

**PROPOSED BMP'S
XTO ENERGY, INC.**

Apache Canyon #09-04

Nad 83 Lat: 37.103732 Long: 104.899737

NWNW Sec. 9, Twn. 34S, Rng. 67W 6th P.M.

Las Animas County, CO

**Certificate to Discharge Under CDPS General Permit No. COR-030000
Stormwater Discharges Associated with Construction Certification No. COR034312**

Prior to construction perimeter controls will be installed utilizing cuttings from the clearing operations. Brush Barriers shall be placed down gradient of the disturbance. Once the well pad has been constructed a variety of B.M.P.'s shall be utilized for the site specific conditions. These devices may include but are not limited to:

- Brush Barriers
- Dirt Berm/Bar Ditch
- Clean Water Run on Diversion
- Seeding
- Erosion Control Blankets
- Mulch Tackifier
- Rip-Rap

During construction each site will be inspected every 14 days and 72 hours after any major storm event. These inspections will be recorded and maintained at the XTO office. Repairs shall be completed within 7 days of the initial inspection. Any modifications shall be revised on the site plan and then implemented at the site.

A Field Wide Stormwater Management Plan (SWMP) for the Raton Basin is on file at the XTO Energy Inc. office. A Site Specific SWMP with a Site Plan will be developed for each location and can be found in:

- Appendix F- Apache Canyon Lease
- Appendix G- Golden Eagle Lease
- Appendix H- Hill Ranch Lease
- Appendix I- New Elk Lease

Wildlife BMP required for Raton Basin utilize bear proof dumpsters and trash receptacles for food related trash at all facilities that generate such trash.

Spill Prevention and Counter Measures (SPCC) for the Raton Basin is on file at the XTO Energy Inc. office. The Field SWMP and Site Specific SWMP each address SPCC during construction operations.

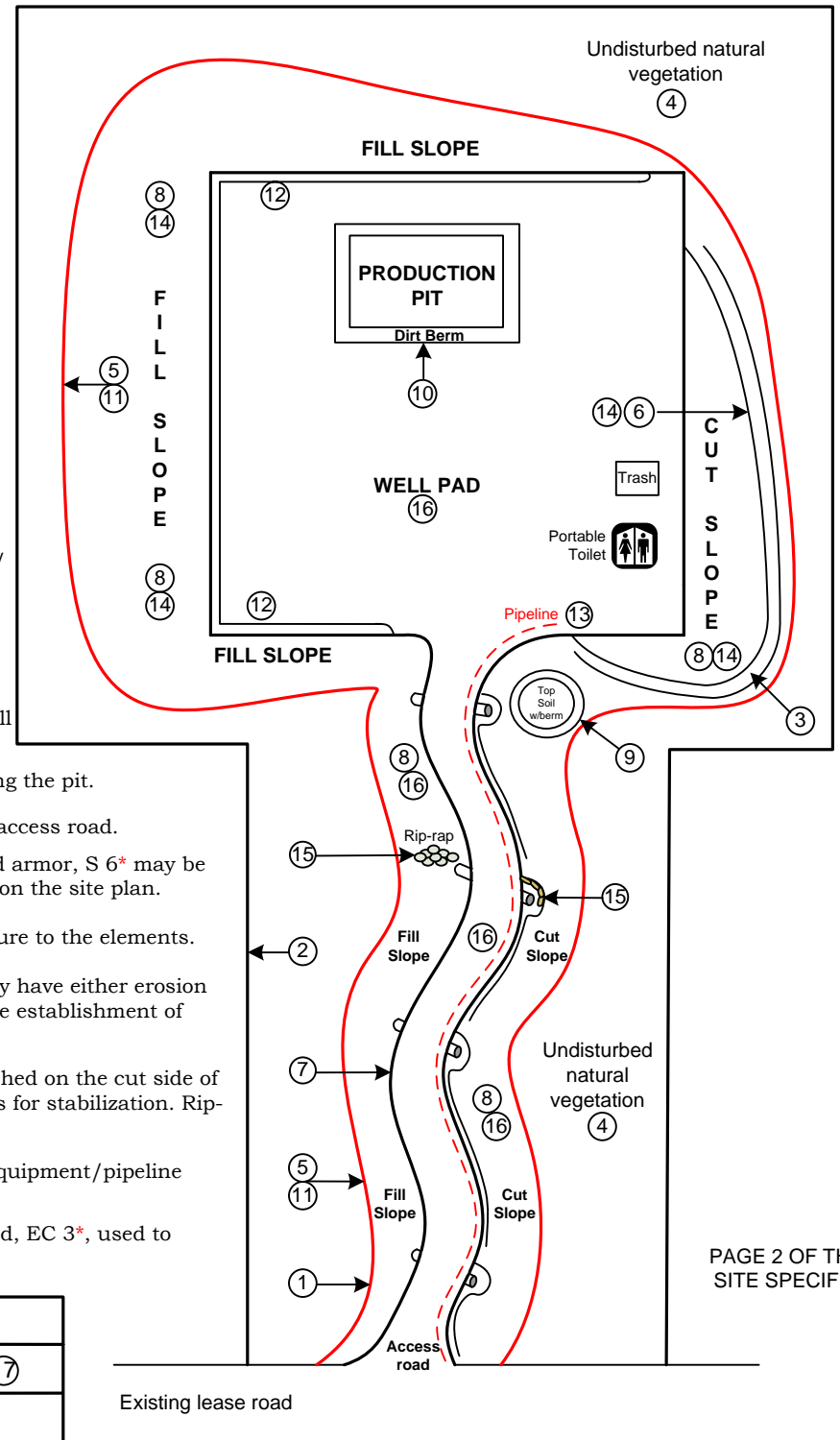
Typical Site Map for well pad and access road.

Implementation schedule through construction phases.

* Please refer to the field wide SWMP for details.

Once the construction begins, a Site Plan will be developed for each site to reflect actual conditions of the location. The Site plan will be revised through construction phases.

- ① Proposed area of disturbance is equivalent to areas of cut and fill. —————
- ② Proposed construction site boundary.
- ③ NS 4* Limiting the area of vegetation disturbance. Undisturbed natural vegetation shall be preserved outside of the boundary of disturbance, reducing sediment and erosion problems.
- ④ NS 9* NS 11* During the clearing operation a Brush Barrier, SC 9* shall be placed down gradient of the disturbance, intercepting and retaining sediment from disturbed areas.
- ⑤ S 4* Construct a Clean Water Diversion Ditch, Alt 1* above the cut slope, prevents upland watershed from entering the disturbed area.
- ⑥ The outfall for this project begins at the top of the Clean water Diversion Ditch. The size of the ditch is proportional to the length of the cut slope.
- ⑦ S 4* A temporary dirt berm, EC 8* shall be placed above the access road out slope until road base/gravel can be applied, minimizing erosion.
- ⑧ S 1* Depending on soil content, disturbed areas may be left in a roughened condition, EC 12* grading techniques, to facilitate plant establishment and minimize soil erosion.
- ⑨ S 17* Topsoil will be stockpiled on the outer limits of the site surrounded with a dirt berm, EC 8*, controlling sediment transport. NS 12* Seeding, EC 1* with or with out a mulch tackifier, EC 3* will be completed during reclamation season.
- ⑩ S 18* A dirt berm, EC 8* shall be placed around the production pit, preventing run off from entering the pit.
- ⑪ The brush barrier shall be replaced with a dirt berm, EC 8* during final grade of the well pad and access road.
- ⑫ S 4* Construct a dirt berm, EC 8* on well pad out slope to direct run off to a desired location. Hard armor, S 6* may be used for erosion control where run off exits the location. At that point the outfalls will be recorded on the site plan.
- ⑬ NS 3* The pipeline shall be completed in small increments to limit the time of disturbed soil exposure to the elements.
- ⑭ NS 12* The cut/fill slopes of the well pad and clean water diversion shall be seeded, EC 1* and may have either erosion control blankets installed, EC 5* or mulch tackifier, EC 3*, used to control erosion and promote the establishment of vegetation.
- ⑮ S 11* & S 6* Once the pipeline has been installed along the access road a bar ditch will be established on the cut side of the access road using culverts with inlet/outlet protection. Rip-rap shall be placed inside bell holes for stabilization. Rip-rap shall be used on culvert outlets to dissipate energy, trap sediment and prevent scouring.
- ⑯ S 21* Access road/well pad shall be stabilized with road base/gravel upon completion of surface equipment/pipeline installation, used to reduce erosion and control off site tracking.
- ⑰ The cut / fill slopes of the access road shall be seeded, EC 1* and may have Mulch Tackifier applied, EC 3*, used to control erosion and promote the establishment of vegetation.



Construction Phases	Clearing ①②③④	Utility installation ⑬
	Construction ⑤⑥⑦⑧⑨⑩	Final Stabilization ⑨⑭⑮⑯⑰
	Final grade ⑪⑫	