

Gas Scheduling System That Eliminated Spreadsheets

User Workflow Documentation

Multi-Role User Interface and Navigation Patterns - Material Design UI Update

This document illustrates the role-based interface design for the Gas Scheduling System (GSS), serving Gas Optimizers, Marketing Traders, and system administrators at a major natural gas processing company. The redesign reduced data entry time by 30% and errors by 25% through intelligent defaults, automated calculations, and role-appropriate information display.

WORKFLOW SEQUENCE

- Page 2 - Optimizer View - Plants/Daily AFS Totals** - Interface showing plant data and daily totals with expanded panel details
- Page 3 - Optimizer View - Plants/Daily AFS Totals - Panels Collapsed** - Same view with collapsed panels for streamlined data scanning
- Page 4 - Trader View - Pipes/Daily AFS (Available for Sale) Totals** - Marketing Trader interface focused on pipeline nominations and available volumes
- Page 5 - Marketing Trader View - Pipes/Daily AFS Totals - Expanded** - Trader view with expanded panel showing detailed pipeline information
- Page 6 - Optimizer View - AFS Spreadsheet, CSV Download Selections** - Data export functionality with spreadsheet view and download options
- Page 7 - Optimizer View - Electronic Bulletin Board (EBB)** - Plant Volume By Location - EBB integration showing plant volume data organized by geographic location
- Page 8 - New Left Navigation UI - Material Design Update** - Updated navigation showing modernized interface patterns and menu structure

DESIGN PRINCIPLES

- **Role-Based Views** - Tailored interfaces for Optimizers vs. Traders with relevant data and workflows
- **Progressive Disclosure** - Collapsible panels reveal complexity only when needed
- **Data Export Flexibility** - CSV download capabilities for power users requiring offline analysis
- **Consistent Navigation** - Unified left navigation structure across all user roles

IMPACT

Established foundation for 30% workflow acceleration • Reduced cognitive load through clear data hierarchy • Enabled flexible data export for power users • Created scalable navigation supporting future feature expansion

Optimizer View - Plants/Daily AFS Totals - Interface showing plant data and daily totals with expanded panel details

Gas Scheduling System

Location
Midcon

Date
Jan 17, 2020

Plants ☒ Pipes

Daily ☒ Monthly

EBB Volumes

Trader AFS

Save

+ Plant Name

Modified: 1/17/2020 10:50am MDT By: Sharon Sanchez

Estimated Residue	Take in Kind	Shrink	Booster Fuel	Available for Sale	Base Load & Term	Buy / Sell	FOM Imbal	CurrMo Imbal	CUM Imbal
200,000	200,000	200,000	200,000	200,000	200,000	0	200,000	200,000	200,000

- Plant Name

Modified: 1/17/2020 10:50am MDT By: Sharon Sanchez

Imbalance Volumes

Estimated Residue	Take in Kind	Shrink	Booster Fuel	Available for Sale	Base Load & Term	Buy / Sell	FOM Imbal	CurrMo Imbal	CUM Imbal
200,000	200,000	200,000	200,000	200,000	200,000	0	200,000	200,000	200,000

Comments

Pipeline Name

Estimated Residue	Take in Kind	Shrink	Booster Fuel	Available for Sale	Base Load & Term	Sell	FOM Imbal	CurrMo Imbal	CUM Imbal
200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000

Pipeline Name

Estimated Residue	Take in Kind	Shrink	Booster Fuel	Available for Sale	Base Load & Term	Buy / Sell	FOM Imbal	CurrMo Imbal	CUM Imbal
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Pipeline Name

Estimated Residue	Take in Kind	Shrink	Booster Fuel	Available for Sale	Base Load & Term	Buy	FOM Imbal	CurrMo Imbal	CUM Imbal
200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000

+ Plant Name

Modified: 1/17/2020 10:50am MDT By: Sharon Sanchez

Estimated Residue	Take in Kind	Shrink	Booster Fuel	Available for Sale	Base Load & Term	Buy / Sell	FOM Imbal	CurrMo Imbal	CUM Imbal
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Multi-Role User Interface and Navigation Patterns - Material Design UI Update

Optimizer View - Plants/Daily AFS Totals - Panels Collapsed - Same view with collapsed panels for streamlined data scanning

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Multi-Role User Interface and Navigation Patterns - Material Design UI Update

Trader View - Pipes/Daily AFS (Available for Sale) Totals - Marketing Trader interface focused on pipeline nominations and available volumes

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Gas Scheduling System

Location
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Jan 17, 2020

Plants ☒ Pipes

Daily ☒ Monthly

Estimated Residue
200,000

Take in Kind
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Shrink
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Available for Sale
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Gas Scheduling System That Eliminated Spreadsheets

Multi-Role User Interface and Navigation Patterns - Material Design UI Update

Marketing Trader View - Pipes/Daily AFS Totals - Expanded - Trader view with expanded panel showing detailed pipeline information

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Gas Scheduling System

Location
Midcon

Date
Jan 17, 2020

Plants ☒ Pipes

Daily ☒ Monthly

+ Pipeline Name

Estimated Residue
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Take in Kind
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Modified: 1/17/2020 10:50am MDT

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Imbalance Volumes

Plant Name

Estimated Residue
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Available for Sale
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Plant Name

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Optimizer View - AFS Spreadsheet, CSV Download Selections - Data export functionality with spreadsheet view and download options

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Gas Scheduling System

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Midcon

Date
Jan 17, 2020

Plants ☒ Pipes

Daily ☒ Monthly

EBB Volumes ☒ Trader AFS

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+ Plant Name

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Trader AFS Spreadsheets

Please select all of the spreadsheets you'd like to download.

Midcon

Select All

☒ Cimarron AFS

☐ NHC AFS

☐ Sherhan-Tolar-Rock Creek AFS

☐ SOK-Okarche AFS

Permian

Select All

☐ Ozona-Sonora AFS

☒ SENM AFS

☐ WTX AFS

Gulf Coast

Select All

☐ LaGloriaGPPlains AFS

☐ WXDEINThomp AFS

Rockies AFS

☐ Rockies AFS

ETGS

☒ ETGS AFS

Download .CSV

Gas Scheduling System That Eliminated Spreadsheets

Multi-Role User Interface and Navigation Patterns - Material Design UI Update

Optimizer View - Electronic Bulletin Board (EBB) - Plant Volume By Location - EBB integration showing plant volume data organized by geographic location

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Location
Midcon

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Plants ☒ Pipes

Daily ☒ Monthly

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+ Plant Name

Estimated Residue
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EBB Imbalance Data

Pipeline Name

January 17, 2020

Plant Name

Loc. 0001
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Loc. 0002
200,000

Loc. 0003
200,000

Loc. 0004
200,000

Loc. 0005
200,000

Total
200,000

Plant Name

Loc. 0001
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Loc. 0002
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Loc. 0003
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Plant Name

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Plant Name

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Loc. 0003
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Loc. 0004
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Total
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Plant Name

Loc. 0001
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Loc. 0002
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Total
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-200,000

/17/2020 10:50am MDT

By: Sharon Sanchez

bal

CurrMo Imbal
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/17/2020 10:50am MDT

By: Sharon Sanchez

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New Left Navigation UI - Material Design Update - Updated navigation showing modernized interface patterns and menu structure

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Location

Choose a Location

Midcon

Rockies

Permian

South

Location

Choose a Location

Midcon

View All Midcon

COK

Cimarron Plant

CRP

Cimarron River

Ladder Creek

ROCK CREEK

Rock Creek

SOK

Chitwood

Cyril

Fox Plant

Grady

Longfisher

Mustang

Okarche

Sholem

TOLAR PIPE

Tolar Pipe

Rockies

Permian

South

Location

Choose a Location

Midcon

Rockies

View All Rockies

Lucerne

Lucerne II

Mewbourn

Mewbourn 3

OConnor

OConnor 2

Roggen

Permian

South

Clear All

Copy Previous Day

Load Last Saved Values

Date

Jan 17, 2020

< January 2020 >

S	M	T	W	T	F	S
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

CancelOk