

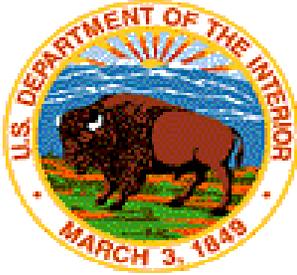
# Bureau of Land Management

Amarillo Field Office

Helium Operations

Statistical Report

for



October - 2015



## *Distribution:*

Fluid Minerals Group Manager, Washington Office  
NMSO, New Mexico State Director  
NMSO, Associate State Director  
NMSO, Petroleum Engineer  
Field Manager, Amarillo Field Office  
Assistant Field Managers (3)  
Team Leaders  
-Federal Leased Lands  
-Resources Evaluation & Gas Analysis  
-Division Of Helium Operations, -  
Engineering and Technical Support

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Amarillo, Texas

*Compiled by: Joan Grochowina*

Issued: September 12, 2016

**"Please Note: Data in this report is accurate as of print date; however all data is subject to change."**

Approved for Distribution: *Samuel R. M. Burton*

Date: *August 26, 2016*

Table 1 - Summary of Helium Operations

October - 2015

**Helium Enrichment Unit Operations**  
**Gas Processed**

|                            | Month<br>Gross Volume | Month<br>Net Helium | Average Percent | Gross FYTD | Net FYTD |
|----------------------------|-----------------------|---------------------|-----------------|------------|----------|
| Measured Plant Feed (Mcf*) | 161,647               | 27,514              | 17.02%          | 161,647    | 27,514   |
| Helium Product (Mcf*)      | 36,305                | 26,830              | 73.90%          | 36,305     | 26,830   |
| Residue Natural Gas (Mcf*) | 83,629                | 0                   | 00.00%          | 83,629     | 0        |

\* Volumes in Mcf at 14.65 psia & 60°F

**Natural Gas & Liquids Produced**

**Gas Processed**

|                            | Month  | FYTD   |
|----------------------------|--------|--------|
| Natural Gas Sales (Mcf***) | 82,568 | 82,568 |
| NGL Sales (gallons)        | 36,521 | 36,521 |

\*\*\* Volumes in Mcf at 14.73 psia & 60°F

**Bush Dome Reservoir Operations**  
**Conservation gases from all sources**

|                         | Month<br>Gross Volume | Month<br>Net Helium | Average Percent | Gross FYTD | Net FYTD |
|-------------------------|-----------------------|---------------------|-----------------|------------|----------|
| Total Withdrawn (Mcf*)  | 182,766               | 39,721              | 21.73%          | 182,766    | 39,721   |
| Crude Injection (Mcf*)  | 10,438                | 7,710               | 73.86%          | 10,438     | 7,710    |
| Crude Production (Mcf*) | 16,100                | 11,796              | 73.27%          | 16,100     | 11,796   |

\* Volumes in Mcf at 14.65 psia & 60°F

**Storage Operations**

**Conservation Helium**

|   | Volume Outstanding | Month     | FYTD    | CYTD    | Cumulative |
|---|--------------------|-----------|---------|---------|------------|
| Conservation Crude Sale Volume Sold/Paid (Mcf*)   |                    | 682,896   | 682,896 | 697,896 | 20,749,625 |
| Conservation Crude Sale Volume Transferred (Mcf*) | 275,000            | 422,896   | 422,896 | 422,896 | 20,474,625 |
| Conservation Helium in Storage (EOM) (Mcf*)       |                    | 6,131,704 |         |         |            |

\* Volumes in Mcf at 14.65 psia & 60°F

**In Kind Helium**

|                                 | Month  | FYTD   | CYTD    | Cumulative |
|---------------------------------|--------|--------|---------|------------|
| Sale Volumes Transferred (Mcf*) | 24,765 | 24,765 | 124,833 | 3,288,307  |
| Sale Volumes Outstanding (Mcf*) | 2,915  |        |         |            |

\* Volumes in Mcf at 14.65 psia & 60°F

**Private Company Helium Storage Contracts**

**Contact Activity**

|  | Month<br>Gross Volume | Month<br>Net Helium | Average Percent | Annual<br>Helium FYTD |
|--|-----------------------|---------------------|-----------------|-----------------------|
| Crude Acquired (Mcf*)                        | 48,345                | 31,896              | 65.98%          | 31,896                |
| Crude Disposed (Mcf*)                        | 97,113                | 68,062              | 70.09%          | 68,062                |
| Net Balance (Mcf*)                           | (48,768)              | (36,166)            |                 | (36,166)              |
| Balance of Stored Helium End Of Month (Mcf*) |                       | 2,698,472           |                 |                       |

\* Volumes in Mcf at 14.65 psia & 60°F

**Revenue / Charges**

**Helium Storage Contracts** (Charges Billed (\$))

|                                       | Month     | FYTD      |
|---------------------------------------|-----------|-----------|
| Storage Fees Billed (\$)              | \$396,802 | \$396,802 |
| Reservoir Management Fees Billed (\$) | \$0       | \$0       |

**Field Compressor Charges** (Charges Billed (\$))

|  | Month | FYTD |
|--|-------|------|
| Funded by the Refiners (provides for booster compression services)                               | \$0   | \$0  |
| Cliffside Refiners, LP, by Agreement #GDA010003 (reimburses BLM for fuel, labor, supplies, etc.) | \$0   | \$0  |
| Net-Total (Funded by the Refiners for compression costs.)  | \$0   | \$0  |

**Enrichment Unit Charges** (Charges Billed (\$))

|   | Month       | FYTD        |
|---|-------------|-------------|
| Reservoir Management Fees (RMF)           | \$0         | \$0         |
| Total operating costs                     | (\$850,689) | (\$850,689) |
| Sub Total - Items provided by BLM         | \$351,608   | \$351,608   |
| Total - Cliffside Refiners, LP, GDA030001 | (\$499,081) | (\$499,081) |

**Conservation Helium - Natural Gas - Liquid Sales**

(Charges Billed (\$))

|                                 | Month     | FYTD      |
|---------------------------------|-----------|-----------|
| Conservation Crude Helium Sales | \$0       | \$0       |
| In Kind Sales                   | \$0       | \$0       |
| Natural Gas & Liquid Sales      | \$224,081 | \$224,081 |

**Helium Resources Evaluation**

|  | Month         | FYTD         |
|--|---------------|--------------|
| Revenue Collected from Federal Lease Holds | \$1,526,214   | \$1,526,214  |
| Helium Sample Collection Report for month  | Submitted - 0 | Received - 0 |
|  |               | Analyzed - 5 |

\*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

October - 2015

|                 |        | Gross Withdrawal |                    | Net Helium Withdrawal |                   | Nitrogen      |                   | Methane       | Methane            | Ethane plus  |                   | Other (CO2, Ar, H2) |                  |
|-----------------|--------|------------------|--------------------|-----------------------|-------------------|---------------|-------------------|---------------|--------------------|--------------|-------------------|---------------------|------------------|
|                 |        | Month            | Cumulative         | Month                 | Cumulative        | Month         | Cumulative        | Month         | Cumulative         | Month        | Cumulative        | Month               | Cumulative       |
| <b>TOTAL</b>    |        | <b>182,766</b>   | <b>221,821,297</b> | <b>39,721</b>         | <b>41,549,018</b> | <b>45,342</b> | <b>54,650,062</b> | <b>86,707</b> | <b>112,411,197</b> | <b>9,336</b> | <b>11,354,129</b> | <b>1,660</b>        | <b>1,856,892</b> |
| BIVINS A-3      | Oct-15 | 0                | 10,961,112         | 0                     | 3,548,629         | 0             | 2,772,147         | 0             | 4,159,383          | 0            | 407,301           | 0                   | 73,653           |
| BIVINS A-6      | Oct-15 | 16,726           | 11,293,606         | 12,242                | 6,713,951         | 3,905         | 2,775,728         | 455           | 1,593,598          | 14           | 157,794           | 111                 | 52,534           |
| BIVINS A-13     | Oct-15 | 11,604           | 8,318,223          | 4,037                 | 4,402,457         | 2,922         | 2,139,801         | 4,079         | 1,555,755          | 477          | 172,457           | 88                  | 47,752           |
| BIVINS A-14     | Oct-15 | 26,950           | 9,343,090          | 8,696                 | 5,431,997         | 6,747         | 2,369,606         | 10,124        | 1,341,966          | 1,143        | 145,080           | 239                 | 54,440           |
| BIVINS A-4      | Oct-15 | 11,875           | 13,265,874         | 1,407                 | 2,365,546         | 2,863         | 3,214,622         | 6,768         | 6,877,407          | 712          | 690,598           | 125                 | 117,701          |
| BUSH A-2        | Oct-15 | 15,193           | 12,895,150         | 1,559                 | 1,927,400         | 3,813         | 3,160,490         | 8,742         | 6,984,344          | 974          | 714,807           | 105                 | 108,110          |
| Injection       | Oct-15 | 10,438           | 66,403,512         | 7,710                 | 47,967,044        | 2,435         | 17,105,160        | 223           | 779,081            | 0            | 33                | 69                  | 552,194          |
| inj Bivins A-3  | Oct-15 | 0                | (25,652,315)       | 0                     | (18,384,452)      | 0             | (6,554,549)       | 0             | (332,777)          | 0            | 0                 | 0                   | (380,537)        |
| inj Bivins A-6  | Oct-15 | (10,438)         | (24,341,463)       | (7,710)               | (17,617,243)      | (2,436)       | (6,470,154)       | (223)         | (141,598)          | (0)          | (71)              | (69)                | (112,397)        |
| inj Bivins A-13 | Oct-15 | 0                | (6,490,417)        | 0                     | (4,706,191)       | 0             | (1,656,853)       | 0             | (122,391)          | 0            | (2)               | 0                   | (4,980)          |
| inj Bivins A-14 | Oct-15 | 0                | (6,501,333)        | 0                     | (4,767,421)       | 0             | (1,602,106)       | 0             | (126,303)          | 0            | (7)               | 0                   | (5,497)          |
| inj Bivins A-4  | Oct-15 | 0                | (2,527,801)        | 0                     | (1,848,815)       | 0             | (601,353)         | 0             | (42,016)           | 0            | 0                 | 0                   | (35,617)         |
| inj Bush A-2    | Oct-15 | 0                | (867,658)          | 0                     | (625,258)         | 0             | (215,406)         | 0             | (13,980)           | 0            | 0                 | 0                   | (13,015)         |
| Production      | Oct-15 | 16,100           | 1,233,968          | 11,796                | 909,374           | 3,754         | 265,418           | 430           | 47,552             | 13           | 3,184             | 107                 | 8,440            |
| BIVINS A-1      | Oct-15 | 0                | 2,686,608          | 0                     | 48,896            | 0             | 636,995           | 0             | 1,798,415          | 0            | 175,704           | 0                   | 26,597           |
| BIVINS A-2      | Oct-15 | 6,292            | 13,904,297         | 219                   | 1,877,411         | 1,470         | 3,406,556         | 4,108         | 7,733,742          | 434          | 770,766           | 62                  | 115,822          |
| BIVINS A-5      | Oct-15 | 7,846            | 15,915,359         | 1,446                 | 2,021,117         | 2,003         | 3,900,638         | 3,911         | 8,954,670          | 426          | 901,057           | 61                  | 137,878          |
| BIVINS A-7      | Oct-15 | 3,837            | 11,732,880         | 1,242                 | 2,761,756         | 1,001         | 2,953,843         | 1,411         | 5,382,712          | 157          | 548,823           | 25                  | 85,746           |
| BIVINS A-9      | Oct-15 | 10,780           | 10,281,219         | 239                   | 195,552           | 2,780         | 2,528,082         | 6,934         | 6,778,870          | 738          | 684,798           | 88                  | 93,917           |
| BIVINS A-11     | Oct-15 | 116              | 6,372,297          | 4                     | 136,926           | 30            | 1,584,895         | 74            | 4,162,963          | 8            | 427,505           | 1                   | 60,008           |
| BIVINS A-15     | Oct-15 | 11,537           | 9,626,151          | 202                   | 427,226           | 2,719         | 2,293,819         | 7,690         | 6,186,565          | 788          | 619,255           | 139                 | 99,287           |
| BIVINS B-1      | Oct-15 | 11,086           | 7,845,227          | 248                   | 295,819           | 2,717         | 1,900,581         | 7,237         | 5,050,484          | 754          | 518,070           | 131                 | 80,272           |
| BIVINS B-2      | Oct-15 | 9,076            | 6,517,808          | 173                   | 122,788           | 2,317         | 1,632,621         | 5,817         | 4,235,557          | 611          | 435,768           | 159                 | 91,074           |
| BUSH A-1        | Oct-15 | 0                | 5,721,962          | 0                     | 104,140           | 0             | 1,356,677         | 0             | 3,830,281          | 0            | 374,216           | 0                   | 56,647           |
| BUSH A-3        | Oct-15 | 9,636            | 11,962,037         | 3,239                 | 2,809,528         | 2,453         | 2,956,834         | 3,480         | 5,531,387          | 386          | 559,696           | 79                  | 104,593          |
| BUSH A-4        | Oct-15 | 6,898            | 8,556,116          | 718                   | 1,571,842         | 1,766         | 2,139,577         | 3,948         | 4,340,291          | 427          | 442,751           | 39                  | 61,654           |
| BUSH A-5        | Oct-15 | 14,116           | 16,383,954         | 3,867                 | 3,760,118         | 3,612         | 4,111,593         | 5,903         | 7,623,085          | 651          | 775,158           | 83                  | 113,999          |
| BUSH A-8        | Oct-15 | 4,579            | 4,161,650          | 85                    | 76,242            | 1,142         | 1,007,468         | 2,970         | 2,749,303          | 308          | 276,912           | 74                  | 51,725           |
| BUSH A-9        | Oct-15 | 0                | 3,860,915          | 0                     | 105,037           | 0             | 930,915           | 0             | 2,537,187          | 0            | 253,463           | 0                   | 34,312           |
| BUSH A-11       | Oct-15 | 1,863            | 4,502,131          | 39                    | 131,735           | 447           | 1,076,775         | 1,225         | 2,943,222          | 127          | 298,836           | 26                  | 51,562           |
| BUSH B-1        | Oct-15 | 2,756            | 3,300,981          | 61                    | 61,977            | 638           | 783,250           | 1,833         | 2,206,000          | 200          | 217,452           | 25                  | 32,302           |
| FUQUA A-1       | Oct-15 | 0                | 2,954,098          | 0                     | 53,854            | 0             | 702,798           | 0             | 1,975,175          | 0            | 193,573           | 0                   | 28,699           |
| FUQUA A-2       | Oct-15 | 0                | 132,119            | 0                     | 2,404             | 0             | 31,322            | 0             | 88,458             | 0            | 8,637             | 0                   | 1,297            |
| FUQUA A-3       | Oct-15 | 0                | 9,303,909          | 0                     | 577,005           | 0             | 2,277,687         | 0             | 5,790,357          | 0            | 583,701           | 0                   | 75,160           |
| TT Fuel         | Oct-15 | 1,459            | 0                  | 38                    | 0                 | 329           | 0                 | 971           | 0                  | 108          | 0                 | 13                  | 0                |
| field-wide pcts |        |                  |                    | 21.73%                | 18.73%            | 24.81%        | 24.64%            | 47.44%        | 50.68%             | 5.11%        | 5.12%             | 0.91%               | 0.84%            |

Latest estimates of reserves and feed to HEU

Based on NITEC's 2003 reserves study from NITEC's interim report

As of EOM Oct-15 Volumes in BCF

|                                     |         |   |
|-------------------------------------|---------|---|
| Initial Gas In Place                | 330.040 |   |
| Produced 1924 to 1961               | 48.830  |   |
| Injected 1924 to 1961               | 0.450   |   |
| Remaining Gas In Place 1961         | 281.660 |   |
| Left Behind Pipe, 1961              | 82.060  | =====> 1.500 BCF of contained helium    |
| Remaining in Place, 1961            | 199.600 |   |
| Gas In Place 1961                   | 199.600 |   |
| Produced 1961 to July 2002          | 82.450  |   |
| Injected 1961 to July 2002          | 64.510  |   |
| Remaining Gas In Place July 2002    | 181.660 | Net Helium 33.997                       |
| Produced July 2002 through Dec 2002 | 1.096   | 0.743                                   |
| Production 2003 - 14                | 85.349  | 22.474                                  |
| Injection 2003 - 14                 | (1.300) | (1.067)                                 |
| Produced to Date 2015               | 4.091   | 0.727                                   |
| Injected to Date 2015               | (0.052) | (0.038)                                 |
| Amount of Raw Gas Available to CHEU | 92.476  | =====> 11.159 total helium in reservoir |
| Estimated Bottom Hole Pressure      | 340.555 | est z-factor 0.980                      |

\* All volumes on Table 2 are reported in Mcf at 14.65 psia & 60°F

## Table 3 - Gas Volumes & Inventory

October - 2015

### Crude Helium Enrichment Unit Operations

|                  |        | Gross Withdrawal |            | Net Helium Withdrawal |            | Nitrogen |            | Methane |            | Ethane plus |            | Other (CO2, Ar, H2) |            |
|------------------|--------|------------------|------------|-----------------------|------------|----------|------------|---------|------------|-------------|------------|---------------------|------------|
|                  |        | Month            | Cumulative | Month                 | Cumulative | Month    | Cumulative | Month   | Cumulative | Month       | Cumulative | Month               | Cumulative |
| Measured Feed    | Oct-15 | 161,647          | 86,900,042 | 27,514                | 21,549,247 | 40,318   | 21,798,038 | 83,508  | 38,681,864 | 8,910       | 4,126,266  | 1,397               | 744,627    |
| Calculated Feed  | Oct-15 | 165,021          | 86,597,460 | 27,769                | 21,514,397 | 41,212   | 21,716,676 | 85,288  | 38,488,111 | 9,213       | 4,133,082  | 1,539               | 745,195    |
| Feed to Box      | Oct-15 | 163,735          | 86,061,189 | 27,769                | 21,514,576 | 41,212   | 21,716,758 | 85,288  | 38,488,156 | 9,213       | 4,133,085  | 253                 | 208,613    |
| Cheu Product     | Oct-15 | 36,305           | 27,125,092 | 26,830                | 21,215,469 | 8,454    | 5,189,444  | 782     | 531,046    | 1           | 562        | 240                 | 188,572    |
| Residue          | Oct-15 | 83,629           | 38,658,761 | 0                     | 1,782      | 2,058    | 955,552    | 74,015  | 34,302,621 | 7,557       | 3,397,557  | 0                   | 1,248      |
| Cold Box Vent    | Oct-15 | 29,257           | 14,671,719 | 18                    | 88,224     | 24,799   | 13,003,193 | 4,437   | 1,519,194  | 0           | 118        | 4                   | 60,991     |
| Flare/Boot Strap | Oct-15 | 29,257           | 5,187,968  | 18                    | 49,004     | 24,799   | 4,258,195  | 4,437   | 781,363    | 0           | 93,583     | 4                   | 5,824      |
| Fuel From Cheu   | Oct-15 | 3,144            | 1,175,747  | 2                     | 343        | 81       | 34,784     | 2,536   | 953,869    | 525         | 186,752    | 0                   | 0          |
| Shrinkage/Loss   | Oct-15 | 1,130            | 416,437    | 0                     | 0          | 0        | 0          | 0       | 0          | 1,130       | 416,437    | 0                   | 0          |
| Unaccounted*     | Oct-15 | 10,051           | 2,657,652  | 760                   | 129,455    | 5,770    | 2,047,533  | 3,514   | 476,290    | 0           | 1,102      | 7                   | 3,272      |

\*Before October 2004, the values are estimated

### Storage Operations

#### Inventory (contained helium)

|                                | Government | Private   |
|--------------------------------|------------|-----------|
| Beginning inventory            | 6,584,237  | 2,249,313 |
| net acceptances + redeliveries | 0          | 0         |
| In Kind Transfers              | (24,765)   | 24,765    |
| Conservation Crude Sales       | (422,896)  | 422,896   |
| Gain/loss                      | (4,872)    |           |
| Ending Inventory               | 6,131,704  | 2,660,808 |
| Total Helium in Reservoir      | 11,158,590 |           |
| Total Helium in Storage        | 8,792,512  |           |
| Helium in native gas           | 2,366,079  |           |

#### Crude Helium Pipeline

|  | Gross   | Net Helium | Percent |
|--|---------|------------|---------|
| Beginning inventory                    | 45,485  | 32,274     | 70.96%  |
| Measured to Pipeline (Private Plants)  | 48,345  | 32,324     | 66.86%  |
| Measured from Pipeline (Private Plant) | 97,113  | 68,062     | 70.09%  |
| HEU Production                         | 36,305  | 26,830     | 73.90%  |
| Injection                              | 10,438  | 7,710      | 73.86%  |
| Production                             | 16,100  | 11,796     | 73.27%  |
| Ending Inventory                       | 32,139  | 22,579     | 70.26%  |
| Gain/Loss                              | (6,545) | (4,872)    |         |

### Tuck Trigg Reservoir Operations

| Native Gas (Gross)                   | Since Field |             |           |
|--------------------------------------|-------------|-------------|-----------|
|                                      | Month       | Fiscal Year | Discovery |
| Total in place, beg. of period       | 5,198,688   | 5,198,688   | 5,890,000 |
| Recoverable in place, beg. of period | 4,528,688   | 4,528,688   | 5,220,000 |
| Production during period to date     | 0           | 0           | 691,312   |
| Total in place, end of month         | 5,198,688   | 5,198,688   | 5,198,688 |
| Recoverable in place, end of month   | 4,528,688   | 4,528,688   | 4,528,688 |

\* All volumes on Table 3 are reported in Mcf at 14.65 psia & 60°F

Table 4 - In Kind Helium Sales

October - 2015

|  | NASA*     | Navy*   | Army* | Air Force* | DOE*    | Other Fed* | Subtotal* | In Kind+  | Charges Billed (\$)** |         |            |
|--|-----------|---------|-------|------------|---------|------------|-----------|-----------|-----------------------|---------|------------|
| <b>In Kind Helium</b>  |           |         |       |            |         |            |           |           |                       |         |            |
| <b>AirGas South West, Contract no. INC98-0101</b>                    |           |         |       |            |         |            |           |           | (billed quarterly)    |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>AirGas North Central, Contract no. INC98-0102</b>                 |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>AirGas Intermountain, Contract no. INC98-0103</b>                 |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Air Liquide Helium America, Inc., Contract no. INC98-0104</b>     |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Air Products, L.P., Contract no. INC98-0105</b>                   |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Linde Gas North America, LLC, Contract no. INC98-0106</b>         |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Corp Brothers, Inc., Contract no. INC98-0107</b>                  |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>FIBA Technologies, Inc., Contract no. INC98-0108</b>              |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>General Air Service &amp; Supply Co., Contract no. INC98-0109</b> |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Praxair, Inc., Contract no. INC98-0112</b>                        |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>United States Welding, Inc., Contract no. INC98-0113</b>          |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Matheson Tri-Gas, Inc., Contract no. INC98-0114</b>               |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>GT &amp; S, Contract no. INC00-0115</b>                           |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Global Gases America, Contract no. INC13-0116</b>                 |           |         |       |            |         |            |           |           |                       |         |            |
| Month  |           |         |       |            |         |            |           |           |                       |         |            |
| FYTD   |           |         |       |            |         |            |           |           |                       |         |            |
| <b>Total month</b>   | 0         | 0       | 0     | 0          | 0       | 0          | 0         | 0         | \$0                   |         |            |
| <b>Total FYTD</b>  | 0         | 0       | 0     | 0          | 0       | 0          | 0         | 0         | \$0                   |         |            |
| <b>Total CYTD</b>  | 34,399    | 0       | 0     | 0          | 0       | 61,746     | 96,145    | 94,661    | \$7,195,236           |         |            |
| <b>Cumulative</b>  | 1,815,086 | 108,674 | 450   | 271,584    | 421,753 | 725,376    | 3,342,922 | 3,291,147 | \$187,637,984         |         |            |
| <b>In Kind Transfers</b>   |           |         |       |            |         |            |           | Month     | FYTD                  | CYTD    | Cumulative |
| Transferred  |           |         |       |            |         |            |           | 24,765    | 24,765                | 124,833 | 3,288,307  |
| Volume outstanding   |           |         |       |            |         |            |           | 2,915     |                       |         |            |

\* Volumes in Mcf at 14.7 psia & 70°F  
 + Volumes in Mcf at 14.65 psia & 60°F

\*\*Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

October - 2015

**Helium & Natural Gas Sales**

|  | Award Volume* | Outstanding* | Sales*     | Charges Billed (\$)**<br>(billed quarterly) |                 |
|--|---------------|--------------|------------|---|-----------------|
| <b>Conservation Helium</b>                 |               |              |            |   |                 |
| <b>Air Liquide Helium America, Inc.</b>    |               |              |            |   |                 |
| Month                                      | 20,000        | (30,000)     | 30,000     | \$3,150,000                                 |                 |
| FYTD                                       | 20,000        | 20,000       |            | \$3,150,000                                 |                 |
| Cumulative                                 | 335,217       |              | 315,217    | \$23,374,815                                |                 |
| <b>Air Products, L.P.</b>                  |               |              |            |   |                 |
| Month                                      | 193,875       | (318,875)    | 318,875    | \$33,038,000                                |                 |
| FYTD                                       | 193,875       | 0            | 318,875    | \$33,038,000                                |                 |
| Cumulative                                 | 8,029,436     |              | 8,029,436  | \$565,835,027                               |                 |
| <b>Linde Gas North America, LLC</b>        |               |              |            |   |                 |
| Month                                      | 140,021       | (140,021)    | 140,021    | \$14,562,184                                |                 |
| FYTD                                       | 140,021       | 0            | 140,021    | \$14,562,184                                |                 |
| Cumulative                                 | 6,030,653     |              | 6,030,653  | \$404,691,853                               |                 |
| <b>Keyes Helium Co., LLC</b>               |               |              |            |   |                 |
| Month                                      | 21,000        | (21,000)     | 21,000     | \$2,184,000                                 |                 |
| FYTD                                       | 21,000        | 0            | 21,000     | \$2,184,000                                 |                 |
| Cumulative                                 | 977,113       |              | 977,113    | \$66,015,798                                |                 |
| <b>Matheson Tri-Gas, Inc.</b>              |               |              |            |   |                 |
| Month                                      | 68,000        | (68,000)     | 68,000     | \$7,072,000                                 |                 |
| FYTD                                       | 68,000        | 0            | 68,000     | \$7,072,000                                 |                 |
| Cumulative                                 | 107,000       |              | 107,000    | \$10,569,500                                |                 |
| <b>Praxair, Inc.</b>                       |               |              |            |   |                 |
| Month                                      | 183,104       | (90,000)     | 90,000     | \$9,365,000                                 |                 |
| FYTD                                       | 183,104       | 183,104      | 90,000     | \$9,365,000                                 |                 |
| Cumulative                                 | 5,219,676     |              | 5,036,572  | \$365,446,964                               |                 |
| <b>Linde Gas, LLC discontinued 10 2008</b> |               |              |            |   |                 |
| Month                                      | 0             | 0            | 0          | \$0   |                 |
| FYTD                                       | 0             | 0            | 0          | \$0   |                 |
| Cumulative                                 | 200,000       |              | 200,000    | \$11,035,000                                |                 |
| <b>Global Gases America</b>                |               |              |            |   |                 |
| Month                                      | 0             | 0            | 0          | \$0   |                 |
| FYTD                                       | 0             | 0            | 0          | \$0   |                 |
| Cumulative                                 | 22,967        |              | 22,967     | \$2,112,565                                 |                 |
| <b>Airgas Merchant Gases</b>               |               |              |            |   |                 |
| Month                                      | 0             | 0            | 0          | \$0   |                 |
| FYTD                                       | 0             | 0            | 0          | \$0   |                 |
| Cumulative                                 | 15,667        |              | 15,667     | \$1,488,365                                 |                 |
| <b>IACX Energy</b>                         |               |              |            |   |                 |
| Month                                      | 0             | (15,000)     | 15,000     | \$1,575,000                                 |                 |
| FYTD                                       | 0             | 0            | 15,000     | \$1,575,000                                 |                 |
| Cumulative                                 | 15,000        |              | 15,000     | \$1,575,000                                 |                 |
| <b>Total month</b>                         | 626,000       | (682,896)    | 682,896    |   | 0               |
| <b>Total FYTD</b>                          | 626,000       | 203,104      | 682,896    |   | \$0             |
| <b>Total CYTD</b>                          | 901,000       |              | 697,896    |   | \$0             |
| <b>Cumulative</b>                          | 20,952,729    |              | 20,749,625 |   | \$1,452,144,887 |
| <b>Conservation Crude Transfers</b>        |               |              |            |   |                 |
|  |               | Month        | FYTD       | CYTD  | Cumulative      |
| Transferred                                |               | 422,896      | 422,896    | 422,896                                     | 20,474,625      |
| Volume outstanding                         |               | 275,000      |            |   |                 |

\* Volumes in Mcf at 14.65 psia & 60°F

**Natural Gas/Liquid Sales**

|                                    | Natural Gas (Mcf)*** | NGLs (gal)   | Decatherms        | Avg Btu Value            | Charges Billed (\$)**<br>(billed monthly) |  |
|------------------------------------|----------------------|--|-------------------|--------------------------|---|--|
| <b>EI Paso Natural Gas</b>         |                      |  |                   |                          |   |  |
|                                    |                      | Provides Measured Firm/Interruptible Transportation Services |                   |                          |   |  |
| Month                              | 82,568               | ---  | 90,931            | 1,101                    | (\$27,997)                                |  |
| FYTD                               | 82,568               | ---  | 90,931            | 1,101                    | (\$27,997)                                |  |
| Cumulative                         | 38,040,552           | ---  | 41,733,790        | 1,097                    | (\$4,276,412)                             |  |
| <b>Minerals Management Service</b> |                      |  |                   |                          |   |  |
|                                    |                      | No Longer Provides Natural Gas Marketing Services            |                   |                          |   |  |
| Cumulative                         | ---                  | ---  | ---               | ---                      | (\$179,913)                               |  |
| <b>Tenaska</b>                     |                      |  |                   |                          |   |  |
|                                    |                      | Purchaser - Natural Gas                                      |                   |                          | \$/Unit                                   |  |
| Month                              | ---                  | ---  | 108,000           | \$2.174162               | \$234,810                                 |  |
| FYTD                               | ---                  | ---  | 108,000           | \$2.174162               | \$234,810                                 |  |
| Cumulative                         | ---                  | ---  | 41,425,213        | \$4.708751               | \$194,234,464                             |  |
| <b>Sandstone</b>                   |                      |  |                   |                          |   |  |
|                                    |                      | Purchaser - Natural Gas Liquids                              |                   |                          |   |  |
| Month                              | ---                  | 36,521   | 3,924             | \$4.400798               | \$17,269                                  |  |
| FYTD                               | ---                  | 36,521   | 3,924             | \$4.400798               | \$17,269                                  |  |
| Cumulative                         | ---                  | 11,500,820   | 1,223,599         | \$11.984695              | \$14,664,461                              |  |
|                                    | Natural Gas (Mcf)*** | NGLs (gal)   | Purchased (Dth's) | \$\$ Per Unit (\$\$/Dth) | Total (\$)                                |  |
| <b>Total month</b>                 | 82,568               | 36,521   | 111,924           | \$2.002084               | <b>\$224,081</b>                          |  |
| <b>Total FYTD</b>                  | 82,568               | 36,521   | 111,924           | \$2.002084               | <b>\$224,081</b>                          |  |
| <b>Total CYTD</b>                  | 1,886,616            | 646,826  | 2,150,645         | \$2.459252               | <b>\$5,288,978</b>                        |  |
| <b>Cumulative</b>                  | 38,040,552           | 11,500,820   | 42,648,812        | \$4.813010               | <b>\$204,442,600</b>                      |  |

\*\*\* Volumes in Mcf at 14.73 psia & 60°F

\*\*Rounded to nearest dollar

## Table 6 - Helium Resources Evaluation

October - 2015

All Volumes in Mcf at 14.7 psia & 70°F

| <b>Revenue Collected From Federal Leaseholds</b>  | Month*             | FYTD*              |
|---|--------------------|--------------------|
| Fee Sales & Royalties                             | \$1,490,607        | \$1,490,607        |
| Natural Gas Royalties (1)                         | \$0                | \$0                |
| Natural Gas Rentals                               | \$0                | \$0                |
| Other   | \$35,607           | \$35,607           |
| <b>Revenue Collected from Federal Lease Holds</b> | <b>\$1,526,214</b> | <b>\$1,526,214</b> |

\*Totals do not sum

| <b>Helium Analysis and Evaluation</b>                   | Month | FYTD |
|---|-------|------|
| Number of Sample Request Letters Sent                   | 0     | 0    |
| Number of Samples Received                              | 0     | 0    |
| Number of Samples Analyzed                              | 0     | 0    |
| Total Number of Samples Analyzed For Resources Division | 0     | 0    |
| Total Number of Other Samples Analyzed (2)              | 5     | 5    |

### U. S. Helium Production

| <i>Domestic</i>                                   | FY Volume | CY Volume   |
|---|-----------|-------------|
| 2011 Helium Sold                                  | 4,531,140 | 4,645,930   |
| 2012 Helium Sold                                  | 4,725,187 | 4,623,130   |
| 2013 Helium Sold                                  | 4,279,765 | 4,166,708   |
| 2014 Helium Sold                                  | 3,815,746 | 3,466,014   |
| 2015 Helium Sold                                  | 4,559,100 | 4,644,278   |
| Estimated Helium Resources as of 12/31/2006 (Mcf) |           | 732,000,000 |

|                                | FY-2014   | CY-2014   |
|--------------------------------|-----------|-----------|
| <b>U.S. Helium Exports</b> (3) | 2,553,129 | 2,432,311 |

(1) Includes drip gas sales & other miscellaneous gas sales.

(2) Includes pipeline, field survey, and other requested analyses.

(3) Data from Department of Commerce - Bureau of the Census.

# Table 7 - Helium Storage Contract Activity

October - 2015

All Volumes in Mcf at 14.65 psia & 60°F

|  | Metered Gas     |          |          |          |             | Transferred Gas Helium |         | Stored Helium EOM | Charges Month | Billed (\$)** |              |
|--|-----------------|----------|----------|----------|-------------|------------------------|---------|-------------------|---------------|---------------|--------------|
|  | Gross Gas Month | Helium % | Helium   | FYTD     | Helium CYTD | Cumulative             | Month   |                   |               | Cumulative    | Month        |
| <b>Total All Contracts*</b>                                  |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   | 48,345          | 66.0%    | 31,896   | 31,896   | 296,524     | 31,476,124             | 517,004 | 55,015,267        |               |               |              |
| Crude Disposed   | 97,113          | 70.1%    | 68,062   | 68,062   | 940,332     | 50,457,117             | 69,343  | 31,894,748        | \$396,802     |               | Storage Fees |
| Grade-A Rdlvrd   | 0               |          | 0        | 0        | 0           | 1,478,718              |         |                   | \$0           |               | RMF Fees     |
| Net/Balance  | (48,768)        |          | (36,166) | (36,166) | (643,808)   | (20,459,711)           | 447,661 | 23,120,519        | 2,698,472     | \$396,802     | \$396,802    |
| <b>Total Prior Contracts (TERMINATED)</b>                    |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          | 0        | 0           | 17,406,129             | 0       | 18,196,898        |               |               |              |
| Crude Disposed   |                 |          |          | 0        | 0           | 11,830,863             | 0       | 19,148,768        |               |               |              |
| Grade-A Rdlvrd   |                 |          |          | 0        | 0           | 1,478,718              |         |                   |               |               |              |
| Number of trailers   |                 |          |          | 0        | 0           | 9,834                  |         |                   | 0             |               |              |
| <b>Linde Gas North America, LLC, Contract no. 3249</b>       |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Praxair, Inc., Contract no. 3251</b>                      |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Air Products, L.P., Contract no. 3256</b>                 |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>IACX Energy, Contract no. 3297</b>                        |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Pioneer Natural Resources USA, Inc, Contract no. 3286</b> |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Keyes Helium Co., LLC, Contract no. 3287</b>              |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Air Liquide Helium America, Inc., Contract no. 3284</b>   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Matheson Tri-Gas, Inc., Contract no. 3288</b>             |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Airgas Merchant Gases, Contract no. 3290</b>              |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Global Gases America, Contract no. 3293</b>               |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |
| <b>Linn Operating, Inc., Contract no. 3296</b>               |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Acquired   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Crude Disposed   |                 |          |          |          |             |                        |         |                   |               |               |              |
| Net/Balance  |                 |          |          |          |             |                        |         |                   |               |               |              |

There was an error on transfers between companies. This error is corrected in a later month.

| <b>Government Helium</b>                                       |           |
|--|-----------|
| Remaining Crude Acquired beginning of the month                | 6,584,237 |
| Crude Disposed: In Kind Sales transferred for the month        | (24,765)  |
| Conservation Crude Sales/Reserve Sell Down transferred (month) | (422,896) |
| Gains and Loses for the month                                  | (4,872)   |
| Net/Balance of Purchased Helium Remaining for Sale             | 6,131,704 |

\*Includes In Kind and Conservation Crude transfers from Government storage

\*\*Rounded to nearest dollar

## Table 8 - Compression & CHEU (Charges & Operations)

October - 2015

| Field/CHEU Compressor Operations                       |              | Month   | FYTD    | Cumulative  |
|--|--------------|---------|---------|-------------|
| Spot gas fuel price *                                  | \$ per/MMBTU | \$2.17  | \$2.17  | \$5.02      |
| Fuel used * (now includes field compression well head) | total MMBTU  | 4,852   | 4,852   | 1,634,141   |
| Field Compression Fuel Cost *                          | \$dollars    | \$2,218 | \$2,218 | \$656,616   |
| CHEU Compression Fuel Cost *                           | \$dollars    | \$5,002 | \$5,002 | \$4,209,161 |
| CHEU Process Fuel Cost *                               | \$dollars    | \$3,309 | \$3,309 | \$2,810,734 |
| Rental compressor(s) fuel consumed (well head)         | \$dollars    | \$0     | \$0     | \$207,234   |
| Rental Compressor(s) helium in fuel (Mcf x \$\$)       | \$dollars    | \$0     | \$0     | \$315,893   |
| Rental compressor(s) helium in fuel (Mcf)              | Mcf          | 0       | 0       | 3645        |
| #1 Compressor run time *                               | hours        | 756     | 756     | 96,075      |
| #2 Compressor run time *                               | hours        | 162     | 162     | 59,926      |
| #3 Compressor run time *                               | hours        | 312     | 312     | 58,292      |

\* Field/CHEU Compressor Operations based on Oct 15 activity

| Field Compressor Charges   | Charges Billed (\$)* |     |                |
|--|----------------------|-----|----------------|
| Linde Gas North America, LLC, Contract no. 3249                                |                      |     |                |
| Praxair, Inc., Contract no. 3251   |                      |     |                |
| Air Products, L.P., Contract no. 3256  |                      |     |                |
| Keyes Helium Co., LLC, Contract no. 3287                                       |                      |     |                |
| SubTotal - Cliffside Refiners, LP (provides booster compression services)      | \$0                  | \$0 | (\$11,205,356) |
| Cliffside Refiners, LP, GDA010003 (BLM provided fuel *, labor, supplies, etc.) | \$0                  | \$0 | \$2,791,978    |
| Net Total - Cliffside Refiners, LP   | \$0                  | \$0 | (\$8,413,377)  |

\* BLM provided fuel cost is based on Sep 15 fuel consumed

**\*Rounded to nearest dollar**

| Crude Helium Enrichment Unit (CHEU)<br>CHEU Runtime | Month       |         | FYTD        |         | Cumulative  |
|---|-------------|---------|-------------|---------|-------------|
|   | Runtime Hrs | Percent | Runtime Hrs | Percent | Runtime Hrs |
| Processing feed gas                                 | 291         | 39.1%   | 291         | 39.1%   | 104,655     |
| Producing residue gas                               | 291         | 39.1%   | 291         | 39.1%   | 103,009     |
| Producing helium product                            | 291         | 39.1%   | 291         | 39.1%   | 99,856      |
| Producing natural gas liquids                       | 291         | 39.1%   | 291         | 39.1%   | 98,649      |

| CHEU Charges                              | Charges Billed (\$)* |             |                 |
|---|----------------------|-------------|-----------------|
|   | Month                | FYTD        | Cumulative      |
| Reservoir Management Fees (RMF)           | \$0                  | \$0         | \$29,505,202    |
| Total operating costs                     | (\$850,689)          | (\$850,689) | (\$128,075,195) |
| Labor                                     | \$130,284            | \$130,284   | \$12,905,487    |
| Compressor fuel cost Sep 15               | \$14,128             | \$14,128    | \$4,249,312     |
| HEU fuel cost Sep 15                      | \$7,865              | \$7,865     | \$2,847,952     |
| Electrical power cost Sep 15              | \$127,997            | \$127,997   | \$19,479,102    |
| Other                                     | \$71,333             | \$71,333    | \$12,288,589    |
| Sub Total - Items provided by BLM         | \$351,608            | \$351,608   | \$54,979,797    |
| Total - Cliffside Refiners, LP, GDA030001 | (\$499,081)          | (\$499,081) | (\$73,095,398)  |

**\*Rounded to nearest dollar**

| CHEU Utility Usage                        | Month     | FYTD      | Cumulative |
|---|-----------|-----------|------------|
| Cheu Fuel Gas (Mcf) usage Oct 15          | 1,394     | 1,394     | 512,128    |
| Cheu Pure Water Usage (gallons) Oct 15    | 26        | 26        | 284,949    |
| Electricity Metered (Kwh) consumed Sep 15 | 2,636,071 | 2,636,071 | 99,333,942 |