

Calico Baseline Data Methodologies

Notice of Prospective Applicants Readiness to Collect Baseline Data

Summary of Public Comments and Response to Public Comments

July 2017

Background

On May 17, 2017, Calico Resources USA Corporation filed *Environmental Baseline Study Work Plans* pursuant to their *Notice of Intent– February 28, 2017*. Calico Resources is proposing baseline data collection methodologies, study areas, and timing/duration of baseline data collection and verification. The proposed mining operation is to be located at Grassy Mountain, near Vale in Malheur County.

The *Notice of Intent – February 28, 2017* addressed an expansion of the northern boundary of a previously proposed Mine and Process Area by 1,500 feet on lands administered by the US Bureau of Land Management (BLM), an expansion of approximately 199 acres, and defines the Access Road Area (approximately 876 acres) of the proposed permit area.

The *Environmental Baseline Study Work Plans – May 17, 2017* were made available for review:

- Online at http://www.oregongeology.org/mlrr/chemicalprocess_Calico-GrassyMtn.htm
- On CD at the Emma Humphrey Library (150 A Street E, Vale, OR 97918)
- On CD at the Ontario Community Library (388 SW 2nd Avenue, Ontario, OR 97914)

As required by Oregon Administrative Rules (OAR) 632-037-0040 (2) to (4), DOGAMI provided public notice and held two public informational meetings within 30 days of receiving the notice. The public informational meetings were held in Ontario, Oregon on June 8, 2017 and Bend, Oregon on June 14, 2017. Written comments were accepted from the public for 45 days. The public comment period for written comments closed at 5 pm (Pacific) on July 3, 2017.

An inventory of the comments received at the two public informational meetings and by US mail or e-mail is below:

Reference #	Date Received	Method of Submission	Name of Commenter	Representing
1	6/3/2017	Email	Benton Elliott	
2	5/24/2017	Email	Kerby Jackson	Galice Mining District
3	6/8/2017	Public informational meeting - Ontario	Kyle Johnson	
4	6/8/2017	Public informational meeting - Ontario	Kim Rutten	Gwen Fukiage Trust

Reference #	Date Received	Method of Submission	Name of Commenter	Representing
5	6/8/2017	Public informational meeting - Ontario	Doug Franek	Gwen Fukiage Trust
6	6/8/2017	Public informational meeting - Ontario	Larry Wilson	County Commissioner
7	6/8/2017	Public informational meeting - Ontario	Lynn Findley	City of Vale
8	6/8/2017	Public informational meeting - Ontario	Les Bertalotto	10 Mile Ranch
9	6/27/2017	Email	Doug Heiken	Oregon Wild

Summaries of the Ontario and Bend public informational meetings are included as Appendix A and Appendix B. A summary of the written comments received is included as Appendix C.

Summaries of the individual comments received and the DOGAMI responses are provided below.

Comments and responses are organized in the following general categories:

1. Concerns about the access road alignment, size of the road access area, road maintenance, and construction.
2. Concerns about the impact of the proposed mine on Oregon’s environment, including greenhouse gas emissions.
3. Desire for the permitting process to move more quickly.
4. Positive economic impacts from the proposed mine to the local economy.
5. Concerns about the long term impacts of the mine operation upon closure on the local economy and the environment.

1. Concerns about the access road alignment, size of the road access area, road maintenance and construction [Comments (4) (5) (8) (9)]	
1.1	Access road alignment will be a problem for neighboring properties.
	<u>Response:</u> The work plans associated with the <i>Notice of Applicants Readiness to Collect Baseline Data</i> are intended to gather broad baseline data. The details of the road alignment have not been proposed by the Company.
1.2	The road should not be paid for by Malheur County residents. How will be road be maintained?
	<u>Response:</u> The costs for construction and maintenance of the access road will need to be worked out between Calico, BLM, and Malheur County.

1.3	Access road is too large at 300 feet; the access road should be narrowed.
	<u>Response:</u> The baseline data collection methodologies are intended to gather adequate information. The exact size and alignments of the access road have not been determined by Calico, at this time.
1.4	Access road should be from Nyssa, not Vale.
	<u>Response:</u> The exact details of the access road have not been determined by Calico, at this time.
1.5	Dust from the road is a concern.
	<u>Response:</u> Nuisance road dust is regulated by DEQ.
1.6	Livestock could be damaged by additional traffic.
	<u>Response:</u> The baseline data collection methodologies do not address risk to livestock.

2. Concerns about the impact of the proposed mine on Oregon’s environment, including greenhouse gas emissions [Comments (1) (3) (8) (9)]	
2.1	Concerns about the post-mine closure requirements. How will the landscape around the mine be restored?
	<u>Response:</u> Oregon regulations set standards for reclamation and mine closure using the best available, practicable and necessary technology – see OAR 632-037-0130. Detailed reclamation standards are included that require establishment of a “self-sustaining ecosystem, comparable to undamaged ecosystems in the area”. As part of the consolidated permit application, Calico will be required to file a Reclamation and Closure Plan, and appropriate Financial Security (see OAR 632-037-0135).
2.2	A full and complete analysis of the potential impacts of the mine is required.
	<u>Response:</u> Under Oregon law, DOGAMI must hire a contractor to complete an Environmental Evaluation of the proposed mining project, evaluating both direct and indirect impacts. The environmental evaluation includes: <ol style="list-style-type: none"> 1. Impact analysis, 2. Cumulative impact analysis, and 3. Alternative analysis <p>Additional details on the scope of the Environmental Evaluation are included at OAR 632-037-0085.</p>
2.3	Water is in short supply. The applicant’s 27-year-old water permit may not be valid because it was never put to beneficial use.
	<u>Response:</u> Issues related to the existing water permit are not baseline data methodology issues. Information on water resources permitting is anticipated as part of the Consolidated Application.

2.4	DOGAMI should consider the social costs of the additional carbon dioxide emissions - - a greenhouse gas - - associated with the project. Using the “Social Cost of Carbon Dioxide (SCC)” would be a useful evaluation tool for this project.
	<i>Response:</i> The current stage of the process focuses on baseline data methodologies. An evaluation of the social costs of additional carbon dioxide emissions associated with the proposed mine is not a baseline data issue.
2.5	“Zero discharge” moniker should be used with caution. There may be numerous steps in the mining process that expose water and wildlife to hazardous chemicals and conditions.
	<i>Response:</i> Calico has indicated that the mine does not plan to discharge wastewater under a National Pollutant Discharge Elimination System (NPDES) permit; wastewater operations will be regulated through a DEQ Water Pollution Control Facility (WPCF) permit. As a portion of the consolidated permit application, DOGAMI regulations require detailed information regarding hazardous chemicals and proper management, including: a list of all chemicals and wastes generated at the mine, a fish and wildlife protection and mitigation plan that meets Oregon Department of Fish and Wildlife (ODFW) standards, a plan for transportation of toxic chemicals developed according to standards set by the State Fire Marshal, a spill prevention plan, and characterization and management plan for all wastes, including quantity and quality. These detailed plans, along with other information, will be included in the consolidated application and available for public review at that time.
2.6	The mine operations should not reduce Animal Units per Month or impact grass availability.
	<i>Response:</i> The baseline data includes an evaluation of the baseline grazing management in the proposed mine area. That information can be used to predict the impact of the mining operations on Animal Units per Month associated with the proposed mine.
2.7	Gold mining should not be allowed in Oregon. No new mines should be authorized.
	<i>Response:</i> Oregon law allows chemical process mining, including gold mining, if the mines are designed, constructed, and operated to meet high environmental standards, see ORS 517.953

3. Desire for the permitting process to move more quickly [Comment (6)]	
3.1	Permitting process for gold mines takes too long. Too many studies are required.
	<i>Response:</i> Oregon law details a unique consolidated State permitting process for mines that use chemical processing, such as the mine Calico has proposed. The process developed by the Legislature is detailed, and includes numerous opportunities for public review and input. Once a consolidated application is filed and complete, Oregon law requires the State Agencies take action to permit or deny the application within one year of issuance of the <i>Notice to Proceed</i> (see OAR 632-037-0105(9)).

4. Positive economic impacts from the proposed mine to the local economy [Comment (2) (7)]	
4.1	The mine will have a positive impact on the poorest county in Oregon.
	<u>Response:</u> The State is required to develop an overall socio-economic impact analysis of the project on the individuals and communities located in the vicinity of the proposed mine site. The report is required to identify both short term and long term impacts on population, economics, infrastructure, and fiscal structure.
4.2	Calico is a reliable and profitable mining operator. The mine will provide jobs and economic stimulus to the local economy.
	<u>Response:</u> The State is required to develop an overall socio-economic impact analysis of the project on the individuals and communities located in the vicinity of the proposed mine site. The report is required to identify both short term and long term impacts on population, economics, infrastructure, and fiscal structure.

5. Concerns about the long term impacts of the mine operation upon closure on the local economy and the environment [Comment (3)]	
5.1	Concerns about the impact of the proposed mine after closure on the local economy, including housing, schools and other services. Information from communities impacted by closed oil & gas industry facilities could be useful.
	<u>Response:</u> The State is required to develop an overall socio-economic impact analysis of the project on the individuals and communities located in the vicinity of the proposed mine site. The report is required to identify both short term and long term impacts on population, economics, infrastructure, and fiscal structure.

Appendix A – Summary of Ontario, Oregon Public Informational Meeting, 6/8/17

Calico Grassy Mountain

Notice of Readiness to Collect Baseline Data

Public Informational Meeting – Comments Summary

Ontario, Oregon

June 8, 2017

The public informational meeting at the Four Rivers Cultural Center was convened at 2 pm (Mountain). Bob Houston with DOGAMI was the presiding officer, assisted by Randy Jones with DEQ.

At the Ontario public informational meeting, the comments received included:

1. Les Bertalotto representing 10 Mile Ranch

He discussed the access road and the impact on the ranch from the construction; the ranch is about 5 miles from Bishop Road. He is concerned about livestock deaths from road accidents and suggested that the road alignment should be through Nyssa. He questioned how much of the road was Malheur County jurisdiction and how much was BLM. What would be the impacts on the Malheur County taxpayers from paying for that, he questioned.

2. Doug Frank for the Gwen Fukiage Trust, a neighboring rancher

He expressed concerns about the road alignment. The County can't take care of the roads they have; how will the county maintain that road? Dust from the existing road is a problem. Take the road straight over; don't take out a paved road to put in a gravel road. Getting people to stop at the stop sign has been difficult in the past. He recommended the road be realigned through Nyssa.

Houston reviewed the overall chemical mining permitting processes used by the State. Randy Jones with DEQ continued that there are project descriptions from Calico. Calico is focused on describing existing conditions including water resources, wildlife, air quality, and other conditions, to ensure that if the project is built, the impacts of the mine can be compared accurately to historical information. Jones explained the additional potential impacts of the mine in the area.

3. Les Bertalotto for 10 Mile Ranch

He added that they are not against the mine, as long as they don't reduce AUMs (Animal Units per Month) or take away grass. He asked how much of the road alignment was BLM road. He does not want any County dollars spent on expanding the County roads.

Houston further described the State of Oregon permitting process, and highlighted that a County land use permit is needed, as well.

Bertalotto expressed concern that some surveyors were on private land.

4. Malheur County Commissioner Larry Wilson

He stated that he did not have a large number of concerns. He said that the DOGAMI staff that started on the Calico permit are dead or retired after 30 years of doing nothing. He reflected that the project has been studied to death, and he is glad that there any mining companies that want to deal with the State, after so much delay in permitting the mine. There should not be 25 years of study – the State should just get things done. The County will not allow roads that will be bothering people. The County is frugal and will make good decisions. The mining companies continue to gather the information that is necessary – Malheur County would like something to happen. Get the project moving, suggested Commissioner Wilson.

Houston and Jones provided additional information on the State permitting requirements in Oregon law and regulations.

5. Kim Rutten for the Gwen Fukiage Trust

She expressed concerns about the road, as well as concerns about safety, noise, dust, and other negative impacts of a gravel road. She indicated that the road would be very close to her house.

6. Lynn Findley – Vale City Manager

He said he strongly supports the project. It adds economic diversity to the poorest county in Oregon. The mine project will provide tax base and jobs. There are issues that have to be worked out, but this is a good project and a boon to the local economy. The permitting process is lengthy, but he said that the economic impact and diversity to the County is important.

Jones explained that there is a requirement for a socio-economic analysis of the project, evaluating the potential impact of the project on items such as schools, employment, roads, local tax base, and other issues. The socio-economic analysis will be a more detailed study of the impact of the mine on the local economy. The report will be prepared by the State of Oregon to evaluate the economy and social impacts of the proposed project.

The public informational meeting was closed at 2:35 pm.

The public informational meeting was reopened at 3:00 pm

7. Kim Rutten for the Gwen Fukiage Trust

She added that the County road in front of her house is getting pushed towards her house. She would like road pushed to the other side of the road. This is an opportunity to improve the road and improve safety overall. Improving the road will make it safer for the ranchers, the County, and the mine operation.

Houston continued to discuss the Notice of Readiness to Collect Baseline Data and the State permitting process.

The public informational meeting was closed at 3:10 pm.

The public informational meeting reopened at 3:34 pm.

8. Kyle Johnson

He expressed concern about the post-mine reclamation process and how the reclamation process will restore the landscape 5 or 10 years later. What will the region and County look like economically once the project has closed, or 10 years later, he asked. He would like the study to include the socio-economic impact on the area, including an evaluation of other chemical gold mine operations in other parts of the country and their economic impacts on the nearby communities. There should be good information from other closed mining operations on the long term effects after a project has ended about both socio-economic impacts and environmental impacts. For each discipline, the post-mine impacts should be evaluated. How does the mining operation, and the closure of the mine, make this area more sustainable, he added. He is concerned about the physical, and economic effects of the mine, before operation, during operation, and post-operation.

For example, what if the project brought in a thousand jobs – and half of those jobs are specialists from other parts of the state to work at the mine. Those jobs would be available for a period of time, and the mine would close, and those specialists would not likely be able to find similar work in the County, he added. When the mine closes, how will schools and housing and other services be supported, he asked. If there are many outside experts planning to be employed at the mine, how will that impact the current housing shortage in the County, he asked. He commented that similar impacts have been experienced in County's heavily impacted by oil and gas exploration. If there is additional housing, how will that housing be maintained over time? The housing should be stable and long lasting, not a trailer park. A housing development that has been vacated is not a value to the community.

The public informational meeting closed at 3:42 pm.

Appendix B – Summary of Bend, Oregon Public Informational Meeting, 6/14/17

Calico Grassy Mountain

Notice of Readiness to Collect Baseline Data

Public Informational Meeting Summary

Bend, Oregon

June 14, 2017

Bob Houston, DOGAMI, opened the public informational meeting at 2 pm. Houston served as the presiding officer, assisted by DOGAMI Deputy Director Ian Madin.

Houston opened the public informational meeting by describing the overall permitting process and the goal for today's public informational meeting. He indicated that written comments would be accepted until 5 pm on July 3, 2017, both in written form and electronically. The comments must be received by the deadline.

He provided additional information on the Grassy Mountain formation; several different companies have owned the mineral site over time.

Houston explained that following action by the Oregon Legislature, DOGAMI adopted regulations for chemical process mining in 1995.

The current *Notice of Intent* was received on February 28, 2017.

The baseline data methodologies were filed by Calico in May 2017.

No one indicated they were interested in providing public comments. The public informational meeting was closed at 2:04 pm.

There was informal discussion regarding the Calico Grassy Mountain project.

The public informational meeting concluded at 4:00 pm. No one commented at the public informational meeting.

Appendix C – Summary of Written Comments

A summary of the written comments received by DOGAMI regarding the Notice of Readiness to Collect Baseline Data include:

1. Benton Elliott – Eugene, Oregon

Gold mining in Oregon is of historical interest, but has no place in the present day. No new mines should be permitted, especially in Malheur County. Climate change and mass extinction calls for environmental protection. The Calico Resources project should not be permitted.

2. Kerby Jackson – Galice Mining District, Jacksonville, Oregon

Calico Resources has a worldwide reputation as a reliable and profitable mining operator. The Grassy Mountain project has the capacity of creating numerous high salary jobs in a very depressed region of the State. The project could provide over 100 jobs in a County with a high unemployment rate. Malheur County needs these jobs. Calico will also be investing in the local economy. The project is expected to yield over 425,000 troy ounces of gold. The Galice Mining District supports Calico's efforts and encourages DOGAMI and other agencies to work with Calico to bring the project forward.

3. Doug Heiken, Oregon Wild, Eugene, Oregon

Oregon Wild has serious concerns about the impacts of the proposed mining operation on water quality, water quantity, wildlife, and scenic values. A full and complete analysis of potential impacts of the proposed mining operation on these public resources is needed. The road access area should be kept to a minimum width, not 300 feet. Water is in short supply in eastern Oregon. Mining operations use a lot of water and pollute a lot of water. A mining operation might not be the best use of scarce water resources in Eastern Oregon. The applicant's 27-year-old water permit may not be valid because it was never put to beneficial use. The 'zero discharge' moniker should be used with caution. There are numerous steps in the mining process that expose water and wildlife to hazardous chemicals and conditions.

The Grassy Mountain mineral resources are at a very low concentration. Heavy equipment burning fossil fuel will be needed to move massive quantities of ore. These fossil fuel emissions will exacerbate global climate change. DOGAMI should carefully consider the social costs of carbon dioxide emissions associated with this mining project. The Social Cost of Carbon Dioxide should be considered to compare the project's economic benefits with the greenhouse gas pollution impacts.