

# Bureau of Land Management

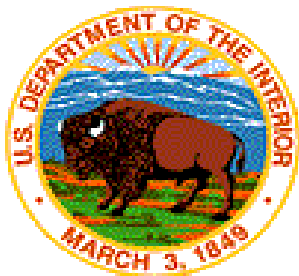
Amarillo Field Office

Helium Operations

Statistical Report

for

February - 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

Issued: October 1, 2019

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

**Revised**

Approved for Distribution: *Amanda L. Clark*

Date: *September 25, 2019*

Table 1 - Summary of Helium Operations

February - 2019

**Helium Enrichment Unit Operations**

Gas Processed	Month	Month	Average Percent	Gross FYTD	Net FYTD
	Gross Volume	Net Helium			
Measured Plant Feed (Mcf*)	380,564	55,979	14.71%	2,454,453	384,440
Helium Product (Mcf*)	73,782	53,754	72.86%	522,580	383,239
Residue Natural Gas (Mcf*)	186,093	0	00.00%	1,310,931	0

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

**Natural Gas & Liquids Produced**

Gas Processed	Month	FYTD
Natural Gas Sales (Mcf***)	183,967	1,299,913
NGL Sales (gallons)	82,249	462,407

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

**Bush Dome Reservoir Operations**

Conservation gases from all sources	Month	Month	Average Percent	Gross FYTD	Net FYTD
	Gross Volume	Net Helium			
Total Withdrawn (Mcf*)	382,101	56,212	14.71%	2,465,914	386,248
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*)		2,900,827			

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

**In Kind Helium**

	Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)	46,394	88,258	46,394	3,768,506
Sale Volumes Outstanding (Mcf*)	7,092			

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

**Private Company Helium Storage Contracts**

Contact Activity	Month	Month	Average Percent	Annual Helium FYTD
	Gross Volume	Net Helium		
Crude Acquired (Mcf*)	18,499	11,528	62.32%	48141
Crude Disposed (Mcf*)	107,534	76,447	71.09%	421619
Net Balance (Mcf*)	(89,035)	(64,919)		(373,478)
Balance of Stored Helium End Of Month (Mcf*)		2,811,314		

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

**Revenue / Charges**

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$483,967	\$2,532,055
Resource Management Fees Billed (\$)	\$312,458	\$1,249,838
Total Storage and Resource Management fees collected (\$)	\$796,425	\$3,781,893

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

(Charges Billed (\$))	Month	FYTD
Conservation Crude Helium Sales	\$0	\$0
In Kind Sales	\$0	\$3,989,884
Natural Gas & Liquid Sales	\$416,537	\$3,064,546

**Helium Resources Evaluation**

	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,800,414	\$10,393,958
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 22

\*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

February - 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
<b>TOTAL</b>		<b>382,101</b>	<b>241,260,013</b>	<b>56,212</b>	<b>44,740,614</b>	<b>94,319</b>	<b>59,476,752</b>	<b>204,786</b>	<b>122,546,573</b>	<b>22,821</b>	<b>12,451,188</b>	<b>3,963</b>	<b>2,044,885</b>
BIVINS A-3	Feb-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	Feb-19	34,906	12,936,452	13,400	7,462,374	8,719	3,184,412	11,269	2,021,554	1,242	203,262	276	64,849
BIVINS A-13	Feb-19	23,750	9,576,330	7,405	4,817,334	5,952	2,453,935	9,157	2,022,516	1,052	225,311	183	57,234
BIVINS A-14	Feb-19	26,852	10,821,657	6,710	5,859,065	6,612	2,734,309	11,949	1,949,296	1,329	211,236	252	67,750
BIVINS A-4	Feb-19	25,848	14,652,816	2,577	2,518,891	6,154	3,548,646	15,139	7,677,057	1,675	775,374	302	132,849
BUSH A-2	Feb-19	7,231	14,034,426	315	2,020,891	1,800	3,446,747	4,537	7,660,761	530	790,132	48	115,896
Injection	Feb-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	Feb-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	Feb-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	Feb-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	Feb-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	Feb-19	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Feb-19	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Feb-19	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Feb-19	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Feb-19	16,040	14,655,139	518	1,902,822	3,723	3,581,696	10,458	8,223,476	1,173	823,749	168	123,396
BIVINS A-5	Feb-19	18,632	16,904,679	3,283	2,203,995	4,699	4,152,947	9,411	9,447,587	1,083	954,475	157	145,675
BIVINS A-7	Feb-19	10,874	12,241,602	3,228	2,913,579	2,795	3,086,049	4,268	5,581,650	506	571,197	77	89,127
BIVINS A-9	Feb-19	23,587	11,430,754	670	224,413	5,990	2,821,083	15,030	7,516,022	1,687	765,451	210	103,786
BIVINS A-11	Feb-19	15,503	7,054,548	465	157,006	3,902	1,757,247	9,875	4,598,423	1,101	475,076	161	66,796
BIVINS A-15	Feb-19	27,750	10,932,376	471	449,764	6,436	2,598,138	18,536	7,058,932	1,949	709,995	359	115,547
BIVINS B-1	Feb-19	27,262	9,102,520	638	324,829	6,625	2,209,296	17,693	5,867,598	1,941	604,764	365	96,033
BIVINS B-2	Feb-19	21,679	7,596,902	404	143,136	5,467	1,904,155	13,886	4,929,253	1,511	510,530	412	109,828
BUSH A-1	Feb-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	Feb-19	20,517	13,081,003	6,401	3,178,120	5,131	3,239,993	7,901	5,943,896	903	605,000	181	113,994
BUSH A-4	Feb-19	19,200	9,321,495	1,571	1,639,743	4,882	2,335,588	11,326	4,788,793	1,302	491,401	119	65,969
BUSH A-5	Feb-19	31,131	17,974,698	7,537	4,171,100	7,861	4,517,138	13,919	8,310,301	1,619	852,340	196	123,818
BUSH A-8	Feb-19	13,734	4,860,491	251	89,084	3,396	1,180,261	8,886	3,202,536	952	324,963	248	63,646
BUSH A-9	Feb-19	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Feb-19	14,105	4,979,807	307	142,060	3,359	1,191,510	9,216	3,256,464	1,010	331,492	213	58,281
BUSH B-1	Feb-19	3,500	3,459,069	61	64,772	817	820,332	2,328	2,311,182	259	228,891	36	33,891
FUQUA A-1	Feb-19	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Feb-19	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Feb-19	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Feb-19	791	0	14	0	185	0	527	0	58	0	8	0
field-wide pct's				14.71%	18.54%	24.68%	24.65%	53.59%	50.79%	5.97%	5.16%	1.04%	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 Feb-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	0.895	0.137
Injected to Date 2019	0.000	0.000
Amount of Raw Gas Available to CHEU	73.063	=====> 8.020 total helium in reservoir
Estimated Bottom Hole Pressure	269.136	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

February - 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	Feb-19	380,564	106,162,444	55,979	24,704,129	93,950	26,576,877	203,976	48,721,364	22,724	5,229,312	3,935	930,763
Calculated Feed	Feb-19	381,309	106,040,347	56,198	24,700,474	94,134	26,539,662	204,260	48,620,730	22,763	5,246,441	3,955	933,041
Feed to Box	Feb-19	377,872	105,345,110	56,198	24,700,653	94,134	26,539,744	204,260	48,620,776	22,763	5,246,437	517	237,501
Cheu Product	Feb-19	73,782	31,323,504	53,754	24,336,196	17,959	6,150,928	1,585	619,495	2	893	482	215,993
Residue	Feb-19	186,093	48,632,405	0	2,171	3,829	1,184,979	165,539	43,156,116	16,726	4,287,875	0	1,265
Cold Box Vent	Feb-19	53,243	17,394,126	32	90,291	46,654	15,436,373	6,546	1,805,813	(0)	121	11	61,528
Flare/Boot Strap	Feb-19	53,243	7,910,375	32	51,071	46,654	6,691,375	6,546	1,067,982	(0)	93,586	11	6,361
Fuel From Cheu	Feb-19	4,903	1,443,506	2	477	127	41,719	3,954	1,169,816	819	231,495	0	0
Shrinkage/Loss	Feb-19	2,809	537,269	0	0	0	0	0	0	2,809	537,269	0	0
Unaccounted*	Feb-19	22,121	3,880,409	439	169,892	16,707	2,905,313	4,963	800,209	0	1,099	11	3,896

\*Before October 2004, the values are estimated

#### Storage Operations

##### Inventory (contained helium)

	Government	Private
Beginning inventory	2,947,452	2,829,839
net acceptances +	0	0
redeliveries	0	(64,919)
In Kind Transfers	(46,394)	46,394
Conservation Crude Sales	0	0
Gain/loss	(231)	
Ending Inventory	2,900,827	2,811,314
Total Helium in Reservoir	8,019,738	
Total Helium in Storage	5,712,141	
Helium in native gas	2,307,597	

##### Crude Helium Pipeline

	Gross	Net Helium	Percent
Beginning inventory	39,353	28,004	71.16%
Measured to Pipeline (Private Plants)	18,499	11,542	62.39%
Measured from Pipeline (Private Plant)	107,534	76,447	71.09%
HEU Production	73,782	53,754	72.86%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	23,432	16,622	70.94%
Gain/Loss	(668)	(231)	

#### 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

February - 2019

NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$)**		
<b>In Kind Helium</b>								(billed quarterly)		
<b>Airgas Merchant Gases, Contract no. INC18-0102</b>										
Month										
FYTD										
<b>Air Liquide Helium America, Inc., Contract no. INC18-0104</b>										
Month										
FYTD										
<b>Air Products, L.P., Contract no. INC18-0105</b>										
Month										
FYTD										
<b>Messer, LLC, Contract no. INC18-0106</b>										
Month										
FYTD										
<b>Praxair, Inc., Contract no. INC18-0112</b>										
Month										
FYTD										
<b>Matheson Tri-Gas, Inc., Contract no. INC18-0114</b>										
Month										
FYTD										
<b>Global Gases America, Contract no. INC18-0116</b>										
Month										
FYTD										
<b>Total month</b>										
	0	0	0	0	0	0	0	\$0		
<b>Total FYTD</b>	26,754	0	0	0	0	20,370	47,124	46,394	\$3,989,884	
<b>Total CYTD</b>	0	0	0	0	0	0	0	0	\$0	
<b>Cumulative</b>	2,075,205	108,685	450	271,593	422,045	956,928	3,834,904	3,775,523	\$228,370,454	
<b>In Kind Transfers</b>							Month	FYTD	CYTD	Cumulative
Transferred							46,394	88,258	46,394	3,768,506
Volume outstanding							7,092			

\* 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 (\$)**
<b>El Paso Natural Gas</b>					
Provides Measured Firm/Interruptible Transportation Services (billed monthly)					
Month	183,967	---	202,852	1,103	\$0
FYTD	1,299,913	---	1,434,644	1,104	\$0
Cumulative	48,171,456	---	52,434,546	1,088	(\$5,088,325)
<b>Minerals Management Service</b>					
No Longer Provides Natural Gas Marketing Services					
Cumulative	---	---	---	---	(\$179,913)
<b>Tenaska</b>					
Purchaser - Natural Gas					
Month	---	---	240,600	\$1.540812	\$370,719
FYTD	---	---	1,476,300	\$1.893635	\$2,795,574
Cumulative	---	---	52,333,439	\$4.205796	\$219,277,215
<b>Sandstone</b>					
Purchaser - Natural Gas Liquids					
Month	---	82,249	8,971	\$5.107341	\$45,818
FYTD	---	462,407	50,155	\$5.362827	\$268,973
Cumulative	---	14,919,228	1,589,290	\$10.611255	\$16,864,362
<b>Total</b>					
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$\$)
<b>Total month</b>	183,967	82,249	249,571	\$1.669013	\$416,537
<b>Total FYTD</b>	1,299,913	462,407	1,526,455	\$2.007623	\$3,064,546
<b>Total CYTD</b>	459,460	173,146	562,828	\$1.984586	\$1,116,981
<b>Cumulative</b>	48,171,456	14,919,228	53,922,729	\$4.296887	\$230,873,339

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

\*\*Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

February - 2019

## Helium &amp; Natural Gas Sales

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

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

## Table 6 - Helium Resources Evaluation

February - 2019

All Volumes in Mcf at 14.7 psia & 70°F

<b>Revenue Collected From Federal Leaseholds</b>	Month*	FYTD*
Fee Sales & Royalties	\$1,716,343	\$10,302,098
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	\$91,860	\$214,707
<b>Revenue Collected from Federal Lease Holds</b>	<b>\$1,800,414</b>	<b>\$10,393,958</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)	22	101

### 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
<b>U.S. Helium Exports</b> (3)	2,520,645	2,451,207
<b>US Helium Imports</b>	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

February - 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
<b>Total All Contracts*</b>										
Crude Acquired	18,499	62.3%	11,528	48,141	22,083	27,388,305	53,543	60,966,444		
Crude Disposed	107,534	71.1%	76,447	421,619	165,834	54,276,297	7,149	26,771,944	\$483,966.83	Storage Fees
Grade-A Rdlvrd	0		0	0	0	1,478,718			\$312,457.68	RMF Fees
Net/Balance	(89,035)		(64,919)	(373,478)	(143,751)	(28,366,710)	46,394	34,194,500	2,811,314	\$796,424.51 \$3,781,893
<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>Messer, 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>Air Liquide Helium America, Inc., Contract no. 3284</b>										
Crude Acquired										
Crude Disposed										
Net/Balance										
<b>Keyes Helium Co., LLC, Contract no. 3287</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										
<b>IACX Energy, Contract no. 3297</b>										
Crude Acquired										
Crude Disposed										
Net/Balance										
<b>Uniper Global Commodities North America LLC, Contract no. 3298</b>										
Crude Acquired										
Crude Disposed										
Net/Balance										
<b>Weil Group Resources LLC, Contract no. 3299</b>										
Crude Acquired										
Crude Disposed										
Net/Balance										
<b>NAH USA Helium Marketing, Inc, Contract no. 3300</b>										
Crude Acquired										
Crude Disposed										
Net/Balance										
<b>Progressive Chemical Technologies LLC, Contract no. 3301</b>										
Crude Acquired										
Crude Disposed										
Net/Balance										

<b>Government Helium</b>	
Remaining Crude Acquired beginning of the month	2,947,452
Crude Disposed: In Kind Sales transferred for the month	(46,394)
Conservation Crude Sales/Reserve Sell Down transferred (t	0
Gains and Losses for the month	(231)
Net/Balance of Purchased Helium Remaining for Sale	2,900,827

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

\*\*Rounded to nearest dollar

\*\* New Contracts



## Table 8 - Compression & CHEU (Operations)

February - 2019

### Field/CHEU Compressor Operations

		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$1.54	#VALUE!	#VALUE!
Fuel used * (now includes field compression well head)	total MMBTU	6,348	#VALUE!	#VALUE!
#1 Compressor run time *	hours	508	3,460	120,308
#2 Compressor run time *	hours	68	538	80,168
#3 Compressor run time *	hours	439	2,377	66,196

\* Field/CHEU Compressor Operations based on Feb 19 activity

### Crude Helium Enrichment Unit (CHEU)

#### CHEU Runtime

	Month		FYTD		Cumulative
	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	667	99.2%	3,620	99.9%	133,254
Producing residue gas	540	80.3%	3,493	96.4%	130,125
Producing helium product	507	75.4%	3,460	95.5%	126,416
Producing natural gas liquids	515	76.7%	3,467	95.7%	125,505

#### CHEU Utility Usage

	Month	FYTD	Cumulative
CheU Fuel Gas (Mcf) usage Feb 19	2,760	#VALUE!	#VALUE!
CheU Pure Water Usage (gallons) Feb 19	572	1,422	317,586
Electricity Metered (Kwh) consumed Jan 19	2,883,035	14,415,175	193,352,797