

Bureau of Land Management Amarillo Field Office Helium Operations Statistical Report for



August - 2019

Distribution:

Fluid Minerals Group Manager, Washington Office
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-Federal Leased Lands
-Resources Evaluation & Gas Analysis
-Division Of Helium Operations, -
Engineering and Technical Support

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"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: *November 1, 2019*

Table 1 - Summary of Helium Operations

August - 2019

Helium Enrichment Unit Operations Gas Processed	Month	Month	Average Percent	Gross FYTD	Net FYTD
	Gross Volume	Net Helium			
Measured Plant Feed (Mcf*)	461,775	69,655	15.08%	946,994	143,621
Helium Product (Mcf*)	97,561	70,562	72.33%	200,279	145,096
Residue Natural Gas (Mcf*)	215,279	0	00.00%	474,683	0

* Volumes in Mcf at 14.65 psia & 60°F

Natural Gas & Liquids Produced Gas Processed	Month	FYTD
Natural Gas Sales (Mcf****)	212,962	2,628,011
NGL Sales (gallons)	91,309	989,258

**** 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Total Withdrawn (Mcf*)	464,683	70,079	15.08%	947,990	143,754
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*)		2,812,281			

* Volumes in Mcf at 14.65 psia & 60°F

In Kind Helium	Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)	39,607	169,496	127,632	3,849,744
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
	Gross Volume	Net Helium		Helium FYTD
Crude Acquired (Mcf*)	9,182	6,502	70.81%	107729
Crude Disposed (Mcf*)	101,732	73,346	72.10%	875720
Net Balance (Mcf*)	(92,550)	(66,844)		(767,991)
Balance of Stored Helium End Of Month (Mcf*)		2,498,039		

* Volumes in Mcf at 14.65 psia & 60°F

Revenue / Charges

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$454,320	\$5,360,654
Resource Management Fees Billed (\$)	\$312,458	\$3,124,584
Total Storage and RMF Collected	\$766,778	\$8,485,238

Conservation Helium - Natural Gas - Liquid Sales (Charges Billed (\$))	Month	FYTD
Conservation Crude Helium Sales	\$0	\$0
In Kind Sales	\$0	\$11,704,092
Natural Gas & Liquid Sales	\$276,356	\$4,006,864

Helium Resources Evaluation	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,746,638	\$21,848,876
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 17

*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

August - 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		464,683	243,961,089	70,079	45,148,540	114,924	60,144,032	248,117	123,985,872	26,855	12,610,135	4,708	2,072,509
BIVINS A-3	Aug-19	0	10,961,114	0	3,548,629	0	2,772,147	0	4,159,384	0	407,301	0	73,653
BIVINS A-6	Aug-19	44,603	13,190,313	16,277	7,556,489	11,119	3,247,748	15,159	2,106,497	1,693	212,713	356	66,867
BIVINS A-13	Aug-19	32,309	9,760,291	9,709	4,873,621	8,090	2,500,018	12,784	2,094,404	1,480	233,607	246	58,642
BIVINS A-14	Aug-19	36,937	11,030,972	8,595	5,908,967	9,063	2,785,763	17,018	2,044,608	1,908	221,908	352	69,726
BIVINS A-4	Aug-19	29,548	14,825,483	2,796	2,535,489	7,061	3,589,772	17,535	7,778,914	1,822	786,446	335	134,863
BUSH A-2	Aug-19	6,598	14,075,443	283	2,022,664	1,649	3,456,960	4,161	7,686,539	463	793,113	42	116,167
Injection	Aug-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	Aug-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	Aug-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	Aug-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	Aug-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	Aug-19	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Aug-19	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Aug-19	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Aug-19	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Aug-19	17,823	14,759,879	555	1,906,122	4,162	3,606,071	11,691	8,291,939	1,237	831,277	177	124,470
BIVINS A-5	Aug-19	23,711	17,043,779	4,171	2,228,401	6,003	4,188,081	12,044	9,518,040	1,301	962,423	193	146,833
BIVINS A-7	Aug-19	14,621	12,325,950	4,348	2,938,604	3,766	3,107,735	5,768	5,614,841	638	575,053	101	89,717
BIVINS A-9	Aug-19	26,951	11,588,766	788	228,974	6,839	2,861,204	17,165	7,616,746	1,920	776,658	240	105,184
BIVINS A-11	Aug-19	17,627	7,157,832	533	160,115	4,428	1,783,220	11,235	4,664,277	1,249	482,358	183	67,862
BIVINS A-15	Aug-19	31,993	11,119,054	540	452,919	7,402	2,641,370	21,391	7,183,763	2,248	723,059	412	117,942
BIVINS B-1	Aug-19	30,487	9,283,018	707	329,024	7,444	2,253,219	19,888	5,984,944	2,053	617,404	394	98,427
BIVINS B-2	Aug-19	26,823	7,750,954	499	146,006	6,758	1,942,987	17,190	5,028,027	1,862	521,177	514	112,757
BUSH A-1	Aug-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	Aug-19	26,832	13,238,788	8,400	3,227,254	6,721	3,279,434	10,356	6,004,774	1,123	611,942	232	115,383
BUSH A-4	Aug-19	21,684	9,448,397	1,661	1,649,702	5,534	2,367,865	12,967	4,864,205	1,396	499,894	126	66,731
BUSH A-5	Aug-19	40,157	18,205,967	9,513	4,226,450	10,182	4,575,629	18,237	8,414,405	1,979	864,224	245	125,260
BUSH A-8	Aug-19	15,611	4,951,939	285	90,754	3,858	1,202,872	10,105	3,261,757	1,079	331,259	284	65,298
BUSH A-9	Aug-19	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Aug-19	15,477	5,073,068	336	144,075	3,704	1,213,750	10,167	3,317,510	1,046	338,061	224	59,672
BUSH B-1	Aug-19	4,892	3,487,947	85	65,273	1,140	827,066	3,257	2,330,406	360	231,012	51	34,189
FUQUA A-1	Aug-19	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Aug-19	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Aug-19	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Aug-19	87	0	1	0	20	0	58	0	6	0	1	0
field-wide pct's				15.08%	18.51%	24.73%	24.65%	53.39%	50.82%	5.78%	5.17%	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 Aug-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	3.596	0.545
Injected to Date 2019	0.000	0.000
Amount of Raw Gas Available to CHEU	70.362	====> 7.612 total helium in reservoir
Estimated Bottom Hole Pressure	259.199	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

August - 2019

Crude Helium Enrichment Unit Operations

		Gross Withdrawal		Net Helium Withdrawal		Nitrogen		Methane		Ethane plus		Other (CO ₂ , Ar, H ₂)	
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
Measured Feed	Aug-19	461,775	108,867,182	69,655	25,112,802	114,206	27,245,082	246,550	50,162,442	26,685	5,388,443	4,678	958,413
Calculated Feed	Aug-19	464,596	108,739,868	70,078	25,108,372	114,904	27,206,579	248,059	50,058,994	26,848	5,405,275	4,707	960,648
Feed to Box	Aug-19	460,536	108,020,784	70,078	25,108,551	114,904	27,206,661	248,059	50,059,040	26,848	5,405,269	646	241,263
Cheu Product	Aug-19	97,561	31,885,185	70,562	24,743,254	24,324	6,289,763	2,040	631,635	2	918	633	219,615
Residue	Aug-19	215,279	49,972,277	0	2,172	5,430	1,216,844	190,074	44,342,380	19,775	4,409,616	0	1,265
Cold Box Vent	Aug-19	67,747	17,796,147	34	90,908	59,254	15,786,400	8,444	1,857,104	0	122	14	61,612
Flare/Boot Strap	Aug-19	67,747	8,312,396	34	51,687	59,254	7,041,402	8,444	1,119,273	0	93,587	14	6,446
Fuel From Cheu	Aug-19	6,154	1,478,980	3	494	159	42,637	4,963	1,198,426	1,028	237,422	0	0
Shrinkage/Loss	Aug-19	5,767	565,401	0	0	0	0	0	0	5,767	565,401	0	0
Unaccounted*	Aug-19	61,484	4,142,420	(849)	167,441	22,352	3,037,000	39,984	932,950	(0)	1,098	(3)	3,931

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)

	Government	Private
Beginning inventory	2,853,997	2,525,276
net acceptances + redeliveries	0	0
	0	(66,844)
In Kind Transfers	(39,607)	39,607
Conservation Crude Sales	0	0
Gain/loss	(2,109)	
Ending Inventory	2,812,281	2,498,039
Total Helium in Reservoir	7,611,813	
Total Helium in Storage	5,310,320	
Helium in native gas	2,301,493	

Crude Helium Pipeline

	Gross	Net Helium	Percent
Beginning inventory	28,566	20,689	72.42%
Measured to Pipeline (Private Plants)	9,182	6,507	70.87%
Measured from Pipeline (Private Plants)	101,732	73,346	72.10%
HEU Production	97,561	70,562	72.33%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	30,911	22,302	72.15%
Gain/Loss	(2,666)	(2,109)	

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

August - 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 0 0 0 0 0 0 0 0 \$0										
Total FYTD 62,363 69 0 0 0 67,208 129,640 127,632 \$11,704,092										
Total CYTD 35,609 69 0 0 0 46,837 82,516 81,238 \$7,714,208										
Cumulative 2,110,814 108,754 450 271,593 422,045 1,003,765 3,917,419 3,856,761 \$236,084,662										
In Kind Transfers							Month	FYTD	CYTD	Cumulative
Transferred							39,607	169,496	127,632	3,849,744
Volume outstanding							7,092			

* Volumes in Mcf at 14.7 psia & 70°F

**Rounded to nearest dollar

+ Volumes in Mcf at 14.65 psia & 60°F

Natural Gas / Natural Gas Liquid Sales

	Natural Gas (Mcf)**	NGLs (gal)	Decatherms	Avg Btu Value	Charges Billed (\$)**
EI Paso Natural Gas Provides Measured Firm/Interruptible Transportation Services (billed monthly)					
Month	212,962	---	234,630	1,102	\$0
FYTD	2,628,011	---	2,897,029	1,102	\$0
Cumulative	49,315,587	---	53,694,079	1,089	(\$5,088,325)
Minerals Management Service No Longer Provides Natural Gas Marketing Services					
Cumulative	---	---	---	---	(\$179,913)
ETC Marketing Ltd Purchaser - Natural Gas \$\$/Unit					
Month	---	---	243,700	\$0.985494	\$240,165
FYTD	---	---	2,977,486	\$1.163614	\$3,464,643
Cumulative	---	---	53,594,025	\$4.112438	\$219,575,566
Sandstone Purchaser - Natural Gas Liquids					
Month	---	91,309	9,927	\$3.645731	\$36,191
FYTD	---	989,258	107,357	\$5.050635	\$542,221
Cumulative	---	15,363,830	1,637,521	\$10.437602	\$17,091,792
	Natural Gas (Mcf)**	NGLs (gal)	Purchased (Dth's)	\$ Per Unit (\$\$/Dth)	Total (\$)
Total month	212,962	91,309	253,627	\$1.089617	\$276,356
Total FYTD	2,628,011	989,258	3,084,843	\$1.298888	\$4,006,864
Total CYTD	1,603,591	617,748	1,871,645	\$0.877710	\$1,642,762
Cumulative	49,315,587	15,363,830	55,231,546	\$4.204584	\$231,399,120

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

**Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

August - 2019

Helium & Natural Gas Sales

	Award Volume*	Outstanding*	Sales*	Charges Billed (\$)** (billed quarterly)	
Conservation Helium					
<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 Helium 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

August - 2019

All Volumes in Mcf at 14.7 psia & 70°F

Revenue Collected From Federal Leaseholds	Month*	FYTD*
Fee Sales & Royalties	\$1,726,494	\$21,775,762
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	\$73,114	\$706,273
Revenue Collected from Federal Lease Holds	\$1,746,638	\$21,848,876

*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	2	2
Total Number of Samples Analyzed For Resources Division	0	0
Total Number of Other Samples Analyzed (2)	17	198

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

August - 2019

All Volumes in Mcf at 14.65 psia & 60°F

	Metered Gas						Transferred Gas		Stored Helium EOM	Charges Billed (\$)**	
	Gross Gas	Helium %	Helium	Helium			Month	Cumulative		Month	FYTD
				FYTD	CYTD	Cumulative					
Total All Contracts*											
Crude Acquired	9,182	70.8%	6,502	107,729	81,671	27,447,893	49,870	61,125,794			
Crude Disposed	101,732	72.1%	73,346	875,720	619,935	54,730,398	10,263	26,831,982			\$454,320.48 Storage Fees
Grade-A Rdlvrd	0		0	0	0	1,478,718					\$312,457.68 RMF Fees
Net/Balance	(92,550)		(66,844)	(767,991)	(538,264)	(28,761,223)	39,607	34,293,812	2,498,039		\$766,778.15 \$8,485,238
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 Helum Marketing, Inc, Contract no. 3300											
Crude Acquired											
Crude Disposed											
Net/Balance											
Progressive Chemical Technologies LLC, Contract no. 3301											
Crude Acquired	0 ---		0	0	0	0	0	1500	0		\$0 Storage Fees
Crude Disposed	0 ---		0	0	0	0	0	0	0%		0 RMF Fees
Net/Balance	0		0	0	0	0	0	0	0		0 \$19,446

Government Helium	
Remaining Crude Acquired beginning of the month	2,853,997
Crude Disposed: In Kind Sales transferred for the month	(39,607)
Conservation Crude Sales/Reserve Sell Down transferred (n	0
Gains and Losses for the month	(2,109)
Net/Balance of Purchased Helium Remaining for Sale	2,812,281

*Includes In Kind and Conservation Crude transfers from Government storage

**Rounded to nearest dollar

** New Contracts

Table 8 - Compression & CHEU (Operations)

August - 2019

Field/CHEU Compressor Operations

		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$0.99	\$1.27	\$4.50
Fuel used * (now includes field compression well head)	total MMBTU	7,187	80,993	1,988,276
#1 Compressor run time *	hours	644	5,976	122,824
#2 Compressor run time *	hours	718	3,396	83,026
#3 Compressor run time *	hours	74	5,036	68,855

* Field/CHEU Compressor Operations based on Aug 19 activity

Crude Helium Enrichment Unit (CHEU)

CHEU Runtime

	Month		FYTD		Cumulative
	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	726	97.6%	7,749	96.4%	137,383
Producing residue gas	724	97.3%	7,597	94.5%	134,230
Producing helium product	718	96.5%	7,438	92.5%	130,394
Producing natural gas liquids	723	97.1%	7,552	93.9%	129,590

CHEU Utility Usage

	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage Aug 19	2,847	32,138	643,272
Cheu Pure Water Usage (gallons) Aug 19	904	8,948	325,112
Electricity Metered (Kwh) consumed Jul 19	2,883,035	31,713,385	210,651,007