0026

C0250005, Incoming
#3371
ok
cc: Priscilla

Alton Coal Development, LLC
463 North 100 West, Suite 1
Cedar City, Utah 84720
Phone (435) 867-5331 • Fax (435) 867-1192

COPY

October 13, 2009

Daron R. Haddock
Department of Natural Resources
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114

Re: Supplemental Information to Response of Technical Review (Task ID #3100) Coal Hollow Project, Kane County, Utah, C/025/0005

Dear Mr. Haddock:

Based on discussions with UDOGM staff, Alton Coal Development is submitting this supplemental information for the Mining and Reclamation Plan, C/025/005. Each item in this submittal is in response to specific requests made by the Division as part of the technical evaluation of the plan.

Please let me know if there is any other assistance that we can provide.

Sincerely,

Chris McCourt

File in:
☐ Confidential
☐ Shelf
☒ Expandable
Refer to Record No 0026 Date 10/13/2009
In C 0250005 2009, Incoming
For additional information
confidential

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OCT 14 2009
DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

COPY

Permit Change ☐ New Permit ☒ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Alton Coal Development, LLC

Mine: Coal Hollow **Permit Number:** C/025/0005

Title: Mining and Reclamation Plan - Supplemental Information for Technical Review 2 (Task ID #3100) Revisions

Description, Include reason for application and timing required to implement:

These documents are supplemental to the submission made by ACD dated August 27, 2009.

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ ☐ increase ☐ decrease.
☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes ☒ No 6. Does the application require or include public notice publication?
☒ Yes ☐ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
☒ Yes ☐ No 11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
☒ Yes ☐ No 13. Does the application require or include collection and reporting of any baseline information?
☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☒ Yes ☐ No 15. Does the application require or include soil removal, storage or placement?
☒ Yes ☐ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☒ Yes ☐ No 17. Does the application require or include construction, modification, or removal of surface facilities?
☒ Yes ☐ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
☒ Yes ☐ No 19. Does the application require or include certified designs, maps or calculation?
☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
☒ Yes ☐ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
☒ Yes ☐ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Chris McCourt
Print Name

Chris McCourt, Manager, 10-13-09
Sign Name, Position, Date

Subscribed and sworn to before me this 13th day of OCTOBER, 20 09

Notary Public

My commission Expires: OCT. 17, 2012

Attest: State of UTAH } ss:
County of IRON

KAILI BENNION
Notary Public
State of Utah
Comm. No. 576303
My Comm. Expires Oct 17, 2012

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Form DOGM- C1 (Revised March 12, 2002)

APPLICATION FOR COAL PERMIT PROCESSING

COPY

Permit Change ☐ New Permit ☒ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Alton Coal Development, LLC

Mine: Coal Hollow **Permit Number:** C/025/0005

Title: Mining and Reclamation Plan - Supplemental Information for Technical Review 2 (Task ID #3100) Revisions

Description, Include reason for application and timing required to implement:

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Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

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☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
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Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Robert Nead
Print Name

Sign Name, Position, Date 10/12/09

Subscribed and sworn to before me this 12 day of Oct, 2009

Notary Public

My commission Expires: July 16, 2010

Attest: State of FLORIDA } ss:
County of COLLIER

KATHRYN GRAYDEN
MY COMMISSION # DD 566661
EXPIRES: July 16, 2010
Bonded Thru Notary Public Underwriters

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Form DOGM- C1 (Revised March 12, 2002)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

COPY

Permittee: Alton Coal Development, LLC
Mine: Coal Hollow **Permit Number:** C/025/0005
Title: Mining and Reclamation Plan - Supplemental Information for Technical Review 2 (Task ID #3100) Revisions

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Chapter 1, Pages 1-2 and 1-3, Change to Corporate Members
☐ Add	☒ Replace	☐ Remove	Chapter 5, Page 5-11, Change to request for temporary cessation
☒ Add	☐ Replace	☐ Remove	Appendix 7-7, Figure 17
☐ Add	☒ Replace	☐ Remove	Chapter 8, Page 8-2, Change to text related to bond estimate
☐ Add	☒ Replace	☐ Remove	Chapter 8, Appendix 8-1, New bond estimate
☐ Add	☐ Replace	☐ Remove	
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

These submissions are made based on verbal requests from the UDOGM review staff and supervision.

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112.230 Abandoned Mine and Reclamation Fee

Robert C. Nead, Jr. will pay the abandoned mine land reclamation fee.

112.300 Ownership and Control

Alton Coal Development, LLC, is the sole party in interest, owning and controlling this application.

112.310 Members and Managers of Alton Coal Development, LLC

Social Security numbers of Alton Coal Development, LLC's members and manager provided in "CONFIDENTIAL BINDER" Appendix 1-1

Manager - CHRIS R. MCCOURT
1461 N. 3775 W.
Cedar City, UT 845721~~0~~

Member STONIE BARKER, JR
1878 Mission Dr. ~~714 Bob White Lane~~
Naples, FL 34109~~8~~

Member ALEXANDER D. MIRROW ~~BEVERLY HOLWERDA~~
2514 Oleaster Ct. ~~960 Cape Marco Drive~~
Grand Junction, CO 81505~~Marco Island, FL 34145~~

Past Member BEVERLY HOLWERDA
960 Cape Marco Drive
Marco Island, FL 34145

Member ROBERT C. NEAD, JR
6602 Ilex Circle
Naples, FL 34109

Member JAMES J. WAYLAND
2841 Capistrano Way
Naples, FL 34105

Member ANTHONY P. GARGIULO
960 Cape Marco Dr. #1001
Marco Island, FL 34145

All members and managers use the employer identification number of Alton Coal Development, LLC No. 42-1655092

112.320 Relationship to the Applicant

Each of the above-listed managers and members owns and controls more than 10% of Alton Coal Development, LLC. The following is a listing of company ownership as defined by R645-100-200 "Owned or Controlled":

Stonie Barker, Jr.: 10% Ownership
~~Beverly Holwerda~~ Alexander D. Mirrow: ~~30~~15% Ownership
Robert C. Nead, Jr.: 15~~1~~% Ownership
James J. Wayland: 540% Ownership
Anthony O. Gargiulo: 10% Ownership
Beverly Holwerda 0% Ownership

112.330 Title and Date of Position

The manager listed in 112.310 was appointed July 17, 2007. ~~The members listed in 112.310 were appointed as of September 9, 2004.~~ The following is a listing of each member and their individual date of appointment and/or departure:

Stonie Barker, Jr.: 9/9/04
Alexander D. Mirrow: 9/9/04
Robert C. Nead: 9/9/04
James J. Wayland: 9/9/04
Anthony O. Gargiulo: 1/1/08
Beverly Holwerda: 9/9/04 with departure 4/30/08

112.340. Ownership or control of Other Coal Mining and Reclamation Operations

Neither Alton Coal Development, LLC nor its manager or members owns and has not in the previous five years owned another coal mining and reclamation operation.

112.350 Application Number – Other Pending Coal Mining and Reclamation Operations

Neither Alton Coal Development, LLC nor its manager or members owns any pending coal mine permits.

112.400 Coal Mining and Reclamation Operations Owned or Controlled

Neither Alton Coal Development, LLC nor its manager or members owns or controls any other coal mining and reclamation operations.

112.410 Coal Mining and Reclamation Operations Owned or Controlled by Managers or Members of Alton Coal Development, LLC

Neither Alton Coal Development, LLC nor its manager or members owns or control any other coal mining and reclamation operations.

Two options are provided for final reclamation of the permit area. The Preferred option is shown on Drawings 5-35 and 5-36. The anticipated time schedule for this option is shown on Drawing 5-38. This option includes mining operations transitioning into the adjacent federal coal reserves. In the case that these reserves are not acquired by ACD, an alternative plan is provided in Drawing 5-37 and 5-37A which requires rehandling much of the fill above original contour to fill in the final pits.

If a circumstance occurs where mining of the permit area is complete and ACD has acquired the federal lease but permit approval has not yet been acquired to continue mining in the federal coal reserves; ACD requests that the Division consider a temporary cessation of operations at that time rather than requiring implementation of the alternate reclamation scenario. This temporary cessation could be granted for a sufficient period of time to allow ACD to acquire approval for transitioning mining operations into the adjacent federal coal reserves. The Division does have the authority to grant such an allowance based on R645-301-515.300. ~~within two years of ceasing operations ACD will then proceed to reclaiming the final pits as specified in the alternative plan.~~ Should the alternative reclamation scenario be implemented prematurely, reclamation along the western side and south end of the permit area will either be excavated to recover coal or these coal reserves beneath and adjacent to the reclamation will be unrecoverable. Also, an additional excess spoil structure will have be constructed for the boxcut for the federal reserves. A detailed description of the two reclamation scenarios and how each scenario would apply is provided in Section 528.200 Overburden and 553 Backfilling and Grading of this Chapter.

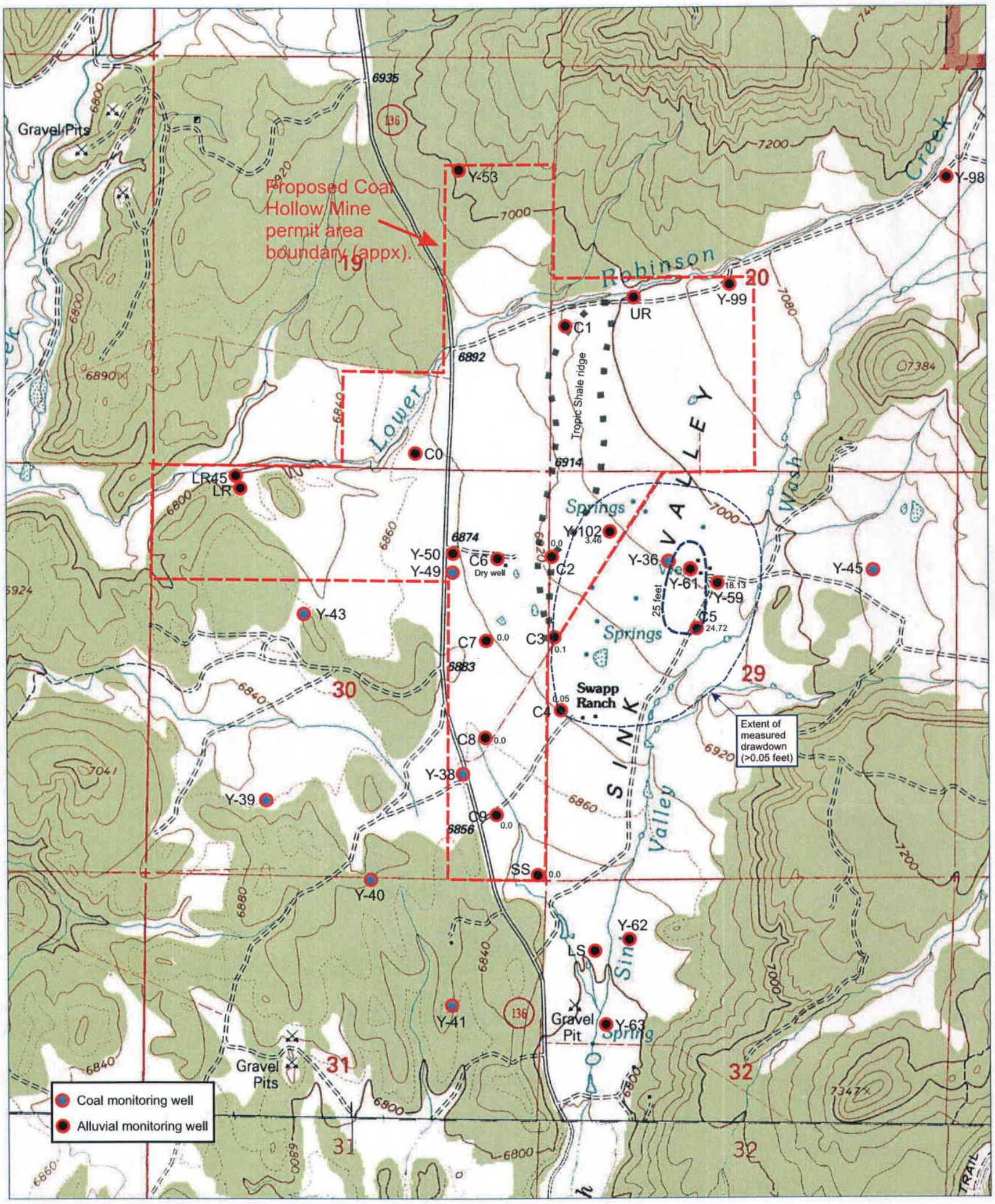
If ACD does not acquire the federal coal lease by the time that the final pit is complete, ACD will then immediately transition the reclamation plan to the alternative scenario.

521.143 The proposed disposal sites for placing excess spoil generated at surface areas affected by surface operations and facilities for the purposes COAL MINING and RECLAMATION ACTIVITIES according to:

- *R645-301-211: The applicant will present a description of the premining soil resources as specified under R645-301-221. Topsoil and subsoil to be saved under R645-301-232 will be separately removed and segregated from other material.*

  The soil resources for the proposed excess spoil disposal area are described in Appendix 2-1. A plan has been developed for removal of topsoil and suitable subsoil based on the soil descriptions in this appendix. The handling plan can be viewed on Drawing 2-2. Topsoil and acceptable subsoil will be separately removed and segregated from other material prior to placement of any spoil.

- *R645-301-212: After removal, topsoil will be immediately redistributed in accordance with R645-301-242, stockpiled pending redistribution under R645-301-234, or if demonstrated that an alternative procedure will provide equal or*



North

0 ¼ ½ Mile

0 1000 2000 Feet

Figure 17 Approximate water level drawdown contour map for the January 2007 pump test of alluvial well Y-61 after 28 hours of pumping. The outer contour shows the limit of measurable drawdown (>0.05 feet). The inner contour shows 25 feet of drawdown. The measured drawdowns are posted next to the monitoring well locations.

830.140 Detailed Estimated Costs

The bonding amount for final reclamation will depend upon the approved permit and reclamation plan (R645-301-830.120). ~~As a preliminary e~~Estimates have been completed~~, costs~~ for the individual mining phases shown in Drawings 5-17, 5-18 and 5-19. ~~final~~ These estimates are provided as ~~reclamation are listed in~~ Appendix 8-1. These cost calculations are based on the specific details shown on these drawings. ~~for the disturbed area boundaries provided in the proposed plan in this application.~~ As requested by the Division, a separate bond estimate is completed for all three phases shown in the drawings and in general, each stage is representative of the expected reclamation liability for years 1, 2 and 3, respectively. ~~For this preliminary evaluation, final reclamation has been estimated at $6,172,000 as shown in Appendix 8-1.~~ The bond estimate by year is the following:

Phase 1:	$5,346,000
Phase 2:	$10,859,000
Phase 3:	$10,889,000

A summary and supporting calculations for these cost estimates is provided in Appendix 8-1.~~A revised bond estimate will be provided by the applicant to the Division following completion of the ***approved*** permit and reclamation plan.~~

840. GENERAL TERMS AND CONDITIONS OF THE BOND

General terms and conditions of the bond as stated at R645-301-840 through R645-301-840.520 will be met by Alton Coal Development, LLC

850. BOND REQUIREMENTS FOR UNDERGROUND COAL MINING

Not Applicable

860. FORM OF BOND

860.100 Surety Bond

The applicant will submit a surety bond as defined under R645-100-200 and meet all the requirements under R645-301-860.110 to .120.

870. REPLACEMENT OF BONDS

Equivalent bond coverage will be provided if Alton Coal Development, LLC replaces the surety bond.

880. REQUIREMENT TO RELEASE PERFORMANCE BONDS

Upon completion of reclamation operations, the applicant will apply for bond release and meet the requirements of R645-301-880.

APPENDIX 8-1

COST ESTIMATE
And CALCULATIONS
COAL HOLLOW MINE

Estimate By: Alton Coal Development, LLC

BONDING

Introduction

The purpose of this appendix is to provide a reclamation bond estimate as required by R645-301-830.140. As requested in the Division's Technical Analysis (TA) dated March 26, 2009, this bond estimate is calculated in a manner that allows for incremental bonding at the Coal Hollow mine in accordance with the requirements of R645-301-820.111, 820.112 through 820.133.

Based on the request in the Division's TA, there are three separate bond cost estimates for the three general stages of mining as detailed in the Mining and Reclamation Plan. These stages of mine development, are shown on Drawings 5-17, 5-18, 5-19 and fully described in Chapter 5 text. The drawings in combination with the text describe the anticipated status of reclamation and the size of the open coal pit at each stage. In the following cost estimate, the stages of mine development are referred to as Phase 1, Phase 2 and Phase 3. Because concurrent (or contemporaneous) reclamation will be implemented, these estimates are not meant to be cumulative (or added together) as the mine progresses through the different stages but instead is meant as the total reclamation liability during each individual phase. Therefore, each phase cost estimate is meant as the total bond amount to be applied while in each development stage.

This appendix includes the following details:

- Bond Estimate Summary

- Mine Facilities - Reclamation Estimate
  - a) Estimate Details

- Phase 1 Reclamation - Reclamation Estimate
  - a) Estimate Details
  - b) Pit Backfill - Dozer Simulation
  - c) Pit Backfill - Truck/Shovel, Fleet Production and Cost Analysis (FPC)
  - d) Subsoil - Truck/Shovel, Fleet Production and Cost Analysis (FPC)
  - e) Topsoil - Truck/Shovel, Fleet Production and Cost Analysis (FPC)

- Phase 2 Reclamation - Reclamation Estimate
  - a) Estimate Details
  - b) Pit Backfill - Dozer Simulation
  - c) Pit Backfill - Truck/Shovel, Fleet Production and Cost Analysis (FPC)
  - d) Subsoil - Truck/Shovel, Fleet Production and Cost Analysis (FPC)
  - e) Topsoil - Truck/Shovel, Fleet Production and Cost Analysis (FPC)

- Phase 3 Reclamation - Reclamation Estimate
  - a) Estimate Details
  - b) Pit Backfill - Truck/Shovel, Fleet Production and Cost Analysis (FPC)

c) Subsoil - Truck/Shovel, Fleet Production and Cost Analysis (FPC)
d) Topsoil - Truck/Shovel, Fleet Production and Cost Analysis (FPC)

All material volume and surface area calculations were performed utilizing Carlson Civil and Mining software.

Cost data sources include:

- RSMeans Heavy Cost Construction 2009
- RSMeans Construction Cost Data 2009
- CostMine Coal Cost Guide 2009
- CostMine Mine and Mill Equipment Cost Data, 2008 (latest version available)

These sources are applied where appropriate in each of the cost estimates. Each line item in the estimate lists specifies which source is utilized for cost data.

Summary

In agreement with the Division's assessment, Alton Coal Development has developed this cost estimate in an incremental phase approach. The facilities reclamation cost, including building demolition/disposal, earthwork and seeding/mulching, is calculated separately and then added to each phase to provide an overall total. In addition, reclamation of the ponds and Lower Robinson Creek are also separated in the calculations and applied to the total costs for each phase as appropriate. The main categories for the cost estimate are:

- Mine Facilities
- Specialized Reclamation Areas
- Phase 1 Mine Development
- Phase 2 Mine Development
- Phase 3 Mine Development

The following is a brief summary of the information and methods used to calculate the costs for each category:

Mine Facilities
This section includes demolition, disposal, earthwork and land reclamation costs for the entire facilities area, including ponds and ditches. The calculations for this section is based on the facilities and pond drawings in the current version of the Mining and Reclamation Plan. These drawings are all provided in Chapter 5 as Drawings 5-3 through 5-8C. The RSMeans Cost data is applied to this estimate. The overall cost estimate for the facilities reclamation is approximately $1,395,000.

Specialized Reclamation Areas
The specialized reclamation areas include ponds 2, 3 and 4 along with the Lower Robinson Creek reconstruction. The calculations for these specific areas are provided separately and applied to each phase of development as appropriate. The overall cost estimate for these areas varies depending on the mine development phase.

Phase 1
The details for this phase of mine development is shown on Drawing 5-17. At this point of mine development, Pits 1 through 8 have been mined. A 2.7 million yard excess spoil pile has been constructed and pits 1 through 6 have been backfilled, subsoil/topsoil placed and the surface graded to the approximate original contour (AOC). This estimate includes rehandle of the entire excess spoil pile to backfill Pits 7 and 8 which are open at this point. This requires a combination of dozers and truck/shovel operations to backfill these pits to the AOC. Once the pit is backfilled, the subsoil and topsoil is then placed followed by seeding and mulching. RSMeans Cost Data is used for everything except material handling. The data supplied by RSMeans for material handling is mainly reflective of construction type projects and is not representative of the mass volumes of material handling required for this project. Therefore, this cost estimate utilizes dozer and truck/shovel simulations to develop production rate estimates. Cost data from CostMine's Coal Cost Guide and Mine/Mill Equipment Cost Data are then applied to the production rates to develop overall cost estimates. The software packages Dozsim and Fleet Production /Cost Analysis (FPC) are utilized to perform the necessary calculations.

Once the overall cost for the material handling is estimated using this process, contractor overhead/profit, engineering/supervision and mobilization costs are then added to the total.

The overall cost estimate for Phase 1 including facilities, specialized reclamation areas, and mine reclamation using this process is approximately $5,345,000.

Phase 2
The detail for this phase of mine development is shown on Drawing 5-18. At this point, Pits 1 through 15 have been mined. The excess spoil pile/fill above AOC now contains approximately 8.6 million cubic yards of spoil. Pits 1 through 14 have been backfilled and graded. The estimate for this phase includes rehandling of the excess spoil to backfill Pit 15 which is the open pit at this point. This requires material handling of approximately 7 million yards by a combination of dozers and truck/shovel equipment to complete. Same methods described above in Phase 1 are also used in Phase 2 to calculate the cost estimate

The overall cost estimate for Phase 2 including facilities, specialized reclamation areas, and mine reclamation using this process is approximately $10,859,000.

Phase 3

The detail for this phase of mine development is shown on Drawing 5-19. At this point, Pits 1 through 30 have been mined. Pits 1 through 23 have been backfilled and graded. The excess spoil pile/fill above approximate original contour contains approximately 8.6 million yards of spoil. The estimate for this phase includes rehandling of the excess spoil to backfill pits 24 through 30 which are the open pits. This requires material handling of approximately 6.6 million cubic yards by a combination of dozers and truck/shovel equipment to complete. The same methods described above in Phase 1 are also used in Phase 3 to calculate the cost estimate.

The overall cost estimate for Phase 3 including facilities, specialized reclamation areas, and mine reclamation using this process is approximately $10,889,000.

The following documentation provides the details for each of these bond estimates.

Mine Facilities - Reclamation Estimate

Estimate Details

Facilities Reclamation Cost Estimate

Concrete Demolition

Item	Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Office (footer)	lft	500	$24.50	$12,250	RSMeans Building Constr., 02 41 16.17 1140
Shop (footer)	lft	616	$29.40	$18,110	RSMeans Building Constr., 02 41 16.17 1140 & 1220
Shop (foundation)	ft^2	3,080	$2.87	$8,840	RSMeans Building Constr., 02 41 16.17 2100 & 2200
Shop (floor)	ft^2	20,000	$7.30	$146,000	RSMeans Building Constr., 02 41 16.17 0440
Wash Bay (footer)	lft	244	$29.40	$7,174	RSMeans Building Constr., 02 41 16.17 1140 & 1220
Wash Bay (foundation)	ft^2	660	$2.87	$1,894	RSMeans Building Constr., 02 41 16.17 2100 & 2200
Wash Bay (floor & sump)	ft^2	3,100	$7.30	$22,630	RSMeans Building Constr., 02 41 16.17 0440
Fuel Storage (slab)	yd^3	111	$137.00	$15,222	RSMeans Heavy Constr., 03 05 05.10 0060
Fuel Storage (containment wall)	yd^3	9	$137.00	$1,218	RSMeans Heavy Constr., 03 05 05.10 0060
Oil Storage (slab)	yd^3	89	$137.00	$12,178	RSMeans Heavy Constr., 03 05 05.10 0060
Oil Storage (containment wall)	yd^3	12	$137.00	$1,674	RSMeans Heavy Constr., 03 05 05.10 0060
Coal Hopper/Feeder Breaker (Tunnel Access)	yd^3	95	$137.00	$12,990	RSMeans Heavy Constr., 03 05 05.10 0060
Coal Hopper/Feeder Breaker (Hopper Supports)	yd^3	190	$137.00	$25,979	RSMeans Heavy Constr., 03 05 05.10 0060
Coal Hopper/Feeder Breaker (Belt Tunnel)	yd^3	133	$137.00	$18,185	RSMeans Heavy Constr., 03 05 05.10 0060
Crusher Building (Footer)	lft	80	$29.40	$2,352	RSMeans Building Constr., 02 41 16.17 1140 & 1220
Feed Conveyor (Support Footers)	lft	30	$29.40	$882	RSMeans Building Constr., 02 41 16.17 1140 & 1220
Reclaim Belt (Support Footers)	lft	25	$29.40	$735	RSMeans Building Constr., 02 41 16.17 1140 & 1220
Loadout (Footers)	lft	72	$29.40	$2,117	RSMeans Building Constr., 02 41 16.17 1140 & 1220
Loadout (Scale Footer)	lft	60	$29.40	$1,764	RSMeans Building Constr., 02 41 16.17 1140 & 1220

Concrete Disposal

*Concrete Disposal (All Facilities)	yd^3	1,551	$15.50	$24,036	RSMeans Building Constr., 02 41 16.17 4250

Subtotal Concrete Demolition & Disposal	**$336,230**

*Concrete is disposed of on site (in pits) within five miles of facilities

**All cost data is from the 2009 additions of either the RS Means Heavy Construction or Building Construction Cost Data Manuals

Facilities Reclamation Cost Estimate

Structure Demolition & Disposal

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Office	ft^3	150,000	$0.33	$49,500	RSMeans Heavy Constr., 02 41 16.13 0100
Office (Sewage Tank)	Ea.	1	$3,775.00	$3,775	RSMeans Heavy Constr., 02 65 10.30 1233 & 1213
Shop	ft^3	1,000,000	$0.31	$310,000	RSMeans Heavy Constr., 02 41 16.13 0020
Wash Bay	ft^3	150,000	$0.31	$46,500	RSMeans Heavy Constr., 02 41 16.13 0020
Fuel Storage (3 tanks)	Ea.	3	$2,776.00	$8,328	RSMeans Heavy Constr., 02 65 10.30 0130 & 1029
Coal Hopper/Feeder Breaker (Demolition)	Ton	64	$328.00	$20,992	RSMeans Heavy Constr., 05 05 05.10 0260
Coal Hopper/Feeder Breaker (Disposal)	yd^3	570	$16.80	$9,576	RSMeans Heavy Constr., 02 41 19.23 5000
Crusher (structure)	ft^3	9,200	$0.31	$2,852	RSMeans Heavy Constr., 02 41 16.13 0020
Crusher (equipment demolition)	Ton	60	$328.00	$19,680	RSMeans Heavy Constr., 05 05 05.10 0260
Crusher (equipment disposal)	yd^3	150	$16.80	$2,520	RSMeans Heavy Constr., 02 41 19.23 5000
Coal Reclaim System (demolition)	Ton	50	$328.00	$16,400	RSMeans Heavy Constr., 05 05 05.10 0260
Coal Reclaim System (disposal)	yd^3	233	$16.80	$3,914	RSMeans Heavy Constr., 02 41 19.23 5000
Loadout (structure)	ft^3	19,000	$0.31	$5,890	RSMeans Heavy Constr., 02 41 16.13 0020
Loadout (equipment demolition)	Ton	68	$328.00	$22,304	RSMeans Heavy Constr., 05 05 05.10 0260
Loadout (equipment disposal)	yd^3	185	$16.80	$3,108	RSMeans Heavy Constr., 02 41 19.23 5000
Conveyors	ft	545	$141.00	$76,845	CostMine - Mine and Mill Equipment Costs (Estimated as 25% of Construction Cost)
Water System (tanks)	Ea.	2	$1,276.00	$2,552	RSMeans Heavy Constr., 02 65 10.30 1029
Subtotal Structure Demolition & Disposal				**$604,736**	

Exact makes and models of equipment are not currently known, therefore estimates are included for weights and yardages of equipment

** RS Means does not have direct cost data references for some specific items. Where needed, reasonable substitutues are utilized.

All cost data is from the 2009 additions of either the RS Means Heavy Construction or Building Construction Cost Data Manuals except where specifically noted

Facilities Reclamation Cost Estimate

Facilities Earthwork and Land Reclamation

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pond 1 backfill from embankment	yd^3	1,156	$1.88	$2,173	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 1 backfill from subsoil pile	yd^3	3,200	$5.87	$18,784	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 1B backfill from embankment	yd^3	146	$1.88	$274	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 1B backfill from subsoil pile	yd^3	794	$5.87	$4,661	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Ditch 3 recontouring	yd^3	11,556	$1.88	$21,725	RSMeans Heavy Constr., 31 23 23.17 0020
Ripping of roads and compacted surfaces	yd^3	9,600	$2.17	$20,832	RSMeans Heavy Constr., 31 23 16.32 2310
Grading of reclamation surface	yd^2	164,000	$0.17	$27,880	RSMeans Heavy Constr., 31 22 16.10 3300
Topsoil reclamation surface	yd^3	36,000	$5.87	$211,320	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Seeding	M.S.F	1,481	$39.00	$57,759	RS Means Heavy Constr., 32 92 19.14 3700
Mulching	M.S.F	1,481	$60.00	$88,860	RS Means Heavy Constr., 32 91 13.16 0350
Subtotal Facilities Earthwork and Land Reclamation				**$454,269**	

Total Facilities Reclamation Cost Estimate	**$1,395,235**

Phase 1 - Reclamation Estimate

Estimate Details

Phase 1 Mine Reclamation Cost Estimate

Phase 1 Specialized Reclamation Areas

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pond 2 backfill from embankment	yd^3	160	$1.88	$301	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 2 backfill from excess spoil	yd^3	7122	$5.87	$41,806	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 2 topsoil	yd^3	860	$5.87	$5,048	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 2 seeding	M.S.F	35	$39.00	$1,365	RS Means Heavy Constr., 32 92 19.14 3700
Pond 2 mulching	M.S.F	35	$60.00	$2,100	RS Means Heavy Constr., 32 91 13.16 0350
Pond 2 Subtotal				**$50,620**	
Pond 3 backfill from embankment	yd^3	4767	$1.88	$8,962	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 3 backfill from excess spoil pile	yd^3	6107	$5.87	$35,848	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 3 topsoil	yd^3	3011	$5.87	$17,675	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 3 seeding	M.S.F	122	$39.00	$4,758	RS Means Heavy Constr., 32 92 19.14 3700
Pond 3 mulching	M.S.F	122	$60.00	$7,320	RS Means Heavy Constr., 32 91 13.16 0350
Pond 3 Subtotal				**$74,563**	
Robinson Creek Topsoil	yd^3	3520	$5.87	$20,661	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Robinson Creek Rip-Rap	yd^3	562	$60.00	$33,709	RS Means Heavy Constr., 31 37 13.10 0100
Robinson Creek Grass Matting	yd^2	2189	$7.95	$17,402	RS Means Heavy Constr., 31 25 13.10 0120
Robinson Creek seeding	M.S.F	188	$39.00	$7,332	RS Means Heavy Constr., 32 92 19.14 3700
Robinson Creek mulching	M.S.F	142	$60.00	$8,520	RS Means Heavy Constr., 32 91 13.16 0350
Robinson Creek Subtotal				**$87,623**	
Phase 1 Specialized Reclamation Areas Total				**$162,195**	

Phase 1 Mine Reclamation Cost Estimate

Phase 1 Pit Backfill and Land Reclamation

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pit Backfill Rehandle Excess Spoil Pile - Dozer	yd^3 (Loose)	1,411,521	$0.84	$1,188,501	Production from Dozsim Software, Cost data from CostMine Coal Cost Guide 2009
Pit Backfill Rehandle Excess Spoil Pile - Excavator	yd^3 (Loose)	1,329,479	$0.94	$1,253,508	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Topsoil	yd^3 (Loose)	81,874	$0.95	$77,754	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Subsoil	yd^3 (Loose)	188,222	$0.97	$183,333	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Seeding	M.S.F	3,310	$39.00	$129,090	RS Means Heavy Constr., 32 92 19.14 3700
Mulching	M.S.F	3,310	$60.00	$198,600	RS Means Heavy Constr., 32 91 13.16 0350
Subtotal				**$3,030,786**	
Mobilization/Demobolization (5%)				$151,539	
Project Management/Engineering (5%)				$151,539	
Contractor Profit/Overhead (15%)				$454,618	
Phase 1 Mine Reclamation Total				**$3,788,482**	

Phase 1 Reclamation Bond Summary

Facilities Reclamation	$1,395,235
Specialized Areas Reclamation	$162,195
Mine Reclamation	$3,788,482
Phase 1 Overall Bond Total	**$5,345,912**

Phase 1 Mine Reclamation Material Handling Summary

Equipment Description	Production Rate (BCY)	Production Rate (LCY)	Cost/BCY	Cost/LCY	Total Volume (BCY)	Total Volume (LCY)	Total Cost
Rehandle with Dozer	152.7	203.1	$1.12	$0.84	1,061,294	1,411,521	$1,188,501
Rehandle with Truck/Shovel	447.7	595.4	$1.25	$0.94	999,608	1,329,479	$1,253,508
Topsoil	456.7	562.7	$1.17	$0.95	66,456	81,874	$77,754
Subsoil	446.4	550.0	$1.20	$0.97	153,026	188,222	$183,333
Total Phase 1 Material Handling							$2,703,096

Rehandle with Dozer Quantity	1,411,521	Loose Cubic Yards
Rehandle with Truck/Shovel Quantity	1,329,479	Loose Cubic Yards
Total Rehandle Quantity	2,741,000	Loose Cubic Yards

Software Overburden Swell Factor	33%
Software Topsoil Swell Factor	23%
Software Subsoil Swell Factor	23%

Topsoil Area	76 acres
Subsoil Area (Open Pit)	35 acres

Equipment Cost Data (Cost Mine 2009 Coal Cost Guide/2008 Mine and Mill Equipment Costs)

Equipment Description	$/hr
7 yd. Excavator	$116.40
25 Ton Haul Truck	$40.03
5,000 Gal. Water Truck	$31.25
14 Grader	$54.15
D10 Dozer	$140.17
D7 Dozer	$79.19
13 yd. Excavator	$264.49
40 Ton Haul Truck	$97.73

Manpower Type	$/hr (46% burden)
Excavator Operator	$32.31
Truck Drivers	$32.46
Heavy Equipment Operators	$31.33
Utility Operators	$32.89

Phase 1 - Reclamation Estimate

Pit Backfill - Dozer
Dozer Simulation

Machine Properties

Select Machine: D10N

Shoe Width: 24 / 28 inch / 31.5

Blade: U / SU / Coal

Capacity - yd³: 28.7

Dual Tilt: Yes / No

Forward Gear: 1st Only / 2nd Only / System Select

Reverse Gear: 1st Only / 2nd Only / System Select

%Avail	Weight	Cost/Hr
100%	+15%	$250
25%	-15%	$1
85 %	150191 lb	$171

Material Properties

Shale

Density / Swell — Select Calculated

Loose	Bank	Swell
2107 lb/LCY	2798 lb/BCY	33 %

Dozability: Easy – Hard — Factor 1.06

Derating Factors

Altitude: 0 – 15,000 — Feet 6900

Visibility: Poor – Excellent — Factor 0.95

Job Efficiency: 0 Min – 60 Min — 54 Min/Hr — Percent 90

Skill Level: Poor – Excellent — Factor 0.95

Input Values

Average Push Distance: 50 ft – 1500 ft — Feet 842

Average Push Slope: -55 % – 55 % — % -8

Volumes

Bank Moved	1,061,294	yd³
Loose Moved	1,411,521	yd³

☑ Slot Dozing

Disclaimer

Due to the many variables involved and the consequent possibility of inadvertant errors or omissions in preparing reports of this character, neither Caterpillar Inc. nor the dealer can or does represent or warrant, expressly or implicitly, either the accuracy of this report or that the Caterpillar equipment referred to in the report will in fact achieve the performance indicated on the job to which the report relates.

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Output Values

Gear

Fwd	1
Rev	2

Productivity

Bank	152.7	yd/hr
	$1.120	$/yd
Loose	203.1	yd/hr
	$0.842	$/yd

Totals

Hours	6,951.00
Cost	$1,188,620.18

Print

Exit

Phase 1 - Reclamation Estimate

Pit Backfill - Truck and Shovel
Fleet Production and Cost Analysis (FPC)

Fleet Production and Cost Analysis

Phase 1 Truck-Shovel
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Pit Backfill Haul

Description:	Haul from excess pile to pit
Material Qty (BCY)	999,608
lbs per BCY	2,798
lbs per LCY	2,107

1950 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving excavator location
1,850	4.00	3.00	25.00	25.00	Haul to open pit

Fleet Production and Cost Analysis

Phase 1 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	84.75
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	86.17
BCY per Sched Hr	447.70
Total BCY	999,608.00
Sched Hrs Required	2,232.77
Total $	1,253,903.41
$ per BCY	1.25
BCY per Year	2,793,644.50
Years Required	0.36

	1 385C LME	4 769C
Loader Fill Factor % (7.25 CY)		90.00
Tons/Pass (2107 lbs/LCY):		6.87
System Passes per Hauler:		3.27
Hauler Payload in Tons		22.51
Percent of Max GVW		95.91
Loader Cycle Time (Min)		0.25
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		1.50
Haul		1.45
Dump and Maneuver		0.60
Return		1.06
Potential Cycle Time		4.61
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		1.69
Total Cycle Time		6.30
POTENTIAL PRODUCTION		
BCY per Hour	643.66	837.78
Avg mph		9.61

Fleet Production and Cost Analysis

Phase 1 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
385C LME	1
Haulers	
769C	4

Potential Production

	Model	BCY per Hour	Avg mph
1	385C LME	644	
2	769C	838	9.6

Fleet Availability (%)	76.50
BCY per Scheduled hour	447.70
Total BCY	999,608.00
Scheduled Hours Required	2,232.77
Total $	1,253,903.41
$ per BCY	1.25
BCY per Year	2,793,644.50
Years Required	0.36

Fleet Production and Cost Analysis

Phase 1 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

999,608 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	385C LME		149.56	2,009	300,539	0.301
Haulers:	4	769C	C202	72.49	7,591	550,301	0.551
Totals	4				7,591	550,301	0.551
Support:	1	14 Grader		87.04	893	77,736	0.078
	1	Water Truck		64.14	893	57,284	0.057
	1	D10 Dozer		171.50	1,563	268,044	0.268
Totals	3				3,349	403,063	0.403
Fleet Totals	8				12,950	1,253,903	1.254

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 1 Truck-Shovel

Alton Coal Development, LLC

Fleet Production and Cost Analysis

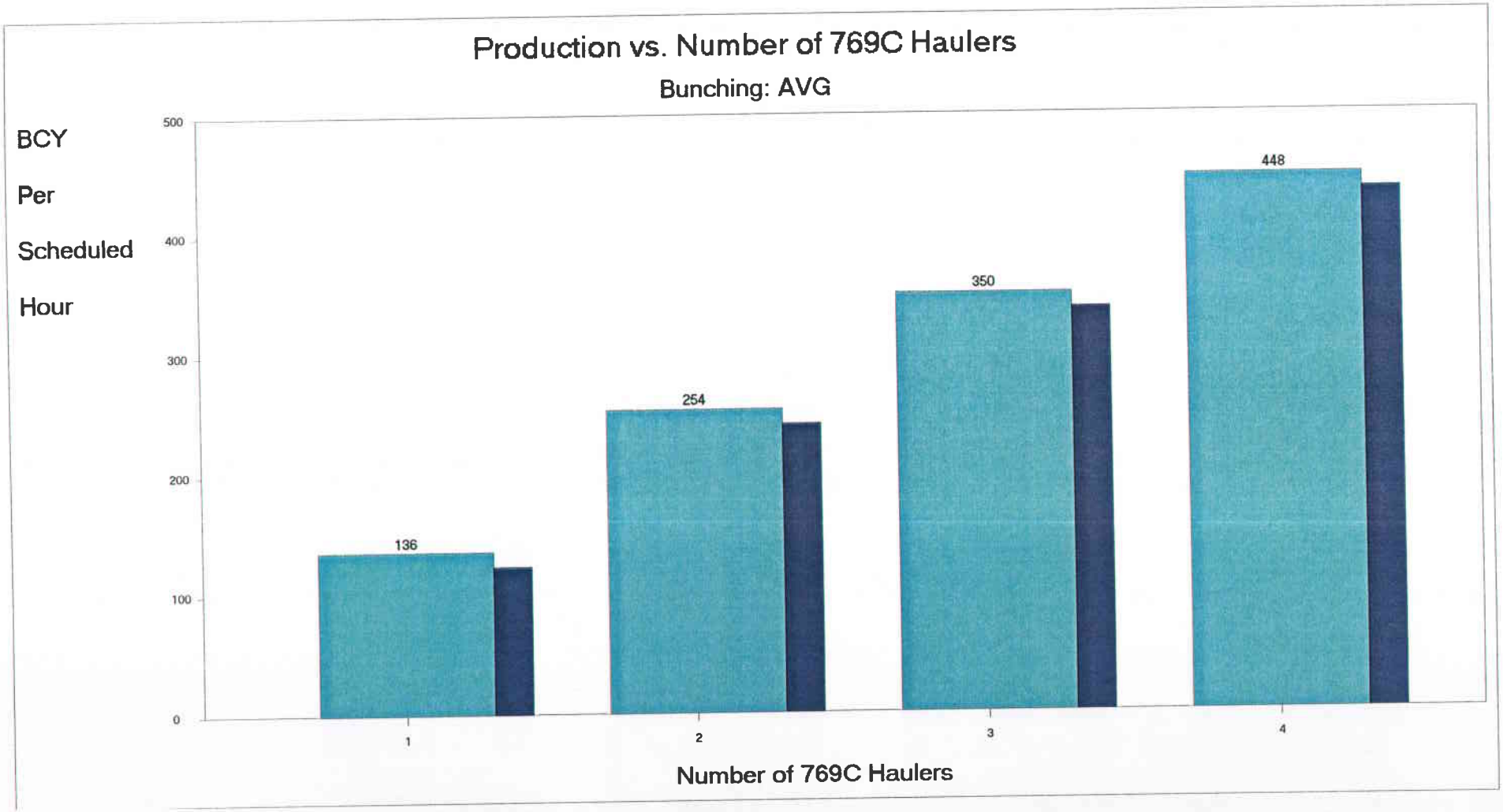
Pit Backfill Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	85 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 1 Truck-Shovel

Alton Coal Development, LLC

Fleet Production and Cost Analysis

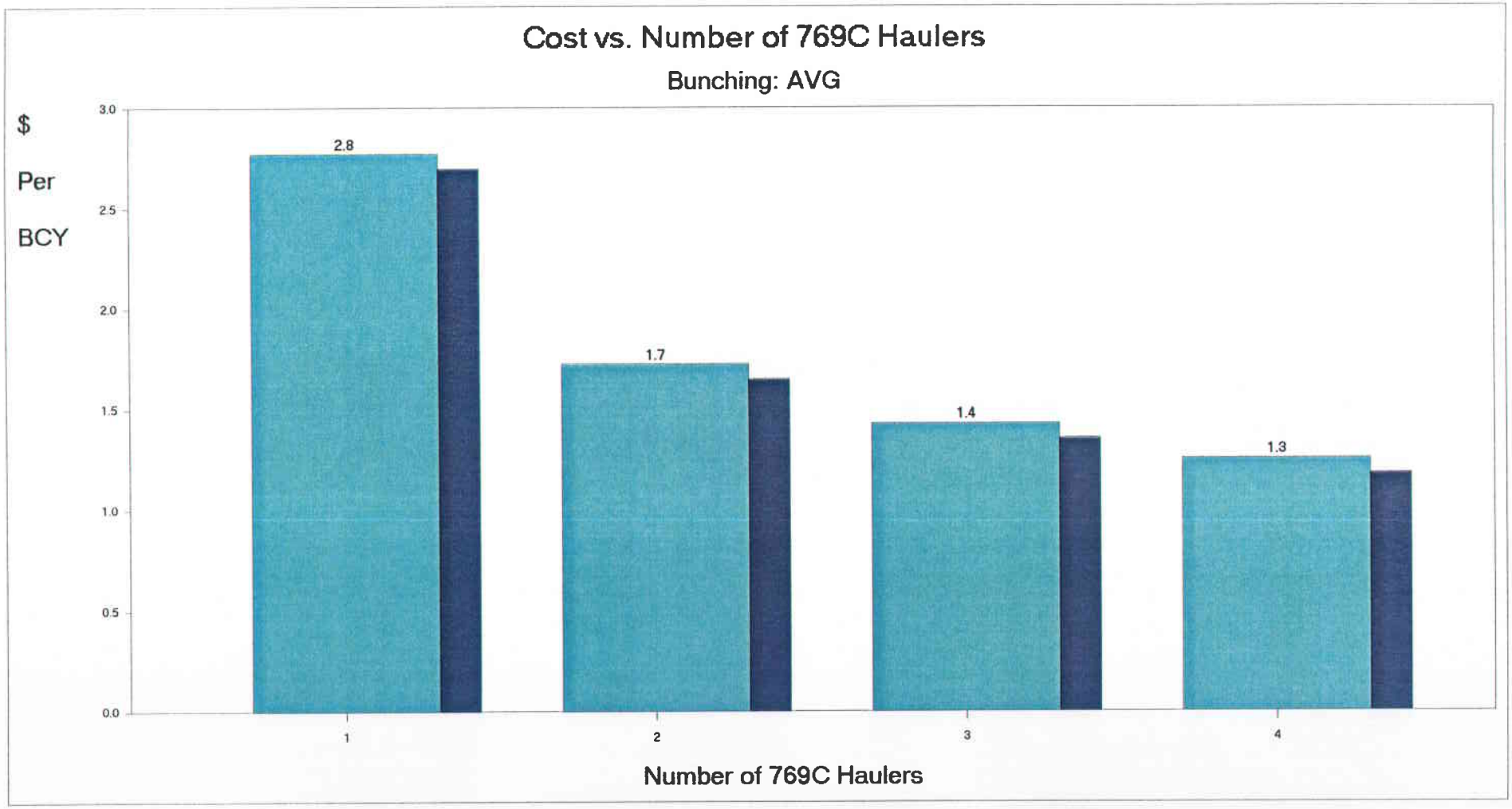
Pit Backfill Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	85 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 1 - Reclamation Estimate

Subsoil
Fleet Production and Cost Analysis

Fleet Production and Cost Analysis

Phase 1 Subsoil
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Subsoil Haul

Description:	Subsoil Pile to Phase 1 Reclamation
Material Qty (BCY)	153,026
lbs per BCY	2,596
lbs per LCY	2,107

4200 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving Excavator
250	4.00	-3.00	25.00	25.00	Segment 1
1,550	4.00	-6.00	25.00	25.00	Segment 2
2,300	4.00	-1.50	25.00	25.00	Segment 3

Fleet Production and Cost Analysis

Phase 1 Subsoil | **Subsoil Haul** | **FLEET1**

ton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	86.50
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	76.50
BCY per Sched Hr	446.37
Total BCY	153,026.00
Sched Hrs Required	342.82
Total $	183,222.50
$ per BCY	1.20
BCY per Year	2,785,360.09
Years Required	0.05

	1 385C LME	4 769C
Loader Fill Factor % (7.25 CY)		90.00
Tons/Pass (2107 lbs/LCY):		6.87
System Passes per Hauler:		4.31
Hauler Payload in Tons		29.63
Percent of Max GVW		107.54
Loader Cycle Time (Min)		0.25
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		1.75
Haul		2.09
Dump and Maneuver		0.60
Return		2.31
Potential Cycle Time		6.75
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		1.37
Total Cycle Time		8.12
POTENTIAL PRODUCTION		
BCY per Hour	782.58	811.81
Avg mph		14.15

Fleet Production and Cost Analysis

Phase 1 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
385C LME	1
Haulers	
769C	4

Potential Production

	Model	BCY per Hour	Avg mph
1	385C LME	783	
2	769C	812	14.1

Fleet Availability (%)	76.50
BCY per Scheduled hour	446.37
Total BCY	153,026.00
Scheduled Hours Required	342.82
Total $	183,222.50
$ per BCY	1.20
BCY per Year	2,785,360.09
Years Required	0.05

Fleet Production and Cost Analysis

Phase 1 Subsoil | **Subsoil Haul** | **FLEET1**

ton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

153,026 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	385C LME		149.56	309	46,145	0.302
Haulers:	4	769C	C202	72.49	1,166	84,494	0.552
Totals	4				1,166	84,494	0.552
Support:	1	14 Grader		87.04	69	5,968	0.039
	1	Water Truck		64.14	137	8,795	0.057
	1	D7 Dozer		110.32	343	37,820	0.247
Totals	3				549	52,583	0.344
Fleet Totals	8				2,023	183,222	1.197

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 1 Subsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

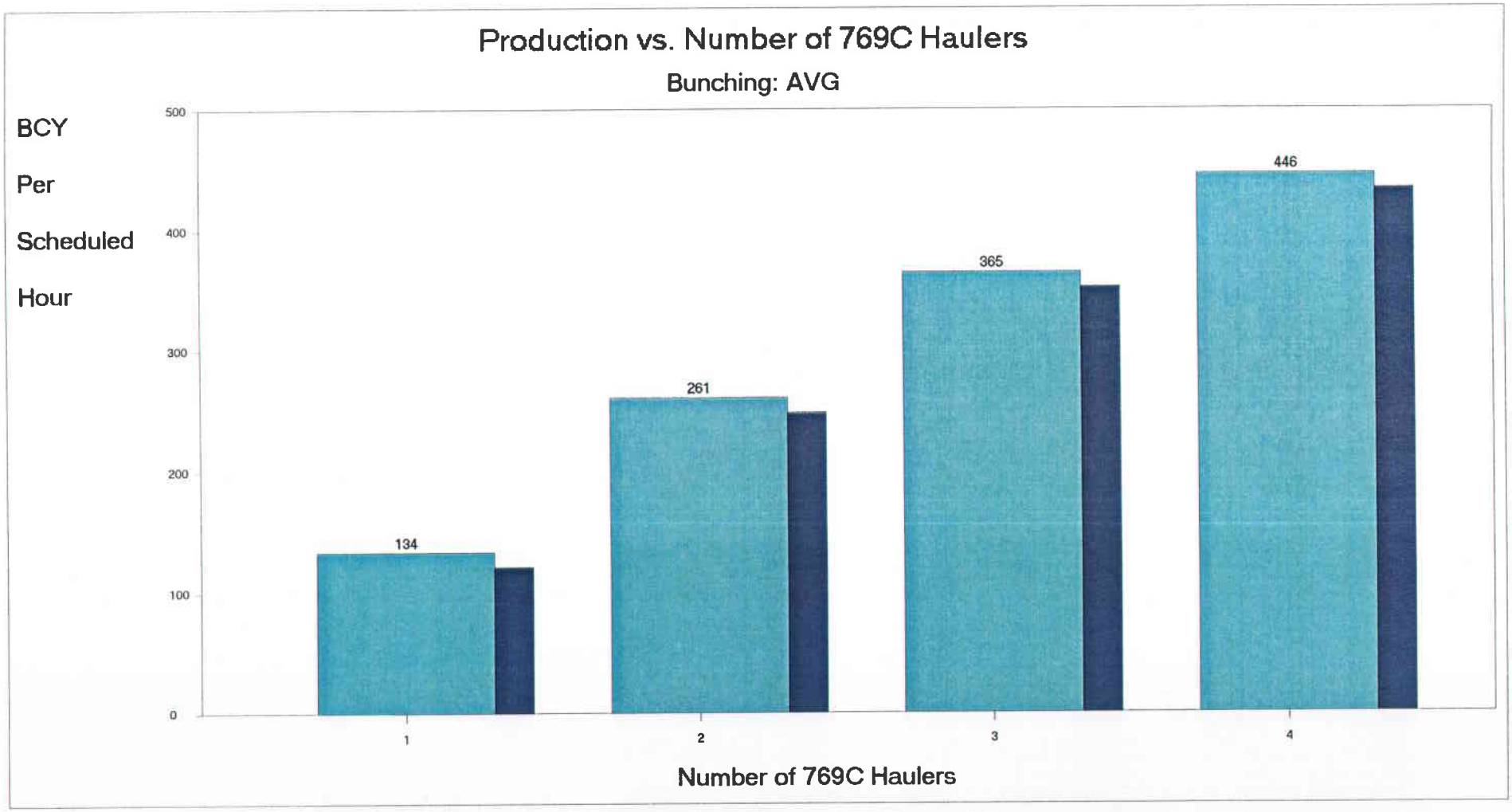
Subsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 1 Subsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

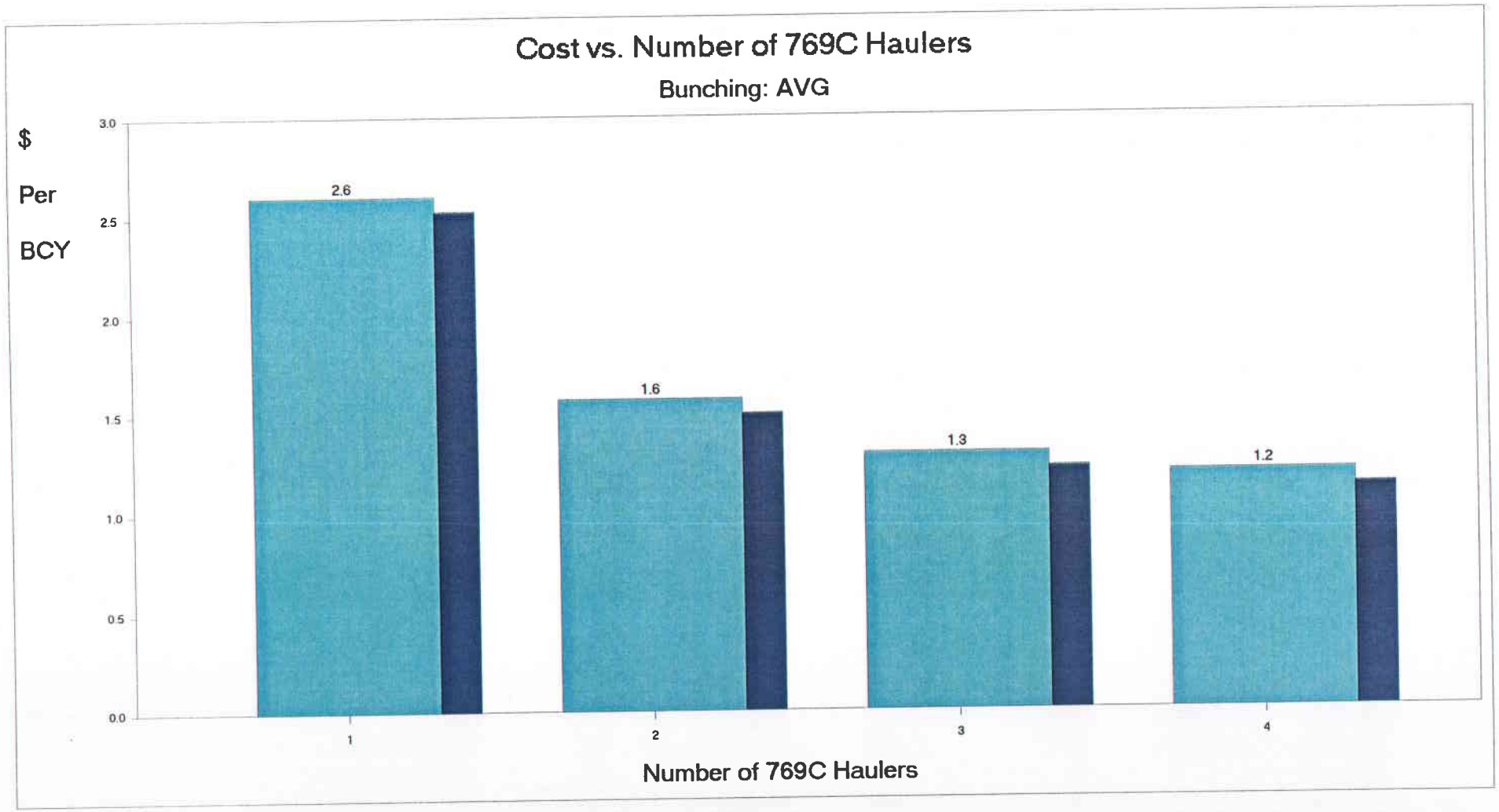
Subsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 1 - Reclamation Estimate

Topsoil
Fleet Production and Cost Analysis

Fleet Production and Cost Analysis

Phase 1 Topsoil
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Topsoil Haul

Description:	Topsoil Pile to Phase 1 Reclamation
Material Qty (BCY)	66,456
lbs per BCY	2,596
lbs per LCY	2,107

3950 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving Excavator
1,550	4.00	-6.00	25.00	25.00	Segment 1
2,300	4.00	-1.50	25.00	25.00	Segment 2

Fleet Production and Cost Analysis

Phase 1 Topsoil | **Topsoil Haul** | **FLEET1**

ton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	86.50
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	76.50
BCY per Sched Hr	456.73
Total BCY	66,456.00
Sched Hrs Required	145.50
Total $	77,765.41
$ per BCY	1.17
BCY per Year	2,849,985.62
Years Required	0.02

	1 385C LME	4 769C
Loader Fill Factor % (7.25 CY)		90.00
Tons/Pass (2107 lbs/LCY):		6.87
System Passes per Hauler:		4.31
Hauler Payload in Tons		29.63
Percent of Max GVW		107.54
Loader Cycle Time (Min)		0.25
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		1.75
Haul		1.96
Dump and Maneuver		0.60
Return		2.15
Potential Cycle Time		6.46
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		1.47
Total Cycle Time		7.94
POTENTIAL PRODUCTION		
BCY per Hour	782.58	847.69
Avg mph		13.89

Fleet Production and Cost Analysis

Phase 1 Topsoil | **Topsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
385C LME	1
Haulers	
769C	4

Potential Production

	Model	BCY per Hour	Avg mph
1	385C LME	783	
2	769C	848	13.9

Fleet Availability (%)	76.50
BCY per Scheduled hour	456.73
Total BCY	66,456.00
Scheduled Hours Required	145.50
Total $	77,765.41
$ per BCY	1.17
BCY per Year	2,849,985.62
Years Required	0.02

Fleet Production and Cost Analysis

Phase 1 Topsoil | **Topsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

66,456 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	385C LME		149.56	131	19,585	0.295
Haulers:	4	769C	C202	72.49	495	35,862	0.540
Totals	4				495	35,862	0.540
Support:	1	14 Grader		87.04	29	2,533	0.038
	1	Water Truck		64.14	58	3,733	0.056
	1	D7 Dozer		110.32	146	16,052	0.242
Totals	3				233	22,318	0.336
Fleet Totals	8				858	77,765	1.170

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 1 Topsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

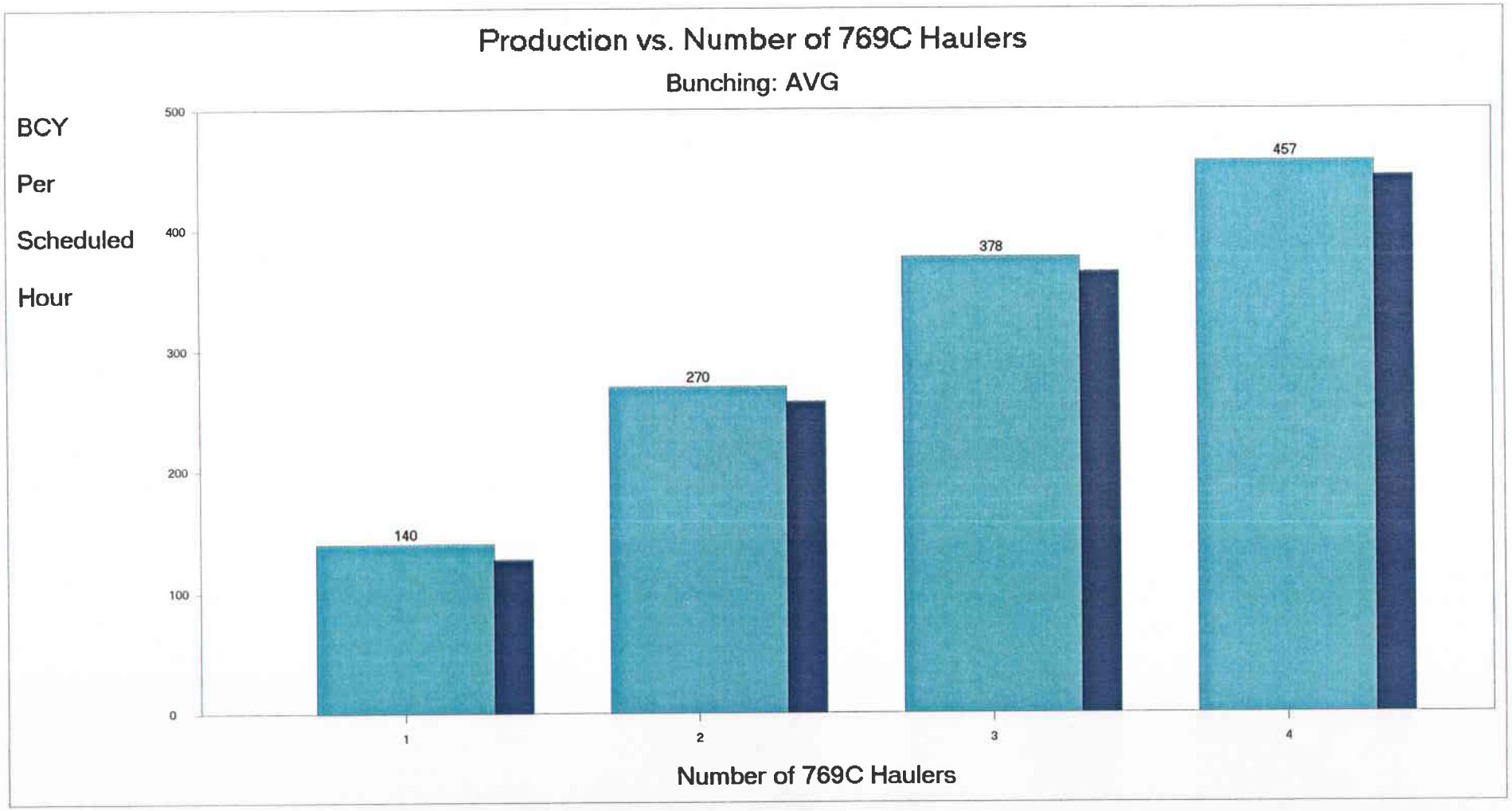
Topsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 1 Topsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

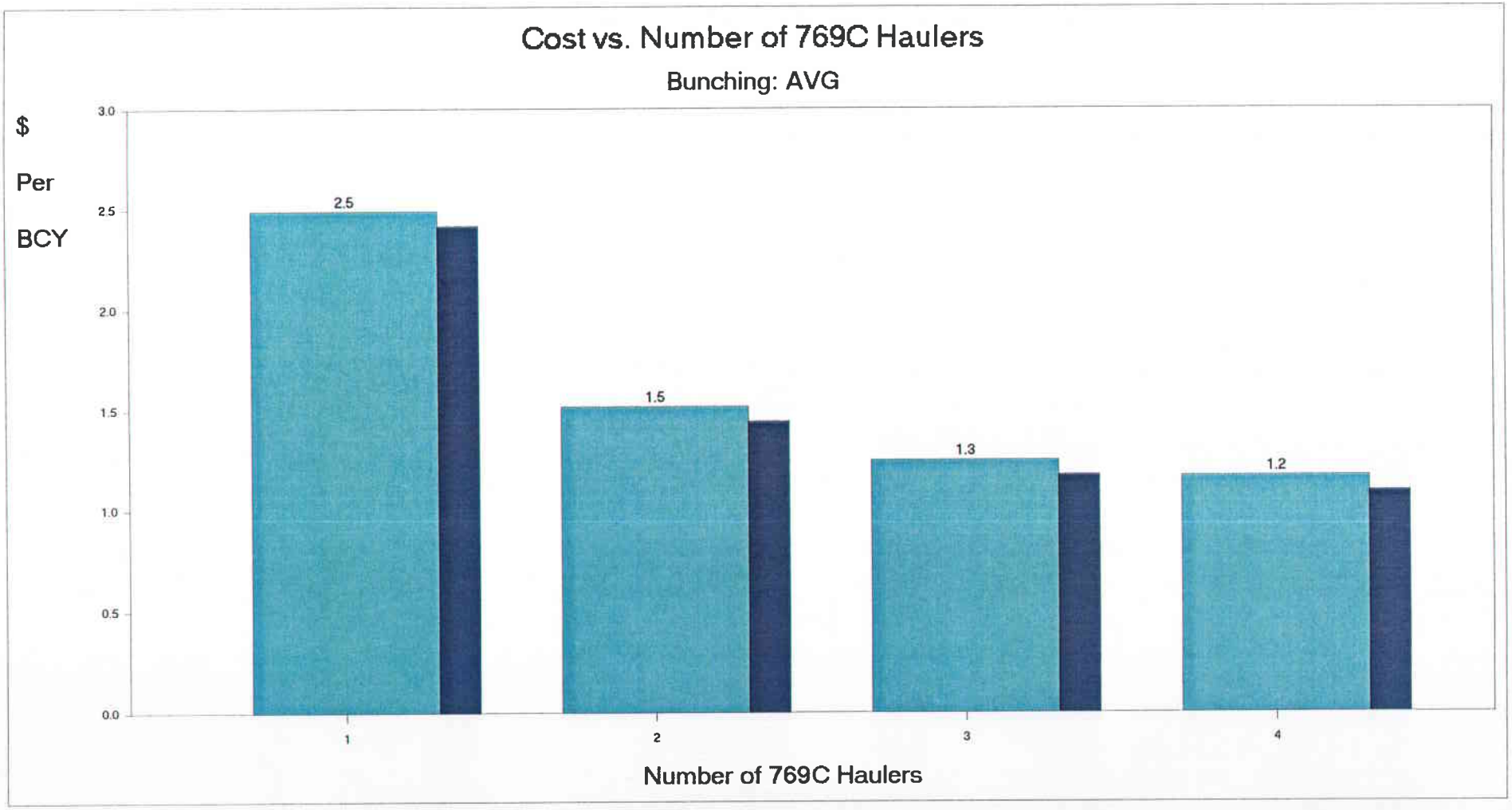
Topsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 2 - Reclamation Estimate

Estimate Details

Phase 2 Mine Reclamation Cost Estimate

Phase 2 Specialized Reclamation Areas

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pond 2 backfill from embankment	yd^3	160	$1.88	$301	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 2 backfill from excess spoil	yd^3	7,122	$5.87	$41,806	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 2 topsoil	yd^3	860	$5.87	$5,048	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 2 seeding	M.S.F	35	$39.00	$1,365	RS Means Heavy Constr., 32 92 19.14 3700
Pond 2 mulching	M.S.F	35	$60.00	$2,100	RS Means Heavy Constr., 32 91 13.16 0350
Pond 2 Subtotal				**$50,620**	
Pond 3 backfill from embankment	yd^3	4,767	$1.88	$8,962	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 3 backfill from excess spoil pile	yd^3	6,107	$5.87	$35,848	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 3 topsoil	yd^3	3,011	$5.87	$17,675	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 3 seeding	M.S.F	122	$39.00	$4,758	RS Means Heavy Constr., 32 92 19.14 3700
Pond 3 mulching	M.S.F	122	$60.00	$7,320	RS Means Heavy Constr., 32 91 13.16 0350
Pond 3 Subtotal				**$74,563**	
Pond 4 backfill from embankment	yd^3	1,410	$1.88	$2,651	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 4 backfill from excess spoil pile	yd^3	14,692	$5.87	$86,242	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 4 topsoil	yd^3	2,055	$5.87	$12,065	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 4 seeding	M.S.F	188	$39.00	$7,332	RS Means Heavy Constr., 32 92 19.14 3700
Pond 4 mulching	M.S.F	142	$60.00	$8,520	RS Means Heavy Constr., 32 91 13.16 0350
Pond 4 Subtotal				**$116,810**	
Phase 2 Specialized Reclamation Areas Total				**$191,381**	

Phase 2 Mine Reclamation Cost Estimate

Phase 2 Pit Backfill and Land Reclamation

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pit Backfill Rehandle Excess Spoil Pile - Dozer	yd^3 (Loose)	3,055,350	$0.93	$2,832,309	Production from Dozsim Software, Cost data from CostMine Coal Cost Guide 2009
Pit Backfill Rehandle Excess Spoil Pile - Excavator	yd^3 (Loose)	3,987,754	$0.93	$3,717,906	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Topsoil	yd^3 (Loose)	153,787	$0.80	$123,579	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Subsoil	yd^3 (Loose)	303,970	$0.80	$244,262	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Seeding	M.S.F	5,053	$39.00	$197,065	RS Means Heavy Constr., 32 92 19.14 3700
Mulching	M.S.F	5,053	$60.00	$303,178	RS Means Heavy Constr., 32 91 13.16 0350
Subtotal				**$7,418,299**	
Mobilization/Demobolization (5%)				$370,915	
Project Management/Engineering (5%)				$370,915	
Contractor Profit/Overhead (15%)				$1,112,745	
Phase 2 Mine Reclamation Total				**$9,272,874**	

Phase 2 Reclamation Bond Summary

Facilities Reclamation	$1,395,235
Specialized Areas Reclamation	$191,381
Mine Reclamation	$9,272,874
Phase 2 Overall Bond Total	**$10,859,490**

Phase 2 Mine Reclamation Material Handling Summary

Equipment Description	Production Rate (BCY)	Production Rate (LCY)	Cost/BCY	Cost/LCY	Total Volume (BCY)	Total Volume (LCY)	Total Cost
Rehandle with Dozer	138.8	184.6	$1.23	$0.927	2,297,256	3,055,350	$2,832,309
Rehandle with Truck/Shovel	502.3	668.1	$1.24	$0.932	2,998,311	3,987,754	$3,717,906
Topsoil	541.0	666.5	$0.99	$0.80	124,827	153,787	$123,579
Subsoil	542.5	668.4	$0.99	$0.80	247,130	303,970	$244,262
Total Phase 2 Material Handling							$6,918,056

Rehandle with Dozer Quantity	3,055,350	Loose Cubic Yards
Rehandle with Truck/Shovel Quantity	3,987,754	Loose Cubic Yards
Total Rehandle Quantity	7,043,104	Loose Cubic Yards

Software Overburden Swell Factor	33%
Software Topsoil Swell Factor	23%
Software Subsoil Swell Factor	23%

Topsoil Area	116	acres
Subsoil Area (Open Pit)	46	acres

Equipment Cost Data (Cost Mine 2009 Coal Cost Guide/2008 Mine and Mill Equipment Costs)

Equipment Description	$/hr
7 yd. Excavator	$116.40
25 Ton Haul Truck	$40.03
5,000 Gal. Water Truck	$31.25
14 Grader	$54.15
D10 Dozer	$140.17
D7 Dozer	$79.19
13 yd. Excavator	$264.49
40 Ton Haul Truck	$97.73

Manpower Type	$/hr (46% burden)
Excavator Operator	$32.31
Truck Drivers	$32.46
Heavy Equipment Operators	$31.33
Utility Operators	$32.89

Phase 2 - Reclamation Estimate

Pit Backfill - Dozer
Dozer Simulation

Machine Properties

Select Machine: D10N

Shoe Width: 24 / 28 / 31.5 inch

B: U / SU / Coal

Capacity - yd³: 28.7

Dual Tilt: Yes / No

Forward Gear: 1st Only / 2nd Only / System Select

Reverse Gear: 1st Only / 2nd Only / System Select

%Avail: 100% / 25% — 85 %

Weight: +15% / -15% — 150191 lb

Cost/Hr: $250 / $1 — $171

Material Properties

Shale

Density / Swell — Select Calculated

Loose	Bank	Swell
2107 lb/LCY	2798 lb/BCY	33 %

Dozability: Easy – Hard — Factor 1.06

Derating Factors

Altitude: 0 – 15,000 — Feet 6900

Visibility: Poor – Excellent — Factor 0.95

Job Efficiency: 0 Min – 60 Min — 54 Min/Hr — Percent 90

Skill Level: Poor – Excellent — Factor 0.95

Input Values

Average Push Distance: 50 ft – 1500 ft — Feet 800

Average Push Slope: -55 % – 55 % — % 0

Volumes

Bank Moved	2,297,256	yd³
Loose Moved	3,055,350	yd³

☑ Slot Dozing

Disclaimer

Due to the many variables involved and the consequent possibility of inadvertant errors or omissions in preparing reports of this character, neither Caterpillar Inc. nor the dealer can or does represent or warrant, expressly or implicitly, either the accuracy of this report or that the Caterpillar equipment referred to in the report will in fact achieve the performance indicated on the job to which the report relates.

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Output Values

Gear: Fwd 1 / Rev 2

Productivity

Bank	138.8	yd/hr
	$1.232	$/yd
Loose	184.6	yd/hr
	$0.927	$/yd

Totals

Hours	16,555.67
Cost	$2,831,020.09

Print

Exit

Phase 2 - Reclamation Estimate

Pit Backfill - Truck and Shovel
Fleet Production and Cost Analysis (FPC)

Fleet Production and Cost Analysis

Phase 2 Truck-Shovel
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Pit Backfill Haul

Description:	Haul from excess pile to pit
Material Qty (BCY)	2,998,311
lbs per BCY	2,798
lbs per LCY	2,107

2650 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving excavator location
2,550	4.00	2.00	25.00	25.00	Haul to open pit

Fleet Production and Cost Analysis

Phase 2 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

ton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	90.00
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	89.07
BCY per Sched Hr	502.35
Total BCY	2,998,311.00
Sched Hrs Required	5,968.54
Total $	3,719,643.17
$ per BCY	1.24
BCY per Year	3,134,681.03
Years Required	0.96

	1 385C LME	5 769C
Loader Fill Factor % (7.25 CY)		90.00
Tons/Pass (2107 lbs/LCY):		6.87
System Passes per Hauler:		3.27
Hauler Payload in Tons		22.51
Percent of Max GVW		95.91
Loader Cycle Time (Min)		0.25
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		1.50
Haul		1.74
Dump and Maneuver		0.60
Return		1.39
Potential Cycle Time		5.23
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		2.48
Total Cycle Time		7.70
POTENTIAL PRODUCTION		
BCY per Hour	643.66	923.88
Avg mph		11.53

Fleet Production and Cost Analysis

Phase 2 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

[illegible]on Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
385C LME	1
Haulers	
769C	5

Potential Production

	Model	BCY per Hour	Avg mph
1	385C LME	644	
2	769C	924	11.5

Fleet Availability (%)	76.50
BCY per Scheduled hour	502.35
Total BCY	2,998,311.00
Scheduled Hours Required	5,968.54
Total $	3,719,643.17
$ per BCY	1.24
BCY per Year	3,134,681.03
Years Required	0.96

Fleet Production and Cost Analysis

Phase 2 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

2,998,311 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	385C LME		149.56	5,372	803,389	0.268
Haulers:	5	769C	C202	72.49	25,366	1,838,802	0.613
Totals	5				25,366	1,838,802	0.613
Support:	1	14 Grader		87.04	2,387	207,801	0.069
	1	Water Truck		64.14	2,387	153,129	0.051
	1	D10 Dozer		171.50	4,178	716,523	0.239
Totals	3				8,953	1,077,452	0.359
Fleet Totals	9				39,691	3,719,643	1.241

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 2 Truck-Shovel

Alton Coal Development, LLC

Fleet Production and Cost Analysis

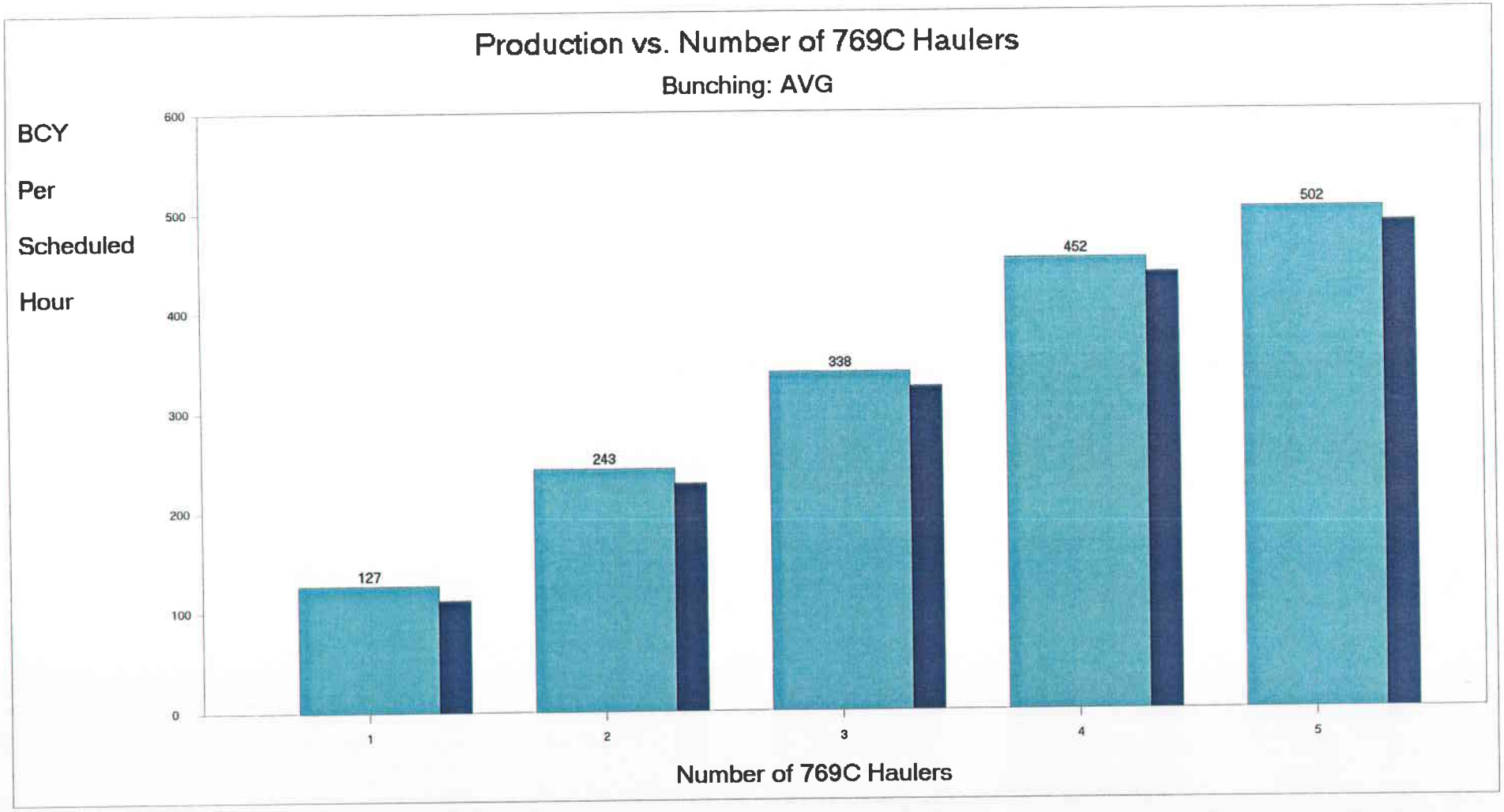
Pit Backfill Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	90 % Operator Efficiency
Haulers:	5 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching

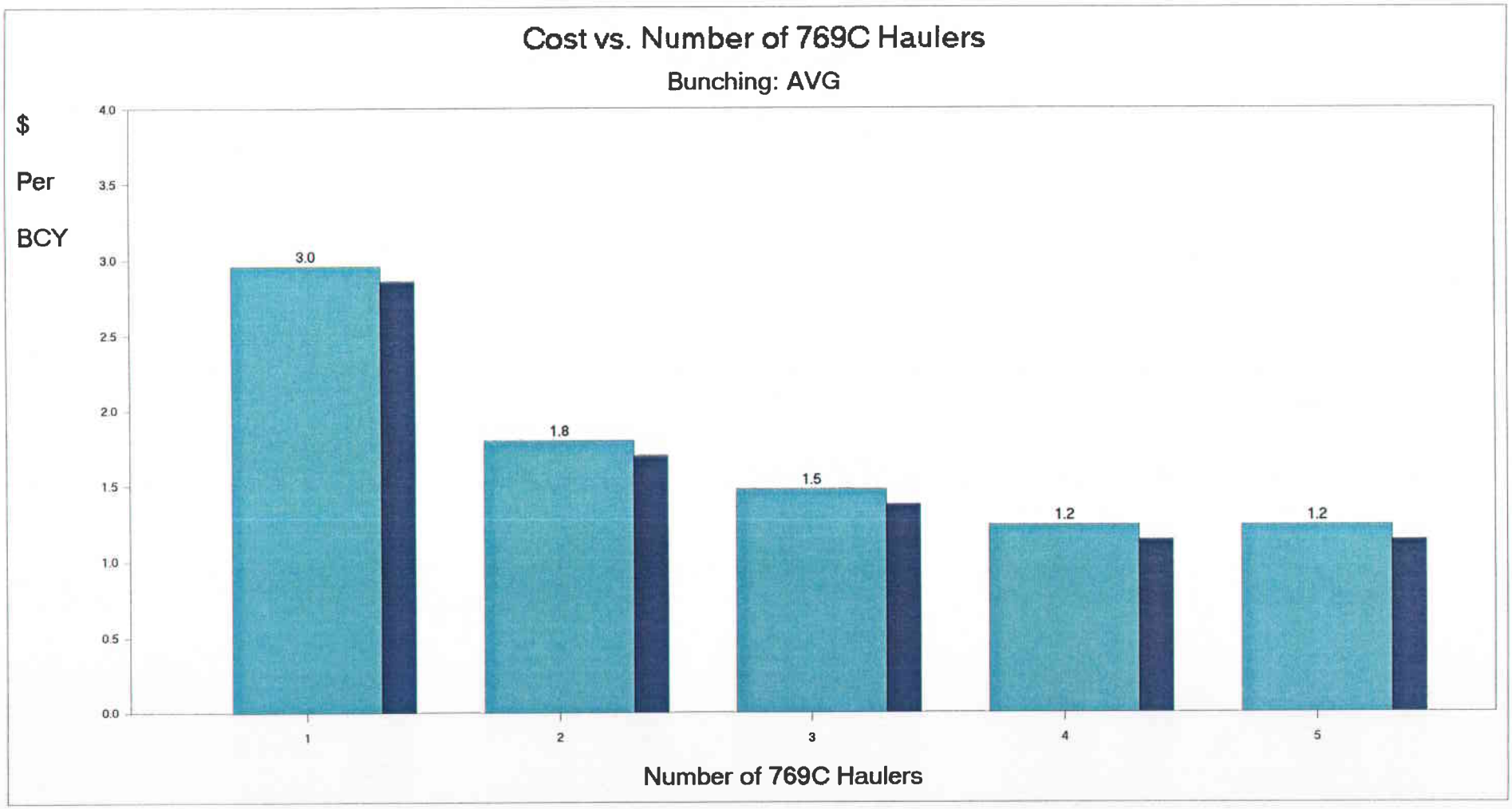


Fleet Production and Cost Analysis

Phase 2 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Loader:	1 385C LME	Availability: 90%	90 % Operator Efficiency
Haulers:	5 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 2 - Reclamation Estimate

Subsoil
Fleet Production and Cost Analysis

Fleet Production and Cost Analysis

Phase 2 Subsoil
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Subsoil Haul

Description:	Subsoil Pile to Phase 1 Reclamation
Material Qty (BCY)	153,026
lbs per BCY	2,596
lbs per LCY	2,107

3100 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving Excavator
250	4.00	-3.00	25.00	25.00	Segment 1
1,550	4.00	-6.00	25.00	25.00	Segment 2
1,200	4.00	-1.50	25.00	25.00	Segment 3

Fleet Production and Cost Analysis

Phase 2 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	86.50
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	86.17
BCY per Sched Hr	542.45
Total BCY	153,026.00
Sched Hrs Required	282.10
Total $	150,770.48
$ per BCY	0.99
BCY per Year	3,384,884.30
Years Required	0.05

	1 385C LME	4 769C
Loader Fill Factor % (7.25 CY)		90.00
Tons/Pass (2107 lbs/LCY):		6.87
System Passes per Hauler:		4.31
Hauler Payload in Tons		29.63
Percent of Max GVW		107.54
Loader Cycle Time (Min)		0.25
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		1.75
Haul		1.59
Dump and Maneuver		0.60
Return		1.81
Potential Cycle Time		5.75
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		1.78
Total Cycle Time		7.53
POTENTIAL PRODUCTION		
BCY per Hour	782.58	953.04
Avg mph		12.26

Fleet Production and Cost Analysis

Phase 2 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
385C LME	1
Haulers	
769C	4

Potential Production

	Model	BCY per Hour	Avg mph
1	385C LME	783	
2	769C	953	12.3

Fleet Availability (%)	76.50
BCY per Scheduled hour	542.45
Total BCY	153,026.00
Scheduled Hours Required	282.10
Total $	150,770.48
$ per BCY	0.99
BCY per Year	3,384,884.30
Years Required	0.05

Fleet Production and Cost Analysis

Phase 2 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

153,026 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	385C LME		149.56	254	37,972	0.248
Haulers:	4	769C	C202	72.49	959	69,529	0.454
Totals	4				959	69,529	0.454
Support:	1	14 Grader		87.04	56	4,911	0.032
	1	Water Truck		64.14	113	7,238	0.047
	1	D7 Dozer		110.32	282	31,121	0.203
Totals	3				451	43,270	0.283
Fleet Totals	8				1,664	150,770	0.985

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 2 Subsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

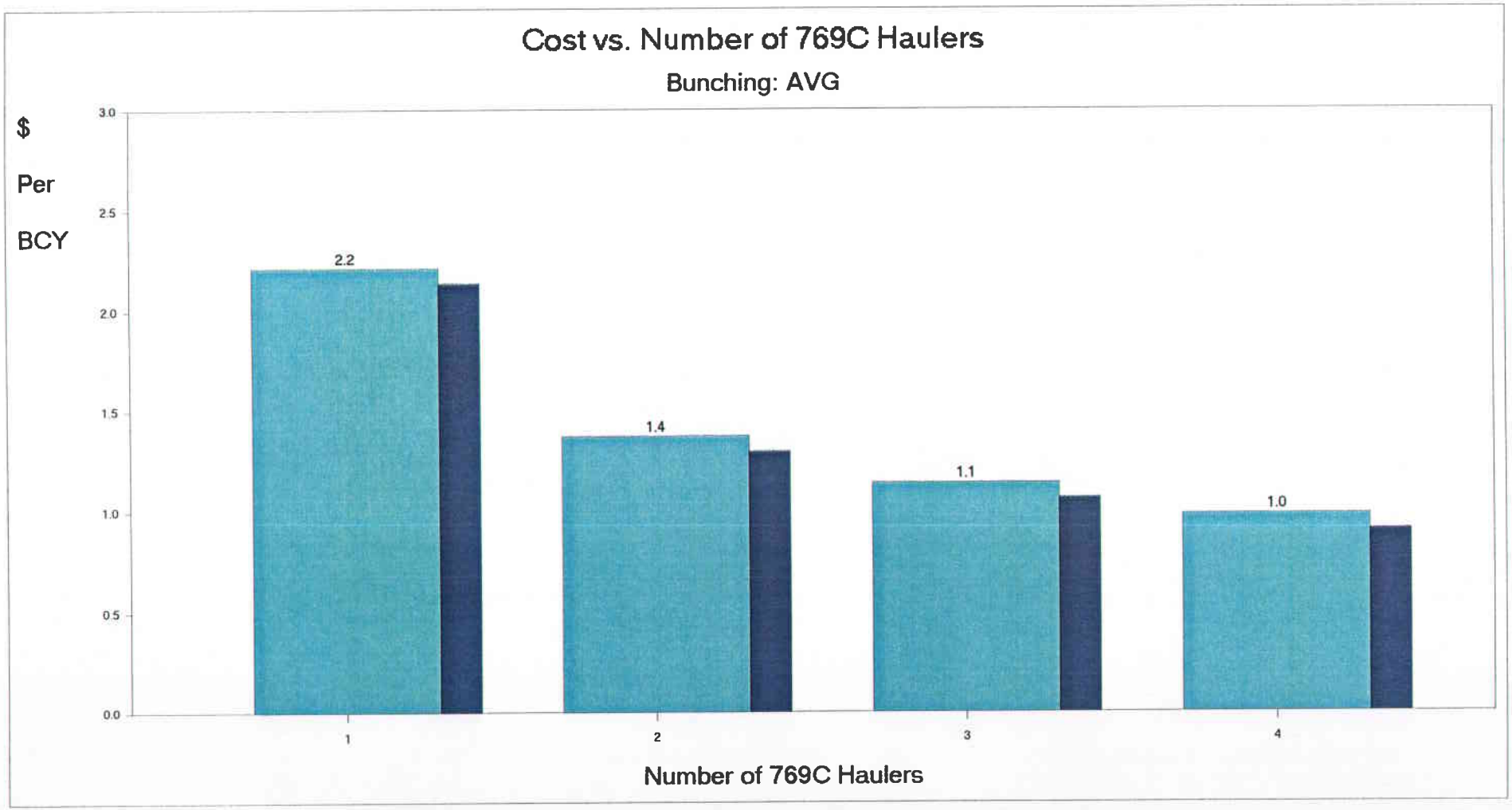
Subsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 2 Subsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

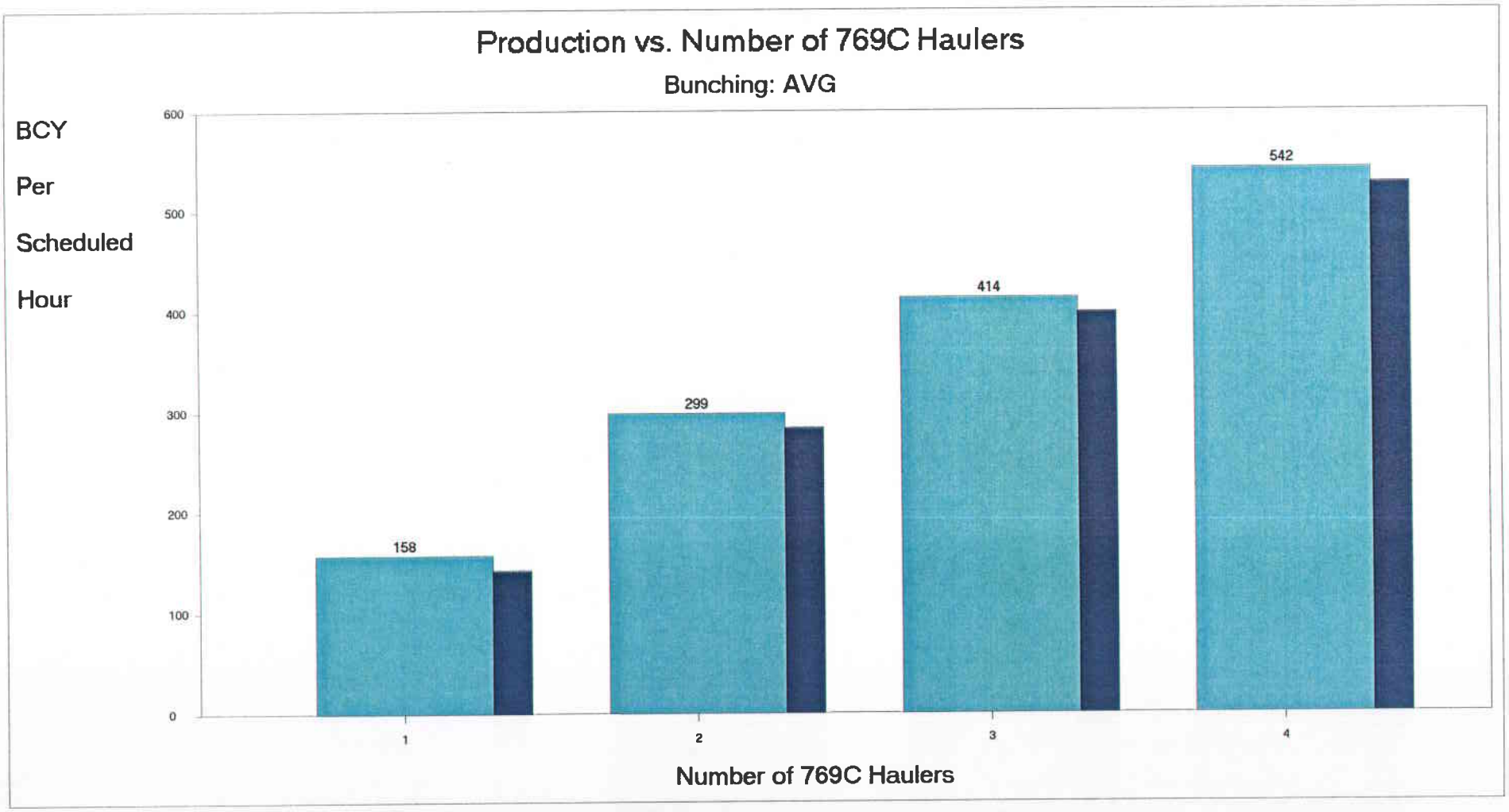
Subsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 2 - Reclamation Estimate

Topsoil
Fleet Production and Cost Analysis

Fleet Production and Cost Analysis

Phase 2 Topsoil
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Topsoil Haul

Description:	Topsoil Pile to Phase 2 Reclamation
Material Qty (BCY)	124,827
lbs per BCY	2,596
lbs per LCY	2,107

3250 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving Excavator
1,550	4.00	-6.00	25.00	25.00	Segment 1
1,600	4.00	-1.50	25.00	25.00	Segment 2

Fleet Production and Cost Analysis

Phase 2 Topsoil | **Topsoil Haul** | **FLEET1**

on Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	86.50
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	86.17
BCY per Sched Hr	540.99
Total BCY	124,827.00
Sched Hrs Required	230.74
Total $	123,318.62
$ per BCY	0.99
BCY per Year	3,375,785.14
Years Required	0.04

	1 385C LME	4 769C
Loader Fill Factor % (7.25 CY)		90.00
Tons/Pass (2107 lbs/LCY):		6.87
System Passes per Hauler:		4.31
Hauler Payload in Tons		29.63
Percent of Max GVW		107.54
Loader Cycle Time (Min)		0.25
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		1.75
Haul		1.64
Dump and Maneuver		0.60
Return		1.83
Potential Cycle Time		5.83
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		1.72
Total Cycle Time		7.55
POTENTIAL PRODUCTION		
BCY per Hour	782.58	940.28
Avg mph		12.68

Fleet Production and Cost Analysis

Phase 2 Topsoil | **Topsoil Haul** | **FLEET1**

on Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
385C LME	1
Haulers	
769C	4

Potential Production

	Model	BCY per Hour	Avg mph
1	385C LME	783	
2	769C	940	12.7

Fleet Availability (%)	76.50
BCY per Scheduled hour	540.99
Total BCY	124,827.00
Scheduled Hours Required	230.74
Total $	123,318.62
$ per BCY	0.99
BCY per Year	3,375,785.14
Years Required	0.04

Fleet Production and Cost Analysis

Phase 2 Topsoil | **Topsoil Haul** | **FLEET1**

on Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

124,827 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	385C LME		149.56	208	31,058	0.249
Haulers:	4	769C	C202	72.49	785	56,869	0.456
Totals	4				785	56,869	0.456
Support:	1	14 Grader		87.04	46	4,017	0.032
	1	Water Truck		64.14	92	5,920	0.047
	1	D7 Dozer		110.32	231	25,455	0.204
Totals	3				369	35,391	0.284
Fleet Totals	8				1,361	123,319	0.988

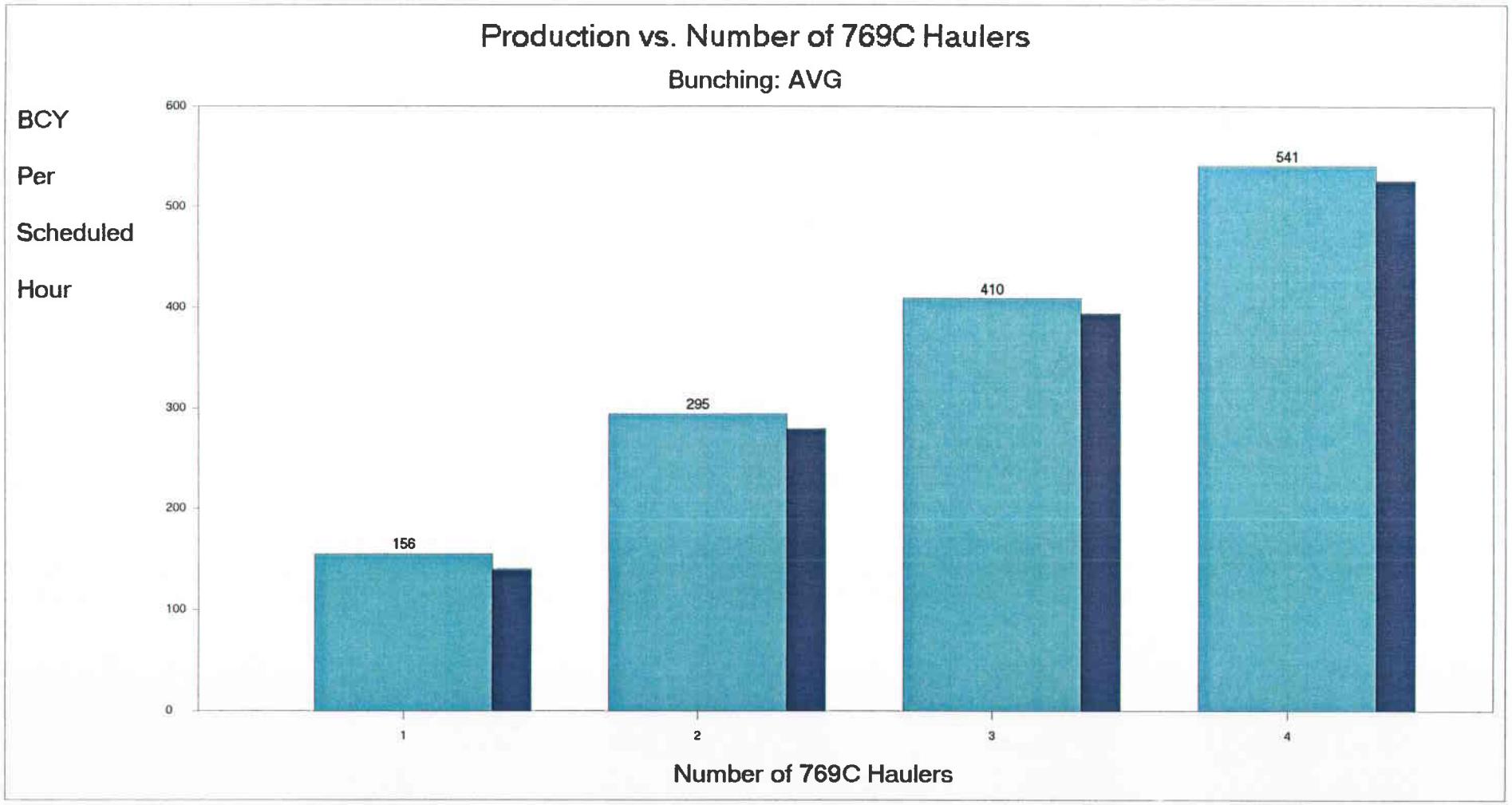
Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Fleet Product and Cost Analysis

Phase 2 Topsoil | **Topsoil Haul** | **FLEET**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-0**

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency	
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year	
			AVG Bunching	



Phase 2 Topsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

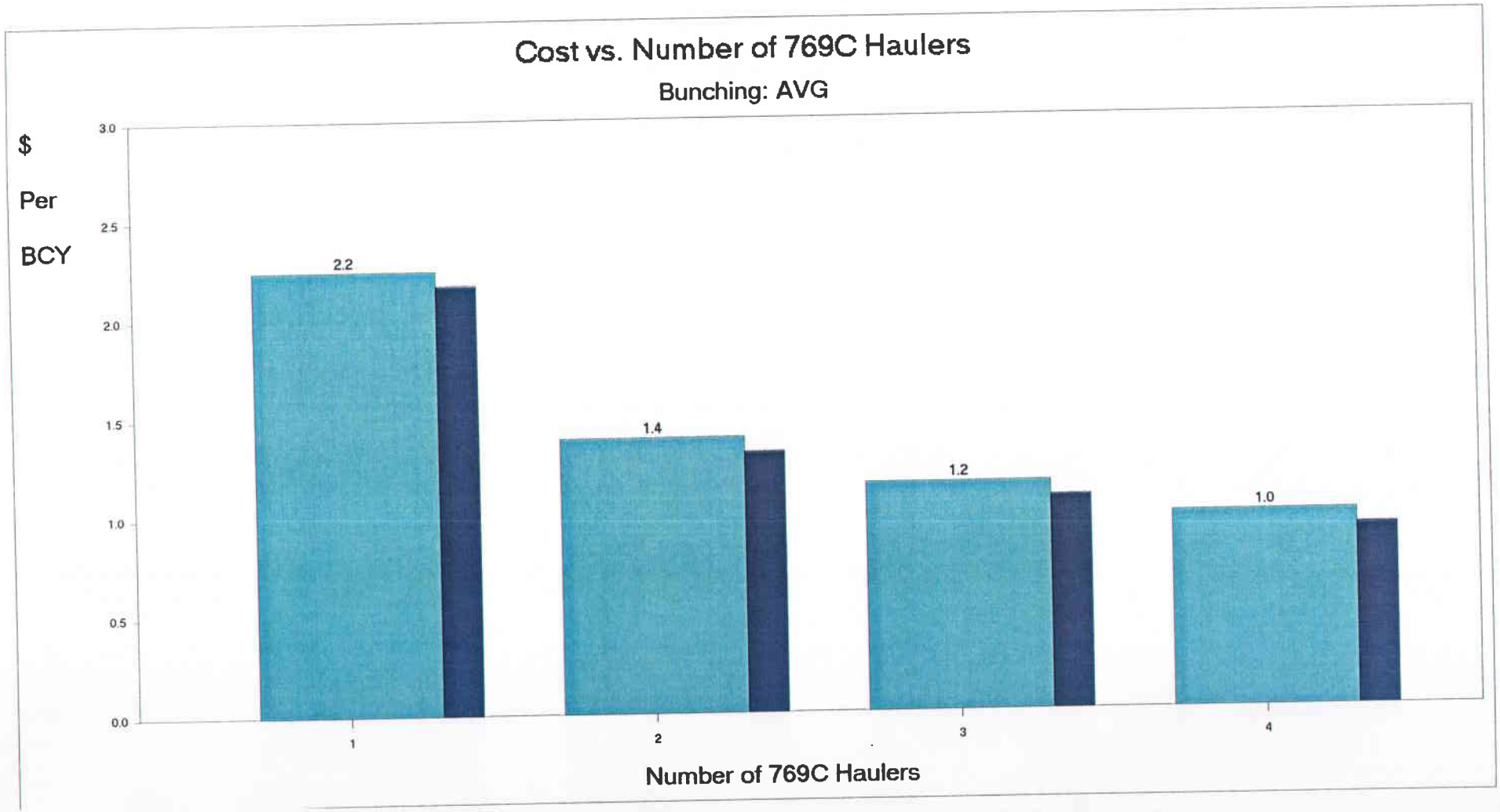
Topsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 385C LME	Availability: 90%	86 % Operator Efficiency
Haulers:	4 769C	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 3 - Reclamation Estimate

Estimate Details

Phase 3 Mine Reclamation Cost Estimate

Phase 3 Specialized Reclamation Areas

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pond 2 backfill from embankment	yd^3	160	$1.88	$301	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 2 backfill from excess spoil	yd^3	7,122	$5.87	$41,806	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 2 topsoil	yd^3	860	$5.87	$5,048	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 2 seeding	M.S.F	35	$39.00	$1,365	RS Means Heavy Constr., 32 92 19.14 3700
Pond 2 mulching	M.S.F	35	$60.00	$2,100	RS Means Heavy Constr., 32 91 13.16 0350
Pond 2 Subtotal				**$50,620**	
Pond 3 backfill from embankment	yd^3	4,767	$1.88	$8,962	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 3 backfill from excess spoil pile	yd^3	6,107	$5.87	$35,848	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 3 topsoil	yd^3	3,011	$5.87	$17,675	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 3 seeding	M.S.F	122	$39.00	$4,758	RS Means Heavy Constr., 32 92 19.14 3700
Pond 3 mulching	M.S.F	122	$60.00	$7,320	RS Means Heavy Constr., 32 91 13.16 0350
Pond 3 Subtotal				**$74,563**	
Pond 4 backfill from embankment	yd^3	1,410	$1.88	$2,651	RSMeans Heavy Constr., 31 23 23.17 0020
Pond 4 backfill from excess spoil pile	yd^3	14,692	$5.87	$86,242	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 4 topsoil	yd^3	2,055	$5.87	$12,065	RSMeans Heavy Constr., 31 23 23.20 3014 & 31 23 16.42 1300 & 31 23 23.17 0020
Pond 4 seeding	M.S.F	188	$39.00	$7,332	RS Means Heavy Constr., 32 92 19.14 3700
Pond 4 mulching	M.S.F	142	$60.00	$8,520	RS Means Heavy Constr., 32 91 13.16 0350
Pond 4 Subtotal				**$116,810**	
Phase 3 Specialized Reclamation Areas Total				**$191,381**	

Phase 3 Mine Reclamation Cost Estimate

Phase 3 Pit Backfill and Land Reclamation

Item	*Unit	Quantity	Unit Cost ($)	Cost	**Cost Data Reference
Pit Backfill Rehandle Excess Spoil Pile - Excavator	yd^3 (Loose)	6,591,123	$0.97	$6,392,894	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Topsoil	yd^3 (Loose)	160,415	$0.94	$151,040	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Subsoil	yd^3 (Loose)	396,483	$0.95	$376,530	Production from Fleet Production and Cost Analysis Software, Cost data from CostMine Coal Cost Guide 2009
Seeding	M.S.F	5,271	$39.00	$205,560	RS Means Heavy Constr., 32 92 19.14 3700
Mulching	M.S.F	5,271	$60.00	$316,246	RS Means Heavy Constr., 32 91 13.16 0350
Subtotal				**$7,442,270**	
Mobilization/Demobolization (5%)				$372,113	
Project Management/Engineering (5%)				$372,113	
Contractor Profit/Overhead (15%)				$1,116,340	
Phase 3 Mine Reclamation Total				**$9,302,837**	

Phase 3 Reclamation Bond Summary

Facilities Reclamation	$1,395,235
Specialized Areas Reclamation	$191,381
Mine Reclamation	$9,302,837
Phase 3 Overall Bond Total	**$10,889,453**

Phase 3 Mine Reclamation Material Handling Summary

Equipment Description	Production Rate (BCY)	Production Rate (LCY)	Cost/BCY	Cost/LCY	Total Volume (BCY)	Total Volume (LCY)	Total Cost
Rehandle with Truck/Shovel	670.1	891.2	$1.29	$0.97	4,955,732	6,591,123	$6,392,894
Topsoil	724.9	893.1	$1.16	$0.94	130,207	160,415	$151,040
Subsoil	719.6	886.6	$1.17	$0.95	322,344	396,483	$376,530
Total Phase 3 Material Handling							$6,920,464

Rehandle with Truck/Shovel Quantity	6,591,123	Loose Cubic Yards
Total Rehandle Quantity	6,591,123	Loose Cubic Yards
Software Overburden Swell Factor	33%	
Software Topsoil Swell Factor	23%	
Software Subsoil Swell Factor	23%	
Topsoil Area	121	acres
Subsoil Area (Open Pit)	60	acres

Equipment Cost Data (Cost Mine 2009 Coal Cost Guide/2008 Mine and Mill Equipment Costs)

Equipment Description	$/hr
7 yd. Excavator	$116.40
25 Ton Haul Truck	$40.03
5,000 Gal. Water Truck	$31.25
14 Grader	$54.15
D10 Dozer	$140.17
D7 Dozer	$79.19
13 yd. Excavator	$264.49
40 Ton Haul Truck	$97.73

Manpower Type	$/hr (46% burden)
Excavator Operator	$32.31
Truck Drivers	$32.46
Heavy Equipment Operators	$31.33
Utility Operators	$32.89

Phase 3 - Reclamation Estimate

Pit Backfill - Truck and Shovel
Fleet Production and Cost Analysis (FPC)

Fleet Production and Cost Analysis

Phase 3 Truck-Shovel
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Pit Backfill Haul

Description:	Haul from excess pile to pit
Material Qty (BCY)	4,955,732
lbs per BCY	2,798
lbs per LCY	2,107

5300 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving excavator location
1,000	4.00	2.00	25.00	25.00	Segment 1
4,200	4.00	-1.30	25.00	25.00	Segment 2

Fleet Production and Cost Analysis

Phase 3 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	95.00
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	85.35
BCY per Sched Hr	670.13
Total BCY	4,955,732.00
Sched Hrs Required	7,395.20
Total $	6,405,603.02
$ per BCY	1.29
BCY per Year	4,181,598.08
Years Required	1.19

	1 5130 FS	5 772
Loader Fill Factor % (13.75 CY)		90.00
Tons/Pass (2107 lbs/LCY):		13.04
System Passes per Hauler:		3.48
Hauler Payload in Tons		45.36
Percent of Max GVW		94.43
Loader Cycle Time (Min)		0.50
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		2.25
Haul		2.90
Dump and Maneuver		0.70
Return		2.61
Potential Cycle Time		8.47
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		3.30
Total Cycle Time		11.77
POTENTIAL PRODUCTION		
BCY per Hour	864.56	1,148.78
Avg mph		14.23

Fleet Production and Cost Analysis

Phase 3 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
5130 FS	1
Haulers	
772	5

Potential Production

	Model	BCY per Hour	Avg mph
1	5130 FS	865	
2	772	1,149	14.2

Fleet Availability (%)	76.50
BCY per Scheduled hour	670.13
Total BCY	4,955,732.00
Scheduled Hours Required	7,395.20
Total $	6,405,603.02
$ per BCY	1.29
BCY per Year	4,181,598.08
Years Required	1.19

Fleet Production and Cost Analysis

Phase 3 Truck-Shovel | **Pit Backfill Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

4,955,732 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	5130 FS		264.49	6,656	1,760,362	0.355
Haulers:	5	772	C314	97.73	31,430	3,071,616	0.620
Totals	5				31,430	3,071,616	0.620
Support:	1	14 Grader		87.04	3,698	321,839	0.065
	1	Water Truck		64.14	3,698	237,164	0.048
	1	D10 Dozer		171.50	5,916	1,014,622	0.205
Totals	3				13,311	1,573,625	0.318
Fleet Totals	9				51,397	6,405,603	1.293

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 3 Truck-Shovel

Alton Coal Development, LLC

Fleet Product and Cost Analysis

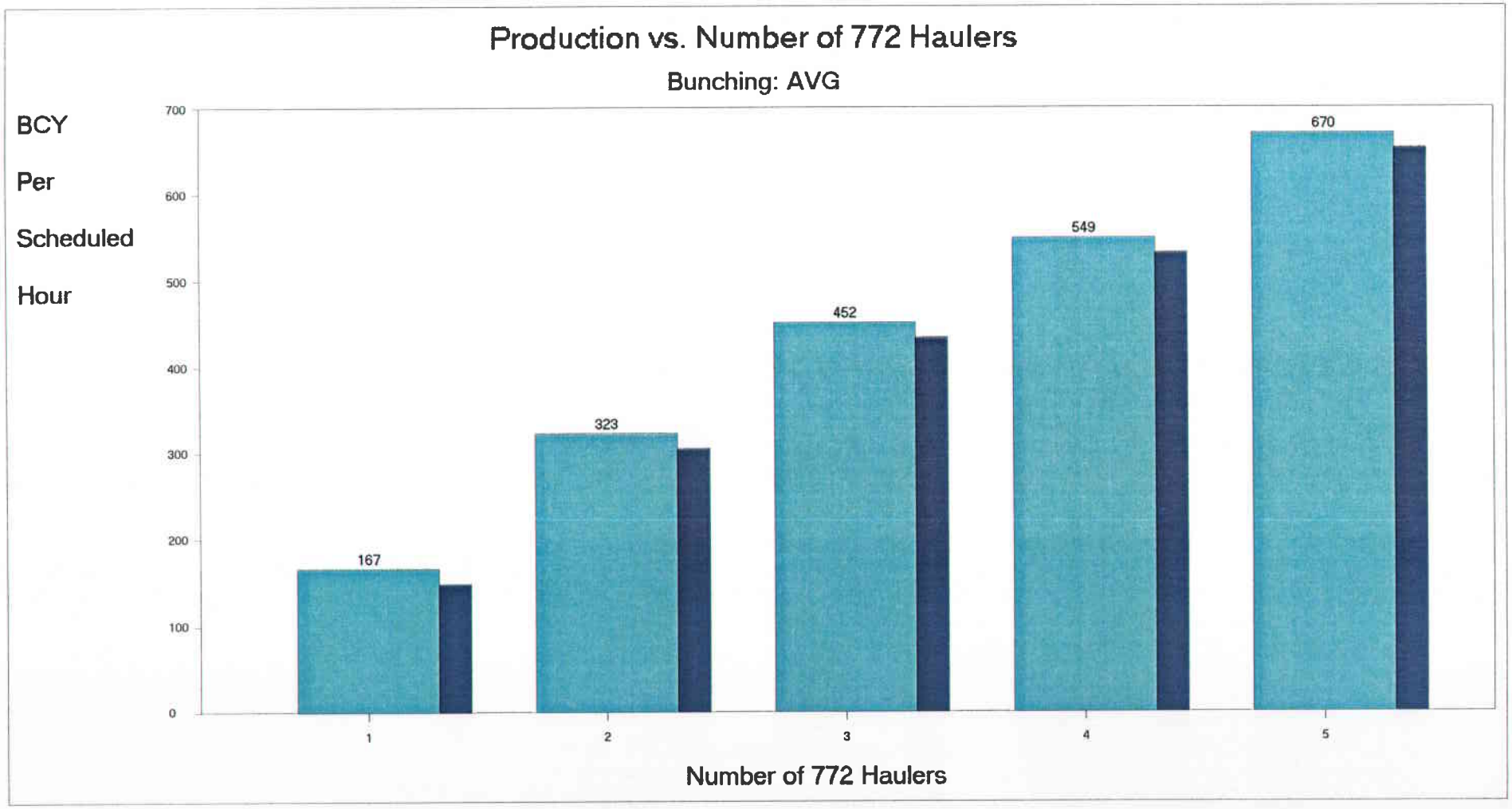
Pit Backfill Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 5130 FS	Availability: 90%	95 % Operator Efficiency
Haulers:	5 772	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 3 Truck-Shovel

Alton Coal Development, LLC

Fleet Production and Cost Analysis

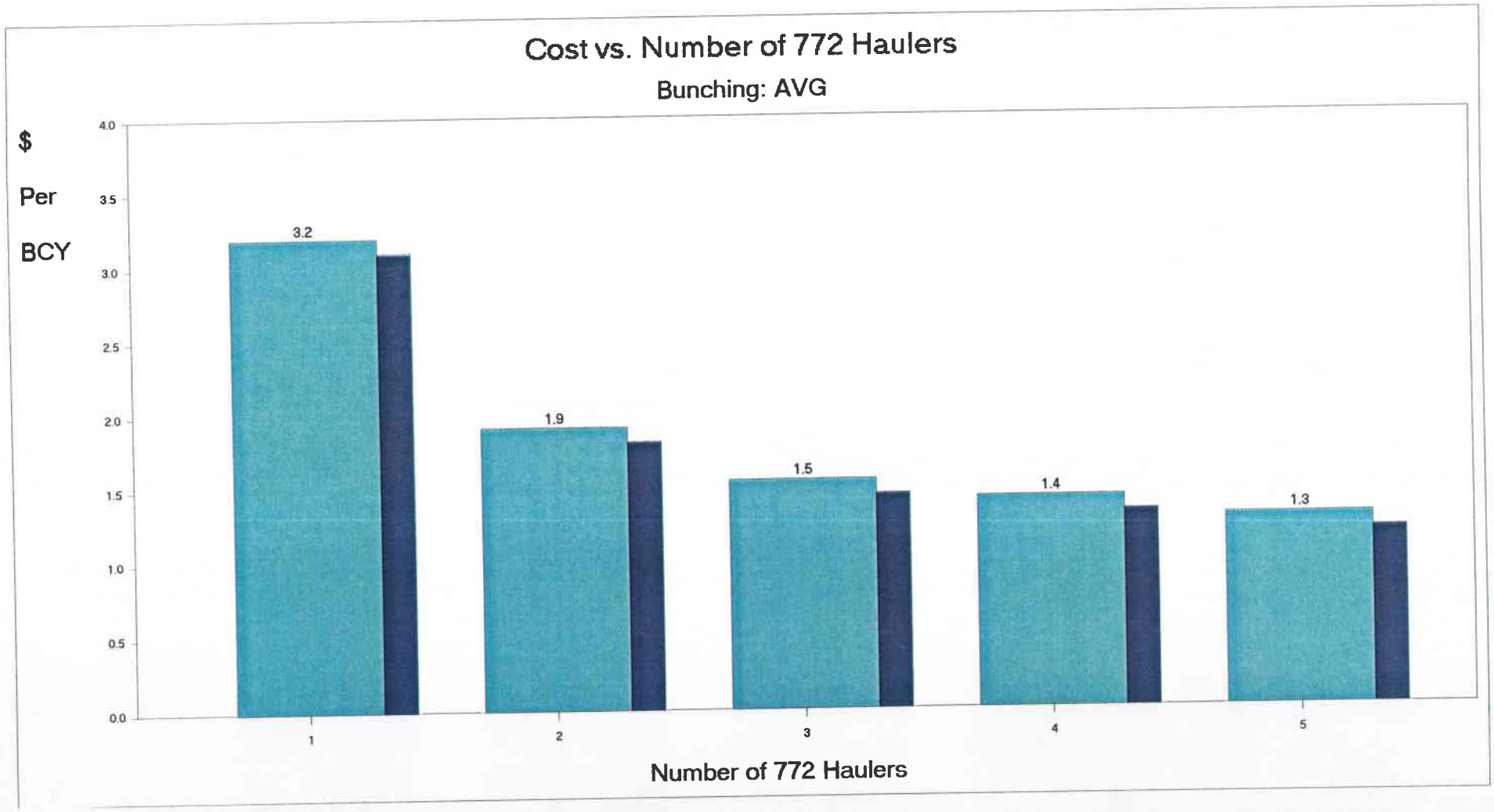
Pit Backfill Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 5130 FS	Availability: 90%	95 % Operator Efficiency
Haulers:	5 772	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 3 - Reclamation Estimate

Subsoil
Fleet Production and Cost Analysis

Fleet Production and Cost Analysis

Phase 3 Subsoil
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Subsoil Haul

Description:	Subsoil Pile to Phase 3 Reclamation
Material Qty (BCY)	322,344
lbs per BCY	2,596
lbs per LCY	2,107

5950 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving Excavator
250	4.00	-1.00	25.00	25.00	Segment 1
5,600	4.00	-2.00	25.00	25.00	Segment 2

Fleet Production and Cost Analysis

Phase 3 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	95.00
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	85.35
BCY per Sched Hr	719.63
Total BCY	322,344.00
Sched Hrs Required	447.93
Total $	376,205.95
$ per BCY	1.17
BCY per Year	4,490,476.23
Years Required	0.07

	1 5130 FS	5 772
Loader Fill Factor % (13.75 CY)		90.00
Tons/Pass (2107 lbs/LCY):		13.04
System Passes per Hauler:		3.48
Hauler Payload in Tons		45.36
Percent of Max GVW		94.43
Loader Cycle Time (Min)		0.50
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		2.25
Haul		2.94
Dump and Maneuver		0.50
Return		2.92
Potential Cycle Time		8.61
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		3.21
Total Cycle Time		11.81
POTENTIAL PRODUCTION		
BCY per Hour	931.83	1,218.13
Avg mph		15.71

Fleet Production and Cost Analysis

Phase 3 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
5130 FS	1
Haulers	
772	5

Potential Production

	Model	BCY per Hour	Avg mph
1	5130 FS	932	
2	772	1,218	15.7

Fleet Availability (%)	76.50
BCY per Scheduled hour	719.63
Total BCY	322,344.00
Scheduled Hours Required	447.93
Total $	376,205.95
$ per BCY	1.17
BCY per Year	4,490,476.23
Years Required	0.07

Fleet Production and Cost Analysis

Phase 3 Subsoil | **Subsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

322,344 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	5130 FS		264.49	403	106,626	0.331
Haulers:	5	772	C314	97.73	1,904	186,050	0.577
Totals	5				1,904	186,050	0.577
Support:	1	14 Grader		87.04	90	7,798	0.024
	1	Water Truck		64.14	179	11,492	0.036
	1	D7 Dozer		110.32	582	64,241	0.199
Totals	3				851	83,530	0.259
Fleet Totals	9				3,158	376,206	1.167

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 3 Subsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

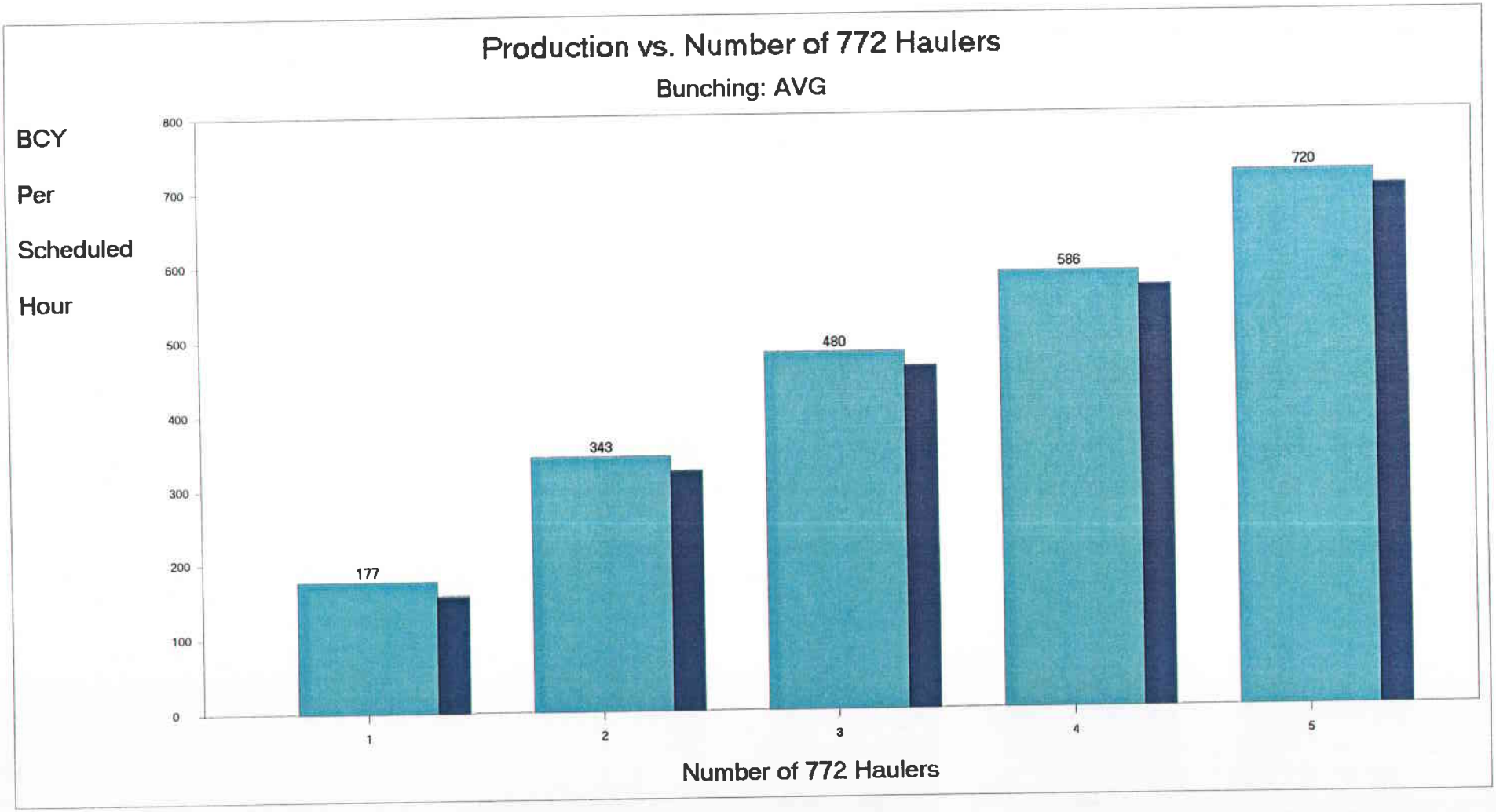
Subsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 5130 FS	Availability: 90%	95 % Operator Efficiency
Haulers:	5 772	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 3 Subsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

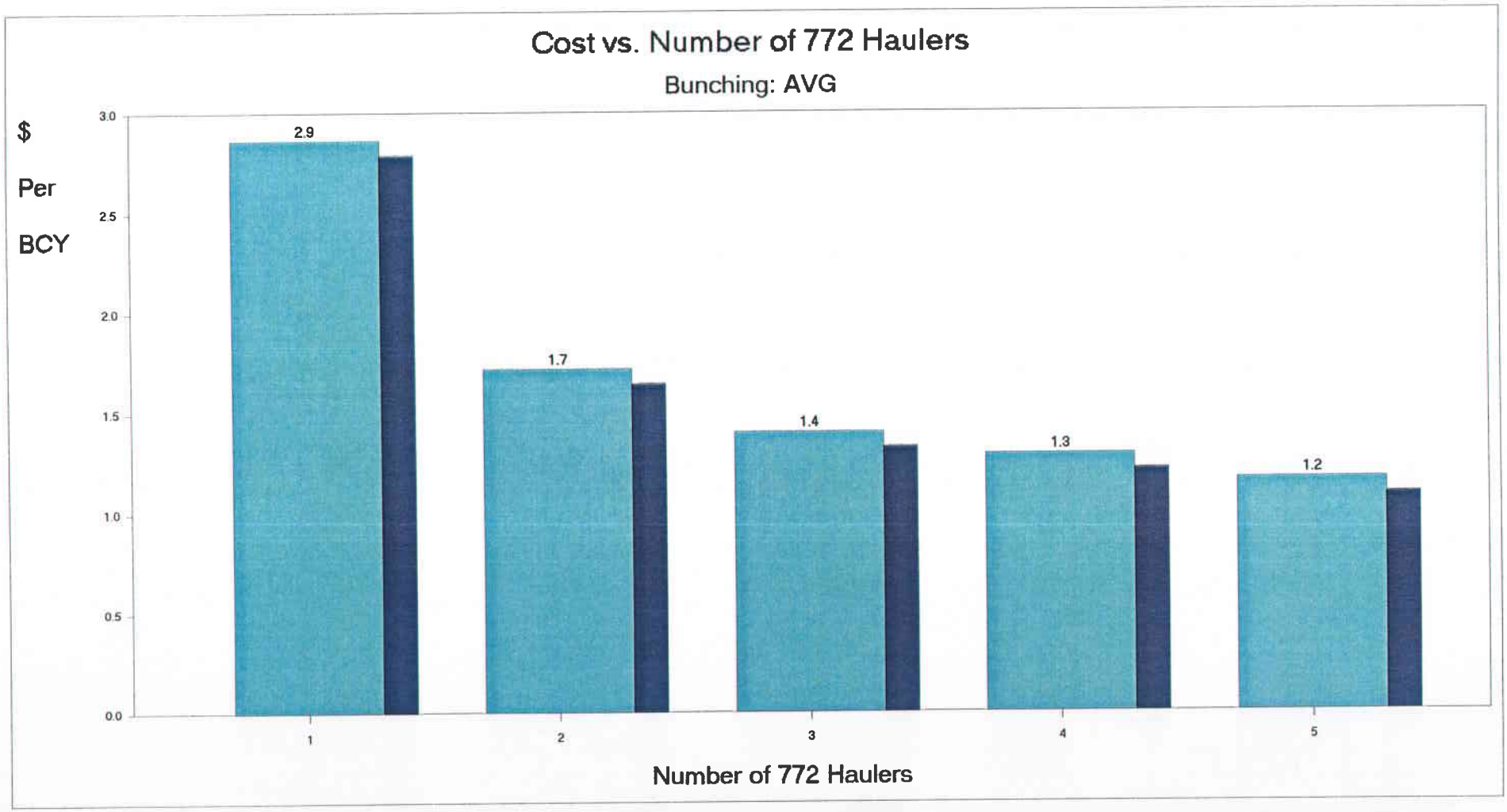
Subsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 5130 FS	Availability: 90%		95 % Operator Efficiency
Haulers:	5 772	Availability: 85%		6240 Sched Hours per Year
				AVG Bunching



Phase 3 - Reclamation Estimate

Topsoil
Fleet Production and Cost Analysis

Fleet Production and Cost Analysis

Phase 3 Topsoil
Alton Coal Development, LLC **Coal Hollow Mine** **10-8-09**

Topsoil Haul

Description:	Topsoil Pile to Phase 3 Reclamation
Material Qty (BCY)	130,207
lbs per BCY	2,596
lbs per LCY	2,107

5700 feet

Distance feet	Rolling Resistance %	Grade %	Haul mph Limit	Return mph Limit	Description
100	4.00	0.00	15.00	15.00	Leaving Excavator
5,600	4.00	-2.00	25.00	25.00	Segment 1

Fleet Production and Cost Analysis

Phase 3 Topsoil | **Topsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Operating Schedule

Operator Efficiency (%)	95.00
Sched Hrs per Year	6,240.00

Fleet Estimates

Fleet Availability (%)	85.35
BCY per Sched Hr	724.92
Total BCY	130,207.00
Sched Hrs Required	179.62
Total $	150,855.24
$ per BCY	1.16
BCY per Year	4,523,477.11
Years Required	0.03

	1 5130 FS	5 772
Loader Fill Factor % (13.75 CY)		90.00
Tons/Pass (2107 lbs/LCY):		13.04
System Passes per Hauler:		3.48
Hauler Payload in Tons		45.36
Percent of Max GVW		94.43
Loader Cycle Time (Min)		0.50
First Bucket Dump (Min)		0.05
Hauler Exchange Time (Min)		0.70
HAULER CYCLE TIMES		
Load with Exchange		2.25
Haul		2.81
Dump and Maneuver		0.50
Return		2.80
Potential Cycle Time		8.36
Wait on Slow Hauler		0.00
Wait TMPH		0.00
Wait to Load, Bunching AVG		3.36
Total Cycle Time		11.72
POTENTIAL PRODUCTION		
BCY per Hour	931.83	1,253.51
Avg mph		15.49

Fleet Production and Cost Analysis

Phase 3 Topsoil | **Topsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

Fleet Composition

	Qty
Loader	
5130 FS	1
Haulers	
772	5

Potential Production

	Model	BCY per Hour	Avg mph
1	5130 FS	932	
2	772	1,254	15.5

Fleet Availability (%)	76.50
BCY per Scheduled hour	724.92
Total BCY	130,207.00
Scheduled Hours Required	179.62
Total $	150,855.24
$ per BCY	1.16
BCY per Year	4,523,477.11
Years Required	0.03

Fleet Production and Cost Analysis

Phase 3 Topsoil | **Topsoil Haul** | **FLEET1**

Alton Coal Development, LLC | **Coal Hollow Mine** | **10-8-09**

130,207 BCY

	Qty	Model	Machine Code	Hourly Cost Each Unit	Operating Hours	$ Total	$ per BCY
Loaders:	1	5130 FS		264.49	162	42,756	0.328
Haulers:	5	772	C314	97.73	763	74,604	0.573
Totals	5				763	74,604	0.573
Support:	1	14 Grader		87.04	36	3,127	0.024
	1	Water Truck		64.14	72	4,608	0.035
	1	D7 Dozer		110.32	234	25,760	0.198
Totals	3				341	33,495	0.257
Fleet Totals	9				1,266	150,855	1.159

Note: TMPH limits have been exceeded on the following Fleet/Course Combinations:

Phase 3 Topsoil

Alton Coal Development, LLC

Fleet Production and Cost Analysis

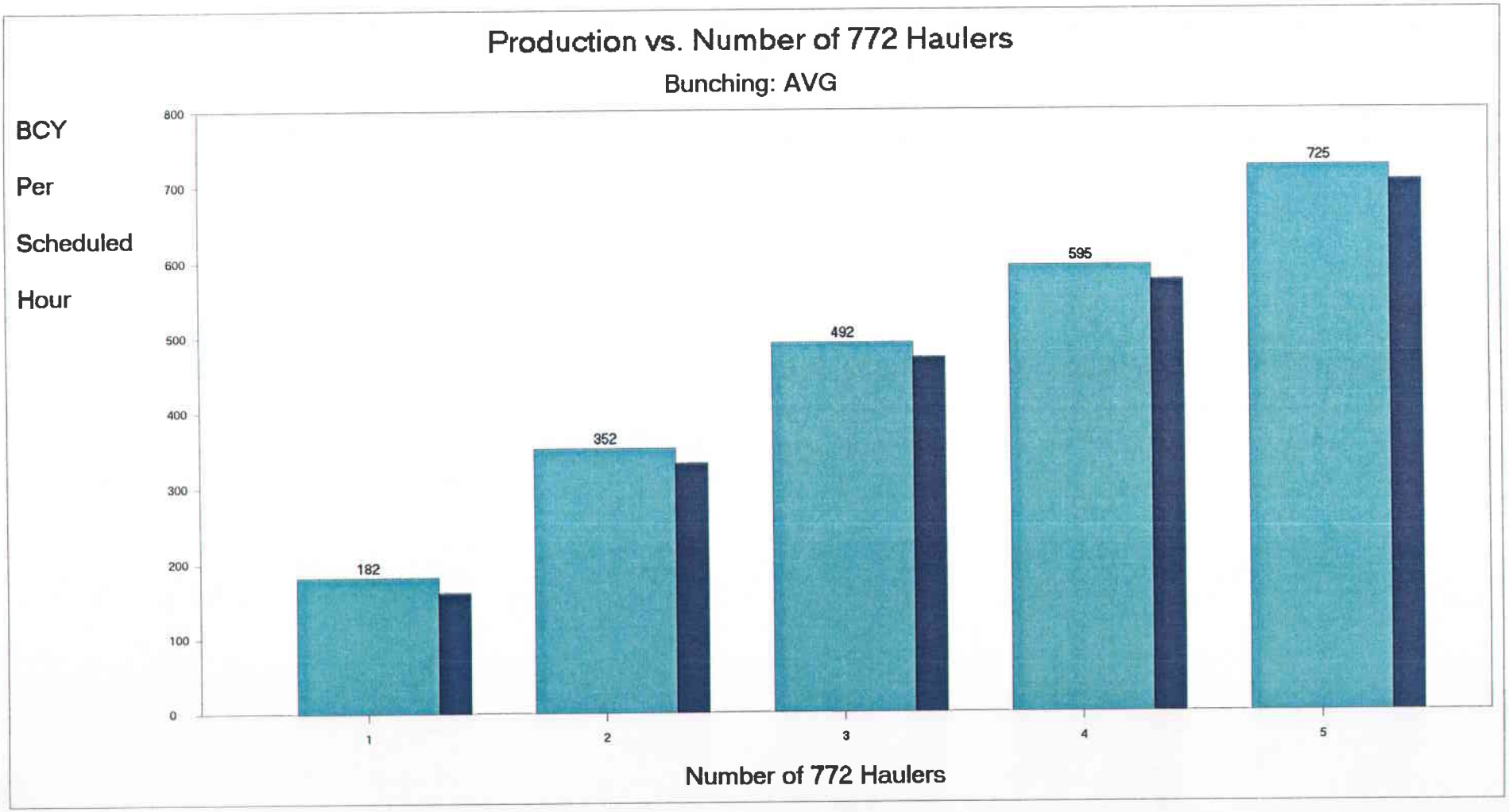
Topsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 5130 FS	Availability: 90%	95 % Operator Efficiency
Haulers:	5 772	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching



Phase 3 Topsoil

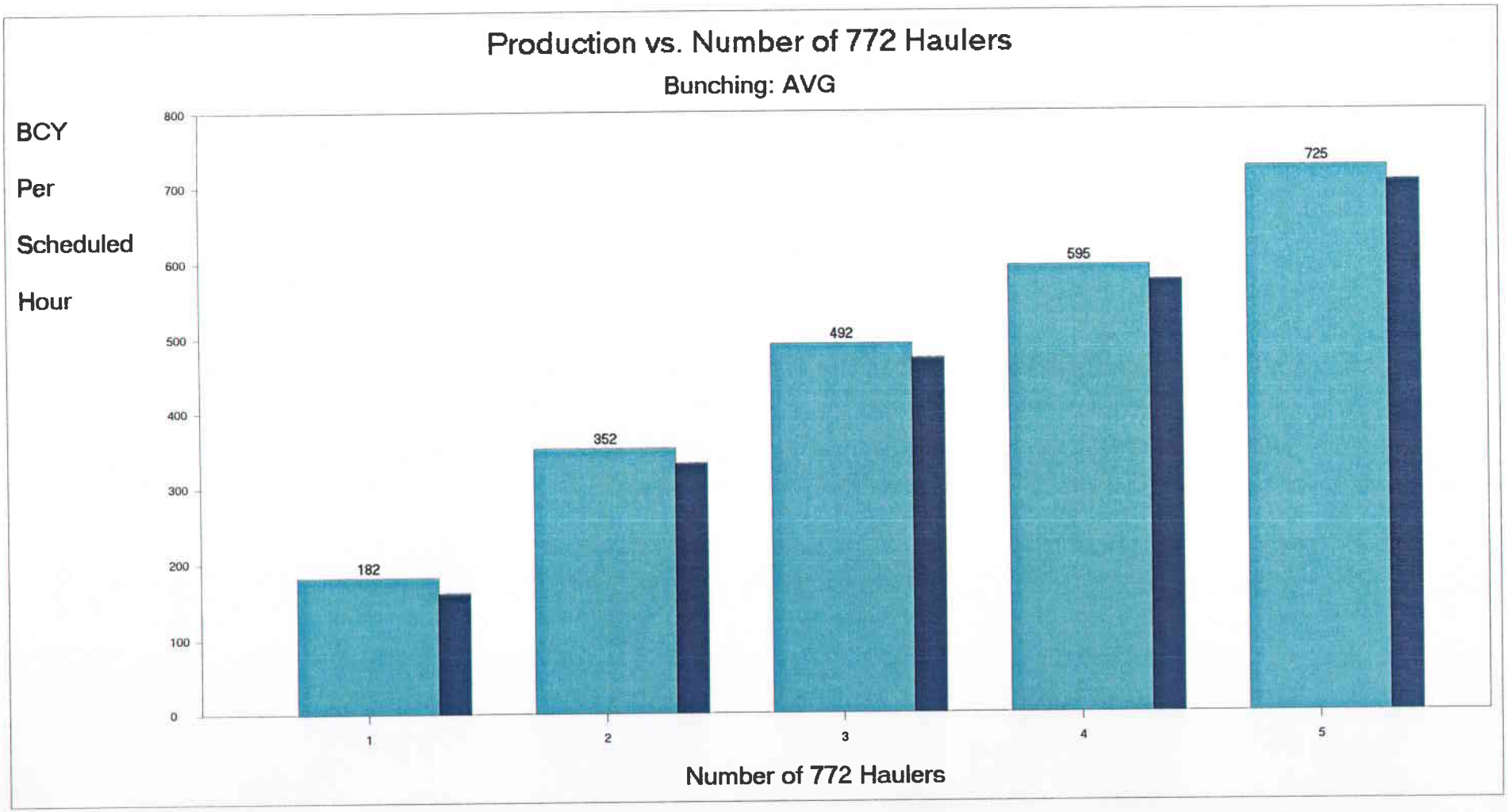
Alton Coal Development, LLC

Fleet Production and Cost Analysis

Topsoil Haul

Coal Hollow Mine

FLEET1

10-8-09

Loader:	1 5130 FS	Availability: 90%	95 % Operator Efficiency
Haulers:	5 772	Availability: 85%	6240 Sched Hours per Year
			AVG Bunching