

THE ROAD TO A NUCLEAR FREE FUTURE FOR WA

Beyond Uranium Mining:

The Road to a Nuclear Free Future for WA

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This is the third version of this report which has been updated, corrected and incorporates new information as it comes to light with a focus on the opportunities to protect WA from the threat of uranium mining in a lasting and meaningful way.

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Executive Summary

More than a decade after the former Barnett Liberal government lifted the state policy ban on uranium mining there are still no operating uranium mines in WA. The McGowan Labor government reinstated a policy ban on new uranium projects but allowed four conditionally approved projects to continue – Wiluna (Toro Energy), Kintyre (Cameco), Mulga Rock (Vimy Resources) and Yeelirrie (Cameco). All four were approved in politicised circumstances by the former Barnett government and all have been unable to proceed because of sustained community opposition and poor market conditions. These sites have undergone substantial exploration activities and trial mining and now present an environmental and economic liability to Western Australia. As all four projects have reached or are soon to reach the expiry of their conditional environmental approvals, this report looks at the individual reasons why none of the four projects should be granted extensions, and why the legacy sites must be rehabilitated.

The rehabilitation of legacy uranium sites can be technically challenging and very expensive, as each site presents different technical rehabilitation and remediation issues. These issues are compounded by unclear, inconsistent or variable site-specific rehabilitation requirements. As a result, each of the four proposed uranium mine sites carries risks that the proponents may default on rehabilitation, or that rehabilitation is not undertaken to an adequate standard or satisfies contemporary community expectation.

The lack of securities or bonds held by government to cover the rehabilitation costs of these sites in the event of default means they present an ongoing risk to WA taxpayers and the State Government.

The estimated current combined costs of rehabilitation of Mulga Rock, Wiluna and Kintyre is just over \$1 million.¹ This modest amount is currently within the means of the companies involved to either post the liabilities as bonds or to undertake the work to secure those sites. However, these risks could be significantly increased if environmental and mining approvals are extended beyond their current terms, or if further approvals are issued that would allow mining or further high impact activity to commence on these sites.

The imminent expiry of environmental approvals for each of the four uranium sites provides the WA Government with an opportunity and a responsibility to manage these risks in a way that protects the environment, public health and Western Australian taxpayers. These sites require special attention from regulators due to the very real risk that proponents will default on rehabilitation requirements or fail to deliver adequate rehabilitation for sites that are uneconomic.

In order to manage these risks, this report recommends that:

- No extensions to environmental approvals be granted, or at the very least new Public Environment Reviews (PER) be required
- The Department of Mines, Industry Regulation and Safety (DMIRS) works closely with tenement holders of uranium exploration projects to ensure the best possible rehabilitation outcomes for those sites
- Increased public reporting on activities and progress to meet the rehabilitation requirements outlined in tenement conditions
- The WA Labor Government legislates a ban on uranium mining to address the unacceptable risks and provide policy certainty to industry and communities.



Background

Uranium mining and exploration presents risks to the environment and human health that are different from other types of mining. After more than a decade of uranium exploration in WA there are four proposed uranium mines and 85 exploration sites, none which have been able to develop into a mine. The declining economics of the global uranium industry would indicate that there are diminishing prospects for uranium mining in WA. The uranium exploration and trial mine sites in WA now present an environmental, economic and public health risk.

The four proposed mines were all given state conditional environmental approval under the Barnett government, three of them under highly politicised circumstances weeks before the 2017 state election. None of the project have final approval to commence all require additional approvals, licenses and permits. All are approaching or have already reached the expiry of their conditional state environmental approval.

- Kintyre (Cameco) in an area excised from the Karlamilyi National Park in Martu Native Title determined country in the East Pilbara. State approval expired March 2020.
- Yeelirrie (Cameco) in Tjiwarl Native Title determined country south of the stunning Montague ranges in the East Murchison. State approval expires January 2022.
- Wiluna (Toro Energy) includes the Lake Way, Centipede, Millipede and Lake Maitland deposits across two incredible ephemeral lake systems in the Northern Goldfields. State approval expires January 2022.
- Mulga Rock (Vimy Resources) NE of Kalgoorlie in the the Yellow Sandplain priority ecological community within the Great Victoria Desert. State approval expires December 2021.

The Barnett government often claimed that the uranium industry would deliver thousands of jobs and billions in investment. Little could be further from the truth. Vimy Resources and Toro Energy both shed approximately 98% of their share value over the last decade and Cameco about 52%.² Toro Energy and Vimy Resources are both small and unproven companies with no operating mines. Toro's Executive Chairman Richard Homsany told shareholders at their July General Meeting that **"No-one can get finance to build a uranium mine in Australia."** It is hard to conceive that they will be able to secure the financing required to develop a mine, and there are concerns that neither have the capacity to meet existing rehabilitation requirements on their exploration and trial mine projects.

Department of Mines, Industry Regulation and Safety (DMIRS) data shows that there are 85 uranium



exploration sites in WA³ 64 sites are listed as being inactive or suspended and 54 no longer have an active owner. In the last six months the number of sites without an active holder has doubled. As more companies dissolve there is a narrowing window of opportunity for the government to ensure uranium exploration tenement holders rehabilitate these sites responsibly and effectively.

This report considers the four proposed uranium mines in WA with regard to the existing environmental approvals, the rehabilitation requirements for the existing uranium exploration sites, and the scale of uranium exploration across the state over the last decade. In this report we recommend uranium exploration sites be required to be rehabilitated, that no extension to environmental approvals for the four proposed uranium mines be granted and that WA should adopt a legislated ban on all uranium mining.

Reflections on an industry in decline

Nuclear Power

The International Energy Agency World Energy Outlook⁴ reported that nuclear power capacity fell by 3,900 megawatts (MW) or 1% in 2019-2020. In 2020 nuclear performed even more poorly. The World Energy Outlook reports that nuclear power declined by 3.5% in the first quarter of 2020 and anticipates a decline of 3% for 2020 (compared to 2019). With an ageing fleet of reactors, many of which reach or exceed their operating license and are set to be shut down over the next 10-20 years, the World Energy Outlook notes that nuclear power could fall from 280,000 MW now to just 90,000 MW by 2040. One quarter of current nuclear capacity is set to shut down over the next five years. In stark contrast, the World Energy Outlook dubbed solar energy 'the king of the energy market'. The writing is on the wall in both the street and the boardrooms and the preferred low emission energy sources of the future are renewable, not radioactive.

Uranium is uneconomic

Canadian based Cameco, the world's largest dedicated uranium company, has identified the long-term price needed to trigger investment in uranium mines in WA as US\$55 - 60lb.⁵ In August 2021, the long-term price was around US \$33.50lb and the spot price (uncommitted market price) was US\$32.40lb.⁶ As more reactors close and as the cost of nuclear continues to rise while the cost of renewables continues to fall, it is hard to foresee a credible scenario in which the uranium price would reach and sustain a commodity price of US\$55lb.

50 years of resistance to uranium mining

For over 50 years Aboriginal communities across WA have been at the forefront of resistance to the uranium mining threat and have led the fight to stop uranium mining in partnership with the environment movement and Labor movement. This fight is clear at each of the four conditionally approved uranium mine proposals in WA.

Yeelirrie:

WMC found uranium at Yeelirrie in 1972, they produced an environmental impact statement and conducted trial mining throughout the 1980's. The mine was not able to proceed due to the federal three mines policy. The project has been consistently opposed by the local community since 1972 because of concerns around uranium and importantly because of the cultural heritage of the area. Through the Central Desert Native Title service Traditional Owners released a statement saying they were opposed to uranium mining and they would not negotiate with BHP over Yeelirrie because there was nothing to discuss. Tjiwarl Native Title over Yeelirrie was recognised in 2017. Following the Barnett governments approval of the project three Tjiwarl women went to court in opposition to the mine. There is still strong community resistance to Yeelirrie.

Mulga Rock:

Mulga Rock was first explored in 1979 by a Japanese Government company PNC Exploration Australia Pty Ltd. Members from the Cundelee community and later Coonana and Tjuntjuntjarra communities had long held opposition to uranium mining and the nuclear cycle. This was largely influenced by the impacts of British nuclear weapons tests at Maralinga. Many people from the Maralinga area fled to Western Australia and settled in Cundelee known as the Spinifex People. Together with the Wongutha people the Spinifex people became custodians for the area in and around Mulga Rock. After considerable anthropological dispute in the area there is now a registered Native Title claim for the area Upurli Upurli Nguratja.

Wiluna:

In the 1980's there was uranium exploration at Wiluna. Corroding drums of uranium ore were left at the site for decades and discovered in 2000. Radiation levels more than 100 times background levels were found. In August 2000 the coordinator of the Wiluna-based Maruwayura Aboriginal Corporation Steve Syred said that until about 1993, 100–150 people were living at an old mission three kilometres from the spot where high radiation levels were recorded. Mr. Syred told the Kalgoorlie Miner that the Aboriginal community had unsuccessfully resisted uranium exploration in the area in the early 1980s. Since then many people had lived in the area while the Ngangganawili Aboriginal Corporation was based near the site. Elders still hunted in the area.

Kintyre:

In protest to uranium exploration around Karlamilyi (formally Rudall River) National Park the Martu people started the homelands movement and set up the Parnngurr community. CRA discovered uranium at Kintyre in the 1980's - and the area was excised from the National Park in 1994. Martu had Native Title recognised in 2002. As Native Title holders Martu made their opposition to uranium mining known. Rio Tinto paid Martu \$21 million to not voice their opposition to the mine during the sale of Kintyre to Cameco in 2008. There was an Indigenous Land Use Agreement signed under very controversial circumstances which saw the representative body put into administration, the community remain opposed.





“Old people in the past have stopped uranium. And today we’re here living not far from what’s North West of us (Kintyre). It’s bad. It should remain in the ground forever. The old people didn’t want it to go ahead - they stopped it, they said that in the past. We’re really afraid about it going ahead because we are closest to it. Like a mother carrying a baby we are carrying the land, we are that close.”

Waka Taylor, Warnman elder, pujiman, artist, ranger. 2015 Submission to the Office of the Appeals Convenor.

“I remember back in 1972, when our old people were still alive, and I was only a young girl and I was living on the Leonora reserve and I remember our grandfathers ... they all got together and had a meeting and they said they do not want any type of mining to go ahead in and around the Yeelirrie area because of the significance. 50 years later I’m here and I realise I’ve got to keep fighting. Pick up from where they left off because I’d like to see my grandchildren enjoy this land and know where my ancestors and their ancestors come from.”

Sandra Evans, Pilki woman. 2017 Submission to the Office of the Appeals convenor.



WA Labor and uranium

The WA Labor party has been clear and consistent in their opposition to uranium mining. This has been re-affirmed at every Labor State Conference since the uranium policy ban was lifted by the former Barnett conservative Government in 2008.

2019 WA Labor Platform ⁷

Uranium and Thorium

28. WA Labor believes that:

- a. Enriching uranium poses significant risks to human health, the natural environment and is not a solution to climate change; and
- b. Thorium also poses significant risks to human health and the environment.

29. In Government, WA Labor will:

- a. Oppose the mining and export of uranium;
- b. Oppose nuclear enrichment, nuclear power and otherwise the production of dangerous radioactive waste;

- c. Oppose the storage of nuclear energy waste in Western Australia;
- d. Oppose the testing or use of nuclear weapons in Western Australia or near our coastline;
- e. Encourage local governments to declare themselves 'Nuclear Free Zones'; and
- f. Ensure that the mining of thorium in Western Australia only occurs under the most stringent environmental conditions and oppose thorium exports to countries that do not observe the Nuclear Non-Proliferation Treaty.

On election in 2017 Premier Mark McGowan commented: ***“I would hope they [the uranium projects] don’t go ahead. Everyone knows our position is we are not very happy about these approvals, so the mining companies need to be aware that they have a potential deadline heading at them in five years from now. Five years is a long time, I mean they’ve already had eight years of getting a project approved and another five years to develop it, that’s a pretty reasonable length of time for them to get a project up. If they can’t do that then that’s not our problem, that’s their [problem].”***⁸ We are now approaching that five year deadline.

Mines Minister Bill Johnson was also very clear when he said the ***“Labor Government has a policy opposed to uranium mining and if there’s an opportunity for that policy to be implemented we will.”***⁹

Resolutions adopted at Labor State conference August 2019¹⁰

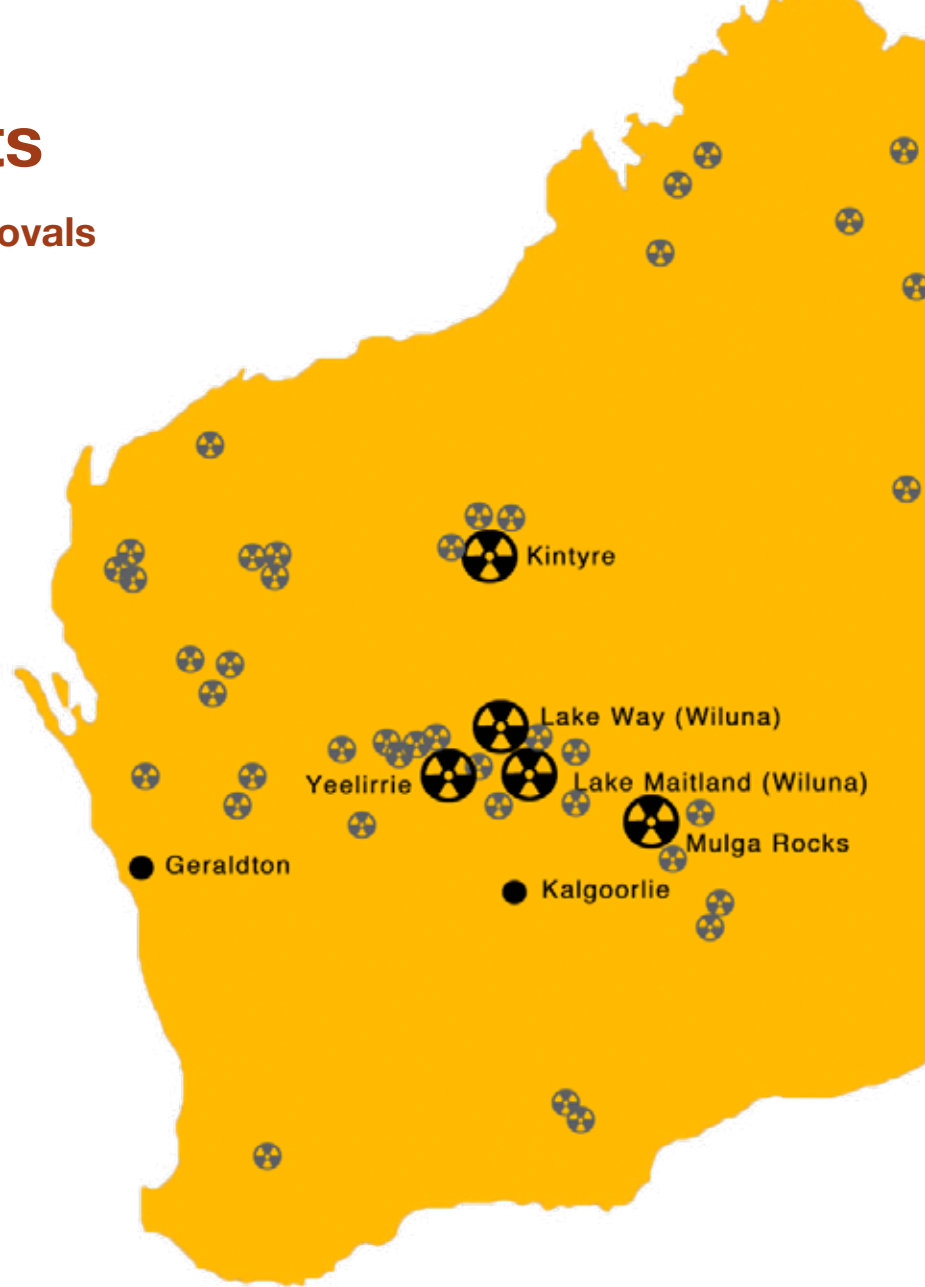
35 - WA Labor is committed to implementing a best process and practise approach to uranium assessment and regulation. We urge federal Labor – and the federal government – to reflect this on a national level and retain the long standing and prudent nuclear action trigger for uranium mining and the clear prohibition on nuclear power in the federal EPBC Act (1999) during the current EPBC review process.

36 - WA Labor commits to rigorous scrutiny of any further approvals or applications by any of the four WA uranium mine proposals approved under the previous government. WA Labor will apply the highest regulatory standards to any project and will work with affected communities and key stakeholders including trade unions and workers in order to reduce risks.”

A policy position banning uranium mining was reaffirmed at the Qld Labor conference in 2021. There are also long held and popular prohibitions on uranium mining in NSW, Victoria and Tasmania.

The Four Projects

A case for not extending approvals



In 2017 WA Labor was elected into Government. One of the new governments first moves was to reintroduce a policy ban on uranium mining across WA. The ban was warmly welcomed by civil society groups who were however disappointed by the decision to allow the four projects fast-tracked by the Barnett administration to continue. There were strong statements from the incoming McGowan government that these four projects were on a tight deadline (see pg 10).

The state environmental approval for all four projects has either expired or is due to expire in the next seven months. The state environment approval for:

- Kintyre - expired in March 2020 and has not been renewed ¹¹
- Mulga Rock - will expire on the 16th December 2021¹²
- Wiluna (including Lake Way and Lake Maitland) - will expire on the 9th January 2022 ¹³
- Yeelirrie - will expire on the 16th January 2022 ¹⁴

Each of the four projects have individual reasons which warrant the government not extending approvals. All four pose an environmental risk and economic liability to both the government and West Australian taxpayers. This section outlines why WA's four uranium projects should be rejected on the grounds of site-specific issues with each of the projects. At the very least, at the expiry of the existing approvals, new Public Environment Review (PER) assessments should be required as part of an EPA inquiry under section 46(1) of the EP Act 1998.

The following section also makes the case for all four sites to undergo active rehabilitation.

Wiluna Uranium Project

Company: Toro Energy ASX: TOE \$0.017 share value

Project Exploration Stage: Active

Project Mine Stage: Proposed

Mining Rehabilitation Fund Levy 2019: \$0

Estimated Closure Cost of existing exploration works: \$28,200

Bond: \$0

Total Net Assets: \$5,944,582 (previous half year - \$6,394,736) ¹⁵

Mine Closure Plan: (MCP Reg ID:53359) 'Wiluna Uranium Project: Mine Closure Plan' for the trial mine activities at the Centipede deposit on the edge of Lake Way.

Proposal

- 6 open pits across two lake systems
- Licensed to take 10.6 million litres of water per day
- Would produce 50 million tonnes of radioactive mine waste (tailings) to be stored in a pit on the edge of Lake Way – an identified flood zone.
- This project has had a two-staged assessment process. The original proposal includes the Lake Way and Centipede deposits, the other half of the project includes the Lake Maitland and Millipede deposits, both have conditional state and federal environmental approval.
- Part of the site is under determined Native Title and has an Indigenous Land Use Agreement (ILUA) while the Lake Maitland area is subject to a Native Title claim and there is no ILUA.

Project Status & Environmental Risk

Toro Energy has transferred some of their tenements to Kimba Resources (a wholly owned subsidiary of Wiluna Mining Company) who are pursuing a potash project at the Centipede site on Lake Way. This is the area where Toro had a trial mine and have a Mine Closure Plan. It is unclear whether Toro would be able to develop the Wiluna uranium project given this arrangement.

Any request to extend the environmental approval should be rejected on the grounds that the company no longer has rights and access to the area approved to carry out the processing and storage of tailings. The key area of environmental concern is the storage

of tailings on the edge of Lake Way. The proposal, which was assessed in a piecemeal two-part process, already had significant deficiencies in considering the total impact of the whole project. The proposal for six open pits across two lake systems with disjointed assessments was a poor process and should not be endorsed by a Labor government through any approval extension.

Toro Energy have also commissioned a scoping study to develop uranium and vanadium at Lake Maitland. This would be a separate and stand alone project to the Wiluna uranium project and would therefore be inconsistent with the state governments uranium mining ban.

This area is experiencing increasingly frequent and severe cyclones during late summer. In 2020 parts of Wiluna were cut off from the rest of state due to flooding which also caused severe erosion and damage. These events pose a threat to the stability and security of any tailings storage on the edge of an ephemeral lake system such as Lake Way.

The trial mine was completed in 2015 and there is yet to be any public evaluation of the pit or the rehabilitation efforts, or any definitive finding about potential contaminant pathways for tailings into the lake system and any subsequent long-term impacts. Toro Energy has failed to submit Annual Environment Reporting between 2017 - 2020, a clear breach of the company's tenement conditions. A poor track record on compliance would also warrant the government rejecting any proposal to extend the approval.

Because of the changes to tenement holders,

compliance non-conformity and the emerging issues with cyclone activity and impacts on the lake system we recommend that any approach by the company to extend the environmental approval should be rejected. At the very least, any such application should be subject to a new and comprehensive Public Environment Review.

The company have no intention of pursuing the conditionally approved Wiluna uranium mine project within the approved 5 year timeframe. Toro are instead pursuing uranium mining at Lake Maitland, a new proposal which would be rejected under the current ban. Toro's Shareholders were told by Executive Chairman Richard Homsany that "No-one can get financing to build a uranium mine in Australia." Their other ventures include gold and nickle. Given their lack of interest or capacity in developing the Wiluna uranium project the full rehabilitaiton of the site should be required.

Eroding core sample bags - Lake Maitland



Core farm at Centipede Millipede, Wiluna

Mulga Rock

Company: Vimy Resources - ASX: VMY \$0.062 share value (Narnoo Mining Pty Ltd)

Project Exploration Stage: Feasibility

Project Mine Stage: Proposed

Mining Rehabilitation Fund Levy 2019: \$7,754

Estimated Closure Cost of existing exploration works: \$939,920

Bond: \$0

Total Current Assets: \$5,245,486 (previous half year \$8,277,818)¹⁶

Mine Closure Plan: Mulga Rocks Uranium Project - Ambassador Investigation Trenches MCP 2015 / Princess Pit Stage 1 Development - 2016

Proposal

- Four open pits, strip mined and backfilled
- Licensed to take 15 million litres of water per day
- Would produce 32 million tonnes of radioactive mine waste
- Would clear 3,709 ha of native vegetation
- Located in the Yellow Sandplain Priority Ecological Community, known as one of the most pristine areas in the Great Victoria Desert.
- Home to the endangered Sandhill Dunnart
- Upstream from the Queen Victoria A Class Nature Reserve
- No Indigenous Land Use Agreement, and little attempt from the company to engage with the Aboriginal community. There is now a Native Title Claim over the area¹⁷

Project Status & Environmental Risk

Unlike the other three projects Vimy Resources are actively seeking to advance the proposed mine. In November 2020 Vimy submitted a Mine Plan – which includes a Mine Closure Plan. In 2020 the company also did a “refresh” of their Definitive Feasibility Study (DFS) and are seeking investment to develop the mine. The company’s move to establish a mine comes despite low market capitalisation, a sustained low in the uranium commodity price, low-cost competitors, and a significant number of other uranium projects in care and maintenance or with reduced production which could ramp up production to meet any unlikely increase in future demand. The company has lost 98%

of its share value in the last decade. We are deeply concerned that this company is ideologically driven to start this mine despite the adverse economic realities facing the uranium sector. This would place the project at a high risk of defaulting and becoming a liability for the state.

Vimy Resources have two trial pits known as Ambassador and Princess. These trials occurred in 2016 and have been completed – however the pits remain open and unrehabilitated. Data obtained from the Mining Rehabilitation Fund shows that in 2020 the company made levy contributions of \$7,754.

The estimated liability using the MRF calculator is approximately \$939,920. In Vimy's 2020 Annual report their total assets are cited as \$8,277,818 and their liabilities are \$6,093,715.

The proposal outlined in the company's 2018 DFS and 2020 DFS refresh is markedly different from the approved project. The DFS and DFS refresh are based on increased scale of production and changes to the processing method and the location of tailings storage. These factors have a significant impact on the geochemical make up of wastes and are critical to understanding and managing both short term and long-term environmental risks. It is important to note that these significant project modifications have not been assessed or approved. On this ground alone we recommend that the state government reject any application to extend the environmental approval. At the minimum a new Public Environment Review that addresses the current project configuration should be required.

The changes to the project were referred for investigation to the WA, EPA by the Conservation Council of WA which sparked an investigation.¹⁸ In August 2019 Vimy Resources indicated to the WA EPA that they would not pursue the revised (DFS) project,¹⁹ ie that they would pursue the project outlined in their 2016 PER. However, in their revised DFS in 2020 they have continued to base the feasibility of the project on the revised project outlined in their 2018 DFS. The project Vimy Resources are presenting to shareholders and potential investors does not have environmental approval. This persistent and inaccurate portrayal of the project to both shareholders and the wider community raises serious questions about the credibility and integrity of the company's plans and highlights their dogged promotion of a project which does not have approval.

Our initial review of the company's PER raised concerns about the rate of seepage of tailings, the credibility of information about groundwater, and the potential pathways for radioactive tailings to travel off site within a 10,000-year period. We remain concerned

about the absence of any assessment in the PER of the fault lines which run through the proposed mine pits and tailings storage facilities. The company has also been recalcitrant about expectations to engage with the Aboriginal community and has made consistent attempts to discredit Aboriginal people with both a connection to the area and concerns about the project.²⁰ We are further concerned about the protection of heritage sites which are yet to be formally listed or identified. We remain concerned about the long-term impact on the endangered Sandhill Dunnart through the potential impacts of increases in feral animals, weeds, road traffic and industrial activity.

Vimy Resources is the parent company for Narnoo Mining Pty Ltd who are listed as the owner of the Mulga Rock tenements. This structure is not uncommon but it does also create opportunities for Vimy Resources to sell off Narnoo, or divest from Narnoo if problems arise. Additional conditions that ensure the accountability of directors of the parent company – Vimy Resources – would be prudent in this circumstance.

Vimy Resources championing a project for which they do not have environmental approval and their lack of financial capacity to rehabilitate existing damage are both clear reasons to reject any request to extend this projects environmental approval. The company's dismissal of Aboriginal concerns and the omission of details or assessment of fault lines through tailings storage facilities are further reasons to reject any proposal to extend approvals. In our view one thing more dangerous than a uranium mine is an uneconomic uranium mine driven by ideology and which ignores due process, market realities and human connections to country.



Mulga Rock - test pit

Yeelirrie

Company: Cameco NYSE: CCJ \$13.94 share value

Project Exploration Stage: Active

Project Mine Stage: Proposed

Mining Rehabilitation Fund Levy 2019: \$8,760

Estimated Closure Cost of existing exploration works: Unclear (Yeelirrie is under a state agreement Act. The levy does not reflect 1% of the liability)

Bond: \$0

Current Total Assets: \$878 million cash²¹

Mine Closure Plan: None

Proposal

- Open pit – 9km long, 1.5km wide, 10m deep
- Licensed to take 8.7 million litres of water per day
- Would produce 36 million tonnes of radioactive mine waste
- Would clear 2,421 ha of native vegetation
- Threatens to make 15 species of subterranean fauna extinct

Yeelirrie dust storm over rehabilitated test pit where calcrete uranium ore is still visible



Project Status & Environmental Risk

Yeelirrie - aerial of trial mine from the 1970's

There has been no mining proposal submitted for Yeelirrie and there is no Indigenous Land Use Agreement with the Tjiwarl Native Title group. Cameco has indicated that the uranium price needed to develop new mines is US\$55 - \$60.²² In Cameco's most recent annual report²³ they state that "No work is planned at Millennium, Yeelirrie or Kintyre. Further progress towards a development decision is not expected until market conditions improve."²⁴

In 2016 the WA EPA advised that the project should not be approved.²⁵ This prudent advice was based on the evidence that suggests between 11 and 15 subterranean fauna species would most likely be made extinct if the mine were established – due to the removal of 100% of their habitat. The EPA found that this factor meant the project could not meet key objects of the Environment Protection Act – including the Precautionary Principle, the Principle of the Protection of Biological Diversity and Ecological Integrity and the Principle of Intergenerational Equity.

Based on this alone we recommend the state Labor government reject any proposal to extend the environmental approval.

In addition to the risk of extinction, Yeelirrie is an important cultural site and part of the Seven Sisters dreaming. This factor of itself should prevent mining from occurring there. There are also risks to neighbouring station owners and cattle from exposure to dust and the depletion of water resources.²⁶ There are growing concerns about water consumption in the region given the high level of mining activity. This is compounded by the absence of a regional water management plan and no cumulative assessment.

Local opposition against the Yeelirrie uranium proposal dates back nearly fifty years when the deposit was discovered by Western Mining Corporation and was evident throughout the 1980's when WMC dug a series of trial mines and left toxic tailings on site for more than a decade. These wastes were un-remediated and without warning signage.



Yeelirrie - aerial of trial mine from 2012

The legacy of earlier trial mining at Yeelirrie is a stark reminder on the importance of ensuring rehabilitation at exploration and trial mine sites.

Protests, legal challenges and national attention to the highly politicised federal approval that was granted shortly before the 2019 federal election have dominated the conversation about Yeelirrie which in the local Wongutha language means 'place of death.' The cultural importance of the site and the long and unbroken connection to the heritage of the area all remain, as does opposition to mining.

Yeelirrie should never be allowed to be mined. The convergence of an approval expiry, continuing community opposition, the depressed commodity price and Cameco's acceptance of the market reality offers an important opportunity to realise this.

Kintyre

Company: Cameco NYSE: CCJ \$13.94 share value

Project Exploration Stage: Care and Maintenance

Project Mine Stage: Proposed

Mining Rehabilitation Fund Levy 2019: \$0

Estimated Closure Cost of existing exploration works: \$93,300

Bond: \$0

Current Total Assets: \$878 million cash²⁷

Mine Closure Plan: None

Proposal

- Open pit – 1.5km long, 1km wide and 220 m deep
- Licensed to take 3.1 million litres of water per day
- Would produce 7.2 million tonnes on radioactive mine waste, to be stored in a pit which would become a permanent and toxic lake
- Would clear 1,418 ha of native vegetation
- Area excised from Karlamilyi National Park, home to many endangered and rare species like the Northern Quoll and Bilby
- The Martu people have Native Title over this area. Traditional Owners have been opposed to uranium mining since the 1980's
- Cameco put the mine on hold due to the low uranium price and set the price for project consideration at US \$55-60 per pound. Cameco has subsequently formally reduced the book value of the project to zero

Project Status & Environmental Risk

The environmental approval for Kintyre expired in March 2020. In Cameco's 2020 Annual Environmental Report for they note that Mitsubishi transferred their interest in the Kintyre Project thus making Cameco the 100% owner of the project. They outlined that no works were under-taken in that reporting period due to "challenging economics." On the ground there is evidence that Cameco are dismantling the exploration camp. The status of the drill holes and core farm and restoration of cleared areas remains unclear. We understand that there was an environmental inspection

scheduled for May 2021 and that Cameco are still bound by the rehabilitation requirements on the tenement conditions.

The state environmental approval for Kintyre expired in March 2020 - there has been no extension for the project. Since the 2016 approval:

- Kanyirninpa Jukurrpa Indigenous rangers who operate in the area have confirmed the presence of the critically endangered Night Parrot in the downstream environment

- There has been substantial land clearing through other mineral projects with cumulative regional impacts on habitat and biodiversity
- New understandings about climate change have emerged which may have a significant impact on the project and the ability to contain radionuclides in dust and tailings and effectively isolate these from water systems
- Changed understandings have highlighted the regional importance of the Karlamilyi National Park and surrounding areas in providing safe habitat for a number of rare and endangered species including the Northern Quoll

There is a controversial Indigenous Land Use Agreement for Kintyre. Shortly after this was made the Aboriginal representative body Western Desert Lands Aboriginal Corporation WDLAC was put into administration²⁸ by the Office of Registered Indigenous Corporations, the federal regulator, based on the Board not representing the membership. The ILUA was 'suspended' in 2015 by Cameco under a sunset clause based on low uranium prices. Martu Traditional Owners have opposed uranium mining for decades. The 1980's homelands movement which saw Martu return to Parnngurr (formerly Cotton Creek) was in part to protest uranium exploration in Parnngurr and at Kintyre.

The original Public Environment Review assessment failed to identify the connectivity between the two branches of Yandagodgee creeks and a number of permanent water holes inside the Karlamilyi National Park that connect to the Karlamilyi River and Lake Dora. These watercourses are all inside the National Park (formerly known as Rudall River National Park). These issues were raised by Martu who largely won native title based on their deep knowledge of water systems. In 2015 senior Martu artists did a collaborative painting called "Kalyu" (water) which documents all the water systems connected to Kintyre. This was created as a form of protest to the mine and is now represented in the permanent collection of the Museum of Contemporary Art in Sydney. In 2016

senior Martu elders led a walk from Parnngurr community to the proposed mine site, passing a number of these permanent water holes and explaining the connectivity and the deep cultural and ecological importance. This was a powerful demonstration of both traditional knowledge and an intricately connected desert water system. Further studies and evidence about the connectivity of water would likely result in substantial new findings about the overall environmental impacts and the risks of the project. We believe these would further demonstrate unacceptable environmental risks from any potential future mining.

In isolation any of these factors identified above may substantially change the impacts of the project. Collectively, they should preclude any support for extending approval. We note there is no longer a valid environmental approval for Kintyre and the company has not indicated they have any intention to mine. Instead, there is evidence that the company is removing infrastructure and rehabilitating the area. Given the high level of public concern, the significance of the area to Martu Native Title holders, the proximity and connectivity to WA's largest national park and its water systems along with threatened, rare and endangered species in the area we respectfully ask that the government work closely with Cameco and Martu to ensure the complete and successful rehabilitation of the Kintyre project area. We recommend this area be rehabilitated and handed back to Martu for incorporation into the Karlamilyi National Park or some other comparable land use decided on by Martu.

The resolution of long standing Aboriginal concerns over the threat of uranium mining at Koongarra (NT) by incorporation in the surrounding Kakadu National Park provides a positive model for such an approach.



Nola Taylor, with a reproduced version of 'Kalyu' at Kintyre during the 2016 protest walk.

Approvals Expiry

By the end of January 2022 none of the four proposed uranium mines in WA will have a valid environmental approval. This means they will not be able to proceed with mining without having their environmental approval conditions amended. Each of the four uranium proposals has a five-year time constraint reflected in conditions in their environmental approvals.

Uranium project approval expiry dates

- Kintyre : 4th March 2020
- Mulga Rock : 16th Dec 2021
- Wiluna : 9th Jan 2022
- Yeelirrie : 16th Jan 2022

Condition: Time Limit for Proposal Implementation

Condition 3 of each of the four uranium mine approvals states that “3-1 The proponent shall not commence implementation of the Proposal after five (5) years from the date on this Statement, and any commencement, prior to this date, must be substantial. 3-2 Any commencement of implementation of the Proposal, on or before five (5) years from the date of this Statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of five (5) years from the date of this Statement.”

Defining ‘Substantial Commencement’

None of the four projects has been able to substantially commence mining. While there is no agreed definition of “substantial commencement” it is our view that substantial commencement should mean that the company must credibly demonstrate that it has:

1. Achieved all necessary approvals to mine including an approved Mine Plan and Mine Closure Plan, Indigenous Land Use Agreements etc.
2. Made a formal Final Investment Decision, secured finance and be able to demonstrate the financial capacity to meet all conditions of their approval, including rehabilitation provisions.
3. Advanced substantial construction of key infrastructure.

None of the four projects have been able to do these three things. The Kintyre project has already reached its expiry and all evidence on the ground is that the company is dismantling the mine camp and making some attempts to rehabilitate the exploration works. This view is reinforced by company reports that indicate there is no intention to mine at Kintyre in the short term along with the formal reduction in the book value of the project from \$238 million to zero in 2016.²⁹

At the point where these proposals reach the five-year deadline there are opportunities for the Minister for Environment (and the Attorney General in the case of Mulga Rock where there is a declared conflict of interest with this project and the Minister for Environment) to intervene.



Environmental Protection Act s46

For the proponents to seek to commence operations after the expiry dates we understand that they would need to make an application to amend condition 3 under section 46 of the Environmental Protection Act. Upon an application the Minister could, under section 46(1), instigate an inquiry to be conducted by the EPA. Section 46(5) outlines the powers of the EPA to conduct the inquiry. 46(6) states that the EPA would prepare a report for the Minister on completion of an inquiry. 46(7) the report is to be published. 46(8) after publication of the report (which we would strongly advocate be open for public consultation) the Minister must make a decision.

Section 46b allows any condition in the Ministerial approval to be reviewed – not just the condition that the proponent is seeking to change. For example, the company may apply to amend condition 3 but a Minister could then review all conditions and strengthen or weaken any condition.

We strongly advocate that the Environment Minister and Attorney General use the powers under the EP Act to review the flawed conditions of the four uranium proposals, which were made in highly politicised circumstances under the former Barnett Government. Each of the uranium projects pose a significant site-specific risk to the environment and we believe the case can be made that material differences at each of the uranium proposals mean they should undergo a fresh and full environmental assessment. Subsequent to this new assessment the Minister(s) may decide to approve or not approve the project consistent with the government's clear and long standing policy position.

Impacted priority and threatened fauna species

Threatened species and priority species documented at the four proposals or with a high likelihood of being at the site

Kintyre ³⁰	Wiluna ^{31 32}	Mulga Rock ³³	Yeelirrie ³⁴
Night Parrot (CR)	Night Parrot (CR)	Sandhill Dunnart (EN)	Night Parrot (CR)
Crest Tailed Mulgara (VU)	Sharp-tailed Sandpiper (MI)	Southern Marsupial Mole	Mallee Fowl (VU)
Northern Marsupial Mole	Rainbow Bee-Eater (MI)	Rainbow Bee-Eater (MI)	Subterranean Fauna 11 + species of stygofauna and troglofaunal – not listed but the EPA found that the entire community is at risk of extinction
Northern Quoll (EN)	Brush Tailed Mulgara (P4)	Brush Tailed Mulgara (P)	
Greater Bilby (VU)	Peregrine Falcon (OS)	Crest Tailed Mulgara (VU)	
Great Desert Skink (VU)	Australian Bustard (P4)	Dotty-tailed Robust Slide	
Princess Parrot (VU)	Crest Tailed Mulgara (VU)	Great Desert Skink (VU)	
Peregrine Falcon (OS)	Malleefowl (VU)	Woma Python (P1)	Black-flanked Rock-Wallaby
Eastern Great Egret (MI)	Slender-billed Thornbill (VU)	Bustard (P4)	Rainbow Bee Eater
Fork-tailed Swift (MI)	Major Mitchell's Cockatoo		Fork-tailed Swift
Rainbow Bee-eater (MI)	Long-tailed Dunnart (P4)		Peregrine Falcon
Orange Leaf-nosed bat (VU)	Northern Marsupial Mole		Major Mitchell's Cockatoo
	Greater Bilby (VU)		Grey Falcon
	Golden Bandicoot (VU)		Princess Parrot
	Burrowing Bettong (VU)		Great Desert Skink
	Black-flanked Rock wallaby		Greater Bilby
	Princess Parrot (VU)		Eastern Great Egret (MI)
	Fork-tailed Swift (MI)		Common Sandpiper
	Eastern Great Egret (MI)		Marsh Sandpiper
	Oriental Plover (MI)		Common Greenshank
	Grey Falcon (VU)		Red-necked Stint
	Bush Stone Curlew (P)		Sharp-tailed Sandpiper
	Great Desert Skink (VU)		Curlew Sandpiper

CR = Critically Endangered
 EN = Endangered
 VU = Vulnerable
 P= Priority
 MI = Migratory
 OS= Other Special Protection



Bilby (Bush Heritage Australia)

Rehabilitating the uranium sites in WA

Community expectations around the rehabilitation of mine sites have changed over the last two decades. The former Barnett government introduced new mine closure laws which unfortunately involved paying back \$1 billion in bonds to mining companies and instead required an annual levy equivalent to 1% of the estimated mine closure cost. This is known as the Mining Rehabilitation Fund (MRF) and currently holds approximately \$216 million. In 2019-2020 the fund received \$35 million in levies. Contributions from the uranium sector equate to less than \$20,000. The fund is meant to provide for rehabilitation costs of any future abandoned mines and interest from the fund is allocated to the enormous task of rehabilitating WA's existing legacies. The legacy of uranium exploration is worth considering as there is a narrowing opportunity to hold exploration companies to account.

After reviewing WA Mining Rehabilitation Fund³⁵ (MRF) data released in 2020 we were able to calculate the 1% levy paid by each of the four uranium hopefuls and establish the estimated total liability of their exploration activities (see Table 1).

In the table we have also identified the net assets of the companies who hold the tenements for the four proposed uranium mines in WA. This analysis highlights that the smaller companies who hold sites have dwindling resources with which to meet their existing obligations to rehabilitate the exploration sites. We are most concerned about the Mulga Rock project where the liabilities are comparatively significant relative to the other sites and where the company has no income from an operating mine. This concern is heightened where there are no bonds held. The major rehabilitation costs with Mulga Rock are from the airstrip, waste dump/ overburden stockpile, and "other cleared land."

Test pit at Centipede



Table 1 - Uranium proposal mining levies, estimated closure liabilities, bonds and assets

Project	2020 MRF Levy (1% of liability)	Est. closure liability	Bonds	Net Assets 2020
Wiluna (Toro Energy) (Millipede, Lake Way and Lake Maitland. Kimba – WMC - Centipede)	\$0	\$28,200	0 ³⁶	Toro - \$5,944,582 (previous half year \$6,394,736) ³⁷ WMC - \$138,537,000 ³⁸
Mulga Rock (Vimy Resources)	\$7,754	\$939,920	0 ³⁹	\$5,245,486 (previous half year) \$8,277,818 ⁴⁰
Yeelirrie (Cameco)	\$8,760	Unclear (under state agreement and lack of data in the MRF data release)	0 ⁴¹	\$878,000,000 cash ⁴²
Kintyre (Cameco)	\$0	\$93,300	0 ⁴³	\$878,000,000 cash
Total	\$16,514	\$960,400 (does not include Yeelirrie)	0	

The above table represents data from the MRF including all types of tenement leases. For each site there were a number of live tenements where there was no information available through the MRF or not listed in the MRF. The table does not detail these companies net liabilities.

Rehabilitation requirements - exploration

The Kintyre, Wiluna and Mulga Rock uranium mine proposals all have clear rehabilitation requirements for their exploration activities. For the Wiluna and Mulga Rock projects where there have been trial mines there are Mine Closure Plans for the rehabilitation of the trial mine activities. The Yeelirrie uranium mine proposal does not have clear rehabilitation requirements associated with the tenements. We understand this is because of the Uranium (Yeelirrie) State Agreement Act 1978 (The Act) which is a separate piece of legislation for the mine activities. There are no clear rehabilitation requirements in The Act but there is a clause which articulates that the Act should not be construed to exempt compliance with other requirements for the protection of the environment – we take this to mean there is no exemption from mine closure requirements – although it is highly problematic that this information is not provided publicly as with other projects.

With all four projects there is a lack of transparency on the status of meeting such requirements. Public reporting is limited to the area of disturbed land, not the adequacy of the rehabilitation efforts, the land-form stability, radiation readings before and after rehabilitation, or a summary of the rehabilitation activities. We remain unclear on what rehabilitation of exploration activities or trial mines has occurred and what is still required.

We recommend the government requires a greater level of public reporting on meeting tenement rehabilitation requirements for exploration activities. We also recommend that the government work closely with Cameco, Toro Energy and Kimba/WMC and Vimy Resources to ensure the successful rehabilitation of the exploration and trial mine activities at the four proposed uranium mine sites.

Lake Maitland - aerial view



Table 2 - Rehabilitation requirements for the four advanced uranium exploration projects

Kintyre ⁴⁴	Wiluna ^{45 & 46}	Mulga Rock ⁴⁷	Yeelirrie ⁴⁸
<p>All surface holes drilled for the purpose of exploration are to be capped, filled or otherwise made safe immediately after completion. (for tenements: M45/264 & M45/266 & M45/267 & M45/420 & M45/695 & M45/1217).</p>	<p>Remove core farms at Centipede and Lake Maitland</p>	<p>All topsoil and vegetation being removed ahead of all mining operations from sites such as pit areas, waste disposal areas, ore stockpile areas, pipeline, haul roads and new access roads and being stockpiled for later respreading or immediately respread as rehabilitation progresses. (L39/1104)</p>	<p>There are no rehabilitation requirements for Yeelirrie tenements. This is likely due to Yeelirrie being subject to a “State Agreement Act.”</p> <p>There is a tenement condition that states “The occupant shall comply with its obligation under the said Agreement in connection with the protection of the environment.”</p>
	<p>Dispose of wastes at Mt Weld rare earths mine and in areas from which the wastes originated</p>	<p>Mine Closure Plan for the - Princess Pit Stage 1 Development (M39/1104). EARS-MP-MCP-63731 as Doc ID 4861039 (L39/1104)</p>	
<p>All costeans and other disturbances to the surface of the land made as a result of exploration, including drill pads, grid lines and access tracks, being backfilled and rehabilitated to the satisfaction of the Environmental Officer, Department of Mines and Petroleum (DMP).</p>	<p>Close the Lake Maitland Camp</p>	<p>On the completion of the life of mining operations in connection with this licence the holder shall: remove all installations constructed pursuant to this licence; and on such areas cleared of natural growth by the holder or any of its agents, the holder shall plant trees and/or shrubs and/or any other plant as shall conform to the general pattern and type of growth in the area and as directed by the Environmental Officer, Department of Mines and Petroleum and properly maintain same until the Environmental Officer advises regrowth is self supporting; unless the Minister responsible for the Mining Act 1978 orders or consents otherwise. (L39/219)</p>	<p>The Uranium (Yeelirrie) State Agreement Act 1978 – requires that “s2 (d) ... to take adequate measures to safeguard the public and the environment in its operation under this Agreement.”</p>
<p>Ongoing monitoring of backfilled trial pits – inc. vegetation recovery, fencing, removal and disposal of rubbish</p>			

Table 2 - Rehabilitation requirements for the four advanced uranium exploration projects

Kintyre	Wiluna	Mulga Rock	Yeelirrie
<p>Backfilling and rehabilitation being required no later than 6 months after excavation unless otherwise approved in writing by the Environmental Officer, DMP. (for tenements: M45/264 & M45/266 & M45/267 & M45/420)</p>	<p>Commence discussions on haul road and access track fate</p>	<p>All disturbances to the surface of the land made as a result of exploration, including costeans, drill pads, grid lines and access tracks, being backfilled and rehabilitated to the satisfaction of the Environmental Officer, Department of Mines and Petroleum (DMP). Backfilling and rehabilitation being required no later than 6 months after excavation unless otherwise approved in writing by the Environmental Officer, DMP. (L39/239 & L39/242 & R39/2)</p>	<p>12 (1) ... carry out a continuous programme of investigation and research including monitoring and the study of sample areas to ascertain the effectiveness of the measures it is taking pursuant to its approved proposals for the protection and management of the environment.</p>
	<p>Exploration drill hole rehabilitation (historical – noting Toro’s drillholes are said to have been rehabilitated)</p>	<p>All waste materials, rubbish, plastic sample bags, abandoned equipment and temporary buildings being removed from the licence area prior to or at the termination of exploration program. (L39/239 & L39/242 & L39/254 & L39/1105 & R39/2)</p>	<p>41. Nothing in this Agreement shall be construed to exempt the Corporation from compliance with any requirement in connection with the protection of the environment arising out of or incidental to the operations of the Corporation hereunder that may be made by the State or any State agency or instrumentality or any local or other authority or statutory body of the State pursuant to any Act for the time being in force.</p>
	<p>The area of the miscellaneous licence to be reduced as soon as practicable after construction, to a minimum for the safe maintenance and operation of the licence purposes. (L39/219 & L39/242 & L39/251 & L39/252 & L39/253 & L39/254)</p>	<p>A Mine Closure Plan is to be submitted in the Annual Environmental Reporting month specified in tenement conditions in the year specified below, unless otherwise directed by an Environmental Officer, DMP. The Mine Closure Plan is to be prepared in accordance with the “Guidelines for Preparing Mine Closure Plans” available on DMP’s website: 2018 (L39/1104)</p>	

Inactive or suspended uranium exploration projects

Out of the 64 inactive or suspended uranium exploration projects listed below 54 do not have an active owner. In an earlier iteration of this report we reported 54 inactive sites and 23 without an active owner. In these cases, it would be valuable to understand whether or not the drill holes and core farms have been remediated and if there is any need for remedial works to ensure the sites are non-polluting. For the other inactive sites where there is still a current holder it would be valuable to work closely and promptly with these companies to ensure the highest standard of remediation of the sites.

Table 3 - Inactive or superseded uranium exploration projects ⁴⁹

Project	Owner	Owner start date - end date
Abercromby – Millipede	Toro Energy Limited	Feb 2011 – Sept 2012
Angelo River Uranium	Burben Investments Pty Ltd	Oct 2010 – unknown
Atlantis Ashburton	Packsaddle Prospecting Pty Ltd	Dec 2014 – July 2016
Baltic Bore	Gianni Peter Romeo	June 2012 - unknown
Barlee South	Emu Nickel NL	April 2010 - unknown
Bellah Bore East	Alacer Gold Corp	March 2011 – Oct 2012
Bolitho Bore Uranium	Alto Metals Limited	August 2014 - unknown
Bordah Well	Geological Resources Pty Ltd	Jan 2011 - unknown
Bremer Basin	Magnis Resources Limited	May 2007 – March 2013
Byro Uranium	Enterprise Metals Limited/ Amiable Holdings Pty Ltd	Jan 2010 – unknown
Chain Pool - Telfer River	Peako Limited	April 2009 - unknown
Downs East	Xantippe Resources Limited	Nov 2007 – May 2010
Firestrick	Toro	Nov 2009 - unknown
Gardner Range Gold -Uranium	Manhattan Corporation Limited	Oct 2003 – April 2010
Gunbarrel – Junction uranium	Aura Energy	July 2006 – unknown
Hillview	Gianni Peter Romeo	Oct 2015 - unknown
Horse Well Copper-Uranium	Gondwana Resource Ltd	April 2013 - current
Jailor Bore/ Copper	Cooper Robin Christopher	June 2013 - July 2016
Jailor Bore extended	Newera Resources Limited	April 2009 - unknown
Jane Well	IGC (Aust) Pty Ltd	Dec 2004 - unknown
Kalgoorlie Uranium Research Plant	BHP Group Limited	June 2005 – unknown
Kaluwiri	Mongolian Resources Corporation Ltd	April 2010 – April 2013
Kennedy Range	Thundelarra Limited	May 2007 – Dec 2015
Lake Barlee/ Alamar	Mongolian Resources Corporation Ltd	April 2010 – Jan 2013
Lake Barlee Uranium	Jervis Mining Ltd	April 2010 – Feb 2013
Lake Harvey	Magnetic Resources NL	April 2010 – Oct 2011
Lake Marmion	Diamond Exploration Pty Ltd	March 2014 - unknown
Lake Seabrook/ Lake Eva Uranium	Lithium Australia NL	Sept 2012 - unknown
Lake Raeside West	Red Oaks Pty Ltd	July 2006 – March 2015
Lake Throssell	Mongolian Resources Corporation Ltd	April 2010 - unknown
Lake Way South Potash *no longer listed	Salt Lake Potash Limited / Piper Preston Pty Ltd	Dec 2015
Lake Wells Uranium	Mongolian Resources Corporation Ltd	April 2010 – Feb 2013
Laverton Alamar	Mongolian Resources Corporation Ltd	April 2010 - unknown
Mad Gap	Lion One Australia Pty Ltd	May 2006 - unknown
Maroonah Uranium	Gondwana Resources Ltd	Feb 2009 - unknown
Maudie Creek Uranium	Aura Energy	March 2007 – Dec 2009
McPherson Bore	Spark Energy	March 2010 – unknown
Minnie Creek Uranium	Aurora Minerals Ltd	July 2006 – unknown
Moogooree Uranium	Thundelarra Limited	August 2006 – July 2009
Mt Alexander Uranium	Northern Manganese/ Ridge Resources	Nov 2010 - unknown
Mt Danvers	Ultima United Ltd	Oct 2013 - unknown
Mt Sears	Peako Limited/ De Grey Mining Ltd	Oct 2010 - current
Munbinia Uranium	Magnetic Resources NL	Aug – 2009 – Aug 2012
Mundong Well Uranium	Artemis Resources Ltd	July 2010 - unknown
Murchison Downs Uranium	Faurex Pty Ltd	April 2015 – Jan 2016

Onslow Uranium	Energia Minerals Limited	Dec 2009 – June 2012
Oobagooma	Uranium Africa Ltd	Dec 2016 - current
Paddy Well	Lion One Australia Pty Ltd	May 2006 - current
Pells Range	Newera Resources Limited	May 2006 - unknown
Quandong Well uranium	Mongolian Resource Corporation Ltd	April 2010 - unknown
Spinifex Uranium	Resources Star Ltd	April 2011 - unknown
Stone Tank Well	Alacer Gold Corp/	March 2011 – Feb 2012
Station Bore	Proto Resources and Investments Ltd	Feb 2012 - current
Tatcher Soak (Gold Road)	Gold Road Resources Ltd	April 2007 - current
Turee Creek Uranium	Fortescue Metals Group	June 2015 - current
Wilson River – Antares	Northern Star	Nov 2005 - April 2007
Windimurra Uranium	AM- Australian Minerals Exploration Pty Ltd	Feb 2016 - unknown
Winmar Creek	CJC Holdings Pty Ltd	Feb 2009 – unknown
Yalgoo – Peranbye Uranium	Enterprise Metals Limited	Jan 2010 - unknown
Yalgoo Uranium	Mongolian Resource Corporation Ltd	April 2010 - May 2013
Yannarie River / Raisama	Peako Limited	July 2010 - unknown
Yeelirrie East – Alamar	Mongolian Resource Corporation Ltd	April 2010 - Feb 2013
Yinnietharra Minindi Creek	South Coast Minerals Pty Ltd	March 2015 - current

Active uranium exploration projects in WA

The current state government ban on uranium mining in WA prevents any of these projects from advancing. There remains a great risk that these companies do not have sufficient financial capacity to rehabilitate the exploration activities. Uranium drill holes, trial mines and core farms all present unique risks to the environment. We strongly urge the government to resource DMRIS to systematically engage with these companies about the status and what is needed to secure these exploration projects, as well as to require bonds to secure these sites or require the progressive rehabilitation of exploration activities. Since the first publication of this report in January 2021, eight of the projects that were listed as active are now listed as inactive. This may be due to a time lag in updating MINDEX, but is important to note that the data here is continually changing as are the status of the projects, the ownership of the companies and the capacity to rehabilitate each site.

Table 4 - Active uranium exploration projects ⁵⁰

Project	Owner	Start date/end date
Anketell Uranium	Energy Metals Limited	Oct 2004 - current
Clever Mary	Hurricane Prospecting Pty Ltd	Nov 2015 - current
Dawson-Hinkler Well	Toro Energy Limited	Oct 2010 - current
Lake Mason/ Energy Metals	Energy Metals Limited	Oct 2004 - current
Lake Way Zeus	Zeus Resources	Feb 2013 - current
Lakeside – Lake Austin Uranium	Energy Metals Limited	Oct 2004 - current
Manyingee	Energy Metals Limited	Oct 2014 - current
Mopoke Well – Lake Raeside	Energy Metals Limited	Oct 2004 - current
Narnoo	Zeus Resources Limited	May 2011 - current
Nowthanna Hill uranium	Australian Vanadium Limited	Dec 2006 - current
Nowthanna Uranium	Toro Energy Limited	July 2011 - current
Nyang – Carley Bore	Paladin Energy Ltd	June 2015 - current
Ponton uranium Manhattan	Manhattan Corporation	Oct 2008 - current
Theseus	Toro Energy	May 2005 - current
Wondinong	Zeedam Enterprises Pty Ltd	March 2015 - current
Wondinong Southeast	Rio Tinto	April 2016 - current
Yarlaweelor	Horn Resource Pty Ltd	May 2015 - current
Yarabubba – Cogla Downs Uranium	Minex (West) Pty Ltd	June 2015 - current
Yilgarn – Avon JV	Crucible Resources Pty Ltd	August 2015 - current
Yuinmery Uranium	Legendre Bruce Rober	Oct 2018 - current

Summary and recommendations

The four WA uranium projects all represent significant risks to the environment, cultural heritage, community and workers.

It is also likely that company failures could see significant cost shifting for rehabilitation and remediation works onto the WA taxpayer. As the environmental approvals have or are about to expire, we recommend that no environmental approvals be extended, based on specific reasons at each site.

- At Wiluna, the company are now pursuing a new and separate proposal to mine uranium at Lake Maitland which would be rejected under the current state policy ban. The existing proposal is impacted by increased cyclonic activity over recent years which highlights the deep flaws with the original approval to store 50 million tonnes of radioactive mine waste on the edge of a lake.
- At Mulga Rock, the company is pursuing a project that they do not have environmental approval for. This raises questions about the company's credibility and compliance. The original approval lacked key information about fault lines through mine pits and tailings storage facilities and the project poses a significant risk to the endangered Sandhill Dunnart. There is no Indigenous Land Use Agreement at Mulga Rock.
- At Yeelirrie, the company show no signs of developing the site, there is no ILUA and there is strong local opposition because of the cultural significance of the site. The original state and federal Ministerial approvals were highly politicised and ignored expert advice about the projects risk of causing the extinction of multiple species and failure to meet objects of the Environmental Protection Act.
- At Kintyre, the approvals have expired and not been extended. Martu continue to oppose the mine and are actively seeking the sites restoration and inclusion into the Karlamilyi National Park under Martu control. The original environmental approval

ignored expert local knowledge about the connectivity of the Yandagoodge creek and the complex underground water systems which connect to the Karlamilyi River and Lake Dora. The original approval predated new information about the critically endangered Night Parrot and ignored the National Recovery plan for the Northern Quoll.

We recommend:

- That the four projects should not be allowed to proceed, and no environmental approvals should be extended.
- That bonds be required for the rehabilitation of all uranium exploration projects and that bonds reflect 100% of the closure liability and that the costs and bonds be reviewed and adjusted annually.
- Projects that do not have valid environmental approvals be required to fully rehabilitate and remediate the trial and exploration sites. Exploration sites which are no longer active should also be required to rehabilitate. This is particularly important given that an increasing number of companies associated with inactive sites that no longer exist.
- DMIRS work closely with those companies to ensure the responsible management and eventual rehabilitation of those sites and strongly support enhanced monitoring and compliance on meeting tenement conditions, along with a greater level of transparency and the requirement of bonds.
- That there be increased requirements for public reporting through Annual Environmental Reporting on meeting rehabilitation requirements associated with tenement conditions.

Upon the expiration of environmental approvals the WA Labor government would be uniquely placed to legislate a ban on uranium mining in WA thereby creating lasting certainty for uranium companies and communities neighbouring uranium deposits.

Endnotes

¹ See Table 1 on pg 10, based on figures from the 2020 MRF data release.

² <https://au.finance.yahoo.com/>

³ MINEDEX search for projects by commodities 'uranium'. December 15th 2020.

⁴ International Energy Agency – World Energy Outlook 2020

⁵ <https://www.theaustralian.com.au/business/mining-energy/cameco-no-market-for-new-uranium-mines/news-story/19089d04b763877975a7fa6e58d55acb>

⁶ Cameco price Chart – showing price's estimated by independent market consultants Trade Tech and UxC (note uranium is not traded on the open market, contracts are negotiated privately between buyer and seller).

⁷ 2019 WA Labor State Platform (pg 38) https://walabor.org.au/media/hptfyp13/2019walabor_platform.pdf

⁸ <https://www.abc.net.au/news/2017-06-21/wa-uranium-miners-given-deadline-to-get-mines-up-and-running/8639070>

⁹ <https://www.afr.com/companies/mining/wa-implements-uranium-mining-ban-but-allows-four-projects-to-proceed-20170620-gwuziv>

¹⁰ 2019 WA Labor State Platform (pg 39) https://walabor.org.au/media/hptfyp13/2019walabor_platform.pdf

¹¹ State Ministerial Decision 4th March 2015 Statement No 997. Condition 3.

¹² State Ministerial Decision 16th December 2016 Statement No 1046. Condition 3.

¹³ State Ministerial Decision 9th January 2017 Statement No 1051. Condition 3.

¹⁴ State Ministerial Decision 16th January 2017 Statement No 1053. Condition 3.

¹⁵ Toro Energy Limited 2020 Interim Financial Report. 12th March 2021. (pg 14)

¹⁶ Vimy Resources Half Year Financial Report to 31 December 2020 (pg 7)

¹⁷ http://www.nntt.gov.au/searchRegApps/NativeTitleClaims/Pages/details.aspx?NTDA_Fileno=WC2020/004

¹⁸ CCWA Referral to WA EPA December 2018

¹⁹ Correspondence from the WA EPA to CCWA 14th February 2020

²⁰ Vimy response to submissions Office of the Appeals Convenor 2017

²¹ Q2 2020 Financial Report 29th June 2020. Cameco (pg 2)

²² <https://www.theaustralian.com.au/business/mining-energy/cameco-no-market-for-new-uranium-mines/news-story/19089d04b763877975a7fa6e58d55acb>

²³ Cameco 2019 Annual Report <https://s3-us-west-2.amazonaws.com/assets-us-west-2/annual/cameco-2019-annual-report.pdf>

²⁴ ibid

²⁵ EPA Report 1574 August 2016

²⁶ CCWA submission to the Yeelirrie PER 14 December 2015

²⁷ Q2 2020 Financial Report 29th June 2020. Cameco (pg 2)

²⁸ <https://www.oric.gov.au/publications/media-release/wdlac-under-special-administration>

²⁹ <https://www.cbc.ca/news/canada/saskatoon/cameco-2016-loss-1.3975279>

Endnotes cont.

³⁰ Kintyre Environment Review Management Plan 2013

³¹ Wiluna Environment Review Management Plan 2012

³² Public Environment Review - Extension to the Wiluna Uranium Project 2015

³³ Public Environment Review - Mulga Rock 2015

³⁴ Public Environment Review - Yeelirrie 2015

³⁵ The MRF 2019 – 2020 annual report indicated the MRF has \$216 million as of June 2020

³⁶ Annual Environment Report 326-33132. Feb 2020. Lake Way Environmental Group.

³⁷ Toro Energy Limited 2020 Interim Financial Report. 12th March 2021. (pg 14)

³⁸ Wiluna Mining Corporation (parent company of Kimba Resources who now hold the tenements for part of the Wiluna Uranium Project) 2020 Annual Report (pg 54)

³⁹ Correspondence with the Minister for Mines – Bill Johnston, signed 20th October 2020. Ref 71-16060

⁴⁰ Vimy Resources Half Year Financial Report to 31 December 2020 (pg 7)

⁴¹ Correspondence with DMIRS December 2020

⁴² Q2 2020 Financial Report 29th June 2020. Cameco (pg 2)

⁴³ Annual Environment Report, 072-34797 May 2020. Kintyre Group

⁴⁴ Environmental Assessment and Regulatory System - Cameco – Kintyre

⁴⁵ Environmental Assessment and Regulatory System - Toro – Wiluna

⁴⁶ Environmental Assessment and Regulatory System - Toro – Lake Maitland

⁴⁷ Environmental Assessment and Regulatory System - Vimy – Mulga Rock

⁴⁸ Environmental Assessment and Regulatory System - Cameco – Yeelirrie

⁴⁹ MINEDEX search for ‘uranium exploration’ mines

⁵⁰ MINEDEX search for ‘uranium exploration’ mines



Image: Mulga Rock

Back cover image: Central Highway, Jessie Boylan

“Yeelirrie in my language means place of death. My old people told us we’re not allowed to mess with it... don’t even go into that area. I am happy that while that uranium is in the ground it is safe. I’m concerned what it’s going to do when it comes out of the ground. Now if it’s going to start affecting people in another country, destroying their lives like at Fukushima, Chernobyl and Maralinga, I’m concerned about that, because that’s my country that could be doing that.”

Koara Elder Richard Evans.



