GAVE ERGY COMP

Dagger Draw Gas System – Four Mile Draw Order Number: 2RP-2632-0 Sec 12 T19S R24E Eddy County, New Mexico March 17, 2016

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#### 1.0 Introduction

On November 14, 2014 Agave Energy Company was made aware of a potential release on an Agave pipeline. The notification came from the landowner who had discovered an area that they suspected was being affected by a pipeline release. The landowner described the location as an area on the north bank of leg of a wash/arroyo referred to as Four Mile Draw. An Agave representative visited the site that morning to conduct the initial investigation.

Initial reporting had identified the potentially affected area as 45 yds. by 25 yds. Upon further investigation, the area with a noticeable decrease in vegetation density was approximately 100 feet by 40 feet. The lack of vegetation was the only observable evidence that there may have been a release. There were no free liquids on or within the soil profile, nor was there any soil staining found.

Part of this potentially affected area does fall within the flood zone of this branch of Four Mile Draw, along with the private ranch road that parallels the pipeline ROW. Agave felt it prudent to give immediate notification of the potential release within the confines of a water way, rather than wait for soil sampling results to determine if there was a release or not.

This branch of Four Mile Draw is ephemeral, and is normally completely dry, only having water during extreme precipitation events. However, out of caution Agave reached out to Justin Riggs with the Army Corps of Engineers (ACoE), as the agency with jurisdiction over U.S. waterways. In correspondence with Mr. Riggs (provided with the initial C-141 form), he informed Agave that the cleanup work for Oil and Gas operations is covered under the Army Corp of Engineers' Nationwide Permit #20. Further, he informed us that being that the draw is ephemeral in nature, no reporting to the ACoE was necessary. Based on this guidance, Agave did not seek any further authorization or permits from ACoE, for the potential remediation work.

Soil samples were collected from the site to determine the nature of soil contamination.

#### 2.0 Background

The reportedly affected area was located in part over a pipeline ROW containing a 12" PVC low pressure gas line, a 6" PVC low pressure gas line, and a 6" PVC water line. The water line belongs to Yates Petroleum Corporation. The two gas lines were constructed and operated by Yates Petroleum Corporation, until 2013 when ownership was transferred to Agave Energy Company. Agave shows no records of prior releases at this location. There is a 2" steel line riser, which is suspected to be connected to the 12" PVC gas line, within the confines of the apparently affected area. This 2" line would have been used to pull a vacuum on the gas line to remove any liquids from the line. If there had been a leak along the line, the connection of the 2" steel line to the 12" PVC line would be the most likely point of release.

All of the PVC lines have subsequently been permanently removed from service, are cut and capped and have no potential to release hydrocarbons or produced water.

#### 3.0 Site Ranking

Based on the *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, August 13, 1993), hereafter referred to as "the Guidelines", the site ranking criteria are as follows.

*Depth to Ground Water:* The nearest Depth to Groundwater record (RA-06436) listed on the New Mexico Office of the State Engineer (Sec 12, T19S-R24E) shows depth of groundwater to be approximately 300 feet. Exhibiting a depth to groundwater of greater than 100 feet, results in a ranking score of 0.

*Wellhead Protection Area:* The nearest water sources to the station is one well used for livestock watering, located 650 feet to the northeast of the site. According to the *Guidelines*, being less than 1000 feet of a water source, or less than 200 feet from private domestic water source, results in a site ranking of 20. Section III(A)(3) of the Guidelines states, "Private and domestic water sources are those water sources used by less than five households for domestic or stock purposes." Water well RA-06436 falls into the definition of a private domestic water source as it is used exclusively by one household for stock watering purposes. Being greater than 200 feet away from a private domestic water source results in a site ranking of 0.

*Distance to Surface Water Body:* The nearest surface water body is the Pecos River, located 14 miles to the east, resulting in a site ranking of 0.

|                                      | Total Ranking Score = | 0        |
|--------------------------------------|-----------------------|----------|
| Distance to surface water body >1000 | )′                    | <u>0</u> |
| Not in a wellhead protection area    |                       | 0        |
| Depth to groundwater >100' (per NM   | IOSE)                 | 0        |

For sites with a Total Ranking Score of 0, the Recommended Remedial Action Levels (RRAL) are:

| Benzene | 10 ppm   |
|---------|----------|
| BTEX    | 50 ppm   |
| TPH     | 5000 ppm |

#### 4.0 Soil Sampling

After making the initial notification of a potential release, Agave conducted soil sampling at the location. The initial soil samples collected were intended to determine the nature of contamination. We were specifically attempting to identify whether or not the apparent contamination was primarily hydrocarbons, indicating a gas leak, or chlorides, indicating a produced water line leak.

These first samples were exploratory and not intended to delineate the extent of contamination. These first samples, H403180-01 and H403180-02, were collected on the south and north sides (respectively) of the pipeline ROW, at 10 feet from the 2" riser. The samples were collected from the top two feet of the soil profile. The rational for collecting samples at this location and at this depth, was the fact that if there had been a release it would most likely have been at the riser, and if soil contamination was responsible for the lack of vegetation, we should be able to observe it in the top two feet of the profile. This is due to the fact that the root depth for most rangeland grasses, weeds and shrubs found in this area does not extend past the two foot depth. Sample H403180-01 detected hydrocarbons in levels barely above the analytical detection limit, and H403180-02 was unable to detect any contamination. After examining the sample results with our operations personnel, we've determined that the minimal amounts of contamination detected on the south side of the riser were most likely to have been caused by small incidental spills occurring while connecting and disconnecting vacuum trucks to the 2" riser, while removing liquids from the line These incidental releases would not have been enough to result in the lack of vegetation in the larger area surrounding the pipeline ROW.

A subsequent round of testing was conducted to determine whether any contamination would be detected throughout the purportedly affected area. Eight sample locations were selected at random, using the random number table found in Appendix B. A sample location diagram is presented in Appendix C. At these locations a sample was collected from the top two feet of the soil profile. The samples were analyzed for chlorides, total petroleum hydrocarbons, and where petroleum hydrocarbons were detected the sample was analyzed for BTEX. Samples 1411679-004 and 1411679-007 detected very minor amounts petroleum hydrocarbons, 23 and 45 ppm respectively, but failed to detect any amount of BTEX or chloride. A summary of the sample results are presented in Appendix A

Having failed to detect any significant soil contamination that could be responsible for the lack of vegetation, Agave reached out to Dr. Robert Flynn at the New Mexico State University Agricultural Science Center in Artesia, for additional guidance as to what could be the cause. Dr. Flynn made a field visit to the location to gather information and offer suggestions as to how we should proceed in our investigation. Dr. Flynn made several observations that may be related to the sparse plant growth. They were that:

- 1) The area was heavily trafficked by livestock. Cattle frequent the immediate area to both graze, and to cross the draw.
- 2) Rather than having top soil for growth, the land within and immediately surrounding the pipeline ROW appears to be composed of caliche. This caliche was most likely exposed during the installation of the pipeline, was used to bury the lines, and build the crown marking the ROW. This caliche is not ideal for plant growth.

The suggestion was also made to conduct analyses on the soil for several key soil fertility characteristics. The result of this sampling is presented in Appendix A. The analyses show several issues that are most likely responsible for the reduced vegetation. The soil in this area was shown to contain no practicably detectable amount of Nitrogen or Phosphorus, and very minor amounts of Potassium. These three ions play the prominent role in soil fertility, without which plant growth is not possible. We also observe that this soil has very high levels of Calcium, and low levels of Sodium. This is expected given that the soil is comprised mainly of caliche (Calcium Carbonate). In fertile, productive soil we would expect to see a Ca:K ratio of approximately 10:1; however, we are seeing an average ratio of 91:1. This imbalance of ions, results in a soil with very low fertility and productivity.

#### 5.0 Conclusion and Proposed Action

Based on the soil sampling completed at this location Agave believes that the cause of the sparse vegetation is soil fertility deficiencies, and issues with rangeland management. There is no evidence to suggest that there has been a pipeline release at this location, which could reasonably affect plant growth on this large of an area. As such Agave doesn't believe that any excavation work should be required, due to the fact that it would not benefit the area. On the contrary it would cause greater damage to the location due to the fact that the pipeline ROW while running parallel to a private road, is not accessible from the road. Mobilizing equipment and accessing the ROW would result in greater damage to vegetation at the site. For this reason, Agave is requesting closure of 2RP-2632.

If you have any questions regarding this matter, please do not hesitate to call me at (575) 513-8988, or email at <u>KEgan@agaveenergy.com</u>

Respectfully,

Kerry Egan

**Engineering Technician** 

#### Appendix A: Soil Sampling Summary

|                                |       |            |               | 5         |           |           |  |
|--------------------------------|-------|------------|---------------|-----------|-----------|-----------|--|
| Analytical Report<br>Sample ID | Depth | BTEX (ppm) | Benzene (ppm) | GRO (ppm) | DRO (ppm) | CI- (ppm) | Comments   |
| H403180-01                     | 0'-2' | 0.504      | 0.06          | ND        | 22        | ND        | Taken from south side of pipeline<br>ROW, 10' from the 2" riser.                           |
| H403180-02                     | 0'-2' | ND         | ND            | ND        | ND        | ND        | Taken from north side of pipeline<br>ROW, 10' from the 2" riser.                           |
| 1411679-001                    | 0'-2' | ND         | ND            | ND        | ND        | ND        | No petroleum hydrocarbons detected,<br>no chlorides. Taken from top 2' of soil<br>profile. |
| 1411679-002                    | 0'-2' | ND         | ND            | ND        | ND        | ND        | No petroleum hydrocarbons detected,<br>no chlorides. Taken from top 2' of soil<br>profile. |
| 1411679-003                    | 0'-2' | ND         | ND            | ND        | ND        | ND        | No petroleum hydrocarbons detected,<br>no chlorides. Taken from top 2' of soil<br>profile. |
| 1411679-004                    | 0'-2' | ND         | ND            | ND        | 23        | ND        | Minimal amount of petroleum<br>hydrocarbons detected, no BTEX<br>detected.                 |
| 1411679-005                    | 0'-2' | ND         | ND            | ND        | ND        | ND        | No petroleum hydrocarbons detected,<br>no chlorides. Taken from top 2' of soil<br>profile. |
| 1411679-006                    | 0'-2' | ND         | ND            | ND        | ND        | ND        | No petroleum hydrocarbons detected,<br>no chlorides. Taken from top 2' of soil<br>profile. |
| 1411679-007                    | 0'-2' | ND         | ND            | ND        | 45        | ND        | Minimal amount of petroleum<br>hydrocarbons detected, no BTEX<br>detected.                 |
| 1411679-008                    | 0'-2' | ND         | ND            | ND        | ND        | ND        | No petroleum hydrocarbons detected,<br>no chlorides. Taken from top 2' of soil<br>profile. |

Soil Sample Summary: Four Mile

| Analytical Report<br>Sample ID | Depth  | Nitrogen,<br>Nitrite (ppm) | Nitrogen,<br>Nitrate (ppm) | Phosphorous<br>(ppm) | Potassium<br>(ppm) | Calcium<br>(ppm) | Magnesium<br>(ppm) | Sodium<br>(ppm) | Comments |
|--------------------------------|--------|----------------------------|----------------------------|----------------------|--------------------|------------------|--------------------|-----------------|----------|
| Campio is                      | Doptil |                            |                            | (55)                 | (66)               | (99)             | (66)               | (pp)            |          |
| 1411679-001                    | 0'-2'  | ND                         | ND                         | ND                   | 1200               | 220000           | 45000              | 140             |          |
| 1411679-002                    | 0'-2'  | ND                         | ND                         | ND                   | 1300               | 210000           | 33000              | 120             |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
| 1411679-003                    | 0'-2'  | ND                         | ND                         | ND                   | 2100               | 110000           | 18000              | 78              |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
| 1411679-004                    | 0'-2'  | ND                         | ND                         | ND                   | 1600               | 140000           | 32000              | 110             |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
| 1411679-005                    | 0'-2'  | ND                         | ND                         | ND                   | 1500               | 170000           | 42000              | 150             |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
| 1411679-006                    | 0'-2'  | ND                         | ND                         | ND                   | 2600               | 75000            | 16000              | 69              |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
| 1411679-007                    | 0'-2'  | ND                         | ND                         | ND                   | 1700               | 140000           | 35000              | 130             |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
| 1411679-008                    | 0'-2'  | ND                         | ND                         | ND                   | 1700               | 180000           | 42000              | 140             |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |
|                                |        |                            |                            |                      |                    |                  |                    |                 |          |

#### Soil Sample Summary: Four Mile

#### Appendix B. Random Number Tables

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All of the sampling plans presented in this handbook are based on the assumption that the packages constituting the sample are chosen at random from the inspection lot. Randomness in this instance means that every package in the lot has an equal chance of being selected as part of the sample. It does not matter what other packages have already been chosen, what the package net contents are, or where the package is located in the lot.

To obtain a random sample, two steps are necessary. First it is necessary to identify each package in the lot of packages with a specific number whether on the shelf, in the warehouse, or coming off the packaging line. Then it is necessary to obtain a series of random numbers. These random numbers indicate exactly which packages in the lot shall be taken for the sample.

#### The Random Number Table

The random number tables in Appendix B are composed of the digits from 0 through 9, with approximately equal frequency of occurrence. This appendix consists of 8 pages. On each page digits are printed in blocks of five columns and blocks of five rows. The printing of the table in blocks is intended only to make it easier to locate specific columns and rows.

#### **Random Starting Place**

Starting Page. The Random Digit pages numbered B-2 through B-8. You can use the day of the week to determine the starting page or use the first page for the first lot you test in a location, the second page for the second lot and so on moving to the following page for each new lot.

Starting Column and Row. You may choose a starting page in the random number table and with eyes closed, drop a pencil anywhere on the page to indicate a starting place in the table.

For example, assume that testing takes place on the 3rd day of the week. Start with Table 3 of Appendix B. Assume you dropped your pencil on the page and it has indicated a starting place at column 22, row 45. That number is 1.

If 1-digit random numbers are needed, record them, going down the column to the bottom of the page and then to the top of the next column, and so on. Ignore duplicates and record zero (0) as ten (10). Following on from the last example, these numbers are 3, 2, 9, 8, etc. If two-digit random numbers are needed, rule off the pages, and further pages if necessary, in columns of two digits each. If there is a single column left on the page, ignore this column, and rule the next page in columns of two. Again, ignore duplicate numbers and record 00 as 100. For example, using the same starting place as in the last example (Table 3, column 22, row 45), the recorded two-digit recorded numbers would be 11, 34, 26, 95, etc.. When three-digit numbers are needed, rule the page in columns of three. Record 000 as 1000. Starting on Table 3, column 22, row 45, the recorded numbers would be 119, 346, 269, 959, etc..

#### **TABLE 1 - RANDOM DIGITS**

| 11164  | 36318          | 75061 | 37674  | 26320  | 75100 | 10431   | 20418  | 19728      | 91792 |
|--------|----------------|-------|--------|--------|-------|---------|--------|------------|-------|
| 21218  | 91791          | 76831 | \$8678 | 87054  | 31687 | 93208   | 43685  | 19732      | 08468 |
| 10438  | 44482          | 66558 | 37649  | 088.82 | 90870 | 12462   | 41-810 | 01806      | 07977 |
| 36792  | 26236          | 33266 | 66583  | 60881  | 97395 | 20461   | 36742  | 02852      | 50564 |
| 73944  | 04773          | 12030 | 51414  | 87384  | 38370 | 00240   | 80700  | 72608      | 67107 |
| 1911   | 21212          | 1000  | 20101  | 92901  | 20570 | 104 m   | 90,00  | 12095      | N I P |
| 49563  | 12872          | 14963 | 93104  | 784.83 | 72717 | 68714   | 18048  | 25005      | 04151 |
| 64208  | 48237          | 41701 | 73117  | 83242  | 42314 | 83049   | 21933  | 92813      | 04763 |
| \$1486 | 72875          | 38605 | 29341  | 80749  | 89151 | 33835   | 52602  | 79147      | 08868 |
| 99756  | 26360          | 64516 | 17971  | 48478  | 09610 | 04638   | 17/41  | 69227      | 10606 |
| 71325  | \$5217         | 13015 | 72907  | 00431  | 45117 | 33827   | 92873  | 02053      | 85474 |
|        | 1              |       | 125 01 | 00101  | 10111 | 22021   | 2015   | 02955      | 05474 |
| 65285  | 97198          | 12138 | 53010  | 94601  | 15838 | 16805   | 61004  | 43516      | 17020 |
| 17264  | 57327          | 38224 | 29301  | 31381  | 38109 | 34976   | 65692  | 98566      | 29550 |
| 95639  | 99754          | 31199 | 92558  | 68368  | 04985 | 51092   | 37780  | 40261      | 14479 |
| 61555  | 76404          | 86210 | 11808  | 12841  | 45147 | 97438   | 60022  | 12645      | 62000 |
| 78137  | 98768          | 04689 | 87130  | 79225  | 08153 | 84967   | 64539  | 79493      | 74917 |
| 62490  | 00215          | 8/087 | 28750  | 10177  | 14722 | 24550   | 20067  | 60004      | 20100 |
| 24216  | 63/1/          | 21283 | 07044  | 02720  | 27284 | 12211   | 20007  | 10415      | 26457 |
| 16075  | 05428          | 21205 | 55002  | 21605  | 12017 | 15211   | 02010  | 10415      | 30437 |
| 50128  | 20542          | 71169 | 57600  | 01510  | 43017 | 22230   | 50040  | 40999      | 98501 |
| 20170  | 50652          | 50414 | 21066  | 91510  | 07154 | 12044   | 30940  | 31333      | 62562 |
| 29470  | 39032          | 30414 | 31900  | 87912  | 8/154 | 12944   | 49862  | 96566      | 48825 |
| 96155  | 95009          | 27429 | 72918  | 08457  | 78134 | 48407   | 26061  | 58754      | 05326 |
| 29621  | 66583          | 62966 | 12468  | 20245  | 14015 | 04014   | 35713  | 03980      | 03024 |
| 12639  | 75291          | 71020 | 17265  | 41598  | 64074 | 64629   | 63293  | 53307      | 48766 |
| 14544  | 37134          | 54714 | 02401  | 63228  | 26831 | 19386   | 15457  | 17999      | 18306 |
| 83403  | 88827          | 09834 | 11333  | 68431  | 31706 | 26652   | 04711  | 34503      | 22561 |
| 00100  | 00027          | 07051 | 11555  | 00151  | 51700 | 20052   | 04711  | 54575      | 22501 |
| 67642  | 05204          | 30697 | 44806  | 96989  | 68403 | 85621   | 45556  | 35434      | 09532 |
| 64041  | 99011          | 14610 | 40273  | 09482  | 62864 | 01573   | 82274  | 81446      | 32477 |
| 17048  | 94523          | 97444 | 59904  | 16936  | 39384 | 97551   | 09620  | 63932      | 03091 |
| 93039  | 89416          | 52795 | 10631  | 09728  | 68202 | 20963   | 02477  | 55494      | 39563 |
| 82244  | 34392          | 96607 | 17220  | 51984  | 10753 | 76272   | 50985  | 97593      | 34320 |
|        |                |       |        |        |       | 101010  |        |            |       |
| 96990  | 55244          | 70693 | 25255  | 40029  | 23289 | 48819   | 07159  | 60172      | 81697 |
| 09119  | 74803          | 97303 | 88701  | 51380  | 73143 | 98251   | 78635  | 27556      | 20712 |
| 57666  | 41204          | 47589 | 78364  | 38266  | 94393 | 70713   | 53388  | 79865      | 92069 |
| 46492  | 61594          | 26729 | 58272  | 81754  | 14648 | 77210   | 12923  | 53712      | 87771 |
| 08433  | 19172          | 08320 | 20839  | 13715  | 10597 | 17234   | 39355  | 74816      | 03363 |
| 10011  | 75004          | 00054 | 41100  | 10001  | 10000 | 0.0.500 |        |            |       |
| 02420  | 65421          | 16520 | 41190  | 10001  | 19000 | 03500   | 08412  | 5/812      | 57929 |
| 92420  | 03431<br>559(5 | 07204 | 05547  | 10083  | 88102 | 30176   | 84/50  | 10115      | 69220 |
| 33342  | 20000          | 07304 | 4/010  | 43233  | 57022 | 52161   | 82976  | 47981      | 46588 |
| 86595  | 26247          | 18552 | 29491  | 33/12  | 32285 | 64844   | 69395  | 41387      | 87195 |
| 72115  | 34985          | 58036 | 99137  | 47482  | 06204 | 24138   | 24272  | 16196      | 04393 |
| 07428  | 58863          | 96023 | 88936  | 51343  | 70958 | 96768   | 74317  | 27176      | 29600 |
| 35379  | 27922          | 28906 | 55013  | 26937  | 48174 | 04197   | 36074  | 65315      | 12537 |
| 10982  | 22807          | 10920 | 26299  | 23593  | 64629 | 57801   | 10437  | 43965      | 15344 |
| 90127  | 33341          | 77806 | 12446  | 15444  | 49244 | 47277   | 11346  | 15884      | 28131 |
| 63002  | 12990          | 23510 | 68774  | 48983  | 20481 | 59815   | 67248  | 17076      | 78910 |
| 10000  | 0.000          | 10/   |        |        | -     |         |        | tant de la |       |
| 40779  | 86382          | 48454 | 65269  | 91239  | 45989 | 45389   | 54847  | 77919      | 41105 |
| 43216  | 12608          | 18167 | 84631  | 94058  | 82458 | 15139   | 76856  | 86019      | 47928 |
| 96167  | 64375          | 74108 | 93643  | 09204  | 98855 | 59051   | 56492  | 11933      | 64958 |
| 70975  | 62693          | 35684 | 72607  | 23026  | 37004 | 32989   | 24843  | 01128      | 74658 |
| 85812  | 61875          | 23570 | 75754  | 29090  | 40264 | 80399   | 47254  | 40135      | 69916 |

#### TABLE 1 - RANDOM DIGITS

| 11164 | 36318  | 75061  | 37674  | 26320 | 75100 | 10431    | 20418  | 19228 | 91792 |
|-------|--------|--------|--------|-------|-------|----------|--------|-------|-------|
| 21215 | 91791  | 76831  | 58678  | 87054 | 31687 | 03205    | 12695  | 10722 | 00460 |
| 10170 | 44400  | ((550  | 27640  | 00000 | 00070 | 15205    | 45065  | 19732 | 06406 |
| 10438 | 44482  | 00008  | 37649  | 08882 | 90870 | 12462    | 41810  | 01806 | 02977 |
| 36792 | 26236  | 33266  | 66583  | 60881 | 97395 | 20461    | 36742  | 02852 | 50564 |
| 73944 | 04773  | 12032  | 51414  | 87384 | 38370 | 00240    | 80700  | 72605 | 67407 |
| 13277 | 04775  | 12052  | 51414  | 02504 | 56570 | 00249    | 80709  | 72003 | 0/49/ |
| 49563 | 12872  | 14063  | 93104  | 78483 | 72717 | 68714    | 18048  | 25005 | 04151 |
| 64208 | 48237  | 41701  | 73117  | 33242 | 47314 | 83040    | 21033  | 07913 | 04762 |
| 51406 | 70237  | 20(05  | 75117  | 55242 | 42314 | 03049    | 21933  | 92015 | 04703 |
| 51480 | 12815  | 38605  | 29341  | 80749 | 80151 | 33835    | 52602  | 79147 | 08868 |
| 99756 | 26360  | 64516  | 17971  | 48478 | 09610 | 04638    | 17141  | 09227 | 10606 |
| 71325 | 55217  | 13015  | 72907  | 00431 | 45117 | 33827    | 92873  | 02953 | 85474 |
|       |        |        |        |       |       | a second |        |       |       |
| 65285 | 97198  | 12138  | 53010  | 94601 | 15838 | 16805    | 61004  | 43516 | 17020 |
| 17264 | 57327  | 38224  | 29301  | 31381 | 38109 | 34976    | 65692  | 98566 | 29550 |
| 95639 | 99754  | 31100  | 92558  | 68368 | 04085 | 51007    | 37780  | 40261 | 14470 |
| CIEEE | 76404  | 9(210  | 11000  | 10041 | 45147 | 07420    | 57760  | 40201 | 14479 |
| 01222 | 76404  | 86210  | 11808  | 12841 | 45147 | 97438    | 60022  | 12645 | 62000 |
| 78137 | 98768  | 04689  | 87130  | 79225 | 08153 | 84967    | 64539  | 79493 | 74917 |
| 62400 | 00215  | 91097  | 20750  | 10177 | 14722 | 24550    | 200/7  | C0004 | 20100 |
| 02490 | 59215  | 04907  | 20/39  | 19177 | 14/33 | 24550    | 28067  | 68894 | 38490 |
| 24216 | 63444  | 21283  | 07044  | 92729 | 37284 | 13211    | 37485  | 10415 | 36457 |
| 16975 | 95428  | 33226  | 55903  | 31605 | 43817 | 22250    | 03918  | 46999 | 98501 |
| 59138 | 39542  | 71168  | 57609  | 91510 | 77904 | 74744    | 50940  | 31553 | 62562 |
| 20479 | 50652  | 50414  | 21066  | 97010 | 07154 | 12014    | 100(0  | 0(5(6 | 02502 |
| 29470 | 39032  | 50414  | 31900  | 87912 | 8/154 | 12944    | 49862  | 96566 | 48825 |
| 96155 | 95009  | 27429  | 72918  | 08457 | 78134 | 48407    | 26061  | 58754 | 05326 |
| 29621 | 66583  | 62966  | 12468  | 20245 | 14015 | 04014    | 35713  | 03080 | 03024 |
| 12620 | 75201  | 71020  | 17265  | 41509 | 64074 | 64620    | (2202  | 63207 | 03024 |
| 12039 | 15291  | /1020  | 17205  | 41598 | 04074 | 64629    | 63293  | 53307 | 48/66 |
| 14544 | 37134  | 54714  | 02401  | 63228 | 26831 | 19386    | 15457  | 17999 | 18306 |
| 83403 | 88827  | 09834  | 11333  | 68431 | 31706 | 26652    | 04711  | 34593 | 22561 |
| 12112 |        | 44.522 |        |       |       |          |        |       |       |
| 67642 | 05204  | 30697  | 44806  | 96989 | 68403 | 85621    | 45556  | 35434 | 09532 |
| 64041 | 99011  | 14610  | 40273  | 09482 | 62864 | 01573    | 82274  | 81446 | 32477 |
| 17048 | 94523  | 97444  | 50004  | 16036 | 30384 | 07551    | 00620  | 62022 | 02001 |
| 02020 | 00416  | 57705  | 10(11  | 10,50 | 59504 | 97551    | 09020  | 03932 | 03091 |
| 93039 | 89416  | 52195  | 10631  | 09728 | 68202 | 20963    | 02477  | 55494 | 39563 |
| 82244 | 34392  | 96607  | 17220  | 51984 | 10753 | 76272    | 50985  | 97593 | 34320 |
| 06000 | 55244  | 70602  | 25255  | 10020 | 22200 | 10010    | 07150  | (0170 | 01/07 |
| 90990 | 55244  | 70093  | 23233  | 40029 | 25269 | 40019    | 0/159  | 60172 | 81697 |
| 09119 | 74803  | 97303  | 88701  | 51380 | 73143 | 98251    | 78635  | 27556 | 20712 |
| 57666 | 41204  | 47589  | 78364  | 38266 | 94393 | 70713    | 53388  | 79865 | 92069 |
| 46492 | 61594  | 26729  | 58272  | 81754 | 14648 | 77210    | 12023  | 53712 | 87771 |
| 00422 | 10172  | 00720  | 20920  | 12715 | 10507 | 17210    | 12725  | 53712 | 07771 |
| 06455 | 19172  | 08520  | 20839  | 13/15 | 10597 | 17234    | 39355  | /4816 | 03363 |
| 10011 | 75004  | 86054  | 41190  | 10061 | 19660 | 03500    | 68412  | 57812 | 57929 |
| 97420 | 65431  | 16530  | 05547  | 10683 | 88102 | 30176    | 84750  | 10115 | 60220 |
| 25540 | 55965  | 07204  | 47010  | 10005 | 55102 | 50170    | 64750  | 10115 | 09220 |
| 35542 | 22802  | 07304  | 47010  | 43233 | 57022 | 52161    | 82976  | 47981 | 46588 |
| 86595 | 26247  | 18552  | 29491  | 33712 | 32285 | 64844    | 69395  | 41387 | 87195 |
| 72115 | 34985  | 58036  | 99137  | 47482 | 06204 | 24138    | 24272  | 16196 | 04393 |
| 07/22 | 500.00 | 0.000  | 0000   |       |       |          |        | 100   |       |
| 0/428 | 28863  | 96023  | 88936  | 51343 | 70958 | 96768    | 74317  | 27176 | 29600 |
| 35379 | 27922  | 28906  | 55013  | 26937 | 48174 | 04197    | 36074  | 65315 | 12537 |
| 10982 | 22807  | 10920  | 26200  | 23503 | 64620 | 57801    | 10437  | 43065 | 15211 |
| 00137 | 22241  | 77000  | 10440  | 15444 | 40244 | 17077    | 112457 | 10001 | 13344 |
| 90127 | 55541  | 11800  | 12440  | 15444 | 49244 | 4/2/1    | 11346  | 15884 | 28131 |
| 63002 | 12990  | 23510  | 68774  | 48983 | 20481 | 59815    | 67248  | 17076 | 78910 |
| 40770 | 86382  | 48454  | 65260  | 01220 | 15000 | 15200    | 54947  | 77010 | 11105 |
| 12210 | 100002 | 101/7  | 0.1(21 | 04050 | 40767 | 45569    | 34647  | 11919 | 41105 |
| 43216 | 12608  | 18167  | 84631  | 94058 | 82458 | 15139    | 76856  | 86019 | 47928 |
| 96167 | 64375  | 74108  | 93643  | 09204 | 98855 | 59051    | 56492  | 11933 | 64958 |
| 70975 | 62693  | 35684  | 72607  | 23026 | 37004 | 32989    | 24843  | 01128 | 74658 |
| 85812 | 61875  | 23570  | 75754  | 20000 | 40264 | 80300    | 17254  | 10125 | 60016 |
| 00012 | 010/5  | 23510  | 13134  | 29090 | 40204 | 00299    | 47234  | 40133 | 01660 |
|       |        |        |        |       |       |          |        |       |       |

#### Appendix C: Sampling Location Diagram

North



25 yds./75 ft.

0

#### Sample Locations

| Diagram ID | Analytical<br>Report Sample<br>ID | X-Axis | Y-Axis | Depth |
|------------|-----------------------------------|--------|--------|-------|
| #1         | 1411679-001                       | 111    | 061    | 0'-2' |
| #2         | 1411679-002                       | 075    | 041    | 0'-2' |
| #3         | 1411679-003                       | 121    | 054    | 0'-2' |
| #4         | 1411679-004                       | 088    | 012    | 0'-2' |
| #5         | 1411679-005                       | 100    | 024    | 0'-2' |
| #6         | 1411679-006                       | 104    | 047    | 0'-2' |
| #7         | 1411679-007                       | 052    | 004    | 0'-2' |
| #8         | 1411679-008                       | 015    | 070    | 0'-2' |

The apparently affected area was approximately 45 yds. (135 ft.) by 25 yds. (75 ft.). In order to properly collect samples in a random fashion the area was set up as a grid with the origin (0,0) being located in the southwest corner, which was nearest to the private road on the south side of the pipeline Right Of Way. The location of the samples was selected randomly using the Random Numbers Table found in Appendix A. Starting with column one, row one on Table 1, locations were selected by identifying three digit coordinates. Values for x-axis coordinates were restricted to the range 000-135. Values for y-axis coordinates were restricted to the range 000-075.

Appendix D: Sampling Data



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

December 05, 2014

Kerry Egan Agave Energy Company P.O. Box 158 Artesia, NM 88211 TEL: (575) 513-8988 FAX

RE: Dagger Draw Gas System Howell Ranch-4 Mile Draw Leak

OrderNo.: 1411679

Dear Kerry Egan:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/18/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Hall Environmental Analy   | all Environmental Analysis Laboratory, Inc. |                             |      |       |  |                        |         |  |  |
|--|---|-----------------------------|------|-------|--|------------------------|---------|--|--|
| CLIENT: Agave Energy Company<br>Project: Dagger Draw Gas System H<br>Lab ID: 1411679-001 | owell Ranch-<br>Matrix:                     | well Ranch-<br>Matrix: SOIL |      |       | Client Sample ID: HR 4M #1<br>Collection Date: 11/14/2014 10:00:00 AM<br>Received Date: 11/18/2014 10:20:00 AM |                        |         |  |  |
| Analyses   | Result                                      | RL                          | Qual | Units | DF   | Date Analyzed          | Batch   |  |  |
| EPA METHOD 8015D: DIESEL RANG  | E ORGANICS                                  |                             |      |       |  | Analyst                | JME     |  |  |
| Diesel Range Organics (DRO)  | ND  | 10                          |      | mg/Kg | 1  | 11/18/2014 3:43:48 PM  | 16439   |  |  |
| Motor Oil Range Organics (MRO)   | ND  | 50                          |      | mg/Kg | 1  | 11/18/2014 3:43:48 PM  | 16439   |  |  |
| Surr: DNOP   | 88.4  | 63.5-128                    |      | %REC  | 1  | 11/18/2014 3:43:48 PM  | 16439   |  |  |
| EPA METHOD 8015D: GASOLINE RA  | NGE   |                             |      |       |  | Analyst                | NSB     |  |  |
| Gasoline Range Organics (GRO)  | ND  | 4.6                         |      | mg/Kg | 1  | 11/19/2014 1:22:51 PM  | 16433   |  |  |
| Surr: BFB  | 92.8  | 80-120                      |      | %REC  | 1  | 11/19/2014 1:22:51 PM  | 16433   |  |  |
| EPA METHOD 300.0: ANIONS   |   |                             |      |       |  | Analyst                | LGP     |  |  |
| Fluoride   | 0.67  | 0.30                        |      | mg/Kg | 1  | 11/25/2014 11:06:49 AM | A 16438 |  |  |
| Chloride   | ND  | 30                          |      | mg/Kg | 20   | 11/18/2014 12:54:39 Pt | A 16438 |  |  |
| Nitrogen, Nitrite (As N)   | ND  | 0.30                        |      | mg/Kg | 1  | 11/25/2014 11:06:49 AM | A 16438 |  |  |
| Bromide  | 0.45  | 0.30                        |      | mg/Kg | 1  | 11/25/2014 11:06:49 AM | A 16438 |  |  |
| Nitrogen, Nitrate (As N)   | ND  | 0.30                        |      | mg/Kg | 1  | 11/25/2014 11:06:49 AM | A 16438 |  |  |
| Phosphorus, Orthophosphate (As P)  | ND  | 1.5                         |      | mg/Kg | 1  | 11/25/2014 11:06:49 AM | A 16438 |  |  |
| Sulfate  | 24  | 1.5                         |      | mg/Kg | 1  | 11/25/2014 11:06:49 AM | A 16438 |  |  |
| EPA METHOD 6010B: SOIL METALS  |   |                             |      |       |  | Analyst                | ELS     |  |  |
| Calcium  | 220000                                      | 1300                        |      | mg/Kg | 50   | 12/2/2014 11:35:23 AM  | 16617   |  |  |
| Magnesium  | 45000                                       | 260                         |      | mg/Kg | 10   | 12/2/2014 11:33:03 AM  | 16617   |  |  |
| Potassium  | 1200  | 51                          |      | mg/Kg | 1  | 12/2/2014 10:17:01 AM  | 16617   |  |  |
| Sodium   | 140   | 26                          |      | mg/Kg | 1  | 12/2/2014 10:17:01 AM  | 16617   |  |  |

| Qualifiers: | *                            | Value exceeds Maximum Contaminant Level         | В                         | B Analyte detected in the associated Method Bla    |  |  |  |
|-------------|------------------------------|---|---------------------------|--|--|--|--|
|             | Е                            | Value above quantitation range                  | Н                         | Holding times for preparation or analysis exceeded |  |  |  |
| O<br>I      | 1                            | Analyte detected below quantitation limits      | ND                        | Not Detected at the Reporting Limit Page 1 c       |  |  |  |
|             | RSD is greater than RSDlimit | Р   | Sample pH greater than 2. | Fage 1 01 14                                       |  |  |  |
|             | R                            | RPD outside accepted recovery limits            | RL                        | Reporting Detection Limit                          |  |  |  |
|             | S                            | Spike Recovery outside accepted recovery limits |                           |  |  |  |  |

**Analytical Report** 

#### Hall Environmental Analysis Laboratory, Inc.

Lab Order 1411679 Date Reported: 12/5/2014

CLIENT: Agave Energy Company Project: Dagger Draw Gas System Howell Ranch-Lab ID: 1411679-002 Matrix: SOIL

Client Sample ID: HR 4M #2 Collection Date: 11/14/2014 10:00:00 AM Received Date: 11/18/2014 10:20:00 AM

| Analyses                          | Result     | RL       | Qual Units | DF | Date Analyzed        | Batch    |
|-----------------------------------|------------|----------|------------|----|----------------------|----------|
| EPA METHOD 8015D: DIESEL RANG     | E ORGANICS |          |            |    | Analy                | st: JME  |
| Diesel Range Organics (DRO)       | ND         | 9.8      | mg/Kg      | 1  | 11/18/2014 4:14:02 P | M 16439  |
| Motor Oil Range Organics (MRO)    | ND         | 49       | mg/Kg      | 1  | 11/18/2014 4:14:02 P | M 16439  |
| Surr: DNOP                        | 95.5       | 63.5-128 | %REC       | 1  | 11/18/2014 4:14:02 P | M 16439  |
| EPA METHOD 8015D: GASOLINE RA     | NGE        |          |            |    | Analy                | st: NSB  |
| Gasoline Range Organics (GRO)     | ND         | 4.9      | mg/Kg      | 1  | 11/19/2014 1:51:36 P | M 16433  |
| Surr: BFB                         | 92.0       | 80-120   | %REC       | 1  | 11/19/2014 1:51:36 P | M 16433  |
| EPA METHOD 300.0: ANIONS          |            |          |            |    | Analy                | st: LGP  |
| Fluoride                          | 0.41       | 0.30     | mg/Kg      | 1  | 11/25/2014 11:44:03  | AM 16438 |
| Chloride                          | ND         | 30       | mg/Kg      | 20 | 11/18/2014 1:31:53 P | M 16438  |
| Nitrogen, Nitrite (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 11:44:03  | AM 16438 |
| Bromide                           | 0.44       | 0.30     | mg/Kg      | 1  | 11/25/2014 11:44:03  | AM 16438 |
| Nitrogen, Nitrate (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 11:44:03  | AM 16438 |
| Phosphorus, Orthophosphate (As P) | ND         | 1.5      | mg/Kg      | 1  | 11/25/2014 11:44:03  | AM 16438 |
| Sulfate                           | 6.9        | 1.5      | mg/Kg      | 1  | 11/25/2014 11:44:03  | AM 16438 |
| EPA METHOD 6010B: SOIL METALS     |            |          |            |    | Analy                | st: ELS  |
| Calcium                           | 210000     | 1200     | mg/Kg      | 50 | 12/2/2014 11:48:22 A | M 16617  |
| Magnesium                         | 33000      | 240      | mg/Kg      | 10 | 12/2/2014 11:45:47 A | M 16617  |
| Potassium                         | 1300       | 49       | mg/Kg      | 1  | 12/2/2014 10:21:39 A | M 16617  |
| Sodium                            | 120        | 24       | mg/Kg      | 1  | 12/2/2014 10:21:39 A | M 16617  |

| Qualifiers: *<br>E |                              | Value exceeds Maximum Contaminant Level.        | В                         | Analyte detected in the associated Meth | od Blank     |
|--------------------|------------------------------|---|---------------------------|---|--------------|
|                    |                              | Value above quantitation range                  | Н                         | is exceeded                             |              |
|                    | J                            | Analyte detected below quantitation limits      | ND                        | Not Detected at the Reporting Limit     | Page 2 of 14 |
| 0                  | RSD is greater than RSDlimit | Р   | Sample pH greater than 2. |   |              |
|                    | R                            | RPD outside accepted recovery limits            | RL                        | Reporting Detection Limit               |              |
|                    | S                            | Spike Recovery outside accepted recovery limits |                           |   |              |
|                    |                              |   |                           |   |              |

#### Date Reported: 12/5/2014

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Agave Energy Company Client Sample ID: HR 4M #3 Project: Dagger Draw Gas System Howell Ranch-Lab ID: 1411679-003 Matrix: SOIL

Collection Date: 11/14/2014 11:00:00 AM Received Date: 11/18/2014 10:20:00 AM

| Analyses                          | Result     | RL       | Qual Units | DF | Date Analyzed        | Batch    |
|-----------------------------------|------------|----------|------------|----|----------------------|----------|
| EPA METHOD 8015D: DIESEL RANG     | E ORGANICS |          |            |    | Analy                | st: JME  |
| Diesel Range Organics (DRO)       | ND         | 10       | mg/Kg      | 1  | 11/18/2014 4:44:15 P | M 16439  |
| Motor Oil Range Organics (MRO)    | ND         | 50       | mg/Kg      | 1  | 11/18/2014 4:44:15 P | M 16439  |
| Surr: DNOP                        | 97.0       | 63.5-128 | %REC       | 1  | 11/18/2014 4:44:15 P | M 16439  |
| EPA METHOD 8015D: GASOLINE RA     | NGE        |          |            |    | Analy                | st: NSB  |
| Gasoline Range Organics (GRO)     | ND         | 4.8      | mg/Kg      | 1  | 11/19/2014 2:20:17 P | M 16433  |
| Surr: BFB                         | 94.7       | 80-120   | %REC       | 1  | 11/19/2014 2:20:17 P | M 16433  |
| EPA METHOD 300.0: ANIONS          |            |          |            |    | Analy                | st: LGP  |
| Fluoride                          | 0.59       | 0.30     | mg/Kg      | 1  | 11/25/2014 11:56:27  | AM 16438 |
| Chloride                          | ND         | 30       | mg/Kg      | 20 | 11/18/2014 1:44:18 P | M 16438  |
| Nitrogen, Nitrite (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 11:56:27  | AM 16438 |
| Bromide                           | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 11:56:27  | AM 16438 |
| Nitrogen, Nitrate (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 11:56:27  | AM 16438 |
| Phosphorus, Orthophosphate (As P) | ND         | 1.5      | mg/Kg      | 1  | 11/25/2014 11:56:27  | AM 16438 |
| Sulfate                           | 1300       | 75       | mg/Kg      | 50 | 11/26/2014 6:20:37 P | M 16438  |
| EPA METHOD 6010B: SOIL METALS     |            |          |            |    | Analy                | st: ELS  |
| Calcium                           | 110000     | 1300     | mg/Kg      | 50 | 12/2/2014 12:29:12 P | M 16617  |
| Magnesium                         | 18000      | 130      | mg/Kg      | 5  | 12/2/2014 11:50:25 A | M 16617  |
| Potassium                         | 2100       | 51       | mg/Kg      | 1  | 12/2/2014 10:25:35 A | M 16617  |
| Sodium                            | 78         | 25       | mg/Kg      | 1  | 12/2/2014 10:25:35 A | M 16617  |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | nod Blank    |
|-------------|---|---|----|---|--------------|
|             | E | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Page 3 of 14 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | rage 5 01 14 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |
|             |   |   |    |   |              |

**Analytical Report** 

Lab Order 1411679

Date Reported: 12/5/2014

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT:Agave Energy CompanyProject:Dagger Draw Gas System Howell Ranch-Lab ID:1411679-004Matrix:SOIL

Client Sample ID: HR 4M #4 Collection Date: 11/14/2014 1:00:00 PM Received Date: 11/18/2014 10:20:00 AM

| Analyses                          | Result     | RL Q     | ual Units | DF | Date Analyzed         | Batch   |
|-----------------------------------|------------|----------|-----------|----|-----------------------|---------|
| EPA METHOD 8015D: DIESEL RANG     | E ORGANICS |          |           |    | Analyst               | JME     |
| Diesel Range Organics (DRO)       | 23         | 10       | mg/Kg     | 1  | 11/18/2014 5:14:15 PM | 16439   |
| Motor Oil Range Organics (MRO)    | ND         | 50       | mg/Kg     | 1  | 11/18/2014 5:14:15 PM | 16439   |
| Surr: DNOP                        | 100        | 63.5-128 | %REC      | 1  | 11/18/2014 5:14:15 PM | 16439   |
| EPA METHOD 8015D: GASOLINE RA     | NGE        |          |           |    | Analyst               | NSB     |
| Gasoline Range Organics (GRO)     | ND         | 4.9      | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433   |
| Surr: BFB                         | 101        | 80-120   | %REC      | 1  | 11/19/2014 2:49:01 PM | 16433   |
| EPA METHOD 8021B: VOLATILES       |            |          |           |    | Analyst               | NSB     |
| Benzene                           | ND         | 0.049    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433   |
| Toluene                           | ND         | 0.049    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433   |
| Ethylbenzene                      | ND         | 0.049    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433   |
| Xylenes, Total                    | ND         | 0.098    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433   |
| Surr: 4-Bromofluorobenzene        | 102        | 80-120   | %REC      | 1  | 11/19/2014 2:49:01 PM | 16433   |
| EPA METHOD 300.0: ANIONS          |            |          |           |    | Analyst               | LGP     |
| Fluoride                          | 1.1        | 0.30     | mg/Kg     | 1  | 11/25/2014 12:08:51 P | M 16438 |
| Chloride                          | ND         | 30       | mg/Kg     | 20 | 11/18/2014 1:56:42 PM | 16438   |
| Nitrogen, Nitrite (As N)          | ND         | 0.30     | mg/Kg     | 1  | 11/25/2014 12:08:51 P | M 16438 |
| Bromide                           | ND         | 0.30     | mg/Kg     | 1  | 11/25/2014 12:08:51 P | M 16438 |
| Nitrogen, Nitrate (As N)          | ND         | 0.30     | mg/Kg     | 1  | 11/25/2014 12:08:51 P | M 16438 |
| Phosphorus, Orthophosphate (As P) | ND         | 1.5      | mg/Kg     | 1  | 11/25/2014 12:08:51 P | M 16438 |
| Sulfate                           | 100        | 1.5      | mg/Kg     | 1  | 11/25/2014 12:08:51 P | M 16438 |
| EPA METHOD 6010B: SOIL METALS     |            |          |           |    | Analyst               | ELS     |
| Calcium                           | 140000     | 1200     | mg/Kg     | 50 | 12/2/2014 11:56:52 AM | 16617   |
| Magnesium                         | 32000      | 240      | mg/Kg     | 10 | 12/2/2014 11:54:39 AM | 16617   |
| Potassium                         | 1600       | 48       | mg/Kg     | 1  | 12/2/2014 10:29:26 AM | 16617   |
| Sodium                            | 110        | 24       | mg/Kg     | 1  | 12/2/2014 10:29:26 AM | 16617   |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | В  | Analyte detected in the associated Meth | od Blank      |
|-------------|---|---|----|---|---------------|
|             | E | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded   |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Page 4 of 14  |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | 1 age 4 01 14 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |               |
|             | S | Spike Recovery outside accepted recovery limits |    |   |               |

Date Reported: 12/5/2014

#### Hall Environmental Analysis Laboratory, Inc.

### CLIENT:Agave Energy CompanyClient Sample ID: HR 4M #5Project:Dagger Draw Gas System Howell Ranch-Collection Date: 11/14/2014 1:00:00 PMLab ID:1411679-005Matrix: SOILReceived Date: 11/18/2014 10:20:00 AM

| Analyses                          | Result     | RL Q     | ual Units | DF | Date Analyzed        | Batch    |
|-----------------------------------|------------|----------|-----------|----|----------------------|----------|
| EPA METHOD 8015D: DIESEL RANG     | E ORGANICS |          |           |    | Analy                | st: JME  |
| Diesel Range Organics (DRO)       | ND         | 10       | mg/Kg     | 1  | 11/18/2014 5:44:13 F | M 16439  |
| Motor Oil Range Organics (MRO)    | ND         | 50       | mg/Kg     | 1  | 11/18/2014 5:44:13 P | M 16439  |
| Surr: DNOP                        | 92.5       | 63.5-128 | %REC      | 1  | 11/18/2014 5:44:13 F | PM 16439 |
| EPA METHOD 8015D: GASOLINE RA     | NGE        |          |           |    | Analy                | st: NSB  |
| Gasoline Range Organics (GRO)     | ND         | 4.8      | mg/Kg     | 1  | 11/19/2014 1:34:40 F | M 16433  |
| Surr: BFB                         | 92.8       | 80-120   | %REC      | 1  | 11/19/2014 1:34:40 F | PM 16433 |
| EPA METHOD 300.0: ANIONS          |            |          |           |    | Analy                | st: LGP  |
| Fluoride                          | 0.73       | 0.30     | mg/Kg     | 1  | 11/25/2014 12:21:16  | PM 16438 |
| Chloride                          | ND         | 30       | mg/Kg     | 20 | 11/18/2014 2:09:07 P | M 16438  |
| Nitrogen, Nitrite (As N)          | 0.31       | 0.30     | mg/Kg     | 1  | 11/25/2014 12:21:16  | PM 16438 |
| Bromide                           | ND         | 0.30     | mg/Kg     | 1  | 11/25/2014 12:21:16  | PM 16438 |
| Nitrogen, Nitrate (As N)          | 3.0        | 0.30     | mg/Kg     | 1  | 11/25/2014 12:21:16  | PM 16438 |
| Phosphorus, Orthophosphate (As P) | ND         | 1.5      | mg/Kg     | 1  | 11/25/2014 12:21:16  | PM 16438 |
| Sulfate                           | 9.5        | 1.5      | mg/Kg     | 1  | 11/25/2014 12:21:16  | PM 16438 |
| EPA METHOD 6010B: SOIL METALS     |            |          |           |    | Analy                | st: ELS  |
| Calcium                           | 170000     | 1200     | mg/Kg     | 50 | 12/2/2014 12:01:14 F | M 16617  |
| Magnesium                         | 42000      | 250      | mg/Kg     | 10 | 12/2/2014 11:59:05 A | M 16617  |
| Potassium                         | 1500       | 50       | mg/Kg     | 1  | 12/2/2014 10:45:18 A | M 16617  |
| Sodium                            | 150        | 25       | mg/Kg     | 1  | 12/2/2014 10:45:18 A | M 16617  |

| Qualifiers: | *                                | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth            | nod Blank    |  |
|-------------|----------------------------------|---|----|--|--------------|--|
|             | E Value above quantitation range |   | Н  | Holding times for preparation or analysis exceeded |              |  |
|             | J                                | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                | Page 5 of 14 |  |
|             | 0                                | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.                          | Fage 5 01 14 |  |
|             | R                                | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                          |              |  |
|             | S                                | Spike Recovery outside accepted recovery limits |    |  |              |  |
|             |                                  |   |    |  |              |  |

#### **Analytical Report**

#### Lab Order 1411679

#### Date Reported: 12/5/2014

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT:Agave Energy CompanyProject:Dagger Draw Gas System Howell Ranch-Lab ID:1411679-006Matrix:SOIL

Client Sample ID: HR 4M #6 Collection Date: 11/14/2014 2:00:00 PM Received Date: 11/18/2014 10:20:00 AM

| Analyses                          | Result   | RL       | Qual Units | DF | Date Analyzed        | Batch    |
|-----------------------------------|----------|----------|------------|----|----------------------|----------|
| EPA METHOD 8015D: DIESEL RANGE    | ORGANICS |          |            |    | Analy                | st: JME  |
| Diesel Range Organics (DRO)       | ND       | 9.9      | mg/Kg      | 1  | 11/18/2014 6:14:16 P | M 16439  |
| Motor Oil Range Organics (MRO)    | ND       | 49       | mg/Kg      | 1  | 11/18/2014 6:14:16 P | M 16439  |
| Surr: DNOP                        | 115      | 63.5-128 | %REC       | 1  | 11/18/2014 6:14:16 P | M 16439  |
| EPA METHOD 8015D: GASOLINE RAM    | NGE      |          |            |    | Analy                | st: NSB  |
| Gasoline Range Organics (GRO)     | ND       | 4.6      | mg/Kg      | 1  | 11/19/2014 2:02:22 P | M 16433  |
| Surr: BFB                         | 93.6     | 80-120   | %REC       | 1  | 11/19/2014 2:02:22 P | M 16433  |
| EPA METHOD 300.0: ANIONS          |          |          |            |    | Analy                | st: LGP  |
| Fluoride                          | 0.57     | 0.30     | mg/Kg      | 1  | 11/25/2014 12:33:41  | PM 16438 |
| Chloride                          | ND       | 30       | mg/Kg      | 20 | 11/18/2014 2:21:32 P | M 16438  |
| Nitrogen, Nitrite (As N)          | ND       | 0.30     | mg/Kg      | 1  | 11/25/2014 12:33:41  | PM 16438 |
| Bromide                           | ND       | 0.30     | mg/Kg      | 1  | 11/25/2014 12:33:41  | PM 16438 |
| Nitrogen, Nitrate (As N)          | ND       | 0.30     | mg/Kg      | 1  | 11/25/2014 12:33:41  | PM 16438 |
| Phosphorus, Orthophosphate (As P) | ND       | 1.5      | mg/Kg      | 1  | 11/25/2014 12:33:41  | PM 16438 |
| Sulfate                           | 2.8      | 1.5      | mg/Kg      | 1  | 11/25/2014 12:33:41  | PM 16438 |
| EPA METHOD 6010B: SOIL METALS     |          |          |            |    | Analys               | st: ELS  |
| Calcium                           | 75000    | 480      | mg/Kg      | 20 | 12/2/2014 12:06:15 P | M 16617  |
| Magnesium                         | 16000    | 120      | mg/Kg      | 5  | 12/2/2014 12:04:09 P | M 16617  |
| Potassium                         | 2600     | 96       | mg/Kg      | 2  | 12/2/2014 11:02:05 A | M 16617  |
| Sodium                            | 69       | 48       | mg/Kg      | 2  | 12/2/2014 11:02:05 A | M 16617  |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | nod Blank    |
|-------------|---|---|----|---|--------------|
|             | E | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Daga 6 of 14 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | rage 0 01 14 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |
|             |   |   |    |   |              |

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Agave Energy Company Client Sample ID: HR 4M #7 Project: Dagger Draw Gas System Howell Ranch-Collection Date: 11/14/2014 3:00:00 PM Lab ID: 1411679-007 Matrix: SOIL Received Date: 11/18/2014 10:20:00 AM

| Analyses                          | Result     | RL (     | Qual Units | DF | Date Analyzed         | Batch |
|-----------------------------------|------------|----------|------------|----|-----------------------|-------|
| EPA METHOD 8015D: DIESEL RANG     | E ORGANICS |          | 1000       |    | Analyst               | JME   |
| Diesel Range Organics (DRO)       | 45         | 9.8      | mg/Kg      | 1  | 11/18/2014 6:44:38 PM | 16439 |
| Motor Oil Range Organics (MRO)    | 120        | 49       | mg/Kg      | 1  | 11/18/2014 6:44:38 PM | 16439 |
| Surr: DNOP                        | 97.6       | 63.5-128 | %REC       | 1  | 11/18/2014 6:44:38 PM | 16439 |
| EPA METHOD 8015D: GASOLINE RA     | NGE        |          |            |    | Analyst               | NSB   |
| Gasoline Range Organics (GRO)     | ND         | 4.7      | mg/Kg      | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Surr: BFB                         | 97.1       | 80-120   | %REC       | 1  | 11/19/2014 2:30:05 PM | 16433 |
| EPA METHOD 8021B: VOLATILES       |            |          |            |    | Analyst               | NSB   |
| Benzene                           | ND         | 0.047    | mg/Kg      | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Toluene                           | ND         | 0.047    | mg/Kg      | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Ethylbenzene                      | ND         | 0.047    | mg/Kg      | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Xylenes, Total                    | ND         | 0.094    | mg/Kg      | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Surr: 4-Bromofluorobenzene        | 112        | 80-120   | %REC       | 1  | 11/19/2014 2:30:05 PM | 16433 |
| EPA METHOD 300.0: ANIONS          |            |          |            |    | Analyst               | LGP   |
| Fluoride                          | ND         | 6.0      | mg/Kg      | 20 | 11/26/2014 6:33:02 PM | 16438 |
| Chloride                          | ND         | 30       | mg/Kg      | 20 | 11/18/2014 2:33:58 PM | 16438 |
| Nitrogen, Nitrite (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 1:10:54 PM | 16438 |
| Bromide                           | 0.81       | 0.30     | mg/Kg      | 1  | 11/25/2014 1:10:54 PM | 16438 |
| Nitrogen, Nitrate (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 1:10:54 PM | 16438 |
| Phosphorus, Orthophosphate (As P) | ND         | 1.5      | mg/Kg      | 1  | 11/25/2014 1:10:54 PM | 16438 |
| Sulfate                           | 38         | 1.5      | mg/Kg      | 1  | 11/25/2014 1:10:54 PM | 16438 |
| EPA METHOD 6010B: SOIL METALS     |            |          |            |    | Analyst:              | ELS   |
| Calcium                           | 140000     | 1300     | mg/Kg      | 50 | 12/2/2014 12:18:09 PM | 16617 |
| Magnesium                         | 35000      | 260      | mg/Kg      | 10 | 12/2/2014 12:16:15 PM | 16617 |
| Potassium                         | 1700       | 52       | mg/Kg      | 1  | 12/2/2014 11:05:07 AM | 16617 |
| Sodium                            | 130        | 26       | mg/Kg      | 1  | 12/2/2014 11:05:07 AM | 16617 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | В  | Analyte detected in the associated Meth | od Blank     |
|-------------|---|---|----|---|--------------|
|             | Е | Value above quantitation range                  | н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Deep 7 of 14 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | Page / 01 14 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |

Date Reported: 12/5/2014

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/5/2014

| CLIENT:  | Agave Energy Company  | Y.              | Client Sample ID: HR 4M #8             |
|----------|-----------------------|-----------------|--|
| Project: | Dagger Draw Gas Syste | m Howell Ranch- | Collection Date: 11/14/2014 4:00:00 PM |
| Lab ID:  | 1411679-008           | Matrix: SOIL    | Received Date: 11/18/2014 10:20:00 AM  |

| Analyses                          | Result     | RL (     | Qual Units | DF | Date Analyzed         | Batch |
|-----------------------------------|------------|----------|------------|----|-----------------------|-------|
| EPA METHOD 8015D: DIESEL RANG     | E ORGANICS |          |            |    | Analyst:              | JME   |
| Diesel Range Organics (DRO)       | ND         | 10       | mg/Kg      | 1  | 11/18/2014 7:14:20 PM | 16439 |
| Motor Oil Range Organics (MRO)    | ND         | 50       | mg/Kg      | 1  | 11/18/2014 7:14:20 PM | 16439 |
| Surr: DNOP                        | 114        | 63.5-128 | %REC       | 1  | 11/18/2014 7:14:20 PM | 16439 |
| EPA METHOD 8015D: GASOLINE RA     | NGE        |          |            |    | Analyst:              | NSB   |
| Gasoline Range Organics (GRO)     | ND         | 4.7      | mg/Kg      | 1  | 11/19/2014 2:57:12 PM | 16433 |
| Surr: BFB                         | 95.6       | 80-120   | %REC       | 1  | 11/19/2014 2:57:12 PM | 16433 |
| EPA METHOD 300.0: ANIONS          |            |          |            |    | Analyst:              | LGP   |
| Fluoride                          | 0.61       | 0.30     | mg/Kg      | 1  | 11/25/2014 1:23:19 PM | 16438 |
| Chloride                          | ND         | 30       | mg/Kg      | 20 | 11/18/2014 2:46:22 PM | 16438 |
| Nitrogen, Nitrite (As N)          | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 1:23:19 PM | 16438 |
| Bromide                           | ND         | 0.30     | mg/Kg      | 1  | 11/25/2014 1:23:19 PM | 16438 |
| Nitrogen, Nitrate (As N)          | 0.98       | 0.30     | mg/Kg      | 1  | 11/25/2014 1:23:19 PM | 16438 |
| Phosphorus, Orthophosphate (As P) | ND         | 1.5      | mg/Kg      | 1  | 11/25/2014 1:23:19 PM | 16438 |
| Sulfate                           | 23         | 1.5      | mg/Kg      | 1  | 11/25/2014 1:23:19 PM | 16438 |
| EPA METHOD 6010B: SOIL METALS     |            |          |            |    | Analyst:              | ELS   |
| Calcium                           | 180000     | 1200     | mg/Kg      | 50 | 12/2/2014 12:22:41 PM | 16617 |
| Magnesium                         | 42000      | 250      | mg/Kg      | 10 | 12/2/2014 12:20:13 PM | 16617 |
| Potassium                         | 1700       | 50       | mg/Kg      | 1  | 12/2/2014 11:16:46 AM | 16617 |
| Sodium                            | 140        | 25       | mg/Kg      | 1  | 12/2/2014 11:16:46 AM | 16617 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | od Blank     |
|-------------|---|---|----|---|--------------|
|             | Е | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Daga & of 14 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | rage o 01 14 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |
|             |   |   |    |   |              |

#### Hall Environmental Analysis Laboratory, Inc.

 Client:
 Agave Energy Company

 Project:
 Dagger Draw Gas System Howell Ranch-4 Mile

 Sample ID
 MB-16438
 SampType:
 MBLK

 Client ID:
 PBS
 Batch ID:
 16438
 RunNo:
 22639

| Client ID: PBS                   | Batc       | h ID: 16 | 438       | F           | RunNo: 2 | 2639      |              |      |          |      |
|----------------------------------|------------|----------|-----------|-------------|----------|-----------|--------------|------|----------|------|
| Prep Date: 11/18/2014            | Analysis [ | Date: 1  | 1/18/2014 | 5           | SeqNo: 6 | 67700     | Units: mg/M  | (g   |          |      |
| Analyte                          | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit    | %RPD | RPDLimit | Qual |
| Fluoride                         | ND         | 0.30     | 1.0       |             |          |           |              |      |          |      |
| Chloride                         | ND         | 1.5      |           |             |          |           |              |      |          |      |
| Nitrogen, Nitrite (As N)         | ND         | 0.30     |           |             |          |           |              |      |          |      |
| Bromide                          | ND         | 0.30     |           |             |          |           |              |      |          |      |
| Nitrogen, Nitrate (As N)         | ND         | 0.30     |           |             |          |           |              |      |          |      |
| Phosphorus, Orthophosphate (As P | ND         | 1.5      |           |             |          |           |              |      |          |      |
| Sulfate                          | ND         | 1.5      | V         |             |          |           |              |      |          |      |
| Sample ID LCS-16438              | Samp       | Type: LC | s         | Tes         | tCode: E | PA Method | 300.0: Anion | s    |          |      |
| Client ID: LCSS                  | Batc       | h ID: 16 | 438       | F           | RunNo: 2 | 2639      |              |      |          |      |
| Prep Date: 11/18/2014            | Analysis [ | Date: 1  | 1/18/2014 | 5           | SeqNo: 6 | 67701     | Units: mg/M  | (g   |          |      |
| Analyte                          | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit    | %RPD | RPDLimit | Qual |
| Fluoride                         | 1.5        | 0.30     | 1.500     | 0           | 96.8     | 90        | 110          | P    |          |      |
| Chloride                         | 14         | 1.5      | 15.00     | 0           | 95.8     | 90        | 110          |      |          |      |
| Nitrogen, Nitrite (As N)         | 3.0        | 0.30     | 3.000     | 0           | 98.5     | 90        | 110          |      |          |      |
| Bromide                          | 7.3        | 0.30     | 7.500     | 0           | 97.9     | 90        | 110          |      |          |      |
| Nitrogen, Nitrate (As N)         | 7.4        | 0.30     | 7.500     | 0           | 98.4     | 90        | 110          |      |          |      |
| Phosphorus, Orthophosphate (As P | 14         | 1.5      | 15.00     | 0           | 95.8     | 90        | 110          |      |          |      |
| Sulfate                          | 32         | 1.5      | 30.00     | 0           | 107      | 90        | 110          |      |          |      |
| Sample ID 1411679-001AMS         | Samp       | Type: M  | S         | Tes         | tCode: E | PA Method | 300.0: Anion | S    |          |      |
| Client ID: HR 4M #1              | Batc       | h ID: 16 | 438       | F           | RunNo: 2 | 2809      |              |      |          |      |
| Prep Date: 11/18/2014            | Analysis D | Date: 1  | 1/25/2014 | 5           | SeqNo: 6 | 73169     | Units: mg/M  | (g   |          |      |
| Analyte                          | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit    | %RPD | RPDLimit | Qua  |
| Fluoride                         | 1.9        | 0.30     | 1.500     | 0.6672      | 80.6     | 13.6      | 100          |      |          |      |
| Chloride                         | 14         | 1.5      | 15.00     | 0           | 96.3     | 71.6      | 122          |      |          |      |
| Nitrogen, Nitrite (As N)         | 2.9        | 0.30     | 3.000     | 0           | 95.1     | 83.2      | 106          |      |          |      |
| Bromide                          | 7.4        | 0.30     | 7.500     | 0.4527      | 93.2     | 87        | 105          |      |          |      |
| Nitrogen, Nitrate (As N)         | 7.2        | 0.30     | 7.500     | 0           | 95.8     | 85.3      | 110          |      |          |      |
| Sulfate                          | 52         | 1.5      | 30.00     | 24.26       | 92.0     | 57.7      | 142          |      |          | _    |
| Sample ID 1411679-001AMSI        | D SampT    | Type: MS | SD        | Tes         | tCode: E | PA Method | 300.0: Anion | s    |          |      |
| Client ID: HR 4M #1              | Batch      | h ID: 16 | 438       | F           | RunNo: 2 | 2809      |              |      |          |      |
| Prep Date: 11/18/2014            | Analysis E | Date: 1  | 1/25/2014 | S           | SeqNo: 6 | 73170     | Units: mg/K  | g    |          |      |
| Analyte                          | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit    | %RPD | RPDLimit | Qua  |
| Fluoride                         | 1.9        | 0.30     | 1.500     | 0.6672      | 82.8     | 13.6      | 100          | 1.70 | 20       |      |

Qualifiers:

Chloride

\* Value exceeds Maximum Contaminant Level.

15

1.5

15.00

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

71.6

122

1.97

20

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ND Not Detected at the Reporting Limit

98.2

P Sample pH greater than 2.

0

RL Reporting Detection Limit

WO#: 1411679 05-Dec-14

#### Hall Environmental Analysis Laboratory, Inc.

Client: Agave Energy Company

**Project:** Dagger Draw Gas System Howell Ranch-4 Mile

| Sample ID 1411679-001AMSE                        | SampT      | ype: MS | SD        | Tes         | tCode: E | PA Method | 300.0: Anion | s    |          |      |
|--|------------|---------|-----------|-------------|----------|-----------|--------------|------|----------|------|
| Client ID: HR 4M #1 Batch ID: 16438 RunNo: 22809 |            |         |           |             |          |           |              |      |          |      |
| Prep Date: 11/18/2014                            | Analysis D | ate: 1  | 1/25/2014 | S           | SeqNo: 6 | 73170     | Units: mg/k  | (g   |          |      |
| Analyte  | Result     | PQL     | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit    | %RPD | RPDLimit | Qual |
| Nitrogen, Nitrite (As N)                         | 2.9        | 0.30    | 3.000     | 0           | 96.4     | 83.2      | 106          | 1.42 | 20       |      |
| Bromide  | 7.6        | 0.30    | 7.500     | 0.4527      | 95.2     | 87        | 105          | 2.00 | 20       |      |
| Nitrogen, Nitrate (As N)                         | 7.3        | 0.30    | 7.500     | 0           | 96.9     | 85.3      | 110          | 1.16 | 20       |      |
| Sulfate  | 56         | 1.5     | 30.00     | 24.26       | 106      | 57.7      | 142          | 8.04 | 20       |      |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded ND
  - Not Detected at the Reporting Limit
- P Sample pH greater than 2,
- RL Reporting Detection Limit

WO#: 1411679 05-Dec-14

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#### Hall Environmental Analysis Laboratory, Inc.

| Client: Agave                  | Energy Com | npany    |            |             |          |           |             |            |          |
|--------------------------------|------------|----------|------------|-------------|----------|-----------|-------------|------------|----------|
| Project: Dagger                | Draw Gas S | System   | Howell Rar | ich-4 Mile  |          |           |             |            |          |
| Sample ID MB-16439             | Samp       | Гуре: МІ | BLK        | Tes         | tCode: E | PA Method | 8015D: Dies | el Range ( | Organics |
| Client ID: PBS                 | Batc       | h ID: 16 | 439        | F           | RunNo: 2 | 2594      |             |            |          |
| Prep Date: 11/18/2014          | Analysis [ | Date: 1  | 1/18/2014  | 5           | SeqNo: 6 | 67292     | Units: mg/k | ٢g         |          |
| Analyte                        | Result     | PQL      | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD       | RPDLi    |
| Diesel Range Organics (DRO)    | ND         | 10       | 5          |             |          |           | 1.1.1       |            |          |
| Motor Oil Range Organics (MRO) | ND         | 50       |            |             |          |           |             |            |          |
| Surr: DNOP                     | 7.5        |          | 10.00      |             | 75.0     | 63.5      | 128         |            |          |
| Sample ID LCS-16439            | Samp       | Type: LC | s          | Tes         | tCode: E | PA Method | 8015D: Dies | el Range ( | Organics |
| Client ID: LOGG                | Data       |          | 100        |             |          |           |             |            |          |

| Client ID: LCSS             | Batch      | n ID: 16 | 439       | F           | RunNo: 2 | 2594     |             |      |          |      |
|-----------------------------|------------|----------|-----------|-------------|----------|----------|-------------|------|----------|------|
| Prep Date: 11/18/2014       | Analysis D | Date: 1  | 1/18/2014 | 5           | SeqNo: 6 | 67293    | Units: mg/k | g    |          |      |
| Analyte                     | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit | HighLimit   | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 44         | 10       | 50.00     | 0           | 87.6     | 68.6     | 130         |      | -        |      |
| SUIT: DNOP                  | 43         |          | 5 000     |             | 85.9     | 63.5     | 128         |      |          |      |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- B Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1411679

Qual

05-Dec-14

RPDLimit

#### Hall Environmental Analysis Laboratory, Inc.

#### Client:Agave Energy CompanyProject:Dagger Draw Gas System Howell Ranch-4 Mile

| Sample ID MB-16433            | Samp       | ype: MI  | BLK       | Tes         | tCode: E | PA Method | 8015D: Gase | oline Rang | e        |      |
|-------------------------------|------------|----------|-----------|-------------|----------|-----------|-------------|------------|----------|------|
| Client ID: PBS                | Batc       | h ID: 16 | 433       | F           | RunNo: 2 | 2632      |             |            |          |      |
| Prep Date: 11/18/2014         | Analysis I | Date: 1  | 1/19/2014 | Ş           | SeqNo: 6 | 67913     | Units: mg/k | (g         |          |      |
| Analyte                       | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD       | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND         | 5.0      | 1.0       |             |          |           |             |            |          |      |
| Surr: BFB                     | 910        |          | 1000      |             | 91.4     | 80        | 120         |            |          |      |
| Sample ID LCS-16433           | Samp       | ype: LC  | s         | Tes         | tCode: E | PA Method | 8015D: Gase | oline Rang | e        |      |
| Client ID: LCSS               | Batc       | n ID: 16 | 433       | F           | RunNo: 2 | 2632      |             |            |          |      |
| Prep Date: 11/18/2014         | Analysis D | Date: 1  | 1/19/2014 | S           | SeqNo: 6 | 67914     | Units: mg/k | ٢g         |          |      |
| Analyte                       | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD       | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23         | 5.0      | 25.00     | 0           | 91.1     | 65.8      | 139         | *          |          |      |
| Surr: BFB                     | 990        |          | 1000      |             | 987      | 80        | 120         |            |          |      |

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1411679

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#### Hall Environmental Analysis Laboratory, Inc.

Client: Agave Energy Company

Project: Dagger Draw Gas System Howell Ranch-4 Mile

| Sample ID MB-16433         | Samp       | Type: ME | 3LK       | Tes         | tCode: E | PA Method | 8021B: Vola | tiles   |          |      |
|----------------------------|------------|----------|-----------|-------------|----------|-----------|-------------|---------|----------|------|
| Client ID: PBS             | Batc       | h ID: 16 | 433       | F           | RunNo: 2 | 2632      |             |         |          |      |
| Prep Date: 11/18/2014      | Analysis [ | Date: 1  | 1/19/2014 | ş           | SeqNo: 6 | 67969     | Units: mg/h | ٢g      |          |      |
| Analyte                    | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD    | RPDLimit | Qual |
| Benzene                    | ND         | 0.050    |           | - A         |          |           | 1           | 10 M 10 |          |      |
| Toluene                    | ND         | 0.050    |           |             |          |           |             |         |          |      |
| Ethylbenzene               | ND         | 0.050    |           |             |          |           |             |         |          |      |
| Kylenes, Total             | ND         | 0.10     |           |             |          |           |             |         |          |      |
| Surr: 4-Bromofluorobenzene | 1.0        |          | 1.000     |             | 100      | 80        | 120         |         |          |      |
| Sample ID LCS-16433        | Samp       | Type: LC | s         | Tes         | tCode: E | PA Method | 8021B: Vola | tiles   |          |      |
| Client ID: LCSS            | Batc       | h ID: 16 | 433       | F           | RunNo: 2 | 2632      |             |         |          |      |
| Prep Date: 11/18/2014      | Analysis [ | Date: 1  | 1/19/2014 | S           | eqNo: 6  | 67970     | Units: mg/h | ٢g      |          |      |
| Analyte                    | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD    | RPDLimit | Qua  |
| Benzene                    | 0.96       | 0.050    | 1.000     | 0           | 96.3     | 80        | 120         |         |          |      |
| Foluene                    | 0.94       | 0.050    | 1.000     | 0           | 94.3     | 80        | 120         |         |          |      |
| Ethylbenzene               | 1.0        | 0.050    | 1.000     | 0           | 102      | 80        | 120         |         |          |      |
| Kylenes, Total             | 3.0        | 0.10     | 3.000     | 0           | 101      | 80        | 120         |         |          |      |
| Surr: 4-Bromofluorobenzene | 1.1        |          | 1.000     |             | 105      | 80        | 120         |         |          |      |

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1411679

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#### Hall Environmental Analysis Laboratory, Inc.

| Client:<br>Project: | Agave Er<br>Dagger D | nergy Con<br>Draw Gas S | npany<br>System 1 | Howell Ran | ich-4 Mile  |          |           |             |        |          |        |
|---------------------|----------------------|-------------------------|-------------------|------------|-------------|----------|-----------|-------------|--------|----------|--------|
| Sample ID N         | AB-16617             | Samp                    | Гуре: МІ          | BLK        | Tes         | tCode: E | PA Method | 6010B: Soil | Metals |          |        |
| Client ID: P        | BS                   | Batc                    | h ID: 16          | 617        | F           | RunNo: 2 | 2877      |             |        |          |        |
| Prep Date:          | 12/1/2014            | Analysis I              | Date: 1           | 2/2/2014   | S           | SeqNo: 6 | 75466     | Units: mg/  | ٢g     |          |        |
| Analyte             |                      | Result                  | PQL               | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD   | RPDLimit | Qual   |
| Calcium             |                      | ND                      | 25                |            |             |          |           |             |        |          | 120200 |
| Magnesium           |                      | ND                      | 25                |            |             |          |           |             |        |          |        |
| Potassium           |                      | ND                      | 50                |            |             |          |           |             |        |          |        |
| Sodium              |                      | ND                      | 25                | n          |             |          |           |             |        |          |        |
| Sample ID L         | .CS-16617            | Samp                    | Type: LC          | s          | Tes         | tCode: E | PA Method | 6010B: Soil | Metals |          |        |
| Client ID: L        | CSS                  | Batc                    | h ID: 16          | 617        | F           | RunNo: 2 | 2877      |             |        |          |        |
| Prep Date:          | 12/1/2014            | Analysis [              | Date: 1           | 2/2/2014   | S           | SeqNo: 6 | 75467     | Units: mg/H | ٢g     |          |        |
| Analyte             |                      | Result                  | PQL               | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD   | RPDLimit | Qual   |
| Calcium             |                      | 2600                    | 25                | 2500       | 0           | 106      | 80        | 120         |        |          |        |
| Magnesium           |                      | 2600                    | 25                | 2500       | 0           | 103      | 80        | 120         |        |          |        |
| Potassium           |                      | 2500                    | 50                | 2500       | 0           | 99.2     | 80        | 120         |        |          |        |
| Sodium              |                      | 2500                    | 25                | 2500       | 0           | 100      | 80        | 120         |        |          | _      |
| Sample ID 1         | 411679-005AMS        | Samp                    | Гуре: М           | s          | Tes         | tCode: E | PA Method | 6010B: Soil | Metals |          |        |
| Client ID: H        | IR 4M #5             | Batc                    | h ID: 16          | 617        | Ê           | RunNo: 2 | 2877      |             |        |          |        |
| Prep Date:          | 12/1/2014            | Analysis [              | Date: 1           | 2/2/2014   | S           | SeqNo: 6 | 75480     | Units: mg/k | ٢g     |          |        |
| Analyte             |                      | Result                  | PQL               | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD   | RPDLimit | Qual   |
| Potassium           |                      | 3900                    | 51                | 2546       | 1451        | 97.8     | 75        | 125         |        |          |        |
| Sodium              |                      | 2200                    | 25                | 2546       | 146.0       | 82.6     | 75        | 125         |        |          |        |
| Sample ID 1         | 411679-005AMS        | Samp                    | Гуре: М           | SD         | Tes         | tCode: E | PA Method | 6010B: Soil | Metals |          |        |
| Client ID: H        | IR 4M #5             | Batc                    | h ID: 16          | 617        | F           | RunNo: 2 | 2877      |             |        |          |        |
| Prep Date:          | 12/1/2014            | Analysis I              | Date: 1           | 2/2/2014   | S           | GegNo: 6 | 75481     | Units: mg/k | ٢g     |          |        |
| Analyte             |                      | Result                  | PQL               | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD   | RPDLimit | Qual   |
| Potassium           |                      | 3900                    | 49                | 2436       | 1451        | 101      | 75        | 125         | 0.779  | 20       |        |
| Sodium              |                      | 2200                    | 24                | 2436       | 146.0       | 85.6     | 75        | 125         | 0.737  | 20       |        |

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits J

0 RSD is greater than RSDlimit

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

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- ND Not Detected at the Reporting Limit
  - Sample pH greater than 2.
- RL Reporting Detection Limit

Р

WO#: 1411679

05-Dec-14

| HALL Hall Environmental<br>ENVIRONMENTAL Alt<br>ANALYSIS TEL: 505-345-397.<br>LABORATORY Webstle: www.h | l Analysis Labora<br>4901 Hawkins<br>nuquerque, NM 87<br>5 FAX: 505-345-4<br>allenvironmental. | NE<br>NE<br>105 <b>Samp</b><br>107<br>com | le Log-In Check List               |
|---|--|---|------------------------------------|
| Client Name: AGAVE ENERGY COMP Work Order Number  | r. 1411679   |   | RcptNo: 1                          |
| Received by/date:   | AM   | AJ  |                                    |
| Reviewed By:  |  |   |                                    |
| hain of Custody   |  |   | Net Descent                        |
| 1. Custody seals intact on sample bottles?  | Yes 🗌  | No L                                      | Not Present                        |
| 2. Is Chain of Custody complete?  | Yes 🗹  | NO  | NOL Plesent                        |
| 3. How was the sample delivered?  | Courier  |   |                                    |
| Log In  |  |   |                                    |
| 4. Was an attempt made to cool the samples?   | Yes 🗹  |   |                                    |
| 5. Were all samples received at a temperature of >0° C to 6.0°C   | Yes 🔲<br>Not rec   | No 🗹                                      |                                    |
| 6. Sample(s) in proper container(s)?  | Yes 🗹  | No 🗆                                      |                                    |
| 7 Sufficient sample volume for indicated test(s)?   | Yes 🗹  | No 🗌                                      |                                    |
| 8. Are samples (except VOA and ONG) properly preserved?   | Yes 🗹  | No 🗌                                      | in H                               |
| 9. Was preservative added to bottles?   | Yes 🗋  | No 🗹                                      | NAL                                |
| 10 VOA vials have zero headspace?   | Yes 🗌  | No 🗆                                      | No VOA Vials 🗹                     |
| 11. Were any sample containers received broken?   | Yes 🗆  | No 🗹                                      | # of preserved<br>bottles checked  |
| 12.Does paperwork match bottle labels?  | Yes 🗹  | No 🗆 .                                    | for pH:<br>(<2 or >12 unless noted |
| (Note discrepancies on chain of custody)  | Yes 🗹  | No 🗌                                      | Adjusted?                          |
| 14 Is it clear what analyses were requested?  | Yes 🗹  | No 🗌                                      |                                    |
| 15.Were all holding times able to be met?<br>(If no, notify customer for authorization.)                | Yes 🗹  | No 🗌                                      | Спескеа ру:                        |
| Special Handling (if applicable)  |  |   |                                    |
| 16. Was client notified of all discrepancies with this order?   | Yes 🗌  | No 🗌                                      |                                    |
| Person Notified: Data   | e:   |   |                                    |
| By Whom: Via:   | eMail  | Phone 🗌 Fax                               | In Person                          |

17. Additional remarks:

Client Instructions:

18. Cooler Information

| Cooler No. Tomp .C | Condition | Seal Intact | Seal No | Seal Date Signed By |  |
|--------------------|-----------|-------------|---------|---------------------|--|
| 1 9.2              | Good      | Yes         |         |                     |  |

Page 1 of 1

|             |             | 10          | 6                         | □ Standard<br>Project Name | Dagger Draw          | . Gas System:          |                        |                         | www.h                   | allenvird | nmenta                                  | al.com                   | KAIUKI             |
|-------------|-------------|-------------|---------------------------|----------------------------|----------------------|------------------------|------------------------|-------------------------|-------------------------|-----------|---|--------------------------|--------------------|
| Mailing Ad  | dress:      | PO BOX      | 158                       | Howell Ranch               | 1-4 Mile Draw        | Leak                   | 490                    | 11 Hawk                 | ins NE                  | - Albuc   | Inerque                                 | , NM 87                  | 109                |
| Artesia, NN | M 8821      | 1           |                           | Project #:                 |                      |                        | Te                     | . 505-34                | 15-3975                 | Fa        | × 505-3                                 | 345-410                  | 2                  |
| Phone #: (  | 575) 51     | 3-8988      |                           |                            |                      |                        |                        |                         |                         | Analys    | is Requ                                 | lest                     |                    |
| email or Fa | :#xe        | KEgan@      | yatespetroleum.com        | Project Mana               | ger:                 |                        | u(À)<br>()             | (les                    |                         |           | (*0                                     |                          |                    |
| QA/QC Pac   | :kage:<br>d |             | Level 4 (Full Validation) |                            |                      |                        | (Gas o                 | eid\ss                  |                         | 0.00      | 5 PCB'                                  |                          |                    |
| Accreditati | on:         | □ Other     |                           | Sampler.<br>On Ice         | Kerry Egan           | E No                   | + TMB                  | 15B (C                  | (HA)                    | (1)       | 2 \ 8083                                | (4                       |                    |
|             | ype)        |             |                           | Sample Tem                 | berature             | 7.2                    | 8E<br>8E               | 99 4<br>9 80            | g po                    | slete     | səbi                                    | -∧0<br>(∀                |                    |
| Date        | Time        | Matrix      | Sample Request ID         | Container<br>Type and #    | Preservative<br>Type | HEAL No.<br>1나 N U 그 그 | TM + X3T8<br>TM + X3T8 | onteM H9T<br>TPH Methor | EDB (Metho<br>8310 (PNA | M 8 AADA  | C, ≺) anonA<br>8081 Pestic              | (OV) 80828<br>(VO) 80828 |                    |
| 11/14/14 1  | OAM         | Soil        | HR 4M #1                  | Jar (1)                    | Temp (cool)          | - 001                  |                        | ×                       |                         | ×         |   |                          |                    |
| 11/14/14    | OAM         | Soil        | HR 4M #2                  | Jar (1)                    | Temp (cool)          | - 002                  |                        | ×                       |                         | ×         |   |                          |                    |
| 11/14/14 1  | MAL.        | Soil        | HR 4M #3                  | Jar (1)                    | Temp (cool)          | - 003                  |                        | ×                       | -                       | ×         |   |                          |                    |
| 11/14/14 1  | PM          | Soil        | HR 4M #4                  | Jar (1)                    | Temp (cool)          | h00-                   |                        | ×                       |                         | ×         |   | _                        |                    |
| 11/14/14 1  | PM          | Soil        | HR 4M #5                  | Jar (1)                    | Temp (cool)          | 200-                   |                        | ×                       |                         | ×         |   |                          |                    |
| 11/14/14 2  | PM          | Soil        | HR 4M #6                  | Jar (1)                    | Temp (cool)          | -00h                   |                        | ×                       |                         | ×         |   | _                        |                    |
| 11/14/14 3  | Mds         | Soil        | HR 4M #7                  | Jar (1)                    | Temp (cool)          | L00.                   |                        | ×                       |                         | ×         |   |                          |                    |
| 11/14/14 4  | Mdt         | Soil        | HR 4M #8                  | Jar (1)                    | Temp (cool)          | -008                   |                        | ×                       |                         | ×         |   |                          |                    |
|             |             |             |                           |                            |                      |                        |                        |                         |                         |           |   | -                        |                    |
| Date:       | ime;        | Relinquishe | ed by:                    | Received by:               | V                    | Date Time              | Remarks                | : 1) For                | Anions                  | analyse   | ss, I onl                               | y need                   | CI- concentration. |
| Date: 1     | ime:        | Relinquish  | ed by:                    | Received by:               | 1                    | Date Time              | Kus<br>も<br>店          | x to                    | yaly<br>-00-            | ses 1     | 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 100                      | ton might          |



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

November 20, 2014

Kerry Egan Agave Energy Company P.O. Box 158 Artesia, NM 88211 TEL: (575) 513-8988 FAX

RE: Dagger Draw Gas System Howell Ranch-4 Mile Draw Leak

OrderNo.: 1411679

Dear Kerry Egan:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/18/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Hall Er                        | nvironmental Analys  | sis Labora              | tory, Iı | ıc.  |   |                                  | Analytical Report<br>Lab Order 1411679<br>Date Reported: 11/20/20 | )14     |
|--------------------------------|--|-------------------------|----------|------|---|----------------------------------|---|---------|
| CLIENT:<br>Project:<br>Lab ID: | Agave Energy Company<br>Dagger Draw Gas System Ho<br>1411679-001 | owell Ranch-<br>Matrix: | SOIL     | C    | lient Sampl<br>Collection I<br>Received I | e ID: HF<br>Date: 11<br>Date: 11 | 8 4M #1<br>/14/2014 10:00:00 AM<br>/18/2014 10:20:00 AM           |         |
| Analyses                       |  | Result                  | RL       | Qual | Units                                     | DF                               | Date Analyzed   | Batch   |
| EPA MET                        | HOD 8015D: DIESEL RANGE  | E ORGANICS              |          |      |   |                                  | Analyst   | JME     |
| Diesel Ra                      | ange Organics (DRO)  | ND                      | 10       |      | mg/Kg                                     | 1                                | 11/18/2014 3:43:48 PM   | 16439   |
| Motor Oil                      | Range Organics (MRO)   | ND                      | 50       |      | mg/Kg                                     | 1                                | 11/18/2014 3:43:48 PM   | 16439   |
| Surr: [                        | DNOP   | 88.4                    | 63.5-128 |      | %REC                                      | 1                                | 11/18/2014 3:43:48 PM   | 16439   |
| EPA MET                        | HOD 8015D: GASOLINE RAI  | NGE                     |          |      |   |                                  | Analyst   | NSB     |
| Gasoline                       | Range Organics (GRO)   | ND                      | 4.6      |      | mg/Kg                                     | 1                                | 11/19/2014 1:22:51 PM   | 16433   |
| Surr: E                        | BFB  | 92.8                    | 80-120   |      | %REC                                      | 1                                | 11/19/2014 1:22:51 PM   | 16433   |
| EPA MET                        | HOD 300.0: ANIONS  |                         |          |      |   |                                  | Analyst   | LGP     |
| Chloride                       |  | ND                      | 30       |      | mg/Kg                                     | 20                               | 11/18/2014 12:54:39 PM  | Л 16438 |
|                                |  |                         |          |      |   |                                  |   |         |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | od Blank     |
|-------------|---|---|----|---|--------------|
|             | Ē | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Page 1 of 12 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | rage rorrz   |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |

| Hall Ei                        | nvironmental Analys                               | sis Labora   | tory, Iı | ıc.  |                             |                      | Analytical Report<br>Lab Order 1411679<br>Date Reported: 11/20/20 | 014   |
|--------------------------------|---|--------------|----------|------|-----------------------------|----------------------|---|-------|
| CLIENT:<br>Project:<br>Lab ID: | Agave Energy Company<br>Dagger Draw Gas System Ho | owell Ranch- | SOIL     | C    | lient Sampl<br>Collection I | e ID: HF<br>Date: 11 | R 4M #2<br>/14/2014 10:00:00 AM                                   |       |
| Analyses                       | 1411079-002                                       | Result       | RL       | Qual | Units                       | Date: 11             | Date Analyzed   | Batch |
| EPA MET                        | HOD 8015D: DIESEL RANGI                           | E ORGANICS   |          |      |                             |                      | Analyst   | JME   |
| Diesel R                       | ange Organics (DRO)                               | ND           | 9.8      |      | mg/Kg                       | 1                    | 11/18/2014 4:14:02 PM   | 16439 |
| Motor Oi                       | Range Organics (MRO)                              | ND           | 49       |      | mg/Kg                       | 1                    | 11/18/2014 4:14:02 PM   | 16439 |
| Surr: I                        | DNOP  | 95.5         | 63.5-128 |      | %REC                        | 1                    | 11/18/2014 4:14:02 PM   | 16439 |
| EPA MET                        | HOD 8015D: GASOLINE RA                            | NGE          |          |      |                             |                      | Analyst   | NSB   |
| Gasoline                       | Range Organics (GRO)                              | ND           | 4.9      |      | mg/Kg                       | 1                    | 11/19/2014 1:51:36 PM   | 16433 |
| Surr: E                        | 3FB   | 92.0         | 80-120   |      | %REC                        | 1                    | 11/19/2014 1:51:36 PM   | 16433 |
| EPA MET                        | HOD 300.0: ANIONS                                 |              |          |      |                             |                      | Analyst   | LGP   |
| Chloride                       |   | ND           | 30       |      | mg/Kg                       | 20                   | 11/18/2014 1:31:53 PM   | 16438 |
|                                |   |              |          |      |                             |                      |   |       |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth  | od Blank     |
|-------------|---|---|----|--|--------------|
|             | Е | Value above quantitation range                  | H  | Holding times for preparation or analyst | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit      | Page 2 of 12 |
|             | 0 | RSD is greater than RSDlimit                    | P  | Sample pH greater than 2.                | rage 2 01 12 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit                |              |
|             | S | Spike Recovery outside accepted recovery limits |    |  |              |

#### Date Reported: 11/20/2014

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Agave Energy CompanyClient Sample ID: HR 4M #3Project:Dagger Draw Gas System Howell Ranch-<br/>Lab ID:Collection Date: 11/14/2014 11:00:00 AMLab ID:1411679-003Matrix: SOILReceived Date: 11/18/2014 10:20:00 AM

| Analyses                       | Result   | RL Qu    | al Units | DF | Date Analyzed         | Batch |
|--------------------------------|----------|----------|----------|----|-----------------------|-------|
| EPA METHOD 8015D: DIESEL RANGE | ORGANICS |          |          |    | Analyst               | JME   |
| Diesel Range Organics (DRO)    | ND       | 10       | mg/Kg    | 1  | 11/18/2014 4:44:15 PM | 16439 |
| Motor Oil Range Organics (MRO) | ND       | 50       | mg/Kg    | 1  | 11/18/2014 4:44:15 PM | 16439 |
| Surr: DNOP                     | 97.0     | 63.5-128 | %REC     | 1  | 11/18/2014 4:44:15 PM | 16439 |
| EPA METHOD 8015D: GASOLINE RAN | GE       |          |          |    | Analyst               | NSB   |
| Gasoline Range Organics (GRO)  | ND       | 4.8      | mg/Kg    | 1  | 11/19/2014 2:20:17 PM | 16433 |
| Surr: BFB                      | 94.7     | 80-120   | %REC     | 1  | 11/19/2014 2:20:17 PM | 16433 |
| EPA METHOD 300.0: ANIONS       |          |          |          |    | Analyst               | LGP   |
| Chloride                       | ND       | 30       | mg/Kg    | 20 | 11/18/2014 1:44:18 PM | 16438 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | od Blank     |
|-------------|---|---|----|---|--------------|
|             | Е | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | 1 | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Dana 3 of 12 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | rage 5 01 12 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |
|             |   |   |    |   |              |

| Analytical Report |  |
|-------------------|--|
| Lab Order 1411679 |  |

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/20/2014

| Analyzac |                        | Docult          | PI Qual | Unite      | DE Data Analyzad            | D. |
|----------|------------------------|-----------------|---------|------------|-----------------------------|----|
| Lab ID:  | 1411679-004            | Matrix: SO      | DIL     | Received   | Date: 11/18/2014 10:20:00 A | M  |
| Project: | Dagger Draw Gas Syster | n Howell Ranch- |         | Collection | Date: 11/14/2014 1:00:00 PM | 1  |
| CLIENT:  | Agave Energy Company   |                 | C       | lient Samp | le ID: HR 4M #4             |    |

| Anaryses                       | Result   | RL Qu    | ial Units | DF | Date Analyzed         | Batch |
|--------------------------------|----------|----------|-----------|----|-----------------------|-------|
| EPA METHOD 8015D: DIESEL RANGE | ORGANICS |          |           |    | Analyst               | JME   |
| Diesel Range Organics (DRO)    | 23       | 10       | mg/Kg     | 1  | 11/18/2014 5:14:15 PM | 16439 |
| Motor Oil Range Organics (MRO) | ND       | 50       | mg/Kg     | 1  | 11/18/2014 5:14:15 PM | 16439 |
| Surr: DNOP                     | 100      | 63.5-128 | %REC      | 1  | 11/18/2014 5:14:15 PM | 16439 |
| EPA METHOD 8015D: GASOLINE RAI | NGE      |          |           |    | Analyst               | NSB   |
| Gasoline Range Organics (GRO)  | ND       | 4.9      | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433 |
| Surr: BFB                      | 101      | 80-120   | %REC      | 1  | 11/19/2014 2:49:01 PM | 16433 |
| EPA METHOD 8021B: VOLATILES    |          |          |           |    | Analyst               | NSB   |
| Benzene                        | ND       | 0.049    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433 |
| Toluene                        | ND       | 0.049    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433 |
| Ethylbenzene                   | ND       | 0.049    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433 |
| Xylenes, Total                 | ND       | 0.098    | mg/Kg     | 1  | 11/19/2014 2:49:01 PM | 16433 |
| Surr: 4-Bromofluorobenzene     | 102      | 80-120   | %REC      | 1  | 11/19/2014 2:49:01 PM | 16433 |
| EPA METHOD 300.0: ANIONS       |          |          |           |    | Analyst               | LGP   |
| Chloride                       | ND       | 30       | mg/Kg     | 20 | 11/18/2014 1:56:42 PM | 16438 |
|                                |          |          |           |    |                       |       |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | nod Blank    |
|-------------|---|---|----|---|--------------|
|             | Е | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Page 4 of 12 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | Fage 4 01 12 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |
|             |   |   |    |   |              |

Date Reported: 11/20/2014

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Agave Energy CompanyClient Sample ID: HR 4M #5Project: Dagger Draw Gas System Howell Ranch-<br/>Lab ID: 1411679-005Collection Date: 11/14/2014 1:00:00 PM<br/>Received Date: 11/18/2014 10:20:00 AM

| Result   | RL Qu  | al Units  | DF   | Date Analyzed   | Batch  |
|----------|--|---|--|---|--|
| ORGANICS |  |   |  | Analyst   | JME  |
| ND       | 10   | mg/Kg   | 1  | 11/18/2014 5:44:13 PM   | 16439  |
| ND       | 50   | mg/Kg   | 1  | 11/18/2014 5:44:13 PM   | 16439  |
| 92.5     | 63.5-128   | %REC  | 1  | 11/18/2014 5:44:13 PM   | 16439  |
| IGE      |  |   |  | Analyst   | NSB  |
| ND       | 4.8  | mg/Kg   | 1  | 11/19/2014 1:34:40 PM   | 16433  |
| 92.8     | 80-120   | %REC  | 1  | 11/19/2014 1:34:40 PM   | 16433  |
|          |  |   |  | Analyst   | LGP  |
| ND       | 30   | mg/Kg   | 20   | 11/18/2014 2:09:07 PM   | 16438  |
|          | Result<br>CORGANICS<br>ND<br>92.5<br>IGE<br>ND<br>92.8<br>ND | Result         RL         Qu           CORGANICS         ND         10           ND         50         92.5           92.5         63.5-128         0           IGE         ND         4.8           92.8         80-120         0           ND         30         30 | Result         RL         Qual         Units           CORGANICS         10         mg/Kg           ND         10         mg/Kg           92.5         63.5-128         %REC           IGE         ND         4.8         mg/Kg           92.8         80-120         %REC           ND         30         mg/Kg | Result         RL         Qual         Units         DF           CORGANICS         ND         10         mg/Kg         1           ND         50         mg/Kg         1           92.5         63.5-128         %REC         1           IGE         ND         4.8         mg/Kg         1           92.8         80-120         %REC         1           ND         30         mg/Kg         20 | Result         RL         Qual         Units         DF         Date Analyzed           CORGANICS         Analyst:         Analyst:           ND         10         mg/Kg         1         11/18/2014 5:44:13 PM           ND         50         mg/Kg         1         11/18/2014 5:44:13 PM           92.5         63.5-128         %REC         1         11/18/2014 5:44:13 PM           IGE         Analyst:         Analyst:         Analyst:           ND         4.8         mg/Kg         1         11/19/2014 1:34:40 PM           92.8         80-120         %REC         1         11/19/2014 1:34:40 PM           MD         30         mg/Kg         20         11/18/2014 2:09:07 PM |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth | od Blank     |
|-------------|---|---|----|---|--------------|
|             | Е | Value above quantitation range                  | Н  | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit     | Page 5 of 12 |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.               | rage 5 01 12 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |    |   |              |
|             |   |   |    |   |              |

Date Reported: 11/20/2014

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT:Agave Energy CompanyClient Sample ID: HR 4M #6Project:Dagger Draw Gas System Howell Ranch-Collection Date: 11/14/2014 2:00:00 PMLab ID:1411679-006Matrix: SOILReceived Date: 11/18/2014 10:20:00 AM

| Analyses                       | Result   | RL Qu    | al Units | DF | Date Analyzed         | Batch |
|--------------------------------|----------|----------|----------|----|-----------------------|-------|
| EPA METHOD 8015D: DIESEL RANGE | ORGANICS |          |          |    | Analyst               | JME   |
| Diesel Range Organics (DRO)    | ND       | 9.9      | mg/Kg    | 1  | 11/18/2014 6:14:16 PM | 16439 |
| Motor Oil Range Organics (MRO) | ND       | 49       | mg/Kg    | 1  | 11/18/2014 6:14:16 PM | 16439 |
| Surr: DNOP                     | 115      | 63.5-128 | %REC     | 1  | 11/18/2014 6:14:16 PM | 16439 |
| EPA METHOD 8015D: GASOLINE RAM | IGE      |          |          |    | Analyst               | NSB   |
| Gasoline Range Organics (GRO)  | ND       | 4.6      | mg/Kg    | 1  | 11/19/2014 2:02:22 PM | 16433 |
| Surr: BFB                      | 93.6     | 80-120   | %REC     | 1  | 11/19/2014 2:02:22 PM | 16433 |
| EPA METHOD 300.0: ANIONS       |          |          |          |    | Analyst               | LGP   |
| Chloride                       | ND       | 30       | mg/Kg    | 20 | 11/18/2014 2:21:32 PM | 16438 |

| Qualifiers: | *                | Value exceeds Maximum Contaminant Level.  | В             | Analyte detected in the associated Meth   | od Blank     |  |
|-------------|------------------|---|---------------|---|--------------|--|
|             | Е                | Value above quantitation range  | Н             | Holding times for preparation or analys   | is exceeded  |  |
|             | J                | Analyte detected below quantitation limits  | ND            | Not Detected at the Reporting Limit   | Daga 6 of 12 |  |
|             | 0                | RSD is greater than RSDlimit  | Р             | Sample pH greater than 2.   |              |  |
|             | R                | RPD outside accepted recovery limits  | RL            | Reporting Detection Limit   |              |  |
|             | S                | Spike Recovery outside accepted recovery limits   |               |   |              |  |
|             | J<br>O<br>R<br>S | Analyte detected below quantitation limits<br>RSD is greater than RSDlimit<br>RPD outside accepted recovery limits<br>Spike Recovery outside accepted recovery limits | ND<br>P<br>RL | Not Detected at the Reporting Limit<br>Sample pH greater than 2.<br>Reporting Detection Limit | Page 6       |  |

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/20/2014

| CLIENT:  | Agave Energy Company     |               |          | Client Sampl | e ID: HI | R 4M #7               |       |
|----------|--------------------------|---------------|----------|--------------|----------|-----------------------|-------|
| Project: | Dagger Draw Gas System I | Howell Ranch- |          | Collection   | Date: 11 | /14/2014 3:00:00 PM   |       |
| Lab ID:  | 1411679-007              | Matrix:       | SOIL     | Received     | Date: 11 | /18/2014 10:20:00 AM  | ()    |
| Analyses |                          | Result        | RL Qu    | al Units     | DF       | Date Analyzed         | Batch |
| EPA MET  | HOD 8015D: DIESEL RAN    | GE ORGANICS   | 1111     |              |          | Analys                | JME   |
| Diesel R | ange Organics (DRO)      | 45            | 9.8      | mg/Kg        | 1        | 11/18/2014 6:44:38 PN | 16439 |
| Motor Oi | I Range Organics (MRO)   | 120           | 49       | mg/Kg        | 1        | 11/18/2014 6:44:38 PN | 16439 |
| Surr: I  | DNOP                     | 97.6          | 63.5-128 | %REC         | 1        | 11/18/2014 6:44:38 PN | 16439 |
| EPA MET  | HOD 8015D: GASOLINE R    | ANGE          |          |              |          | Analyst               | NSB   |
| Gasoline | Range Organics (GRO)     | ND            | 4.7      | mg/Kg        | 1        | 11/19/2014 2:30:05 PN | 16433 |

| Gasoline Range Organics (GRO) | ND   | 4.7    | mg/Kg | 1  | 11/19/2014 2:30:05 PM | 16433 |
|-------------------------------|------|--------|-------|----|-----------------------|-------|
| Surr: BFB                     | 97.1 | 80-120 | %REC  | 1  | 11/19/2014 2:30:05 PM | 16433 |
| EPA METHOD 8021B: VOLATILES   |      |        |       |    | Analyst:              | NSB   |
| Benzene                       | ND   | 0.047  | mg/Kg | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Toluene                       | ND   | 0.047  | mg/Kg | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Ethylbenzene                  | ND   | 0.047  | mg/Kg | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Xylenes, Total                | ND   | 0.094  | mg/Kg | 1  | 11/19/2014 2:30:05 PM | 16433 |
| Surr: 4-Bromofluorobenzene    | 112  | 80-120 | %REC  | 1  | 11/19/2014 2:30:05 PM | 16433 |
| EPA METHOD 300.0: ANIONS      |      |        |       |    | Analyst:              | LGP   |
| Chloride                      | ND   | 30     | mg/Kg | 20 | 11/18/2014 2:33:58 PM | 16438 |

|             |   |   |    | the second |               |
|-------------|---|---|----|---|---------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В  | Analyte detected in the associated Meth   | od Blank      |
|             | Е | Value above quantitation range                  | Н  | Holding times for preparation or analys   | is exceeded   |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit   | Page 7 of 12  |
|             | 0 | RSD is greater than RSDlimit                    | Р  | Sample pH greater than 2.   | 1 age 7 01 12 |
|             | R | RPD outside accepted recovery limits            | RL | Reporting Detection Limit   |               |
|             | S | Spike Recovery outside accepted recovery limits |    |   |               |
|             |   |   |    |   |               |

#### Date Reported: 11/20/2014

#### Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Agave Energy Company
 Client Sample ID: HR 4M #8

 Project: Dagger Draw Gas System Howell Ranch-Lab ID: 1411679-008
 Collection Date: 11/14/2014 4:00:00 PM

 Received Date: 11/18/2014 10:20:00 AM
 Received Date: 11/18/2014 10:20:00 AM

| Analyses                       | Result     | RL Qu    | al Units | DF | Date Analyzed         | Batch |
|--------------------------------|------------|----------|----------|----|-----------------------|-------|
| EPA METHOD 8015D: DIESEL RANG  | E ORGANICS |          |          |    | Analyst               | JME   |
| Diesel Range Organics (DRO)    | ND         | 10       | mg/Kg    | 1  | 11/18/2014 7:14:20 PM | 16439 |
| Motor Oil Range Organics (MRO) | ND         | 50       | mg/Kg    | 1  | 11/18/2014 7:14:20 PM | 16439 |
| Surr: DNOP                     | 114        | 63.5-128 | %REC     | 1  | 11/18/2014 7:14:20 PM | 16439 |
| EPA METHOD 8015D: GASOLINE RA  | NGE        |          |          |    | Analyst               | NSB   |
| Gasoline Range Organics (GRO)  | ND         | 4.7      | mg/Kg    | 1  | 11/19/2014 2:57:12 PM | 16433 |
| Surr: BFB                      | 95.6       | 80-120   | %REC     | 1  | 11/19/2014 2:57:12 PM | 16433 |
| EPA METHOD 300.0: ANIONS       |            |          |          |    | Analyst               | LGP   |
| Chloride                       | ND         | 30       | mg/Kg    | 20 | 11/18/2014 2:46:22 PM | 16438 |
|                                |            |          |          |    |                       |       |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.        | В   | Analyte detected in the associated Meth | 10d Blank    |
|-------------|---|---|-----|---|--------------|
|             | E | Value above quantitation range                  | Н   | Holding times for preparation or analys | is exceeded  |
|             | J | Analyte detected below quantitation limits      | ND  | Not Detected at the Reporting Limit     | Daga 9 of 12 |
|             | 0 | RSD is greater than RSDlimit                    | Р   | Sample pH greater than 2.               | rage o of 12 |
|             | R | RPD outside accepted recovery limits            | RL. | Reporting Detection Limit               |              |
|             | S | Spike Recovery outside accepted recovery limits |     |   |              |
|             |   |   |     |   |              |

#### Hall Environmental Analysis Laboratory, Inc.

WO#: 1411679

20-Nov-14

| Client:<br>Project:                   | Agave<br>Dagger               | Energy Company<br>r Draw Gas System Howell Ran   | nch-4 Mile   |
|---------------------------------------|-------------------------------|--|--|
| Sample ID<br>Client ID:<br>Prep Date: | MB-16438<br>PBS<br>11/18/2014 | SampType: MBLK<br>Batch ID: 16438<br>Analysis Date: 11/18/2014<br>Result POL SPK value | TestCode: EPA Method 300.0: Anions<br>RunNo: 22639<br>SeqNo: 667700 Units: mg/Kg |
| Chloride                              |                               | ND 1.5   | SER Rei Val %REC LOWLINIL HIGHLINIL %RED REDLIMIL QUAI                           |
| Sample ID                             | LCS-16438                     | SampType: LCS  | TestCode: EPA Method 300.0: Anions   |
| Client ID:                            | LCSS                          | Batch ID: 16438  | RunNo: 22639   |
| Prep Date:                            | 11/18/2014                    | Analysis Date: 11/18/2014  | SeqNo: 667701 Units: mg/Kg   |
| Analyte                               |                               | Result PQL SPK value   | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual                           |
| Chloride                              |                               | 14 1.5 15.00   | 0 95.8 90 110  |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1411679

20-Nov-14

| Client: Agave I<br>Project: Dagger | Energy Com<br>Draw Gas S | ipany<br>System I | Howell Ran | ich-4 Mile  |          |           |             |            |          |      |
|------------------------------------|--------------------------|-------------------|------------|-------------|----------|-----------|-------------|------------|----------|------|
| Sample ID MB-16439                 | Samp                     | ype: MI           | BLK        | Tes         | tCode: E | PA Method | 8015D: Dies | el Range ( | Organics |      |
| Client ID: PBS                     | Batc                     | h ID: 16          | 439        | F           | RunNo: 2 | 2594      |             |            |          |      |
| Prep Date: 11/18/2014              | Analysis D               | Date: 1           | 1/18/2014  | 5           | SeqNo: 6 | 67292     | Units: mg/h | ۲g         |          |      |
| Analyte                            | Result                   | PQL               | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD       | RPDLimit | Qual |
| Diesel Range Organics (DRO)        | ND                       | 10                |            |             |          |           |             |            |          |      |
| Motor Oil Range Organics (MRO)     | ND                       | 50                |            |             |          |           |             |            |          |      |
| Surr: DNOP                         | 7.5                      | 1                 | 10.00      | 41.2.2      | 75.0     | 63.5      | 128         |            |          |      |
| Sample ID LCS-16439                | Samp                     | Type: LC          | s          | Tes         | tCode: E | PA Method | 8015D: Dies | el Range ( | Organics |      |
| Client ID: LCSS                    | Batc                     | h ID: 16          | 439        | F           | RunNo: 2 | 2594      |             |            |          |      |
| Prep Date: 11/18/2014              | Analysis [               | Date: 1           | 1/18/2014  | S           | SeqNo: 6 | 67293     | Units: mg/k | ٢g         |          |      |
| Analyte                            | Result                   | PQL               | SPK value  | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD       | RPDLimit | Qual |
| Diesel Range Organics (DRO)        | 44                       | 10                | 50.00      | 0           | 87.6     | 68.6      | 130         |            |          |      |
| Surr: DNOP                         | 4.3                      |                   | 5.000      |             | 85.9     | 63.5      | 128         |            |          |      |
|                                    |                          |                   |            |             |          |           |             |            |          |      |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- Value above quantitation range Е
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

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#### Hall Environmental Analysis Laboratory, Inc.

WO#: 1411679

20-Nov-14

| Client:  | Agave Energy Company                       |
|----------|--|
| Project: | Dagger Draw Gas System Howell Ranch-4 Mile |

| Sample ID MB-16433  | Samp     | Type: MI | BLK       | Tes         | tCode: E | PA Method | 8015D: Gaso                              | oline Rang | е        |      |
|---|----------|----------|-----------|-------------|----------|-----------|--|------------|----------|------|
| Client ID: PBS  | Bato     | h ID: 16 | 433       | F           | RunNo: 2 | 2632      |  |            |          |      |
| Prep Date: 11/18/2014   | Analysis | Date: 1  | 1/19/2014 | 5           | SeqNo: 6 | 67913     | Units: mg/h                              | ٢g         |          |      |
| Analyte   | Result   | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit                                | %RPD       | RPDLimit | Qual |
| Gasoline Range Organics (GRO)   | ND       | 5.0      | 120       |             |          |           | 1. |            |          |      |
| Surr: BFB   | 910      | 10.1     | 1000      |             | 91.4     | 80        | 120                                      |            | _        |      |
| Sample ID LCS-16433   | Samp     | Type: LC | s         | Tes         | tCode: E | PA Method | 8015D: Gaso                              | oline Rang | e        |      |
| Client ID: LCSS   | Bato     | h ID: 16 | 433       | F           | RunNo: 2 | 2632      |  |            |          |      |
| Prep Date: 11/18/2014   | Analysis | Date: 1  | 1/19/2014 | S           | SeqNo: 6 | 67914     | Units: mg/k                              | ٢g         |          |      |
| Analyte   | Result   | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit                                | %RPD       | RPDLimit | Qual |
| in a state of the |          |          | 05.00     | 0           | 04.4     | 05.0      | 400                                      |            |          |      |
| Gasoline Range Organics (GRO)   | 23       | 5.0      | 25.00     | 0           | 91.1     | 65.8      | 139                                      |            |          |      |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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- Н Holding times for preparation or analysis exceeded

#### Hall Environmental Analysis Laboratory, Inc.

WO#: 1411679

20-Nov-14

#### Client: Agave Energy Company

Project: Dagger Draw Gas System Howell Ranch-4 Mile

| Sample ID MB-16433         | Samp       | Type: MI | BLK       | Tes         | tCode: E | PA Method | 8021B: Vola | tiles |          |      |
|----------------------------|------------|----------|-----------|-------------|----------|-----------|-------------|-------|----------|------|
| Client ID: PBS             | Batc       | h ID: 16 | 433       | F           | RunNo: 2 | 2632      |             |       |          |      |
| Prep Date: 11/18/2014      | Analysis [ | Date: 1  | 1/19/2014 | 5           | SeqNo: 6 | 67969     | Units: mg/k | ٢g    |          |      |
| Analyte                    | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD  | RPDLimit | Qual |
| Benzene                    | ND         | 0.050    |           |             |          |           |             |       |          |      |
| Foluene                    | ND         | 0.050    |           |             |          |           |             |       |          |      |
| Ethylbenzene               | ND         | 0.050    |           |             |          |           |             |       |          |      |
| Xylenes, Total             | ND         | 0.10     |           |             |          |           |             |       |          |      |
| Surr: 4-Bromofluorobenzene | 1.0        |          | 1.000     | 1.1.1       | 100      | 80        | 120         |       |          |      |
| Sample ID LCS-16433        | Samp       | Type: LC | s         | Tes         | tCode: E | PA Method | 8021B: Vola | tiles |          |      |
| Client ID: LCSS            | Batc       | h ID: 16 | 433       | € E         | RunNo: 2 | 2632      |             |       |          |      |
| Prep Date: 11/18/2014      | Analysis [ | Date: 1  | 1/19/2014 | S           | SeqNo: 6 | 67970     | Units: mg/k | ٢g    |          |      |
| Analyte                    | Result     | PQL      | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit   | %RPD  | RPDLimit | Qua  |
| Benzene                    | 0.96       | 0.050    | 1.000     | 0           | 96.3     | 80        | 120         |       |          |      |
| Toluene                    | 0.94       | 0.050    | 1.000     | 0           | 94.3     | 80        | 120         |       |          |      |
| Ethylbenzene               | 1.0        | 0.050    | 1.000     | 0           | 102      | 80        | 120         |       |          |      |
| Kylenes, Total             | 3.0        | 0.10     | 3.000     | 0           | 101      | 80        | 120         |       |          |      |
| Surr: 4-Bromofluorobenzene | 1.1        |          | 1.000     |             | 105      | 80        | 120         |       |          |      |

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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| HALL Hall Environmental.<br>ANALYSIS<br>LABORATORY TEL: 505-345-<br>Website: www.         | ental Analysis Labor<br>4901 Hawkir<br>Albuquerque, NM 8<br>3975 FAX: 505-345<br>w.hallenvironmenta | ratory<br>ns NE<br>37105 <b>Sam</b><br>-4107<br>L.com | ple Log-In Check Lis                    | t    |
|---|---|---|---|------|
|   | nber: 1411679   |   | RcptNo: 1                               |      |
| Received by/date: App 1118  |   |   |   |      |
| Logged By: Ashley Gallegos 11/18/2014 10:20:  | 00 AM   | A   |   |      |
| Completed By: Ashley Gallegos 11/18/2014 10:32;<br>Reviewed By:                           | 14 AM   | AJ  |   |      |
| Chain of Custody  |   |   |   | -    |
| 1 Custody seals intact on sample bottles?   | Yes   | No 🗆  | Not Present                             |      |
| 2. Is Chain of Custody complete?  | Yes 🔽   | No 🗆  | Not Present                             |      |
| 3. How was the sample delivered?  | Courier   |   |   |      |
| Log In  |   |   |   |      |
| 4. Was an attempt made to cool the samples?   | Yes 🗹   | No 🗌  |   |      |
| 5. Were all samples received at a temperature of >0° C to 6.0°C                           | Yes 🗌<br>Not rec  | No 🗹  |   |      |
| 6. Sample(s) in proper container(s)?  | Yes 🗹   | No 🗌  |   |      |
| 7, Sufficient sample volume for indicated test(s)?  | Yes 🗹   | No 🗌  |   |      |
| 8. Are samples (except VOA and ONG) properly preserved?                                   | Yes 🗹   | No 🗌  |   |      |
| 9. Was preservative added to bottles?   | Yes   | No 🗹  | NA 🗆                                    |      |
| 10.VOA vials have zero headspace?   | Yes 🗆   | No 🗌  | No VOA Vials 🗹                          |      |
| 11. Were any sample containers received broken?   | Yes 🗆   | No 🔽  | # of preserved                          |      |
| 12. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)       | Yes 🗹   | No 🗆  | for pH:<br>(<2 or >12 unless n          | otec |
| 13 Are matrices correctly identified on Chain of Custody?                                 | Yes 🔽   | No 🗌  | Adjusted?                               | _    |
| 14, is it clear what analyses were requested?   | Yes 🖌   | No 🗌  |   |      |
| 15. Were all holding times able to be met?<br>(If no, notify customer for authorization.) | Yes 🗹   | No 🗌  | Checked by:                             | _    |
| Special Handling (if applicable)  |   |   |   |      |
| 16. Was client notified of all discrepancies with this order?                             | Yes 🗌   | No 🗌  | NA 🗹                                    |      |
| Person Notified: Da   | te:   |   |   |      |
| By Whom: Vie  | a: 🗌 eMail 🗌  | Phone 🗌 Fax   | In Person                               |      |
| Regarding:  |   |   |   |      |
| Client Instructions:  |   |   | an a fan an fan fan fan fan fan fan fan |      |
| 17. Additional remarks:   |   |   |   |      |
| 18. Cooler Information  |   |   |   |      |
| Cooler No Temp °C Condition Seal Intact Seal No   | Seal Date   | Signed By   |   |      |
| 1 9.2 Good Yes  |   |   |   |      |

Page 1 of 1

|                       | Jave E    | inergy Co  | ompany                    | □ Standard              | L Rush               |                    | 6                        |            | INA        | LYS           | IS               | Z             | BORA        | TORY                      |
|-----------------------|-----------|------------|---------------------------|-------------------------|----------------------|--------------------|--------------------------|------------|------------|---------------|------------------|---------------|-------------|---------------------------|
|                       |           |            |                           | Project Name            | Dagger Draw          | / Gas System:      |                          |            | WWW.F      | lallenvi      | ronmei           | ntal.cc       | m           |                           |
| failing Add           | ress:     | PO BOX     | 158                       | Howell Ranct            | 1-4 Mile Draw        | Leak               | 490                      | 1 Hawk     | ins NE     | - Albu        | blanbr           | ue, Nf        | A 87109     |                           |
| rtesia, NM            | 8821      | 1          |                           | Project #:              |                      |                    | Te                       | . 505-3    | 45-397     | 5             | ax 505           | 5-345-        | 4107        |                           |
| hone #: (5            | 75) 51.   | 3-8988     |                           |                         |                      |                    |                          |            |            | Analy         | sis Re           | duesi         |             |                           |
| mail or Fax           | .世        | KEgan@     | iyatespetroleum.com       | Project Mana            | ger:                 |                    | (Aju<br>()               | (Jəs       |            |               | ( <sup>*</sup> C |               |             |                           |
| A/QC Pack<br>Standard | age:<br>I |            | Level 4 (Full Validation) |                         |                      |                    | r208) 2'<br>10 269)      | eiO\ss5    |            |               | 2 PCR's          |               |             | -                         |
| ccreditatio           | :ue       |            |                           | Sampler:<br>On Ice      | Kerry Egan           | E No               | 8МТ +                    | 15B (C     | (1.40      | (LIV)         | 20N, 608 \ 6     | 000           | (A          |                           |
| T EDD (Ty             | pe)       |            |                           | Sample Tem              | berature             | 9 2-10 10 10       | 3E<br>3E                 | 180<br>180 | g p        | a ici         | DN,              | ()            | 0           |                           |
| Date                  | lime      | Matrix     | Sample Request ID         | Container<br>Type and # | Preservative<br>Type | HEAL No<br>HEAL No | BTEX + MTB<br>BTEX + MTB | TPH Methoc | edb (Metho | RCRA 8 Me     | C, T) snoinA     | AOV) 80828    | -ime2) 0728 |                           |
| 11/14/14 10           | MM        | Soil       | HR 4M #1                  | Jar (1)                 | Temp (cool)          | - 001              |                          |            |            |               | ×                |               |             |                           |
| 11/14/14 10           | MM        | Soil       | HR 4M #2                  | Jar (1)                 | Temp (cool)          | - 002              |                          |            |            |               | ×                |               |             |                           |
| 11/14/14 11           | AM.       | Soil       | HR 4M #3                  | Jar (1)                 | Temp (cool)          | -003               |                          | ~          |            |               | ~                |               |             |                           |
| 11/14/14 1F           | We        | Soil       | HR 4M #4                  | Jar (1)                 | Temp (cool)          | 100-               |                          | ~          |            |               | ×                |               |             |                           |
| 11/14/14 1F           | Wc        | Soil       | HR 4M #5                  | Jar (1)                 | Temp (cool)          | -005               |                          | ~          |            |               | ×                |               |             |                           |
| 11/14/14 2F           | Mc        | Soil       | HR 4M #6                  | Jar (1)                 | Temp (cool)          | -00W               |                          | ~          |            |               | ×                |               |             |                           |
| 11/14/14 3F           | W         | Soil       | HR 4M #7                  | Jar (1)                 | Temp (cool)          | L00 .              |                          | ~          |            |               | ×                |               |             |                           |
| 11/14/14 4F           | We        | Soil       | HR 4M #8                  | Jar (1)                 | Temp (cool)          | -008               |                          | ×          |            |               |                  |               |             |                           |
|                       |           |            |                           |                         |                      |                    |                          |            |            |               |                  | -             |             |                           |
| ate: Tin<br>17/14     | ne:       | Relinquish | ed by:                    | Received by:            |                      | Date Time          | Remarks<br>0 c L         | : 1) For   | Anions     | analys<br>sec | Per lo           | nly ne<br>Ler | ed CI- con  | ncentration.<br>UN , a dc |
| ate: Tin              | ne:       | Relinquish | ed by:                    | Received by:            |                      | Date Time          | 1200                     | x t,       | 10-        | of a          | Sur              | 10            | the or      | n in Irg/II               |



Hall Environmental 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 Website: <u>www.hallenvironmental.com</u>

Invoice#: 1411679 Date: 11/20/2014

| IVOICE TO: ATTN: ACCOUNTS PA<br>Agave Energy Company<br>Kerry Egan<br>P.O. Box 158 | YABLE  | Acct. Code: |     | Work Order:<br>Date Received:<br>Priority:<br>Phone:<br>Fax:<br>Project: | 1411679<br>11/18/2014<br>Rush<br>(575) 513-8988<br>Dagger Draw Gas S | ystem Howell Ra |
|--|--------|-------------|-----|--|--|-----------------|
| Artesia, NM 88211  |        |             |     | PO:  |  |                 |
|  |        |             |     | Submitted By:  | Agave Energy Comp<br>Kerry Egan                                      | pany            |
| Item Description   | Matrix | Remarks     | Qty | Unit Price   |  | Total           |
| EPA Method 300.0: Anions   | Soil   |             | 8   | 50.00  |  | 400.00          |
| EPA Method 8015D: Diesel Range Organi  | Soil   |             | 8   | 100.00   |  | 800.00          |
| EPA Method 8015D: Gasoline Range   | Soil   |             | 8   | 100.00   |  | 800.00          |
| EPA Method 8021B: Volatiles  | Soil   |             | 2   | 110.00   |  | 220.00          |
|  |        |             |     |  | Sub Total:   | \$2,220.00      |
|  |        |             |     |  | Mise Charges   | \$0.00          |

| Misc. Charges:        | \$0.00     |
|-----------------------|------------|
| Surcharge:            | 0.00%      |
| Tax:                  | 7.00%      |
| <b>INVOICE Total:</b> | \$2,375.40 |
| Pre-Paid Amount:      | \$0.00     |
| Total Payable Amount: | \$2,375.40 |

TERMS:



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 17, 2014

KERRY EGAN AGAVE ENERGY COMPANY P. O. BOX 158 ARTESIA, NM 88211

RE: DAGGER DRAW 4 MILE

Enclosed are the results of analyses for samples received by the laboratory on 10/16/14 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| Method EPA 552.2 | Haloacetic Acids (HAA-5)     |
|------------------|------------------------------|
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3)  |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



#### Analytical Results For:

AGAVE ENERGY COMPANY KERRY EGAN P. O. BOX 158 ARTESIA NM, 88211 Fax To: (575) 748-4275

| Received:         | 10/16/2014         | Sampling Date:      | 10/10/2014    |
|-------------------|--------------------|---------------------|---------------|
| Reported:         | 10/17/2014         | Sampling Type:      | Soil          |
| Project Name:     | DAGGER DRAW 4 MILE | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN         | Sample Received By: | Kathy Perez   |
| Project Location: | NOT GIVEN          |                     |               |

#### Sample ID: HR #1 (H403180-01)

**BTEX 8021B** mg/kg Analyzed By: ms Analyte Result **Reporting Limit** Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Benzene\* 0.060 0.050 10/17/2014 ND 1.80 90.2 2.00 3.12 Toluene\* 0.275 0.050 10/17/2014 ND 1.68 83.9 2.00 3.24 Ethylbenzene\* < 0.050 0.050 10/17/2014 ND 1.58 79.1 2.00 3.79 Total Xylenes\* 0.167 0.150 10/17/2014 ND 4.68 78.0 6.00 3.92 **Total BTEX** 0.504 0.300 10/17/2014 ND

Surrogate: 4-Bromofluorobenzene (PID 104 % 61-154

| Chloride, SM4500Cl-B      | mg     | /kg             | Analyze    | d By: AP     |     |            |               | _    |           |
|---------------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                  | <16.0  | 16.0            | 10/17/2014 | ND           | 416 | 104        | 400           | 0.00 |           |
| TPH 8015M                 | mg     | /kg             | Analyze    | d By: ms     |     |            |               | 11   |           |
| Analyte                   | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                | <10.0  | 10.0            | 10/16/2014 | ND           | 175 | 87.5       | 200           | 1.53 |           |
| DRO >C10-C28              | 22.0   | 10.0            | 10/16/2014 | ND           | 176 | 87.8       | 200           | 5.17 |           |
| Surrogate: 1-Chlorooctane | 94.7   | % 47.2-15       | 7          |              |     |            |               |      |           |

Surrogate: 1-Chlorooctadecane 108 % 52.1-176

#### Cardinal Laboratories

\*=Accredited Analyte

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Celez D. Kune

Celey D. Keene, Lab Director/Quality Manager



#### Analytical Results For:

AGAVE ENERGY COMPANY KERRY EGAN P. O, BOX 158 ARTESIA NM, 88211 Fax To: (575) 748-4275

| Received:         | 10/16/2014         | Sampling Date:      | 10/10/2014    |
|-------------------|--------------------|---------------------|---------------|
| Reported:         | 10/17/2014         | Sampling Type:      | Soil          |
| Project Name:     | DAGGER DRAW 4 MILE | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN         | Sample Received By: | Kathy Perez   |
| Project Location: | NOT GIVEN          |                     |               |
| A                 |                    |                     |               |

HZ (KC)

#### Sample ID: HR 🏘 (H403180-02)

| BTEX 8021B     | mg,    | kg              | Analyze    | d By: ms     |      |            |               |      |           |
|----------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 10/17/2014 | ND           | 1.80 | 90.2       | 2.00          | 3.12 |           |
| Toluene*       | <0.050 | 0.050           | 10/17/2014 | ND           | 1.68 | 83.9       | 2.00          | 3.24 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2014 | ND           | 1.58 | 79.1       | 2.00          | 3.79 |           |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2014 | ND           | 4.68 | 78.0       | 6.00          | 3.92 |           |
| Total BTEX     | <0.300 | 0.300           | 10/17/2014 | ND           |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID 102 % 61-154

| Chloride, SM4500Cl-B | mg     | /kg             | Analyze    | d By: AP     |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | <16.0  | 16.0            | 10/17/2014 | ND           | 416 | 104        | 400           | 0.00 |           |
| TPH 8015M            | mg     | /kg             | Analyze    | d By: ms     |     |            |               |      |           |
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10           | <10.0  | 10.0            | 10/16/2014 | ND           | 175 | 87.5       | 200           | 1.53 |           |
| DRO >C10-C28         | <10.0  | 10.0            | 10/16/2014 | ND           | 176 | 87.8       | 200           | 5.17 |           |

Surrogate: 1-Chlorooctane 96.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 104 % 52.1-176

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\*=Accredited Analyte

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Celleg L. Keine

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### **Notes and Definitions**

| QM-4X | The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or<br>greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance<br>limits. |
|-------|--|
| ND    | Analyte NOT DETECTED at or above the reporting limit   |
| RPD   | Relative Percent Difference  |
| **    | Samples not received at proper temperature of 6°C or below.  |
| ***   | Insufficient time to reach temperature.  |
| ÷.    | Chloride by SM4500Cl-B does not require samples be received at or below 6°C  |
|       | Samples reported on an as received basis (wet) unless otherwise noted on report  |
|       |  |

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#### \*=Accredited Analyte

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Celeg D. Keine-

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

## 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

|   | 575) 393-2326 FAX (5   | 75) 393-2476   | ľ                                 |   |  |   |  |                     |                |    |                                |       |  |
|---|--|--|-----------------------------------|---|--|---|--|---------------------|----------------|----|--------------------------------|-------|--|
| Company Name:   | Agave Energy Company   | У  |                                   |   | 3  | 110   |  |                     |                |    | ANALYSIS RE                    | QUESI |  |
| Project Manager:  | Kerry Egan   |  |                                   | 9.  | .0. #: 606-2:  | 336   | q  | -                   | 18<br><u>T</u> |    |                                |       |  |
| Address: 105 Sou  | th 4 <sup>th</sup> Street  |  |                                   | 0   | ompany: Ag   | Jave Energy   |  |                     | K3             |    |                                |       |  |
| City: Artesia   |  | State: NM  | Zip:                              | A   | ttn: Kerry E   | gan   |  |                     |                |    |                                |       |  |
| Phone #: 575-513  | -8988 Fa   | ax #:  |                                   | A   | ddress: 105  | South 4th   |  |                     |                |    |                                |       |  |
| Project #:  | P  | roject Owner:  |                                   | 0   | ity: Artesia   |   |  |                     |                |    |                                |       |  |
| Project Name: Day   | gger Draw 4 Mile   |  |                                   | S   | tate: NM   | Zip: 88210  |  |                     | _              |    |                                |       |  |
| Project Location:   | Dagger Draw 4 Mile   |  |                                   | P   | hone #: 575  | 748-4555  |  | -                   |                |    |                                |       |  |
| Sampler Name: K   | erry Egan  |  |                                   | 7   | ax #: 575 74   | 8-4275  |  |                     |                |    |                                |       |  |
| FOR LAB USE ONLY  |  |  | ИP.                               | MATRIX  | PRESERV.   | SAMPLIN   | G  |                     |                |    |                                |       |  |
| Lab I.D.  | Sample I.D.  |  | (G)RAB OR (C)OM                   | # CONTAINERS<br>GROUNDWATER<br>WASTEWATER<br>SOIL<br>OIL<br>SLUDGE<br>OTHER   | ACID/BASE:<br>ICE / COOL<br>OTHER :                                      | DATE  | TIME   |                     |                |    |                                |       |  |
| H   | R #1   |  | G                                 | ×   |  | 10/10/14 1  | 0:00AM X   | ×                   | ×              | -  |                                |       |  |
| U-  | R 事 井2   |  | 6                                 | ×   |  | 10/10/14 1  | 0:00AM X   | ×                   | ×              |    |                                |       |  |
| 2   |  |  | G                                 | X   |  | 10/10/14 1  | 0:00AM   | -                   |                |    |                                |       |  |
|   |  |  | G                                 | 1 ×   |  | 10/10/14 1  | 0:00AM   |                     |                |    |                                |       |  |
|   |  |  | G                                 | 1 ×   |  | 10/10/14 1  | 0:00AM   |                     |                |    |                                |       |  |
|   |  |  | G                                 | 1 ×   |  | 10/10/14 1  | 0:00AM   |                     |                |    |                                |       |  |
|   |  |  | 6 1                               | 1 X   |  | 10/10/14 1  | 0:00AM   | -                   |                |    |                                |       |  |
|   |  |  | G                                 | 1 X   |  | 10/10/14 1  | 0:00AM   |                     | _              |    |                                |       |  |
| 4414  |  |  | 5                                 | 1 ×   |  | 10/10/14 1  | 0:00AM   |                     |                |    |                                |       |  |
|   |  |  | 6                                 | 1 ×   | _  | 10/10/14 1  | 0:00AM   | -                   |                |    |                                |       |  |
| PLEASE NOTE: Liability and<br>All claims including those for<br>In no event shall Cardinal be i | Damages. Cardinal's liability and client's<br>negligence and any other cause whatsoe<br>lable for incidental or consequential dama | exclusive remedy for a<br>ver shall be deemed w<br>ages, including without I | ny claim<br>aived un<br>imitation | arising whether based in contract or<br>itess made in writing and received by<br>a business interruptions, loss of use, | fort, shall be limited<br>Gardina within 30 d<br>or loss of politis inco | to the amount paid<br>lays after completio<br>urred by client, its si | by the client for the<br>n of the applicable s<br>ubsidiaries, | analyses<br>ervice. |                |    |                                |       |  |
| Relinquished By:  | out of or related to the performance of s  | ate: 16-14   | Rec                               | Reparties of whether such cum is:   | - L  |   | Phone Result:<br>Fax Result:<br>REMARKS:                       |                     | ]Yes □         | No | Add'l Phone #:<br>Add'l Fax #: |       |  |
| Relinquished By:  | _  | Date:  | Rec                               | bived By:   | 2  | C   | Rus  | 5                   |                |    |                                |       |  |
| Delivered By:<br>Sampler - UPS -  | (Circle One)<br>Bus - Other:   | ŝ  | 00                                | Sample Condition<br>Cool Intact   | Sale of  | (ED BY:<br>tials)   |  |                     |                |    |                                | 5     |  |
|   |  |  |                                   |   |  |   |  |                     |                |    |                                |       |  |

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Page 5 of 5