

Technology that Works

Ben Ballard | Sylva Corporation, Inc.





Scale

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“We are stuck with technology when what we really want is just stuff that works”

- Douglas Adams (Author, Hitchhiker's Guide to the galaxy)



Key Management Systems



Lockbox:

- + Organizes keys in one place, easily accessible for those who have access to the asset
- + Ideal for back-up keys, but not for everyday rolling stock
- Limited control and visibility
- Sign-in/sign out clipboard
- Self-governance or management time
- Only accessible when a responsible “keyholder” is present

Key Management Systems



Lockbox:

- + Organizes keys in one place, easily accessible for those who have access to the asset
- + Ideal for back-up keys, but not for everyday rolling stock
- +/- Accessible to anyone with the code/key
 - Some control, no real-time visibility
 - Sign-in/sign out clipboard
 - Self-governance or management time
 - Only accessible at specific times of the day

Key Management System

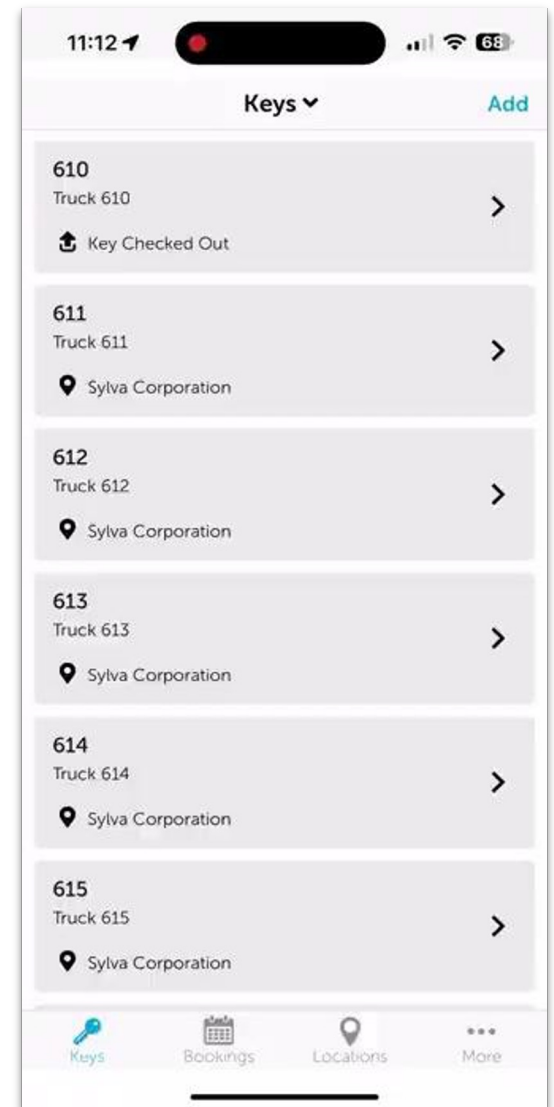


Digital Key Management:



- + Safe, Easy & Accessible 24/7
- + Granular permissions and groups
- + Automatic audit trail w/full details
- + Does not require constant management
- + Expandable
- + Control anywhere from computer or app
- + Keep keys as singles or sets
- +/- Admin-Only Key history report
- + Keeps your fleet moving
- + Manage from anywhere

Using KeyCafe



Onboard Truck & Equipment GPS Monitoring

GEOTAB®

The screenshot displays the GEOTAB software interface for GPS monitoring. The main area is a map of Minnesota with several assets tracked and labeled with callouts:

- E27 CAT Wheel Loader
- E72 930K CAT Wheel Loader
- Truck 623 (Michael Mengden)
- Truck 617 (John Zupan)
- Truck 626 (Steven Green)
- Truck 630 (Paul Culbertson)
- Truck 631 (Keith Halvorson)
- Trailer BTR -1 Power Plant
- E54 930G CAT Wheel Loader

The left sidebar contains a list of assets with the following details:

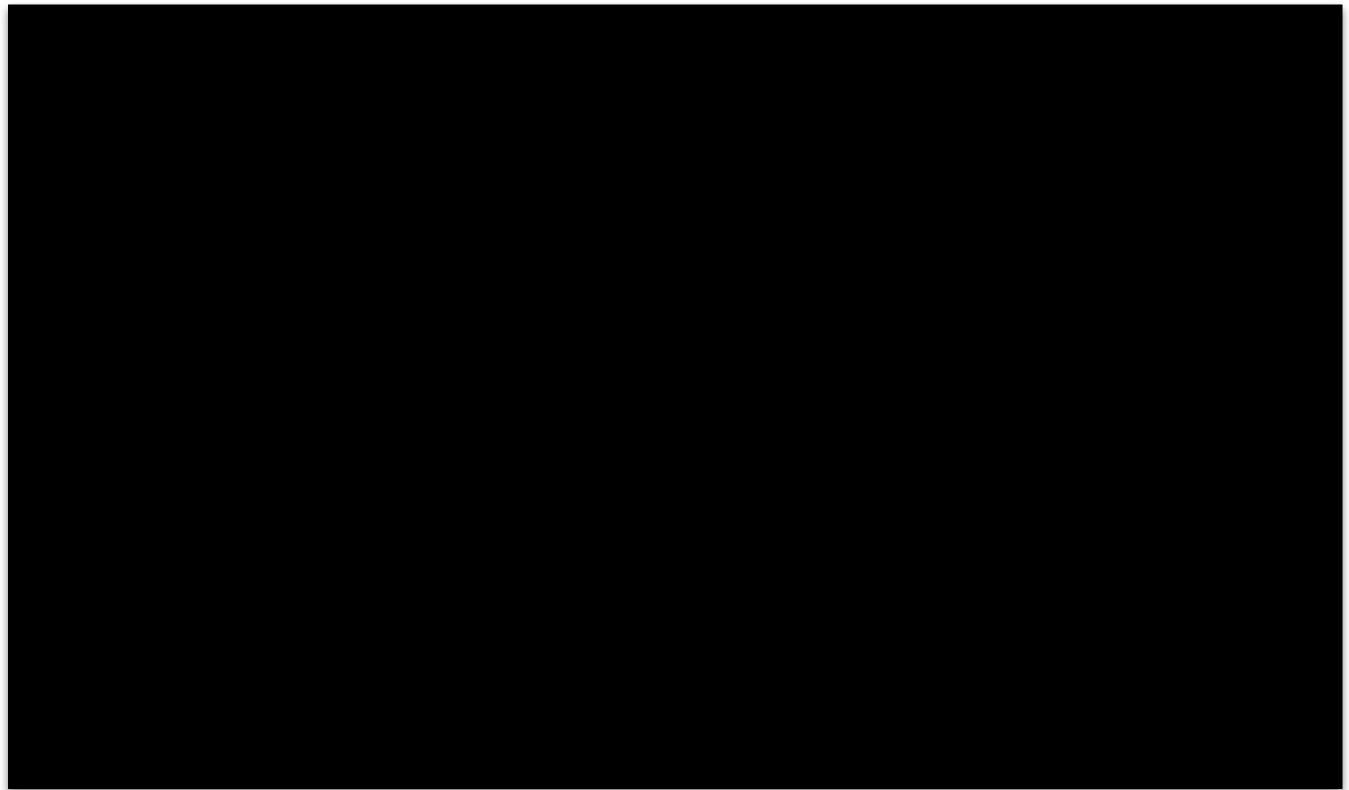
Asset Name	Driver	Distance	Speed	Status
Truck 617	John Zupan	1h 43m	58 mph	1 ⚠️
Truck 623	Michael Mengden	2h 57m	68 mph	2 ⚠️
Truck 626	Steven Green	8m 6s	64 mph	2 ⚠️
Truck 627	Kevin Marois	2m 23s	6 mph	2 ⚠️
Truck 630	Paul Culbertson	5m 59s	62 mph	4 ⚠️
Truck 631	Keith Halvorson	7m 6s	62 mph	3 ⚠️
2016 Chevy	No driver assigned	33m 55s	0 mph	2 ⚠️
E54 930G CAT Wheel Loader	Truck Maintenance/Wash	0 mph	0 mph	2 ⚠️

The interface also includes search bars, filter options, and map controls. A 'Live Video' section is visible on the right side of the map.

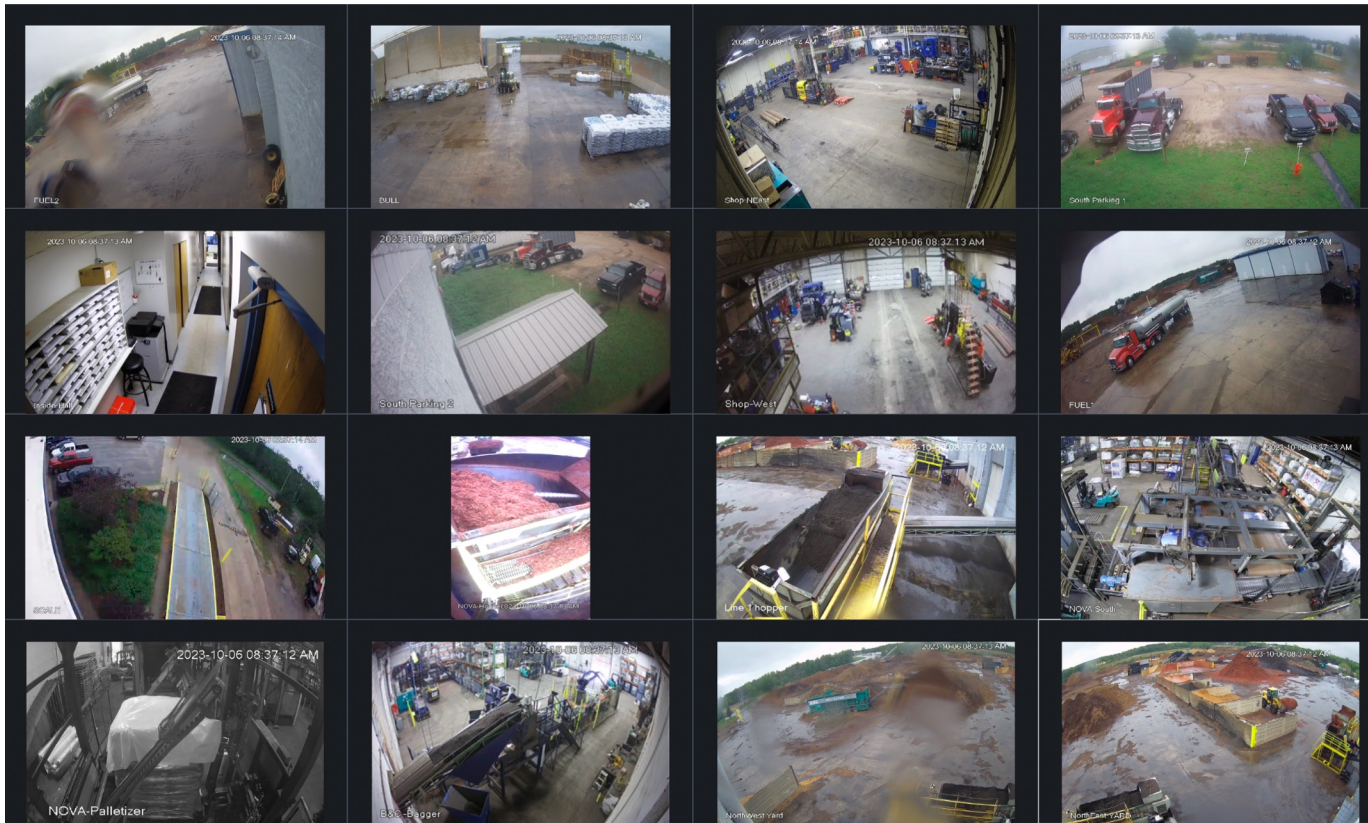




CMMS
Computerized Maintenance
Management System



NVR Camera Surveillance System



- Real-Time View
- Recordings

Playback



15:53:

2023-09-26 12:21:54 PM



NOVA South

13:20

13:30

13:40

13:50

14:00

14:10

14:20

14:30

14:40

14:50

15:00

15:10

15:20

2023-09-27 01:18:47 PM



BU11

2023-09-27 01:36:52 PM





COMPUTE STICK



Tablet W/video app

- Fewer Hopper run-outs = Less Down time
- Increased task options
- Keep track of multiple hoppers

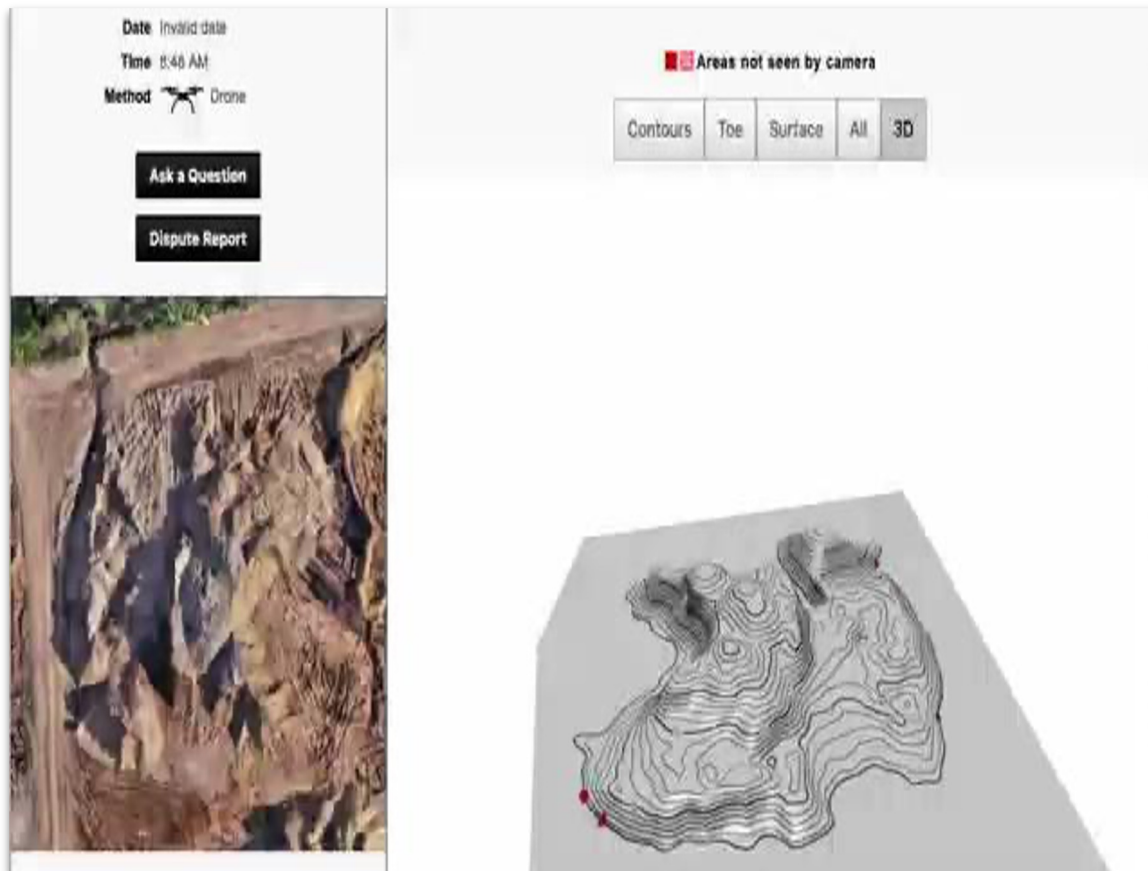


Digital Pile Inventory Imaging

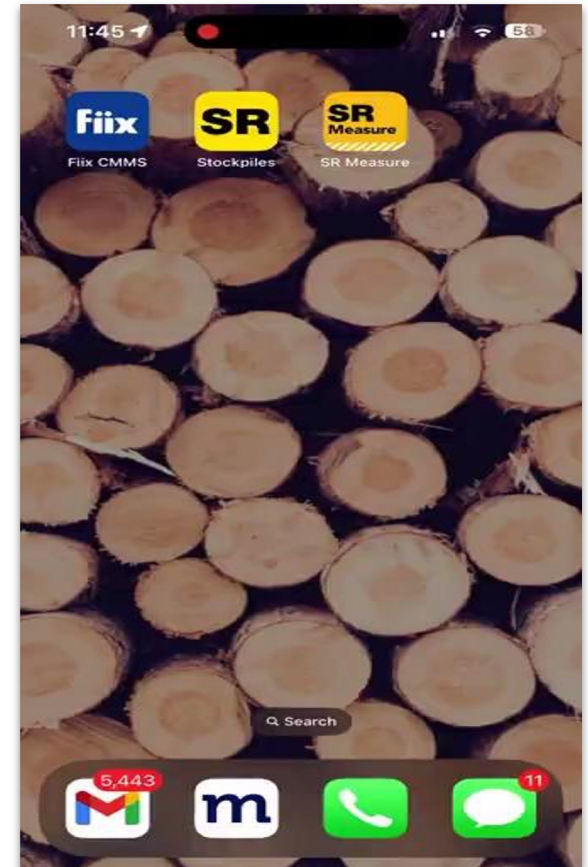
- + Accurate monthly inventory updates
- + View of historical inventory levels
- + Up to date yard maps with ever-changing inventory
- + Accurate financial
- + Assist in forecasting demand vs. production needs vs. on hand inventory
- + Drone or Phone Pile Measurements
- + Measure log and brush piles



Drone Measurements



Mobile Phone Measurements



Measuring Log Piles

3,074 Cubic Yards

Auto-verified

Pile Details

Collected By Ben Ballard
Date Invalid date
Time 9:23 AM
Method Drone

[Ask a Question](#)

[Dispute Report](#)

Princeton: C Logs (CLOG)

Surface Coverage Confidence
HIGH

Possible Risks

- Combined piles
- Standing water
- Debris
- Equipment obstruction
- Vegetation
- Highwall
- Snow
- Lighting issues
- Buried base

Areas not seen by camera

Contours Toe Surface All 3D

Counting Pallets



Load Verification Systems

Assess:

- + Product Quality
- + Load Volumes
- + Bulk Densities
- + Load Maximization
- + Compaction Loss

= Quickly determine load value and vendor viability

Control:

- + Receiving
- + Volume Invoicing
- + Driver Coaching
- + Loader Coaching
- + Cost Variables

= Customer and Vendor Satisfaction

Load Maximization Improves the bottom line



Truck Scale

Use of a truck scale is not only a way to interact a transaction in the wood industry, but it also helps to make sure your vendors or drivers are loading the trucks up to maximum capacity. The truck scale is also used to weigh incoming colorant loads.

Load Scanning

Using a bulk load scanner combined with weight scale to get accurate bulk densities and cost of raw materials. A bulk load scanner also is a check on how accurate the loader operators are at loading trucks.

Auto-Tarps



“Just a Driver Benefit”?

- Aging Workforce
- Increased Driver Satisfaction

REALLY “Just a Driver Benefit”?

40 Minutes per day savings (8 Rolls):

= 171 Hours annually (-\$4,275)

= 65 More Truckloads per year

= +\$100,000 revenue opportunities

= + \$1,100,000 in revenue opp. fleet-wide.

Reduced Work Comp Claims?



Inbound Load - Hardwood Bark Mulch (New Vendor)

Weight: 90,880

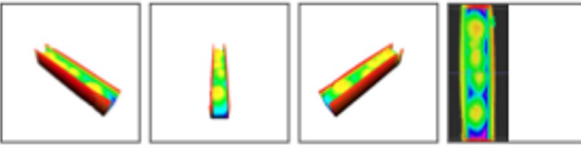
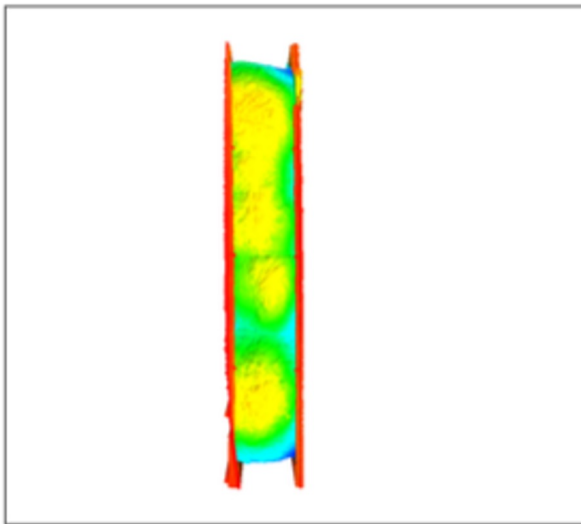
Unknown inbound Volume = 80 - 100 Cubic yards

Unknown Bulk Density



Inbound Load - Hardwood Bark Mulch

Loaded Scan # 202310001600002354



Unit # S35
Volume: 102.2 yd3
Account: SylvaCorp
Job:
Stockpile: SylvaBark
Material: SylvaBark (CF 0.00%)
Calculated Payload:
Struck Unit Capacity: 151 yd3
Note: Ticket # 18948

Inbound info:
Gross Vehicle Weight: 90,880 Lbs
Volume: 102 yd3



Cleen Sweep System



“Just a Driver Benefit”?

- Aging Workforce
- Increased Driver Satisfaction

REALLY “Just a Driver Benefit”?

1 hour per day savings:

= 260 Hours annually (-\$6,500)

= 65 More Truckloads per year

= + \$150,000 in revenue opportunities

= + \$1,650,000 in revenue opp. fleet-wide.

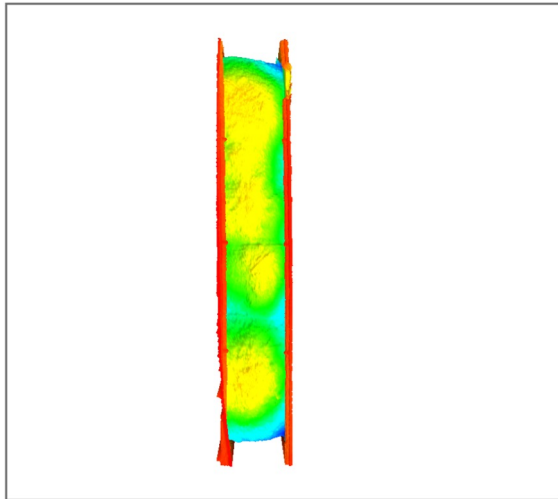
Reduced Work Comp Claims?



Grind into Truck - Hardwood Bark Mulch

Outbound info:
Weight: 82,920 Lbs
Volume: 87 yd3

Loaded Scan # 202310001600002354

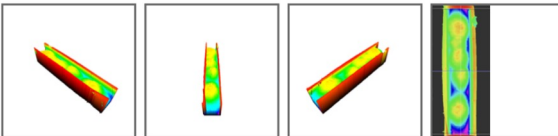


Unit # S14
Volume: 87.4 yd3
Account: SylvaCorp
Job: Sales
Stockpile: SylvaBark
Material: SylvaBark (CF 0.00%)
Calculated Payload:
Struck Unit Capacity: 129 yd3
Note: SO#72878



Volume loss: 15 yd3
= \$165.50 (\$1.90 / yd3)

(Less GVW due to truck swap)



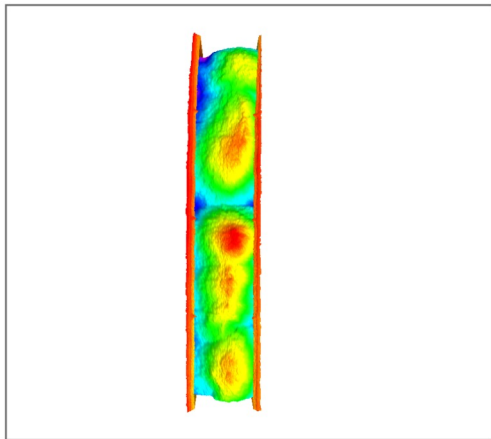
Load Cost Variables on a Load Received by Weight

Variable:	Example Costs	Scan Volume Measure (102 yd ³ Scan)	Bucket Measuring "91 yd ³ , 13 buckets"	Volume Inaccuracy	Cost Inaccuracy
Inbound Material	\$15 per Ton	24.6 Tons, 102 yd ³ = \$3.61 yd ³	24.6 Tons, \$369.00 =\$4.05 yd ³	11 Yd ³	\$.44 yd ³ High
Freight	\$350 per Load	= \$3.43 yd ³	= \$3.84 yd ³		\$.41 yd ³ High
Grinding	\$4.00 per yd ³	\$408	\$364.00		\$.41 yd ³ Low
Grind Volume Loss/Gain		\$11.04 * 15 = (\$165.5) or (\$1.90)	11.89*10 = (\$118.90) or (\$1.30) (13 Buckets)	5 Yd ³	\$.60 yd ³ Low
Total Cost		(Actual Cost) \$1291.58 = \$12.66	(Assumed Cost) \$1083/91 = \$11.90	16 Yd ³	Variance of \$1.86 yd ³

Outbound Load - Hardwood Bark Mulch

Outbound info:
Weight: 89,120 Lbs
Volume: 93 yd3

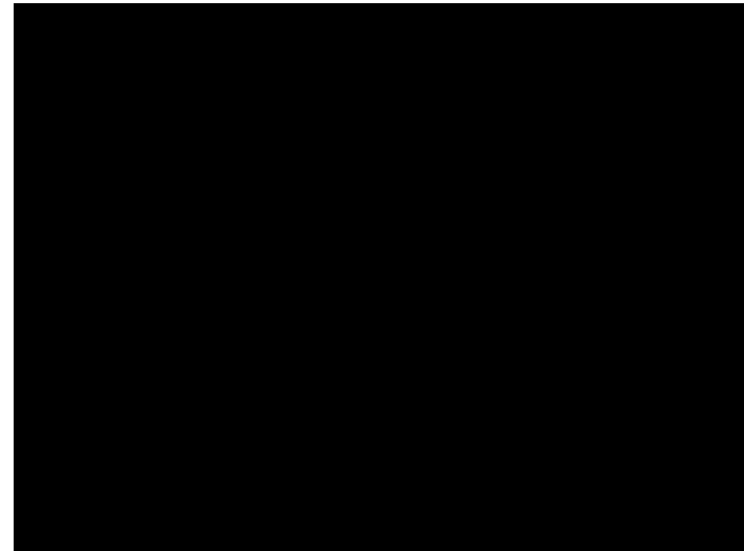
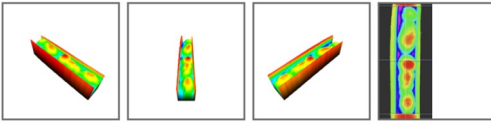
Loaded Scan # 202310001600002360



Unit # S14
Volume: 104 yd3
Account: SylvaCorp
Job: Sales
Stockpile: SylvaBark
Material: SylvaBark (CF 0.00%)
Calculated Payload:
Struck Unit Capacity: 129 yd3
Note: SO#72878

Load Benefits:

- + 24 yd23
- + \$480.00 revenue
- + \$0.82 / yd3 cost reduction



Maximizing Revenue per load

Variables	Method -> Ticket info v	Bucket Measuring	1st Scan Volume Measure	Full Scan & Weigh Volume	Full Load Benefits	Annualized Benefit (800 Loads/Season)
Volume	80 yd3	11.5 buckets	87 yd3	104 yd3	+ 24 yd3	19,200 yd3
Sale Price	\$20 yd3	\$1,600	\$1,740	\$2,080	+\$480	+ \$384,000
Freight Cost	\$285 Load	=\$3.56 yd3	= \$3.27 yd3	=\$2.74	-\$0.82 yd3	- 220 TL @ \$285.00 \$62,700 Savings
Total Cost to Customer		= \$23.56 yd3	= \$23.27 yd3	= \$22.74 yd3	\$71.34 Load savings	Total Benefit: \$446,700

What's your story?
