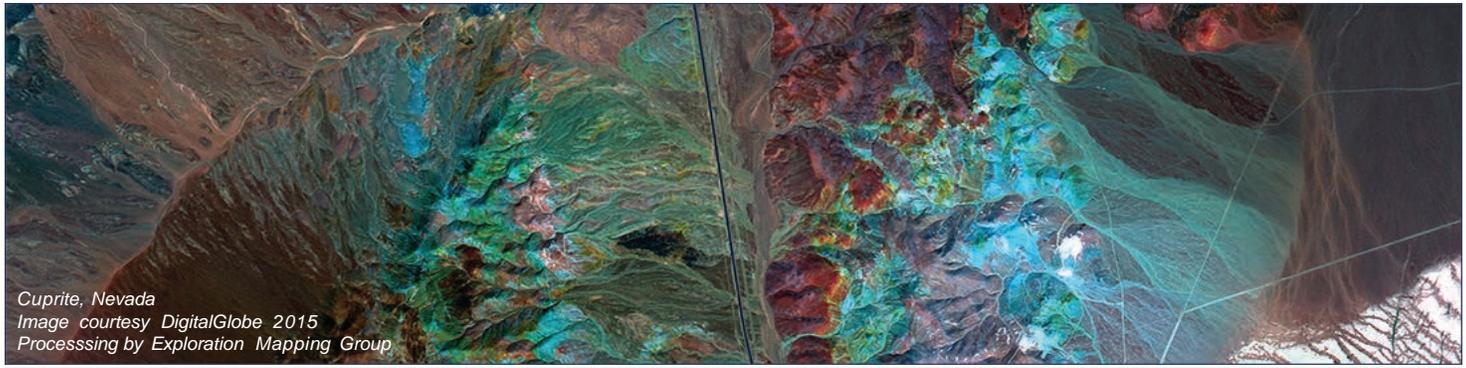


# WorldView-3 Imagery for Exploration and Mining



## Explore the Benefits of WorldView-3

In addition to offering the highest resolution satellite imagery available today, the new WorldView-3 satellite is the first commercial satellite to have twenty-nine high resolution bands that capture information in the visible, near-infrared and short-wave infrared regions of the electromagnetic spectrum. The satellite provides 31-centimeter panchromatic resolution, five times the detail of the company's nearest competitor, and double the spectral band coverage of DigitalGlobe's previous industry-leading satellite.

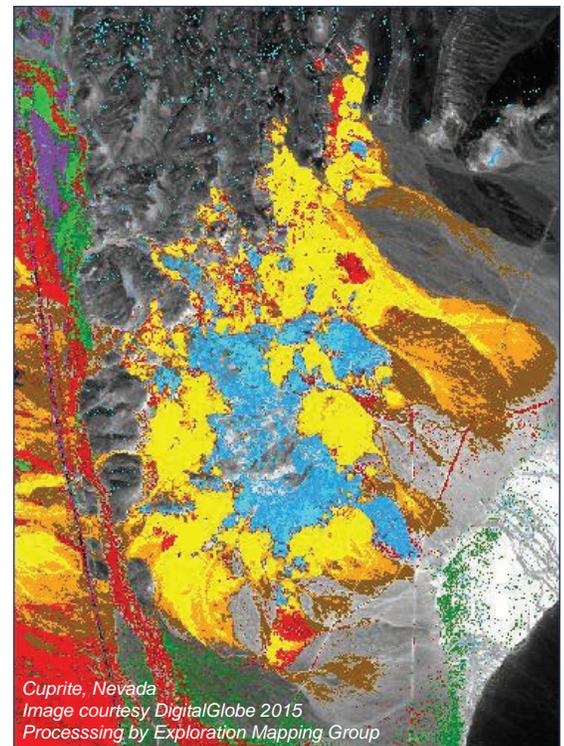
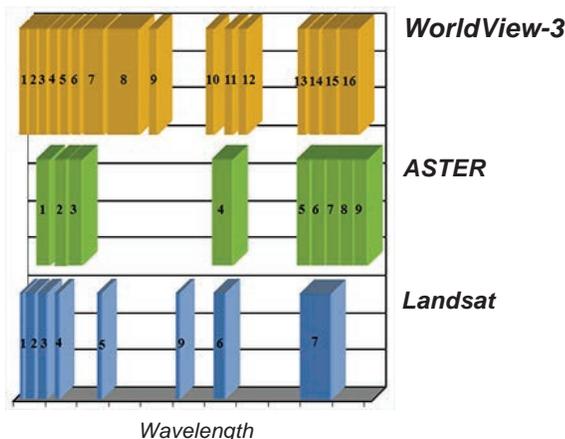
### Features

- » Highest resolution commercially available
  - Panchromatic 31cm
  - Visible & Near-infrared 1.24m
  - Short-wave infrared 7.5m
- » Broadest spectral range commercially available
  - 1 Panchromatic band
  - 8 VNIR bands
  - 8 SWIR bands
  - 12 atmospheric bands
- » Superior atmospheric corrections
- » Highly accurate geocoding
- » Priority satellite tasking for clients of Exploration Mapping Group

### Benefits

- » Apply the latest technology for competitive advantage
- » Map geology, alteration and structures in spectral regions and at scales not possible before
- » Streamline work planning for mapping, surveying, sampling and drilling
- » Monitor regional environmental state including vegetation, erosion, drainage and wildlife habitat
- » Document baseline site and infrastructure conditions
- » Measure site development progress
- » Prepare disaster response and site reclamation plans

Relative VNIR and SWIR spectral coverage of WorldView-3 compared to ASTER and Landsat

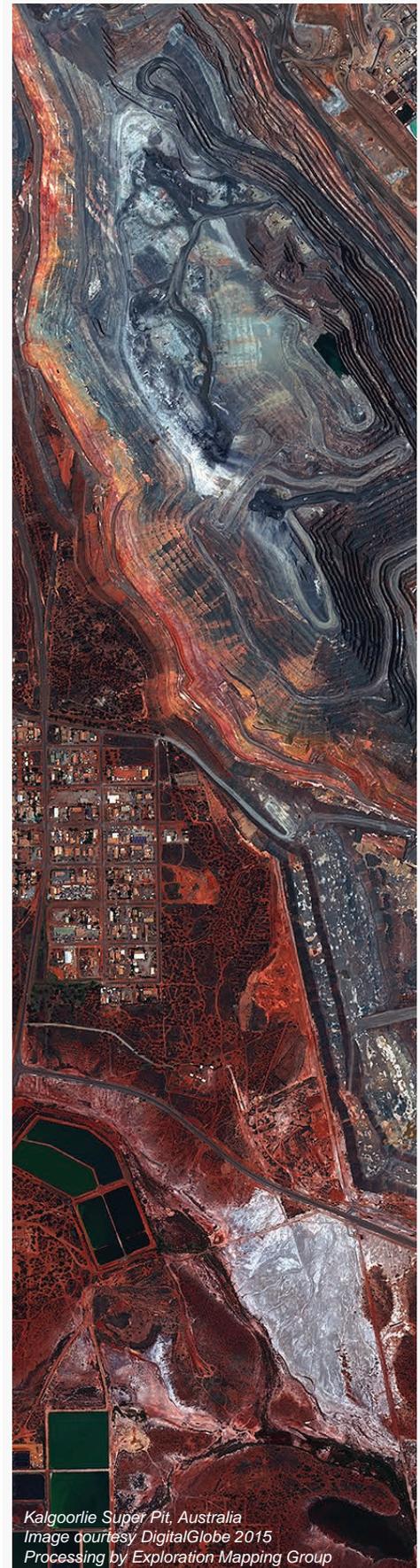


Cuprite, Nevada is one of the most iconic remote sensing sites in the world and has been used as a calibration test site for every major resource satellite ever flown. The yellow, green and brown colors represent high concentrations of silica, iron and clay alteration minerals and are just a few of the 30+ mapping classes produced by Exploration Mapping Group for resource exploration.

# WorldView-3 Imagery for Exploration and Mining

## Technical Specifications

Swath Width	At nadir: 13.1 km																																																									
Revisit Frequency (at 40°N Latitude)	1 m GSD: <1.0 day 4.5 days at 20° off-nadir or less																																																									
Orbit	Altitude: 617 km Type: Sun-synchronous, 10:30 am local time Period: 97 minutes for Earth orbit																																																									
Geolocation Accuracy	Predicted <3.5 m CE90 without ground control																																																									
Dynamic Range	11-bits per pixel Pan and MS; 16-bits per pixel SWIR																																																									
Sensor Bands	<p><b>Panchromatic: 450 - 800 nm</b></p> <p><b>8 Visible and Near-Infrared Bands:</b></p> <table border="0"> <tr> <td>Coastal:</td> <td>397 - 454 nm</td> <td>Red:</td> <td>626 - 696 nm</td> </tr> <tr> <td>Blue:</td> <td>445 - 517 nm</td> <td>Red Edge:</td> <td>698 - 749 nm</td> </tr> <tr> <td>Green:</td> <td>507 - 586 nm</td> <td>Near-IR1:</td> <td>765 - 899 nm</td> </tr> <tr> <td>Yellow:</td> <td>580 - 629 nm</td> <td>Near-IR2:</td> <td>857 - 1039 nm</td> </tr> </table> <p><b>8 SWIR Bands:</b></p> <table border="0"> <tr> <td>SWIR-1:</td> <td>1184 - 1235 nm</td> <td>SWIR-5:</td> <td>2137 - 2191 nm</td> </tr> <tr> <td>SWIR-2:</td> <td>1546 - 1598 nm</td> <td>SWIR-6:</td> <td>2174 - 2232 nm</td> </tr> <tr> <td>SWIR-3:</td> <td>1636 - 1686 nm</td> <td>SWIR-7:</td> <td>2228 - 2292 nm</td> </tr> <tr> <td>SWIR-4:</td> <td>1702 - 1759 nm</td> <td>SWIR-8:</td> <td>2285 - 2373 nm</td> </tr> </table> <p><b>12 Atmospheric Bands:</b></p> <table border="0"> <tr> <td>Desert Clouds:</td> <td>405 - 420 nm</td> <td>Water-3:</td> <td>930 - 965 nm</td> </tr> <tr> <td>Aerosol-1:</td> <td>459 - 509 nm</td> <td>NDVI-SWIR:</td> <td>1220 - 1252 nm</td> </tr> <tr> <td>Green:</td> <td>525 - 585 nm</td> <td>Cirrus:</td> <td>1365 - 1405 nm</td> </tr> <tr> <td>Aerosol-2:</td> <td>635 - 685 nm</td> <td>Snow:</td> <td>1620 - 1680 nm</td> </tr> <tr> <td>Water-1:</td> <td>845 - 885 nm</td> <td>Aerosol-1:</td> <td>2105 - 2245 nm</td> </tr> <tr> <td>Water-2:</td> <td>897 - 927 nm</td> <td>Aerosol-2:</td> <td>2105 - 2245 nm</td> </tr> </table>		Coastal:	397 - 454 nm	Red:	626 - 696 nm	Blue:	445 - 517 nm	Red Edge:	698 - 749 nm	Green:	507 - 586 nm	Near-IR1:	765 - 899 nm	Yellow:	580 - 629 nm	Near-IR2:	857 - 1039 nm	SWIR-1:	1184 - 1235 nm	SWIR-5:	2137 - 2191 nm	SWIR-2:	1546 - 1598 nm	SWIR-6:	2174 - 2232 nm	SWIR-3:	1636 - 1686 nm	SWIR-7:	2228 - 2292 nm	SWIR-4:	1702 - 1759 nm	SWIR-8:	2285 - 2373 nm	Desert Clouds:	405 - 420 nm	Water-3:	930 - 965 nm	Aerosol-1:	459 - 509 nm	NDVI-SWIR:	1220 - 1252 nm	Green:	525 - 585 nm	Cirrus:	1365 - 1405 nm	Aerosol-2:	635 - 685 nm	Snow:	1620 - 1680 nm	Water-1:	845 - 885 nm	Aerosol-1:	2105 - 2245 nm	Water-2:	897 - 927 nm	Aerosol-2:	2105 - 2245 nm
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Sensor Resolution (Ground Sample Distance)	Panchromatic Nadir:	0.31 m																																																								
	20° Off-Nadir:	0.36 m																																																								
	Multispectral Nadir:	1.24 m																																																								
	20° Off-Nadir:	1.38 m																																																								
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	20° Off-Nadir:	4.12 m																																																								
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Kalgoorlie Super Pit, Australia  
Image courtesy DigitalGlobe 2015  
Processing by Exploration Mapping Group

## Processing and Products

- » Basic raw imagery products are corrected for radiometric response between detectors, optical sensor corrections and geometric resampling
- » Atmospheric bands are used to measure atmosphere and surface properties including cloud, aerosol, water vapor, ice and snow to correct imagery for atmospheric interference
- » Standard geoscientific products include natural color and a variety of other color composites to enhance and discriminate geology, lithology and alteration
- » Specialized geoscientific products are generated using advanced processing techniques depending on client requirements, target mineralization styles, alteration types present and local terrain characteristics
- » Environmental products are designed to support Environmental Impact Assessments, Environmental Management Plans and related ecological and land use measurements and change assessments

## Ordering and Deliverables

Contact Exploration Mapping Group to search the archive or task the satellite with a new collection request for your area of interest. Imagery is ordered by the square kilometer with a minimum purchase of 100 sq km per order. Products are delivered by secure ftp and digital media in a variety of geocoded formats compatible with leading commercial GIS and image processing software. All projects include reporting to document the project and all deliverables.