

# Bureau of Land Management

## Amarillo Field Office

### Helium Operations

### Statistical Report

for



June - 2018

#### *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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*Compi* Amarillo, Texas

Issued: November 8, 2018

**REVISED**

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

Approved for Distribution: Joseph B. Peterson (Acting FM)

Date: November 7, 2018

Table 1 - Summary of Helium Operations

June - 2018

**Helium Enrichment Unit Operations**

Gas Processed	Month Gross Volume	Month Net Helium	Average Percent	Gross FYTD	Net FYTD
Measured Plant Feed (Mcf*)	536,933	84,905	15.81%	4,766,512	764,974
Helium Product (Mcf*)	116,771	87,066	74.56%	1,033,710	768,167
Residue Natural Gas (Mcf*)	291,349	0	00.00%	2,553,898	40

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

**Natural Gas & Liquids Produced**

Gas Processed	Month	FYTD
Natural Gas Sales (Mcf***)	289,278	2,562,853
NGL Sales (gallons)	103,635	911,833

\*\*\* 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Total Withdrawn (Mcf*)	542,065	85,715	15.81%	4,769,017	765,350
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	15,000	0	22,779,063
Conservation Crude Sale Volume Transferred (Mcf*)	0	0	15,000	0	903,477
Conservation Helium in Storage (EOM) (Mcf*)		3,352,446			

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

**In Kind Helium**

	Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)	0	104,414	73,176	3,629,577
Sale Volumes Outstanding (Mcf*)	61,238			

\* 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*)	13,510	8,787	65.04%	95866
Crude Disposed (Mcf*)	127,194	93,546	73.55%	866941
Net Balance (Mcf*)		(113,684)	(84,759)	(771,075)
Balance of Stored Helium End Of Month (Mcf*)		2,990,084		

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

**Revenue / Charges**

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$597,212	\$5,422,392
Reservoir Management Fees Billed (\$)	\$226,129	\$1,501,014

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

(Charges Billed (\$))	Month	FYTD
Conservation Crude Helium Sales	\$0	\$1,815,000
In Kind Sales	\$4,656,556	\$10,849,052
Natural Gas & Liquid Sales	\$688,577	\$6,934,177

**Helium Resources Evaluation**

	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,868,473	\$15,645,843
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 49

\*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

June - 2018

		Gross Withdrawal		Net Helium Withdrawal		Nitrogen		Methane	Methane	Ethane plus		Other (CO2, Ar, H2)	Cumulative
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	
<b>TOTAL</b>		<b>542,065</b>	<b>237,189,276</b>	<b>85,715</b>	<b>44,098,931</b>	<b>135,305</b>	<b>58,471,558</b>	<b>283,849</b>	<b>120,397,033</b>	<b>31,713</b>	<b>12,216,791</b>	<b>5,482</b>	<b>2,004,962</b>
BIVINS A-3	Jun-18	0	10,961,112	0	3,548,629	0	2,772,147	0	4,159,384	0	407,301	0	73,653
BIVINS A-6	Jun-18	49,180	12,549,238	20,517	7,308,151	12,354	3,087,571	14,501	1,901,502	1,440	190,203	368	61,811
BIVINS A-13	Jun-18	36,802	9,301,947	11,865	4,730,504	9,260	2,385,130	13,896	1,917,843	1,507	213,341	274	55,129
BIVINS A-14	Jun-18	41,743	10,510,468	11,398	5,778,094	10,372	2,657,530	17,806	1,813,677	1,801	196,314	366	64,853
BIVINS A-4	Jun-18	37,372	14,390,483	3,820	2,492,046	9,072	3,485,951	21,578	7,523,512	2,468	759,072	435	129,903
BUSH A-2	Jun-18	9,128	13,968,080	415	2,017,926	2,306	3,430,208	5,657	7,619,055	687	785,427	64	115,464
Injection	Jun-18	0	66,474,735	0	48,019,788	0	17,121,580	0	780,676	0	37	0	552,655
inj Bivins A-3	Jun-18	0	(25,652,315)	0	(18,384,452)	0	(6,554,549)	0	(332,777)	0	0	0	(380,537)
inj Bivins A-6	Jun-18	0	(24,412,686)	0	(17,669,978)	0	(6,486,588)	0	(143,192)	0	(72)	0	(112,856)
inj Bivins A-13	Jun-18	0	(6,490,417)	0	(4,706,191)	0	(1,656,853)	0	(122,391)	0	(2)	0	(4,980)
inj Bivins A-14	Jun-18	0	(6,501,333)	0	(4,767,421)	0	(1,602,106)	0	(126,303)	0	(7)	0	(5,497)
inj Bivins A-4	Jun-18	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Jun-18	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Jun-18	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Jun-18	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Jun-18	23,123	14,487,978	760	1,897,347	5,433	3,543,032	14,950	8,114,783	1,732	811,148	247	121,668
BIVINS A-5	Jun-18	28,989	16,693,192	5,141	2,166,043	7,475	4,099,348	14,409	9,340,836	1,723	943,013	241	143,952
BIVINS A-7	Jun-18	16,867	12,116,348	4,803	2,876,427	4,454	3,053,687	6,691	5,532,109	802	565,820	117	88,305
BIVINS A-9	Jun-18	32,141	11,186,561	859	217,665	8,107	2,759,320	20,603	7,359,931	2,289	748,028	283	101,617
BIVINS A-11	Jun-18	21,889	6,891,993	641	152,186	5,478	1,716,487	14,000	4,494,650	1,546	463,549	223	65,120
BIVINS A-15	Jun-18	35,929	10,654,019	608	445,049	8,282	2,533,833	24,053	6,872,781	2,526	690,385	460	111,971
BIVINS B-1	Jun-18	35,026	8,841,860	795	318,701	8,668	2,145,743	22,535	5,697,880	2,562	586,830	466	92,706
BIVINS B-2	Jun-18	31,206	7,365,594	577	138,773	7,817	1,847,375	20,064	4,779,358	2,169	493,775	581	106,313
BUSH A-1	Jun-18	0	5,721,962	0	104,140	0	1,356,677	0	3,830,281	0	374,216	0	56,647
BUSH A-3	Jun-18	30,669	12,840,309	9,468	3,102,440	7,876	3,179,664	11,657	5,851,509	1,399	594,798	268	111,899
BUSH A-4	Jun-18	24,686	9,130,297	2,078	1,623,553	6,399	2,286,685	14,375	4,675,436	1,688	479,685	147	64,939
BUSH A-5	Jun-18	46,001	17,631,261	11,157	4,086,685	11,930	4,430,179	20,214	8,157,520	2,413	835,200	288	121,677
BUSH A-8	Jun-18	17,862	4,722,834	323	86,589	4,380	1,146,443	11,604	3,113,203	1,237	315,396	318	61,204
BUSH A-9	Jun-18	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Jun-18	19,463	4,836,402	422	138,894	4,720	1,157,185	12,594	3,162,256	1,430	321,718	296	56,348
BUSH B-1	Jun-18	3,988	3,427,160	69	64,221	924	812,922	2,662	2,289,916	293	226,539	41	33,562
FUQUA A-1	Jun-18	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Jun-18	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Jun-18	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Jun-18	0	0	0	0	0	0	0	0	0	0	0	0
field-wide pct's				15.81%	18.59%	24.96%	24.65%	52.36%	50.76%	5.85%	5.15%	1.01%	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 Jun-18 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 - 17	101.638	25.237
Injection 2003 - 17	(1.423)	(1.159)
Produced to Date 2018	3.215	0.515
Injected to Date 2018	0.000	0.000
Amount of Raw Gas Available to CHEU	77.133	====> 8.661 total helium in reservoir
Estimated Bottom Hole Pressure	284.112	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

June - 2018

#### Crude Helium Enrichment Unit Operations

		Gross Withdrawal		Net Helium Withdrawal		Nitrogen		Methane		Ethane plus		Other (CO <sub>2</sub> , Ar, H <sub>2</sub> )	
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
Measured Feed	Jun-18	536,933	102,112,816	84,905	24,065,732	134,025	25,576,890	281,162	46,583,000	31,412	4,996,133	5,430	891,061
Calculated Feed	Jun-18	542,065	101,970,529	85,715	24,058,807	135,305	25,534,683	283,849	46,471,801	31,713	5,012,111	5,482	893,127
Feed to Box	Jun-18	537,327	101,309,264	85,715	24,058,986	135,305	25,534,765	283,849	46,471,847	31,713	5,012,107	744	231,559
Cheu Product	Jun-18	116,771	30,459,617	87,066	23,699,598	26,668	5,947,123	2,301	601,709	3	869	733	210,317
Residue	Jun-18	291,349	46,457,132	0	2,171	6,855	1,137,690	258,328	41,224,531	26,167	4,091,477	0	1,263
Cold Box Vent	Jun-18	81,297	16,782,781	56	89,935	73,519	14,892,213	7,704	1,739,107	1	121	16	61,406
Flare/Boot Strap	Jun-18	81,297	7,299,030	56	50,714	73,519	6,147,215	7,704	1,001,276	1	93,586	16	6,239
Fuel From Cheu	Jun-18	7,001	1,388,725	4	449	181	40,300	5,646	1,125,636	1,170	222,341	0	0
Shrinkage/Loss	Jun-18	4,374	512,274	0	0	0	0	0	0	4,374	512,274	0	0
Unaccounted*	Jun-18	36,535	3,629,547	(1,410)	168,264	28,082	2,710,857	9,869	745,554	(1)	1,098	(5)	3,774

\*Before October 2004, the values are estimated

#### Storage Operations

##### Inventory (contained helium)

	Government	Private
Beginning inventory	3,352,779	3,074,843
net acceptances + redeliveries	0	0
	0	(84,759)
In Kind Transfers	0	0
Conservation Crude Sales	0	0
Gain/loss	(333)	
Ending Inventory	3,352,446	2,990,084
Total Helium in Reservoir	8,661,421	
Total Helium in Storage	6,342,530	
Helium in native gas	2,318,891	

##### Crude Helium Pipeline

	Gross	Net Helium	Percent
Beginning inventory	27,775	20,310	73.12%
Measured to Pipeline (Private Plants)	13,510	8,789	65.06%
Measured from Pipeline (Private Plants)	127,194	93,546	73.55%
HEU Production	116,771	87,066	74.56%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	30,297	22,286	73.56%
Gain/Loss	(565)	(333)	

#### 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

June - 2018

	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$) **		
<b>In Kind Helium</b>											
<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>Linde Gas North America, 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>	36,878	0	0	0	0	18,122	55,000	54,146	\$4,656,556		
<b>Total FYTD</b>	72,417	1	0	0	0	56,974	129,392	127,388	\$10,849,052		
<b>Total CYTD</b>	57,046	0	0	0	0	38,232	95,279	93,803	\$8,061,497		
<b>Cumulative</b>	2,023,209	108,685	450	271,593	422,045	919,276	3,745,256	3,687,265	\$220,780,266		
<b>In Kind Transfers</b>								Month	FYTD	CYTD	Cumulative
Transferred								0	104,414	73,176	3,629,577
Volume outstanding								61,238			

\* Volumes in Mcf at 14.7 psia &amp; 70°F

+ Volumes in Mcf at 14.65 psia &amp; 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	289,278	---	318,298	1,100	\$0
FYTD	2,562,853	---	2,758,073	1,076	(\$167,982)
Cumulative	46,013,729	---	50,055,689	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	---	---	318,100	\$1.936300	\$615,937
FYTD	---	---	2,798,854	\$2.275623	\$6,369,137
Cumulative	---	---	49,913,741	\$4.317778	\$214,689,893
<b>Sandstone</b>					
Purchaser - Natural Gas Liquids					
Month	---	103,635	11,072	\$6.560658	\$72,640
FYTD	---	911,833	98,285	\$7.458122	\$733,022
Cumulative	---	14,140,070	1,505,384	\$10.873652	\$16,369,021
<b>Total</b>					
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$\$)
<b>Total month</b>	289,278	103,635	329,172	\$2.091844	<b>\$688,577</b>
<b>Total FYTD</b>	2,562,853	911,833	2,897,139	\$2.393457	<b>\$6,934,177</b>
<b>Total CYTD</b>	1,759,710	632,395	1,982,321	\$2.283235	<b>\$4,526,106</b>
<b>Cumulative</b>	46,013,729	14,140,070	51,419,125	\$4.407256	<b>\$225,790,676</b>

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

\*\*Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

June - 2018

## 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	8,962,845		8,962,845	\$671,868,990	
<b><u>Linde Gas North America, LLC</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	6,289,226		6,289,226	\$433,603,032	
<b><u>Keyes Helium Co., LLC</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	1,013,471		1,013,471	\$70,080,272	
<b><u>Matheson Tri-Gas, Inc.</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	360,034		360,034	\$38,155,146	
<b><u>Praxair, Inc.</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	5,550,116		5,550,116	\$421,704,984	
<b><u>Global Gases America</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	36,267		36,267	\$3,535,665	
<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	41,334		41,334	\$5,038,746	
<b><u>Weil Group Resources LLC</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	15,000	\$1,815,000	
Cumulative	21,000		21,000	\$2,529,000	
<b><u>NAH USA Helium Marketing, Inc</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	11,334		11,334	\$1,348,746	
<b>Total month</b>					
	0	0	0	0	
<b>Total FYTD</b>					
	0	0	15,000	\$1,815,000	
<b>Total CYTD</b>					
	0		0	\$0	
<b>Cumulative</b>					
	22,779,063		22,779,063	\$1,678,646,449	
<b>Conservation Crude Transfers</b>					
		Month	FYTD	CYTD	Cumulative
Transferred		0	15,000	0	903,477
Volume outstanding		0			

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

## Table 6 - Helium Resources Evaluation

June - 2018

All Volumes in Mcf at 14.7 psia & 70°F

<b>Revenue Collected From Federal Leaseholds</b>	Month*	FYTD*
Fee Sales & Royalties	\$1,873,077	\$15,606,724
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	\$39,119	\$371,131
<b>Revenue Collected from Federal Lease Holds</b>	<b>\$1,868,473</b>	<b>\$15,645,843</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)	49	171

### 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

June - 2018

All Volumes in Mcf at 14.65 psia & 60°F

	Metered Gas					Transferred Gas Helium		Stored Helium EOM	Charges Billed (\$)**		
	Gross Gas	Helium %	Helium	Helium			Month		Cumulative	Month	FYTD
				FYTD	CYTD	Cumulative					
<b>Total All Contracts*</b>											
Crude Acquired	13,510	65.0%	8,787	95,866	59,823	32,213,232	22,246	60,266,765			
Crude Disposed	127,194	73.5%	93,546	866,941	581,855	53,584,325	22,246	26,623,300	\$597,212	Storage Fees	
Grade-A Rdlvrd	0		0	0	0	1,478,718			<u>\$226,129.17</u>	RMF Fees	
Net/Balance	(113,684)		(84,759)	(771,075)	(522,032)	(22,849,811)	0	33,643,465	\$823,341	\$6,923,406	
<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>Air Liquide Helium America, Inc., Contract no. 3284</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>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											

Government Helium	
Remaining Crude Acquired beginning of the month	3,352,779
Crude Disposed: In Kind Sales transferred for the month	0
Conservation Crude Sales/Reserve Sell Down transferred (m)	0
Gains and Losses for the month	(333)
Net/Balance of Purchased Helium Remaining for Sale	3,352,446

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

\*\*Rounded to nearest dollar

\*\* New Contracts



## Table 8 - Compression & CHEU (Operations)

June - 2018

<b>Field/CHEU Compressor Operations</b>		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$1.94	\$2.29	\$4.67
Fuel used * (now includes field compression well head)	total MMBTU	8,093	73,839	1,884,540
Rental compressor(s) helium in fuel (Mcf)	Mcf	0	0	3645
#1 Compressor run time *	hours	720	5,567	115,126
#2 Compressor run time *	hours	609	5,883	78,006
#3 Compressor run time *	hours	109	811	62,819

\* Field/CHEU Compressor Operations based on Jun 18 activity

<b>Crude Helium Enrichment Unit (CHEU) CHEU Runtime</b>	Month		FYTD		Cumulative
	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	720	100.0%	6,304	96.2%	127,429
Producing residue gas	720	100.0%	6,169	94.2%	124,453
Producing helium product	720	100.0%	6,132	93.6%	120,786
Producing natural gas liquids	720	100.0%	6,158	94.0%	119,859

<b>CHEU Utility Usage</b>	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage Jun 18	3,000	28,085	602,326
Cheu Pure Water Usage (gallons) Jun 18	1,398	6,850	316,089
Electricity Metered (Kwh) consumed May 18	3,080,921	23,104,474	170,383,100