

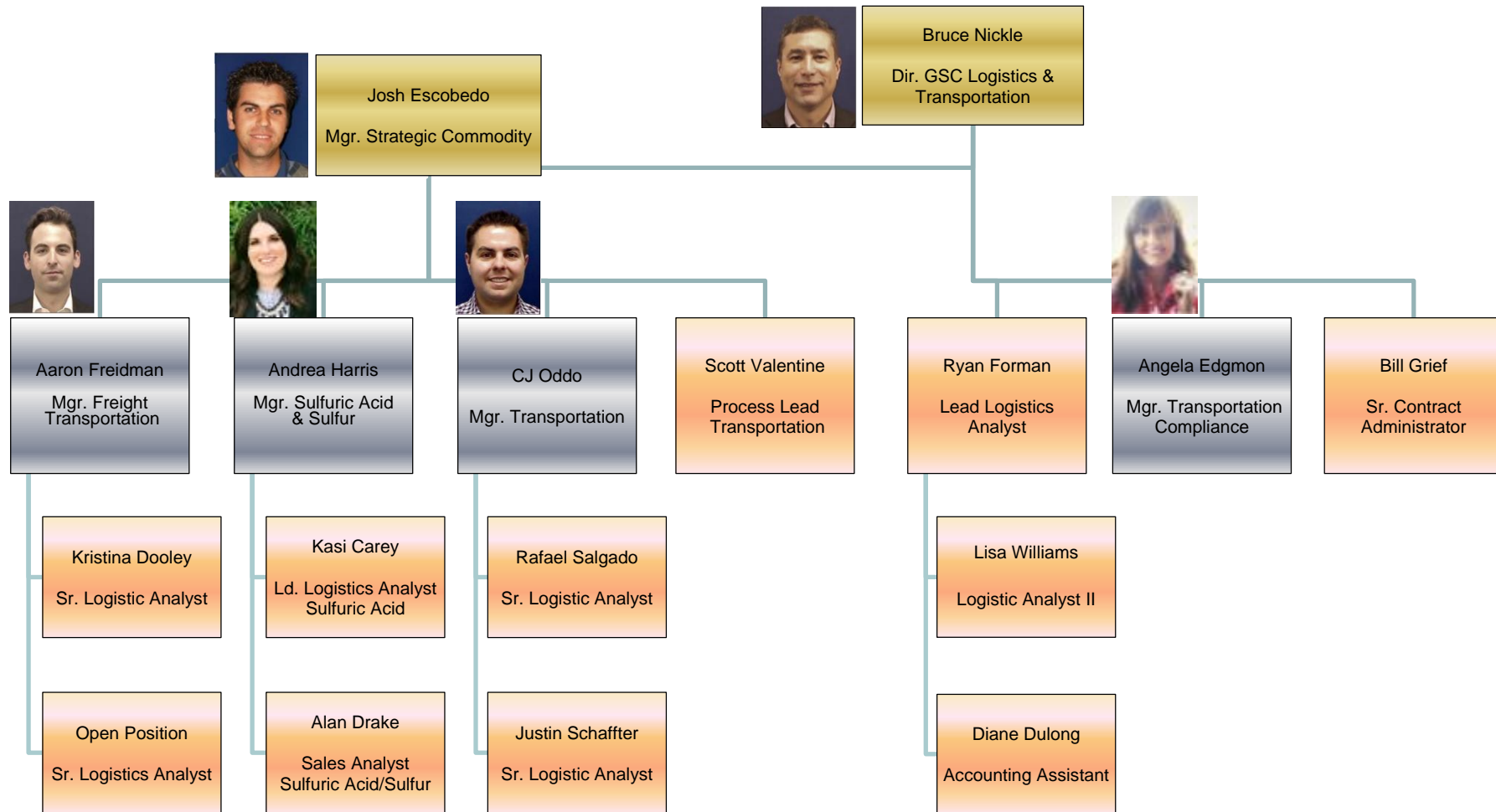
Freeport-McMoRan 2018 Supplier Summit - Transportation Breakout – DAY 1



Welcome - I'm Bruce Nickle and I'm an Optimist



Logistics & Transportation Team (Corporate)



The A team – A stands for AWESOME

We Have Our Challenges, But Things Are Good!

- **The country is at full employment**
- **NYSE and NASDAQ have hit all time highs**
- **Copper & Moly prices are significantly higher than the lows of 15**
- **Mines continue to operate despite transportation challenges**
- **Customers continue to receive our product delivered by you**
- **Operating profitably in three regions of the world**
- **We have the best infrastructure, rivers, ports and road networks in the world**

It is all a matter of perspective!

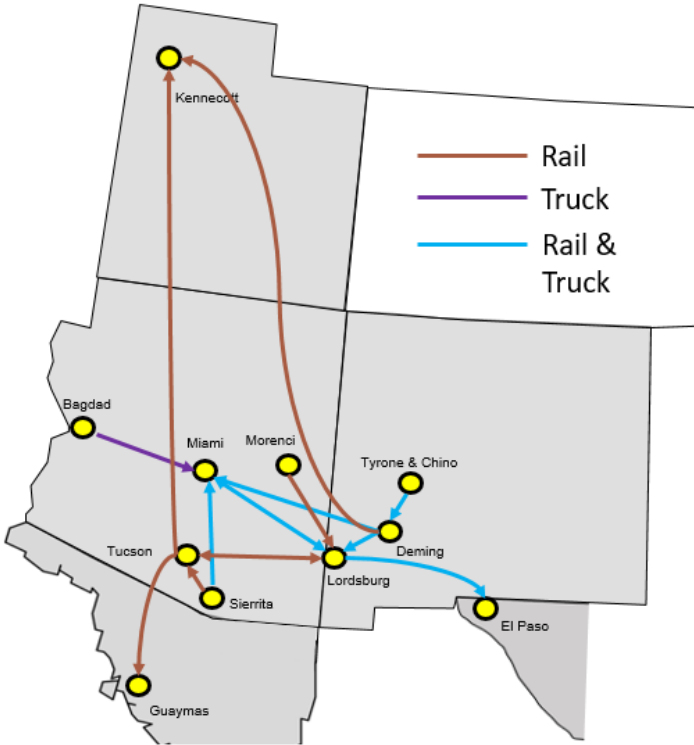
Did I Mention We Have the Best Infrastructure?



What Freeport-McMoRan does with Transportation

- **Our primary focus on N.A. transportation (inbound / outbound)**
- **Support regional transportation offices as needed – S.A. and Indonesia / New Orleans**
- **Manage Sulfur and Sulfuric end to end supply chain**
- **Coordinate intercompany shipments across global regions**
- **Functional expert on all things transportation**
- **Approximate volumes and activity:**
 - **100k (+) truck movements a year**
 - **13k rail cars moved a year**
 - **Oversite of parcel deliveries**
 - **Oversize loads**
 - **1,097 shipments – full and partial ship loads**
 - **4,960 containers (misc. supplies) / 14k bags (moly)**
 - **Logistics contract support**
 - **Logistics compliance**
 - **Logistics accounting functions**

North American Ground Transportation - Copper & Moly



10 Mines

- Arizona
- New Mexico
- Colorado (Moly)

3 Copper Rod Mills

- Miami, AZ
- El Paso, TX
- Norwich, CT

1 Moly Chemical Plant

- Fort Madison, IA

2 Rod Warehouses

- Laredo, TX
- Owensboro, KY

2 Moly Warehouses

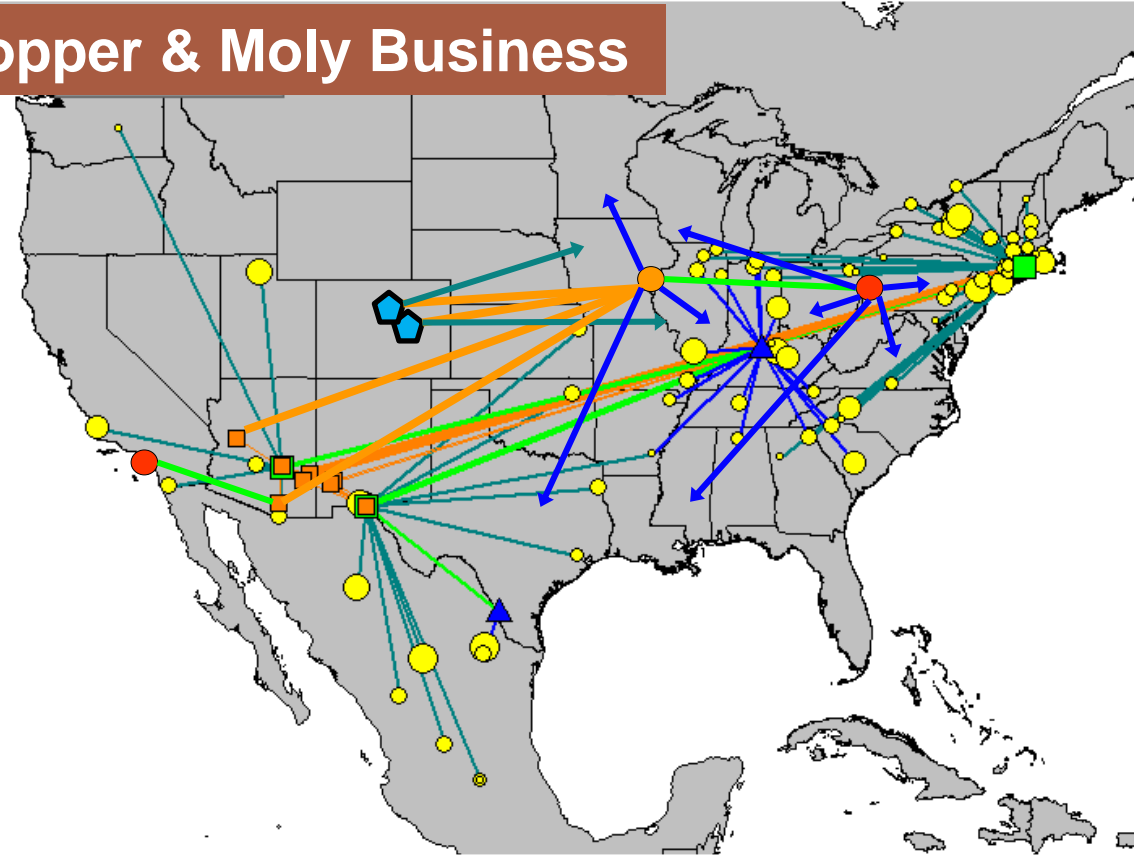
- Newell, WV
- Long Beach, CA

~ 45 Trucking Carriers

- Mix of assets & brokers

Anode, Concentrate & Cathode

Copper & Moly Business



- Mine
- Mill
- Rod warehouse
- Moly warehouse
- Moly chemical plant
- Rod customer
- Moly primary mine
- Mine to mill
- Mill to warehouse
- Mine/mill to customer
- Warehouse to customer

A More Extreme Truck Capacity Problem than Ours



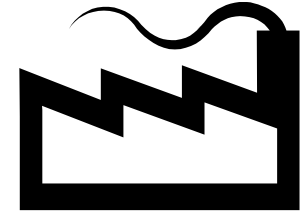
North American Ground Transportation - Cobalt Business

POWERED BY COPPER

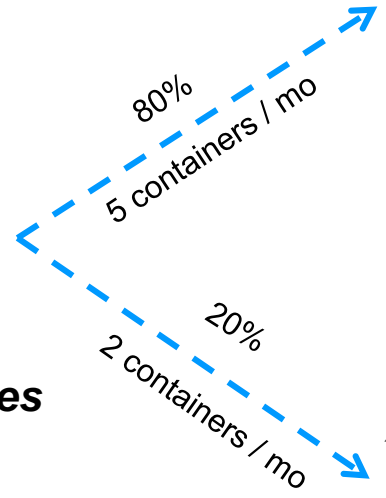
→ Export ← Import ····· Domestic



Tenke Fungurume



Kokkola, Finland
(Kokkola processes & ships via ocean to the U.S.)

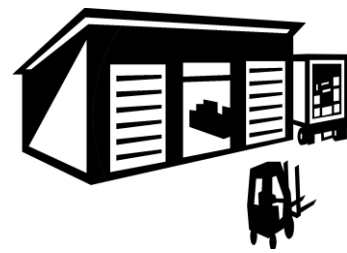


Norfolk 3rd Party Warehouse

····· Ships via truck



U.S. Customer
(East + Midwest + West Regions)



Houston 3rd Party Warehouse

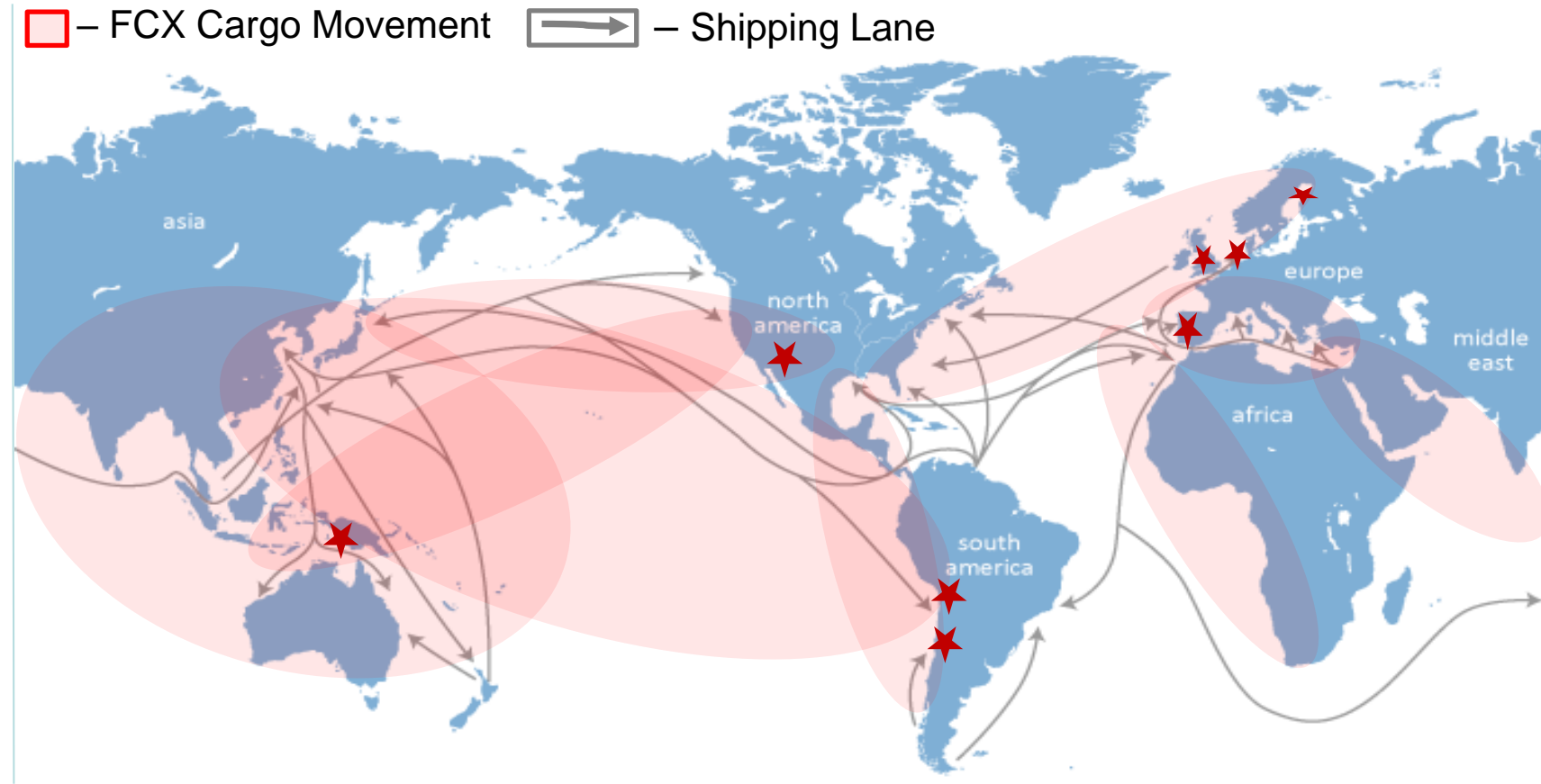
····· Ships via truck



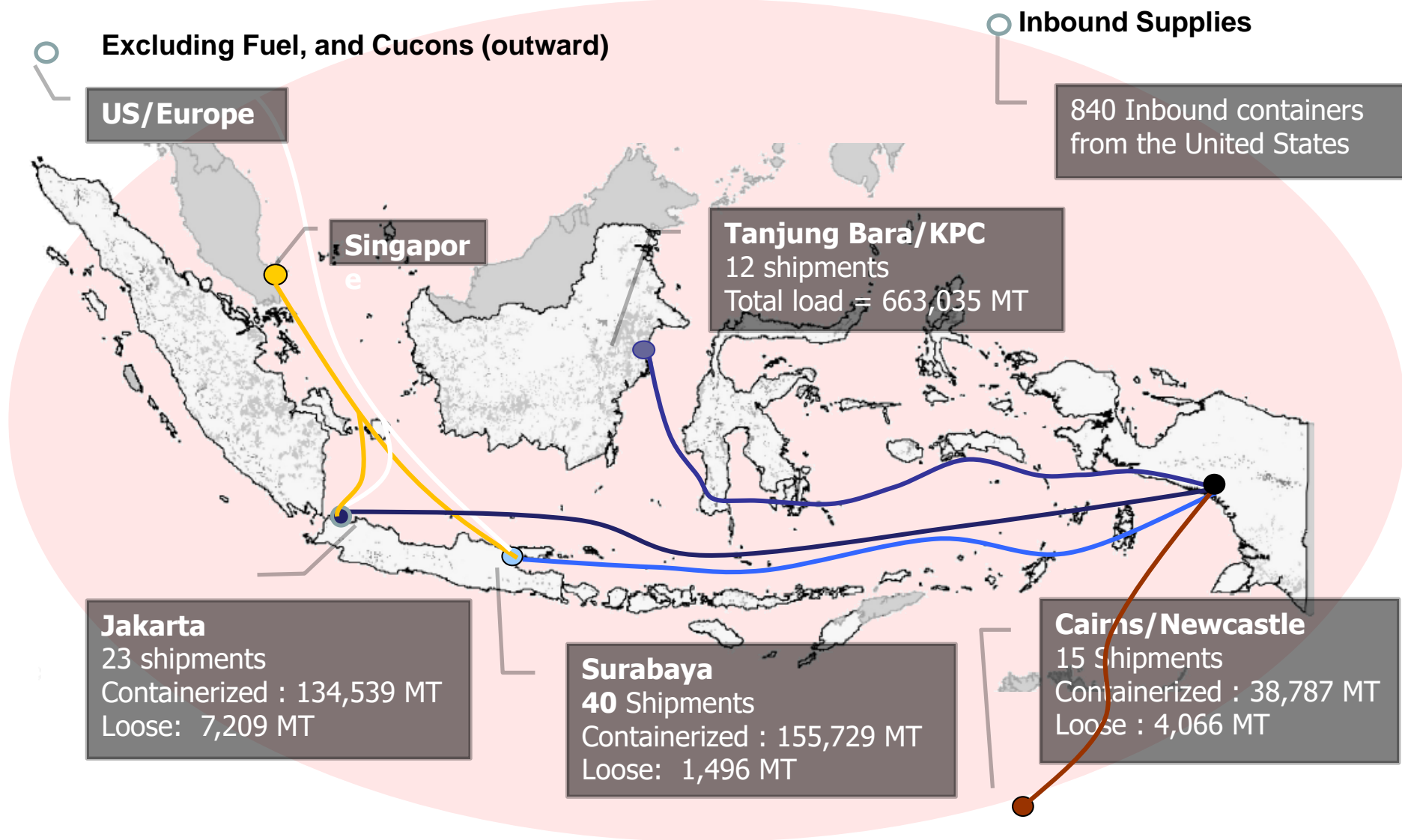
U.S. Customer
(South East Region)

FCX Material Moving Around the World

- FCX-managed ocean shipping – export, import, and intercompany
- 1,097 shipments – full & partial ship loads
- 4,960 containers (misc. supplies) and 14k bags (moly)
- Does not include all vendor managed shipments or PTFI outbound concentrate



PTFI / Indonesia – Seaborne Centric Supply Chain



Mines / Plants

Went to the Grocery Store,
and the shelves were full

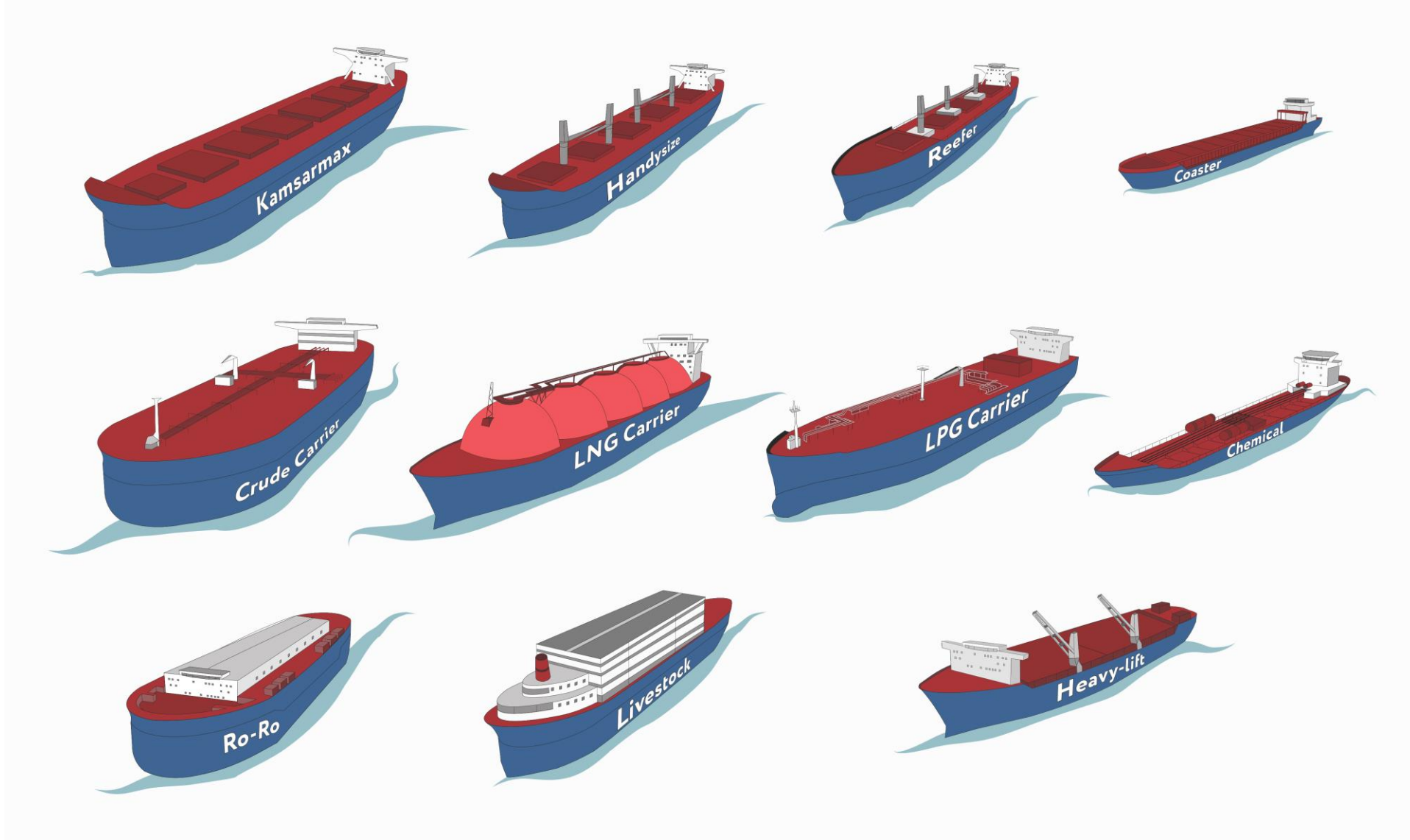
we are still making
Cu, Mo, and
delivering
to our customers!

**THANK YOU
Truckers!**

Thank you Railroads



Thank you Shippers and Freight Forwarders



Thank you Logisticians / Office People



“We Want to Continue Partnering With You”

“What got us here is not what’s going to get us there”

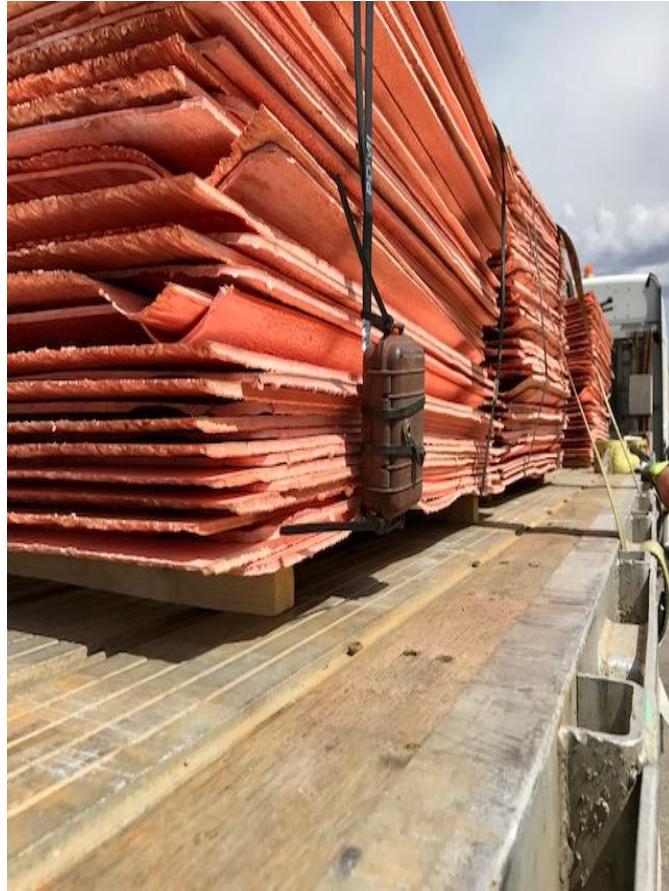


How can we work together to improve operations in today's and tomorrow's complex environment?

Freeport-McMoRan 2018 Supplier Summit - Transportation Breakout – DAY 2



Shipper of Choice Initiative: Keeping Your Drivers Moving



Freeport Shipping Constraints & Challenges

- **Most locations are remote**
- **Drivers are required to watch site safety videos, which range from 7 to 30 minutes**
 - **Repeat drivers can watch once annually if they keep their safety card copy**
- **Proper PPE is required, meaning long pants & closed toed shoes**
- **No pets allowed on-site, even if they stay in the truck cab**
- **An ability to read/speak English is mandatory for site access**
- **Copper falls under red metal insurance requirements**
 - **Many cargo insurance policies have Precious Metals exclusions**
- **Block/Bracing of Copper Rod involves nails into the truck floor**
- **Tight market capacity with plenty of desirable freight available to carriers**

Rod Mill Loading Improvement Project

Miami, AZ

- Freeport personnel perform block/brace
- No trailer drop yard

El Paso, TX

- Drivers required to perform block/brace
- No trailer drop yard

Norwich, CT

- 2 primary carriers supply block/brace on-site labor
- No trailer drop yard



Historically, turn times had not been a significant focus nor have they been measured properly

Shipment Report

Freeport-McMoRan Ship date from: 07/30/2018 to 07/30/2018
 Shipment Report
 07/31/2018 09:38:00 Material Group: 1003000

Slip	Appt. p/u	Start Date	Appt. p/u	Start Time	Appt. p/u	End Date	Appt. p/u	End Time	Check in	Check In Time	Shipment Complete	Check Out Time	Time elapsed	Vessel Name	Vessel Voyage	Booking No	ITN No	Delivery	Storage Location
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	12:12:00	07/30/2018	13:48:11	02:24					802376490	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	09:46:00	07/30/2018	10:03:38	00:18					802376491	Rod Mill
		07/27/2018		13:00:00		07/27/2018		15:00:00	07/30/2018	11:13:00	07/30/2018	12:43:00	02:30					802389946	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	09:42:00	07/30/2018	10:59:00	01:17			X20180720394839		802391981	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	07:00:00	07/30/2018	08:26:00	01:26					802391984	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	09:12:00	07/30/2018	09:44:00	01:28			X20180720343579		802391985	Rod Mill
		07/30/2018		13:00:00		07/30/2018		15:00:00	07/30/2018	12:15:00	07/30/2018	13:53:00	02:22					802391986	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	07:11:00	07/30/2018	09:28:12	02:17					802391987	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	12:47:00	07/30/2018	14:28:34	02:18					802391988	Rod Mill
		07/30/2018		13:00:00		07/30/2018		15:00:00	07/30/2018	11:55:00	07/30/2018	13:45:00	02:10					802391989	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	13:32:00	07/30/2018	15:40:00	02:08					802391993	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	13:25:00	07/30/2018	15:26:23	02:01					802391994	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	11:04:00	07/30/2018	12:08:00	01:04			X20180720343680		802391995	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	11:46:00	07/30/2018	13:08:00	01:22			X20180720394968		802392025	Rod Mill
		07/30/2018		11:00:00		07/30/2018		13:00:00	07/30/2018	13:53:00	07/30/2018	14:03:00	00:10					802392026	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	07:45:00	07/30/2018	08:56:00	01:11					802392027	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	10:12:00	07/30/2018	11:26:00	01:14			X20180720343586		802392028	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	12:21:00	07/30/2018	14:26:00	02:05					802392029	Rod Mill
		07/30/2018		13:00:00		07/30/2018		15:00:00	07/30/2018	12:00:00	07/30/2018	13:56:00	02:04					802392030	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	14:13:00	07/30/2018	15:57:00	02:16					802392032	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	13:43:00	07/30/2018	15:48:00	02:05			X20180720343657		802392033	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	13:05:00	07/30/2018	14:50:00	02:15			X20180720395153		802392042	Rod Mill
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		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	07:00:00	07/30/2018	08:57:00	02:03			X20180720394626		802392050	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	13:23:00	07/30/2018	15:03:00	02:20			X20180720343633		802392051	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	07:03:00	07/30/2018	09:12:00	02:09			X20180720395155		802392055	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	10:40:00	07/30/2018	11:56:00	01:16			X20180720343729		802392056	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	11:25:00	07/30/2018	12:26:00	01:01			X20180720395478		802392058	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	10:23:00	07/30/2018	11:44:00	01:21			X20180720387713		802392059	Rod Mill
		07/30/2018		09:00:00		07/30/2018		11:00:00	07/30/2018	07:00:00	07/30/2018	08:45:00	02:15			X20180720395418		802392063	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	13:38:00	07/30/2018	14:11:27	01:27					802392261	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	13:57:00	07/30/2018	14:40:00	01:17					802392262	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	12:05:00	07/30/2018	12:41:58	01:23					802392263	Rod Mill
		07/31/2018		00:00:00		07/31/2018		00:00:00	07/30/2018	15:47:00	07/30/2018	15:47:00	00:00					802392264	Rod Mill
		07/31/2018		00:00:00		07/31/2018		00:00:00	07/30/2018	14:20:00	07/30/2018	15:06:21	01:14					802392265	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	10:00:00	07/30/2018	11:12:28	01:12					802392347	Rod Mill
		07/30/2018		00:00:00		07/30/2018		00:00:00	07/30/2018	12:50:00	07/30/2018	14:44:54	02:05					802392351	Rod Mill

SAP Time Stamp Example – Issues Discovered

Outbound-Truck GEN 2179590 Display: Overview

Outbound-Truck GEN 2179590 Display: Overview

Processing Identification Shipment Cst Cal Control Administr.

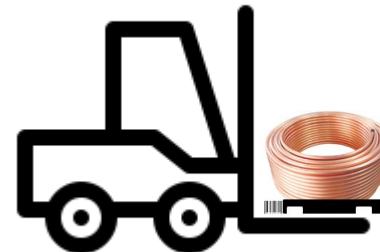
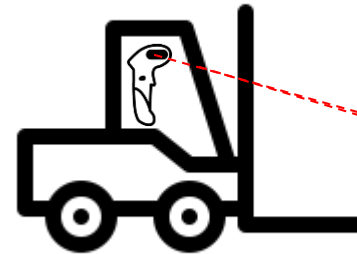
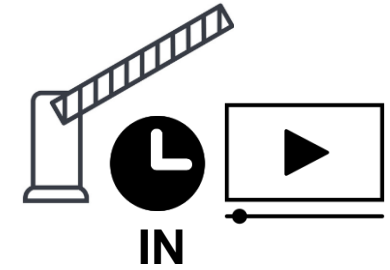
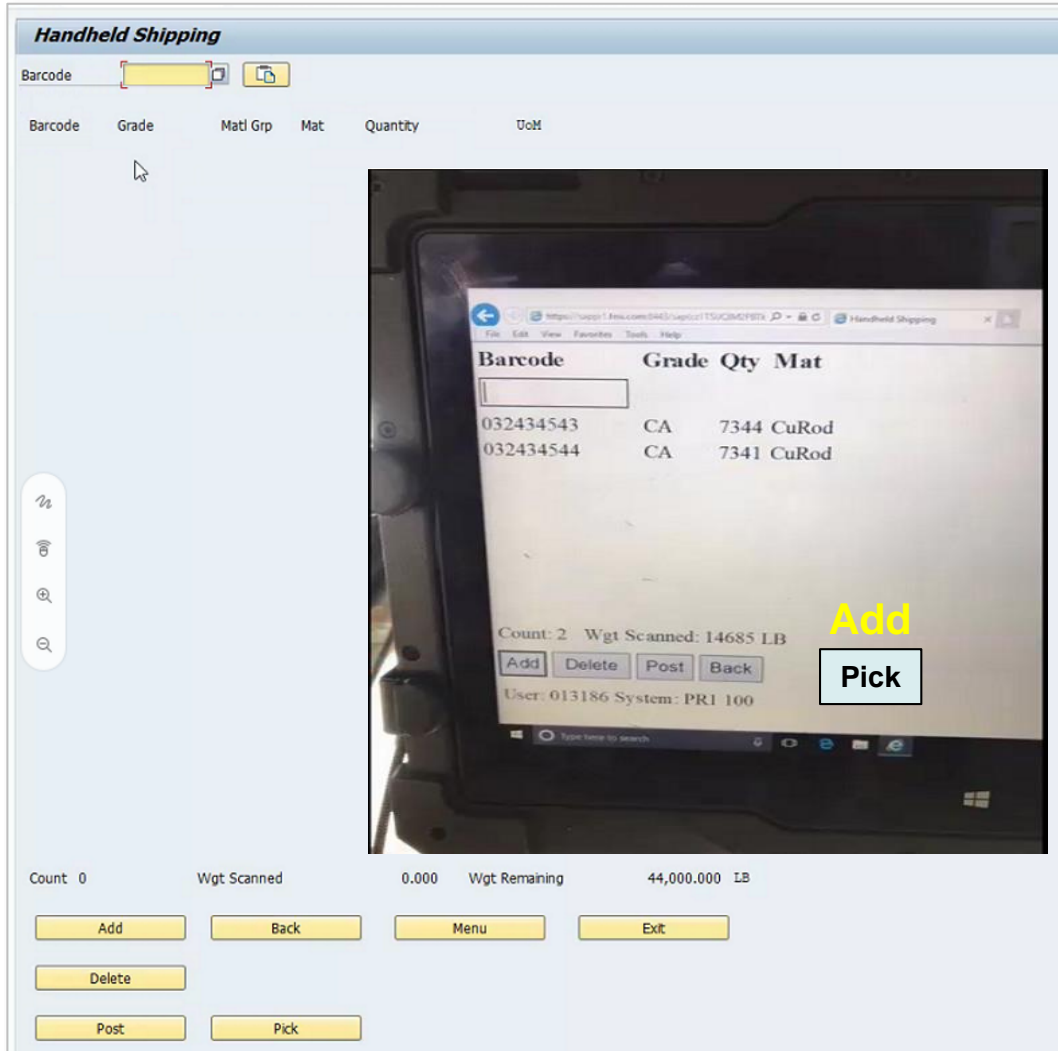
Shipment type Y001 Outbound-Truck ... TransportPlanPt 3909 [REDACTED]
 Overall status 5 Shipment completion [STATUS] Tender status Not offered to forwarding a...
 FwdAgent IC1212 [REDACTED]
 Shipment route G00002 [REDACTED]
 Shipping type 01 Truck
 Service Level [REDACTED] Shipping Cond. YI TRK-NoEquipSpecifd
 Vehicle # [REDACTED] Spec. Process. [REDACTED]
 AlwdTotWgt 0 KG Seal 1 [REDACTED]

DeadL Further Dates Stages Partner Texts Duration and Distnce Status Tender Addit. data Dng.Goods Continuous Move

Planning			Execution			
Check-in	04/23/2018	00:00	04/23/2018	12:53	✓	Planning
Loading start	04/23/2018	00:00	04/23/2018	12:53	✓	Check-in
Loading end	04/23/2018	00:00	04/23/2018	12:53	✓	Loading start
Shpmt completion	04/23/2018	00:00	04/23/2018	12:53	✓	Loading end
Shipment start	04/23/2018	00:00		00:00		Shpmt completion
Shipment end	04/23/2018	00:00		00:00		Shipment start
						Shipment end

- Security gate and tough books were on different time zones
- Only the security entry & shipment complete times were measured
- SAP time stamps Load Start, Load End, & Shipment Complete all at once
- Times not calculating properly

Process Update Will Measure Two Legs of Loading



Policy Changes & Proposed Updates

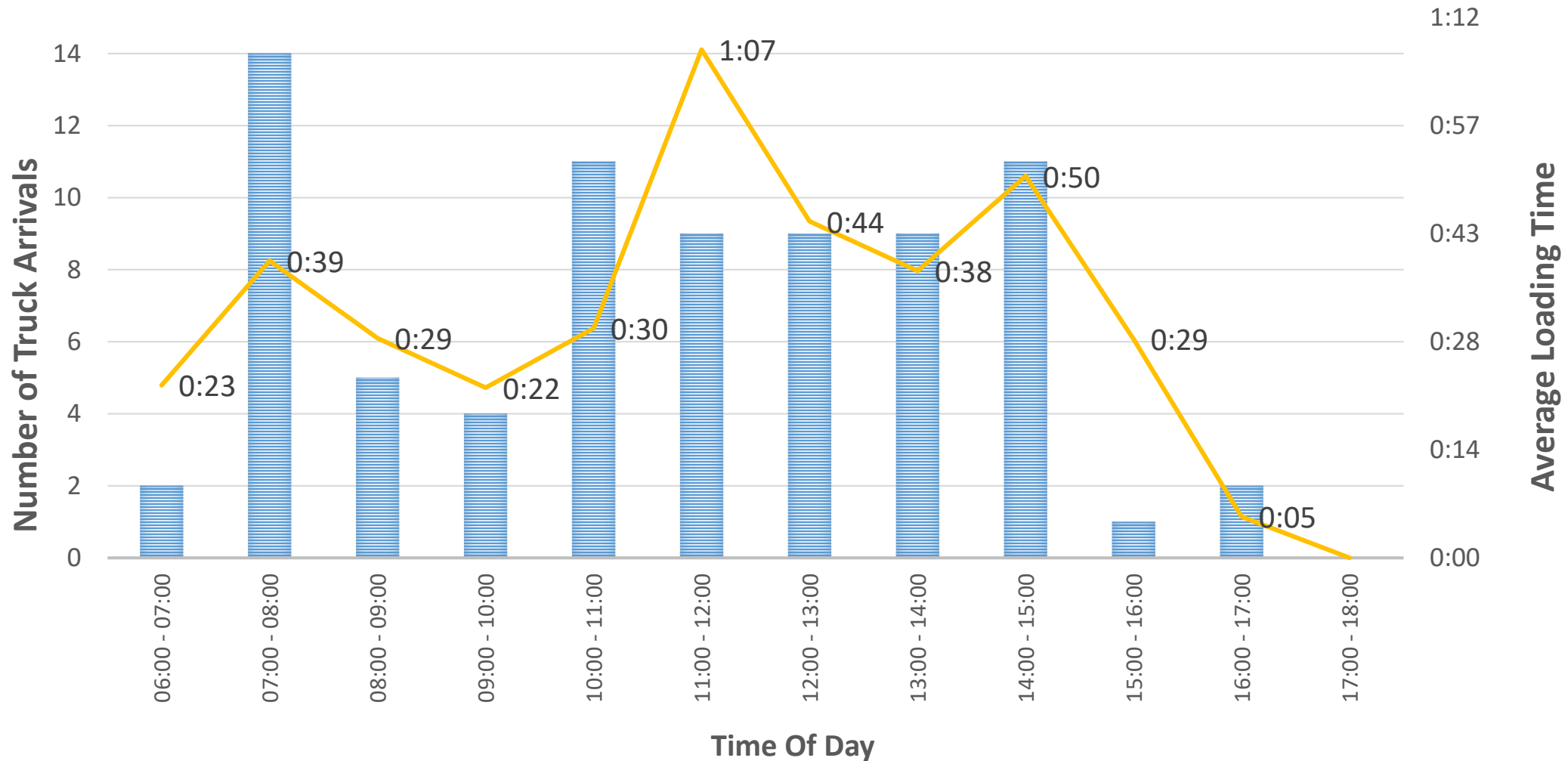
Implemented Changes:



- 1) Removal of El Paso Rod Mill safety video

Corporate Health & Safety to provide direction on:

- 1) Pets to be allowed on-site as long as they stay inside the truck
- 2) Driver-specific safety videos or safety documents to replace videos
- 3) El Paso block/brace by site personnel

El Paso Rod Mill Sampling post video removal




 Savings of
 20 - 40m


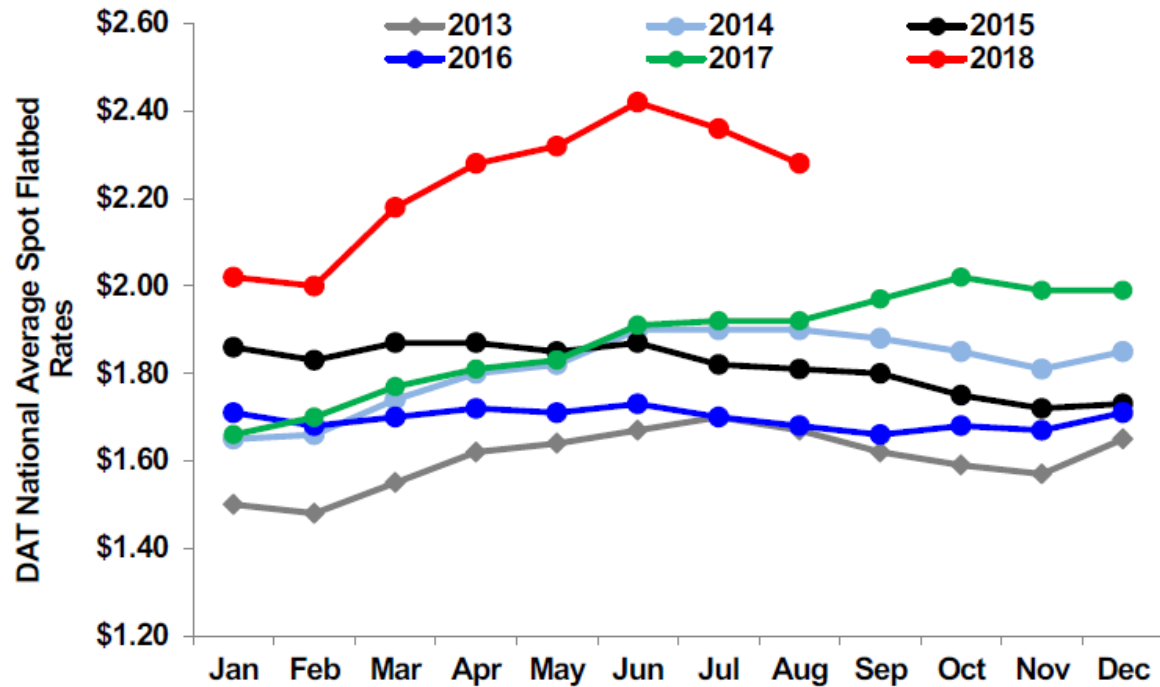
What else would you like Freeport to focus on?

Honest feedback is strongly encouraged.

We value opinions and suggestions that facilitate prosperous partnerships for both companies.

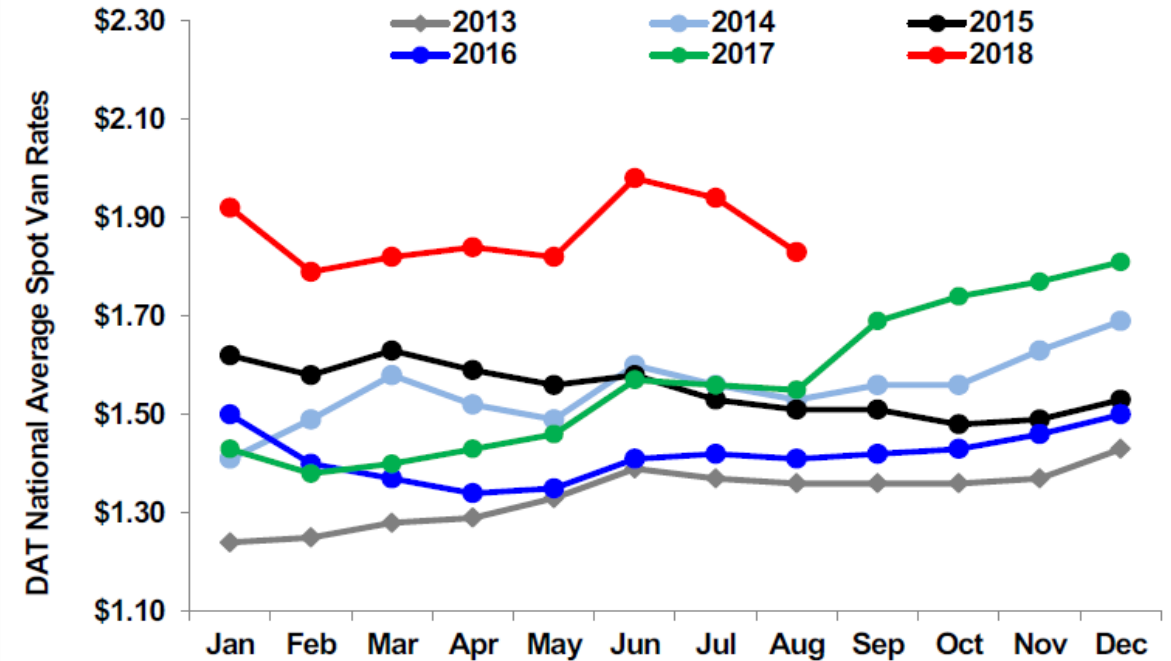
Truck freight rates: Where are they headed?

Exhibit 35: National Average Spot Flatbed Rates ex. Fuel Surcharge



Source: DAT Solutions, Morgan Stanley Research

Exhibit 31: National Average Spot Van Rates ex. Fuel Surcharge



Source: Morgan Stanley Research, DAT Solutions (www.dat.com/resources/trendlines); Note: DAT sources from over \$24 B in transactions and 65k lanes

- 1) What Freeport is feeling...
- 2) What are you seeing & expecting moving forward?

Freeport-McMoRan 2018 Supplier Summit: Projects & Transportation

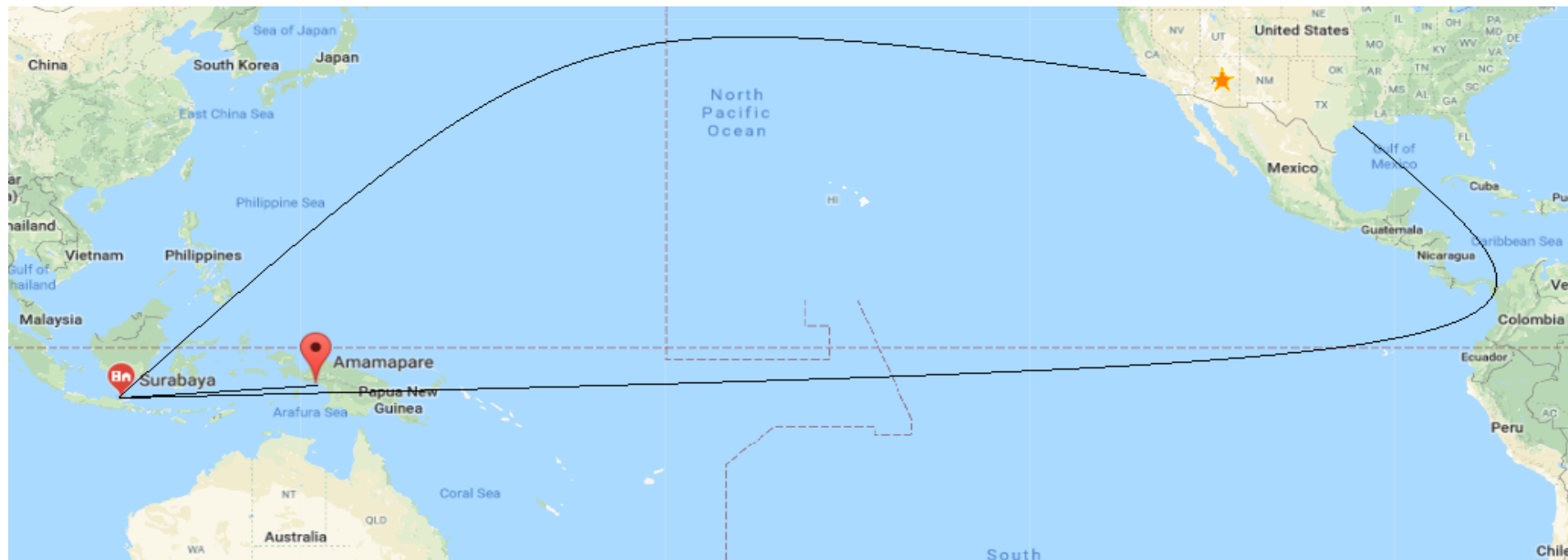


Projects Impact on Transportation

- **PTFI Indonesia**
- **Bagdad**
- **Lone Star**
- **Cobre/Chino**



PTFI Equipment Movement



Equipment Being Moved

P&H 4100A Shovel



793 Haul Truck



Logistics Impact

Port of Entry TBD:

- Long Beach, CA
- Houston, TX

Package Types:

- 20' Containers
- Flat Racks
- Break Bulk

US Carrier Partners:

- Rail
- Heavy Haul Trucks
- Flatbed Carriers

Equipment Quantities:

- 1 P&H 4100A Shovel
 - 70 mixed loads
- 132 793 Haul Trucks
 - 24 to be moved in 2019
 - 10 mixed loads per truck

Status:

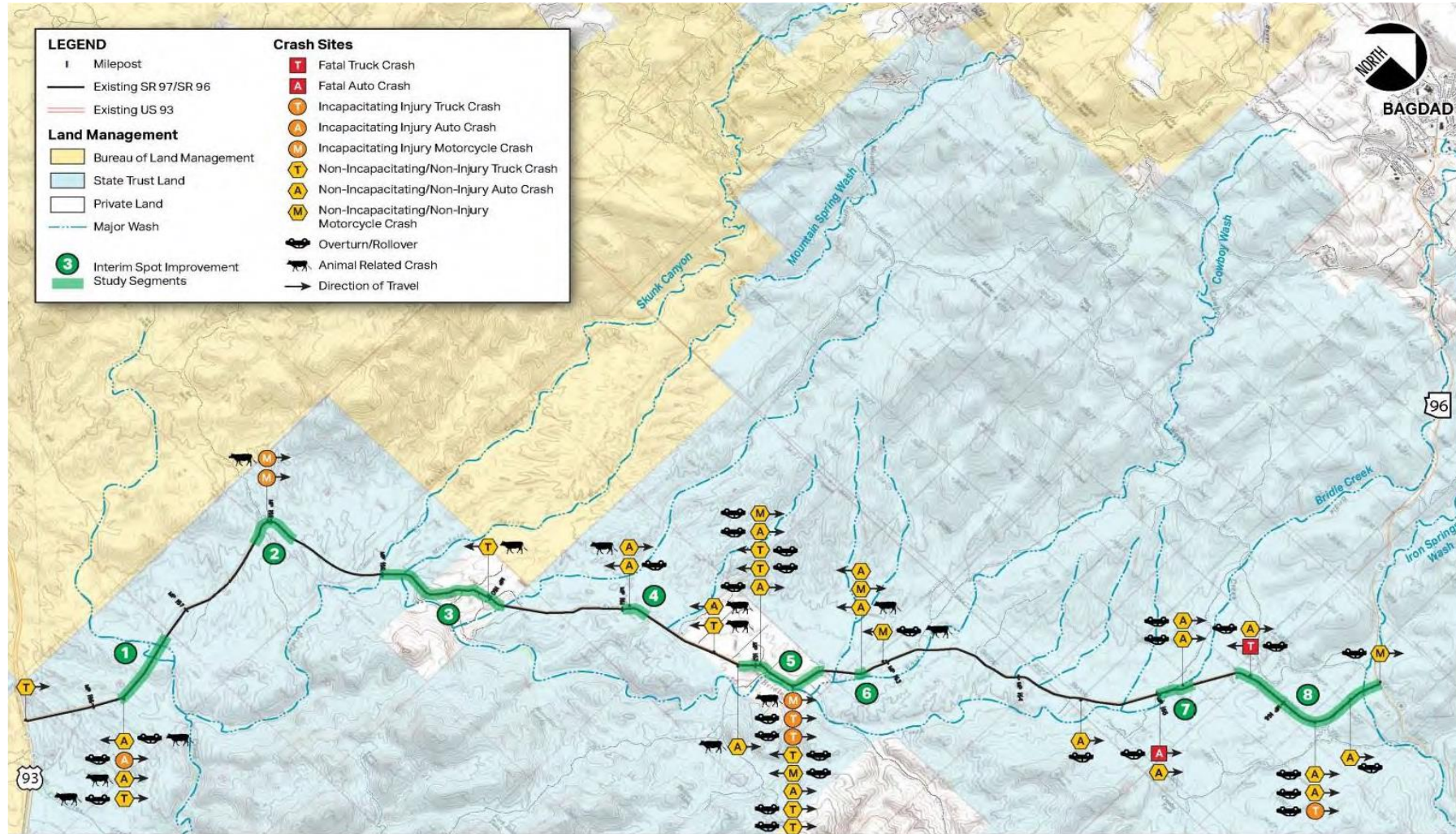
Portions have been approved, we are coordinating with the Indonesian government on some additional approvals

Bagdad Expansion

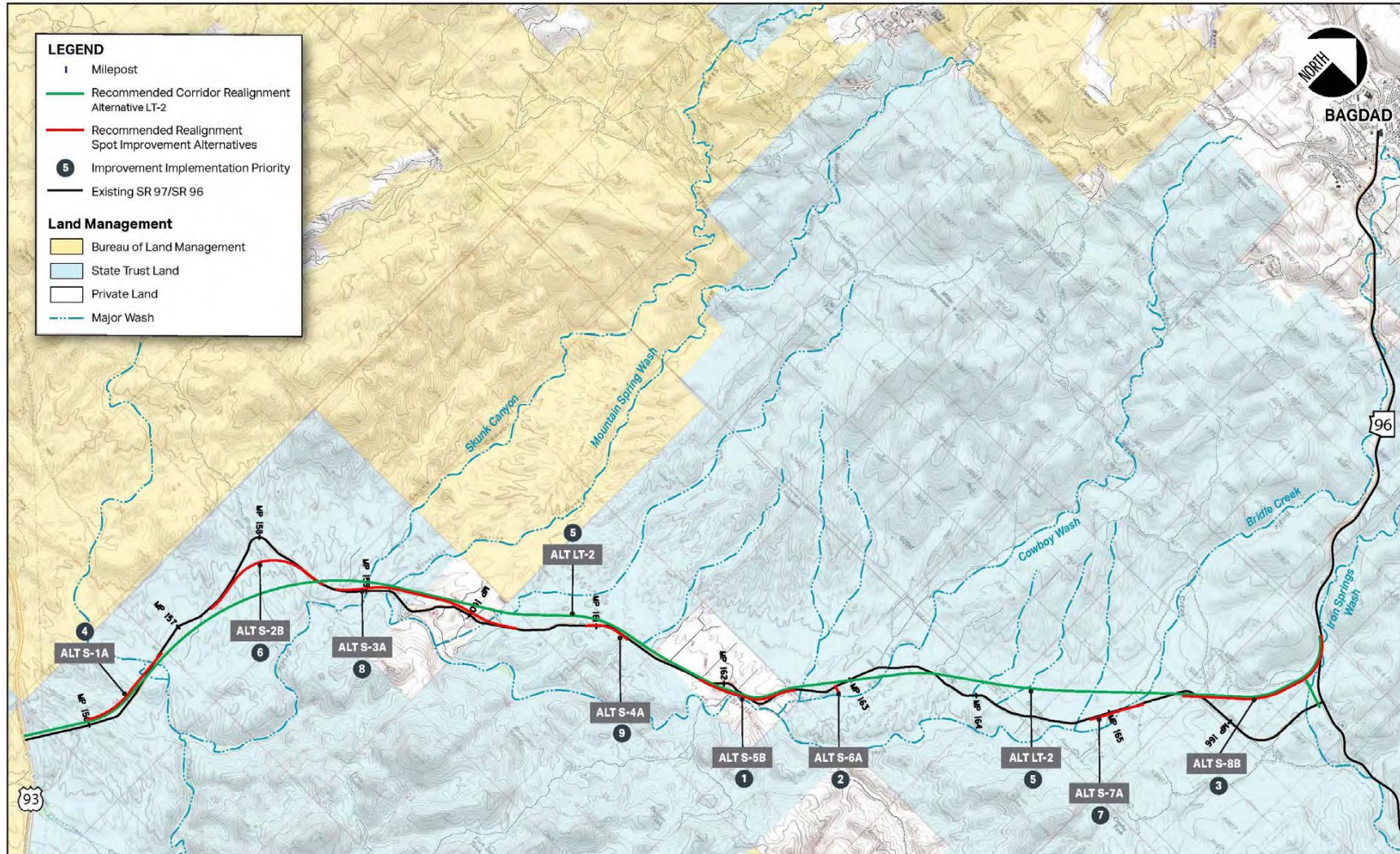
- **Status: Feasibility Stage**
- **Transportation impact upon Bagdad approval:**
 - **Increased inbound transportation to the site**
 - Combination of Rail and Truck, trans load in Wickenburg
 - Estimated Structural Steel = 15,268 tons
 - 70 miles of 30" pipe
 - 1,000 loads of mixed steel & pipe
 - **Increase in outbound transportation from site**
 - Bulk Copper Concentrate carriers will increase capacity
 - 300,000 tons → 600,000 tons per year upon approval
 - **Bagdad SR-97 road improvement**
 - Coordinating with ADOT

SR-97 Study

Mapping Route Accidents



SR-97 Recommended Update



Lone Star Transition

- **Status:** Approved, haul road has been built
- **Reserve:** 4.4 bn lbs of Copper (Oxides Only)
- **Estimated:** 60+ bn lbs sulfide deposit with Copper
- **First Copper by 2020**, anticipated mine life of 20 years
- **Between 2020 & 2021** rail car volumes will start to increase
- **Dual efforts**
 - Continuing to mine Safford
 - Commencing mine stripping at Lone Star



Cobre/Chino Expansion

- **Status: In Progress, first ore has been mined**
- **Estimated 364 million pounds of Copper to be recovered**
- **\$60 million in capex will lead to hundreds of million dollars in savings**
 - **No new facility will be built**
 - **Chino will continue to process the ore body mined**
- **Mine life is estimated to be 7 years**
- **Chino production sits around 180M lbs with the expansion production with move up to 200M lbs and 220M lbs in 2021**

POWERED BY
COPPER



Keep the Mines Moving

