



Geologist Information

General: New Location, 9 new wells
 Ownership: Fed Surface/Fed Minerals
 SUA Status: N/A
 Leases: 1-Federal Lease (COC 73094)
 Adjacent Owner: Naugle, Teter, Tri-state

Plan of Development

Access: New access road (approx. 2290') will be constructed from the PA 41-25 access road to the PA 34-24 Pad following Balzac Gulch. The road will require a 12' CMP at the Balzac Gulch drainage crossing and will be surfaced with a minimum of 6" of gravel. See Access Road Culvert Details for further information.

Construction: Prior to construction test holes will be drilled to evaluate subsurface materials and to ensure soil characteristics are suitable for the designed cut and fill slopes. Design changes may be needed prior to initiating construction of the pad location based on the results of the geotechnical evaluation. Areas underneath the rig footprint with a fill greater than 3' and less than 12' will be water packed in 3' lifts during pad construction. Rig footprint will be graveled prior to the rig moving to the location.

Cuttings: Cuttings will be managed in a cuttings trench on the north side of the pad. Estimated cuttings volume is approximately 5400cy.

SIMOPS: No

Completions: The PA 23-25 Frac Pad will be used to remote frac the proposed wells on the PA 34-24 Pad. 3-4.5" temporary surface steel frac lines (approx. 5403' each) will be installed following the existing pipeline easements and proposed access road to the PA 34-24 Pad. 2-10" temporary surface poly water lines (approx. 250') will be installed from the existing 10" water pipeline to the PA 23-25 Frac Pad to supply water to location.

Flowback: On pad/PA 23-25 Frac Pad.

Production: Separators (2 Quads, 1 Single and 1 Vertical) will be placed in a 50' x 30' area. 1-300bbl blowdown tank will be installed in a 30' x 30' area. All production equipment will be installed after drilling operations are complete. Water and oil will be piped to the tanks on the PA 22-25 pad.

Pipeline: A new 8" steel gas pipeline (approx. 5120') will be installed from the separators to the existing 12" gas line near the PA 22-25 pad following the proposed access road and existing pipeline easements. A new 4" flexpipe production water pipeline and 2" flexpipe oil pipeline (approx. 5270' each) will be installed from the proposed separators to the tank battery on the PA 22-25 Pad. Pipeline easement will consist of a 25' permanent easement with an additional 15' wide temporary work space. In addition, a 100' x 60' area on both side of each drainage crossing will be needed to provide additional working surface for burial of the pipelines through the drainage. The gas, water, and oil pipelines will be collocated in the same trench with approximately 18" separation between pipes and a minimum of 48" cover.

- Legend**
- Proposed Road
 - Proposed Production Equipment Area
 - Proposed Stockpile
 - Proposed Daylight Line
 - Proposed Pad or Pit
 - Proposed Limit of Disturbance
 - Proposed Pipeline (8" Gas/4" Water/2" Oil)
 - Frac Water Supply Line (2-10" Poly)
 - Temporary Frac Lines (3-4.5" Steel)
 - Williams Midstream Pipeline
 - Existing Gas Pipeline
 - Existing Water Pipeline
 - Existing Pad
 - Parcel Ownership

TEP Rocky Mountain LLC
PA 34-24 Plan of Development
T6S R95W, Section 24

August 23, 2018

