



## ***2010-2011 Australian Precious & Specialty Metal Project Survey***

April 7, 2010.

**Speculative Brief #1:** *Northwest Resources Ltd.* (ASX: NWR)

**Mineral Focus:** gold (Au) and antimony (Sb)

### **Why We Bought Northwest Resources *Before* Visiting the Project Site:**

1. We see gold prices climbing in response to supply imbalances and global reflation efforts (please refer to thumbnail sketch on page 2); we prefer high grade, narrow vein to open pit operations in the inflationary environment we anticipate when these efforts gain traction.
2. Antimony is in strong demand (please refer to thumbnail sketch on page 4), but despite smelters worldwide routinely crediting miners with auro-stibnite concentrates for 80-85% of the Au content and for 85-90% of the Sb content, ***the market continues to price Northwest Resources Ltd. as if it were suffering from antimony contamination.***
3. We believe the A\$25 million in funding needed to put the mine back into production will be raised either by the elegant irony of antimony off-take agreements or via bank financing with but minimal share dilution, which loads significant upside into the share price.
4. We like Northwest's prospects, vision, and conservative approach and believe they have learned from the mistakes of previous operators of the project; further, we think they have a tremendous opportunity to expand their resource base at very low cost.
5. ***However, our primary reason for buying Northwest Resources Ltd. prior to making our site visit was simply that we believe the market is mispricing their stock. We are convinced that by the time we get out to the Pilbara region of Western Australia in 4-5 months for a site visit, we will no longer be able to buy a 42- to 52- gram per ton, narrow vein gold mine containing a JORC proven reserve of 288,000 oz of gold and more than 6000 tons of antimony, a surface deposit with an additional 56,000 oz of gold and 1100 tons of antimony, tremendous exploration potential, and a mining camp complete with serviceable CIP treatment plant, crusher, accommodation and outbuildings for little more than the value of the cash the company presently has on hand.***

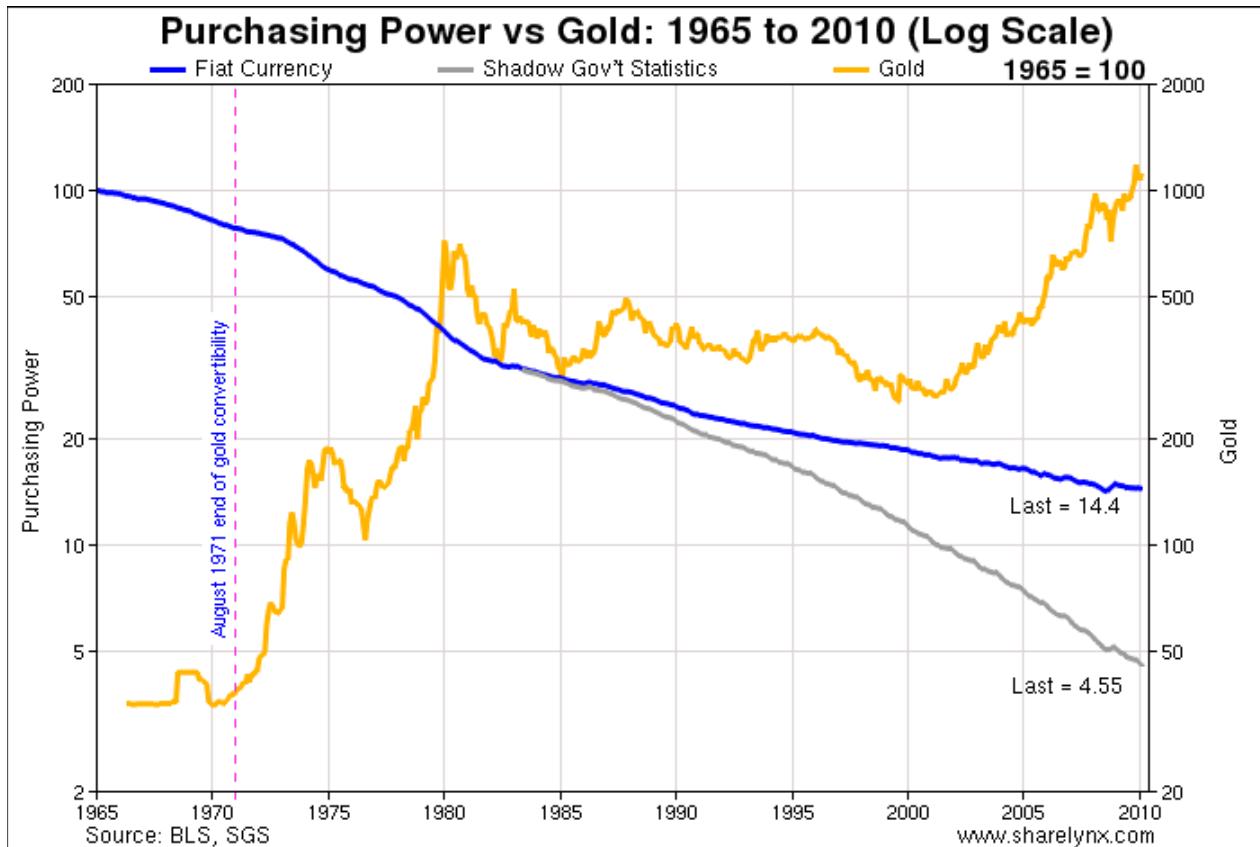
**Editor's Note:** *The Emerging Trends Report has received no compensation whatsoever for writing this report. Due to the historic and technical nature of the report, however, Northwest's management was invited to review this report to confirm both its accuracy*

and the veracity of our claims regarding their projects; otherwise, the opinions expressed are our own.

### Mineral Market Drivers and Thumbnail Sketches:

**Gold (Au):** our position regarding gold is a matter of public record, but it is worth revisiting briefly here. *Under a fiat currency regime, the only way it is possible to ‘save money’ over time in the traditional sense of preserving the wealth you have accumulated is by purchasing physical gold* (as well as silver and platinum).

- This preceding statement is borne out by chart below of the US dollar and gold is in log scale, which has been indexed to 1965 in an effort to *reflect what the largest demographic cohort in US history is in the process of discovering: the ravages of monetary inflation.*



- the Bureau of Labor Statistics claims the US dollar has experienced a compound annual decline in purchasing power of -4.30% since 1965 (blue line); Shadow Government Statistics, employing the original model free of ‘adjustments’ to measurement methodology that commenced in 1982, places the compound annual rate of decline in purchasing power at -6.67% (gray line)

- whether your 1965 dollar has retained 14.40 cents or 4.55 cents of its original purchasing power is moot: ***if your fiat dollar has lost 85 to 95% of its purchasing power, attempts to save money have been futile***
- it is critical to understand that \$1100 gold does not reflect an appreciation in your holdings of physical gold but the decline in the purchasing power of the dollars you use to measure it
- this applies in varying degrees to every currency on earth because they are universally fiat, rendering them but derivatives of the fiat US dollar, the world's reserve currency
- this is increasingly being recognized and is driving people either to speculate or to put their money into gold or other commodities in an effort to preserve their savings' purchasing power over time
- ***with H.R.2847, President Obama appears to have introduced capital controls to restrict the movement of US dollars***, which the American media has studiously ignored: we view this as a pre-emptive response to the capital flight his policies have provoked—and as an ominous sign of things to come in that it puts gold confiscation clearly on the table
- ***we advise you plan accordingly***
- gold production has been declining for 8 years running:
  - when a central bank can literally conjure fiat currency with a few computer key strokes, claims to be selling gold to raise money are patently fraudulent: ***it is to bolster the nominal value of their fiat currency***
  - gold is the only commodity central banks actively sell into the markets
  - the introduction of 500 tons of central bank gold into the marketplace each year for more than a decade has negatively impacted the gold market, ***but there are unintended consequences:***
    - the gold mining sector has generated negative returns, far underperforming the price of physical gold because ***production costs have been increasing faster than the price of gold, undermining profitability***
    - this has served both to curtail exploration activity and to make gold more expensive to produce
    - only a handful of gold miners have generated consistent long term profits for investors, and they are universally large volume, comparatively low grade, open cut operations taking advantage of the economies of scale
    - monetary policy has loaded an unprecedented level of inflation into the pipeline, and there are ***signs now the cost curve is steepening*** as production costs for large scale open pit mining operations escalate (fuel, rubber, labor, chemicals, electricity, etc)
    - ***in this environment, we prefer high grade, narrow vein operations with smaller operations and better cost controls***
    - central banks have inadvertently stepped on a landmine: ***the explosion (in the gold price) will come when they step off*** and the aftermath will not be pretty.

**Antimony (Sb)** is a silvery white, brittle, fusible crystalline metalloid that has poor electrical and heat conductivity properties; it vaporizes at low temperatures and is unusual in that it expands as it cools.

- primary uses of antimony include:
  - flame retardant in clothing, toys, aircraft and automotive seat covers
  - hardening and strengthening agent for lead and zinc alloys, especially those found in lead-acid batteries
  - polyethylene terephthalate (PET) containers
  - secondary uses include:
    - high purity metal, grading 99.99 to 99.99999% Sb (5N) for use in thermoelectric and semiconductor applications
    - glass and ceramics
    - ammunition, cable sheathing, safety matches, soldering, pewter etc
  
- there is no competing with the Chinese on price, and as with a variety of other metals, China largely controls the global antimony market:
  - not motivated by profit and prone to boom and bust excesses, unrestrained dumping and withdrawal of antimony on world markets had a profoundly negative impact on mine output and development in competing countries
  - by 2005 China produced 80% of the world's mined antimony; and with South Africa, Bolivia and Tajikistan, the four accounted for 95% of output
  - in 2008, China alone accounted for 91% of world output
  - from 1996 to 2006, China shifted its export focus from the metal to the value-added antimony trioxide, the precursor for most antimony use
  - during this period, antimony trioxide exports grew from 20,000 metric tons per year (tpy) to 41,300 tpy almost entirely at the expense of US producers, whose exports declined 94% from 24-26,000 tpy to 1,500 tpy
  - China has publically stated it intends to remain the dominant producer of antimony trioxide as well as refined antimony products
  - today China is the world's largest producer of antimony, the largest importer of antimony concentrates, and the largest exporter of antimony trioxide; its domestic market for antimony is also now the world's largest
  - **however, China is now unable to meet global demand**, and there is speculation Chinese antimony resources are nearing exhaustion as its mine output has fallen from 97,400 tpy in 1998 to 60,945 tpy in 2006
  - since 2000 Sb demand growth has averaged 7.5% annually, and the price has risen from less than \$1000/ton to \$6697/ton as of 26.03.2010 **largely on this decline in Chinese production**
  - steps taken by the Chinese government, such as mine closures, fewer mining licenses, export quotas etc., are expected to help sustain higher antimony prices going forward; this is encouraging higher-cost mines to go back into operation and driving the development of new mines
  
- the primary use of antimony in flame retardants is dissipative as are its uses in small arms ammunition, semiconductor alloys and solders; most antimony compounds cannot be recycled

- recycling comes primarily from the recovery of antimony in automotive lead acid batteries, but the trend toward low-maintenance batteries, which rely on a calcium additive, is steadily eroding demand and hence recovery
- the US has no strategic stockpile of antimony

### Quick Company & Financial Overview:

#### Northwest Resources Ltd.

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Sydney, Australia 2000  
<http://www.nw-resources.com.au/>

John J. Merity, Managing Director: +61-292-677-661  
Peter Richard, Non-executive Director: +61-414-711-177

Market Capitalization: A\$7.86 million  
Number of shares outstanding: 131,000,000  
Share price (as of 01.04.2010): A\$0.06  
Cash and liquid assets (as of 31.12.2009): A\$5.3 million  
Burn rate: +/- A\$200,000 over most recent quarter  
Debt: NIL

Most recent half-yearly report (31.12.2009):  
<http://www.asx.com.au/asxpdf/20100316/pdf/31p9fwt7flm3dz.pdf>

2009 annual report:  
<http://www.nw-resources.com.au/images/northwest-25--zeihi.pdf>

Next quarterly report scheduled for release by the end of April 2009.

### A Brief History of the Nullagine Gold Project and the Blue Spec Gold Mine

- in 1906 a prospector exploring an area roughly 20 kilometers northeast of Nullagine in the Pilbara region of Western Australia stumbled upon the surface expression of an auro-stibnite ore body and dubbed it Blue Spec in honor of the 1905 Melbourne Cup winner;
  - over the next 66 years, Blue Spec was mined to a depth of 180 meters (m) by small syndicates that were generally undercapitalized, lacked the expertise to accurately interpret the ore body, and essentially just followed the narrow vein system lower, generally disregarding anything grading less than 15-18 grams per ton (g/t)
  - the most critical development during this period was the discovery of the surface expression of a second deposit less than a kilometer away on what became known as Blue Spec Shear, which was named *Golden Spec* (please refer to map on page 9)
- in 1974 Anglo American acquired the Blue Spec property as part of a strategy to geographically diversify the company; they then proceeded to:

- define an ore reserve from a depth of 180 to 320 meters that was reminiscent of the style of mineralization they were familiar with in South Africa
- install a CIP treatment plant and attendant facilities
- sink a new triple compartment shaft and development decline
- employ a mechanized cut-and-fill approach with an average stope width of 2 m, which they eventually reduced to 1.8 m, **achieving production rates in excess of 36g/t of gold (Au) containing 3.5% antimony (Sb) by volume**
- Anglo American's project, however, was plagued by problems apparently largely attributable (but not limited) to inexperienced management, the largest of which was the poor recovery rates from the CIP treatment plant which were blamed on the difficulty involved with recovering gold from refractory ore (auro-stibnite):
  - **significant Au content was being lost to what was essentially thought of as 'antimony contamination'**
  - the economics of producing a Sb concentrate were further undermined by the standard smelter off-take agreements of the time frequently making neither provision nor payment for the Au content of the concentrate—and only after as much as a 6-month delay if put in place
  - the processing flow sheet employed by Anglo American was to crush and grind the mined ore, leach the Au from solution, and then float off the Sb
  - **management failed to recognize that they had the processes inverted—the Sb floatation needed to precede the Au leaching:**
    - the Sb was cannibalizing the available oxygen, effectively truncating the leaching process long before it had neared an optimal Au recovery rate
    - this was borne out a few years later in 1982-3 when Golconda reprocessed the Anglo American tailings using the very same treatment plant
    - **by super-oxygenating the float with hydrogen peroxide, Golconda was able to recover 6 g/t of Au from Anglo American's tailings**
- unable to overcome the recovery and other problems, in 1979 when the original reserve block delineated in the feasibility study was exhausted Anglo American closed the mine, exited Australia, and abandoned its strategy of geographical diversification
- Chase Minerals then took a crack at Blue Spec between 1986-88, managing to:
  - install a new treatment plant
  - begin production from Golden Spec as well as discovering its western shoot (please see Plate 3 on page 10)
  - and to dewater Blue Spec in preparation for putting it back into production
  - but they were under-capitalized and collapsed following the 1988 Australian stock market crash
- Fimiston Mining briefly but successfully operated Golden Spec during 1992-3 before withdrawing from the property due to capitalization issues, and the property essentially languished until being acquired by Northwest Resources Ltd. in 2005
- **Over the course of nearly a century, Blue Spec and Golden Spec have produced an estimated 85,000 oz of Au at 24 g/t but only negligible amounts of marketable antimony.**

## Nullagine Gold Project under Northwest Resource Ltd Management:

- Northwest has spent A\$13 million in exploratory drilling and other activities since 2005:
  - proving a JORC compliant resource of 353,000 oz of Au and 7,300 tons of Sb grading 1.02% by volume along the Blue Spec Shear (please refer to Plate 1 on page 9), **including a new resource called the Green Spec which has a higher Sb than Au weighting**
  - **discovering the Red Ribbon Shear**, paralleling the Blue Spec Shear to the north
  - identifying resources along the **Camel Creek Shear Zone** paralleling the Blue Spec Shear to the south
  - conducting an assessment that concluded existing facilities are in need of renovation but are serviceable (please refer to Plate 2 on page 10 and project photographs: [http://www.nw-resources.com.au/photo\\_gallery/photo\\_gallery.phtml?Photos\\_Category\\_ID=1](http://www.nw-resources.com.au/photo_gallery/photo_gallery.phtml?Photos_Category_ID=1) )
  - working with lead consultant, and potential project manager, **CSA Global** to develop a Bankable Feasibility Study, **and an announcement regarding their findings is due by the end of April, 2010**
- **times have changed:** Sb is no longer viewed as a mine-killing contaminant in an aurostibnite ore body but as a valuable specialty metal byproduct in high demand and commanding an impressive price:
  - Northwest Resources believes Sb could add up to 15% to the total revenue stream
  - since 2000 Sb demand growth has averaged 7.5% annually, and the price has risen from less than \$1000/ton to \$6697/ton as of 26.03.2010 **largely on the decline in Chinese production**
  - Au prices have stabilized above the \$1000 oz level
- **Managing Director, John Merity, succinctly laid out Northwest's approach** to maximizing shareholder value in the Nullagine Gold Project:
  - today the flow sheet for optimizing the recovery of both Au and Sb from the aurostibnite ore is well understood:
    - the least expensive, most expedient option to maximize recovery from Golden Spec and Blue Spec production is to crush and grind the ore and then employ a gravity separation unit to **recover an initial 40% of the Au content on-site, which will be used for immediate cash flow purposes**
    - with Penfolds acting as their marketing agent, the Au-Sb concentrate will then be sent to a smelter and **the standard off-take agreement today credits the miner for 80-85% of the Au and 85-90% of the Sb in the concentrate**—albeit still after a payment delay of as much as 6 months
    - **combined, this will result in Northwest recovering more than 90% of the value of the Au content and 85-90% of the Sb content of their ore**
    - in the future, Northwest may become more vertically integrated by constructing an Au-Sb electro-winning (refining) circuit on-site, perhaps utilizing the patented Quelar Process, which produces value-added Sb metal and compounds, plus commercial byproduct sodium sulphide, as well as recovering the Au in concentrate and thereby eliminating the lag time in payment

- ***Northwest believes the project will ultimately be significantly larger than the current resource estimate suggest***, and together with CSA Global have designed a staged development program to leverage the existing ore body into free cash flow as quickly as possible:
  - regarding the model depicted on Plate 3 on page 10:
    - Golden Spec is comprised of the two smaller ore bodies on the left side of the page
    - Blue Spec is the larger, deeper ore body on the right side of the page
    - the Blue Spec Shear is untested and extends between the two;
    - copper colored ore bodies have been partially mined
    - exploited areas within ore bodies are in black
    - proposed declines are colored green and blue
  - the initial stage is to drive a decline (green line) between the two Golden Spec deposits, mucking ore rather than waste where possible
  - the decline will then run from the Golden Spec ore body parallel to the Blue Speck Shear and intersect the Blue Spec ore body at the 320 m level:
    - ***this will enable low-cost exploratory fan drilling to identify potential blind shoots along the untested strike***
  - one branch of the decline will extend up to the partially exploited, pre-Anglo American section of the Blue Spec ore body
  - upon reaching the Blue Spec, the decline will then work its way lower, again mucking ore rather than waste
  - once the Golden Spec and Blue Spec are connected, *and depending on the results of the drilling program between the two*, the last stage will be to extend the decline (blue line) in Golden Spec to depth in order to exploit both ore bodies and to perhaps increase the size of the resource
- Management has been in contact with the appropriate authorities, and thanks in large part to the combination of the mine's operational history as well as its location in a not very environmentally sensitive area, the Nullagine Gold Project is classified as a Tier 2 project and is likely to be fast-tracked in the permitting process
- Northwest Resources estimates it will require A\$25 million to put the preceding into effect, and financing options include:
  - long term off-take agreements with antimony smelters
  - bank financing, which would require a longer, more detailed and more expensive feasibility study, as well as potentially overly conservative forward sales agreements
  - a combination of both
  - management will elect the least dilutive method available

### **Risks:**

1. We view the biggest threats to Northwest Resource's success as being financial and largely out of their control:
  - a. between the failure of Opes Prime, the withdrawal of Societe Generale and the scaled back operations of AMB Amro, a lingering aftereffect of the global financial crisis is that mining project finance in Australia is largely in the hands

of Macquarie Bank, which now has a near monopoly on project finance and may exact onerous terms

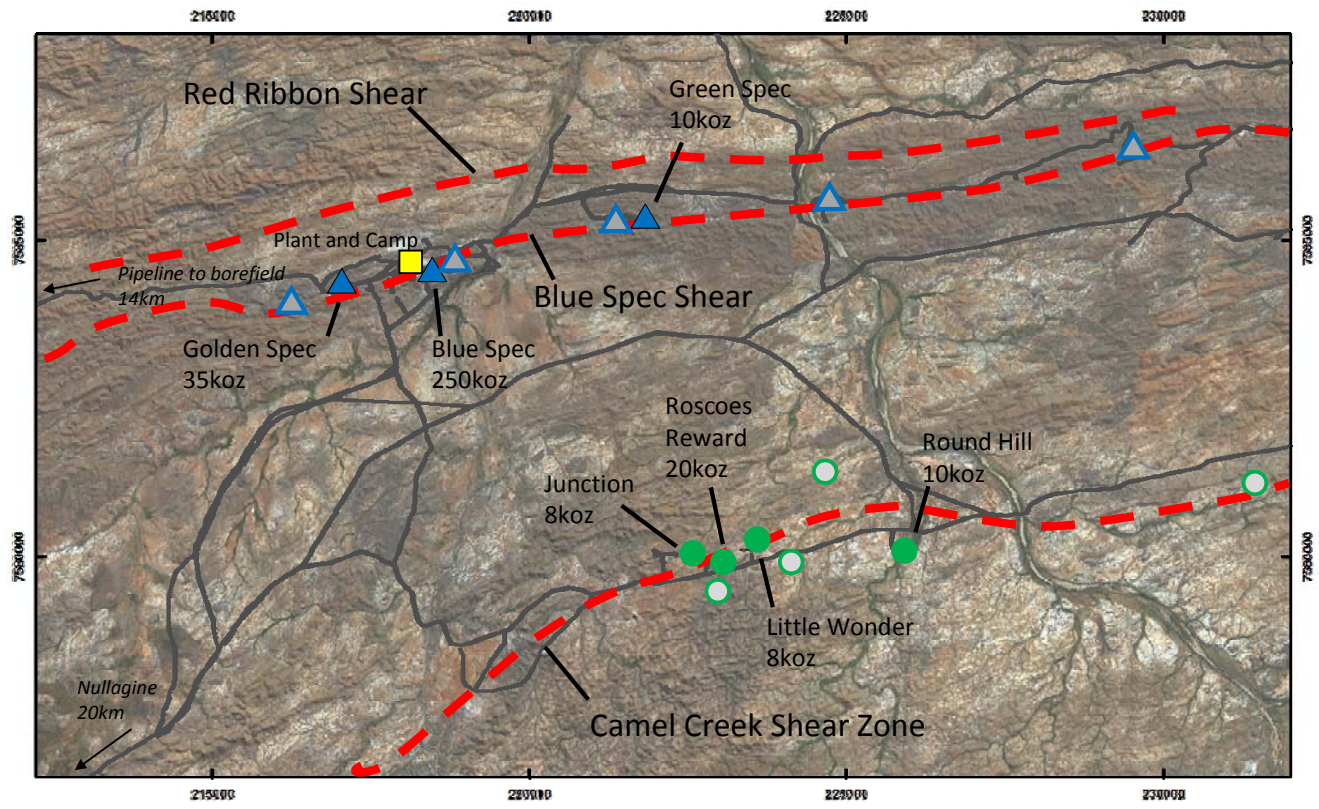
- b. runaway sovereign debt issuance throttling credit markets
- c. a return of the global financial crisis.

2. We see the downside as being limited by the A\$5.3 million they have on hand (+/- 4 cents Australian per share): all of the heavy lifting in preparation for putting the mine back into production has been done, and the burn rate should stabilize at a very low level until the financial question is settled.

**Conclusion:**

We believe Northwest Resources Ltd. is significantly undervalued and think it is likely they will be able to finance the start-up and expansion of the project based largely on the revenues stemming from their antimony byproduct—in effect using what was previously viewed as a ‘contaminant’ to finance the operation of their gold mine, an elegant irony, if you will.

*Plate 1: Areal View with Overlay of Northwest Resources Prospects*



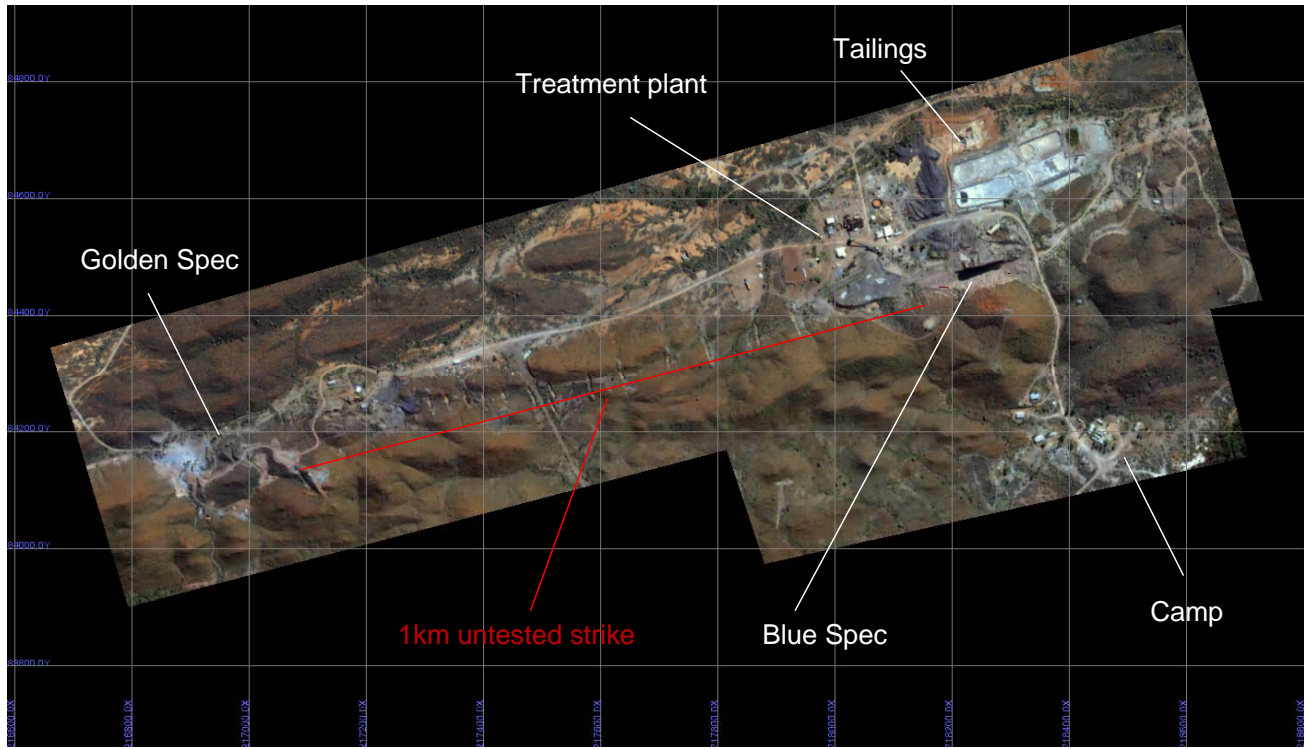
- ▲ Blue Spec Shear Resource
- ▲ Blue Spec Shear Target

- Camel Creek Shear Zone Resource
- Camel Creek Shear Zone Target

All resources and targets on granted mining leases

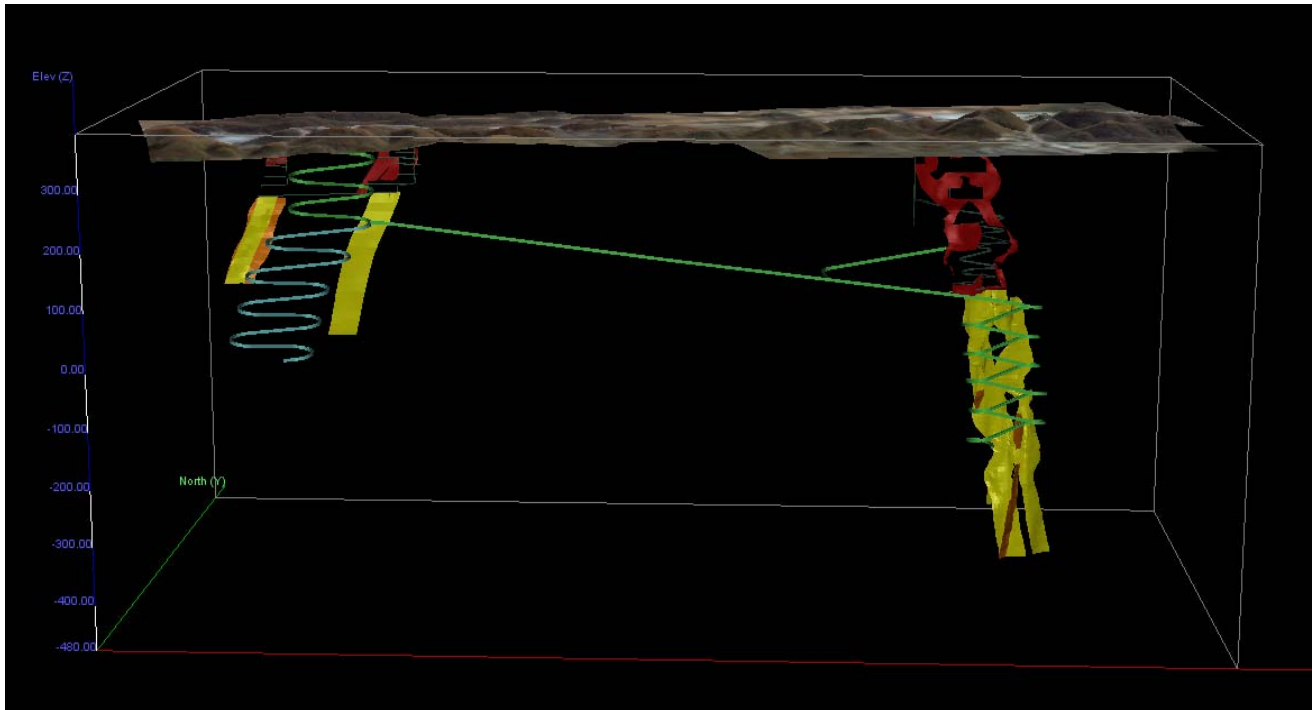
(Photo courtesy of Northwest resources Ltd.)

**Plate 2: Areal Photograph of Northwest Resources' Nullagine Gold Project**



(Photo courtesy of Northwest resources Ltd.)

**Plate 3: Model of Proposed Development**



(model courtesy of Northwest resources Ltd.)

### Source Materials/Suggestions for Further Reading:

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