

MEMORANDUM

DATE: March 20, 2019

TO: Ryan Beam

PREPARED BY: Jones & DeMille Engineering, Inc.

SUBJECT: Uinta Rail – RL Banks Report Details

This memo is intended to provide information regarding the Uinta Basin Railway as studied by RL Banks in 2018. It is noted that due to confidentiality the entire report cannot be made public. The bulleted list below is intended for public use and does not contain otherwise protected information.

1. The RL Banks report believes that rail is viable as a government project, but that it would have difficulty attracting private investment.
2. Rail to Rifle from Myton/Leland Bench plus transloading is roughly estimated to cost \$1.5Billion. Some routes, etc. may reduce the cost.
3. Rail to Rifle is the preferred route because it allows shipping on two major rail carriers, Union Pacific and Burlington Northern.
4. The RL Banks report believes that rail would facilitate increased oil production in the Uinta Basin in the range of 225,000 Bopd to 350,000 Bopd (current production for SLC refineries is capped near 80,000-85,000 Bopd)
5. Rail is viable at the lower end of estimated oil production.
6. This RL Banks report reaffirms the viability of rail, seconding the 2016 HDR study on rail.
7. The cost to transport oil by unit trains to the gulf coast would be 20% to 25% less than what we previously believed.
8. Generally, Uinta Waxy Crude would sell at WTI prices less the price of transportation at gulf coast refineries.
9. The discount in SLC on Uinta Waxy Crude would be reduced to the difference between transporting to SLC vs. gulf coast and is approximately \$4-\$5 per barrel depending on location of gulf coast refinery. The discount has been as high as \$20 during the last 5 years.
10. Rail into the Uinta Basin would lower the cost of transporting oil to gulf coast refineries more than trucking oil to a rail head or transporting oil to rail via an oil pipeline.
11. At higher range of oil production (350,000 Bopd), rail transportation to SLC is cost competitive with trucking and could get oil trucks off highway.
12. It is much easier to scale rail to transport more oil than it is for an oil pipeline.
13. Rail carries products in and out of the Basin, and can haul all types of commodities, like Gilsonite, Soda, Fly Ash, Frac Sands, tubular goods, etc. It would lower the cost of producing oil and increase the price of crude oil produced in the Uinta Basin.
14. Rail would have a greater economic impact on the Uinta Basin and the State of Utah than other transportation alternatives. This has been confirmed in several studies on rail since 2001.