21 January 2020

Refining NZ Operational Update for November/December 2019

HIGHLIGHTS

- The Company earned NZD 19.2 million in Processing Fees for November/December. Full year 2019 Processing Fee income is NZD 242.0 million versus NZD 258.7 million for the same period in 2018.
- Refinery throughput for November/December was 6.8 million barrels, which was lower than plan due to the unscheduled Transpower outage and late crude deliveries by our customers.
- Refining NZ's Gross Refining Margin (GRM) was USD 2.62 per barrel which was heavily impacted by poor global refining margins and high crude oil freight costs. Full year 2019 GRM was USD 5.34 per barrel.
- Global refining margins were poor in November/December as high sulphur fuel oil margins fell strongly due to the impact of the 2020 IMO MARPOL regulations, but diesel margins did not increase significantly. Margins were also impacted by high crude oil freight rates which increased due to the US imposed sanctions on several Chinese tanker companies. We have seen a material decline in crude freight rates following the 15 January 2020 USA/China trade deal.
- Refining NZ achieved several production records in 2019 including the highest annual crude and condensate intake, and the highest annual refined product make and customer product offtakes.
- The RAP achieved throughput of 3.8 million barrels in November/December earning income of NZD 6.2 million. Annual RAP throughput was the second highest on record.
- Process and personal safety performance remained excellent:
  - No Tier 1 or Tier 2 process safety events for the entire 2019 – a first since records began; and
  - The recordable injury frequency is currently 0.27 per 200,000 work hours - the best since 2010.

COMMENTARY

Refining - Margins and throughput

The refinery achieved throughput of 6.8 million barrels which was lower than plan due to an unscheduled Transpower power outage on 27 November 2019 and late crude deliveries by customers. Operational availability was high at 99.7%. This throughput, coupled with a GRM of USD 2.62 per barrel at an exchange rate of USD/NZD 0.65, has earned the Company NZD 19.2 million Processing Fee revenue in the November/December period. The Transpower outage on 27 November 2019 impacted the November/December GRM by circa USD 0.50 per barrel.

For the full year 2019, Refining NZ achieved throughput of 42.7 million barrels and an average GRM of USD 5.34 per barrel earning the Company NZD 242 million Processing Fee revenue.

Refining NZ achieved several production records in 2019 including the highest annual crude and condensate intake, and the highest annual refined product make and customer product offtakes. The Company also conducted test runs on four new crudes with the aim of broadening the slate of crudes that we process in order to refine lower cost crudes in 2020, thereby improving GRM.

Global refining margins

Singapore refining margins were negatively impacted by several factors during November/December. Crude prices trended up due to OPEC's decision to deepen production cuts. High sulphur fuel oil margins fell strongly as had been forecast due to the impact of the 2020 IMO MARPOL regulations. The USA/China trade war had a profound impact on the regional diesel demand and diesel exports from China and India were high. Diesel margins therefore did not increase significantly as had been forecast previously by market commentators. However, international energy consulting company FGE still expects diesel margins to increase in the near-term as MARPOL compliant fuel demand increases, thereby increasing hydrocracking margins.

Crude freight rates increased significantly from October due to the US imposed sanctions on several Chinese tanker companies, including COSCO which owns ~6% of the global VLCC fleet. The sanctions came at a time when the available shipping fleet was already reduced with a number of vessels docked for installation of exhaust scrubbers and some being used to store MARPOL compliant fuel oil.

While there was a surge in all crude oil tanker rates, including Aframax tanker rates which impact Refining NZ's GRM, product tanker rates only increased moderately. As was foreshadowed in our September/October update, the higher freight rates impacted the cost of crude processed by Refining NZ during November and December in the order of USD -1.00 per barrel as the Refining NZ GRM has a two-month lag in the freight rates that are applied.

Uplift over Singapore Dubai complex margin

Refining NZ's November/December uplift over the Singapore Dubai complex margin was healthy at USD 4.16 per barrel. The Singapore Dubai complex margin for the November/December period was weak at USD -1.55 per barrel.

Looking forward - Impact of temporary spike in crude freight rates

As noted above, crude freight rates increased significantly due to the US imposed sanctions on several Chinese tanker companies. This continued until the USA/China trade deal was struck on 15 January which has already led to a 28% reduction in Mid-East Aframax crude tanker rates in a matter of days. Assuming this reduction is sustained, it should favourably impact Refining NZ's GRM from March.

Distribution – Refinery to Auckland Pipeline (RAP)

The RAP achieved throughput of 3.8 million barrels of gasoline, jet fuel and diesel which earned income of NZD 6.2 million, in line with the same period last year. Pipeline operational availability was high at greater than 99%. Annual RAP throughput was 20.8 million barrels, the second highest on record.

Natural gas

The natural gas market was stable during November/December and Refining NZ comfortably secured all its requirements. Refining NZ is pleased to have contracted all its natural gas requirements for the next three years with a credible market participant having diverse supply options.

Health, safety and environment

We continued our excellent process safety performance in November/December to achieve a full year without any Tier 1 or Tier 2 process safety events – a first since records began in 2010. On a personal safety front, we closed out the remaining two months of the year without any recordable injuries and achieved a recordable injury frequency of 0.27 per 200,000 work hours for 2019 – the best performance since 2010. These safety achievements are underpinned by the E tu Tangata safety culture programme introduced and embedded through the year.

Costs

Overall operating costs continue to be tightly controlled with a number of cost reduction initiatives underway, in response to the current weaker margin environment and the ongoing pressure from higher electricity prices.

OPERATIONAL DATA

		Nov/Dec 2019	Nov/Dec 2018	YTD 2019	FY 2018
Health, Safety & Environment					
LTI	#	0	0	1	5
LTIF	#/200,000hrs	-	-	0.13	0.48
TRC	#	0	1	2	8
TRCF	#/200,000hrs	-	-	0.27	0.76
Tier I Process Safety Events	#	0	0	0	2
Tier II Process Safety Events	#	0	0	0	3
Releases outside of consent	#	0	1	1	5
Refining					
Brent Crude Oil Price	US$/bbl	65.0	61.1	64.3	71.2
Exchange Rate	US$/NZ$	0.65	0.68	0.66	0.69
Operational availability	%	99.7	99.7	99.7	90.7
Unplanned process downtime	%	3.5	0.9	1.6	0.8
Refining throughput	Mbbl	6.80	7.31	42.69	40.44
Gross Refining Margin	US$/bbl	2.62	6.53	5.34	6.31
Gross Refining Margin (excluding Fee Floor/Margin Cap)	US$M	17.8	47.7	227.9	255.0
Processing Fee (after Fee Floor/Margin Cap)	US$M	12.5	33.4	159.5	178.6
Processing fee (after Fee Floor/Margin Cap)	NZ$M	19.2	49.2	242.0	258.7
Distribution					
RAP throughput	Mbbl	3.8	3.7	20.8	21.0

Notes:

1. The information provided in this announcement excludes revenue from other activities.
2. The Processing Fee results reported in this announcement are subject to change due to post announcement price updates and independent audit.
3. A five year history of Throughput, Margins and Processing Fees is attached below.
4. Refer to the explanatory notes/glossary for a definition of terms.

HISTORICAL INFORMATION - REFINING

		2015	2016	2017	2018	2019
Jan/Feb	Barrels 000's	7,056	6,826	7,160	7,011	6,963
	RNZ USD GRM per barrel 1)	9.91	7.96	6.58	7.54	4.88
	Singapore Dubai Complex GRM	5.40	4.95	3.42	3.37	-0.32
	Uplift vs. Singapore Dubai Complex 3)	4.51	3.01	3.16	4.17	5.20
	NZD Processing Fee (million) 2)	59.6	57.0	45.9	50.8	34.9
Mar/Apr	Barrels 000's	7,411	7,471	5,140	6,958	7,312
	RNZ USD GRM per barrel 1)	8.77	1.84	9.35	6.82	6.63
	Singapore Dubai Complex GRM	4.82	3.18	3.02	3.75	0.75
	Uplift vs. Singapore Dubai Complex 3)	3.95	-1.34	6.33	3.07	5.88
	NZD Processing Fee (million) 2)	62.3	14.8	48.1	45.8	50.1
May/Jun	Barrels 000's	6,416	6,837	7,755	3,910	6,945
	RNZ USD GRM per barrel 1)	8.55	6.26	7.63	0.18	4.36
	Singapore Dubai Complex GRM	4.24	2.13	2.90	2.02	0.17
	Uplift vs. Singapore Dubai Complex 3)	4.31	4.13	4.73	-1.84	4.19
	NZD Processing Fee (million) 2); 5)	48.9	43.3	58.4	0.7	32.2
Jul/Aug	Barrels 000's	7,519	6,833	7,511	7,615	7,419
	RNZ USD GRM per barrel 1)	7.66	6.20	8.87	6.86	7.10
	Singapore Dubai Complex GRM	2.52	1.86	4.70	2.57	3.23
	Uplift vs. Singapore Dubai Complex 3)	5.14	4.34	4.17	4.29	3.87
	NZD Processing Fee (million) 2)	63.5	41.3	63.6	54.3	56.2
Sept/Oct	Barrels 000's	7,221	7,251	6,816	7,639	7,245
	RNZ USD GRM per barrel 1)	9.47	7.49	9.31	7.09	6.16
	Singapore Dubai Complex GRM	5.12	3.18	4.73	2.47	3.55
	Uplift vs. Singapore Dubai Complex 3)	4.35	4.31	4.58	4.62	2.61
	NZD Processing Fee (million) 2)	71.8	52.5	62.2	57.8	49.3
Nov/Dec	Barrels 000's	7,017	7,447	7,342	7,307	6,803
	RNZ USD GRM per barrel 1)	10.82	9.20	6.83	6.53	2.62
	Singapore Dubai Complex GRM	6.37	4.19	3.67	1.80	-1.55
	Uplift vs. Singapore Dubai Complex 3)	4.45	5.01	3.16	4.73	4.16
	NZD Processing Fee (million) 2)	73.0	67.6	50.7	49.2	19.2
Total	**Barrels 000's**	**42,639**	**42,665**	**41,724**	**40,440**	**42,687**
	USD GRM per barrel 1)	**9.20**	**6.47**	**8.02**	**6.31**	**5.34**
	NZD Processing Fee (million) 2)	**379.2**	**276.6**	**328.9**	**258.7**	**242.0**
	YTD Cap adjustment	**14.4**				
	NZD Processing Fee (million) 1)					

1) Excludes Fee Floor/Cap adjustment
2) Includes Fee Floor/Cap adjustment
3) RNZ uplift vs. Singapore Dubai Complex GRM is in USD per barrel

EXPLANATORY NOTES/GLOSSARY

LTI (Lost time injuries) and LTIF (Lost time injury frequency)

Lost time injuries refer to fatalities, permanent disabilities or time lost from work.

Lost time injury frequency refers to the number of lost time injuries over a rolling 12-month period, per 200,000 hours worked.

TRC (Total recordable cases) and TRCF (Total recordable case frequency)

Total recordable cases refer to lost time injuries, medical treatment and restricted work cases.

Total recordable case frequency refers to the number of recordable injuries over a rolling 12-month period, per 200,000 hours worked.

Tier 1 Process Safety Event (API 754)

A tier 1 Process Safety Event (PSE) is an unplanned or uncontrolled release of any material, including non-toxic and non-flammable, from a process which results in one or more of the following: A LTI and/or fatality; a fire or explosion resulting in greater than or equal to $25,000 of direct cost to the company; a release of material greater than the threshold quantities given in Table 1 of API 754 in any one-hour period; an officially declared community evacuation or community shelter-in-place.

Tier 2 Process Safety Event (API 754)

A tier 2 Process Safety Event (PSE) is an unplanned or uncontrolled release of any material, including non-toxic and non-flammable, from a process which results in one or more of the following: A recordable injury; a fire or explosion resulting in greater than or equal to $2,500 of direct cost to the company; a release of material greater than the threshold quantities given in Table 2 of API 754 in any one-hour period.

Operational availability

Operational availability is the percent of time available for manufacturing after subtracting maintenance and regulatory/process downtimes.

Unplanned process downtime

A unit downtime is “planned” if the refinery is aware of and has scheduled that unit outage in the previous year. Unplanned process downtime is the weighted average of unplanned downtime across all process units.

Refining throughput

Refining throughput is the volume of feedstock intake, comprising crude oil, residues, natural gas and blendstock, measured in barrels. One barrel equates to approximately 159 litres.

Gross Refining Margin (excluding Fee Floor/Margin Cap)

The Gross Refining Margin is calculated in USD as the difference between the value of products and the cost of feedstock for each refining customer. The value of products use Singapore quoted prices adjusted for New Zealand quality and the cost of importing those products to New Zealand. Feedstocks are valued using the notional market values adjusted for the cost of getting the feedstock to the refinery. The Gross Refining Margin incorporates the cost of hydrocarbon used as fuel and incurred as process losses.

Typically, Refining NZ has an uplift over the Singapore complex margins of around USD 3.00 to 4.00 per barrel. The value of the uplift varies due to fluctuations in freight rates, product quality premium, crude market premium and operational performance. Product quality premium are the cost differentials between products made to New Zealand quality and products made to the quality that applies to quoted prices in Singapore. Crude market premium are the cost differences between the crude types actually processed at Refining NZ and Dubai (used as basis for the Singapore complex margins). Refining NZ's crude diet comprises of crudes that price off Dubai as well as crudes that price off different markers such as Brent. The fluctuations of these price markers relative to each other impact the uplift.

Margin Cap/Fee Floor Adjustment

The processing agreements with our customers contain both Floor and Margin Cap clauses, both effective over a full calendar year.

The Fee Floor is the minimum Processing Fee due, for a calendar year, up to a current maximum of NZD 137.5 million. If the year-to-date Processing Fee is below the pro-rata Fee Floor, then an interim pro-rata Fee Floor payment is made by the Customers. Should the Processing Fee exceed the Fee Floor in future months any pro-rata Fee Floor payments that have been made are repaid to the Customers.

The Margin Cap limits the Gross Refining Margin for each customer to a maximum of USD 9.00 per barrel over the calendar year. Should the Gross Refining Margin fall below the Cap in future months any pro-rata Cap reductions that have been made are repaid by the Customers.

The Cap and the Floor are subject to year-to-date adjustments.

Any balance remaining at the end of the year cannot be carried over to the next year.

Processing Fee (after Fee Floor/Margin Cap)

The Processing Fee is 70% of the Gross Refining Margin after any adjustment for the Margin Cap or Fee Floor. The Processing Fee is paid by our customers in NZD.

RAP throughput

RAP throughput is the volume of refined products, comprising gasoline, jet fuel and diesel that are delivered via the Refinery to Auckland Pipeline (RAP) to the Wiri oil terminal.