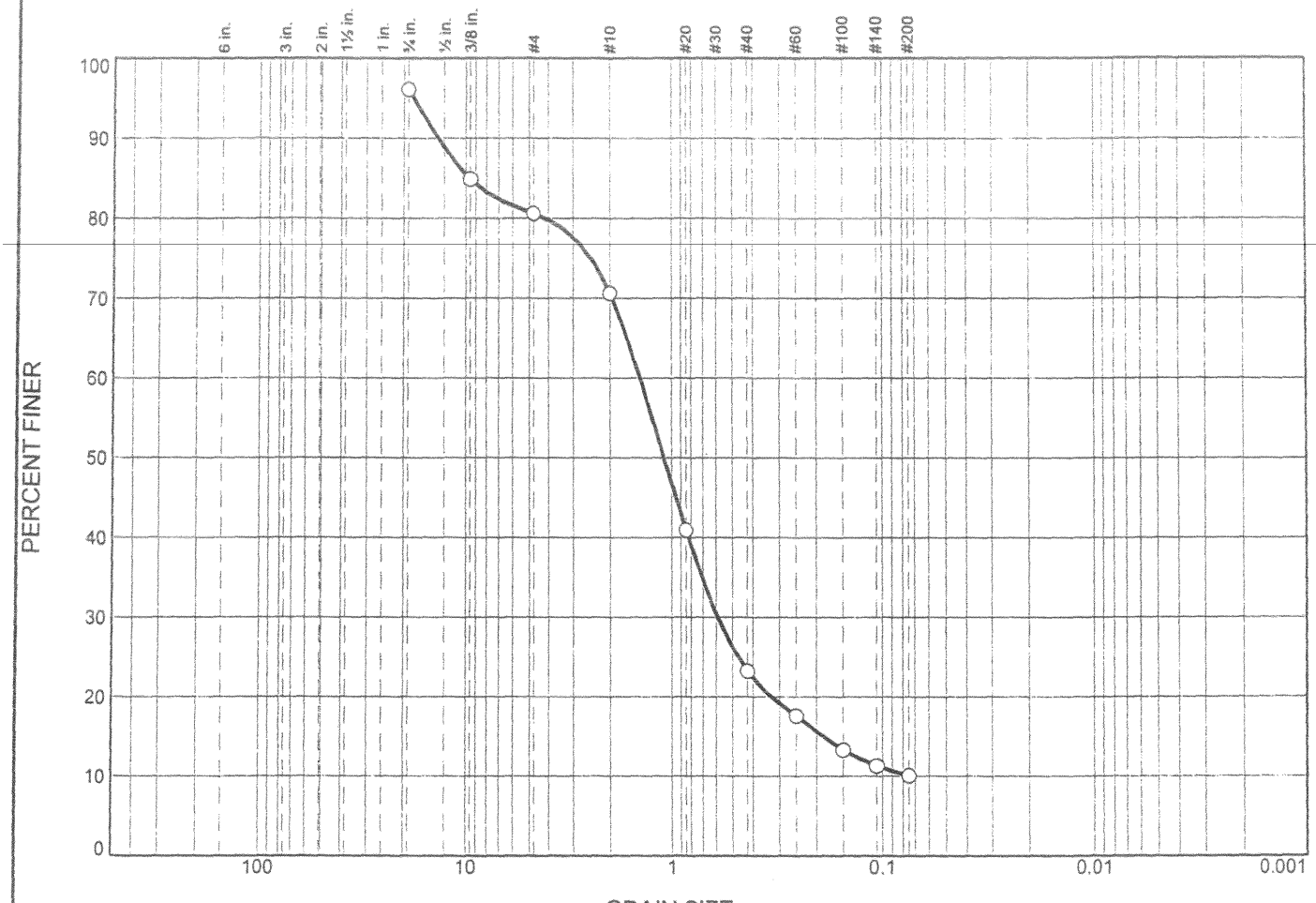
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 15 | 10 | 48 | 13 | 10 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.6337 | 1.4233 | 1.0888 | 0.5903 | 0.1853 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0205 **Depth:** 115' to 120'

**Date:** ○

**Remarks:**
○ Moisture Content % 15.5
CP05-EAARS-VB-0286

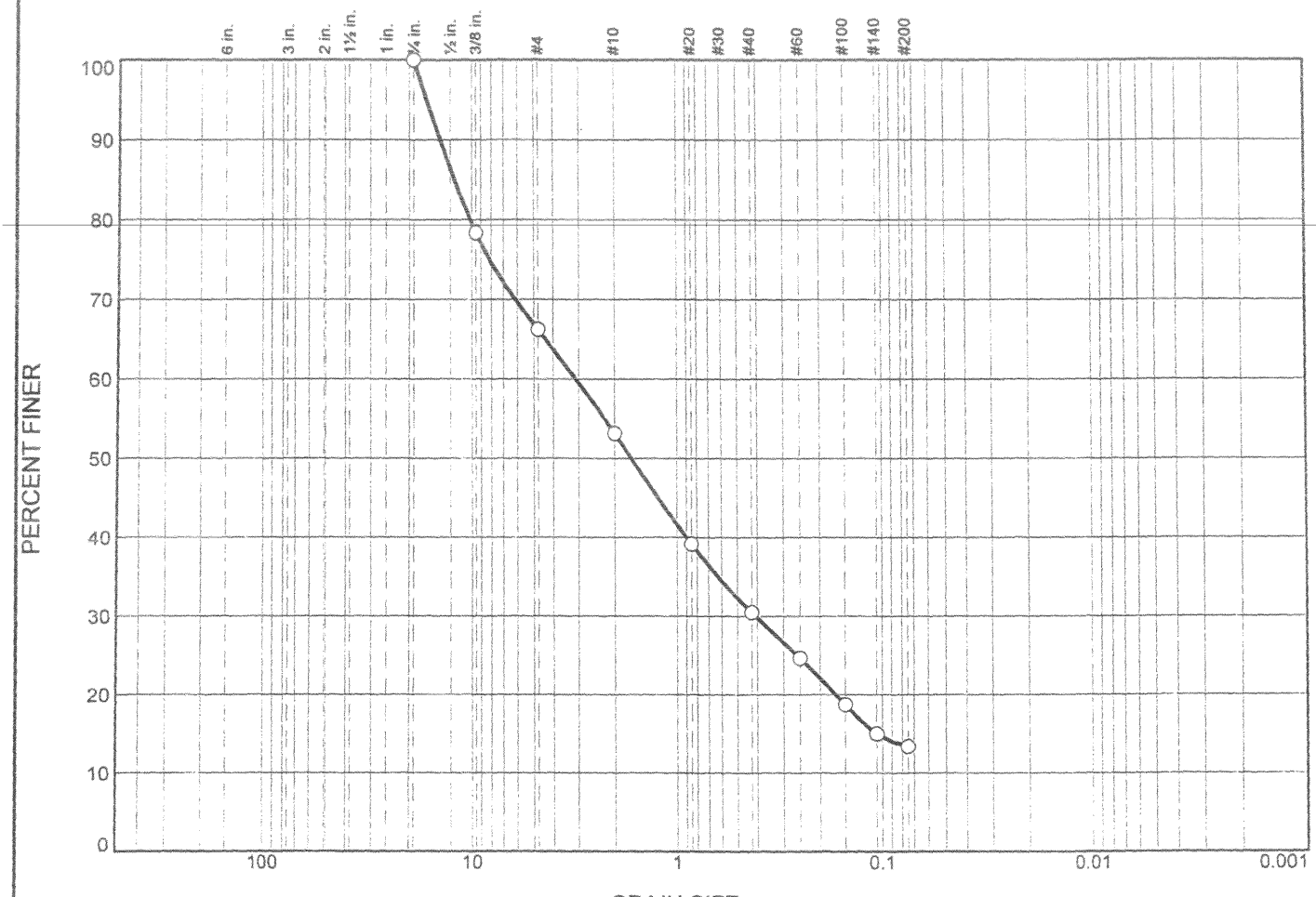
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 33.8 | 13.0 | 22.7 | 17.1 | 13.4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.1172 | 3.0958 | 1.6547 | 0.4065 | 0.1060 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ well graded sand with silt and gravel | SW-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 120.0'-125.0' **Sample No.:** CB205

**Remarks:**

○ Moisture Content % 13.4 CP05-EAARS-VB-0286

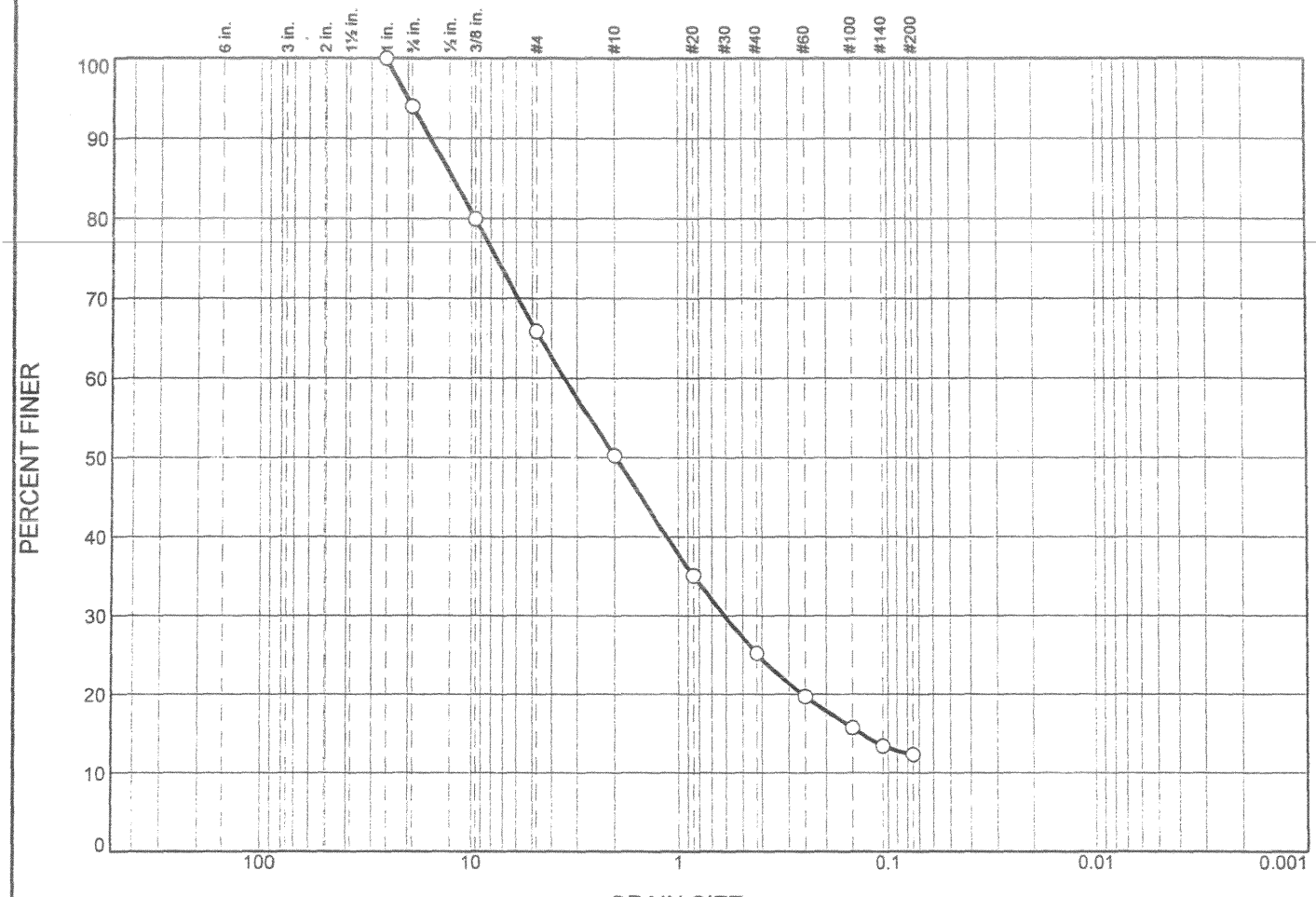
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

Figure

Tested By: Balocki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 6.0 | 28.1 | 15.6 | 25.1 | 12.9 | 12.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.2356 | 3.4620 | 1.9692 | 0.6103 | 0.1357 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB205 **Depth:** 125'-130.0' **Sample Number:** CB205

**Remarks:**

○ Moisture Content % 16.6 CP05-EAARS-VB-0286

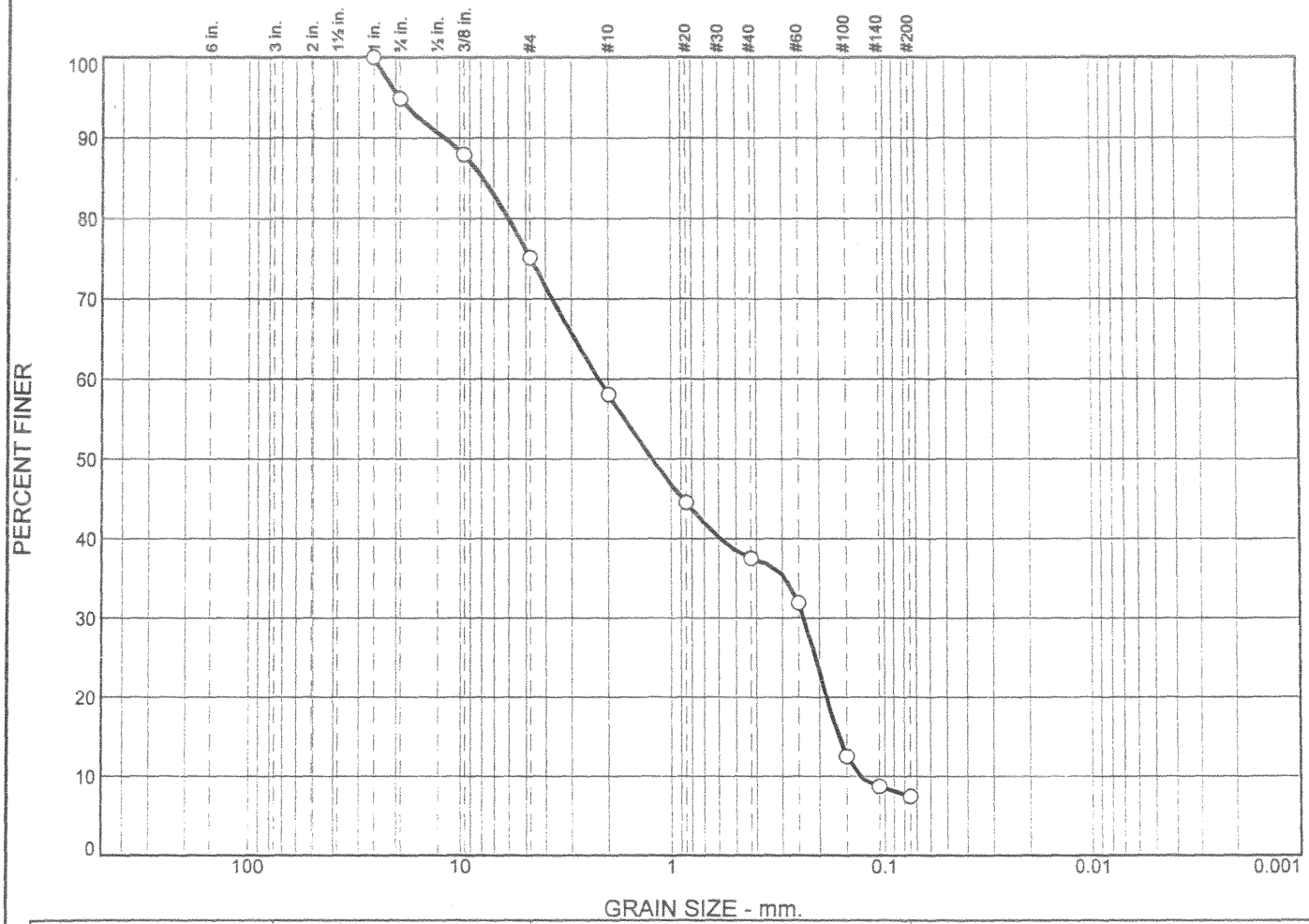
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 5.1 | 19.7 | 17.1 | 20.6 | 30.0 | 7.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.8082 | 2.2231 | 1.2327 | 0.2356 | 0.1627 | 0.1304 | 0.19 | 17.05 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 140.0'-145.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 15.0 CP05-EAARS-VB-0286

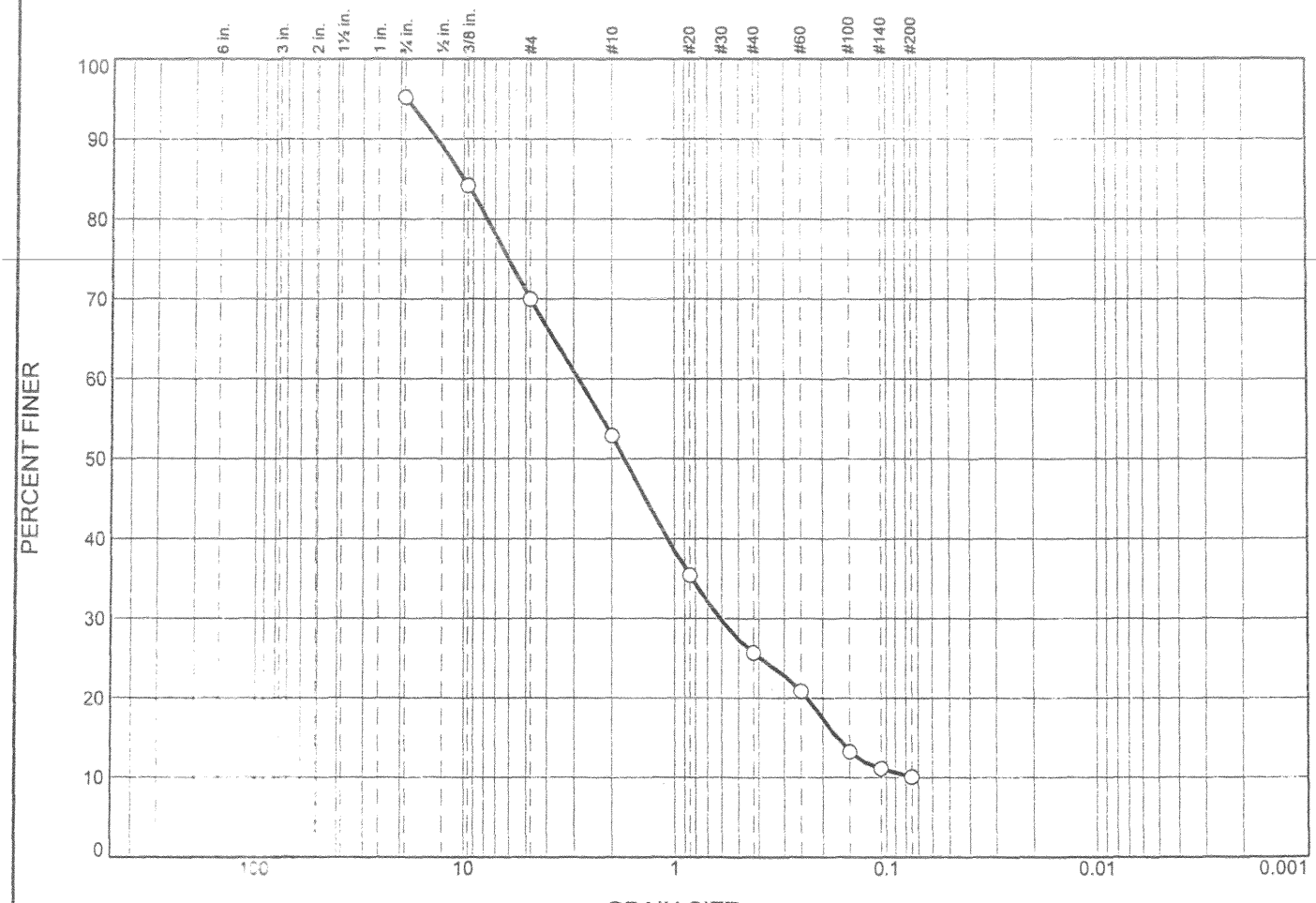
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | | | 25 | 17 | 27 | 16 | 10 | |
| | | | | | | | | |
| | | | | | | | | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.9537 | 2.8667 | 1.7431 | 0.6109 | 0.1716 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)
○ **Source of Sample:** CB-0205 **Depth:** 150' to 155'

**Date:** ○

**Remarks:**
○ Moisture Content % 14.1
CP05-EAARS-VB-0286

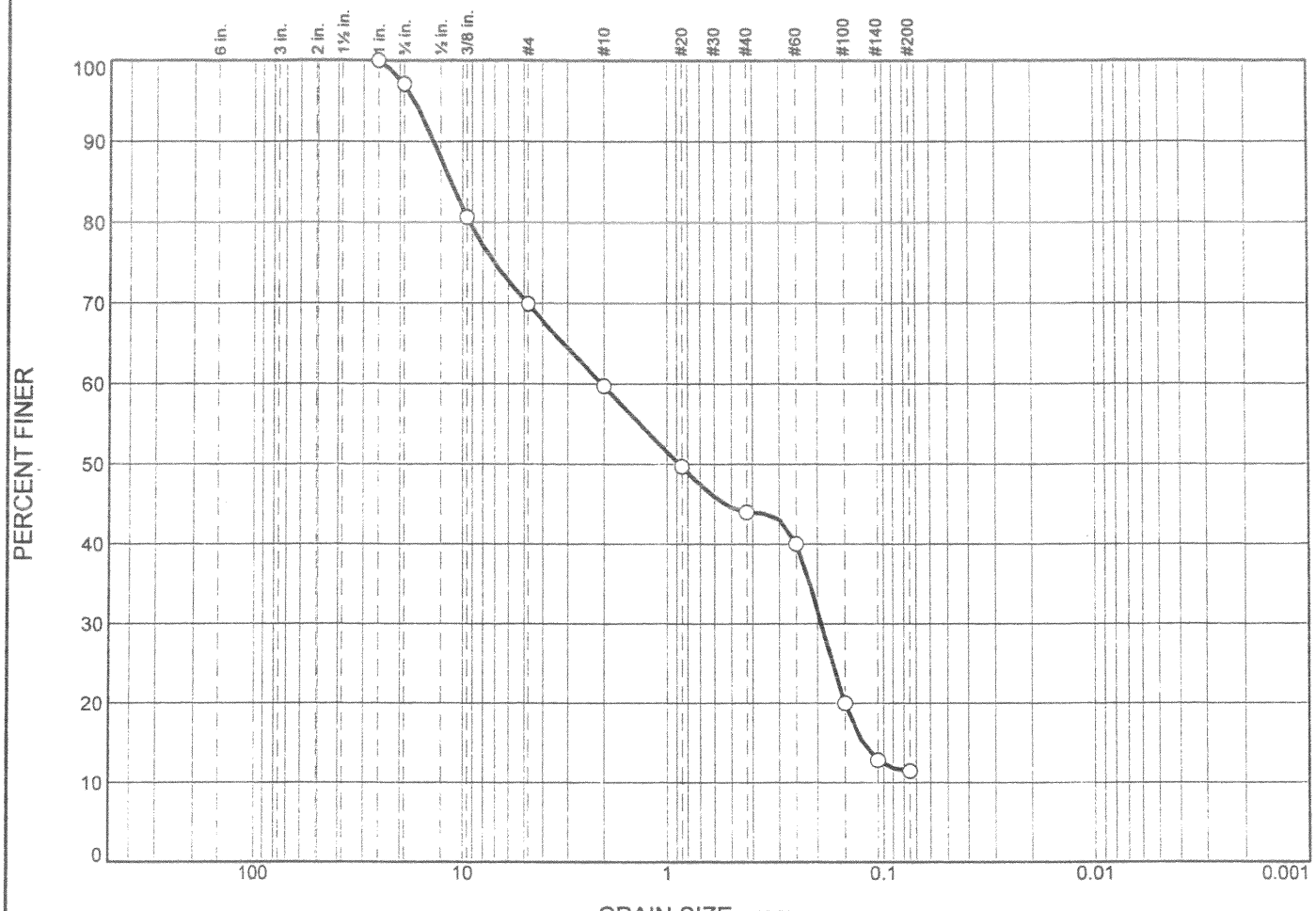
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Pedro Camaraza **Checked By:** Kevin Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 2.9 | 27.2 | 10.2 | 15.7 | 32.5 | 11.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 11.3484 | 2.0447 | 0.8724 | 0.1915 | 0.1238 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 1565.0'-160.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 13.34
CP05-EAARS-VB-0286

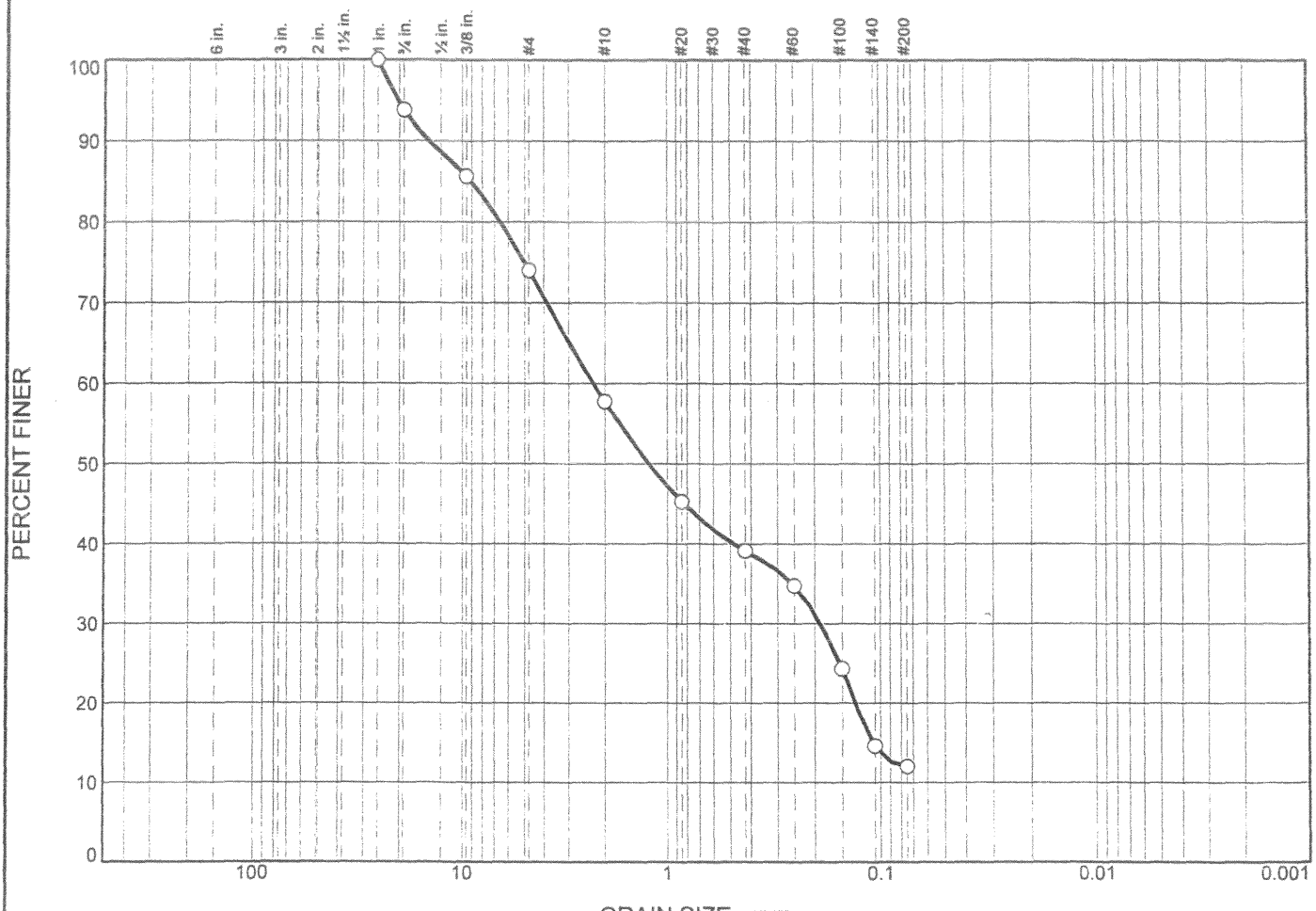
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 6.2 | 19.8 | 16.2 | 18.7 | 27.1 | 12.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.0486 | 2.2687 | 1.2245 | 0.1881 | 0.1081 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 160.0'-165.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 20.0 CP05-EAARS-VB-0286

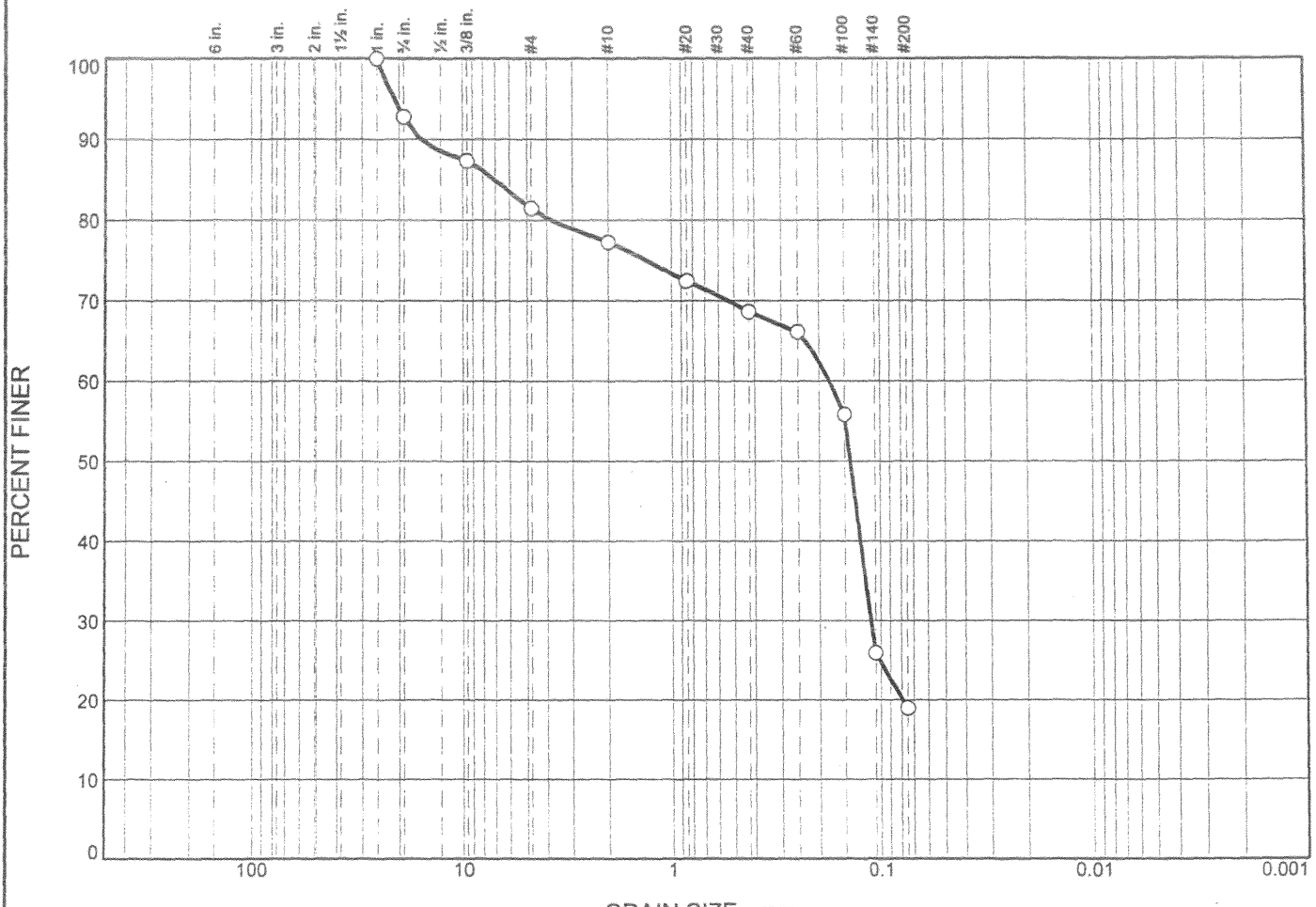
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 7.2 | 11.3 | 4.2 | 8.6 | 49.7 | 19.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.0278 | 0.1770 | 0.1395 | 0.1122 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 175.0'-180.0' **Sample No.:** CB205

**Remarks:**

○ Moisture Content % 18.3 CP05-EAARS-VB-0286

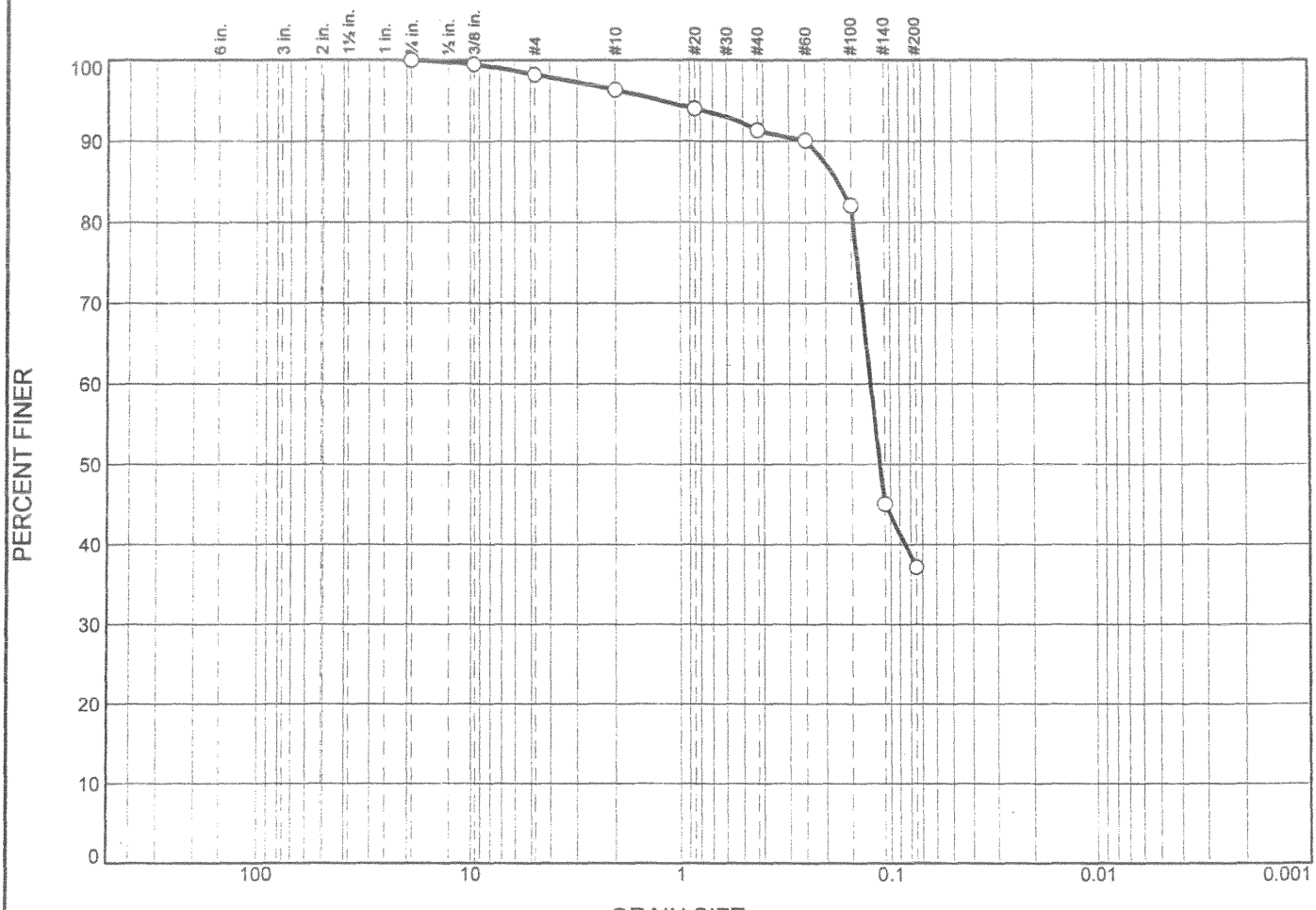
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 1.8 | 1.9 | 4.9 | 54.2 | 37.2 | |

| ☒ | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1731 | 0.1227 | 0.1120 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 180.0'-185.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 20.7 CP05-EAARS-VB-0286

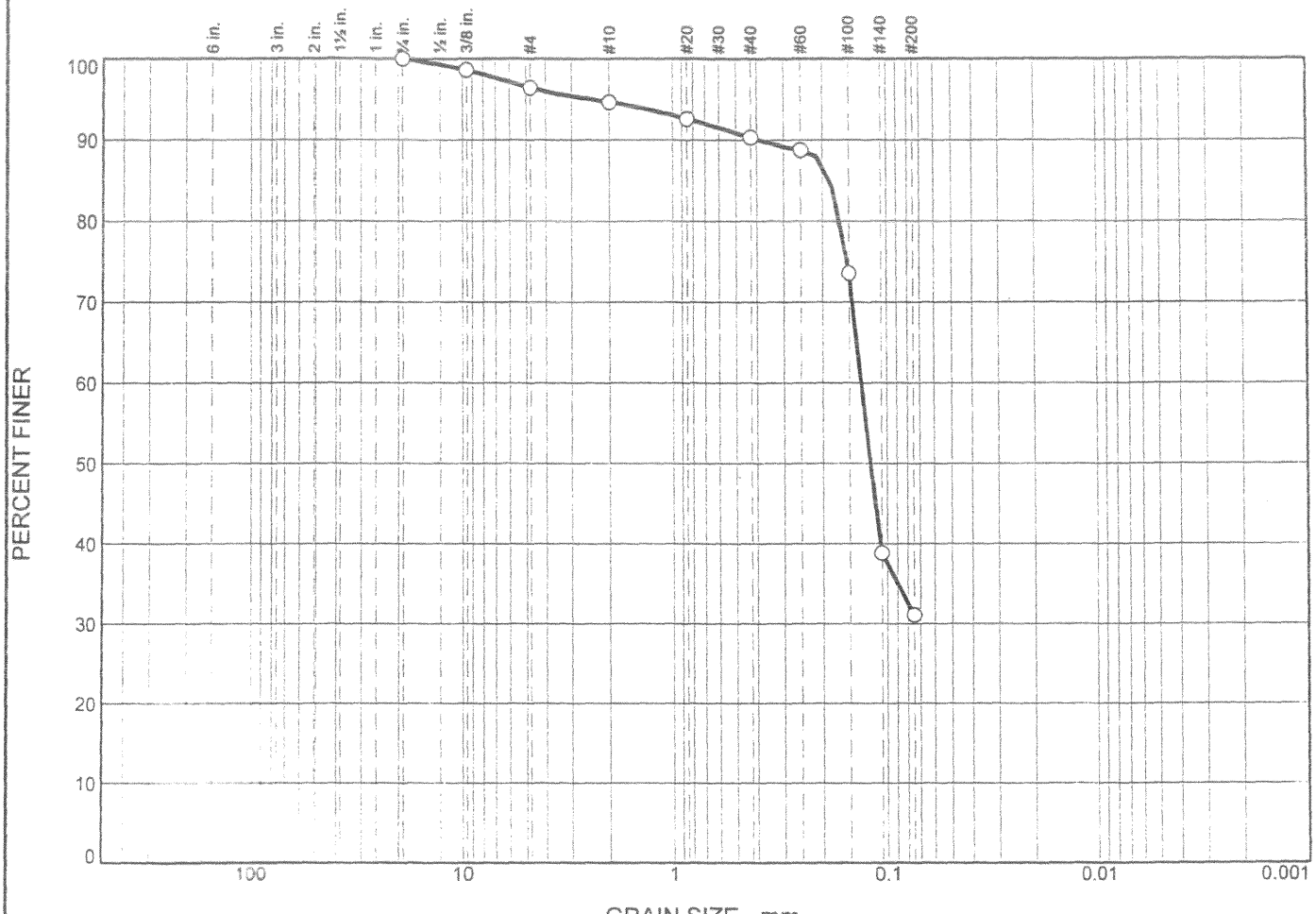
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 3.6 | 1.7 | 4.4 | 59.2 | 31.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.1832 | 0.1312 | 0.1198 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 195.0'-200.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 18.5 CP05-EAARS-VB-0286

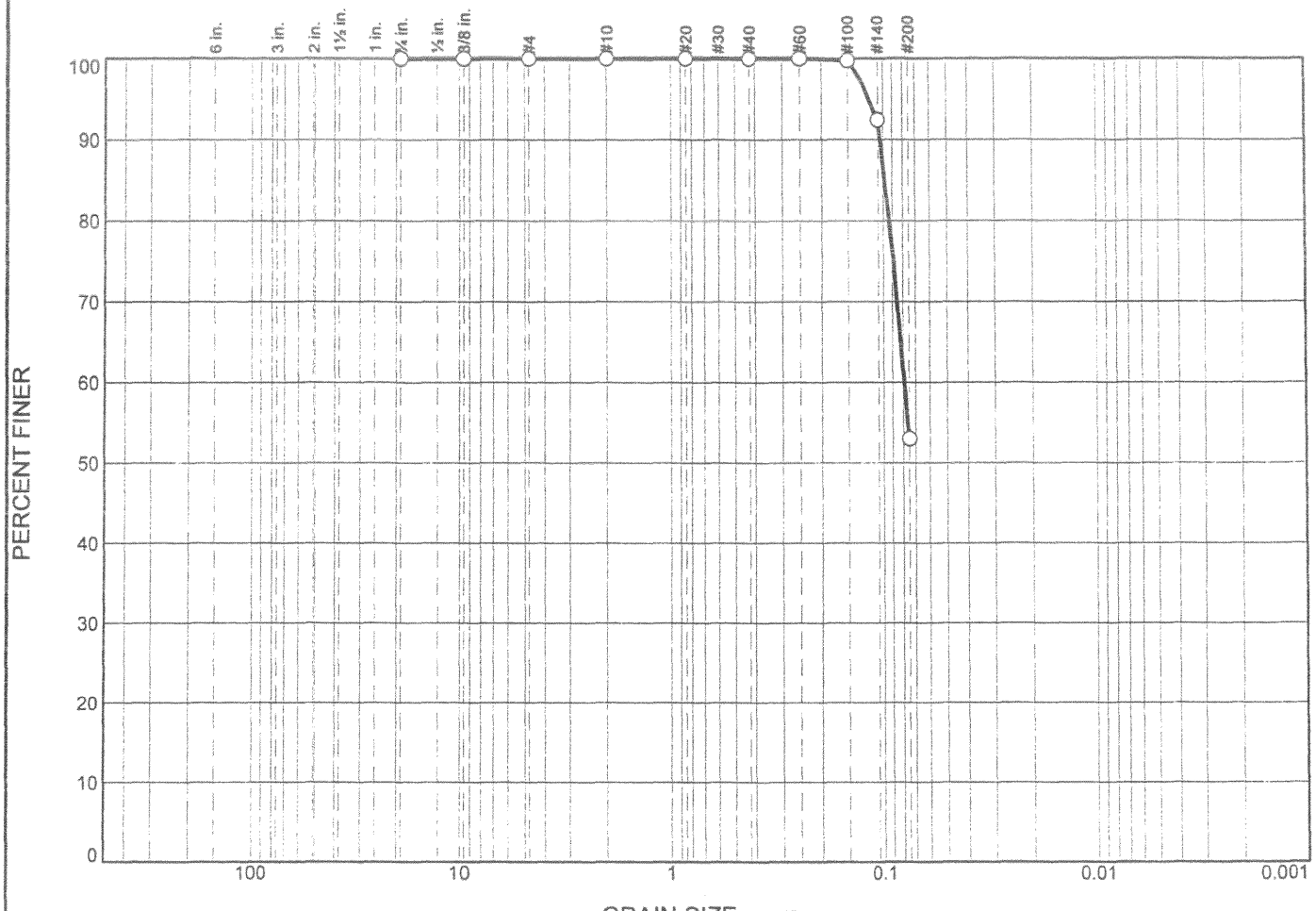
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 46.9 | 53.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.0970 | 0.0789 | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Inorganic silts with very fine sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB205 **Depth:** 215.0'-220.0' **Sample No.:** CB205

**Remarks:**
○ Moisture Content % 24.7 CP05-EAARS-VB-0286

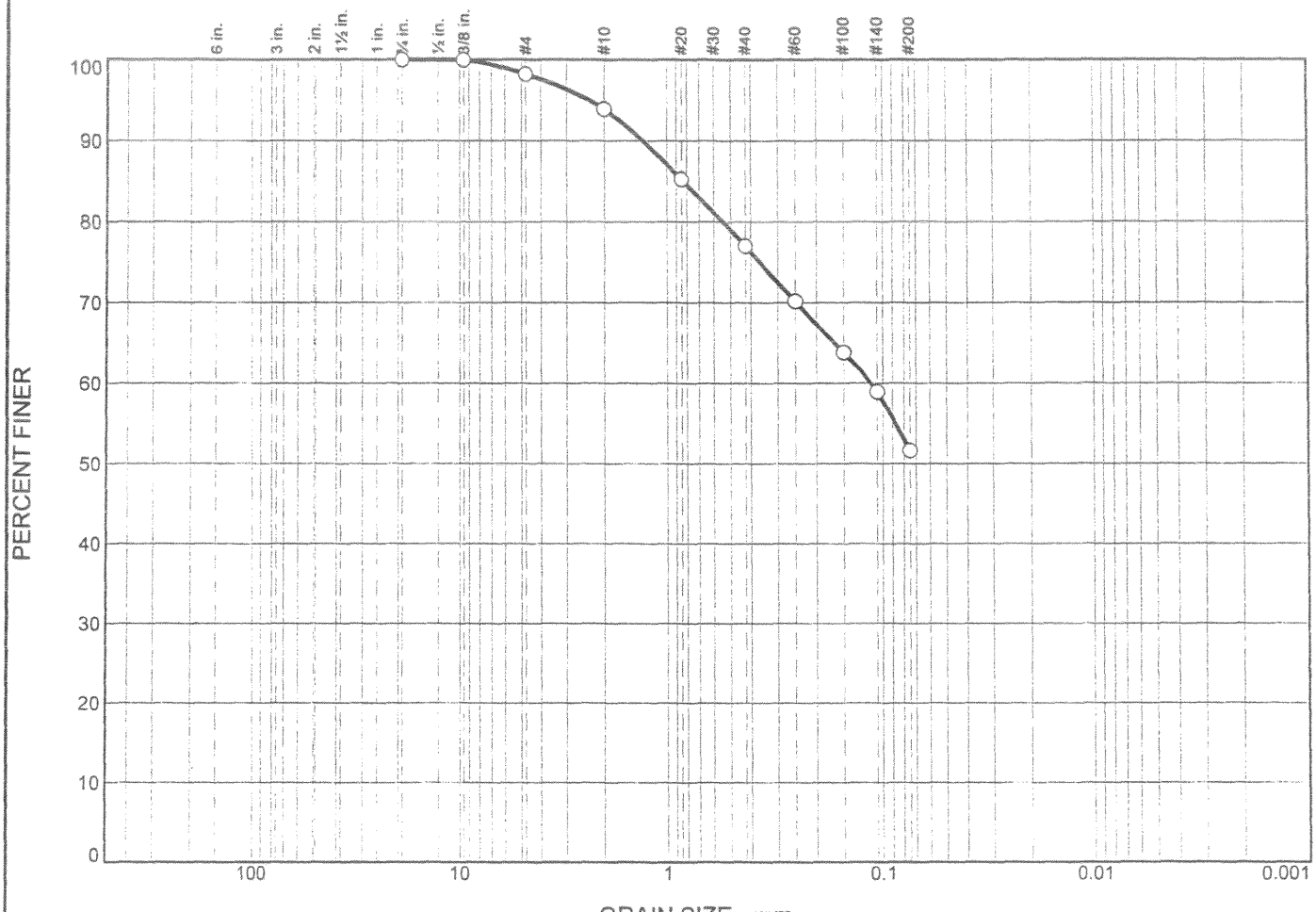
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 1.8 | 4.3 | 16.9 | 25.3 | 51.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.8308 | 0.1129 | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Inorganic silts and very fine sands | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB219 **Depth:** 14.0'-15.5 **Sample Number:** CB219

**Remarks:**

○ Moisture Content %22.8 CP05-EAARS-CB-0317

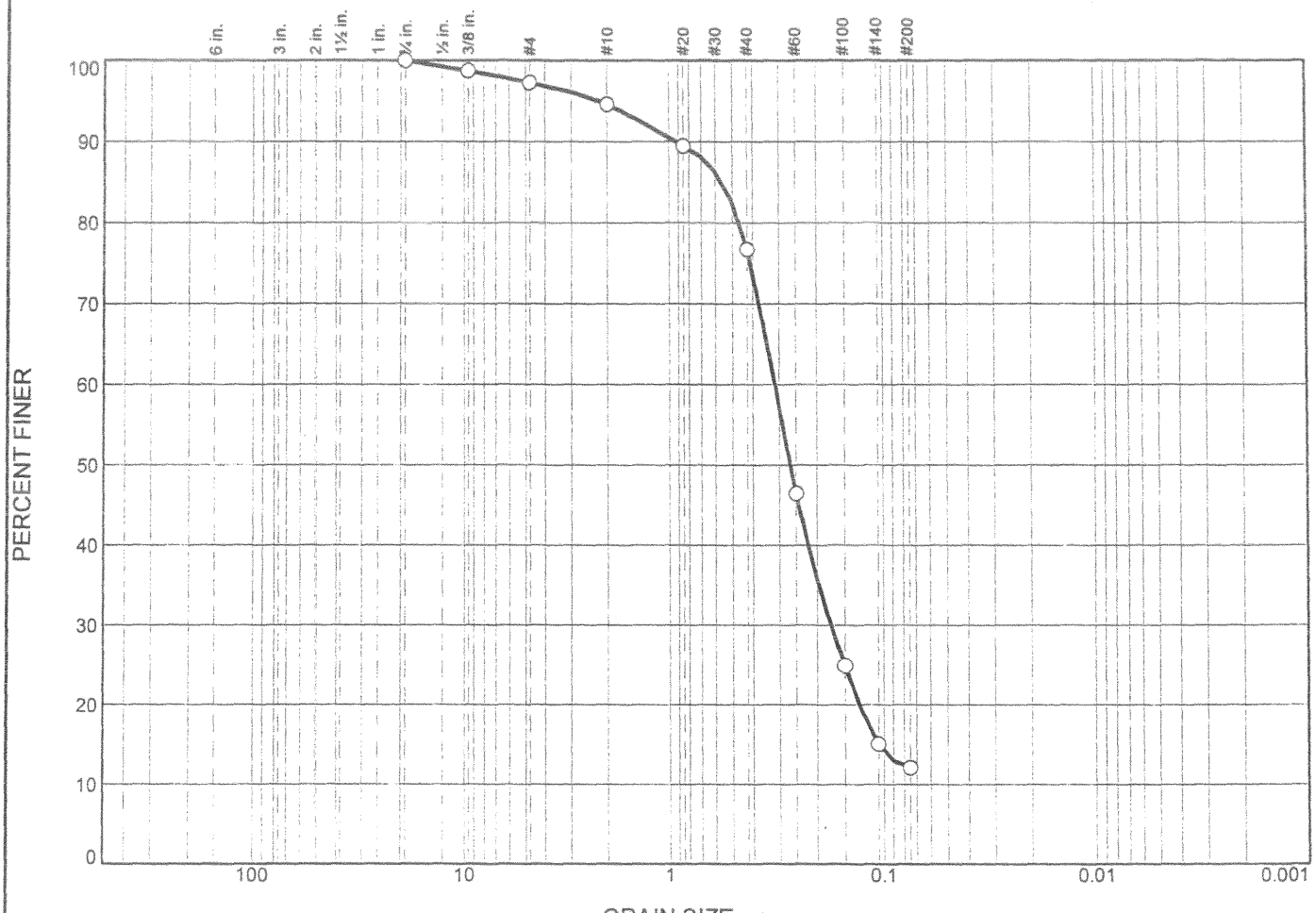
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** L Mazo **Checked By:** M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 2.7 | 2.7 | 17.9 | 64.6 | 12.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.5563 | 0.3138 | 0.2661 | 0.1729 | 0.1057 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB219 **Depth:** 34.0'-35.5 **Sample Number:** CB219

**Remarks:**

○ Moisture Content % 25.4 CP05-EAARS-CB-0317

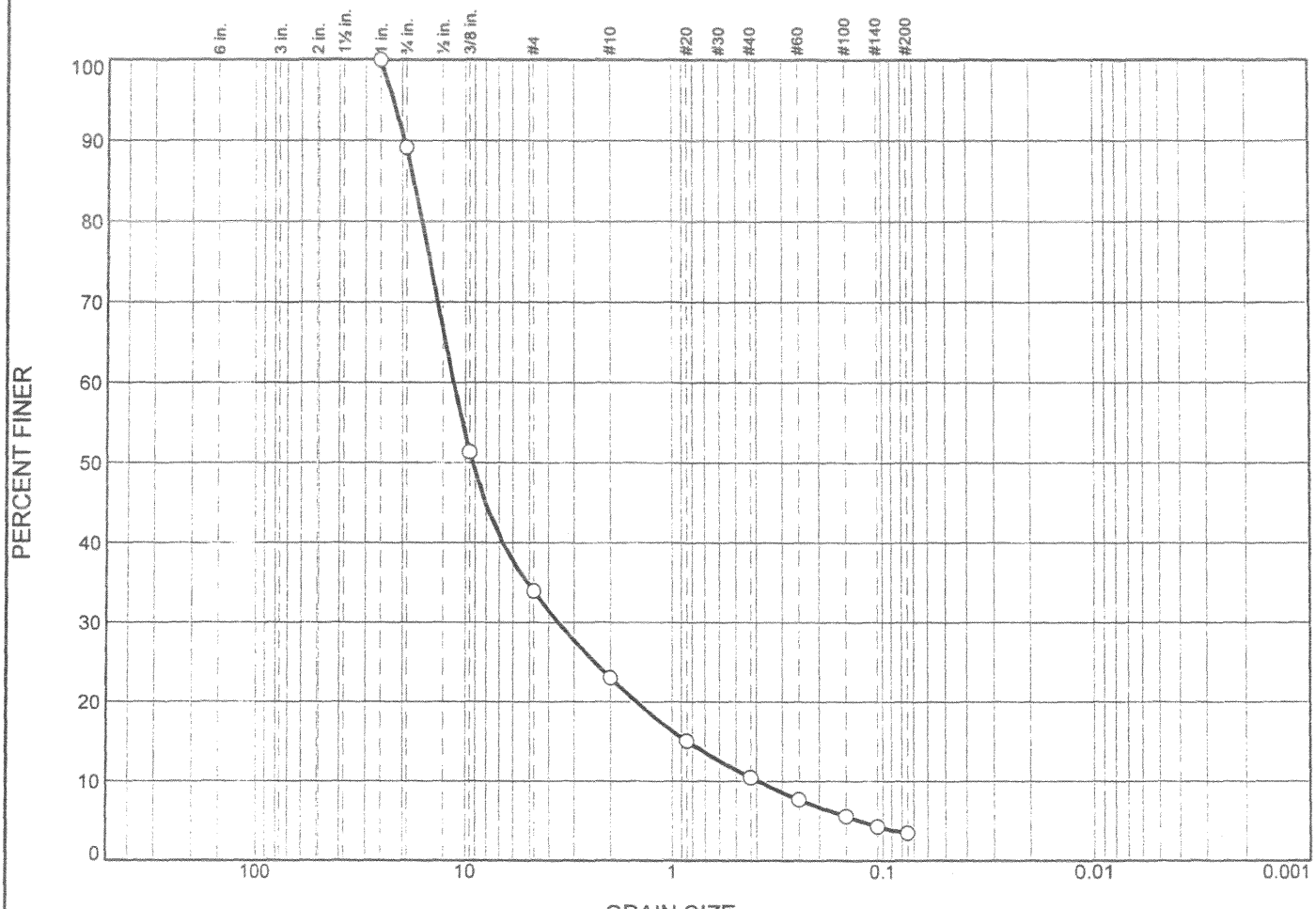
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: L Mazo Checked By: M Brown

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 10.8 | 55.3 | 10.9 | 12.5 | 7.0 | 3.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.4855 | 11.2897 | 9.2234 | 3.5693 | 0.8428 | 0.3896 | 2.90 | 28.98 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with sand | GP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB0228 **Depth:** 4.0'-5.5 **Sample Number:** CB0228

**Remarks:**
○ Moisture Content % 5.2 CP05-EAARS-CB-0326

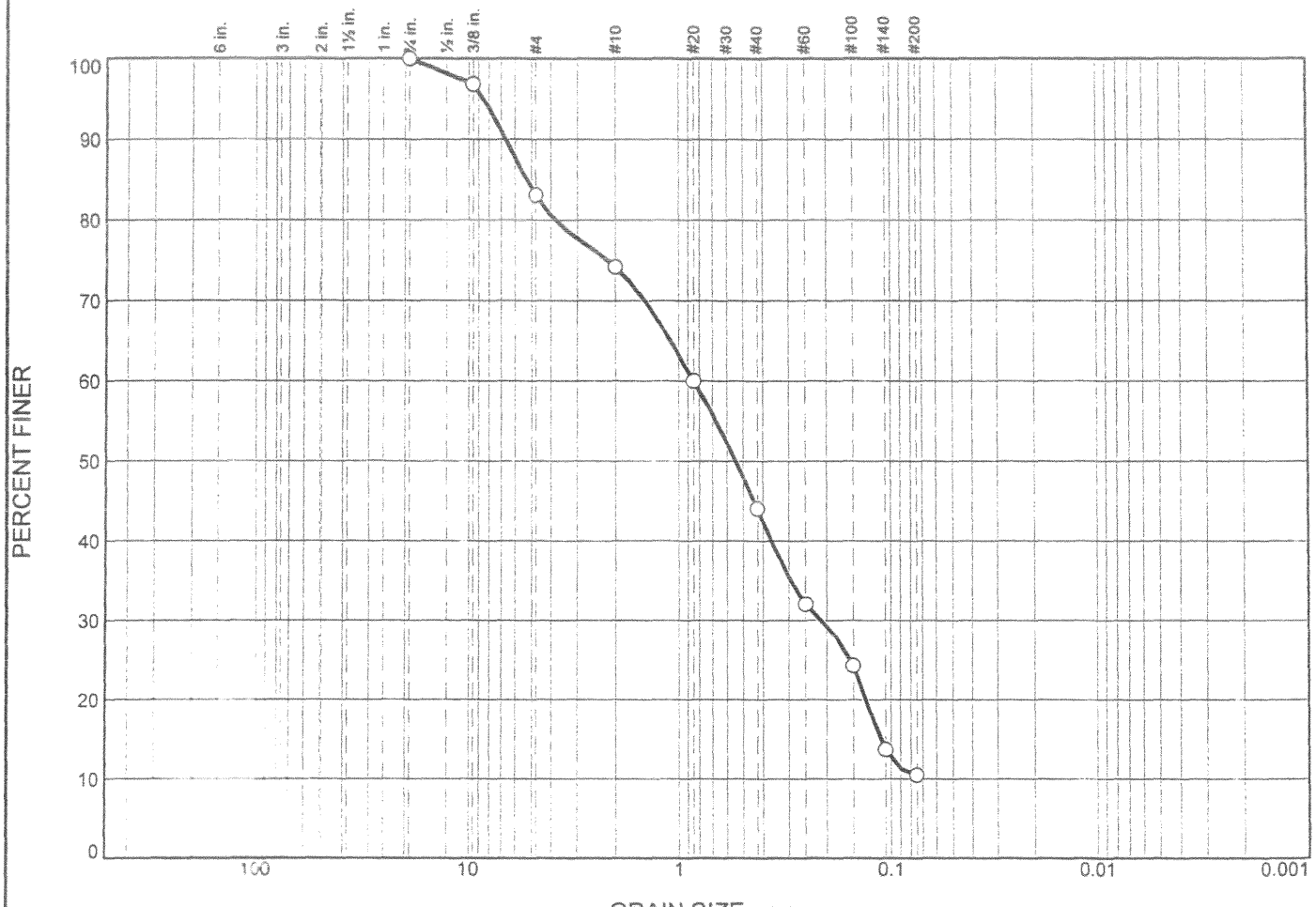
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** M Mazo **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 16.9 | 8.9 | 30.2 | 33.5 | 10.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.2567 | 0.8482 | 0.5416 | 0.2123 | 0.1115 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB0228 **Depth:** 14.0'-15.5 **Sample Number:** CB0228

**Remarks:**

○ Moisture Content % 22.6 CP05-EAARS-CB-0326

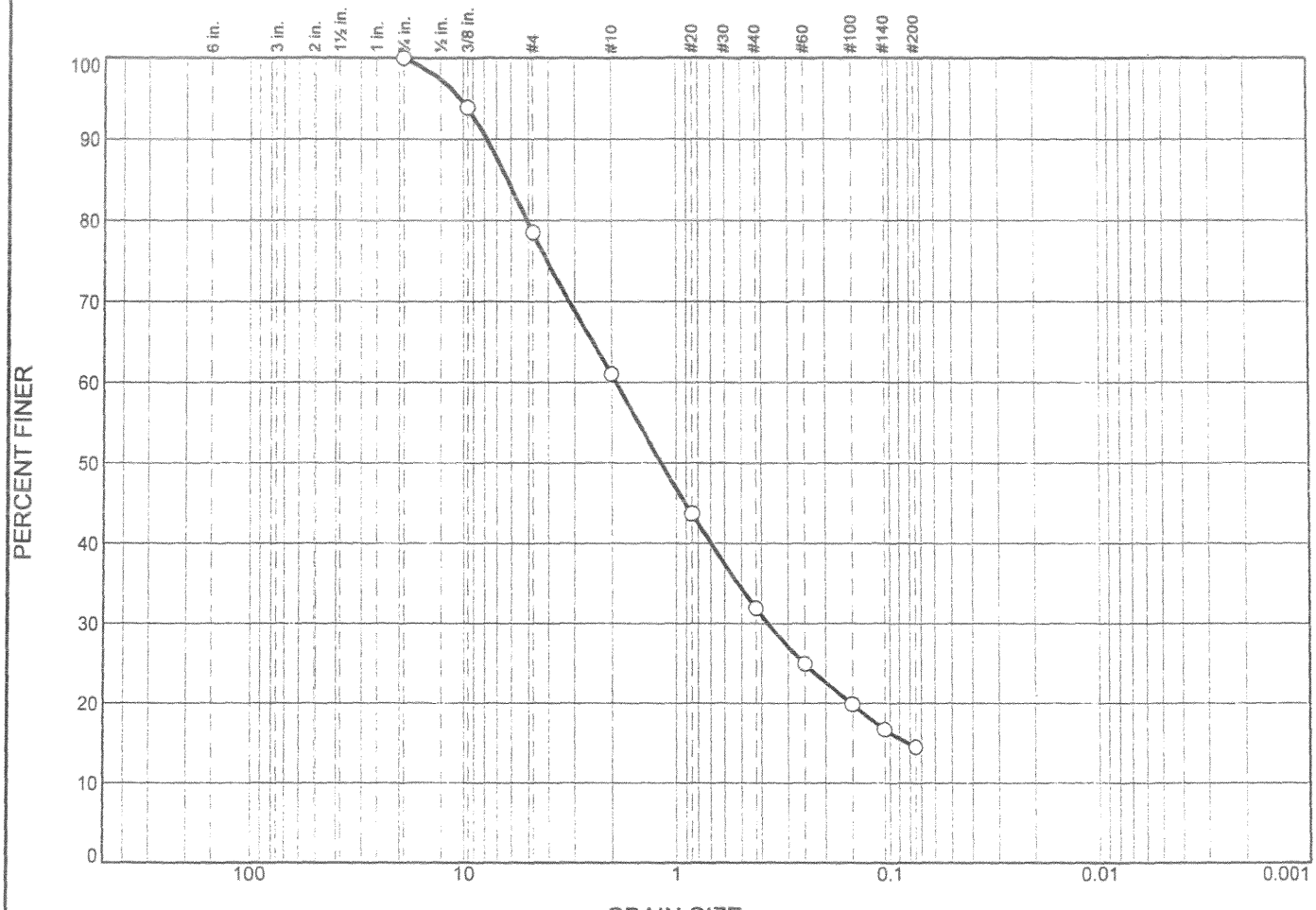
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 21.5 | 17.5 | 29.1 | 17.4 | 14.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_C$ | $C_U$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.2268 | 1.8989 | 1.1658 | 0.3721 | 0.0819 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB231 **Depth:** 8.5'-10.0' **Sample Number:** CB231

**Remarks:**

○ Moisture Content % 16.8 CP05-EAARS-CB-0329

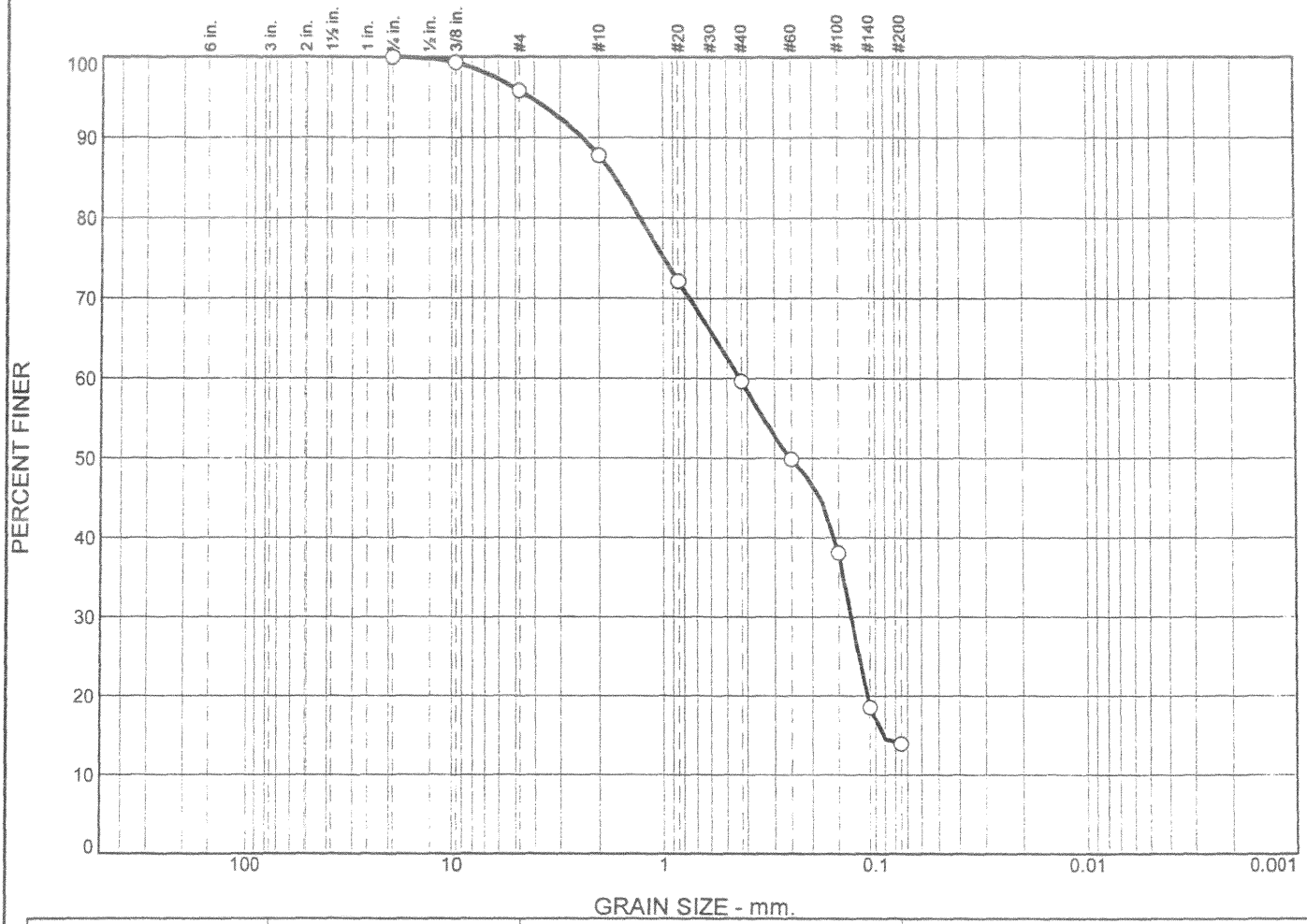
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 4.2 | 8.0 | 28.1 | 45.7 | 14.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.6785 | 0.4322 | 0.2521 | 0.1305 | 0.0926 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB231 **Depth:** 13.5'-15.0' **Sample Number:** CB231

**Remarks:**
○ Moisture Content % 22.0 CP05-EAARS-CB-0329

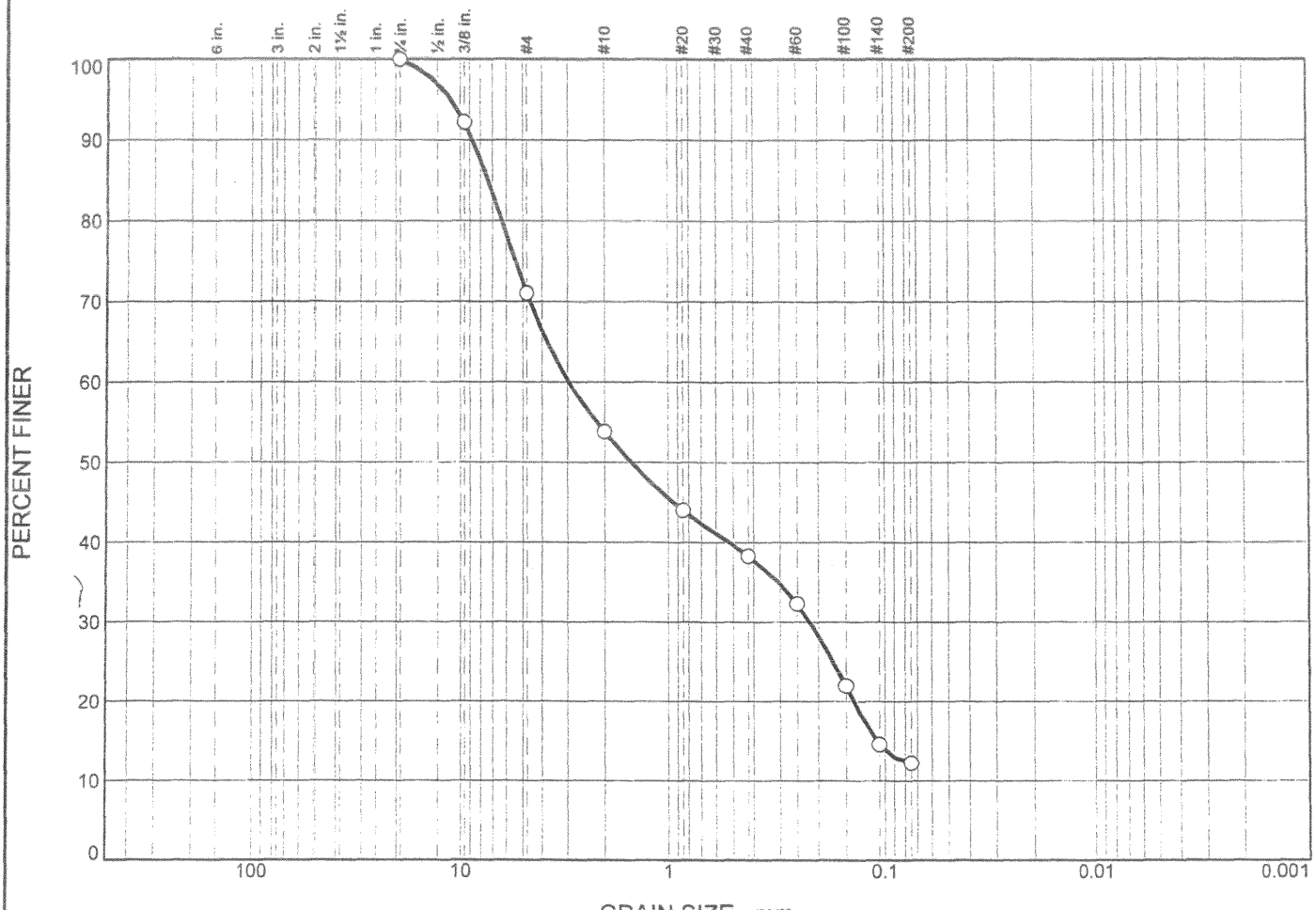
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 28.9 | 17.3 | 15.5 | 26.0 | 12.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.3318 | 2.9564 | 1.4925 | 0.2181 | 0.1089 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB231 **Depth:** 18.5'-20.0 **Sample Number:** CB231

**Remarks:**
○ Moisture Content % 13.0 CP05-EAARS-CB-0329

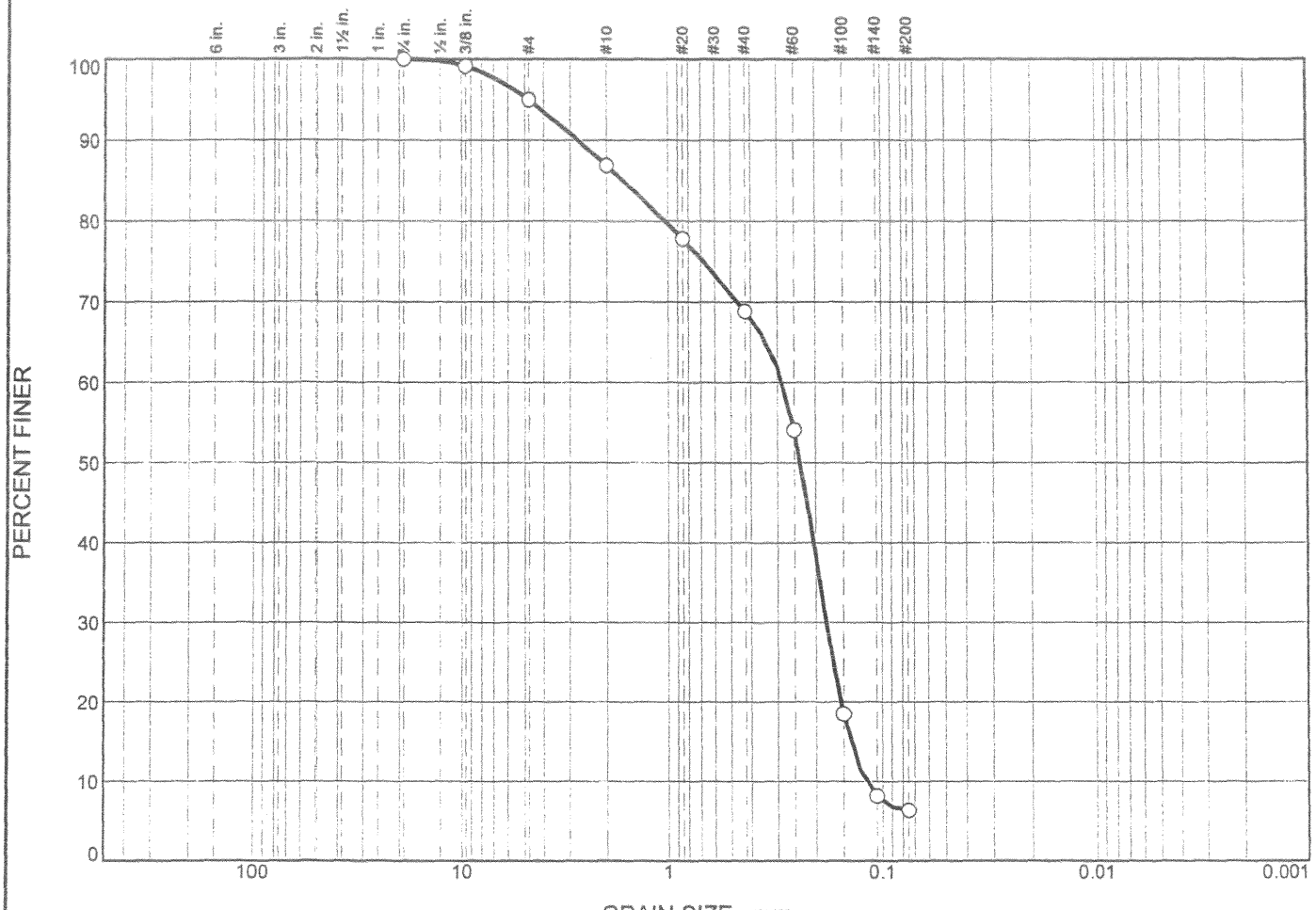
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 5.0 | 8.1 | 18.1 | 62.5 | 6.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.6571 | 0.2831 | 0.2339 | 0.1787 | 0.1394 | 0.1185 | 0.95 | 2.39 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB231 **Depth:** 23.5'-25.0 **Sample Number:** CB231

**Remarks:**

○ Moisture Content % 25.6 CP05-EAARS-CB-0329

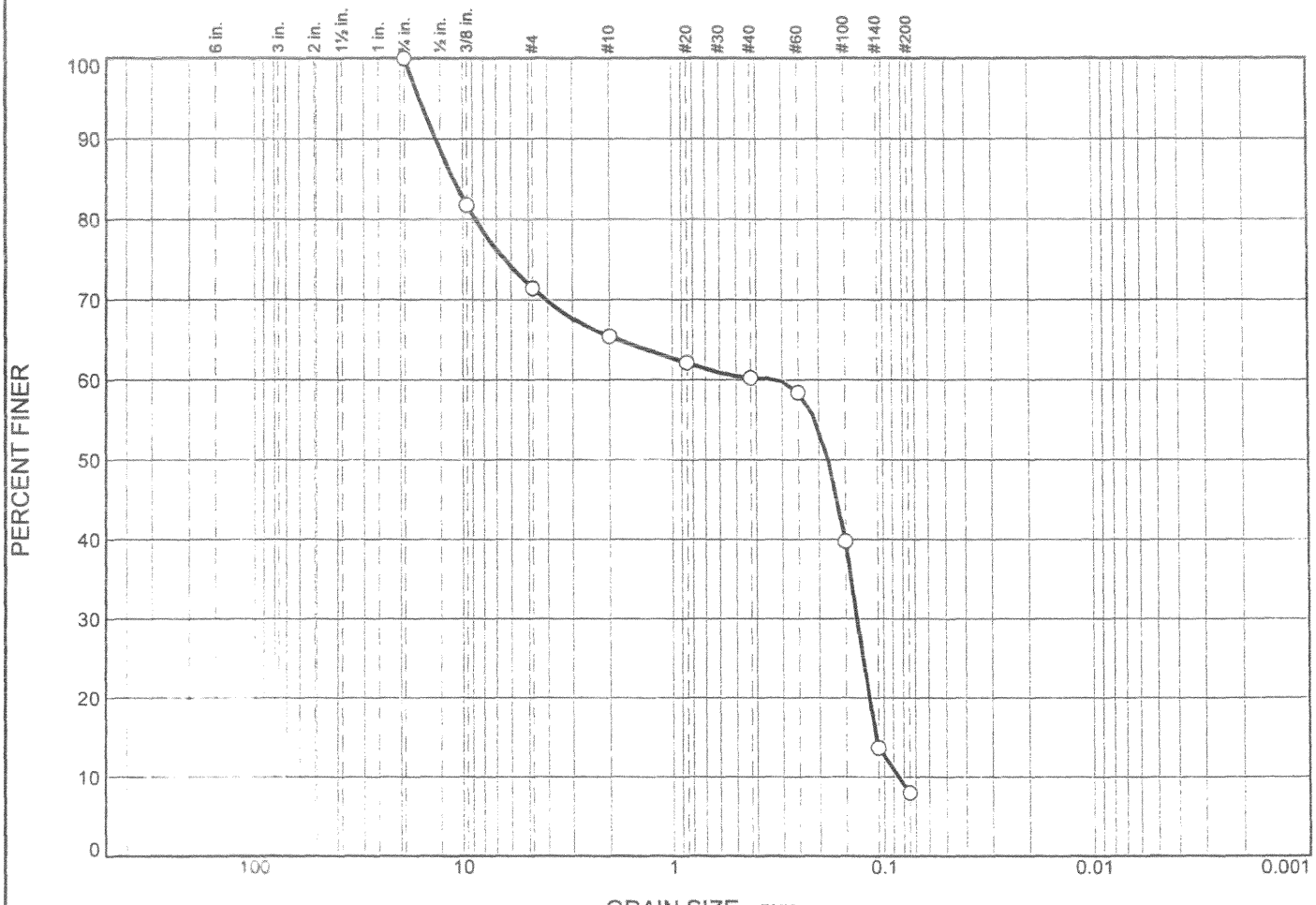
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 28.6 | 6.0 | 5.2 | 52.2 | 8.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 10.9857 | 0.3136 | 0.1797 | 0.1326 | 0.1086 | 0.0846 | 0.66 | 3.70 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded fine sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB231 **Depth:** 33.5'-35.0 **Sample Number:** CB231

**Remarks:**

○ Moisture Content % 15.7 CP05-EAARS-CB-0329

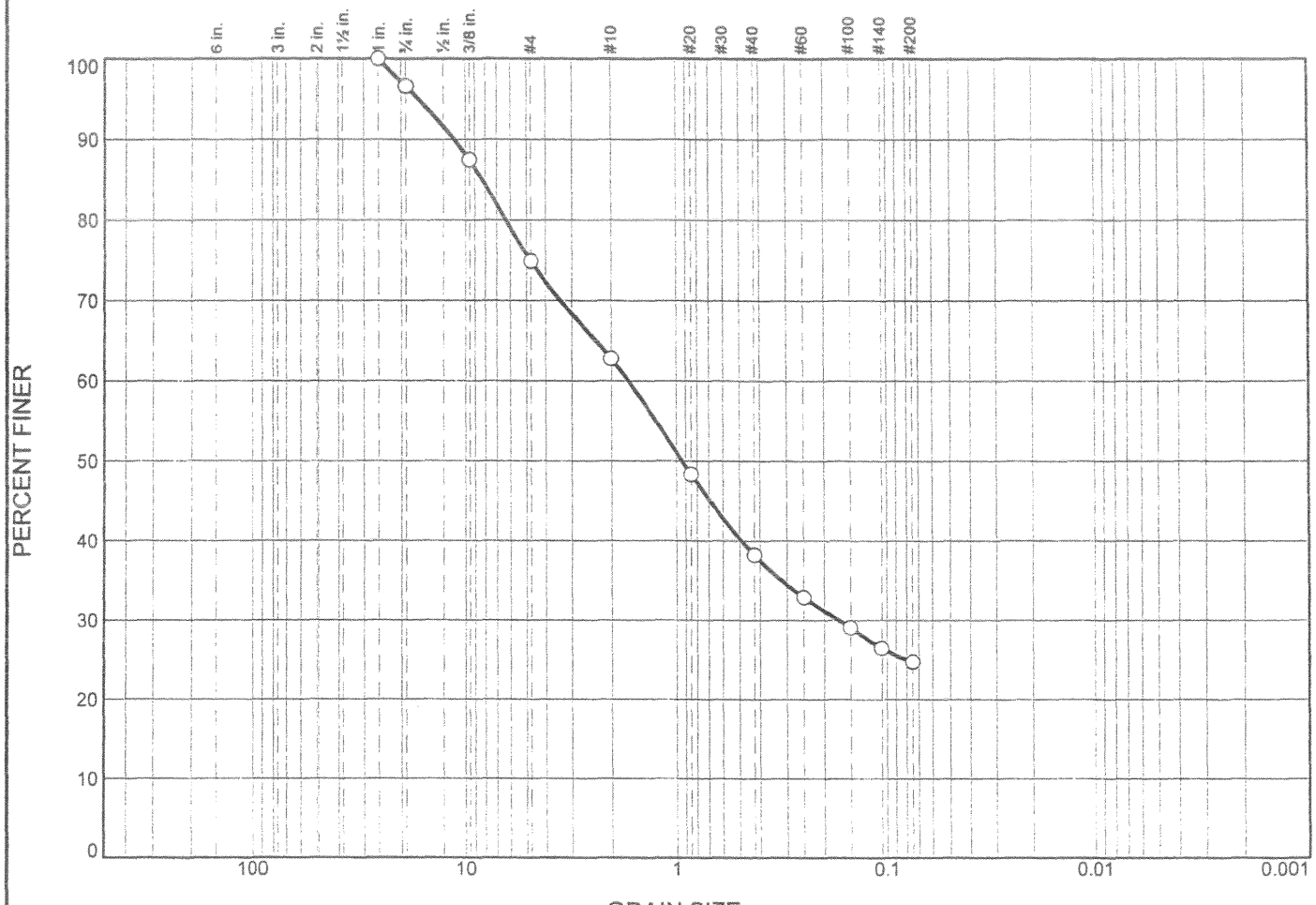
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 3.4 | 21.7 | 12.1 | 24.6 | 13.4 | 24.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.2515 | 1.6704 | 0.9373 | 0.1693 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB235 **Depth:** 8.5'-10.0 **Sample Number:** CB235

**Remarks:**
○ Moisture Content % 24.4 CP05-EAARS-CB-0333

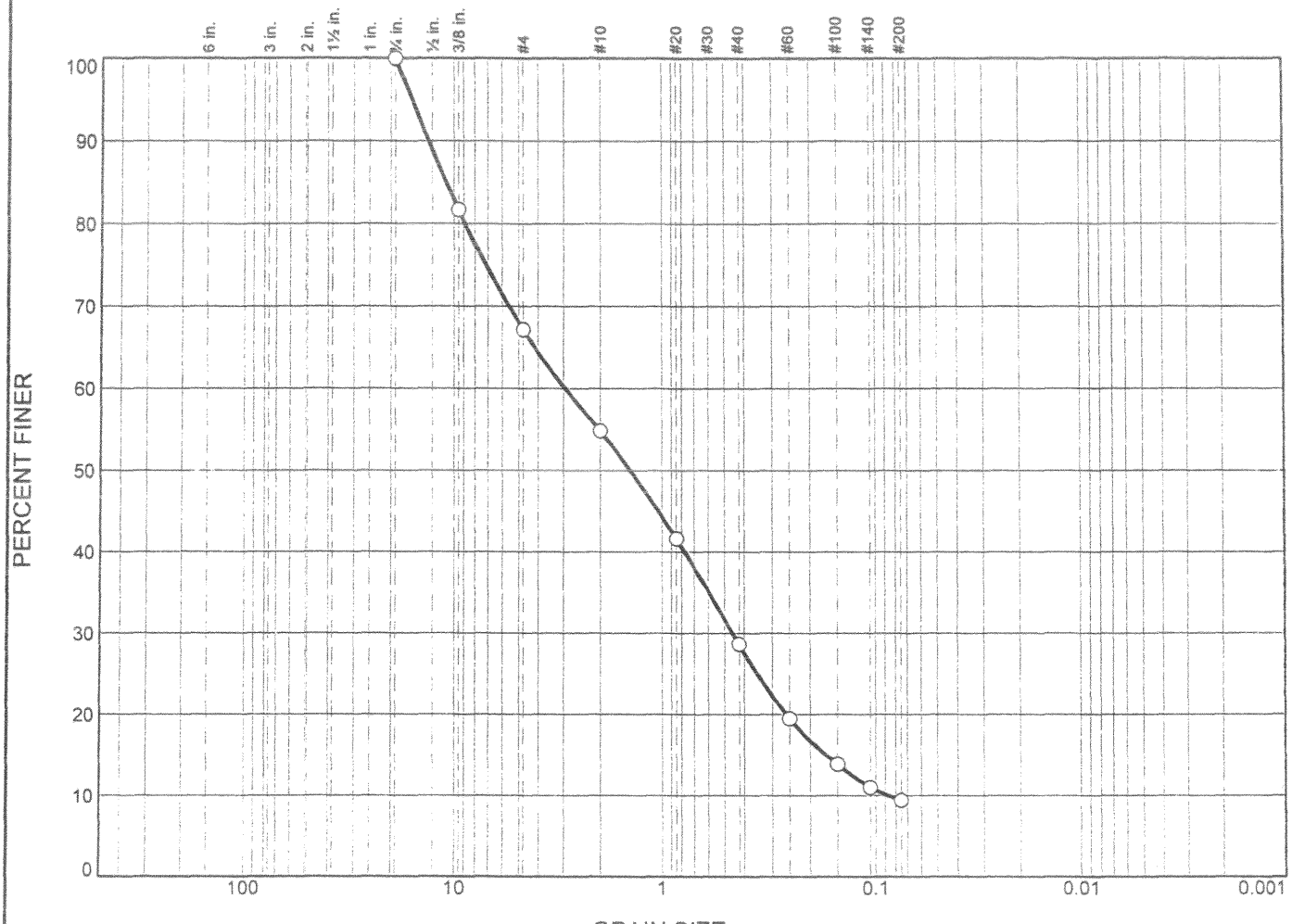
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 32.8 | 12.4 | 26.1 | 19.3 | 9.4 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 10.8848 | 2.9453 | 1.4254 | 0.4559 | 0.1689 | 0.0866 | 0.81 | 33.99 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB248 **Depth:** 10.0'-11.5 **Sample Number:** CB248

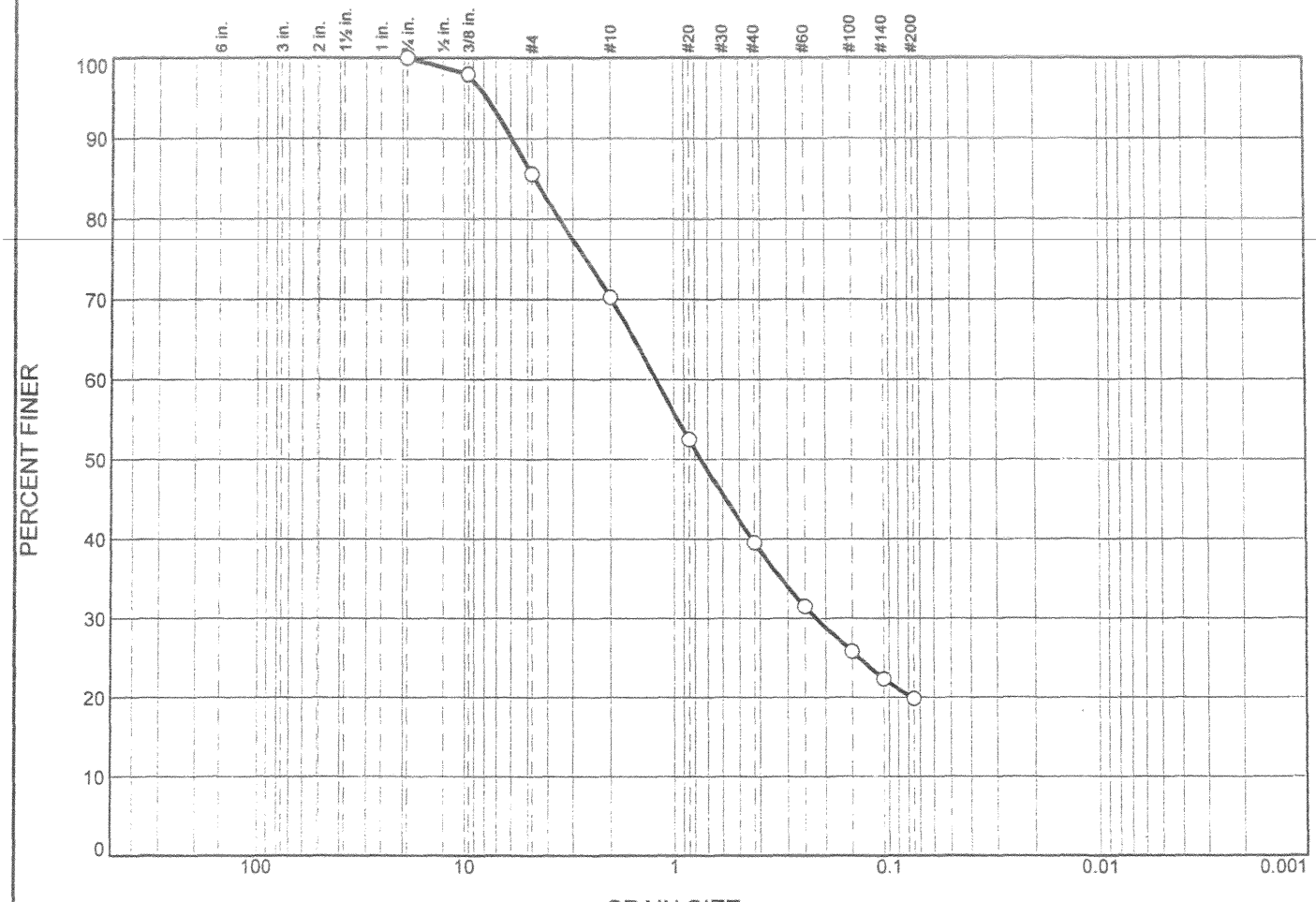
**Remarks:**

○ Moisture Content %10.1 CP05-EAARS-CB-0346

Nodarse & Associates, Inc.

Miami Lakes, FL

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 14.4 | 15.3 | 30.7 | 19.7 | 19.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.6041 | 1.2124 | 0.7504 | 0.2212 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB260 **Depth:** 13.0'-13.5 **Sample Number:** CB260

**Remarks:**

○ Moisture Content % 20.6 CP05-EAARS-CB-0358

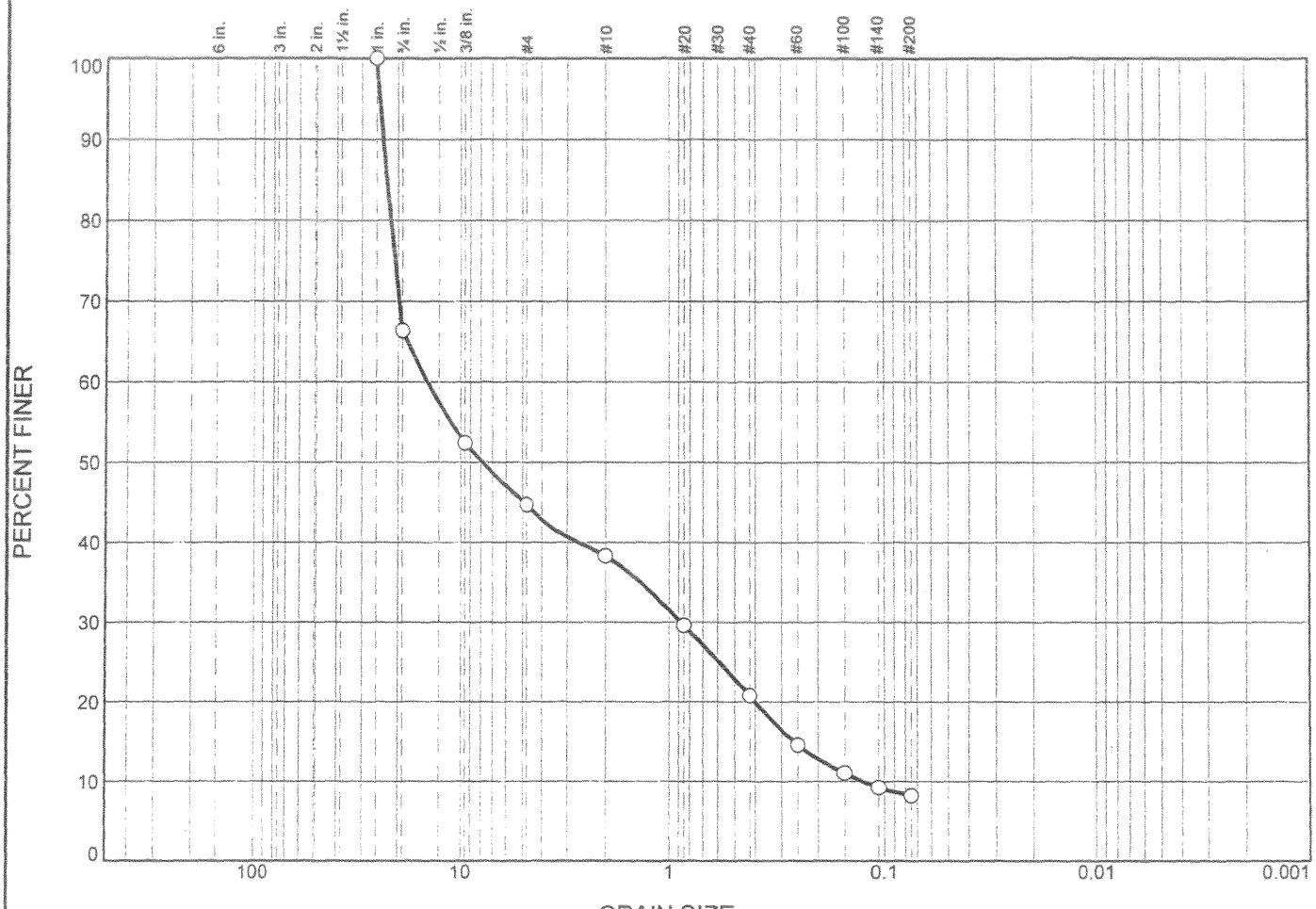
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 33.6 | 21.7 | 6.4 | 17.5 | 12.6 | 8.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 22.6245 | 14.3998 | 7.8074 | 0.8766 | 0.2614 | 0.1242 | 0.43 | 115.97 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded gravel with silt and sand | GP-GM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB262 **Depth:** 8.5'-10.0 **Sample Number:** CB262

**Remarks:**

○ Moisture Content % 25.6 CP05-EAARS-CB-0360

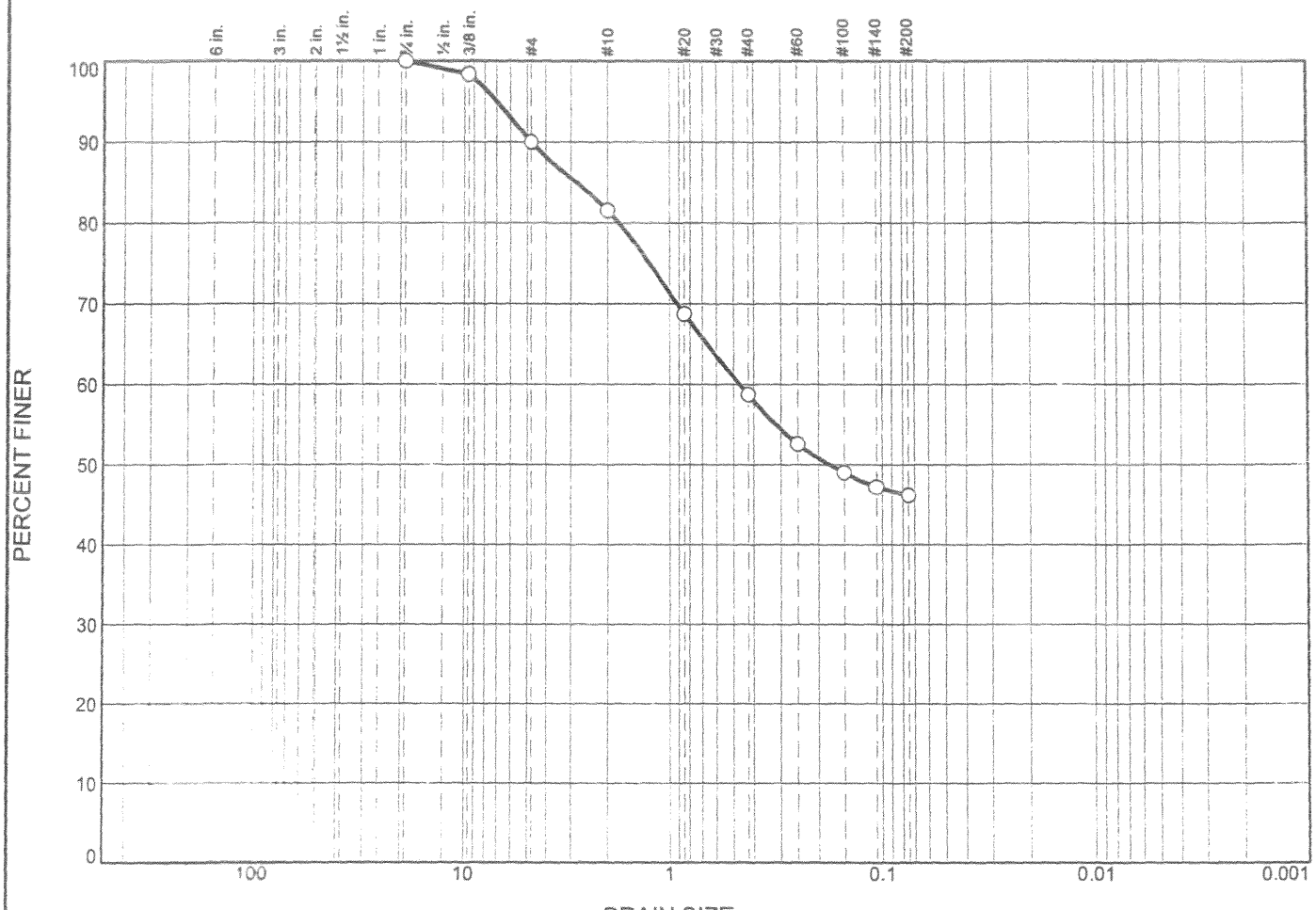
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K.Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 10.0 | 8.4 | 22.8 | 12.6 | 46.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.8203 | 0.4664 | 0.1766 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB262 **Depth:** 13.5'-15.0' **Sample Number:** CB262

**Remarks:**
○ Moisture Content % 31.4 CP05-EAARS-CB-0360

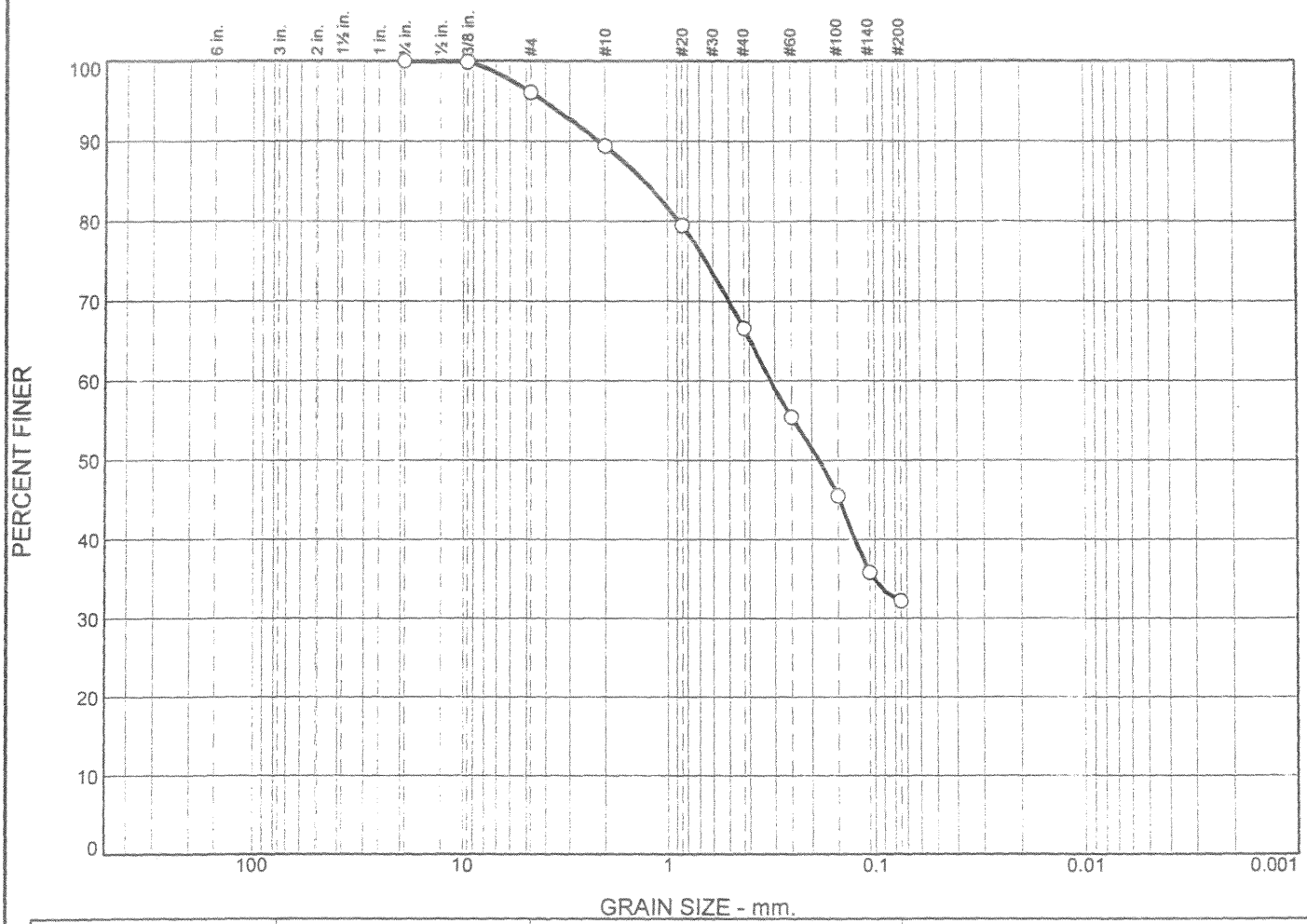
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 3.9 | 6.7 | 22.8 | 34.4 | 32.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.2941 | 0.3140 | 0.1833 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB262 **Depth:** 18.5'-20.0 **Sample Number:** CB262

**Remarks:**
○ Moisture Content % 24.2 CP05-EAARS-CB-0360

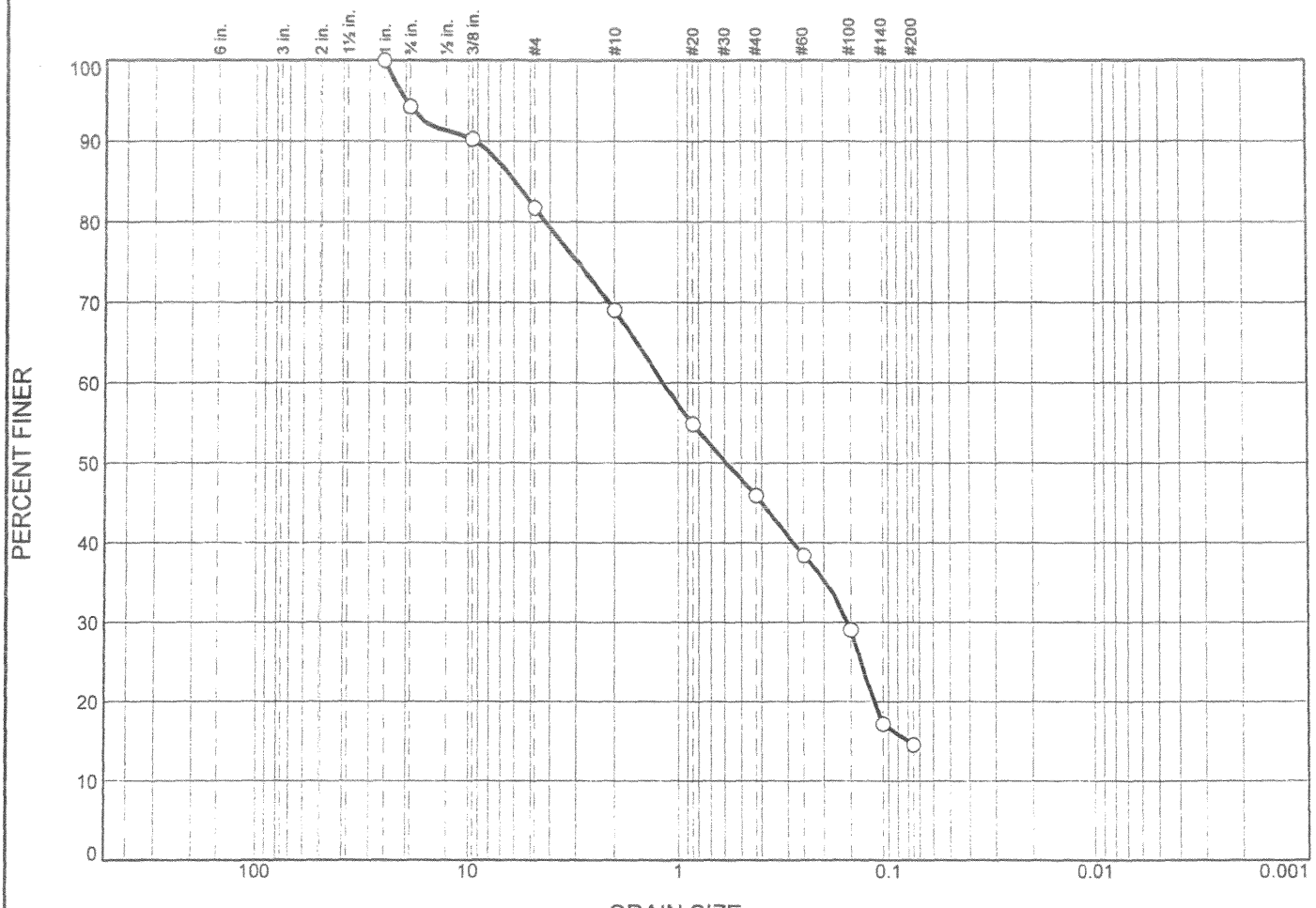
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 5.7 | 12.5 | 12.7 | 23.2 | 31.4 | 14.5 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.9210 | 1.1761 | 0.5855 | 0.1547 | 0.0796 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB262 **Depth:** 23.5'-25.0 **Sample Number:** CB262

**Remarks:**
○ Moisture Content % 21.9 CP05-EAARS-CB-0360

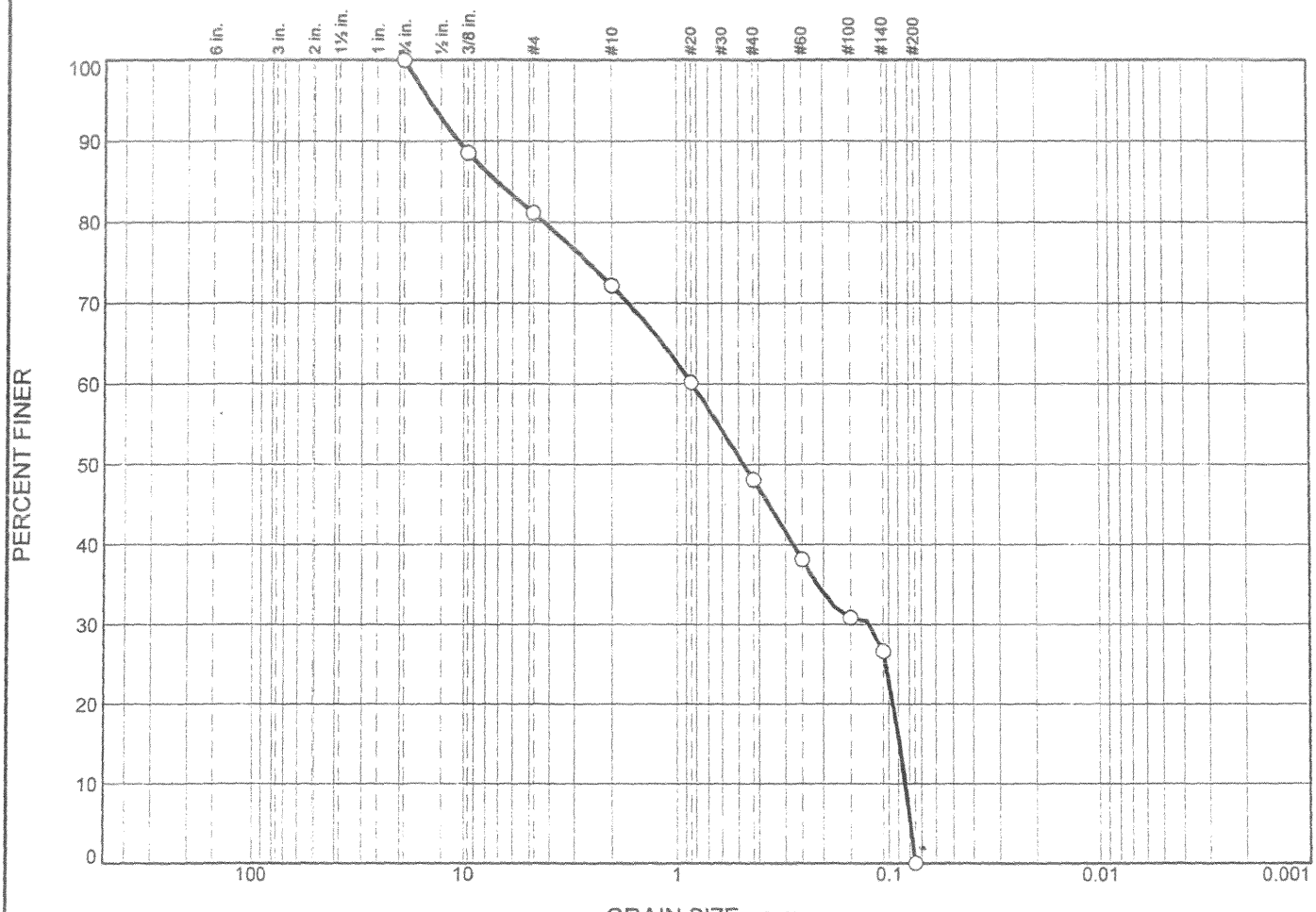
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 18.8 | 9.0 | 24.1 | 48.1 | 0.0 | 0.0 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 7.0631 | 0.8402 | 0.4709 | 0.1204 | 0.0886 | 0.0836 | 0.21 | 10.06 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with gravel | SP | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 0.0'-1.5' **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 10.1 CP05-EAARS-CB-0365

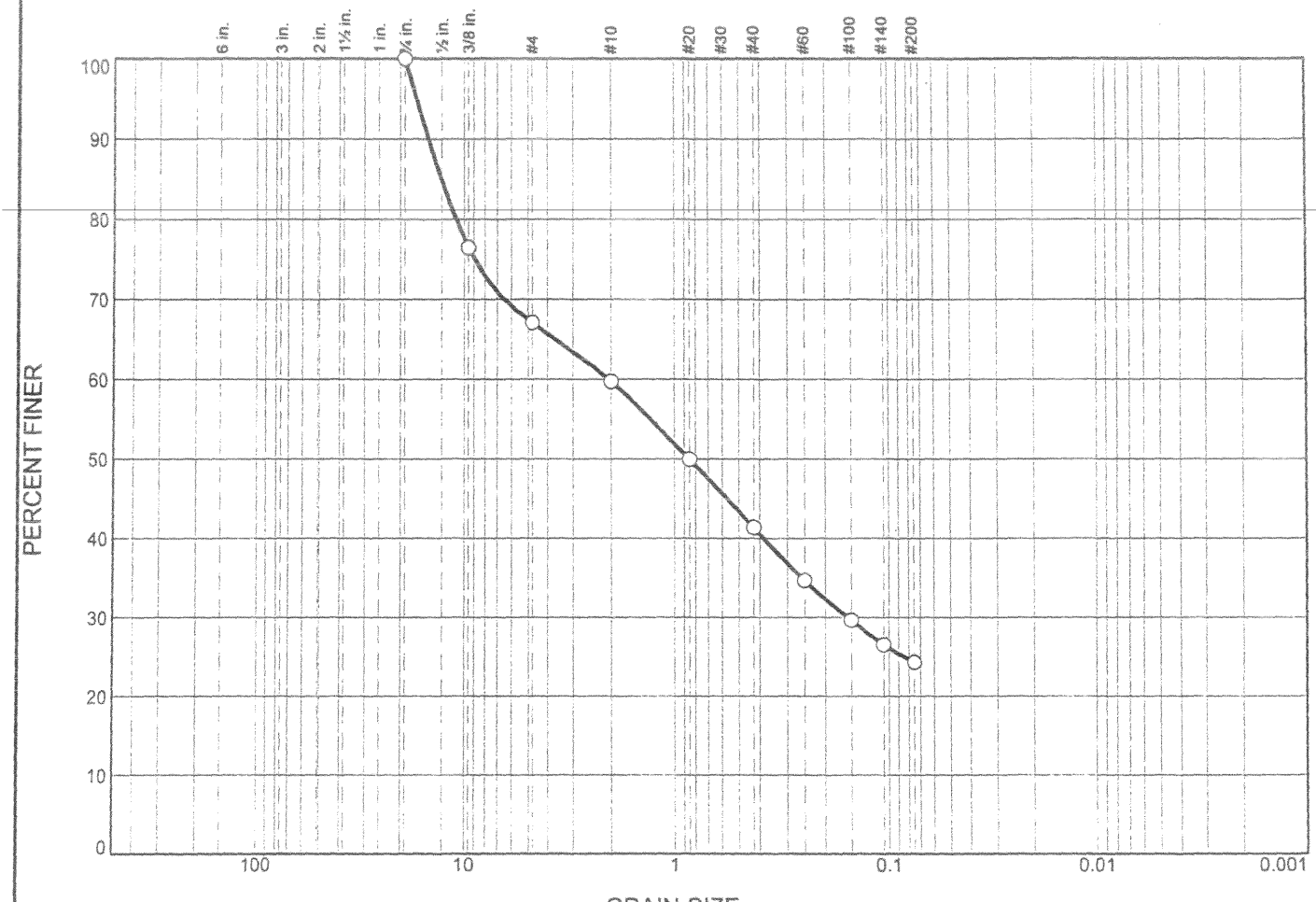
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K.Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 32.9 | 7.3 | 18.4 | 17.1 | 24.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 12.7439 | 2.0512 | 0.8540 | 0.1557 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 1.5'-3.0' **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 12.9 CP05-EAARS-CB-0365

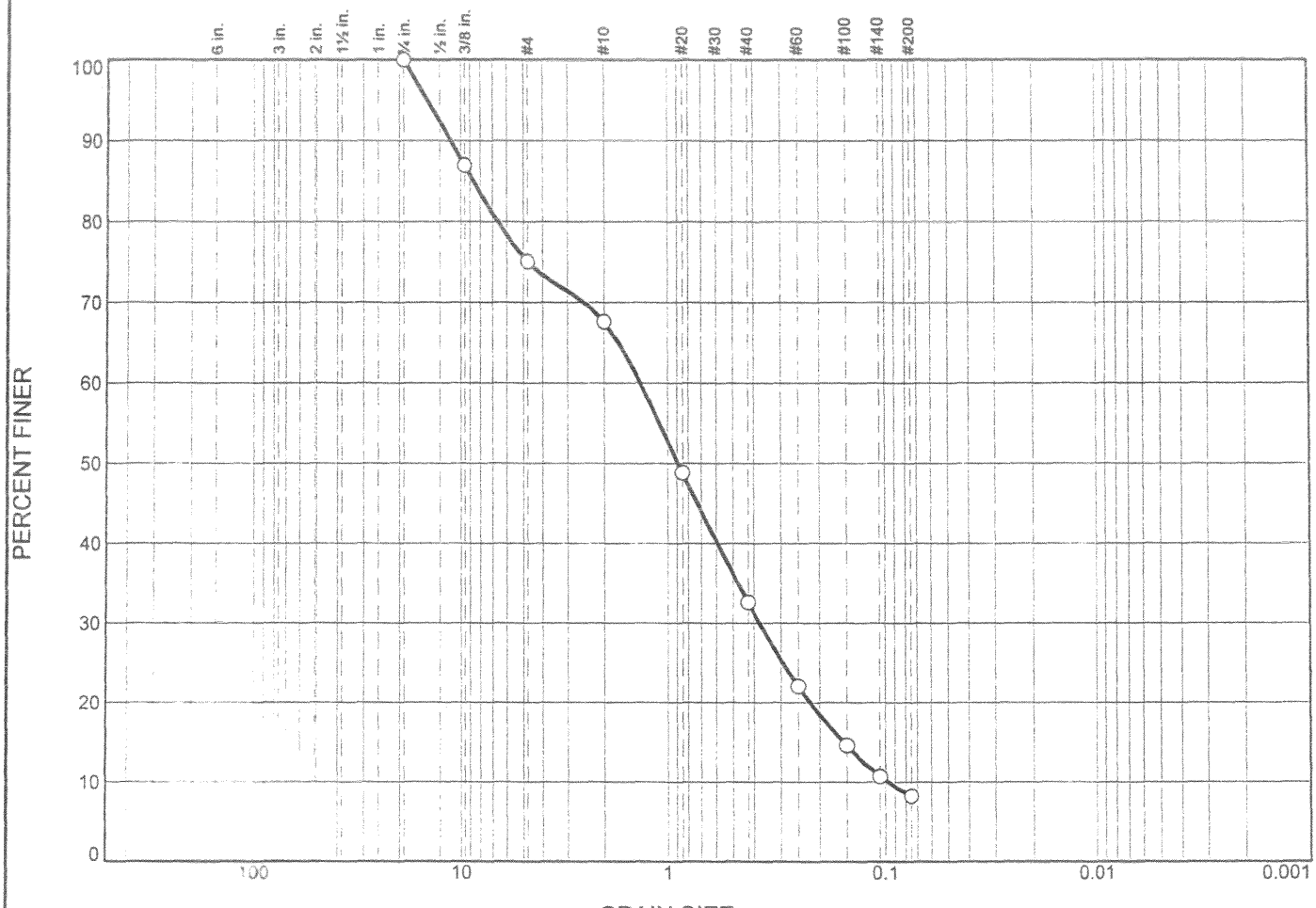
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 24.9 | 7.5 | 35.0 | 24.4 | 8.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.6202 | 1.3374 | 0.8908 | 0.3760 | 0.1545 | 0.0975 | 1.08 | 13.71 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 3.5'-5.0 **Sample Number:** CB268

**Remarks:**
○ Moisture Content % 87.5 CP05-EAARS-CB-0365

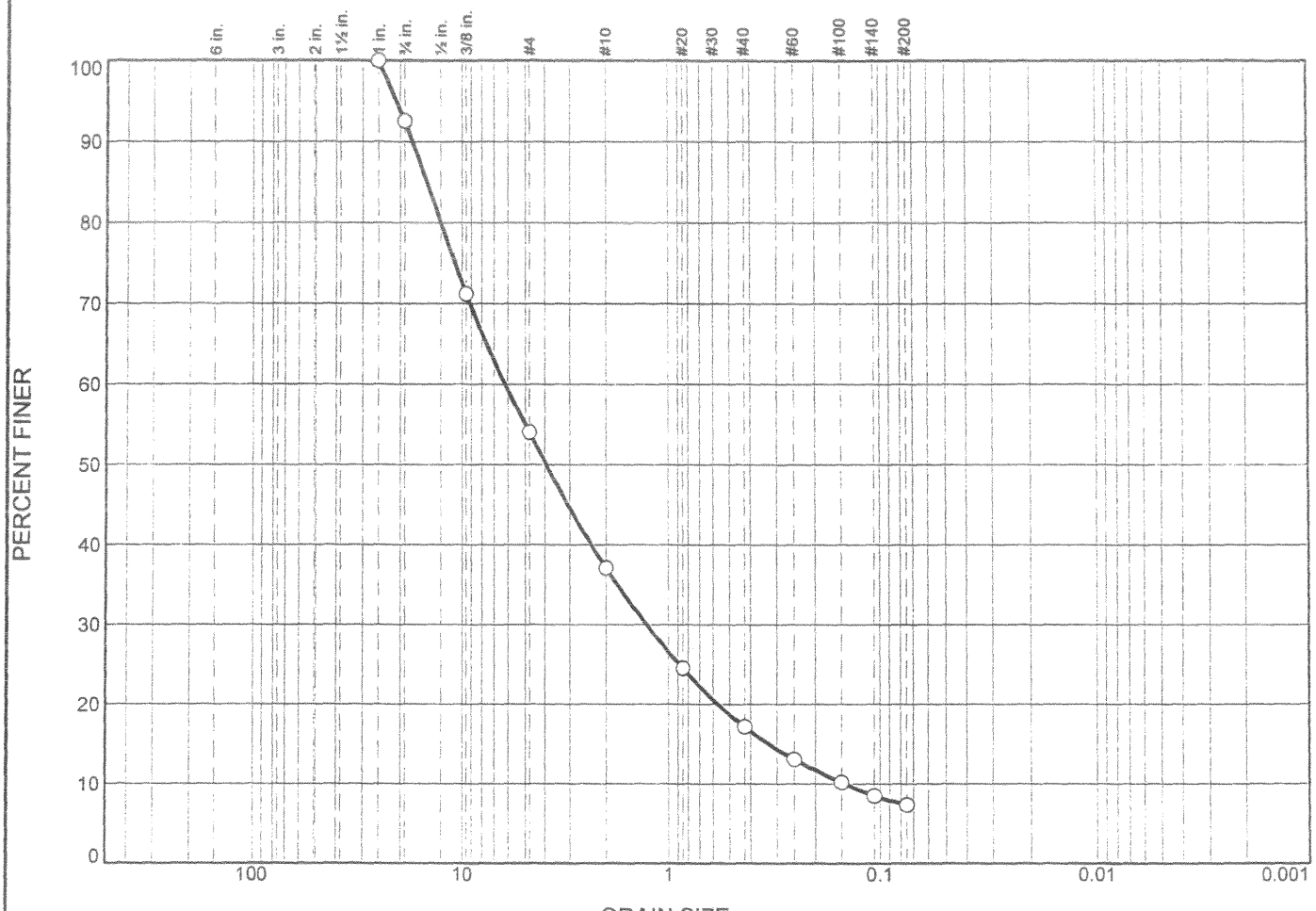
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 7.4 | 38.5 | 17.0 | 19.9 | 9.8 | 7.4 | |

| X | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.8118 | 6.1887 | 3.9230 | 1.2769 | 0.3276 | 0.1446 | 1.82 | 42.80 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 5.0'-6.5 **Sample Number:** CB268

**Remarks:**
○Moisture Content % 12.8 CP05-EAARS-CB-0365

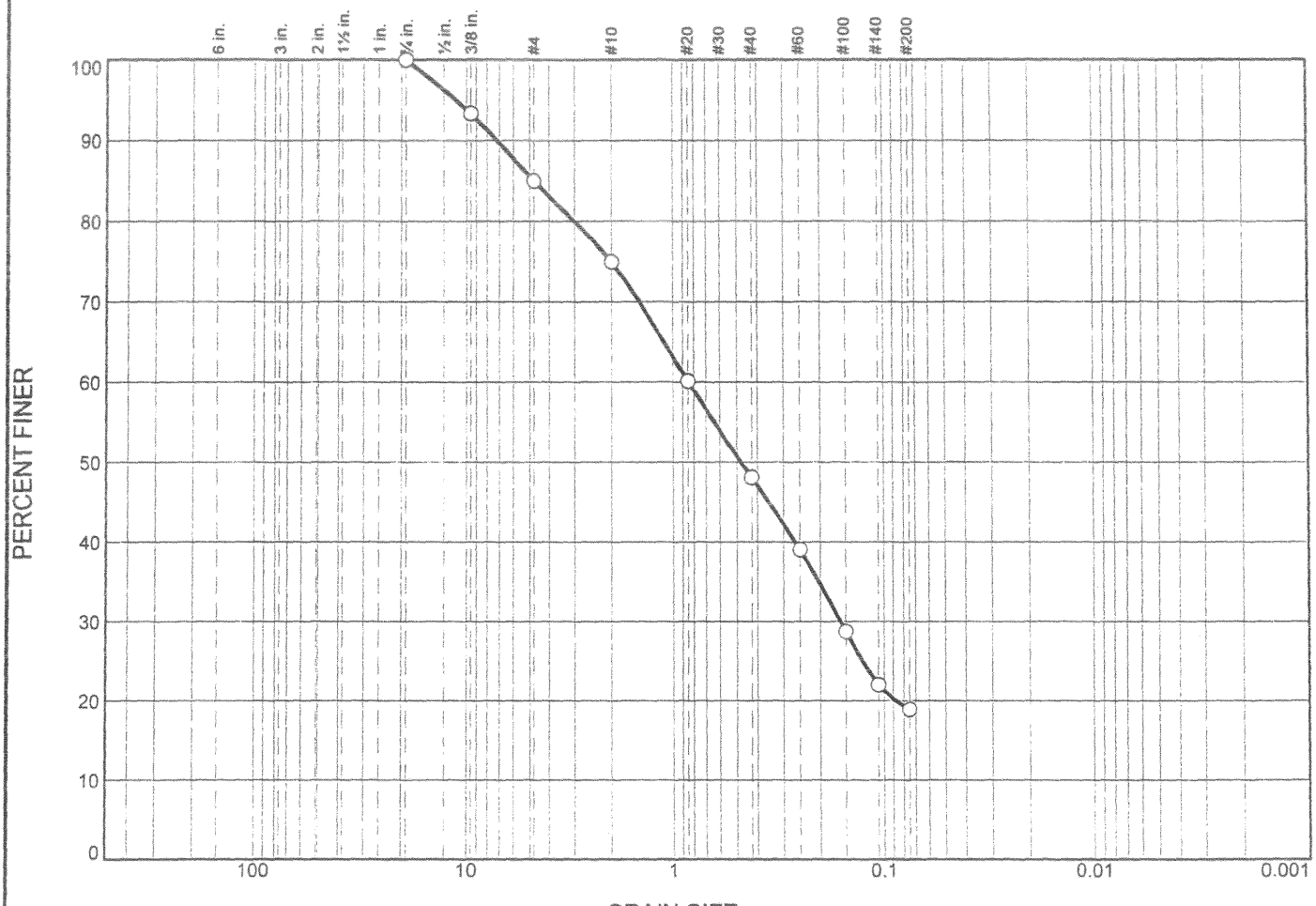
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 15.0 | 10.0 | 26.9 | 29.2 | 18.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 4.7460 | 0.8429 | 0.4759 | 0.1589 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 11.5'-13.0 **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 29.3 CP05-EAARS-CB-0365

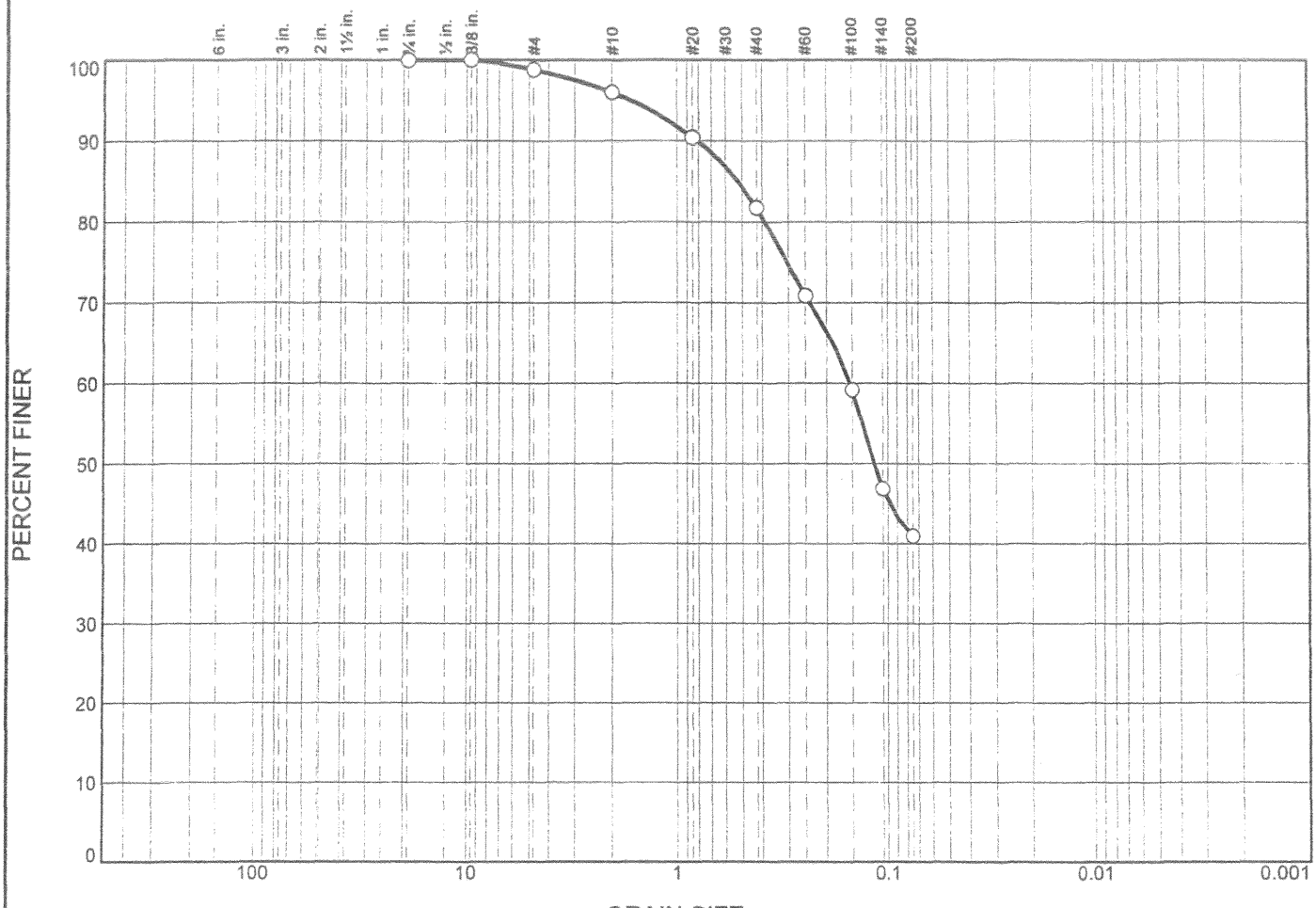
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 1.2 | 2.8 | 14.2 | 40.8 | 41.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.5194 | 0.1536 | 0.1167 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 18.5'-22.0' **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 23.0 CP05-EAARS-CB-0365

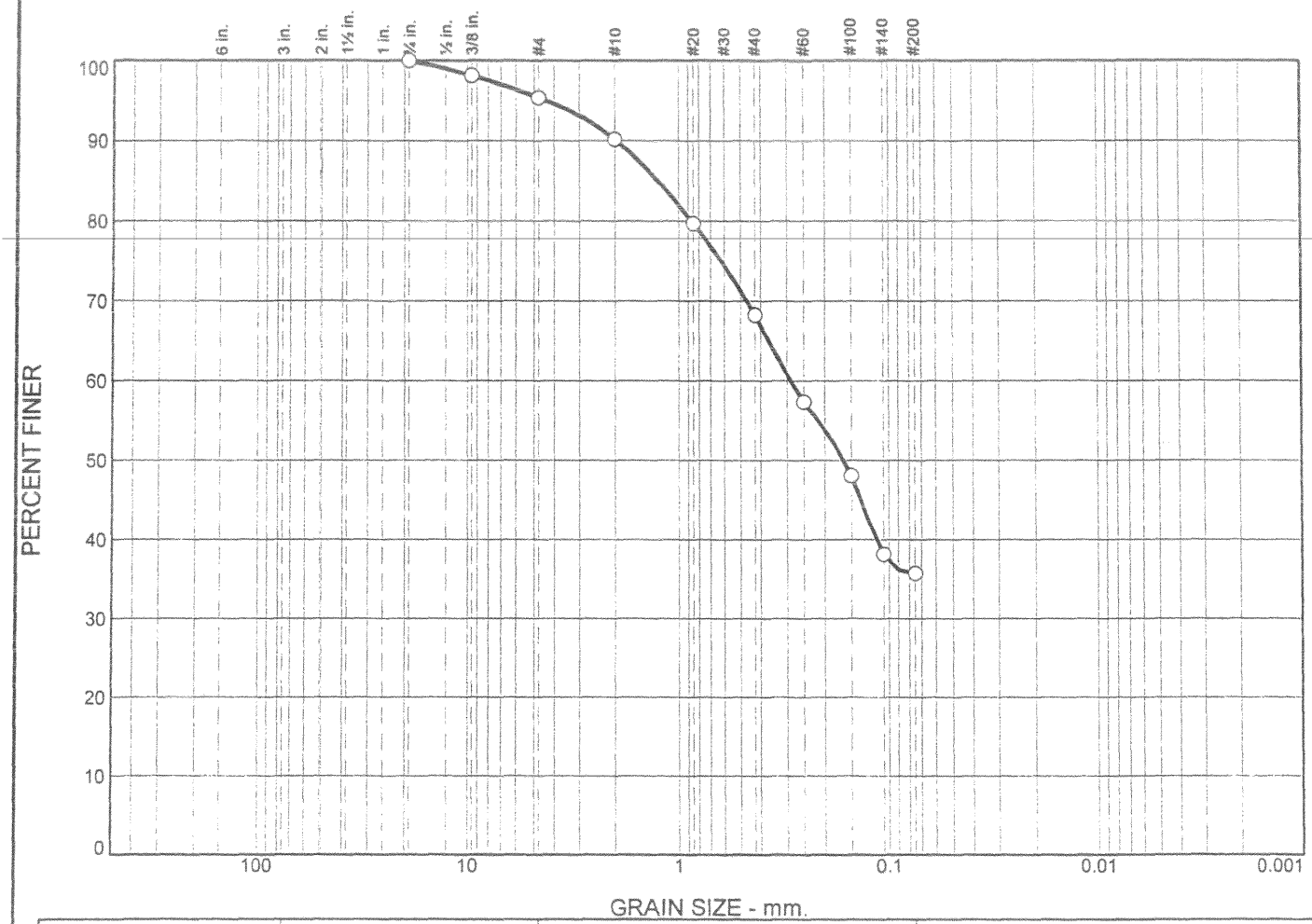
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolock Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 4.6 | 5.2 | 21.9 | 32.6 | 35.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.2520 | 0.2875 | 0.1620 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 23.5'-25.0 **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 22.5 CP05-EAARS-CB-0365

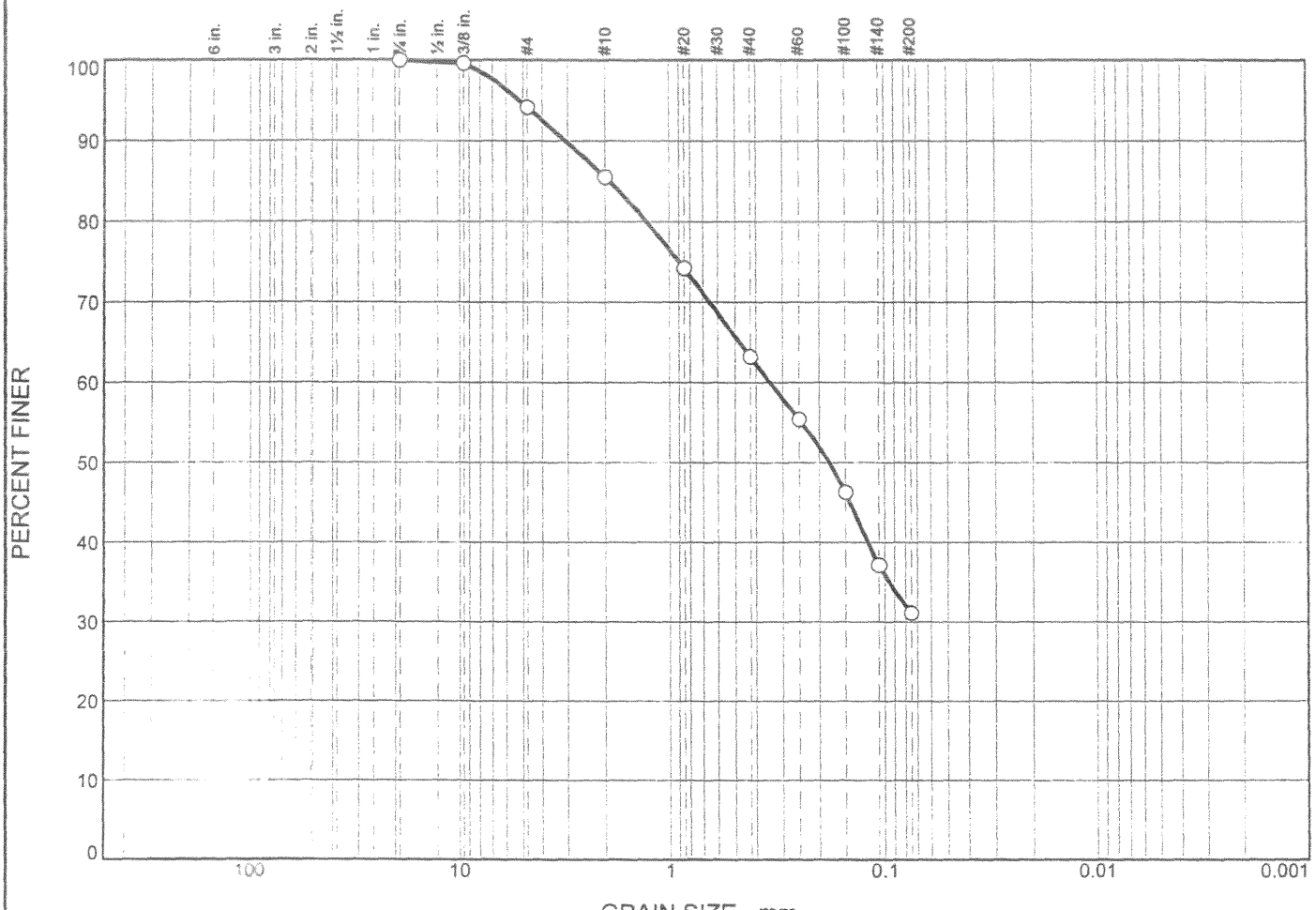
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolocki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 5.8 | 8.7 | 22.3 | 32.1 | 31.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.9072 | 0.3429 | 0.1781 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 28.5'-30.0 **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 20.5 CP05-EAARS-CB-0365

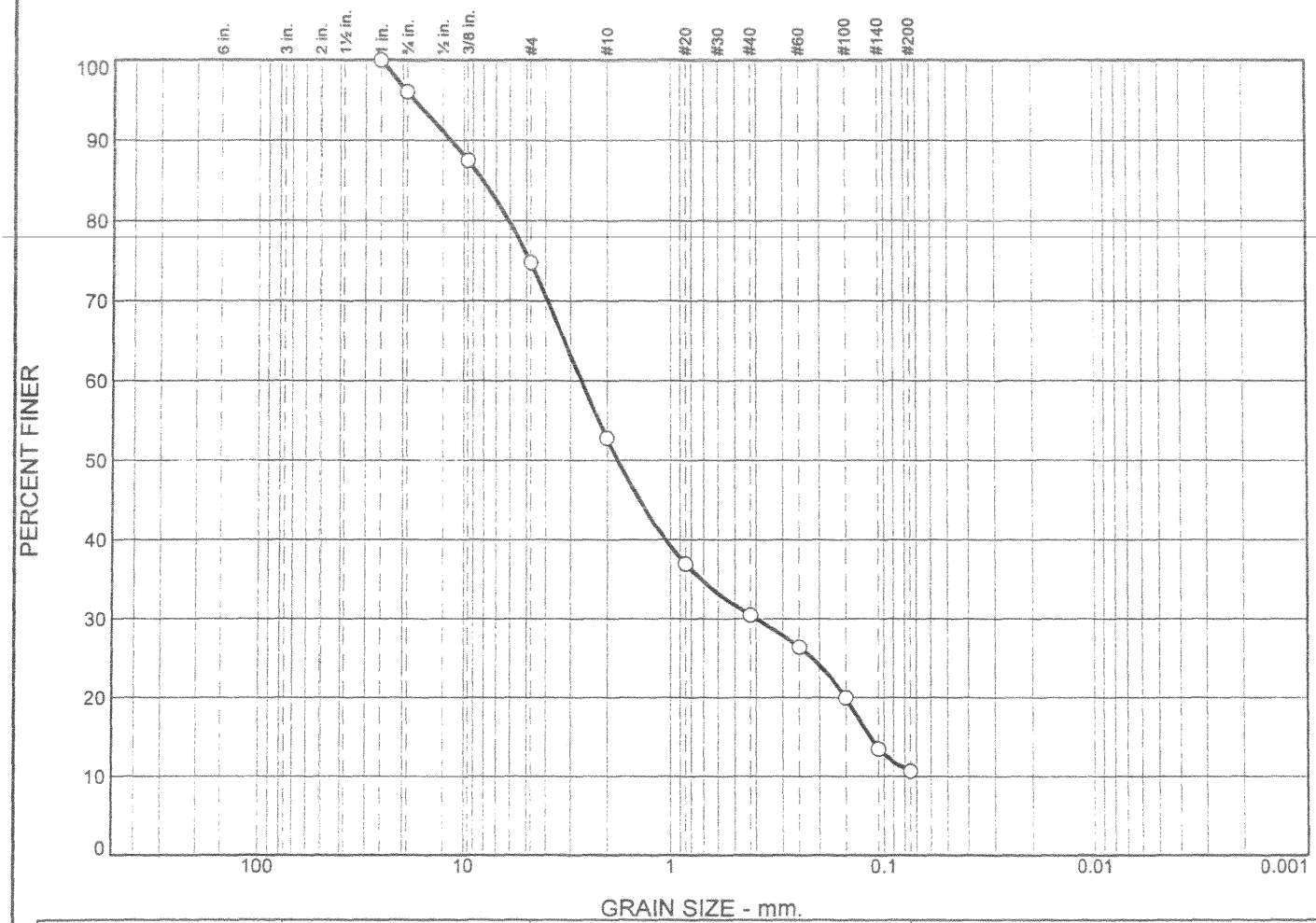
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 3.9 | 21.3 | 22.0 | 22.3 | 19.8 | 10.7 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.0526 | 2.6581 | 1.7733 | 0.3977 | 0.1161 | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-sm | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB268 **Depth:** 33.5'-35.0' **Sample Number:** CB268

**Remarks:**

○ Moisture Content % 12.9 CP05-EAARS-CB-0365

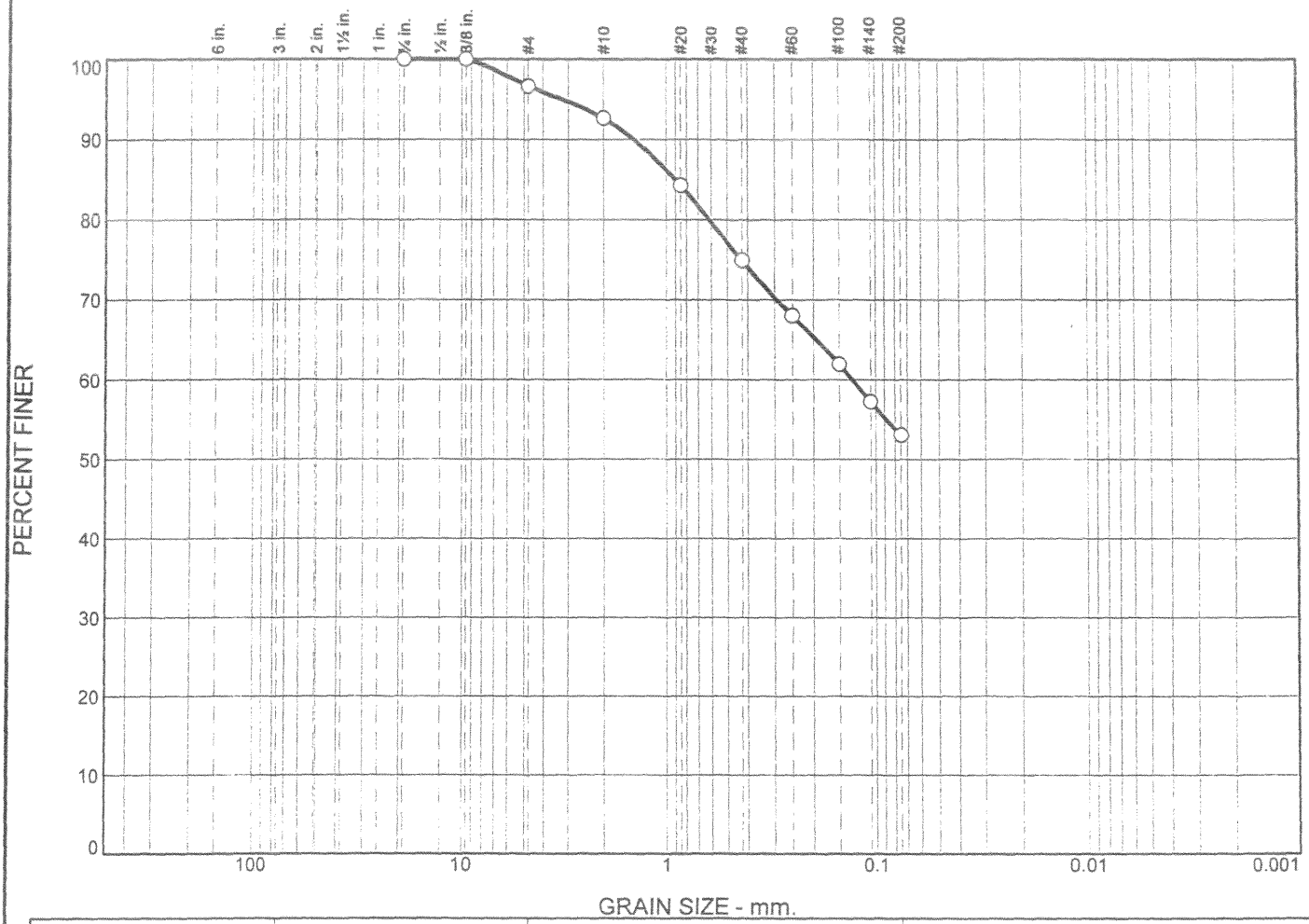
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 3.3 | 4.1 | 17.6 | 21.9 | 53.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.9016 | 0.1296 | | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Sandy silt | ML | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB276 **Depth:** 14.5'-16.0' **Sample Number:** CB276

**Remarks:**
○ Moisture Content % 19.0 CP05-EAARS-CB-0372

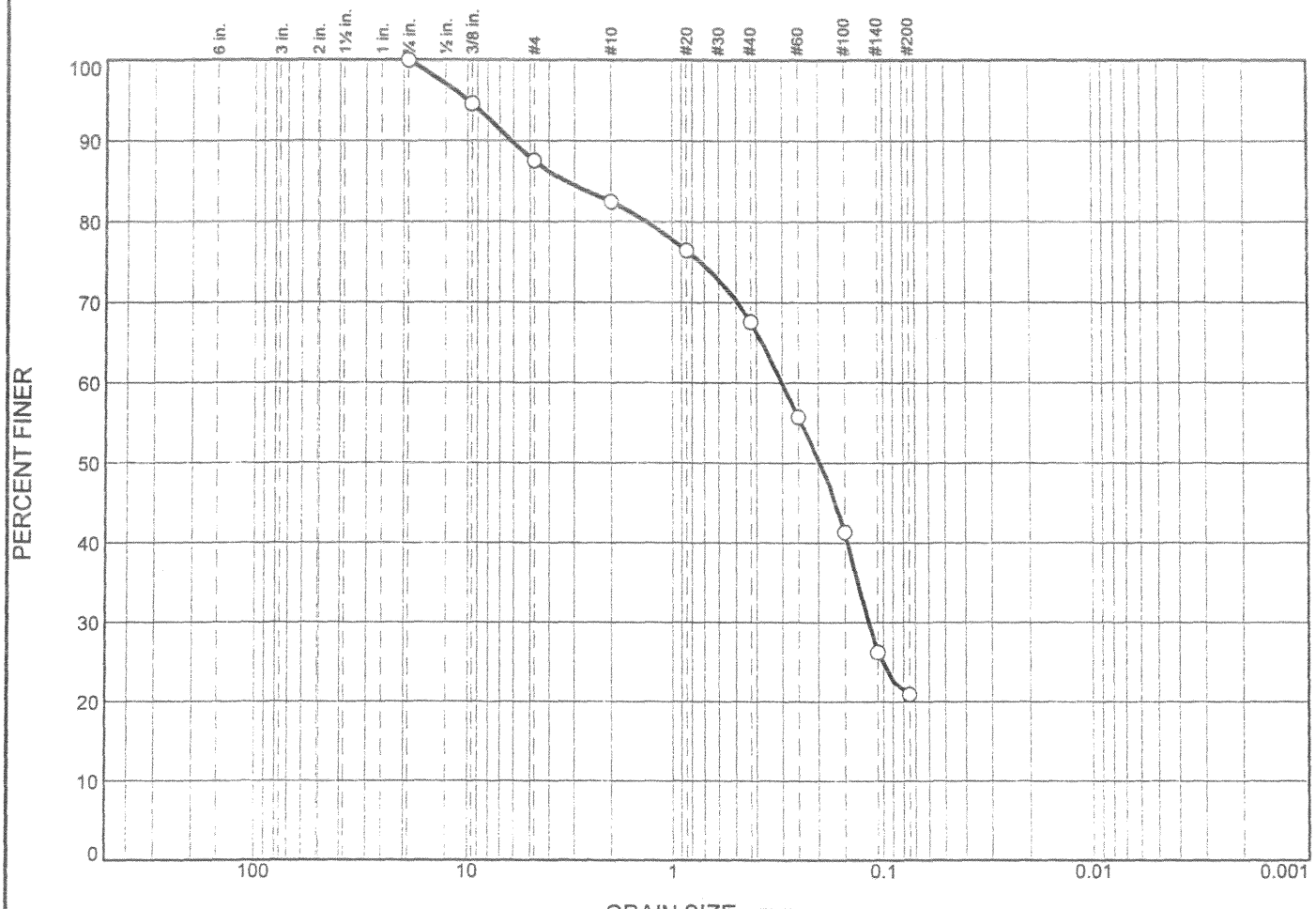
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: BOBOKI Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 12.5 | 5.0 | 14.9 | 46.7 | 20.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 3.2918 | 0.3002 | 0.1954 | 0.1170 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB277 **Depth:** 19.0'-20.5' **Sample Number:** CB277

**Remarks:**
○ Moisture Content % 24.7 CP05-EAARS-CB-0373

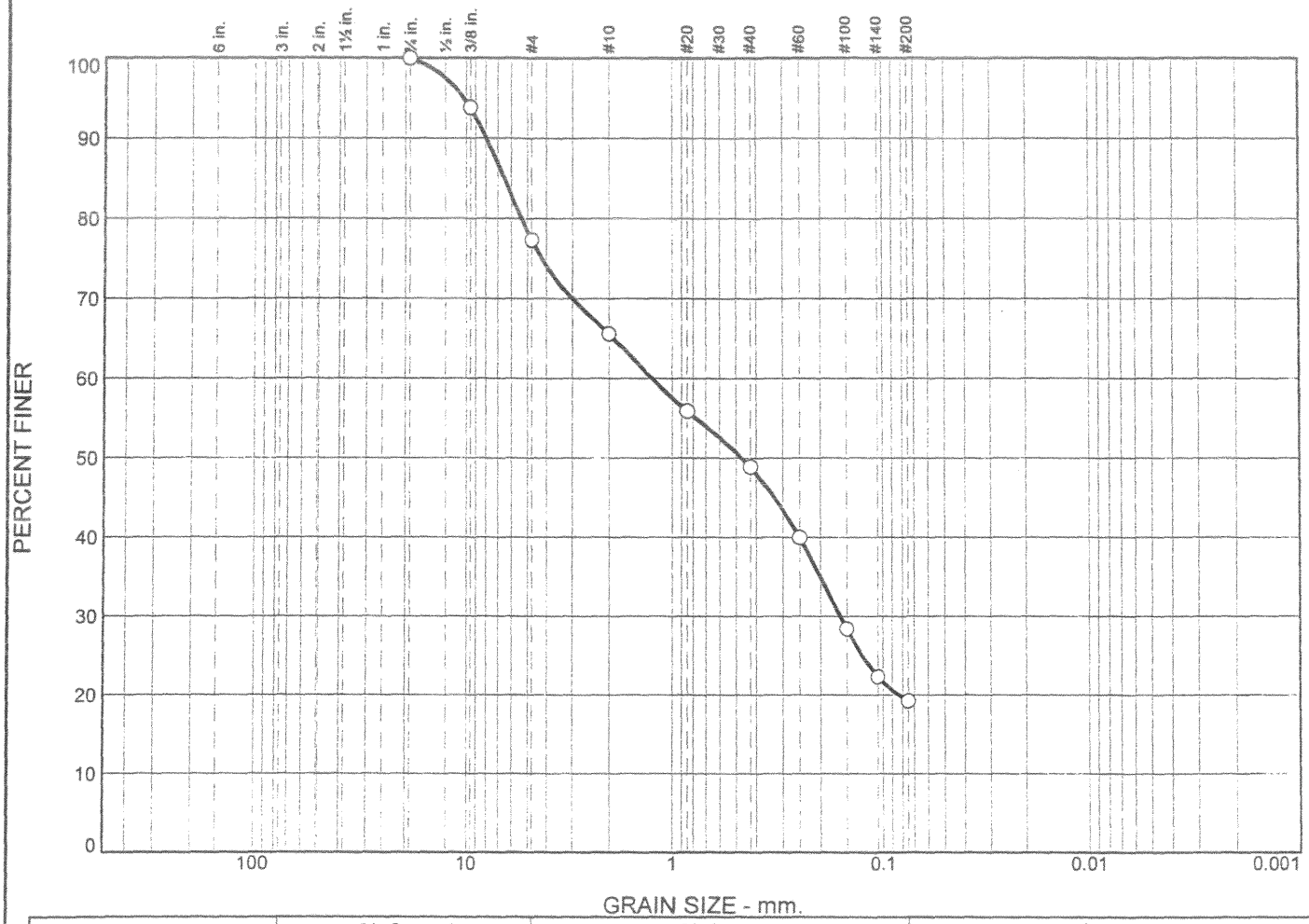
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 22.7 | 11.7 | 16.7 | 29.7 | 19.2 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.5031 | 1.2320 | 0.4654 | 0.1611 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB277 **Depth:** 29.0'-30.5' **Sample Number:** CB277

**Remarks:**

○ Moisture Content % 21.6 CP05-EAARS-CB-0373

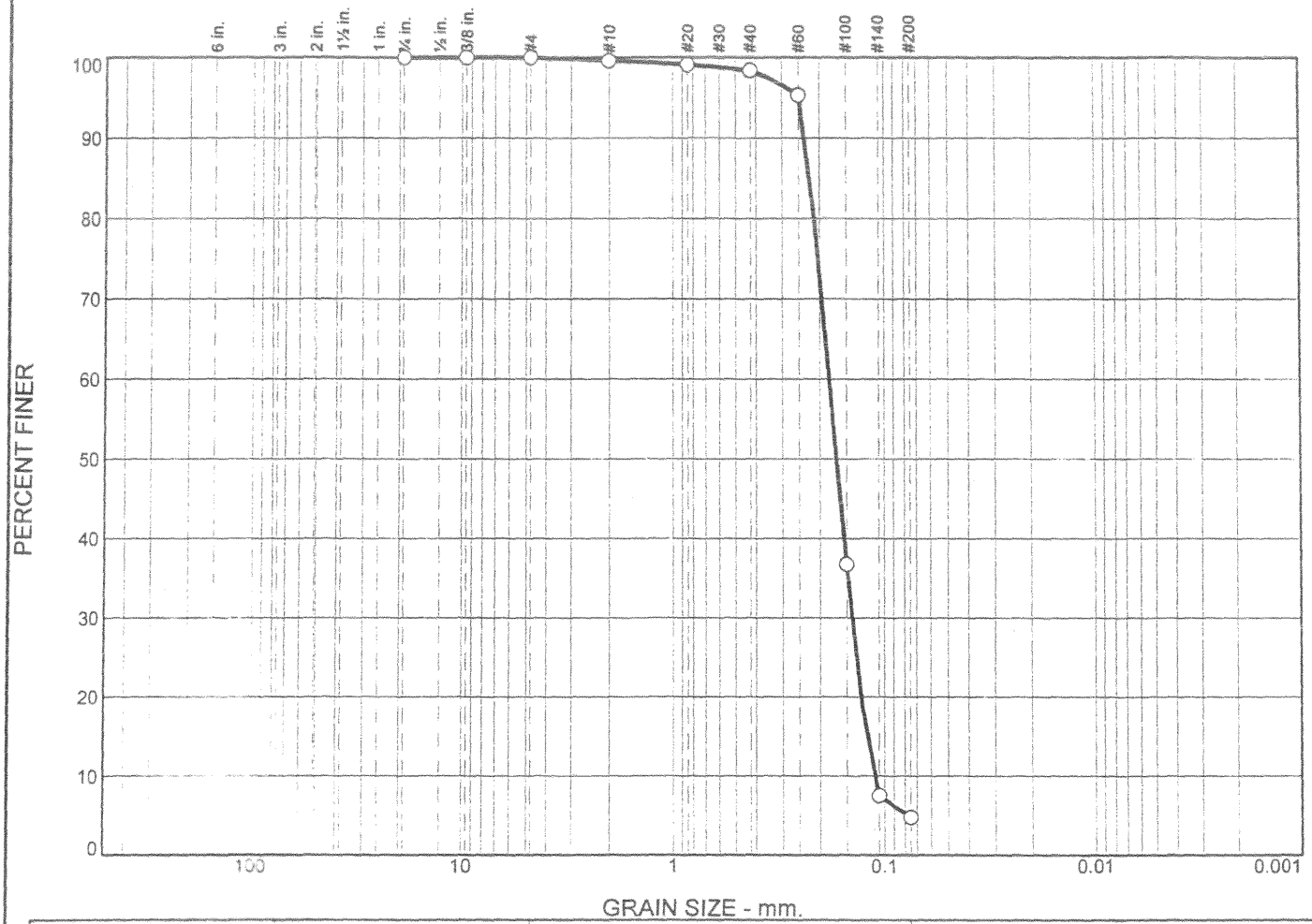
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure**

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 0.0 | 0.4 | 1.2 | 93.6 | 4.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.2214 | 0.1799 | 0.1667 | 0.1414 | 0.1204 | 0.1116 | 1.00 | 1.61 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand | sp | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB277 **Depth:** 34.0'-35.5' **Sample Number:** CB277

**Remarks:**

○ Moisture Content % 25.5 CP05-EAARS-CB-0373

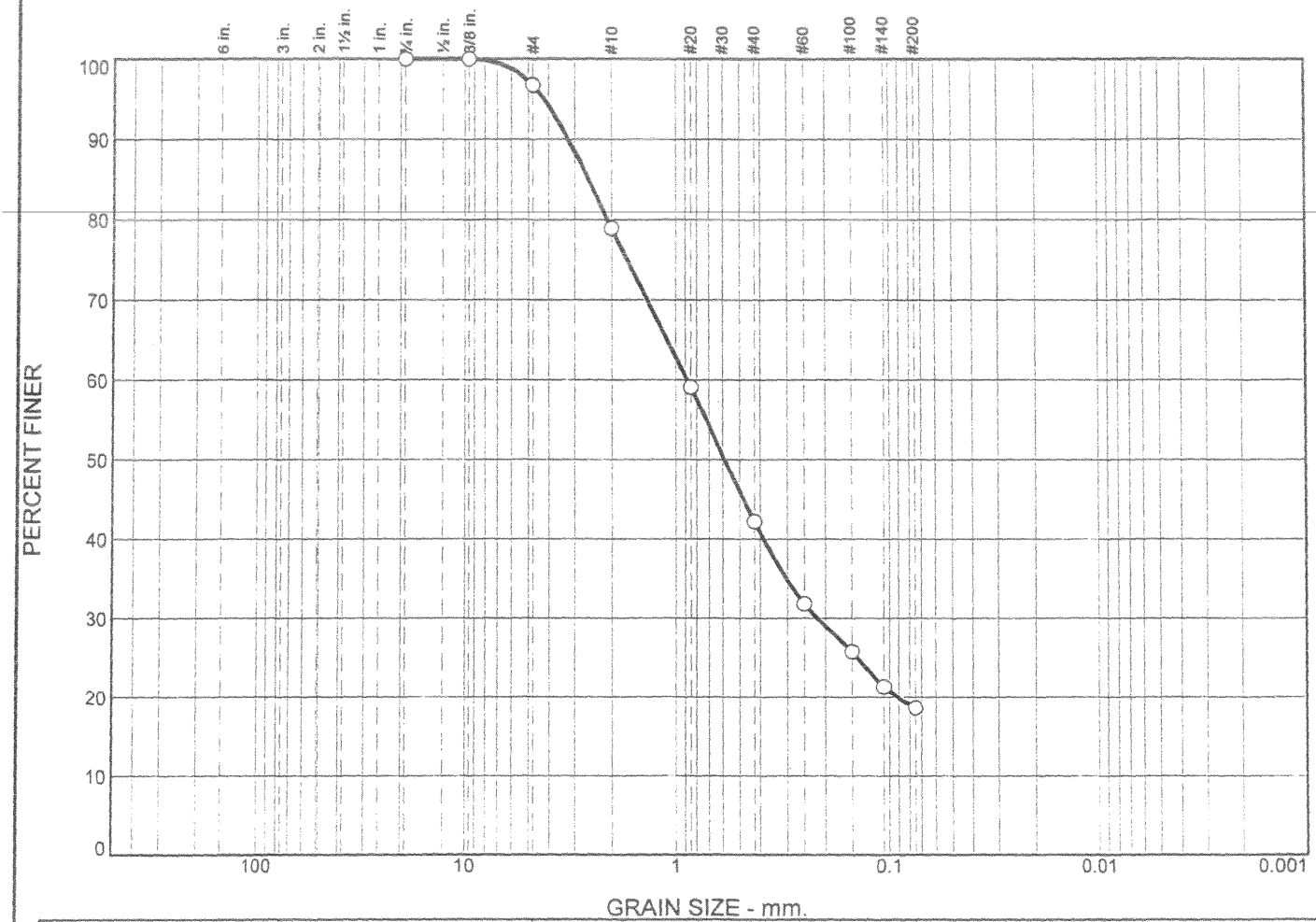
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 3.2 | 17.8 | 36.8 | 23.6 | 18.6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.5756 | 0.8822 | 0.5869 | 0.2173 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB281 **Depth:** 15.5'-17.0' **Sample Number:** CB281

**Remarks:**
○ Moisture Content %18.2 CB05-EAARS-CB-0377

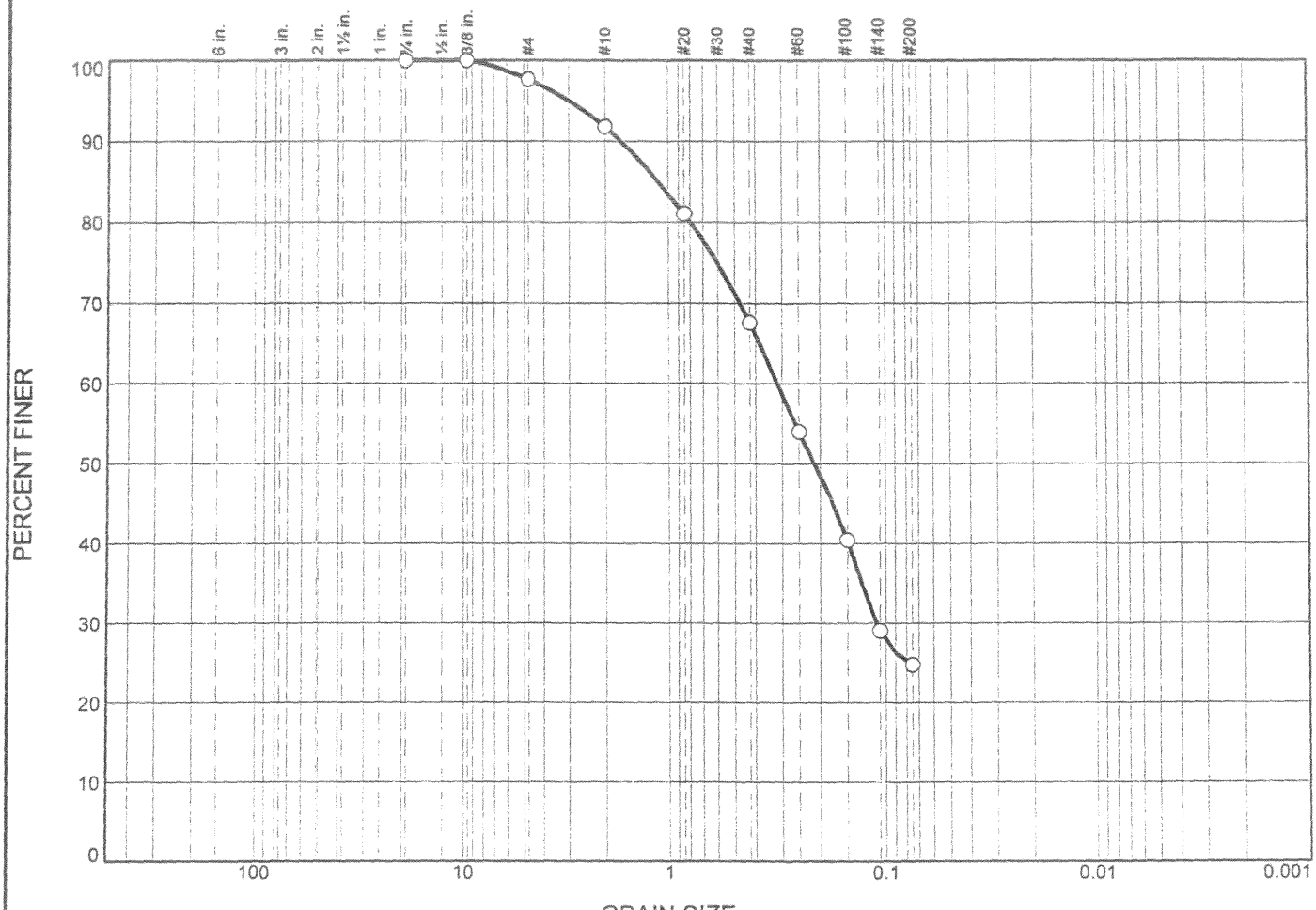
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 2.3 | 5.9 | 24.2 | 42.8 | 24.8 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.1108 | 0.3153 | 0.2118 | 0.1100 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB281 **Depth:** 19'-20.5' **Sample Number:** CB281

**Remarks:**

○ Moisture Content % 26.1 CB05-EAARS-CB-0377

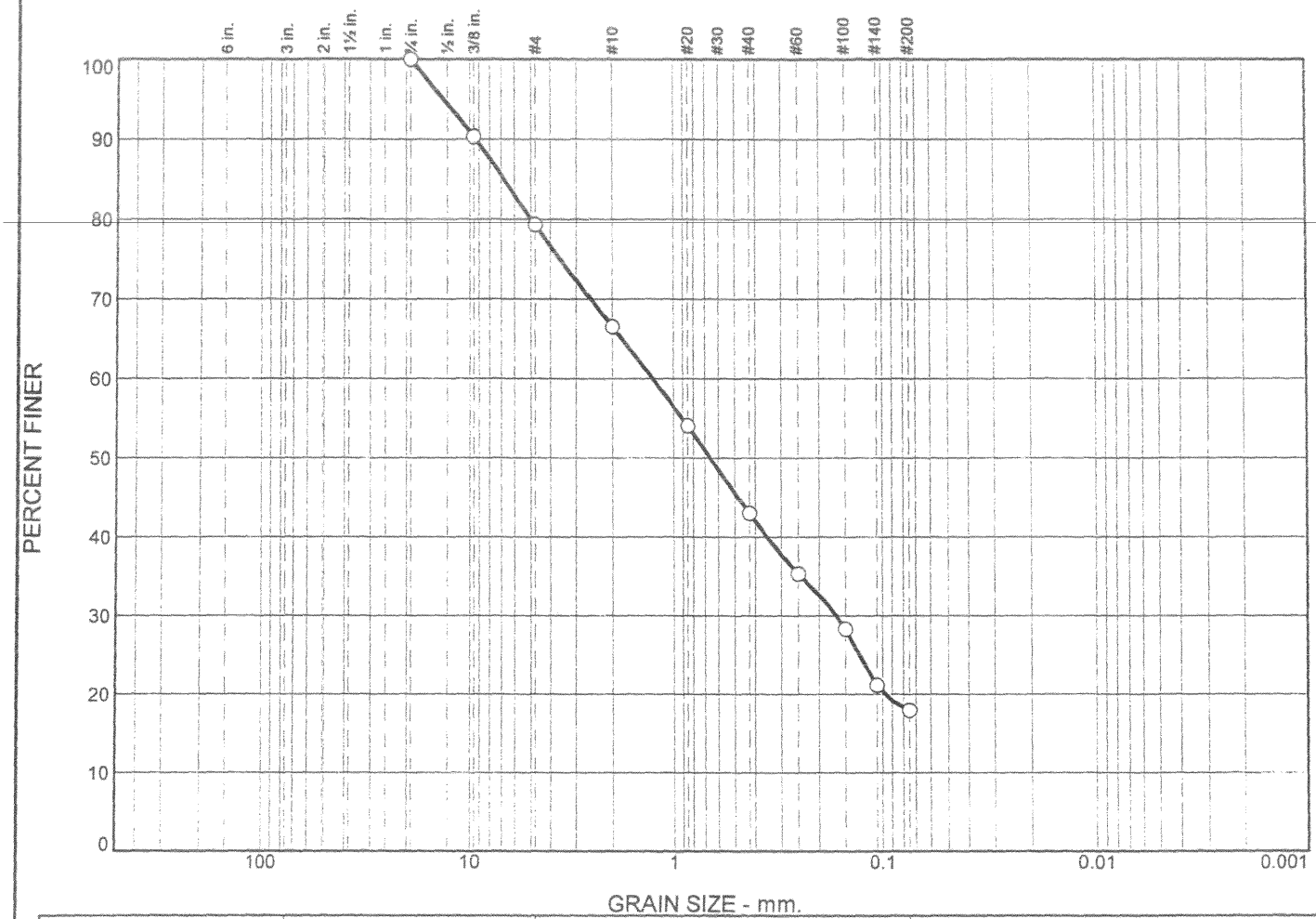
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolooki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 20.7 | 12.8 | 23.5 | 25.0 | 18.0 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 6.7792 | 1.2674 | 0.6570 | 0.1652 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB281 **Depth:** 24.0'-25.5' **Sample Number:** CB281

**Remarks:**
○ Moisture Content % 19.3 CB05-EAARS-CB-0377

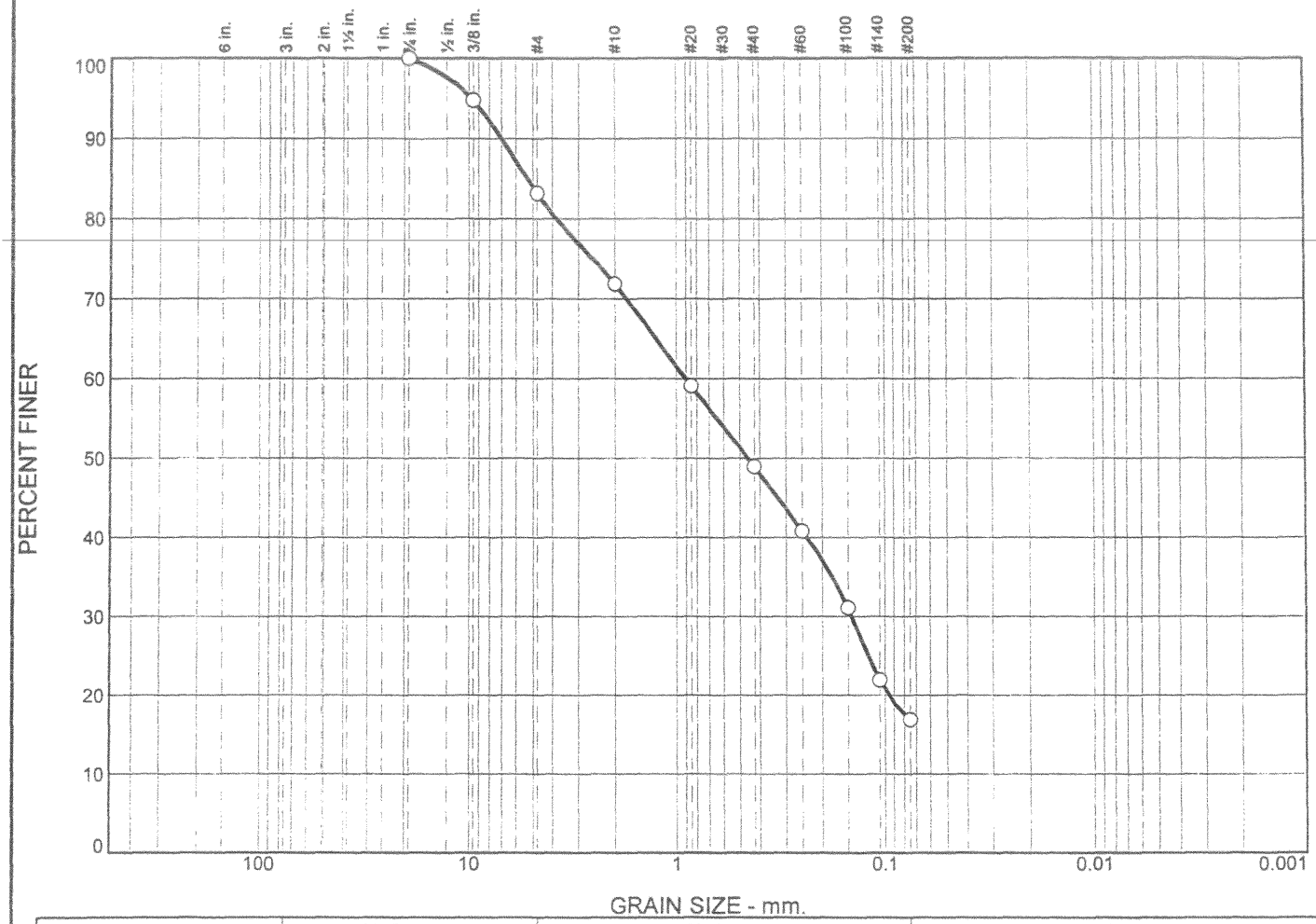
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolocki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 16.8 | 11.3 | 22.9 | 32.1 | 16.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 5.2904 | 0.9019 | 0.4549 | 0.1437 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB281 **Depth:** 29.0'-30.5' **Sample Number:** CB281

**Remarks:**

○ Moisture Content % 14.7 CB05-EAARS-CB-0377

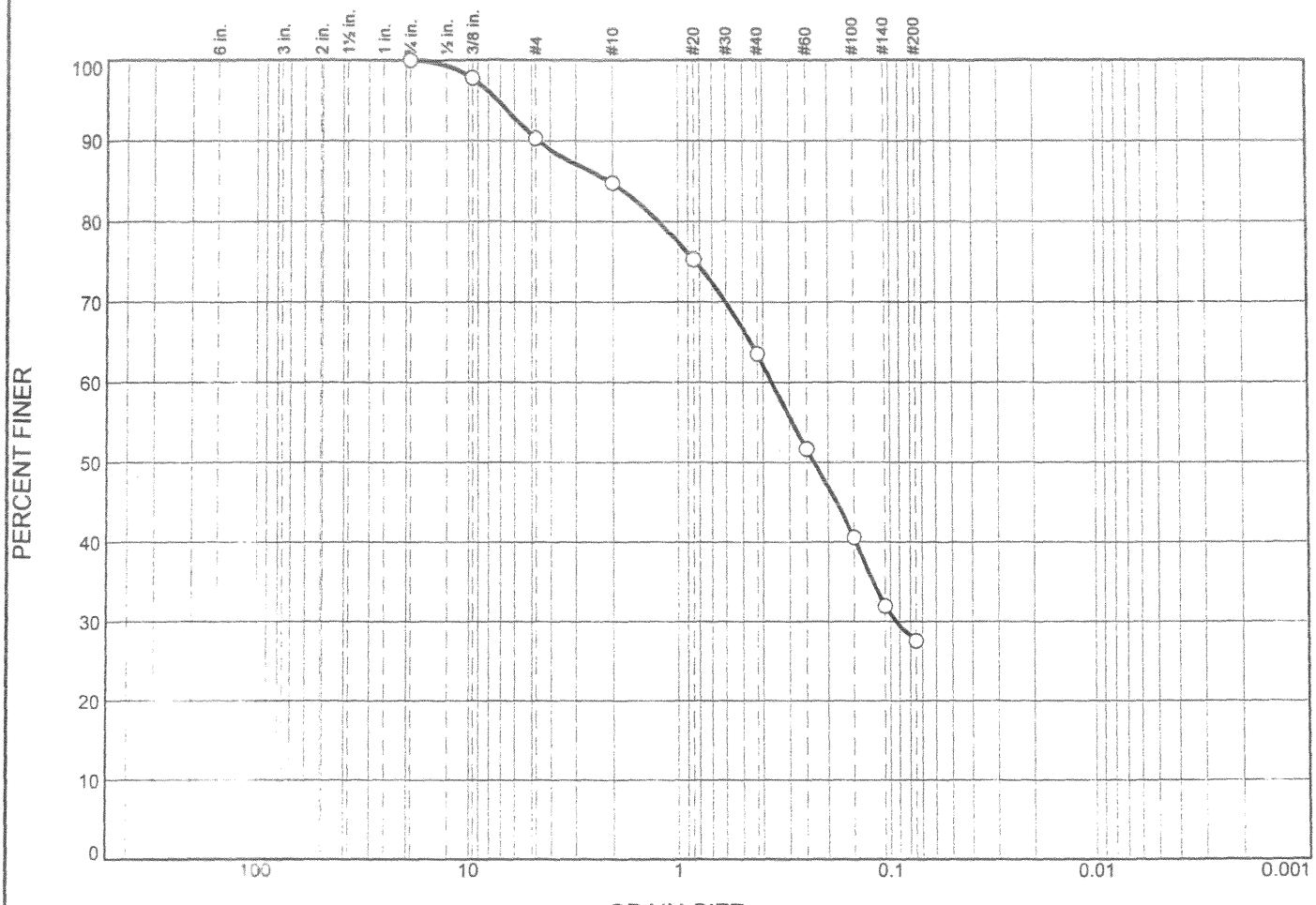
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: Bolocki Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 9.7 | 5.5 | 21.2 | 36.0 | 27.6 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 2.0697 | 0.3611 | 0.2308 | 0.0940 | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Silty sand with gravel | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch
**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB310 **Depth:** 23.5'-25.0' **Sample Number:** CB310

**Remarks:**
○ Moisture Content % 25.8 CP05-EAARS-CB-0406

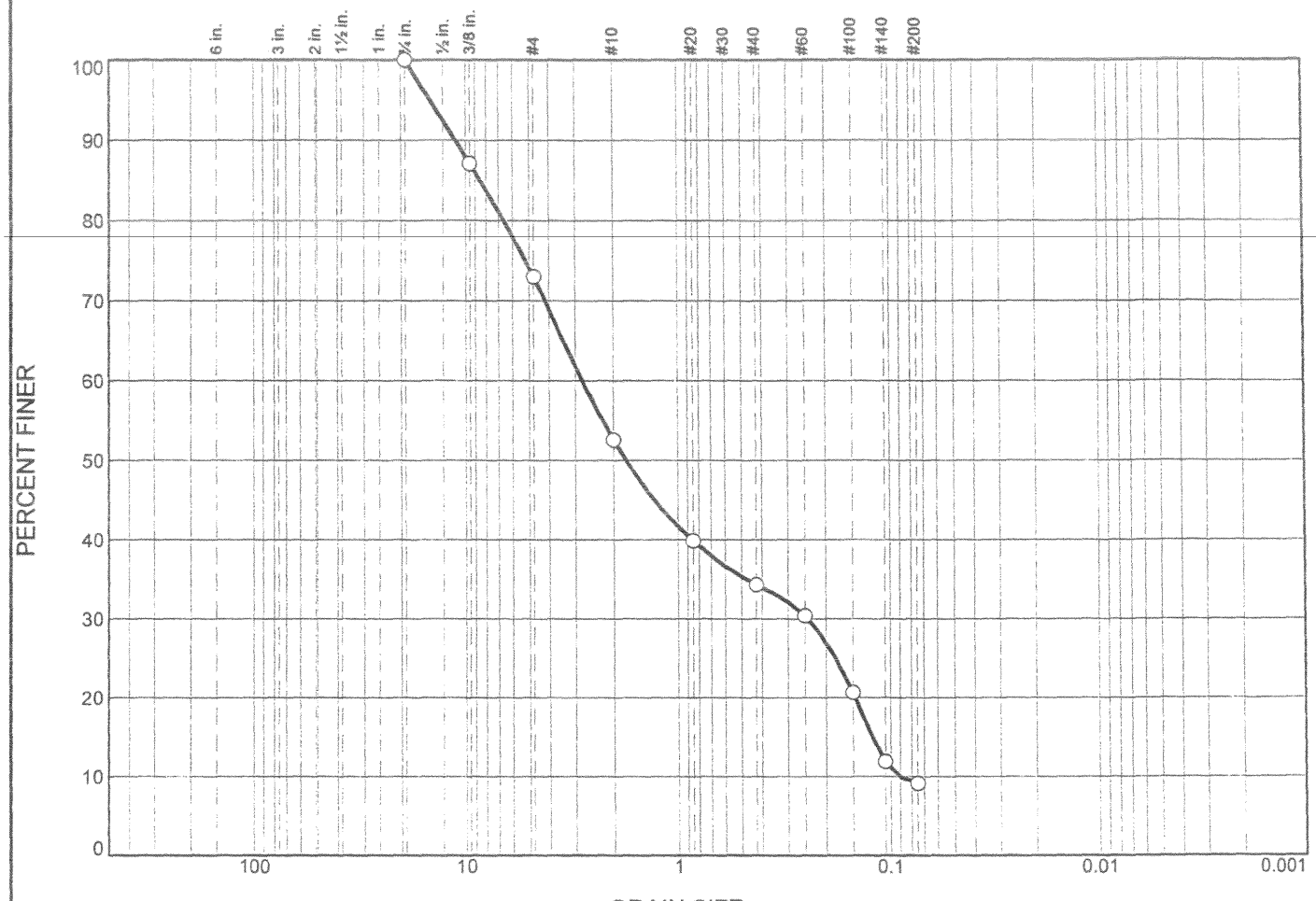
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

**Tested By:** Bolooki **Checked By:** K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 27.0 | 20.4 | 18.3 | 25.2 | 9.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 8.5204 | 2.7741 | 1.7491 | 0.2417 | 0.1218 | 0.0902 | 0.23 | 30.74 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ Poorly graded sand with silt and gravel | SP-SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB310 **Depth:** 33.5'-35.0' **Sample Number:** CB310

**Remarks:**

○ Moisture Content % 12.8 CP05-EAARS-CB-0406

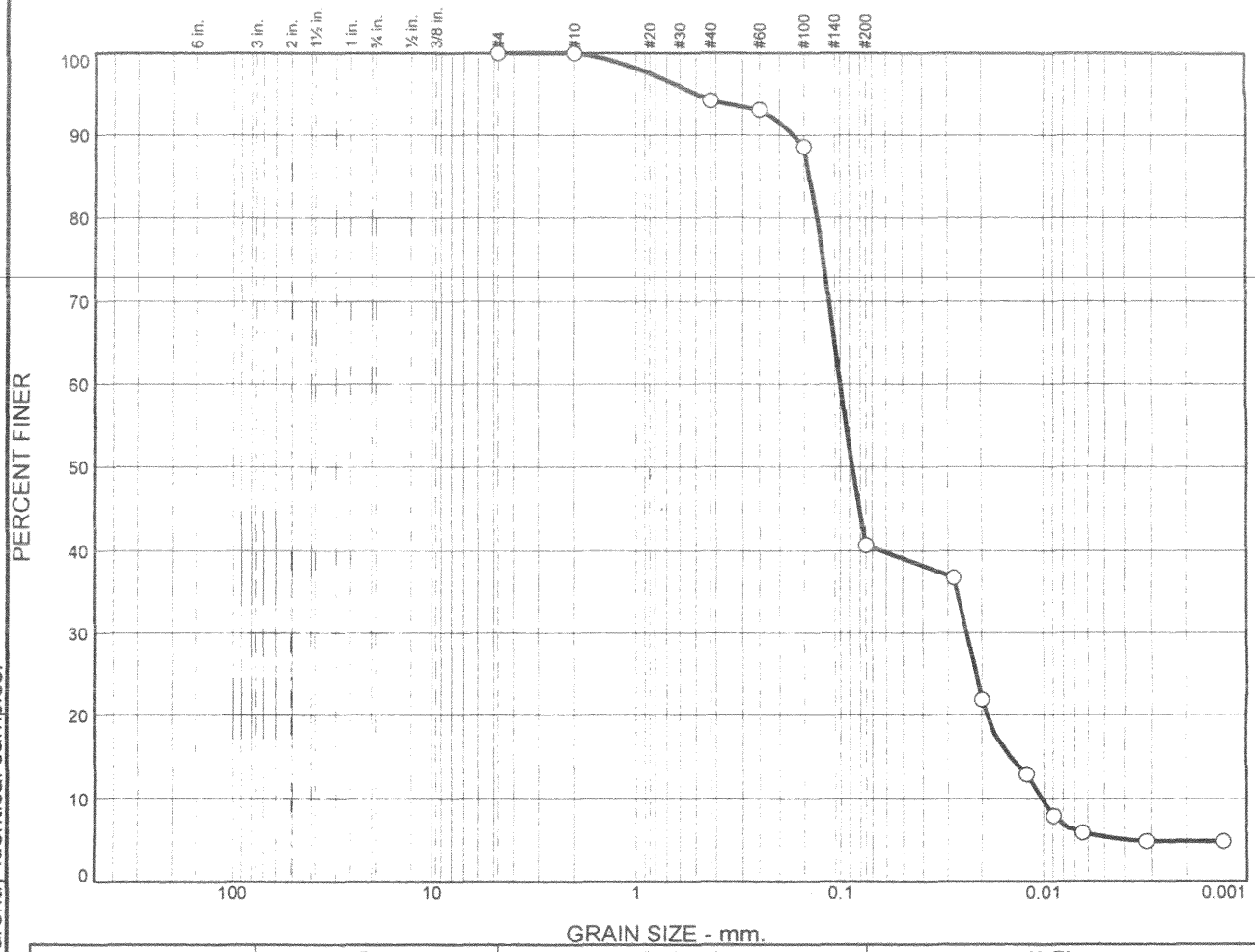
Nodarse & Associates, Inc.

Miami Lakes, FL

Figure

Tested By: [illegible] Checked By: K Leung

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 6 | 53 | 36 | 5 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | NP | 0.1397 | 0.1001 | 0.0878 | 0.0238 | 0.0146 | 0.0102 | 0.55 | 9.81 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SILTY SAND | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB190 HYD **Depth:** 175'-180' **Sample No.:** 36

**Remarks:**

○HYGROSCOPYC MOISTURE .4 % -NATURAL MOISTURE 17.6 % -CP05-EAARS-VB-0285

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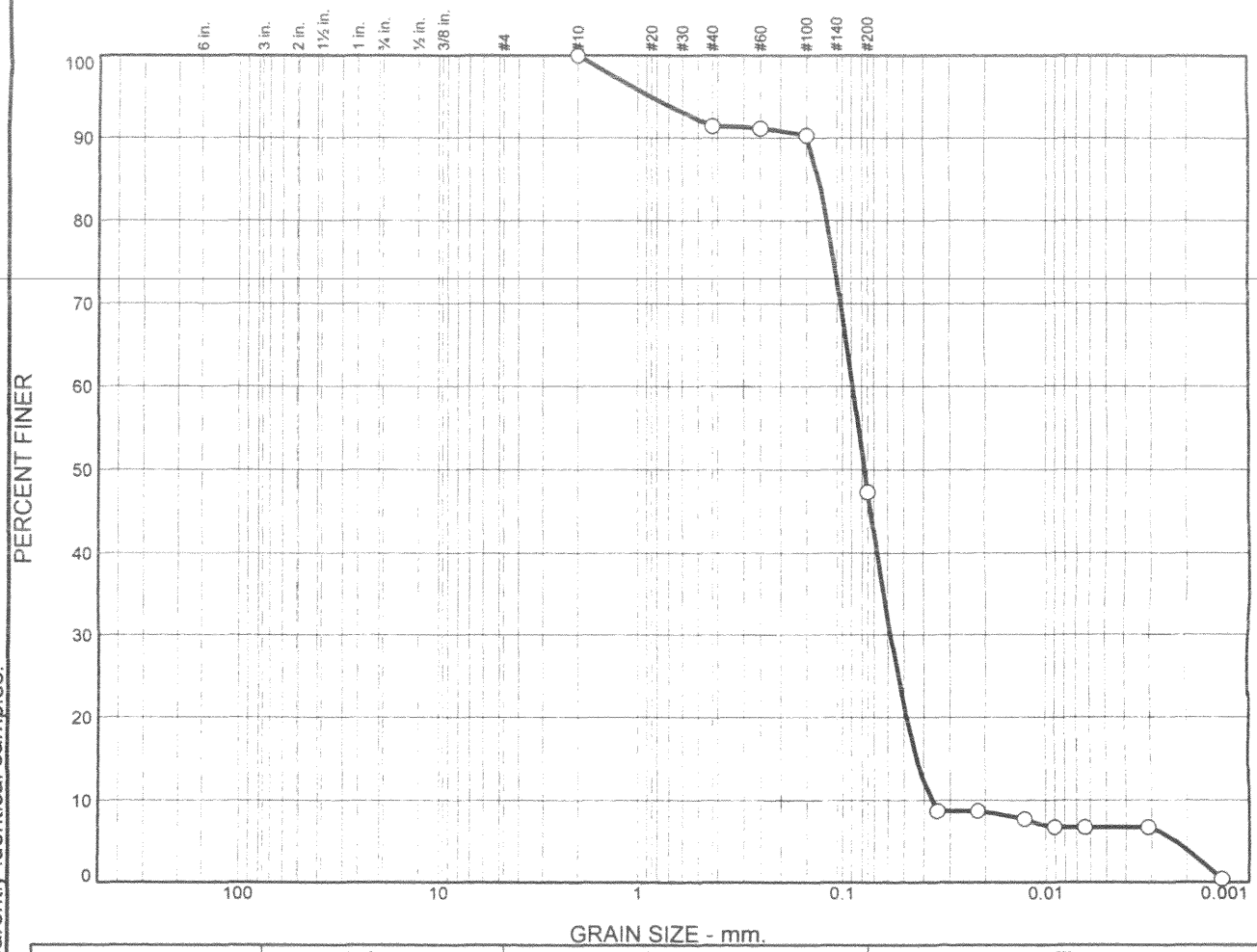
**Miami Lakes, FL**

**Figure** HYDROMETE

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

**Tested By:** CAMARAZA **Checked By:** MAZO

# Particle Size Distribution Report




These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 9 | 44 | 40 | 7 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | NL | NP | 0.1304 | 0.0888 | 0.0777 | 0.0581 | 0.0433 | 0.0369 | 1.03 | 2.40 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SILTY SAND | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB190 HYD **Depth:** 190'-195' **Sample No.:** 39

**Remarks:**

○ HYGROSCOPIC MOISTURE 2.63 % - NATURAL MOISTURE 27.7 % - CP05-EAARS VB 0285

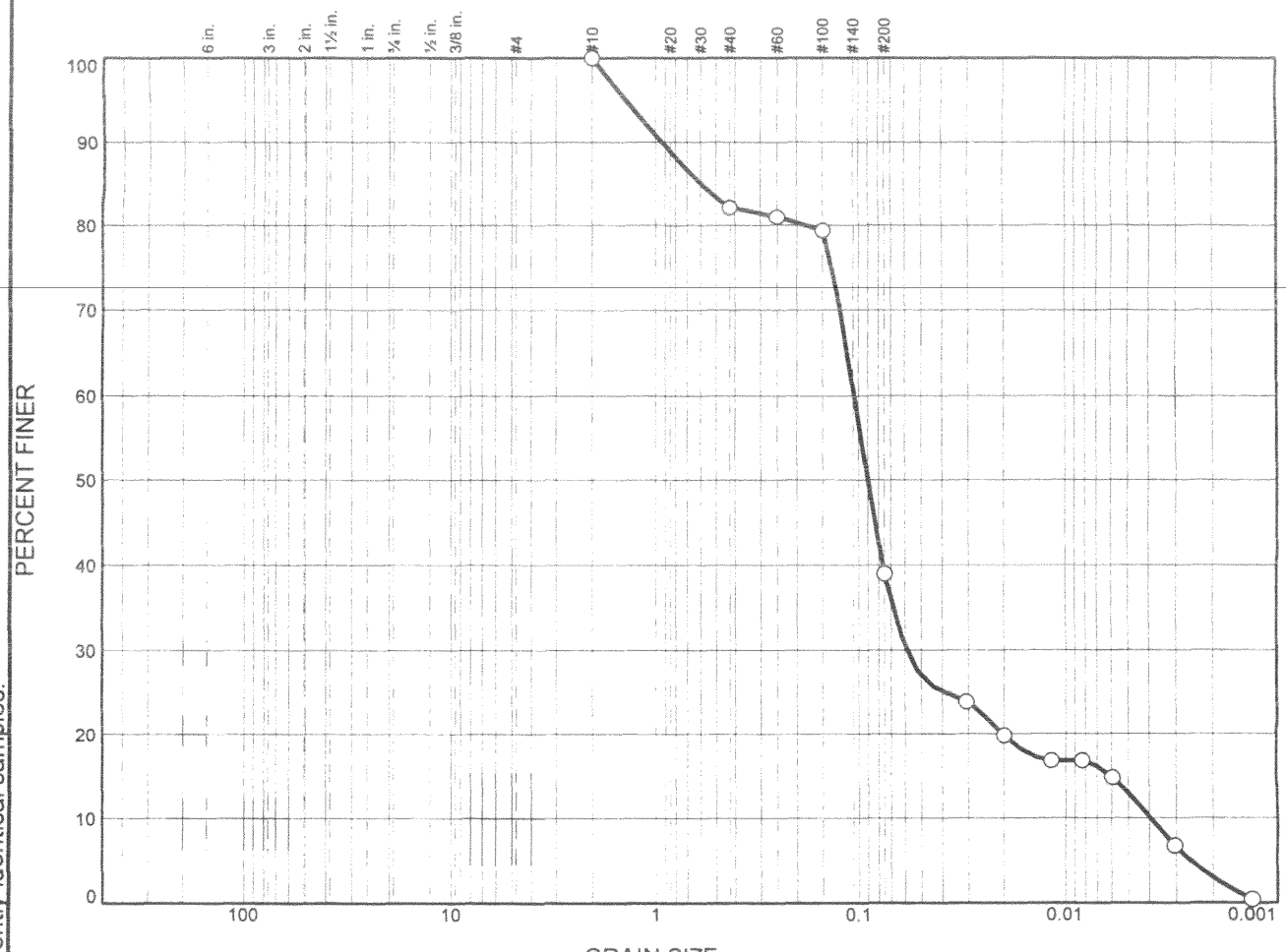
**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure** HYDROMETE

**Tested By:** CAMARAZA **Checked By:** MAZO

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 18 | 43 | 26 | 13 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | NP | 0.5911 | 0.1047 | 0.0903 | 0.0587 | 0.0061 | 0.0040 | 8.30 | 26.43 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SILTY SAND | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB190 HYD **Depth:** 205'-210' **Sample No.:** 44

**Remarks:**

○HYGROSCOPYC MOISTURE 4.0 % -NATURAL MOISTURE 31.8 % -CP05-EAARS-VB-0285.

**Nodarse & Associates, Inc.**

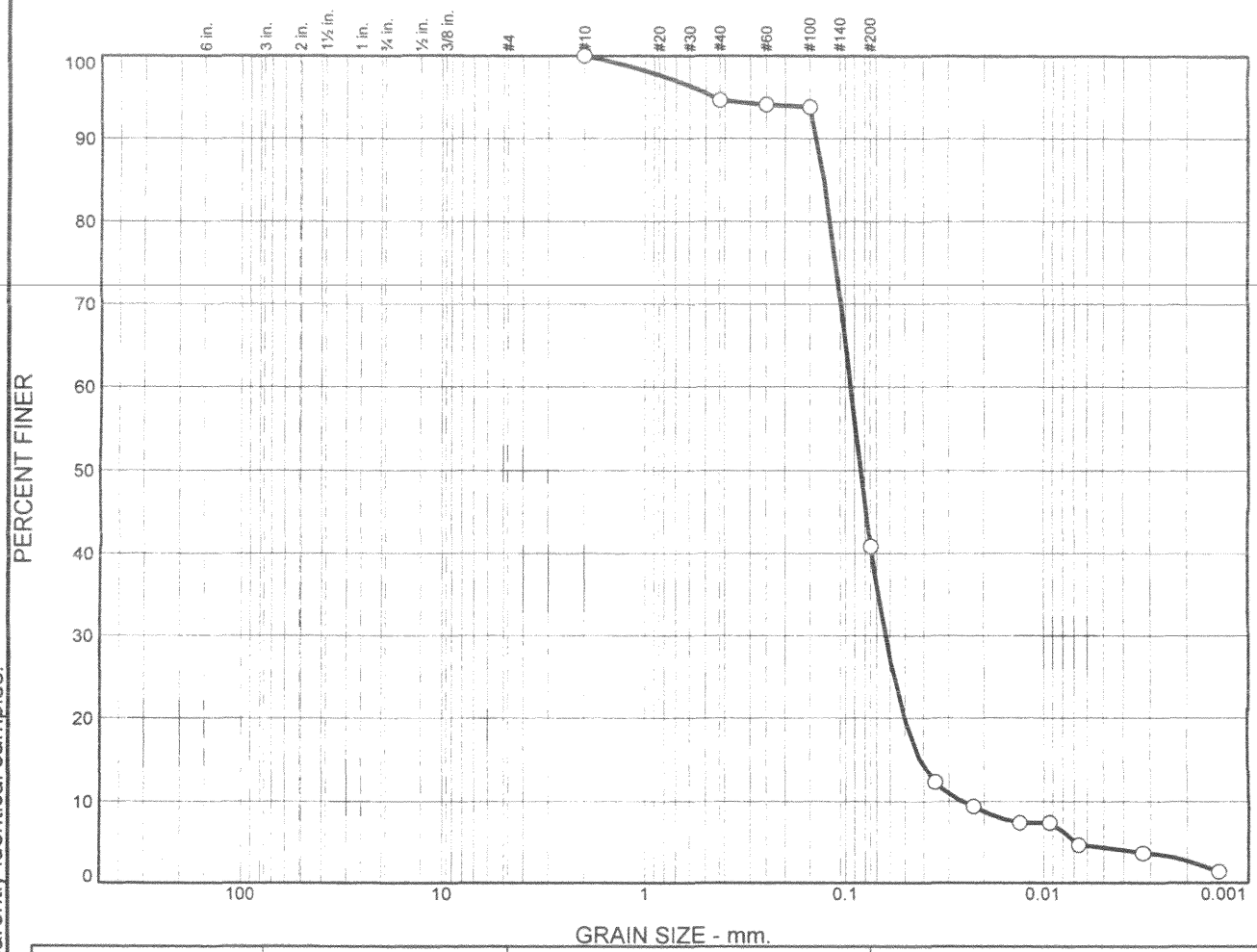
**Miami Lakes, FL**

**Figure** HYDROMETE

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

**Tested By:** CAMARAZA **Checked By:** MAZO

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 5 | 54 | 37 | 4 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | NL | NP | 0.1272 | 0.0941 | 0.0840 | 0.0634 | 0.0415 | 0.0255 | 1.67 | 3.69 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SILTY SAND | SM | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB190 HYD **Depth:** 210'-215' **Sample No.:** 43

**Remarks:**

○ HYGROSCOPYC MOISTURE .6 % -NATURAL MOISTURE 34.4 % -CP05-EAARS-VB-0285.

**Nodarse & Associates, Inc.**

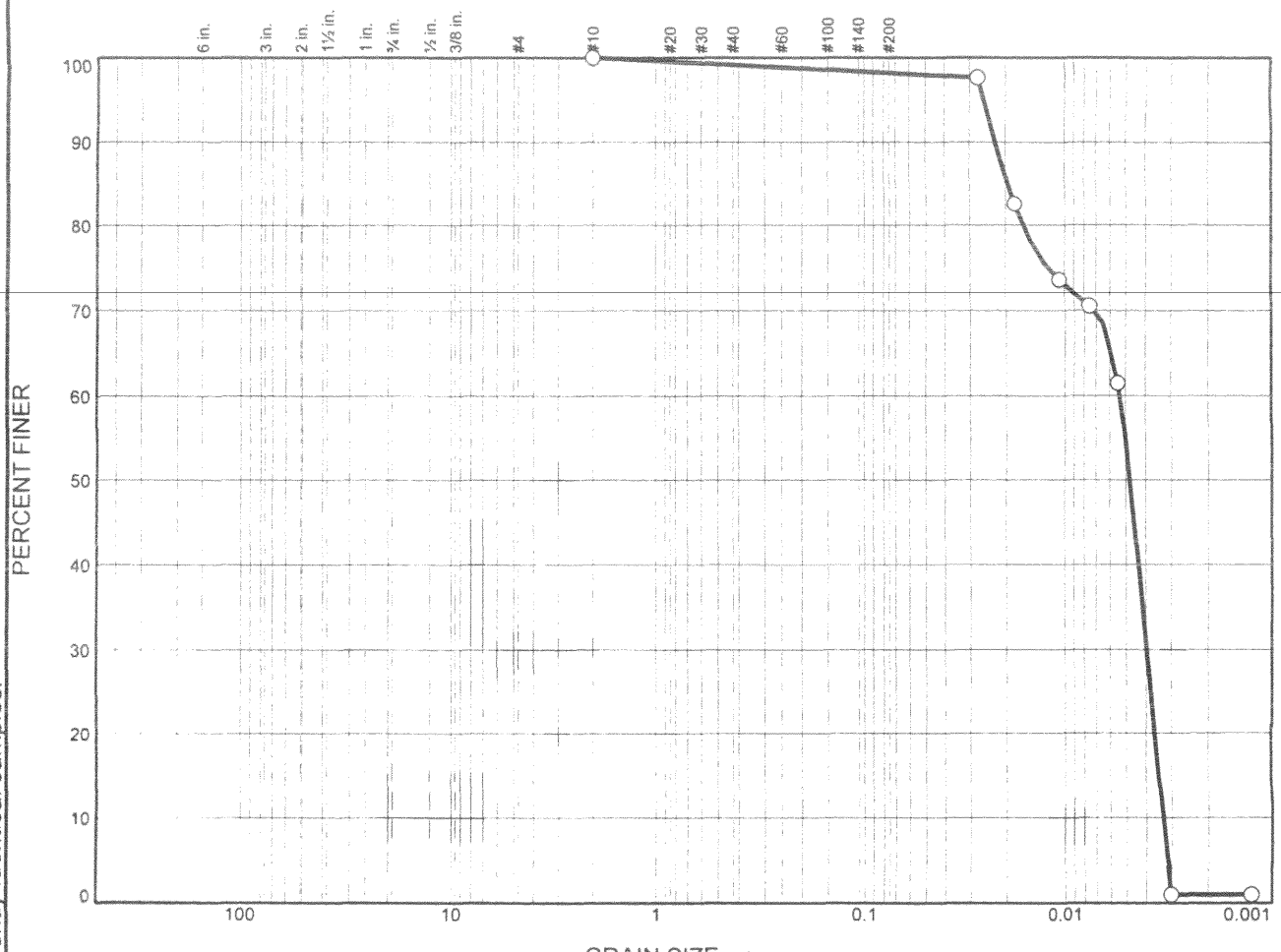
**Miami Lakes, FL**

Figure

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

**Tested By:** CAMARAZA **Checked By:** MAZO

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 1 | 1 | 43 | 55 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | 65 | 24 | 0.0195 | 0.0053 | 0.0048 | 0.0040 | 0.0035 | 0.0033 | 0.89 | 1.61 |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SANDY ELASTIC SILT | MH | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB190 HYD **Depth:** 215'-220' **Sample No.:** 44

**Remarks:**
○ HYGROSCOPYC MOISTURE 7.7 -NATURAL MOISTURE 43. 3 % -CP05-EAARS-VB-0285

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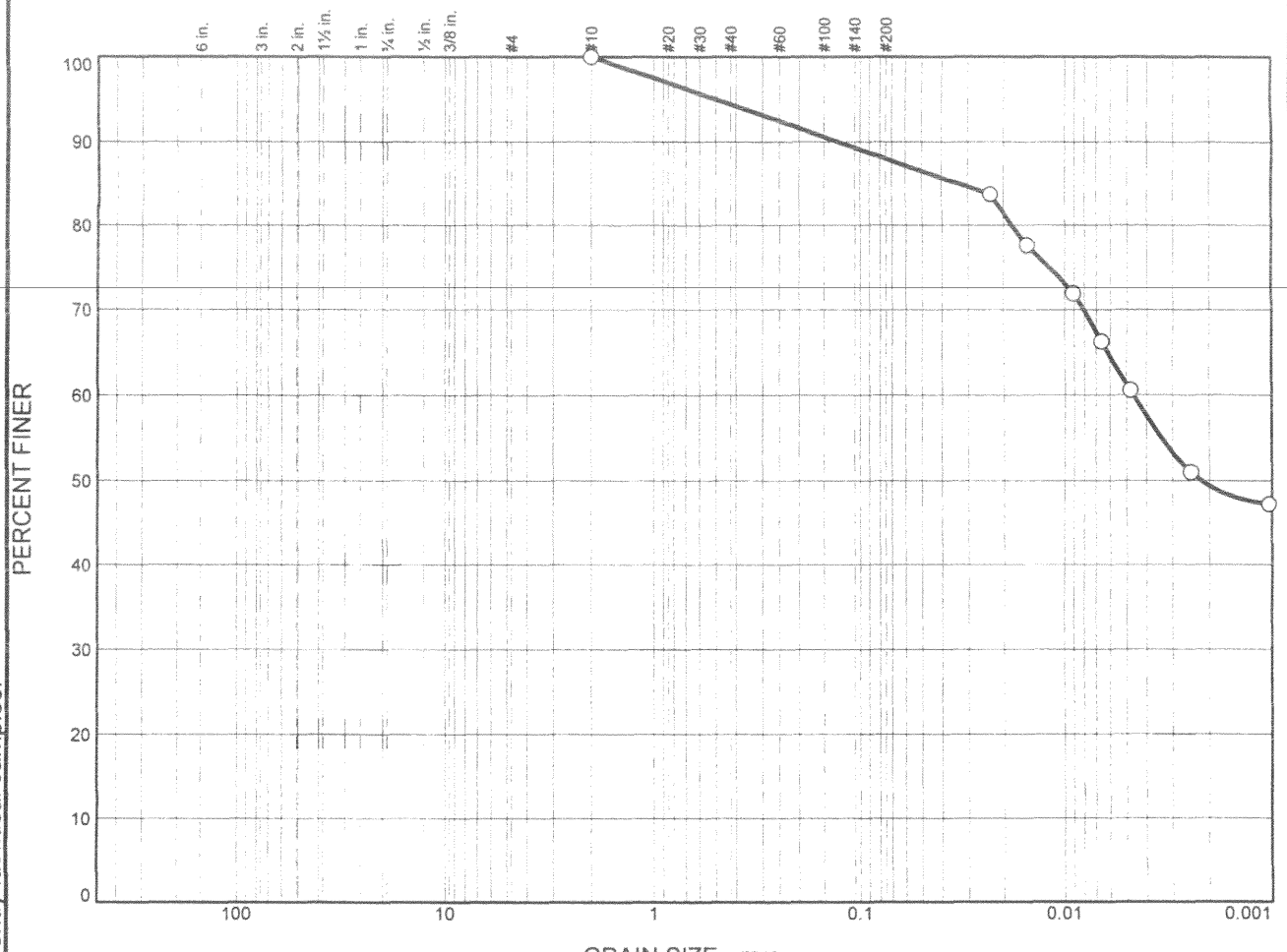
**Miami Lakes, FL**

**Figure** HYDROMETE

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

**Tested By:** CAMARAZA **Checked By:** MAZO

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 6 | 6 | 27 | 61 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 0.0324 | 0.0046 | 0.0022 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SANDY ELASTIC SILT -With green glauconite colour | MH | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Source of Sample:** CB190 HYD **Depth:** 225' **Sample Number:** 15E

**Remarks:**

○ HYGROSCOPIC MOISTURE 9.6% - NATURAL MOISTURE CONTENT 101.4 % -CP05-EAARS-VB-0285-Insufficient sample for Atteberg limits.

**Nodarse & Associates, Inc.**

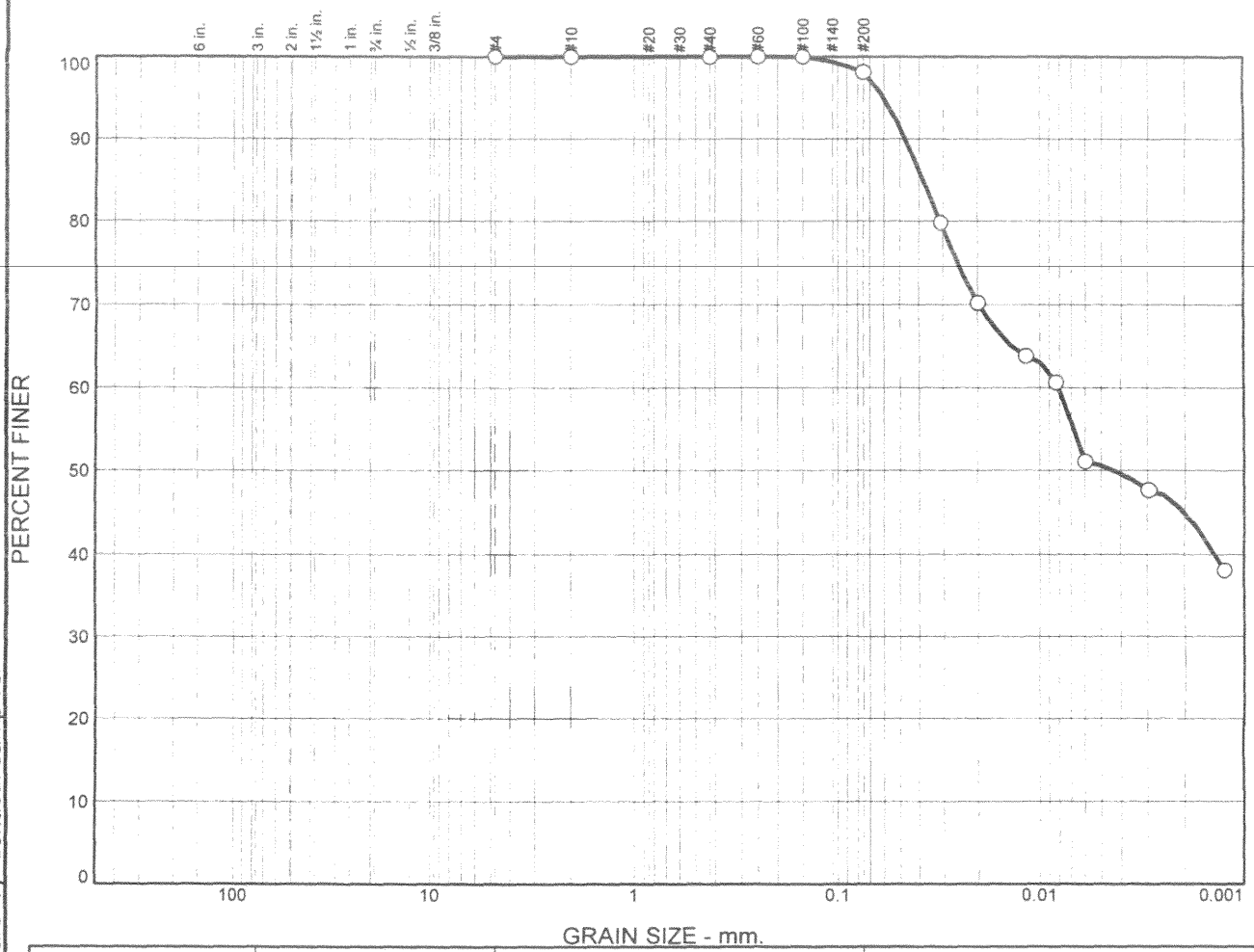
**Miami Lakes, FL**

**Figure** HYDROMETE

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

**Tested By:** CAMARAZA **Checked By:** MAZO

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0 | 0 | 0 | 0 | 0 | 2 | 47 | 51 |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | 126 | 62 | 0.0381 | 0.0081 | 0.0043 | | | | | |

| Material Description | USCS | AASHTO |
|---|---|---|
| ○ SANDY ELASTIC SILT. With green glauconite colour | MH | |

**Project No.** 05-05-0013- **Client:** Black & Veatch

**Project:** E.A.A (Reservoir)W/O#6

○ **Sample Source:** CB190 HYD **Depth:** 245'-250' **Sample No.:** 50

**Remarks:**

○HYGROSCOPYC MOISTURE 2.3 % -NATURAL MOISTURE 151.2 % -CP05-EAARS-VB-0285

**Nodarse & Associates, Inc.**

**Miami Lakes, FL**

**Figure** HYDROMETE

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicitive of apparently identical samples.

**Tested By:** CAMARAZA **Checked By:** MAZO

# APPENDIX 5
# LABORATORY TEST RESULTS
# ROCK QUALITY TESTS