

Bureau of Land Management

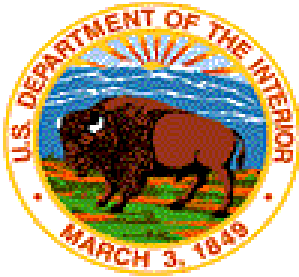
Amarillo Field Office

Helium Operations

Statistical Report

for

November - 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: October 1, 2019

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

November - 2018

Helium Enrichment Unit Operations

Gas Processed	Month	Month	Average Percent	Gross FYTD	Net FYTD
	Gross Volume	Net Helium			
Measured Plant Feed (Mcf*)	507,438	80,742	15.91%	1,040,549	165,007
Helium Product (Mcf*)	109,880	80,738	73.48%	224,677	165,553
Residue Natural Gas (Mcf*)	273,440	0	00.00%	563,705	0

* Volumes in Mcf at 14.65 psia & 60°F

Natural Gas & Liquids Produced

Gas Processed	Month	FYTD
Natural Gas Sales (Mcf***)	271,024	558,865
NGL Sales (gallons)	95,961	192,906

*** 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Total Withdrawn (Mcf*)	511,245	81,348	15.91%	1,047,662	166,136
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	300,000	23,073,063
Conservation Crude Sale Volume Transferred (Mcf*)	0	0	0	300,000	1,203,477
Conservation Helium in Storage (EOM) (Mcf*)		2,979,806			

* Volumes in Mcf at 14.65 psia & 60°F

In Kind Helium

	Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)	13,687	13,687	137,534	3,693,935
Sale Volumes Outstanding (Mcf*)	35,269			

* 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*)	13,836	8,513	61.53%	18999
Crude Disposed (Mcf*)	123,616	89,406	72.33%	167497
Net Balance (Mcf*)	(109,780)	(80,893)		(148,498)
Balance of Stored Helium End Of Month (Mcf*)		2,961,723		

* Volumes in Mcf at 14.65 psia & 60°F

Revenue / Charges

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$499,347	\$1,062,432
Reservoir Management Fees Billed (\$)	\$312,465	\$312,465
Total Storage and Resource Management fees collected (\$)	\$811,812	\$1,374,897

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	\$603,403	\$1,268,684

Helium Resources Evaluation

	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,533,826	\$4,932,874
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 15

*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

November - 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	
TOTAL		<u>511,245</u>	<u>239,841,761</u>	<u>81,348</u>	<u>44,520,502</u>	<u>126,163</u>	<u>59,125,914</u>	<u>270,483</u>	<u>121,796,042</u>	<u>28,625</u>	<u>12,368,590</u>	<u>4,626</u>	<u>2,030,713</u>
BIVINS A-3	Nov-18	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	Nov-18	49,232	12,800,984	19,475	7,409,768	12,307	3,150,564	15,382	1,978,352	1,681	198,522	387	63,779
BIVINS A-13	Nov-18	34,935	9,481,234	11,045	4,787,483	8,760	2,430,094	13,336	1,986,022	1,526	221,132	268	56,502
BIVINS A-14	Nov-18	39,635	10,714,341	10,225	5,831,935	9,772	2,707,870	17,349	1,901,816	1,920	205,977	369	66,743
BIVINS A-4	Nov-18	32,664	14,560,615	3,355	2,509,615	7,861	3,526,639	19,267	7,622,987	1,841	769,574	339	131,800
BUSH A-2	Nov-18	8,029	14,011,189	358	2,019,871	2,013	3,440,956	5,082	7,646,155	527	788,464	49	115,743
Injection	Nov-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	Nov-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	Nov-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	Nov-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	Nov-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	Nov-18	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Nov-18	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Nov-18	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Nov-18	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Nov-18	18,613	14,597,121	585	1,900,935	4,150	3,568,199	11,657	8,185,559	2,012	819,626	209	122,803
BIVINS A-5	Nov-18	26,884	16,832,152	4,824	2,191,022	6,863	4,134,562	13,713	9,410,925	1,269	950,568	216	145,075
BIVINS A-7	Nov-18	16,096	12,198,133	4,810	2,900,663	4,168	3,074,863	6,365	5,564,562	650	569,221	105	88,823
BIVINS A-9	Nov-18	30,448	11,345,755	844	222,014	7,695	2,799,493	19,463	7,461,845	2,175	759,374	271	103,029
BIVINS A-11	Nov-18	20,346	6,998,504	604	155,328	5,097	1,743,137	12,990	4,562,726	1,445	471,096	210	66,216
BIVINS A-15	Nov-18	34,930	10,833,736	591	448,088	8,061	2,575,254	23,364	6,993,074	2,465	703,046	449	114,274
BIVINS B-1	Nov-18	32,364	9,010,027	763	322,655	7,917	2,186,757	21,135	5,807,420	2,148	598,365	401	94,831
BIVINS B-2	Nov-18	28,986	7,518,580	501	141,522	6,749	1,884,373	19,299	4,879,409	2,132	504,711	306	108,565
BUSH A-1	Nov-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	Nov-18	30,857	12,998,352	9,706	3,152,257	7,744	3,219,282	11,878	5,912,048	1,243	601,482	286	113,283
BUSH A-4	Nov-18	24,330	9,253,436	2,103	1,634,117	6,356	2,318,281	14,736	4,748,605	1,055	486,877	80	65,557
BUSH A-5	Nov-18	43,752	17,854,635	10,774	4,141,854	11,128	4,486,758	19,572	8,256,645	2,028	846,301	249	123,077
BUSH A-8	Nov-18	17,257	4,811,902	311	88,197	4,219	1,168,247	11,223	3,171,099	1,206	321,591	297	62,768
BUSH A-9	Nov-18	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Nov-18	18,186	4,929,571	409	140,957	4,445	1,179,510	12,204	3,223,535	1,030	328,021	98	57,548
BUSH B-1	Nov-18	3,699	3,448,243	64	64,584	858	817,807	2,466	2,303,981	273	228,091	38	33,779
FUQUA A-1	Nov-18	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Nov-18	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Nov-18	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Nov-18	0	0	0	0	0	0	0	0	0	0	0	0
field-wide pct's				15.91%	18.56%	24.68%	24.65%	52.91%	50.78%	5.60%	5.16%	0.90%	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 Nov-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	5.868	0.936
Injected to Date 2018	0.000	0.000
Amount of Raw Gas Available to CHEU	74.481	=====> 8.240 total helium in reservoir
Estimated Bottom Hole Pressure	274.354	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

November - 2018

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	Nov-18	507,438	104,748,540	80,742	24,484,696	125,224	26,227,105	268,469	47,973,125	28,412	5,146,969	4,591	916,646
Calculated Feed	Nov-18	511,245	104,622,887	81,348	24,480,375	126,163	26,189,010	270,483	47,870,725	28,625	5,163,900	4,626	918,877
Feed to Box	Nov-18	507,368	103,939,778	81,348	24,480,554	126,163	26,189,092	270,483	47,870,771	28,625	5,163,897	749	235,464
Cheu Product	Nov-18	109,880	31,025,601	80,738	24,118,510	26,094	6,079,057	2,321	613,112	2	888	726	214,035
Residue	Nov-18	273,440	47,885,179	0	2,171	5,602	1,169,715	243,046	42,491,946	24,791	4,220,084	0	1,263
Cold Box Vent	Nov-18	78,126	17,181,089	44	90,164	69,019	15,249,035	9,047	1,780,284	0	121	15	61,485
Flare/Boot Strap	Nov-18	78,126	7,697,338	44	50,943	69,019	6,504,037	9,047	1,042,454	0	93,586	15	6,318
Fuel From Cheu	Nov-18	7,452	1,423,397	4	466	193	41,198	6,010	1,153,599	1,245	228,135	0	0
Shrinkage/Loss	Nov-18	2,587	528,292	0	0	0	0	0	0	2,587	528,292	0	0
Unaccounted*	Nov-18	35,884	3,797,249	562	169,588	25,255	2,838,511	10,059	784,175	(0)	1,098	8	3,876

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)

	Government	Private
Beginning inventory	2,995,172	3,028,929
net acceptances +	0	0
redeliveries	0	(80,893)
In Kind Transfers	(13,687)	13,687
Conservation Crude Sales	0	0
Gain/loss	(1,678)	
Ending Inventory	2,979,806	2,961,723
Total Helium in Reservoir	8,239,851	
Total Helium in Storage	5,941,529	
Helium in native gas	2,298,321	

Crude Helium Pipeline

	Gross	Net Helium	Percent
Beginning inventory	41,256	29,887	72.44%
Measured to Pipeline (Private Plants)	13,836	8,522	61.59%
Measured from Pipeline (Private Plant	123,616	89,406	72.33%
HEU Production	109,880	80,738	73.48%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	38,848	28,063	72.24%
Gain/Loss	(2,508)	(1,678)	

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

November - 2018

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		
Total FYTD										
	0	0	0	0	0	0	0	\$0		
Total CYTD										
	82,288	0	0	0	0	55,514	137,802	135,667	\$11,661,801	
Cumulative										
	2,048,451	108,685	450	271,593	422,045	936,558	3,787,780	3,729,129	\$224,380,570	
In Kind Transfers							Month	FYTD	CYTD	Cumulative
Transferred							13,687	13,687	137,534	3,693,935
Volume outstanding							35,269			

* 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	271,024	---	299,475	1,105	\$0
FYTD	558,865	---	616,831	1,104	\$0
Cumulative	47,430,408	---	51,616,733	1,088	(\$5,088,325)
Minerals Management Service					
No Longer Provides Natural Gas Marketing Services					
Cumulative	---	---	---	---	(\$179,913)
Tenaska					
Purchaser - Natural Gas					
Month	---	---	304,700	\$1.786407	\$544,318
FYTD	---	---	622,200	\$1.827541	\$1,137,096
Cumulative	---	---	51,479,339	\$4.243358	\$217,618,738
Sandstone					
Purchaser - Natural Gas Liquids					
Month	---	95,961	10,478	\$5.638944	\$59,085
FYTD	---	192,906	20,692	\$6.359373	\$131,588
Cumulative	---	14,649,727	1,559,827	\$10.723611	\$16,726,978
Total					
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$)
Total month	271,024	95,961	315,178	\$1.914484	\$603,403
Total FYTD	558,865	192,906	642,892	\$1.973401	\$1,268,684
Total CYTD	3,176,389	1,142,052	3,602,362	\$2.168829	\$7,812,907
Cumulative	47,430,408	14,649,727	53,039,166	\$4.334609	\$229,077,477

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

**Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

November - 2018

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					
	300,000		300,000	\$74,540,000	
Cumulative					
	23,073,063		23,073,063	\$1,762,102,941	
Conservation Crude Transfers					
		Month	FYTD	CYTD	Cumulative
Transferred		0	0	300,000	1,203,477
Volume outstanding		0			

* Volumes in Mcf at 14.65 psia & 60°F

Table 6 - Helium Resources Evaluation

November - 2018

All Volumes in Mcf at 14.7 psia & 70°F

Revenue Collected From Federal Leaseholds	Month*	FYTD*
Fee Sales & Royalties	\$1,529,823	\$4,893,646
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	\$39,228	\$74,453
Revenue Collected from Federal Lease Holds	\$1,533,826	\$4,932,874

*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)	15	35

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

November - 2018

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	13,836	61.5%	8,513	18,999	101,479	27,359,163	20,681	60,815,243			
Crude Disposed	123,616	72.3%	89,406	167,497	1,019,705	54,022,175	6,994	26,727,257			\$499,346.96 Storage Fees
Grade-A Rdlvrd	0		0	0	0	1,478,718					\$312,464.93 RMF Fees
Net/Balance	(109,780)		(80,893)	(148,498)	(918,226)	(28,141,730)	13,687	34,087,986	2,961,723		\$811,811.89 \$1,374,897
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	2,995,172
Crude Disposed: In Kind Sales transferred for the month	(13,687)
Conservation Crude Sales/Reserve Sell Down transferred (t	0
Gains and Loses for the month	(1,678)
Net/Balance of Purchased Helium Remaining for Sale	2,979,806

*Includes In Kind and Conservation Crude transfers from Government storage

**Rounded to nearest dollar

** New Contracts

Table 8 - Compression & CHEU (Operations)

November - 2018

Field/CHEU Compressor Operations

		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$1.87	\$1.87	\$4.61
Fuel used * (now includes field compression well head)	total MMBTU	8,828	17,656	1,924,939
Rental compressor(s) helium in fuel (Mcf)	Mcf	0	0	0
#1 Compressor run time *	hours	721	1,465	118,313
#2 Compressor run time *	hours	69	138	79,768
#3 Compressor run time *	hours	102	776	64,595

* Field/CHEU Compressor Operations based on Nov 18 activity

Crude Helium Enrichment Unit (CHEU)

CHEU Runtime

	Month		FYTD		Cumulative
	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	721	100.1%	1,465	100.1%	131,100
Producing residue gas	721	100.1%	1,465	100.1%	128,098
Producing helium product	721	100.1%	1,465	100.1%	124,421
Producing natural gas liquids	721	100.1%	1,464	100.0%	123,502

CHEU Utility Usage

	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage Nov 18	3,104	6,208	617,342
Cheu Pure Water Usage (gallons) Nov 18	72	144	316,308
Electricity Metered (Kwh) consumed Oct 18	2,883,035	5,766,070	184,703,692