

# EXCELLON RELEASES POSITIVE PRELIMINARY ECONOMIC ASSESSMENT ON PLATOSA OPTIMIZATION PROJECT

After-tax IRR of 118% with peak production all-in sustaining costs of \$9.00 per ounce

**Toronto, Ontario – June 2, 2015 – Excellon Resources Inc. (TSX:EXN; OTC:EXLLF)** ("Excellon" or the "Company"), Mexico's highest grade silver producer, is pleased to announce the completion of an independent preliminary economic assessment ("PEA") by Roscoe Postle Associates Inc. of the previously announced optimization project on the Platosa Mine in Durango, Mexico (refer to press release dated April 27, 2015). The results of the PEA will be summarized in a technical report prepared pursuant to National Instrument 43-101, which will be filed on SEDAR within 45 days. All currency references are in U.S. dollars.

<b>Optimization Proje</b> Base case of \$17/oz	<b>ct: PEA Highlights</b> z silver, \$0.90/lb lead, \$1.00/lb zinc							
IRR	• 118% after-tax IRR with a 1.9 year	payback on invested capital						
NPV	• \$39 million after-tax NPV <sup>7.5%</sup>							
M+I Resources	<ul> <li>428,000 tonnes @ 760 g/t Ag, 8.28 million oz Ag, 78 million lb Pb and</li> </ul>							
Mine Life	• 6 years (2015-2020)							
Invested Capital	• \$9.9 million							
	LOM (2015-2020) Peak Production (2016-2019)							
Net After-Tax Cash Flow	• \$54.4 million	• \$58.4 million						
Average Annual Metal Production Recovered	<ul> <li>1.6 million ounces silver</li> <li>10.4 million pounds lead</li> <li>11.8 million pounds zinc</li> </ul>	<ul> <li>1.9 million ounces silver</li> <li>12.2 million pounds lead</li> <li>14.3 million pounds zinc</li> </ul>						
Production Costs	<ul> <li>\$7.58 total cash cost per payable silver ounce</li> <li>\$12.41 all-in sustaining cost ("AISC") per payable silver ounce</li> </ul>	<ul> <li>\$6.02 total cash cost per payable silver ounce</li> <li>\$9.00 AISC per payable silver ounce</li> </ul>						

"We are very pleased with this preliminary economic assessment, as it demonstrates the exceptionally high returns of the optimization project proposed for Platosa, with a modest capital investment," stated Brendan Cahill, President and Chief Executive Officer. "Platosa has been Mexico's highest grade silver producer for over a decade and we now see the clear opportunity to resume being one of the lowest cost producers in the silver industry. This project will not only reduce costs for the currently defined mine-life at Platosa, but will also reduce the cost of mining every additional tonne and ounce discovered near the mine in the future. We are positioning Platosa to have a sustainable low cost profile that can generate profits under any market conditions." "From 2002 to 2011, Platosa mineral resources grew by over 10 times, from an initial resource of only 60,000 tonnes in 2002, to a resource of well over 600,000 tonnes. Since 2011, as exploration shifted focus to the skarn-source of the Platosa mantos and market conditions limited expenditures, little exploration has been conducted for additional mantos. Yet the nearly one million tonnes of manto mineralization discovered and mined to date sit on only 56 hectares of a 40,000 hectare ground package, and represent the periphery of what is effectively a newly-discovered carbonate replacement deposit system, virtually untouched prior to Excellon's arrival on the property. The additional benefit of the optimization project is that it will allow us to generate significant cash flow in even the current silver price environment and resume exploration in due course for ounces that will now be significantly more profitable than previously realizable."

After-Tax NPV									
-20% -10% Base Case +10% +									
Ag (oz)	\$13.60	\$15.30	\$17.00	\$18.70	\$20.40				
Pb (lb)	\$0.72	\$0.81	\$0.90	\$0.99	\$1.08				
Zn (lb)	\$0.80	\$0.90	\$1.00	\$1.10	\$1.20				
NPV <sup>7.5%</sup> ('000s)	\$(662)	\$19,405	\$39,472	\$59,539	\$79,607				
IRR (%)	6%	56%	118%	221%	466%				
Payback <sup>(1)</sup> (years)	3.0	2.3	1.9	1.5	1.25				

#### **Preliminary Economic Assessment of the Optimization Project**

(1) Payback on operating cash flow including capital expenditure assuming April 1, 2015 commencement of optimization project and investment.

The PEA calculates a Base Case after-tax NPV of \$39 million, with an after-tax IRR of 118% using a discount rate of 7.5%. The capital cost of the optimization project is estimated to total \$9.9 million. The payback period for the base case is estimated at 1.9 years following commencement of the optimization project and investment, which has been calculated from April 1, 2015. For further discussion regarding the period of capital investment and the period in which the optimization project will reach full impact, refer to "Timeframe for Implementation," below.

The PEA is preliminary in nature and includes 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 results of this PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Thus, there is no certainty that the results of this PEA will be realized.

#### **Baseline Production Metrics**

		LC	М	Peak Production		
		(2015-2020)	(annual avg.)	(2016-2019)	(annual avg.)	
Tonnes Ore <sup>(1)</sup>	t ('000s)	505	84	384	96	
Ore/day	tpd	256	256	274	274	
Head Grades <sup>(1)</sup>	i		I			
Ag	g/t	638	638	681	681	
Pb	%	6.8%	6.8%	7.0%	7.0%	
Zn	%	8.1%	8.1%	8.6%	8.6%	
Recoveries						
Ag	%	90%	90%	91%	91%	
Pb	%	82%	82%	82%	82%	
Zn	%	77%	77%	79%	79%	
Metals Produced						
Ag	oz ('000s)	9,316	1,553	7,608	1,902	
Pb	lb ('000s)	62,424	10,404	48,644	12,161	
Zn	lb ('000s)	71,017	11,836	57,144	14,286	
Pb Conc.	t	47,237	7,873	36,802	9,200	
Zn Conc.	t	63,498	10,583	51,093	12,773	

(1) Tonnes of mineable ore and estimated head grades are derived from the application of a 95% mineability factor and 20% dilution to Platosa's mineral resources.

As discussed further under "Timeframe for Implementation," below, the ramp-up of the project will require a period of capital investment (Q3/Q4 2015) followed by a further period (Q1/Q2 2016) during which the optimization project's impact should result in increasingly dry mining conditions, with the optimization project's full impact being realized from mid-2016 onwards. Considering the periods of implementation and effect and the currently defined mineral resources at Platosa, peak production is expected to occur during the years 2016 to 2019; however, the discovery of any further mineral resources should further improve Platosa's production profile, as such mineral resources will be mineable at the improved cost profile afforded by the optimization project. Refer to "Payable Metal Cash Costs Summary" and "Description of the Optimization Project," below.

#### Payable Metal Cash Cost Summary

	(	LOM 2015-2020	))	Peak Production (2016-2019)			
Ag oz payable ('000s)		8,492		6,932			
Tonnes produced		504,504			383,541		
	\$ M	\$/t	\$/oz	\$ M	\$/t	\$/oz	
Mining	101.6	201.4	11.97	72.3	188.5	10.43	
Processing	31.1	61.6	3.66	23.4	61.0	3.37	
Operating Cash Cost before by-product credits & royalties	132.7	263.0	15.63	95.7	249.5	13.80	
By-product credits <sup>(1)</sup>	(68.9)	(136.5)	(8.11)	(54.3)	(141.5)	(7.83)	
Royalties <sup>(2)</sup>	0.5	1.1	0.06	0.3	0.9	0.05	
Total cash cost	64.3	127.6	7.58	41.7	108.9	6.02	
Corporate G&A	15.9	31.5	1.87	10.7	27.9	1.54	
Accretion and amortization of reclamation costs	0.4	0.9	0.05	0.3	0.8	0.04	
Sustaining Exploration	5.0	9.8	0.58	3.3	8.5	0.47	
Sustaining Capital Expenditure <sup>(3)</sup>	19.8	39.2	2.33	6.4	16.8	0.93	
Total sustaining costs	41.1	81.4	4.83	20.7	54.0	2.99	
All-in sustaining costs	105.4	209.0	12.41	62.4	162.9	9.00	

(1) Net of TC/RC charges.

(2) Advance royalties payable in respect of the Company's Miguel Auza property. Mexican mining tax royalties are included in operating cash costs.

(3) Sustaining capital expenditures include initial \$9.9 M capital investment on optimization project.

During the peak production period of 2016 to 2019, average annual production is estimated to total approximately 96 thousand tonnes containing 1.7 million payable silver ounces. Sustaining exploration and sustaining capital expenditures reflect expenditures required in respect of currently definite mineral resources, and expenditures in these areas may be increased to define and access mineralization that may be discovered in the future.

After-Tax NPV ('000s)								
	Metal Prices	5	Discount rate					
Ag (oz)	Pb (lb)	Zn (lb)	5%	7.5%	10%			
\$13.60	\$0.72	\$0.80	360	(662)	(1,544)			
\$15.30	\$0.81	\$0.90	22,097	19,405	17,036			
\$17.00	\$0.90	\$1.00	43,835	39,472	36,617			
\$18.70	\$0.99	\$1.10	65,572	59,539	54,197			
\$20.40	\$1.08	\$1.20	87,310	79,607	72,778			

#### Sensitivity to Metal Prices and Discount Rate

## Genesis of the Optimization Project

The Platosa deposit comprises several massive sulphide mantos hosted in permeable limestone, and has been mined by Excellon since 2005. In 2007, as mine workings extended below the local water table, the Company began an intensive program of reactive grouting and pumping to control and prevent water inflows. This program has been effective in managing inflows, but has been time, labour and cost intensive, which has historically limited production to less than 200 tonnes per day.

In late 2014, the Company engaged Hydro-Ressources Inc. and Technosub Inc. of Quebec, Canada to investigate alternative water management solutions through which mine operations could achieve consistent, increased production rates and lower costs. In April 2015, the Company released the results of a hydrogeological study prepared by Hydro-Ressources, which confirmed that dry mining conditions are achievable at Platosa and which proposes to replace the current grouting and pumping process with a more efficient and permanent dewatering system.

#### **Description of the Optimization Project**

The new dewatering system aims to maintain and increase a localized "cone of depression" of the water table below mine workings. Historical data and field observations have already identified that pumping began creating a localized drawdown as pumping operations exceeded ~9,000 gpm at Platosa in 2009. The drawdown trend subsequently increased with increased rates of pumping. Data indicates drawdown rates of ~0.35 metres/month at ~9,000 gpm, 0.75 metres/month at 10,000 gpm and 1.8 metres/month at 18,000 gpm, with incremental increases in the drawdown trend of one metre/month per ~6,000 gpm pumped in excess of 9,000 gpm.

The water table is relatively flat throughout the mine site area, indicating a highly permeable local rock formation, particularly near the ore body. Water levels in nearby monitoring wells are over 30 metres higher than at the mine, and over 50 metres higher in private wells located further away from Platosa. Therefore, drawdown trends indicate that lateral influx into the mine area is limited by lower permeability (i.e. fewer water-bearing faults) in the surrounding area and indicative of the restricted recharge rate of water into the mine area. Conservatively, the drawdown rate should increase to four metres per month when the optimization program is fully implemented, in due course allowing access to, and production from, dry mineralization more rapidly.

Current pumping operations are primarily conducted directly from the mining face, which results in grit

and fines being pumped with the water, increasing the cost of pumping and wear-and-tear on pumping and piping equipment, decreases pump efficiency and requires regular movement of pumps as mining faces advance. Following implementation of the optimization project, pumping will be conducted directly from high flow zones removed from mining operations, thus allowing for higher efficiency pumps, pumping water directly from water bearing faults around the mine area.

Description	Cost
Pumps	\$3.7M
Drilling	\$4.5M
Technical studies	\$0.2M
Power infrastructure	\$0.7M
Contingency	\$0.8M
Total:	\$9.9M

A summary of capital expenditures required to implement the optimization project is as follow:

# Timeframe for Implementation

The optimization project will commence early in the third quarter, with a focus on the following:

- installing high efficiency pumps throughout the mine and in existing Robbins raises;
- conducting confirmatory test wells in preparation for drilling dewatering wells from surface;
- drilling four dewatering wells (approximately three weeks drilling per well) from surface targeting high-flow zones that have been identified by Hydro-Ressources through invasive field testing; and
- drilling underground drain wells directly into water bearing faults and equipping these wells with high efficiency pumps to increase efficient pumping capacity from underground.

As mine workings are currently up to 20 metres below the local water table, a six-month period will be required following implementation to lower water levels below existing mine-workings and ongoing development. Therefore, the full impact of the optimization program is expected to be realized in mid-2016.

Current development remains focused on the key 623 and Rodilla mantos, with current rates of development under wet mining conditions ranging from five to twelve metres per month, which should increase to up to 100 metres per month under dry mining conditions as the optimization project reaches full effect.

The optimization project will be implemented independently of ongoing day-to-day operations, which will continue as usual during the implementation period.

# **Continued Optimization of Platosa Operations**

The simple goal of the optimization project is to increase production and lower costs. The PEA is based on historical rates of dry versus wet mine production and development, with the identified advantages of dry mining including:

- significantly increased development rates;
- increased production volume;
- the virtual elimination of grouting activities;
- increased machine hour availability and reduced maintenance costs; and
- significantly reduced pumping costs in the longer term.

Platosa has no significant capacity constraints on increasing production beyond current rates, with spare mill, ramp, personnel and equipment capacity of 50% or more.

The optimization project will also allow mining of any new mineral resources discovered and delineated relatively near the current deposit. Additionally, the project is modular, in that additional wells may be constructed in the future to influence the cone of depression towards mineralization delineated further from the current deposit.

## **Mining Method**

The predominance of mining to date at Platosa has been by room and pillar, the most appropriate method for the flat-lying to sub-horizontal mantos. Ground conditions are excellent, with very little ground support required. As the more steeply-dipping 623, Rodilla and NE-1 mantos are developed, portions of mining will be carried out using more appropriate cut and fill and shrinkage methods. The method used will be dictated by the conditions encountered in each manto during the development process. The application of such methods is accounted for in the mining costs reflected in the PEA.

### **Mineral Resource Estimate**

In the course of preparing the PEA, an updated mineral resource estimate was prepared as at December 31, 2014, reflecting only a minor depletion (approximately 12% of measured and indicated resources) relative to the previous estimate dated December 31, 2013, despite mining conducted during 2014. The mineral resource estimate is as follows:

Category	Tonnes (t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (g/t)	Contained Ag (oz)	Contained Pb (lb)	Contained Zn (lb)	Contained AgEq (oz)
Measured	28,000	781	7.85	11.52	1,305	711,000	4,896,000	7,188,000	1,187,000
Indicated	400,000	758	8.31	9.77	1,248	9,747,000	73,214,000	86,098,000	16,046,000
M + I	428,000	760	8.28	9.88	1,252	10,457,000	78,110,000	93,286,000	17,233,000
Inferred	4,000	2,027	14.65	2.20	2,492	260,000	1,288,000	193,000	320,000

Notes:

1. CIM definitions were followed for the classification of Mineral Resources.

2. Mineral Resources are estimated at an incremental NSR cut-off value of US\$146 per tonne.

3. Net smelter return metal price assumptions: US\$17/oz Ag, US\$0.90/lb Pb, US\$1.00/lb Zn.

4. Metal recovery assumptions: Ag 89%, Pb 76%, Zn 81%.

5. The silver equivalent (AgEq) is estimated from metallurgical recoveries, metal price assumptions, and smelter terms, which include payable factors, treatment charges, penalties, and refining charges.

6. The estimate is of Mineral Resources only and, because these do not constitute Mineral Reserves, they do not have any demonstrated economic viability.

- 7. Mineral resource estimate prepared by David Ross, P.Geo., of Roscoe Postle Associates Inc., independent geological and mining consultants of Toronto, Ontario. Prepared as at December 31, 2014.
- 8. Totals may not add or multiply accurately due to rounding.

Block silver, lead and zinc grades were interpolated and constrained within the wireframe models using the Inverse Distance Squared method. The Platosa drill hole database includes 1,251 vertical and inclined diamond drill holes totaling 330,645 metres of core. Most holes within the Mineral Resource area are aligned along NE-SW oriented sections spaced 15 metres apart. Average drill hole spacing is approximately 15 to 20 metres. No drilling has taken place on the property since the previous resource estimate dated December 31, 2013.

The small depletion in Measured plus indicated Resources of 12% or 56,000 tonnes since the previous estimate is accounted for by the mining of 64,170 tonnes during 2014. A significant portion of these tonnes was found outside the resource block model, particularly on the fringes of the Guadalupe Manto. The typical erratic shape of the massive sulphide mantos makes it difficult to determine exact boundaries even given the tight drilling pattern employed at Platosa. In addition to mining depletion, 15,000 tonnes contained in now unmineable pillars in the essentially depleted Guadalupe Manto were removed from the model. Counterbalancing these losses the LOM plan discussed in this disclosure incorporates 11,000 tonnes from outside the block model that have been found during the course of underground development activities in recent months. Such discoveries are not unusual at Platosa.

# **Resource Expansion and Exploration Opportunities**

The Platosa property continues to hold significant exploration potential, with the Platosa mantos sitting on 56 hectares in the middle of an approximately 40,000 hectare mineral concession package held by Excellon. Additionally, limited exploration for manto resources has been conducted since the last significant resource expansion in 2011.

The improved cash flow realized from the optimization project will facilitate the resumption of drilling for new high-grade massive sulphide mantos as a first priority. Several areas adjacent to the known high-grade mantos, principally to the northeast and east remain entirely undrilled. Drill targets have already been generated and the feasibility of carrying out Natural Source Audio-Frequency Magnetotelluric (NSAMT) geophysical surveying in the search for additional direct drilling targets is being studied. The Guadalupe mantos were discovered while drilling NSAMT and biogeochemical targets.

The Company is also focussed on discovering the proximal, large-tonnage skarn-related carbonate replacement deposit (CRD) mineralization, following up on the 2012 discovery at Rincon del Caido (one kilometre from the mine), which encountered significant Ag, Pb, Zn mineralization typical of the skarn deposits being mined elsewhere in Mexico. The Company believes that the Rincon mineralization, also containing anomalous Au, lies on the edge of such a large deposit and recent detailed drill core study has provided vectors pointing to the possible centre of the system. Almost no drilling has been conducted to date in the area east of the Rincon discovery.

# **Technical Report**

The results of the PEA will be summarized in a technical report prepared pursuant to Canadian Securities Administrators' National Instrument 43-101, which will be filed on SEDAR within 45 days and will also be available on the Company's website (<u>www.excellonresources.com</u>).

## **Qualified Persons**

Jason Cox, P.Eng., Executive Vice-President and Principal Mining Engineer of RPA has supervised the preparation of the technical information, which formed the basis of this independent assessment of economic potential in this press release. He has acted as the independent Qualified Person, as defined in NI 43-101, for this disclosure.

Mr. David Ross, P.Geo., Director, Resource Estimation and Principal Geologist of RPA, and an independent Qualified Person, prepared the Mineral Resource estimate.

Michael Verreault, Ing., has acted as the Qualified Person as defined in NI 43-101 for this disclosure and supervised the preparation of the technical information related to hydrogeology and the optimization project described in this release. Mr. Verreault has a Masters in Applied Science (Hydrogeology) and 15 years of relevant experience focussed on hydrogeology. He is a certified professional engineer (OIQ 125243) by the Ordre des ingénieurs du Québec and is President of Hydro-Ressources Inc. Mr. Verreault is independent of the Company and visited Platosa several times during the preparation of the Hydro Study.

John Sullivan, P.Geo., Vice-President of Exploration, is responsible for the Company's exploration programs and has supervised the preparation of the technical information, which formed the basis for the Mineral Resource disclosed in this press release. He has acted as a Qualified Person, as defined in NI 43-101, for this disclosure.

# About Excellon

Excellon's 100%-owned and royalty-free La Platosa Mine in Durango is Mexico's highest grade silver mine, with lead and zinc by-products historically making it one of the lowest cash cost silver mines in the country. The Company is positioning itself to capitalize on undervalued projects by focusing on increasing La Platosa's profitable silver production and near-term mineable resources.

Additional details on the La Platosa Mine and the rest of Excellon's exploration properties are available at <u>www.excellonresources.com</u>.

## For Further Information, Please Contact:

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#### Forward-Looking Statements

The Toronto Stock Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of the content of this Press Release, which has been prepared by management. This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 27E of the Exchange Act. Such statements include, without limitation, statements regarding the future results of operations, performance and achievements of the Company, including potential property acquisitions, the timing, content, cost and results of proposed work programs, the discovery and delineation of mineral deposits/resources/reserves, geological interpretations, proposed production rates, potential mineral recovery processes and rates, business and financing plans, business trends and future operating revenues. Although the Company believes that such statements are reasonable, it can give no assurance that such expectations will prove to be correct. Forwardlooking statements are typically identified by words such as: believe, expect, anticipate, intend, estimate, postulate and similar expressions, or are those, which, by their nature, refer to future events. The Company cautions investors that any forward-looking statements by the Company are not guarantees of future results or performance, and that actual results may differ materially from those in forward looking statements as a result of various factors, including, but not limited to, variations in the nature, quality and quantity of any mineral deposits that may be located, significant downward variations in the market price of any minerals produced, particularly silver, the Company's inability to obtain any necessary permits, consents or authorizations required for its activities, to produce minerals from its properties successfully or profitably, to continue its projected growth, to raise the necessary capital or to be fully able to implement its business strategies. All of the Company's public disclosure filings may be accessed via www.sedar.com and readers are urged to review these materials, including the technical reports filed with respect to the Company's mineral properties, and particularly the March 25, 2014 NI 43-101-compliant technical report prepared by Roscoe Postle Associates Inc. with respect to the Platosa Property. This press release is not, and is not to be construed in any way as, an offer to buy or sell securities in the United States.