

Mohamed Abdellaoui, Géologue agréé



Atlas Lion Vanadinite Polymetallic Mineral Deposit

Ouatat el Haj / Boulemane Province in Morocco

Form NI 43-101

Technical Report and Resource Report

Prepared for



Elcora Advanced Materials, Halifax, Canada and

Ermazon SARL, Casablanca, Morocco, wholly owned subsidiary of Elcora

Prepared by

Dr. Mohamed Abdellaoui Chartered Geologist (Morocco)

Mining Engineer

May 24, 2022



Mohamed Abdellaoui, Géologue agréé

Signature Page

NI 43-101 Technical Report and First Resource Report for the Atlas Lion Vanadinite Polymetallic Deposit of Ermazon SARL, a wholly owned subsidiary of Elcora Advanced Materials Inc, Halifax, Canada

Location of Research Finds

Exploration License No. 3338367

Latitude: 679.273

Longitude: 309.571

Exploration License No. 3338363

Latitude: 684.273

Longitude: 307.821

Mohamed Abdellaoui, Geo. agréé

Signed at Casablanca, March 30, 2022



Mohamed Abdellaoui, Géologue agréé

Certificate of Author

I, Mohamed Abdellaoui, M.Sc. Geo., do hereby certify that:

- 1) I am the President of the Association des Géologues Agréés since 2005. This certificate applies to the technical report titled “NI 43-101 Technical Report and First Resource Estimate on the Atlas Lion Vanadinite Polymetallic Deposit (the “Technical Report”) dated January 31, 2022 with an effective date of December 31, 2021 and a signing date of March 30, 2021.
- 2) I graduated with a M.Sc. in Geology of the University of Marrakesh
- 3) I am a Member of the Association des Géologues Agréés since
- 4) I have worked as a Geologist for a total of 20 years since graduating from university
- 5) I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
- 6) I have visited the Atlas Lion Project from October 2021 to December 2021 and have inspected the surface ore finds and reviewed all data collection and sampling procedures.
- 7) I am a co-author of the technical report entitled “Mineral Resource Estimate of the Atlas Lion Vanadinite Deposit”. I am responsible for Sections 4, 6, 7, 8, 9 and 10.
- 8) I am independent of the issuer applying the test set out in Section 3 of NI 43-101.
- 9) Other than as indicated, I have had no prior involvement with the Atlas Lion Project. I have read NI 43-101 and Form 43-101F1 and the Report has been prepared in compliance therewith.
- 10) As of the effective date of this report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 11) I consent to the filing of the Atlas Lion Mineral Resource Estimate with any regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Effective Date: December 31, 2021

Signed Date: March 30, 2021

Mohamed Abdellaoui
Association des Géologues Agréés



Mohamed Abdellaoui, Géologue agréé

Certificate of Author

I do hereby certify that:

- 1) I work as an independent consulting engineer since January 2020. This certificate applies to the technical report titled “NI 43-101 Technical Report and First Resource Estimate on the Atlas Lion Vanadinite Polymetallic Deposit (the “Technical Report”) dated January 31, 2022 with an effective date of December 31, 2021 and a signing date of March 30, 2022.
- 2) I graduated with a M.Sc. for Mining Engineering, from the Rheinisch-Westfälische Technische Hochschule in Aachen, North-Rhine Westfalia, Germany in 1987.
- 3) I am a Member of the Prospectors and Developers Association of Canada and Member of the Academy of Mining Science in Moscow/Russia.
- 4) I have worked as a Mining Engineer for a total of 35 years since graduating from university and have worked at Lead/Zinc, Graphite, Coal, Gold, Talc, Salt and Hard Rock mines in Germany, USA, Dominican Republic, Guyana, Puerto Rico, Romania, North Korea, China, Kyrgyzstan, Vietnam, Malaysia, Philippines, Russia, Sri Lanka, Guatemala, Finland, Mexico and Morocco in engineering, development, commissioning and production positions. I have held senior management roles since 1992.
- 5) I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43- 101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
- 6) I have visited the Atlas Lion Project from October 2021 through March 2022 and have inspected the surface ore finds and reviewed all data collection and sampling procedures.
- 7) I am a co-author of the technical report entitled “Mineral Resource Estimate of the Atlas Lion Vanadinite Deposit”. I am responsible for Sections 1, 2, 3, 11, 12, 13, 14, 15 and 16; jointly responsible with Mr. Mohamed Abdellaoui for Sections 4, 6, 7, 8, 9, 10.
- 8) I am independent of the issuer applying the test set out in Section 3 of NI 43-101.
- 9) Other than as indicated, I have had no prior involvement with the Atlas Lion Project. I have read NI 43-101 and Form 43-101F1 and the Report has been prepared in compliance therewith.
- 10) As of the effective date of this report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 11) I consent to the filing of the Atlas Lion Mineral Resource Estimate with any regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Effective Date: December 31, 2022

Signed Date: March 30, 2022



Table of Content

	Page
1. Summary	7
1.1 Introduction	7
1.2 Purpose of Tech Report and First Resource Report	8
1.3 Property Description and Ownership	8
1.4 Accessibility, Climate, Local Resources and Infrastructure	8
1.5 Geology and Mineralization	9
1.6 Sampling, Methodology and Analysis	10
1.7 Mineral Resource Estimate	10
1.8 Interpretations and Conclusions	10
1.9 Recommendations	11
2. Introduction	12
2.1 Issuer	12
2.2 Terms of Reference	12
2.3 Principal Source of Information	13
2.4 Qualified Persons	14
2.5 Site Visit	15
2.6 Close-out Date	15
2.7 Abbreviations, Units and Currencies	15
3. Reliance on other Experts	17
4. Property description and Location, Mining Rights	17
4.1 Property description	17
4.2 Location	17
4.3 Mining rights in Morocco	20
4.3.1 State Ownership of Minerals	21
4.3.2 Mining titles under the former regime	21
4.3.3 Mining titles under the New Mining Code	22
4.3.4 Transition from the former mining regime to the new mining regime	24
4.3.5 Foreign investors' rights	24
4.3.6 Indigenous population, training and other social obligations	25
4.3.7 Fees, taxes, duties and royalties	25
4.3.8 Financial capacity of the investors	26
4.3.9 Protection of the environment	26
4.3.10 Enforcement Regime	26
5. Accessibility, Climate, Local Resources, Infrastructure & Physiography	27
5.1 Accessibility	27
5.2 Climate	27
5.3 Local Resources	27
5.4 Infrastructure	28
5.5 Physiography	28
6. History	29

Mohamed Abdellaoui, Géologue agréé



7.	Geological Setting and Mineralization	29
7.1	Vanadinite Mineral	29
7.2	Geology	30
7.3	Mineralization	34
8.	Deposit Types	36
9.	Exploration	36
10.	Drilling	38
11.	Samples preparation, Analyses and Security	38
11.1	Sampling and Sample preparation	38
11.2	Analysis	41
11.3	Interpretation of the Analysis	43
11.4	Security	44
12.	Data Verification	44
13.	Mineral Processing and Metallurgical Test-work	44
14.	Mineral Resource Estimate	45
15.	Mineral Reserve Estimates	45
16.	Mining Methods	45
17.	Recovery Methods	46
18.	Project Infrastructure	47
19.	Market Studies and Contracts	47
20.	Environmental Studies, Permitting and Social or Community Impact	48
21.	Capital and Operating Costs	48
22.	Economic Analysis	48
23.	Adjacent Properties	48
24.	Other Relevant Data and Information	49
25.	Interpretation and Conclusions	50
26.	Recommendations	50
27.	References	52



Mohamed Abdellaoui, Géologue agréé

1. Summary

1.1 Introduction

Mohamed Abdellaoui was retained by Ermazon SARL, wholly owned subsidiary of Elcora Advanced Materials, to prepare a first resource estimate for the Atlas Lion Vanadinite Polymetallic Deposit including information leading to a future full Technical Report in accordance with Canadian Securities Administrators' National Instrument 43-101 respecting standards of disclosure for mineral projects ("NI 43-101" or "43-101") and its related form 43-101F1. The mandate was assigned by Mr. Denis Choquette, Chairman of the Board of Elcora Advanced Materials Inc. ("Elcora"), parent company of Ermazon SARL ("Ermazon").

Mohammed Abdellaoui is an experienced Geologist from Morocco and President of the Association des Géologues Agréés. Mr. Abdellaoui is considered independent of the issuer for the purpose of section 1.5 of NI 43-101.

Retained by Ermazon SARL, wholly owned subsidiary of Elcora Advanced Materials, to prepare a first resource estimate for the Atlas Lion Vanadinite Polymetallic Deposit including information and assessments leading to a future full Technical Report in accordance with Canadian Securities Administrators' National Instrument 43-101 respecting standards of disclosure for mineral projects ("NI 43-101" or "43-101") and its related form 43-101F1. The mandate was assigned by Mr. Denis Choquette, Chairman of the Board of Elcora Advanced Materials Inc. ("Elcora"), parent company of Ermazon SARL ("Ermazon").

He is an experienced Mining, Mineral Processing and Mechanical Engineer from Germany and Member of the Academy of Mining Science in Moscow, Russia. Mr. Leiders is considered independent of the issuer for the purpose of section 1.5 of NI 43-101.

By virtue of their technical review of the Project, the QPs affirm that the recommended work program herein is appropriate for the Project's current level of advancement and conforms to NI 43-101 requirements and CIM Definition Standards for Mineral Resources and Mineral Reserves ("CIM Definition Standards").



Mohamed Abdellaoui, Géologue agréé

1.2 Purpose of Provisional Tech Report and First Resource Report

Elcora has purchased Ermazon with the intention to develop the Vanadinite polymetallic deposit to a fully operating mining, processing and refining operation which will produce high-grade Lead and Vanadium concentrates.

The purpose of this first exploration effort and consequential provisional Tech Report and First Resource Report is to justify investment into mining equipment and to start mining operation once the Moroccan government has issued the mandatory exploitation license.

Elcora will commence a large-scale exploration campaign once its own core drill machine, an Atlas Copco track mounted U7, has arrived in Morocco.

1.3 Property Description and Ownership

The research licenses, the Moroccan legal term for mining exploration licenses, are situated in Boulemane Province. The center of the licensed area is ca. 28km Northeast of the town of Outat El Haj. Elcora had initially acquired 9 contiguous research licenses and 1 license ca 20km off to the West of the center of the licenses with the purchase of Ermazon for 500.000US\$ plus 4.5 Million common shares and retained key partners in this project for a monthly fee for the next 3 years.

The successful acquisition of further seven research licenses for Ermazon resulted in a combined area of 15 contiguous Vanadinite research licenses which cover an area of 24.000 Hectares.

Elcora Advanced Materials Inc. is focused on the global battery value chain, The company is a vertically integrated miner, processor and technology developer of Battery Metals and their applications with the goal to develop and implement them into proprietary energy storage applications. Elcora's headquarters are in Halifax, NS, Canada. Its subsidiary Ermazon has its headquarters in Midelt, Morocco.

1.4 Accessibility, Climate, Local Resources and Infrastructure

The route to the Vanadinite licenses leads from Outat El Haj via national route N4 to the road forking East to the village of Tissaf. From the village a gravel road is heading East for about 20km to the sample location on license Nr. 3338367.

The district's climate is Mediterranean with an average annual temperature of 18.1° C and an average precipitation of 517.2 mm. Summer temperatures can exceed 40° C and Winter temperatures drop well below freezing point.



Mohamed Abdellaoui, Géologue agréé

Finding qualified labor for the mining industry is comparable to other remote, predominantly farmed areas. Human resource efforts can tap on a motivated and dedicated local workforce. Mechanical skills and skills necessary for mining are available and at reasonable cost.

Fuel, Tools and Supplies are available at Outat El Haj and Food and Drinking water can be purchased in Tissaf. Process water for mineral processing has to be searched for by well-drilling as close as possible to the mine site. Locals informed that drilling in Wadi (dry river bed) is highly successful in the entire area.

There is no high-voltage power grid anywhere near the licensed area so all electrical power has to be generated with diesel generator or with solar and/or wind power generation. There are no buildings in close vicinity to the licensed area so setting up a container-camp with dorms, sanitary, kitchen and socializing containers is necessary. Cell phone service shows weak signal so the installation of a repeater mast is mandatory. There is no emergency service like fire fighter or ambulance within a 2-hour range, so keeping an ambulance at work site is also mandatory.

1.5 Geology and Mineralization

The Geology of the licensed area is named the middle Moulouya which stratigraphically belongs to the Meseta Oranaise. The Meseta Oranaise stretches from Mid-Morocco well into Algeria. It is the area between the Tellian basin to the North and the Atlantic Basin to the South. The Northern Meseta Oranaise is characterized by fault systems and folding.

Stratigraphically the area is characterized by at times reduced sedimentary layers which consist of clastic and carbonatic deposits (Silurian to Tertiary ages). The formations exist since the Palaeozoic era and the entire Moulouya river area, of which the licensed middle-Moulouya area is a part of, contains the Rif, Middle and High Atlas Mountain ridges plus the Palaeozoic Horsts.

The middle Moulouya area is limited to the north and west by the Middle Atlas, to the East by the High Moulouya plateaus and to the south by the High Atlas. The outcropping rock formations are varied in nature and date from the Paleozoic to the Plio-Quaternary.

The Vanadinite layers dip and strike equi-angular to all other rock formations. Dip is between 6 and 10 degrees towards the South, Strike dips at various angles due local tectonic events.

Mineralogically Vanadinite belongs to the Apatite Group of Minerals. Its Crystals are hexagonal. Vanadinite is a secondary Lead-Chlorovanadate with the formula $Pb_5(VO_4)_3Cl$



Mohamed Abdellaoui, Géologue agréé

with a specific gravity of 6.88 and a hardness of 2.5 to 3 on the Mohs scale. The mineral shows colours of red, red-brown, yellow and colorless.

1.6 Sampling, Methodology and Analysis

The explored area in license 3338367, South-Eastern part, is a typical Horst type formation in which the mineral crops out at more than a dozen locations and is covered between a few deca-centimeters up to a maximum of 12m to 15m of overburden. It was decided to sample from the outcrops which showed an even mineralization and low carbonate interference. Hand-held Screw type drilling and Pick & Shovel down to the bedrock of the ore layer was the applied sampling method.

Due to the easy access and the evenness of the mineralization all samples were piled and then mixed to form a uniform mass. All sample locations are mapped and easily accessible. A representative amount of the mineral then was sent to the SGS-certified African Laboratory for Mining and Environment (AFRILAB). Lead and Vanadium masses tested at 45,1% and 6,14% respectively.

In a second exploration campaign 14 trench samples were taken and analyzed. The results averaged 36,52%Pb and 4,125% V.

1.7 Mineral Resource Estimate

The Resource Estimate was calculated utilizing the length of the mineralized structures, average thickness of the Vanadinite seam and the width of exposed Vanadinite mineral structures. Ore density was determined as 4.

Three structures were identified over a length of 2.5km representing a total of 772.000 t of Mineral of which 463.000 t account as indicated resources and 309.000 t of inferred resources according to National Instrument 43-101.

It has to be stated that this is one of at least a dozen prospected and partially explored sites. Further exploration, especially at depth, is mandatory to determine the full scale of the licensed deposit.

1.8 Interpretations and Conclusions

The main objective of this NI 43-101 Tech Report and First Resource Report is to prove the existence of sufficient amounts of indicated resources to start a test raw-ore production over a limited time until the first exploration campaign with Elcora's core drill will have



Mohamed Abdellaoui, Géologue agréé

produced substantial amounts of measured resources to justify the construction of a concentrator and then consequentially a Lead/Vanadium separator.

The mineralogical Interpretations on license 3338367 indicate that there are at least 3 main Vanadinite veins in a 40m thick rock formation, interpolating these findings with the typical Vanadinite formations at Mibladen and Zaida strongly indicates that more veins may be found at depth.

Main conclusion of the described ore findings is that this vast deposit requires a multi year exploration program while allowing to start ore production in this or other areas of exposed mineral.

1.9 Recommendations

The existing indicated resource amounts justify the start of a small-scale raw ore mining operation to generate cash flow.

It is strongly recommended to invest into a concentrator as soon as possible, particularly into a semi-mobile one due to the large consumption of area. This would generate higher prices for the Lead concentrate and either a premium for the Vanadium content or the re-sale of the foundry's lead slag to hydrometallurgical plants.

The exploration program should contain rather shallow core holes at the corner of each quadrant combined with a center-located hole drilled to maximum depth of 700 to 800m to explore the existence of feeder structures and other mineral veins.

Although open pit mining obviously appears to be the mining method to start with, it is recommended to investigate overburden to mineral vein ratios to determine whether some of the deposit should be mined underground.

Separation of Lead and Vanadium is recommended as a hydrometallurgical process rather than a thermal one for reasons of energy consumption and low Carbon footprint. It is recommended to test the hydrometallurgical process under laboratory conditions.

Mohamed Abdellaoui, Géologue agréé



2. Introduction

Mohamed Abdellaoui was retained by Ermazon SARL, wholly owned subsidiary of Elcora Advanced Materials Inc of Halifax, Nova Scotia, Canada, to prepare a first resource estimate for the Atlas Lion Vanadinite Polymetallic Deposit including information leading to a supporting Technical Report in accordance with Canadian Securities Administrators' National Instrument 43-101 respecting standards of disclosure for mineral projects ("NI 43-101" or "43-101") and its related form 43-101F1. The mandate was assigned by Mr. Denis Choquette, Chairman of the Board of Elcora Advanced Materials Inc. ("Elcora"), parent company of Ermazon SARL ("Ermazon").

Mohamed Abdellaoui is an experienced exploration Geologist and President of the "Associacion de Geologues agrees" from Midelt, Morocco. He is considered independent of the issuer for purpose of section 5 of NI 43-101.

This Mineral Resource Estimate has an effective date of March 30, 2022.

2.1 Issuer

Elcora Advanced Materials Inc is a Canadian battery metals exploration, mining and processing company. It has acquired Ermazon SARL from Midelt, Morocco which holds several licenses in Vanadinite (Lead/Vanadium), Copper and Manganese.

The corporate headquarter of the issuer is at Suite 10, 275 Rocky Lake Drive, Bedford, Nueva Scotia, B4A 2T3, Canada. It can be contacted via Email: troy@elcoraresources.com
Phone: +1 902-802-8847

The issuer is a Halifax-based public company trading on the Toronto stock exchange (TSX) under the symbol of ERA and the Frankfurt stock exchange (FRA) under the symbol of ELM.



Mohamed Abdellaoui, Géologue agréé

2.2 Terms of Reference

The Atlas Lion Vanadinite Polymetallic Deposit is situated in North-Eastern Morocco in the Middle Moulouya region in Boulemane Province. It comprises of 16 adjacent research licenses (Moroccan term for mineral exploration) of 16 km² each. The Middle Moulouya basin is part of a geological system bearing Vanadinite deposits which stretches NNE to SWS over a length of 180 km.

The main objective of the mandate is to produce a first resource estimate to justify further investment into exploration, mining and ore processing. This resource estimate refers solely to the license numbers 3338367 and 3338363. There is no previous resource estimate or tech report on this deposit.

2.3 Principal Source of Information

The qualified persons (“QPs”), as defined by NI 43-101, have reviewed and appraised the information used to prepare the Technical Report and first Resource Estimate, including the conclusions and recommendations. The QPs believe the information for the Technical Report and First Resource Estimate is valid and appropriate considering the status of the project and the purpose for which the Technical Report and first Resource Estimate is prepared.

The report is based on information obtained from site visits, governmental information from Morocco, public domain and reports listed in the collection at the end of this report.

Main sources of information of this report are:

- Discussions with Affiliates of Ermazon SARL
- Exploration and Sampling Data obtained by Ermazon SARL
- Sample Analysis obtained by Ermazon SARL
- Published information from public domain sources



Mohamed Abdellaoui, Géologue agréé

By virtue of their technical review of the Project, the QPs affirm that the recommended work program herein is appropriate for the Project's current level of advancement and conforms to NI 43-101 requirements and CIM Definition Standards for Mineral Resources and Mineral Reserves ("CIM Definition Standards").

None of the QPs involved in this Technical Report have or have previously had any material interest in the issuer or its related entities. The relationship with the issuer is solely a professional association between the issuer and the independent consultants. This Technical Report was prepared in return for fees based upon agreed commercial rates, and the payment of these fees is in no way contingent on the results of the Technical Report. None of the QPs involved in this Technical Report have or have previously had any material interest in the issuer or its related entities. The relationship with the issuer is solely a professional association between the issuer and the independent consultants. This Technical Report was prepared in return for fees based upon agreed commercial rates, and the payment of these fees is in no way contingent on the results of the Technical Report.

2.4 Qualified Persons

Mohamed Abdellaoui is responsible for this Technical Report and First Resource Estimate. The list below presents the QPs for the Technical Report and the sections for which each is responsible:

- Mohamed Abdellaoui, Geologist, President of the Association des Géologues Agréés

In addition to the QPs, the following people were involved in the preparation of this Technical Report:



Mohamed Abdellaoui, Géologue agréé

- Lahcen Jouak, Mechanical Engineer M.Sc., Specialist in Licensing and Permitting in Morocco

2.5 Site Visit

The site visit was performed between October 12 and October 22, 2021. All three QPs who produced this report were present.

2.6 Close-out Date

The close-out date of the sampling data is October 22, 2021 on both sampled licensed areas 3338363 and 3338367. The effective date of the mineral resource statement is January May 12, 2022. The effective date of the Technical Report is May 25, 2022.

2.7 Abbreviations, Units and Currencies

A list of general abbreviations is provided in Table 2.1. The currency is Canadian dollars (\$, C\$, CAD), unless otherwise specified. Quantities are stated in metric units, as per standard Canadian and international practice, including metric tonnes (t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, and gram per tonne (g/t) for metal grades. Wherever applicable, imperial units have been converted to the International System of Units (SI units) for consistency (Table 2.2).

Table 2.1 – List of abbreviations and symbols

Abbreviation or Symbol	Unit or Term
\$	Canadian dollar
\$/t	Dollars per metric ton
%	Percent
°	Angular degree
°C	Degree Celsius



µm	Micron (micrometre)
43-101	National Instrument 43-101 – Standards of Disclosure for Mineral Projects (Regulation 43-101 in Québec)
Az	Azimuth
C\$	Canadian dollar
CAD	Canadian dollar
CAD:USD	Canadian-American exchange rate
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Definition Standards	CIM Definition Standards for Mineral Resources and Mineral Reserves

3. Reliance on other Experts

There are no additional experts overlooking this Technical Report and First Resources Report.

4. Property Description and Location, Mining Rights

4.1 Property Description

The licensed area described in this Tech Report and First Resource Report of Elcora's wholly owned subsidiary Ermazon consists of 16 licenses. Each has a size of 4x4 km or 16 km². Due to measurements of many decades ago, two licenses slightly overlap.

The gaps between some of the licenses are too small to grant a license, neither to Ermazon nor to any other applicant. However, these areas will be included in an exploitation license.

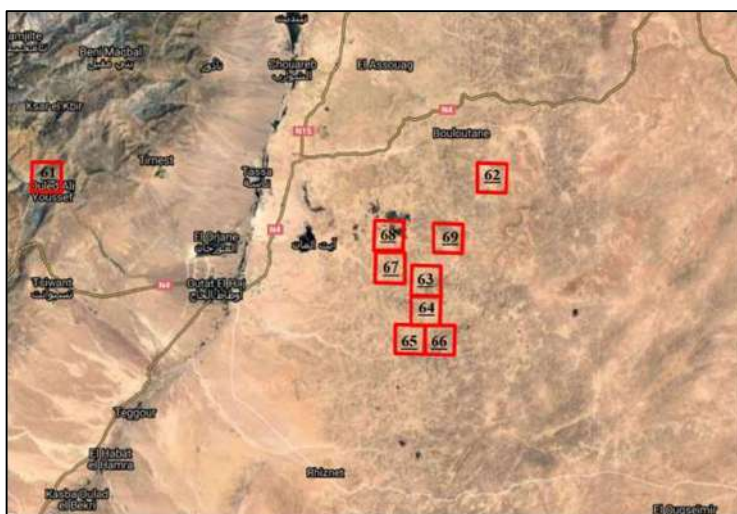
The hilly horst area is divided by numerous Wadis, dry river beds, which also serve as access to the licensed area. The Moroccan state remains property owner of the licensed area.

4.2 Location

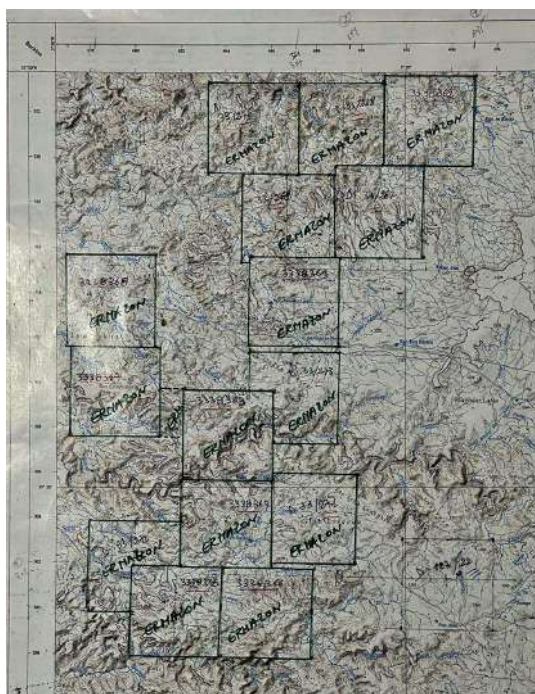


Mohamed Abdellaoui, Géologue agréé

The area of Elcora's licenses is in the Boulemane province in Eastern Morocco. It is accessible from the city of Outat El Haj via National Road N4 in Northern direction, after 7km the route turns right onto an asphalted road to the village of Tissaf. From the village a gravel road heads East for 22km. The visited sites are ca.10 and ca. 17km as the crow flies to the East of the village of Tissaf. Area 1 is ca. 5km off a former Bedouin camp on foot, area 2 is accessible with off-road vehicles.



The picture on the left shows the location of the original 9 Vanadium licenses of Ermazon in the Tissaf area. License 338361 (in short "61", is not included in this report.



All contingent 16 Vanadium Licenses of Ermazon SARL



Mohamed Abdellaoui, Géologue agréé

Elcora through its wholly owned subsidiary has purchased 16 licenses in the Tissaf area. It holds 1 further Vanadium license which is not subject to this Tech report. Nine licenses are part of the initial package which Elcora has acquired with Ermazon. The other seven licenses were purchase in addition in order to obtain one large licensed area without any threat that potential competitors may step in. This contingent licensed area now may transition into a single exploitation license for 16 research (exploration) licenses combined.

The original exploration licenses have an expiration date of August 4, 2024, the new licenses are valid until 2027.

The chart on the following page shows all sixteen Ermazon research (exploration) licenses with their official numbering and center-coordinates. There original nine licenses are valid from 06 August 2021 through to 04 August 2024.

Each of these exploration zones have an area of 1600 hectares for a total area of the sixteen areas of 25,600 hectares.

PERMIT	X	Y
PR 3338361	631942	321133
PR 3338362	693016	322004
PR 3338363	684273	307821
PR 3338364	684273	30387
PR 3338365	682173	299921
PR 3338366	686273	299921
PR 3338367	679273	309571
PR 3338368	679016	313804
PR 3338369	687163	313619
33/267		
33/268		
33/269		
33/270		
33/271		
33/272		
33/273		

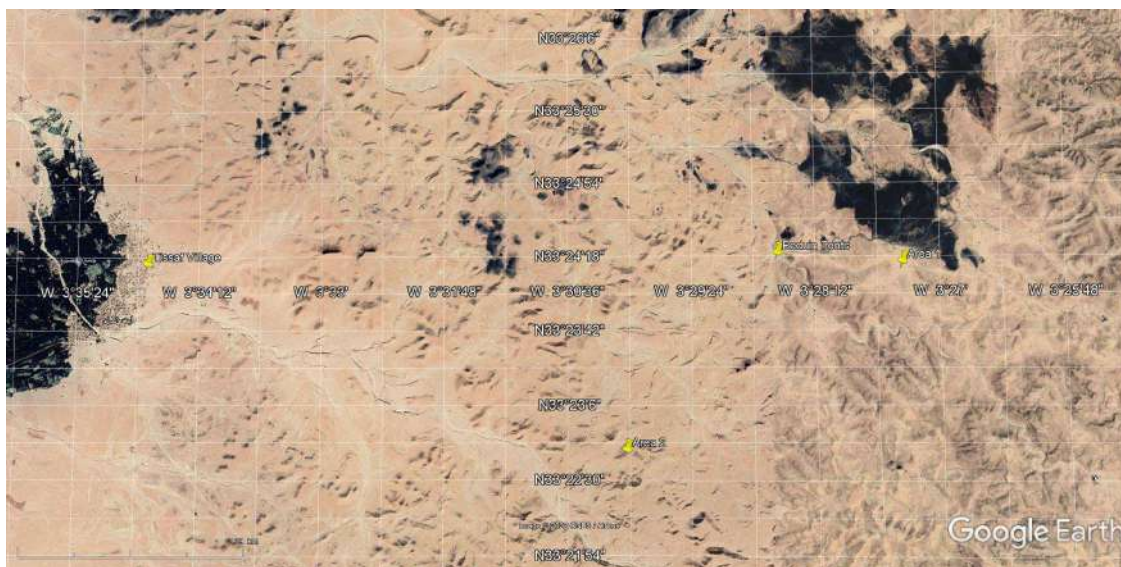
There are several other licenses issued to other entities in the vicinity of the Atlas Lion Project. However, there is no activity associated with these licenses which mostly are situated to the East.

Ermazon is in process of application for the exploitation license. The findings of this Tech Report and First Resource Report are sufficient proof to the Moroccan mining authorities to accept the application for an exploitation license.



Mohamed Abdellaoui, Géologue agréé

The current licensing status is that once the exploitation license is granted, it will be valid for 10 years. The company has to all mining related activities every quarter to the regional mining authority in Fes. Upon doing so and by maintaining all applicable Moroccan laws and regulations, the application for renewal of the exploitation license after 10 years will be renewed.



Location of the sampling areas in relation to Tissaf municipality

4.3 Mining Rights in Morocco

The following article is a full assessment of the actual Moroccan mining law written by Godfroy LeMintier of global law firm Norton Rose Fullbright. Due to its completeness and comprehensiveness, there are no further comments made by the qualified persons.

Until 2016, the mining sector in Morocco was regulated by the *Règlement Minier* i.e. Dahir, dated 16 April 1951 (the “Dahir”) completed by Decree no.2.57.1647 dated 17 December 1957 implementing the provisions of the Dahir and *arrêté viziriel* dated 21 April 1951 relating to the filing and registration of research permits (as subsequently modified by *arrêté viziriel* dated 1 January 1953).

A new mining regulation was introduced under law n°33-13 dated 1 July 2015 (enacted by Dahir n°1-15-76 dated 6 August 2015) (the “New Mining Code”) and Decree-Law n°2-15-807 dated 20 April 2016 (the “Decree”). Effective as from the publication in the Official Gazette of the Decree i.e. 21 July 2016, the New Mining Code incorporated some of the principles contained in the previous legislation and introduced new provisions, including:



Mohamed Abdellaoui, Géologue agréé

- Extending the provisions of the New Mining Code to all mineral substances used for industrial purposes with the exception of construction and civil engineering purposes;
- Abolishing categorisation of mines and restrictions of permits in respect of such categories;
- Abolishing concessions and introducing new mining authorisations including an exploration authorisation enabling the holder to carry out exploration programmes and giving priority to holders for applications for exploration permits;
- Altering the conditions for granting exploration permits and the renewal period (three years instead of four);
- Introducing committees to arbitrate between the authorities and the operators and simplifying administrative formalities; and
- Defining the statutes applicable to mining companies.

4.3.1 State ownership of Minerals

The New Mining Code is applicable to all mineral substances including but not limited to:

- Solid fossil fuels, graphite as well as oil shale, limestone and oil sands
- Metallic substances
- Industrial rocks and minerals
- Phosphates
- Radioactive or non-radioactive substances that can be used in atomic energy
- Ornamental rocks and precious stones
- Carbon dioxide
- Dumps and slag heaps
- Groundwater

Mineral substances that can be used as materials for civil engineering or construction are not considered as mines. This applies in particular to sands and clays intended for civil engineering and construction, limestone intended for building stone or gravel, marbles and granites intended for coating, as well as ghashoul and clays intended for pottery, which are considered as quarries.

4.3.2 Mining titles under the former regime

The Dahir provided for three different categories of mining titles:



Mohamed Abdellaoui, Géologue agréé

Exploration permit (*Permis de recherche*) Exploration permits gave an exclusive right to search for mineral substances of a given category within an area of 4 km by 4km. This permit, which was valid for a period of three years and was renewable for a second four-year period, gave the holder the right as well as the obligation to explore for the substance classified in a given category.

Mining permit (*Permis d'exploitation minière*) If a workable deposit was discovered, and the applicant had fulfilled the conditions relating to the exploration permit (including carrying out the required exploration works), the exploration permit might be transformed into a mining permit. This new permit, which was issued for a period of four years and could be renewed three times, entitled the holder to work the deposit and dispose of the substances in the relevant category. After three renewals, an additional 12-year extension might be granted, where relevant. The granting of the mining permit rendered the exploration permit which enabled its constitution null and void, which meant that, since the exploration had produced results, the exploration permit was replaced by the mining permit. It must be noted that the applicant was at this stage also allowed to operate the discovered deposit. A mining permit might be transformed into a concession either at the owner's initiative or at the initiative of the Ministry of Mine and Energy, in cases where such measure was justified by the importance of the deposit (*gisement*).

Mining concession (*Concession minière*) A mining concession gave an exclusive right to exploit mineral substances for a given category within a given area. It was granted for a period of 50 or 75 years, depending on the category of mineral substance, which could be renewed for a 25-year period, if the results obtained by the activity performed under the former concession period were sufficient. Upon the expiry of the concession, the concession was returned to the State, free of any costs and encumbrances, including all of its ancillary immovable assets. The concessionaire might freely dispose of the mineral substances which were subject to the concession, subject to the requisition right that the State might exercise in the public interest (and which gave right to compensation, to be either agreed by the parties or fixed by court). Mining concessions were rare in practice (a few of them were granted decades ago) and have no longer been granted to investors under the New Mining Code.

4.3.3 Mining titles under the New Mining Code

Mining licences are limited real estate rights that may be subject to mortgage but are distinct from the ownership of the land. Therefore, mining operators must always secure applicable occupancy rights separately from the applicable mining title.

Exploration permit (*Autorisation d'exploration*) It is valid for a period of two years and renewable once for a one-year period, for an area comprised between 100 km² and 600 km². Applicants must enter into a contract with the mining administration detailing the



Mohamed Abdellaoui, Géologue agréé

contemplated exploration and investment activities. An exploration permit can only be granted to a legal entity. The exploration area depends on the works programme and the investments contemplated by the applicant. It is not possible to hold more than four exploration permits.

Research permit (*Permis de recherche*) It is valid for a three-year term for a square area with sides of at least 4 km in length and is renewable once for four years, subject to a program detailing at least the contemplated expenditures and work. The research permit confers to its holder, under the conditions set out in the New Mining Code, the exclusive right to search for the products of mines found within the perimeter covered by such permit, including by carrying out geological, geochemical and geophysical studies and work, drilling holes and mining work, for the purpose of determining the existence of a deposit.

Mining licence (*Licence d'exploitation*) (i) The mining license grants its holder the exclusive right to extract and/or develop mining products from a deposit with a view to obtaining merchantable mining products, in particular by means of studies, preparatory work, exploitation work and/or enrichment and/or beneficiation operations of these products, as well as the realization of the infrastructure necessary for such work. (ii) It is valid for a term of ten years and successively renewable for ten years periods until the reserves are exhausted. Under the former regime, the license was only valid for four years. Furthermore, the granting of a mining licence will now revoke the research permit only for the area it covers. A second exploration permit will be granted for the area that is not covered by the same licence. (iii) The discovery of a deposit gives the holder of the research permit the exclusive right to apply for a mining license for the perimeter of the said discovery, the application having to be filed before the expiry of the permit. These provisions imply that an application for a license may be refused for reasons other than the failure to file the application within the validity period of the license. However, the New Mining Code does not provide for any guidance as to the reasons for such a refusal. (iv) Unlike exploration permits and research permits, which do not specify any constraint relating to the nationality of the holder, the beneficiary of a mining license must be a Moroccan law company.

4.3.4 Transition from the former mining regime to the new mining regime

Mining concessions that are valid on the date of entry into force of the New Mining Code remain subject to the legal provisions in force at the time they were granted, but the New Mining Code will apply as soon as they are renewed.

They cannot be renewed as mining concessions per se. Within a period of one year before the expiry of a mining concession, the holder of the said concession may submit an



application for a mining license to cover the exploited deposit or deposits, in accordance with the provisions of the New Mining Code and the Decree. Failing this, the concession will be repealed and the land concerned will become available for exploration.

As for the holders of valid research or exploitation permits under the Dahir, the New Mining Code provides that the latter must submit an application for renewal of the research permit or, as the case may be, for its conversion into a mining license within one year of the coming into force of the New Mining Code, failing which the existing permits will be revoked by the administration. This is an important point to check in case of the acquisition of an operator holding mining licences under the former mining regime.

Furthermore, the operators of mineral substances which are considered as quarries before the date of entry into force of the New Mining Code and which are classified as mining products under the provisions of the New Mining Code, must, within one year, submit an application for a mining license to cover the deposit(s) they are exploiting, in accordance with the provisions of the New Mining Code and the Decree. If the application is not filed within the time limit referred to in the first paragraph of this article, the area concerned is released.

4.3.5 Foreign investors' rights

The three above-mentioned mining rights may only be granted to legal entities. There is no restriction relating to the nationality of the holder of the authorisation except for mining licenses, which may only be granted to Moroccan law companies. It must be noted that the exploration and exploitation of phosphates are a monopoly of the Moroccan State.

Through the investment charter (*charte d'investissement*), foreign investors may benefit from certain tax and regulatory advantages, in particular if the investment meet certain requirements (size, number of workers etc.).

Investments which are made by foreign investors in foreign currency into Morocco benefit from the so-called convertibility regime provided for by the Moroccan foreign exchange regulations, including in particular the *Instruction Générale de l'Office des Changes*.

4.3.6 Indigenous population, training, and other social obligations

Permits and concessions may not impeditment the rights granted to indigenous persons (*droits coutumiers*) for the extraction of certain substances. However, permit or concession holders may be allowed to override those rights for all or part of the perimeter of their permit, if they agree with the indigenous persons on the payment of compensation which, if they fail to agree, is determined by the authorization.



4.3.7 Fees, taxes, duties and royalties

The granting and renewal of mining permits are subject to the payment of certain application taxes, which have been revised by the Decree as follows:

- Exploration permit: MAD50 per square kilometre.
- Research permit: MAD2,000
- Mining licence: MAD18,000

In addition to those taxes which are usually applicable, a local annual tax applicable to mining exploitation activities is payable to the relevant region under Article 4 of Law No 47-06 related to local taxes, promulgated by Dahir No 1-07-195 dated 30 November 2007.

The amount of such taxes is based on the quantity of mining products extracted during the mining operation. The rate varies depending on the extraction region between MAD1 and MAD3 per ton extracted.

Lastly, exploration authorizations and research permits are subject to the performance of a minimum amount of work per square kilometer ranging between MAD10,000 and MAD66,000.

4.3.8 Financial capacity of the investors

The award of a mining title (in particular at first an exploration permit) is subject to justification of technical capabilities and financial resources for all operations related to such title. The holder of a mining title must achieve a program for works to be carried out (which must also include the minimum technical and financial means that the applicant undertakes to deploy).

4.3.9 Protection of the environment

Environmental regulation in Morocco is set out in particular by Law n°11-03 dated 12 May 2003, the main purpose of which is to protect the environment against any kind of pollution and degradation and to implement a liability legal framework guaranteeing compensation for any damages caused to the environment.



Mohamed Abdellaoui, Géologue agréé

In this context, the New Mining Code specifies that the holders of a mining license must elaborate an environmental assessment study and shall be subject to environmental acceptance by the authorities.

When the occupation of the land lasts more than five years or the land is no longer suitable for the use to which it was previously assigned, the owner of the land may require the holder of the research permit or the mining licence to acquire the land at a mutually agreed upon price. In the event of disagreement on the acquisition price, the price shall be set by the provincial commission referred to in Article 69 of New Mining Code. In the event that no agreement is reached on the price set by the provincial commission, the price shall be set by the competent jurisdiction.

4.3.10 Enforcement regime

Morocco has signed and ratified the New York Convention on the Recognition and Enforcement of Foreign Arbitral Award. This establishes a framework for enforcement of foreign arbitral awards, although the enforcement process is submitted to local law. Moreover, it must be noted that the templates of agreements provided by the ONHYM are submitted to arbitration of the Moroccan Arbitration Chamber (*Chambre Marocaine d'Arbitrage*) in accordance with its rules of arbitration.

Morocco is a party to bilateral investment treaties with a number of countries, including free trade agreements with the US, European Union and major Arab, African and south-eastern Asian countries.

In the case of Ermazon the Forrestral authority agency of Missouri, which carries the responsibility for the licensed area has signalized that there are no issues in regards of Flora and Fauna, however, the agency expects that it is stated in the environmental impact study that Ermazon will apply all and every protection measure to protect surface and groundwater levels.

5. Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

There is one route from Morocco's economical center Casablanca to the Atlas Lion project with a total length of 513km to the municipality of Tissaf. It follows National Highway A5 and A2 towards Meknes and turns South-East on National Road N4 all the way to Outat El Haj in Boulemane Province. Trucks need ca. 12 hours for this trip.



Mohamed Abdellaoui, Géologue agréé

From Outat El Haj the N4 continues for 7km to the road forking East to the village of Tissaf. From the village a gravel road is heading East for about 20km to the sample location on license Nr. 3338367. The rough gravel road has to be broadened and stabilized and then be developed from the former Bedouin camp to the site Area 1. The rough road to area 2 requires also developing works from the existing gravel road.

5.2 Climate

The district's climate is Mediterranean with an average annual temperature of 18.1° C and an average precipitation of 517.2 mm. Summer-temperatures can exceed 40° C in daytime and reach low single-digit temperatures at night. Winter temperatures reach 5 to 15° C during daytime and drop well below freezing point at night down to -15°C.

Most precipitation falls from January to March, but has been delayed in recent years by one or two months.

5.3 Local Resources

Finding qualified labor for the mining industry is comparable to other remote, predominantly farmed areas. Human resource efforts can tap on a motivated and dedicated local workforce. Mechanical skills and skills necessary for mining are available and at reasonable cost. Non-qualified Labor pays 4.000 MAD on average and skilled Labor from 7000 MAD to 10.000 MAD. Management, Geologists, Engineers are paid from 30.000MAD per month.

Equipment maintenance services are mainly available from Casablanca where all major equipment manufacturers like Caterpillar, Komatsu, Liebherr, Volvo etc. are present. Due to the long travel distance, the cost for preventive maintenance is strongly affected.

Fuel, Tools and Supplies are available at Outat El Haj and Food and Drinking water can be purchased in Tissaf.

Process water for mineral processing has to be searched for by well-drilling as close as possible to the mine site. Locals informed that drilling in Wadi (dry river) beds is highly successful in the entire area. Depending on the distance between well and mine-site, the water will be either pumped via ÜE pipeline or transported with farm tractor and tank trailer.

There is no high-voltage power grid anywhere near the licensed area so all electrical power has to be generated with diesel generator or with solar and/or wind power generation. There are no buildings in close vicinity to the licensed area so setting up a container-camp with



Mohamed Abdellaoui, Géologue agréé

dorms, sanitary, kitchen and socializing containers is necessary. Cell phone service shows weak signal so the installation of a repeater mast is mandatory. There is no emergency service like fire fighter or ambulance within a 2-hour range, so keeping an ambulance at work site is also mandatory.

5.4 Infrastructure

Energy. There is no high-voltage power grid anywhere near the licensed area so all electrical power has to be generated with diesel generator or with solar and/or wind power generation.

Water. While process water may become available through well drilling, potable water has to be locally purchased and provided to staff.

Accommodation. There are no buildings in close vicinity to the licensed area so setting up a container-camp with dorms, sanitary, kitchen and socializing containers is necessary.

Communication. Cell phone service shows weak to no signal so the installation of a repeater mast is mandatory.

Emergency Services. There is no emergency service like fire fighter or ambulance within a 2-hour range, so keeping an ambulance at work site is also mandatory.

Roads. All access from Tissaf is via rough roads pushed with dozers etc. Maintenance with grader will be mandatory for haulage.

5.5 Physiography

The licensed area is a Horst-Stratigraphy region in the Moulouya basin. Average Height above sea-level is ca. 800m with Horst-tops reaching elevations between 1.200 and 1.800m above sea-level. Erosion has formed steep to vertical-walled valleys with depths of up to several hundred meters.

Almost all of the scarce water can be found in these Wadi-valleys. The dip of the Wadi beds on average is around 5 degrees with steeper section behind hard-rock fault-zones.

There is no topsoil, vegetation is typical for this semi arid climate.

6. History



Mohamed Abdellaoui, Géologue agréé

The district may have some history since there are a few old mines and open pits but mostly on artisanal scale. Only known mining operation on a professional scale was until 1954 just outside Ermazon's license 333273.

7. Geology Setting and Mineralization

7.1 Vanadinite Mineral

Vanadinite forms particularly colorful minerals and is named after Vanadium, another name for Freyja, Scandinavian goddess of beauty. Its name-giving metal is Vanadium (V), a white, silvery, hard, ductile and corrosion-resistant Metal. The metal is a good conductor of heat and electricity with a hardness of 7, a density of 6.1 g/cm³. and a melting point of 1910°C.



Vanadinite (Wikipedia)

The metal Vanadium is found in either magmatic or hydrothermal deposits. Vanadium minerals are *Patronite* [VS₄], *Vanadinite* [Pb₅(VO₄)₃Cl], *Mottramite* [PbCu)(VO₄)(OH)], *Carnotite* [K₂(UO₂)₂(VO₄)₂(3H₂O)] and *Roscoelite* [K(V,Al,Mg)₂(SiAl)₃O₁₀(OH)₂]. The minerals usually associated with vanadium minerals are magnetite, ilmenite and hematite.



Mohamed Abdellaoui, Géologue agréé

The mineral in the case of Ermazon's deposit is *Vanadinite*. The hydrothermal Mineral is a secondary *Lead-Chlorovanadate*. *Vanadinite* is one of three Vanadium minerals mined for industrial use together with *Carnotite* and *Roscoelite*.

Traditional method of extraction is roasting and smelting to first extract the Lead and then Vanadium for this process' slag. A much more modern method is a combination of gravity-separation and hydrometallurgical separation of Lead and Vanadium.

Moroccan Vanadinite served as a source of Lead until the Mid-1950s, when the French Colonial rule came to an end. Since then, all Vanadinite mining in Morocco was abandoned.

Modern hydrometallurgical processing of the mineral now enables the base metals industry to extract 99.99% pure Lead (Pb) and 99.99% (V) from Ermazon's Vanadinite. The increasing demand for Vanadium, which mainly is utilised for such steel alloys as in tools etc. is generated from a completely new technology which is linked to ecological electric power generation: Vanadium-Flow Batteries are expected to become the main solution to store ecological, green energy from solar and wind power generation.

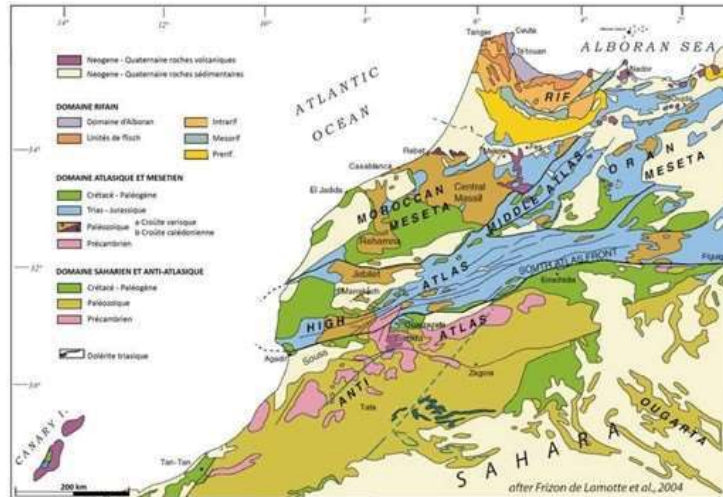
7.2 Geology

The licensed area is located in the Middle Atlas. All licenses are part of the same geological context, which is the middle Moulouya which belongs to geological formation of the Meseta Oranaise.

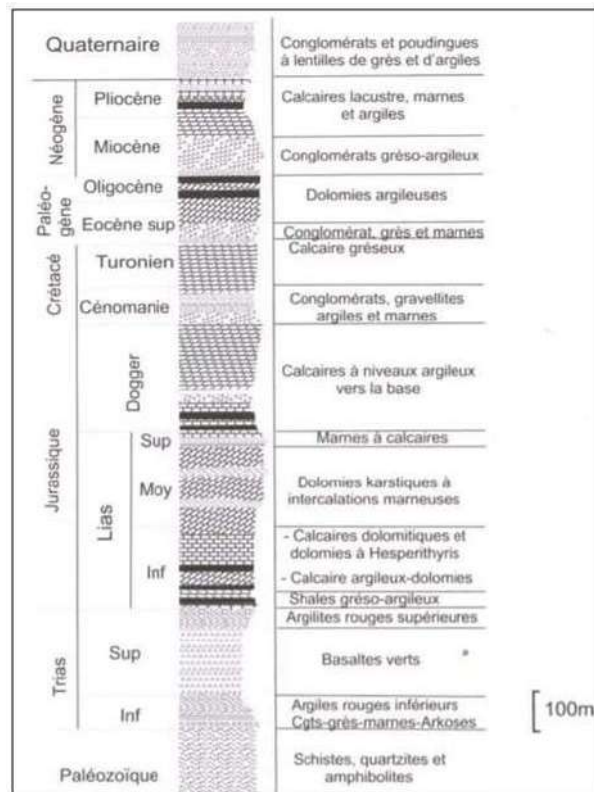
These areas' boundaries are the Middle Atlas to the North and West, to the East it is the High Plateaux ("Horst") of Moulouya and to the south it is bordered by the High Atlas. Outcrops there are various in geological nature and date from the Paleozoic to the Plio-Quaternary. The overall stratigraphy is illustrated in Naji, 2004.

Geological Basis

The Paleozoic basement is formed by schistose and granitic terrains attributed to the Cambro-Ordovician (Hoepffner, 1987). The shales are metamorphosed and intruded by granitoids 330 ± 2 Ma in age (Oukemeni et al., 1995). The whole is affected by Late-Hercynian and Atlas fracturing. These granite massifs outcrop, by the play of tectonics, to the west by crystallophyllian series from Aouli to Zaïda and Boumia Kerrouchène.



Simplified geological map of Morocco from Frizon de Lamotte et al, 2004



Synthetic stratigraphic log of the Moulouya formation and its Atlas borders (Naji, 2004)

The Moulouya stratigraphy overlays Triassic formations in a pronounced angular discordance, on top of its base formations (Emberger, 1965). The Million-year-old



Mohamed Abdellaoui, Géologue agréé

stratigraphy of the Moulouya river basin fills the concave shape stratigraphy of the paleo-surface (Derrar, 1996). The Triassic series is topped by marl and Liassic limestone of low thickness and multiple coastal facies (Dagallier, 1977). On the whole of this detrital cover, the thicknesses are reduced, especially near the inlets, under the action of erosion (Jaouani, 2001) and also because these inlets remain after the Permian in an elevated position (Schmitt, 1976).

The Permo-Triassic age rocks correspond to predominantly clay-salt and red detrital formations: conglomerates, arkoses, red clayey sandstone. On the granitic bedrock, saliferous argillites with gypsiferous passages present basaltic doleritic intercalations in the intermediate part. During this period, the outpourings of lava on the outskirts of the bulge were formed by the basement: Basalts, Sakalavites and Trachytes, the region also experienced a series of transgressions / regressions causing the deposit of sandstone, marl, limestone facies and clays.

Triassic formations are generally sub-horizontal and unconformably overlies fractured Paleozoic terrains. They consist at the base of a conglomeratic level with schist pebbles and thin arkoses (Naji, 2004), arenites and feldspathic Rudites cemented by hematite (Felenc and Lenoble, 1965). Arkoses are bound by a siliceous, carbonated, ferruginous or barytic cement (Amade, 1965). The formations in contact with the basement are surmounted by a detrital series of red sandstone clay (Schmitt, 1976) 30 m thick, this one is composed of Pelites and Argillites (Amade, 1965). These facies are considered as a Lower Triassic clayey series (Naji, 2004). The whole is followed by a gray tholeiitic basaltic series from the Atlas rifting 200 m thick (Emberger, 1965).

The Jurassic series rests unconformably on the underlying terrains; it is a powerful series of carbonate platforms made up of limestone and dolomitic limestone (Felenc and Lenoble, 1965) strongly karstified (Dagallier and MacAudiere, 1987). It outcrops on the borders of the Atlas. Lead-barite mineralization is hosted in these carbonate formations in two intercalated levels (Naji, 2004).

Under the effect of erosion and emersion, the Cretaceous rests directly on the Middle Dogger (Emberger, 1965). The Cretaceous formations are probably the first terrains completely covering the Zeida Inlier (Schmitt, 1976).

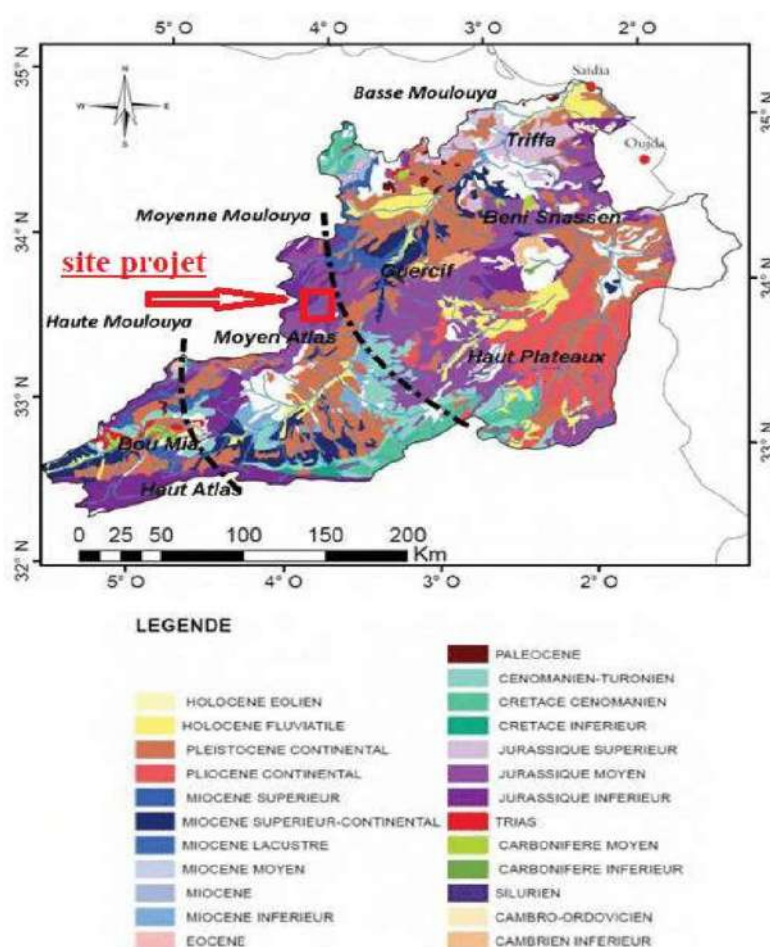
In places, it rests on the Triassic formations and its stratigraphic base (Naji, 2004). This series begins with a transgressive phase of Cenomanian age which covers the entire Moulouya basin. The stratigraphic column begins with the Infra-Cenomanian formations of lagoon character represented by conglomerates with limestone or sandstone cementation (Nasloubi, 1993) partially mineralized in barite (Naji, 2004), sandstones, argillites and marls (Felenc et al., 1965). The top of the Cretaceous is represented by Turonian limestone in bars intercalated by clay beds (Derrar, 1996).



Mohamed Abdellaoui, Géologue agréé

The Paleogene terrains are continental deposits formed at the base by conglomerates followed by marls intercalated by limestones, clays and also by dolomites (Naji, 2004). The Neogene is particularly represented by the Miocene formations (Michard, 1976).

Quaternary formations consist of fluvial terraces. These terraces contain pudding stones, pebbles, sands and sandy clays and travertines. (Combe & Simonot, 1971). The basaltic formations are set up through two volcanic structures present in the region: to the north, the small projection cone of Bou Idarne characterized by a flared crater (Schmitt, 1976); the Tougue did cone is the second volcanic unit of the Moulouya basin (Schmitt, 1976).



Geological map of the Moulouya basin (Geological Service of Morocco, 1985, scale 1/1,000,000).

The Middle Moulouya generally showing Triassic and Jurassic deposits characterizing the eastern edge of the Middle Atlas and mainly secondary-age deposits with calm structure



Mohamed Abdellaoui, Géologue agréé

which predominate in the high plateaux of the Rekkame. The subsiding domain with tertiary and quaternary filling characterizes the Middle Moulouya valley in the strict sense.

Triassic formations are generally sub-horizontal and unconformably overlie fractured Paleozoic terrains. They are formed at the base by a conglomeratic level with shale pebbles and thin arkoses (Naji, 2004).

The Jurassic series rests unconformably on the underlying terrains; it is a powerful series of carbonate platforms made up of limestone and dolomitic limestone (Felenc & Lenoble, 1965) strongly karstified (Dagallier & Macaudiere, 1987).

7.3 Mineralization

The Vanadinite mineralization is in the form of hydrothermal veins that run EW to SE-NW and intersect the Jurassic formations that are composed mainly of carbonate rocks, marly limestones and limestones.

The veins have sub-vertical dips, with km-long strike-extensions and mineable thicknesses from 0,30 to 1,0m, often grouped in parallel over packages up to 40m thick. The mineralization is controlled by tectonics, the quartz gangue encasing the Vanadinite is 30 to 50 cm thick; with decametric extensions. The probable fluid for the emplacement of the Vanadinite deposits, was placed in faults, following the interaction of fluids circulating under the effect of thermal gradients and tectonic events, with the carbonated marl rock. The upper part of the mineralized veins is composed mainly of iron oxides, quartz with surface lead showings. Vanadinite appears to be relatively more concentrated at depth, mineral paragenesis is composed of Quartz-Vanadinite-Cerussite-Galena.



Vanadinite Sample Rock from the Atlas Lion Deposit



Sampling Sites of the Exploration Campaign

8. Deposit Types

Vanadinite deposits in Morocco are unique and cannot be found elsewhere. As described Vanadinite is a secondary lead chlorvanadate. All known Moroccan Vanadinite deposits have similar to identical mineralogical and geological structure.

9. Exploration

Following extensive prospection work by the former Ermazon owner on the first 9 research licenses, Elcora and Ermazon performed a single exploration campaign from October 12 to October 21, 2021 to justify capital expenses for an initial production of raw ore with a focus on Lead.



Mohamed Abdellaoui, Géologue agréé

During the prospection work several areas showed surface or near surface veins. Some of the surface veins were partially eroded and it was decided by Geologist Mohamed Abdellaoui to visit Licenses 3338363 and 3338367 with the objective of characterizing the geological context of the Vanadinite mineralization, take representative samples at various locations and send a composite sample to the AFRILAB, African Laboratory for Mining and Environment in Marrakech. All exploration work was performed manually due to the fact that no equipment could be utilised due to the lack of access roads. The aim was to produce a first resource estimate.

The Geologist-QP Mohamed Abdellaoui and a Group of prospectors performed surface sampling, manual exploration digging and hand drilling in the exposed vein layers in the time of October 12 to October 22, 2021.



Site visit to PR 338363 with prospectors and QP Lahcen Jouak

The geological and geochemical methods used in this exploration campaign were trenching to the bottom of a surface vein and hand-drilling with a screw-type 100mm-diameter drill at places of indicated mineralization at surface.

This was followed by digging of the trenches where possible with pick-axes and shovels following the strike and dip of the mineralized veins, their thickness by relevance for mining (Starting with a minimum 0,30m, thickest vein found was 0,5m) and the veins visual extension at surface.

Sample locations were chosen according to the surface findings independent from their grade of mineralization. The sampling locations were chosen at pre-determined equal



Mohamed Abdellaoui, Géologue agréé

distances. Samples taken as representative ones as it is standard in the mining industry with an emphasis to not contaminate them. Each sample of each location was split to a size allowing to carry it for a large walking distance.

As part of the exploration work the rock formations of head- and footwalls of the vein system were identified as schist-sandstone types and carbonatic formations as they are typical for the Middle Moulouya geological formations.

It is concluded that the rock formations at depth with their in large part magmatic nature and the likelihood of higher grade Vanadinite-bearing veins require an intensive and extensive core drill exploration program.

10. Drilling

No drilling was performed in the period applying to this report. Elcora/Ermazon is in process to move its exploration drill rig Atlas Copco Diamec U7 to Morocco.

11. Sample preparation, Analysis and Security

11.1 Sample preparation

The goal of this exploration trenching campaign was to produce one composite sample from all 14 sampling locations. The reason for this procedure was that all samples were taken in the very same veins -or layers- which can be followed over many square-kilometers. These layers do not appear significantly different in their mineral composition, so the sample trenches and drill-holes (not-core-holes) material was deemed to be representative enough for a first resource estimate.

Each sample taken at each location ranged by weight between 50kg and 200kg. Each sample was carefully piled and mixed and then split into ca. 8kg samples. Geologist Mohamed Abdellaoui supervised that none of the samples was contaminated with foreign rock material and that no one tampered with the samples.

The resulting ca. 120kg of composite sample then were carefully mixed and split and then carried to a vehicle. It then was shipped in a secure manner to AFRILAB in Marrakech for Analysis.



Sampling Locations on 338363 (Area2)

Mohamed Abdellaoui, Géologue agréé



	Lambert Zone 4 X	Lambert Zone 4 Y
WP 107	677608	309932
WP 108	677443	310063
WP 109	677710	309933
WP 110	677426	310122
WP 111	677836	309818
WP 112	677416	310200
WP 113	677364	310334
WP 114	677968	309637
WP 115	677439	310337
WP 116	677995	309599
WP 117	677327	310542
WP 118	677170	310645

The chart above shows the Lambert Zone 4 coordinates for each sample taken.

In a meeting in April 28, 2022, related to the sampling done so far it was decided to sample all locations again with new samples and to get these samples analyzed at the SGS-certified laboratory AFRILAB.

The sampling was done from May 4 to May 5, 2022. The sampling was done in the same fashion as in the first campaign with shovels and picks by hand. The sample bags then were labeled and packed and the sample locations were noted with GPS data in the Lambert coordinate system. The samples then were hand-carried to the nearest vehicle ca. 6km from the sample site.



Mohamed Abdellaoui, Géologue agréé

Sample locations in Lambert Zone 4 coordinates.

The next morning on May 6, 2022, the samples were sent in a secure fashion to AFRILAB in Marrakesh for full individual assay. The results were released to the issuer on May 22, 2022.

11.2 Analysis

The following page shows the results from the SGS-certified laboratory AFRILAB both for the composite and the individual samples.

AFRILAB FORMULAIRE REALISATION
RAPPORT D'ANALYSE
ANALYTICAL REPORT

Report issue date : 10/12/21
Please find below the results of analyses.

Report number	AM/QTMB/RA/4460/12/2021
Company	EBMAZAN
Interlocutor	
Client reference	Lead Ore
Order number	
Imputation code	
date of receipt	03/12/2021
Date of analysis	09/12/2021
Sampled by	Customer
Witnessed by	
Prepared by	NABEAB

Lab-Ref	R/4460-21-01
Customers-Ref	Echantillon 1
Al2O3 (%)	0.26
CaO (%)	13.22
Fe2O3 (%)	0.16
K2O (%)	0.44
MgO (%)	0.72
MnO (%)	0.01
P2O5 (%)	0.32
SiO2 (%)	1.02
TiO2 (%)	0.01
As (%)	0.31
Ba (%)	2.40
Pb (%)	45.14
V (%)	6.14
S (%)	0.76

Address: N°148 zone industrielle Sidi Ghannem (près de la gare) - Marrakech - BP 40 000 Maroc
Marrakech (AF21) 0 61 40 15 15 - Fax/Fax: 061 29 5 51 35 81 81
TEL: 00352754000020 - Adresse: 64004900 - P: 18777180 - AG: 74473 2535 - 8007590

AFRILAB FORMULAIRE REALISATION
RAPPORT D'ANALYSE
ANALYTICAL REPORT

Lab-Ref	R/4460-21-01
Customers-Ref	Echantillon 1
B (ppm)	< 5
Be (ppm)	6
Bi (ppm)	< 10
Cd (ppm)	27
Co (ppm)	< 5
Cr (ppm)	32
Cu (ppm)	41
Ge (ppm)	< 10
Li (ppm)	< 20
Mo (ppm)	< 10
Ni (ppm)	30
Sb (ppm)	19
Se (ppm)	< 30
Sn (ppm)	< 20
Sr (ppm)	304
Ta (ppm)	6
Y (ppm)	< 1
Zn (ppm)	304

Controlled and approved by
R. HARKWA

المختبر الإفريقي للأبحاث المعدنية
AFRILAB - Lab. for Mining and Mineral Analysis
Mar. 21 - 148 Zone Industrielle Sidi Ghannem
Tél. 061 29 51 35 81

Address: N°148 zone industrielle Sidi Ghannem (près de la gare) - Marrakech - BP 40 000 Maroc
Marrakech (AF21) 0 61 40 15 15 - Fax/Fax: 061 29 5 51 35 81 81
TEL: 00352754000020 - Adresse: 64004900 - P: 18777180 - AG: 74473 2535 - 8007590

Assay of the Composite Sample from December 3, 2021

Mohamed Abdellaoui, Géologue agréé



Report issue date: 18/05/2022

Please find below the results of analyses.

Report number	AMQJA-DM-RA/2257/01/22
Company	ERMARZON
Insolvent	
Client reference	Lead Ore
Order number	
Imputation code	
Date of receipt	12/05/2022
Date of analysis	17/05/2022
Sampled by	Customer
Prepared by	AFRILAB

Les résultats ne se rapportent qu'à l'échantillon analysé à l'analyse. La reproduction de ce rapport n'est autorisée que sous sa forme intégrale.

PRE-DONNANT V 02

Page 1 sur 9

Adresse : N°344 zone industrielle S&S Ghazem (près de la poste) - Marrakech - BP : 40 000-Marrakech
Métropole : (+212) 6 43 00 15 15 - Fax/Fac : (+212) 5 24 35 81 81
CE : 00162754000005 - Patente : 6409490 - R : 18777150 - RC : 74473-CND : 480708



Lab-Ref	R/2257-22-01	R/2257-22-02	R/2257-22-03	R/2257-22-04
Customers-Ref	WP 107	WP 108	WP 109	WP 110
Al2O3 (%)	0,26	0,36	0,39	0,06
CaO (%)	11,65	15,88	20,90	9,69
Fe2O3 (%)	0,37	0,35	0,96	0,20
K2O (%)	0,45	0,43	0,42	0,29
MgO (%)	2,16	0,51	0,47	0,18
MnO (%)	0,01	0,01	0,01	0,01
P2O5 (%)	0,16	0,26	0,22	0,20
S (%)	1,20	1,04	0,84	1,41
SiO2 (%)	1,65	0,72	1,04	0,32
TiO2 (%)	0,01	0,01	0,01	<0,01
Pb (%)	44,25	43,07	40,01	50,76
V (%)	5,91	5,90	5,24	6,66
As (ppm)	1713	2354	1947	4268
B (ppm)	6	5	7	< 5
Be (ppm)	9	9	8	10
Bi (ppm)	< 10	< 10	< 10	< 10
Cd (ppm)	18	15	11	19
Co (ppm)	< 5	< 5	< 5	< 5
Cr (ppm)	52	145	87	67
Cu (ppm)	39	114	56	87
Ge (ppm)	< 10	< 10	< 10	< 10
Li (ppm)	< 20	< 20	< 20	< 20
Mo (ppm)	27	20	15	25
Ni (ppm)	42	262	116	237
Sb (ppm)	8	< 1	3	4
Se (ppm)	< 30	< 30	< 30	< 30
Sn (ppm)	< 20	< 20	< 20	< 20
Sr (ppm)	922	453	423	910
Ta (ppm)	101	107	91	126
Tl (ppm)	132	142	125	150
Y (ppm)	< 30	< 30	< 30	< 30
Zn (ppm)	551	192	311	155

Les résultats ne se rapportent qu'à l'échantillon analysé à l'analyse. La reproduction de ce rapport n'est autorisée que sous sa forme intégrale.

PRE-DONNANT V 02

Page 2 sur 9

Adresse : N°344 zone industrielle S&S Ghazem (près de la poste) - Marrakech - BP : 40 000-Marrakech
Métropole : (+212) 6 43 00 15 15 - Fax/Fac : (+212) 5 24 35 81 81
CE : 00162754000005 - Patente : 6409490 - R : 18777150 - RC : 74473-CND : 480708



Lab-Ref	R/2257-22-05	R/2257-22-06	R/2257-22-07	R/2257-22-08
Customers-Ref	WP 111	WP 112	WP 113	WP 114
Al2O3 (%)	0,16	0,17	0,16	0,72
CaO (%)	11,78	20,02	23,34	16,56
Fe2O3 (%)	0,45	2,19	0,40	0,90
K2O (%)	0,44	0,38	0,42	0,53
MgO (%)	0,62	1,60	2,46	3,44
MnO (%)	0,01	0,02	0,01	0,01
P2O5 (%)	0,23	0,17	0,24	0,27
S (%)	1,05	0,33	0,87	1,35
SiO2 (%)	0,87	1,52	2,04	2,52
TiO2 (%)	0,01	0,01	0,02	0,02
Pb (%)	41,35	40,80	28,87	34,83
V (%)	5,38	5,45	3,91	4,89
As (ppm)	1956	2279	1521	1086
B (ppm)	6	8	6	12
Be (ppm)	8	8	6	7
Bi (ppm)	< 10	< 10	< 10	< 10
Cd (ppm)	12	16	45	10
Co (ppm)	< 5	19	< 5	< 5
Cr (ppm)	91	110	78	63
Cu (ppm)	39	110	54	61
Ge (ppm)	< 10	< 10	< 10	< 10
Li (ppm)	< 20	< 20	< 20	< 20
Mo (ppm)	23	28	15	23
Ni (ppm)	78	115	84	74
Sb (ppm)	< 1	< 1	< 1	1
Se (ppm)	< 30	< 30	< 30	< 30
Sn (ppm)	< 20	< 20	< 20	< 20
Sr (ppm)	1376	152	497	185
Ta (ppm)	92	97	73	82
Tl (ppm)	120	123	87	114
Y (ppm)	< 30	< 30	< 30	< 30
Zn (ppm)	186	179	1138	644

Les résultats ne se rapportent qu'à l'échantillon analysé à l'analyse. La reproduction de ce rapport n'est autorisée que sous sa forme intégrale.

PRE-DONNANT V 02

Page 3 sur 9

Adresse : N°344 zone industrielle S&S Ghazem (près de la poste) - Marrakech - BP : 40 000-Marrakech
Métropole : (+212) 6 43 00 15 15 - Fax/Fac : (+212) 5 24 35 81 81
CE : 00162754000005 - Patente : 6409490 - R : 18777150 - RC : 74473-CND : 480708



Lab-Ref	R/2257-22-09	R/2257-22-10	R/2257-22-11	R/2257-22-12
Customers-Ref	WP 115	WP 116	WP 117	WP 118
Al2O3 (%)	0,39	0,31	0,16	0,33
CaO (%)	28,60	18,20	11,20	14,35
Fe2O3 (%)	0,59	0,36	0,40	1,08
K2O (%)	0,50	0,39	0,41	0,41
MgO (%)	2,39	4,94	1,37	4,71
MnO (%)	0,02	0,01	0,01	0,01
P2O5 (%)	0,07	0,14	0,19	0,29
S (%)	0,80	2,18	1,35	0,79
SiO2 (%)	2,11	1,49	0,67	2,32
TiO2 (%)	0,02	0,02	0,01	0,02
Pb (%)	7,61	27,93	44,88	28,48
V (%)	1,09	1,53	6,24	1,77
As (ppm)	348	405	1733	2319
B (ppm)	6	7	5	8
Be (ppm)	< 1	2	9	6
Bi (ppm)	< 10	< 10	< 10	< 10
Cd (ppm)	21	82	10	25
Co (ppm)	< 5	< 5	< 5	< 5
Cr (ppm)	54	86	51	77
Cu (ppm)	22	52	34	39
Ge (ppm)	< 10	< 10	< 10	< 10
Li (ppm)	< 20	< 20	< 20	< 20
Mo (ppm)	12	16	12	22
Ni (ppm)	39	93	63	74
Sb (ppm)	3	58	2	3
Se (ppm)	< 30	< 30	< 30	< 30
Sn (ppm)	< 20	< 20	< 20	< 20
Sr (ppm)	1765	980	522	1382
Ta (ppm)	20	33	109	74
Tl (ppm)	19	27	135	88
Y (ppm)	< 30	< 30	< 30	< 30
Zn (ppm)	817	4077	278	916

Les résultats ne se rapportent qu'à l'échantillon analysé à l'analyse. La reproduction de ce rapport n'est autorisée que sous sa forme intégrale.

PRE-DONNANT V 02

Page 4 sur 5

Adresse : N°344 zone industrielle S&S Ghazem (près de la poste) - Marrakech - BP : 40 000-Marrakech
Métropole : (+212) 6 43 00 15 15 - Fax/Fac : (+212) 5 24 35 81 81
CE : 00162754000005 - Patente : 6409490 - R : 18777150 - RC : 74473-CND : 480708

Mohamed Abdellaoui, Géologue agréé



AFRILAB FORMULAIRE REALISATION RAPPORT D'ANALYSE ANALYTICAL REPORT			
African Laboratory for Mining and Environment			
Lab-Ref	R/2257-22-13	R/2257-22-14	
Customer-Ref	WIP 138	WIP 130	
Al ₂ O ₃ (%)	0.35	0.19	
CaO (%)	13.74	13.15	
Fe ₂ O ₃ (%)	0.42	0.37	
K ₂ O (%)	0.48	0.44	
MgO (%)	2.52	0.87	
MnO (%)	0.01	0.01	
P ₂ O ₅ (%)	0.22	0.16	
S (%)	1.08	1.19	
SiO ₂ (%)	1.90	1.05	
TiO ₂ (%)	0.02	0.01	
Pb (%)	34.28	42.36	
V (%)	4.53	5.74	
Al (ppm)	1648	1714	
B (ppm)	5	5	
Be (ppm)	6	8	
Bi (ppm)	< 10	< 10	
Cd (ppm)	15	9	
Co (ppm)	< 5	< 5	
Cr (ppm)	52	39	
Cu (ppm)	25	22	
Ga (ppm)	< 10	< 10	
Li (ppm)	< 20	< 20	
Mo (ppm)	15	15	
Ni (ppm)	44	44	
Pb (ppm)	11	< 1	
Se (ppm)	< 30	< 30	
Sn (ppm)	< 20	< 20	
Sr (ppm)	1346	688	
Ta (ppm)	80	190	
Ti (ppm)	96	131	
V (ppm)	< 30	< 30	
Zn (ppm)	348	236	

Assays of the 14 samples analyzed at AFRILAB dated May 12, 2022

11.3 Interpretation of the Analysis

The very positive results from the composite sample reflects the observations made by the authors during their site expansion and during the sampling process. A Lead content of 45% and Vanadium of 6.14% is typical for this type of deposit in Morocco.

The 14 sample assays from the May 2022 campaign reflect the natural fluctuation in these hydrothermally altered Lead-deposits. A lead average content over the 14 samples of 36.52% Pb is typical for Morocco's lead deposits.

The average content of 4,125% V from all 14 samples confirms that the issuer's plan to produce a maximum lead content concentrate of ca. 50% Pb will show Vanadium concentrations from 6% V up and up to 10%V in the lead concentrate,

Mineralogically-same-type deposits in the areas of Sidi Yahia Oussad, the Oujda-Angad Province and the famous, now mined-out deposits at Zaida and Mibladen have shown similar Lead and Vanadium contents. For this first resource estimate it appears to be correct and adequate to assume that the near-surface Vanadinite ore will have an average Lead and Vanadium content as shown in this Analysis.

With this Analysis result it appears safe to say that an initial low-budget mining operation may show positive economic results due to sufficient raw ore grades.



Mohamed Abdellaoui, Géologue agréé

However, for security of economics, the first mining phase, which aims at Lead-sales only, was calculated with an average of 30% Pb.

Cautionary note: this exploration campaign was performed to determine the possibility to start a low-budget mining operation with raw ore sales to fund an extensive exploration program and a gravimetric concentration plant to upgrade the Vanadinite to ca. 55%Pb for better pricing.

11.4 Security

All samples taken were placed in individual bags, numbered and the sample location recorded in Lambert Zone 4 coordinates. The samples were taken by car from site to the city of Midelt from where they were shipped same day by individual transport service to AFRILAB in Marrakesh.

Tampering of the samples was hindered by bag seals.

12. Data Verification

All utilised data in this NI 43-101 Tech Report have been verified through the following steps:

- a) Presence of the QP's during sampling and sample preparation
- b) Supervision of transport
- c) Verification of the status of the sample being untampered upon arrival at laboratory
- d) Choice of a SGS certified Laboratory for the sample-analysis

The Qualified persons of this NI 43-101 Tech Report and First Resource Estimate state that all sample procedures were performed in a correct, professional and adequate fashion and that the collected data reflect the reality in the Vanadinite deposit as it is known at the point of signing the report.

13. Mineral Processing and Metallurgical Test-Work

There was no mineral processing and metallurgical test work performed in the reporting period of this report. However, according to the issuer this test work will be done once mine production and raw ore sales generate cash flow.



14. Mineral Resource Estimate

The Resource Estimate was calculated utilizing the length of the mineralized structures, average thickness of the Vanadinite seam and the width of exposed Vanadinite mineral structures. Ore density was determined as an average of 4 t/m³.

Three veins with thickness between 0.3m and 0.5m were identified over a total length of 2.5km, 1.700m on area 1 and 800 m on area 2. The average width of exposed mineralization with a maximum cover of 1.0m was measured at 220m which calculates to 1.1 km² of total explored area. The exposed Mineral accounts to 463.000 t of *indicated resources*. Mineral covered under a maximum cover of 10m along ridges with exposure on three sides of the ridge account for 309.000 t of *inferred resources* according to National Instrument 43-101. In total 772.000t of resources were found in the exploration campaign.

The results of the May 2022 campaign confirmed the estimates made above.

15. Mineral Reserve Estimates

No Mineral Reserve Estimates were possible due to lack of exploration drilling.

16. Mining

This Tech Report is limited to the determination of the initial method of mining for the indicated reserves. It will be open pit mining with a 40-ton class dozer with single shank ripper and a 40-ton class excavator with fifth valve and hydraulic hammer. No drilling and blasting will be necessary due to the fractured nature of overburden rock formations.

The method will suffice to produce the amounts the issuer is intending to produce a total of 250 ton per day containing ca. 75 ton of Vanadinite ore.

The issuer has provided its initial business plan for the first year and the following 10 years. The figure of 70 US\$/t of raw ore extraction, including overburden removal, appears to be realistic under the rock conditions found at site.

Once the company is positioned to hydro-metallurgically separate Lead and Vanadium to produce these metals in pure form according to LME rules, it will be necessary to determine cut-off grades and/or overburden/ore relation to determine whether open pit mining can be continued or a form of underground mining, potentially room-and-pillar mining, becomes more economical.

The result of a core hole drill campaign may change the actual mine planning in case high-grade, thicker vein(s) will be found at depth.



17. Recovery Methods

The issuer, Elcora/Ermazon, plans to develop its operation in three stages.

At first the issuer plans to sell raw ore to local mineral dealers at LME prices.

Secondly, once cash flow has generated sufficient funds, the issuer is planning to construct a semi-mobile gravimetric concentrator plant on skids and/or tracks. This measure allows to set up the concentrator as close as possible to the mining operation. The feeding method could be load-and-carry with a 4 m³-class wheel loader or excavate-haul-dump-feed.

Tests performed at the RWTH Aachen mining university in Aachen, Germany, with the same-type ore of Sidi Yahia Outat have shown that crushing, milling, rougher concentration with spirals and then application of Deister-tables will produce a 50% (Pb) Lead concentrate with up to 10% (V) Vanadium contained in that concentrate.

It is possible, and this is verified with a German foundry in Stolberg/North-Rhine Westfalia, to repurchase the slag from the Lead production and resell it to a company which extracts the Vanadium with a hydrometallurgical process. This means that Elcora/Ermazon will have the option to start exporting concentrate from Morocco once the semi-mobile concentrator is commissioned.

The third project phase starts with the tests of the hydrometallurgical method to separate Lead and Vanadium in 99.99% concentration from the gravimetrically produced concentrate. The test phase is understood to take a few months. Elcora Ermazon then plans to build the hydrometallurgical separator plant in a location within its licensed area. The location for that plant remains to be determined.

Tailings from the concentrator plant will be pumped into on-site built sediment ponds from which processing water will be recuperated. Once a pond is filled and the tailings dewatered, the pond will be emptied with excavator and dumper and the tailings will be dumped into constructed dams in dry Wadis and then covered by overburden from operation to avoid erosion.

The tailings from the separator plant are subject to polymetallurgical research laboratory work to determine which of the metals and rare elements as shown in the AFRILAB analysis can be recuperated at reasonable cost.

The all-in cost forecast for the concentrator operation is calculated at 120 US\$/t of concentrate. The increase in concentrate sales revenue is calculated at ca. 70% per ton in comparison to the raw ore sales.



Mohamed Abdellaoui, Géologue agréé

At this point there is no final figure available for the Lead/Vanadium separation process. The inventor and patent holder for the process gives a cost estimate of 700 US\$ per ton of concentrate as a plan-figure. These costs appear to be justifiable in light of the opportunity to obtain a 100% full Lead price with premium under LME rules and Vanadium prices from 25.000US\$/t and up on European and Asian Markets.

18. Project Infrastructure

There is no high voltage electrical power available in a 50km distance from the project site. All electrical power may be generated by Diesel-powered generators and/or in part by solar power

Process water is available through well drilling in the aquifers below the Wadi valleys but water consumption must be minimized so not to drain an aquifer.

Most work force will come from Outat El Haj and Tissaf. For their well being a container-based canteen will be established. Expats and/or Moroccan specialists will find accommodation in a container camp at site.

Access by dirt road will be constructed for each individual mine and processing site. Road-going trucks will such be able to access the site.

19. Market Studies and Contracts

The issuer has connections through their Moroccan partners to the Moroccan mineral buyers with who they will sell their raw ore.

There are several European and Asian Mineral Traders identified with whom the issuer plans to market the lead concentrates once a concentrator is built.

The third stage sale of purified Lead and Vanadium will be initiated once the lead concentrate business generated enough funds to build the lead/Vanadium separator facility.

Independent Market studies show strong growth for high grade Vanadium (Especially Ferro-Vanadium at 80% V-grade). The newer Vanadium-flow technology batteries do need purified Vanadium, a market that is hardly served by the actual Vanadium producers.



20. Environmental Studies, Permitting and Social or Community Impact

Ermazon has performed an environmental study for the process of the application of exploitation license. Every entity applying for a mining exploitation license must submit an environmental assessment study with the application for said license.

The applicable authorities then will examine the environmental protection and remediation measures as the applicant has submitted them. It is solely in the authority of the applicable authorities to demand environmental protection and remediation measures.

The permitting process and its status was described in chapter 4.

Social impact is expected to be very positive in this area of more than 20% unemployment. A study on this matter will be performed at a later point.

21. Capital and Operating Costs

Initial purchase cost for licenses were 600.000 US\$. Additional licenses and exploitation license application cost additional 230.000 US\$ for a total initial CAPEX of 830.000 US\$.

CAPEX for raw ore production is estimated at 400.000 US\$. All-in OPEX cost for raw ore operation are estimated at 300 US\$/t.

Any further development and/or of the Atlas Lion Vanadium Project will require detailed economic analysis when such a measure reaches planning stage.

The entire licensed area of Ermazon is state-owned property. There are no royalties to be paid to any private party or the state. The only royalty to be paid is 10 Dh/t to the closest neighboring municipality.

22. Economic Analysis

A full economic analysis will be started once the raw ore sales show results.

23. Adjacent Properties

There are adjacent properties known through the contacts at the mining authorities. None of them are active.



Mohamed Abdellaoui, Géologue agréé

24. Other Relevant Data and Information

24.1 Country Risk

In a 2017 Doing-Business survey, Morocco has ranked 67th out of 190 Nations. Morocco has good to very good relations with Canada, Israel and many European Countries.

The modernized mining laws set in place in 2021, which mirror French mining laws and regulations, give mining companies an investment security on a high level almost equaling European investment security.

Taxation is 20% VAT on sales and 30% on annual profit after all-in cost.

As in many countries, bureaucracy can be slow in procedures and/or decision making but the experience made by the issuer in the process of obtaining the additional research (exploration) licenses show that the mining authorities are effectively organized.

The exchange rate risk is relatively small since the Moroccan Dirham (MAD) for years exchanged for around 8 MAD towards the US\$ and 10 MAD towards the Euro.

Biggest known risk are some restrictions on pre-payments on import-purchases which complicates and slows down the purchase of equipment. This can be mitigated by good in-advance planning of purchases and/or purchase of equipment through local dealerships. All major mining equipment manufacturers are present in Morocco.

As a constitutional monarchy Morocco is ranked as very politically stable.

There is no risk from the point of infrastructure. Half of the route from Tissaf to Casablanca is possible on two-lane-highways, the other half is four-lane-highway with short access to the Casablanca port via a newly constructed access road.

There is no record off any mentionable social unrest in Morocco over the past 10 years. The labor laws are clear and are designed to establish stable relationships between employer and employee.

24.2 Area Risk

The risks associated with operating in the Tissaf area are the same as experienced in any semi-arid climate. With good planning and tight organisation issues like water, food and accommodation for the workers can be successfully mitigated.

The threats for the employees' health from poisonous snakes and scorpions can be considered as minor since all on-site workers will be hired locally. The local people know well how to be precautions.



The water supply for the processing operation may become an operative risk after prolonged draughts. In recent years the weather pattern has shifted also in Morocco but the overall precipitation amounts remained stable year-on-year.

24.3 Other Risk

Other risk associated with Elcora/Ermazon's operation in Tissaf/Morocco are the typical issues associated with mining operations anywhere:

- Undetected Geological Changes: fault zones, vein-fading,
- Undetected Mineralogical Changes: fluctuation in ore-grades, fluctuation in content of harmful metals as example Arsenic or Cadmium
- Operative Issues: Machinery and/or Labor performance
- Supply challenges: fuel, imported supplies, logistics

25. Interpretations and Conclusions

The information derived from exploration program performed by Elcora/Ermazon leads to the conclusion that there is substantial evidence of existence of Vanadinite ore at near or surface which justifies an initial mining operation with raw ore sales.

It is mandatory that the Elcora/Ermazon, the issuer, starts an extensive exploration campaign as soon as the company's core drill machine is on site. It is recommended to operate the exploration works in a 24/7 fashion so to locate best reserves in aspect of accessibility, grade, vein thickness and mineability in a relatively short time frame.

Also mandatory is that the Elcora/Ermazon invests as soon as possible into a concentration plant to mitigate the risk associated with ore quality fluctuation.

26. Recommendations

It is recommended to start the open pit operation with quality used machinery which is available on the Moroccan equipment market. This avoids high investment before a cash flow is established.

It is strongly recommended to invest into a concentrator to produce a highest possible Lead concentrate as soon as possible, particularly into a semi-mobile one due to the large consumption of area by the mining operation. This would generate higher prices based on LME rules for the Lead concentrate and either a premium for the Vanadium content or allowing for the re-sale of foundry-lead-slag to hydrometallurgical plants.

Mohamed Abdellaoui, Géologue agréé



It is recommended to employ a local core drill contractor, if Elcora/Ermazon cannot receive its core drill machine within 3 months of the issuance of this Tech Report. The exploration program needs to begin as soon as possible to avoid potentially costly planning errors.

The evenness of the vein systems which only get disrupted by Wadis or rather rare fault zones, does help with the exploration program. It should contain rather shallow core holes of ca. 100m in depth at the corner of each quadrant of 400 to 500m spacing which should be combined with a center-located hole drilled to maximum depth of 700 to 800m to explore the existence of feeder structures and other mineral veins.

Although open pit mining obviously appears to be the mining method to start with, it is recommended to investigate overburden to mineral vein ratios to determine whether some of the deposit should be mined underground.

Separation of Lead and Vanadium is recommended as a hydrometallurgical process rather than the standard thermal one for reasons of much reduced energy consumption and low Carbon footprint. It is highly recommended to test the hydrometallurgical process under laboratory conditions with certified laboratory companies.



27. References

The following have been cited within the report, as is, but do not include an actual reference.

Amade, 1965

Combe & Simonot, 1971

Dagallier, 1977

Dagallier & Macaudiere, 1987

Derrar, 1996

Emberger, 1965

Felenc and Lenoble, 1965

Hoepffner, 1987

Jaouani, 2001

Michard, 1976

Naji, 2004

Nasloubi, 1993

Oukemeni et al., 1995

Schmitt, 1976