

# Crazy Horse Resources Inc.: New PEA Increases Post Tax IRR to 29.3% and Reduces Initial Capex by 41% on Taysan Copper Gold Project

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## Highlights:

- Taysan Copper-Gold Porphyry Project reoriented as a staged development, reduces initial investment, increases profitability and enhances robustness.
- Initial capex reduced by 41% from US\$869 million to US\$511 million.
- Post tax IRR increases by over 33%, from 21.9% to 29.3% based on US\$3.00/lb copper and US\$1,000/oz gold prices.
- Robust project economics driven by low strip ratio in initial years, proximity to port (20 km) and electrical grid, paved road access and excellent metallurgy.
- Base case net present value (NPV) is US\$484 million at a 10% discount rate.
- Pre-feasibility study on Taysan Project is fully funded and scheduled for completion in March 2012.
- Project received endorsement from the Provincial Board of Batangas for further development.

VANCOUVER, Nov. 14, 2011 - [Crazy Horse Resources Inc.](#) (TSX VENTURE: CZH) (OTCQX: CRZHF) (the "Company") is pleased to announce that its new management has completed a review and scoping study of the Taysan Copper-Gold Porphyry Project in Batangas Province on Luzon Island in the Philippines. The scoping study was initiated in order to lower initial capital costs, increase profitability and possibly fast track development. It uses the same resource estimate as contained in the Company's NI43-101 report dated October 10, 2011 and entitled "Update of the Mineral Resource Estimate and Preliminary Economic Assessment for the Taysan Project" prepared by Mining Associates Pty. Ltd. and AMEC Minproc Limited and available under the Company's profile at [www.SEDAR.com](#), which strictly relates to the 30Mtpa case only.

The scoping study is based on new pit optimizations at a higher copper cutoff grade (0.19% vs 0.10%), as well as a reduced plant size of 15Mtpa (compared to 30 Mtpa). These changes result in a significant increase in profitability, with the internal rate of return of the Project (IRR) increasing by over a third to 29.3%, from the 21.9% shown in the last Preliminary Economic Assessment ("PEA") based on a 30 Mtpa project. The net present value (NPV) at US\$484 million remains highly attractive:

	30Mtpa	15Mtpa
IRR	21.9%	29.3%
NPV @ 10% (US\$ Million)	639	484
Initial Capital Cost (US\$ Million)	869	511

The Company views the new 15Mtpa throughput configuration as the first stage of the Taysan Project with the second stage, to double capacity and output, dependent on future copper prices. It is also anticipated that the staged development will allow the Company to fund any future expansion largely with project cash flow and limit dilution to shareholders.

"This new plan to develop the Taysan deposit through a staged operation starting with a 15Mtpa plant maximizes profitability, as evidenced by the 34% increase in the expected IRR and also makes the project financeable," said Mitch Alland, Chairman and CEO of Crazy Horse Resources Inc. "Taysan is now an exceptional and robust copper project and the pre-feasibility study is now continuing on a much stronger and attractive basis."

## New 15 Mtpa Scoping Study

In the new scoping study, IMC Mining Group, the Company's mining consultant, increased the average copper grade processed material by selecting a smaller and higher-grade pit to mine; thereby reducing the waste required to be mined and improving the Project's cash flows and profitability. This change decreased the mined copper resource from 750 million tonnes to 250 million tonnes and the mine life from 25 years to 15 years.

The mining fleet equipment is of the same size as that assumed for the 30Mtpa operation, thereby not increasing variable mining costs per tonne. The average in-situ grades for the life of mine (LOM) and initial five years of the 15Mtpa operation are as follows:

Grade	Avg		
Year 1-5	Avg	LOM	Avg
Metallurgical recovery			
Copper (%)	0.39	0.32	91%
Gold (g/t)	0.16	0.12	60%
Silver (g/t)	1.57	1.15	63%
Magnetite (%)	4.21	3.58	51%

The 30Mtpa PEA assumed two front-end trains of 15Mtpa each. As a result, considerable process design parameters and criteria remain the same in the new study, although the back end of the plant was reconfigured to suit a 15 Mtpa operation. The planned payable production of copper, gold, silver and magnetite (net of deductions) is as follows:

Production	Avg/Year	LOM	Total	Cu Equivalent (Mlbs)	Cu Equivalent (tonnes)
Copper (Mlbs)	89	1,338	1,338	606,979	
Gold ('000 oz)	27	409	136	61,864	
Silver ('000 oz)	181	2,717	24	10,681	
Magnetite ('000 t)	273	4,091	136	61,858	
Total Copper Equivalent			1,634	741,382	

The infrastructure requirements, prepared by GHD Australia, are largely based on the work done for the 30Mtpa PEA. The tailings storage facility option selected provides the optimum size and location to minimize capital and operating costs for a 15Mtpa operation. Other infrastructure requirements remain the same, including the port, power distribution, telecommunications and access roads. The water dam, camp, tailings storage facility, haul roads and fuel farm have all been scaled down to suit the lower mine throughput.

The following table summarizes the estimated initial capital expenditure for the 15 Mtpa operation compared to the 30Mtpa PEA:

### Capital Cost Comparison

	30 Mtpa	15 Mtpa
Process Plant (including EPCM)	532.2	294.8
Mining Equipment, Mining Pre-production	186.6	76.2
Infrastructure	122.5	89.2
Owners Costs, Land and Port Acquisition	23.0	45.5
Initial Cash Account Funding	5.0	5.0
TOTAL	869.2	510.7

Operating costs are based on pre-feasibility study work completed for the 30Mtpa operation and have been scaled down in proportion to the reduction in equipment. Consequently, unit variable costs are similar, with the difference mostly arising from the fixed cost elements, including port and administrative costs. The most significant operating cost change stems from the use of available grid power compared to the assumption of building a captive coal fired power station at Batangas for the larger 30Mtpa operation.

The total average cash operating cost per pound of copper equivalent is US\$1.55/lb over the life of the project and averages US\$1.28/lb during the first five years of operations, compared to US\$1.63/lb and

US\$1.39, respectively, for the 30Mtpa project. The NPV and IRR at US\$2.50 and US\$4.00/lb copper prices, as well as at the US\$3.00/lb base case, is as shown in the following comparison table:

### Taysan Project - Comparison of Financial Returns

Item	30 Mtpa	15 Mtpa				
Copper Price	\$/lb	\$2.50	\$3.00	\$4.00	\$2.50	
Gold Price	\$/oz	\$850	\$1,000	\$1,400	\$850	
Silver Price	\$/oz	\$24	\$26	\$28	\$24	\$26
Magnetite Price	\$/tonne	\$80	\$100	\$110	\$80	
Discount Rate	%	10%	10%	10%	10%	10%
Project NPV	\$M	\$47	\$639	\$1,745	\$132	\$484
Project IRR	%	10.9%	21.9%	41.0%	15.7%	29.2%

Mineral resources that are not mineral reserves do not have demonstrated economic viability. The PEA is preliminary in nature, and is based partially on inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the PEA will be realized.

An updated technical report incorporating this new PEA will be filed with the securities commissions within 45 days. A complete copy of the PEA and the updated technical report (once completed) can be viewed under the Company's profile at [www.SEDAR.com](http://www.SEDAR.com).

### The Pre-Feasibility Study

Virtually all of the work that had been previously completed for the pre-feasibility study on a 30 Mtpa operation, including the resource estimate, mining studies and process and infrastructure engineering, is now being used for the pre-feasibility study of the 15Mtpa project. In addition, 45 drill holes that have been completed are now being assayed and will be used for a revised resource estimate that will be conducted by Mining Associates Pty. Ltd., the Company's resource consultant. The updated resource estimate will be used as the basis for the mineral reserve estimate and mining studies for the pre-feasibility study of the new 15Mtpa Project. This will result in a better defined estimate, with the potential to convert some of the Indicated Resource to Measured status and Inferred Resource to Indicated status.

In addition, as part of the pre-feasibility study, further detailed pit optimization studies may result in improved mine life and a further increase in return on investment. Similarly, as in all pre-feasibility studies, additional work being undertaken on metallurgy, including comminution and magnetite recovery test work, as well as on infrastructure options for water supply, tailings storage facilities, camp sites, access roads and power supply, will determine optimum solutions to minimize capital and operating costs and to provide the maximum return to the project. The pre-feasibility study is fully funded and scheduled for completion in March 2012.

### Additional Upside Potential

Apart from the effect of higher copper prices than assumed in the base case and from the aforementioned possible upside potential stemming from on going pre-feasibility work and from a revised resource estimate, metallurgical test work results indicate that there is considerable potential to significantly increase the magnetite recovery from the 51% achieved to date. Test work continues to assess this upside potential.

The technical information contained in this news release has been reviewed by Alistair Barton. Mr. Barton is a Qualified Person ("QP") as defined in the "Canadian Institute of Mining, Metallurgy and Petroleum, CIM standards on Mineral Resources and Reserves" and NI 43-101.

### Board Change and Option Grant

In other news, the Company advises that based on his new appointment as President and CEO of [Sabina Gold and Silver Corporation](http://www.SabinaGold.com) and the recent changes to management and direction of the Company, the Board and Mr. Robert Pease have agreed that Mr. Pease will step down as the Chairman of the Company. Mr. Pease is replaced by Mr. Mitchell Alland effective immediately. The Company wishes to thank Mr. Pease for his contributions and wishes him success in his new role with Sabina Gold and Silver Corporation.

The Company has granted to Mr. Alland stock options to purchase up to 700,000 common shares in connection with his positions as President, CEO and Chairman of the Board. Each option is exercisable to acquire one common share of the Company at a price of C\$0.30 until November 13, 2016. The options will vest in accordance with the Company's stock option plan.

*\* Copper equivalents are calculated on the basis of US\$3.00/lb Cu and 91% Cu metallurgical recovery, US\$1,000/oz. Au and 60% Au recovery, US\$26/oz. Ag and 63% recovery and US\$100/tonne magnetite and 51% magnetite recovery.*

## Glossary

Ag = Silver  
Au = Gold  
Cu = Copper  
g/t = grams per tonne  
IRR = internal rate of return  
lb = pound(s)  
LOM = life of mine  
Mtpa = million tonnes per annum  
NPV = net present value  
oz = ounce(s)

## ON BEHALF OF THE BOARD

Mitchell Alland  
Chairman, President and CEO

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