DRAFT EXECUTIVE SUMMARY

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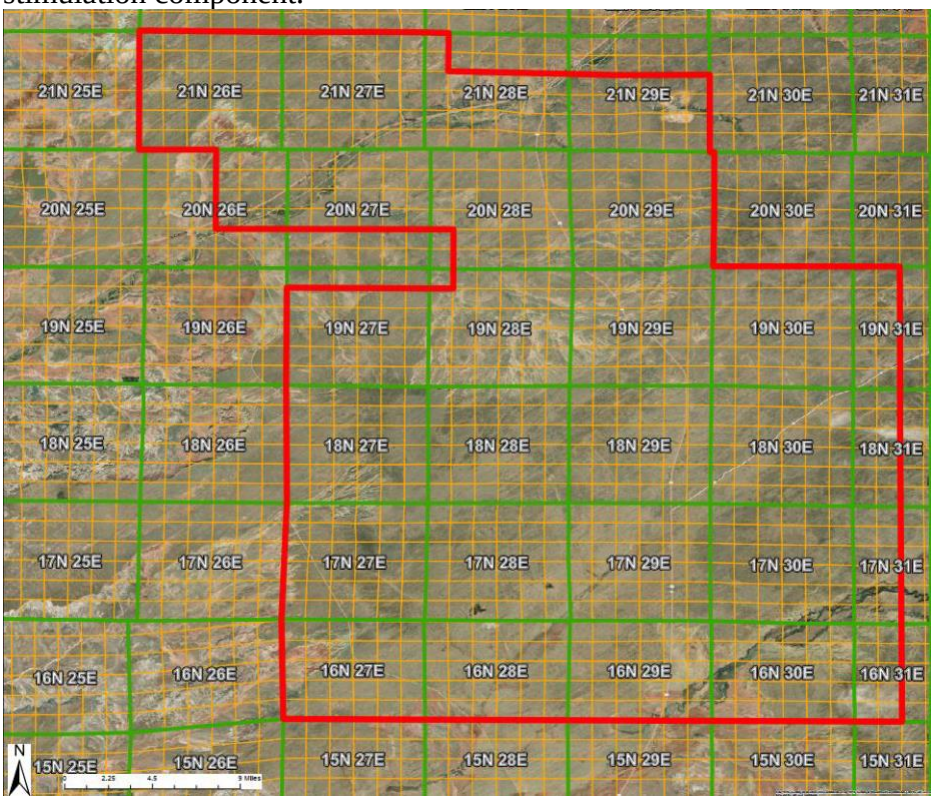
Prize Energy Resources
Aquifer Protection Permit No. P-513196
Place ID 194123, LTF No. 79111

I. Introduction:

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit (APP) for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards (AWQS) at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

II. Permittee & Facility Location:

The permit authorizes Prize Energy Resources, Inc. (Prize) to utilize acid stimulation for the purpose of developing and maintaining helium gas extraction wells in an area near Chambers, Arizona, within Apache County, Arizona. Prize has plans to operate more than 80 wells during the life of the project within the Area of Development (AOD) as shown in red on the figure below. Prize is only seeking authorization for acid stimulations at this time without any proppant stimulation component.



III. Facility Description:

Prize is proposing to conduct acid stimulation, as needed, on helium gas wells completed within the Shinarump Member of the Chinle Formation (hereafter Shinarump). The purpose of the acid stimulation is to effectively clean out the well borings when the wells are constructed initially, and potentially again later as small clay particles accumulate during well usage. This is analogous to using acid wash to clean out the coils on a residential air conditioning unit as dirt builds up on the coils and reduces their efficiency. At this time Prize cannot identify all the exact wells and intervals within the Shinarump that will be subject to stimulation. Determination of well location and stimulation intervals are based on an extensive geological survey, pilot drilling and sampling. As a result, Prize is seeking authorization to conduct the stimulation on wells within the confines of the Area of Development, as shown in Section II above. As Prize identifies wells to be stimulated, the permit must be amended to add any additional wells beyond the 15 wells specifically listed in the permit. Prize's stimulation will be confined to the Shinarump only, and will not be applied to the underlying Moenkopi Formation or overlying Members of the Chinle Formation.

Acid stimulations are generally 45 to 60 minutes in duration and will be conducted to clean out the wellbore after drilling and after periodic well use, to remove small clay particles and allow helium to flow more freely. Prize believes the acid will be completely consumed by the clays and carbonate cement in the Shinarump. Acid stimulation will be performed by pumping the stimulation fluid (water and acid mixture) to the stimulation zones. Nitrogen may be added to assist in the flow back of the fluids. Once the acid stimulation fluid is spent (after about 10 to 20 minutes) and neutralized, the remaining stimulation fluid will be immediately flowed back to the wellbore and to the surface and placed in a mobile storage tank. Upon completion of the acid stimulation, the mobile storage tank will be removed from the site.

After stimulation, the well will be equipped with a gas/water separator which is used to separate the helium from liquids that are generated from the well. The liquids generally consist of any natural liquids from the formation as well as any remaining stimulation fluids. The separated liquids will be routed to tanks for storage before final disposal offsite.

IV. Best Available Demonstrated Control Technology (BADCT):

The BADCT for stimulation campaigns in the wells includes the design and construction of the wells, the site specific geology of the development area, pre-operational requirements for evaluating the well construction, and operational requirements for conducting the well stimulations. The specific BADCT requirements for the wells are in permit Section 2.2.

V. Compliance with Aquifer Water Quality Standards (AWQS):

Each stimulation well will have its own designated Pollutant Management Area (PMA), which is the area where the acid stimulation will be conducted in the Shinarump. Each well will also have its own Discharge Impact Area (DIA), which is the maximum distance the acid is expected to travel within groundwater. The PMA and DIA for each well will be defined by the same boundary: a 300-ft. radius circle with the stimulation well at its center point. Because the Shinarump rock characteristics may vary between wells, there may be some variability in the distance the acid travels in the Shinarump at each well. However, the distance the acid travels is not expected to extend past the 300-ft. radius based on the design of the stimulation procedures

to extract a high percentage of the acid solution back through the well. Any small percentage of acid solution that remains in the Shinarump would be consumed by the clays and carbonate cement in the formation.

Each stimulation well will have its own Point of Compliance (POC) at a location 300 ft. downgradient of the wellbore. The POC is a location in the aquifer at the edge of the PMA where the permittee shall not cause an exceedance of an aquifer water quality standard (AWQS).

Monitoring will not be required at the POCs for the following reasons:

- The proposed stimulations are expected to last approximately 45 minutes to an hour, when the wells are constructed and potentially for maintenance purposes
- The stimulations are designed to avoid communication with any water productive intervals around the well location
- The Shinarump (the only Member of the Chinle Formation where well stimulation is permitted) is hydrologically "isolated" by the low-permeability geologic formations around it
- The Shinarump's ability to produce water is inconsistent, and typically low-yield when present, therefore, even if POC wells were installed, there may not be sufficient quantities of water in the Shinarump to adequately collect samples
- It is unlikely that a drinking water well would be screened in the Shinarump, which decreases the risk to human health.
- Per the permit requirements, in no circumstance can stimulation campaign be conducted closer than 300 feet from a water well, regardless of where the water well is screened
- It is expected that most of the acid will be extracted back through the well, and the stimulation activities are not expected to cause an exceedance of AWQS's.
- The design of the helium extraction wells, which are solid pipe that is leak tested (minus the wells screen in the Shinarump), limits the risk of the discharge
- The stimulation process involves pumping and recovery of the stimulation materials, and it is in Prize Energy's best interests to encourage recovery/flow towards the well