# National Instrument 43-101 Technical Report for the Cleopatra Nickel-Cobalt Property

Curry County Oregon, USA

### **Report Prepared for:**



Spruce Ridge Resources Ltd. 18 King St. E, Suite 902 Toronto, Ontario, Canada, M5C 1C4

## **Report Prepared by:**



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Effective Date: 10 August 2023

Issuing Date: 3 November 2023

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Project Number: 682.23.00

#### **DATE AND SIGNATURE**

The Report, "National Instrument 43-101 Technical Report for the Cleopatra Nickel-Cobalt Property, Curry County, Oregon, USA", issued 3 November 2023 and with an Effective Date of 10 August 2023, was prepared for Spruce Ridge Resources Ltd. and authored by the following:

/s/ Scott Jobin-Bevans

Scott Jobin-Bevans (P.Geo. PGO #0183, PhD, PMP) Principal Author and Principal Geoscientist Caracle Creek International Consulting Inc.

/s/ John Siriunas

John M. Siriunas (P.Eng. Ontario #42706010, M.A.Sc) Co-Author and Professional Engineer Caracle Creek International Consulting Inc.

Dated: 3 November 2023

### **CERTIFICATE OF QUALIFIED PERSON**

Scott Jobin-Bevans (P.Geo.)

I, Scott Jobin-Bevans, P.Geo., do hereby certify that:

- 1. I am an independent consultant and Principal Geoscientist with Caracle Creek International Consulting Inc., and have an address at La Gioconda 4344, Las Condes, Santiago, Chile.
- 2. I graduated from the University of Manitoba (Winnipeg, Manitoba), BSc. Geosciences (Hons) in 1995 and from the University of Western Ontario (London, Ontario), PhD. (Geology) in 2004.
- 3. I am a registered member, in good standing, of the Professional Geoscientists of Ontario (PGO), License Number 0183 (since June 2002).
- 4. I have practiced my profession continuously for more than 28 years, having worked mainly in mineral exploration but also having experience in mine site geology, mineral resource and reserve estimations, preliminary economic assessments, pre-feasibility studies, due diligence, valuation and evaluation reporting. I have authored, co-authored or contributed to numerous NI 43-101 and JORC Code reports on a multitude of commodities including nickel-copper-platinum group elements, base metals, gold, silver, vanadium, and lithium projects in Canada, the United States, China, Central and South America, Europe, Africa, and Australia.
- 5. 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 reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I am responsible for sections 2.0-2.4, 2.6, 2.7, 3.0-13.0, 15.0-27.0 in the technical report titled, "National Instrument 43-101 Technical Report for the Cleopatra Nickel-Cobalt Property, Curry County, Oregon, USA" (the "Technical Report"), issued 3 November 2023 and with an Effective Date of 10 August 2023.
- 7. I have not visited the Cleopatra Nickel-Cobalt Property, the subject of the Report.
- 8. I am independent of Spruce Ridge Resources Ltd. applying all of the tests in Section 1.5 of NI 43-101 and Companion Policy 43-101CP.
- 9. I have had no prior involvement with the Cleopatra Nickel-Copper Property which is the subject of the current Technical Report.
- 10. I have read NI 43-101, Form 43-101F1 and confirm the Technical Report has been prepared in compliance with that instrument and form.
- 11. As of the Effective Date of the Technical Report, to the best of my knowledge, information and belief, the Sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed at Santiago, Chile this 3 <sup>rd</sup> day of November 2023.	
/s/ Scott Jobin-Bevans	

Scott Jobin-Bevans (P.Geo., PhD, PMP)

#### **CERTIFICATE OF QUALIFIED PERSON**

John M. Siriunas (P.Eng., M.A.Sc)

I, John M. Siriunas, P.Eng., do hereby certify that:

- 1. I am an Associate Independent Consultant with Caracle Creek International Consulting Inc. (Caracle) and have an address at 25 3rd Side Road, Milton, Ontario, Canada, L9T 2W5.
- 2. I graduated from the University of Toronto (Toronto, Ontario) with a B.A.Sc. (Geological Engineering) in 1976 and from the University of Toronto (Toronto, Ontario) with an M.A.Sc. (Applied Geology and Geochemistry) in 1979.
- 3. I have been a member, in good standing, of the Association of Professional Engineers of Ontario since June 1980 (Licence Number 42706010) and possess a Certificate of Authorization to practice my profession.
- 4. I have practiced my profession continuously for 39 years and have been involved in mineral exploration, mine site geology, mineral resource and reserve estimations, preliminary economic assessments, pre-feasibility studies, due diligence, valuation and evaluation reporting, and have authored or co-authored numerous reports on a multitude of commodities including nickel-copper-platinum group element, base metals, precious metals, lithium, iron ore and coal projects in the Americas.
- 5. 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 reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I am responsible for sections 2.4-2.6, 3.0, 11.0, 12.0, 24.0, 25.0, and 26.0 in the technical report titled, "National Instrument 43-101 Technical Report for the Cleopatra Nickel-Cobalt Property, Curry County, Oregon, USA" (the "Technical Report"), issued 3 November 2023 and with an Effective Date of 10 August 2023.
- 7. I visited the Cleopatra Nickel-Cobalt Property for 1 day on 8 August 2023.
- 8. I am independent of Spruce Ridge Resources Ltd., applying all of the tests in Section 1.5 of NI 43-101 and Companion Policy 43-101CP.
- 9. I have had no prior involvement with the Cleopatra Nickel-Cobalt Property which is the subject of the current Technical Report.
- 10. I have read NI 43-101, Form 43-101F1 and confirm the Technical Report has been prepared in compliance with that instrument and form.
- 11. As of the Effective Date of the Technical Report, to the best of my knowledge, information and belief, the Sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed at Milton, Ontario this 3 <sup>rd</sup> day of November 2023.	
/s/ John Siriunas	

John M. Siriunas (P.Eng., M.A.Sc)

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### 1.0 SUMMARY

### 1.1 Introduction

Geological consulting group Caracle Creek International Consulting Inc. ("Caracle") was engaged by Canadian public company Spruce Ridge Resources Ltd. ("Spruce Ridge" or the "Issuer"), to prepare an independent National Instrument 43-101 ("NI 43-101") Technical Report (the "Report") for its Cleopatra Nickel-Cobalt Property ("Cleopatra" or the "Property"), located in Curry County, Oregon, USA. The Report has been prepared in accordance with the Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects as set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 (June 30, 2011).

### 1.1.1 Purpose of the Technical Report

The Technical Report has been prepared for Spruce Ridge Resources Ltd., a Canadian public company trading on the Toronto Venture Exchange (TSX-V: SHL), in support of a transaction to acquire a majority interest in the Cleopatra Ni-Co Property.

The Report provides an independent review of the Cleopatra Nickel-Cobalt Property located in Curry County, Oregon, USA, verifies the data and information related to historical and current mineral exploration on the Property, and presents a report on data and information available in the public domain with respect to the Property.

### 1.1.2 Previous Technical Reports

There are no previous NI 43-101 Technical Reports prepared for the Issuer Spruce Ridge Resources regarding the Cleopatra Ni-Co Property and as such the Report is the current NI 43-101 technical report regarding the Property.

#### 1.1.3 Effective Date

The Effective Date of the Report is 10 August 2023.

#### 1.1.4 Qualifications of Consultants

The Report has been completed by Dr. Scott Jobin-Bevans and Mr. John Siriunas (together the "Consultants" or the "Authors"). Dr. Jobin-Bevans ("Principal Author") is the Principal Geoscientist at Caracle Creek International Consulting Inc. and Mr. Siriunas ("Co-Author") is an Associate Independent Consultant with Caracle Creek International Consulting Inc.

Dr. Jobin-Bevans is a professional geoscientist (PGO #0183, P.Geo.) with experience in geology, mineral exploration, mineral resource and reserve estimation and classification, land tenure management, metallurgical testing, mineral processing, capital and operating cost estimation, and mineral economics. Mr. Siriunas is a Professional Engineer (APEO #42706010) with experience in geology, mineral exploration, mine site geology, mineral resource and reserve estimations, preliminary economic assessments, pre-feasibility studies, due diligence, and valuation and evaluation reporting.

Dr. Scott Jobin-Bevans and Mr. John Siriunas, by virtue of their education, experience, and professional association, are each considered to be a Qualified Person ("QP"), as that term is defined in NI 43-101 and

specifically sections 1.5 and 5.1 of NI 43-101CP (Companion Policy). A responsibility matrix is provided in Table 1-1, summarizing each of the Report sections for which the Authors are responsible.

Table 1-1. Responsibility matrix for the preparation of the Report sections by the Authors.

Author	Complete Section Responsibility	Sub-Section Responsibility
Scott Jobin-Bevans	3.0-13.0, 15.0-27.0	2.0-2.4, 2.6, 2.7
John Siriunas	3.0, 11.0, 12.0, 24.0, 25.0, 26.0	2.4-2.6

The QP responsibilities for Section 1 are reflected in their responsibilities for each of the other individual Report sections.

# 1.2 Personal Inspection (Site Visit)

Mr. John Siriunas (M.A.Sc., P.Eng.) visited the Property on 8 August 2023, accompanied by Mr. Michael D. Strickler. Mr. Strickler is the principal of Lithologic Resources, LLC, the consulting group that carried out much of the contract exploration work on the Property for Red Flat Nickel Corp. The personal inspection was made to observe the general Property conditions and access, and to verify the locations of some of the previous trenching and sampling.

The Property does have some bedrock outcroppings but appears to be mainly covered by saprolitic/lateritic material. No evidence of previous exploration work was noted in the southeast corner of the Property that was visited. Three (3) samples were collected for analysis from this location: two (CL-1 and CL-2) of lateritic material and one (CL-3) of weathered ophiolitic bedrock (Table 1-2).

Table 1-2. Location and assay results for 3 surface grab samples from the Personal Inspection, Cleopatra Property.

	UTM NAD 83 Zone 10		Ni	%	Cop	opm	Cr	%	M	g %	Fe	%
Analysis Method	Easting (m)	Northing (m)	AR	FUS	AR	FUS	AR	FUS	AR	FUS	AR	FUS
CL-1	424523	4649860	0.428	0.445	237	291	0.238	0.527	8.91	16.6	14.6	15.5
CL-2	424550	4649922	0.353	0.387	195	251	0.286	0.812	9.1	17.7	13.7	15.1
CL-3	424552	4649921		0.272		130		0.268		24.5		6.83

Analysis Methods: AR - Aqua Regia ("partial") digestion followed by ICP analysis; FUS - Na2O2 ("total") digestion followed by ICP analysis.

# 1.3 Property Description and Location

The Cleopatra Ni-Co Property is located on the top of McGrew Summit on the west bank of Taylor Creek, in the southeast quadrant of Curry County, Oregon. It is about 60 miles (100 km) southwest of the City of Grants Pass (2021: pop. 39,364) and about 335 miles (539 km) south of the City of Portland (2021: 641,162). It is in a mountainous forested area that can be accessed either from the southwest by taking US Highway 101 or from the northeast from US Highway 199. The Property is centred at approximately 423938 mE, 4653367 mN, NAD83 UTM Zone 10N (42°00′N Latitude, 123°55′W Longitude).

All known nickel mineralization that is the focus of the Report and that of the Cleopatra Ni-Co Property is located within the boundary of the mining lands that comprise the Property.

#### 1.3.1 Current Transaction

The current transaction gives Spruce Ridge the ability to hold a controlling interest of 80.0079% in the Cleopatra Ni-Co Property.

In July 2023, Spruce Ridge Resources entered into a binding Letter of Intent ("LOI") with RAB Capital Holdings Ltd. ("RAB"), a private limited company incorporated in England, to acquire all of the issued and outstanding securities ("Offered Securities") of RFN Holdings Limited ("RFNH"), a Guernsey company, such that RFNH will become a wholly owned subsidiary of Spruce Ridge (the "Acquisition"). Upon execution, the Definitive Agreement (not yet completed) will replace and supersede the LOI.

RAB is the sole holder of the Offered Securities and the holder of a Loan Note Instrument with Homeland Nickel Corporation ("HLN") dated August 20, 2008, as amended by various supplemental agreements and other corresponding agreements (collectively, the "Loan Note Instrument"). RFNH is the holder of 80.0079% of the issued and outstanding securities of Homeland Nickel Corporation ("HLN") which maintains a portfolio of mining claims in Oregon that make up the Red Flat and Cleopatra properties (the "Properties").

The debt owed to RAB by HLN will be converted to debt owed to Spruce Ridge with the remaining 19.9921% held by third party shareholders.

### 1.3.2 Mineral Disposition

The Cleopatra Ni-Co Property, registered under the name of Red Flat Nickel Corp., consists of 139 Lode mining claims at 20.66 acres per mining claim, covering a total area of approximately 2,872 acres (1,162 ha). Oregon's Mineral Land Regulation and Reclamation ("MLRR") and the federal Bureau of Land Management ("BLM") cover in details the rights, obligations and definitions regarding Lode mining claims (Rancourt, 2009).

### 1.3.3 Holdings Costs

Annual holding costs (Annual Maintenance Fee) for the Cleopatra Ni-Co Property (139 mining claims), payable to the BLM, are \$165 per mining claim and total US\$22,935. In addition, approximately US\$724 is payable to Curry County Clerk to cover mining claim affidavit recording fees (US\$5.21/claim). The last payments were made by Homeland Nickel Corporation (the Claimant) prior to 31 August 2023.

### 1.3.4 Surface Rights and Legal Access

The Cleopatra Property covers 2,872 acres (1,162 ha) which are located on public lands and as such surface access is not prohibited.

#### 1.3.5 Current Permits and Work Status

Exploration permits are not required to complete the exploration work detailed in the recommended work program. The Principal Author is not aware of any other requirements which would prevent the Issuer from completing the recommended work program. There is no exploration work currently being conducted by the Issuer on the Property.

#### 1.3.6 Environmental Liabilities

At this early stage of the Property's development there are no requirements for environmental studies and the Company will implement industry standard best practices in terms of preserving and minimizing its impact on the environment.

The Principal Author is unable to comment on any remediation which may have been undertaken by previous companies and is not aware of any environmental liabilities associated with the Property.

### 1.3.7 Royalties and Obligations

As part of the terms and conditions with respect to the July 2023 LOI between Spruce Ridge Resources and RAB Capital Holdings, Spruce Ridge agrees to grant RAB a 2.0% NSR on the Cleopatra Property (the "Cleopatra NSR"), with an option to re-purchase 50% of the Cleopatra NSR at a price of \$2,000,000 at any time.

The Principal Author is not aware of any royalties or obligations associated with the Cleopatra Ni-Co Property mining claims.

### 1.3.8 Other Significant Factors and Risks

The Principal Author is not aware of any significant factors that may affect access, title, or the right or ability to perform the proposed work program on the Property.

# 1.4 Property Access and Operating Season

The Cleopatra Property can be accessed from the southwest, from US Highway 101 by taking the Rowdy Creek Road in Smith River, California, that joins Road 305 for 5.6 miles (9.0 km), and then an additional 18.3 miles (29.5 km) to Road 450 that enters the Property. It can also be reached from the northeast by taking US Highway 199 south to the Lone Mountain Road in O'Brien, Oregon, for a distance of 22.3 miles (36 km).

The only access to the Property is from Road 450, which enters the Property from the south. An ATV is required to access the southern part of the Property. Rogue Valley International Medford Airport is located about 80 miles (129 km) east of the Property.

The Cleopatra Property is located on the top of a mountain in the centre of the Coastal Range at about 3,200 ft (975 m). Most of the Property experiences colder temperatures than the surrounding valleys. Very few people live in the Coastal Range itself (Rancourt, 2009).

Given the location of the Cleopatra Property to the coast and at relatively low elevation, exploration work (*i.e.*, drilling, geophysical surveys, geological mapping, trenching and surface sampling) can be completed year-round.

# 1.5 History

Nickel-bearing laterites of southwestern Oregon are known since the discovery of the Nickel Mountain Mine near Riddle, Oregon in 1881. This mine was in operation from 1954 until 1976 and provided 39M tons of ore at nickel grades between 1.0 and 1.5% Ni. Regional investigations were carried out by the State of Oregon Department of Geology and Mineral Industries ("DOGAMI") as early as 1943. DOGAMI's work on the laterites followed the publication of a study of the Nickel Mountain deposit by the USGS (Pecora and Hobbs, 1942).

In 1978, DOGAMI explored the Cleopatra Property (Ramp, 1978). The exploration consisted of geological mapping of the ultramafic rock and five (5) auger drill holes. The regional geology was described by Ramp et al. (1977) and was summarized in a geological map of Curry County (Rancourt, 2009).

Historical results from exploration work on or proximal to the Property have not been verified by the Principal Author or a Qualified Person associated with the Company and as such are not necessarily indicative of the results to be found on the Property.

### 1.5.1 Prior Ownership and Ownership Changes

The Cleopatra Property was staked and claimed 100% by Lithologic Resources ("LLR") during the spring of 2007 (Rancourt, 2009). The Cleopatra Property was previously owned 100% by Oregon-based private company, Red Flat Nickel Corp. (RFN). The Property is currently owned 80.0079% by RAB Capital Holdings Ltd. (UK) through RFN Holdings Limited and a Loan Note Instrument with Homeland Nickel Corporation, the latter holding 100% of the Property.

The Issuer Spruce Ridge Resources is acquiring approximately 80% of the Property, subject to an NSR, through a share purchase agreement.

### 1.5.2 Historical Drilling

In 1978, DOGAMI drilled five (5) auger holes in the northern part of the Property (Ramp, 1978). These five auger holes were incorporated into the drill hole database along with results from 2007, 2008 and 2009 drilling programs. Geological interpretations were conducted on this database and used in calculation of the 2009 historical mineral resource estimate (Rancourt, 2009).

### 1.5.3 Historical Mineral Resource Estimate (2009)

In 2009, AJR Geoconsulting Inc. prepared a mineral resource estimate for the nickel laterite mineralization on the Cleopatra Ni-Co Deposit, located on the Cleopatra Property (Rancourt, 2009). The 2009 historical mineral resource estimate on the Cleopatra Nickel-Cobalt Deposit is detailed in the report titled, "Evaluation of the Cleopatra Ni/Co Property Mining Potential, Curry County, Oregon, U.S.A., NI 43-101 Technical Report", with a date of 23 November 2009, and prepared by Geological Engineer Andre J. Rancourt (P.Eng., Quebec #112457) of AJR Geoconsulting Inc. for Red Flat Nickel Corp.

The 2009 mineral resource estimate was completed in accordance with NI 43-101 and following the CIM Definition Standards for Mineral Resources & Mineral Reserves (CIM, 2005).

The data and information used in the 2009 historical mineral resource estimation comes from the 2007 to 2009 auger testing program and the 1978 DOGAMI drill data. In 2009, trenching was conducted to obtain more accurate geological profiles and increase the knowledge in the resources (Rancourt, 2009).

Table 1-3 and Table 1-4 present the historical mineral resource estimate at two different %Ni cut-offs (Rancourt, 2009). The 2009 historical mineral resource estimate does not consider contributions from other metals like cobalt.

Table 1-3. Summary of the 2009 historical mineral resource estimation, Cleopatra Ni Deposit (0.7% Ni cut-off).

Category	Туре	US Tons (1,000s)	Ni (%)	Ni (pounds)*
Measured	Soil	3,342	1.07%	71,518,800
Measured	Rock	1,913	0.83%	31,755,800
Measured Total:	S+R	5,255	0.98%	103,274,600
Indicated	Soil	9,569	0.96%	183,724,800
Indicated	Rock	4,979	0.84%	83,647,200
Indicated Total:	S+R	14,548	0.92%	267,372,000
Measured + Indicated	Soil	12,911	0.99%	255,243,600
Measured + Indicated	Rock	6,892	0.84%	115,403,000
Meas. + Ind. Total:	S+R	19,803	0.94%	370,646,600
Inferred	Soil	12,320	0.97%	239,008,000
Inferred	Rock	7,351	0.84%	123,496,800
Inferred Total:	S+R	19,671	0.92%	362,504,800

<sup>\*</sup>assumes 100% nickel recovery (contained metal).

Table 1-4. Summary of the 2009 historical mineral resource estimation, Cleopatra Ni Deposit (0.8% Ni cut-off).

Category	Type	US Tons (1,000s)	Ni (%)	Ni (pounds)*
Measured	Soil	3,342	1.07%	71,518,800
Measured	Rock	1,572	0.85%	26,724,000
Measured Total:	S+R	4,914	1.00%	98,242,800
Indicated	Soil	7,365	1.03%	151,719,000
Indicated	Rock	3,605	0.84%	60,564,000
Indicated Total:	S+R	10,970	0.97%	212,283,000
Measured + Indicated	Soil	10,707	1.04%	223,237,800
Measured + Indicated	Rock	5,177	0.84%	87,288,000
Meas. + Ind. Total:	S+R	15,884	0.98%	310,525,800
Inferred	Soil	6,993	1.01%	141,258,600
Inferred	Rock	3,248	0.84%	54,566,400
Inferred Total:	S+R	10,241	0.96%	195,825,000

<sup>\*</sup>assumes 100% nickel recovery (contained metal).

Mineral resources are not mineral reserves, they do not have demonstrated economic viability, and there is no certainty that all or part of an estimated mineral resource can be converted to mineral reserves.

A qualified person has not done sufficient work to classify the 2009 historical mineral resource estimate as current mineral resources or mineral reserves. Other than the review by the Principal Author, the Issuer has not conducted any work to establish the relevance and reliability of the 2009 historical resource estimate and as such is not treating the historical mineral resource estimate as current mineral resources.

### 1.5.4 Historical Production

There is no known historical production on the Cleopatra Ni-Co Property.

# 1.6 Geological Setting and Mineralization

The Property is located on the northwestern part of the Klamath Mountains physiographic terrane and is composed primarily of volcanic rocks and some ultramafic and gabbroic intrusions of Jurassic age. The Pre-Nevadan Klamath Mountain rocks are in contact to the west with younger Northern Coastal Range rocks of the Dothan Point sedimentary Formation, and to the east by the Cascade Range younger Cenozoic volcanic rocks (Rancourt, 2009).

The regional geology has been described in detail by Hotz (1964). The Property is covered by Jurassic bedrock, mostly ultramafic and gabbroic intrusive rocks that envelop a large area in the south east of Curry County and extend north-easterly into Josephine County. The ultramafic formation is 10 to 15 miles (16-24 km) wide and extends up to 50 miles (80.5 km) northeast and 50 miles (80.5 km) south into California. It is bordered to the west by the Dothan and Otter Point formations composed of volcano-sedimentary rocks and to the east by the metasedimentary rocks of the Galice Formation. The area is faulted with high angle fault zones generally striking northeasterly with some younger granitic intrusions (Rancourt, 2009).

### 1.6.1 Property Geology and Mineralization

The Property overlies intrusive ultramafic rocks mainly comprising partly serpentinized peridotite, wehrlite and lherzolite (Rancourt, 2009). The ultramafic rocks are primarily composed of altered olivine, serpentine, chlorite with some ortho- and clinopyroxene. Magnetite and hematite was also observed with hematite present in small veinlets. The ultramafic rocks have been intruded by a number of small diabase dikes (Ramp, 1978).

The mineralized horizon reflects a lateritic alteration profile formed by the prolonged weathering and slumping of the ultramafic rocks in sub-tropical climates. The ground surface is covered by corestones, which are remnants of surface bedrock. In the centre of the Property, near the summit of the mountain, the laterite cover appears to be shallower than the areas on the mountain sides. In the northeast part of the Property, slumping and landslides accumulated down-slope with mixed material made of cover, corestones, limonite and saprolite, with the thickness of the slide area reaching as much as 50 ft (15.2 m) (Rancourt, 2009).

Ramp (1978), described lower areas in the northern part of the Property that are characterized by important slumping and sliding accumulations of soil and saprolite to a depth of about 50 ft (15.2 m). At the Cleopatra Property, sliding and slumping appears to play a significant role in the accumulation of nickel mineralized material; however, this assumption needs to be validated by field observations (Rancourt, 2009). The main deposit located in the northeastern part of the Property is believed to be the result of intense nickel laterite accumulation.

### 1.6.2 Mineralization and Mineralogy

The nickel laterites found on the Property can be classified, on the basis of ore mineralogy, as clay silicate deposits and maybe some oxide deposits (Rancourt, 2009). The mineralized zone is typically composed of residual goethitic-limonite covering altered peridotite layers (saprolite) with iron oxide veins.

The mineralogy of the laterites at Nickel Mountain in Oregon, was studied by Pecora and Hobbs (1942) and Hotz (1964). Montmorillonite, chlorite and talc constitute the clay fraction. Nickel also occurs in nontronite, a ferric iron member of the montmorillonite series (Hotz, 1964; Ramp, 1978). Nickel is also concentrated in thin fracture fillings by garnierite mineralization between saprolite corestone blocks.

Garnierite Group minerals were discovered for the first time on the Property during the 2009 field program with grab samples assayed up to 4.1% Ni (Rancourt, 2009).

Mineralization is divided into soil and rock groups. The mineralized soil is composed of clay (limonite and saprolite), while the mineralized rock is mostly corestone with garnierite accumulations.

Three types of mineralization were identified by Rancourt (2009), based on the cumulate frequency of the nickel grade. The first type is from 0.0 to 0.5% Ni and represents the non-mineralized zone. The second type is the first mineralization zone from 0.5% Ni to approximately 1.2% Ni. The third type is the high-grade mineralization zone above 1.2% Ni (Rancourt, 2009).

The horizontal continuity of the soil deposit is supported by the geostatistical results and by the consistency between borehole and trench results, especially in the high-grade zone. In this zone, where the average grade is above 1.0% Ni, every borehole and trench exceeded the 0.8% Ni cut-off. This indicates a strong continuity in the soil fraction. Areas with a high density of boreholes confirm that the grade is continuous between 300 ft x 300 ft (91.4 x 91.4 m) spaced holes. Rock mineralization does not correlate well but appears to be associated with high nickel in-soils (>1% Ni) (Rancourt, 2009).

# 1.7 Deposit Types

Concentration of nickel and cobalt on the Cleopatra Ni-Co Property is derived from the surface alteration of olivine-rich ultramafic rocks, referred to as nickel laterites. The unaltered ultramafic rocks on the Property average 0.2 to 0.4 % Ni (Rancourt, 2009).

The nickel laterites can be classified on the basis of ore mineralogy as clay silicate deposits and potentially oxide deposits. The laterites found on the Property are remnants of an old upland surface and according to Irwin (1997), the weathering has taken place during the Pleistocene (2.58-0.01 Ma) and/or the Pliocene (5.33-2.58 Ma).

Laterites are formed by weathering of the serpentinized peridotites generally in humid savanna climates with poor drainage and associated with dry climates and semi-arid environments. During weathering, nickel is concentrated in place, while more soluble elements such as magnesium, calcium and silica are dissolved and leached rapidly. Nickel accumulates in the form of nickel-silicate veins or becomes enriched in the insoluble residue of silica, nickel hydrosilicates, and oxides of magnesium and iron. Similar Oregon laterite nickel deposits have been described by Pecora and Hobbs, (1942) and by Hotz, (1964).

# 1.8 Exploration

From 2007 to 2009, Red Flat Nickel Corp. (now Homeland Nickel) completed a total of 748 auger holes (1,135 samples) covering an area of 1,950 acres (789 ha) and completed 10 manual trenches (246 samples). Also, 3,970 ft (1,210 m) of seismic refraction geophysics was completed. Five (5) large samples (>100 lbs) were collected and sent for mineralogical and metallurgical analysis. In addition, 14 in-place density measurements were performed on 1 cubic foot soil samples, and 16 rock density measurements were performed on fist grab samples (Rancourt, 2009). Table 1-5 provides a summary of the historical exploration work that has been completed on the Cleopatra Ni-Co Property.

There has been no known exploration work performed on the Property since 2009 (Rancourt, 2009) and there is currently no exploration work being carried out on the Property.

Table 1-5. Summary of exploration work completed by Red Flat Nickel Corp. (now Homeland Nickel), 2007 to 2009.

Period	Dates	Description
2007-2009	-	Geological mapping over Property
		Auger samples: 1,381 samples (four acid digestion with ICP analysis)
	-	Auger drilling: 748 holes totalling 5,169 ft. (1,575.5 m)
2008	27-30 Oct.	Refraction seismic survey: 3,970 ft. total (1,210.1 m) on four lines
	-	Five "bulk" (> 45 kg) samples for mineral/metallurgical testing
	-	<i>In-situ</i> density testing on 14 x 1 cu. ft. (0.03 m³) samples
	-	Rock density testing on 16 grab samples
2009	29 Jul. – 23 Aug.	Trenching: ten trenches; 8-12 ft. (2.4 m - 3.7 m) avg. depth; 246 samples

# 1.9 Drilling

From 2007 to 2009, Red Flat Nickel Corp. (now Homeland Nickel) competed a total of 748 auger holes (1,135 samples) in 3 drilling programs, covering an area of 1,950 acres (789 ha); the seven (7) auger holes completed in 2009 were the deepest at >20 ft (6.1 m) (Rancourt, 2009).

In general, the locations of the holes followed a 300 ft x 300 ft grid (91.4 x 91.4 m), representing a total of 5,169 ft (1,576 m) successfully drilled and sampled. The hole depth ranged from 2 to 30 ft (0.6-9.1 m) and averaged 7 ft (2.1 m). The drilling was carried out under the direct supervision of LLR (Rancourt, 2009).

Details of the auger holes including auger collar and sample locations, drill hole and sample logs, and complete assays are included in the reporting of Rancourt (2009).

The nickel variation with depth in the laterite profiles from auger drill holes, showing an increase in nickel concentration with depth (Rancourt, 2009). The trend for cobalt is less instructive due to the lab accuracy limitations in detecting Co; however, Co concentration does appear to decrease with depth. Finally, there is no specific trend between Fe concentration and depth (Rancourt, 2009).

# 1.10 Sample Preparation, Analysis and Security

There is limited information and data available with respect to the past exploration work completed by Red Flat Nickel Corp. from 2007 to 2009 (Rancourt, 2009).

All auger, rock and soil sampling was performed by LLR. Samples were individually wrapped and identified with a unique number. The samples were sent to the assay laboratory quickly after being recovered from the field and a sample register was continually updated with results. The register is also a summary of assay results for nickel, cobalt, iron and magnesium (Rancourt, 2009).

The laboratory, ALS Chemex of Vancouver, Canada, performed the assays using the conventional ME-ICP61 method. This Canadian laboratory is ISO/IEC 17025 certified by the Standards Council of Canada and has its own quality system (Rancourt, 2009).

Quality control measures were completed by Red Flat Nickel Corp. In 2007, AJR completed six (6) spot check drill holes and collected 11 samples. In 2009, AJR collected 19 samples of corestone from the trenches. In addition, 10 samples that were already assayed by LLR were re-assayed by AJR. All assays performed by AJR were carried out using the Ni-ICP81 method (Rancourt, 2009).

The Authors and the Issuer are independent of the laboratories used by Red Flat Nickel Corp. and previous operators as reported herein.

### 1.11 Data Verification

The Authors have reviewed historical and current data and information regarding past and current exploration work on the Cleopatra Property, as provided by the Issuer Spruce Ridge. The Authors has no reason to doubt the adequacy of exploration work completed by previous Property Operators (*i.e.*, Red Flat Nickel Corp.), including sample collection, preparation, security and analytical procedures, and are confident with respect to this data and information and its use for the purpose of the Report.

The Principal Author has independently reviewed the status of the mining claims held by the Issuer through the U.S. Federal Government Bureau of Land Management online portal which hosts information regarding mining claims on federal land in the state of Oregon.

# 1.12 Mineral Processing and Metallurgical Testing

Red Flat Nickel Corp. (now Homeland Nickel) collected two large samples from five trenches on the Cleopatra Property and four trenches on the Red Flat Property. These samples were sent for analysis to the SGS laboratory in Lakefield, Ontario, Canada (Rancourt, 2009). The objectives of the analysis were to perform:

- 1) Chemical, grain size and mineralogical characterisation of the ore; and
- 2) Leaching program, including Bottle Roll Leach Testing and Agitated Leach Testing.

SGS received and prepared a total of 1,236 lbs (588 kg) of wet material from Cleopatra and 646 lbs (293 kg) of wet material from Red Flat. Samples were separated into two composite fractions, the limonite (L) and the saprolite (S) fraction.

Given that this analysis was a preliminary study and because the deposits are similar, the limonite fraction and the saprolite fraction from both properties were blended together resulting in one blended limonite fraction and one blended saprolite fraction. The blended sample of limonite from both properties totalled 425.5 lbs (193 kg) of material and the blended sample of saprolite from both properties totalled 1,517 lbs (688 kg); a total wet weight of 1,942 lbs (881 kg) (Rancourt, 2009).

Fractional size analysis of the limonite fraction shows an average head grade of 1.08% Ni, with the -400 mesh (38  $\mu$ m) fraction being the highest grade nickel (1.2% Ni). The majority of the nickel exists in the -400 mesh (38  $\mu$ m) fraction. When screened at 400 mesh (38  $\mu$ m), 80.6% of the sample weight was recovered and the grade increased from 1.08% to 1.2% Ni.

For the saprolite fraction, the average head grade was 1.08% Ni and the highest grade fractions were +1 inch (+25.4 mm) and -100 mesh (145  $\mu$ m). When screened, keeping only the +1 inch (+25.4 mm) and -100 mesh (145  $\mu$ m), 70% of the sample weight was recovered and the grade increased from 1.08% to 1.3% Ni (Rancourt, 2009).

The Principal Author has not done any review of the information and results related to metallurgical processing and metallurgical testing.

### 1.13 Mineral Resource Estimates

The Cleopatra Property contains no current mineral resource estimates.

### 1.14 Adjacent Properties

There are no adjacent properties that would materially affect the Authors' understanding of the Project and the results of the Report.

## 1.15 Other Relevant Data and Information

The Authors are not aware of any additional information or explanations necessary to make the Report understandable and not misleading.

### 1.16 Interpretation and Conclusions

The objective of the Report was to prepare an independent NI 43-101 Technical Report, capturing historical information and data available about the Cleopatra Ni-Co Property, providing interpretation and conclusions, and making recommendations for future exploration work.

#### 1.16.1 Risks and Uncertainties

Risks and uncertainties which may reasonably affect reliability or confidence in future work on the Property relate mainly to the reproducibility of exploration results (*i.e.*, exploration risk) in a future production environment. Exploration risk is inherently high when exploring for laterite nickel-cobalt deposits, however at Cleopatra these risks are mitigated by the knowledge obtained from the 748 drill holes and by applying the latest exploration techniques (*e.g.*, geophysics, geology, geochemistry) to develop high confidence targets for future drilling programs and mineral resource delineation and estimation.

The Authors are not aware of any other significant risks or uncertainties that would impact the Issuer's ability to perform the recommended work program (see Section 26) and other future exploration work programs on the Property.

#### 1.16.2 Conclusions

Based on the Property's favourable location in southwestern Oregon, an area known to host numerous laterite nickel-cobalt properties including those that are located immediately south of Oregon in northern California, the Property presents an excellent opportunity to develop nickel mineral resources and to make additional discoveries of nickel-cobalt laterite mineralization.

Characteristics of mineralization on the Cleopatra Ni-Co Property and the knowledge gained from drilling to date, are of sufficient merit to justify additional surface exploration work, including rock and soil sampling, trenching, geophysics, and metallurgical and mineralogical studies, with aim to develop drill targets for future drilling and mineral resource definition.

### 1.17 Recommendations

It is the opinion of the Authors that the geological setting and character of the nickel laterite mineralization discovered to date on the Cleopatra Ni-Co Property is of sufficient merit to justify additional exploration expenditures on the Property. A recommended work program, arising through the preparation of the Report and consultation with the Company, is provided below.

A Phase 1 exploration program is recommended (Table 1-6), consisting of a high resolution airborne magnetic survey, rock/soil sampling and assays, review and validation of historical surface and drill hole sampling and related assays, and a maiden NI 43-101 mineral resource estimate and technical report. The estimated cost for the recommended Phase 1 component of exploration work is approximately C\$200,000 (Table 1-6). The recommended Phase 1 exploration program could be accomplished within a 12 month period.

Table 1-6. Budget estimate for a recommended Phase 1 exploration program, Cleopatra Ni-Co Property.

ITEM	DESCRIPTION	AMOUNT (C\$)
Geophysics	High resolution airborne magnetics survey	\$75,000
Geochemical Survey	Surface rock and soil sampling; assays	\$50,000
Data Review and Validation	Historical data confirmation (geochemistry; drilling); maiden mineral resource estimate	\$50,000
Technical Reporting	Reporting	\$25,000
	Total (C\$):	\$200,000

Budget does not include G&A and associated taxes and fees.

### 2.0 INTRODUCTION

Geological consulting group Caracle Creek International Consulting Inc. ("Caracle") was engaged by Canadian public company Spruce Ridge Resources Ltd. ("Spruce Ridge" or the "Issuer"), to prepare an independent National Instrument 43-101 ("NI 43-101") Technical Report (the "Report") for its Cleopatra Nickel-Cobalt Property ("Cleopatra" or the "Property"), located in Curry County, Oregon, USA (Figure 2-1). The Report has been prepared in accordance with the Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects as set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 (June 30, 2011).



Figure 2-1. State-scale location of the Cleopatra Ni-Co Property ("Cleopatra"), Curry County, southern Oregon, USA. Also shown is the location of the Red Flat Ni-Co Property ("Red Flat"), also being acquired by Spruce Ridge (Alyssum, 2012)

# 2.1 Purpose of the Technical Report

The Technical Report has been prepared for Spruce Ridge Resources Ltd., a Canadian public company trading on the Toronto Venture Exchange (TSX-V: SHL), in support of a transaction to acquire a majority interest in the Cleopatra Ni-Co Property (see Section 4.2).

The Report provides an independent review of the Cleopatra Nickel-Cobalt Property located in Curry County, Oregon, USA, verifies the data and information related to historical and current mineral exploration on the Property, and presents a report on data and information available in the public domain with respect to the Property.

The quality of information, conclusions, and recommendations contained herein have been determined using information available at the time of Report preparation and data supplied by outside sources as outlined in Section 2.6 and Section 27.

# 2.2 Previous Technical Reports

There are no previous NI 43-101 Technical Reports prepared for the Issuer, Spruce Ridge Resources Ltd., regarding the Cleopatra Ni-Co Property and as such the Report is the current technical report regarding the Property.

### 2.3 Effective Date

The Effective Date of the Report is 10 August 2023.

### 2.4 Qualifications of Consultants

The Report has been completed by Dr. Scott Jobin-Bevans and Mr. John Siriunas (together the "Consultants" or the "Authors"). Dr. Jobin-Bevans ("Principal Author") is the Principal Geoscientist at Caracle Creek International Consulting Inc. and Mr. Siriunas ("Co-Author") is an Associate Independent Consultant with Caracle Creek International Consulting Inc.

Dr. Jobin-Bevans is a professional geoscientist (PGO #0183, P.Geo.) with experience in geology, mineral exploration, mineral resource and reserve estimation and classification, land tenure management, metallurgical testing, mineral processing, capital and operating cost estimation, and mineral economics. Mr. Siriunas is a Professional Engineer (APEO #42706010) with experience in geology, mineral exploration, mine site geology, mineral resource and reserve estimations, preliminary economic assessments, pre-feasibility studies, due diligence, and valuation and evaluation reporting.

Dr. Scott Jobin-Bevans and Mr. John Siriunas, by virtue of their education, experience, and professional association, are each considered to be a Qualified Person ("QP"), as that term is defined in NI 43-101 and specifically sections 1.5 and 5.1 of NI 43-101CP (Companion Policy). A responsibility matrix is provided in Table 2-1, summarizing each of the Report sections for which the Authors are responsible.

Table 2-1. Responsibility matrix for the preparation of the Report sections by the Authors.

Author	Complete Section Responsibility	Sub-Section Responsibility
Scott Jobin-Bevans	3.0-13.0, 15.0-27.0	2.0-2.4, 2.6, 2.7
John Siriunas	3.0, 11.0, 12.0, 24.0, 25.0, 26.0	2.4-2.6

The QP responsibilities for Section 1 are reflected in their responsibilities for each of the other individual Report sections.

The Consultants employed in the preparation of the Report have no beneficial interest in Spruce Ridge and are not insiders, associates, or affiliates of Spruce Ridge. The results of the Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between Spruce Ridge and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practices.

# 2.5 Personal Inspection (Site Visit)

Mr. John Siriunas (M.A.Sc., P.Eng.) visited the Property on 8 August 2023, accompanied by Mr. Michael D. Strickler. Mr. Strickler is the principal of Lithologic Resources, LLC, the consulting group that carried out much of the contract exploration work on the Property for Red Flat Nickel Corp. The personal inspection was made to observe the general Property conditions and access, and to verify the locations of some of the previous trenching and sampling. Locations were logged in the field using datum NAD83 (CONUS) and metric UTM coordinates in Zone 10 North, though it is common in Oregon to use the US State Plane Coordinates of 1983 (SPCS83) Oregon S Zone 3602, with distances measured in feet for localization.

The Cleopatra Property is located just north of the Oregon-California state border; this border forms the southern boundary of the claim block. Travel to the Property from US State #101 at Smith River, CA via Rowdy Creek Road to Low Divide Road (#305), which becomes Wimer Road (#305) where it crosses the North Fork of the Smith River, takes approximately 2 1/4 hours, covering a road distance of about 60 km and climbing 725 m in elevation to reach the southern limit of the Property on the state border. Wimer Road takes the designation of Forest Service Road #4402 on the Oregon side of the border. Egress was made via the complete length of Low Divide Road (#305) to North Bank Road, California State Highway #197. An alternate route to Highway #197 at Gasquet via Forest Route #17N49 may be passable. Roads and trails to most of the Property area were inaccessible without a four-wheel drive vehicle or an ATV.

The Property does have some bedrock outcroppings but appears to be mainly covered by saprolitic/lateritic material. No evidence of previous exploration work was noted in the southeast corner of the Property that was visited.

Three (3) samples were collected for analysis from this location: two (CL-1 and CL-2) of lateritic material and one (CL-3) of weathered ophiolitic bedrock (Table 2-2).

Table 2-2. Location and assay results for 3 surface grab samples from the Personal Inspection, Cleopatra Property.

	UTM NAD 83 Zone 10		Ni	%	Coı	opm	Cr	%	Mg	g %	Fe	2 %
Analysis Method	Easting (m)	Northing (m)	AR	FUS	AR	FUS	AR	FUS	AR	FUS	AR	FUS
CL-1	424523	4649860	0.428	0.445	237	291	0.238	0.527	8.91	16.6	14.6	15.5
CL-2	424550	4649922	0.353	0.387	195	251	0.286	0.812	9.1	17.7	13.7	15.1
CL-3	424552	4649921		0.272		130		0.268		24.5		6.83

Analysis Methods: AR - Aqua Regia ("partial") digestion followed by ICP analysis; FUS - Na2O2 ("total") digestion followed by ICP analysis.



Figure 2-2. Selection of photos taken during the Personal Inspection of the Cleopatra Ni-Co Property by Co-Author John Siriunas. (A) View from the Wimer Road (Forest Service Road #4402) in the southeast corner of the Cleopatra Property looking south toward California; B) Analytical sample CL-1, lateritic material; (C) Analytical sample CL-2, lateritic material; (D) Analytical sample CL-3, ophiolitic outcrop; (E) View of a major slump or slide along the valley of the North Fork of the Smith River south of the Cleopatra Property in California. Winding switchbacks on Wimer Road (Road #305) down the side of the valley are visible in the right centre of the photo. Foreground vegetation shows evidence of the forest fire that burned the Property area in 2002.

### 2.6 Sources of Information

The information, conclusions, opinions, and estimates contained herein are based on:

- information available to the Authors at the time of preparation of the Report;
- assumptions, conditions, and qualifications as set forth in the Report; and
- data, reports, and other information supplied by Spruce Ridge and other third party sources.

For the purposes of the Report, the Authors have relied on Property ownership information provided by Spruce Ridge; however, the Principal Author has reviewed the status of the mining claims through the online portal of the Bureau of Land Management.

The Principal Author has not researched legal Property title or mineral rights for the Cleopatra Ni-Co Property and expresses no opinion as to the official ownership status of the Property.

Company personnel and associates were actively consulted before and during the Report preparation, including Stephen Balch (President & CEO, Director, Spruce Ridge).

The Report is based on, but not limited to, internal Company emails and memoranda, historical reports, maps, data, and publicly available information and data (e.g., government and internet), as cited throughout the Report and listed in Section 27.

The primary source of information and data with respect to historical and current mineral exploration work completed on the Property and the Property itself was extracted from:

Rancourt, A.J., 2009. Evaluation of the Cleopatra Ni/Co Property Mining Potential, Curry County, Oregon, U.S.A.. NI 43-101 technical Report, AJR Geoconsulting Inc., Quebec, Canada, P028-03 E2 DOC, 23 November 2009, 298p.

Additional information was reviewed and acquired through public online sources including Spruce Ridge's website, through SEDAR (System for Electronic Document Analysis and Retrieval), and various corporate websites.

Standard professional review procedures were used by the Authors in the preparation of the Report. The Authors consulted and utilized various sources of information and data, including historical files provided by the Issuer and government publications. In addition, Co-Author and QP John Siriunas (P.Eng.) completed a personal inspection (site visit) to confirm features within the Property and area, including infrastructure, mineralization, and historical data and information as presented.

Except for the purposes legislated under Canadian provincial securities laws, any use of the Report by any third party is at that party's sole risk.

### 2.7 Units of Measure, Abbreviations, Initialisms and Technical Terms

All units in the Report are based on the International System of Units ("SI Units"), except for units that are industry standards, such as troy ounces for the mass of precious metals. Table 2-3 provides a list of some of the terms, initialisms, and abbreviations used in the Report.

Unless specified otherwise, the currency used is Canadian Dollars (CAD\$ or CAD) and coordinates are given in North American Datum of 1983 ("NAD83"), UTM Zone 10 North (EPSG:6560 NAD83(2011)/Oregon South (metres) - Curry County, Oregon).

Table 2-3. Some of the commonly used units of measure, abbreviations, acronyms and technical terms in the Report.

Units of Measure/Abbreviat	tions	Elements			
above mean sea level	AMSL	silver	Ag		
acre	ac	sulphur	S		
annum (year)	а	zinc	Zn		
billion years ago	Ga		Acronyms/Abbreviations		
centimetre	cm	AA	Atomic Absorption (analysis)		
degree	۰	AR	Aqua Regia (sample digestion)		
degrees Celsius	°C	ATV	All-Terrain Vehicle		
dollar (Canadian)	C\$	BLM	Bureau of Land Management		
dollar (American)	US\$	CCIC	Caracle Creek International Consulting Inc.		
foot/feet	ft	CONUS	Continental United States		
gram	g	CRM	Certified Reference Material		
grams per tonne	g/t	DDH	Diamond Drill Hole		
greater than	>	DOGAMI	Oregon Dept. of Geology and Mineral Industries		
hectare	ha	EM	Electromagnetic		
hour	hr	EOH	End of Hole		
inch	in	FA	Fire Assay		
kilo (thousand)	k	FUS	Na <sub>2</sub> O <sub>2</sub> fusion (sodium peroxide sample digestion)		
kilogram	kg	ICP	Inductively Coupled Plasma (analysis)		
kilometre	km	Int.	Interval		
less than	<	LDL	Lower Detection Limit		
litre	L	LLD	Lower Limit of Detection		
megawatt	Mw	LLR	Lithologic Resources, LLC		
metre	m	LOI	Letter of Intent		
millimetre	mm	LUP	Land Use Permit		
million	М	MAG	Magnetics or Magnetometer		
million years ago	Ma	MLRR	Mineral Land Regulation and Reclamation		
nanotesla	nT	NAD83	North American Datum of 1983		
not analyzed	na	NI 43-101	National Instrument 43-101		
ounce (troy)	OZ	NSR	Net Smelter Return Royalty		
parts per million (by weight)	ppm	P.Eng.	Professional Engineer		
parts per billion (by weight)	ppb	PEO	Professional Engineers Ontario		
percent	%	P.Geo.	Professional Geoscientist or Professional Geologist		
pound(s)	lb	PGO	Professional Geoscientists of Ontario		
short ton (2,000 lb)	ton	QA/QC	Quality Assurance / Quality Control		
specific gravity	SG	QP	Qualified Person		
square kilometre	km2	RC	Reverse Circulation		
square metre	m2	RFN	Red Flat Nickel Corp.		
three-dimensional	3D	ROFR	Right of First Refusal		
tonne (1,000 kg) (metric tonne)	t	SEM	Scanning Electron Microscope		
Elements		SG	Specific Gravity		
cobalt	Со	SI	International System of Units		
copper	Cu	SPCS	State Plane Coordinate System		
gold	Au	Twp	Township		
lead	Pb	UFS	Urban Forestry South		

Elements			Acronyms/Abbreviations
magnesium	Mg	USBM	United States Bureau of Mines
nickel	Ni	USFS	United States Forest Service
platinum group elements	PGE	USGS	United States Geological Survey
		UTM	Universal Transverse Mercator
		WGS84	World Geodetic System Datum of 1984

# 3.0 RELIANCE ON OTHER EXPERTS

The Report has been prepared by Caracle Creek International Consulting Inc. (Caracle) for the Issuer Spruce Ridge Resources Ltd. The Authors have not relied on any other report, opinion or statement of another expert who is not a qualified person, or on information provided by the Issuer concerning legal, political, environmental or tax matters relevant to the Report.

# 4.0 PROPERTY DESCRIPTION AND LOCATION

# 4.1 Property Location

The Cleopatra Ni-Co Property is located on the top of McGrew Summit on the west bank of Taylor Creek, in the southeast quadrant of Curry County, Oregon (Figure 4-1). It is about 60 miles (100 km) southwest of the City of Grants Pass (2021: pop. 39,364) and about 335 miles (539 km) south of the City of Portland (2021: 641,162). It is in a mountainous forested area that can be accessed either from the southwest by taking US Highway 101 or from the northeast from US Highway 199 (see Section 5.1). The Property is centred at approximately 423938 mE, 4653367 mN, NAD83 UTM Zone 10N (42°00′N Latitude, 123°55′W Longitude).

All known nickel mineralization that is the focus of the Report and that of the Cleopatra Ni-Co Property is located within the boundary of the mining lands that comprise the Property.

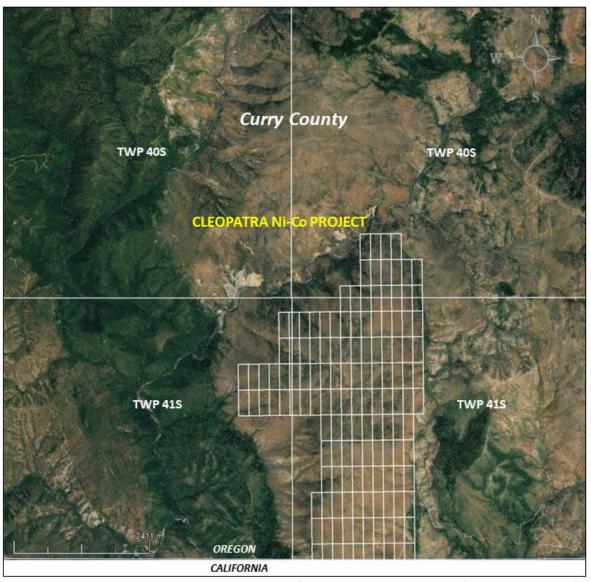


Figure 4-1. Township-scale map showing the location of the Cleopatra Ni-Co Property (white mining claims), Curry County, southwest Oregon.

### 4.2 Current Transaction

The current transaction gives Spruce Ridge the ability to hold a controlling interest of 80.0079% in the Cleopatra Ni-Co Property.

In July 2023, Spruce Ridge Resources entered into a binding Letter of Intent ("LOI") with RAB Capital Holdings Ltd. ("RAB"), a private limited company incorporated in England, to acquire all of the issued and outstanding securities ("Offered Securities") of RFN Holdings Limited ("RFNH"), a Guernsey company, such that RFNH will become a wholly owned subsidiary of Spruce Ridge (the "Acquisition"). Upon execution, the Definitive Agreement (not yet completed) will replace and supersede the LOI.

RAB is the sole holder of the Offered Securities and the holder of a Loan Note Instrument with Homeland Nickel Corporation ("HLN") dated August 20, 2008, as amended by various supplemental agreements and other corresponding agreements (collectively, the "Loan Note Instrument"). RFNH is the holder of 80.0079% of the issued and outstanding securities of Homeland Nickel Corporation ("HLN") which maintains a portfolio of mining claims in Oregon that make up the Red Flat and Cleopatra properties (the "Properties").

The debt owed to RAB by HLN will be converted to debt owed to Spruce Ridge with the remaining 19.9921% held by third party shareholders.

#### 4.2.1 Terms and Conditions

The principal terms and conditions of the Acquisition are as follows:

- 1. The Transaction:
- 1.1 Spruce Ridge and RAB will enter into the Definitive Agreement whereby:
  - (a) Spruce Ridge will acquire all of the Offered Securities;
  - (b) the Loan Note Instrument will be assigned by RAB to Spruce Ridge.
- 2. Consideration:
- 2.1 Pursuant to the terms of the Acquisition, Spruce Ridge will:
  - (a) transfer to RAB an aggregate of 2,000,000 common shares in the capital of Canada Nickel Company Inc. (the "CNC Shares") as follows:
    - i. 500,000 CNC Shares upon closing of the Acquisition (the "First Transfer"); and
    - ii. 1,500,000 upon the earlier of (i) completion of the Concurrent Financing (as such term is defined herein); or (ii) ninety (90) days from the date of the First Transfer;
  - (b) pay to RAB aggregate cash consideration of \$500,000 as follows:
    - i. \$50,000 by wire transfer upon execution of this LOI; and
    - ii. \$450,000 upon completion of the Concurrent Financing (as such term is defined herein);
  - (c) issue to RAB an aggregate of 10,000,000 common shares in the capital of Spruce Ridge (the "Spruce Shares") upon closing of the Acquisition, subject to the resumption of trading of the Spruce Shares on the TSX Venture Exchange (the "Exchange");

- (d) reimburse RAB for the cost of tenement renewals on the Properties due September 1, 2023;
- (e) reimburse RAB for the costs incurred for the preparation of such audited and unaudited interim financial statements of HLN as are required pursuant to the policies of the TSXV and applicable securities laws (the "HLN Financials");

### (f) grant to RAB:

- i. a 2.0% net smelter return royalty ("NSR") on Red Flat (the "Red Flat NSR"), with an option to repurchase 50% of the Red Flat NSR at a price of \$2,000,000;
- ii. a 2.0% NSR on Cleopatra (the "Cleopatra NSR"), with an option to re-purchase 50% of the Cleopatra NSR at a price of \$2,000,000; and
- (g) pay to RAB the following milestone payments upon any of the tenements forming part of the Properties achieving the described milestone level:
  - i. \$1,000,000 upon filing of a technical report on any one of or both of the Properties prepared in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* of the Canadian Securities Administrators, payable within sixty (60) days of the technical report being filed under Spruce Ridge's profile on the System for Electronic Document Analysis and Retrieval ("SEDAR");
  - ii. \$2,000,000 upon completion of a Preliminary Economic Assessment (the "PEA") on the Properties, payable within sixty (60) days of release of the PEA;
  - iii. \$2,000,000 upon completion of a Feasibility Study on the Properties, payable within sixty (60) days of release of the Feasibility Study; and
  - iv. \$10,000,000 upon announcement of a decision to commence construction on the Properties, payable within sixty (60) days of such announcement.
- 2.2 Pursuant to the terms of the Acquisition, RAB will:
  - (a) subscribe for an aggregate \$450,000 in the Concurrent Financing being offered by Spruce Ridge.

# 4.3 Mineral Disposition

The Cleopatra Ni-Co Property, registered under the name of Red Flat Nickel Corp., consists of 139 Lode mining claims at 20.66 acres per mining claim, covering a total area of approximately 2,872 acres (1,162 ha) (Table 4-1; Figure 4-2). Oregon's Mineral Land Regulation and Reclamation ("MLRR") and the federal Bureau of Land Management ("BLM") cover in details the rights, obligations and definitions regarding Lode mining claims (Rancourt, 2009).

Table 4-1. Summary of the mining lands that comprise the Cleopatra Ni-Co Property.

Claim Name	Curry County Instrument No.	BLM Record ORMC	Claim Name	Curry County Instrument No.	BLM Record ORMC
Cleo 1	2007-2909	161516	Cleo 71	2007-4217	161798
Cleo 2	2007-2910	161517	Cleo 72	2007-4218	161799
Cleo 3	2007-2911	161518	Cleo 73	2007-4219	161800
Cleo 4	2007-2912	161519	Cleo 74	2007-4220	161801

Claim Name	Curry County Instrument No.	BLM Record ORMC	Claim Name	Curry County Instrument No.	BLM Record ORMC
Cleo 5	2007-2913	161520	Cleo 75	2007-4221	161802
Cleo 6	2007-2914	161521	Cleo 76	2007-4222	161803
Cleo 7	2007-2915	161522	Cleo 77	2007-4223	161804
Cleo 8	2007-2916	161523	Cleo 78	2007-4224	161805
Cleo 9	2007-2917	161524	Cleo 79	2007-4225	161806
Cleo 10	2007-2918	161525	Cleo 80	2007-4226	161807
Cleo 11	2007-2919	161526	Cleo 81	2007-4227	161808
Cleo 12	2007-2920	161527	Cleo 82	2007-4228	161809
Cleo 13	2007-2921	161528	Cleo 83	2007-4229	161810
Cleo 14	2007-2922	161529	Cleo 84	2007-4230	161811
Cleo 15	2007-2923	161530	Cleo 85	2007-4231	161812
Cleo 16	2007-2924	161531	Cleo 86	2007-4232	161813
Cleo 17	2007-2925	161532	Cleo 87	2007-4233	161814
Cleo 18	2007-2926	161533	Cleo 88	2007-4234	161815
Cleo 19	2007-2927	161534	Cleo 89	2007-4235	161816
Cleo 20	2007-2928	161535	Cleo 90	2007-4236	161817
Cleo 21	2007-2929	161536	Cleo 91	2007-4237	161818
Cleo 22	2007-2930	161537	Cleo 92	2007-4238	161819
Cleo 23	2007-2931	161538	Cleo 93	2007-4239	161820
Cleo 24	2007-2932	161539	Cleo 94	2007-4240	161821
Cleo 25	2007-2933	161540	Cleo 95	2007-4241	161822
Cleo 26	2007-2934	161541	Cleo 96	2007-4242	161823
Cleo 27	2007-2935	161542	Cleo 97	2007-4243	161824
Cleo 28	2007-2936	161543	Cleo 98	2007-4244	161825
Cleo 29	2007-2937	161544	Cleo 99	2007-4245	161826
Cleo 30	2007-2938	161545	Cleo 100	2007-4246	161827
Cleo 31	2007-2939	161546	Cleo 101	2007-4247	161828
Cleo 32	2007-2940	161547	Cleo 102	2001-4i4a	161829
Cleo 33	2007-2941	161548	Cleo 103	. 2001-424g	161830
Cleo 34	2007-2942	161549	Cleo 104	2007-4250	161831
Cleo 35	2007-2943	161550	Cleo 105	2007-4251	161832
Cleo 36	2007-2944	161551	Cleo 106	2007-4252	161833
Cleo 37	2007-4187	161764	Cleo 107	2007-4253	161834
Cleo 38	2007-3957	161765	Cleo 108	2007-4254	161835
Cleo 39	2007-3958	161766	Cleo 109	2007-4255	161836
Cleo 40	2007-3959	161767	Cleo 110	2007-4256	161837
Cleo 41	2007-4188	161768	Cleo 111	2007-4257	161838
Cleo 42	2007-4189	161769	Cleo 112	2007-4258	161839
Cleo 43	2007-4190	161770	Cleo 113	2007-4259	161840
Cleo 44	2007-4191	161771	Cleo 114	2007-4260	161841
Cleo 45	2007-4192	161772	Cleo 115	2007-4261	161842
Cleo 46	2007-4193	161773	Cleo 116	2007-4262	161843
Cleo 47	2007-4194	161774	Cleo 117	2007-4263	161844
Cleo 48	2007-4195	161775	Cleo 118	2007-4264	161845
Cleo 49	2007-4196	161776	Cleo 119	2007-4265	161846
Cleo 50	2007-4197	161777	Cleo 120	2007-4266	161847
Cleo 51	2007-4198	161778	Cleo 121	2007-4267	161848
Cleo 52	2007-4199	161779	Cleo 122	2007-4268	161849
Cleo 53	2007-4200	161780	Cleo 123	2007-4269	161850

Claim Name	Curry County Instrument No.	BLM Record ORMC	Claim Name	Curry County Instrument No.	BLM Record ORMC
Cleo 54	2007-4201	161781	Cleo 124	2007-4270	161851
Cleo 55	2007-4202	161782	Cleo 125	2007-4271	161852
Cleo 56	2007-4203	161783	Cleo 126	2007-4272	161853
Cleo 57	2007-4204	161784	Cleo 127	2007-4273	161854
Cleo 58	2007-4280	161785	Cleo 128	2007-4274	161855
Cleo 59	2007-4205	161786	Cleo 129	2007-4275	161856
Cleo 60	2007-4206	161787	Cleo 130	2007-4276	161857
Cleo 61	2007-4207	161788	Cleo 131	2007-4277	161858
Cleo 62	2007-4208	161789	Cleo 132	2007-4278	161859
Cleo 63	2007-4209	161790	Cleo 133	2007-4279	161860
Cleo 64	007-4.210	161791	Cleo 134	2007-5517	162421
Cleo 65	2007-4211	161792	Cleo 135	2007-5518	162422
Cleo 66	2007-4212	161793	Cleo 136	2007-5519	162423
Cleo 67	2007-4213	161794	Cleo 137	2007-5520	162424
Cleo 68	2007-4214	161795	Cleo 138	201203472	169564
Cleo 69	2007-4215	161796	Cleo 139	2012-03473	169565
Cleo 70	2007-4216	161797			

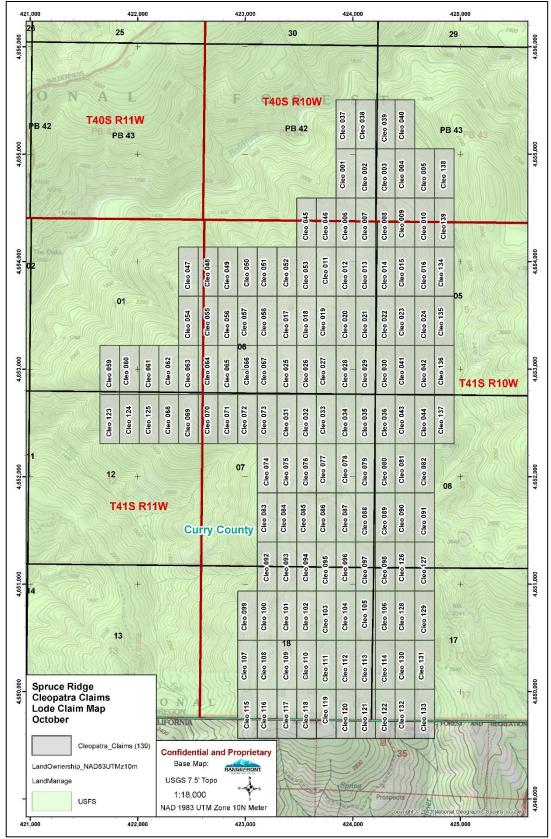


Figure 4-2. Mining claims (1390 that comprise the Cleopatra Ni-Co Property (Spruce Ridge, 2023).

# 4.4 Property Holding Costs

Annual holding costs (Annual Maintenance Fee) for the Cleopatra Ni-Co Property (139 mining claims), payable to the BLM, are \$165 per mining claim and total US\$22,935, payable before 1 September of each year. In addition, approximately US\$724 is payable to Curry County Clerk to cover mining claim affidavit recording fees (US\$5.21/claim). The last payments were made by Homeland Nickel Corporation (the Claimant) prior to 31 August 2023.

# 4.5 Mineral Disposition in Oregon

Access to current records of mineral and lands records transactions can be gained through the Bureau of Land Management (BLM) Mineral & Land Records System (MLRS), an online portal available through the BLM website.

United States citizens who have reached the age of discretion under the law of the state of residence; or legal immigrants who have declared their intention to become a citizen; or a corporation organized under the laws of any state may locate a mining claim. The government considers a corporation the same as a U.S. citizen. An agent may locate a mining claim on behalf of a claimant. A claimant may hold any number of claims or sites.

### 4.5.1 Mining Claims

The following has been extracted from various locations and publications available on the Bureau of Land Management (BLM) website. Mining claims are typically staked on Federally-administered lands managed by either the Bureau of Land Management or the US Forest Service (UFS). Oregon comprises Federally-administered lands where the BLM manages the surface of public land and the UFS manages the surface of National Forest System (NFS) land. The BLM is responsible for the subsurface on both public and NFS lands.

There are three basic types of minerals on federal lands:

- Locatable minerals, those minerals that have never left federal ownership (aka public domain minerals), include commodities such as gold, silver, copper, zinc, nickel, lead, platinum and some non-metallic minerals such as asbestos, gypsum, and gemstones. Reconveyed minerals are considered locatable minerals under the mining laws. Subject to the Mining Law of 1872, as amended.
- Leasable minerals include commodities such as oil, gas, coal, geothermal, potassium, sodium phosphates, oil shale, sulfur, and solid leasable minerals on acquired lands. Subject to various Mineral Leasing Acts.
- Salable minerals include common varieties of sand, stone, gravel, cinders, clay, pumice and pumicite. Subject to mineral materials disposed of under the Materials Act of 1947, as amended.

### 4.5.2 Types of Mining Claims

Mining claims are staked for locatable minerals on public domain lands. There are two types of mining claims; (1) Lode Claims and (2) Placer Claims (BLM website):

• Lode Claims: deposits subject to lode claims include classic veins or lodes having well-defined boundaries. They also include other rock in- place bearing valuable minerals and may be broad

zones of mineralized rock. Examples include quartz or other veins bearing gold or other metallic minerals and large volume, but low-grade disseminated gold deposits. Descriptions are by metes and bounds surveys beginning at the discovery point on the claim and including a reference to natural objects or permanent monuments. Federal statute limits their size to a maximum of 1500 feet in length, and a maximum width of 600 feet (300 feet on either side of the vein).

• Placer Claims: defined as "...including all forms of deposit, excepting veins of quartz, or other rock in-place." In other words every deposit, not located with a lode claim, should be appropriated by a placer location. Placer claims, where practicable, are located by legal subdivision (aliquot part and complete lots). The maximum size is 20 acres per locator, and the maximum for an association placer is 160 acres for 8 or more locators. The maximum size for a corporation is 20 acres per claim. Corporations may not locate association placer claims unless they are in association with other locators or corporations as co-locators.

#### 4.5.3 Locating a Mining Claim

Mining claims can be located on open public land administered by another federal agency (most commonly UFS land). Mining claims cannot be located on acquired lands (lands that were at some point owned by a state or private party and then were re-acquired by the federal government); a prospecting permit (43 CFR 3500) is required to prospect in areas with acquired lands (minerals).

You may prospect and locate claims and sites on public and NFS land open to mineral entry. Claims may not be located in areas closed to mineral entry by a special act of Congress, regulation, or public land order. These areas are said to be "withdrawn" from mineral entry. Areas withdrawn from location of mining claims and sites include:

- National Parks;
- National Monuments;
- Indian reservations;
- Various types of reclamation projects under the Bureau of Reclamation;
- Military reservations;
- · Scientific testing areas; and
- Wildlife protection areas managed by the U.S. Fish and Wildlife Service.
- Land withdrawn for power development may be subject to mineral entry and claim location only under certain conditions.

Mining claims and sites may not be located on land that has been:

- Designated by Congress as part of the National Wilderness Preservation System;
- Designated as a wild portion of a Wild and Scenic River; or
- Withdrawn by Congress for study as a Wild and Scenic River.

There is usually a ¼-mile (402 m) buffer zone withdrawn from location of mining claims on either side of a river while the river is being studied for inclusion in the Wild and Scenic River System. Additions to the National Wilderness Preservation System are withdrawn from mining claim location at the time of designation by Congress. Mining activities are permitted only on those mining claims that can show proof of discovery either (1) by December 31, 1983, or (2) on the date of designation as wilderness by Congress.

Mining claims can be located for minerals reserved under the Stock Raising Homestead Act of 1916 ("SRHA") which provided settlers 640 acres of public land—a full section or its equivalent—for ranching purposes. Under the SRHA, the surface is fee but the minerals are public domain. There are specific regulations governing the claiming of SRHA minerals.

## 4.5.3.1 Staking a Claim

Federal law specifies that claim and site boundaries must be distinctly and clearly marked to be readily identifiable on the ground. To stake a Lode Mining Claim in the state of Oregon, a notice of discovery and location (Form No. 830 Notice of Vein or Lode Location) is first lodged with the state (county clerk's office).

Within 30 days of filing the location notice, physical demarcation in the field of the described boundaries of the mining claim must be completed. Oregon state law requires four (4) conspicuous and substantial corner monuments (posts or mound of earth and stone) be used to mark the position of the mining claim; all monuments must be wildlife safe.

Within 60 days from the staking of the claim or site on the ground, state laws require filing the original location notice or certificate in the county clerk's office along with information about the location of the mining claim. The proper county is the one in which the claim or site is located.

#### 4.5.4 National Parks

All National Park units are closed to the establishment of new mining claims. However, mining claims still exist in park units, either because the claims were established before the park was created or because they were established while that particular park unit was still open to claim location. In order to conduct a mining operation on any of the pre-existing claims, an operator must submit a proposed plan of operations to the National Park Service (NPS) for evaluation by the NPS.

#### 4.5.5 Private Lands

In certain situations it is also possible to stake a claim on private land if you seek permission from the landowner and verify that the land has not already been claimed.

#### 4.5.6 Annual Maintenance and Assessment

All mining claims are subject to an Annual Maintenance Fee which must be filed and paid on or before 1 September of every year. This is a strict date, as failure to timely pay the fee or file a Small Miner's Waiver in the proper BLM office will subject mining claims or sites to forfeiture of operation by law. In most cases, this annual maintenance fee may be paid online using the Mineral & Land Records System (MLRS), in person at a BLM state office, or sent via mail. The annual fee per Lode Mining Claim is US\$165.

#### 4.5.6.1 Assessment Work

Claimants requesting a Small Miner's Waiver from paying the Annual Maintenance Fee must perform assessment work and spend a minimum of \$100 in labor or improvements on each claim, and record evidence of such with the BLM on or before December 30 of the calendar year in which the assessment year ended and must include a US\$15 processing fee. Assessment work may include but is not limited to drilling, excavations, driving shafts and tunnels, sampling (geochemical or bulk), road construction on or for the benefit of the mining claim; and geological, geochemical, and geophysical surveys.

# 4.6 Surface Rights and Legal Access

The Cleopatra Property covers 2,872 acres (1,162 ha) which are located on public lands and as such surface access is not prohibited.

# 4.7 **Exploration Permits**

In the state of Oregon, there are three (3) types of surface mining approvals that DOGAMI issues: Exploration Permits, Operating Permits, and Exclusion Certificates. The type of permit/certificate required for your operation depends on quantity, acreage, and/or planned activities.

An Exploration Permit is required for all activities that disturb more than one surface acre or involve drilling to greater than 50 feet (15.24 m) for the purpose of determining presence, location, extent, grade or economic viability of a deposit.

DOGAMI currently recommends that applicants contact the department at least 180 days prior to initiation of activities. Other state, federal, Tribal, and local agencies may require the applicant to obtain approval prior to operation. If an application is incomplete, the department shall notify the applicant in writing within 30 days of receipt and specify the deficiencies; the applicant may resubmit the application with deficiencies corrected within 60 days for review.

Minimum requirements for an Exploration Permit include:

- Completed Exploration Permit Application Form;
- Non-refundable Application Fee;
- Project Description and Reclamation Plan;
- Permit Area Map with Proposed Boundary and Activity Locations; and
- Proposed Reclamation Security Bond.

Each application requires payment of a US\$2,000 non-refundable fee and each permit application may include a single contiguous exploration boundary that is no more than 640 acres (259 ha).

DOGAMI coordinates with other agencies to avoid duplication on the part of applicants. The department will notify local planning authorities and other appropriate public agencies that it has received the application for review. Based on external timelines, coordination with other agencies generally takes more than 30 days after receipt of a complete application in order for an Exploration Permit to be approved or denied by the

department. The department may attach conditions to the DOGAMI permit to reflect concerns which are not adequately addressed. It is the applicant's responsibility to obtain any necessary permits from other agencies.

Exploration Permits must be renewed and reported upon annually until all activities and reclamation are complete.

#### 4.7.1 Site Closure

When a permitted site has met the reclamation obligations, as described in the approved Reclamation Plan, the permit is eligible for closure and release of the security bond. The permit must continue to be maintained in good standing until DOGAMI determines the reclamation is complete, and the permit can be officially closed.

#### 4.8 Current Permits and Work Status

Exploration permits are not required to complete the exploration work detailed in the recommended work program (see Section 26). The Principal Author is not aware of any other requirements which would prevent the Issuer from completing the recommended work program (see Section 26).

There is no exploration work currently being conducted by the Issuer on the Property.

#### 4.9 Environmental Liabilities

Most federal agencies have regulations to protect the surface resources of federal lands during exploration and mining activities. After completion of exploration and mining activities, disturbed sites must be reclaimed. Any exploration work conducted on the Property must comply with the Department of Environmental Quality (DEQ) and applicable legislation.

At this early stage of the Property's development there are no requirements for environmental studies and the Company will implement best practices in terms of preserving and minimizing its impact on the environment.

The Principal Author is unable to comment on any remediation which may have been undertaken by previous companies and is not aware of any environmental liabilities associated with the Property.

# 4.10 Royalties and Obligations

As part of the terms and conditions with respect to the July 2023 LOI between Spruce Ridge Resources and RAB Capital Holdings (see Section 4.2), Spruce Ridge agrees to grant RAB a 2.0% NSR on the Cleopatra Property (the "Cleopatra NSR"), with an option to re-purchase 50% of the Cleopatra NSR at a price of \$2,000,000.

The Principal Author is not aware of any royalties or obligations associated with the Cleopatra Ni-Co Property mining claims.

# 4.11 Other Significant Factors and Risks

The Principal Author is not aware of any significant factors that may affect access, title, or the right or ability to perform the proposed work program on the Property.

# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

# 5.1 Accessibility

The Cleopatra Property can be accessed from the southwest, from US Highway 101 by taking the Rowdy Creek Road in Smith River, California, that joins Road 305 for 5.6 miles (9.0 km), and then an additional 18.3 miles (29.5 km) to Road 450 that enters the Property. It can also be reached from the northeast by taking US Highway 199 south to the Lone Mountain Road in O'Brien, Oregon, for a distance of 22.3 miles (36 km) (*see* Figure 2-1, Figure 4-1 and Figure 4-2).

The only access to the Property is from Road 450, which enters the Property from the south. An ATV is required to access the southern part of the Property. Rogue Valley International Medford Airport is located about 80 miles (129 km) east of the Property.

# 5.2 Climate and Operating Season

The climate that prevails on a regional-scale is temperate and of the Coastal Range type. The Property lies in the mountains and reaches approximately 4,000 ft (1,524 m) in elevation, abutting the coastal strip. The average day temperature on the Property ranges from 32° F (0° C) in the winter to 70° F (21° C) in the summer. The area has morning valley fog in the summer and tends to keep marine influences out of the intermountain valleys. It has mild winters and mild summers with high precipitation (up to 75 inches (194 cm) per year). In the winter, snow covers the ground from November to April at elevations above 4,000 ft (1,524 m).

The Cleopatra Property is located on the top of a mountain in the centre of the Coastal Range at about 3,200 ft (975 m). Most of the Property experiences colder temperatures than the surrounding valleys. Very few people live in the Coastal Range itself (Rancourt, 2009).

Given the location of the Cleopatra Property near the coast and at relatively low elevation, exploration work (*i.e.*, drilling, geophysical surveys, geological mapping, trenching and surface sampling) can be completed year-round.

#### 5.3 Local Resources and Infrastructure

The closest center with services is the coastal city of Brookings, Oregon. The nearest airport is in Medford, located 80 miles (129 km) northeast of the Property. Given the distance to Medford, in 2007 and 2009, the drilling crew stayed on site in a temporary camp on the Property. This relatively remote location also requires the use of satellite phones for communication.

Working materials can be brought in from Medford and Brookings. The local economy is largely based on the logging industry and the coastal economy is heavily influenced by tourism in the summer (Rancourt, 2009).

# 5.4 Physiography

The topography of the Property was shaped by the Coastal Range Mountains. The maximum difference in altitude on the Property is about 2,000 ft (610 m), and the average altitude of the Property is around 3,200 ft

(975 m). The Property lies on the top of a North-South mountain ridge, reaching a maximum altitude of 3,434 ft (1,047 m). The mountain top is flat with an average width of 5,000 ft (1,524 m) and the valley sides are steep.

#### 5.4.1 Water Availability

There are major drainage systems that pass in close proximity to both properties; however, water for exploration activities such as diamond drilling would have to be hauled from these rivers to the sites of the exploration work. Laterite sampling using auger or air core drilling would require much less water than diamond drilling.

#### 5.4.2 Flora and Fauna

Flora over the ophiolite basement rocks comprises sparse fir, spruce and pine with smaller brushy plants. Beyond the geological extent of ultramafic rocks are larger trees including redwoods and brushy rhododendrons.

Due to the high altitude and the presence of ultramafic rocks, the vegetation is less abundant and less prolific than in the valley bottoms. The Property is mostly covered by fir, spruce, pine and cedar trees and manzanita, salal, rhododendron and other brushy varieties.

The majority of the several wildlife species present are small mammals and songbirds that are common and widely distributed. Deer and squirrels and fish are the main Fauna in the region.

# 6.0 HISTORY

Nickel-bearing laterites of southwestern Oregon have been known since the discovery of the Nickel Mountain Mine near Riddle, Oregon in 1881. This mine was in operation from 1954 until 1976 and provided 39M tons of ore at nickel grades between 1.0 and 1.5% Ni. Regional investigations were carried out by the State of Oregon Department of Geology and Mineral Industries ("DOGAMI") as early as 1943. DOGAMI's work on the laterites followed the publication of a study of the Nickel Mountain deposit by the USGS (Pecora and Hobbs, 1942).

In 1978, DOGAMI explored the Cleopatra Property (Ramp, 1978). The exploration consisted of geological mapping of the ultramafic rock and five (5) auger drill holes. The regional geology was described by Ramp et al. (1977) and was summarized in a geological map of Curry County (Rancourt, 2009).

Historical results from exploration work on or proximal to the Property have not been verified by the Principal Author or a Qualified Person associated with the Company and as such are not necessarily indicative of the results to be found on the Property.

# 6.1 Prior Ownership and Ownership Changes

The Cleopatra Property was staked and claimed 100% by Lithologic Resources ("LLR") during the spring of 2007 (Rancourt, 2009). The Cleopatra Property was previously owned 100% by Oregon-based private company, Red Flat Nickel Corp. (RFN). The Property is currently owned 80.0079% by RAB Capital Holdings Ltd. (UK) through RFN Holdings Limited and a Loan Note Instrument with Homeland Nickel Corporation, the latter holding 100% of the Property.

The Issuer Spruce Ridge Resources is acquiring approximately 80% of the Property, subject to an NSR (see Section 4.10), through a share purchase agreement (see Section 4.2).

# **6.2** Historical Drilling

In 1978, DOGAMI drilled five (5) auger holes in the northern part of the Property (Figure 9-1) with Table 6-1 providing the auger locations and assay results (Ramp, 1978). These five auger holes were incorporated into the drill hole database along with results from 2007, 2008 and 2009 drilling programs. Geological interpretations were conducted on this database and used in calculation of the 2009 historical mineral resource estimate (Rancourt, 2009).

Table 6-1. Auger co	Illar locations and sam	nple assay results from	1978 work by DOGAMI.

Drill hole no.	Depth inte	rval (ft)	Ni	Со	Coord	inates	Assay
110.	From	to	(%)		X	Y	Number
1	0	7.5	0.85	0.06	3993756	154472	AJG-16
2	0	7.5	1.61	0.16	3993363	153548	AJG-15
3	0	7	1.2	0.09	3993820	152884	AJG-17
4	0	3	0.65		3991550	149086	AIG-117
5	0	5	0.91	0.24	3991788	148824	AIG-118
5	5	10	1.06	0.2	3991788	148824	AIG-119
		Average	1.05				

#### 6.3 Historical Mineral Resource Estimate

In 2009, AJR Geoconsulting Inc. prepared a mineral resource estimate for the nickel laterite mineralization on the Cleopatra Ni-Co Deposit, located on the Cleopatra Property (Rancourt, 2009). The 2009 historical mineral resource estimate on the Cleopatra Nickel-Cobalt Deposit is detailed in the report titled, "Evaluation of the Cleopatra Ni/Co Property Mining Potential, Curry County, Oregon, U.S.A., NI 43-101 Technical Report", with a date of 23 November 2009, and prepared by Geological Engineer Andre J. Rancourt (P.Eng., Quebec #112457) of AJR Geoconsulting Inc. for Red Flat Nickel Corp.

The 2009 mineral resource estimate was completed in accordance with NI 43-101 regulations and following the CIM Definition Standards for Mineral Resources & Mineral Reserves (CIM, 2005).

A qualified person has not done sufficient work to classify the 2009 historical mineral resource estimate as current mineral resources or mineral reserves. Other than the review by the Principal Author, the Issuer has not conducted any work to establish the relevance and reliability of the 2009 historical resource estimate and as such is not treating the historical mineral resource estimate as current mineral resources.

The data and information used in the 2009 historical mineral resource estimation comes from the 2007 to 2009 auger testing program and the 1978 DOGAMI drill data. In 2009, trenching was conducted to obtain more accurate geological profiles and increase the knowledge in the resources (Rancourt, 2009).

## 6.3.1 Estimation Methodology

The potential resources were divided into two groups, soil and rock. The grade of the soil was primarily calculated using the auger drilling and the grade of the rock was calculated using the trenching information. The volume of both groups was based on the proportions measured from the trenches.

The volume of each fraction (rock and soil) of the resource was calculated then the volume of each fraction was transformed into a tonnage by multiplying the volume by the weighed dry density average of the material. Density measurements were done on limonite/saprolite soil samples and corestone samples.

The nickel grade of the soil fraction was calculated using the kriging method. A block size of 300 ft x 300 ft (91.4 x 91.4 m) was defined over the Property, chosen because it fit the mining claim dimensions (600 ft x 1,500 ft) (183 x 457 m) so as to have at least one auger drill hole in each block and because it is well under the variogram range of 1,100 ft (305 m) (Rancourt, 2009).

All boreholes were used to estimate the nickel grade and depth of each block. Statistical analysis of the data includes frequency distribution analysis and variogram definition.

Table 6-2 provides the statistical parameters for the 483 of the 748 auger holes performed by LLR which is included in the historical mineral resource estimate (Rancourt, 2009).

		O		
Parameter	Average	Standard deviation	Minimum	Maximum
Ni (%)	1.03	0.25	0.70	2.10
Co (%)	0.06	0.03	0.02	0.27
Cr (%)	1.19	0.44	0.34	3.47
Fe (%)	28.74	7.16	9.32	47.10
Mg (%)	8.16	3.52	0.63	26.20
Borehole depth (ft)	7.64	3.45	3.00	23.00

Table 6-2. Statistical information of auger hole population included in the 0.7% Ni cut-off resource (n=483).

Nickel resources were estimated using cut-offs of 0.7 and 0.8% Ni (Table 6-3). These cut-offs were selected to obtain an average grade as close as possible to 1.0% Ni. Data analysis indicates cobalt, chrome and iron as potential sub-products but the mineral resource estimate does not include these elements.

Table 6-3. Average auger hole depth and average metal grades for each of the two nickel cut-off grades.

Cut-Off	Average depth	Ni (%)	Co (%)	Cr (%)	Fe (%)	Mg (%)	nb of sample
0.7	7.64	1.03	0.06	1.19	28.74	8.16	483
0.8	7.98	1.09	0.07	1.20	28.93	8.10	400

#### **6.3.2** Resource Categorization

The measured resource was calculated using a geostatistical model and Kriging estimates of the soil and the half distance method for the trenching information. The measured area was divided into nine (9) resource blocks with one trench per block. The boundary between the blocks was located halfway between the trenches (Rancourt, 2009). The depth of the blocks was set to 8 ft (2.4 m), which corresponds to the average auger drill hole depth in the measured zone. The nickel grade for the soil fraction was based on results from the Auger drilling and the trenching. The nickel grade for the rock fraction was estimated using the results from the trenches (Rancourt, 2009).

The indicated and inferred resources were calculated using a geostatistical model and block Kriging estimates. The volumes and grades for the rock fraction were based on the results from the trenches. Part of the indicated resources are assumed under the measured zone to a depth of 20 ft (6.1 m). Thus, the nine (9) measured resource blocks were extended down using the same nickel grade as the block above.

The depth used in calculating the inferred resource is supported by the fact that most of the holes were not refused by bedrock, and that there is strong geological evidence that mineralization increases with depth and culminates just above the surface of the bedrock (Rancourt, 2009). Part of the inferred resource was assumed in the measured resource area and underneath the indicated resource area, from 20 ft (6.1 m) to a maximum depth of 40 ft (12.2 m) for the four (4) inferred blocks where increased thickness of the deposit by sliding and slumping is assumed. Subsequently, the four (4) resource blocks were extended down using the same nickel grade as the block above. Outside the measured resources area, inferred resources are assumed to be present below the indicated resource for depths up to 15 ft (4.6 m). Nickel grade for the inferred resource is assumed to be the same that of the upper part.

# 6.3.3 Historical Mineral Resource Statement (2009)

Table 6-4 and Table 6-5 present the historical mineral resource estimate at two different %Ni cut-offs and Figure 6-1 shows the distribution of the estimated blocks and mineral resources (Rancourt, 2009). In Table 6-4 and Table 6-5, the block kriging average grade differs from the borehole results in Table 6-3 due to the weighting effect of kriging in a 2D plane space, which depends on borehole locations and nickel grades of the extrapolated blocks (Rancourt, 2009). The 2009 historical mineral resource estimate does not consider contributions from other metals such as cobalt, iron and chromium.

Table 6-4. Summary of the 2009 historical mineral resource estimation, Cleopatra Ni Deposit (0.7% Ni cut-off).

Category	Туре	US Tons (1,000s)	Ni (%)	Ni (pounds)*
Measured	Soil	3,342	1.07%	71,518,800
Measured	Rock	1,913	0.83%	31,755,800
Measured Total:	S+R	5,255	0.98%	103,274,600
Indicated	Soil	9,569	0.96%	183,724,800
Indicated	Rock	4,979	0.84%	83,647,200
Indicated Total:	S+R	14,548	0.92%	267,372,000
Measured + Indicated	Soil	12,911	0.99%	255,243,600
Measured + Indicated	Rock	6,892	0.84%	115,403,000
Meas. + Ind. Total:	S+R	19,803	0.94%	370,646,600
Inferred	Soil	12,320	0.97%	239,008,000
Inferred	Rock	7,351	0.84%	123,496,800
Inferred Total:	S+R	19,671	0.92%	362,504,800

<sup>\*</sup>assumes 100% nickel recovery (contained metal).

Table 6-5. Summary of the 2009 historical mineral resource estimation, Cleopatra Ni Deposit (0.8% Ni cut-off).

Category	Туре	US Tons (1,000s)	Ni (%)	Ni (pounds)*
Measured	Soil	3,342	1.07%	71,518,800
Measured	Rock	1,572	0.85%	26,724,000
Measured Total:	S+R	4,914	1.00%	98,242,800
Indicated	Soil	7,365	1.03%	151,719,000
Indicated	Rock	3,605	0.84%	60,564,000
Indicated Total:	S+R	10,970	0.97%	212,283,000
Measured + Indicated	Soil	10,707	1.04%	223,237,800
Measured + Indicated	Rock	5,177	0.84%	87,288,000
Meas. + Ind. Total:	S+R	15,884	0.98%	310,525,800
Inferred	Soil	6,993	1.01%	141,258,600
Inferred	Rock	3,248	0.84%	54,566,400
Inferred Total:	S+R	10,241	0.96%	195,825,000

<sup>\*</sup>assumes 100% nickel recovery (contained metal).

Mineral resources are not mineral reserves, they do not have demonstrated economic viability, and there is no certainty that all or part of an estimated mineral resource can be converted to mineral reserves.

A qualified person has not done sufficient work to classify the 2009 historical mineral resource estimate (*see* Table 6-4 and Table 6-5) as current mineral resources or mineral reserves. Other than the review by the Principal Author, the Issuer has not conducted any work to establish the relevance and reliability of the 2009 historical resource estimate and as such is not treating the historical mineral resource estimate as current mineral resources.

## 6.4 Historical Production

There is no known historical production on the Cleopatra Ni-Co Property.

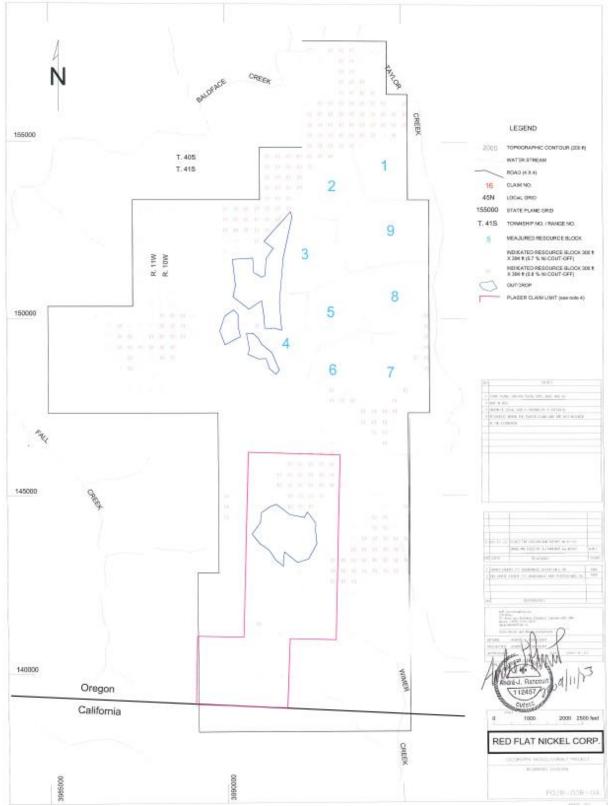


Figure 6-1. Distribution of the 9 mineral resource blocks and corresponding Indicated Resources at 0.7% Ni and 0.8% Ni cut-offs from the 2009 historical mineral resource estimate on the Cleopatra Nickel Laterite Deposit (Rancourt, 2009).

# 7.0 GEOLOGICAL SETTING AND MINERALIZATION

# 7.1 Regional Geology

The Property is located on the northwestern part of the Klamath Mountains physiographic terrane and is composed primarily of volcanic rocks and some ultramafic and gabbroic intrusions of Jurassic age (Figure 7-1).

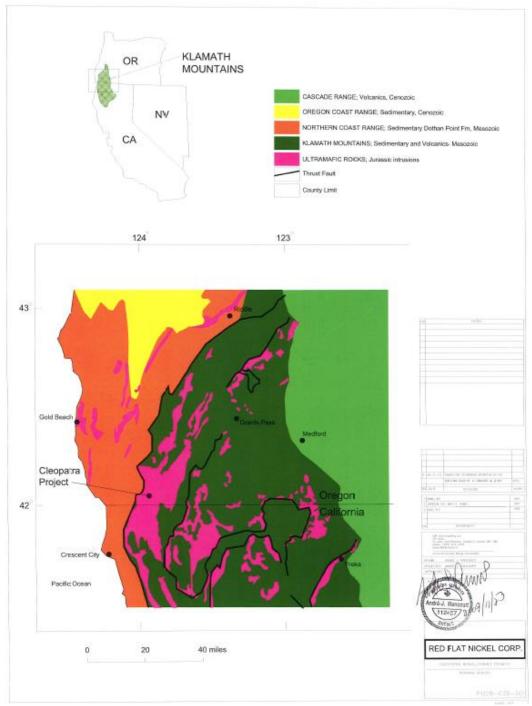


Figure 7-1. Regional geology of southwestern Oregon showing the approximate location of the Cleopatra Ni-Co Property (geology based on Johnson and Raines, 2001; Irwin, 1997; Hotz, 1964) (Rancourt, 2009).

The Pre-Nevadan Klamath Mountain rocks are in contact to the west with younger Northern Coastal Range rocks of the Dothan Point sedimentary Formation, and to the east by the Cascade Range younger Cenozoic volcanic rocks (Rancourt, 2009).

The regional geology has been described in detail by Hotz (1964). The Property is covered by Jurassic bedrock, mostly ultramafic and gabbroic intrusive rocks that envelop a large area in the south east of Curry County and extend north-easterly into Josephine County. The ultramafic formation is 10 to 15 miles (16-24 km) wide and extends up to 50 miles (80.5 km) northeast and 50 miles (80.5 km) south into California. It is bordered to the west by the Dothan and Otter Point formations composed of volcano-sedimentary rocks and to the east by the metasedimentary rocks of the Galice Formation. The area is faulted with high angle fault zones generally striking northeasterly with some younger granitic intrusions (Rancourt, 2009).

#### 7.1.1 Metal Mines in Oregon

At present there are no hard rock metal mines in production in Oregon. The Nickel Mountain laterite deposit, located about 70 miles (113 km) north of the Property, was in production between 1954 and 1976, and produced 39 million tons of ore with reported smelter feed grading of 1.0 to 1.5% Ni. The southwestern area of Oregon also contains other nickel laterites which are described by Ramp (1978) and documented by Ferns and Huber (1984).

The Red Flat nickel laterite deposit (Red Flat Ni-Co Property) in Curry County, about 50 miles (80 km) northwest of the Cleopatra Property, is also being acquired by the Issuer Spruce Ridge.

# 7.2 Property Geology and Mineralization

The Property overlies intrusive ultramafic rocks mainly comprising partly serpentinized peridotite, wehrlite and lherzolite (Rancourt, 2009) (Figure 7-2; Figure 7-3). The ultramafic rocks are primarily composed of altered olivine, serpentine, chlorite with some ortho- and clinopyroxene. Magnetite and hematite was also observed with hematite present in small veinlets. The ultramafic rocks have been intruded by a number of small diabase dikes (Ramp, 1978).

In 2009, Garnierite Group minerals with nickel silicate were discovered in the trenches (see Section 7.2.1) (Rancourt, 2009). Garnierite results from the alteration of olivine-rich rock to a clay-like mineral that can be poor to rich in nickel which is reflected by the green colouration of the garnierite. Very pale green coloured garnierite is poor in nickel whereas light green to bright green garnierite is enriched in nickel. The nickel-rich garnierite observed on the Property typically results from the groundwater leaching of manganese oxide, magnesium, nickel and iron from the original garnierite. On the Property, garnierite is commonly found as thin veinlets millimetres to centimetres thick or as fracture fillings.

The outcrop area, located north of Trench No. 9 (Figure 9-1), has locally disseminated chromite. A petrographic review and report was made with respect to two polished thin sections collected rocks in this area (Caderon, 2008).

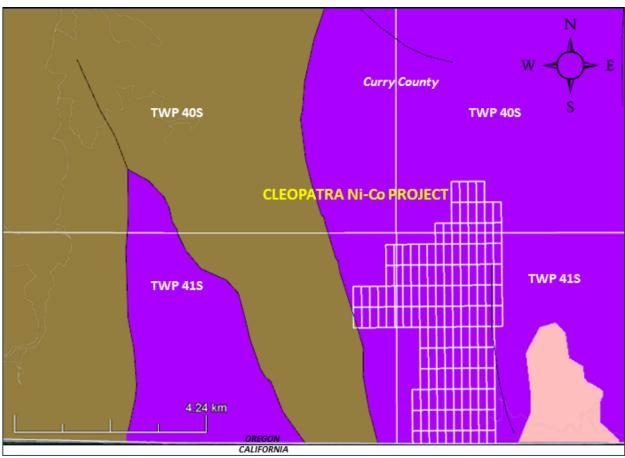


Figure 7-2. Generalized geology of the Cleopatra Ni-Ci Property mining claims. Magenta = ophiolitic ultramafic rocks; Brown = sedimentary rocks; Pink = granitic intrusive (geological base map from the Government of Oregon, 2023).



Figure 7-3. Ultramafic bedrock outcrop on the Cleopatra Ni-Co Property (Rancourt, 2009).

The mineralized horizon reflects a lateritic alteration profile formed by the prolonged weathering and slumping of the ultramafic rocks in sub-tropical climates. The ground surface is covered by corestones, which are remnants of surface bedrock (Figure 7-4). In the centre of the Property, near the summit of the mountain, the laterite cover appears to be shallower than the areas on the mountain sides. In the northeast part of the Property, slumping and landslides accumulated down-slope with mixed material made of cover, corestones, limonite and saprolite, with the thickness of the slide area reaching as much as 50 ft (15.2 m) (Rancourt, 2009).



Figure 7-4. Corestone cover (remnants of surface bedrock) on the Cleopatra Ni-Co Property (Rancourt, 2009).

#### 7.2.1 Slumping and Sliding Features

Ramp (1978), described lower areas in the northern part of the Property that are characterized by important slumping and sliding accumulations of soil and saprolite to a depth of about 50 ft (15.2 m). Figure 7-5 provides an example of slide accumulation. At the Cleopatra Property, sliding and slumping appears to play a significant role in the accumulation of nickel mineralized material; however, this assumption needs to be validated by field observations (Rancourt, 2009). The main deposit located in the northeastern part of the Property is believed to be the result of intense nickel laterite accumulation. An interpreted cross-section showing typical slumping/sliding characteristics is provided in Figure 7-6.



Figure 7-5. Slide accumulation of nickel laterite material on the Property (Rancourt, 2009).

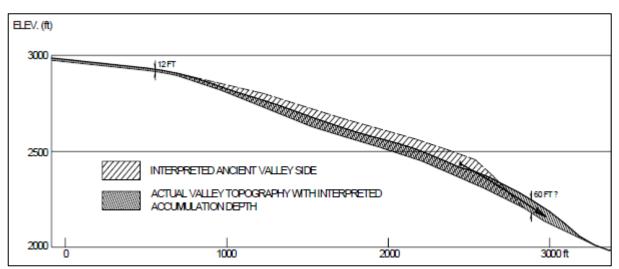


Figure 7-6. Interpreted cross-section showing typical slumping/sliding and accumulation area (from Ramp, 1978; Rancourt, 2009).

# 7.2.2 Mineralization and Mineralogy

The nickel laterites found on the Property can be classified, on the basis of ore mineralogy, as clay silicate deposits and maybe some oxide deposits (Rancourt, 2009). The mineralized zone is typically composed of residual goethitic-limonite covering altered peridotite layers (saprolite) with iron oxide veins.

The mineralogy of the laterites at Nickel Mountain in Oregon, was studied by Pecora and Hobbs (1942) and Hotz (1964). Montmorillonite (smectite group), chlorite and talc constitute the clay fraction. Nickel also occurs in

nontronite, a ferric iron member of the montmorillonite series (Hotz, 1964; Ramp, 1978). Nickel is also concentrated in thin fracture fillings by garnierite mineralization between saprolite corestone blocks.

Mineralogical studies by Gleeson et al. (2004), for the Cerro Matoso deposit in Colombia, found that nickel occurred in phyllo-silicates like pimelite (nickeliferous talc), nimite (nickeliferous chlorite), sepiolite and nickeliferous smectites (Rancourt, 2009).

Garnierite Group minerals were discovered for the first time on the Property during the 2009 field program with grab samples assayed up to 4.1% Ni. Figure 6-2 (B) shows typical Garnierite Group mineralization uncovered during trenching.

Mineralization is divided into soil and rock groups. The mineralized soil is composed of clay (limonite and saprolite), while the mineralized rock is mostly corestone with garnierite accumulations.

Three types of mineralization were identified by Rancourt (2009), based on the cumulate frequency of the nickel grade. The first type is from 0.0 to 0.5% Ni and represents the non-mineralized zone. The second type is the first mineralized zone from 0.5% Ni to approximately 1.2% Ni. The third type is the high-grade mineralized zone with greater than 1.2% Ni (Rancourt, 2009).

The horizontal continuity of the soil deposit is supported by the geostatistical results and by the consistency between borehole and trench results, especially in the high-grade zone. In this zone, where the average grade is above 1.0% Ni, every borehole and trench exceeded the 0.8% Ni cut-off. This indicates a strong continuity in the soil fraction. Areas with a high density of boreholes (Figure 9-1) confirm that the grade is continuous between 300 ft x 300 ft (91.4 x 91.4 m) spaced holes. Rock mineralization does not correlate well but appears to be associated with high nickel in-soils (>1% Ni) (Rancourt, 2009).

The difference between limonite and saprolite is defined in terms of the Fe/Mg ratio. A ratio above 10 indicates limonite, and a ratio below 10 indicates saprolite. The limonite is usually present above the saprolite, and ranges in thickness from 1 ft to 10 ft (0.3-3.1 m) in the trenches. The limonite is mostly composed of very fine and uniform red clay, while the saprolite is coarser with a high in place porosity.

# 8.0 DEPOSIT TYPES

Concentration of nickel and cobalt on the Cleopatra Ni-Co Property is derived from the surface alteration of olivine-rich ultramafic rocks, referred to as nickel laterites. The unaltered ultramafic rocks on the Property average 0.2 to 0.4 % Ni (Rancourt, 2009).

The nickel laterites can be classified on the basis of ore mineralogy as clay silicate deposits and potentially oxide deposits.

Laterites are formed by weathering of the serpentinized peridotites generally in humid savanna climates with poor drainage and associated with dry climates and semi-arid environments. During weathering, nickel is concentrated in place, while more soluble elements such as magnesium, calcium and silica are dissolved and leached rapidly. Nickel accumulates in the form of nickel-silicate veins or becomes enriched in the insoluble residue of silica, nickel hydrosilicates, and oxides of magnesium and iron. Similar Oregon laterite nickel deposits have been described by Pecora and Hobbs, (1942) and by Hotz, (1964).

The laterites found on the Property are remnants of an old upland surface and according to Irwin (1997), the weathering has taken place during the Pleistocene (2.58-0.01 Ma) and/or the Pliocene (5.33-2.58 Ma). A typical laterite profile is presented in Table 8-1.

Table 8-1. Typical laterite profile (adapted from Golightly, 2005).

Unit	Mineralogy	Structure
Landslide	Mixed of cover, corestones, limonite	Slide and slumping accumulation
	and saprolite	of mixed structures
Cover	Goethite + Kaolinite ± Hematite	Granular iron pebbles (kanga)
	± Gibbsite + Quartz	with peridotite boulders (30 -
		60 %) at surface, limonitic matrix
Limonite	Goethite ± Mn, Co oxides ± Gibbsite	Porous clayed limonite, some
	± Quartz	sand, some relict bedrock
		corestones
Upper	Ni in serpentine + Mn, Co oxides +	Fe rich Mg poor Saprolite crusts
Saprolite	Quartz	surround Ni enriched saprolite
		corestones
Lower	Ni in serpentine + Goethite	Fe poor Mg rich Saprolite crusts
Saprolite		surround peridotite corestones
Bedrock	Forsteritic Olivine and Serpentine (±	Joint blocks, serpentinite breccia
	pyroxenes ± talc)	

# 9.0 EXPLORATION

From 2007 to 2009, Red Flat Nickel Corp. (now Homeland Nickel) completed a total of 748 auger holes (1,135 samples) covering an area of 1,950 acres (789 ha) and completed 10 manual trenches (246 samples). Also, 3,970 ft (1,210 m) of seismic refraction geophysics was completed. Five (5) large samples (>100 lbs) were collected and sent for mineralogical and metallurgical analysis. In addition, 14 in-place density measurements were performed on 1 cubic foot soil samples, and 16 rock density measurements were performed on fist grab samples (Rancourt, 2009). Figure 9-1 shows the location of the exploration work completed by RFN and Table 9-1 provides a summary of the historical exploration work that has been completed on the Cleopatra Ni-Co Property.

There has been no known exploration work performed on the Property since 2009 (Rancourt, 2009) and there is currently no exploration work being carried out on the Property.

Table 9-1. Summary of	f exploration work con	mpleted by Red Flat Nickel Corp.	(now Homeland Nickel	). 2007 to 2009.

Period	Dates	Description					
2007-2009	-	Geological mapping over Property					
		Auger samples: 1,381 samples (four acid digestion with ICP analysis)					
	-	Auger drilling: 748 holes totalling 5,169 ft. (1,575.5 m)					
2008	27-30 Oct.	Refraction seismic survey: 3,970 ft. total (1,210.1 m) on four lines					
	-	Five "bulk" (> 45 kg) samples for mineral/metallurgical testing					
	-	<i>In-situ</i> density testing on 14 x 1 cu. ft. (0.03 m <sup>3</sup> ) samples					
	-	Rock density testing on 16 grab samples					
2009	29 Jul. – 23 Aug.	Trenching: ten trenches; 8-12 ft. (2.4 m - 3.7 m) avg. depth; 246 samples; trenches were generally only a few metres wide and/or long					

# 9.1 Geological Mapping

Geological mapping of the Property was completed by RFN assisted by aerial photographs (Rancourt, 2009).

# 9.2 Geophysics

The 2008 exploration program completed by RFN included four (4) seismic refraction geophysics lines for a total length of 3,970 ft (1,210 m). Data was acquired between 27 October and 30 October 2008. The objective of the seismic refraction program was primarily to validate the use of this method on this type of deposit and identify, if possible, the depth of the soil horizon (Rancourt, 2009).

Seismic acoustic wave velocity can be correlated to the rock/soil nature and the rock/soil quality. The wave velocity is well correlated with the density of the material. For the Cleopatra deposit, the clay fraction on the top shows a lower acoustic wave velocity (<3,000 ft/s) and the bedrock underneath the soil shows a greater acoustic wave velocity (>3,000 ft/s).

To correlate the bottom of the deposit with a seismic wave velocity, holes along the seismic line should have been drilled through the deposit to identify the bedrock. However, this information is not available, so the correlation can not be completed.

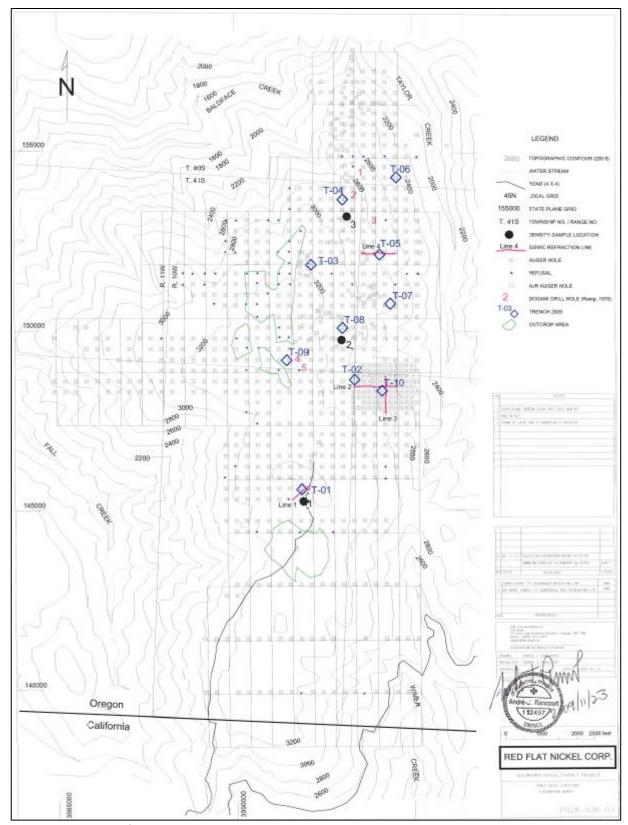


Figure 9-1. Location of historical exploration work, including auger drill holes and trenching, completed by Red Flat Nickel Corp. (now Homeland Nickel) on the Cleopatra Property (Rancourt, 2009).

AJR went further in its analysis of the seismic lines. Auger hole logs were plotted along the seismic lines and an attempt was made to correlate drilling refusals with seismic wave velocity. AJR identified a seismic wave velocity at around 2,000 ft/sec at the level corresponding to the auger refusal depth. However, this does not represent the seismic wave velocity of the bottom of the deposit because corestones are suspected of causing most of the auger hole refusals. This 2,000 ft/sec velocity may represent a denser corestone layer, a denser and harder iron oxide layer or the limonite-saprolite interface. Using the 3,000 ft/s velocity limit, the soil thickness varies from 10 ft to 40 ft. While a geophysical tool like seismic refraction lines can be a useful for the Cleopatra deposit, the lines should be validated by core or sonic drilling (Rancourt, 2009).

# 9.3 Trenching (Manual)

In 2009, RFN completed a trenching program, which is the most recent and extensive work carried out on the Property. The 10 manually dug trenches (or large pits) reached depths of 8 to 12 ft (2.4-3.7 m). Trenching began on 29 July 2009 and was completed on 23 August 2009 (Rancourt, 2009). Of the 10 trenches, 9 were located on the northeast zone where the higher grades of Ni are located (*see* Figure 9-1). Table 9-2 provides the assay results for the 10 trenches.

The objective of the manually dug trenches was to visually inspect the nickel laterite mineralization, to evaluate the corestone content and mineralogy, and for the sampling of the clay and corestone fractions. The trenching was also used to acquire large samples for mineralogical and metallurgical testing. Of the 10 trenches, 9 were located in the northeast zone where the higher grades of Ni are located (*see* Figure 9-1). Figure 9-2 provides photos from typical RFN trenching.

A total of 246 samples were taken from the 10 trenches, from which many chemical assays were conducted, 11 samples were taken for soils density analysis and four large samples (>100 lbs) were taken for mineralogical and metallurgical testing. The trenching and sampling were carried out under the direct supervision of LLR.

The trenches do not follow a defined grid; they were located at distances varying from 800 ft to 1,800 ft (244-549 m) from one another. In some trenches, the corestones are mineralized with grades similar to or higher than that of the soil. In other trenches, the corestones shows only background nickel grades. In 9 out of 10 trenches, mineralized corestone was sampled (Rancourt, 2009).

Samples were also taken from the corestone rind, the rusty coating surrounding the fresher rock. Rind thickness varies between  $\frac{1}{2}$  in to  $\frac{1}{2}$  in and the average corestone boulder diameter is around 1.5 ft (0.46 m). Table 9-3 provides the coordinates of each trench and Table 9-4 presents the trench sample characteristics.

Table 9-3 shows that the average corestone content from all trenches is approximately 31% in volume. From this corestone fraction, a little more than 17% of the rocks contain nickel concentrations above 0.7% Ni, and thus, represent the mineralized fraction of corestones. The average nickel grade of the mineralized corestone is approximately 0.88% Ni (Rancourt, 2009)

Table 9-2 (part1). Results for soil, corestone, and corestone rind samples from the 10 trenches completed in 2009.

	Trench no	D.																			
		1				2				3				4				5			
	Depth (ft)		Vi %)	Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg	
	Soil																				
		1 0		16.78		1	0.9	12.98		1	1	11.46		1	0.84	12.65		1	1.2	25.64	
			).79	20.38		2	1.1		S	2	1.2		L	2	1.15	12.27	Ŀ	2	0.9	2.22	
		3 O 4 O	).84 ).86	30.25 39.92		3	1.4	3.77 3.91	S	3 4	0.8	4.49 5.11	S	3	1.49	25.68 43.30	L	3 4	1.1	2.23 9.18	S
			).95	37.12		5	1.4		S	5	0.9		S	5	1.7	18.00	Ĺ	5	0.6	0.85	
		В	1	26.35		6	1.3		s	6	1	2.86	s	6	1.63	24.94	ī	6	1.2	3.68	
		7 1	.06	10.66	L	7	1.3	1.86	s	7	1.2	2.50	S	7	1.68	15.29	L	7	0.7	0.91	s
		8 1		4.36		8	1.4		S	8	0.9	1.44	S	8	1.36	5.77		8	0.9	1.01	S
		9 1	.38	8.97	S	9	1.6		S	9	1.3	2.18	S	9	1.35		S				- 1
						10	1.4	1.70	S	10	1.7	4.93	S	10	1.23		S				
										11	1.5	3.38	S	11	1.39	3.68 2.89	S				
										12	1.0	0.02	-	12	1.20	2.00	-	1			
Average		0	).95				1.30				1.17				1.37				1.03		
	Coreston	e																			$\neg$
		0 0	).24			0	0.3			0	0.2			0	0.24			0	0.2		
		2 0				0	0.2			0	0.5							I	0.73		
		4 0				0	0.2			0	0.2			5	0.6			1	1.6		
		50 60	1.23			3	0.2			3 4	0.2			9	0.36			4	0.5		
			1.26			6	0.3			5	0.5			11	0.30			8	0.72		
			).26			8	0.3			7	0.4				0.3				0.7		
			0.5			A	0.4			11	0.5			В	0.61						
		3 0	).23			В	0.3			Α	0.6			С	0.62						
			).26			С	0.2			В	0.2										
		0 0	).28							C	0.5										
Average			).27				0.27			D	0.7				0.45				0.85		
Average		U	1.21				0.27				0.37				0.40				0.00		
	Rind																				$\neg$
		0 0				0	0.4			0	0.6			I	0.38			0	0.6		
		2 0				0	0.3			0	0.7			0	0.62			1	1.6		
		3 0				3 3B	0.4			0	0.2				0.61			1B	0.4		
		4 0 5	0.5			3B 4	0.6			3	0.6			5 7	0.52			4	1		
		3 0				6	1.2			4	0.5			9	1.56			8	0.8		
		70				8	0.8			5	0.4				1.14						
		9 0								7	0.9										
										11	0.6										
Average		0	).35				0.86				0.74				1.35				0.85		

L: Limonit

S: Saprolite

Table 9-2 (part 2). Results for soil, corestone, and corestone rind samples from the 10 trenches completed in 2009.

	1	6			_	7				8		•		9				10			_
		Depth (ft)	Ni (%)	Fe/Mg		Depth (ft)		Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg		Depth (ft)	Ni (%)	Fe/Mg	
		1	0.7	12.89		I	1.03	27.45			0.86	10.42			0.74	30.58		1	1.1	23.51	
		3	1	23.40 6.03		3	1.1 1.28	23.90 36.96			0.96 1.17	5.75 7.62		3	1.04	36.44 16.29		2	1.3	15.92 30.56	L
		4 5	1.2	3.73 2.22			1.51	37.25 26.93			0.87	3.08 2.35			1.13	15.57 26.97		4 5	1.3	6.44 5.25	S
		6	1.2	3.94	s	6	1.38	15.28	L	6	0.85	2.31	s	6	1.07	16.91	L	6	1.3	4.01	s
		7 8	0.7	2.26 1.26			1.76	21.58 20.94			0.96	2.52			1.16 0.82	10.85 4.61		7 8	1.2	2.73	
	'	9		1.65				41.04		-	0.84	2.20		9	1.31	27.79	L				
														10	1.13	42.31	L				
			0.98				1.46				0.90				1.06				1.25		
Average	-																				_
		0 2	0.2			_	0.23 0.24				0.23			_	0.23			0 2	0.2		
		4	0.2			4	0.22			2B	0.38			4	0.22			2B	0.3		
		4B 6	1.1 0.8				0.26				0.34				0.28			4 4B	0.3		
		7	1.4				0.74			1	0.56							6	0.5		
		9	1.1							1	0.29							8	0.7		
											0.47 0.37										
Average			0.76				0.32				0.41				0.31				0.36		
		0				1	0.24				0.34				0.26						
		2 2B	0.6 1.4				0.52 0.58				0.71				0.22			0	0.3		
		4	1.5			4B	2.78			4	0.59			4	0.38			2	0.4		
		6 7	1.2			6 8	1.1			1	0.73 1.15			10	0.65			2B 4	0.5		
		9 A	1.4 1.3							8 8A	0.6 1.64							6 8	1.3 0.2		
Average			1.17				1.04				0.84				0.68				1.00		

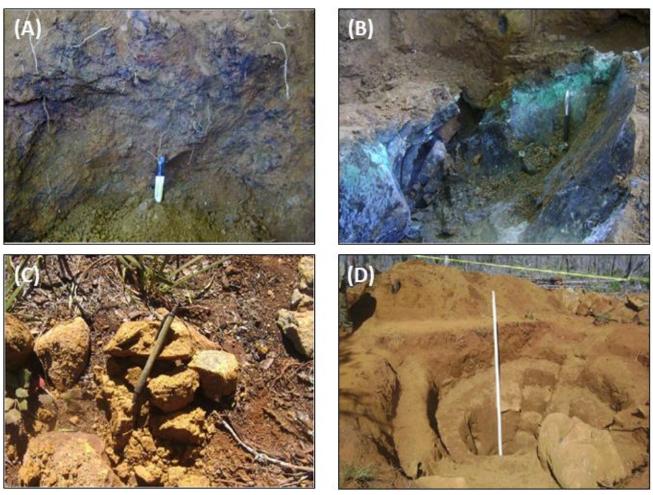


Figure 9-2. Photos from 2009 trenching (Rancourt, 2009). (A) Trench No. 2 with typical saprolite (approx. 1.2 m deep). (B) Trench No. 3 with garnierite mineralization in fractures. (C) Trench No. 9 showing typical corestone rind. (D) Trench No. 4 facing west.

Table 9-3. Trench locations coordinates, depth, and corestone characteristics - 2009.

Trench	Coordinate	es		Depth	Estimated	Mineralized	Nickel grade of mineralized
no.	X Y		Z		corestone	corestone	corestone
	(ft) (ft)		(ft)	(ft)	(%) <sup>1</sup>	(%) <sup>2</sup>	(%)
1	3991890	145573	3378	9	25	0	N/A
2	3993387	148637	3101	10	45	9	0.86
3	3992165	151847	3161	12	35	4	0.74
4	3993094	153697	2862	12	20	5	1.35
5	3994101	152137	2810	8	50	15	0.85
6	3994567	154303	2441	9	15	100	0.80
7	3994386	150763	2811	9	15	15	0.84
8	3993031	150087	3059	9	40	15	0.84
9	3991477	149191	3301	10	5	5	0.68
10	3994144	148326	2934	10	60	5	1.00
			Average		31	17.3	0.88

Percentage of the total trench volume
Percentage of the rock fraction volume

Table 9-4 shows the statistics of the samples taken from the trenches, separated in two categories, the mineralized corestone (> 0.7% Ni) and the non-mineralized corestone (< 0.7% Ni). The nickel grade within the corestone appears to be linked with the possible presence of garnierite mineralization within rock fractures (Rancourt, 2009).

Table 9-4. Trench sample statistics from 2009 trenching.

Material	Mineralized (> 0.7 % Ni)				Non mineralized (< 0.7 % Ni)			
	Average	Min.	Max.	Nb of sample	Average	Min.	Max.	Nb of sample
Soil	1.15	0.72	1.88	96	0.58	0.58	0.58	2
Corestone	0.94	0.71	1.61	11	0.33	0.20	0.62	68
Rind	1.14	0.61	2.78	28	0.44	0.21	0.65	41

# 9.3.1 Sampling Methods – Manual Trenching

Samples from trenching were taken every foot along a vertical channel on the side of each trench (*see* Figure 9-2(D)). Samples of approximately 1 cubic foot were also collected for soil density measurement, those samples weighed approximately 50 lbs. In addition, fist size rock samples were collected for bulk density measurements (Rancourt, 2009).

Five composite samples weighing 170 to 290 lbs, depending on the depth of the trench, were taken and sent for mineralogical and metallurgical testing to the SGS laboratory in Lakefield, Ontario, Canada. The composites were obtained by blending roughly 10 lbs of material per vertical foot of trench.

Detailed trench sample logs and corestone location logs are included in the reporting of Rancourt (2009).

# 9.4 Verification Sampling (2007 and 2009)

Field verification was conducted by AJR during two property visits – 2007 and 2009. In 2007, six (6) verification auger holes were completed along a north-south line covering a distance of about 10,000 ft (3,048 m) (see Figure 9-1). Table 9-5 provides the assays results and Table 9-6 shows the space correlation interpretation of some verification holes in the vicinity of existing LLR holes. In general, results from AJR sampling are in close agreement with results obtained from LLR reflecting strong continuity in the laterite mineralization.

Table 9-5. Assay results from the six AJR 2007 verification auger holes.

Hole No.	Sample	Ni	Co	
	(ft)	(%)	(%)	
AJR-01	0 - 6	0.89	0.207	
	6 - 8	0.67	0.049	
AJR-02	0 – 6	1.52	0.125	
	6 – 10	1.72	0.119	
AJR-03	0 – 6	1.03	0.084	
	6 – 12	1.21	0.066	
AJR-04	0 – 6	0.82	0.101	
	6 – 10	0.49	0.043	
AJR-05	0 – 6	0.48	0.057	
	6 - 7	0.39	0.039	
AJR-06	0 – 4	0.67	0.046	

Table 9-6. Interpretation of the verification auger hole results.

Verif.			Coordinates <sup>1</sup>		Coordinates <sup>1</sup>		Ni <sup>2</sup>	Remarks	
		East (ft)	North (ft)		East (ft)	North (ft)	(%)		
1				18S-15E	3991846	145597	0.92	Verification hole located between two N-S 300 ft	
	AJR-01	3991869	145472				0.83		
				21S-15E	3991846	145297	1.23	spaced holes	
2				57N-27E	3993046	153097	1.44	Verification hole located between two E-W 300 ft	
	AJR-02	3993183	153123				1.60		
				57N-30E	3993346	153097	1.67	spaced holes	
3	AJR-03	3992425	151930				1.12	Verification hole located 40 ft away	
				45N-21E	3992446	151897	1.23	from checked hole	
4	AJR-04	3992735	148920				0.69	Verification hole	
				15N-27S	3992746	148897	0.83	from checked hole	

<sup>1</sup> State Plane, Oregon South, FIPS, 3602, NAD 1983

#### 9.4.1 Laboratory Verification

Laboratory quality verification was done by randomly selecting 10, already assayed pulp samples, and reassaying them using the Ni-ICP81 method (Rancourt, 2009).

The ME-ICP61 method used by LLR was a four-acid leach digestion process that provides a near total extraction. This method is the conventional low cost multi-elements package used in exploration geochemistry. AJR used the Ni-ICP81 method, which is a four acid leach digestion process combined with peroxide fusion suited for high-grade samples and equivalent to the XRF method, to verify the assays (Rancourt, 2009).

Results from the quality control assays are presented on Table 9-7. This quality control consisted of re-assaying samples to check for reproducibility of results. Samples were selected at random. Average variability was approximately 0.03% Ni. The average nickel grade was 1.13% Ni for the LLR samples and 1.11% Ni for the check

<sup>2</sup> Weighted average of all samples from the hole

samples – a negligible difference. Interpretation of these results confirms the accuracy and reproducibility of the assays performed by ALS Chemex Laboratories (Rancourt, 2009).

Table 9-7. Quality control samples collected in 2007.

SAMPLE NO.	Ni-ICP81 Ni (%)	ICP61 Ni (%)	Diff. Ni (%)
	AJR	LLR	
39N-18E-6	1.05	1.05	0.01
36N-27E-6	0.92	0.95	0.03
66N-42E-6	1.97	2.04	0.07
66N-33E-12	1.09	1.11	0.02
ON-36E-12	0.98	1.00	0.02
27S-3E-9	0.60	0.62	0.02
57N-45E-9	1.23	1.28	0.05
54N-45E-6	1.24	1.26	0.02
90N-36E-5	0.88	0.89	0.01
45S-27E-6	1.12	1.14	0.02
Average	1.11	1.13	0.03

## 9.4.2 Corestone Sampling

During the 2009 field visit, AJR randomly collected 19 rock samples from the trenches and from the surface of the ground. The samples consisted of corestones and the rind surrounding the corestones. Table 9-8 provides the grade and characteristics of the samples. The last five (5) samples in Table 9-8 were randomly selected to represent the kanga (Figure 9-3), dunitic bedrock, and surface peridotite corestone. The Kanga and fresh surface dunite corestone sampled are relatively rich in nickel, both above 1.0% Ni (Rancourt, 2009).

Table 9-8. Verification samples collected in 2009 by AJR.

SAMPLE	ICP61	Description
NO.	Ni (%)	
	AJR	
RF_AJR_1_A	0.5	Rind
RF_AJR_1_B	0.23	Fresh corestone
RF_AJR_1_C	0.26	Corestone
RF_AJR_1_D	0.28	Altered corestone
RF AJR 2 A	0.43	Rind
RF AJR 2 B	0.43	Corestone
RF AJR 2 C	0.24	Fresh corestone
KF_AJK_2_C	0.24	Trestreorestone
RF_AJR_3_A	0.55	Rind
RF_AJR_3_B	0.23	Corestone
RF_AJR_3_C	0.45	Corestone
RF_AJR_3_D	0.71	Rind
DE AID 4 A	0.00	Fresh corestone
RF_AJR_4_A	0.30 0.61	Corestone
RF_AJR_4_B	0.01	
RF_AJR_4_C	0.62	Rind
RF_AJR_S_1	1.01	Kanga
RF_AJR_S_2	1.07	Fresh Dunite surface corestone
RF_AJR_S_3	0.41	Fresh Dunite surface corestone
RF_AJR_S_4	0.47	Fresh Peridotite surface corestone
RF_AJR_S_5	0.30	Fresh Peridotite surface corestone



Figure 9-3. Typical iron-oxide gravel cover referred to as "Kanga" (Rancourt, 2009).

A corestone is a rounded boulder, occurring individually or in piles at the ground surface, resulting from an initial phase of subsurface chemical weathering, of a joint-bounded block, followed or accompanied by surface erosion that exposes the corestone. The sampling medium consists of both the corestone, which can be variably altered, and the exfoliated corestone rind. The intensity of alteration does not appear to correlate well with nickel content (Rancourt, 2009).

# 10.0 DRILLING

From 2007 to 2009, Red Flat Nickel Corp. (now Homeland Nickel) competed a total of 748 auger holes (1,135 samples) in 3 drilling programs, covering an area of 1,950 acres (789 ha); the seven (7) auger holes completed in 2009 were the deepest at >20 ft (6.1 m) (Rancourt, 2009).

In general, the locations of the holes followed a 300 ft x 300 ft grid (91.4 x 91.4 m), representing a total of 5,169 ft (1,576 m) successfully drilled and sampled. The hole depth ranged from 2 to 30 ft (0.6-9.1 m) and averaged 7 ft (2.1 m). The drilling was carried out under the direct supervision of LLR (Rancourt, 2009).

Figure 10-1 shows the auger hole locations with contoured percent nickel assay results from the surface soil profile. Details of the auger holes including auger collar and sample locations, drill hole and sample logs, and complete assays are included in the reporting of Rancourt (2009).

The nickel variation with depth in the laterite profiles from auger drill holes is shown in Figure 10-2, clearly showing an increase in nickel concentration with depth (Rancourt, 2009). The variation of Co and Fe with depth for the auger holes is presented in Figure 10-3 and Figure 10-4, respectively. The trend for cobalt in Figure 10-3 is less instructive due to the lab accuracy limitations in detecting Co; however, Co concentration does appear to decrease with depth. Finally, Figure 10-4 shows no specific trend between Fe concentration and depth (Rancourt, 2009).

# 10.1 Sampling Methods – Auger Drilling

For 2007 and 2008 drilling, all holes were vertical and drilled using a 1.6 HP two-man auger (Figure 10-5). This auger drill reached an average depth of 7 feet (2.1 m). A larger 5.5 HP four-man auger drill was used in 2009 and it reached a maximum vertical depth of 30 feet (9.1 m).

The samples taken were to be representative of a maximum of 6 ft (1.83 m) drilling runs. Rods were carefully cleaned between each drill run. If the attempts were not successful in reaching a minimum depth of 2 ft (0.61 m), the hole was labelled a "refusal". Refusals were either due to corestones preventing the drills from penetrating deeper into the soil profile, or due to hitting bedrock. When early refusals were encountered, several attempts were made in the nearby vicinity to deepen the hole.

All holes were logged and sampled by LLR. All drill hole collar locations were surveyed using a Trimble GeoExplorer XT which has a  $\pm 3$  ft (0.9 m) accuracy.

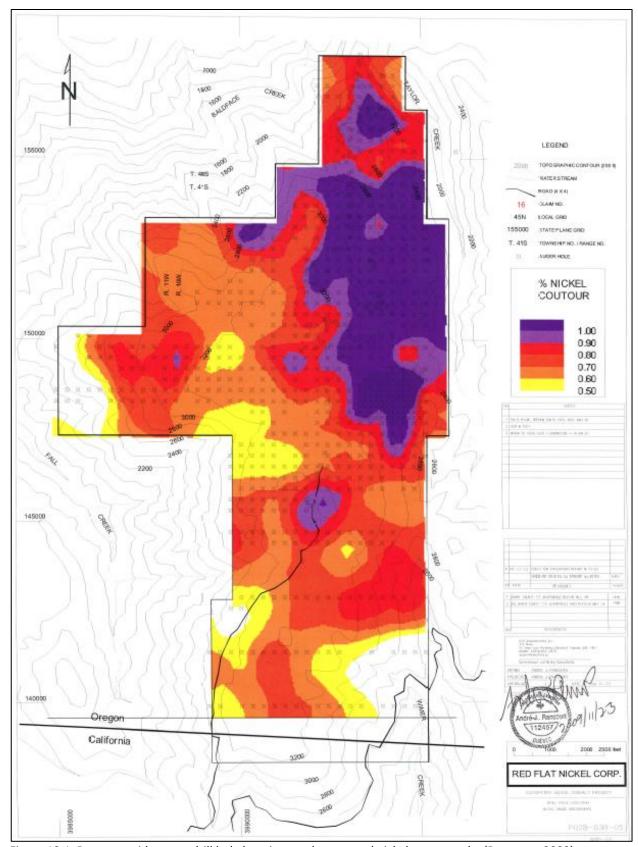


Figure 10-1. Property-wide auger drill hole locations and contoured nickel assay results (Rancourt, 2009).

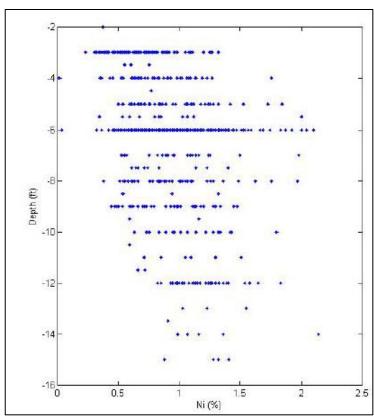


Figure 10-2. Variation in nickel concentration versus depth from auger drill holes (Rancourt, 2009).

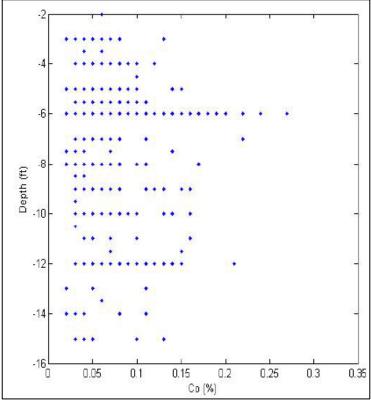


Figure 10-3. Variation in cobalt concentration versus depth from auger drill holes (Rancourt, 2009).

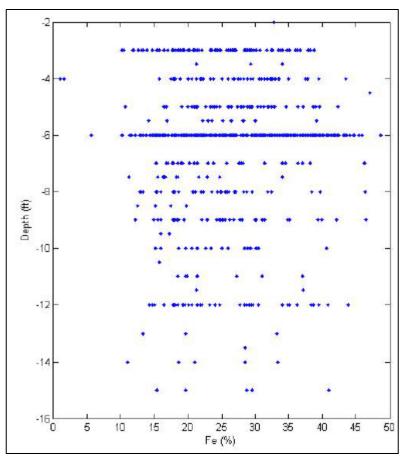


Figure 10-4. Variation in iron concentration versus depth from auger drill holes (Rancourt, 2009).





Figure 10-5. Auger drilling during Red Flat Nickel Corp.'s 2007 and 2008 field season. (A) Six-foot steel auger bit. (B) Two-man 1.6 HP auger drilling a hole (Rancourt, 2009).

The Auger drill sampling method has some advantages and some drawbacks:

- Advantages:
  - o Auger drills are light and easily handled;

- Possibility to obtain several hundreds of shallow holes rapidly;
- Covers large areas.

#### • Drawbacks:

- The recovery can be very low especially in saturated materials;
- The method is ineffective to sample corestones in the saprolite zones;
- Is a shallow hole method.

With the sampling method used, the corestones and surface bedrock (which have nickel rich oxide and silicate coating and veins) are under-sampled (Rancourt, 2009).

# 11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

There is limited information and data available with respect to the past exploration work completed by Red Flat Nickel Corp. from 2007 to 2009 (Rancourt, 2009). Sampling preparation, analysis and security related to historical exploration work, to the extent that it is known, is provided in Section 6.

All auger, rock and soil sampling was performed by LLR. Samples were individually wrapped and identified with a unique number. The samples were sent to the assay laboratory quickly after being recovered from the field and a sample register was continually updated with results. The register is also a summary of assay results for nickel, cobalt, iron and magnesium (Rancourt, 2009).

The laboratory, ALS Chemex of Vancouver, Canada, performed the assays using the conventional ME-ICP61 method. This Canadian laboratory is ISO/IEC 17025 certified by the Standards Council of Canada and has its own quality control system (Rancourt, 2009).

Quality control measures were completed by Red Flat Nickel Corp. In 2007, AJR completed six (6) spot check drill holes and collected 11 samples. In 2009, AJR collected 19 samples of corestone from the trenches. In addition, 10 samples that were already assayed by LLR were re-assayed by AJR. All assays performed by AJR were carried out using the Ni-ICP81 method (Rancourt, 2009).

The Authors and the Issuer are independent of the laboratories used by Red Flat Nickel Corp. and previous operators as reported herein.

# 12.0 DATA VERIFICATION

#### 13.1 Internal-External Data Verification

The Authors have reviewed historical and current data and information regarding past and current exploration work on the Cleopatra Property, as provided by the Issuer Spruce Ridge. The Authors has no reason to doubt the adequacy of exploration work completed by previous Property Operators (*i.e.*, Red Flat Nickel Corp.), including sample collection, preparation, security and analytical procedures, and are confident with respect to this data and information and its use for the purpose of the Report (*see* Section 2.1).

The Principal Author has independently reviewed the status of the mining claims held by the Issuer through the U.S. Federal Government Bureau of Land Management online portal which hosts information regarding mining claims on federal land in the state of Oregon.

# 13.2 Verification Performed by the QPs

Co-Author Mr. John Siriunas (M.A.Sc., P.Eng.) visited the Property on 8 August 2023, accompanied by Mr. Michael D. Strickler. Mr. Strickler is the principal of Lithologic Resources, LLC, the consulting group that carried out much of the historical contract exploration work on the Property. The personal inspection was made to observe the general Property conditions and access, and to verify the locations of some of the previous exploration work. The Property does have some bedrock outcroppings but is mainly covered by saprolitic/lateritic material. A total of three (3) samples of ultramafic material (2 lateritic soil and 1 bedrock) were collected from various locations on the Property, all containing anomalous nickel concentrations (see Section 2.5).

# 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Red Flat Nickel Corp. (now Homeland Nickel) collected two large samples from five trenches on the Cleopatra Property and four trenches on the Red Flat Property. These samples were sent for analysis to the SGS laboratory in Lakefield, Ontario, Canada (Rancourt, 2009). The objectives of the analysis were to perform:

- 3) Chemical, grain size and mineralogical characterisation of the ore; and
- 4) Leaching program, including Bottle Roll Leach Testing and Agitated Leach Testing.

Table 13-1 and Table 13-2, from Rancourt (2009), provide the characteristics of the samples from the Cleopatra Property and the Red Flat Property, respectively, collected by LLR and sent to SGS. SGS received and prepared a total of 588 kg of wet material from Cleopatra and 293 kg of wet material from Red Flat. Samples were separated into two composite fractions, the limonite (L) and the saprolite (S) fraction.

Given that this analysis was a preliminary study and because the deposits are similar, the limonite fraction and the saprolite fraction from both properties were blended together resulting in one blended limonite fraction and one blended saprolite fraction. The blended sample of limonite from both properties totalled 193 kg of material and the blended sample of saprolite from both properties totalled 688 kg; a total wet weight of 881 kg (Rancourt, 2009).

Fractional size analysis of the limonite fraction shows an average head grade of 1.08% Ni, with the -400 mesh fraction being the highest grade nickel (1.2% Ni). The majority of the nickel exists in the -400 mesh fraction. When screened at 400 mesh, 80.6% of the sample weight was recovered and the grade increased from 1.08% to 1.2% Ni (Figure 13-1).

For the saprolite fraction, the average head grade was 1.08% Ni and the highest grade fractions were +1 inch (+25.4 mm) and -100 mesh. When screened, keeping only the +1 inch and -100 mesh, 70% of the sample weight was recovered and the grade increased from 1.08% to 1.3% Ni (Rancourt, 2009).

Figure 13-2 shows the assay results against the grain size and Figure 13-3 shows the cumulative frequency of the different grain sizes. Figure 13-3 shows that limonite is generally composed of finer grained material as 80% passes through the 38  $\mu$ m sieve, whereas only 50% of the saprolite passes through the same 38  $\mu$ m sieve.

The Principal Author has not done any review of the information and results related to metallurgical processing and metallurgical testing.

Table 13-1. Characteristics of samples sent to SGS for mineralogical and metallurgical testing – Cleopatra Property.

Sample ID	Ore Type	Gross Wt	Net Wt*	Ni	Co	Cr	Fe	Mg	Fe/Mg
CL-M-1-1	L	15.16	14.88	0.58	0.093	2.49	40.6	2.42	
CL-M-1-1 CL-M-1-2	L	15.10	15.34	0.785	0.093	2.49	42.6	2.42	16.8 20.4
CL-M-1-2 CL-M-1-3	L	14.82	14.54	0.765	0.192	2.47	47.5	1.57	30.3
CL-M-1-3	L	17.87	17.59	0.864	0.192	2.47	47.5	1.18	39.9
CL-M-1-4 CL-M-1-5	L	9.37	9.09	0.004	0.207	2.45	46.4	1.10	37.1
CL-M-1-5	Ĺ	13.17	12.89	1	0.169	2.13	44.8	1.7	26.4
CL-M-1-6 CL-M-1-7	L	19.81	19.53	1.055	0.169	1.75	44.0	3.76	10.7
CL-M-1-7 CL-M-1-8	S	15.35	15.07	1.055	0.140	1.75	33.6	7.7	4.4
CL-M-1-9	S	12.28	12	1.38	0.149	1.76	39.2	4.37	9.0
CL-M-1-3	L	18.57	18.29	0.928	0.143	1.6	37.9	2.92	13.0
CL-M-2-1	S	17.27	16.29	1.085	0.100	1.28	34.2	4.31	7.9
CL-M-2-2	S	12.51	12.23	1.37	0.076	0.943	27.9	7.4	3.8
CL-M-2-3	S	10.04	9.76	1.29	0.054	0.993	28	7.16	3.9
CL-M-2-5	S	12.76	12.48	1.41	0.061	1.15	28.7	6.72	4.3
CL-M-2-6	S	13.23	12.40	1.3	0.047	0.824	23	10.15	2.3
CL-M-2-7	S	11.04	10.76	1.27	0.057	0.693	20.4	10.15	1.9
CL-M-2-8	S	10.05	9.77	1.37	0.047	0.671	20.4	11.65	1.8
CL-M-2-9	S	12.62	12.34	1.62	0.053	0.687	21.7	13.95	1.6
CL-M-2-10	S	17.34	17.06	1.39	0.055	0.702	19.25	11.3	1.7
CL-M-3-1	L	16.02	15.74	0.969	0.113	1.35	36.2	3.16	11.5
CL-M-3-1	Ĺ	9.92	9.64	1.15	0.113	1.51	38.6	2.99	12.9
CL-M-3-3	S	12.48	12.2	0.802	0.123	1.25	31.8	7.08	4.5
CL-M-3-4	S	9.89	9.61	1.02	0.123	1.19	31.6	6.18	5.1
CL-M-3-5	S	12.95	12.67	0.86	0.089	1.06	29.2	8.88	3.3
CL-M-3-6	s	11.3	11.02	0.969	0.074	0.992	27.3	9.53	2.9
CL-M-3-7	S	11	10.72	1.24	0.081	0.769	26.2	10.5	2.5
CL-M-3-8	S	9.13	8.85	0.913	0.058	0.59	20.2	14.05	1.4
CL-M-3-9	s	10.41	10.13	1.32	0.088	0.848	22.6	10.35	2.2
CL-M-3-10	S	10.41	10.13	1.68	0.091	1.43	31.3	6.35	4.9
CL-M-3-11	S	10.1	9.82	1.505	0.107	1.1	28.8	8.52	3.4
CL-M-3-12	S	13.25	12.97	1.57	0.093	0.85	28.5	8.1	3.5
CL-M-4-1	L	13.55	13.27	0.836	0.102	1.28	34.8	2.75	12.7
CL-M-4-2	L	10.47	10.19	1.15	0.14	1.5	37.9	3.09	12.3
CL-M-4-3	L	9.14	8.86	1.4	0.147	1.53	41.6	1.62	25.7
CL-M-4-4	L	10.06	9.78	1.485	0.181	1.42	44.6	1.03	43.3
CL-M-4-5	L	11.49	11.21	1.695	0.152	1.72	40.5	2.25	18.0
CL-M-4-6	L	8.85	8.57	1.63	0.171	2	42.4	1.7	24.9
CL-M-4-7	L	10.94	10.66	1.675	0.142	1.36	40.2	2.63	15.3
CL-M-4-8	S	8.48	8.2	1.36	0.117	1.23	33.5	5.81	5.8
CL-M-4-9	S	8.2	7.92	1.35	0.133	1.45	35.8	4.59	7.8
CL-M-4-10	S	6.87	6.59	1.23	0.116	0.947	23.7	10.5	2.3
CL-M-4-11	S	6.46	6.18	1.39	0.106	1.18	28.9	7.86	3.7
CL-M-4-12	S	9.81	9.53	1.25	0.136	1.13	25.7	8.89	2.9
CL-M-5-1	L	12.2	11.92	1.23	0.137	1.83	42.3	1.65	25.6
CL-M-5-2	S	9.6	9.32	0.919	0.047	0.864	25.3	11.4	2.2
CL-M-5-3	S	10.93	10.65	1.1	0.078	0.984	25.5	11.45	2.2
CL-M-5-4	S	12.01	11.73	1.695	0.135	1.65	38.2	4.16	9.2
CL-M-5-5	S	10.9	10.62	0.583	0.042	0.641	14.9	17.5	0.9
CL-M-5-6	S	8.54	8.26	1.17	0.07	1.48	30.7	8.34	3.7
CL-M-5-7	S	8.42	8.14	0.72	0.026	0.521	15.2	16.7	0.9
CL-M-5-8	S	9.77	9.49	0.862	0.036	0.624	16.2	16.1	1.0
Total			588.15	_					
				kg / samp	ole in com	р			
			51						
			315.18	kg in com	ıp				
*Net Wt includes plastic sample bag									
**************************************									

Note: Gross Wt = wet weight and Net Wt = dry weight

Table 13-2. Characteristics of samples sent to SGS for mineralogical and metallurgical testing – Red Flat Property.

Sample ID	Ore Type	Gross Wt	Net Wt*	Ni	Co	Cr _	Fe _	Mg	Fe/Mg
RF-M-1-1	L	5.83	5.55	0.795	0.071	1.66	36.1	3.31	10.91
RF-M-1-2	L	5.43	5.15	1.26	0.075	1.8	42	2.09	20.10
RF-M-1-3	S	4.67	4.39	1.23	0.104	1.64	36	4.79	7.52
RF-M-1-4	S	5.58	5.30	1.15	0.062	0.864	24.9	9.88	2.52
RF-M-1-5	S	6.11	5.83	1.06	0.046	0.695	22.8	10.95	2.08
RF-M-1-6	S	5.49	5.21	1.08	0.053	0.819	25.8	9.91	2.60
RF-M-1-7	S	6.21	5.93	1.14	0.047	0.958	21.8	11.2	1.95
RF-M-1-8	S	4.97	4.69	0.917	0.028	0.462	13.75	16	0.86
RF-M-1-12	S	12.64	12.36	0.629	0.022	0.38	11.1	17.9	0.62
RF-M-2-1	S	4.63	4.63	0.95	0.049	0.806	25.1	6.53	3.84
RF-M-2-2	S	4.65	4.37	0.783	0.024	0.401	12.3	16.9	0.73
RF-M-2-3	S	4.26	4.26	0.853	0.02	0.296	11.9	16.85	0.71
RF-M-2-4	S	4.88	4.60	0.457	0.024	0.41	14.6	12.75	1.15
RF-M-2-5	S	4.07	3.79	0.605	0.017	0.244	9.83	16.1	0.61
RF-M-2-6	S	4.92	4.92	0.521	0.015	0.213	9.3	17.2	0.54
RF-M-2-7	S	5.99	5.71	0.288	0.014	0.206	8.79	16.75	0.52
RF-M-2-8	S	4.53	4.53	0.283	0.014	0.206	8.83	17.15	0.51
RF-M-3-1	S	8.47	8.47	0.27	0.038	1.21	28.6	2.99	9.57
RF-M-3-2	L	9.49	9.21	0.745	0.029	1.84	46.4	1.09	42.57
RF-M-3-3	L	6.17	5.97	0.815	0.045	1.83	47.9	0.92	52.07
RF-M-3-4	L	9.38	9.10	0.821	0.098	1.91	44.3	1.07	41.40
RF-M-3-5	L	9.51	9.23	0.71	0.18	1.11	39.9	2.07	19.28
RF-M-3-6	L	8.51	8.51	0.782	0.199	1.07	40	2.17	18.43
RF-M-3-7	L	9.67	9.39	1.01	0.176	1.47	43.6	2.06	21.17
RF-M-3-8	S	8.27	8.27	0.765	0.125	0.968	34.8	5.04	6.90
RF-M-3-9	S	8.80	8.52	0.736	0.128	0.87	30.9	5.48	5.64
RF-M-3-10	S	8.19	8.19	0.882	0.126	0.894	32.2	4.51	7.14
RF-M-3-11	S	8.89	8.61	0.919	0.105	0.883	32.5	4.02	8.08
RF-M-3-12	S	8.01	8.01	1.02	0.086	0.823	29.1	4.76	6.11
RF-M-3-13	S	8.07	7.79	1.01	0.078	0.875	29.9	4.53	6.60
RF-M-3-14	S	7.43	7.43	0.979	0.086	0.82	29	6.29	4.61
RF-M-3-15 RF-M-3-21	S S	6.93 9.55	6.65	1.02	0.075	1.05 0.628	27.2	7 700	3.89 3.50
			9.55	1.44	0.066		24.8	7.08	
RF-M-4-1 RF-M-4-2	L S	9.06 9.77	9.06	1.03	0.086	2.82	50	0.64 4.53	78.13 8.81
RF-M-4-3	S	8.96	9.49 8.68	1.25 1.57	0.22 0.187	2.07 0.749	39.9 28.1	7.08	3.97
II	S			l				6.79	
RF-M-4-4 RF-M-4-5	S	9.85 10.97	9.85 10.69	1.75 1.32	0.166 0.15	0.795 0.61	28.4 20.8	11.8	4.18 1.76
RF-M-4-6	S	10.97	10.69	1.66	0.179	1.03	29.5	7.19	4.10
RF-M-4-7	S	11.41	11.13	1.48	0.175	0.825	20.7	11.35	1.82
Total	3	11.41	293.43		0.130	0.023	20.7	11.55	1.02
Total			3.79	_	in comp				
	3.79 kg / sample in comp 40 samples								
				kg in comp					
			131.0	ng in comp					

Note: Gross Wt = wet weight and Net Wt = dry weight

\*Net Wt excludes plastic sample bag

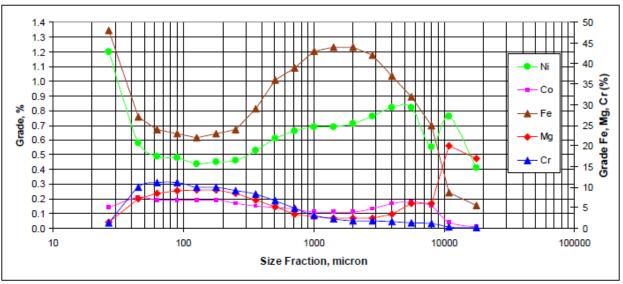


Figure 13-1. Assay results according with grain size for the limonite composite sample (Rancourt, 2009).

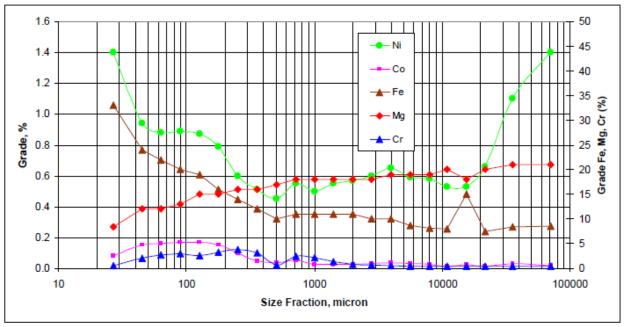


Figure 13-2. Assay results according with grain size for the saprolite composite sample (Rancourt, 2009).

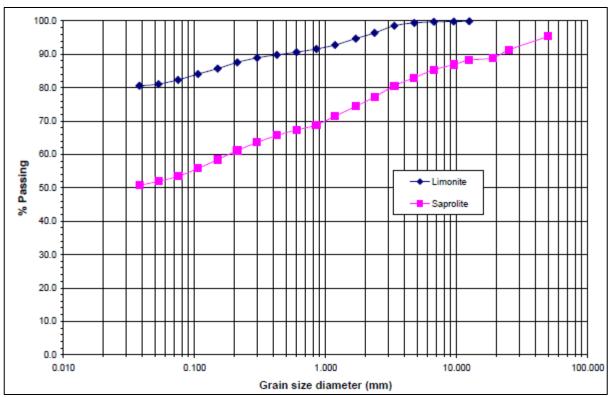


Figure 13-3. Cumulative frequency of the different grain size for the limonite and the saprolite fraction (Rancourt, 2009).

# 14.0 MINERAL RESOURCE ESTIMATES

The Cleopatra Property contains no current mineral resource estimates.

# 15.0 MINERAL RESERVES

This section is not applicable to the Property at its current stage.

# **16.0 MINING METHODS**

This section is not applicable to the Property at its current stage.

# 17.0 RECOVERY METHODS

This section is not applicable to the Property at its current stage.

# **18.0 PROJECT INFRASTRUCTURE**

This section is not applicable to the Property at its current stage.

### 19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable to the Property at its current stage.

# 20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section is not applicable to the Property at its current stage.

# 21.0 CAPITAL AND OPERATING COSTS

This section is not applicable to the Property at its current stage.

# 22.0 ECONOMIC ANALYSIS

This section is not applicable to the Property at its current stage.

# 23.0 ADJACENT PROPERTIES

There are no adjacent properties that would materially affect the Authors' understanding of the Project and the results of the Report.

# 24.0 OTHER RELEVANT DATA AND INFORMATION

The Authors are not aware of any additional information or explanations necessary to make the Report understandable and not misleading.

# 25.0 INTERPRETATION AND CONCLUSIONS

The objective of the Report was to prepare an independent NI 43-101 Technical Report, capturing historical information and data available about the Cleopatra Ni-Co Property, providing interpretations and conclusions, and making recommendations for future exploration work.

# 25.1 Target Deposit Type

Concentration of nickel and cobalt on the Cleopatra Ni-Co Property is derived from the surface alteration of olivine-rich ultramafic rocks, referred to as nickel laterites. The parent ultramafic rocks average 0.2 to 0.4% Ni.

Laterites are formed by weathering of the serpentinized peridotites generally in humid savanna climates with poor drainage and associated with dry climates and semi-arid environments. During weathering, nickel is concentrated in place, while more soluble elements such as magnesium, calcium and silica are dissolved and leached rapidly. Nickel accumulates in the form of nickel-silicate veins or becomes enriched in the insoluble residue of silica, nickel hydrosilicates, and oxides of magnesium and iron. Laterites found on the Property are remnants of an old upland surface and according to Irwin (1997), the weathering having taken place during the Pleistocene and/or the Pliocene.

# 25.2 Geology and Mineralization

The Cleopatra Ni-Co Property is located on the northwestern part of the Klamath Mountains physiographic terrane and is composed primarily of volcanic rocks and some ultramafic and gabbroic intrusions of Jurassic age. The Pre-Nevadan Klamath Mountain rocks are in contact to the west with younger Northern Coastal Range rocks of the Dothan Point sedimentary Formation, and to the east by the Cascade Range younger Cenozoic volcanic rocks (Rancourt, 2009).

The Property overlies intrusive ultramafic rocks mainly composed of partly serpentinized peridotite - wehrlite and Iherzolite (Rancourt, 2009). Ultramafic rocks are mainly composed of altered olivine, serpentine, chlorite with some ortho- and clinopyroxene. Magnetite and hematite was also observed with hematite present in small veinlets. Ultramafic rocks have been intruded by a number of small diabase dikes (Ramp, 1978).

The mineralized horizon has a lateritic weathering profile formed by the prolonged weathering of the ultramafic rocks in sub-tropical climates. The thickest portion of lateritic nickel mineralization is within the northeast quadrant of the Cleopatra Property where slumping and landslides accumulated down-slope with a thickness reaching up to 50 ft (15.2 m) (Rancourt, 2009).

In 2009, Garnierite Group minerals with nickel silicate were discovered in the trenches (Rancourt, 2009). Light coloured garnierite results from the alteration of olivine-rich rock to a clay-like mineral poor in nickel; light green to bright green garnierite is a result of the leaching of manganese oxide, magnesium, nickel and iron from the original dark green garnierite and is enriched in nickel, deposited by groundwater. Garnierite is commonly found as thin veinlets millimetres to centimetres thick or as fracture fillings.

Mineralization occurs in two fractions, the soil fraction and the rock fraction. For the soil fraction, the mineralized zone is usually composed of residual goethitic limonite covering altered peridotite layers (saprolite) with iron oxide veins. Within the rock fraction, nickel is concentrated in thin fracture fillings of garnierite saprolite corestone blocks (Rancourt, 2009).

Three types of mineralization were identified by Rancourt (2009), based on the cumulate frequency of the nickel grade. The first type is from 0.0 to 0.5% Ni and represents the non-mineralized zone. The second type is the first mineralization zone from 0.5% Ni to approximately 1.2% Ni. The third type is the high-grade mineralization zone above 1.2% Ni (Rancourt, 2009).

The difference between limonite and saprolite is defined in terms of the Fe/Mg ratio. A ratio above 10 indicates limonite, and a ratio below 10 indicates saprolite. The limonite is usually present above the saprolite, and ranges in thickness from 1 ft to 10 ft (0.3-3.1 m) in the trenches. The limonite is mostly composed of very fine and uniform red clay, while the saprolite is coarser with a high in place porosity.

# 25.3 Historical Mineral Resource Estimate (2009)

In 2009, AJR Geoconsulting Inc. prepared a mineral resource estimate for the nickel laterite mineralization on the Cleopatra Ni-Co Deposit, located on the Cleopatra Property (Rancourt, 2009). The 2009 historical mineral resource estimate on the Cleopatra Nickel-Cobalt Deposit is detailed in the report titled, "Evaluation of the Cleopatra Ni/Co Property Mining Potential, Curry County, Oregon, U.S.A., NI 43-101 Technical Report", with a date of 23 November 2009, and prepared by Geological Engineer Andre J. Rancourt (P.Eng., Quebec #112457) of AJR Geoconsulting Inc. for Red Flat Nickel Corp.

The 2009 mineral resource estimate was completed in accordance with NI 43-101 and following the CIM Definition Standards for Mineral Resources & Mineral Reserves (CIM, 2005).

The data and information used in the 2009 historical mineral resource estimation comes from the 2007 to 2009 auger testing program and the 1978 DOGAMI drill data. In 2009, trenching was conducted to obtain more accurate geological profiles and increase the knowledge in the resources (Rancourt, 2009).

Table 25-1 and Table 25-2 present the historical mineral resource estimate at two different %Ni cut-offs (Rancourt, 2009). The 2009 historical mineral resource estimate does not consider contributions from other metals like cobalt.

Table 25-1. Summary of the 2009 historical mineral resource estimation, Cleopatra Ni Deposit (0.7% Ni cut-off).

Category	Type	US Tons (1,000s)	Ni (%)	Ni (pounds)*
Measured	Soil	3,342	1.07%	71,518,800
Measured	Rock	1,913	0.83%	31,755,800
Measured Total:	S+R	5,255	0.98%	103,274,600
Indicated	Soil	9,569	0.96%	183,724,800
Indicated	Rock	4,979	0.84%	83,647,200
Indicated Total:	S+R	14,548	0.92%	267,372,000
Measured + Indicated	Soil	12,911	0.99%	255,243,600
Measured + Indicated	Rock	6,892	0.84%	115,403,000
Meas. + Ind. Total:	S+R	19,803	0.94%	370,646,600
Inferred	Soil	12,320	0.97%	239,008,000
Inferred	Rock	7,351	0.84%	123,496,800
Inferred Total:	S+R	19,671	0.92%	362,504,800

<sup>\*</sup>assumes 100% nickel recovery (contained metal).

Ni (pounds)\* Type US Tons (1,000s) Ni (%) Category Measured Soil 3,342 1.07% 71,518,800 Measured Rock 1,572 0.85% 26,724,000 **Measured Total:** S+R 4,914 1.00% 98,242,800 Indicated 7,365 1.03% 151,719,000 Soil Indicated 3,605 0.84% 60,564,000 Rock **Indicated Total:** 0.97% 212,283,000 S+R 10,970 Measured + Indicated Soil 10,707 1.04% 223,237,800 Measured + Indicated 87.288.000 Rock 5,177 0.84% Meas. + Ind. Total: S+R 15,884 0.98% 310,525,800 Inferred Soil 6,993 1.01% 141,258,600 Inferred 0.84% 54,566,400 Rock 3,248 **Inferred Total:** S+R 10,241 0.96% 195,825,000

Table 25-2. Summary of the 2009 historical mineral resource estimation, Cleopatra Ni Deposit (0.8% Ni cut-off).

Mineral resources are not mineral reserves, they do not have demonstrated economic viability, and there is no certainty that all or part of an estimated mineral resource can be converted to mineral reserves.

A qualified person has not done sufficient work to classify the 2009 historical mineral resource estimate as current mineral resources or mineral reserves. Other than the review by the Principal Author, the Issuer has not conducted any work to establish the relevance and reliability of the 2009 historical resource estimate and as such is not treating the historical mineral resource estimate as current mineral resources.

#### 25.4 Risks and Uncertainties

Risks and uncertainties which may reasonably affect reliability or confidence in future work on the Property relate mainly to the reproducibility of exploration results (*i.e.*, exploration risk) in a future production environment. Exploration risk is inherently high when exploring for laterite nickel-cobalt deposits, however at Cleopatra these risks are mitigated by the knowledge obtained from the 748 drill holes and by applying the latest exploration techniques (*e.g.*, geophysics, geology, geochemistry) to develop high confidence targets for future drilling programs and mineral resource delineation and estimation.

The Authors are not aware of any other significant risks or uncertainties that would impact the Issuer's ability to perform the recommended work program (see Section 26) and other future exploration work programs on the Property.

#### 25.5 Conclusions

Based on the Property's favourable location in southwestern Oregon, an area known to host numerous laterite nickel-cobalt properties including those that are located immediately south of Oregon in northern California, the Property presents an excellent opportunity to develop nickel mineral resources and to make additional discoveries of nickel-cobalt laterite mineralization.

<sup>\*</sup>assumes 100% nickel recovery (contained metal).

Characteristics of mineralization on the Cleopatra Ni-Co Property and the knowledge gained from drilling to date, are of sufficient merit to justify additional surface exploration work, including rock and soil sampling, trenching, geophysics, and metallurgical and mineralogical studies, with aim to develop drill targets for future drilling and mineral resource definition.

# **26.0 RECOMMENDATIONS**

It is the opinion of the Authors that the geological setting and character of the nickel laterite mineralization discovered to date on the Cleopatra Ni-Co Property is of sufficient merit to justify additional exploration expenditures on the Property. A recommended work program, arising through the preparation of the Report and consultation with the Company, is provided below.

A Phase 1 exploration program is recommended (Table 26-1), consisting of a high resolution airborne magnetic survey, rock/soil sampling and assays, review and validation of historical surface and drill hole sampling and related assays, and a maiden NI 43-101 mineral resource estimate and technical report. The estimated cost for the recommended Phase 1 component of exploration work is approximately C\$200,000 (Table 26-1). The recommended Phase 1 exploration program could be accomplished within a 12 month period.

Table 26-1. Budget estimate for a recommended Phase 1 exploration program, Cleopatra Ni-Co Property.

ITEM	DESCRIPTION	AMOUNT (C\$)
Geophysics	High resolution airborne magnetics survey	\$75,000
Geochemical Survey	Surface rock and soil sampling; assays	\$50,000
Data Review and Validation	Historical data confirmation (geochemistry; drilling); maiden mineral resource estimate	\$50,000
Technical Reporting	Reporting	\$25,000
	Total (C\$):	\$200,000

Budget does not include G&A and associated taxes and fees.

#### 26.1 General Recommendations

General recommendations, compiled during the preparation of the Report, are as follows:

- All drill hole collar locations, future, current and where possible historical, should be surveyed using a differential GPS (DGPS) system to ensure higher accuracy in the X, Y, Z coordinates.
- Previous work in 2007 and 2009 was geolocated using the Oregon State Plane Coordinate System.
   It is recommended that future work be done using the NAD83 (CONUS) or WGS84 datum.
   Conversion of the previous work to one of these other datums should be completed.
- Reinterpretation of the original seismic refraction survey should be completed when supplemental drilling data is available.
- 3D geological and surface modelling should be completed.
- A LiDAR survey over the property should be considered.
- A robust QA/QC program for surface rock and geochemical sampling should be developed; this could also be applied to any future drilling programs.
- A more robust style of drilling should be considered for future programs such as reverse circulation (RC) drilling, as it will facilitate complete sampling from surface into the underlying bedrock.

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