

***CSA NI 43-101 Technical Report on the Santa Daniela Gold Project, Municipios of Sahuaripa and Yecora, Sonora, Mexico***

**Prepared for Rancho Gold Corp.**

**by**

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***Maiz Azul mineralized outcrop in Arroyo Maiz Azul.***

## Table of Contents

<b>Item</b>	<b>Page</b>
Title Page.....	cover
Table of Contents, Table of Figures, List of Tables.....	i
1 Summary.....	1
1.1 General Summary .....	1
1.2 Property Description.....	1
1.3 Ownership .....	1
1.4 Geology and Mineralization.....	1
1.5 Exploration and Drilling .....	2
1.6 Mineral Processing and Metallurgical Testwork.....	3
1.7 Conclusions and Recommendations.....	4
2 Introduction and Terms of Reference .....	5
2.1 Introduction.....	5
2.2 Terms of Reference.....	5
2.3 Purpose of Report .....	5
2.4 Sources of Information .....	6
2.5 Field Examination and Data Review by William Pincus.....	6
2.6 Definitions and Translations.....	8
3 Reliance on Other Experts.....	9
4 Property Description and Location.....	10
4.1 Area and Location .....	10
4.2 Melior – Ranchero RTO Transaction .....	10
4.3 Claims and Title.....	12
4.4 Surface Rights.....	15
4.5 Environmental Liability .....	17
4.6 Permits .....	17
4.6.1 Environmental .....	17
4.6.2 Water.....	18
4.7 Access, Title, and Permit Risks.....	18
4.7.1 Access Risks.....	18
4.7.2 Title Risks .....	18
4.7.3 Permit Risks.....	18
5 Accessibilty, Climate, Local Resources, Infrastructure, and Physiography.....	19
5.1 Accessibility .....	19
5.2 Physiography, Climate and Vegetation.....	21
5.3 Local Resources and Infrastructure .....	21
6 History.....	23
6.1 Prior Ownership.....	23
6.2 Prior Exploration.....	23
6.2.1 Altos Hornos de México S.A de C.V – JLL Joint Venture.....	23

6.2.1.1	Rock Chip Sampling.....	23
6.2.1.2	Geophysical Surveys .....	25
6.2.1.3	Diamond Core Drilling .....	29
6.3	Historical Metallurgical Studies .....	33
6.4	Historical Resource Estimates .....	33
6.5	Prior Production.....	33
7	Geological Setting.....	34
7.1	Regional Geology.....	34
7.2	Local Geology .....	36
7.2.1	General Geology.....	36
7.2.2	Maiz Azul Area Lithology Descriptions .....	36
7.2.2.1	Mafic Dikes.....	38
7.2.2.2	Andesitic Tuff.....	38
7.2.2.3	Felsic Tuff.....	39
7.2.2.4	Quartz Dacite Tuff .....	40
7.2.2.5	Porphyritic Andesite .....	40
7.2.3	La Colmena Area Structure .....	41
7.2.4	Maiz Azul Area Mineralized Zones .....	42
7.2.4.1	La Colmena Zone.....	42
7.2.4.2	La Cascada Zone .....	44
7.2.4.3	X Structure .....	44
7.2.5	Maiz Azul Area Alteration .....	45
7.2.5.1	Argillic.....	47
7.2.5.2	Propylitic.....	47
7.2.5.3	Silica – Clay.....	47
7.2.6	Maiz Azul Area Vein Types.....	47
7.2.6.1	Early stage chalcedonic quartz veins.....	47
7.2.6.2	Banded white quartz veins .....	47
7.2.6.3	Late stage cryptocrystalline grey silica veinlets .....	51
7.3	Oxidation .....	51
7.4	Conclusions.....	52
8	DEPOSIT TYPES .....	53
9	Exploration .....	55
9.1	General.....	55
9.2	Geologic Mapping .....	55
9.3	Thematic Mapping.....	55
9.4	Rock Chip Sampling.....	57
10	Drilling .....	59
10.1	Drilling History .....	59
10.2	2021-2022 Phase I Campaign .....	59
11	Sampling Method and Approach .....	66
11.1	Sampling Field Methods.....	66
11.2	Sample Security .....	66
11.3	Analytical Methods .....	66

11.4	Quality Assurance and Quality Control .....	67
11.4.1	QA/QC Materials.....	67
11.5	Results of Security, Quality Control Procedures and Adequacy of Results.....	70
12	Data/Database Verification .....	71
13	Mineral Processing and Metallurgical Testing .....	71
14	Mineral Resource Estimates .....	71
23	Adjacent Properties.....	72
24	Other Relevant Data and Information .....	72
25	INTERPRETATION AND CONCLUSIONS .....	72
25.1	Geologic Interpretation .....	72
25.2	Project Opportunities.....	74
25.3	Project Risks .....	74
25.3.1	Permitting Risk.....	74
25.3.2	Water Supply Risk .....	74
25.3.3	Surface Access Risks .....	75
25.3.4	Metallurgical Risk.....	75
26	Recommendations .....	76
27	References.....	77
28	certificate and effective date .....	80

## List of Figures

Figure	Page
Figure 1. Field visit, 8 January 2020, L to R: S. Ristorcelli, J. Baltierrez, W. Pincus, M. Gray, pilot E. Castro.....	7
Figure 4-1. Location map, Santa Daniela Project.....	11
Figure 4-2. Mining concessions, Santa Daniela Project.....	14
Figure 4-3. Surface rights in project area.....	16
Figure 5-1. Project location and regional infrastructure.....	20
Figure 5-2. View of typical topography and vegetation at Santa Daniela, looking north from drillpad MH18-01, across Arroyo Maiz Azul.....	21
Figure 6-1. Historical (pre-2020) rock chip gold sampling results, plotted on shaded topographic base, 20m contour interval.....	24
Figure 6-2. Geophysical survey areas plotted on shaded relief map.....	26
Figure 6-3. Ground magnetic survey total magnetic intensity, reduced to pole.....	28
Figure 6-4. RGI Geologist Rodolfo Saucedo examining AHMSA drill core, Paika's Yecora field office.....	29
Figure 6-5. Historical drillhole locations and project claim boundaries plotted on shaded relief map.....	30
Figure 6-6. Historical drilling and rock chip Au at Maiz Azul, plotted on shaded topographic base, 20m contour interval).....	31
Figure 7-1. Regional geologic map (Servicio Geologico Mexicano, 2000).....	35
Figure 7-2. Maiz Azul Area geologic map (Castellanos and Reyna, 2020).....	37
Figure 7-3. Hand samples of mafic dikes.....	38
Figure 7-4. Stratified andesitic tuff outcrop.....	39
Figure 7-5. Hand samples of rhyolitic tuff. Note pen barrel for scale.....	39
Figure 7-6. Hand samples of quartz dacite tuff. Note pen barrel for scale.....	40
Figure 7-7. Hand samples of porphyritic andesite. Note pen for scale.....	41
Figure 7-8. Silicified veined and brecciated zone exposed along Arroyo Maiz Azul. View looking northwest. Mineralized zone dips gently to the southwest.....	43
Figure 7-9. View looking north at arroyo exposure of the La Cascada zone. Small exploration adits Cascada 1 and Cascada 2 are developed on veined breccia zones, contained within a broader silica-clay and argillically altered zone. Historic sampling of the zone returned high grade (>8 gpt Au) results from the breccia and vein zones, and highly anomalous gold contents in the altered wallrock.....	44
Figure 7-10. Quartz veinlets in a zone of silica-clay alteration in porphyritic andesite along the trace of the X Structure.....	45
Figure 7-11. Southern projection of X Structure exposed as zone of silica-clay alteration of porphyritic andesite with stockwork fractures with Fe-oxide.....	45
Figure 7-12. Hydrothermal alteration map, Maiz Azul area (Castellanos and Reyna, 2020).....	46
Figure 7-13 Drillcore, M18-01, ~114.5 to 117m (upper left to bottom right), quartz veined and quartz cemented breccia zone in quartz dacite tuff. Veined zone assayed 3.54, 0.60, 4.19, and 3.12 gpt Au respectively for samples MA-98 through MA-101, 114.35 to 117.0m.....	48
Figure 7-14. Close up of multistage quartz veinlet, drillhole MA18-01, ~115.5m depth. Early stage, open space filling, white crystalline quartz at margin of veinlet, and later low temperature silica filling open space at center of veinlet. Note veinlet crosscuts zone of silica cemented breccia. Interval assayed 4.19 gpt Au.....	48
Figure 7-15. Drillcore M18-03, knife at ~104.6m. Interval 103.80 to 104.80m assayed 3.12 gpt Au, 104.80 to 105.70m assayed 6.92 gpt Au.....	49
Figure 7-16. Drillcore MA18-03, breccia vein zone at ~104.6m. This drill core sample assayed 3.12 gpt Au.....	50
Figure 7-17. Drillcore MA18-03, ~105m depth, silica matrix hydrothermal breccia. Note: banded silica rim on dark silicified volcanic clast in lower left of photo; angular clasts of dense grey silica and weakly banded silica in siliceous microbreccia matrix. This interval assayed 6.92 gpt Au. 50	50

Figure 7-18. Banded silica vein fragment as breccia clast, below and right of knife blade, drillhole MA18-03, ~98m depth. Interval 98.00 to 99.05m assayed 7.7 gpt Au. ....	50
Figure 7-19. Hand specimen of quartz vein breccia zone exposed along Arroyo Maiz Azul. Note similarity to breccia seen in drillcore in Figure 7-19.....	51
Figure 9-1. Thematically mapped interpreted hydrothermal alteration (Perry, 2020). ....	56
Figure 9-2. Gold assays, rock chip samples collected by Ranchero in 2020-2022 .....	58
Figure 10-1. Phase I Drill Campaign – Collar Location Map .....	62
Figure 10-2. La Colmena Target Cross Section MA21-10 and 11 .....	63
Figure 10-3. La Colmena Target Cross Section MA21-13 and 14 .....	64
Figure 10-4. La Colmena Target Cross Section MA21-20 .....	65
Figure 11-1. Plot of Results for Standard OxE150. ....	68
Figure 11-2. Plot of Results for Standard OxB130. ....	68
Figure 11-3. Plot of Results for Standard OxH163.....	69
Figure 11-4. Plot of Results for Blank Silica Sand.....	69
Figure 11-5. Scatterplot of Duplicate Samples.....	70
Figure 25-1. Maiz Azul area geology with drill hole locations. ....	73

List of Tables

<u>Table</u>	<u>Page</u>
Table 1-1. Stage 1 – Data Confirmation, Drill Testing Known Targets, Regional Evaluation Work Plan and Budget, Santa Daniela Project.....	4
Table 4-1. Listing of Mining Concessions.....	13
Table 6-1. Historical drillholes .....	29
Table 26-1. Recommended Program - Data Confirmation, Drill Testing Known Targets, Regional Evaluation Work Plan and Budget, Santa Daniela Project.....	76

## **1 SUMMARY**

### **1.1 General Summary**

Ranchero Gold Corp. (Ranchero) presents this report, “CSA NI 43-101 Technical Report on the Santa Daniela Gold Project, Municipios Sahuaripa and Yecora, Sonora Mexico” prepared by William Pincus. The report presents the results of an initial drill campaign and other exploration activities to the effective date. Ranchero holds an indirect 99.9% interest in a 22,267-hectare gold exploration property located in the Sierra Madre Occidental gold-belt in eastern Sonora, Mexico, known as the Santa Daniela property, subject to a 2% NSR to prior concession owners. This report has been prepared to comply with the disclosure and reporting requirements of CSA NI43-101, describes the historical work completed at the project, summarizes work completed by contractors and Ranchero geologic personnel, and recommends additional work to further advance the project. The effective date of this report is 25 April, 2022.

### **1.2 Property Description**

The Santa Daniela project is located in the Municipalities of Sahuaripa and Yecora, State of Sonora, Mexico. The Maiz Azul area, the most advanced exploration target, lies 226 km E-SE of the city of Hermosillo, Sonora, 6 km S-SE of the town of Mulatos, Sonora, and 5km E of Alamos Gold’s Mulatos Mine. The project area is centered at approximately 725470E 3171500N UTM WGS84 Z12N. The project hosts low sulfidation epithermal gold-silver mineralization at the Maiz Azul and La Cascada targets, and due to its location within a district hosting high sulfidation epithermal deposits, it is considered prospective for discovery of concealed high sulfidation epithermal gold deposits. For purposes of this evaluation, only Au and Ag are of potential significance.

### **1.3 Ownership**

The project mineral rights are held in 8 mining concessions covering approximately 222.67 square kilometers. Surface rights in the Maiz Azul area are held by the Ejido Mulatos, a communal agrarian cooperative. A valid surface rights agreement covering the Maiz Azul area, the most advanced exploration target at the project, is in effect, allowing mineral exploration and development. Exploration has been carried out under the authority of agreements between the project operators and the Ejido Mulatos.

### **1.4 Geology and Mineralization**

The Santa Daniela project lies within the Sierra Madre Occidental (SMO) province, a regionally extensive Tertiary volcanic field, comprised of two distinct volcanic sequences, an older andesitic and dacitic series, and a younger, pyroclastic dominated rhyolitic series. The traditional nomenclature refers to these as the Serie Volcanica Inferior (Lower Series) and Serie Volcanica Superior (Upper Series). The Lower Series is dominated by Paleocene and Eocene andesitic lavas and pyroclastic deposits, with interbedded volcanoclastic strata. Silicic volcanic units are present but are a minor component. The volcanic strata of the Lower Series are cut by calc-alkaline intrusives. The Upper Series

unconformably overlies the Lower Series with erosional disconformity and comprises a sequence dominated by Oligocene and early Miocene dacitic and rhyolitic pyroclastic strata and volcanoclastic strata. Most significant metal occurrences in the SMO are hosted by rocks of the Lower Series or the underlying Mesozoic strata.

The Santa Daniela project area is underlain by the Lower Series volcanic sequence comprised of Paleocene andesitic and dacitic volcanic rocks interbedded with epiclastic rocks of similar composition, capped by Upper Series Oligocene ignimbrites. The favorable Lower Series rocks are exposed in valleys incised through the overlying Upper Series rocks.

Mapping conducted as part of the study for this report documented zones of quartz veining and hydrothermal alteration consistent with the upper levels of a low sulfidation epithermal mineralized system. Historical drill programs support this conclusion.

Historical drill hole data has not been fully verified by the author. Nevertheless the author has viewed the historic drill core and attendant logs. He considers this information useful in supporting geologic interpretations. Drill data acquired in the initial 3100-meter drill campaign conducted from October 2021 until February 2022 are included in this report and have been verified by the author.

## 1.5 Exploration and Drilling

Ranchero has conducted detailed mapping and sampling at the Maíz Azul prospect within the Santa Daniela concessions. This was followed by an initial 3,112-meter diamond-core, drill program.

The results of 2021 and 2022 drilling are:

Drill Hole	Target	Azimuth (degrees)	Inclination (degrees)	Total Depth (meters)	From (meters)	To (meters)	Interval (meters)	Au (gpt)
MA 21-10	La Colmena	22	50	145.5				
					<b>75.00</b>	<b>106.50</b>	<b>31.50</b>	<b>4.00</b>
					<b>91.50</b>	<b>103.50</b>	<b>12.00</b>	<b>9.93</b>
includes					132.00	144.00	12.00	0.32
MA 21-11	La Colmena	22	70	218.2				
					69.15	72.55	3.40	0.27
					<b>102.65</b>	<b>123.65</b>	<b>21.00</b>	<b>1.08</b>
includes					<b>110.15</b>	<b>120.65</b>	<b>10.50</b>	<b>1.68</b>
MA 21-12	La Colmena	60	60	136.9				
					76.90	78.65	1.75	0.15
					97.20	103.10	5.90	0.47
					109.10	115.05	5.95	0.28
MA21-13	La Colmena	60	60	43.0				
					7.25	21.75	14.50	0.33
					<b>25.25</b>	<b>38.40</b>	<b>13.15</b>	<b>1.11</b>
					38.40	39.80	1.40	N/A <sup>3</sup>
					39.80	42.95	3.15	0.71
MA 21-14	La Colmena	0	90	80.3				

Drill Hole	Target	Azimuth (degrees)	Inclination (degrees)	Total Depth (meters)	From (meters)	To (meters)	Interval (meters)	Au (gpt)
					<b>32.15</b>	<b>53.30</b>	<b>21.15</b>	<b>1.18</b>
MA 21-15	La Colmena	25	60	130.8	46.95	67.00	20.05	0.28
MA 21-16	La Colmena	25	60	172.9	38.38	41.24	2.86	0.81
MA 21-17	La Cascada	20	60	311.1	110.05	120.55	10.00	0.22
MA 21-18	La Cascada	20	60	349.8	36.30	37.80	1.50	0.30
Ma 21-19	La Cascada	0	70	326.0	124.55	133.40	8.85	0.18
MA 21-20	La Cascada	30	70	176.2	117.7	128	10.30	0.32
MA 21-21	La Cascada	60	70	308.2	266.2	276.7	10.50	0.33
MA-22-22	La Colmena	25	70	188.1	96.55	105.90	9.35	0.37
					<b>134.85</b>	<b>139.35</b>	<b>4.50</b>	<b>2.17</b>
					164.05	181.35	17.30	0.35
MA 22-23	La Colmena	0	90	203.4	137.15	147.65	10.50	0.27
					152.15	162.65	10.50	0.16
MA 22-24	La Colmena	0	70	182.0	71.50	81.50	10.00	0.12
					87.20	90.20	3.00	0.24
					<b>93.20</b>	<b>113.55</b>	<b>20.35</b>	<b>0.40</b>
MA 22-25	La Colmena	22	70	140.1	61.70	64.70	3.00	0.28
					<b>74.00</b>	<b>89.55</b>	<b>15.55</b>	<b>1.17</b>
					95.10	99.60	4.50	0.16

#### Notes

1. Intersections presented herein may not necessarily represent true width of mineralization. Reported drill intercepts were based on a minimum grade of 0.1 ppm Au over 1.5 meters. Intervals are weight-average by sample length. Assay values are uncut. Intervals less than 3 meters are not included.
2. Rancho has a QA/QC program that conforms to industry best practices. Samples selected by Rancho geologists were no more than 1.5 meters of core length and at the discretion of the geologist could be shorter. All samples were sawn in half with a rock saw, bagged, tagged, sealed and kept in a secure facility until shipment by Rancho personal to ALS Global Labs in Hermosillo, Sonora, Mexico for preparation and analysis. Preparation and analytical methodology are those described below. Strict sampling and QA/QC protocol are followed, including the insertion of three standards, blanks, and duplicates on a routine basis. Approximately 5 percent of assays are control samples. Results of the QC data are plotted and failures are re-analyzed. The remaining core, coarse reject and pulps are stored on-site in a secure location.
3. Drill Hole MA 21-13 encountered a 1.4-meter natural void in the rock during drilling. This occurred within a mineralized interval from 25.25 meters to 42.95 meters. For purposes of proper representation, the interval has been divided into two segments – one above and one below the void.

Rancho geologists also began initial reconnaissance efforts over the extended concession package. This included initial and follow-up site visits to target areas, rock sampling and initial mapping.

### 1.6 Mineral Processing and Metallurgical Testwork

No metallurgical studies have been conducted.

## 1.7 Conclusions and Recommendations

The Maiz Azul area hosts three outcropping structures prospective for hosting low sulfidation, epithermal gold mineralization: 1) La Colmena; 2) La Cascada; and 3) X Structure. Drilling during the Phase I campaign has identified gold mineralization at the La Colmena and La Cascada targets. Both targets are considered open and further drilling at each is likely to encounter further gold mineralization. The X-Structure was not tested during the initial drill campaign.

Outcropping, mappable vein zones and hydrothermal alteration zones together with historical outcrop and drill core assays indicated that the Santa Daniela project is a structurally controlled, low sulfidation epithermal gold prospect. This interpretation was incorporated into the design of the recent drill program. The 2016 through 2019 drilling results are historical in nature and have not been verified by the author. Drill hole data could not be verified because of incomplete documentation regarding sampling and QA/QC protocols, incomplete assay certificates for review and no downhole survey data. Nevertheless the author considers the historic drill information as useful in supporting geologic interpretations.

The La Colmena and La Cascada targets were tested in an initial, 3100-meter diamond core drill program. Specific findings are:

- Rancho completed its Phase I drill program with total diamond core drilling of 3,112 meters;
- All 16 completed drill holes intersected gold mineralization confirming widespread mineralization at Maíz Azul; and
- Near surface drill results included: 1) 4.0 g/t gold over 31.5 meters (MA 22-10); 2) 1.2 g/t gold over 21.2 meters (MA 21-14); 3) 1.2 g/t gold over 15.6 meters (MA 22-25); and 4) 1.1 g/t gold over 21.0 meters (MA 21-11).

A follow-up drill campaign is recommended consisting of detailed deposit modelling based on initial drill results, a geophysical survey and a subsequent 4000-meter drill program. The cost of this program is estimated to be C\$1,188,000.

**Table 1-1. Stage 1 – Data Confirmation, Drill Testing Known Targets, Regional Evaluation Work Plan and Budget, Santa Daniela Project**

Activity or Concept	Month Start	Month End	Cost CDN\$
Drilling	1	6	750,000
Assay Cost	1	6	150,000
Camp, Vehicle, etc.	1	6	90,000
Geologists and Assistants	1	6	135,000
Geophysical Contractor	1	2	63,000
<b>Grand Total</b>			<b>1,188,000</b>

## **2 INTRODUCTION AND TERMS OF REFERENCE**

### **2.1 Introduction**

Ranchero Gold Corp. (Ranchero) presents this report, “CSA NI 43-101 Technical Report on the Santa Daniela Gold Project, Municipios Sahuaripa and Yecora, Sonora Mexico”. The report presents the results of an initial drill campaign and other exploration activities to the effective date. This report is prepared by William Pincus, CPG and a qualified person to report exploration results. He is both an Executive and Director of Ranchero Gold and is not considered independent.

On October 7, 2021 Ranchero (then named Melior Resources Inc.) acquired Ranchero BC Holding Corp. (then named Ranchero Gold Corp.), which holds the Santa Daniela property, in a reverse take-over transaction. Ranchero’s common shares trade on the TSX Venture Exchange.

Ranchero holds an indirect 99.9% interest in a 22,267-hectare gold exploration property located in the Sierra Madre Occidental gold-belt in eastern Sonora, Mexico, known as the Santa Daniela property, subject to a 2% NSR to prior concession owners. This report has been prepared to comply with the disclosure and reporting requirements of CSA NI43-101, describes the historical work completed at the project, summarizes work completed by contractors and Ranchero geologic personnel, and recommends additional work to further advance the project. The effective date of this report is 25 April, 2022.

This report has been prepared in accordance with CSA NI 43-101 standards. The report provides a summary of the geology of the project, its potential to host economic mineral deposits, and recommendations for additional work.

### **2.2 Terms of Reference**

Mr. Pincus has prepared this report to include the results of its recently completed drill campaign (October 2021 until February, 2022.) Ranchero is a mineral exploration company investigating its Santa Daniela concession package in the Sierra Madre Occidental of Sonora, Mexico.

William Pincus is the CEO and Director of Ranchero. He has visited the project on multiple occasions, has supervised all sample collection and field-checked other work, and has verified the new drilling data.

### **2.3 Purpose of Report**

The purpose of this report is to provide an provide new information that includes the results of a 2021-2022 drill campaign. This report has been prepared in accordance with the disclosure and reporting requirements set forth in CSA NI 43-101.

## 2.4 Sources of Information

In the preparation of this report Mr. Pincus has used his own observations, data generated by Resource Geoscience Inc. and other consultants contracted by Rancho, field work and sampling conducted by Rancho geologists directly under his supervision and supplemented by information obtained through review of both published and unpublished documents and maps.

Sources of information include:

- 'CSA NI 43-101 Technical Report on the Santa Daniela Gold Project, Municipios of Sahuaripa and Yecora, Sonora, Mexico' prepared by Matthew D. Gray, Ph. D. (C.P.G. #10688) of Resource Geosciences Incorporated dated 18 January, 2021 with an effective date of 24 August, 2020.
- Geologic, geophysical, geochemical, assay and other data collected by Rancho geologists or its contractors as discussed in this report.
- Geologic, geophysical, and assay data collected and published by the Servicio Geológico Mexicano, a Mexican Federal agency.
- Topographic and physiographic data collected and published by the Instituto Nacional de Estadística y Geografía, a Mexican Federal Agency.
- Historic drillhole geology and assay information contained in digital databases provided by Rancho and its Mexican subsidiary Minera y Metalurgia Paika SA de CV.
- Historical exploration information contained in reports provided by Rancho and its Mexican subsidiary Minera y Metalurgia Paika SA de CV.
- Mining concession information provided by Lic. Gustavo Aguilar Aranda, Legal Counsel for Rancho's Mexican subsidiaries.
- Land access agreement summaries provided by Lic. Gustavo Aguilar Aranda, Legal Counsel for Rancho's Mexican subsidiaries.
- Environmental permitting information provided by Lic. Gustavo Aguilar Aranda, Legal Counsel for Rancho's Mexican subsidiaries.
- Water rights information provided by Lic. Gustavo Aguilar Aranda, Legal Counsel for Rancho's Mexican subsidiaries.

## 2.5 Field Examination and Data Review by William Pincus.

Mr. Pincus has visited the Santa Daniel concessions on multiple occasions:

- January 8, 2020;
- February 4-8, 2020;
- October 25-November 9, 2021;
- December 6-9, 2021;
- January 3-8, 2022;
- February 3-8, 2022; and
- April 5-12, 2022.

Mr. Pincus was directly responsible for the field work done by Rancho Gold Corp geologists and independent contractors. During the course of his visits to the project he

has viewed 3112 meters of ores, reviewed logging, sampling, sample storage and shipping procedures and field checked all mapping and modelling. He has also verified data related to the drill program conducted by Rancho.



Figure 1. Field visit, 8 January 2020, L to R: S. Ristorcelli, J. Baltierrez, W. Pincus, M. Gray, pilot E. Castro.

## 2.6 Definitions and Translations

AHMSA	-	Altos Hornos de México SA de CV
C	-	Centigrade
cm	-	centimeter
CONAGUA	-	Comisión Nacional de Agua (National Water Commission)
CRM	-	Consejo de Recursos Minerales (Natural Resources Council)
CSAMT	-	Controlled source audio-frequency magneto tellurics (geophysical survey method)
CUS	-	Cambio de Uso de Suelo (Land Use Change Permit)
DGM	-	Dirección General de Minas (Central Mining Department)
gpt	-	grams per tonne, equivalent to ppm
Has	-	hectares
HQ	-	diamond drill core size, 63.5 mm core diameter
IP	-	Induced polarization (geophysical survey method)
km	-	kilometer
M	-	million
MIA	-	Manifiesto de Impacto Ambiental (Environmental Impact Statement)
masl	-	meters above sea level
Melior	-	Melior Resources Incorporated
mm	-	millimeter
NA	-	North azimuth, bearing expressed as 0 to 360 degrees
NOM120	-	Norma Oficial Mexicana 120
NSR	-	Net Smelter Return
oz	-	Troy Ounce
Paika	-	Minera y Metalurgia Paika SA de CV
ppm	-	parts per million
Ranchero	-	Ranchero Gold Corporation
RGI	-	Resource Geosciences Incorporated
RGM	-	Resource Geosciences de Mexico SA de CV
RTO	-	Reverse take-over
SEMARNAT	-	Secretaría del Medio Ambiente y Recursos Naturales (Secretary of the Environment and Natural Resources)
SGM	-	Servicio Geológico Mexicano (Mexican Geologic Survey)
SMO	-	Sierra Madre Occidental
UTM	-	Universal Transverse Mercator
WGS84	-	World Geodetic System 1984 datum

### 3 RELIANCE ON OTHER EXPERTS

The author is not expert in Mexican mining, civil, environmental or tax laws and the author is not a Qualified Person with respect to these subjects. The QP has reviewed the mineral tenure, environmental permits, surface ownership, water rights, with the Company's lawyer Gustavo Aguilar and the Company's Country Manager Jesus Noriega, both who are experienced in these matters. He has also reviewed supporting documents regarding the corporate legal status, ownership of the project area and underlying documents referred to in the list of items below. The QP has relied upon information derived from legal experts including the information in the following documents:

Letter from Lic. Gustavo Aguilar Aranda of Hermosillo, Sonora law firm Promocion Integral Minera, titled "Informacion de Concesion de Agua con Titulo 02SON152958/09FMDA18", a summary of water rights held by Minera y Metalurgia Paika SA de CV for the Santa Daniela Project, Sonora, Mexico, dated 4 August 2020

Letter from Lic. Gustavo Aguilar Aranda of Hermosillo, Sonora law firm Promocion Integral Minera of Hermosillo, Sonora, titled "Opinion Legal Concesiones Mineras e Informe Preventivo", a summary of mineral rights and environmental permits held by Minera y Metalurgia Paika SA de CV for the Santa Daniela Project, Sonora, Mexico, dated 5 August 2020.

Letter from Lic. Gustavo Aguilar Aranda of Hermosillo, Sonora law firm Promocion Integral Minera of Hermosillo, Sonora, titled "Opinion Legal Concesion Minera Santa Daniela 1 Titulo 245008 y Legal Otorgamiento de Ocupacion Temporal Sobre El Ejido Mulatos", a summary of mineral rights and surface rights held by Minera y Metalurgia Paika SA de CV for the Santa Daniela Project, Sonora, Mexico, dated 4 August 2020

Information from these letters and supporting documents has been used in Section 4 of this report.

This Technical Report was prepared specifically for the purpose of complying with CSA NI 43-101 and may be distributed to third parties and published in its entirety without omissions or modifications, subject to the regulations of CSA NI43-101.

## **4 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Area and Location**

The Santa Daniela project is located in the Municipalities of Sahuaripa and Yecora, State of Sonora, near the village of Mulatos. The Maiz Azul area, the most advanced exploration target, lies 226 km E-SE of the city of Hermosillo, Sonora, 6 km S-SE of the town of Mulatos, Sonora, and 5km E of Alamos Gold's Mulatos Mine. The project area is centered at approximately 725470E 3171500N UTM WGS84 Z12N (Figure 4-1).

All geographic references in this report utilize UTM Zone 12N datum WGS84 otherwise stated.

### **4.2 Melior – Ranchero RTO Transaction**

The transaction, as described below was completed on Oct 7, 2021.

Ranchero (then named Melior Resources Inc.) entered into a non-binding letter of intent dated October 31, 2020 with Ranchero Gold Corp. (the private entity) (PrivCo) with respect to an arm's length reverse take-over transaction (RTO) pursuant to the policies of the TSX Venture Exchange whereby Ranchero acquired all of the issued and outstanding common shares in the capital of PrivCo (Melior Resources Inc., 2020). The letter of intent was replaced with a definitive amalgamation agreement dated February 17, 2021, as amended, between Ranchero, PrivCo and 1274169 BC Ltd. (Newco), a wholly-owned subsidiary of Ranchero at the time. PrivCo held an indirect 99.9% interest in the Santa Daniela property through its ownership of its Mexican subsidiary Paika. As a result of the RTO, Ranchero holds an indirect 99.9% interest in the Santa Daniela property.

Pursuant to the RTO, Ranchero consolidated its outstanding share capital and acquired all of the issued and outstanding shares of PrivCo from the holders thereof in exchange for post-consolidation common shares of Ranchero, and PrivCo and Newco amalgamated and continued as one company, Ranchero BC Holding Corp.

Prior to the closing of the RTO, Pala Investments Limited converted a material portion of its principal amount US\$18,837,500 convertible indebtedness (plus the interest and fees accrued thereon) into common shares of Ranchero and thereafter forgave or assigned any remaining indebtedness (including any interest and fees accrued thereon).

In connection with the RTO, PrivCo completed a brokered private placement of subscription receipts of PrivCo at a purchase price of C\$0.55 per subscription receipt for aggregate gross proceeds of C\$5,258,887. Each subscription receipt entitled the holder thereof to automatically receive, upon satisfaction of certain escrow release conditions, one PrivCo share, which was immediately exchanged for one share of Ranchero pursuant to the RTO. Ranchero used the proceeds of the concurrent financing for exploration and development of Ranchero's properties in Mexico and for working capital and general corporate purposes.

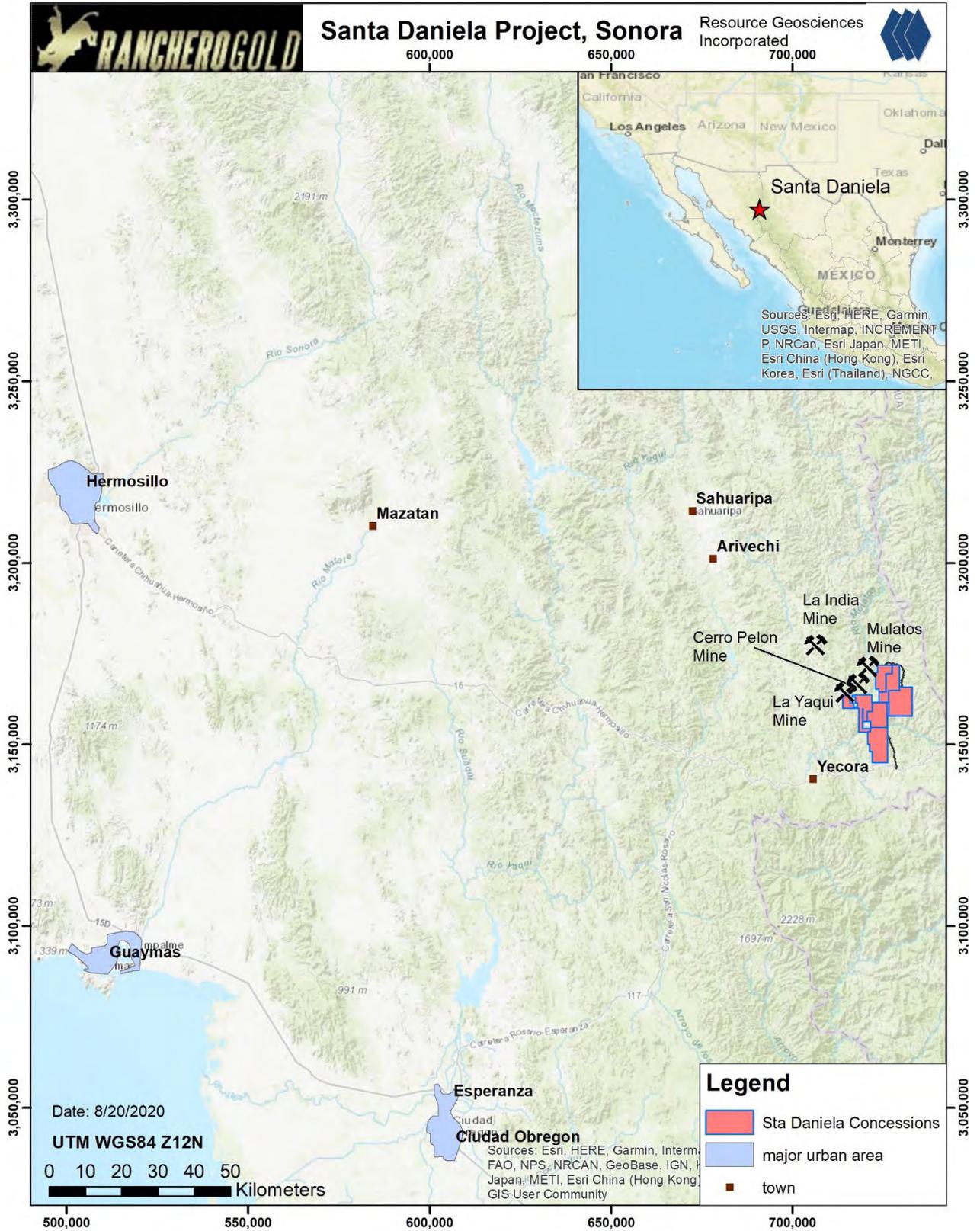


Figure 4-1. Location map, Santa Daniela Project.

### 4.3 Claims and Title

The author is not an expert in Mexican mining law. The author has relied upon representations from senior management of Rancho and legal opinion letters from Lic. Gustavo Aguilar Aranda of Hermosillo, Sonora for a review of the concession titles and legal framework, as described in Item 3 of this report. Lic. Aguilar Aranda verified that the concessions are in good standing and ownership of all eight concessions has been registered to Minera and Metalurgia Paika SA de CV, a 100% subsidiary of Rancho, with the prior concession owners retaining a 2% NSR on all concessions.

Lic. Aguilar Aranda and Rancho report that the mining concessions comprising the Santa Daniela project are not encumbered by any back in rights, payments, or other agreements beyond the 2% NSR payable to the prior concession owners.

All minerals rights in Mexico are the property of the government of Mexico and may be exploited by private entities under concessions granted by the Mexican federal government. The process was defined under the Mexican Mining Law of 1992 and excludes petroleum and nuclear resources from consideration. The Mining Law also requires that non-Mexican entities must either establish a Mexican corporation, or partner with a Mexican entity.

Under current Mexican mining law, amended April 29, 2005, the Direccion General de Minas ('DGM') grants concessions for a period of 50 years, provided the concession is maintained in good standing. There is no distinction between mineral exploration and exploitation concessions. As part of the requirements to maintain a concession in good standing, bi-annual fees must be paid based upon a per-hectare escalating fee, work expenditures must be incurred in amounts determined on the basis of concession size and age, and applicable environmental regulations must be respected.

The Santa Daniela project consists of eight concessions covering in aggregate 22,266.9159 Has.

Concession Title 228792 was originally staked and titled to Aurelio Valdespino Partida and Ernesto Lopez Montes. Title to this concession was transferred to JLL Grupo Mulatos de Sonora on Jan 26, 2012. On Aug 16, 2016, this concession was subdivided into 6 new concessions, Titles 245008, 245009, 245010, 245011, 245012 and 245013. These six titles were transferred to Minera and Metalurgia Paika on Feb 19, 2020 with JLL Grupo Mulatos de Sonora retaining a 2% NSR on all concessions.

The STA DANIELA (Title 225783) and STA. DANIELA (Title 225784) concessions were originally staked and titled to Ernesto Lopez Montes, and were transferred to SAH Exploraciones on August 30, 2011. These two concessions were then transferred to Minera y Metalurgia Paika on February 19, 2020 with SAH Exploraciones retaining a 2% NSR on all concessions.

Concession information is summarized in Table 4-1, and the concessions are shown in Figure 4-2.

Table 4-1. Listing of Mining Concessions

LOT NAME	TITLE	SURFACE AREA (HAS)	CITY & STATE	VALIDITY		PREVIOUS HOLDER	CURRENT HOLDER	STATUS
				FROM	TO			
STA DANIELA	225783	97.0000	SAHUARIPA, SON	25-oct-05	24-oct-55	SAH, EXPLORACIONES MINERAS S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA DANIELA	225784	100.0000	SAHUARIPA, SON	25-oct-05	24-oct-55	SAH, EXPLORACIONES MINERAS S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA. DANIELA 1	245008	2,301.2237	YECORA Y SAHUARIPA, SON	16-ago-16	01-feb-57	JLL GRUPO MULATOS DE SONORA S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA. DANIELA 2	245009	2,892.2937	YECORA Y SAHUARIPA, SON	16-ago-16	01-feb-57	JLL GRUPO MULATOS DE SONORA S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA. DANIELA 3	245010	3,947.2935	YECORA Y SAHUARIPA, SON	16-ago-16	01-feb-57	JLL GRUPO MULATOS DE SONORA S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA. DANIELA 4	245011	4,770.4305	YECORA Y SAHUARIPA, SON	16-ago-16	01-feb-57	JLL GRUPO MULATOS DE SONORA S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA. DANIELA 5	245012	4,912.5854	YECORA Y SAHUARIPA, SON	16-ago-16	01-feb-57	JLL GRUPO MULATOS DE SONORA S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE
STA. DANIELA 6	245013	3,246.0891	YECORA Y SAHUARIPA, SON	16-ago-16	01-feb-57	JLL GRUPO MULATOS DE SONORA S.A. DE C.V.	MINERA Y METALURGIA PAIKA, S.A. DE C.V.	ACTIVE

## NOTES:

1.- THE ASSIGNMENT OF RIGHTS CONTRACT OF THE MINING CONCESSIONS FROM SAH, EXPLORACIONES MINERAS, S.A. DE C.V. A MINERA AND METALURGIA PAIKA, S.A. DE C.V., SIGNED ON FEB-19-2020, IS CURRENTLY IN THE PROCESS OF REGISTRATION IN THE PUBLIC REGISTRY OF MINING WITH DOC. NO. 08681 DATED FEB-26-2020.

2.- THE ASSIGNMENT OF RIGHTS CONTRACT OF THE MINING CONCESSIONS FROM JLL GRUPO MULATOS DE SONORA, S.A. DE C.V. A MINERA AND METALURGIA PAIKA, S.A. DE C.V., SIGNED ON FEB-19-2020, IS CURRENTLY IN THE PROCESS OF REGISTRATION IN THE PUBLIC REGISTRY OF MINING WITH DOC. NO. 08682 DATED FEB-26-2020.



#### **4.4 Surface Rights**

The author is not an expert in Mexican surface rights or contract law. The author has relied upon Rancho's legal counsel in Mexico, Lic. Gustavo Aguilar Aranda for a review of the project surface rights as discussed in Item 3 of this report .

Surface rights for the project have been investigated only for the northwest portion of the claim block, where exploration activities have taken place. Portions of the property are owned by the Mulatos and Tesoripa Ejidos and by private ranches. Ejidos are Federally defined agrarian communities with cooperative land rights. Surface rights at the Maiz Azul target area are owned by the Mulatos Ejido and Rancho has surface rights to the land which includes the Maiz Azul area at Santa Daniela by means of a Temporary Occupation agreement covering 307.7704 ha between the Mulatos Ejido and JLL Grupo Mulatos de Sonora SA de CV. Upon transference of mineral concession titles from JLL to Paika, the Temporary Occupation permit rights and obligations were transferred to Paika, Rancho's Mexican subsidiary. Prior operator AHMSA conducted exploration drilling on private ranch lands of the Rancho Rincon Cerro del Metate and Rancho Mesas Coloradas.

Areas for which Rancho controls surface rights, and surface ownership as presently investigated and documented, are shown in Figure 4-3.

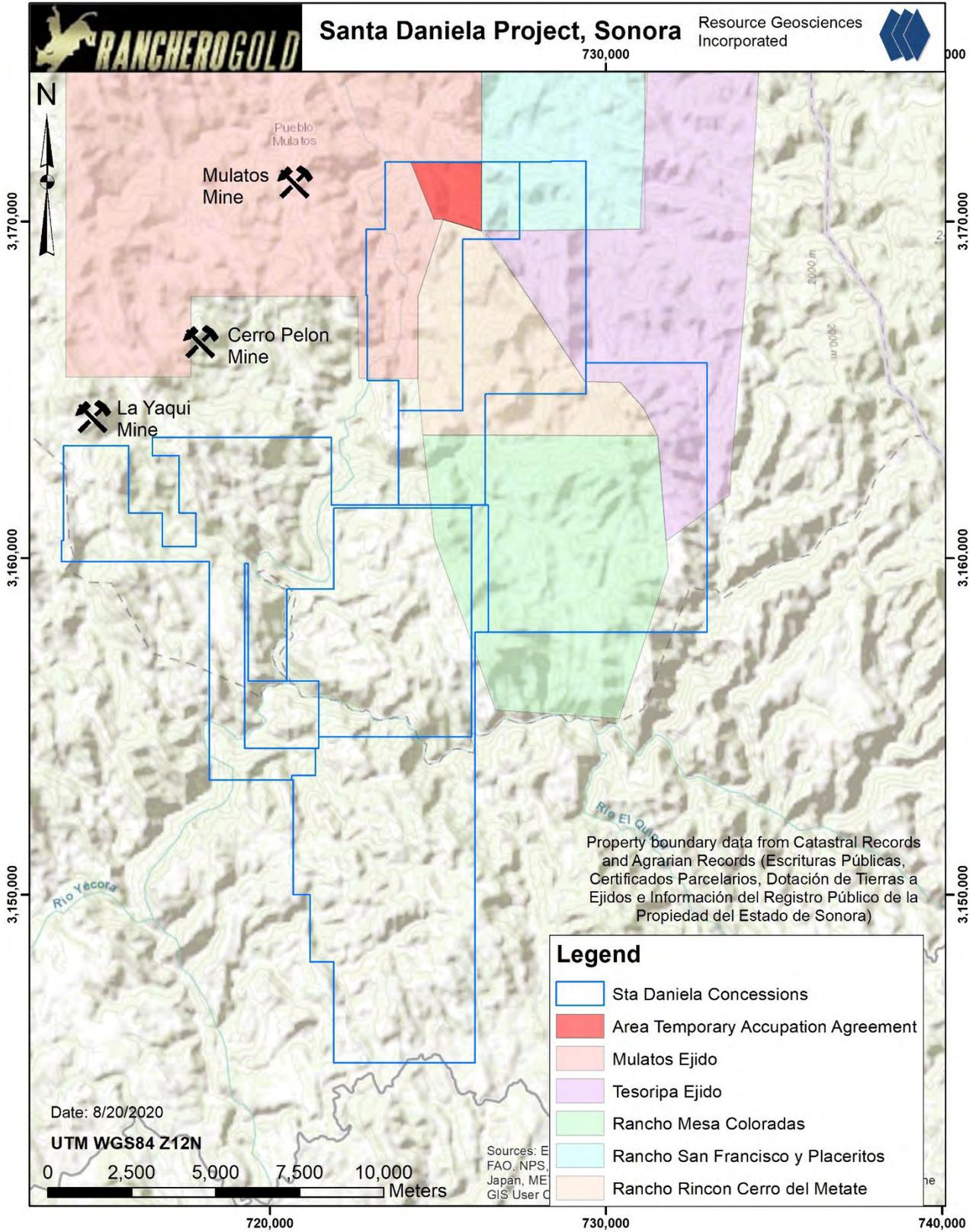


Figure 4-3. Surface rights in project area.

## 4.5 Environmental Liability

No environmental liabilities are apparent. The property does not contain active or historic mines or prospects beyond the level of small artisanal workings. There are no plant facilities present within the project area, nor are tailings piles present. All exploration work has been carried out by Rancho and prior operators in accordance with Mexican environmental standards.

## 4.6 Permits

### 4.6.1 Environmental

The author is not an expert in Mexican environmental law. The author has relied upon Lic. Gustavo Aguilar Aranda for a summary review of the project environmental permits as discussed in Item 3 of this report.

The Ley de Desarrollo Forestal Sustentable (Sustainable Development Forest Law) and the Ley General del Equilibrio Ecológico y Protección al Ambiente (General Law of Ecologic Equilibrium and Environmental Protection) regulate all direct exploration activities carried out at Santa Daniela (reverse circulation drilling, core drilling, trenching, road construction, etc.). Surface disturbances caused by exploration activities require a Cambio de Uso de Suelo (CUS, Land Use Change) authorization and approval of an Environmental Impact Assessment (MIA).

Exploration and mining activities in Mexico are subject to control by the Secretaria del Medio Ambiente y Recursos Naturales (Secretary of the Environment and Natural Resources), known by its acronym SEMARNAT. The Santa Daniela project is not included within any specially protected, Federally designated ecological zones, therefore basic exploration activities are regulated under Norma Oficial Mexicana NOM-120-ECOL-2011. NOM120 allows for activities including mapping, geochemical sampling, geophysical surveys, mechanized trenching, road building, and drilling. Most exploration activities can be permitted utilizing NOM120.

On 10 May 2019, SEMARNAT, under the guidelines of NOM120, issued to JLL Grupo Mulatos de Sonora SA de CV, authorization to construct 208 drillpads in the Maiz Azul area on a 100 x 100m grid pattern, via Oficio DS-SG-UGA-IA-0239/2019. Upon transference of mineral concession titles to Paika, permit rights and obligations of the SEMARNAT permit were transferred to Paika.

A review of environmental compliance and permitting issues was not within the scope of the present study. Lic. Aguilar Aranda and Rancho report that the environmental permits currently granted to the project allow for basic exploration work including geologic mapping, surface rock chip sampling, and drilling.

#### 4.6.2 Water

The author is not an expert in Mexican water law. The author has relied upon Lic. Gustavo Aguilar Aranda for a summary review of the project water rights as discussed in Item 3 of this report and documented in.

The National Water Law regulates all water use in Mexico under the responsibility of Comisión Nacional del Agua (CONAGUA). Applications are submitted to CONAGUA indicating the annual water needs for mining activities and the source of water to be used. CONAGUA grants water concessions according to stipulated water availability in the source area.

On 4 July 2018 CONAGUA ceded to JLL Grupo Mulatos de Sonora SA de CV an industrial use water right for 3,000,000 cubic meters per annum, title 02SON152958/09FMDA18 (). On 17 July 2020 JLL executed a contract with Paika under which these water rights were transferred to Paika.

### **4.7 Access, Title, and Permit Risks**

#### 4.7.1 Access Risks

The project has had a productive relationship with the surface owners and no extraordinary risks to project access were discerned. A valid surface access agreement allows Rancho to explore the property.

#### 4.7.2 Title Risks

Rancho advises that they have met legal requirements to maintain in good standing mining concession titles. Conditional upon continued compliance with annual requirements, no risk to validity of title was discerned.

#### 4.7.3 Permit Risks

Rancho and prior operators have been compliant with Mexican environmental regulations and conditional upon continued compliance, permits for normal exploration activities are expected to be readily attainable. The project is in an active mining district where both Alamos Gold and Agnico Eagle are operating large open pit gold mines. A valid surface rights agreement that allows exploration and development of the most advanced targets on the property is in effect. No extraordinary permitting risks were discerned.

## **5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY**

### **5.1 Accessibility**

The property is located approximately 226 km E-SE of the city of Hermosillo, Sonora, 6 km S-SE of the town of Mulatos, Sonora, and 5km E of Alamos Gold's Mulatos Mine. The project area is centered at approximately 725470E 3171500N UTM WGS84 Z12N. The project is in the eastern portion of the State of Sonora, Mexico, in close proximity to the neighboring State of Chihuahua (Figure 5-1). Access is by road from Hermosillo and requires approximately 7 hours of travel time. The first 150 kilometers is via a paved road to the village of Arivechi located 15 kilometers southeast of Sahuaripa. The remaining distance is on a gravel and dirt roads, well maintained up to the Mulatos mine. Alternatively, access can be gained by entering through Yecora off of the Hermosillo-Chihuahua highway.



## 5.2 Physiography, Climate and Vegetation

The property is in the Sierra Madre Mountains of eastern Sonora. The topography consists of long ridges separated by steep V-shaped valleys. Elevations range from 940 masl to over 2080 masl. Areas of low relief are scarce, thus suitable locations for mill sites, leach pads, waste dumps, and other mine related infrastructure will require special engineering considerations, similar to that of other active mines in the region.

The climate in the area is semi-arid with variable seasonal temperatures typically ranging from 35°C in the summer and -2°C in the winter, with occasional frost and snow at higher elevations. The area experiences torrential rainfall occurring from July to September and the driest months are March to May. Exploration activities may be conducted year round, although summer rains may cause occasional closings of river and arroyo crossings.

Vegetation in the area is varied. Vegetation at higher elevations consists of open pine forests while oak and cedar forests predominate at lower elevations (Figure 5-2). Poor soils and inconsistent precipitation limit the viability of farming in the area.



Figure 5-2. View of typical topography and vegetation at Santa Daniela, looking north from drillpad MH18-01, across Arroyo Maiz Azul.

## 5.3 Local Resources and Infrastructure

The property is located near the town of Mulatos, which offers little infrastructure beyond rural telephone service and small Federally subsidized grocery stores. Most basic services are available in Sahuaripa, and to a lesser degree in Yecora. The population of the district is estimated to be a few thousand with most of the inhabitants involved in small mining operations, ranching, and/or subsistence farming. Like most areas of the Sierra Madre, production and transport of marijuana and opium poppy forms an important but

unquantified part of the local economy. Organized crime cartels operate with impunity in the region, and illicit activities have occasionally adversely affected exploration in the region and operation at the nearby Mulatos and La India gold mines. An adequate supply of labor for mining operations can be drawn from the region.

The nearest international airport is located at Hermosillo. An unpaved airstrip for light aircraft exists at the Mulatos mine. A paved airstrip without services at Yecora is suitable for light aircraft.

The Federally owned and operated electric transmission grid extends as far as Yecora.

As discussed in section 4.4, Rancho has reached a long-term agreement for surface rights through exploration, development and operation in the Maiz Azul area. Rancho also has water rights to develop up to 2 million cubic meters annually. This resource must be explored for and developed.

Due to the many operating mines in the region the area has a suitable workforce for a wide variety of exploration and mining related disciplines.

No potential plant, tailing, waste or leachpad sites have been evaluated.

## 6 HISTORY

### 6.1 Prior Ownership

The mining concessions comprising the Santa Daniela project were staked to private persons and subsequently transferred to Mexican corporations and ultimately to Paika, as described in Section 4.3 of this report.

### 6.2 Prior Exploration

In 2011-12 JLL Grupo Mulatos de Sonora conducted rock chip sampling at the Maíz Azul area and other areas were reviewed at a reconnaissance level of investigation. From 2013 to 2019 exploration was conducted by Altos Hornos de Mexico S.A. (AHMSA), though a joint venture with JLL. AHMSA's exploration continued until 2019. Exploration conducted by Rancho is discussed in Section 9 of this report.

#### 6.2.1 Altos Hornos de México S.A de C.V – JLL Joint Venture

In 2013 JLL formed a joint venture with Altos Hornos de Mexico S.A. (AHMSA) which continued until 2019. As operator of the project AHMSA conducted geophysical surveys and diamond drilling programs. The work completed by AHMSA is incompletely documented, but some assay certificates, geophysical survey reports, and the entirety of the drill core have been preserved. The description of AHMSA's historical exploration activities presented in this report is not definitive but serves to provide a general overview of AHMSA's work.

##### 6.2.1.1 *Rock Chip Sampling*

AHMSA conducted rock chip sampling at the Maiz Azul target and identified gold anomalous volcanic rocks in outcrops along the Arroyo Maiz Azul and its tributaries (Figure 6-1).

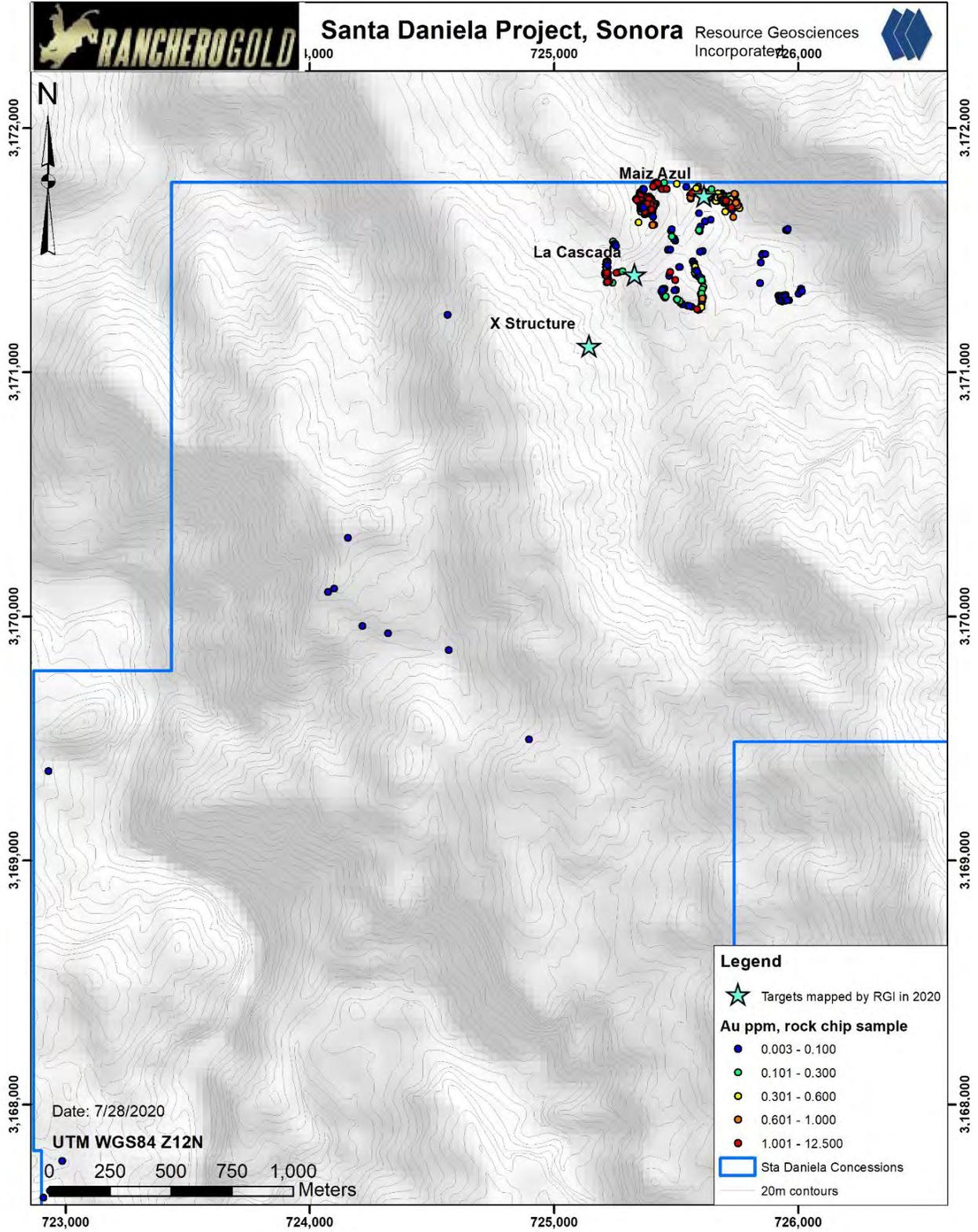


Figure 6-1. Historical (pre-2020) rock chip gold sampling results, plotted on shaded topographic base, 20m contour interval.

### 6.2.1.2 *Geophysical Surveys*

AHMSA recognized that much of the concession was covered by unmineralized Oligocene ignimbrites that may conceal mineralized zones in the underlying Eocene volcanic rocks. To explore beneath the barren volcanic cover, AHMSA selected areas for controlled source audio-frequency magnetic tellurics (CSAMT) surveys. Areas selected were based on review of public domain magnetic surveys where: AHMSA interpreted proximity to concealed intrusives; Oligocene volcanic cover was interpreted to be relatively thin; and it seems most importantly, where roads provided ready access to the area (Lopez, 2017). A total of 17,000 linear meters of CSAMT surveys were conducted in 5 areas (Figure 6-2):

1. Maiz Azul, 2 lines, 4150m
2. El Rincon, 5 lines, 5650m
3. El Potrerito, 1 line, 1100m
4. La Mojonera, 2 lines, 3300m
5. Los Redondeados, 2 lines, 2800m

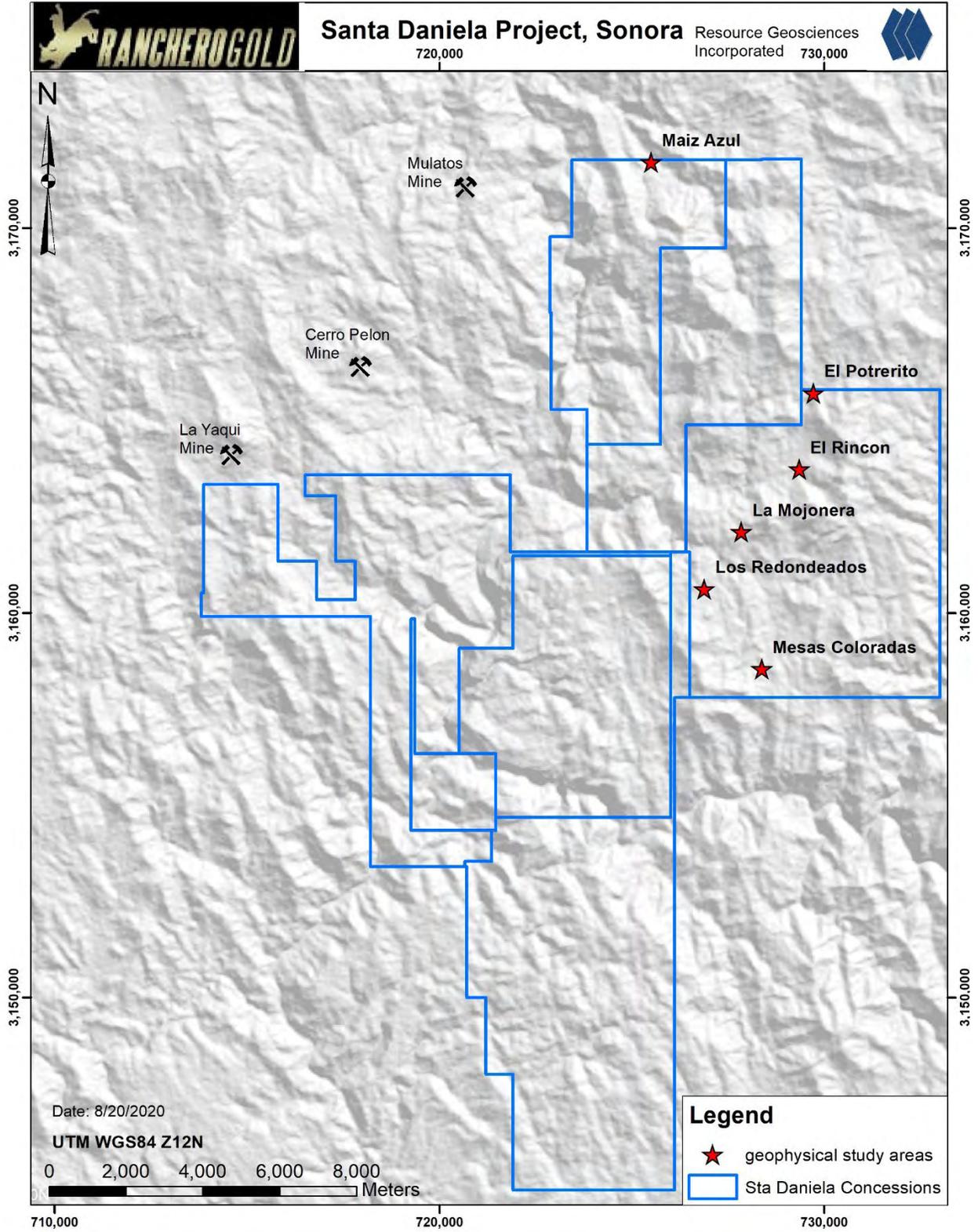


Figure 6-2. Geophysical survey areas plotted on shaded relief map.

Results of the CSAMT surveys were similar in all areas surveyed in that resistive units at depth (500m or more below surface) were interpreted as possible felsic intrusions and near surface zones of lower resistivity were interpreted as possible zones of hydrothermal alteration (Minera del Norte, 2018). None of the areas of interpreted hydrothermal alteration were tested by drilling. At El Rincon, the CSAMT survey was conducted after drilling was completed, as an opportunistic use of the crew and equipment while they were on standby waiting for access permits into other target areas.

An Induced Polarization (IP) survey comprising 2 lines and 2700 linear meters was completed at Mesas Coloradas (Lopez, 2017), however documentation of the survey and results are not available for review, but the drilling at Mesa Coloradas was reportedly designed to test resistivity anomalies, presumably defined by the IP survey, at depths of 300m and greater, beneath a veneer of unmineralized Oligocene volcanic strata (Lopez, 2017).

A ground magnetometry survey was completed at Maiz Azul, after completion of the drill program (Figure 6-3).

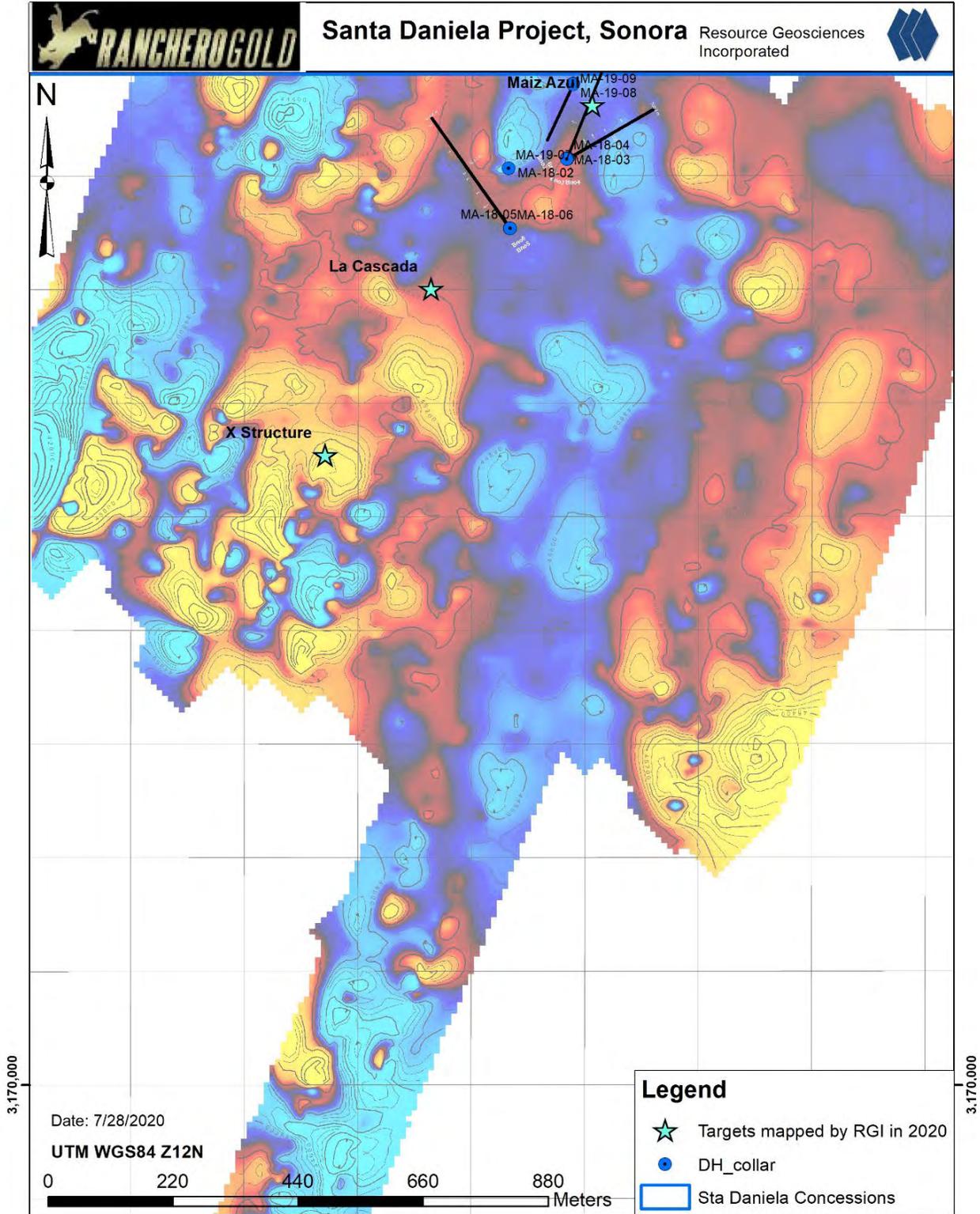


Figure 6-3. Ground magnetic survey total magnetic intensity, reduced to pole.

### 6.2.1.3 Diamond Core Drilling

AHMSA conducted drilling in 2016 at Mesas Coloradas, in 2017 at Mesas Coloradas and El Rincon, and in 2018 and 2019 at Maiz Azul, as summarized in Table 6-1. A total of 3,380.05 m of HQ diameter diamond core drilling was reported. No assay certificates for samples from the 2016 and 2017 drilling were in the project archive, but Excel tables indicate that portions of the 2016 drillholes at Mesa Coloradas were assayed, seemingly by an in-house analytical laboratory of AHMSA. Drill core from the AHMSA program is well preserved and stored at Paika's Yecora field office (Figure 6-4). Logs for the AHMSA drilling are in the project archive, and for this study the Maiz Azul drillholes were re-logged, as described in Section 9 of this report. Locations of historical drillholes and the project claim boundaries are summarized in Figure 6-5. A detailed map of the Maiz Azul drillholes and the rock chip gold anomalies they tested is presented as Figure 6-6.

**Table 6-1. Historical drillholes**

Drillhole ID	Area	UTM Easting WGS94	UTM Northing WGS84	Elevation masl	Azimuth	Dip	Total Depth m	Assay Certificate	Lab
SD-16-01	Mesa Colorada	728290.845	3158592.536	1575.500	267.686	-50	500.75	no	AHMSA?
SD-16-02	Mesa Colorada	728291.750	3158592.558	1575.447	267.686	-75	300.2	no	AHMSA?
SD-17-03	El Rincon	729200.604	3164006.654	1503.707	0	-90	214.25	no assays in data set	
SD-17-04	Mesa Colorada	728466.699	3158599.826	1572.967	270	-50	273.3	no assays in data set	
SD-17-05	El Rincon	729515.779	3163459.880	1600.199	0	-50	177.9	no assays in data set	
MA-18-01	Maiz Azul	725570.114	3171629.522	1277.659	60	-55	300.15	yes	ALS
MA-18-02	Maiz Azul	725569.628	3171629.239	1277.623	60	-66	222.20	yes	ALS
MA-18-03	Maiz Azul	725568.343	3171629.849	1277.535	22	-50	250.60	yes	ALS
MA-18-04	Maiz Azul	725568.027	3171628.652	1277.521	0	-90	405.65	no	ALS
MA-18-05	Maiz Azul	725468.005	3171506.701	1304.703	324.6259	-55	414.80	yes	ALS
MA-18-06	Maiz Azul	725468.311	3171506.270	1304.773	324.6259	-65	320.25	no	ALS
MA-19-07	Maiz Azul	725,466.00	3,171,612.00	1,263	0	-90	183.00	no	ALS
MA-19-08	Maiz Azul	725,580.00	3,171,761.00	1,213	0	-90	183.00	no	ALS
MA-19-09	Maiz Azul	725,579.00	3,171,760.00	1,214	205	-50	167.75	no	ALS



**Figure 6-4. RGI Geologist Rodolfo Saucedo examining AHMSA drill core, Paika's Yecora field office.**

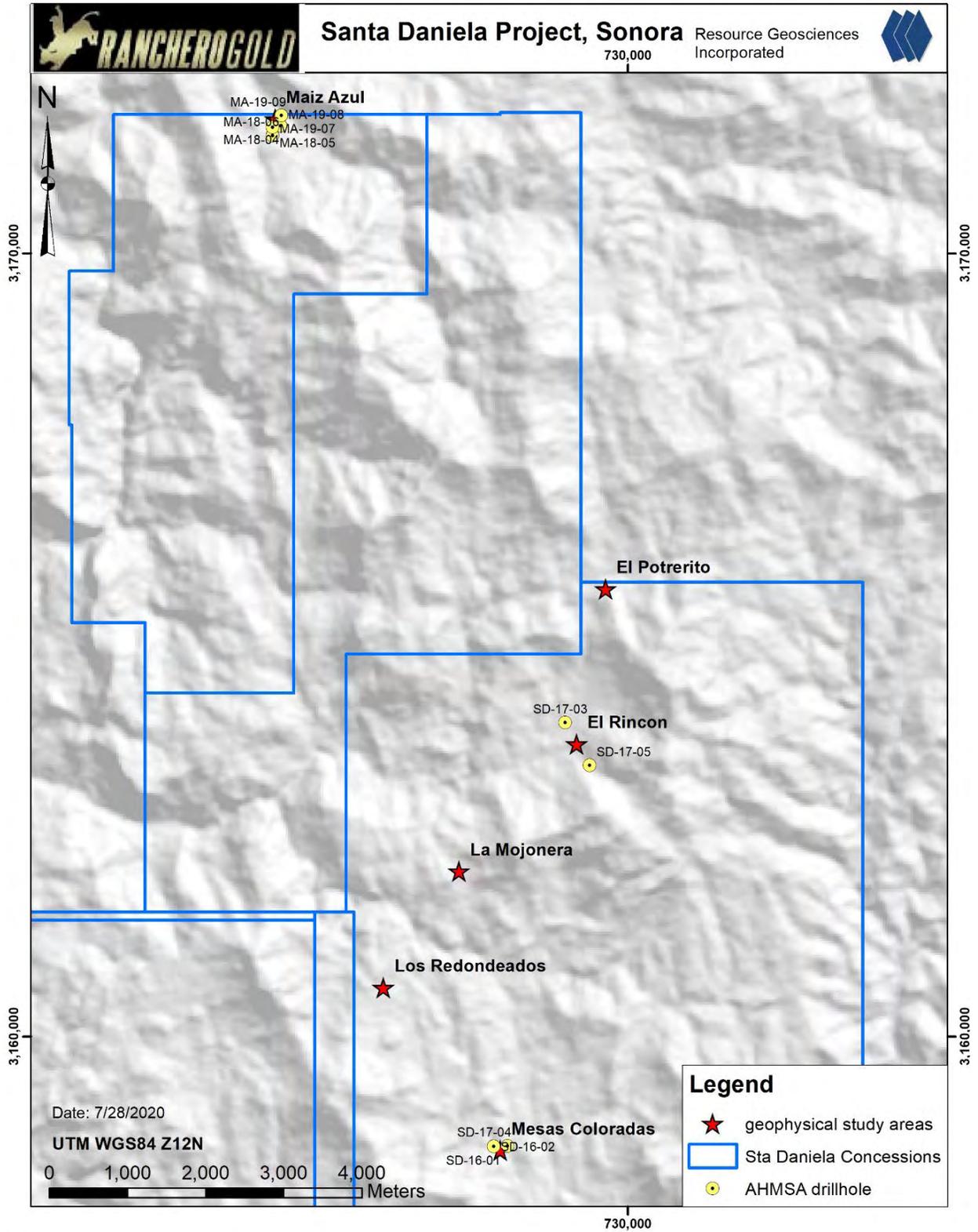


Figure 6-5. Historical drillhole locations and project claim boundaries plotted on shaded relief map.

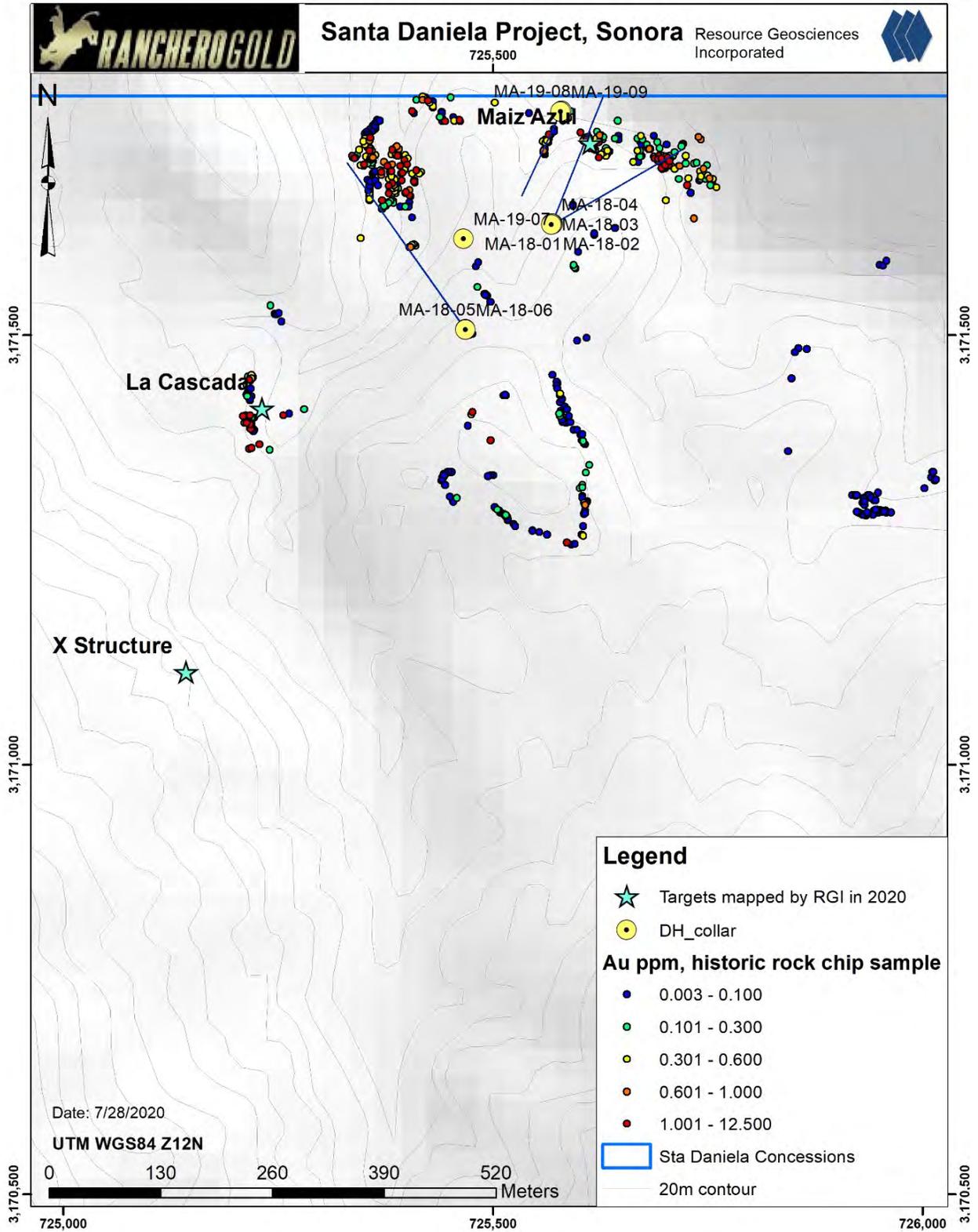


Figure 6-6. Historical drilling and rock chip Au at Maiz Azul, plotted on shaded topographic base, 20m contour interval).

The rationale for drill site and drillhole orientation selection is not documented in the historic reports, but it appears that drillholes MA-18-01 through 04 and MA-18-08 and 09 were drilled to test the rock chip gold anomaly defined by outcrop sampling along the Arroyo Maiz Azul. Drillholes MA-18-08 and 09 were collared in the footwall of the mineralized structural zone thus had zero possibilities of intersecting the zone. Holes MA18-01 through 04 were collared in the hanging wall and all intersected the zone.

Drillholes MA-18-05 and 06 appear to have been drilled to test a rock chip assay gold anomaly, at lower elevation and west of their collars, but the orientation of this zone is undetermined and structures mapped on surface dip west, thus holes 05 and 06 may have drilled the footwall of the outcropping zone. The target tested by drillhole MH-18-07, a vertical hole drilled between rock chip gold anomalies, is unknown.

Locked pdf file assay certificates from ALS were available for some of the Maiz Azul drillholes and Excel files with assay data were available for all. Excel files with AHMSA logos containing assay data were available for 2 of the Mesas Coloradas drillholes. Sampling of drill core was not continuous and in many cases drill core intervals that returned anomalous gold assays are "orphan intercepts" with drill core above and below the mineralized interval unsampled. The author has no reason to doubt the validity of the reported historic results, but not all drill collars can be field verified, downhole survey data reported for drillholes is ambiguous, and in some cases self-contradictory, and the details of the drilling program are not documented. The QA QC protocols, drilling techniques, and sampling methods used by AHMSA in their diamond drill programs are not documented and are unknown to the author. The 2016 through 2019 drillhole results are historical in nature, have not been verified by the author. Nevertheless the author considers the historic data as useful for geologic interpretations.

### **6.3 Historical Metallurgical Studies**

The author is unaware of any metallurgical studies of Santa Daniela mineralization.

### **6.4 Historical Resource Estimates**

There are no known no recorded Mineral Resource estimates for the property.

### **6.5 Prior Production**

There has been no recorded mineral production from the property.

## 7 GEOLOGICAL SETTING

### 7.1 Regional Geology

The Santa Daniela project lies within the Sierra Madre Occidental (SMO) province, a regionally extensive Tertiary volcanic field which extends southeast from the United States-Mexico border to central Mexico. The total thickness of the volcanic sequence is approximately 2km, and it rests upon Mesozoic clastic and calcareous sedimentary rock. The volcanic field is comprised of two distinct volcanic sequences, an older andesitic and dacitic series, and a younger, pyroclastic dominated rhyolitic series. The traditional nomenclature refers to these as the Serie Volcanica Inferior (Lower Series) and Serie Volcanica Superior (Upper Series). The Lower Series is approximately 1km thick and is dominated by Paleocene and Eocene andesitic lavas and pyroclastic deposits, with interbedded volcanoclastic strata. Silicic volcanic units are present but are a minor component. The volcanic strata of the Lower Series are cut by calc-alkaline intrusives. The Upper Series unconformably overlies the Lower Series with erosional disconformity and comprises a 1km thick sequence dominated by Oligocene and early-Miocene dacitic and rhyolitic pyroclastic strata and volcanoclastic strata. Most significant metal occurrences in the SMO are hosted by rocks of the Lower Series or the underlying Mesozoic strata.

The Santa Daniela project lies within the western limits of the SMO in an area dominated by outcrops of andesitic to dacitic tuffs that were intruded by granodiorite and diorite stocks, and overlain by rhyolitic tuffs, basaltic-andesite lavas, and basin-filling late conglomerates (Figure 7-1). These rocks lie within a northwest-trending zone of Miocene extension that disrupted the regional stratigraphy along N-NW striking normal faults causing large-scale rotation of blocks with predominantly east-northeast inclinations (Servicio Geologico Mexicano, 2000). Incised fluvial canyons have cut the uppermost strata and expose the Lower Series volcanic strata.

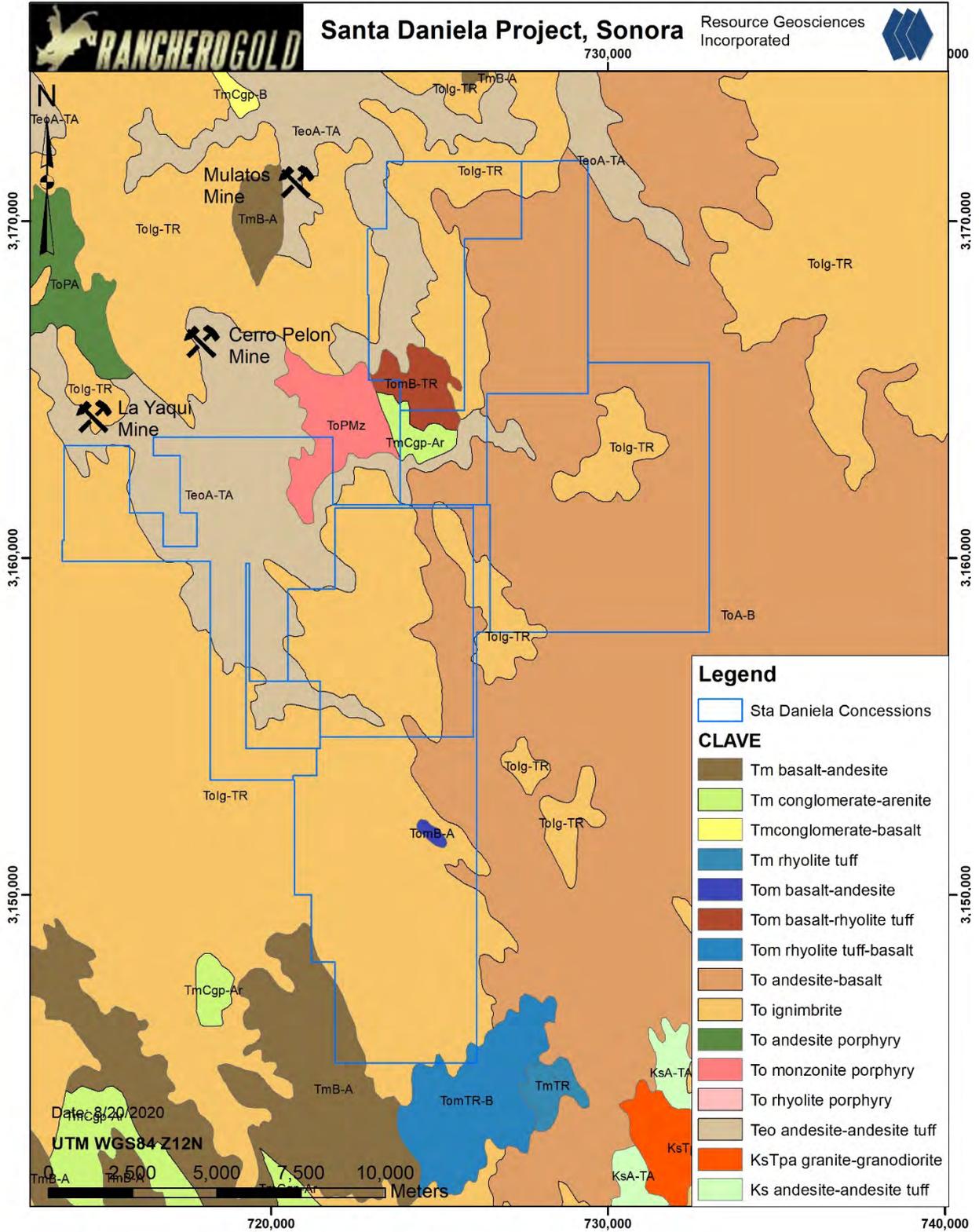


Figure 7-1. Regional geologic map (Servicio Geologico Mexicano, 2000).

## **7.2 Local Geology**

### **7.2.1 General Geology**

The Santa Daniela project area is underlain by the Lower Series volcanic sequence comprised of Paleocene andesitic and dacitic volcanic rocks interbedded with epiclastic rocks of similar composition, capped by Upper Series Oligocene ignimbrites.

Detailed mapping has been conducted only in the Maiz Azul area (Figure 7-2). Mapping was completed in the first semester of 2020 by Resource Geosciences Inc., led by Senior Geologist Mario Castellanos. The geologic descriptions in this section are based upon this mapping and observations of outcrop and drillcore made by the author. The dominant Lower Series rock units are crystal tuffs, ash fall tuffs, andesitic flows, andesitic porphyry, and mafic dikes. All these rocks show characteristics of alteration indicating that they are pre-mineral rocks.

### **7.2.2 Maiz Azul Area Lithology Descriptions**

The description of Maiz Azul area rock types is based upon mapping conducted by Resource Geosciences de Mexico SA de CV (Castellanos, 2020) (Castellanos and Reyna, 2020). Lithologies mapped are herein described.

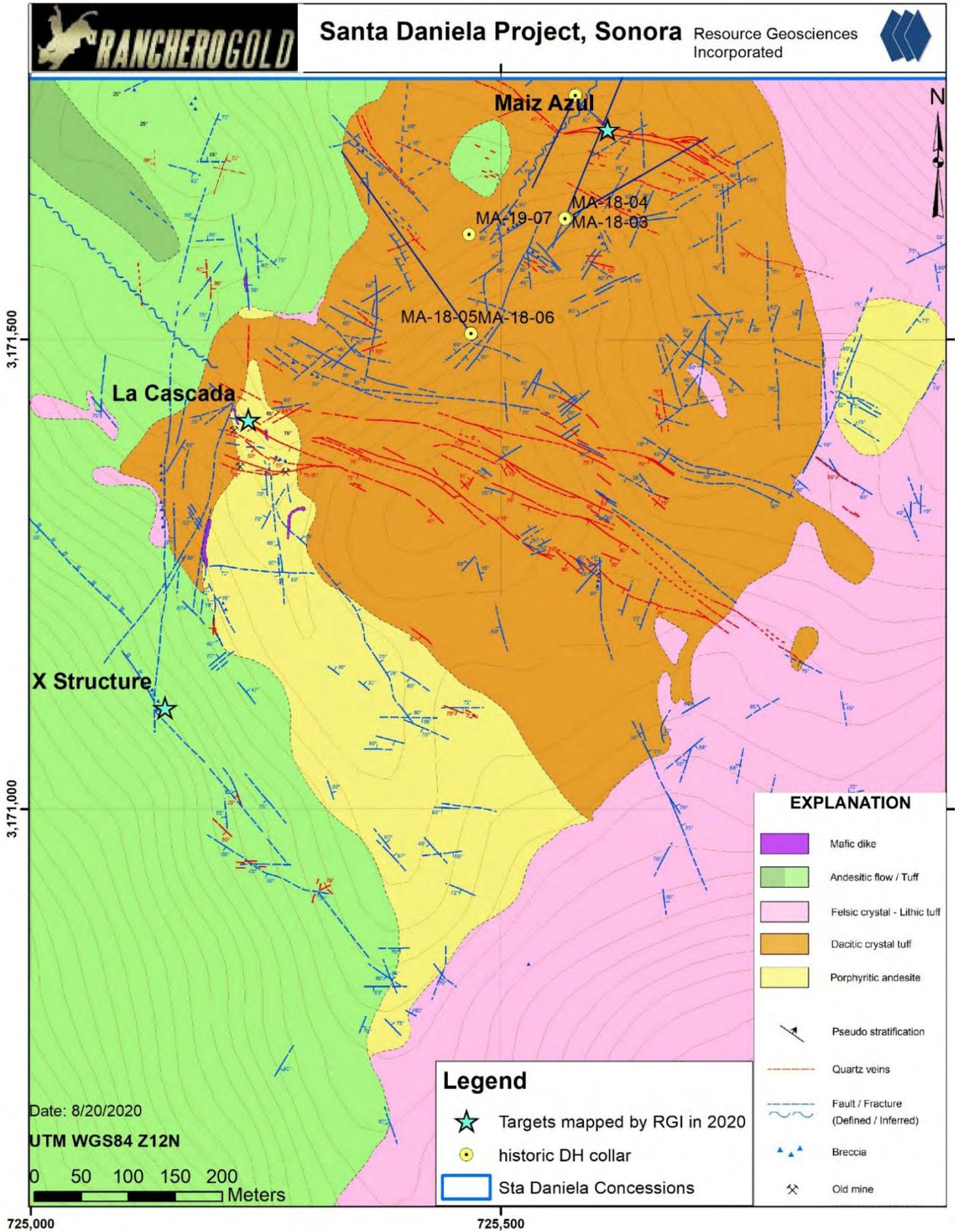


Figure 7-2. Maiz Azul Area geologic map (Castellanos and Reyna, 2020).

### 7.2.2.1 *Mafic Dikes*

Dark green, fine matrix, porphyritic texture defined by plagioclase phenocrysts up to 0.5 cm long (Figure 7-3), moderately to strongly magnetic. Dikes are narrow, generally less than 1 meter thick, usually localized by N-S faults.



**Figure 7-3. Hand samples of mafic dikes.**

### 7.2.2.2 *Andesitic Tuff*

This unit crops out throughout the northern and western part of the area (Figure 7-2). Generally a fine grained rock with fine grained matrix hosting plagioclase and hornblende crystals, often with layering or pseudo stratification in thin layers, generally less than 10 cm (Figure 7-4). Locally a compact massive rock. In the northwest portion of the mapped area andesitic flows with abundant vesicles were mapped and included in the same map unit. Color varies from reddish brown to purple. This unit is weakly magnetic and is the stratigraphically highest unit mapped. It is up to 200 meters thick and discordantly overlies felsic tuff.



**Figure 7-4. Stratified andesitic tuff outcrop.**

#### 7.2.2.3 *Felsic Tuff*

This unit is present throughout the mapped area and covers much of the eastern and southern areas (Figure 7-2). In the northern and western areas it is present as small outcrops of less than 5m thickness, contrasting to thicknesses of greater than 100m in the south. The variation in thickness is interpreted to be due to erosion.

In the upper part it is a lapilli tuff that grades to a lithic crystal tuff at the base of the unit, containing crystals of plagioclase and quartz in a fine grained matrix of ash. The lithic fragments are mostly angular and comprised of felsic tuff or quartz dacite. In general the rock is white to locally reddish beige due to the presence of hematite (Figure 7-5).

The felsic tuff overlies the quartz dacite tuff in a transitional contact.



**Figure 7-5. Hand samples of rhyolitic tuff. Note pen barrel for scale.**

#### 7.2.2.4 *Quartz Dacite Tuff*

Composed of fine grained lapilli (ash) matrix with abundant crystals of plagioclase, biotite, hornblende, quartz, and specularite. Includes horizons with sub-rounded lithic fragments of the same composition. Layering or pseudo-stratification strikes northwest and dips moderately ( $< 20^\circ$ ) to the southwest. Color varies from purple - light reddish in fresh rock to light gray, green and yellow-reddish depending on the type and intensity of alteration and weathering (Figure 7-6).



Figure 7-6. Hand samples of quartz dacite tuff. Note pen barrel for scale.

Crops out as an elliptical window in the central part of the mapped area (Figure 7-2), with a thickness of 140 meters as measured between the Arroyo de Maíz Azul (1220 masl) and Cerro de la Antena (1360 masl). In the west center corner of the mapped area the quartz dacite tuff is in discordant contact with andesitic porphyry.

The mineralization at Maiz Azul is hosted dominantly by this unit.

#### 7.2.2.5 *Porphyritic Andesite*

Sub-volcanic rock that underlies and/or intrudes the quartz dacite tuff. Crops out in the central western part and the southeastern corner of the mapped area (Figure 7-2). Porphyritic texture defined by phenocrysts of plagioclase, hornblende, and biotite. Hosts veinlets of specularite without quartz or with only traces of quartz. Color varies from brown green to dark gray (Figure 7-7). Unit is moderately to strongly magnetic. Unit is in discordant contact with other map units, this contact often at high angle orientation, suggestive of a vertical intrusive contact.

The northern part of the La Cascada structure is hosted by this unit.



**Figure 7-7. Hand samples of porphyritic andesite. Note pen for scale.**

### 7.2.3 La Colmena Area Structure

Three structural sets were mapped (Figure 7-2):

1. Northwest Regional System. Locally with strike orientation NA285 to 310, vertical to southwest dips. This system is associated with mapped alteration zones and quartz vein zones in the La Colmena area, and structures of similar orientation are associated with the nearby Mulatos and La India mines, particularly where intersected by other structures.
2. Northeast System, striking NA040 to 060, dipping 60 to 90 degrees to the northwest or southeast. These structures cut and slightly displace the northwest structures. Streams aligned with these structures are developed at lithologic contacts.
3. North-Northeast System. These structures strike north-northeast and are vertical to steeply east dipping and were mapped in the area of La Cascada. The surface expression is subtle, as fractures and discontinuous failure planes, however this structural orientation may be an important control of hydrothermal fluid flow. The fracture zone defines a more or less continuous zone with long dimension greater than one hundred meters, with discontinuous but correlated narrow (<1 m) outcrops of hydrothermal breccia. Some quartz veins with gold and copper in the La Cascada prospect have this orientation. An alteration mineral study of clays show that the clays collected from this zone are kaolinite and illite of relatively higher temperature relative to other clays analyzed in the area (Querol, 2020).

With the exception of the southeastern extension of the La Colmena structure that ends more or less abruptly in the Arroyo Maiz Azul, the other structures mapped appear to be more or less continuous, with only some short lateral displacements observed where NA 030 to 060 striking faults cut and slightly displace the NA285

striking structures, which otherwise appear to be continuous without major complications.

#### 7.2.4 Maiz Azul Area Mineralized Zones

Three structurally controlled mineralized zones were identified in the mapped area, described as follows:

##### 7.2.4.1 *La Colmena Zone*

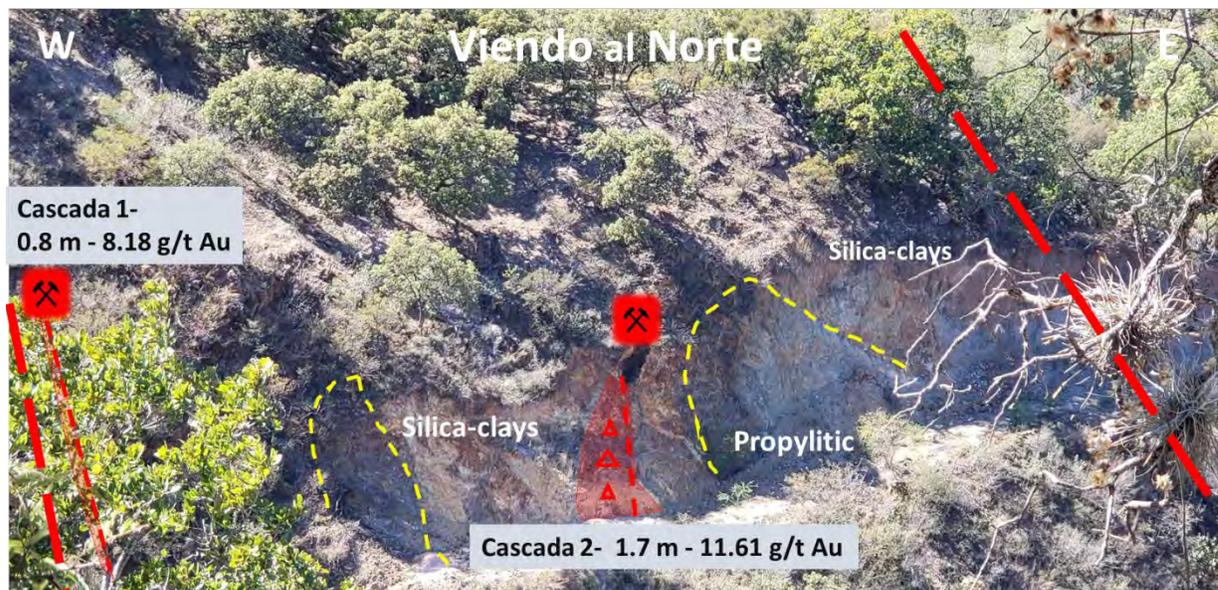
Structural zone hosted by quartz dacite tuff, striking NA280 to 290, dipping 20 to 40 degrees to the southwest. Observed continuously over 350m of strike length and an altered width, defined by silica and clay alteration, up to 75m wide. Historic drillhole intercepts indicate a down dip extent of at least 150m. Independent samples of outcrop exposures of the La Colmena zone, collected under the author's supervision as part of the study documented in this report, returned 0.224 to 6.27 gpt Au. The structure was densely surface sampled by prior operators and partially drill tested. The northern projection of the zone extends off the concession onto claims controlled by Alamos Gold, however historic drillhole data indicated continuity of the mineralized zone to the south and at depth. The mineralized zone crops out in the Maiz Azul arroyo at 1230 to 1255 masl and was intersected in drillholes at elevations between 1160 and 1220 masl, indicating a moderate angle orientation, possibly listric, to a tabular mineralized zone.



**Figure 7-8. Silicified veined and brecciated zone exposed along Arroyo Maiz Azul. View looking northwest. Mineralized zone dips gently to the southwest.**

### 7.2.4.2 La Cascada Zone

Mineralized structural zone striking NA285 – 300, dipping vertical to steeply southwest, exposed semi-continuously for 650m of strike length with an altered width of up to 100m as defined by silica, clay, and propylitic alteration. Depth extent is undetermined. Within the altered zone, quartz veins up to 1 m wide are present as are quartz veinlet stockworks and brecciated zones (Figure 7-12). The La Cascada zone is hosted by quartz dacite tuff and porphyritic andesite. Rock chip sampling by prior operators reported anomalous gold assays from portions of the zone as summarized in Figure 6-6. It outcrops at approximately 1270 masl. The zone has been partially sampled at surface but has not been drill tested. Because of its broad dimensions and rock chip gold assays, the La Cascada zone is considered by the author to be the most significant exploration target thus far identified in the Maiz Azul area.



**Figure 7-9. View looking north at arroyo exposure of the La Cascada zone. Small exploration adits Cascada 1 and Cascada 2 are developed on veined breccia zones, contained within a broader silica-clay and argillicly altered zone. Historic sampling of the zone returned high grade (>8 gpt Au) results from the breccia and vein zones, and highly anomalous gold contents in the altered wallrock.**

### 7.2.4.3 X Structure

NA290 striking, vertical to 80° southwest dipping structure semi-continuously exposed for 350m of strike, that correlates with a zone of alteration defined by quartz veinlet swarms, (Figure 7-13) and projects to a silica-clay alteration zone mapped on a road cut 200m further to the south (Figure 7-14). The northern exposure of the X Structure is expressed as an approximately 10m high scarp associated with a 10m wide zone of quartz veining. The depth extent of the zone is unknown. Host rock is andesitic tuff. Crops out at elevation of approximately 1400 masl. This structure has not been previously mapped, described, nor sampled.



**Figure 7-10. Quartz veinlets in a zone of silica-clay alteration in porphyritic andesite along the trace of the X Structure**



**Figure 7-11. Southern projection of X Structure exposed as zone of silica-clay alteration of porphyritic andesite with stockwork fractures with Fe-oxide.**

### 7.2.5 Maiz Azul Area Alteration

Hydrothermal alteration was identified in the mapped area, in a northwest elongate zone with dimensions of 1.0 x 0.8 km. Within this zone, alteration is fault and fracture controlled, with central zones of silica and clay alteration flanked by propylitically altered zones, and further outboard, by zones of less intense clay and calcite alteration (Figure 7-15).

The alteration mapped is typical of low sulfidation epithermal systems and includes: chalcedonic silica in irregular veins; banded crystalline quartz veins; remnants of silica caps; hypogene specularite veinlets; and illitic and smectitic argillic alteration. All the aforementioned are variably associated with quartz vein stockworks and hydrothermal breccias. Outcrop exposures are consistent with the higher levels of a low sulfidation epithermal system thus potential for mineralization at depth is indicated.

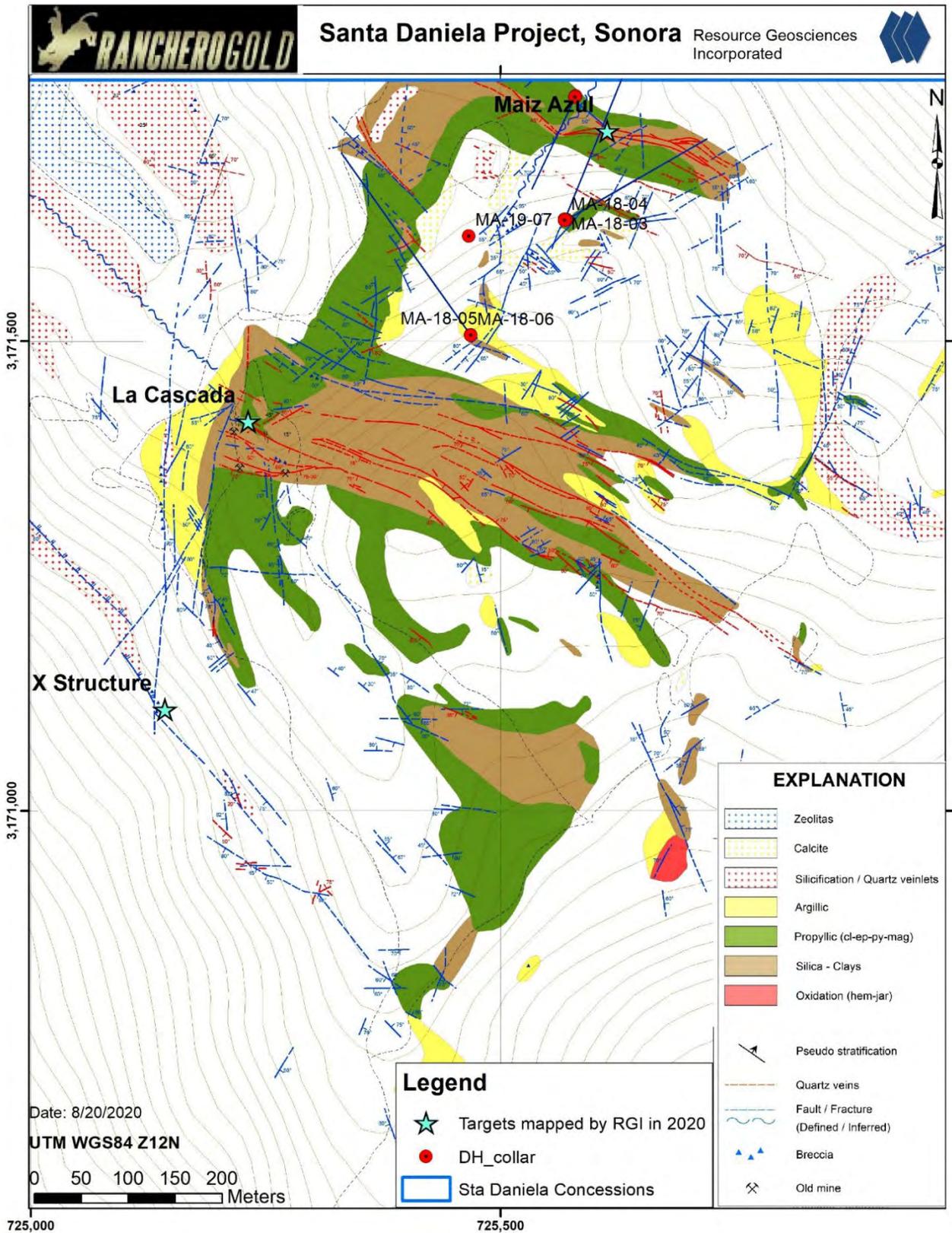


Figure 7-12. Hydrothermal alteration map, Maiz Azul area (Castellanos and Reyna, 2020).

Alteration zones mapped are:

#### 7.2.5.1 *Argillic*

Forms the outermost halo to mineralized structures and is typically proximal to propylitic zones. Characterized by textural destruction and pervasive clay replacement of the rock. Original colors lost and rock converted to greyish white color. Argillic zones commonly host calcite veinlets. Most intensely developed in the La Cascada area with dimensions of up to 200 x 50m.

#### 7.2.5.2 *Propylitic*

Forms a well-developed halo to structures hosted by quartz dacite tuff and porphyritic andesite. Imparts green hue to rock due to presence of chlorite. Hosts occasional veinlets of epidote-calcite. Well-developed and exposed in the western part of the La Cascada area with variable intensity over areas as great as 600 x 100 m. May host chalcedonic quartz veinlets less than 5 cm wide.

#### 7.2.5.3 *Silica – Clay*

Normally haloed by propylitic alteration and best developed in the quartz dacite tuff. Consists of alteration developed directly along northwest striking structures, manifested by bleached variably silicified rock, with pale green and white sericitic minerals. Spectral studies identified illites and smectites as the principal clay minerals (Querol, 2020). Hosts veins and veinlets of quartz  $\pm$  pyrite  $\pm$  specularite, jarositic where weathered. Veins are typically 0.1 to 20 cm wide, but at La Cascada individual veins are as much as 1 m wide. Silica-clay alteration zones are continuous over hundreds of meters along strike of structures.

### 7.2.6 Maiz Azul Area Vein Types

Three distinct vein events are recognized in the Maiz Azul area. All are quartz or silica dominated but exhibit differences in texture and association with mineralization. In interpreted order of formation the vein sets are:

#### 7.2.6.1 *Early stage chalcedonic quartz veins*

Banded chalcedonic quartz, white to reddish color, as irregular veinlets typically less than 5cm wide, or as chalcedonic patches within the northwest striking structural zones, typically within the silica-clay alteration zone but also observed in propylitic zones. Historic sampling of these veins did not yield anomalous gold contents and they are considered sterile.

#### 7.2.6.2 *Banded white quartz veins*

Banded white quartz crystalline quartz veins and lenses, with multi-stage veining textures (Gray, 2020) occurring as druses, open space filling veins, breccia veins, and stockworks (Figure 7-16, Figure 7-17, Figure 7-18, Figure 7-19, Figure 7-20, Figure

7-21, Figure 7-22). Occasionally with pyrite. Veins generally strike NA285 to 315, dipping vertically to moderately ( $50^\circ$ ) to the southwest. These veins are more or less continuous along strike over hundreds of meters. Thicknesses of individual veins varies from 10cm in the Antena area at 1370 masl to up to 1m at the La Cascada zone at 1270 masl. This vein stage is clearly associated with the gold mineralization mapped and sampled at surface and intersected in historic drilling.



Figure 7-13 Drillcore, M18-01, ~114.5 to 117m (upper left to bottom right), quartz veined and quartz cemented breccia zone in quartz dacite tuff. Veined zone assayed 3.54, 0.60, 4.19, and 3.12 gpt Au respectively for samples MA-98 through MA-101, 114.35 to 117.0m.



Figure 7-14. Close up of multistage quartz veinlet, drillhole MA18-01, ~115.5m depth. Early stage, open space filling, white crystalline quartz at margin of veinlet, and later low

temperature silica filling open space at center of veinlet. Note veinlet crosscuts zone of silica cemented breccia. Interval assayed 4.19 gpt Au.



Figure 7-15. Drillcore M18-03, knife at ~104.6m. Interval 103.80 to 104.80m assayed 3.12 gpt Au, 104.80 to 105.70m assayed 6.92 gpt Au.



Figure 7-16. Drillcore MA18-03, breccia vein zone at ~104.6m. This drill core sample assayed 3.12 gpt Au.



Figure 7-17. Drillcore MA18-03, ~105m depth, silica matrix hydrothermal breccia. Note: banded silica rim on dark silicified volcanic clast in lower left of photo; angular clasts of dense grey silica and weakly banded silica in siliceous microbreccia matrix. This interval assayed 6.92 gpt Au.



Figure 7-18. Banded silica vein fragment as breccia clast, below and right of knife blade, drillhole MA18-03, ~98m depth. Interval 98.00 to 99.05m assayed 7.7 gpt Au.



**Figure 7-19. Hand specimen of quartz vein breccia zone exposed along Arroyo Maiz Azul. Note similarity to breccia seen in drillcore in Figure 7-19.**

#### *7.2.6.3 Late stage cryptocrystalline grey silica veinlets*

Occur as hairline veinlets less than 1mm wide that cut silicified zones in felsic tuffs and overprint zones of silica-clay alteration associated with banded white quartz veins. Felsic tuffs in the southeast portion of the mapped area are intensely silicified with disseminated pyrite, with a semi-circular outcrop pattern suggestive of a remnant silica cap, consistent with the upper levels of a low sulfide epithermal system. This silicified zone hosts thin grey silica veinlets, possibly with alunite (could not be identified by TerraSpec analysis due to silica interference lines (Querol, 2020)). Rock chip samples collected by previous operators from this area did not yield gold anomalies but showed anomalous contents of Ba, As, and Sb. The late cryptocrystalline veinlets are considered sterile.

### **7.3 Oxidation**

Oxidation at the La Colmena target was observed to range from complete oxidation in the uppermost portions of the deposit exposed in outcrop, to a generally complete lack of oxidation, with primary sulfide minerals preserved, at downhole depths of 9 to 20 meters in most drillholes. However oxidation profiles appear to extend to deeper levels along structural zones that permitted the downward percolation of meteoric waters.

## **7.4 Conclusions**

The Maiz Azul area hosts structurally controlled low sulfidation epithermal gold mineralization. Historic surface sampling and drill core sampling indicates grades in excess of 1 gpt Au are present within the mineralized zones. Extents and morphologies of mineralized zones are not constrained by drilling or surface mapping and sampling. Alteration styles and textures observed in outcrop are consistent with those of the upper levels of epithermal mineralized systems thus there exists potential for discovery of mineralization below the mapped altered and mineralized zones.

## 8 DEPOSIT TYPES

At the Maiz Azul prospect, surface outcrop mapping and drillhole data indicates that the gold system there exposed is best classified as a low sulfidation epithermal gold deposit. Low sulfidation deposits may be present as veins and/or disseminated deposits and hosted by intrusive, volcanic, and sedimentary rocks. Features common to such deposits (Buchanan, 1981) (Hayba, 1985) (Heald, 1987) (Bonham, 1988) (Berger, 1989) (Albinson, 2001) include:

- Intermediate to felsic, calc-alkaline volcanic host rocks.
- Association with intrusive centers.
- Alteration mineral assemblages dominated by sericite, quartz, adularia, and chlorite.
- Variable Au:Ag ratios.
- Ore mineralogy characterized by argentite, tetrahedrite, tennantite, native silver, native gold, and base-metal sulfides.
- Vertical geochemical zoning, with well-defined upper and lower elevation limits to economic mineralization, over vertical ranges of 200 to 700m.
- Open space filling vein textures.
- Quartz and carbonate gangue minerals.
- Ore and gangue mineral textures indicative of low temperature environments.

Because of its location within the Mulatos Mining District, which in 2019 had three operating mines exploiting high sulfidation (HS) gold deposits (Agnico Eagle Mines Ltd., 2020) (Alamos Gold Incorporated, 2020), as described in Section 23 of this report, the Santa Daniela project is prospective for discovery of volcanic hosted, epithermal, high sulfidation gold-silver deposits. Such deposits may be present as veins and/or disseminated deposits. Some of the most intensely studied and described HS deposits include Summitville, Colorado (Stoffregen, 1987) (Gray, J.E., and Coolbaugh, M.F., 1994), Goldfield, Nevada (Ransome, 1909) (Ashley, 1974) (Vikre, 1989), Lepanto, Philippines (Hedenquist, 1998) and Julcani, Peru (Petersen, 1977) (Deen, 1994). Based upon these studies and others, excellent compilations of general characteristics and genetic and empirical models have been presented by (Hayba, 1985), (Heald, 1987), (Berger, 1989) and (Arribas, 1995). General characteristics of HS deposits include:

- Located within plutonic-volcanic arcs.
- Associated with intermediate calc-alkaline rocks, often in dome complexes.
- Alteration mineral assemblages indicative of high temperature acidic hydrothermal fluids, including an advanced argillic assemblage characterized by one or more of pyrophyllite, alunite, dickite, kaolinite, and diaspore.
- Silicification and acid leaching of principal hydrothermal fluid conduits (forming the clichéd “vuggy silica” alteration).
- Presence of minerals indicative of high sulfidation states, principally the sulfosalt enargite or its low temperature polymorph luzonite.
- Economically important quantities of Au and/or Ag and/or Cu.

- Alteration zoning typified by a central zone of silica alteration flanked by a zone of advanced argillic alteration, which in turn is surrounded by illite dominated argillic alteration.

Genetic models proposed for HS systems call upon shallow emplacement of an oxidized calc-alkaline magma. As the magma crystallizes, a metal- and volatile-rich fluid phase exsolves, and at relatively low confining pressures will separate into a low salinity vapor and a hypersaline liquid. The vapor phase ascends and when absorbed into connate or meteoric waters, forms a high temperature, sulfate-rich, acidic hydrothermal fluid. As this hydrothermal fluid ascends and cools, acidity progressively increases, resulting in a vertical zonation where advanced argillic assemblages overly illite-dominated argillic assemblages. Neutralization and cooling of the fluid during lateral fluid flow repeats this zoning pattern, with proximal silicified and leached zones flanked first by advanced argillic alteration, and then by more distal illite dominated alteration. As the hydrothermal system evolves, younger, more reduced hydrothermal fluids, probably generated by interactions between ascending hypersaline magmatic fluid and meteoric water dominated convection cells, then transport and deposit metals (Au-Ag-Cu) along the same conduits utilized previously. Metals may be sourced directly from the magmatic fluids or leached from country rocks.

## **9 EXPLORATION**

### **9.1 General**

Ranchero has conducted extensive investigation at Maiz Azul and the surrounding areas. This has been conducted by Ranchero staff or independent contractors working for the Company. This includes detailed mapping, rock sampling, alteration studies, structural studies and satellite image interpretation. During the period from October 2021 and February 2022 the company drilled 3112 meters of diamond core.

Historic exploration by prior operators is summarized in Item 6 of this report. Work completed by Ranchero, or for the benefit of Ranchero, is summarized herein.

### **9.2 Geologic Mapping**

In 2020 Ranchero hired Resource Geosciences Incorporated and its sister company Resource Geosciences de Mexico SA de CV to create a detailed geologic map of the Maiz Azul area and complete a rock alteration study using a TerraSpec portable mineral analyzer. Additionally all core from the Maiz Azul target was relogged and alteration assemblages in drill core samples was studied using VNIR-SWIR spectroscopy using TerraSpec equipment. This work forms the basis for the geologic information presented in Section 7.2 of this report.

### **9.3 Thematic Mapping**

In February 2020 Ranchero contracted Perry Remote Sensing Services (Perry) of Denver, Colorado to conduct alteration mineral analysis using ASTER/LandSat data (Figure 9-1). This survey was conducted over the entire concession area.

Perry obtained an archived Landsat 5 scene, Path34 Row40, acquired May 3, 2004, from the USGS EROS Data Center in Sioux Falls, SD. Landsat 5 provides 30-meter spatial resolution. Perry then obtained an ASTER scene from the EROS Data Center which was acquired 8 days after the Landsat-5 scene on May 11, 2004. The same area for processing was subset from the ASTER data and co-registered to fit the Landsat subset. Landsat VNIR bands were combined with ASTER SWIR bands, rectified to UTM 12 North, WGS84 map base and combined to form a “hybrid” data set, offering an improved total of 10 bands for spectral analysis. The hybrid data set was atmospherically corrected and prepared for mineral modeling. Several local alteration sites were known within the processed scene plus including the known alteration styles at the adjacent Mulatos and El Victor Au deposits. Image classification was applied to evaluate suspected argillic, advanced argillic, sericitic, and propylitic alteration minerals, as found in the Mulatos district. Each alteration mineral model was provided as a separate vector polygon .shp file.

Results delivered included a DEM, regional structural analysis, and identification of various alteration assemblages potentially related to mineralization (Perry, 2020). A

program of follow-up field visits by Rancho has begun as of the effective date of this report.

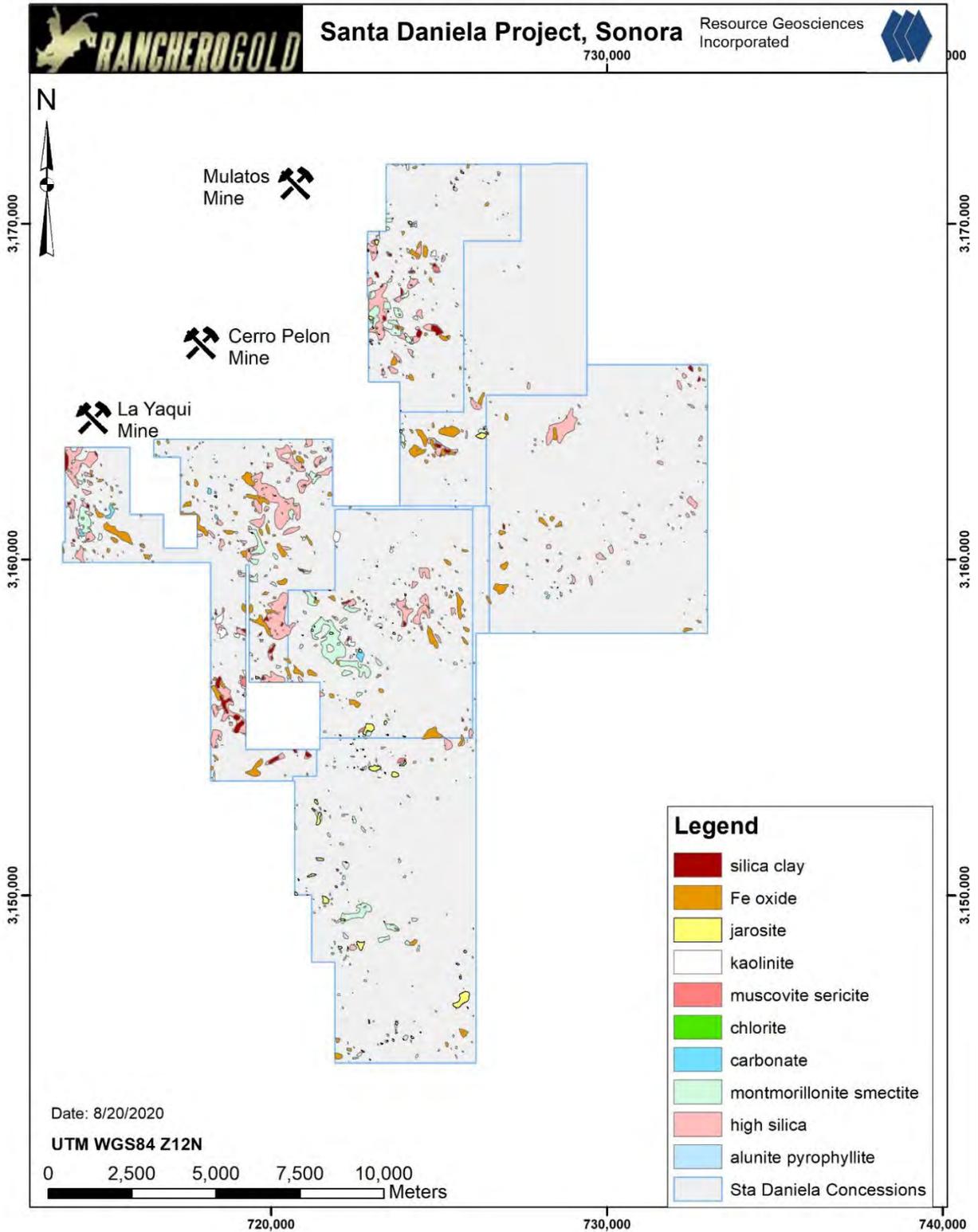


Figure 9-1. Thematically mapped interpreted hydrothermal alteration (Perry, 2020).

#### **9.4 Rock Chip Sampling**

Ranchero geologists or those working under contract to Ranchero's subsidiary Paika conducted rock chip sampling in areas that had not been historically sampled. As of the effective date of this report 1224 samples had been collected and analyzed. The bulk of the sampling has been conducted in the Maíz Azul area. Additional samples have been collected at targets identified by thematic mapping within the Santa Daniela concession block. Anomalous gold assays were returned from sampling of veined and silicified zones, consistent with the results reported from sampling programs conducted by prior operator AHMSA. Results for gold analyses of the samples are shown in Figure 9-2.

Sampling was widely spaced and reconnaissance in nature, consisting of site specific grab samples, representative chip samples over 1 to 3 m lengths, and very few true channel samples over 1 to 2 m lengths. The sampling density is insufficient to indicate true widths or representative gold contents of the sampled areas, however the data is valid and useful for identifying areas favorable for hosting gold mineralization that merit more detailed evaluation.

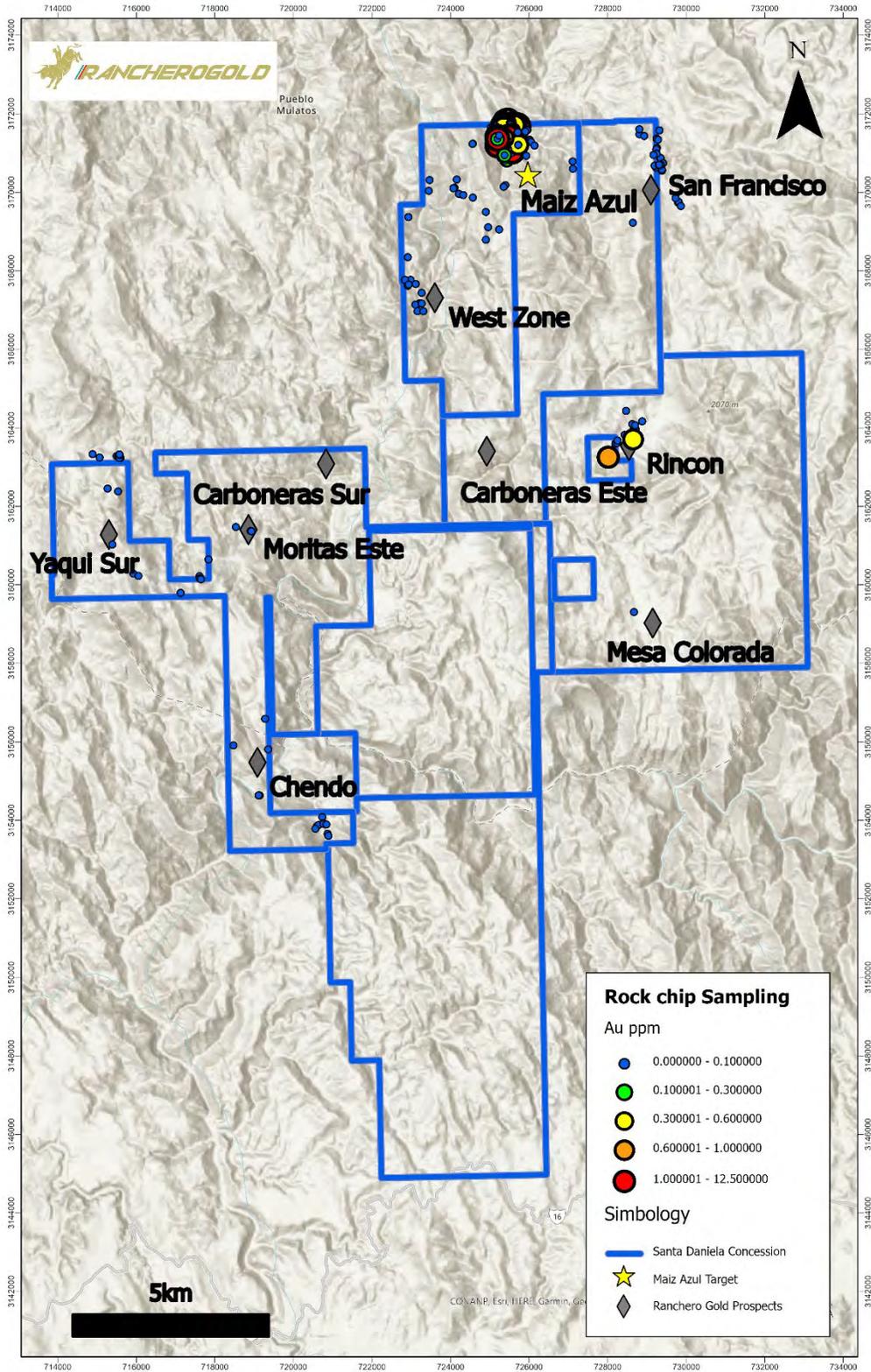


Figure 9-2. Gold assays, rock chip samples collected by Rancho in 2020-2022

## 10 DRILLING

### 10.1 Drilling History

Prior operator AHMSA conducted drill campaigns at the project as described in Section 6.2 of this report.

### 10.2 2021-2022 Phase I Campaign

Ranchero completed a Phase 1 3,100-meter diamond-core drilling campaign at Maíz Azul during October 2021 until January 2022. Two principal drill targets known as La Colmena and La Cascada were tested in 16 drill holes. These targets were identified during the field work completed by Resource Geosciences de Mexico SA de CV in 2020 supported by work completed by Ranchero geologists. .

Drill locations were sited by the site geologists who verified the location coordinates with a handheld GPS unit. Drill hole azimuths were verified using a hand held Brunton compass. All diamond core was HQ size. It was recovered by the driller and placed in labeled core boxes which were then visually inspected by a site geologist prior to transport to the core shack for logging and sampling.

Downhole surveys were conducted using a Reflex survey tool. Collected data was downloaded and incorporated into the GDM database.

Core recovery was excellent and the QP did not observe any sampling or recovery factors that could materially impact the accuracy or reliability of results.

The results of that work are presented in the following Table 10-1:

**Table 10-1. Summary of Drill Results**

Drill Hole	Target	Azimuth (degrees)	Inclination (degrees)	Total Depth (meters)	From (meters)	To (meters)	Interval (meters)	Au (gpt)	
MA 21-10	La Colmena	22	50	145.5	75.00	106.50	31.50	4.00	
					includes	91.50	103.50	12.00	9.93
						132.00	144.00	12.00	0.32
MA 21-11	La Colmena	22	70	218.2	69.15	72.55	3.40	0.27	
					includes	102.65	123.65	21.00	1.08
						110.15	120.65	10.50	1.68
MA 21-12	La Colmena	60	60	136.9	76.90	78.65	1.75	0.15	
						97.20	103.10	5.90	0.47
						109.10	115.05	5.95	0.28

Drill Hole	Target	Azimuth (degrees)	Inclination (degrees)	Total Depth (meters)	From (meters)	To (meters)	Interval (meters)	Au (gpt)
MA21-13	La Colmena	60	60	43.0	7.25	21.75	14.50	0.33
					<b>25.25</b>	<b>38.40</b>	<b>13.15</b>	<b>1.11</b>
					38.40	39.80	1.40	N/A <sup>3</sup>
					39.80	42.95	3.15	0.71
MA 21-14	La Colmena	0	90	80.3	<b>32.15</b>	<b>53.30</b>	<b>21.15</b>	<b>1.18</b>
MA 21-15	La Colmena	25	60	130.8	46.95	67.00	20.05	0.28
MA 21-16	La Colmena	25	60	172.9	38.38	41.24	2.86	0.81
MA 21-17	La Cascada	20	60	311.1	110.05	120.55	10.00	0.22
MA 21-18	La Cascada	20	60	349.8	36.30	37.80	1.50	0.30
Ma 21-19	La Cascada	0	70	326.0	124.55	133.40	8.85	0.18
MA 21-20	La Cascada	30	70	176.2	117.7	128	10.30	0.32
MA 21-21	La Cascada	60	70	308.2	266.2	276.7	10.50	0.33
MA-22-22	La Colmena	25	70	188.1	96.55	105.90	9.35	0.37
					<b>134.85</b>	<b>139.35</b>	<b>4.50</b>	<b>2.17</b>
					164.05	181.35	17.30	0.35
MA 22-23	La Colmena	0	90	203.4	137.15	147.65	10.50	0.27
					152.15	162.65	10.50	0.16
MA 22-24	La Colmena	0	70	182.0	71.50	81.50	10.00	0.12
					87.20	90.20	3.00	0.24
					<b>93.20</b>	<b>113.55</b>	<b>20.35</b>	<b>0.40</b>
MA 22-25	La Colmena	22	70	140.1	61.70	64.70	3.00	0.28
					<b>74.00</b>	<b>89.55</b>	<b>15.55</b>	<b>1.17</b>
					95.10	99.60	4.50	0.16

## Notes

1) Intersections presented herein may not necessarily represent true width of mineralization. Reported drill intercepts were based on a minimum grade of 0.1 ppm Au over 1.5 meters. Intervals are weight-average by sample length. Assay values are uncut. Intervals less than 3 meters are not included.

2) Rancho has a QA/QC program that conforms to industry best practices. Samples selected by Rancho geologists were no more than 1.5 meters of core length and at the discretion of the geologist could be shorter. All samples were sawn in half with a rock saw, bagged, tagged, sealed and kept in a secure facility until shipment by Rancho personal to ALS Global Labs in Hermosillo, Sonora, Mexico for preparation and analysis. Preparation and analytical methodology are those described below. Strict sampling and QA/QC protocol are followed, including the insertion of three standards, blanks, and duplicates on a routine basis. Approximately 5 percent of assays are control samples. Results of the QC data are plotted and failures are re-analyzed. The remaining core, coarse reject and pulps are stored on-site in a secure location.

3) Drill Hole MA 21-13 encountered a 1.4-meter natural void in the rock during drilling. This occurred within a mineralized interval from 25.25 meters to 42.95 meters. For purposes of proper representation, the interval has been divided into two segments – one above and one below the void.

Individual sample results for the MA21-10 from 91.5 to 103.5 meters are:

From (m)	To (m)	Length (m)	Au (gpt)
91.5	93	1.5	1.01
93	94.5	1.5	2.61
94.5	96	1.5	11.69
96	97.5	1.5	27.77
97.5	99	1.5	13.48
99	100.5	1.5	12.2
100.5	102	1.5	3.79
102	103.5	1.5	6.93

Individual sample results for the MA21-11 from 110.15 to 120.65 meters are:

From (m)	To (m)	Length (M)	Au (gpt)
110.15	111.65	1.5	1.04
111.65	113.15	1.5	0.64
113.15	114.65	1.5	0.79
114.65	116.15	1.5	0.94
116.15	117.65	1.5	1.97
117.65	119.15	1.5	0.60
119.15	120.65	1.5	5.80

The location of all drill holes is shown in Figure 10-1.

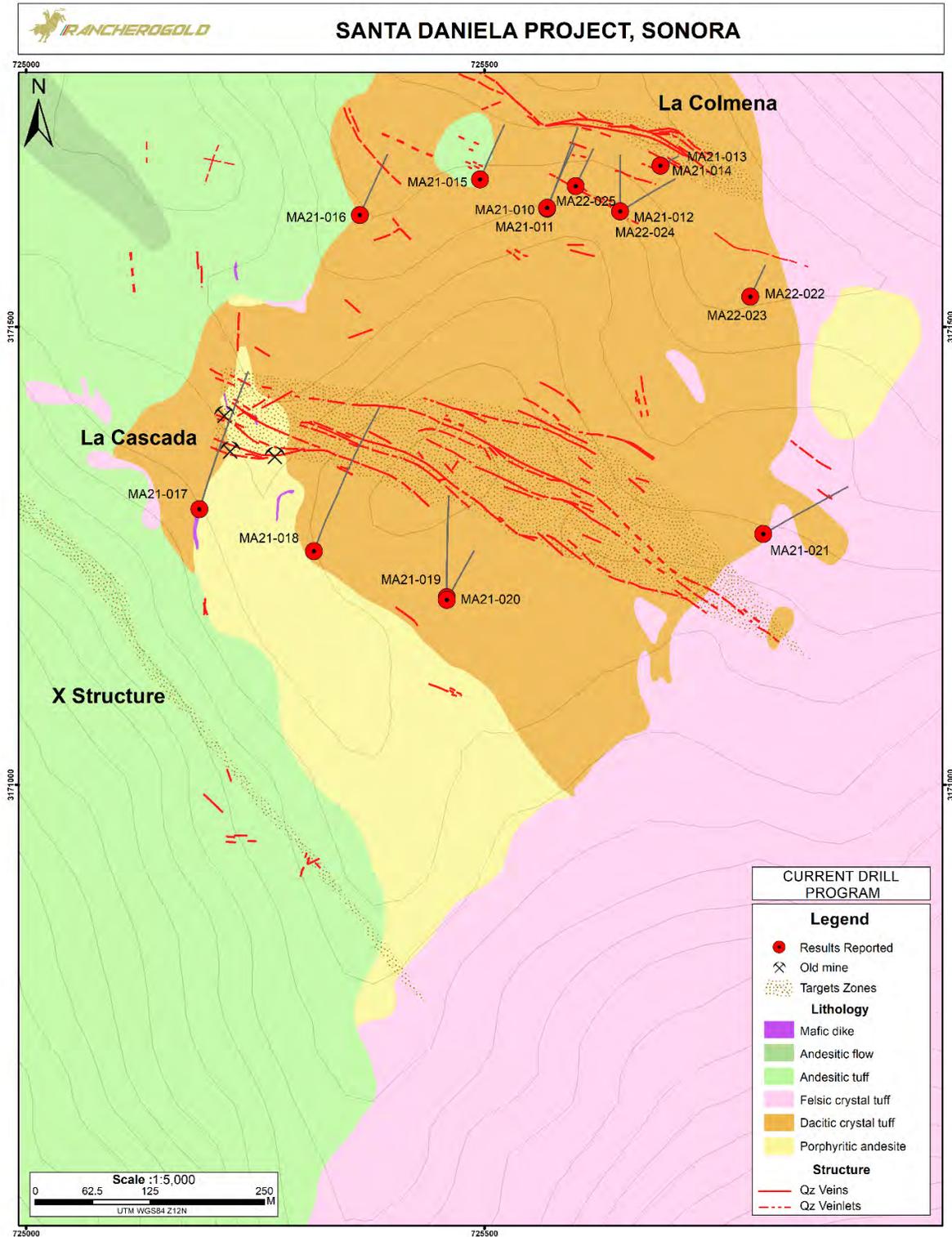


Figure 10-1 Phase I Drill Campaign – Collar Location Map

The interpretation of drill results at the La Colmena target indicates a high-grade hydrothermal breccia (12 meters of 9.93 g Au/t) surrounded by a halo of lower grade material consisting of hydrothermal breccia and related quartz veins and veinlets (Figures 10-1 and 10-2).

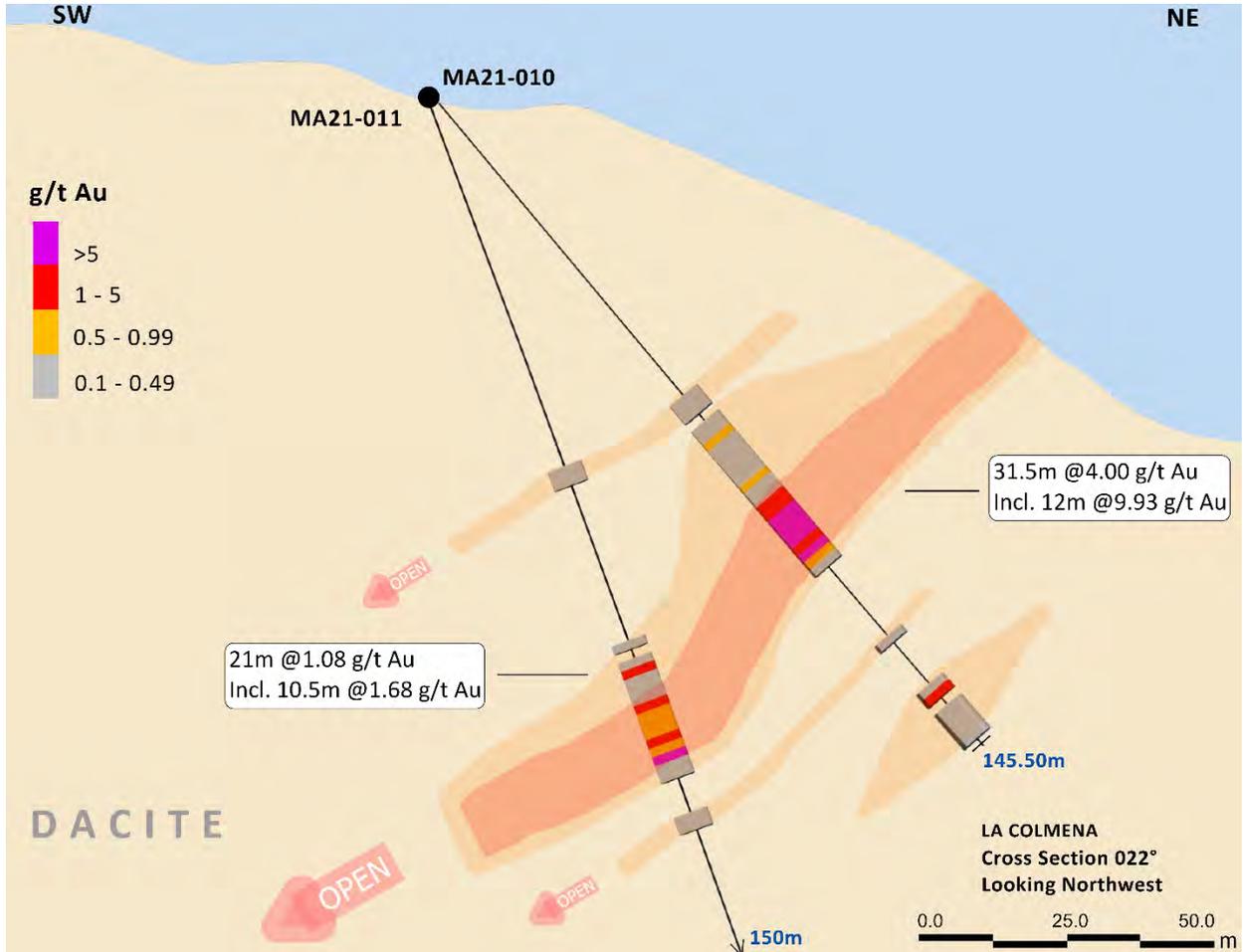


Figure 10-2 La Colmena Target Cross Section MA21-10 and 11.

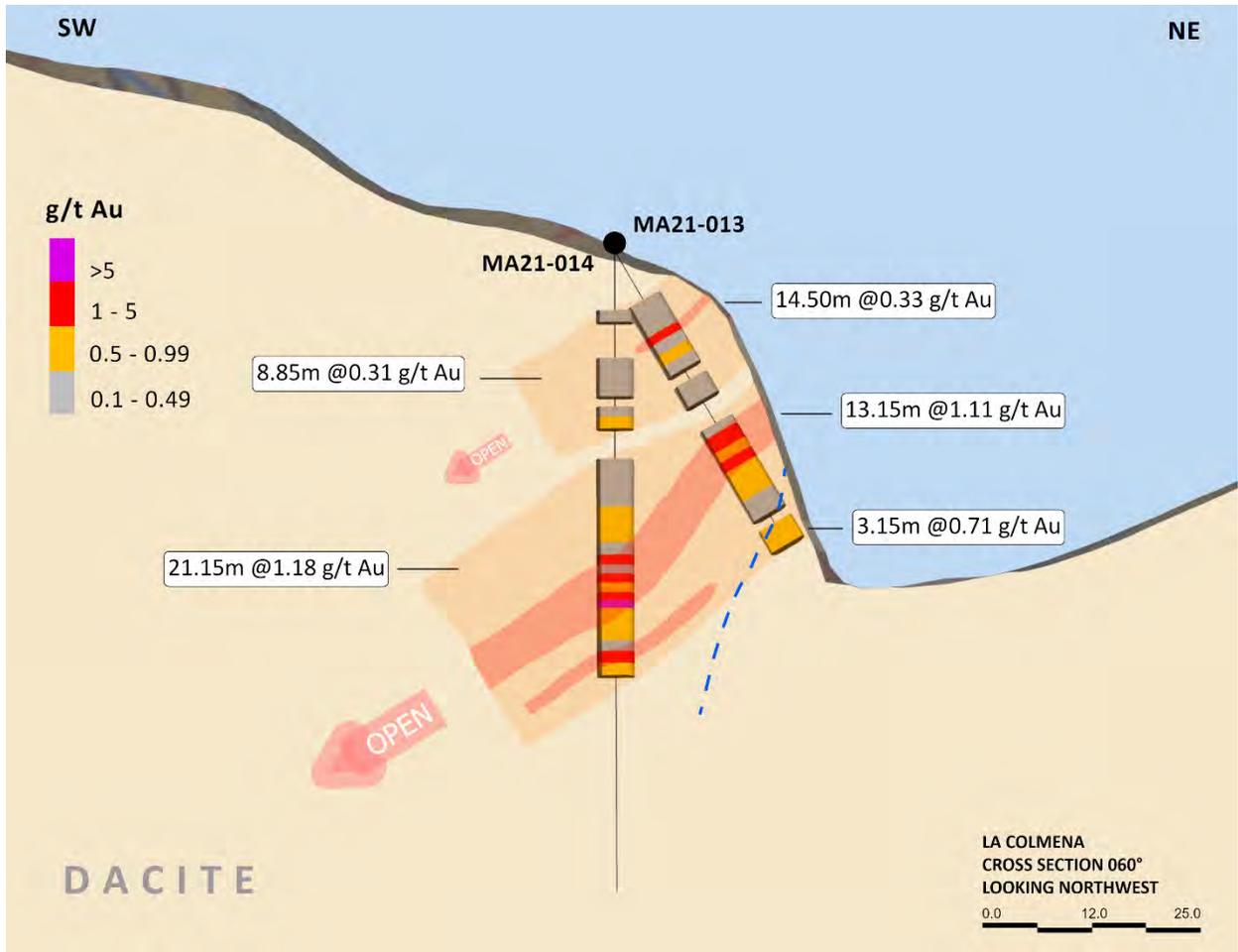


Figure 10-3 La Colmena Target Cross Section MA21-13 and 14

Drilling in the La Cascada target area encountered gold bearing veins and veinlets (Figure 10.4).

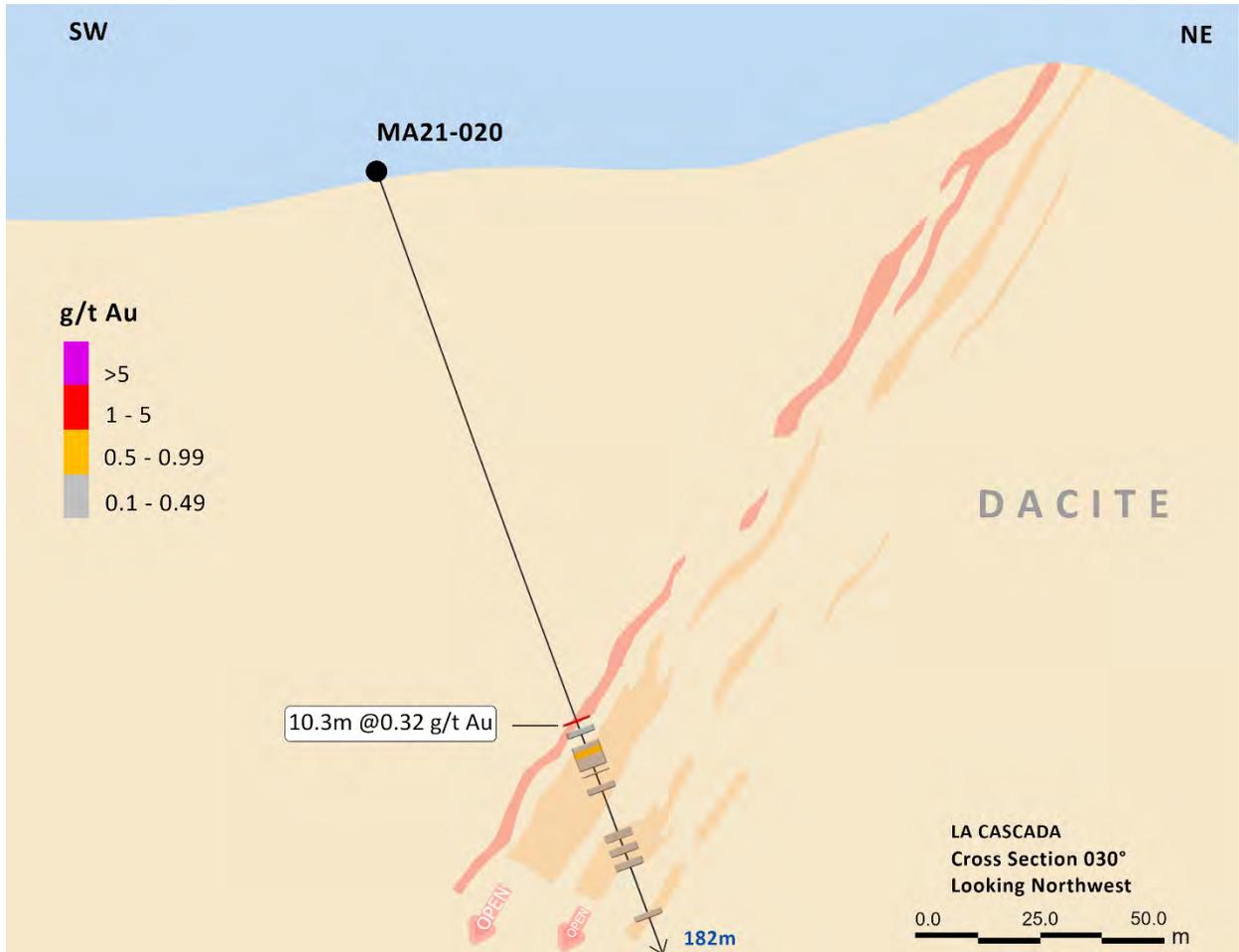


Figure 10-4 La Colmena Target Cross Section MA21-20

## **11 SAMPLING METHOD AND APPROACH**

### **11.1 Sampling Field Methods**

**Surface Rock Samples** – Rancho geologists or those working under contract for Rancho's subsidiary Paika conducted follow up visits to gold mineralized areas identified during previous historic sampling programs. Additional samples were collected to obtain rock chip geochemical information for areas outside of the previously sampled zones. Locations were marked on the ground and recorded with GPS. Samples were collected manually, described, tagged and bagged and then sent for analysis by ALS Chemex, an independent internationally certified laboratory. A total of 1124 samples were collected. Control samples comprising ~5% of total samples consisting of blank samples, duplicate and 3 reference standards were inserted into the sample stream. Samples were kept in the possession of Paika until delivered to ALS Chemex in Hermosillo.

**Drill Core Sampling** – All drill core was collected at the drill site by Rancho geologists and driven to the on-site core logging facility. Core was initially logged unsplit. Intervals to be sampled were identified and marked by Rancho's geologists. Core intervals to be sampled were then cut in half by a power rock saw. Sampled core intervals were generally 1.5 meters in length although under certain circumstances and at the site geologist's discretion shorter intervals were collected.

Once cut, half of the core interval was bagged, tagged and sealed. Bags were labelled with sample number and a unique sample ticket was included inside the sample bag. A duplicate sample ticket was stapled to the core box at the interval where the sample was collected. Samples were held in a secured warehouse until shipment by Rancho geologists to ALS Labs. Receiving facility in Hermosillo, Sonora Mexico.

The remaining core, coarse reject and pulps are stored on-site in a secure location.

### **11.2 Sample Security**

Samples were collected at the drill site by Rancho geologists and transported to the core shack where they logged and sampled the core. Samples and core were then kept in a locked warehouse until shipment. Samples were periodically shipped to ALS Chemex receiving center in Hermosillo, Sonora Mexico. Transport from the warehouse to the site was under direct supervision of Rancho senior geologists. ALS took custody of the samples at that point.

### **11.3 Analytical Methods**

Samples were submitted to an ALS Chemex preparation facility in Hermosillo, Sonora, and pulps then sent to an ALS laboratory in Vancouver for analysis. ALS Chemex is independent of Rancho and is an internationally recognized provider of analytical services to the mining and exploration industries. ALS Chemex internal audits meet all requirements of ISO/IEC 17025:2017 and ISO 9001:2015. All ALS Geochemistry

hub laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures (ALS, 2020).

Upon receipt at the sample preparation lab the samples were dried, crushed in their entirety to >70% passing a 2mm screen. The crushed material was riffle split to extract an approximate 250-gram sub-sample that was pulverized to >85% passing 75 microns in a disc pulveriser. This sample preparation procedure is the standard ALS Chemex “CRU-31, SPL-21, PREP-31” procedure. Analysis of gold was by standard fire assay using the “Au-AA23” method of ALS Chemex, in which prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in dilute nitric acid and concentrated hydrochloric acid and analyzed by atomic absorption spectroscopy. Samples that yield greater than 10 gpt Au upper limit are re-analyzed using a gravimetric finish. Multielement assays were by ALS Chemex method ME-ICP41 which assays for 35 elements by aqua-regia acid digestion and ICP-AES.

#### 11.4 Quality Assurance and Quality Control

The assay performance of the primary laboratory was assessed by a review of results from the insertion of certified reference material (Standards), blank samples and duplicates. This included three certified standards at varying but known grades. Assay precision is assessed by reprocessing duplicate samples.

Contamination is assessed by inserting blank material in the sample stream. Rancho used commercially available silica sand.

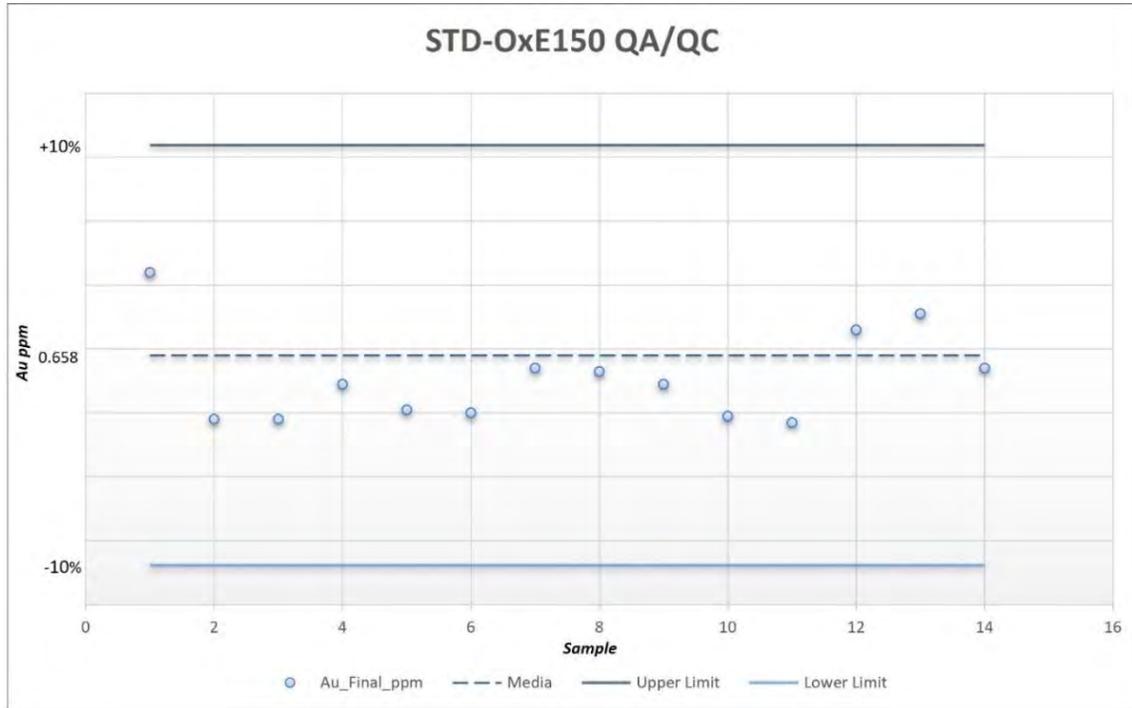
A total of 70 QA/QC samples were submitted to ALS together with 1585 regular samples. This is an insertion rate of 4.4% broken down as follows:

Sample Type	Number	Insertion Rate
Regular Samples	1585	n/a
Blanks	15	1 per 106
Standards	44	1 per 36
Duplicates	11	1 per 144

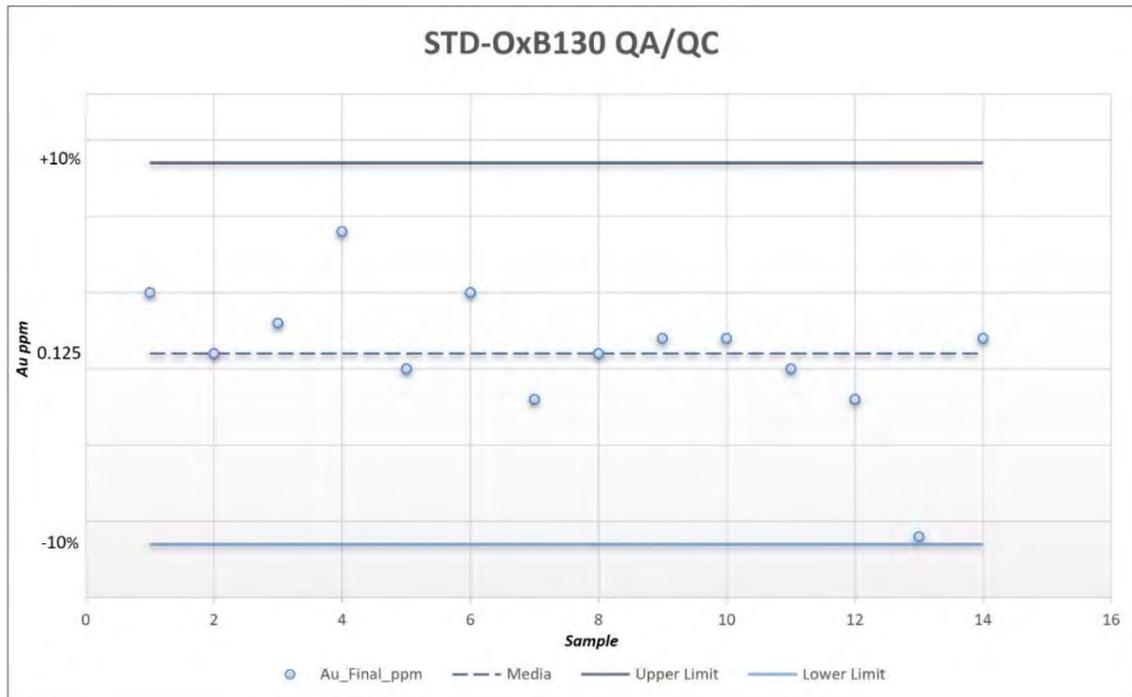
##### 11.4.1 QA/QC Materials

Rancho used three, commercially-available standards purchased from ProLabo Mining Supply of Hermosillo, Sonora, Mexico. The standard values were chosen to approximate a possible cut-off grade, a low grade and an average grade for nearby deposits. These are 0.125 g Au/t, 0.658 g Au/t and 1.313 g Au/t respectively.

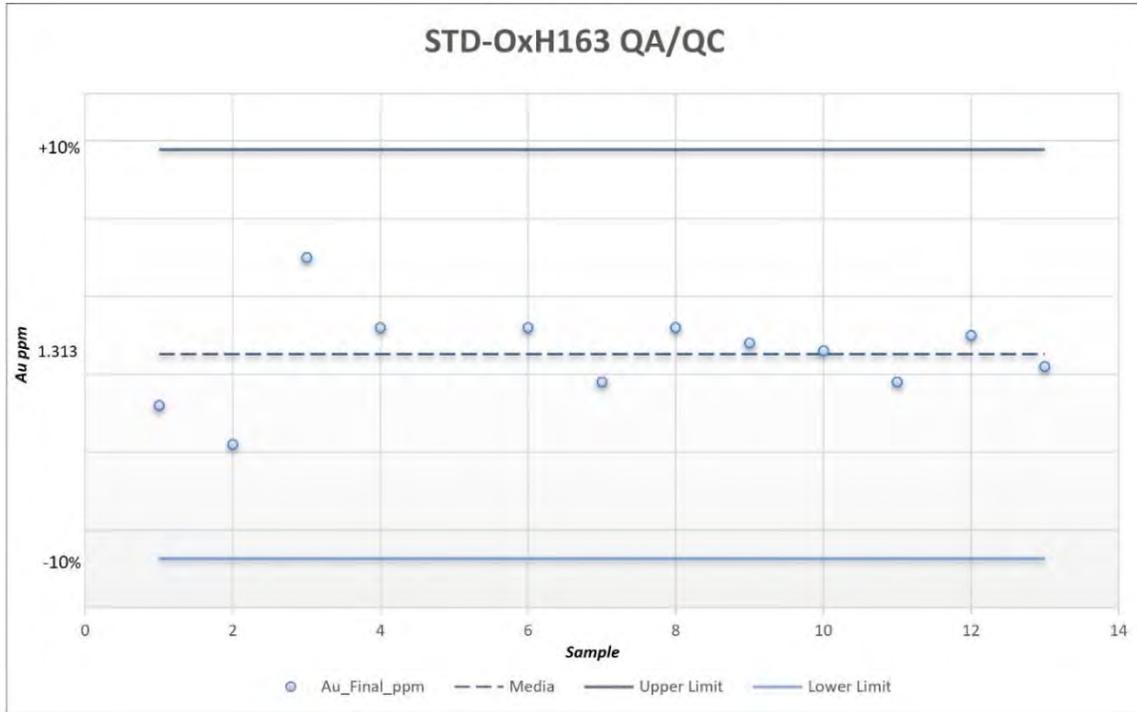
Results of Standard Material assays were then plotted and evaluated to assess the presence of outliers (> 10% variation) that would indicate an assaying problem. No outliers were found in any of the standard material assays.



**Figure 11-1 Plot of Results for Standard OxE150.**

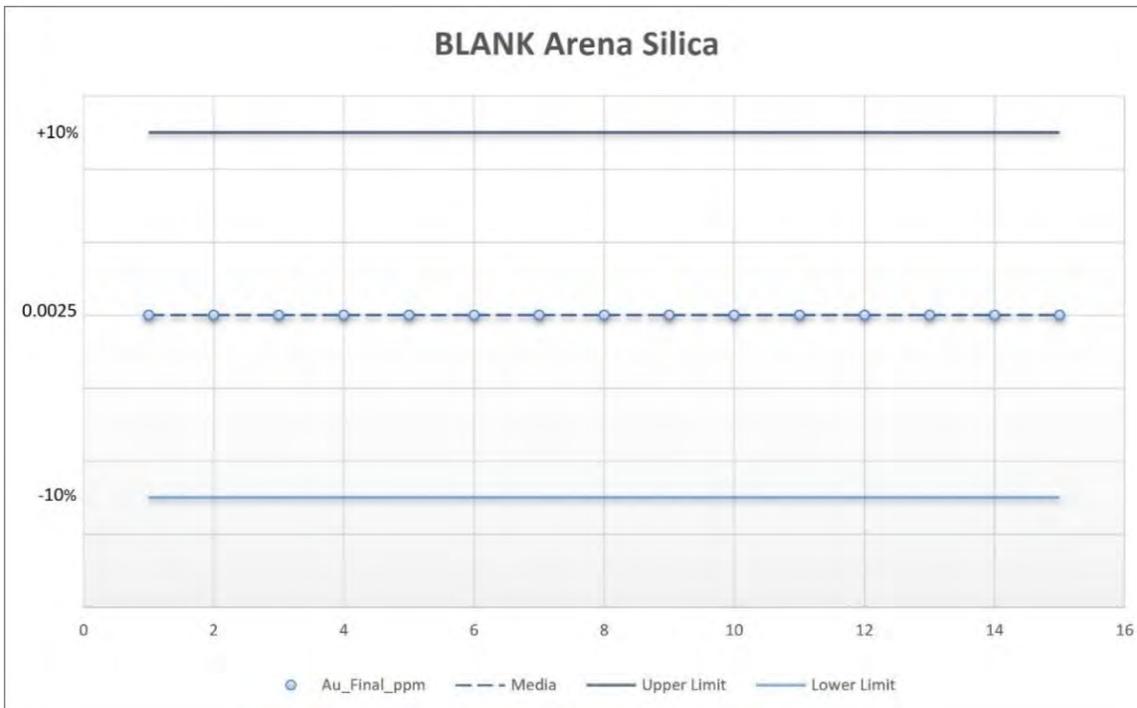


**Figure 11-2 Plot of Results for Standard OxB130.**



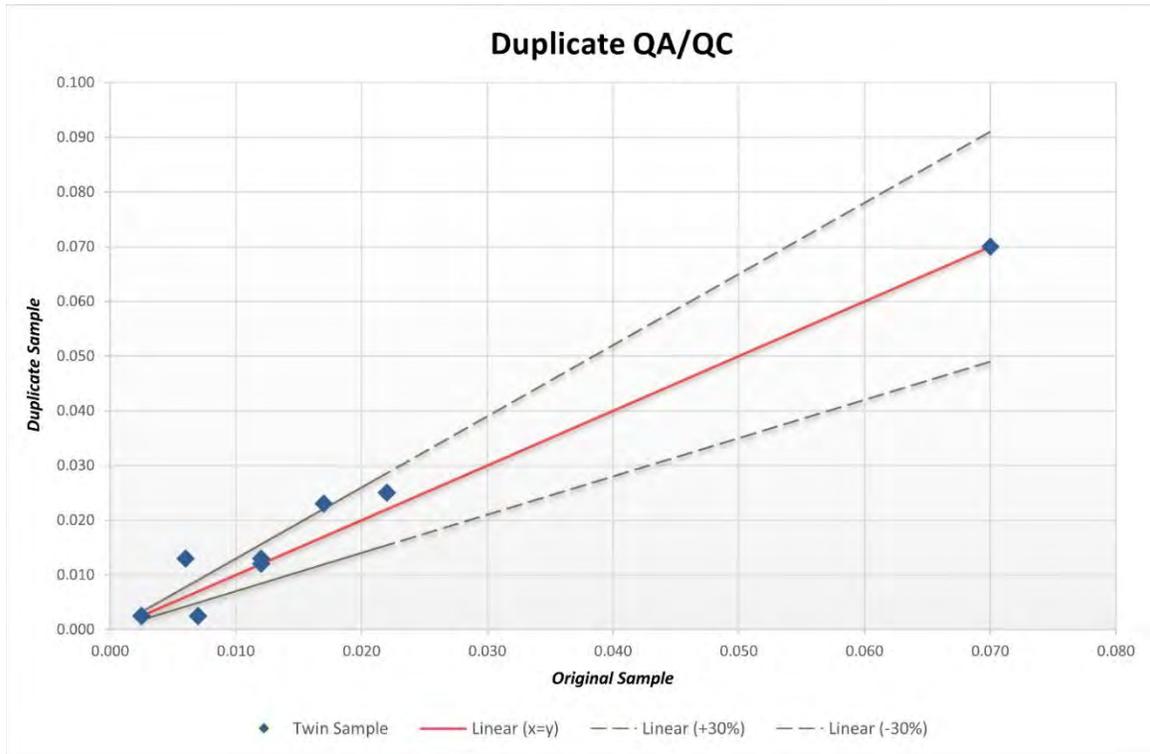
**Figure 11-3 Plot of Results for Standard OxH163.**

The blank material was commercially available silica sand. All blank samples returned assays below the detection limit.



**Figure 11-4 Plot of Results for Blank Silica Sand.**

The original and duplicate samples were plotted on a scatter diagram and viewed for evidence of bias.



**Figure 11-5. Scatterplot of Duplicate Samples**

No duplicate sample bias was detected.

### 11.5 Results of Security, Quality Control Procedures and Adequacy of Results

Chain of possession security methods were adequate to ensure that persons not a part of Rancho or Paika did not have access to the samples up to the point that they were delivered to the laboratory. Control sample data points are discussed in Item 12 below. No problems with the adequacy of results were identified. The drill core and rock chip samples results are adequate to confirm the gold mineralized zones in the drill core and to identify areas that merit detailed geologic mapping and systematic geochemical sampling as part of the Company's reconnaissance effort.

## **12 DATA/DATABASE VERIFICATION**

This section addresses the verification of data collected during the 2021-2022 drill campaign. Historical data collected prior to Rancho's involvement in the project could not be verified and is not relied upon, other than as a qualitative guide for exploration planning.

The Qualified Person carried out a program of validating the assay tables in the drill hole databases by means of spot checking a selection of drill holes. DD core was examined by visually comparing the core to entries in the drill logs and assays. Assay tables of the digital database were checked against the assays presented in the laboratory certificates. Additional checks included a comparison of the drill hole collar locations with the digital models of the topographic surfaces.

All data is captured by an exploration geologic database management system designed by Spatial Engineering Technologies Inc. This database manager includes inputs such as Collar/Azimuth/Inclination, Down Hole Survey, Geology/Lithology, Samples, assay results and certificates.

Mr. Pincus performed the following activities:

- Header table: reviewed for incorrect or duplicate collar coordinates and duplicate hole IDs.
- Survey table: reviewed survey tables, searched for survey points past the specified maximum depth in the collar table, and abnormal dips and azimuths.
- Lithology: reviewed for duplicate entries, overlapping intervals, negative lengths, missing collar data, missing intervals, or incorrect logging codes.
- Geochemical and assay table: reviewed for duplicate entries, sample intervals, overlapping intervals, missing collar data, missing intervals, and duplicated sample IDs.
- Conducted a thorough review of the electronic database by comparing assay certificates for selected drill holes against the electronic database.

Mr. Pincus considers the data as adequate for the purposes of this report.

## **13 MINERAL PROCESSING AND METALLURGICAL TESTING**

No metallurgical or mineral processing studies have been conducted.

## **14 MINERAL RESOURCE ESTIMATES**

The Santa Daniela project does not host a current Mineral Resource.

## **23 ADJACENT PROPERTIES**

The Santa Daniela project concession holdings are contiguous with the mineral concessions of Alamos Gold Inc. The Maiz Azul prospect is 4.5km east of the Mulatos Mine open pit, 13km northeast of the La Yaqui gold project, and 9km northeast of the Cerro Pelon mine (Figure 4-1). Alamos Gold Inc. is currently operating the Mulatos and Cerro Pelon Mines, and developing a new mine at La Yaqui.

The Maiz Azul prospect is 20km E-SE from the La India gold mine (Figure 4-1), currently being operated by Agnico Eagle Mines Ltd.

Sources of information for this section are Google Earth and Alamos Gold and Agnico Eagles Annual Reports. The QP has not independently verified the information and it is not necessarily indicative of the mineralization on the property subject of this report.

The Mulatos, Cerro Pelon, La Yaqui and La India mines exploit epithermal gold deposits.

## **24 OTHER RELEVANT DATA AND INFORMATION**

To the best of the author's knowledge, all relevant data has been presented in this report.

## **25 INTERPRETATION AND CONCLUSIONS**

### **25.1 Geologic Interpretation**

The Maiz Azul area hosts three outcropping structures prospective for hosting low sulfidation, epithermal gold mineralization: 1) Maiz Azul; 2) La Cascada; and 3) X Structure (Figure 25-1). Drilling during the Phase I campaign has identified gold mineralization at the La Colmena and La Cascada targets. Both targets are considered open and further drilling at each is likely to encounter further gold mineralization. The X-Structure was not tested during the initial drill campaign.

The results of the completed drilling coupled with on-going geologic interpretation demonstrates that Santa Daniela has potential to host an epithermal gold deposit of significance, associated with structurally controlled vein and breccia zones hosted by Tertiary volcanic strata at the Maíz Azul prospect.

Further the combination of thematic mapping, initial field visits and reconnaissance geochemistry demonstrate that the greater concession block is prospective and on-going efforts should continue to identify new prospects.

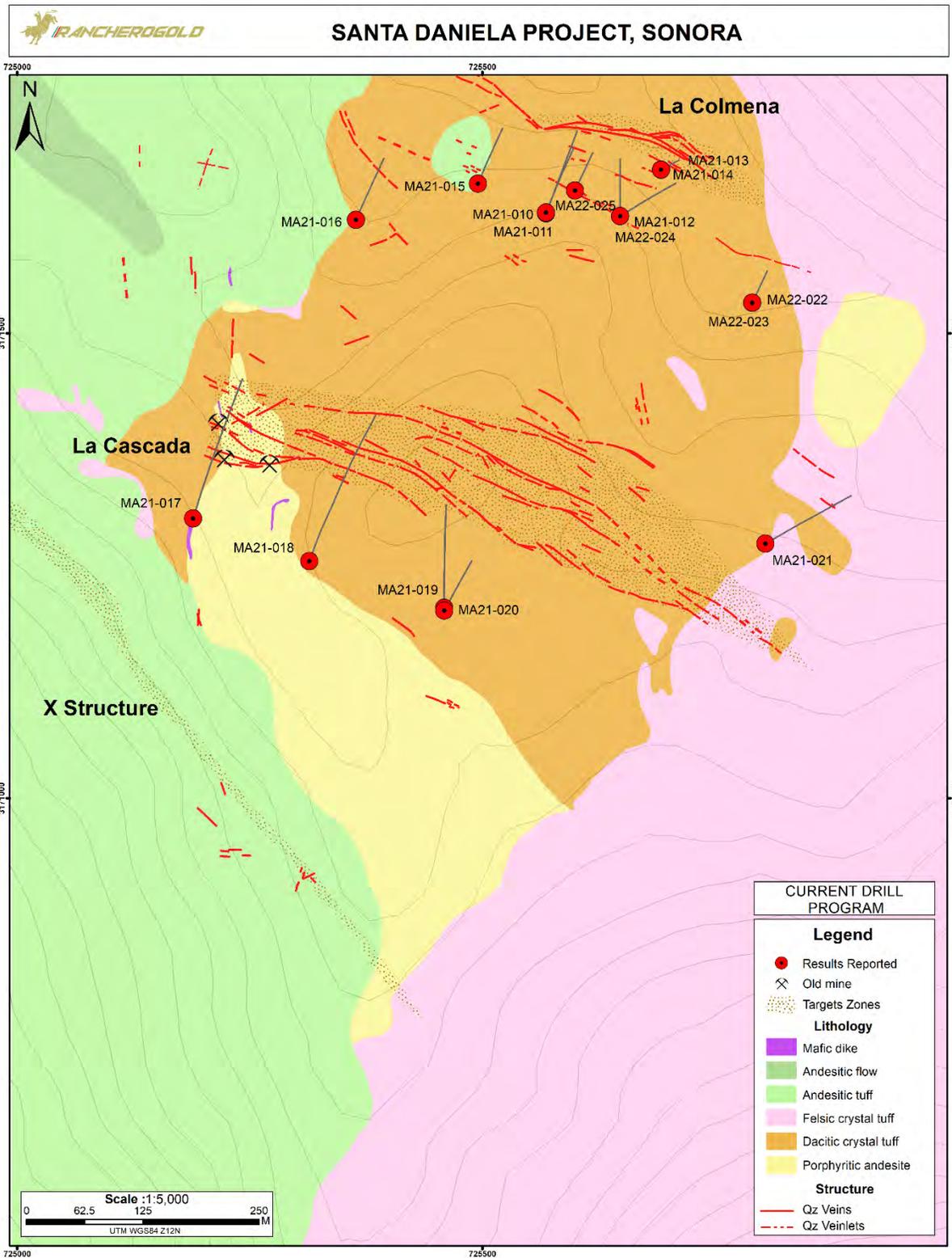


Figure 25-1. Maiz Azul area geology with drill hole locations.

## 25.2 Project Opportunities

Outcrop and drill core assays and outcropping, mappable vein zones and hydrothermal alteration zones demonstrate that the Santa Daniela project is prospective for hosting a structurally controlled, low sulfidation epithermal gold deposit. Two high priority targets, La Colmena and La Cascada, were drill tested. An additional target area, the X Structure, was identified during mapping in 2020 but has not yet been drill-tested. Opportunities exist to:

1. Expand, by diamond core and reverse circulation drilling, the mineralization intercepted by Phase I drillhole intercepts and demonstrate strike and dip continuity of the mineralized zones.
2. Discover mineralization at depth, by diamond core drilling, along the X Structure.
3. Discover new mineralized zones in areas of the concession that have not yet been mapped and evaluated. Outside of the Maiz Azul area, the concessions comprise an early-stage exploration opportunity that merits evaluation. Analogs to targets that should be sought are Maiz Azul style low sulfidation epithermal mineralization and high sulfidation mineralization similar to the La India and Mulatos gold deposits. Oligocene-Miocene ignimbritic and extrusive volcanic strata cover much of the concessions, and these areas are not considered prospective, but erosional windows exposing potentially mineralized Lower Series strata could be sought.

## 25.3 Project Risks

No extraordinary risks were identified. The project is subject to normal geologic, social, and legal risks.

### 25.3.1 Permitting Risk

Because the Santa Daniela project is in an active mining district with a recent history of successfully permitting exploration programs and mine operations, it is presumed that additional exploration activities at Santa Daniela, and eventual production from any deposits discovered, would not be prohibited by environmental regulations. Paika currently holds a drill permit authorizing drilling from 208 drillpads in the Maiz Azul area on a 100 x 100m grid pattern, as discussed in section 4.6.1 of this report.

### 25.3.2 Water Supply Risk

Paika has acquired industrial use water rights for project use, as detailed in Item 5.3 of this report, thus mitigating the social/political risk of obtaining water for the project.

The technical risk of developing a well field is unquantified.

### 25.3.3 Surface Access Risks

Paika has had an amicable relationship with Mulatos Ejido and regional stakeholders and successfully negotiated acquisition of surface rights for the most advanced target area at the Santa Daniela project, as discussed in Section 4.4 of this report. Additional surface rights would likely be required if an economic deposit were discovered and developed. In light of this history, the author does not see undue risk of community opposition to project development.

### 25.3.4 Metallurgical Risk

The metallurgical risk is that any mineralization discovered may not be amenable to standard gold recovery and beneficiation methods. Oxidation profiles in the district vary from shallow to moderate, thus mineralization not exposed at surface is likely to be sulfide bearing at shallow depths which may affect amenability to standard heap-leach gold recovery.

## 26 RECOMMENDATIONS

A 6-month, Phase II, geophysical survey and 4000-meter drill program is recommended for the Maíz Azul area.

This consists of detailed deposit modelling based on initial drill results, a geophysical survey, likely ground magnetics, and a subsequent 4000-meter drill program.

Continued reconnaissance exploration consisting of field visits, initial mapping, rock sampling and potentially geophysical surveys is also recommended outside the Maíz Azul Area.

The cost of this program is estimated to be C\$1,188,000.

**Table 26-1. Recommended Program - Data Confirmation, Drill Testing Known Targets, Regional Evaluation Work Plan and Budget, Santa Daniela Project**

<b>Activity or Concept</b>	<b>Month Start</b>	<b>Month End</b>	<b>Cost CDN\$</b>
Drilling (4000 meters at CDN\$188/meter)	1	6	750,000
Assay Cost (2000 samples at CDN\$75/sample)	1	6	150,000
Camp, Vehicle, etc. (CDN\$15,000/mo. for 6 months based on actual company costs)	1	6	90,000
Geologists and Assistants (5 Geologists and 2 helpers for six months. Based on actual company costs)	1	6	135,000
Geophysical Contractor (Estimate)	1	2	63,000
<b>Grand Total</b>			<b>1,188,000</b>

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## 28 CERTIFICATE AND EFFECTIVE DATE

I, William J Pincus, of Denver, CO. do hereby certify that:

1. This certificate is being delivered in connection with the technical report entitled “CSA NI 43-101 Technical Report on the Santa Daniela Gold Project, Municipios of Sahuaripa and Yecora, Sonora, Mexico” dated 25 April 2022 (the “Technical Report”) prepared for Rancho Gold Corp.
2. I am employed as CEO of Rancho Gold Corporation whose address is 910-800 West Pender Street, Vancouver, B.C V6C 2V6.
3. I am a Certified Professional Geologist (#10762) with the American Institute of Professional Geologists since 2004 and my qualifications include experience applicable to the subject matter of this Technical Report. In particular, I am a graduate of the University of Colorado (B.A. Geology, 1975) and the Colorado School of Mines (MSc., Geology 1982 and M.Sc. Mineral Economics, 1986.) I have practiced my profession continuously since 1976. Most of my professional practice has focused on exploration of metallic mineral deposits and the economic development of gold and copper deposits. I have been directly involved in the evaluation of numerous epithermal gold deposits including the Austin Gold Venture (Nevada), La Joya del Sol (Argentina) and San Luis (Peru).
4. I have read the definition of Qualified Person set out in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of NI 43-101.
5. I most recently completed a personal inspection of the Santa Daniela gold project on April 5-12, 2022, and I am aware of no information that constitutes a material change to the scientific and technical information about the property since that personal inspection.
6. I am responsible for the entirety of this Technical Report.
7. I am not independent of Rancho Gold Inc. and its subsidiary Minera and Metalurgia Paika SA de CV, as defined in Section 1.5 of NI 43-101.
8. I have been involved with the property that is the subject of the Technical Report since January 2020
9. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

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10. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Date: April 25, 2022

Signed and Sealed



William Pincus CPG# 10762

