

Bureau of Land Management

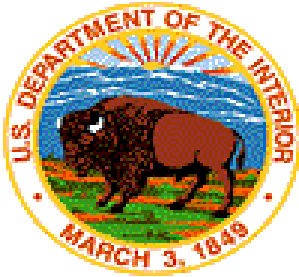
Amarillo Field Office

Helium Operations

Statistical Report

for

March - 2019



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
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Revised

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

Approved for Distribution: AMANDA L. CLARK

Date: September 25, 2019

Table 1 - Summary of Helium Operations

March - 2019

Helium Enrichment Unit Operations

Gas Processed

| | Month Gross Volume | Month Net Helium | Average Percent | Gross FYTD | Net FYTD |
|----------------------------|-----------------------|---------------------|-----------------|------------|----------|
| Measured Plant Feed (Mcf*) | 506,986 | 78,176 | 15.42% | 2,961,439 | 462,616 |
| Helium Product (Mcf*) | 107,375 | 78,109 | 72.74% | 629,955 | 461,348 |
| Residue Natural Gas (Mcf*) | 251,481 | 0 | 00.00% | 1,562,412 | 0 |

* Volumes in Mcf at 14.65 psia & 60°F

Natural Gas & Liquids Produced

Gas Processed

| | Month | FYTD |
|----------------------------|---------|-----------|
| Natural Gas Sales (Mcf***) | 249,516 | 1,549,429 |
| NGL Sales (gallons) | 95,830 | 558,237 |

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

Bush Dome Reservoir Operations

Conservation gases from all sources

| | Month Gross Volume | Month Net Helium | Average Percent | Gross FYTD | Net FYTD |
|-------------------------|-----------------------|---------------------|-----------------|------------|----------|
| Total Withdrawn (Mcf*) | 505,444 | 77,936 | 15.42% | 2,971,358 | 464,184 |
| Crude Injection (Mcf*) | 0 | 0 | 00.00% | 0 | 0 |
| Crude Production (Mcf*) | 0 | 0 | 00.00% | 0 | 0 |

* 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*) | | 0 | 0 | 0 | 23,073,063 |
| Conservation Crude Sale Volume Transferred (Mcf*) | 0 | 0 | 0 | 0 | 1,203,477 |
| Conservation Helium in Storage (EOM) (Mcf*) | | 2,900,473 | | | |

* Volumes in Mcf at 14.65 psia & 60°F

In Kind Helium

| | Month | FYTD | CYTD | Cumulative |
|---------------------------------|--------|--------|--------|------------|
| Sale Volumes Transferred (Mcf*) | 0 | 88,258 | 46,394 | 3,768,506 |
| Sale Volumes Outstanding (Mcf*) | 48,723 | | | |

* Volumes in Mcf at 14.65 psia & 60°F

Private Company Helium Storage Contracts

Contact Activity

| | Month Gross Volume | Month Net Helium | Average Percent | Annual Helium FYTD |
|--|-----------------------|---------------------|-----------------|-----------------------|
| Crude Acquired (Mcf*) | 16,235 | 10,645 | 65.57% | 58786 |
| Crude Disposed (Mcf*) | 105,646 | 75,163 | 71.15% | 496782 |
| Net Balance (Mcf*) | (89,411) | (64,518) | | (437,996) |
| Balance of Stored Helium End Of Month (Mcf*) | | 2,746,796 | | |

* Volumes in Mcf at 14.65 psia & 60°F

Revenue / Charges

Helium Storage Contracts (Charges Billed (\$))

| | Month | FYTD |
|---|-----------|-------------|
| Storage Fees Billed (\$) | \$476,262 | \$3,008,317 |
| Resource Management Fees Billed (\$) | \$312,458 | \$1,562,296 |
| Total Storage and Resource Management fees collected (\$) | \$788,720 | \$4,570,613 |

Conservation Helium - Natural Gas - Liquid Sales (Charges Billed (\$))

| | Month | FYTD |
|---------------------------------|-------------|-------------|
| Conservation Crude Helium Sales | \$0 | \$0 |
| In Kind Sales | \$3,954,945 | \$7,944,829 |
| Natural Gas & Liquid Sales | \$229,972 | \$3,294,518 |

Helium Resources Evaluation

| | Month | FYTD |
|--|---------------|---------------|
| Revenue Collected from Federal Lease Holds | \$2,159,671 | \$12,553,629 |
| Helium Sample Collection Report for month | Submitted - 0 | Received - 0 |
| | | Analyzed - 16 |

*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

March - 2019

| | | 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 |
| TOTAL | | 505,444 | 241,765,457 | 77,936 | 44,818,550 | 124,909 | 59,601,661 | 267,559 | 122,814,132 | 29,872 | 12,481,060 | 5,169 | 2,050,054 |
| BIVINS A-3 | Mar-19 | 0 | 10,961,113 | 0 | 3,548,629 | 0 | 2,772,147 | 0 | 4,159,384 | 0 | 407,301 | 0 | 73,653 |
| BIVINS A-6 | Mar-19 | 47,769 | 12,984,221 | 17,890 | 7,480,264 | 11,939 | 3,196,352 | 15,813 | 2,037,367 | 1,746 | 205,008 | 380 | 65,229 |
| BIVINS A-13 | Mar-19 | 34,575 | 9,610,905 | 10,757 | 4,828,091 | 8,664 | 2,462,599 | 13,354 | 2,035,871 | 1,536 | 226,847 | 264 | 57,498 |
| BIVINS A-14 | Mar-19 | 39,126 | 10,860,783 | 9,670 | 5,868,735 | 9,623 | 2,743,932 | 17,513 | 1,966,809 | 1,953 | 213,190 | 368 | 68,118 |
| BIVINS A-4 | Mar-19 | 31,968 | 14,684,785 | 3,147 | 2,522,038 | 7,612 | 3,556,258 | 18,757 | 7,695,814 | 2,075 | 777,449 | 377 | 133,225 |
| BUSH A-2 | Mar-19 | 9,140 | 14,043,566 | 399 | 2,021,289 | 2,274 | 3,449,021 | 5,736 | 7,666,497 | 670 | 790,802 | 61 | 115,957 |
| Injection | Mar-19 | 0 | 66,474,735 | 0 | 48,019,788 | 0 | 17,121,580 | 0 | 780,676 | 0 | 37 | 0 | 552,655 |
| inj Bivins A-3 | Mar-19 | 0 | (25,652,315) | 0 | (18,384,452) | 0 | (6,554,549) | 0 | (332,777) | 0 | 0 | 0 | (380,537) |
| inj Bivins A-6 | Mar-19 | 0 | (24,412,686) | 0 | (17,669,978) | 0 | (6,486,588) | 0 | (143,192) | 0 | (72) | 0 | (112,856) |
| inj Bivins A-13 | Mar-19 | 0 | (6,490,417) | 0 | (4,706,191) | 0 | (1,656,853) | 0 | (122,391) | 0 | (2) | 0 | (4,980) |
| inj Bivins A-14 | Mar-19 | 0 | (6,501,333) | 0 | (4,767,421) | 0 | (1,602,106) | 0 | (126,303) | 0 | (7) | 0 | (5,497) |
| inj Bivins A-4 | Mar-19 | 0 | (2,527,801) | 0 | (1,848,815) | 0 | (601,353) | 0 | (42,016) | 0 | 0 | 0 | (35,617) |
| inj Bush A-2 | Mar-19 | 0 | (867,658) | 0 | (625,258) | 0 | (215,406) | 0 | (13,980) | 0 | 0 | 0 | (13,015) |
| Production | Mar-19 | 0 | 1,254,876 | 0 | 924,742 | 0 | 270,231 | 0 | 48,129 | 0 | 3,199 | 0 | 8,575 |
| BIVINS A-1 | Mar-19 | 0 | 2,686,608 | 0 | 48,896 | 0 | 636,995 | 0 | 1,798,415 | 0 | 175,704 | 0 | 26,597 |
| BIVINS A-2 | Mar-19 | 19,708 | 14,674,847 | 631 | 1,903,453 | 4,579 | 3,586,275 | 12,858 | 8,236,334 | 1,433 | 825,182 | 206 | 123,602 |
| BIVINS A-5 | Mar-19 | 26,421 | 16,931,100 | 4,643 | 2,208,638 | 6,667 | 4,159,615 | 13,355 | 9,460,942 | 1,534 | 956,009 | 222 | 145,896 |
| BIVINS A-7 | Mar-19 | 15,929 | 12,257,531 | 4,727 | 2,918,306 | 4,094 | 3,090,144 | 6,255 | 5,587,905 | 740 | 571,937 | 112 | 89,239 |
| BIVINS A-9 | Mar-19 | 29,363 | 11,460,118 | 838 | 225,251 | 7,463 | 2,828,546 | 18,698 | 7,534,720 | 2,102 | 767,553 | 262 | 104,048 |
| BIVINS A-11 | Mar-19 | 19,202 | 7,073,750 | 576 | 157,582 | 4,835 | 1,762,082 | 12,224 | 4,610,647 | 1,367 | 476,442 | 200 | 66,996 |
| BIVINS A-15 | Mar-19 | 34,350 | 10,966,725 | 583 | 450,346 | 7,968 | 2,606,106 | 22,927 | 7,081,859 | 2,428 | 712,423 | 444 | 115,991 |
| BIVINS B-1 | Mar-19 | 33,878 | 9,136,398 | 791 | 325,620 | 8,235 | 2,217,531 | 21,993 | 5,889,591 | 2,404 | 607,169 | 454 | 96,487 |
| BIVINS B-2 | Mar-19 | 26,835 | 7,623,736 | 500 | 143,636 | 6,770 | 1,910,925 | 17,179 | 4,946,432 | 1,873 | 512,403 | 512 | 110,340 |
| BUSH A-1 | Mar-19 | 0 | 5,721,962 | 0 | 104,140 | 0 | 1,356,677 | 0 | 3,830,281 | 0 | 374,216 | 0 | 56,647 |
| BUSH A-3 | Mar-19 | 30,685 | 13,111,688 | 9,533 | 3,187,653 | 7,669 | 3,247,662 | 11,844 | 5,955,740 | 1,368 | 606,368 | 271 | 114,266 |
| BUSH A-4 | Mar-19 | 23,616 | 9,345,111 | 1,909 | 1,641,653 | 6,005 | 2,341,593 | 13,965 | 4,802,759 | 1,594 | 492,995 | 143 | 66,112 |
| BUSH A-5 | Mar-19 | 43,729 | 18,018,426 | 10,570 | 4,181,670 | 11,053 | 4,528,191 | 19,563 | 8,329,864 | 2,268 | 854,608 | 275 | 124,093 |
| BUSH A-8 | Mar-19 | 16,869 | 4,877,360 | 308 | 89,392 | 4,174 | 1,184,435 | 10,908 | 3,213,444 | 1,173 | 326,137 | 306 | 63,952 |
| BUSH A-9 | Mar-19 | 0 | 3,860,915 | 0 | 105,037 | 0 | 930,915 | 0 | 2,537,187 | 0 | 253,463 | 0 | 34,312 |
| BUSH A-11 | Mar-19 | 17,379 | 4,997,185 | 378 | 142,437 | 4,138 | 1,195,648 | 11,358 | 3,267,822 | 1,242 | 332,734 | 263 | 58,544 |
| BUSH B-1 | Mar-19 | 4,902 | 3,463,970 | 85 | 64,858 | 1,145 | 821,477 | 3,258 | 2,314,440 | 363 | 229,254 | 51 | 33,942 |
| FUQUA A-1 | Mar-19 | 0 | 2,954,098 | 0 | 53,854 | 0 | 702,798 | 0 | 1,975,175 | 0 | 193,573 | 0 | 28,699 |
| FUQUA A-2 | Mar-19 | 0 | 132,119 | 0 | 2,404 | 0 | 31,322 | 0 | 88,458 | 0 | 8,637 | 0 | 1,297 |
| FUQUA A-3 | Mar-19 | 0 | 9,303,912 | 0 | 577,005 | 0 | 2,277,687 | 0 | 5,790,357 | 0 | 583,701 | 0 | 75,162 |
| TT Fuel | Mar-19 | 22 | 0 | 0 | 0 | 5 | 0 | 14 | 0 | 2 | 0 | 0 | 0 |
| field-wide pct's | | | | 15.42% | 18.54% | 24.71% | 24.65% | 52.94% | 50.80% | 5.91% | 5.16% | 1.02% | 0.85% |

Latest estimates of reserves and feed to HEU

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

As of EOM Mar-19 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 | Net Helium |
| Remaining Gas In Place July 2002 | 181.660 | 33.997 |
| Produced July 2002 through Dec 2002 | 1.096 | 0.743 |
| Production 2003 - 18 | 108.029 | 26.256 |
| Injection 2003 - 18 | (1.423) | (1.159) |
| Produced to Date 2019 | 1.401 | 0.215 |
| Injected to Date 2019 | 0.000 | 0.000 |
| Amount of Raw Gas Available to CHEU | 72.557 | =====> 7.942 total helium in reservoir |
| Estimated Bottom Hole Pressure | 267.277 | 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

March - 2019

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 | Mar-19 | 506,986 | 106,669,430 | 78,176 | 24,782,305 | 125,290 | 26,702,167 | 268,373 | 48,989,737 | 29,963 | 5,259,275 | 5,185 | 935,947 |
| Calculated Feed | Mar-19 | 505,422 | 106,545,770 | 77,936 | 24,778,410 | 124,904 | 26,664,566 | 267,544 | 48,888,274 | 29,870 | 5,276,311 | 5,169 | 938,209 |
| Feed to Box | Mar-19 | 500,975 | 105,846,086 | 77,936 | 24,778,588 | 124,904 | 26,664,648 | 267,544 | 48,888,320 | 29,870 | 5,276,307 | 722 | 238,222 |
| Cheu Product | Mar-19 | 107,375 | 31,430,879 | 78,109 | 24,414,305 | 26,242 | 6,177,169 | 2,325 | 621,820 | 2 | 895 | 698 | 216,690 |
| Residue | Mar-19 | 251,481 | 48,883,886 | 0 | 2,171 | 5,194 | 1,190,172 | 223,685 | 43,379,801 | 22,602 | 4,310,476 | 0 | 1,265 |
| Cold Box Vent | Mar-19 | 78,265 | 17,472,391 | 127 | 90,419 | 68,129 | 15,504,502 | 9,992 | 1,815,805 | 0 | 121 | 17 | 61,544 |
| Flare/Boot Strap | Mar-19 | 78,265 | 7,988,640 | 127 | 51,198 | 68,129 | 6,759,505 | 9,992 | 1,077,974 | 0 | 93,586 | 17 | 6,377 |
| Fuel From Cheu | Mar-19 | 7,420 | 1,450,925 | 4 | 480 | 192 | 41,911 | 5,984 | 1,175,800 | 1,240 | 232,734 | 0 | 0 |
| Shrinkage/Loss | Mar-19 | 6,027 | 543,295 | 0 | 0 | 0 | 0 | 0 | 0 | 6,027 | 543,295 | 0 | 0 |
| Unaccounted* | Mar-19 | 50,408 | 3,930,817 | (305) | 169,587 | 25,147 | 2,930,460 | 25,559 | 825,767 | (0) | 1,099 | 8 | 3,904 |

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)

| | Government | Private |
|--------------------------------|------------|-----------|
| Beginning inventory | 2,900,827 | 2,811,314 |
| net acceptances + redeliveries | 0 | (64,518) |
| In Kind Transfers | 0 | 0 |
| Conservation Crude Sales | 0 | 0 |
| Gain/loss | (355) | |
| Ending Inventory | 2,900,473 | 2,746,796 |
| Total Helium in Reservoir | 7,941,802 | |
| Total Helium in Storage | 5,647,269 | |
| Helium in native gas | 2,294,533 | |

Crude Helium Pipeline

| | Gross | Net Helium | Percent |
|--|---------|------------|---------|
| Beginning inventory | 23,432 | 16,622 | 70.94% |
| Measured to Pipeline (Private Plants) | 16,235 | 10,645 | 65.57% |
| Measured from Pipeline (Private Plant) | 105,646 | 75,163 | 71.15% |
| HEU Production | 107,375 | 78,109 | 72.74% |
| Injection | 0 | 0 | 00.00% |
| Production | 0 | 0 | |
| Ending Inventory | 41,761 | 29,859 | 71.50% |
| Gain/Loss | 364 | (355) | |

Tuck Trigg Reservoir Operations

| Native Gas (Gross) | Month | Fiscal Year | Since Field |
|--------------------------------------|-----------|-------------|-------------|
| | | | 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

March - 2019

| NASA* | Navy* | Army* | Air Force* | DOE* | Other Fed* | Subtotal* | In Kind+ | Charges Billed (\$)** | | |
|--|-----------|---------|------------|---------|------------|-----------|-----------|-----------------------|---------------|------------|
| In Kind Helium | | | | | | | | (billed quarterly) | | |
| Airgas Merchant Gases, Contract no. INC18-0102 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Air Liquide Helium America, Inc., Contract no. INC18-0104 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Air Products, L.P., Contract no. INC18-0105 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Messer, LLC, Contract no. INC18-0106 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Praxair, Inc., Contract no. INC18-0112 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Matheson Tri-Gas, Inc., Contract no. INC18-0114 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Global Gases America, Contract no. INC18-0116 | | | | | | | | | | |
| Month | | | | | | | | | | |
| FYTD | | | | | | | | | | |
| Total month | 21,412 | 0 | 0 | 0 | 0 | 20,873 | 42,285 | 41,631 | \$3,954,945 | |
| Total FYTD | 48,166 | 0 | 0 | 0 | 0 | 41,244 | 89,409 | 88,025 | \$7,944,829 | |
| Total CYTD | 21,412 | 0 | 0 | 0 | 0 | 20,873 | 42,285 | 41,631 | \$3,954,945 | |
| Cumulative | 2,096,617 | 108,685 | 450 | 271,593 | 422,045 | 977,801 | 3,877,189 | 3,817,154 | \$232,325,399 | |
| In Kind Transfers | | | | | | | Month | FYTD | CYTD | Cumulative |
| Transferred | | | | | | | 0 | 88,258 | 46,394 | 3,768,506 |
| Volume outstanding | | | | | | | 48,723 | | | |

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

**Rounded to nearest dollar

Natural Gas / Natural Gas Liquid Sales

| | Natural Gas (Mcf)*** | NGLs (gal) | Decatherms | Avg Btu Value | Charges Billed (\$)** |
|---|----------------------|------------|-------------------|--------------------------|-----------------------|
| El Paso Natural Gas | | | | | |
| Provides Measured Firm/Interruptible Transportation Services (billed monthly) | | | | | |
| Month | 249,516 | --- | 274,995 | 1,102 | \$0 |
| FYTD | 1,549,429 | --- | 1,709,639 | 1,103 | \$0 |
| Cumulative | 48,420,972 | --- | 52,709,541 | 1,089 | (\$5,088,325) |
| Minerals Management Service | | | | | |
| No Longer Provides Natural Gas Marketing Services | | | | | |
| Cumulative | --- | --- | --- | --- | (\$179,913) |
| Tenaska | | | | | |
| Purchaser - Natural Gas | | | | | |
| Month | --- | --- | 261,386 | \$0.645499 | \$168,725 |
| FYTD | --- | --- | 1,737,686 | \$1.705888 | \$2,964,298 |
| Cumulative | --- | --- | 52,594,825 | \$4.188102 | \$219,445,940 |
| Sandstone | | | | | |
| Purchaser - Natural Gas Liquids | | | | | |
| Month | --- | 95,830 | 10,408 | \$5.884611 | \$61,247 |
| FYTD | --- | 558,237 | 60,563 | \$5.452498 | \$330,220 |
| Cumulative | --- | 15,015,058 | 1,599,698 | \$10.580503 | \$16,925,609 |
| Total | | | | | |
| | Natural Gas (Mcf)*** | NGLs (gal) | Purchased (Dth's) | \$\$ Per Unit (\$\$/Dth) | Total (\$\$) |
| Total month | 249,516 | 95,830 | 271,794 | \$0.846125 | \$229,972 |
| Total FYTD | 1,549,429 | 558,237 | 1,798,249 | \$1.832070 | \$3,294,518 |
| Total CYTD | 708,976 | 268,976 | 834,622 | \$1.613847 | \$1,346,952 |
| Cumulative | 48,420,972 | 15,015,058 | 54,194,523 | \$4.279581 | \$231,103,311 |

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

**Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

March - 2019

Helium & Natural Gas Sales

| | Award Volume* | Outstanding* | Sales* | Charges Billed (\$)** | |
|---|---------------|--------------|------------|---------------------------|------------|
| Conservation Helium | | | | (billed quarterly) | |
| <u>Air Liquide Helium America, Inc.</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 335,217 | | 335,217 | \$25,454,815 | |
| <u>Air Products, L.P.</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 9,201,991 | | 9,201,991 | \$735,759,540 | |
| <u>Messer, LLC</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 6,310,276 | | 6,310,276 | \$437,286,782 | |
| <u>Keyes Helium Co., LLC</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 1,016,747 | | 1,016,747 | \$70,653,572 | |
| <u>Matheson Tri-Gas, Inc.</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 361,534 | | 361,534 | \$38,417,646 | |
| <u>Praxair, Inc.</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 5,577,644 | | 5,577,644 | \$426,522,384 | |
| <u>Global Gases America</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 37,767 | | 37,767 | \$3,798,165 | |
| <u>Airgas Merchant Gases</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 15,667 | | 15,667 | \$1,488,365 | |
| <u>IACX Energy</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 16,220 | | 16,220 | \$1,720,180 | |
| <u>Uniper Global Commodities North America LLC</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 42,834 | | 42,834 | \$5,301,246 | |
| <u>Weil Group Resources LLC</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 22,500 | | 22,500 | \$2,791,500 | |
| <u>NAH USA Helum Marketing, Inc</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 12,834 | | 12,834 | \$1,611,246 | |
| <u>Progressive Chemical Technologies LLC</u> | | | | | |
| Month | 0 | 0 | 0 | \$0 | |
| FYTD | 0 | 0 | 0 | \$0 | |
| Cumulative | 1,500 | | 1,500 | \$262,500 | |
| Total month | | | | | |
| | 0 | 0 | 0 | 0 | |
| Total FYTD | | | | | |
| | 0 | 0 | 0 | \$0 | |
| Total CYTD | | | | | |
| | 0 | | 0 | \$0 | |
| Cumulative | | | | | |
| | 23,073,063 | | 23,073,063 | \$1,762,102,941 | |
| Conservation Crude Transfers | | | | | |
| | | Month | FYTD | CYTD | Cumulative |
| Transferred | | 0 | 0 | 0 | 1,203,477 |
| Volume outstanding | | 0 | | | |

* Volumes in Mcf at 14.65 psia & 60°F

Table 6 - Helium Resources Evaluation

March - 2019

All Volumes in Mcf at 14.7 psia & 70°F

| Revenue Collected From Federal Leaseholds | Month* | FYTD* |
|---|--------------------|---------------------|
| Fee Sales & Royalties | \$2,025,224 | \$12,327,321 |
| Natural Gas Royalties (1) | \$0 | \$0 |
| Natural Gas Rentals | \$0 | \$0 |
| Other | \$226,307 | \$441,015 |
| Revenue Collected from Federal Lease Holds | \$2,159,671 | \$12,553,629 |

*Totals do not sum

| Helium Analysis and Evaluation | 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) | 16 | 117 |

U. S. Helium Production

| <i>Domestic</i> | FY Volume | CY Volume |
|---|-----------|-------------|
| 2013 Helium Sold | 4,725,187 | 4,623,130 |
| 2014 Helium Sold | 4,279,765 | 4,166,708 |
| 2015 Helium Sold | 3,815,746 | 3,463,698 |
| 2016 Helium Sold | 3,282,185 | 3,466,014 |
| 2017 Helium Sold | 4,559,100 | 4,644,278 |
| Estimated Helium Resources as of 12/31/2016 (Mcf) | | 723,000,000 |

| | FY-2017 | CY-2017 |
|--------------------------------|-----------|-----------|
| U.S. Helium Exports (3) | 2,520,645 | 2,451,207 |
| US Helium Imports | 731,407 | 666,908 |

(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

March - 2019

All Volumes in Mcf at 14.65 psia & 60°F

| | Metered Gas | | | | | Transferred Gas Helium | | Stored Helium EOM | Charges Billed (\$)** | | |
|---|-----------------|----------|----------|-----------|-------------|------------------------|-------|-------------------|-----------------------|--------------|--------------|
| | Gross Gas Month | Helium % | Helium | FYTD | Helium CYTD | Cumulative | Month | | Cumulative | Month | FYTD |
| Total All Contracts* | | | | | | | | | | | |
| Crude Acquired | 16,235 | 65.6% | 10,645 | 58,786 | 32,728 | 27,398,950 | 8,291 | 60,979,872 | | | |
| Crude Disposed | 105,646 | 71.1% | 75,163 | 496,782 | 240,997 | 54,351,460 | 8,291 | 26,780,235 | | | |
| Grade-A Rdlvrd | 0 | | 0 | 0 | 0 | 1,478,718 | | | | \$476,262.31 | Storage Fees |
| Net/Balance | (89,411) | | (64,518) | (437,996) | (208,269) | (28,431,228) | 0 | 34,199,637 | 2,746,796 | \$312,457.68 | RMF Fees |
| | | | | | | | | | | \$788,719.99 | \$4,570,613 |
| Total Prior Contracts (TERMINATED) | | | | | | | | | | | |
| 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 | | |
| Messer, LLC, Contract no. 3249 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Praxair, Inc., Contract no. 3251 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Air Products, L.P., Contract no. 3256 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Air Liquide Helium America, Inc., Contract no. 3284 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Keyes Helium Co., LLC, Contract no. 3287 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Matheson Tri-Gas, Inc., Contract no. 3288 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Airgas Merchant Gases, Contract no. 3290 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Global Gases America, Contract no. 3293 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Linn Operating, Inc., Contract no. 3296 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| IACX Energy, Contract no. 3297 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Uniper Global Commodities North America LLC, Contract no. 3298 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Weil Group Resources LLC, Contract no. 3299 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| NAH USA Helium Marketing, Inc, Contract no. 3300 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |
| Progressive Chemical Technologies LLC, Contract no. 3301 | | | | | | | | | | | |
| Crude Acquired | | | | | | | | | | | |
| Crude Disposed | | | | | | | | | | | |
| Net/Balance | | | | | | | | | | | |

| Government Helium | |
|---|-----------|
| Remaining Crude Acquired beginning of the month | 2,900,827 |
| Crude Disposed: In Kind Sales transferred for the month | 0 |
| Conservation Crude Sales/Reserve Sell Down transferred (t | 0 |
| Gains and Losses for the month | (355) |
| Net/Balance of Purchased Helium Remaining for Sale | 2,900,473 |

*Includes In Kind and Conservation Crude transfers from Government storage

**Rounded to nearest dollar

** New Contracts

Table 8 - Compression & CHEU (Operations)

March - 2019

Field/CHEU Compressor Operations

| | | Month | FYTD | Cumulative |
|--|--------------|--------|---------|------------|
| Spot gas fuel price * | \$ per/MMBTU | \$0.65 | #VALUE! | #VALUE! |
| Fuel used * (now includes field compression well head) | total MMBTU | 6,348 | #VALUE! | #VALUE! |
| #1 Compressor run time * | hours | 0 | 3,460 | 120,308 |
| #2 Compressor run time * | hours | 738 | 1,276 | 80,906 |
| #3 Compressor run time * | hours | 738 | 3,115 | 66,934 |

* Field/CHEU Compressor Operations based on Mar 19 activity

Crude Helium Enrichment Unit (CHEU)

CHEU Runtime

| | Month | | FYTD | | Cumulative |
|-------------------------------|-------------|---------|-------------|---------|-------------|
| | Runtime Hrs | Percent | Runtime Hrs | Percent | Runtime Hrs |
| Processing feed gas | 743 | 99.9% | 4,363 | 99.9% | 133,997 |
| Producing residue gas | 743 | 99.9% | 4,236 | 97.0% | 130,868 |
| Producing helium product | 738 | 99.2% | 4,198 | 96.1% | 127,155 |
| Producing natural gas liquids | 743 | 99.9% | 4,210 | 96.4% | 126,248 |

CHEU Utility Usage

| | Month | FYTD | Cumulative |
|---|-----------|------------|-------------|
| CheU Fuel Gas (Mcf) usage Mar 19 | 2,760 | #VALUE! | #VALUE! |
| CheU Pure Water Usage (gallons) Mar 19 | 572 | 1,994 | 318,158 |
| Electricity Metered (Kwh) consumed Feb 19 | 2,883,035 | 17,298,210 | 196,235,832 |