Report Prospectus:

Market Analysis and Forecast
Loading & Haulage Equipment

December 2015

THE PARKER BAY COMPANY

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ABSTRACT

SUMMARY:

The decade-long Commodities Super-Cycle that propelled mining markets to unprecedented levels was accompanied by a comparably-long and -strong growth in the markets for the largest excavators/loaders and haul trucks that helped produce those minerals. The reversal has been dramatic and severe. Although production of many minerals has not contracted or has declined only modestly, continued growth on the mine-production side produced a significant supply-imbalance with resultant sharp declines in mineral pricing and an equally sharp curtailment of capital expenditures for the equipment covered by this analysis. As measured by shipments of excavators/loaders and trucks, the market has declined by roughly two-thirds over the past 30 months and a sustained turnaround is not in evidence at year-end 2015.

In the context of this severely contracted market for the largest excavators and haulers, Parker Bay projects continued weakness worldwide for another year, followed initially by slow growth in shipments of new machines as recovering mines restart parked equipment and, in many instances, purchase and redeploy large numbers of machines currently available. A resumption of solid growth in equipment markets is projected for 2017-2020 driven initially by the necessity to begin replacing the equipment installed during 2004-2012. But it may be a decade before the equipment industry returns to the levels achieved in 2012.

This report summarizes the results of research conducted by the Parker Bay Company into the global market for two primary sets of mining tools essential to surface mining materials handling: the large mining trucks that transport ore and waste rock/overburden from the mine workface to the next stage in processing, and the three distinct types of excavating/loading equipment use to load these trucks – electric shovels, hydraulic excavators, and wheel loaders.

PARAMETERS:

Product	Payload	Manufacturers Covered
Mining Trucks	90 mt+	BelAZ, Caterpillar, Hitachi,
Electric Shovels	20 mt+	Joy Global/P&H, Komatsu, Liebherr, Terex.
Hydraulic Excavators	20 mt+	Regional suppliers in China, India, Russia
Wheel Loaders	20 mt+	addressed in text only.

SCOPE:

For each product line (and excavating/loading equipment combined), data and analysis of:

- Annual Shipments 2005-2014
- 5 year+ forecast through 2020
- Year-end population/installed base 2005-2014
- Annual decomissionings/removals 2005-2014

each broken out by

- # Units and payload
- Size class
- Region and mineral
- Manufacturer (historical only)

PRICING:	Standard price	Database Subscribers*
Full report, Loading & Haulage Equipment + data file	$5,000	$2,500
Haulage Equipment only, report + data file	$3,500	$1,750
Loading Equipment only, report + data file	$3,500	$1,750

Non-database subscribers required to sign a non-disclosure agreement

**Subscribers w/o full service may require add'l fee.*

INCLUDES:

- 130 page report and analysis (sections removed for reports on trucks or loading equipment only)
- Interactive data file allowing further examination of all items mentioned in "scope" above

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commanding share of the 20-25 mt class, they have secured a majority of all units in the increasingly popular 30-35 mt class. Komatsu has achieved more limited success with its wheel loader line accounting just under one-fourth of the active population and a somewhat improved 27% of the past 10 years' shipments. Joy/LeTourneau is a virtual non-factor in the 20-25 mt size-class thus limiting its overall market share to 11%. But the Company holds a 20% share competing at 30-35 mt and has a monopoly at 40-mt and above. As noted, the volume at 40-50 mt and 63-mt is small but provides a viable niche for LeTourneau and is a segment that has grown at above average rates.

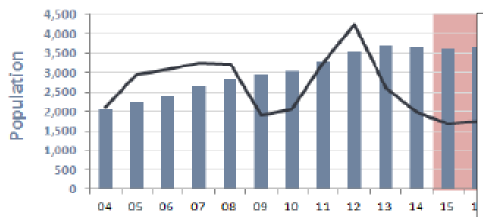
Forecast: All of the mineral and equipment market assumptions and driving factors defined above and in the balance of this report will impact wheel loaders in like manner with a few notable exceptions. Wheel loaders are projected to decline slightly as a share of the installed base of excavators/loaders (28.9% at Dec. 31, 2020 vs. 29.5% at Dec. 31, 2014). In total the number of units running at the end of the decade will have increased by just 300 units to nearly 4,000. Given the projected 4% increase in average payload, the installed capacity of wheel loaders will grow by 13%, below that of the two competitive products and reflecting, to a degree, adverse conditions in two key mineral applications: coal and iron.

Although large wheel loaders are built for heavy-duty mining duties, their average service life (approx. 70,000 operating hours) is estimated to be shorter than that of electric or hydraulic shovels. As a result, replacement requirements through 2020 are projected to include nearly one third of the machines in the Dec. 31, 2014 population. The resulting average of nearly 200 replacements per year is greater than the number of new loaders being shipped during 2015-2017. In part this will be due to the substitution of new shipments by surplus equipment being redeployed during that time.

In addition to these replacements, shipments will be required to grow the active population. While that increase is modest by historical standards, it will still require an additional 300 machines with aggregate payload of 11,000 mt. Unit shipments will increase at a lower rate because of continuing shift toward bigger loaders. Units in the 20-25 mt class will remain the mainstays for most mines, but units in the 30-mt and larger range will account for half of the capacity delivered during 2015-2020 as compared to 40% over the past ten years.

Chart II-11

Wheel Loader Population & Shipments 2005-2020 *(# Units)*



Like its competitive counterparts, the active population and requirement
remain stagnant during 2015-2016. When growth does resume, projected
overall population will be modest averaging less than 2%/year. In
replacement demand, shipments will increase by 20%/annum in the initi
followed by solid if less impressive gains through 2020. By then, wheel l
266 units with aggregate capacity of almost 7,500 mt. These projected le
2012 peak.

over the past decade portending a near-term decline in world gold output as existing mines' reserves are depleted and not fully replaced.

Oil sands represent the smallest and also most concentrated of the five major minerals with only a handful of mega-mines in Alberta, Canada accounting for nearly US$4 billion worth of trucks and loaders at year-end 2014. These operations also represent a unique segment for mining suppliers in that the scale and long-term nature of the oil sands reserves drive mines to utilize the largest scale equipment available. These mines have worked with equipment manufacturers to pioneer both machine scale and features designed to address unique mining conditions (e.g., high-floatation undercarriages/crawler tracks). The combination of the multi-billion dollar expansions at Suncor, Syncrude, Shell/Albian, new mines at CNR/Horizon and Imperial/Kearl and the ongoing development of Fort Hills, drove oil sands equipment growth faster than any other mineral sector -- +179% over the past decade. Not surprisingly, these mines have been hit hard by weak oil prices. But the decades-long planning horizon for these projects ensures continued equipment demand even if some capex for these products is postponed in the short-term.

Other Minerals: While accounting for just 9% of global equipment in place (and a somewhat smaller share of the past decade's shipments), the minerals encompassed herein are nevertheless a major market segment for the suppliers of larger excavators/loaders and trucks: over US$7 billion in shipments during 2005-2014 and US$10 billion of active equipment in 2014. No single mineral accounted for more than 1.4% of industry shipments, and most mines in this category are decidedly smaller than those operated by the five major minerals: the average value of installed equipment per mine was US$34 MM vs. US$135 MM average for mines of the five major minerals. Average equipment size is similarly smaller: average payload of trucks in operation is just 116 mt vs. 160 mt for the five majors. Although the increase in equipment utilized by mines in this diverse sector was below rates for the five major minerals during the past decade, the aggregate of all equipment in place nearly doubled. And the outlook for several of these minerals is expected to be sufficiently strong to warrant a share of 2015-20 shipments above historical norms.

Table II - 2

Equipment Values by Mineral (MM US$)

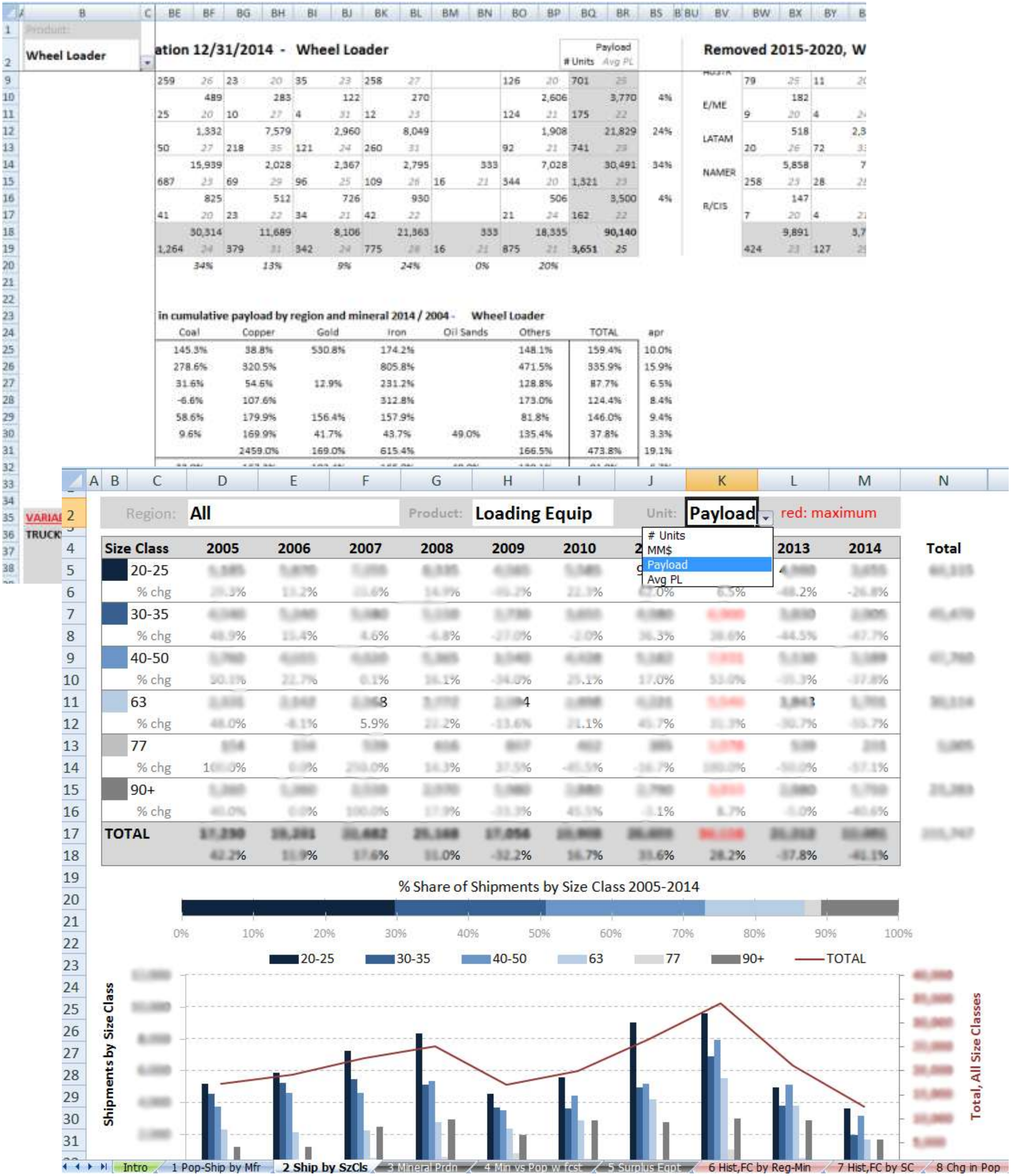
	12/31/04 Population		2005-14 Shipments		12/31/14 Population	
	MM US$	%	MM US$	%	MM US$	%
Coal	23,577	*46%*	33,350	*42%*	46,769	*43%*
Copper	9,448	*19%*	14,289	*18%*	20,277	*19%*
Gold	4,247	*8%*	8,323	*11%*	10,434	*10%*
Iron	6,868	*14%*	13,220	*17%*	17,203	*16%*
Oil Sands	1,427	*3%*	2,978	*4%*	3,975	*4%*
Others	5,148	*10%*	7,046	*9%*	10,224	*9%*
TOTAL	**50,715**		**79,206**		**108,882**	

Projected Growth in Mineral Production

Global mine production of the five key minerals increased by 1.7 to 4.4% annually over the decade ending 2014. But that growth was appreciably stronger through 2012 for coal and iron and it slowed dramatically between 2012 and 2014 for both. At the same time, copper, gold and oil sands continued to grow despite sharp declines in prices obtained for these minerals.

Parker Bay's assessment of these markets, based in large part on forecasts developed by industry/trade organizations and mining/mineral suppliers is summarized in Table II 3 and reflects a general consensus that the slowdown in the Chinese economy will persist and may even accelerate for the next few years with

DATA FILE - SAMPLE



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