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ANNOUNCEMENT

22 July 2010

Co-O MINE MINERAL RESOURCE ESTIMATE & CONCEPTUAL TARGET SIZE UPDATE

Medusa Mining Limited (ASX & AIM: MML; TSX: MLL) ("Medusa" or the "Company"), through its Philippines operating company, Philsaga Mining Corporation ("Philsaga"), advises that it has **increased the Indicated Resource by 4% to 603,000 ounces and increased the Inferred Resource by 36% to 898,000 ounces** (excluding production since 9 December 2009). The grade of both categories has also increased.

The Company also announces additional information which supports the announcement dated 18 January 2010 containing estimates of the conceptual potential target sizes** for the Co-O Mine using various parameters which indicate a range of **3,000,000 ounces** in 9,300,000 tonnes to **7,000,000 ounces** in 22,000,000 tonnes using a grade range of 9 to 11 g/t gold with a preferred average grade of 10 g/t gold.

Table I. Mineral resource estimate at 21 June 2010

Category	> 0 g/t gold		
	tonnes	g/t gold	ounces
Indicated	1,418,000	13.2	603,000
Inferred	2,905,000	9.6	898,000

Geoff Davis, Managing Director of Medusa, commented:

"The Company is pleased with the new resource estimate which continues to grow. The intent is to maintain the total resources for the mine at the current level primarily by underground drilling.

Concurrently the Company will continue surface drilling to seek extensional mineralisation outside the current mine limits.

*The compilation of drill hole intersections below the current bottom of the mine strongly supports the Co-O Mine conceptual potential target size** of 3 to 7 million ounces of gold."*

** The potential target size and grade is conceptual in nature, and there has been insufficient exploration to define a mineral resource, and it is uncertain if further exploration will result in the target being defined as a mineral resource.

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MINERAL RESOURCE MODEL

Discussion

Surface and underground diamond drilling has continued since the last resource model update based on data as at 9 December 2009 and announced on 18 January 2010 and has focused on infilling some data deficient areas and on extending the Co-O vein system along the northern side of the mine. A total of 20 drill holes have been completed (as announced on 30 June 2010) since the previous resource estimation and considered for inclusion in the current resource model update in conjunction with available underground sampling data, and excluding mined material.

A total of 45 veins of varying sizes have now been modelled, many of which have the potential to become larger with more drilling and development.

It should be noted that a number of drill holes in a number of areas as indicated on Figure 2 are still to be included in resource estimates, and underground drilling will become more focused in some of these areas, and in some cases, in combination with development.

It is intended that future resource estimates will be undertaken annually in June-July.

Figure 1 (attached) shows the updated 3D resource model. The veins are open at depth and currently only limited by the depth and density of drilling.

Figure 2 (attached) is the composite map of the Co-O Mine area showing the projection of veins onto Level 5. This also shows areas where additional drilling and/or development is required to complete the definition/extension of known veins and to increase definition around existing drill hole intersections which are not yet included in the model.

Figure 3 (attached) shows all the current development in the Co-O Mine and Table II is a summary of the major veins.

Table II. Co-O Mine mineral resource estimates for the major veins at 21 June 2010

Vein name	Category	> 0 g/t gold		
		tonnes	g/t gold	contained ounces
Central	Indicated	363,000	9.4	109,00
	Inferred	267,000	3.3	28,000
Jereme	Indicated	104,000	12.6	42,000
	Inferred	135,000	7.7	34,000
Jereme Footwall	Indicated	93,000	16.3	49,000
	Inferred	72,000	11.3	26,000
Great Hamish	Indicated	239,000	23.9	184,000
	Inferred	432,000	15.3	212,000
Great Hamish FW	Indicated	22,000	15.8	11,000
	Inferred	226,000	9.7	70,000
Roysan	Indicated	101,000	24.5	80,000
	Inferred	107,000	23.6	81,000
Catto 1	Indicated	60,000	18.3	35,000
	Inferred	57,000	20.0	37,000
EA4	Inferred	239,000	12.0	92,000
Other veins	Indicated	436,000	6.6	93,000
	Inferred	1,370,000	7.2	318,000
Total Indicated		1,418,000	13.2	603,000
Total Inferred		2,905,000	9.6	898,000

Notes:

- A lower cut-off of 0 g/t gold has been applied
- Variable upper cuts up to 200 g/t gold has been applied to different veins
- Resources are inclusive of reserves
- Rounding to the nearest 1,000 may result in some slight discrepancies in totals.

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Specific gravity

A programme of over 1,000 specific gravity ("SG") measurements has been completed on vein samples from drill core and rock samples. An SG of 2.62 is now used compared to 2.45 in previous resource estimates. The effect is that previous resource numbers have been underestimated by approximately 7%.

Vein modelling

Cube Consulting Pty Ltd of Perth, Western Australia was contracted to undertake the resource estimations. A wireframe model of the vein system and the mine depletions were based on all available information as at 21 June 2010. A 2D longitudinal modelling approach was used and is based on an accumulation variable incorporating mineralised vein horizontal width and intercept grade. Variography was used to analyse the spatial continuity of the horizontal width and accumulation variables within the mineralised veins and to determine appropriate estimation inputs to the interpolation process. The accumulation variables were interpolated into blocks using Ordinary Kriging. High grade limits were applied to gold prior to the calculation of the accumulation variable. Mineral resources have been reported in accordance with The 2004 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code) and Canadian National Instrument 43-101.

Co-O MINE CONCEPTUAL TARGET SIZE **

As announced on 18 January 2010, a conceptual target size** for the Co-O Mine was estimated at between 3,000,000 ounces in 9,300,000 tonnes and 7,000,000 ounces in 22,000,000 tonnes at a preferred grade of 10g/t gold. Further details are provided and tabulated in the 18 January 2010 announcement.

Figure 4 (attached) shows a composite longitudinal projection of all the drill hole intersection grades reported up to the announcement dated 30 June 2010 below Level 6 (250 metres below Level 1). This strongly supports the concept that mineralisation extends to a depth of 500 metres below Level 1, and shows that mineralisation occurs below the 500 metre level.

It should be noted that the conceptual target size** includes the current resource estimate. The total production from the mine to 30 June 2010 was approximately 290,000 ounces.

** The potential target size and grade is conceptual in nature, and there has been insufficient exploration to define a mineral resource, and it is uncertain if further exploration will result in the target being defined as a mineral resource.

Information in this report relating to **Exploration Results** has been reviewed and is based on information compiled by Mr Geoff Davis, who is a member of The Australian Institute of Geoscientists. Mr Davis is the Managing Director of Medusa Mining Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a "Competent Person" as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" and is a "Qualified Person" as defined in "National Instrument 43-101" of the Canadian Securities Administrators. Mr Davis consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Information in this report relating to **Mineral Resources** has been estimated and compiled by Mark Zammit of Cube Consulting Pty Ltd of Perth, Western Australia. Mr Zammit is a member of The Australasian Institute of Mining & Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" and is a "Qualified Person" as defined in "National Instrument 43-101" of the Canadian Securities Administrators. Mr Zammit consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

A revised Technical Report will be lodged with Sedar within 45 days of this announcement.

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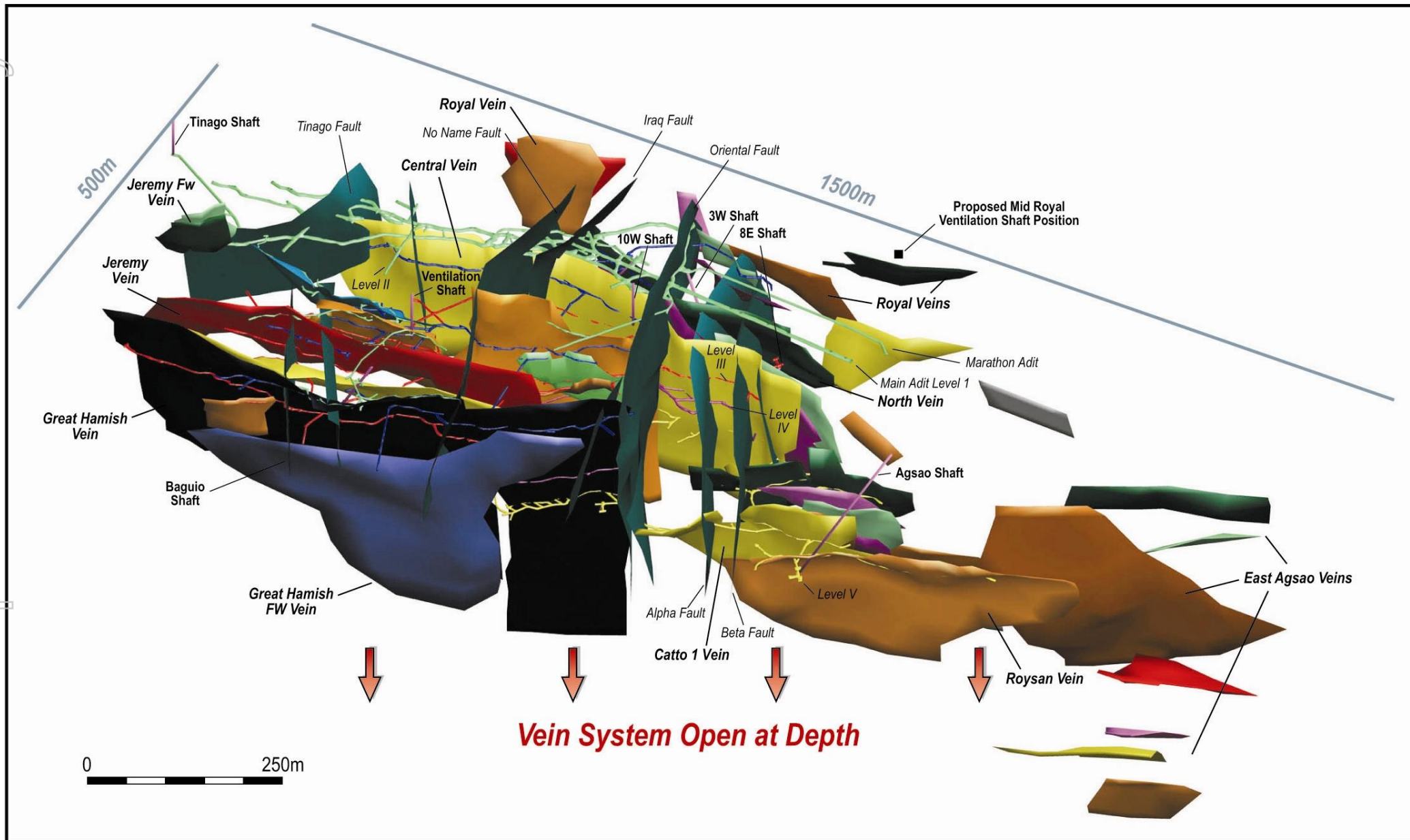


Figure 1. 3D model of the Co-O vein system and underground workings

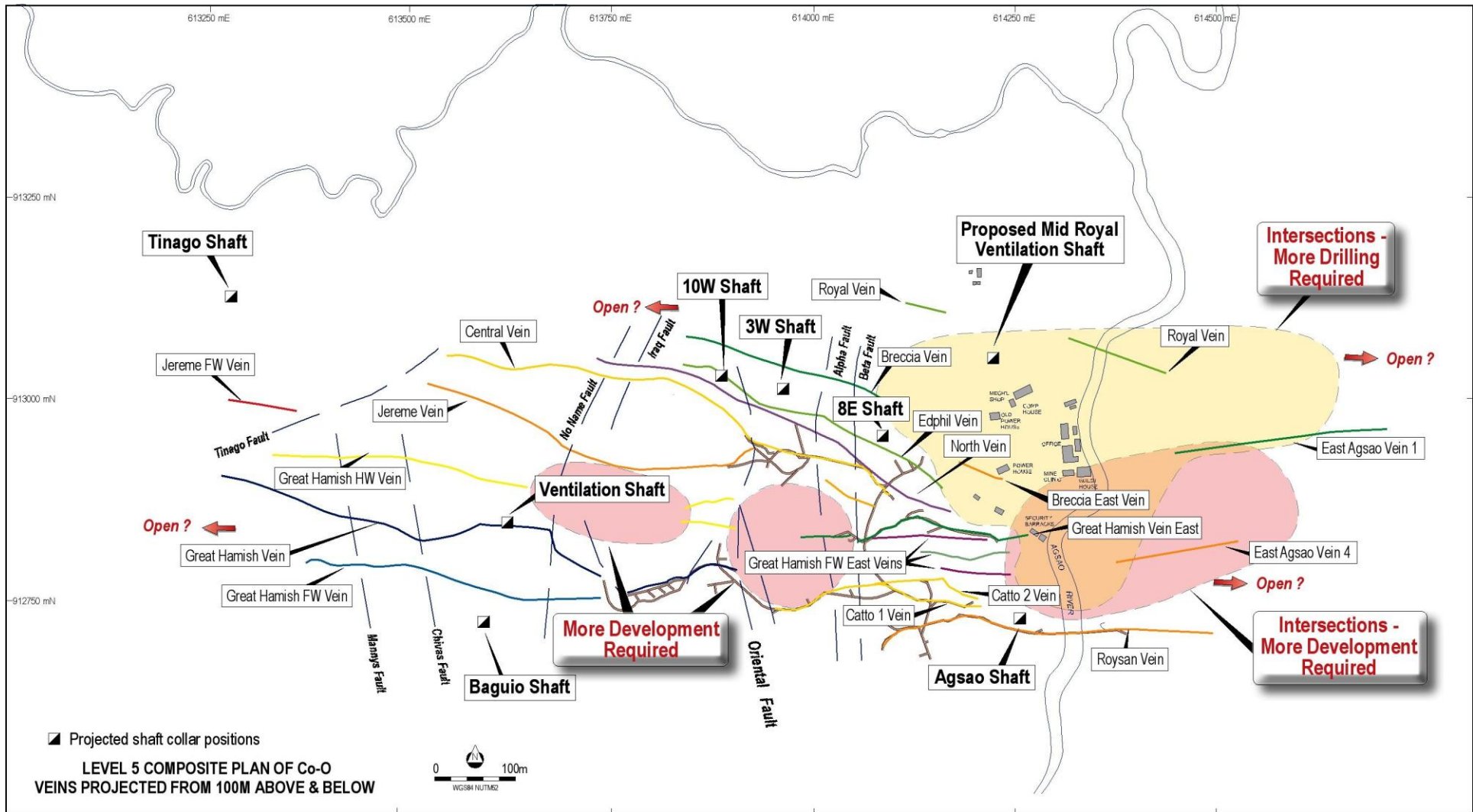


Figure 2. Co-O Mine composite map showing vein and workings projections to Level 5

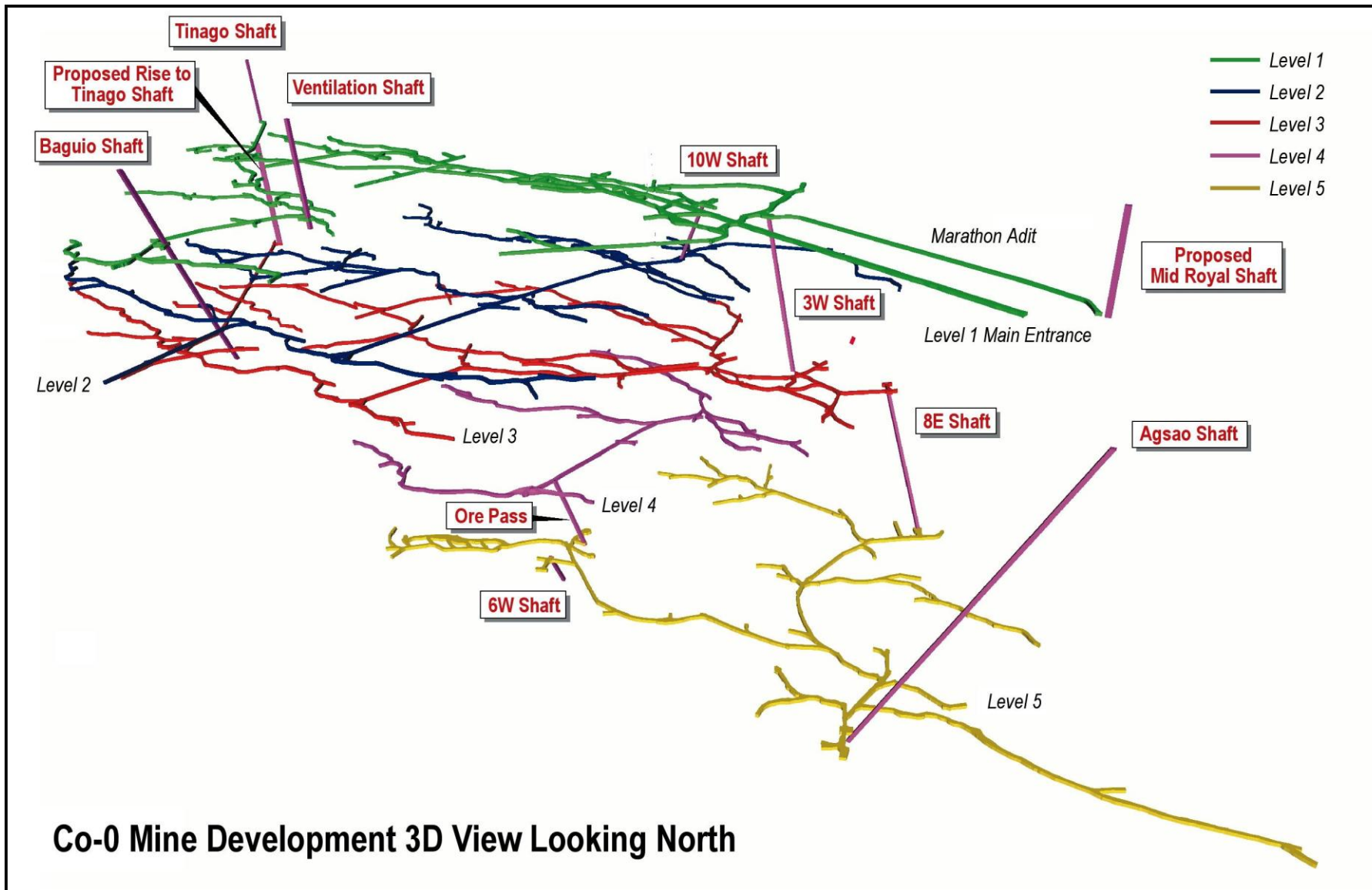


Figure 3. 3D view of the Co-O Mine underground workings

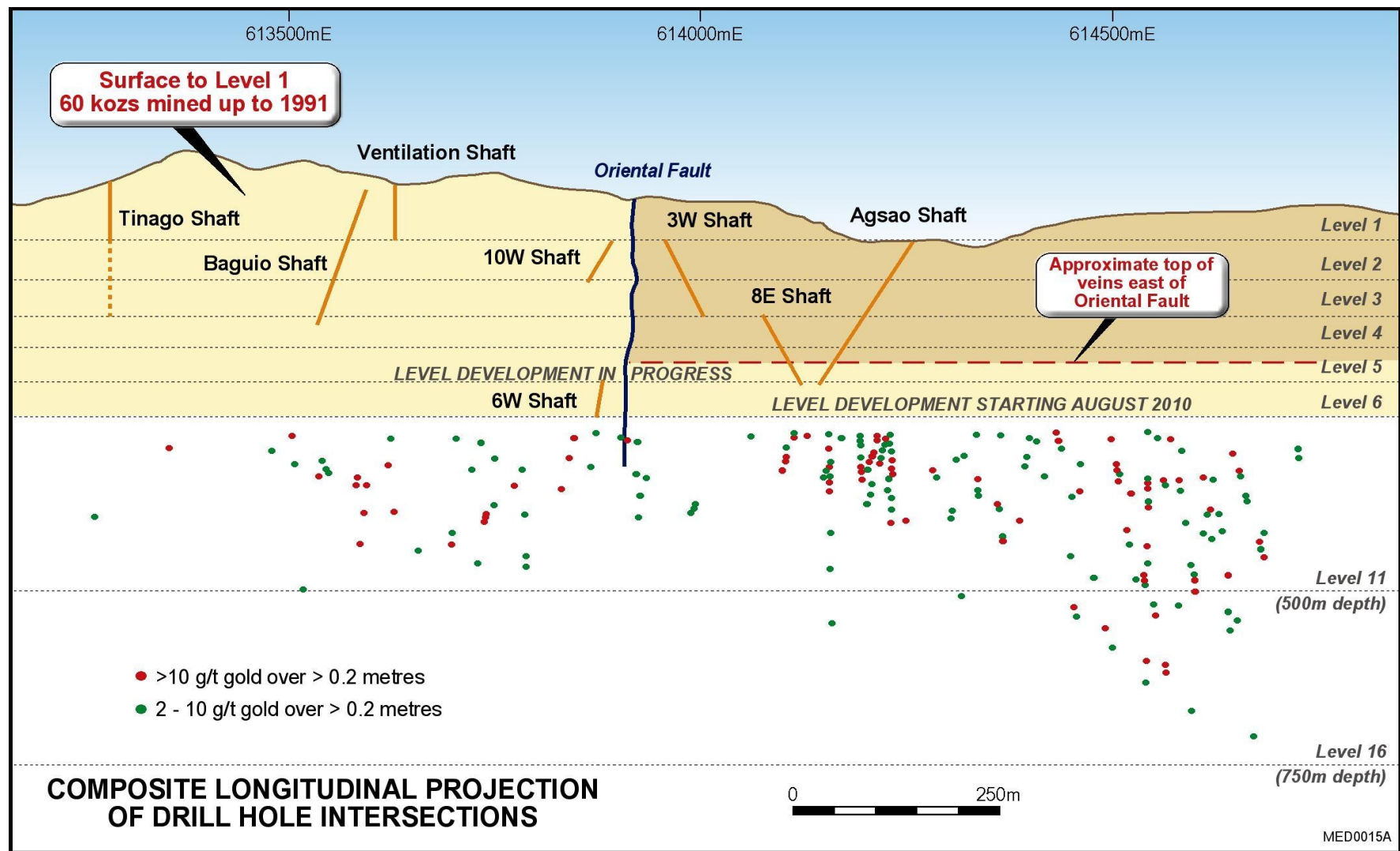


Figure 4. Co-O Mine composite longitudinal projection of drill hole intersection grades below Level 6