



## ***Drill Cuttings Remediation and Testing Protocol***

### ***COLORADO***

1. During the drilling process, the Symmetry CDU shall be used to mix fresh drill cuttings with Geozorb, DryLet MBB and BioComplete.
2. Geozorb shall be used with the proper additives to begin the bioremediation process for hydrocarbon and salt contamination.
  - a. Care shall be taken to not over-dry the drill cuttings (min. 15% moisture)
3. After drilling is complete, (est. 30-45 days after TD) a properly trained individual shall take two separate 10-part composite stockpile samples – 1 of the treated drill cuttings, and 1 of the subsoil
  - a. See attached Stockpile Composite Sample Worksheet
4. Samples shall be analyzed by an independent 3<sup>rd</sup> party certified laboratory for all of table 910-1
5. Results shall be compiled and compared to the table 910-1 standards
6. If the material does not yet meet standards, then it shall be re-tested until remediation is complete
7. Once material meets all of table 910-1 thresholds,
  - a. Lab data and compilation report shall be preserved in permanent company records
  - b. The treated material shall be thin spread within the permitted well site
  - c. The well site shall be reclaimed according to current practices

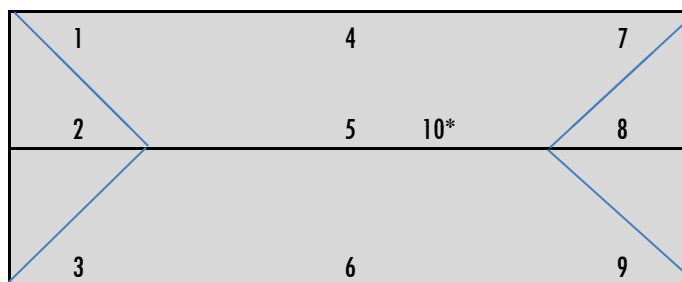
# Stockpile Composite Sample Worksheet:



Operator & Well #:		Spud Date:	
Dimensions of Cuttings Pile: Length:	Width:	Height:	

## A.) Drill Cuttings Sample: From the stockpile of dried treated drill cuttings,

- 1.) Take 1 quart samples from the 10 points indicated in the diagram below and gather into a 5 gallon bucket
- 2.) Samples 1-9 shall be taken from a 12-24" depth from the surface of the pile
- 3.) Sample 10 shall be taken from a 48" depth from the surface of the pile



- 4.) Mix all 10 samples together well in the 5 gallon bucket
- 5.) Label the lid and container with the following information:
  - a. Name of operator and well number
  - b. The description: "10 part composite cuttings stockpile"
  - c. Date and time of sample

## B.) Background Sample:

- 1.) Repeat steps 1-4 above with the stockpile of native subsoil
- 2.) Label the lid and container with the following information:
  - a. Name of operator and well number
  - b. The description: "10 part composite background soil"
  - c. Date and time of sample

NOTE: Take representative samples. Rocks, debris, etc. are not good samples

SAMPLER: Printed Name:	Signature:
Company Name:	
Sample Date and Time:	