

AIM : MARL TSX.V : MRA

September, 2016



Continued Resource Growth at the Flagship Hot Maden Gold Copper Project

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## Mariana's Advancing Project Portfolio

Mariana is a well funded exploration and development company with a diversified, highly prospective portfolio of gold, silver & copper projects in Turkey and South America.



- Plus a 10.2% Interest in the Nassau Gold Project, Suriname
- New Opportunities: South America (Suriname, Chile, Peru), and favourable jurisdictions globally

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LOS CISNES (100%)



# Mariana Project Portfolio Strategy & Key Data

Generating a geographically diverse, precious and base metals exploration and development portfolio and optimise potential investment returns by moving projects efficiently along the "development curve" towards feasibility and realisation.



Capital structure (13 September 2016) (Post Consolidation)	AIM:MARL TSXV:MRA			
Share price	56.5p/ C\$0.96			
Market capitalisation	£68M/ C\$108.3M			
Shares issued	120.4M			
Options issued	6.34M			
Warrants issued	21.5M			
Cash position (1 September 2016)	£4.8M/ US\$6.4M			

Top shareholders (13 September 2016)			
Sandstorm Gold Limited	7.49%		
Exploration Capital Partners 2014 Limited Partnership (Sprott Group)	5.72%		
AngloGold Ashanti Holdings plc	4.08%		
Resource Capital Funds	4.43%		
Australian Investors P/L	2.95%		
Directors & Management	1.76%		

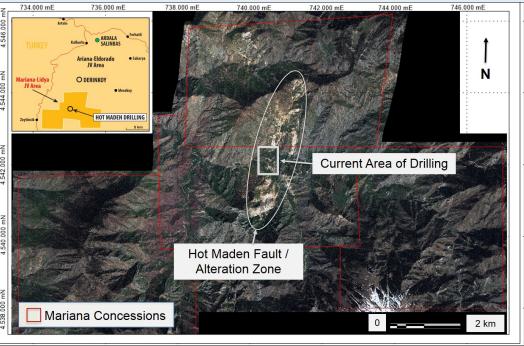
The Board & Management*	
John Horsburgh (Non Executive)	NED- Chairman
Glen Parsons (Executive)	CEO*
Eric Roth (Executive)	COO*
John Goodwin (Non Executive)	NED
Mustafa Aksoy (Non Executive)	NED
Ron Ho (Non Executive)	NED
Sharon Cooper	CFO*



#### **Hot Maden Project - Introduction**

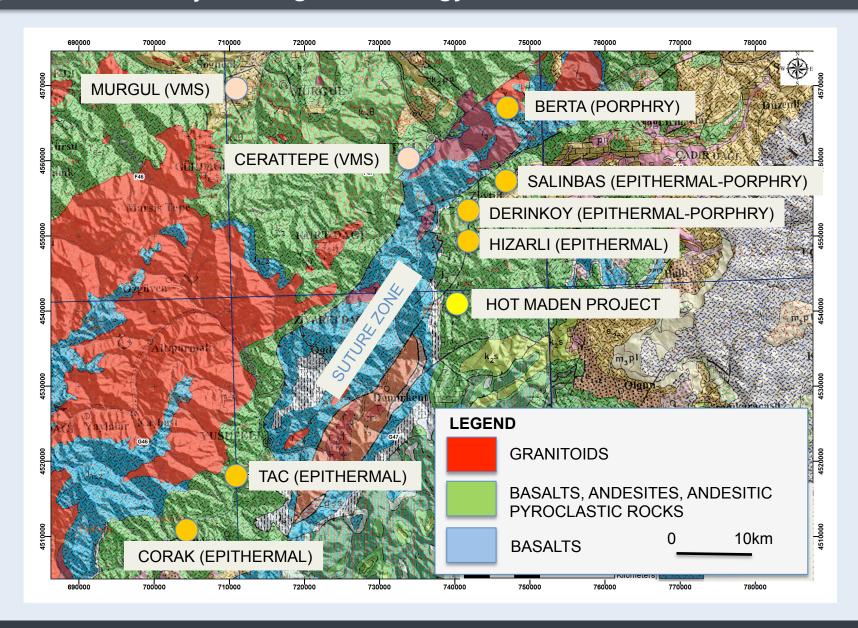
- Located 1,050km E of Istanbul and 130 km NE of Erzurum in NE Turkey.
- Lies within the prospective Eastern
   Pontides metallogenic belt.
- 4 licences covering 7,394 Ha.
- Pre-1923 mining in southern part of property by Russian interests (focus on high grade Cu/polymetallic veins. Little modern systematic exploration.
- Currently 70:30 Lidya:Mariana JV, with Lidya as project operators.
- Discovery hole (HTD-04) announced in February, 2015. First Mineral Resource released in August, 2015.
- Updated Mineral Resource July, 2016
- Current status: Drilling in Progress





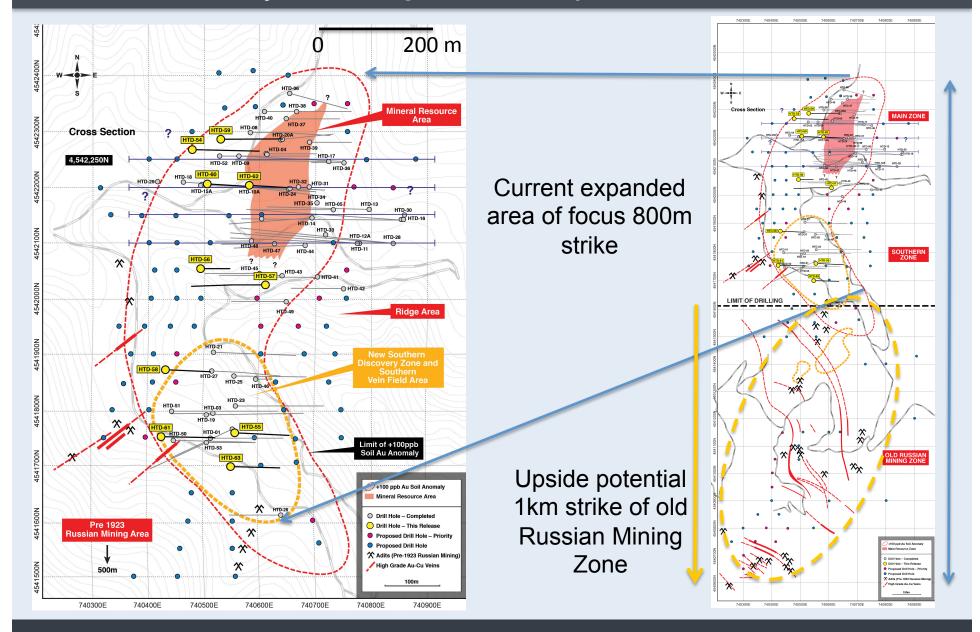


## **Hot Maden Project – Regional Geology**





# **Hot Maden Project – Drilling to Date and up side**





## Hot Maden Project - Mineralization

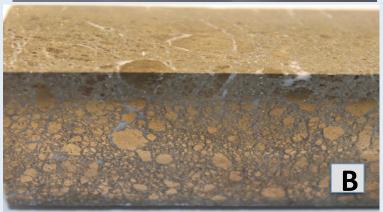
#### Main Zone Au-Cu Mineralization

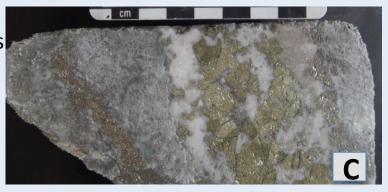
- Broadly N-S trending, sub-vertical mineralized body
- Dominantly high Au-Cu grade, breccia-style mineralization with distinctive red jasperoid +/hematite (A).
- Minor semi massive to massive sulfide (B).
- All sulphide deposit (no oxide). Primary sulfides are chalcopyrite and pyrite. Low in deleterious elements.
- Minor (secondary) chalcocite near surface in faults
- Zinc(-lead) mineralization flanks Au-Cu mineralization in eastern (hanging wall) sequences.

#### Southern Zone Au-Cu Mineralization

- Broadly N-S trending, sub-vertical mineralized bodies
- "Network quartz veinlets / veining" (C)
- Pyrite minor chalcopyrite
- Jasperoid / hematite virtually absent

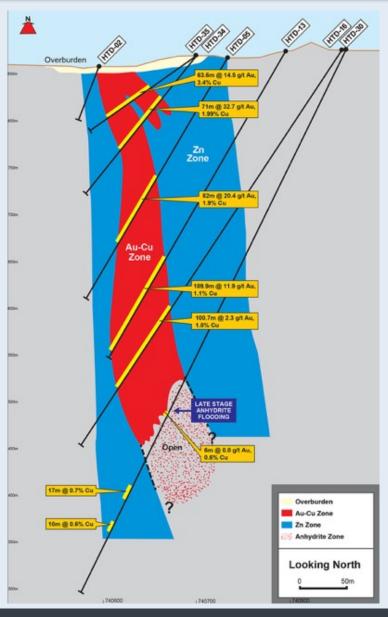






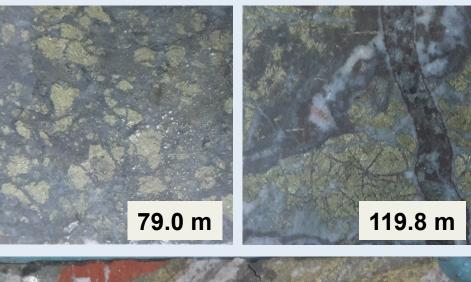


## **Hot Maden – Main Zone – Typical Cross Section 4,542,150N**



#### **Highest Grade Au-Cu Mineralization to Date**

HTD-34: 82m @ 32.7 g/t Au + 1.9% Cu from 55m (incl. 22m @ 83.9 g/t Au + 1.8% Cu from 89m)





HTD-35: 63.6m @ 14.5 g/t Au + 3.4% Cu from 56.8m (incl. 21m @ 38.9 g/t Au + 5.1% Cu from 85m



# Hot Maden Project – Global Mineral Resource Summary (July, 2016)

#### Gold-Copper Resource (Mariana 30%/Lidya 70%) at 2 g/t AuEq\* Cut-off)

Resource Category	Gold (oz)	Copper (Tonnes)	Gold Equivalent Oz**
Indicated	2,790,000	166,000	3,431,000
Inferred	375,000	17,000	439,000

#### Maiden Zinc Resource (Mariana 30%/Lidya 70%) at 2% Zn Cut-off

Resource Category	Zinc (Tonnes)
Indicated	11,600
Inferred	114,000

# Hot Maden Project – Main Zone Gold-Copper Resource (July, 2016)

#### Main Zone - Indicated Mineral Resource (Mariana 30%/Lidya 70%)

Domain	Tonnes	Au	Cu	Zn	AuEq	Au	Cu	AuEq
	t	g/t	%	%	g/t*	Ounces	Tonnes	Ounces**
Main Zone LG	463,000	1.1	1.1	0.3	2.4	17,000	5,000	36,000
Main Zone HG	4,501,000	3.9	1.9	0.2	6.3	570,000	87,000	908,000
Main Zone UHG	2,086,000	32.7	3.5	0.1	36.9	2,195,000	73,000	2,476,000
Mixed Gold-Zinc Zone	17,000	7.5	3.1	3.6	11.2	4,000	1,000	6,000
Peripheral Lodes	60,000	2.1	0.4	0.4	2.5	4,000		5,000
Total	7,127,000	12.2	2.3	0.2	15.0	2,790,000	166,000	3,431,000

#### Main Zone - Inferred Mineral Resource (Mariana 30%/Lidya 70%)

Domain	Tonnes	Au	Cu	Zn	AuEq	Au	Cu	AuEq
	t	g/t	%	%	g/t*	Ounces	Tonnes	Ounces**
Main Zone LG	395,000	1.7	0.9	0.03	2.8	21,000	4,000	35,000
Main Zone HG	31,000	3.9	1.6	0.1	5.8	4,000		6,000
Main Zone UHG	6,000	39.1	2.1	0.01	41.6	7,000		8,000
Mixed Gold-Zinc Zone	4,000	1.7	0.4	2.4	2.2			
Peripheral Lodes	282,000	3.2	0.9	0.1	4.3	29,000	2,000	38,000
Total	718,000	2.7	0.9	0.1	3.8	62,000	7,000	88,000

Indicated and Inferred resources shown above utilise a 2.0 g/t gold equivalent\* cut-off

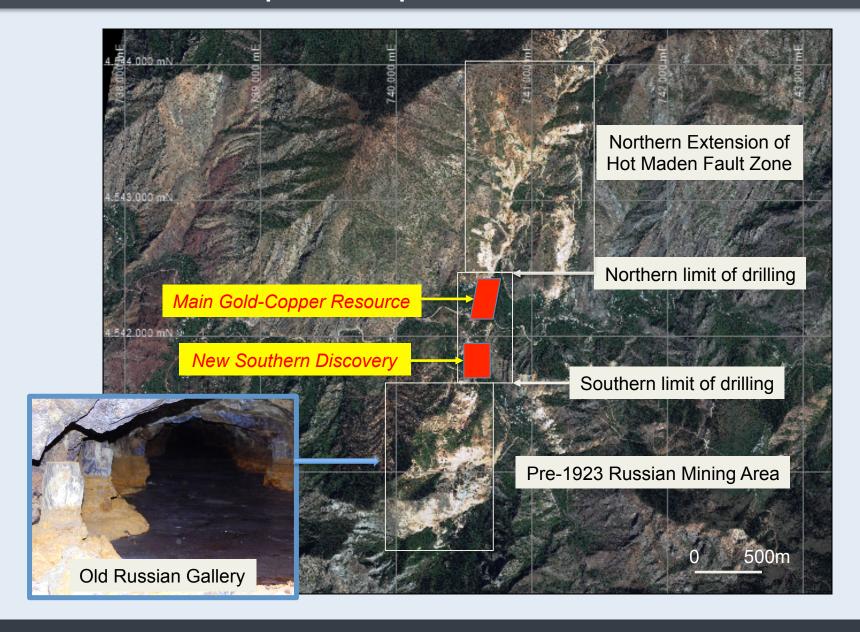


# Hot Maden Project

3D Video



# **Hot Maden – Exploration Upside**





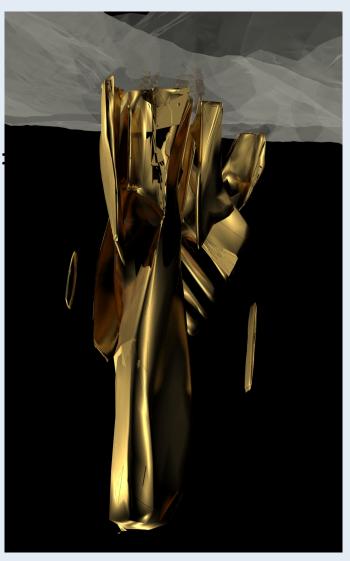
## **Hot Maden – Update on Development Studies**

#### Preliminary Economic Assessment (PEA):

- Expected completion in October, 2016
- Study being undertaken by RungePincockMinarco (RPM)
- PEA to evaluate main development options, wih focus on:
  - Underground mining
  - Mineral processing using gravity separation and standard flotation
- Economic Modelling (NPV/IRR)

#### Pre Feasibility Study (PFS):

- Expected to be completed during 2017
- Study to be undertaken jointly by AMC Consultants and GR Engineering Services (GRES)
- PFS will futher evaluate development options to higher level of confidence than PEA



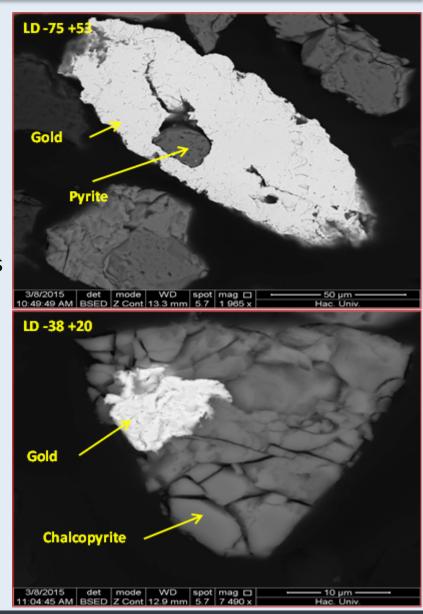
Hot Maden deposit looking S



# Hot Maden - Systematic Metallurgical Testwork Underway

A systematic metalllurgical testwork program is well underway, and consists of:

- Mineralogical analysis / characterization
- Comminution (crushing, grinding)
- Flotation (Bulk and Selective)
  - Mineralization is free of deleterious elements so opportunity to produce clean concentrates
  - Grind size vs metal recovery optimizations
- Gravity Separation
  - Evaluate recoveries of coaser grained gold particles using gravitmetric techniques
- Physical testwork being undertaken by Hacettepe Mineral Technologies (Ankara, Turkey) and SGS Laboratories (UK)



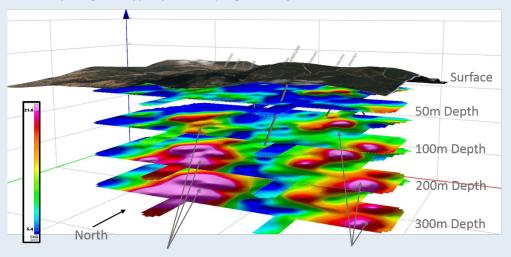


#### **Ergama Gold-Copper Project (100% Mariana)**

- Located in Balikesir Province (western Turkey). Lies between the prolific Biga Peninsula and Kisladag Gold Mine
- 1 licence covering 2,169 Ha.
- Primary target: porphyry gold-copper deposit underlying "lithocap". Strong surface alteration / geochemistry and IP Chargeability anomaly at 150m below surface
- Secondary target: high grade goldcopper in fault / vein zones
- Ex Newmont, Teck Property
- Field work currently in progress to fine tune drill targets
- Initial drill holes permitted
- Drill testing expected H2, 2016



IP (Chargeability) Depth Slices, Ergama Project



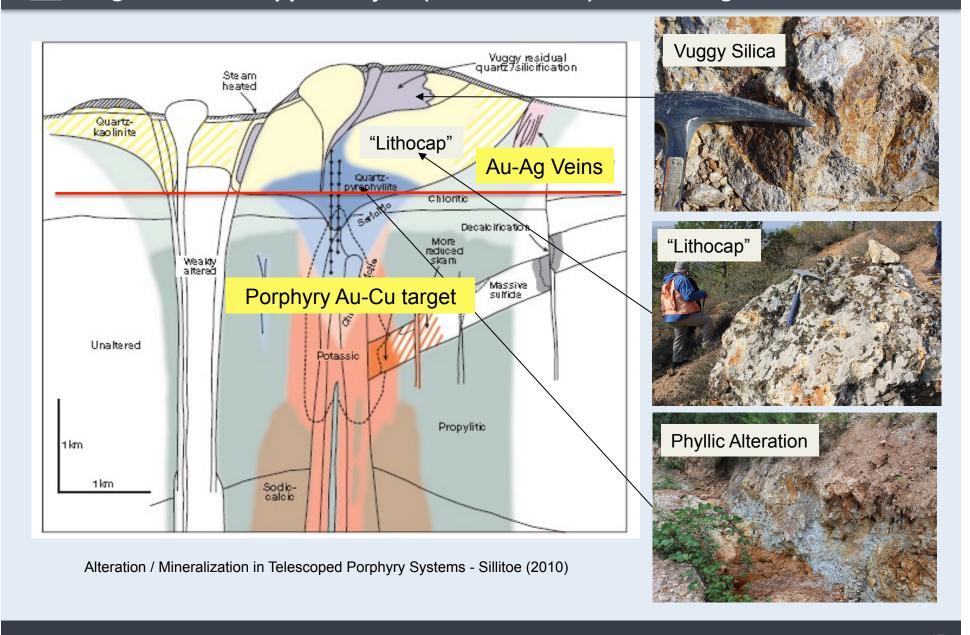
Strong Chargeability Anomaly (A) From 100m Depth. Priority Drill Target.

Newmont 2004 Drill Hole

Strong Chargeability Anomalies (B) From 100m Depth. Priority Drill Targets.

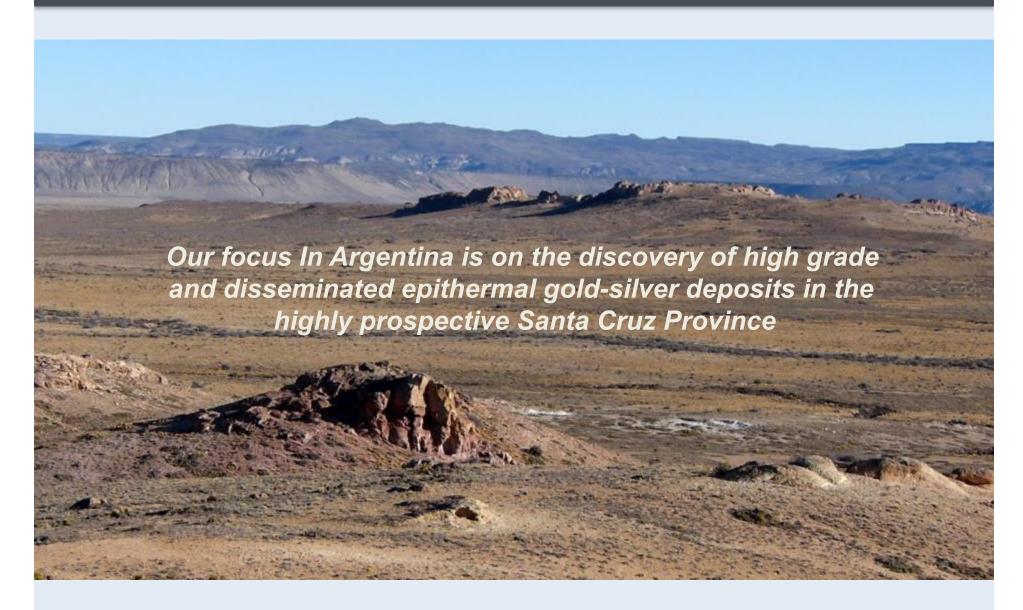


# **Ergama Gold-Copper Project (100% Mariana) – Main Targets**





# **Argentina Gold-Silver Portfolio (Deseado Massif, Santa Cruz)**





# Argentina Gold-Silver Portfolio (Deseado Massif, Santa Cruz

# Mariana an Active Explorer since 2008 106,100 Ha in 32 Mining / Exploration Claims Main Projects

#### Las Calandrias (100%)

- Dome related bulk tonnage and high grade gold epithermal system
- Maiden Mineral Resource 2011

#### Sierra Blanca (100%)

 Intermedium sulphidation epithermal system, quartz-sulphide vein breccias

#### Los Cisnes (100%)

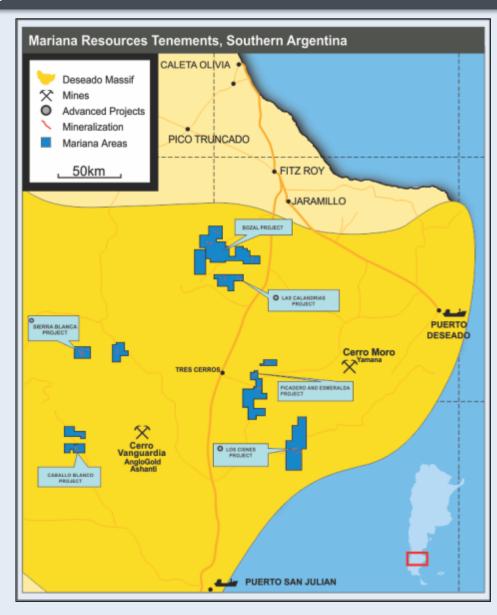
- Dome complex bulk tonnage related (Au).
- High grade epithermal vein system (Ag).

#### **Bozal (100%)**

 High grade potential quartz vein epithermal system (Au).

#### Other exploration targets

 Several high level epithermal targets mainly constrained by different types of quartz veins.





## Mariana Resources – Work Program and News Flow - H2, 2016

#### **Hot Maden Project**

- Ongoing Infill and Exploration Drill Results (20,000 m budgeted for 2016)
- Advance development-related technical studies (metallurgy, geotechnical, etc)
- Preliminary Economic Assessment (PEA) Expected Completion October 2016
- Ongoing Community Relations Programs
- Total Budget (100% basis for 2016) USD 8 Million

#### **Ergama Project**

Drill target generation work being finalized, initial drill testing expected H2, 2016

#### Santa Cruz (Argentina) Portfolio

- Continue to evaluate value add alternatives for the Company's extensive project portfolio in the Santa Cruz Province, southern Argentina
- Focus on advancing high grade gold-silver vein targets

#### **Other Portfolio News and New Opportunites**







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