MAJOR MODIFICATION TO PERMIT NO. NN295000009 ISSUED TO RESOLUTE NATURAL RESOURCES COMPANY

In accordance with 40 CFR §144.39, it is understood and agreed that this permit has been modified to allow enlargement of the authorized injection interval, and includes minor modifications to the testing procedures and monitoring requirements. This modification increases the overall permitted interval to include the Ismay, Gothic Mesa, and Desert Creek members of the Paradox Formation and up to 129 feet above the Ismay member in the lower Honaker Trail Formation. This modification will allow cutting windows in the long string up to 129 feet above the Ismay member and drilling through the lower Honaker Trail Formation, Ismay member, and Gothic Mesa member in order to drill horizontal extensions into the upper Desert Creek zone from an existing or new wellbore.

The permit has been modified to incorporate the following changes in the well construction, injection interval, testing procedures, and monitoring requirements and reads as follows:

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONSTRUCTION

1. Casing and Cementing

Insert the additional following paragraph:

APPENDIX D will include wellbore schematics that depict the typical well construction of a vertical well and a horizontal well as modified under the authority of this permit modification and shall be binding on the permittee.

C. WELL OPERATION.

1. Mechanical Integrity
(a)(i)

Insert the additional following paragraph:

In addition to existing mechanical integrity test (MIT) requirements, the bradenhead valve will be opened and fluid pressure and content shall be monitored and recorded before and during the annular pressure test.

2. <u>Injection Intervals</u>

Replace with the following paragraph:

Injection shall be permitted for the overall interval that encompasses the lower 129 feet of the

Honaker Trail Formation and the Ismay, Gothic Mesa, and Desert Creek members of the Paradox Formation in each well. Open hole intervals in horizontal wells may be added to existing wellbores and new injection wells only within this interval. EPA must be notified in writing of proposed alterations of the injection zone and open hole intervals or other rework operations, and those operations must be properly reported (EPA Form 7520-12) and the well must demonstrate mechanical integrity before injection resumes.

D. MONITORING, RECORD KEEPING, AND REPORTING OF RESULTS

1. a and b replaced with the following:

- 1. <u>Injection Well Monitoring Program</u> Samples and measurements shall be representative of the monitored activity. The permittee shall utilize the applicable analytical methods described in Table I of 40 CFR §136.3, or, in certain circumstances, other methods that have been approved by the EPA Administrator. Monitoring shall consist of:
 - a) Analysis of the injection fluids. The analysis shall be performed:
 - i) annually for Total Dissolved Solids, major ions, ph, specific conductivity, viscosity, and specific gravity
 - ii) whenever there is a change in the source of injection fluids
 - b) Weekly monitoring and monthly recordings of injection pressure, annulus pressure, flow rate, and cumulative volume.
 - c) Annual average reservoir pressure measurements.

All other permit conditions remain unchanged.

Alexis Strauss

Director, Water Division-