

**NI 43-101 TECHNICAL REPORT ON THE
DORADO PROJECT
(Formerly Lajitas)**

ATACAMA REGION, CHILE

PREPARED FOR

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AND

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Effective Date:

October 23rd 2020

Report Date:

November 26th 2020

CERTIFICATE OF QUALIFIED PERSON

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I, **David R. Hopper** do hereby certify:

- I am an independent consultant, resident in El Arrayán, Santiago, Chile.
- This certificate applies to the technical report "NI 43-101 TECHNICAL REPORT ON THE DORADO PROJECT, (Formerly Lajitas), ATACAMA REGION, CHILE" dated October 23, 2020 (the "Technical Report") with respect to the Dorado Project in the Atacama Region, Chile (the "Property").
- I graduated in 1990 with a BSc (Hons) in Applied Geology from the University of Leicester, UK, and in 1998 with a MSc in Mineral Exploration from James Cook University, Australia.
- I am a Chartered Geologist in good standing of the Geological Society of London, License No. 1030584. The GSL is a recognized professional association as defined by NI 43-101.
- I have worked as a geologist continuously for 30 years since my graduation from University. Throughout these years of professional experience, I have been directly involved in mineral exploration for porphyry gold, porphyry copper and epithermal gold deposits in various geologic settings, including the Atacama.
- I have read the definition of "qualified person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and confirm that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
- I am responsible for all sections of the Technical Report.
- I am independent of Federal Gold Corp. and ZTR Acquisition Corp. (to be renamed Angold Resources Ltd.), as described in Section 1.5 of NI 43-101.
- I am independent of the Dorado project as understood in Section 1.5 of NI 43-101.
- I have not worked on or visited the Dorado project prior to the preparation of this report.
- I spent 1 day reviewing and sampling Dorado Project drill core on October 12th 2020, and 1 day reviewing and sampling the Dorado Project site on October 13th, 2020.
- I have read NI 43-101 and this Report. The Report has been prepared in accordance with NI 43-101.
- As of the date of this certificate, 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.

Dated at Santiago, Chile this 26th day of November 2020

"David R. Hopper"

David R. Hopper
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List of Abbreviations, Meanings and Acronyms

\$	US dollars
%	percent
°C	degrees Celsius
AA	atomic absorption
Ag	silver
As	arsenic
Federal	Federal Gold Corp. or agents acting on its behalf, including Rio Explorations SpA
Au	gold
Au eq.	Gold equivalent
Author, the, this	David Hopper
Capella	Capella Resources Inc.
C\$	Canadian dollar
Ch\$	Chilean peso
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
Company, the	Federal Gold Corp. or Rio Explorations SpA
Cu	copper
Cu eq.	copper equivalent
DD	diamond drilling
DDH	diamond drill hole
E	east
g/t	grams per tonne
ha	hectare
IP	induced polarization
kg	kilogram
km	kilometres
m	metres

mm	millimetres
Mo	molybdenum
Mt	million tonnes
N	north
NE	northeast
NI 43-101	National Instrument 43-101
NS	north south
NSR	net smelter royalty
NW	northwest
PAD	porphyry gold deposits
ppm	parts per million
Project, the	The Dorado project area covered by the Dorado and Lajitas claims
Property, the	The Dorado project area covered by the Dorado and Lajitas claims
QP	qualified person
RC	reverse circulation
Report, the	NI-43-101 Technical Report on the Dorado Project, Atacama Region, Chile
S	south
SE	southeast
SW	southwest
W	west

1 SUMMARY

The Dorado Project is located in the Atacama Region of Chile on the eastern margin of the Maricunga Gold Belt at around 4500 metres altitude near the Chile-Argentina border. The project hosts a typical porphyry gold-(copper) system of probable Miocene age. The partly eroded system is related to intermediate subvolcanic intrusives and is zoned from magnetite-albite-chlorite alteration at lower elevations, through hematite-albite-clay, to advanced argillic alteration at higher elevations. Gold mineralisation occurs in association with swarms of banded quartz veinlets in an area of some 400 x 400 mts. The Project was explored by two companies between 1996 and 2011 culminating in the estimation of an historical inferred mineral resource of approximately 35 million tonnes grading 0.45g/t Au, equal to about 515,000 ounces of contained gold. The following report was prepared by David Hopper, a Chartered Geologist of the Geological Society of London, Fellow No. 1030584 for Federal Gold Corp., and ZTR Acquisition Corp. ("ZTR") in connection with a proposed Reverse Takeover Transaction (the "RTO") of Federal Gold Corp. by ZTR under the policies of the TSX Venture Exchange. The report describes the geology of the Project, historical exploration results, and provides recommendations for further work.

1.1 Property Summary

The Dorado Project is an early-stage gold exploration project. The property is located in the east-central sector of the Maricunga Gold belt in the Atacama Region of northern Chile, approximately 160 km to the east of the City of Copiapo and 14 km southeast of Kinross Gold's Marte-Lobo Project (Fig.4.1.1). The project lies in a hyper-arid alpine environment adjacent to the Chile- Argentina border where elevations vary from 4,200 to 5,100 masl.

The Dorado Property is owned by Rio Explorations SpA, a wholly owned subsidiary of Ty & Sons Explorations Chile, which in turn, is a wholly owned direct subsidiary of Federal Gold Corp. For the purposes of this report the Federal parent company, Rio Explorations SpA and Ty & Sons Explorations Chile are referred to interchangeably as "Federal" or "the Company".

The core of the Property comprises 9 exploitation concessions covering 1,600 hectares (Fig. 4.2.3.1) (formerly referred to as the Lajitas Project). This core area will henceforth be called the "Lajitas" area. On June 19, 2020, Rio Explorations SpA, the wholly owned subsidiary of Federal Gold Corp., acquired the Lajitas area concessions from Compañía Minera Cerro el Diablo. On August 24 Federal Gold Corp., acting through its subsidiary Rio Explorations SpA, was able to expand the total project size by staking 49 contiguous exploration concessions covering 13,200 ha (Fig.4.2.3.1) surrounding and contiguous with the central Lajitas area. As of the effective date of this report, the project encompasses a total area of 14,800 hectares, excluding overlapping concessions. This expanded area, including the Lajitas area, comprises the "Dorado" project (or "Dorado" property).

A royalty agreement was executed between former owners of the Lajitas area exploitation concessions - International Mineral Resources Ltd. and Roberto Alarcon, on the one hand - and Capella Resources Ltd. on the other. The agreement, including a 2011 amendment, indicated a 2% NSR which may be reduced to 1%. According to Federal's legal counsel, Federal is not liable for any impacts that were caused by previous owners and/or operators. Environmental liabilities for Federal are limited to those associated generally with exploration-stage properties and would involve removal of the exploration camps and rehabilitation of drill sites and access roads.

Pursuant to (and subject to completion of) the RTO, Federal will amalgamate with a newly formed subsidiary of ZTR, with the amalgamated entity being a wholly-owned subsidiary of ZTR, and ZTR, to be renamed “Angold Resources Ltd.”, will thereafter hold a 100% indirect interest in the Property.

1.2 Geology and Mineralization Summary

The Dorado project is situated in the Maricunga gold belt, a region of gold-silver copper prospects and deposits in the high Andes of northern Chile where zones of hydrothermally altered rocks host high-sulfidation epithermal gold-silver deposits such as La Coipa and Salares Norte, and porphyry gold-(copper) deposits such as Refugio, Caspiche, Marte-Lobo and Fenix. Since 1980, an aggregate geologic resource of approximately 70 Moz of gold has been defined.

The belt consists of a NNE-trending chain of partially eroded andesitic to dacitic volcanoes that are part of a late Oligocene to late Miocene continental margin volcanic-plutonic arc developed parallel to and over the subducting Pacific plate.

At the Dorado project a Permo-Triassic basement of felsic volcanic and intrusive rocks is overlain by andesitic and dacitic volcanic rocks of Eocene-Oligocene age. These are cut by porphyritic quartz diorites and dacites interpreted as subvolcanic dykes/sills and stocks, often associated with phreatic and/or phreatomagmatic breccias. The former is overlain by dacitic flows and Pliocene gravels that locally conceal alteration. The Lajitas zone is interpreted as the eroded core of a small stratovolcano.

Hydrothermal alteration seen by the Author in outcrop and drill core is typical of Maricunga-style porphyry gold deposits. It comprises deep magnetite-albite-chlorite, passing outwards and upwards to pyrite/hematite-albite-clay, and then high-level advanced-argillic alteration with kaolinite-alunite-pyrophyllite and pyrite.

Gold mineralisation occurs with hairline to millimetric banded quartz veinlets and grades are roughly proportional to the intensity of veining. The banded quartz veins overprint non-banded quartz veins with minor pyrite, chalcopyrite and reported bornite that coincide with copper grade. Veinlet frequencies are typically less than 5 veinlets per metre and pyrite content is very low.

Significant veinlet-associated gold mineralization interpreted from RC and diamond drilling occurs in an area of about 400m X 400m in two NNE trending tabular bodies. The zones range from 250m to 300m in length and range from 25m to 125m in width, with average width being in the 75m range. The mineralisation appears to have been delimited to the east and west, but the northern and southern strike extensions are poorly defined.

1.3 Summary of Historical Exploration Activities

The first documented exploration of the Dorado/Lajitas concessions was undertaken by Santa Fe Pacific, commencing in the fourth quarter of 1996 and finalizing in early 1997. Santa Fe conducted a reverse circulation (RC) drilling program of 1,402m in 7 holes. The drilling resulted in 5 mineralised holes with intervals up to 50m wide averaging up to 1.32g/t Au.

Santa Fe then undertook detailed mapping of the mineralized zone and drilled an additional 1,172m in 7 RC holes for a total of 2,574m.

Company	Santa Fe Pacific	Capella	Capella	Capella	Capella	Capella	Totals
	1996	2006	2007	2008	2009-2010	2011	
Drilling							
DDH				1365			1,365
RC	2574	1709			4529		8,812
Sampling							
Talus	X						
Rocks	X						
Trench	X			1044	1021		2,065
Geophysics							
IP - km			20.8				20.8
MAG - km			118				118
Mapping	X	X	X	X	X		
Special Studies							
Metalurgy	X						
Remote Sensing						X	

Table 1.3.1. Summary of exploration activities at Dorado (Cole 2011).

In 2006, following a hiatus of 9 years, Capella Resources Inc. acquired the Property and completed 1 induced polarization/resistivity line over the mineralized part of the Property and a limited ground magnetics survey that was extended in early 2007 for a total of 118 line km's.

In 2006 Capella completed 7 reverse circulation drill holes in 2006 totalling 1,709m which confirmed the results of Santa Fe drilling and returned intercepts of 116m @ 0.88 g/t Au including 10m @ 1.24 g/t Au in the first hole LJ06-001r.

In 2008 Capella completed 1,365m in 4 diamond drill holes, as well as adding an additional 3 IP/RES lines and the collection of 1,044 rock chip samples from new road cuts. This drilling returned an interval of 261m @ 0.91 g/t Au including 105.7m @ 1.58 g/t Au in LJ08-011.

In 2010 Capella continued drill testing Dorado with an RC drilling campaign of 4,529m in 16 drill holes. Significant drill intersections of all campaigns are summarised in Section 6 of this report.

In 2011 Capella conducted preliminary metallurgical testing indicating recoveries of 63% - 73% in oxidized material, and calculated an historical inferred mineral resource of approximately 35 million tonnes grading 0.45g/t Au at a cut-off of 0.2g/t Au, equal to approximately 515,000 troy ounces of contained gold. This previous exploration work over the Lajitas area, including the historical inferred resource estimate, is described in the NI 43-101 technical report entitled "*RESOURCE ESTIMATION ON THE DORADO/LAJITAS GOLD PROPERTY, MARICUNGA GOLD-COPPER DISTRICT, THIRD REGION, REPUBLIC OF CHILE, FOR CAPELLA RESOURCES LTD.*" effective August 17, 2011, by B. Cole. The report is available on the Chilean geological survey website at the following location: https://portalgeo.sernageomin.cl/Sigex/EL_DORADOLAJITAS_13_196/. This mineral resource estimate is a historical estimate as defined in National Instrument 43-101 and while the estimate uses categories set out in National Instrument 43-101, no qualified person has done the work necessary to classify the historical mineral resources as current mineral resources. In order to convert the historical mineral resources to current mineral resource, the author recommends completing the work summarized in Section 26. Federal is not treating the historical mineral resource as current and the historical resource estimates should not be relied upon.

There has been no exploration activity since Capella abandoned the Property in 2011. Federal has not conducted any exploration at the Project at the time of this report.

1.4 Conclusions and Recommendations

The Author has reviewed the work completed to date over the Lajitas area of the Dorado project as described in Cole 2011 and independently checked a selection of data, drill core and outcrops during a site inspection on October 12th and 13th, 2020.

The Author concludes that the data is adequate for the express purpose of this report, that being to confirm the presence and style of gold mineralisation on the Dorado project, recommend if further work is warranted, and if so what form the work might take. The Author cautions that the data in its current state is not adequate for the calculation of a mineral resource.

The Lajitas zone of the Dorado project is a typical Maricunga-style porphyry-gold deposit related to intermediate composition subvolcanic intrusives and breccias. Alteration at Lajitas is zoned from a deep magnetite-chloritic zone in low areas, outwards and upwards to a hematite-clay zone and finally an advanced-argillic zone at higher elevations. Gold mineralisation identified to date occurs as two NNE trending tabular zones with banded quartz veins cutting magnetite-chlorite and hematite-clay alteration. The mineralisation appears to be limited to the East and West but may be open to the North and South. Additional mineralisation could occur elsewhere on the Property.

No exploration data is available for the greater Dorado project. It was reconnoitred briefly, and field observations and remote sensing images indicate that areas of alteration may exist that could potentially host other occurrences of porphyry or epithermal style mineralisation.

The author is not aware of any reason why exploration could not proceed on the Property.

Further work is justified with the aim to upgrade or verify the historical mineral resource estimate at Lajitas and to potentially discover new zones of mineralisation at Lajitas and elsewhere on the Dorado property.

The principal recommendations for the Lajitas area include

- Detailed “mineral system” mapping of the entire Lajitas alteration zone at 1:5000 scale
- Detailed mapping over the historical mineral resource area at 1:2500 scale
- Talus fines sampling of the entire Lajitas alteration zone at nominal 100 x 100 mt spacings
- Up to 15 line-km of induced polarization surveying
- Relogging of historical diamond drill holes
- Recovery of historical assays and verification against the original assay certificates
- Alternatively, systematic reanalysis of splits of the sample pulps stored in Copiapó
- Preliminary ore characterisation and leach tests on a representative suite of samples
- 5000 mts of diamond drilling to recalculate/upgrade/extend the historical resource
- Recover the historical data obtained by Capella and Santa Fe over the Lajitas zone

The principal recommendations for the Dorado district include

- Reconnaissance mapping and sampling at a nominal scale of 1:25,000
- Follow up of anomalies with sampling, geophysics and trenching as required

A tentative budget of USD \$ 2,660,500 is proposed for the program. Subject to unforeseen permitting or technical delays, it is estimated that the program could be completed in one 4-month field season.

2 INTRODUCTION

Federal Gold Corp. (“Federal”) and ZTR Acquisition Corp. (“ZTR”) has retained David Hopper, a Chartered Geologist of the Geological Society of London, Fellow No. 1030584, to prepare a report that is in accordance with the requirements of NI 43-101, which summarizes the historical mineral exploration performed on the Dorado Property (Formerly known as the Lajitas Project), located in the Maricunga Belt of the Atacama Region of Chile, and the results obtained to date. The report was commissioned in connection with a proposed Reverse Takeover Transaction (the “RTO”) of Federal Gold Corp. by ZTR under the policies of the TSX Venture Exchange.

Mr. Hopper is a Qualified Person (“QP”) as defined by National Instrument 43-101 Standards for Disclosure for Mineral Projects (“NI 43-101”) and is independent of Federal, the vendors, and the Property. Mr. Hopper is a resident of Santiago, Chile, and has over 30 years of relevant experience in exploration of porphyry-epithermal systems in a variety of geological environments. This report is effective as at October 23rd 2020.

Pursuant to (and subject to completion of) the RTO, Federal will amalgamate with a newly formed subsidiary of ZTR, with the amalgamated entity being a wholly-owned subsidiary of ZTR, and ZTR, to be renamed “Angold Resources Ltd.”, will thereafter hold a 100% indirect interest in the Property. The following report was prepared by David Hopper, a Chartered Geologist of the Geological Society of London, Fellow No. 1030584 for Federal Gold Corp., and ZTR Acquisition Corp. (“ZTR”). The corporate head office of Federal is located at Suite 918 – 1030 West Georgia Street, Vancouver, B.C., V6E 3M5, Canada.

Rio Explorations SpA is a wholly owned Chilean subsidiary of Ty & Sons Explorations Chile, which in turn, is a wholly owned direct Chilean subsidiary of Federal Gold Corp. On June 19th, 2020, Rio Explorations SpA, acquired the Dorado and Lajitas Exploration concessions from the Chilean company Compañía Minera Cerro el Diablo. In March 2020 Mr. Alfred Gregorian acquired the shares in Compañía Minera Cerro el Diablo from the previous shareholder, Cappella Resources Limited, which later became Cerro Mining Corp. On August 24, Rio Explorations SpA, the local subsidiary of Federal Gold Corp. was able to add to the project size by staking 49 exploration concessions covering a total area of 13,200 ha (Fig.4.2.3.1).

The Dorado Project is an early-stage gold exploration project located in the Maricunga Au belt of the high Andes in the Atacama Region of Chile. It is located approximately 160 kilometres east of Copiapó, Chile.

The property was previously explored by Capella Resources Inc. and Santa Fe Pacific. A previous NI 43-101 report “*RESOURCE ESTIMATION ON THE DORADO/LAJITAS GOLD PROPERTY MARICUNGA GOLD-COPPER DISTRICT THIRD REGION, REPUBLIC OF CHILE FOR CAPELLA RESOURCES LTD. effective August 17, 2011*” by B. Cole. was prepared for Capella Resources Inc.

This technical report reflects the current status of the Project as at the effective date of the report, and confirmation where possible of historic data compiled from the project site, from the Cole 2011 report, and the Capella files available at the time of writing.

The information contained within this report comes from activities conducted by two different companies, as well as various reports, memorandums, letters, presentations, scientific papers, figures and maps, of both internal company and public domain character as listed at the end of this

report in “Section 27- References”. All illustrations not sourced and dated were compiled by the author for the purposes of this report.

The author of this report has relied on certain technical information collected and prepared by Capella Resources Ltd., and information cited by Capella from Santa Fe Pacific, during their respective exploration activities on the Project (disclosed in Section 6 and Section 10), including assay results and descriptive logs from drilling programs the results from geophysical surveys completed by Capella (disclosed in Section 6). The author has also relied on certain information prepared with the assistance of Federal.

The author has read NI 43-101 and this Report. The Report has been prepared in accordance with NI 43-101.

2.1 Site Inspection

The Author completed a current site visit on the 12th and 13th of October 2020. On the 12th sample storage, sample condition and drill core sample locations were reviewed at Core Storage facilities controlled by Ebontex SpA in Paipote, the industrial suburb of Copiapó. On the 13th the Author visited the project site and confirmed access, drill collars, basic geology and general conditions. Nine check samples were taken of drill core and three check samples were taken of outcrop. The site visit was completed in the company of Mr. Edmundo Bonilla Lopez of Copiapó, the Company’s logistical coordinator.

3 RELIANCE ON OTHER EXPERTS

The Author has relied upon information provided by Adrian Rothwell, President and CEO of Federal that describes: the terms of the agreement under which Federal has acquired Dorado; the data that describes the legal status, rights, obligations, dimensions and coordinates of the mineral claims; and the need for and status of agreements and/or permits required to access and undertake activities on the Property. The Author considers that the information provided and relied upon for preparation of this Technical Report is accurate at the time of the Technical Report and that the interpretations and opinions expressed herein are reasonable, based on current ore deposit models and the regional geological setting. The Author has made reasonable efforts to verify the accuracy of the data relied upon in this Technical Report.

The results and opinions expressed in this Technical Report are conditional upon the aforementioned information being current, accurate, and complete as of the date of this Technical Report, and the understanding that no information has been withheld that would affect the conclusions made herein.

The Author is not competent to comment on the ownership rights of the Dorado and Lajitas concessions but has relied on a “Title Opinion”, dated September 23rd, 2020, prepared by Rony Zimerman of Lembeye Abogados, Federal’s legal counsel in Santiago, Chile (Zimerman 2020). The Author has been informed by Federal that, to the best of its knowledge, there are no current or pending litigations, easements or other encumbrances that may be material to the exploration and development of the Dorado project.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Location

The Dorado project is located in the Province of Copiapó, Region III of the Republic of Chile approximately 175 kilometres east of Copiapo, the mining capital and main supply centre for the region, and approximately 700 kilometres north of Chile's capital Santiago (Figure 4.1.1). The property is centred on UTM coordinates (datum: WGS-84, Zone 19S) UTM 6,980,000 North and 507,500 East (68 degrees 55 minutes longitude west and 27 degrees 18.3 minutes latitude south).



Figure 4.1.1: Location of the Dorado Project, Atacama Region, Chile

4.2 Mineral Rights

There are two types of mining concessions in Chile: exploration mining concessions and exploitation mining concessions.

In accordance with the Chilean Mining Code, the owner of a mining concession can explore, exploit and benefit from all minerals within the boundaries of the relevant concessions, except for hydrocarbon and lithium, providing they obtain the relevant permits and or operation agreements.

Every titleholder of a mining concession, whether exploitation or exploration, has the right to establish an occupation easement over the surface properties required for the comfortable exploration or exploitation of its concession. In the event that the surface property owner does not voluntarily agree to the granting of the easement, the titleholder of the mining concession may

request such easement before the Courts of Justice, which shall grant the same upon determination of due compensation for losses.

All mining exploration and exploitation concession applications are submitted to the Chilean court and granted through a court procedure. Once the court procedure is completed, the court issues a final ruling decision. If the decision is supportive of the application, the ruling decision acts as the legal title of the concession, which is then registered in the national mining registrar. The application to court decision process typically takes 6 to 8 months for an exploration concession and 12 to 15 months for an exploitation concession. Prior to the granting of the exploration or exploitation concession, the petitioner has a legal and binding pre-emptive right against any subsequent petitioner for a concession over the same area so long as the petitioner carries out the concession process in a correct and timely manner as required by law.

The characteristics of exploration and exploitation concessions are described below.

4.2.1 Exploration Mining Concessions

The titleholder of an exploration concession has the right to carry out all types of mining exploration activities within the area of the concession. Exploration concessions can overlap or be granted over the same area of land, however, the rights granted by an exploration concession can only be exercised by the titleholder with the earliest dated exploration concession over a particular area.

For each exploration concession, the titleholder must pay an annual fee of approximately US\$1.60 per hectare to the Chilean Treasury. Exploration concessions have a duration of two years. At the end of this period, they may: (i) be renewed as an exploration concession for two additional years in which case at least 50 percent of the surface area must be renounced, or (ii) be converted, totally or partially, into exploitation concessions.

A titleholder with the earliest dated exploration concession has a preferential right to establish an exploitation concession in the area covered by the exploration concession, over any third parties with a later dated exploration concession for that area or without an exploration concession at all and must oppose any applications made by third parties for exploitation concessions within the area for the exploration concession to remain valid.

4.2.2 Exploitation Mining Concessions

The titleholder of an exploitation (or mining) concession is granted the right to explore and exploit the minerals located within the area of the concession and to take ownership of the minerals that are extracted. Exploitation concessions can overlap or be granted over the same area of land, however, the rights granted by an exploitation concession can only be exercised by the titleholder with the earliest dated exploitation concession over a particular area.

Exploitation concessions are of indefinite duration and an annual fee is payable to the Chilean Treasury of approximately US\$8 per hectare. Where a titleholder of an exploration concession has applied to convert the exploration concession into an exploitation concession, the application for the exploitation concession and the exploitation concession itself are backdated to the date of the exploration concession.

A titleholder to an exploitation concession must apply to annul or cancel any third-party exploitation concessions that overlap with the area covered by its exploitation concession within a certain time period in order for their exploitation concession to remain valid.

4.2.3 Project Mineral Rights

The Project consists of 9 exploitation concessions registered to Rio Explorations SpA, totalling 1,600 hectares and 49 exploration concessions registered to Rio Explorations SpA, totalling 13,200 hectares. The total area covered by these concessions is 14,800 hectares. Concession details are listed in Table 4.2.3.1 and shown in Figure 4.2.3.1.

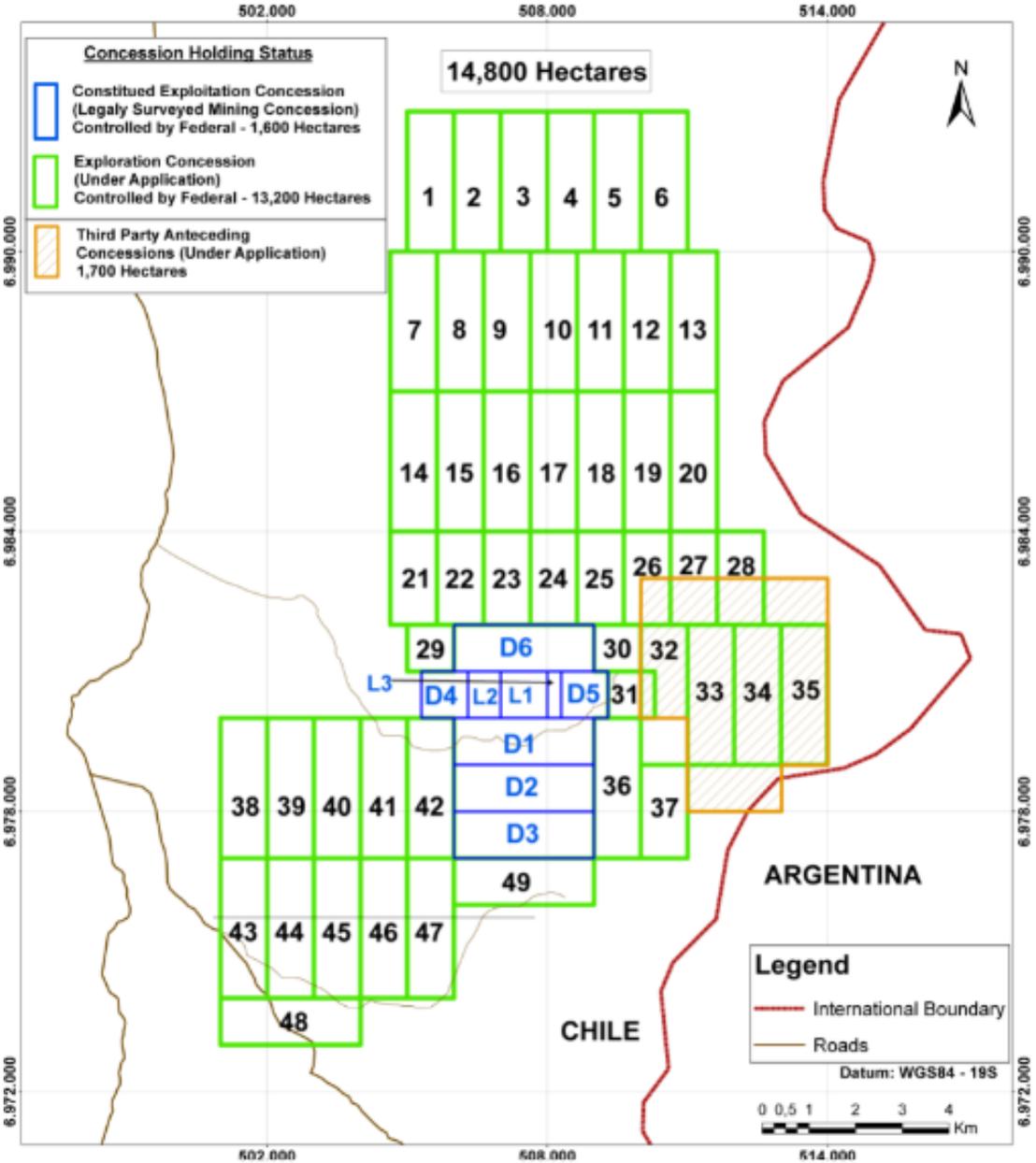


Figure 4.2.3.1: Tenement Map Showing Exploration & Exploitation Mining Concession Details

Map ID	Name	Ownership	Inscription Data		Area ha	Status
			Record Date	ID #		
D1	Dorado 1, 1-60	Rio Explorations SpA	03-20-2008	03201-8516-5	300	Constituted
D2	Dorado 2, 1-60	Rio Explorations SpA	03-20-2009	03201-8517-3	300	Constituted
D3	Dorado 3, 1-60	Rio Explorations SpA	03-20-2010	03201-8518-1	300	Constituted
D4	Dorado 4, 1-20	Rio Explorations SpA	2/3/2006	03201-7342-6	100	Constituted
D5	Dorado 5, 1-20	Rio Explorations SpA	2/3/2006	03201-7343-4	100	Constituted
D6	Dorado 6, 1-60	Rio Explorations SpA	2/3/2006	03201-7344-2	300	Constituted
L1	Lajitas 1, 1-10	Rio Explorations SpA	05-14-1999	03201-6016-2	100	Constituted
L2	Lajitas 2, 1-7	Rio Explorations SpA	9/11/2005	03201-7096-6	70	Constituted
L3	Lajitas 3, 1-3	Rio Explorations SpA	9/11/2005	03201-7097-4	30	Constituted
1	Dorado 1	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
2	Dorado 2	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
3	Dorado 3	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
4	Dorado 4	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
5	Dorado 5	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
6	Dorado 6	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
7	Dorado 7	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
8	Dorado 8	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
9	Dorado 9	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
10	Dorado 10	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
11	Dorado 11	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
12	Dorado 12	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
13	Dorado 13	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
14	Dorado 14	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
15	Dorado 15	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
16	Dorado 16	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
17	Dorado 17	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
18	Dorado 18	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
19	Dorado 19	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
20	Dorado 20	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
21	Dorado 21	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
22	Dorado 22	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
23	Dorado 23	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
24	Dorado 24	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
25	Dorado 25	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
26	Dorado 26	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
27	Dorado 27	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
28	Dorado 28	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
29	Dorado 29	Rio Explorations SpA	08-24-2020	Not assigned	100	Inscription stage

30	Dorado 30	Rio Explorations SpA	08-24-2020	Not assigned	100	Inscription stage
31	Dorado 31	Rio Explorations SpA	08-24-2020	Not assigned	100	Inscription stage
32	Dorado 32	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
33	Dorado 33	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
34	Dorado 34	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
35	Dorado 35	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
36	Dorado 36	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
37	Dorado 37	Rio Explorations SpA	08-24-2020	Not assigned	200	Inscription stage
38	Dorado 38	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
39	Dorado 39	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
40	Dorado 40	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
41	Dorado 41	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
42	Dorado 42	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
43	Dorado 43	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
44	Dorado 44	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
45	Dorado 45	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
46	Dorado 46	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
47	Dorado 47	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
48	Dorado 48	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage
49	Dorado 49	Rio Explorations SpA	08-24-2020	Not assigned	300	Inscription stage

Table 4.2.3.1 List of Dorado Property Mineral Concessions.

Rio Explorations SpA is the registered owner of the mineral concessions comprising the Dorado Project as described in this Report and, pursuant to applicable Chilean mining laws, Rio Explorations SpA has the right of possession, exploitation and exploration of such concessions. Rio Explorations SpA is a wholly owned subsidiary of Ty & Sons Explorations Chile, which is in turn a wholly owned subsidiary of Federal Gold Corp.

A legal opinion on the Dorado mining concessions reviewed by the Author, dated September 23, 2020 prepared by the Chilean law firm Lembeye, found no mortgages, encumbrances, prohibitions or outstanding litigation affecting any of the mining concessions. Similarly, the due diligence process found no significant factors or risks that may affect access, title, or the right or ability to perform work on the Property.

A royalty agreement was executed between former owners of the Lajitas area exploitation concessions - International Mineral Resources Ltd. and Roberto Alarcon, on the one hand - and Capella Resources Ltd. on the other. The agreement, including a 2011 amendment, indicated a 2% NSR which may be reduced to 1% for a payment of C\$2,000,000 at any time, payable by Capella to the former owners. Additionally, Chilean government royalties are levied in the form of a mining tax on operational mining income applied on a sliding scale rate basis of between 5% and 14% depending on operating rights.

Annual fee payments required to maintain exploitation and exploration concessions are made annually in March. The annual fee payments for the Dorado mining concessions, paid in June 2020, will maintain the Dorado/Lajitas exploitation concessions in good standing until March 2021 and exploration concessions in good standing until May 2021.

The corners of exploitation concessions are marked in the field by cement monuments surveyed, erected and labelled by an authorized surveyor and then inscribed.

In the eastern portion of the Rio Explorations claims, several exploration claim requests (pedimentos) were filed by a third party before the Rio Explorations exploration claim requests were filed. These antecedent claim requests, shown by hachure in Figure 4.2.3.1, are presently under application. If the third-party application process is completed successfully, this area of 1,400Ha will not be available for exploration by Federal, whose preferential rights will be reduced from 14,800Ha to 13,400Ha. If the third-party claim process is not completed or the application is rejected, Rio Exploration's claim requests will take precedence and the area will be available for exploration by Federal.

4.3 Surface Rights & Encumbrances

According to the legal opinion on the Dorado mining concessions, dated September 23, 2020 prepared by the Chilean law firm Lembeye, the Project's surface area, as shown in Figure 4.2.3.1, is free of any encumbrances relating to surface right-of-way. The Project's surface area is located on public lands and the rights over said land therefore belong to the government of Chile. If larger scale exploration takes place, Federal will need to negotiate agreements with the Chilean Government or obtain legal occupant easements to access and explore the Property. There are no encumbrances or pre-emptive third-party easements registered against the surface land.

The Dorado project does not lie within any protected or sensitive areas. However, it lies within a couple of kilometres of the "Complejo Lacustre Laguna del Negro Francisco y Laguna Santa Rosa", an area protected under the terms of the RAMSAR Convention on Wetlands of International Importance. The Dorado project occurs within several kilometres of the "Nevado Tres Cruces" National Park. These protected areas are monitored by park rangers.



Figure 4.4.1. View to East across the Maricunga Belt towards the Dorado project. The lake in the middle distance is Laguna Santa Rosa, within the Tres Cruces National Park and the site of a park-ranger outpost. The ridgeline on the horizon is the border with Argentina. Just to the right of centre and in front of the ridgeline is the Pastillitos volcano. Behind this volcano lies the Marte-Lobo project of Kinross Gold, and behind that lies the Dorado Project.

4.4 Protected & Sensitive areas

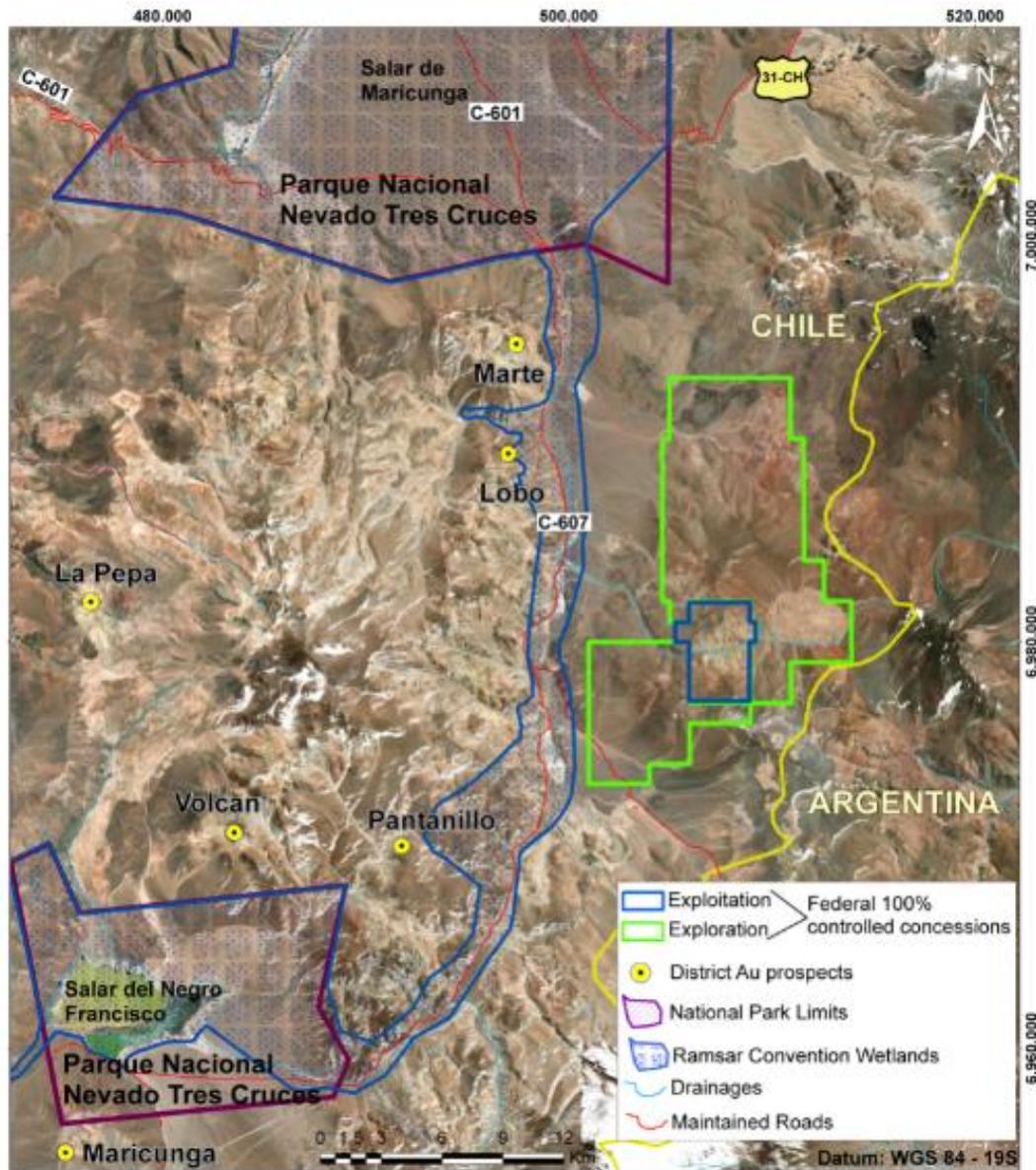


Figure 4.4.2: National park limits and protected wetlands close to the Dorado project.

4.5 Communities & Native Title

There are no known aboriginal or surface rights in the project area. However, there is a history of complex relationships between certain mining projects in the Maricunga belt in which the Project is located and certain Coya communities. While the Project is not located specifically on areas deemed to belong to Coya or other native communities and there are no communities living in the project area, a road that leads to the project site passes through Coya communities. It is recommended that Federal minimize the use of these sensitive routes and evaluate alternatives where possible.

4.6 Underlying Agreements

A royalty agreement was executed between former owners of the Lajitas area exploitation concessions - International Mineral Resources Ltd. and Roberto Alarcon, on the one hand - and Capella Resources Ltd. on the other. The agreement, including a 2011 amendment, indicated a 2% NSR which may be reduced to 1% for a payment of C\$2,000,000 at any time.

4.7 Environmental Liabilities

The Dorado Project is an undeveloped early-stage exploration project located on the eastern flanks of the Maricunga Belt, an historical gold/silver/copper mining and exploration area characterized by substantial surface disturbances (i.e. shafts, pits, trenches, abandoned plant foundations, leach pads, etc.) several 10's of km's west of the project boundary.

Historic surface disturbances resulting from exploration work completed by Capella from 2006-2010, includes access roads and drill platforms (Figure 4.7.1), some partially rehabilitated trenching, and reverse circulation and diamond drilling hole collars. Previous explorers left 40Kg plastic bags of reverse circulation drill cuttings on the drill platforms. The plastic has decayed under UV light and has been scattered by wind (Figure 4.7.2). Apart from this the project area is clean of waste and refuse.

According to Federal's legal counsel, Federal is not liable for any impacts that were caused by previous owners and/or operators. Environmental liabilities for Federal are limited to those associated generally with exploration-stage properties and would involve removal of the exploration camps and rehabilitation of drill sites and drill site access roads.



Figure 4.7.1: View to west showing typical drill roads and platforms at the Lajitas area.



Figure 4.7.2: Photograph at the Lajitas area showing abandoned 40kg bags of RC drill cuttings rotted by UV exposure.

4.8 Permits

In Chile, projects involving 40 or more drill platforms between the Arica, Parinacota and Coquimbo regions require an environmental declaration or assessment depending on the specific environmental impacts and/or location of the Project as noted below. A platform is defined as a raised level surface on which the drilling equipment is installed for drilling one or more holes.

Below 40 drill platforms, exploration projects are not required to be environmentally assessed, unless they are in protected or sensitive areas. Whether the Project requires an Environmental Assessment Study (Estudio de Impacto Ambiental - EIA) or an Environmental Assessment Statement (Declaración de Impacto Ambiental - DIA) depends on the specific location and environmental characteristics of the Project.

No environmental permits have been requested or granted yet to the Dorado Project for any exploration work involving the mining and exploration concessions. The future exploration programs, as outlined in Sections 1 and 26 of this report, in the opinion of Federal's legal counsel, are not expected to require a formal permitting process given the proposed work program presented. Subsequent programs may require Environmental Assessment Studies or Environmental Assessment Statement.

Federal will be required to submit an initiation of activities form to SERNAGEOMIN, the Chilean National Mining and Geology Service, in order to initiate exploration activities at the project site, including installing a mobile camp and undertaking earth moving and drilling activities (Activity

Initiation Form or “Iniciación de Actividades”). Permits to extract water are not expected to be required if water is purchased from third parties who have legal title and rights to sell water.

No water rights are owned by Federal Gold Corp.

4.9 Risks and Uncertainties

Water is limited in the hyper-arid Atacama Region. Recent changes in legislation have designated that water use for human consumption should take priority in the assignment of future water rights and public opinion is against use of scarce water resources for mining. Moreover, the aquifers in the Maricunga region appear not to have further capacity for granting of water rights and it cannot be assured that new rights will be granted. Water rights may therefore need to be purchased from current water rights holders. Construction of desalination plants on the coast is becoming increasingly common and may be the norm in the future.

The Project does not lie within the Tres Cruces National Park nor the RAMSAR protected area nor does it contain any designated sensitive areas. However, it is close, it drains into these areas, and the roads transit these areas which are monitored by park rangers and the environmental agency. Care must be taken to avoid or minimize all real or perceived damage to the environment.

The local Coya communities are increasingly organized and have gradually expanded the limits of their ancestral claim from the river valleys to the west, to include areas of the Altiplano closer to the Project.

Climate extremes are unusual and are not a serious risk to advanced projects or mining operations, however they can interrupt exploration activities severely in cases of heavy snow or flash flooding, that can result in accidents and or the loss of a summer field season.

According to the information available at the time of writing there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Property.

4.10 Comments on Section 4

With respect to Environmental Liabilities, the Author recommends that all previous exploration activities be photographically documented by a notary public. Careful date-stamped photographic records should be kept of Federal’s impacts, such as road works, trenches, drill platforms and camp sites, before, during and after activity.

Although it is not required under current law for the current stage of exploration, it is considered best practice to prepare an “environmental management plan” with the assistance of an independent environmental consulting group. The EMP (PMA in Spanish) will provide an independent record of the conditions of the Project before any significant activity by Federal, and will provide guidelines for the correct management of the environment under Federal’s control.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Access

The nearest major city to Dorado is Copiapo, some 170 kilometres by road to the west. Copiapo lies along the Pan American Highway (Ruta 5 Norte) approximately 700 road kilometres north of Santiago, the capital of Chile. Copiapo has daily air service from Santiago and other Chilean cities. The project is in the Atacama Region (III) of northern Chile in the Province of Copiapo and political subdivision of Comuna Tierra Amarilla (see Figure 5.1.1).

The northern and southern ends of the Dorado Property, which are equidistant from Copiapo, can be accessed by vehicle from Copiapo. Federal's principal access to the Property is via paved Highway 31 which leads towards the Kinross La Coipa mine. The highway is accessed by taking the ENAMI Paipote Smelter turnoff northward out of Copiapo and which links Copiapo with the villages of Inca del Oro and Diego de Almagro.

Continue for 120 kilometres along Highway 31 to the local police (Carabineros) outpost at the northern end of the Salar de Maricunga. From the police outpost, continue south on Highway 31 for 10 kilometres until the bifurcation of Highway 31 and provincial road C-601. Continue on route C-601 to the southwest for 10km and proceed along the C-601 split to the left for another 15km until the junction of provincial roads C-601 and C-607. Proceed south on C-607, past the access to the Kinross Marte Project for 17km to the access of the Lajitas stream canyon to the east. The Lajitas stream access road is a non-maintained drill road last used in 2010, which traverses up the locally narrow canyon to the historic drill camp site area for approximately 8km. Total travel time from Copiapo to the Dorado Project site is approximately 3.5 hours.



Figure 5.1.1. Image with location of the Dorado project with respect to roads and other projects.

5.2 Climate

Precipitation consists largely of snow during the Andean winter months of May through September, with rare, but intense, rainstorms of short duration occurring during the summer months from January through April. Precipitation in this part of the Andes averages less than 200 mm while evaporation from surface water and soils varies between 1,500 to 2,000 mm/yr resulting in the extremely arid conditions.

Vegetation is absent except for lichens and rare spinifex grass on mountainsides and mosses in spring-fed bogs found along the valley floor (Fig. 5.2.1). Wildlife is sparse though small groups of guanaco and vicuña are occasionally encountered as well as reptiles and foxes. During the migration season waterfowl, in particular flamingos, are common in the wetlands to the west.

The typical exploration field season in the belt is from approximately November through April, a duration of 5-6 months. However, advanced projects and mines in the area operate all year.

Because of the high altitudes, extremely strong winds frequently can develop in the afternoons and evenings. White-outs and lightning storms, termed the “Bolivian Winter”, which can create hazardous conditions, may occur during the summer. The average annual temperatures are on the order of 11° C and range between -30° C at night in the winter to 20° C during the summer.

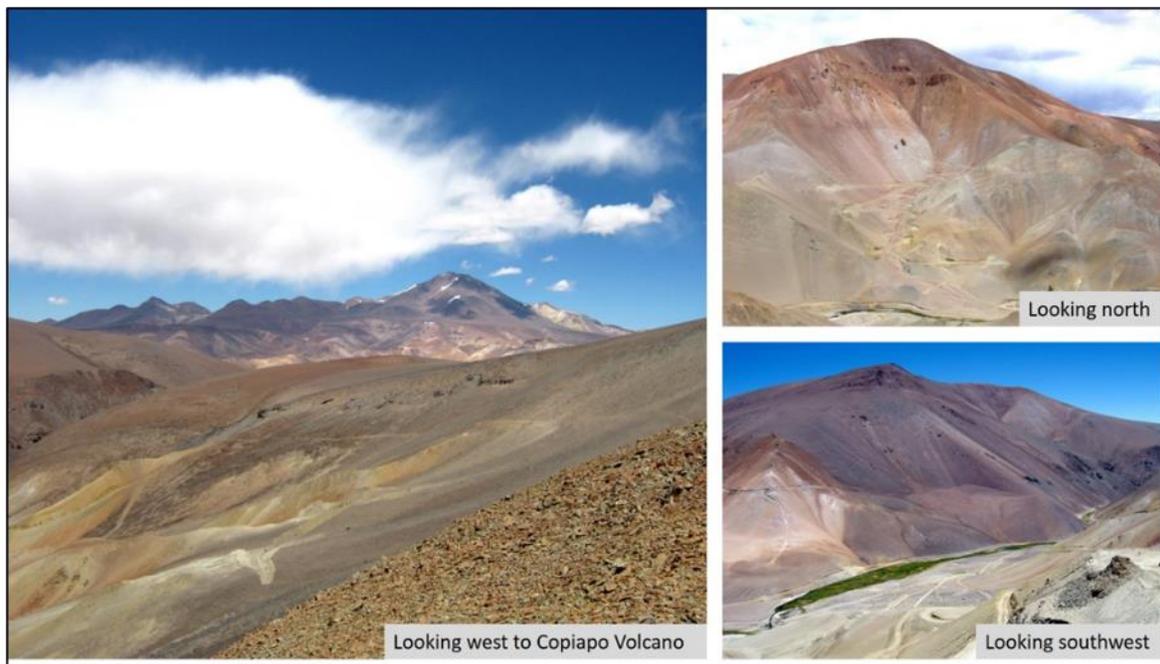


Figure 5.2.1: Typical landscape and vegetation in the Lajitas area of the Dorado project.

5.3 Local Resources and Infrastructure

Apart from minor secondary roads, there is no infrastructure nor inhabitants close to the Dorado Project area. Personnel will have to be housed in camps and all food supplies including potable water etc. must be brought from Copiapo, some 170-180km to the west in the city of Copiapo.

The project is an early-stage exploration project and has therefore not yet been evaluated in detail for potential mining infrastructure aspects such as the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant sites.

Experienced exploration, mine and plant personnel is expected to be sourced from Copiapo, or elsewhere in Chile where a generally well trained and experienced workforce exists. Furthermore, Copiapo is a well-established support and logistics centre for mining activities in the region.

5.4 Physiography

Local physiography in the vicinity of the Project is alpine in character and consists of a series of abrupt, NS-trending mountain ranges with high peaks ranging from 4,000 to 6,192 m. The principal topographic features of the region are the result of a combination of horst and graben block tectonics in the Cordillera Occidental and the Cenozoic to Recent volcanism that produced the Volcan Copiapo stratovolcano. See Figure 5.2.1.

There are no glaciers in the immediate project area although minor rock glaciers or zones of permafrost cannot be ruled out. Soils are poorly developed to non-existent within the area.

Water from the Cienega Redonda valley, the main NS drainage feature, drains north towards the Salar de Maricunga (see Fig. 4.4.2) and laguna Santa Rosa.

5.5 Comments on Section 5

Although the Dorado project is in a remote and harsh area at extreme altitude, it benefits from proximity to numerous active mines and evaluation projects, all serviced out of a well-established supply and services hub at Copiapo.

This is tempered by the scarcity of water resources and proximity to national parks and protected areas, which are monitored closely. Every care should be taken to ensure good environmental and community stewardship.

6 HISTORY

The first exploration work in the Dorado project area for which reports exist was by Santa Fe Pacific in 1996. Cole 2011 cites a report by Toro JC & Muehlebach W 1997; Lajitas Project Results, Minera Santa Fe Pacific Chile Ltda. However, this report is not available to the Author. Santa Fe is reported to have conducted mapping, sampling, trenching, reverse circulation drilling and preliminary metallurgical testing. Santa Fe Pacific abandoned the Project in 1997 and the concessions lapsed.

Compañía Minera Cerro el Diablo acquired part of the Lajitas project area at auction and optioned the remainder from Compañía Minera Cerro Dorado Ltda (Cole 2011).

Capella Resources Inc. optioned the Project from Compañía Minera Cerro el Diablo in 2006. Between 2006 and 2011 Capella conducted lithological mapping, hyperspectral alteration mapping, geochemical rock chip sampling, drilling, trench sampling, geophysics and preliminary metallurgical testing culminating in calculation of an inferred mineral resource estimate.

Federal acquired the Dorado and Lajitas concessions in 2020.

The previous operator Capella Resources no longer exists, and the historical data provided to and or acquired by Federal is not of sufficient quality or integrity to allow full independent verification by the Author.

The historical exploration activities over the Dorado and Lajitas exploitation concessions are documented in Cole 2011 and are summarised below.

The historical results reported below have not been independently verified by the Author unless otherwise stated. Data verification efforts are documented in Section 11.

Direct quotes from Cole 2011 are shown in italics and/or cited accordingly.

Company	Santa Fe Pacific	Capella	Capella	Capella	Capella	Capella	Totals
	1996	2006	2007	2008	2009-2010	2011	
Drilling							
DDH				1365			1,365
RC	2574	1709			4529		8,812
Sampling							
Talus	X						
Rocks	X						
Trench	X			1044	1021		2,065
Geophysics							
IP - km			20.8				20.8
MAG - km			118				118
Mapping	X	X	X	X	X		
Special Studies							
Metalurgy	X						
Remote Sensing						X	

Table 6.1 Summary of exploration activities at the Lajitas area of the Dorado project (Cole 2011).

6.1 Santa Fe Pacific 1996

“During March 1996, 1,700m of bulldozer trenching was completed and defined mineralized zones 50m - 70m wide averaging 0.8g/t Au. First pass RC drilling consisting of seven holes and a cumulative total of 1,402m tested mineralized zones in October 1996. The drill program gave encouraging results, as five holes were mineralized with intervals up to 50m wide averaging up to 1.32g/t Au. Detailed mapping of the main zone was completed in November 1996 with second pass RC drilling completed in December. An additional seven holes and 1,172m were drilled to test the extent of the mineralized zone with five holes intersecting mineralization.” see Cole 2011.

Santa Fe conducted preliminary hot cyanidation tests on mineralized material from drill hole cuttings from Dorado and prepared an inferred mineral resource estimate. See Tables 6.1.1, 6.1.2 and 6.1.3 below. The original reports of these studies are not available, and they cannot be verified.

HoleID	UTM_E84	UTM_N84	Elev_m	Azm	Dip	T_Depth_m	Year
DTH-LA-01	507,079	6,980,108	4,562	220	-75	300	1997
DTH-LA-02	507,071	6,980,118	4,561	315	-60	144	1997
DTH-LA-03	507,061	6,980,079	4,562	110	-60	188	1997
DTH-LA-04	507,052	6,980,085	4,562	290	-60	170	1997
DTH-LA-05	506,996	6,980,024	4,533	110	-60	220	1997
DTH-LA-06	507,103	6,980,001	4,508	230	-60	180	1997
DTH-LA-07	506,758	6,979,876	4,466	235	-60	200	1997
DTH-LA-08	506,937	6,980,202	4,537	80	-60	200	1997
DTH-LA-09	507,002	6,980,019	4,533	250	-60	96	1997
DTH-LA-10	506,917	6,980,042	4,499	300	-60	186	1997
DTH-LA-11	507,071	6,979,885	4,463	83	-60	174	1997
DTH-LA-12	506,855	6,979,891	4,463	125	-60	200	1997
DTH-LA-13	506,762	6,979,879	4,466	305	-60	160	1997
DTH-LA-14	506,960	6,979,807	4,462	90	-60	156	1997

Table 6.1.1. Location and orientation data for Santa Fe Reverse circulation drilling at Lajitas.

Drill Hole	Total Depth (m)	From (m)	To (m)	Gold (g/t)	Width * (m)
DTH-LA-01	300				
DTH-LA-02	144	0	36	0.88	36
DTH-LA-03	188	0	12	0.86	12
		54	84	1.37	32
		166	174	1.27	8
DTH-LA-04	170	32	50	0.52	18
		128	170	0.77	42
DTH-LA-05	220	168	212	0.78	44
DTH-LA-06	180	0	40	1.21	40
		104	152	0.52	50
DTH-LA-07	200				
DTH-LA-08	200				
DTH-LA-09	96	0	6	0.38	6
DTH-LA-10	186	25	54	0.68	28
		56	66	0.41	20
		80	96	0.58	16
		116	120	0.63	4
DTH-LA-11	174	32	44	0.81	12
		56	80	0.69	24
DTH-LA-12	200	12	24	0.45	12
DTH-LA-13	160				
DTH-LA-14	156				
* - true width of mineralized intervals unknown					

Table 6.1.2. Santa Fe 1996 highlights from Lajitas drilling as calculated and reported in Cole 2011. The Author has checked the calculations of numerous intercepts and detected minor mathematical differences of tens of ppb which are not considered material. Because the original database is not available it is unclear if this is due to different sample lengths, rounding errors, or calculation errors. The assay results were not independently verified.

Sample	Hole	Interval (m)	Au (g/t) Original	Au (g/t) met	Difference %	AuLix (g/t) met	Recovery %
8723	DTH-LA-02	24-26	1.11	1.09	2	0.72	66
8760	DTH-LA-02	98-100	0.25	0.29	-16	0.24	83
8821	DTH-LA-03	74-76	6.92	7.69	-11	5.4	70
8836	DTH-LA-03	104-106	0.68	0.89	-31	0.84	94
8868	DTH-LA-03	168-170	2.05	2.19	-7	1.56	71
8895	DTH-LA-04	34-36	1.01	1.09	-8	1.08	99
8943	DTH-LA-04	130-132	0.83	0.84	-1	0.76	90
9057	DTH-LA-05	188-190	0.55	0.69	-25	0.48	70
9091	DTH-LA-06	30-32	1.76	2.09	-19	1.44	69

Table 6.1.3. Hot Cyanide leach tests reported by Santa Fe. From Cole 2011 and references therein.

6.2 Capella Resources 2006-2011

Capella optioned the Lajitas portion of the Dorado property in 2006. They conducted geological mapping, outcrop and roadcut sampling, remote sensing, ground geophysics, reverse circulation drilling and diamond drilling followed by preliminary metallurgical testing and calculation of an inferred mineral resource. The historical work is reported in Cole 2011 and summarised below.

6.2.1 Surface Sampling

Capella completed rock chip and road cut sampling over the Lajitas area for a total of 2065 samples. Road cut sampling confirmed consistently anomalous Au values in channel samples in the area of historic drilling by Santa Fe Pacific.

6.2.2 Drilling Locations

The historical drilling at the Lajitas zone of the Dorado property is documented in Cole 2011. Reverse circulation drilling focused on the area of mineralisation previously defined by Santa Fe Pacific, repeating several of the Santa Fe holes.

Diamond drilling was mainly exploratory and tested outlying geophysical anomalies as can be seen in the map of drill hole locations below, with the exception of drill hole LJ08011 which was drilled to extend mineralisation intercepted in LJ06002r. The tables and figures below show the details and locations of historical drilling at Lajitas.

Figure 6.2.2.1. View looking North at the Lajitas area.

HoleID	Year	Drilled_By	Map HoleID	UTM_E84	UTM_N84	Elev_m	Azm	Dip	T_Depth_m	
U06001r	2006	Capella	U01	507,051	6,980,081	4,562	290	-60	300	
U06002r	2006	Capella	U02	507,062	6,980,083	4,562	110	-60	282	
U06003r	★	2006	Capella	U03	507,165	6,980,142	4,589	280	-50	234
U06004r	★	2006	Capella	U04	506,893	6,980,142	4,525	110	-50	174
U06005r	2006	Capella	U05	506,999	6,980,024	4,533	110	-60	300	
U06006r	2006	Capella	U06	507,196	6,979,967	4,521	290	-50	200	
U06007r	2006	Capella	U07	507,108	6,980,011	4,509	50	-50	219	
Total									1709	
U08008	2008	Capella	U08	507,470	6,979,835	4,478	155	-50	359.8	
U08009	★	2008	Capella	U09	507,660	6,979,420	4,431	155	-50	331
U08010	★	2008	Capella	U10	507,268	6,979,362	4,419	310	-50	488
U08011	★	2008	Capella	U11	507,061	6,980,083	4,562	120	-60	482.1
Total									819	
U09012r	2009	Capella	U12	507,349	6,979,975	4,558	50	-60	205	
U09013r	2009	Capella	U13	507,439	6,980,156	4,572	50	-60	280	
U09014r	2009	Capella	U14	507,387	6,980,245	4,589	310	-60	300	
U10015r	★	2010	Capella	U15	507,081	6,980,110	4,562	120	-60	318
U10016r	2010	Capella	U16	507,093	6,980,248	4,583	110	-60	276	
U10017r	2010	Capella	U17	506,828	6,980,096	4,514	110	-55	264	
U10018r	2010	Capella	U18	507,174	6,980,133	4,589	175	-75	342	
U10019r	2010	Capella	U19	506,850	6,979,324	4,440	115	-60	300	
U10020r	2010	Capella	U20	506,893	6,980,187	4,537	110	-60	330	
U10021r	★	2010	Capella	U21	506,802	6,980,033	4,505	110	-60	306
U10022r	2010	Capella	U22	507,134	6,979,925	4,491	285	-60	296	
U10023r	2010	Capella	U23	506,665	6,980,090	4,538	110	-60	156	
U10024r	2010	Capella	U24	507,040	6,980,030	4,536	23	-60	246	
U10025r	2010	Capella	U25	506,814	6,979,974	4,486	110	-60	310	
U10026r	2010	Capella	U26	507,455	6,979,907	4,500	360	-60	300	
U10027r	2010	Capella	U27	507,198	6,979,977	4,521	360	-60	300	
Total									4529	
Grand Total									7057	

Table 6.2.2.1. Capella drilling locations and meters by year. Blue stars indicate drill collars whose approximate locations and orientations were confirmed by the Author using GPS and compass.

The locations and orientations of 7 drill collars were confirmed in the field by the Author using a handheld GPS and compass. Exact coordinates do not match, possibly reflecting the use of different datums or varying GPS accuracy over time. Nonetheless the location of the drill holes on satellite images and their orientations match those observed in the field to the extent the Author is satisfied that the locations of the drill holes are sufficiently accurate for the purpose of this report.

Key project features and all drill collars should be resurveyed by a qualified topographer and data reconciled to a single datum in advance of further work by Federal.

A number of Capella holes appear to have been drilled subparallel to veining, supposedly due to access difficulty. Banded veinlets in some of the best intervals in diamond core hole U08-011 are subparallel to the core axis and almost certainly produced longer intervals of mineralisation than if drilling had been orthogonal to the veins. Figure 7.5.1 illustrates a good example of this practice.

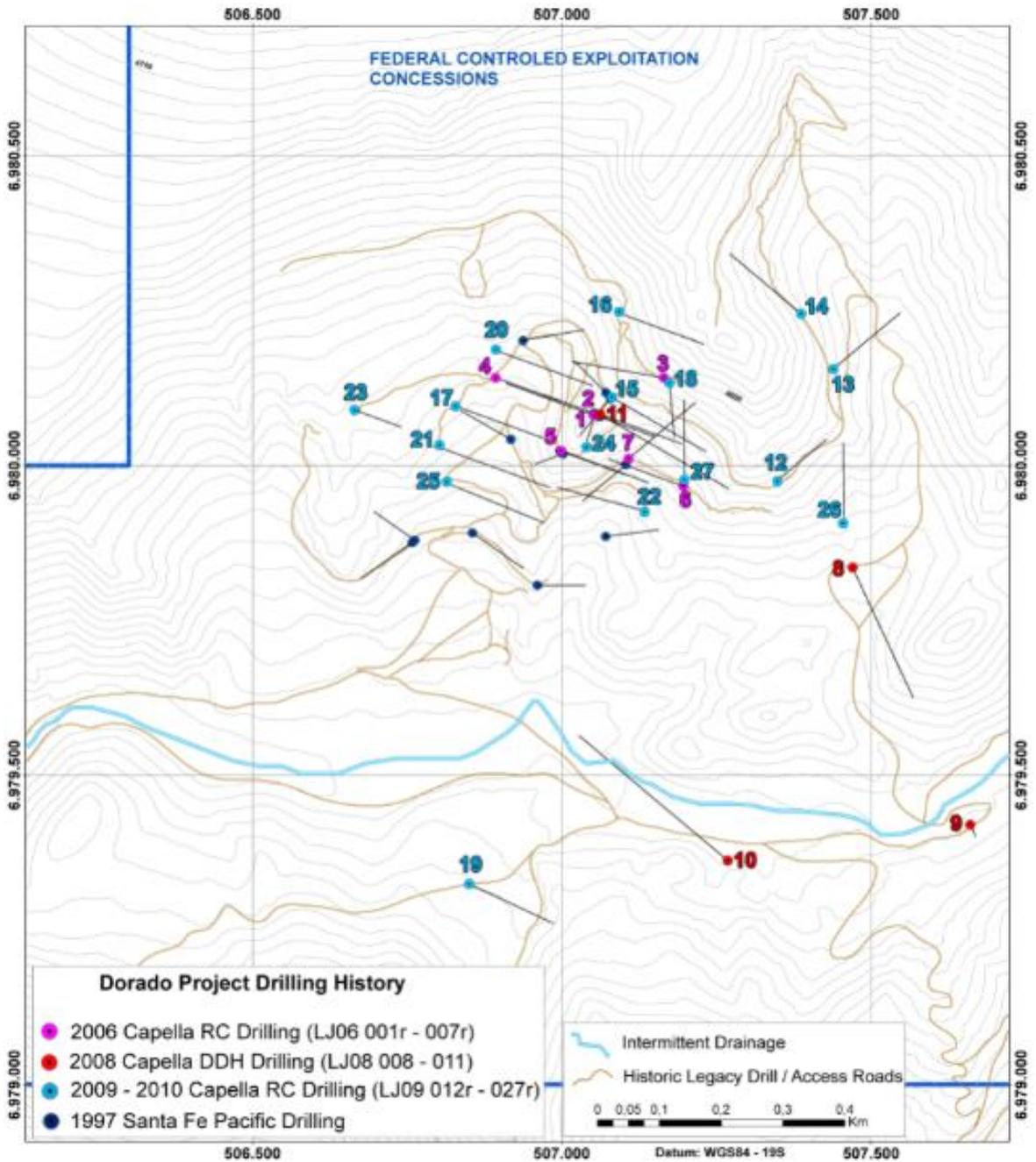


Figure 6.2.2.1 Map of historical drill holes at the Lajitas area, Dorado project, Chile.

6.2.3 Drilling Results

Significant drill intercepts from the Capella drilling campaigns in the Lajitas area are reported in Cole 2011 and replicated below. Only partial digital records were available to the Author. The Author has checked the calculations of numerous intercepts and did not detect any mathematical errors. However, the assay results in the database have not been independently verified, with the exception of nine check samples described in Section 11.

Significant Drill Intersections (2006)										
Hole No.	To	From	Interval Width (m) *	Gold g/t	Comments	Azimuth	Dip	Final Hole Depth	Zone	
LJ06001r	0	10	10	1.24	Including 2m @ 3.82g/t.	290	-60	300	Oxide	
	98	158	60	0.40						
	166	282	116	0.88						
LJ06002r	142	234	92	0.95	Hole ended in mineralization.	110	-60	282	Oxide	
	276	282	6	0.63						
LJ06003r	156	176	20	0.53		280	-50	234	Oxide	
	206	220	14	0.62						
LJ06004r	98	170	72	0.70		110	-50	174	Oxide	
LJ06005r	158	216	58	0.63	Hole ended in mineralization.	110	-60	300	Oxide	
	298	300	2	2.38						
LJ06006r	70	148	78	0.60		290	-50	200	Oxide	
LJ06007r	0	192	192	0.72		50	-50	219	Oxide	
* - Down-the-Hole Length Interval. Intercepts not determined using a gold cut-off								Total Metres	1,709	

Table 6.2.3.1. Significant Capella drill intersections at Lajitas, 2006, as reported in Cole 2011.



Fig 6.2.3.1. Hole LJ08-001, sample 1711, 183-184.5m = 1.5m @ 2.34 ppm Au 730 ppm Cu. Note the abundance of banded quartz veinlets in a hematite-clay-chlorite altered andesitic porphyry.

Significant Drill Intersections (2008-2010)									
Hole No.	To	From	Interval Width (m) *	Gold g/t	Comments	Azimuth	Dip	Final Hole Depth	Zone
LJ08008				nil		155	-50	359	
LJ08009				nil		155	-50	33	
LJ08010				nil		310	-50	488	
LJ08011	90	351	261	0.91	including 105.7m @ 1.58	120	-60	482	Oxide
LJ08012r	128	204	74	0.22		50	-60	205	Oxide
LJ10013r				nil		50	-60	280	
LJ10014r	292	300	8	0.08		310	-60	300	Oxide
LJ10015r	0	318	318	0.68	including 140m @1.02g/t Hole ended in mineralization.	120	-60	318	Oxide
LJ10016r				nil		110	-60	276	Sulphide
LJ10017r	102	194	92	0.74		110	-55	264	Oxide & Mixed
LJ10018r	140	296	156	0.55	including 30m @ 0.99g/t	175	-75	342	Sulphide
LJ10019r				nil		115	-60	300	Oxide
LJ10020r	268	330	62	0.47	Hole ended in mineralization.	110	-60	330	Mixed
LJ10021r	66	208	142	0.57	including 48m @ 1.07g/t	110	-60	306	Oxide
LJ10022r	76	272	196	0.28		285	-60	296	Oxide
LJ10023r				nil		110	-60	156	Oxide
LJ10024r	224	246	22	0.52	Hole ended in mineralization.	23	-60	246	Oxide
LJ10025r	6	176	170	0.56		110	-60	310	Oxide
LJ10026r				nil		360	-60	300	
LJ10027r	122	300	178	0.49		360	-60	300	Oxide
* - Down-the-Hole Length Interval. Intercepts not determined using a gold cut-off								Total Metres	5,891

Table 6.2.3.2. Significant Capella drill intersections at Lajitas, 2008-2010, as reported in Cole 2011.

6.2.4 Remote Sensing

Hyperspectral imagery at Lajitas was acquired in early April 2011 by SpecTIR LLC. from Reno, NV. The data were collected under clear conditions at 3m lateral ground sampling distance (GSD) (pixel size) and entire visible – shortwave infrared range. The instrument used for data collection was a 350 band, configurable hyperspectral imaging system ProSpecTIR VS. The initial data pre-processing and calibration was conducted by SpecTIR and the finalized reflectance data delivered to Capella Resources where the subsequent analysis was made by Amer Smailbegovic, Ph.D., CPG. Alteration indices were prepared and are shown in Figure 6.2.4.1. below.

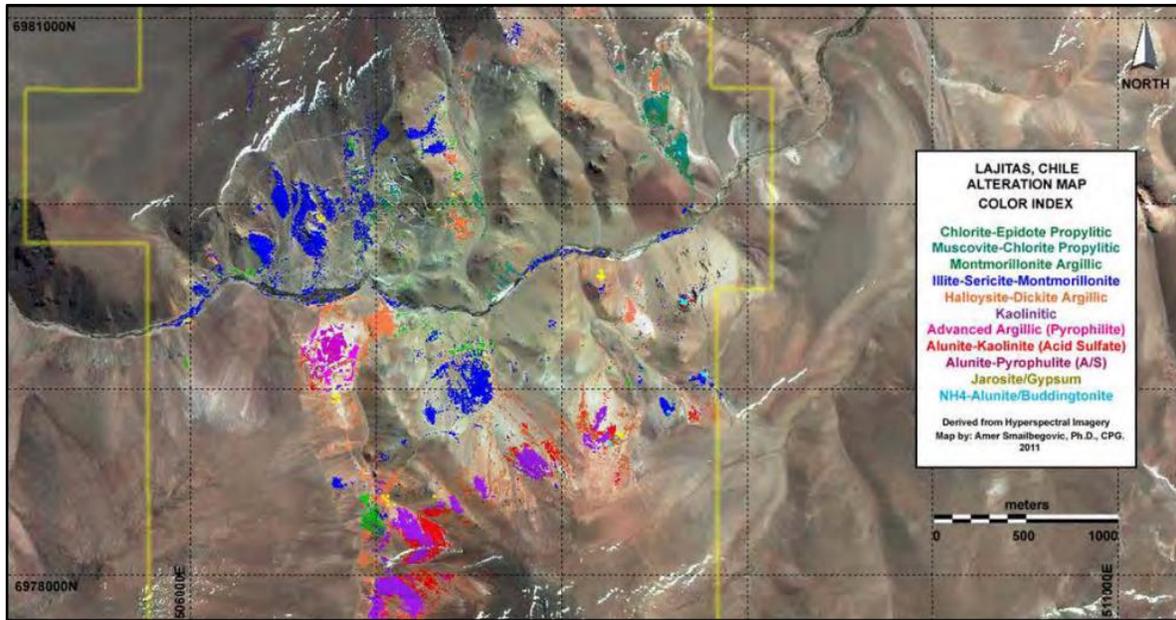


Figure 6.2.4.1. Hyperspectral Alteration Map of the Lajitas area, Dorado project, Chile.

6.2.5 Geophysics Induced Polarization Survey

During April 2007, Argali Geofísica Chile E.I.R.L. (*Argali*) conducted induced polarization (IP) and resistivity surveys at the Lajitas Project in Region III, Chile, on behalf of Capella. The primary objective of the geophysical surveys was to help delineate zones of gold mineralization.

A total of 20.8 line kilometres of IP and RES, in 4 lines, was measured using a pole-dipole array with a-spacing of 200m and n-spacing of 1 to 6. A GDD 3.6kW transmitter with a Honda 6.5 kW motor generator power supply and an ELREC Pro 10 channel receiver was used for data acquisition. IP data were collected in time domain with 2-second ¼ cycle 50% duty cycle current waveform and an integration window from 480msec to 1840msec. The IP and resistivity results were modelled using the UBC inversion program DCIP2D v3.2.

Capella contracted Reno, Nevada based geophysicist Bob Ellis to compile an interpretation of the IP/Res results, however, this report and interpretation has not been preserved and thus not reviewed by the Author.

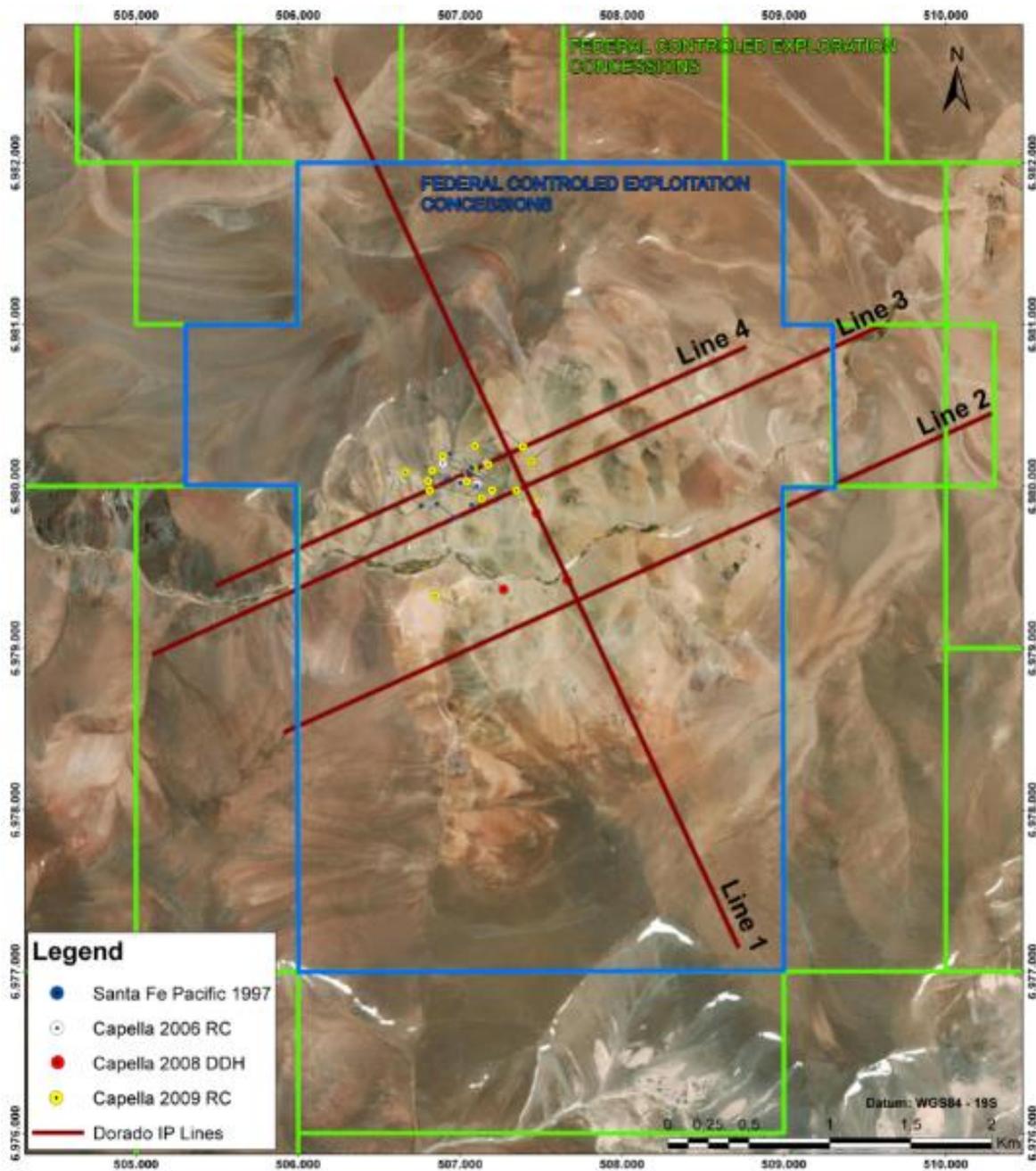


Figure 6.2.5.1. Location of IP lines

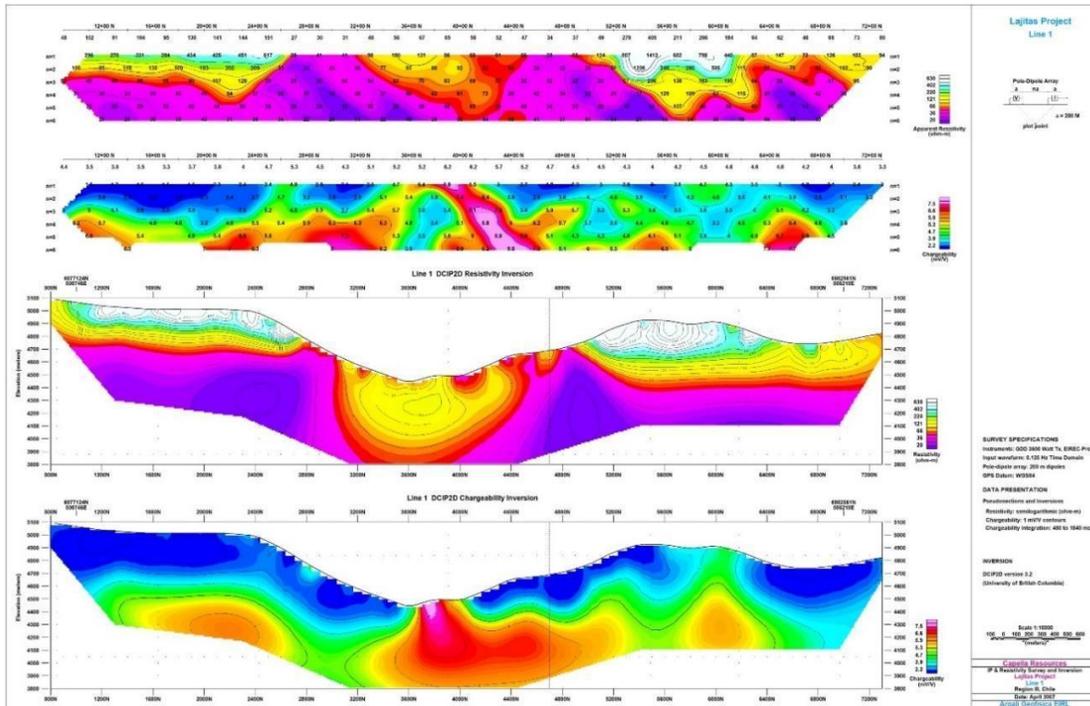


Figure 6.2.5.2. Line 1 - 2D Pseudosection Resistivity and Chargeability

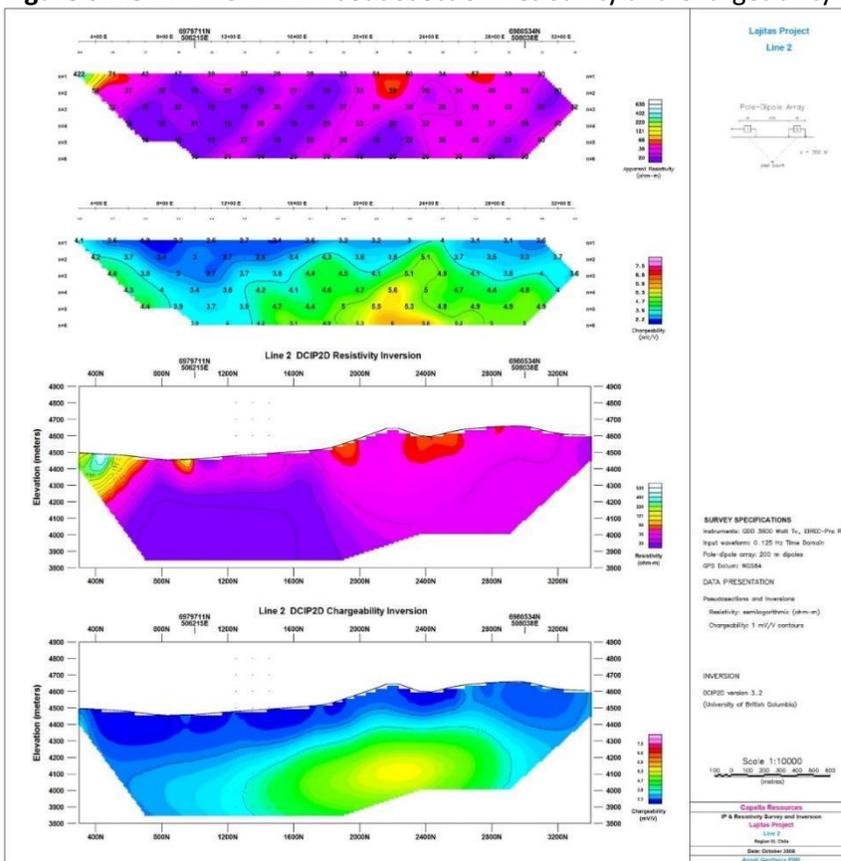


Figure 6.2.5.3. Line 2 - 2D Pseudosection Resistivity and Chargeability

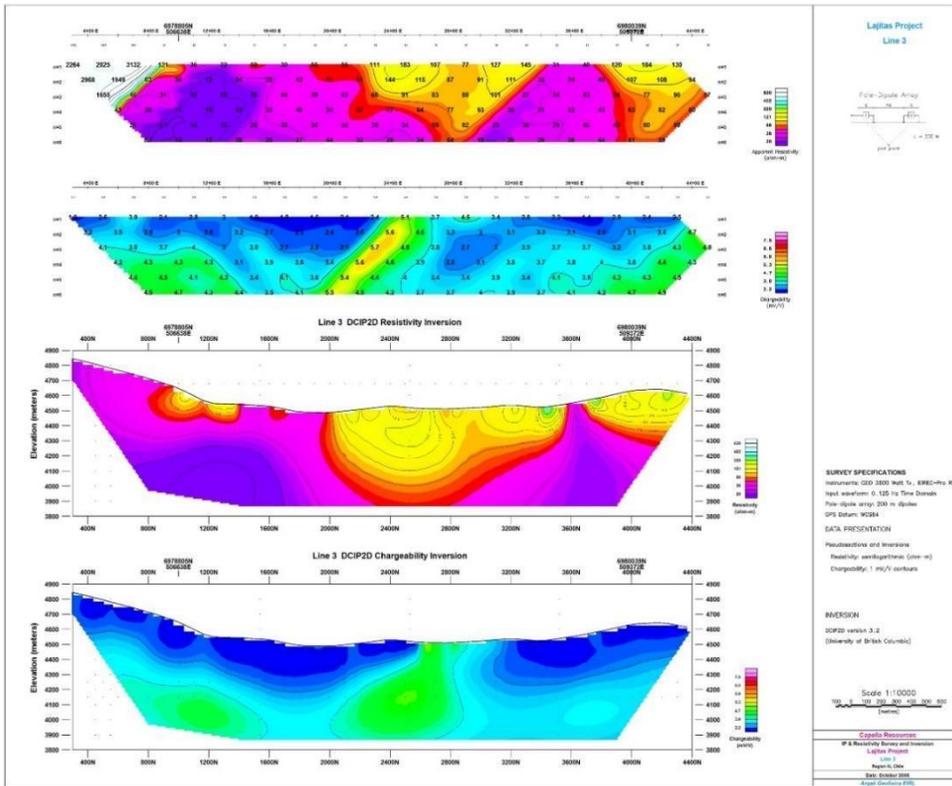


Figure 6.2.5.4. Line 3 - 2D Pseudosection Resistivity and Chargeability

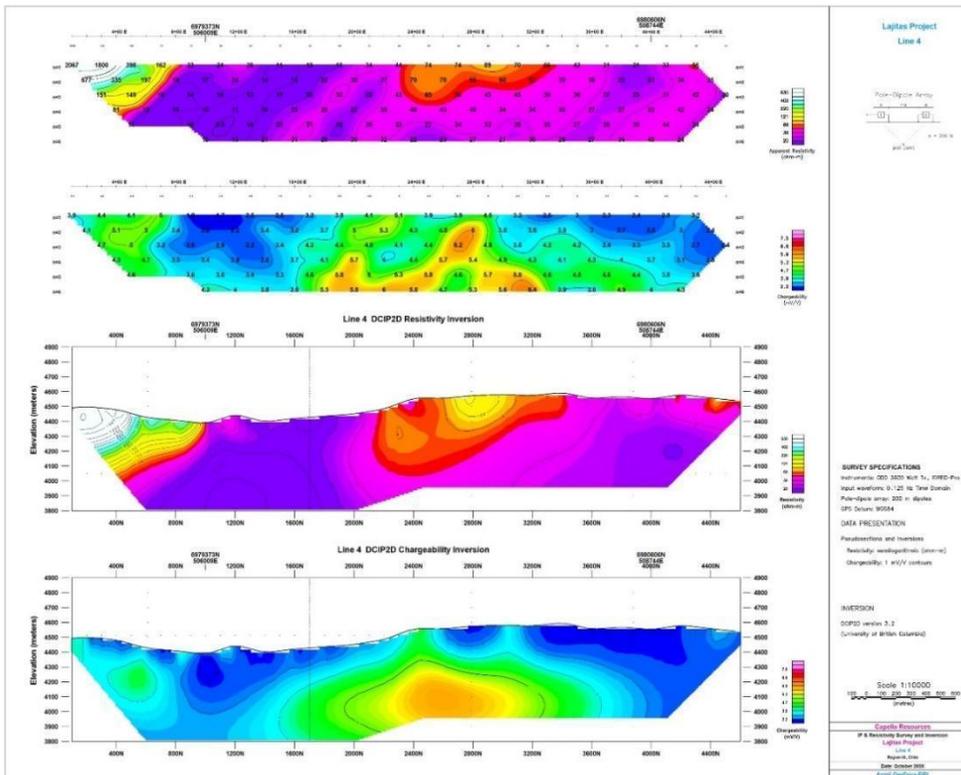


Figure 6.2.5.5. Line 4 - 2D Pseudosection Resistivity and Chargeability

6.2.6 Geophysics Magnetics

Capella commissioned a ground magnetic survey of limited scale over the gold resource area outlined from Santa Fe drilling, prior to the 2006 RC drilling program to help guide drill targeting. A much larger survey expanded out from the initial survey and was performed over most of the Property prior to the 2008 diamond drilling program.

In April 2007, a ground magnetics survey totalling 118 km was completed by Argali Geofisica E.I.R.L, Antofagasta on behalf of Capella and the following information in this Section is summarized from a report prepared by Argali (Jordan, J. 2011).

The ground magnetic survey was conducted with continuous profiles and a line spacing of 100 m for a total of 118 km. using a GSM-19W v7.0 GPS referenced “walking” overhauser technology magnetometer and a GSM-19 v6.0 overhauser technology base to monitor the diurnal variation. The data were plotted, and various enhanced images made in OASIS Montaj The present survey represents an extension to a survey completed by *Argali for Capella* in 2006 using the same equipment and specifications. Survey control was maintained with an internal GPS system. The WGS84 datum was used for both the IP and magnetic surveys.

The ground magnetic data outline a circular anomaly measuring approximately 1 km in diameter. The circular anomaly appears to consist of a magnetic core ringed by a magnetic low. The character and the shape of the anomaly are similar to other deposits in the Maricunga District and additional interpretation of this anomaly together with other data is encouraged.

Cole (2011) indicates that the magnetic data shows the western 65% of the Property is a magnetically complex environment probably dominated by volcanic flows and flow rocks with different magnetic properties. Remnant magnetization may contribute to some of the strong magnetic lows in this area. The eastern 35% of the Property is less magnetically complex possibly due to the lack of volcanic flows common to the west or more uniformly magnetized volcanic rocks. South of UTM 6,978,750N as well as west of UTM 506,650E in the southwest quadrant of the map, these rocks appear to be very resistive low chargeability cap rock forming the ridge line surrounding the erosional depression exposing the mineralization at the Lajitas Resource.

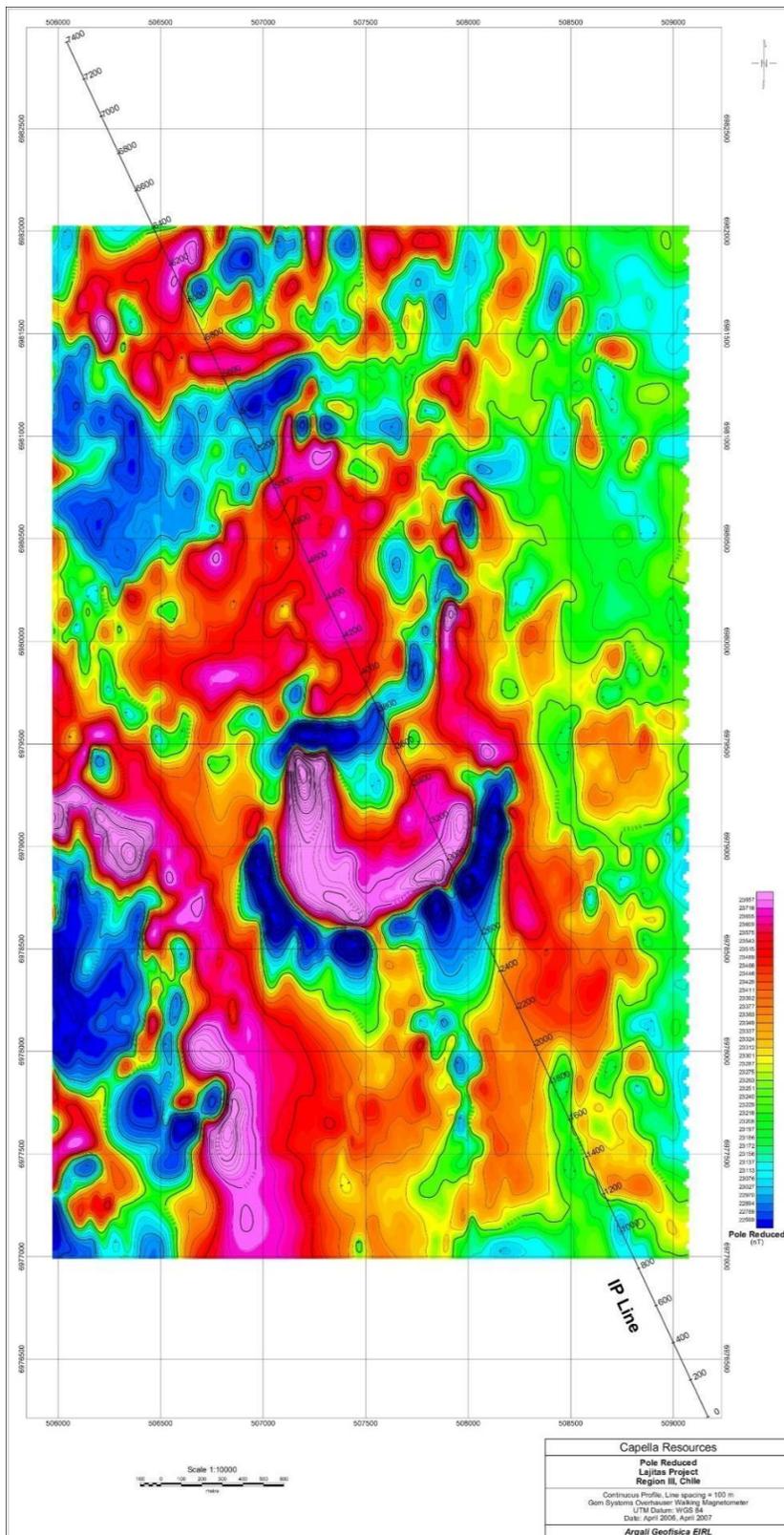


Figure 6.2.6.1. Magnetics RTP image with initial IP line 1

6.2.7 Preliminary Metallurgical Testing

Capella completed preliminary metallurgical testing. Results are described in Cole 2011 as follows;

“A series of metallurgical tests has been carried out in the United States by McClelland Laboratories, Inc. of Sparks, Nevada on a total of nine composite core samples from Drill Hole LJ08011 with composite assay grades ranging from 0.33g/t Au to 3.32g/t Au. Composite length ranged from 4.5m to 16.2m..... The composites are made up from half splits of the ½ split core in storage. The core was crushed to 6.3mm diameter.

Recoveries range from 63% - 73% in a 96 hour bottle roll. This indicates that oxidation of gold mineralization at Lajitas extends to depths of greater than 200m below the surface.

Modified Acid/Base Accounting (Mod ABA) tests were performed on the three composite core samples from Drill Hole LJ-08011 (00651, 00652, 00653). These results indicate that two of the three samples tested contained no detectable sulphur. The third sample (00653, 171.0 - 178.5m) contained only 0.07% total sulphur. None of the three samples contained detectable pyritic sulphur. Consequently, all three samples displayed no detectable acid generation potential (<0.3 tons CaCO₃ equivalents/1,000 tons solids).” (see Cole 2011.)

Metallurgical Results, Bottle Roll Tests									
Capella Lajitas Core Intercepts, P80 6.3mm Feeds									
Core Intercept, Metres									
	1040	1041	1042	1043	1044	1045	653	652	651
Metallurgical Results	54.0 - 58.5m	58.5 - 64.5m	106.5 - 111.0m	114.0 - 118.5m	138.0 - 142.5m	142.4 - 147.0m	171.0-178.5m	166.5-171.0m	220.5-236.7m
Composite Length	4.5m	6.0m	4.5m	4.5m	4.5m	4.6m	7.5m	4.5m	16.2m
Extraction: % Total Au	Au								
in 2 hours	22.2	22.8	26.3	21.4	29.2	25.6	41.3	35.6	42.3
in 6 hours	37.7	40.8	42.2	36.3	41.1	39.3	59.0	50.3	54.9
in 24 hours	57.5	62.5	54.9	60.6	60.7	60.7	64.4	56.4	67.2
in 48 hours	59.4	66.1	60.4	64.4	62.7	66.2	71.4	68.2	72.4
in 72 hours	61.3	70.6	62.3	71.8	64.6	72.0	77.0	77.5	74.6
in 96 hours	63.3	76.8	67.9	79.4	70.3	72.3	79.0	77.7	76.1
Extracted (g/t Au)	0.257	1.412	0.271	0.669	0.289	0.593	2.406	2.587	1.430
Tail Assay (g/t Au)	0.149	0.427	0.128	0.174	0.122	0.227	0.641	0.744	0.449
Calculated Head (g/t Au)	0.406	1.839	0.399	0.843	0.411	0.820	3.048	3.331	1.879
Assay Head (g/t Au)	0.234	1.625	0.395	0.762	0.392	0.806	3.144	3.257	1.886
NaCN Consumed (kg/t)	0.10	0.07	0.14	0.32	0.15	0.37	0.40	0.49	0.64
Lime Added (kg/t)	3.2	3.8	7.5	6.7	4.7	6.2	5.4	4.3	4.8
Final Leach pH	11.0	11.1	11.2	11.1	11.0	11.2	11.3	10.9	11.0
Silver Extracted (g/t Ag)	0.52	0.19	0.08	0.02	0.05	0.12	0.17	0.21	0.14

Note : Drill Core Composites constructed from ¼ HQ and NQ splits.

Table 6.2.7.1. Bottle roll test results from Cole 2011.

6.2.8 Historical Mineral Resource Estimate

Capella Resources Inc. prepared an inferred mineral resource estimate on part of the Lajitas area of the Dorado project. The historical estimate is reported in the NI 43-101 Technical Report *RESOURCE ESTIMATION ON THE DORADO/LAJITAS GOLD PROPERTY, MARICUNGA GOLD-COPPER DISTRICT, THIRD REGION, REPUBLIC OF CHILE, FOR CAPELLA RESOURCES LTD.* effective August 17, 2011, by B.Cole P.Geo. https://portalgeo.sernageomin.cl/Sigex/EL_DORADOLAJITAS_13_196/

This mineral resource estimate is a historical estimate as defined in National Instrument 43-101 and while the estimate uses categories set out in National Instrument 43-101, no qualified person has done the work necessary to classify the historical mineral resources as current mineral resources. In order to convert the historical mineral resources to a current mineral resource, the author recommends completing the work summarized in Section 26.

Neither the Author nor Federal is treating the historical mineral resource as current and the historical resource estimate should not be relied upon. It is disclosed here because to not do so would make this report misleading.

The resource estimation methodology and underlying assumptions are addressed extensively in Cole 2011. Readers should refer to the report for further details.

In summary, Cole 2011 states:

- The resource estimation was compiled using the 3D block model method.
- Estimation was commensurate with CIMM Standards on Mineral Resources and Mineral Reserves (2005) as well as CIMM Practice Guidelines for Estimation of Mineral Resources and Mineral Reserves (2003).
- The drill hole database used information from 4 diamond and 23 RC holes (7,300m) completed between 2006 and 2010 by Capella and 14 historic RC holes drilled in 1997 (1,704m) by Santa Fe.
- It was decided not to incorporate lithological modelling within the resource estimate.
- The Digital Elevation Model was prepared from high resolution stereo satellite images and is accurate to 1m resolution.
- All drill core from Holes LJ08010 and LJ08011 tested at 1.5m intervals by the water displacement method by Company personnel. The mean of 631 samples is 2.7g/cc.
- Sample assays were composited at 5m intervals down-the-hole.
- Cross-sections were at 50m intervals, more or less consistent with drill hole density.
- Gold was capped at 1.25 g/t affecting 120 samples.
- A cut-off of 0.2g/t Au was chosen as it is similar to deposits within the same mining camp.
- The Resource Model was estimated by a grade block model constrained by a wire frame.
- The Resource is almost completely contained within Oxidized rock and to lesser extent Mixed Oxide rock.

Assumptions regarding the wireframe and block model parameters are presented in Cole 2011.

The resource modelling defined two elongate steeply dipping zones of mineralisation trending approximately NNE. The West zone measures approximately 300 mts long and the East zone about 250 mts long. The zones measure between 50 to 100 mts in width and were projected to 200 mts depth (see Figures 6.2.8.1 and 6.2.8.2).

An Inferred Resource was estimated at approximately 35 million tonnes grading 0.45g/t Au at a cut-off of 0.2g/t Au and capping of 1.25g/t Au. This translates to approximately 515,000 troy ounces of contained gold (see Table 6.2.8.1). This resource has not been verified.

East Zone						
Lajitas, Chile						
<i>Cut-Off Grade</i>	<i>Volume</i>	<i>SG</i>	<i>Tonnes</i>	<i>Tenor</i>	<i>Gm</i>	<i>Oz</i>
0.1	8,060,500	2.7	21,763,350	0.41	8,965,847	288,259
0.2	7,607,500	2.7	20,540,250	0.43	8,763,703	281,760
0.3	5,769,000	2.7	15,576,300	0.48	7,472,730	240,254
0.4	3,303,000	2.7	8,918,100	0.57	5,126,068	164,807
0.5	1,914,000	2.7	5,167,800	0.67	3,477,413	111,801
<i>Dilution below 0.2 within Wire Frame</i>	461,500	2.7	1,246,050	0.16	204,147	6,563

West Zone						
Lajitas, Chile						
<i>Cut-Off Grade</i>	<i>Volume</i>	<i>SG</i>	<i>Tonnes</i>	<i>Tenor</i>	<i>Gm</i>	<i>Oz</i>
0.1	5,752,500	2.7	15,531,750	0.47	7,372,766	237,040
0.2	5,539,000	2.7	14,955,300	0.49	7,276,950	233,959
0.3	4,553,000	2.7	12,293,100	0.54	6,598,444	212,145
0.4	3,797,000	2.7	10,251,900	0.59	6,078,249	195,420
0.5	2,247,500	2.7	6,068,250	0.67	4,065,728	130,716
<i>Dilution below 0.2 within Wire Frame</i>	222,000	2.7	599,400	0.16	97,762	3,143

Total						
Lajitas, Chile						
<i>Cut-Off Grade</i>	<i>Volume</i>	<i>SG</i>	<i>Tonnes</i>	<i>Tenor</i>	<i>Gm</i>	<i>Oz</i>
0.1			37,295,100	0.44	16,338,614	525,299
0.2			35,495,550	0.45	16,040,653	515,719
0.3			27,869,400	0.50	14,071,174	452,399
0.4			19,170,000	0.58	11,204,317	360,227
0.5			11,236,050	0.67	7,543,140	242,518
<i>Dilution below 0.2 within Wire Frames</i>			1,845,450	0.16	301,909	9,707

Table 6.2.8.1. Historical inferred mineral resource estimate for the Dorado property, effective on August 17, 2011, as reported in Cole 2011. The data and methodology used to calculate this estimate has not been verified. This mineral resource estimate is a historical estimate as defined in National Instrument 43-101 and while the estimate uses categories set out in National Instrument 43-101, no qualified person has done the work necessary to classify the historical mineral resources as current mineral resources. In order to convert the historical mineral resources to current mineral resource, the author recommends completing the work summarized in Section 26. Federal is not treating the historical mineral resource as current and the historical resource estimates should not be relied upon. The estimate is reported because to not do so would make this report misleading.

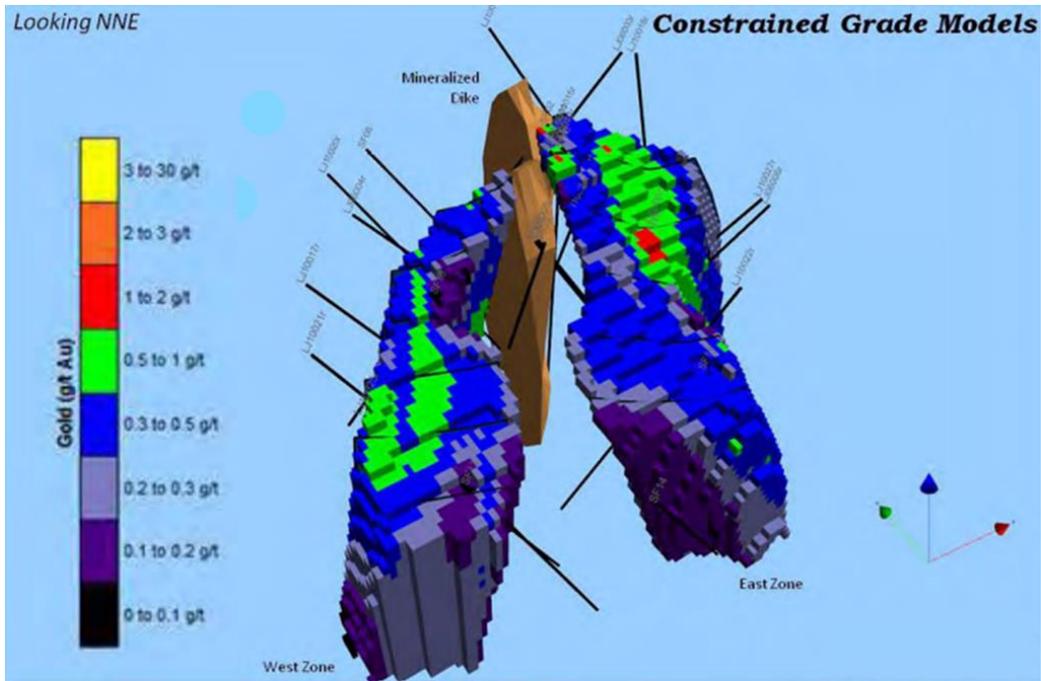
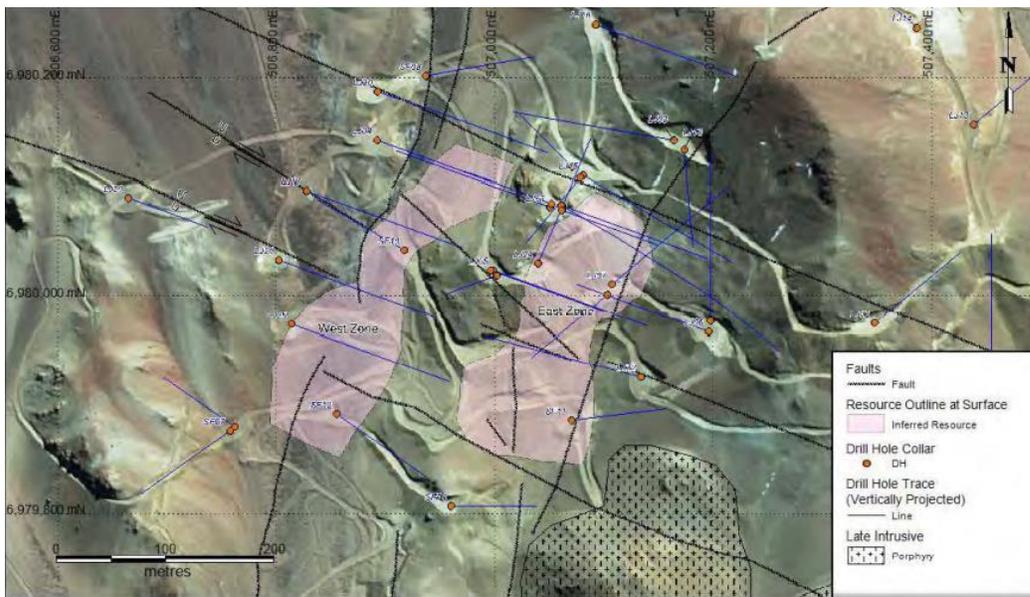


Figure 6.2.8.1. View of the 3D block model used for the calculation of the historical inferred mineral resource estimate at the Dorado Property and reported in Cole 2011, effective August 17, 2011. The data and methodology used to calculate this model has not been verified by the Author.



6.3 General Results of Historical Exploration Programs

Two companies have undertaken exploration at the Lajitas area of the Dorado project: Santa Fe Pacific in 1996 and Capella Resources from 2006 to 2011. Both companies conducted mapping, sampling, and drilling. Capella also undertook geophysical and hyperspectral studies.

The work to date at Lajitas has defined what appears to be a typical Maricunga-style porphyry gold deposit related to porphyritic subvolcanic intrusive rocks in the eroded core of a volcano. Hydrothermal alteration of the rocks is zoned from deeper magnetite-albite-chlorite, through intermediate pyrite/hematite albite-clay, to upper advanced argillic alteration. This is cut by quartz veinlets carrying gold, and at depth gold and minor copper.

The most extensive drilling at Lajitas was by Capella who drilled 5894 mts in 27 drill holes, including 4 diamond core holes. The drilling defined a mineralised zone measuring approximately 400 x 400 mts in plan to roughly 200 mts depth containing two NNE trending steeply dipping tabular zones of veinlet controlled gold mineralisation. Capella calculated an historical unverified inferred mineral resource, effective August 17, 2011, containing approximately 35 million tonnes grading 0.45g/t Au at a cut-off of 0.2g/t Au, or approximately 515,000 troy ounces of contained gold. The mineralisation is poorly constrained in at least two directions. This mineral resource estimate is a historical estimate as defined in National Instrument 43-101 and while the estimate uses categories set out in National Instrument 43-101, no qualified person has done the work necessary to classify the historical mineral resources as current mineral resources. In order to convert the historical mineral resources to current mineral resource, the author recommends completing the work summarized in Section 26. Federal is not treating the historical mineral resource as current and the historical resource estimates should not be relied upon.

The Author is unaware of any record of exploration in the greater Dorado project area, which is considered prospective for porphyry gold-(copper) and epithermal gold-(silver) mineralisation.

6.4 Production

There is no record of any mineral or metal production from the Project.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The regional geology of the Maricunga belt and its mineral deposits is summarised in Muntean and Einaudi 2000 and the references cited therein. The Maricunga belt is a region of gold-silver copper prospects and deposits in the high Andes of northern Chile (Vila and Sillitoe, 1991). Zones of hydrothermally altered rocks give rise to conspicuous colour anomalies several of which host significant metal concentrations, including high-sulfidation epithermal gold-(silver) deposits (La Coipa, Salares Norte) and porphyry gold-(copper) deposits (Refugio, Casale, Caspiche, Marte, Lobo). Since 1980, a total geologic resource of approximately 70 Moz of gold has been defined.

The belt consists of a NNE-trending chain of partially eroded andesitic to dacitic volcanoes that are part of a late Oligocene to late Miocene continental margin volcanic-plutonic arc developed parallel to and over the subducting Pacific plate. Paleozoic-Triassic basement rocks, largely of continental origin, crop out locally in NNE-trending horst blocks.

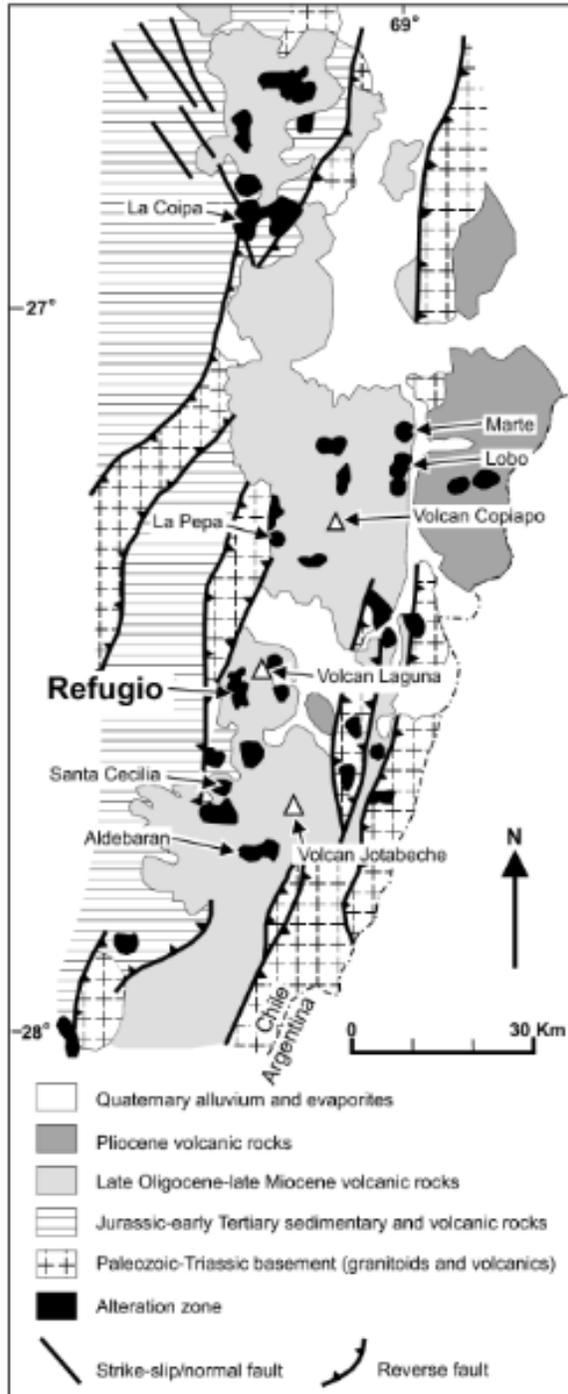


Figure 7.1.1. Geology of the central Maricunga Belt after Einaudi / Muntean 2000. The black dots immediately below the word “Lobo” are the Dorado project alteration zones. Named alteration zones are other porphyry and epithermal gold deposits mentioned in the report and literature.

Four pulses of andesitic to dacitic arc magmatism occurred in the Maricunga belt from the late Oligocene to the early Pliocene. The first (26–20 Ma) and second (16–11 Ma) episode resulted in a series of stratovolcanic complexes and dome fields along the length of the belt and form two roughly parallel sub-belts, the Western and Eastern sub-belts respectively.

The Dorado property lies within the Eastern sub-belt. The third (11–7 Ma) and fourth (7–5 Ma) episodes are represented by dacitic volcanic rocks that may locally cover earlier alteration and mineralisation.

The Maricunga belt lies near the northern limit of the modern non-volcanic, flat-slab region of the Chilean Andes (28–33° S). Flattening of the subduction zone began around 20 to 17 Ma after termination of the first magmatic episode and before initiation of the second. The Maricunga belt lies in a transition zone where there is a decrease in the dip of the Nazca plate from 30° to 10° around lat 28° S. It has long been speculated that this has bearing on the belts gold endowment.

Three dominant structural trends are present in the belt. First, north to northeast-trending high-angle reverse faults that bound basement rocks are probably coincident with the onset of flattening of the subduction zone. A second structural trend consists of northwest-striking normal faults, dikes, and veins, suggesting southwest-northeast extension. These structures align and are found in many of the late Oligocene to early Miocene volcanic centres. A third structural trend is defined by east-northeast lineaments.

7.2 Property Geology

The Author of this report made a one-day site visit to the Lajitas sector of the Dorado project on October 13th, 2020. During the visit numerous outcrops were examined to confirm the general rock-types, and the type and intensity of alteration and mineralisation in the Lajitas sector where the historic resource is located.

This Author also spent the 12th of October 2020 examining diamond drill core from the Project which also provided valuable insights regarding the lithologies, alteration and mineralisation in the area of known mineralisation. However, a detailed review of the Property geology was beyond the scope of work and much of the following sections are adapted after Cole 2011 (in italics where quoted directly) with numerous additions, corrections, and comments by this Author as required.

No detailed digital or hard-copy geological maps of the Property were available to the Author, from either of the previous operators Capella or Santa Fe, although reports by Cole suggest such maps might have existed over the Lajitas area.

As is typical of much of the Maricunga belt, outcrop is limited in areas of alteration and mineralisation and the steep slopes are covered by extensive scree and talus. Furthermore, rock types tend to be similar in texture and composition, for example porphyritic subvolcanic andesite plugs intruding porphyritic andesite flows, all cut by porphyritic andesite igneous-matrix breccias. Geological interpretations should therefore be treated as approximate and subject to revision.

7.3 Host Rocks

Andesitic and dacitic volcanic rocks of Eocene-Oligocene age are the main units outcropping in the Dorado project area. These rocks are generally subhorizontal to gently dipping and overlie the Permo-Triassic basement (Cholloy Formation) of acidic volcanic and intrusive rocks. The Eocene-Oligocene volcanics are overlain by dacitic flows and Pliocene gravels which post-date and locally conceal alteration.

To the Author's knowledge there is no age dating in the area and ages are inferred from published maps of the area.

In the Lajitas area the Eocene-Oligocene volcanics are cut by discordant bodies of porphyritic quartz diorite-dacite interpreted as subvolcanic intrusives. These are interpreted as ranging in size from small dikes/sills to major stocks up to hundreds of metres in extent. Where observed, these intrusions are often associated with phreatic and/or phreatomagmatic breccias with matrices and clasts of similar composition.

The compositions, textures and field relationships of the host rocks, together with the crater-like geomorphology in the central Lajitas area, all suggest that the Lajitas zone represents the now eroded core or shoulder of a small stratovolcano, similar to the Pastillitos volcano that hosts the Marte deposit or Cerro Maricunga volcano that hosts the Fenix deposit.

7.4 Hydrothermal Alteration

Hydrothermal alteration observed by this Author in outcrop and drill core from LJ08-008 and LJ08-011 is typical of Maricunga style gold-porphyry deposits. The subvolcanic intrusives exposed in the central Lajitas area and in drill core are altered to weak to moderate pervasive magnetite-albite-chlorite alteration. The alteration is subtle and to the unsuspecting might be considered any of fresh, weak deuteric, weak propylitic or brownschist-like in appearance but it is typical of the core zone of many gold porphyries. Evidence for its proximal origin can be seen in drill core in the form of magnetite and garnet bearing veinlets of clearly hydrothermal origin and found at depth in Refugio and Fenix for example. See photographs in Figure 7.5.1.

This deeper alteration is overprinted by zones rich in hematite-clay with some of the clay perhaps developed at the expense of former albite. These zones appear to be linear and seem to increase in volume upwards, sometimes but not always in zones of more intense veining. Later breccias and tuffisites (rock-flour matrix phreatic dykes) are often more clay altered. The clay type is unclear but is suspected to be mostly illite. Hyperspectral imagery also indicates illite-sericite-montmorillonite alteration in positions above and around the chlorite dominant alteration. This zone may be equivalent to the pyrite-albite-clay zone developed in other porphyry-gold systems but at Dorado, hematite dominates instead of pyrite, perhaps reflecting a lower sulphur budget.

The upper parts of the alteration system were not visited. However, from a distance the outcrops and scree are bright orange to white in colour suggesting abundant jarosite (from oxidation of pyrite) and kaolinite (supergene from pyrite generated acid, and hypogene advanced-argillic). This alteration is mapped as advanced argillic by the hyperspectral survey and occurs in the topographically high parts of the system where it forms a halo around the chlorite-illite core.

These observations match the zoning patterns seen at other porphyry-gold deposits, from deep magnetite-albite-chlorite, outwards and upwards to pyrite/hematite-albite-clay, and advanced argillic alteration with kaolinite-alunite-pyrophyllite-pyrite at the highest levels (see Section 8.1).

7.5 Mineralisation

“Significant known gold mineralization [at Lajitas] occurs in an area of about 400m X 400m in two tabular bodies, as interpreted from RC and diamond drilling data. The zones range from 250m to 300m in length and range from 25m to 125m in width, with average width being in the 75m range. The Western Zone dips steeply west and the Eastern Zone steeply to moderately east. Both zones are essentially tabular in form, with the Eastern Zone funnel-shaped at its northern end. Widths of the zones are largely established by drilling; the southern ends remain open. The northern end appears to be truncated by post-mineral cross-faulting..... Limited, sporadic, but significant mineralization also occurs along a line bisecting the two primary mineralized zones. This mineralization appears to be hosted in a relatively thin (25m wide) dike that has been traced intermittently by sampling for 100m along strike. The resource area [at Lajitas] is a vent structure consisting of porphyry intrusive with lesser tuff and coarser pyroclastics. Stages of alteration and mineralization are multiphased. Gold mineralization is most typically associated with tectonically disturbed zones accompanied by argillic clay alteration with silicification and occasionally with quartz veinlets. A better grade ... results in areas of quartz veinlet mineralization.” (see Cole 2011.)



Sample No		Long mts	Au ppm	Cu ppm
From mts	To mts			

1716
190.5 192.0 1.5 0.4 210
Multiple generations of A type quartz, banded quartz & late calcite



1722
198.0 199.5 1.5 0.54 230
Grey banded veinlet subparallel to core cutting magnetite-chlorite altered porphyry with illite overprint



1765
260.7 261.7 1.0 0.73 700
Black banded veinlets parallel to core



1766
261.7 262.7 1.0 0.74 460
Black banded veinlets parallel to core



1767
262.7 263.7 1.0 0.66 630
Black banded veinlets parallel to core



1768
263.7 264.7 1.0 0.44 ---
Black banded veinlets parallel to core

2060
430.5 432.0 1.5 0.19 393
*Upper – gypsum matrix breccia
Lower – anhydrite matrix breccia
Magnetite-chlorite-biotite? alteration*

Figure 7.5.1. Photographs of HQ drill core from Capella drillhole LJ08-011 with grades. Note the banded veinlets parallel to the core axis in the 4-metre run of samples 1765 to 1768.

Areas of higher-grade gold mineralization (>1ppm) are engulfed by an expansive and very wide spread cloud of anomalous gold (>100ppb) within the country rock in the resource area, which measures 300m x 400m. Although zones of breccia occur, they do not appear to be intimately linked with gold mineralization. Many of the fault zones observed are suspected to be post-mineralization.

The occurrence of sulphide minerals with gold is uncommon.....Anomalous copper mineralization has only been encountered in one instance to date.” (see Cole 2011.)

This Author reviewed drill core from Capella diamond drillhole LJ08-011 and LJ08-008 and is in general agreement with the observations from Cole 2011 quoted above. Mineralisation is of porphyry-gold style, with gold occurring in narrow banded veinlets and lesser “disseminations” in a series of subvolcanic rocks of the sort found in the central vent zone of volcanoes (Fig 7.5.1).

In general, gold in porphyry-gold deposits occurs with very fine-grained sulphides and or magnetite within millimetric to hairline colloform banded quartz veinlets (see Section 8.1). Typically, gold grades are directly proportional to the volume of veining and the amount of sulphide/magnetite in the bands within the veinlets. In many cases banded quartz veinlets show a spatial and temporal zoning from deep black (magnetite rich) through dark grey (pyrite rich) to later and/or high-level white (fluid inclusion rich) with corresponding decrease in gold grade. Where the upper advanced argillic alteration zones are preserved gold occurs with pyrite in bodies of vuggy silica.

The banded quartz veins may overprint earlier non-banded quartz veins like porphyry copper style “A” veins. These may carry pyrite, chalcopyrite and bornite and are the main control of copper grade. Gold may occur with these sulphides but is generally lower grade than in banded veinlets. At depth anhydrite veinlets, and garnet and or magnetite veinlets may occur.

All the veinlet types described above were observed by the Author in drillhole LJ08-011 and serve to confirm the geological model for the Lajitas area and the primary controls on gold grade. Magnetite, garnet, and anhydrite are more common at depth in the hole, and breccias and banded veinlets are more common towards the top of the hole. Veinlet frequencies are on average less than 5 veinlets per metre. Pyrite in general is very low in veinlets, and only trace in the wall rocks.

In porphyry gold deposits lower grade gold is often described as “disseminated” especially in breccias. However, close inspection shows the gold is related to pre-existing banded veinlets which have been incorporated as clasts and rock flour within the breccia matrix. This is suspected at Dorado where zones of rubble and or breccia without obvious veinlets report anomalous gold.

7.6 Supergene Oxidation

Supergene oxidation is subtle at Lajitas, due largely to the low-pyrite content of the rock. Supergene oxidation is reported by Cole 2011 to extend to around 200mts depth with locally deeper zones. This could not be confirmed by the Author in the time available. Nonetheless localized oxidation in the form of iron-oxides was observed in fracture zones to at least 190 mts depth in drillhole LJ08-011.

8 DEPOSIT TYPES

The Lajitas area of the Dorado project has characteristics like other known deposits in the Maricunga Belt. The deposit type being explored for is a porphyry gold deposit developed in, and associated with, Miocene subvolcanic intrusives. Typical characteristics can include mineralization and alteration types which are intimately associated with or occur below high-level high-sulfidation epithermal systems developed in variably eroded and collapsed Oligocene-Upper Miocene stratovolcanoes and within recurrent intrusive dacitic domes. Hydrothermal and phreatic breccias are frequently developed flanking and transecting the subvolcanic intrusives. To date, evidence for both porphyry gold and epithermal high-sulphidation styles of mineral deposit have been observed on the Property.

8.1 Porphyry Gold Deposits

Porphyry gold-(copper) deposits were first defined in the Maricunga Belt (Vila and Sillitoe, 1991) where they host most of the district's in-situ gold resources. They were later described in detail by Muntean and Einaudi (Muntean & Einaudi, 2000 & 2001). They have since been recognized in similar geological settings worldwide. They are associated with subvolcanic porphyritic andesitic to dacitic intrusions or cogenetic phreatomagmatic breccias emplaced into coeval volcanic rocks within 1-2 kilometres of the surface near the centre or on the flanks of stratovolcanoes.

In general terms, porphyry-gold deposits are zoned outwards and upwards as follows (Fig. 8.1.1)

- a) a porphyry copper-like core with Kspar-biotite-magnetite potassic alteration locally cut by A-type quartz \pm magnetite \pm pyrite \pm chalcopyrite veinlets. Garnet veinlets may also occur.
- b) an intermediate zone of magnetite-albite-chlorite and/or pyrite-albite-clay alteration locally cut by dark banded quartz \pm magnetite \pm sulphide veinlets (Fig. 8.1.2).
- c) a shallower zone of pyrite-albite-clay alteration in which clay content increases and the banded quartz veinlets may be grey to white, sugary to vuggy and without magnetite and sulphides.

The upper zones with banded quartz veinlets are sometimes cut by quartz-alunite \pm baryte ledges and near the paleo surface they can be overlain by sub horizontal mantos or blankets of advanced argillic and "steam-heated" alteration. D-type quartz-pyrite-sericite veinlets are sometimes seen later than banded quartz veinlets and before quartz alunite ledges.

In general, copper-gold ratios increase downwards; gold dominates in the shallower banded veinlets, and copper dominates in the deeper A-veinlets. Where A-veinlets and potassic alteration dominate, magnetite is typically > sulphide, which rarely exceeds 1 vol%.

Grades are typically < 0.5 % copper and 0.1 to 1 ppm gold. Zones of abundant banded quartz veinlets generally contain 0.5 to 2 ppm gold and < 0.05 % copper. Later quartz-alunite \pm baryte ledges may locally carry > 2 ppm gold.

Inter-mineral, late-mineral and post-mineral phreatic breccias and felsic intrusives often cut and may dilute or destroy the mineralisation described above, especially in and around the vent zone of the stratovolcano.

Exploration of porphyry-gold deposits is best achieved by careful mapping of quartz veinlet types and their spatial distribution. It is important to distinguish the veinlet types, orientations, and intensities because gold grade is generally proportional to the intensity of banded veinlets, and copper grade to the intensity of A-veinlets.

Banded veinlets commonly form structurally controlled “swarms” of parallel “sheeted” veins and may extend away from the related intrusives into the surrounding country rocks. In contrast A-veins typically occur as more irregular stockworks closer to and within the related intrusive. Dominant orientations may be different for each vein type as stress fields change through time.

In the hyper-arid Maricunga belt systematic talus fines sampling is an effective tool for detecting mineralised trends in areas of limited outcrop surrounded by widespread low-angle scree.

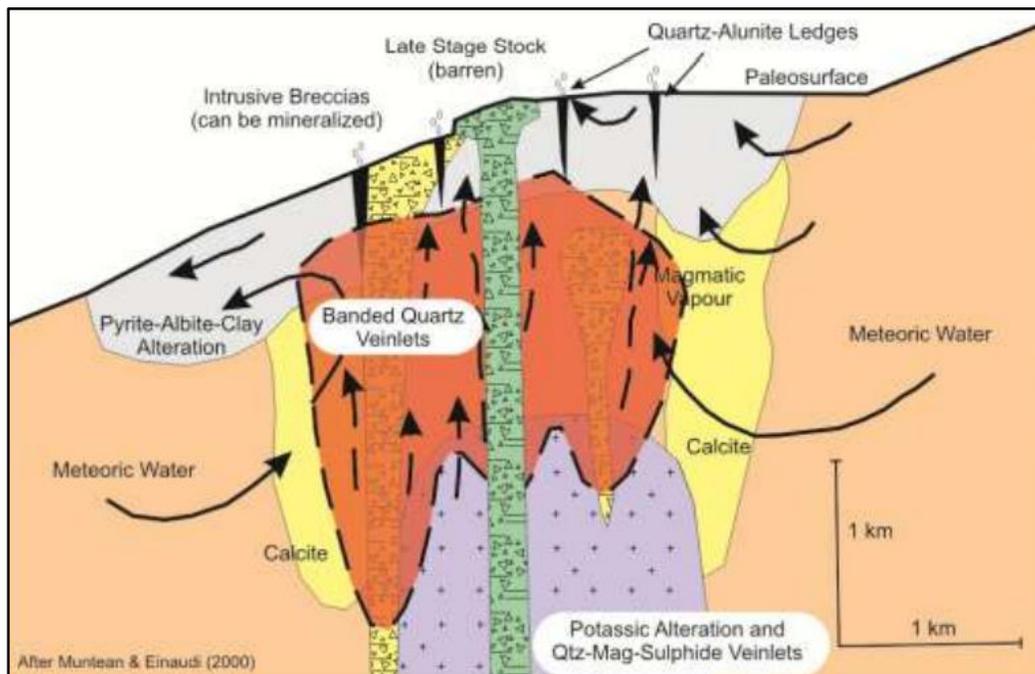


Figure 8.1.1. Typical architecture of a porphyry-gold system after Muntean & Einaudi 2000.

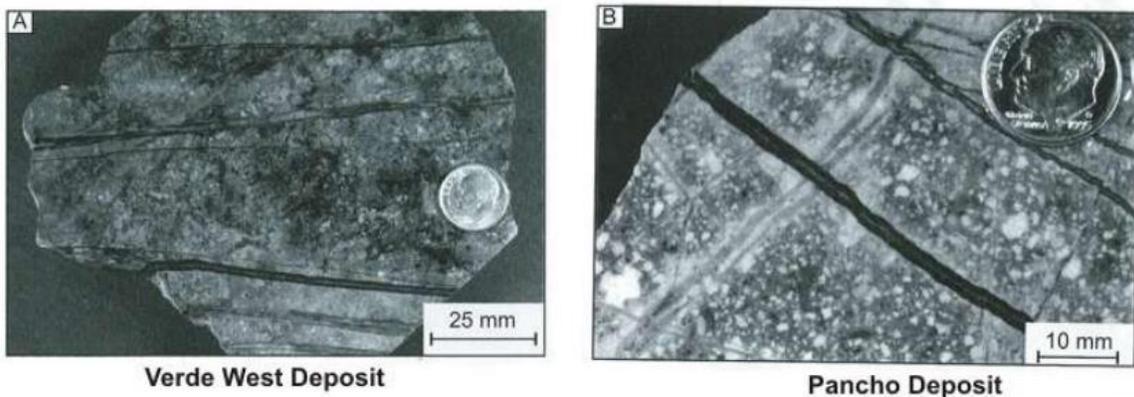


Figure 8.1.2. Typical quartz veins observed in porphyry gold deposits of the Maricunga belt. After Muntean and Einaudi, 2000

Geophysics can aid exploration given the contrasting alteration styles as shown in the table below.

Alteration type and responses	Magnetic	Chargeable	Resistive	Conductive
Supergene oxidation	no	no	if silica rich	if clay rich
Quartz-alunite ledges	no	if pyritic	if large	no
Sheeted or stockwork quartz veins	no	if v. pyritic	if v. intense	if v. pyritic?
Pyrite-albite-clay	no	yes	if albite>clay	if clay>albite
Magnetite-albite-chlorite	yes	weak to no	yes	no
Potassic Kspar-magnetite-biotite	yes	no	yes	no

Table 8.1.1. Summary of typical geophysical responses of porphyry-gold related alteration facies

Note however that geophysics must be used with caution. The geophysical response of a potassic and magnetite-albite-chlorite altered porphyry can be similar to, and therefore indistinguishable from, fresh to weakly deuteric altered intrusives and or breccia pipes that commonly occur in stratovolcano settings. This can result in many false positives. Furthermore, the sheeted quartz veins that carry gold mineralisation in the porphyry gold deposits of the Maricunga belt do not in themselves have a geophysical response. Holistic interpretation of all available geological, geochemical and geophysical data is therefore required to define potential targets for further exploration.

8.2 Epithermal High-Sulphidation Deposits

In the nearer-surface zone of numerous well-preserved porphyry copper and porphyry gold deposits the porphyry-centred alteration and mineralization zones described in Section 8.1 are temporally and spatially overprinted by epithermal high-sulphidation (EHS) gold mineralization with associated advanced argillic alteration (Sillitoe, 1973). These advanced-argillic assemblages form from the upward flow of hot acidic fluids and gases from the underlying magmatic source. These progressively alter the rocks to clay minerals and residual silica with or without gold (and sometimes silver) mineralization (see Figures 8.2.1 and 8.2.2).

Manto-like EHS deposits are generally hosted in coeval volcanic and proximal volcanoclastic sedimentary rocks deposited during active volcanism. Porous pyroclastic and fragmental flow units are particularly good hosts. EHS deposits are formed by magmatic acidic fluids and vapours that rise along structures and diffuse within and above the water table.

Where fully preserved from erosion, these systems comprise an upper blanket of steam heated alteration underlain by advanced argillic alteration that is zoned from inner quartz alunite, out to quartz kaolinite, and then quartz illite. In some cases, a blanket of chalcedonic silica can form at the base of the steam heated zone/top of the paleo water table (Fig. 8.2.2).

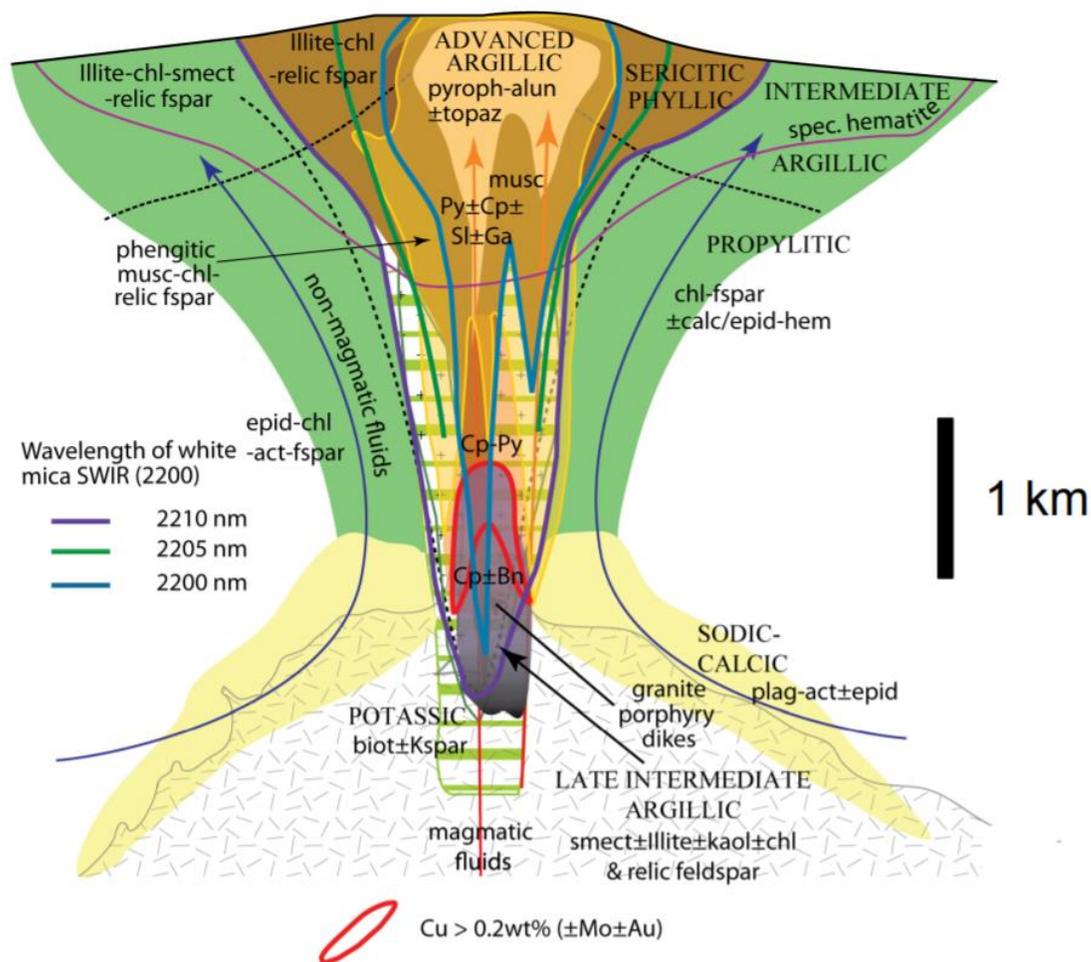


Figure 8.1.1. Integrated porphyry – epithermal deposit model (Halley et al. 2015)

This pervasive, often lithologically controlled alteration, sometimes hosts bulk lower grade mineralization on the order of 0.X g/t Au and 100s of g/t Ag. This zones into / is overprinted by structurally focused, often discordant “ledges” (lodes) of vuggy silica which can host higher grade mineralization grading from 1 to tens of g/t Au and 1000’s of g/t Ag.

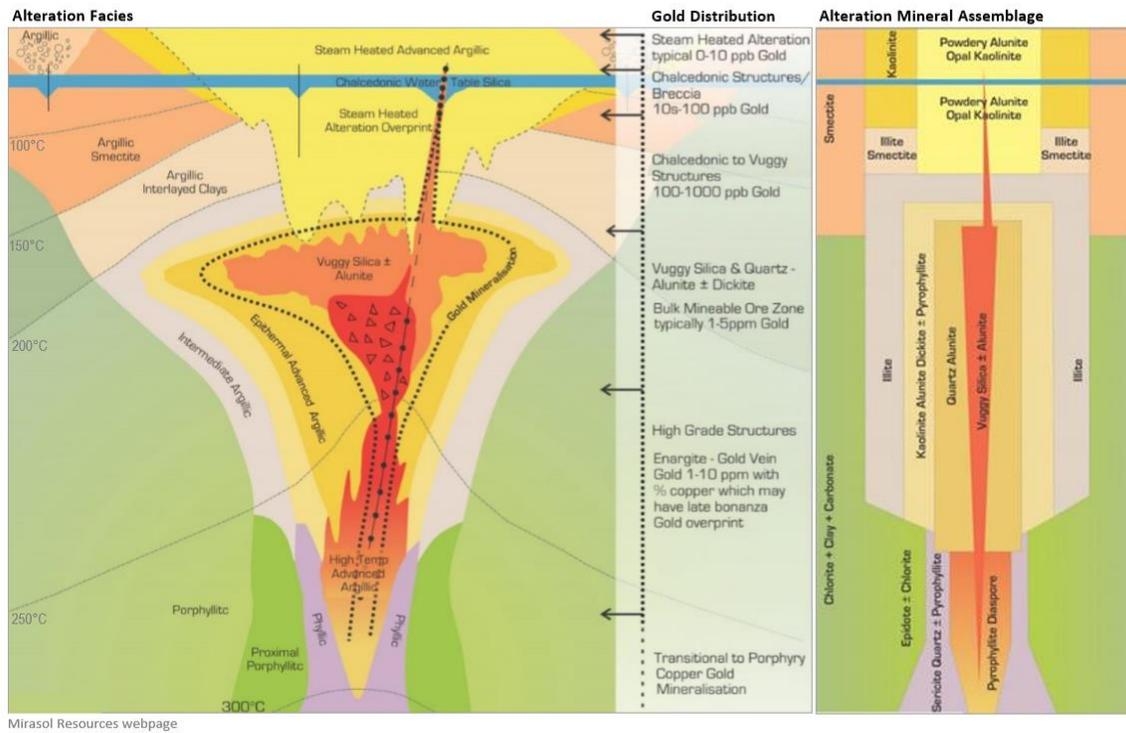


Figure 8.2.2. Integrated model of an epithermal high-sulphidation deposit above a deep porphyry

8.3 Comments on Section 8

The Author recommends an integrated porphyry-gold deposit model for exploration at Dorado.

The drilling completed by Capella at Lajitas identified hydrothermal alteration and mineralisation typical of porphyry gold deposits. Remote sensing indicates that high-sulphidation style alteration may also exist on the Property. Exploration of both mineralisation styles has been preliminary at best, and they appear to remain open laterally and at depth.

Future exploration should focus on confirming the dimensions, geometry, and grade of the porphyry-related veinlet-hosted mineralization at Lajitas, with a particular focus on the orientations and extensions of the vein swarms. At the same time, the rest of the Dorado project should be systematically evaluated as soon as possible for additional porphyry and high-sulphidation occurrences.

9 EXPLORATION

There has been no exploration by Federal as of the effective date of this report. The exploration history prior to Federal is summarised in the NI 43-101 report by Cole 2011, which is filed at https://portalgeo.sernageomin.cl/Sigex/EL_DORADOLAJITAS_13_196/.

The exploration histories from these reports are summarized in Section 6.

10 DRILLING

There has been no drilling by Federal as of the effective date of this report.

The drilling history prior to Federal is summarised in the NI 43-101 report by Cole 2011, which is filed at https://portalgeo.sernageomin.cl/Sigex/EL_DORADOLAJITAS_13_196/.

The exploration histories from these reports are summarized in Section 6.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Since the acquisition of the Dorado and Lajitas concessions from Capella in 2020, there has not been any exploration or sampling undertaken on the property. This section reviews the historic sampling over the Dorado and Lajitas concessions as documented by Cole (2011).

No records were available to the Author of sample dispatch or QA/QC. Official laboratory assay certificates matched to sample numbers and drill holes are available only for the Capella 2009/2010 drill program. The only information on sample preparation, analyses, and security is contained in Cole (2011), a NI 43-101 report previously prepared for Capella Resources. Therefore, the veracity of the quantity of assays submitted, their preparation, security, QA/QC and assay results themselves cannot be independently verified.

Information regarding the Capella exploration programs has been taken from Cole 2011 and is shown in quoted italics.

No supporting information nor sampling, preparation, analyses, and security information for data from the Santa Fe exploration programs was available to the Author and therefore no mention will be made. Readers can find details in Cole 2011.

The author considers the sample preparation, analyses, and security of the historical project data contained and cited in this report to be sufficiently accurate and representative for the limited purpose of this report, that being only to confirm the potential for porphyry Au mineralization at the Dorado project, to make recommendations as to whether or not further exploration is justified, and what form such exploration might take.

Data verification undertaken by the Author is described in Section 12.

11.1 Drilling Contractors

Drilling contractors for the three programs undertaken by Capella in the years 2006, 2008 and 2009-2010 are as follows:

- 2006 RC Drilling Program
 - 7 drill holes totalling 1,709m.
 - Drill contractor – unknown/not documented.
- 2008 Diamond Drilling Program
 - 4 drill holes totalling 1,660m.
 - Drill contractor – Captagua Cia Limitada. Orbit Garant (Canada) purchased Captagua in 2015 and are located at; Avenida Los Cerrillos 998, Metropolitan Region, Chile.

- 2009-2010 RC Drilling Program
 - 16 drill holes totalling 4,529m.
 - Drill contractor – Major Drilling Chile S.A., located at; Highway 41, km 12, Lot 9, La Serena Chile.

11.2 Sampling Methods & Security

Except where otherwise stated in Section 12, independent verification of sampling methods was not possible as records and most materials are not preserved.

11.2.1 Reverse Circulation Drill Samples

“All drill holes in both RC drill programs were blanket sampled at two-metre intervals. Dry samples were split using a standard riffle splitter. A 3-times split was performed to yield two 6kg to 10kg samples. Once the water table was encountered, a wet splitter was utilized. Dry samples were bagged in sturdy polyethylene sheet bags while wet samples were placed in polyethylene spun woven bags to allow the water to drain off. The depth at which the water table was encountered was recorded.

One sample split was shipped to the assay laboratory for assay and the other was held in secure storage in Copiapó.

As previously indicated, approximately 50% of the samples collected were wet. Sample weights were highly variable for the wet samples leading to a concern about the level of sample recovery. Subsequent statistical analysis comparing dry vs. wet sample distributions indicate they are similar. This result is taken to indicate no great problem in terms of sample quality.”

“Samples remained in the custody of Company personnel until shipment to the lab. Samples were shipped either by a pick-up service by the laboratory or driven to Copiapó by Company personnel followed by shipment to the laboratory by independent contractors secured by the Company.” (all italics above quoted from Cole 2011.)

11.2.2 Trench Samples

“Trench locations were mapped by handheld GPS. Chip samples were taken at measured 1m – 2m intervals across a bulldozer cut wall. Sample limits were marked by fluorescent spray paint. Chip samples consisted of a more or less continuous record across the interval and averaged approximately 4kg of material. Chips were placed into sturdy plastic bags, a sample number inserted, and the bag securely closed using a heavy duty wire stapler.”

“Samples remained in the custody of Company personnel until shipment to the lab. Samples were shipped either by a pick-up service by the laboratory or driven to Copiapó by Company personnel followed by shipment to the laboratory by independent contractors secured by the Company.” (all italics above quoted from Cole 2011.)

11.2.3 Diamond Core Samples

“Core boxes were trucked from the site to Copiapó. Standard protocol for drill core was to be logged, photographed, and geotched (recovery, RQD, and SG for each 3m interval) at the facility there. Core was blanket sampled at 1.5m intervals unless there was a geological reason to modify. The core was split by sawing by Company personnel. One half the core was retained in secure storage and the split samples shipped to the laboratory. Samples remained in the custody of Company personnel until shipment to the lab. Samples were shipped either by a pick-up service by the laboratory or driven to Copiapó by Company personnel followed by shipment to the laboratory by independent contractors ” (from Cole 2011.)

The Author reviewed the diamond core sampling during the October 13th, 2020 site visit. Core was cut at the Ebontex core-cutting facilities in the industrial sector of Copiapó by Ebontex personnel. Core was cut in half using a diamond bladed saw and ½ of the core was placed in standard nylon plastic bags, labelled and stapled shut. Following standard Chilean practice, the cutting line of the core was based on the alignment of the restituted and marked drill core and was effectively random. The cutting line was not specifically chosen in order to ensure a representative split of the fragment, e.g. in the case of a vein. There is no evidence that fragment selection was biased, however the method can produce local over and underestimation on the scale of metres. For large low grade bulk tonnage deposits of porphyry type this is generally considered acceptable practice.



Figure 11.2.3.1. Photograph of Ebontex core cutting facility and sample tags in wax core boxes.



Figure 11.2.3.2. Photo showing ½ core sampling in examples of competent and friable ground.

Sample locations are clearly marked by printed card tags firmly stapled at the end of each sample interval (Fig.11.2.3.1). Intervals of ¼ core indicate duplicate or metallurgical sampling and these are also clearly marked with different coloured tags.

The core cutting facilities were in regular conditions of cleanliness (Fig.11.2.3.1). Inter-sample contamination cannot be ruled out although the Author is unaware of significant examples for the type of deposit in question. Loss of Au during cutting is a possibility, especially in friable or heavily oxidised intervals. It is unknown if cutting tray fines were sampled to check this possibility.

In general the Author considers the quality of the drill core and the standard of sample cutting and sampling to be typical of and acceptable for the type of deposit in question (Fig.11.2.3.2).

11.3 Sample Preparation

11.3.1.1 Reverse circulation drilling samples

“All samples were prepared and analyzed pursuant to the following standardized sample prep and analysis package:

- *Received sample weight after drying*
- *Crushing QC test*
- *Pulverizing QC test*
- *Sample login*
- *Fine crushing – 70% <2mm*
- *Split sample – riffle splitter*
- *Pulverize 800g to 85% <75 Φm*
- *Gold (30g) Fire Assay AA finish.*

Standing instructions were to automatically rerun the pulp of any sample assaying ≥ 1 g/t Au using an AA finish and any sample assaying ≥ 3 g/t Au using a gravimetric finish.” (from Cole 2011.)

11.3.1.2 Trench and Diamond Drill Core Samples

“All samples were prepared and analyzed pursuant to the following standardized sample prep and analysis package:

- *Crush entire sample 95% <2.3mm*
- *Split sample with Rotary Sample Divider to 800gm*
- *Pulverize the subsample to 85% <200 mesh*
- *Fire assay Au 30g atomic absorption (“AA”) finish (20% duplicates)*

When requested, copper is analyzed for by 3 acid digestion (HNO₃, HClO₄, HCl) followed by analysis by AA. Like the RC samples, standing instructions were to automatically rerun the pulp of any sample assaying ≥1 g/t Au using an AA finish and any sample assaying ≥3 g/t Au using a gravimetric finish.” (all italics above quoted from Cole 2011.)

11.4 Laboratories

According to Cole 2011 *“Samples were sent to several different laboratories during the life of the Project and all are independent of the Company. All labs have ISO 9000:2008 accreditation, or higher:*

- *ALS Chemex in Coquimbo, Chile for the 2006 RC drilling project;*
- *SGS Laboratories in Santiago, Chile for the 2008 drilling project;*
- *Activation Labs in Coquimbo, Chile for the 2009/2010 project phase.”*

11.5 Sample and Core Storage

Diamond drill core, reverse circulation drill cuttings, and laboratory pulps from the Capella drilling programs have been preserved and are now stored in good condition at the Ebontex warehouse facility in the industrial sector of Paipote on the outskirts of Copiapo (see Figures 11.5.1 & 2).

RC split samples from the Capella drilling are not conserved and may not have been collected.

Diamond drill core, RC cuttings and sample pulps are in general clearly labelled with appropriate information such as drill hole number, depth and / or sample number.

There is no inventory of the materials stored at the Ebontex facilities.



Figure 11.5.1. Photo showing storage and labelling of Lajitas drill core at Ebontex facilities.



Figure 11.5.2. Photo of storage and labelling of Lajitas RC cuttings and laboratory pulps.

11.6 QA/QC Protocols

Documentation regarding and results of the quality assurance and quality control practices used by Capella in the 2006, 2008 and 2009-2010 exploration and drill programs was not available to the Author and cannot be independently verified.

Cole (2011) states:

“It was protocol to insert blank samples into the sample stream every 15 – 20 samples or in zones of suspected mineralization. Duplicate samples were taken from the core box every 20 samples and retained pending results of the initial assaying. The 2009/2010 drilling program included Standard Reference Samples (“SRS”) as well.” (see Cole 2011.)

12 DATA VERIFICATION

The author considers the data contained and cited in this report to be sufficiently accurate and representative for the limited purpose of this report, that being to confirm the potential for porphyry Au mineralization at the Dorado project, to make recommendations as to whether or not further exploration is justified, and what form such exploration might take. This opinion is based on the Author's prior experience in the belt working on similar deposits, his knowledge of the professionals and companies involved, and on the results of his site visit and check sampling.

To the best of his ability, the author has independently cross-checked a reasonable number of records and products included in this report, such as drill hole intercepts, sample numbers, assay certificates, collar coordinates, and azimuths, against the data provided by Federal and in the field.

Further quality assurance in the form of assay certificates, sample registers, and certified quality control samples combined with a statistically robust number of check samples and / or re-assaying of laboratory pulps will be required to show that the data is sufficiently accurate and precise.

12.1 Site Visit & Check Sampling

The Author completed a current site visit on the 12th and 13th of October 2020. On the 12th, sample storage, sample condition and drill core sample locations were reviewed at core storage facilities controlled by Ebontex SpA in Paipote, the industrial suburb of Copiapo. On the 13th, the Author visited the project site and confirmed access, drill collars, basic geology and general conditions. The site visit was completed in the company of Mr. Edmundo Bonilla Lopez of Copiapó.

Drill core storage is good and sampling methodology is generally appropriate and follows industry practice. A more detailed description and photographs are provided in Section 11.

Nine check samples were taken of drill core. A range of Au grades were selected spaced throughout the length of hole LJ08-011, including contiguous samples. Drill core check samples comprised $\frac{1}{4}$ core, cut and sampled at the Ebonetex sampling facility and delivered to the ALS sample preparation laboratory all under the direct supervision of the Author. See Figure 12.1.1.

Three channel-chip samples were taken of outcrops with banded quartz veins. Samples averaged about 1 metre in length and were taken and delivered to the ALS sample preparation laboratory under the direct supervision of the Author. Figure 12.1.2 shows typical mineralisation in outcrop.

The original and check assay results for Au are shown in the table below. The correlation is within reasonable limits of geological variability with the exception of sample 1749 which may be due to unequal sampling. In the Author's opinion these results verify the presence of Au in the Lajitas system and the accuracy of the Capella results for the samples in question. It is reasonable to assume, but cannot be verified without additional check sampling, that the remainder of the Capella diamond core sampling is also reasonably accurate.

Dorado Project - Lajitas Check Sampling Results					Capella	Hopper
Drill Hole	Sample	From	To	Length	Au ppm	Au ppm
LJ08011	1650	96.0	97.5	1.5	0.25	0.237
LJ08011	1651	97.5	99.0	1.5	0.26	0.244
LJ08011	1652	99.0	100.5	1.5	0.30	0.256
LJ08011	1696	162.0	163.5	1.5	0.91	0.932
LJ08011	1697	163.5	165.0	1.5	0.98	1.035
LJ08011	1698	165.0	166.5	1.5	1.61	1.78
LJ08011	1706	175.5	177.0	1.5	2.96	2.82
LJ08011	1749	236.7	238.2	1.5	1.51	2.11
LJ08011	2036	396.0	397.5	1.5	0.08	0.09
D.Hopper outcrop samples				Easting	Northing	Au ppm
Channel chip of porphyry with quartz veins				507341	6980574	0.743
Channel chip of porphyry with quartz veins				507342	6980574	0.482
Channel chip of porphyry with quartz veins				507484	6980792	0.637

Table 12.1.1. Top: Capella drill core samples on left, versus D.Hopper drill core check samples on right. Bottom: Chip channel samples of quartz veins in outcrop in “East” mineralised zone, Lajitas.

Seven drill collars and drill hole orientations were checked with hand-held GPS and compass in the field (Fig 12.1.3). Coordinates did not match presumably due to different datums/conversions or changes in GPS accuracy with time, and drillhole numbers were not labelled in the field. Nonetheless the azimuths, dips and locations of the holes in the field match the maps and images.



Figure 12.1.1. Example of drill core check sampling by the Author. Top; Samples 1696, 1697 and 1698 after cutting into $\frac{1}{4}$ core, before and after sampling. Bottom; sampling procedure and duly labelled sample bags that were delivered to ALS sample preparation laboratory by the Author.



Figure 12.1.2. Banded quartz veins at check sample site 103 (L) and check sample site 108 (R)



Figure 12.1.3. Clockwise from top left: Lajitas area with resource is the reddish ridge just above the Author's head. Diamond drillhole LJ08-010, diamond drillhole LJ08-011 and RC drillhole JLJ09-015r.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

There has been no mineral processing or metallurgical test work conducted on the Property by Federal. Historical metallurgical testing is described by Cole 2011 and summarised in Section 6.2.7.

14 MINERAL RESOURCE ESTIMATE

There has been no mineral resource estimate prepared for the Property by Federal. An historical resource estimate by a previous issuer is described in Cole 2011 and summarised in Section 6.2.8.

23 ADJACENT PROPERTIES

The author is unaware of any public domain information regarding adjacent properties that might be relevant to the Property or that is required to be disclosed to make the report not misleading.

24 OTHER RELEVANT DATA AND INFORMATION

The Author is unaware of any other relevant data or information that should be included.

25 INTERPRETATIONS AND CONCLUSIONS

The Author has reviewed the work completed to date over the Lajitas area of the Dorado project as described in Cole 2011 and independently checked a selection of data, drill core and outcrops during a site inspection on October 12th and 13th, 2020.

The Author concludes that the data is adequate for the express purpose of this report, that being to confirm the presence and type of gold mineralisation on the Dorado project, recommend if further work is warranted, and if so what form the work might take. The Author cautions that the data in its current state is not adequate for the calculation of a mineral resource.

The Lajitas zone of the Dorado project is a typical Maricunga-style porphyry-gold deposit related to intermediate composition subvolcanic intrusives and breccias intruding what may be the core of a now-eroded volcano. In common with other deposits in the belt alteration at Lajitas is zoned from a deep magnetite-chloritic zone in low areas, outwards and upwards to a hematite-clay zone and finally an advanced-argillic zone at highest elevations.

Gold mineralisation identified to date occurs in the Lajitas area and forms two NNE trending tabular zones associated with banded quartz veins cutting magnetite-chlorite and hematite-clay alteration. This mineralisation appears to be limited by drilling to the East and West but may be open to the North and South. Additional zones and other trends of banded veinlets or mineralised breccias could occur elsewhere in the lower and intermediate elevation parts of the system and high-sulphidation style gold mineralisation could occur in the upper levels.

The area is masked by abundant scree and locally covered by post mineral volcanics and gravels that might conceal alteration and mineralisation.

No exploration data is available for the greater Dorado project and it was not visited by the Author. However, remote sensing images suggest that significant areas of alteration may exist that could potentially host other occurrences of porphyry or epithermal style precious metals mineralisation.

The Dorado project lies in an established mineral belt in a stable mining country close to other exploration projects and mines. The author is not aware of any reason why exploration could not proceed on the Property.

Further work is justified with the aim to upgrade or verify the historical mineral resource estimate at Lajitas and to potentially discover new zones of mineralisation at Lajitas and elsewhere on the Dorado property.

26 RECOMMENDATIONS

The following exploration activities are recommended for the Dorado Project, as one phase of exploration.

26.1 Lajitas area exploration and upgrade/verification of historical resource estimate

- Detailed “mineral system” mapping at 1:5000 scale of the entire alteration zone, ideally by a geologist with prior experience in porphyry-gold and high-sulphidation epithermal systems in the Maricunga belt. Mapping should extend as far as the limits of alteration. Special attention needs to be paid to subtle alteration facies, timing relationships of intrusives and breccias, and the presence of even the smallest hairline veinlets, their characteristics, and their orientations.
- Similar mineral systems mapping over the historical mineral resource area should be completed at 1:2500 scale with special emphasis on veinlet frequencies and orientations.
- The mapping should be complemented by channel or panel-chip sampling and SWIR analysis of all outcrops, supported where necessary by petrographic studies.
- Talus fines sampling of the entire Lajitas alteration zone on nominal 100 x 100 mt spacings. This could be done on a regular grid or 100mt spacings along contours or downhill “fall-lines”. Although talus “creeps” downslope in steep areas, mineralised regolith can migrate to the surface and provide evidence for and give the approximate location of mineralised trends, albeit displaced. The method is useful for porphyry gold deposits because the host rocks can appear fresh to weakly altered and the fine quartz veinlets are easily dispersed in the scree, therefore there are no visual clues. A minus 2mm fraction is adequate and further sieving in the laboratory is not required.
- Hand, backhoe or bulldozer trenching of anomalous areas identified by talus sampling followed by systematic channel chip sampling.
- Up to 15 line km of induced polarization survey could be considered if the reprocessing and interpretation of the historical data demonstrates the method's usefulness.
- Revision and where necessary rehabilitation of all exploitation claim markers.

- Surveying of all historical drill collars to a standard datum and labelling of drill collars.
- Relogging of historical diamond drill holes using the same standards as the surface mapping, with particular emphasis on veinlet frequencies, characteristics and orientations, and the degree of oxidation of the veinlets and mineralised zones in general.
- Recovery of all historical assays and their verification against the original assay certificates and/or reanalysis of a split of the sample pulps stored in the Ebontex warehouse, assuming they can be demonstrably correlated with the original sample locations.
- Re-assay of splits from some or all pulps using 4 acid digest ICP-MS for full characterisation of lithologies and alteration as well as quantification of deleterious elements.
- Polished section and/or QemScan analysis of a representative suite of mineralised oxide, mixed and sulphide zone samples to identify the location and characteristics of gold and its amenability to heap leaching.
- Preliminary cyanide leach tests on a representative suite of samples, including those above. Advice should be sought about the recommended type of test and quantity of samples needed for the level of resource to be published, e.g. bottle roll, column etc.
- Up to 5000 mts of diamond drilling is recommended assuming the company wishes to recalculate/upgrade/extend the historical mineral resource, including if the historical drilling assays cannot be certified.
- Between 10 and 14 diamond core holes should be drilled to confirm/infill/extend the East and West zones reported in Cole 2011, and to test for extensions to the North and South. Fans or fences of holes should be drilled to cut across the tabular vein zones described in Cole 2011 and not down dip or along strike of the veins. The length, location and orientation of drill holes depends on the integration and interpretation of the historical and new data and is beyond the scope of this report.
- Best efforts should be made to recover the historical data obtained by Capella and Santa Fe over the Lajitas zone as this may replace or complement the work recommended above.

This includes, but is not limited to

- Reprocessing of raw ground magnetic data to produce new products, including a 3D apparent susceptibility model as voxels that can be imported into a 3D modelling platform.
- Reprocessing of raw IP data to produce new inversions, including 3D models as voxels for importing into 3D platforms.
- Rescue and import of the hyperspectral data, including replication of the mineral alteration map reported in Cole 2011 which will be a valuable aid to geological mapping at Lajitas and throughout the Dorado project.
- Recovery of outcrop, road cut and talus sampling locations and assay results.

26.2 Dorado district exploration

- Geological reconnaissance style mapping and sampling is recommended at a nominal scale of 1:25,000 accompanied by reconnaissance style outcrop and stream sediment sampling.
- Anomalous areas should be followed up with talus fines sampling and trenching.
- Approximately 6 km of Induced polarization and an uncertain amount of ground magnetics might assist in delimiting anomalous zones or structural controls.

26.3 Proposed Exploration Budget

Table 26.3.1 below shows an approximate budget for the recommended program presented in section 26.1 and 26.2.

The budget is preliminary and was prepared using costs based on local experience and preliminary quotations from key service providers such as drillers, camp providers and laboratories. Mineral exploration in general, and early-stage exploration projects in particular, can be subject to unforeseeable geological and operational factors that may result in final expenditures differing from projected budgets. Therefore, this preliminary estimate should be considered neither exhaustive, nor definitive.

Based on his personal experience in the belt, the Author believes that the budget is reasonable for the scale of work envisaged and the remote high-altitude location of the project.

Table 26.3.1. Estimated budget for exploration at the Dorado project as per Sections 26.1 & 26.2.

BUDGET AREAS

Field Exploration	Quantity	Amount USD\$
Mineral System Mapping & Sampling		
Salaries		\$41,000
Talus, Rock & Trench Samples	1000	\$30,000
Trenching	500 meters	\$45,000
Drill Program		
IP-RES Geophysics	12km	\$35,000
Diamond Core Drilling	5,000 meters	\$1,500,000
Permitting		\$10,000
Mobile Camp & Supplies		\$400,000
Assaying	3,500	\$110,000
Salaries		\$250,000
Data Compilation		
Historic core re-logging	1 month	\$8,000
Historic sample pulp re-assay	1000	\$30,000
Confirmation historic collar surveying		\$2,500
Petrographic Analysis	20	\$3,000
Bench-scale Met tests (cyanide leach)	5	\$20,000
Data Verification/Cataloging	1 month	\$8,000
G&A		\$40,000
Sub Total		\$2,532,500
VAT 19%		\$128,000
Total		\$2,660,500

27 REFERENCES

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