AIV-Registry #0008
TRIAL EXPERT
Dennis D. Blacklaws
Valuation Specialist

Dennis Blacklaws

LOWER HUTT: 10 Laings Road, Lower Hutt, 5010, New Zealand
Phone & Fax (04) 566-3668
Email: dennis.blacklaws@gemlink.co.nz Website : www.gemlink.co.nz
Resident Appraiser/Valuer: Dennis D. Blacklaws
Gems & Jewellery Specialist - Appraiser/Valuer - Graduate Gemologist

Reg# 0008 Aisociety

Appraisal prepared for

Address

AppraisalPlus DBL06001
Ref No: 21669DB/LH24830

Date: 9 March, 2021

ARTICLE

ITEM 1. CONTINUED .../

Surround Diamonds, (**MRSBC**) **modern**, and **(Round)** shaped **"Brilliant"** cut; .... **CONTINUED ..../**

This **Laboratory** has **applied various "in-situ"** type **"method/s"** to **"identify"** the **type** and/or **origin** of the **submitted Diamond/s** and may **include** the use of some (**if not all**) of the following; **Microscopy "examination",** including ***analysis*** with ***cross-Nicol polarized Filters*** (**Polariscope**) **(CPF)** *and/or* the **Gemtrix PL Inspector** *and/or* the **use** of **"SSEF classic illuminator"** and/or **(Neodymium) rare-earth Magnetism** *and/or* **GL Gem Spectrometer.**
For the **purposes** of this **Appraisal** these **Diamonds** have been **appraised/valued** as (**Natural - Earth Mined**).

N.B. (**Natural**) Ruby and Diamonds **graded** in mounts (***in-situ***).
Diamonds **est Total (Est 0.510ct).**
Immersion Microscopy ***analysis*** indicates Ruby of **(Natural) (Mong-Hsu)** origin.
(**Natural**) Ruby **length←** & **width→** & **depth↕** and Diamonds **diameterØ** & **depth↕**
dimension measurements **estimated** due to mounts.
Diamonds colour **graded** under an (**ultraviolet-free**) colour/grading **environment.**
Diamonds **body** colour **Masked** due to mounts.
(**MRSBC**) Diamonds of **G.I.A. Very Good cut/grade.**
Diamonds **NEED** to be **removed** from **mounts** for more
accurate **Weight, Colour** and **Clarity** grading and to ***identify*** if Clarity **enhanced.**

Diamonds presenting inert (***Nil***) and (***Faint***) weak – strong
and **cloudy - translucent** with Violetish/Bluish and Bluish
and ***Fluorescent*** and colour ***reaction*** to L.w.U.v. **radiation.**

Ring Total Weight (4.92grams) with Total Metal Weight (4.58grams).
Ring presenting as 'New' and Safe condition.
Finger size (T) centre. Photographs (X2/1.).

R.M.V.N. **$.7,960.00**
I.M.V. **$.7,960.00**

Item No 1. for (courtesy) **"WIKIPEDIA" REFERENCES CONTINUED .../**

CONTINUED .../

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ITEM 1. CONTINUED .../

Central Ruby, **modified**, and **"Oval"** shaped, **(mixed)** cut; .... **CONTINUED ..../**

GIA ColorMaster® Notation D:36:00:33 with Colour grade (7)

GIA GemSet® colour Analysis

(1) **(single)** and **(Natural)** Ruby presenting Good - Fair *symmetry* and *proportions*, with off-centre *culet* and High surface *polish* and presenting (Nil) Window *effect*, with colour *Banding* and colour *Zoning* and presenting a number of internal *relic melt residue Fluid Healing-Fracture* and *Discoid iridescence fracture* and a number of of *Positive* and *Negative* type *Crystallites* and *Epitaxially inter-grown syngenetic (in-complete interrupted) Rutile* and *Polysynthetic Twin Lamellae, Turbulence* and *Zones & Nebulous* and *Phantom* type *Cloud* inclusion *scenes*, applying (oblique lighting) and (immersion microscopy) technique, presented in mount.

N.B. Check **Spectrometer** Analysis.

It is an **Internationally** recognised **trade** practice to **treat/enhance** gems of this **variety**, by various **methods** to **enhance** the **colour** and/or **clarity**,- **applying** immersion **Microscopy** technique indicates **SOME** evidence of ***Significant/Substantial*** amount of **"Residue"** from **standard** ***Thermal-Heat/Annealing*** treatment is ***immediately*** apparent - **Research** also ***indicates*** this treatment ***may/does*** also **involves** the **use** of the more **NON-Traditional** type ***treatment/enhancement*** process with the ***addition*** of a ***Filler*** type ***clarity - enhancement*** of a ***propriety-process*** type ***treatment*** is **immediately** apparent with-in this **Gem**.
Extent: ***Significant/Substantial*** Stability: **Stable** under normal wearing conditions. Prevalence: **Never/Rarely/Commonly/Usually**

N.B. **Positive Provenance/Origin Identification may alter assessed value** of **submitted Ruby**. **This** can **only** be **established** by an **International** recognised **Gemological Laboratory** i.e. **(G.I.A.)** **(Gubelin)** and/or **(GRS/SWISSLAB)** **specialising** in **(Origin) identification** and/or **including; (LA-ICP-MS) = (Laser Ablation Inductively Coupled Plasma Mass Spectrometry)** and/or **(LIBS = Laser Induced Breakdown Spectroscopy)**, and/or **(FTIR = Fourier Transformed Spectroscopy)** and is **determined** on the **basis** of **concordant indications.**
For the **purposes** of this **Appraisal** the **Ruby** has been **appraised/valued** as **(Medium) quality.**
Applying assignment-specific research including examining **'facts - in - evidence'** and have been **appraised** at **current market value (as is)** with **cognisance** to the presented **authentication - physical nature**, **origin** and **quality** and **evaluation** of the above.

N.B. **Statement/s** of **"Geographical Origin"** included **within** this **Appraisal** are **submitted** by **'expert-opinion'** including **accumulative** and **analytical "Observations"** and **"Data"** and the **experience** of the **practitioner.**

Surround Diamonds, **(MRSBC) modern**, and **(Round)** shaped **"Brilliant"** cut;

10 x est 2.44-2.36mmØ x 1.45-1.40mm↕

***Est by Formula* (10 x est 0.053-0.049ct) (H or Higher) (SI_2)**

N.B. The **(10) Ten** presented **Diamonds** have by **application** and **"in-situ"** and **applied** type **examination** and ***analysis*** using "Ultra-Spectrum Optical Filtering" (USOF) and/or "The Diamond Trading Co" V2.03) **Diamond-Sure™** and/or "SmartPro™ screening **"instruments"** to separate **Cultured (LGD)** **Laboratory-Grown Diamond** of **(HPHT)** High-Pressure High Temperature and/or **(CVD)** Chemical Vapour Deposition **Cultured (LGD)** **(Laboratory-Grown)** and/or **(treated)** Diamonds - also known as **(Created/Man-Made)** from **"Natural-Untreated" - "Earth-Mined"** Diamonds have **indicated** a **Pass/Positive result** for **"Natural-Untreated" - "Earth-Mined"** Diamonds.

ITEM 1. CONTINUED .../

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ARTICLE

1. Branded, (Reproduction) Cast/Fabricated,- (10) Bezel, with - (single) (1) species; Corundum variety; Ruby object: (faceted Gemstone) synthesis: (Natural) phenomena: transparent/translucent treatment: (Enhanced) analysis: Filler -Thermal origin: Myanmar/Burma (Mong-Hsu) and (10) species: Diamond object: (faceted) variety: Colourless synthesis: (Natural - Earth mined) treatment: (Non-enhanced) origin: Un-Known with vintage and contemporary/modernist type (double-tier) and (Halo) design (Cluster) style Ring.

Ring Metal composition analysed as 18ct Yellow gold and Rhodium-plated on top of White gold ***alloy,*** and ***'laser-inscribed'*** with **750** style ***hall/mark,*** and **MHJ** style ***brand/makers*** mark.

Ring presented with **Yellow gold** and plain, with flat (**section**) to **"reverse"** and ***'Taper'*** shape, ***'polish-finish'*** with 2.11mm← x 1.48mm→ x 1.17-4.30mm↕ dimension and **"Seamless"** style ***shank***.

Ring presented with **Yellow gold,** and flow-on to cut-out, ***plain*** and ***'inverted'*** to **"Point"** shaped, ***'solid'*** and **"Buttress"** style **"shoulder"** setting, ***placed*** and ***applied*** to ***either*** side.

Ring presented with **Rhodium-Plated** on top of **White gold**, and Elevated, with (**1**) (**single**) and separate ***Ruby***, with (4) ***claw*** and (4) ***pillar***, flush and inset, with cut-out and pierced, **"in-situ"** and **'single'** separate **"Bezel"** design, with ***'Oval'*** and **"Parallel"** shaped, ***Tension*** inset, type ***central*** style mount 8.10mm→ x 6.00mm← x 2.01mm↕ dimension and **"Assembly"** setting.

Ring presented with **Rhodium-Plated** on top of **White gold**, and Elevated, with (**10**) (**single**) and ***'alternate'*** and separate ***Diamonds***, with (10) x (5) ***claw*** and (10) x (5) ***pillar,*** and flush and inset, cut-out and pierced, **"in-situ"** and **'single'** separate **"Bezel"** design, ***'semi-scallop'*** and ***'dome'*** shaped, with ***'split-level'*** and ***'immediate'*** and **"surround"** and **"Parallel"** and **"Plaque"** shaped, ***Tension*** inset, type ***'pierced-back'*** and **"Assembly"** style mount **"Assembly"** setting.

Ring presented with 12.58mm→ x 10.58mm← x 6.87mm↕ dimension and **"Assembly"** setting ***applied*** across top of **Rhodium-Plated** on top of **White gold**, with (10) separate **"wire"** type **"cage-back"** style ***'base'*** and mm↕ ***height*** setting, ***placed*** and ***applied*** and inset ***between*** shank ends.

Centre Ruby, **modified**, and **"Oval"** shaped, (**mixed**) cut;

1 x est 7.09 x 5.01mmØ x 3.63mm↕ L.W. Ratio 1.415:1

Est by Formula **1 x est 1.191ct**

(**1**) (**single**) and (**Natural**) Ruby presenting
semi-translucent/transparent
(vivid) (very) slightly **Purplish/Reddish - Reddish** *Hue*,
with *Tone* **(5-7)** with *Saturation* **(4/5)** and *Clarity* **(SI-I.)**.

ITEM 1. CONTINUED .../

CONTINUED .../

JASNZ The Jewellery Appraisers Society of N.Z. Inc
EDINBURGH ASSAY OFFICE
GIA Gemological Institute of America
NAJA National Association of Jewelry Appraisers
GEMLINK

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(courtesy) ref: Wikipedia

A **Ruby** is a pink to **blood-red** colored **gemstone**, a variety of the **mineral** corundum (**aluminium oxide**). The red **colour** is **caused** mainly by the **presence** of the element **chromium**. **Its name** comes from *ruber*, Latin for red. Other **varieties** of gem-quality **corundum** are called **sapphires**. Prices of **rubies** are **primarily** determined by color. After color follows **clarity**: a clear stone will **command a premium**, but a ruby **without** any needle-like **rutile** inclusions may **indicate** that the stone has been **treated**. Cut and **carat** (weight) are also an **important** factor in **determining** the price. **Ruby** is the traditional **birthstone** for **July** and is **always** lighter **red** or **pink** than garnet. **Rubies** have a **hardness** of **9.0** on the **Mohs** scale of mineral **hardness**.

Among the **natural** gems only **moissanite** and **diamond** are harder, with diamond **having** a Mohs hardness of **10.0**. Ruby is **α-alumina** (the most stable form of Al_2O_3) in which a small **fraction** of the **aluminium**$^{3+}$ **ions** are **replaced** by **c hromium**$^{3+}$ ions. Each Cr^{3+} is surrounded **octahedrally** by six O^{2-} ions. This **crystallographic** arrangement **strongly** affects each Cr^{3+}, resulting in light **absorption** in the **yellow-green** region of the **spectrum** and **thus** in the **red** color of the **gem**. When **yellow-green** light is **absorbed** by Cr^{3+}, it is **re-emitted** as red **luminescence**. This red **emission** adds to the red color **perceived** by the **subtraction** of **green** and **violet** light from **white** light, and adds **luster** to the gem's **appearance**. When the **optical** arrangement is **such** that the **emission** is **stimulated** by **694-nanometer** photons **reflecting** back and forth **between** two mirrors, the **emission** grows **strongly** in **intensity**. This **effect** was **used** in **1960** to make the **first** successful **laser**, based on ruby.

All **natural** rubies have **imperfections** in them, **including** color **impurities** and **inclusions** of rutile **needles** known as "**silk**". Gemologists use **these** needle inclusions **found** in **natural** rubies to **distinguish** them from **synthetics**, **simulants**, or **substitutes**. Usually the **rough** stone is **heated** before **cutting**. Almost all **rubies** today are **treated** in some form, with **heat-treatment** being the most **common** practice. **However**, rubies that are **completely** untreated but **still** of **excellent** quality **command** a large **premium**. Some **rubies** show a **three-point** or **six-point** asterism or "**star**". These **rubies** are **cut** into **Cabochons** to display the **effect** properly. **Asterisms** are best **visible** with a **single-light** source, and move across the **stone** as the light **moves** and/or the stone is **rotated**. Such **effects** occur when light is **reflected** off the "**silk**" (the structurally ***oriented*** rutile needle inclusions) in a **certain** way. This is one **example** where **inclusions** increase the **value** of a gemstone. **Furthermore**, rubies can show **color changes** - though this **occurs** very **rarely** —as well as **chatoyancy** or the "**cat's eye**" effect.

Generally, **gemstone-quality** corundum in all **shades** of **red**, including **pink**, are called **rubies**. The **Mogok** Valley in Upper Myanmar (**Burma**) was for **centuries** the world's **main** source for rubies. That **region** has produced **some** of the **finest** rubies ever **mined**, but in **recent** years very few **good** rubies have been **found** there. In central **Myanmar**, the area of **Mong Hsu** began **producing** rubies during the **1990s** and rapidly **became** the world's main ruby **mining** area. The **New Montepuez** in (**Mozambique**), and probably the **deposit** near Diby (**Madagascar**), and **three** other ruby deposits **discovered** fairly recently in **Africa**. Amphibole-type rubies generally have **higher** iron content than those found in **marble-related** deposits and lower **iron** content than **those** from **basalt-related** deposits.

Recently found **ruby** deposit in **Myanmar** is in **Namya** (**Namyazeik**) located in the northern state of **Kachin**. Rubies have **historically** been mined in **Thailand**, the **Pailin** and **Samlout** district of **Cambodia**, **Burma**, **India**, **Afghanistan** and in **Pakistan**. In **Sri Lanka**, lighter **shades** of rubies (often "**pink** sapphires") are more **commonly** found. After the Second World War ruby **deposits** were **found** in **Mozambique Tanzania**, **Madagascar**, **Vietnam**, **Nepal**, Tajikistan, and **Pakistan**.

In the **evaluation** of **colored** gemstones, **color** is the most **important** factor. Color **divides** into **three** components: ***hue***, ***tone*** and ***saturation***. **Hue** refers to "**actual** color" as we **normally** use the term. **Transparent** gemstones **occur** in the following **primary** hues: **red, orange, yellow, green, blue, violet**. These are known as ***pure spectral hues***. In **nature**, there are rarely **pure** hues, so when speaking of the ***hue*** of a gemstone, we speak of **primary** and **secondary** and sometimes **tertiary** hues. In **ruby**, the **primary** hue must be **red**. All **other** hues of the gem **species** corundum are called **sapphire**. **Ruby** may **exhibit** a range of **secondary** hues, **Orange, purple, violet** and **pink** are possible. The **finest** ruby is **best** described as **being** a **vivid** medium-dark **toned** red. **Secondary** hues add an **additional** complication. **Pink, orange**, and **purple** are the **normal** secondary **hues** in ruby. Of the three, **purple** is **preferred** because, firstly, the purple **reinforces** the red, making it **appear** richer.

Rubies and **Sapphires** may be **treated** by several **methods** to **enhance** and **improve** their **clarity** and **colour**. It is common **practice** to **heat** natural sapphires to **improve** or enhance **colour**. This is **done** by **heating** the Rubies and/or sapphires in **furnaces** to **temperatures** between **500** and **1800 °C** for several hours, or by heating in a **nitrogen-deficient** atmosphere **oven**. Evidence of ruby and sapphire and other **gemstones** being **subjected** to **heating** goes back at least to **Roman** times. **Un-heated** natural stones are somewhat **rare** and will **often** be sold **accompanied** by a **certificate** from an **independent** gemological **laboratory** attesting to "**no evidence of heat** treatment"

Improving the **quality** of gemstones by **treating** them is **common** practice. During the late **1990s**, a large **supply** of **low-cost** materials caused a **sudden** surge in **supply** of **heat-treated** rubies, leading to a **downward** pressure on ruby prices. **Improvements** used include **color alteration**, improving **transparency** by **dissolving** inclusions, **healing** of **fractures** (cracks) or even **completely** filling them. The **most** common **treatment** is the **application** of heat. **Most**, if not **all**, rubies at the **lower** end of the **market** are **heat-treated** on the **rough** stones to **improve** color, remove ***purple*** tinge, **blue** patches and **silk**. These heat treatments **typically** occur around **temperatures** of 1800 **°C** (3300 **°F**). Some rubies **undergo** a process of **low-tube-heat**, when the **stone** is **heated** over **charcoal** of a **temperature** of about **1300 °C (2400 °F)** for 20 to 30 minutes. The **silk** is only **partially** broken as the **color** is improved. **Another** treatment, which has **become** more **frequent** in **recent** years, is **lead/glass** filling. **Filling** the ***fractures*** inside the ruby with **lead/glass** (or a similar material) **dramatically** improves the **transparency** of the stone, **making** previously **unsuitable** rubies **fit** for **applications** in jewellery.

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