Luminant

Dragline Relocations using Self Propelled Modular Transports (SPMTs)

May 19th , 2015

Prepared for 2015 Haulage & Loading Conference

Dragline Relocations using SPMT – BE 1350

1350 Transport Scope:

- **One BE 1350 Dragline and shoes at Big Brown Mine**

  Weight approx. 5.5M lbs

  Transport distance approx. 3.3 miles

  Used 120 axle lines of SPMTs

  approx. 10 days to mobilize & load

  approx. 2 days to transport

  approx. 4 days to unload & demobilize

Obstructions etc.

345 KV High Voltage OH Line

150 ft concrete box culvert low water bridge

Multi-plate superspan bridge

3 OH distribution lines (internal to LUM)

Dragline Relocations using SPMT – BE 1570

1570 Transport Scope:

- **One BE 1570 Dragline and shoes at Kosse Mine**

  Weight approx. 7.5M lbs

  Transport distance approx. 6.7 miles

  Used 150 axle lines of SPMTs

  approx. 7 days to mobilize & load

  approx. 3.5 days to transport

  approx. 3 days to unload & demob

Obstructions etc.

345 KV High Voltage OH Line

State Hwy 7 (at grade)

2 OH distribution lines

misc internal CMPs

Dragline Relocations using SPMT – Marion 8750W

8750 Transport Scope:

- **Two Marion 8750W Draglines at Martin Lake Beckville Mine . 4 Shoes, 2 Elect. Subs w/Switch**

Weight approx. 13M lbs each

Used 240 axle lines of SPMTs

Delta 33 move:

approx. 15 miles

11 dys to mobilize & load

15 dys to transport

4 dys to unload & demob to D32

Delta 32 move:

approx. 8 miles

3 dys to mobilize & load

4 dys to transport

6 dys to unload & demob

Obstructions etc.

35 nat gas pipelines,12 OH Power L

4 railroad crossings, 7 CR and FM crossings

(6 @ grade)

Luminant Video

Eye on Luminant_ Draglines Move to Liberty Mine-Mobile.mp3

SIZE MATTERS

1 BE1350 (5.5M lbs)

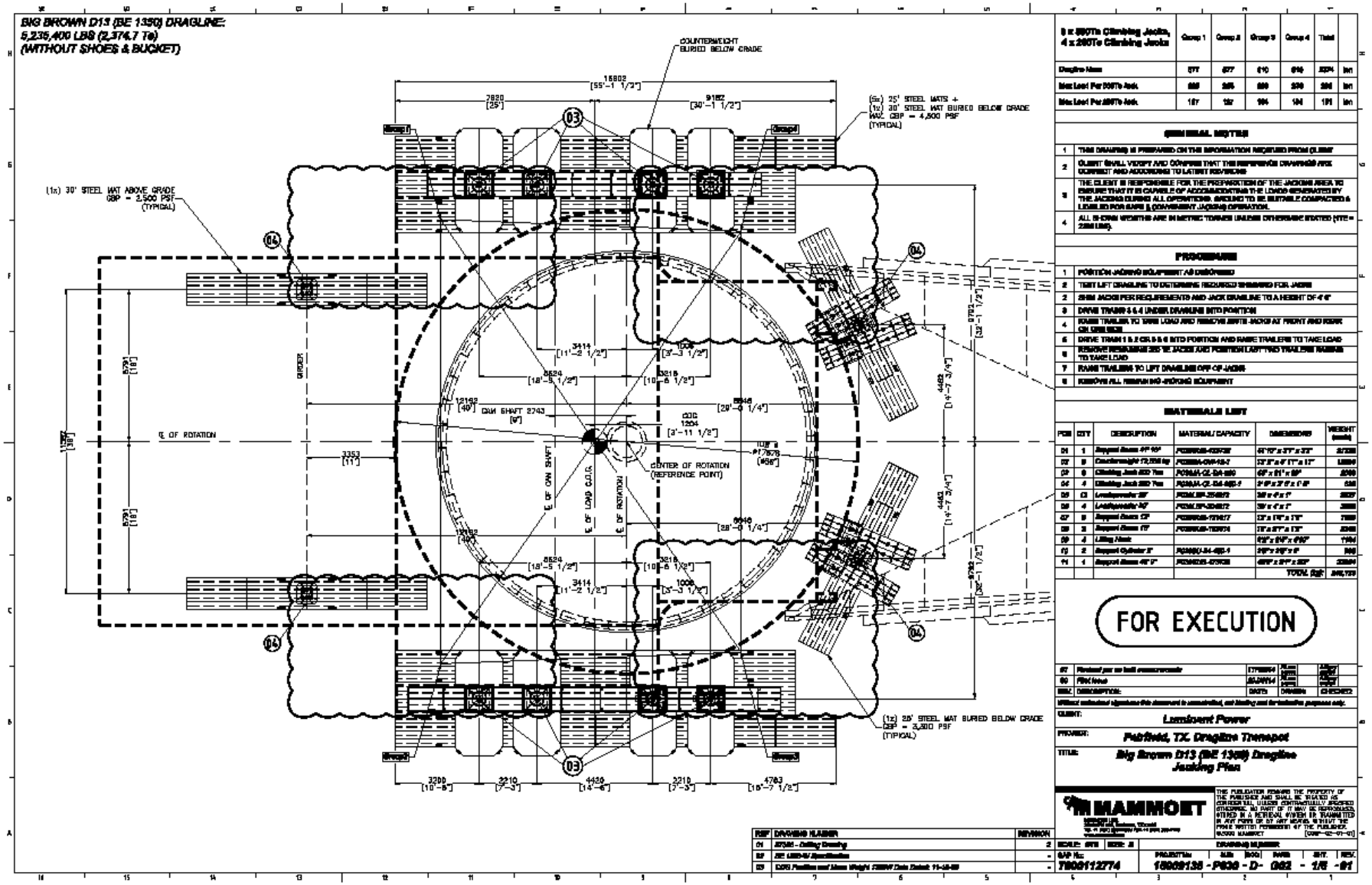
+

1 BE1570 (7.5M lbs)

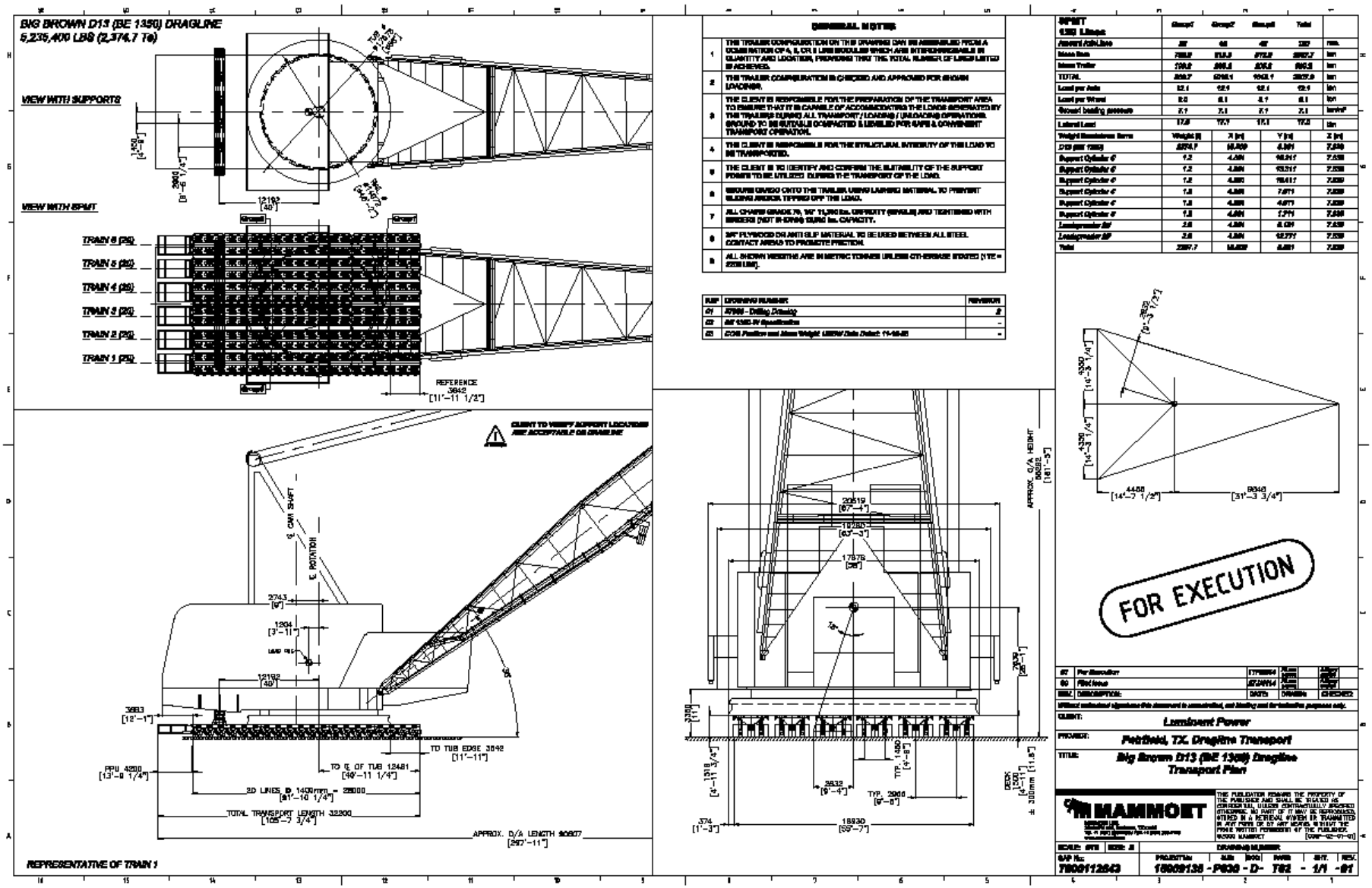
=

1 M8750 (13M lbs)

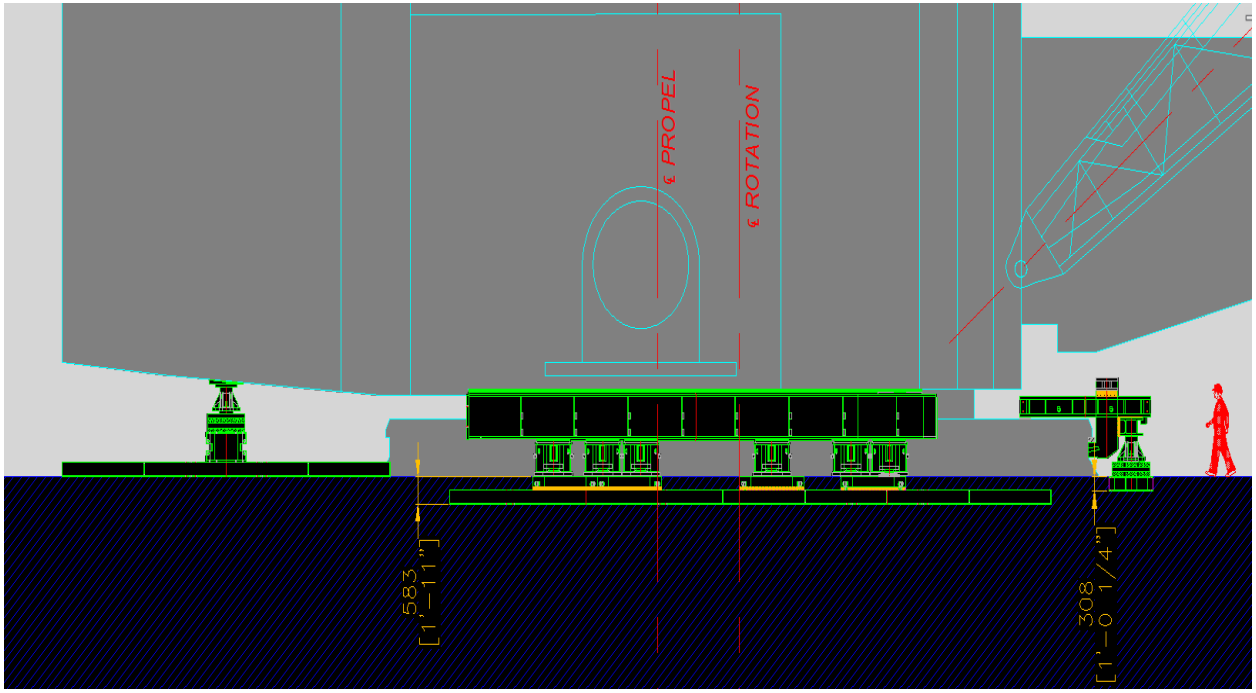
Engineering for Loading and Jacking



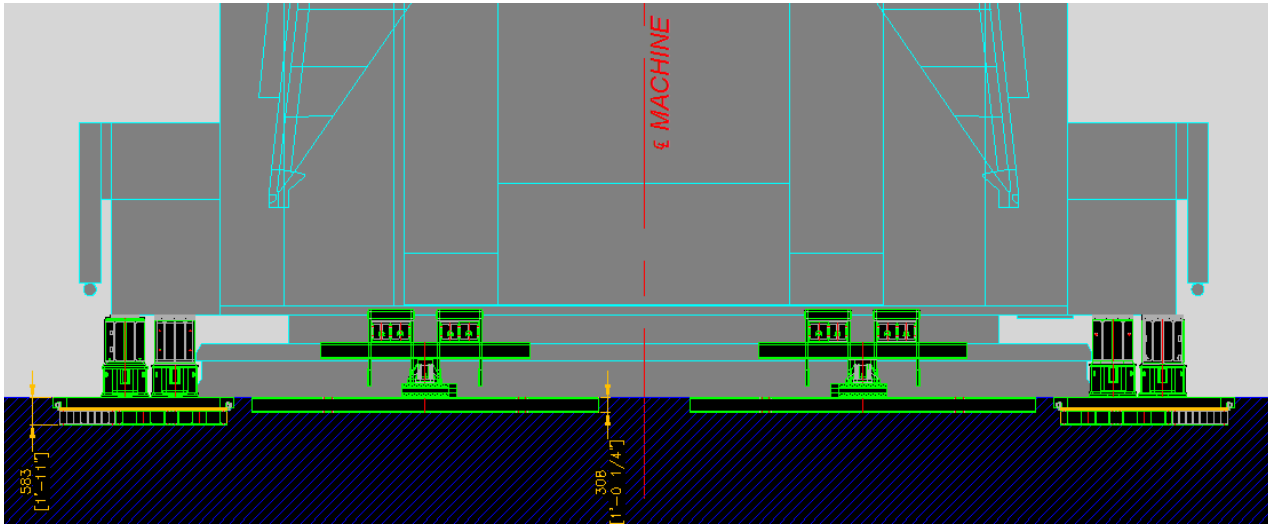
Engineering for Loading and Jacking



LOADING Step 1 & 2 - POSITION JACKS & TEST LIFT

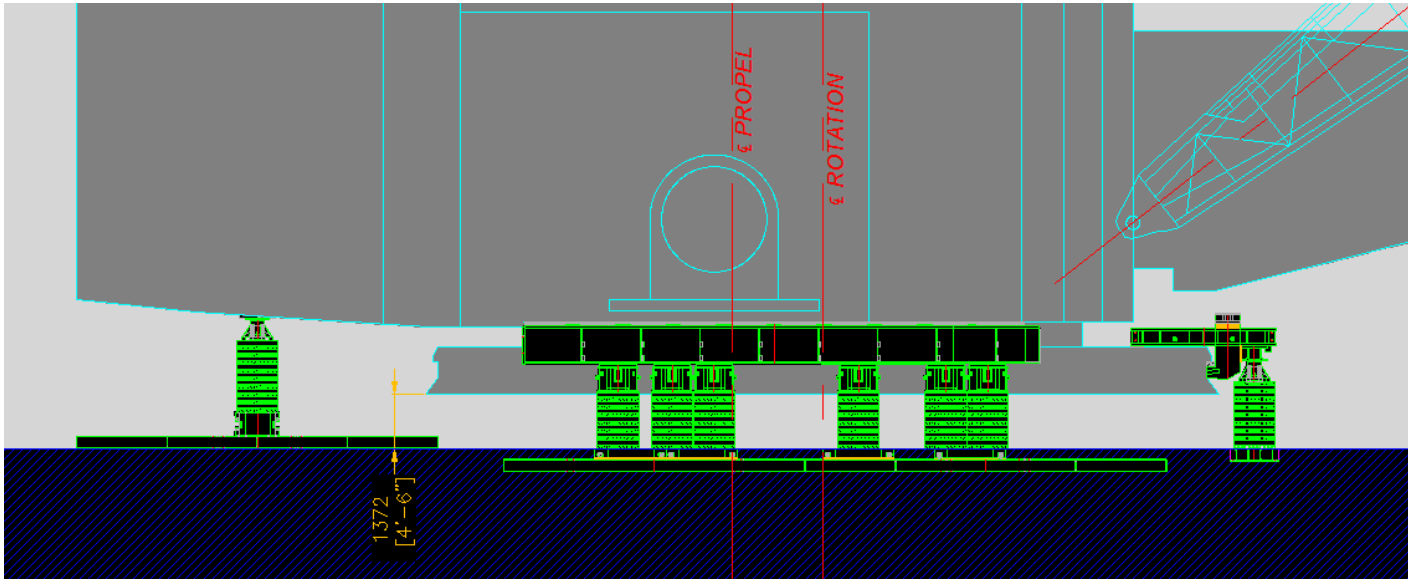


Right side of Machine (Ready to take full load overnight)

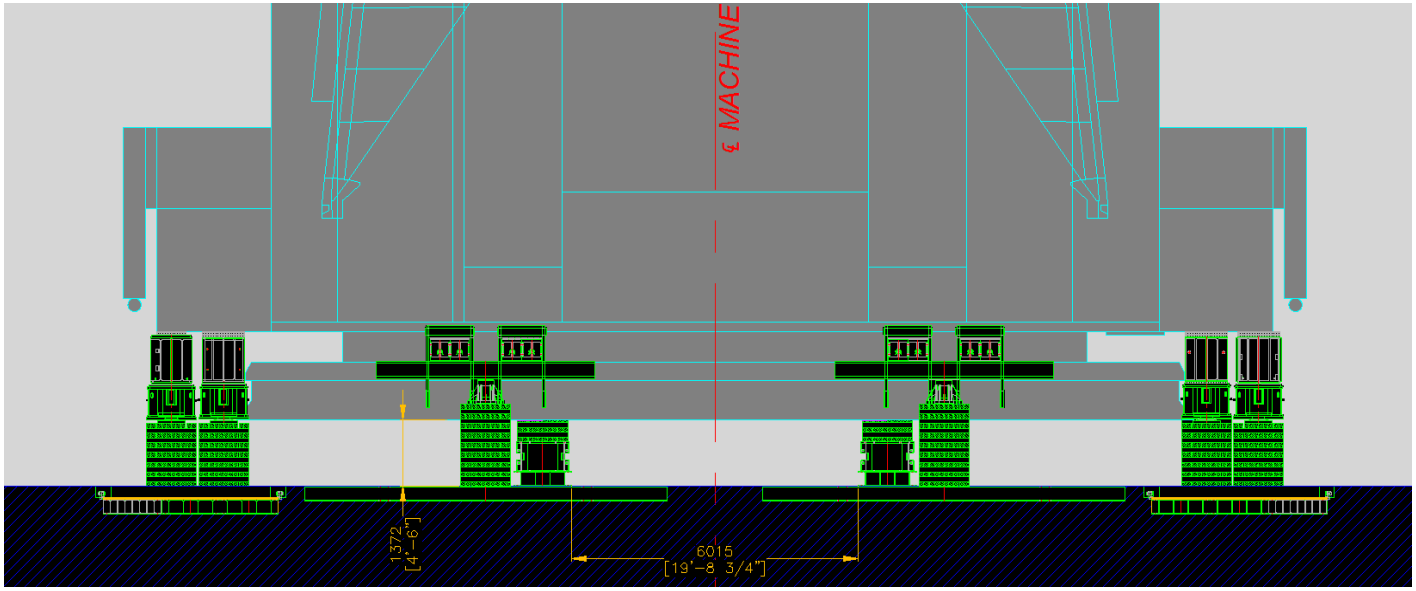


Front of Machine

LOADING Step 3 - FULL LIFT

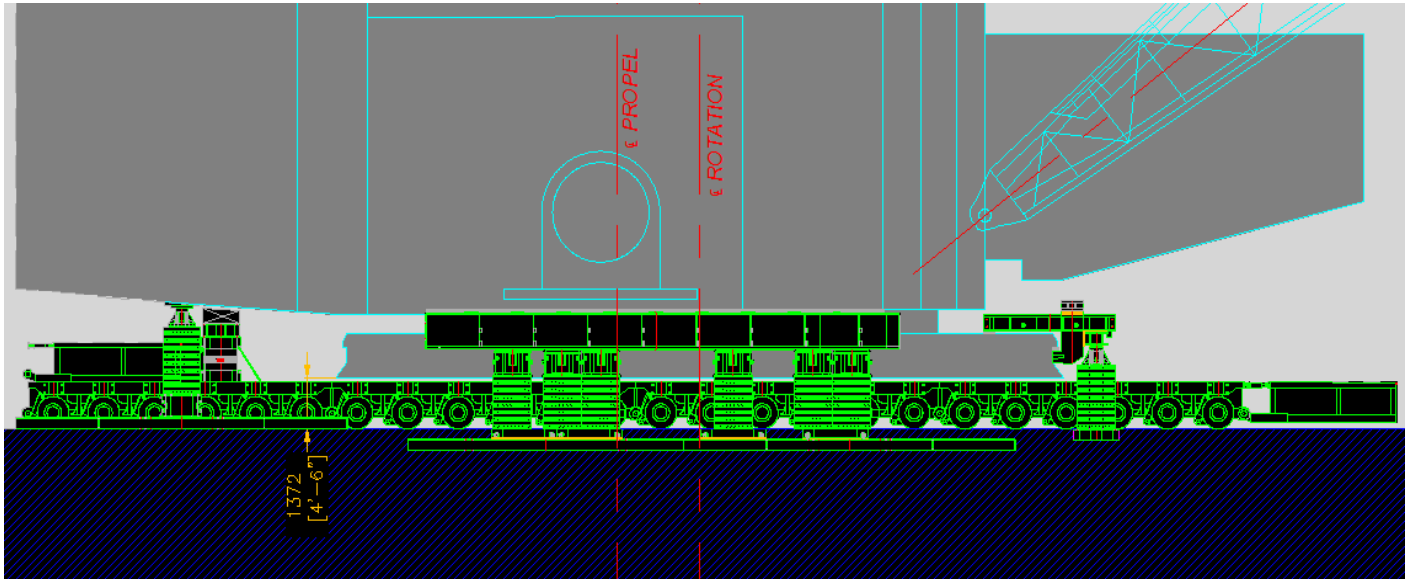


Right side of Machine
(Ready for
Positioning SPMTs)

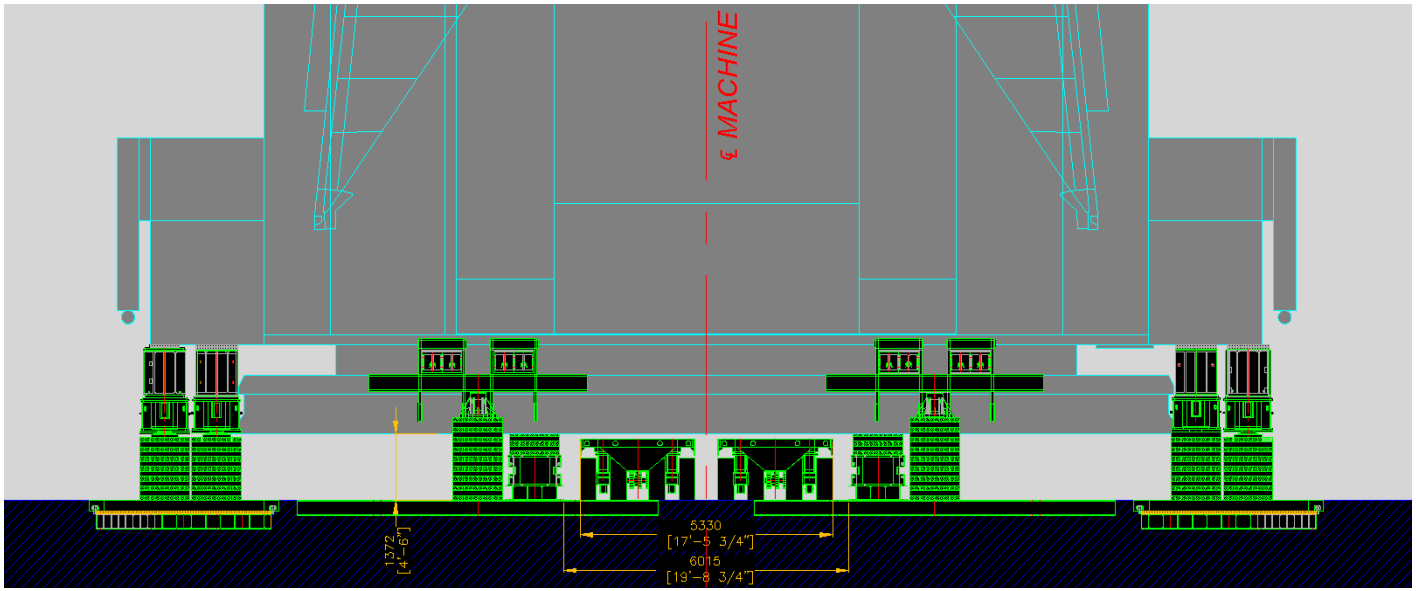


Front of Machine

LOADING Step 4 – INITIAL POSITION SPMTs

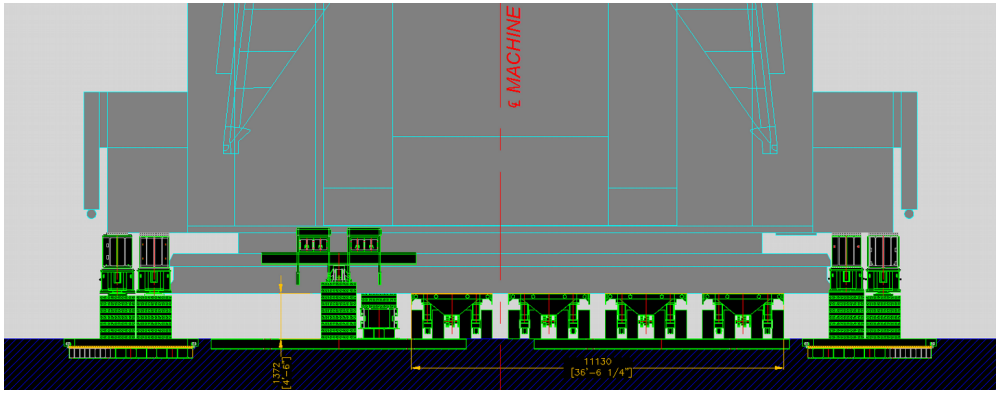


Right side of Machine (Center SPMTs positioned)

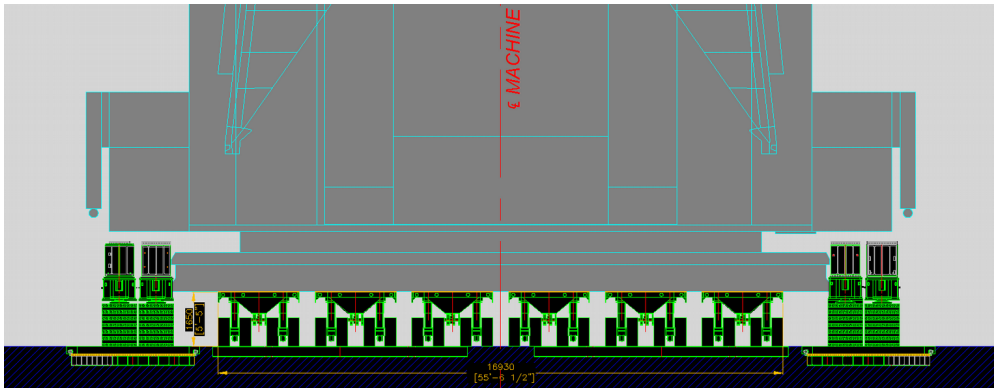


Front of Machine

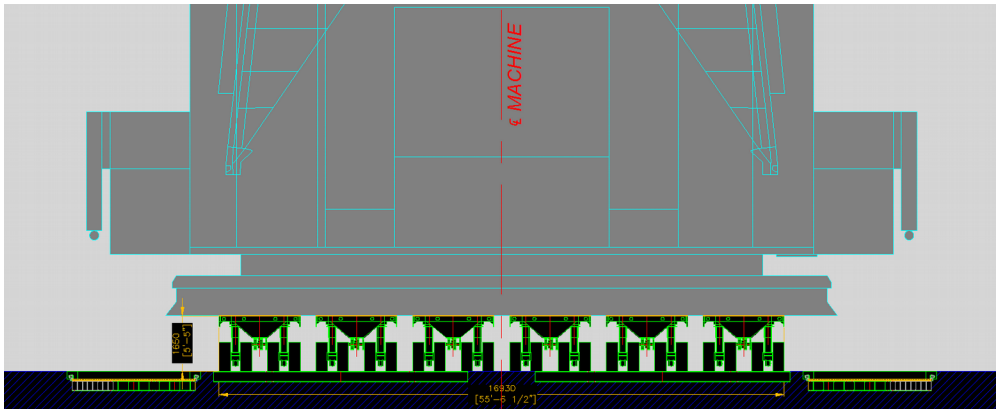
LOADING: Steps 5 thru 7 – COMPLETE LOADING SEQUENCE



Front of Machine



Front of Machine (Last Jacks Ready for Removal)



Front of Machine (Ready for Transport)

Loading Animation video

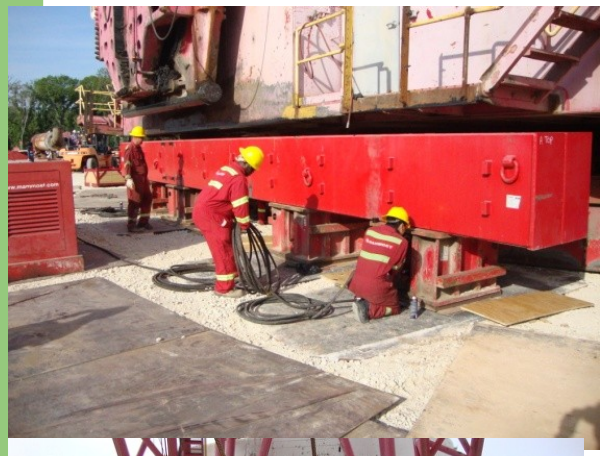
Luminant Kosse Dragline 002.mp3

BE 1350-W

BE 1570-W

M 8750 W

BE 1350-W



BE 1570-W

M 8750 W

BE 1350-W

BE 1570-W

M 8750 W

“Opportunities”:

Yes… more Opportunities…

Liberty Bridge Video

D32 Liberty Bridge xing.mp3

SUMMARY – Lessons Learned & Pros

Lessons Learned :

- **Loading and unloading pad areas require much more area – more equipment staging are than expected (20 loads per day for 3 days). Mob & Demob $'s are significant**
- **Walkway subgrade and surface prep is extremely important !**
- **Removal of Bucket and Ropes /keep the ropes on & "link" them together – adjust CG Calculations**
- **Removal of Tub Growsers are critical path – critical for load distribution , remove and reinstall on backshifts**
- **Support required - Diesel fuel supply, Water trucks, fork trucks, flat tires and lots of 8'x 15' x 3/16" steel plate**

Pros:

- **Much less dirt work $s for Dragline walkway construction – narrower for SPMT transport (even less $s if reclamation is required)**
- **Engineered jacking method is fast and safe!**
- **Haulroad is not destroyed**
- **No wear and tear on propel gearing for deadhead on longer moves**
- **No Trail cable issues to mess with during move – cable is removed and then reinstalled**
- **Faster & Approx. 2/3 cost of walking … or less… depending on distance and "opportunities" etc.**

Job done safely… Job done well… THE END!!

Questions?