



Canadian Crude by Rail: From Need to Optimization Comparison vs. North Dakota

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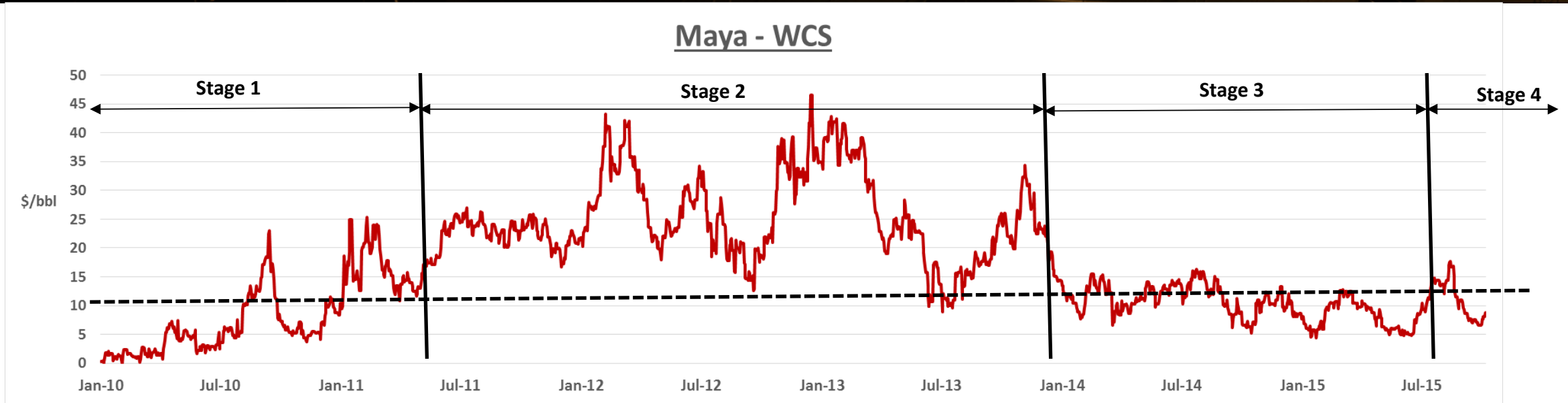
Torq Energy Logistics

Torq Energy Logistics – Who We Are

Torq Energy Logistics is a progressive provide of logistics services for crude oil and other energy based commodities in Western Canada. Our assets include:

- ⊗ 280 + trucking units in Western Canada
 - ▣ Significant growth in 2014 - 2015
- ⊗ 6 Crude by Rail facilities in Western Canada
 - ▣ Focus on heavy undiluted crude
 - ▣ Additional commodities moving through facilities: frac sand, NGL's, LPG's
- ⊗ Armada Resources providing sourcing of crude oil and other energy based commodities to our customers
- ⊗ Capital Backing of KKR
- ⊗ Growth into midstream assets in Western Canada and U.S.

Maya – WCS Differential: Driver for Western Canadian Crude by Rail



- ☼ Maya price is a function of 5 components
 - ☐ 40% WTS
 - ☐ 40% USGC 3% Fuel oil
 - ☐ 10% Brent
 - ☐ 10% LLS
 - ☐ K factor

- ☼ Therefore, one must monitor multiple market differentials:
 - ☐ WTI- WCS
 - ☐ WTI – USGC 3% Fuel Oil
 - ☐ Brent – WTI

Stages of Crude by Rail in Western Canada

- ⊗ Stage 1 – Production vs. Takeaway Capacity Fundamentals Develop (pre June 2011)
 - ☐ Increasing production with lagging pipeline capacity additions set stage for need to move crude by rail

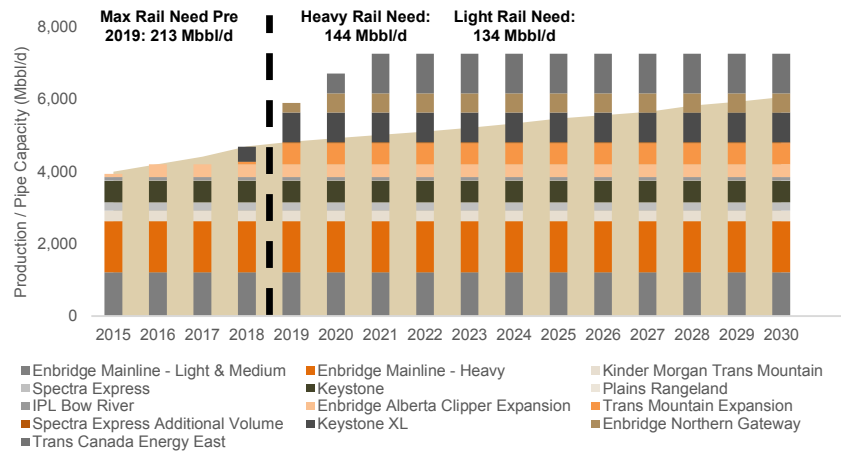
- ⊗ Stage 2 – “First Movers” reap large arbitrage rewards(3Q2011 – 1Q2014)
 - ☐ Refiners, Marketers, and Fuel Oil Blenders with coiled and insulated rail cars worked with logistics providers to start up manifest rail facilities
 - ☐ Railcars, load capacity , and unload capacities limit volume

- ⊗ Stage 3 - Capacity Addition and Efficiency (2Q2014 – Present)
 - ☐ Larger refiners, producers, and midstream providers get into “the game” with new large rail car fleets, unit train lad facilities, and unit train unload facilities

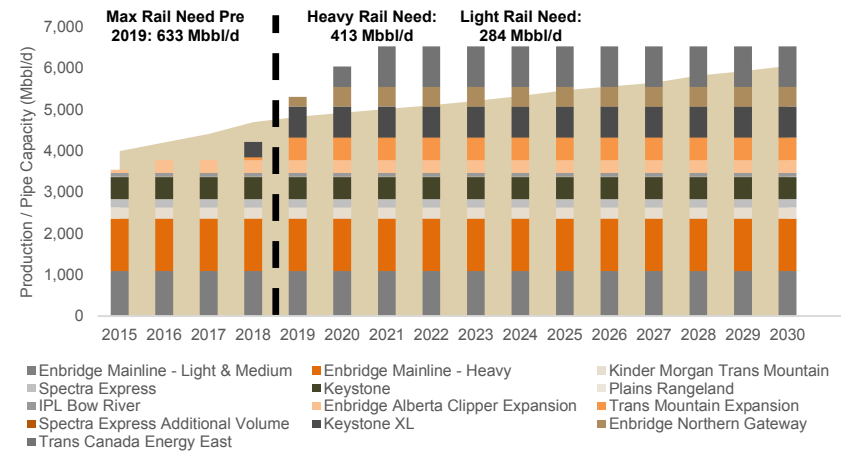
- ⊗ Stage 4 – Optimization (Present→)
 - ☐ Minimal to closed arbitrages will forces those “in the game” to optimize movements.
 - ☐ Most optimization achieved through movement of undiluted crude

Western Canada: Production vs Takeaway Capacity Scenarios

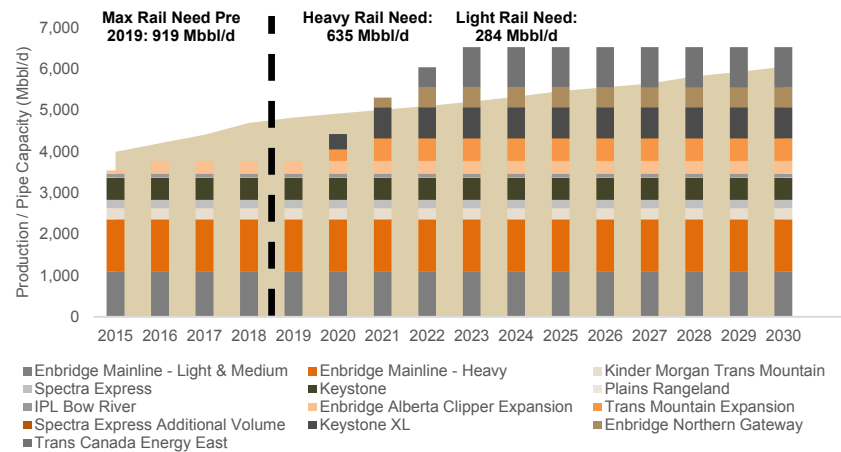
Rail Need – 100% Capacity, On Time



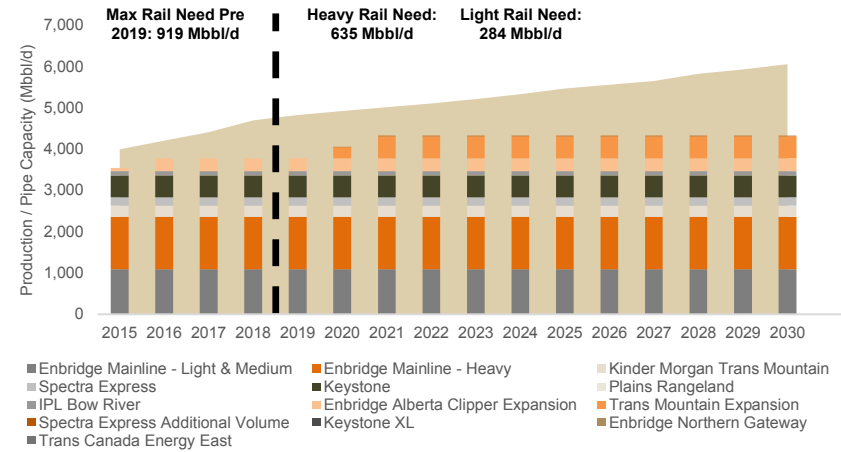
Rail Need – 90% Capacity, On Time



Rail Need – 90% Capacity, 2 Year Delay



Rail Need – 90% Capacity, 2 Year Delay, No Major Pipe



Western Canada vs. North Dakota Comparison

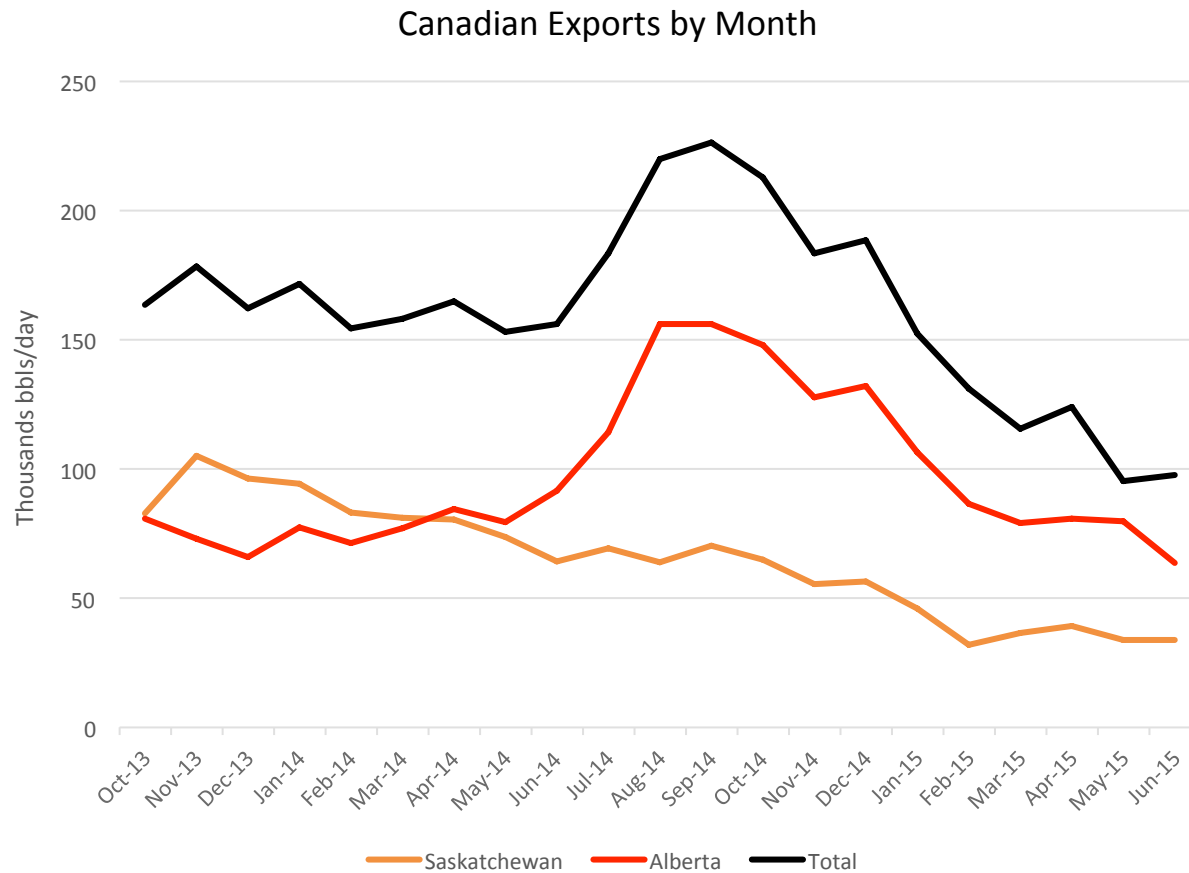
☼ Similarities:

- ☐ Production vs Takeaway Capacity Fundamentals
- ☐ Arbitrage timing
- ☐ Movement from manifest to unit trains

☼ Differences

- ☐ Crude Grade and qualities
 - Multiple grades of crude oil in Western Canada vs. 1-2 grades in North Dakota
 - W.C. grades range from 8 - 48 degrees API vs consistent
 - Additional market drivers
- ☐ Regional production vs take away constraints in Canada
 - Logistical challenges of larger basin
 - Western Canada Basin is ___ square miles vs Williston Basin has ___ square miles
- ☐ Limited rail load capacity in Canada vs excess rail capacity in North Dakota
 - Locations have limited grade selections
- ☐ Additional governmental agencies / regulations
- ☐ Added complexities force additional stage vs North Dakota- Stage 4 - Optimization

Stage 4: Optimization



- ☼ Crude by Rail in Stage 4:
- ▣ 100 – 250 kbbls/day
- ▣ Equivalent of 2-4 Unit trains per day

Stage 4: Optimization – Recipe for Long Term Rail Movements

- ⊗ Focus on movement of undiluted crude vs dilbit or rail bit.
 - ❑ Avoids diluent cost for producer to blend
 - ❑ Avoids diluent penalty for shipper to move
 - Shipper diluent penalty averaged \$8.00 / bbl over the past four year period
 - Cost competitive vs pipeline movements
 - ❑ Benefit of transporting Package Group 3 materials and longer phase on CPC 1232 rail cars
 - Availability of excess CPC 1232 cars will drive down car leasing costs.
 - Expect additional saving of \$0.50 to \$1.00 / bbl
 - ❑ Refiners with light ends and naphtha constraints can increase throughput
 - 1bbl WCS = 0.75 bbl Undiluted + 0.25 bbl condensate
 - Equivalent that production from: 0.75 bbl Undiluted+ 0.75 bbl of Bakken (or equivalent light grade)
 - Extra production and margin from incremental 0.50bbl of Bakken or equivalent

Stage 4: Optimization – Recipe for Long Term Rail Movements (continued...)

- ⊗ Load / Unload facilities with access to minimum of 2 Class 1 railroads
 - ❑ Shippers with competing railroad access indicated saving of \$1.00 - \$1.50/bbl
 - ❑ Shippers indicate improved service with competing railroads as well
- ⊗ Unit Train Scale
 - ❑ Saving of \$1.00 - \$1.50 /bbl on unit train vs. manifest
 - ❑ Reduce rail fleet size requirements

*Short term, manifest rail of undiluted is more economical than unit train rail of dilbit. With excess rail cars in storage, velocity (round trip times) less of a concern

Torq Energy's Solutions to Long Term Rail Success

- ☉ Currently, Unity facility possess all 3 items: Undiluted crude source, rail service from CP and CN, and unit train capacity
- ☉ Development of Britannia facility in Lloydminster to be second facility with the 3 key components
- ☉ Current manifest operations at all 6 rail facilities offer improved economics vs unit train dilbit moves
- ☉ Integrated logistics can provided improved value to customers
 - ☐ Trucking from wellhead to facility
 - ☐ Armada Resources crude sourcing

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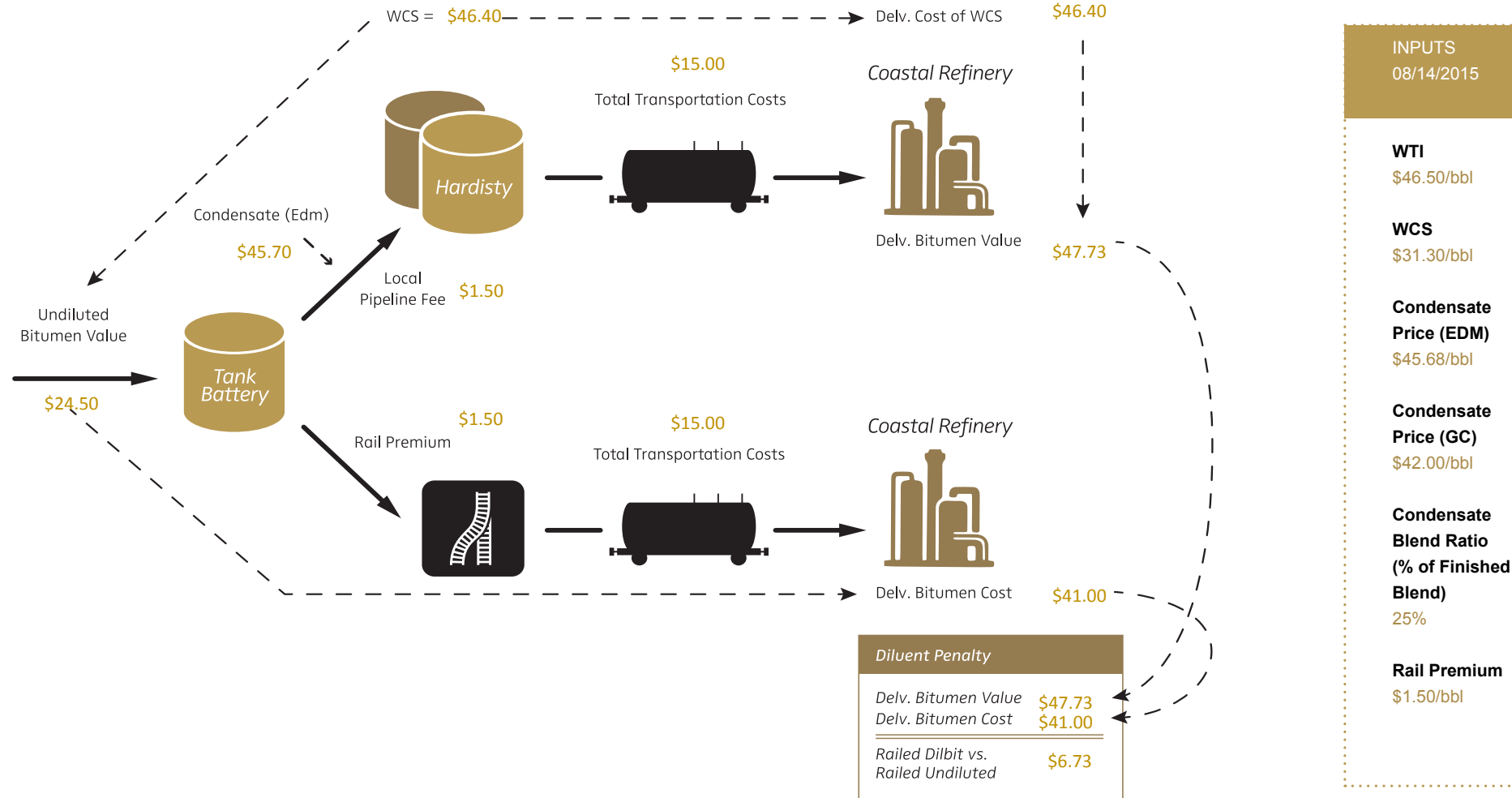
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Appendix

Shipper Diluent Penalty Illustration



Shipper Diluent Penalty Graph

