



WASTE MANAGEMENT PLAN

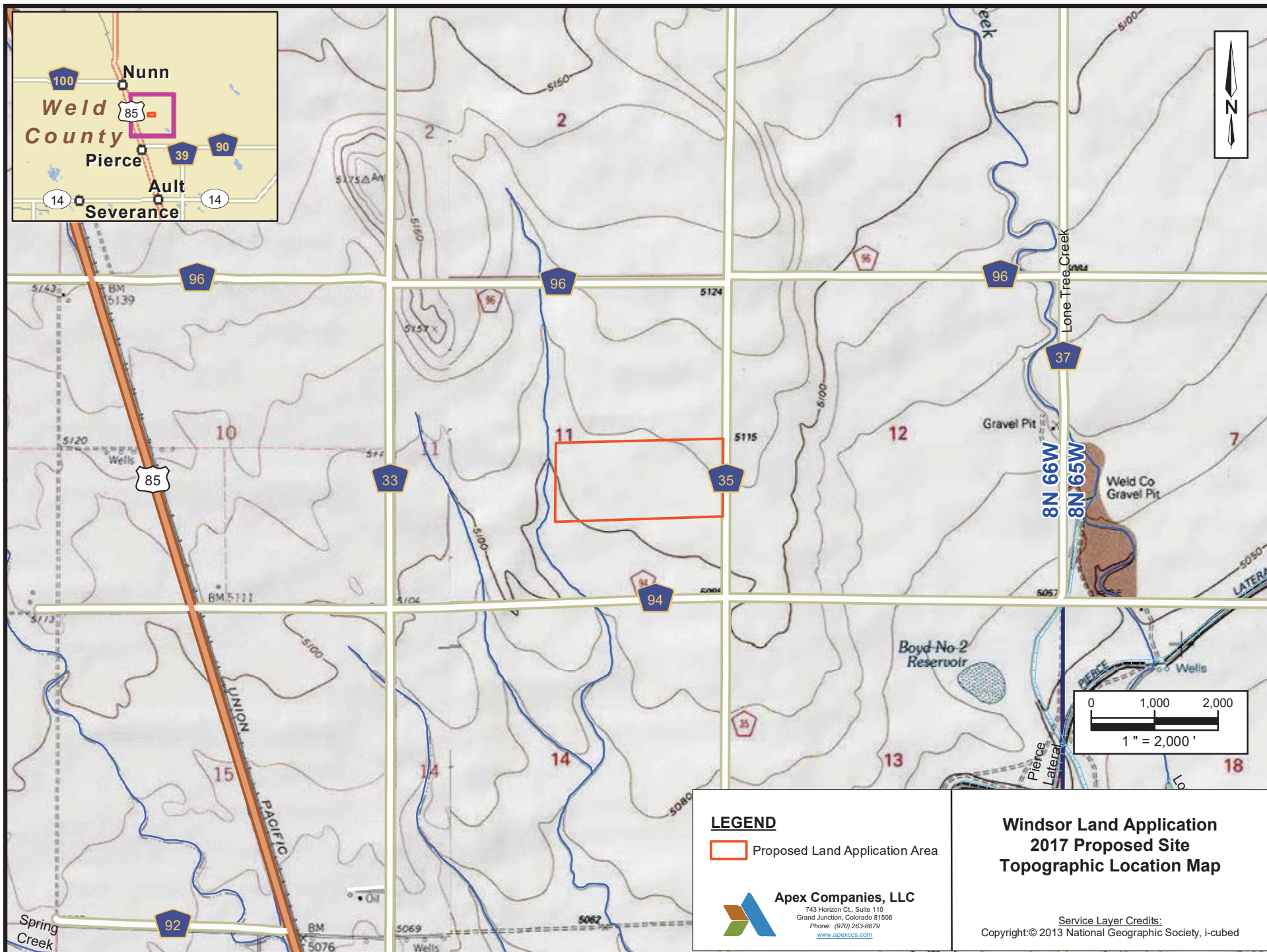
Land Application of Water-Based Bentonitic Drill Cuttings

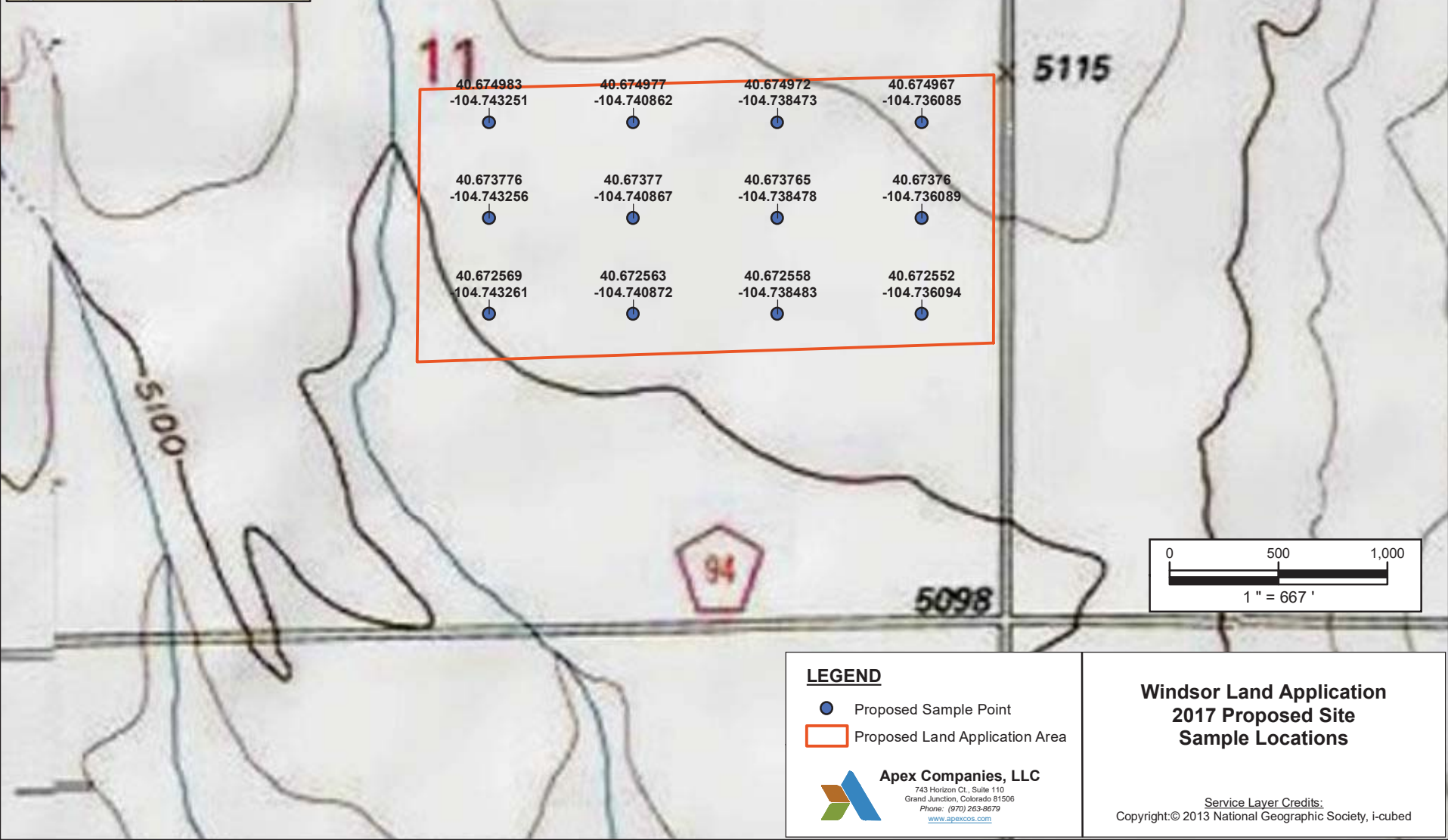
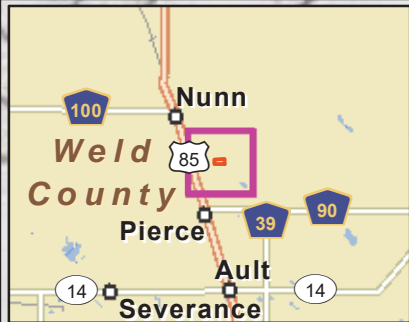
In accordance with Colorado Oil & Gas Conservation Commission (COGCC) rules for the management of exploration and production (E&P) waste, Extraction Oil & Gas, Inc. (Extraction) proposes the following waste management plan (WMP) procedures for land application and beneficial reuse of water-based bentonitic drill cuttings. These guidelines were developed to comply with applicable portions of the 900 (E&P Waste Management) and 1000 (Reclamation Regulations) Series Rules, and the Drill Cuttings Management Policy issued by the COGCC on September 15, 2014.

Extraction will secure written authorization from the landowner, and approval from the COGCC prior to initiating operation at any land application site proposed for beneficial soil amendment of water-based bentonitic drill cuttings. The landowner agreement shall state that only water-based bentonitic drill cuttings originating from surface drilling, and from Extraction operated wells and locations will be allowed at the land application site.

1. Prior to transport, cuttings will be stabilized at the drill site to remove or immobilize free liquid, to minimize the potential for unintentional discharges of liquids from the load during transport.
2. Transport of drill cuttings will be carried out by a licensed third party contractor, with proper material transfer tickets.
3. Drill cuttings will be offloaded into a designated staging area with proper BMPs to contain any residual fluids prior to spreading.
4. Appropriately designed stormwater management features will be maintained at each application site to prevent offsite sediment discharge. Responsibility for stormwater compliance, whether the facility operator or Extraction, will be determined during the planning phase of the project, with current plans and inspection records maintained by the responsible party designated for each site, and will be available upon request.
5. Drill cuttings will not be applied to a depth of greater than three (3) inches prior to incorporation, and will remain on the surface for no more than ten (10) days before incorporation.
6. Current records will be maintained for drill cuttings received at each land application site. These records will be maintained under usual and customary practice, and Extraction will assure that records are available for review if requested. Material tracking records will include the following information:
 - a. Name of well where material was generated.
 - b. Date of material transfer to the approved beneficial amendment site.
 - c. Volume of material transported and received at the land application site.
 - d. Name of transporter.
7. To assure compliance with COGCC Table 910-1 allowable levels for analytical constituents of concern, samples will be collected throughout the life cycle of each approved beneficial reuse land application site. At least one sample will be collected for each 8 acres of the site. Sample point coordinates will be established during the planning phase for each site, and samples will be collected during the following phases of operation for the land application site:
 - a. Baseline sample of soil conditions prior to first land application;
 - b. A minimum of one sample per year to assure ongoing compliance with COGCC Table 910-1;
 - c. Prior to requested closure of the facility; and
 - d. At least one representative sample of incoming drill cuttings prior to land application.

End of procedure.





LEGEND

- Proposed Sample Point
- Proposed Land Application Area



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Windsor Land Application 2017 Proposed Site Sample Locations

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