Bureau of Land Management



Amarillo Field Office Helium Operations Statistical Report for

January - 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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Compiled by: Joan Grochowina 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

January - 2019

Holium Envictment Unit Operations		NA (1			
Helium Enrichment Unit Operations Gas Processed	Month Gross Volume	Month Net Helium	Average Percent	Gross FYTD	Net FYTD
Measured Plant Feed (Mcf*)	512,390	80,898	15.79%	2,073,889	328,461
Helium Product (Mcf*)	111,036	81,135	73.07%	448,797	329,485
Residue Natural Gas (Mcf*) * Volumes in Mcf at 14.65 psia & 60°F	277,052	0	00.00%	1,124,838	0
Natural Gas & Liquids Produced					
Gas Processed				Month	
Natural Gas Sales (Mcf***)					FYTD
NGL Sales (gallons)				275,493	1,115,946
*** Volumes in Mcf at 14.73 psia & 60°F				90,897	380,158
Bush Dome Reservoir Operations	Month	Month			
Conservation gases from all sources	Gross Volume	Net Helium	Average Percent	Gross FYTD	Net FYTD
Total Withdrawn (<i>Mcf*</i>)	513,182	81,025	15.79%	2,083,813	330,037
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				I	
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*)		2,947,452			
* Volumes in Mcf at 14.65 psia & 60°F					
In Kind Helium		Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)		0	41,864	0	3,722,112
Sale Volumes Outstanding (Mcf*)		53,486			
* Volumes in Mcf at 14.65 psia & 60°F					
Private Company Helium Storage Contracts		Month	Month		Annual
Contact Activity		Gross Volume	Net Helium	Average Percent	Helium FYTD
Crude Acquired (Mcf*)		17,792	10,555	59.32%	36613
Crude Disposed (<i>Mcf*</i>)		125,753	89,387	71.08%	345172
Net Balance (Mcf*)		(107,961)			(308,559)
Balance of Stored Helium End Of Month (Mcf*)			2,829,839		
* Volumes in Mcf at 14.65 psia & 60°F			,,		
<u>Revenue / Charges</u>					
Helium Storage Contracts (Charges Billed (\$)				Month	FYTD
Storage Fees Billed (\$)				\$497,831	\$2,048,088
Reservoir Management Fees Billed (\$)				\$312,458	\$937,380
Total Storage and Resource Management fees collexted (\$)				\$810,288	\$2,985,469
Conservation Helium - Natural Gas - Liquid Sa	ales	(Charges Billed (\$)		Month	FYTD
Conservation Crude Helium Sales		,		\$0	\$0
In Kind Sales				\$0	\$3,989,884
Natural Gas & Liquid Sales				\$700,443	\$2,648,009
Helium Resources Evaluation				Month	FYTD
Revenue Collected from Federal Lease Holds				\$1,976,697	\$8,593,543
Helium Sample Collection Report for month Submitted	- 0	Received -	0	Analyzed -	32
				*Rounde	d to nearest dollar

Table 2 - Bush Dome Reservoir Operations

January - 2019

		Gross V	Vithdrawal	Net Helium	Withdrawal	Nitro	ogen	Methane	Methane	Ethar	e plus	Other (CO2, Ar, H2)	1 1
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
TOTAL		<u>513,182</u>	<u>240,877,912</u>	<u>81,025</u>	44,684,403	126,933	59,382,433	270,092	122,341,787	<u>30,070</u>	12,428,367	<u>5,062</u>	2,040,922
BIVINS A-3	Jan-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	Jan-19	49,856	12,901,546	19,340	7,448,974	12,458	3,175,694	15,920	2,010,285	1,745	202,020	394	64,574
BIVINS A-13	Jan-19	35,414	9,552,580	11,108	4,809,929	8,878	2,447,983	13,598	2,013,359	1,556	224,259	273	57,051
BIVINS A-14	Jan-19	39,930	10,794,805	10,076	5,852,355	9,837	2,727,697	17,685	1,937,347	1,957	209,907	375	67,498
BIVINS A-4	Jan-19	32,899	14,626,968	3,301	2,516,314	7,841	3,542,491	19,269	7,661,918	2,107	773,699	380	132,547
BUSH A-2	Jan-19	7,914	14,027,195	347	2,020,575	1,970	3,444,948	4,970	7,656,224	575	789,602	53	115,847
Injection	Jan-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	Jan-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	Jan-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	Jan-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	Jan-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	Jan-19	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Jan-19	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Jan-19	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Jan-19	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Jan-19	20,695	14,639,098	672	1,902,304	4,806	3,577,973	13,509	8,213,018	1,493	822,576	214	123,227
BIVINS A-5	Jan-19	26,579	16,886,047	4,757	2,200,712	6,718	4,148,248	13,378	9,438,176	1,509	953,392	218	145,518
BIVINS A-7	Jan-19	16,164	12,230,729	4,799	2,910,351	4,155	3,083,255	6,350	5,577,382	746	570,691	114	89,049
BIVINS A-9	Jan-19	30,373	11,407,167	857	223,743	7,711	2,815,093	19,361	7,500,991	2,173	763,764	271	103,576
BIVINS A-11	Jan-19	20,000	7,039,045	599	156,541	5,033	1,753,345	12,740	4,588,548	1,421	473,975	207	66,636
BIVINS A-15	Jan-19	35,185	10,904,626	598	449,293	8,159	2,591,702	23,491	7,040,396	2,483	708,046	454	115,189
BIVINS B-1	Jan-19	32,238	9,075,258	757	324,191	7,852	2,202,671	20,965	5,849,905	2,243	602,823	421	95,668
BIVINS B-2	Jan-19	28,006	7,575,222	693	142,732	7,119	1,898,688	17,687	4,915,367	2,127	509,019	379	109,416
BUSH A-1	Jan-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	Jan-19	30,723	13,060,486	9,597	3,171,718	7,687	3,234,862	11,826	5,935,995	1,345	604,097	269	113,814
BUSH A-4	Jan-19	24,302	9,302,295	2,007	1,638,173	6,175	2,330,706	14,350	4,777,467	1,622	490,099	147	65,850
BUSH A-5	Jan-19	44,169	17,943,567	10,747	4,163,563	11,165	4,509,277	19,728	8,296,383	2,253	850,721	276	123,622
BUSH A-8	Jan-19	17,256	4,846,757	315	88,833	4,265	1,176,865	11,165	3,193,650	1,198	324,011	312	63,398
BUSH A-9	Jan-19	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Jan-19	17,829	4,965,701	391	141,752	4,253	1,188,151	11,673	3,247,247	1,247	330,482	265	58,068
BUSH B-1	Jan-19	3,652	3,455,569	63	64,712	851	819,516	2,430	2,308,854	270	228,633	38	33,855
FUQUA A-1	Jan-19	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Jan-19	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Jan-19	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Jan-19	1	0	0	0	0	0	1	0	0	0	0	0
field-	wide pcts			15.79%	18.55%	24.73%	24.65%	52.63%	50.79%	5.86%	5.16%	0.99%	0.85%

Latest estimates of reserves and feed to HEU

Jan-19

As of EOM

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

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	0.513	0.081
Injected to Date 2019	0.000	0.000
Amount of Raw Gas Available to CHEU	73.445 ====>	8.076 total helium in reservoir
Estimated Bottom Hole Pressure	270.542	

Volumes in BCF

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

Crude Helium Enrichment Unit Operations

January - 2019

		Gross V	Vithdrawal	Net Helium	n Withdrawal	Nitr	ogen	Met	hane	Ethan	e plus	Other (CC	D2, Ar, H2)
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
Measured Feed	Jan-19	512,390	105,781,880	80,898	24,648,149	126,737	26,482,927	269,677	48,517,388	30,024	5,206,588	5,054	926,828
Calculated Feed	Jan-19	513,181	105,659,038	81,025	24,644,276	126,933	26,445,528	270,092	48,416,470	30,070	5,223,678	5,062	929,086
Feed to Box	Jan-19	508,871	104,967,239	81,025	24,644,455	126,933	26,445,610	270,092	48,416,516	30,070	5,223,674	752	236,983
Cheu Product	Jan-19	111,036	31,249,722	81,135	24,282,442	26,795	6,132,969	2,374	617,909	0	891	730	215,511
Residue	Jan-19	277,052	48,446,312	0	2,171	5,717	1,181,150	246,180	42,990,577	25,154	4,271,149	2	1,265
Cold Box Vent	Jan-19	78,997	17,340,883	47	90,260	69,603	15,389,719	9,331	1,799,267	(0)	121	16	61,517
Flare/Boot Strap	Jan-19	78,997	7,857,132	47	51,039	69,603	6,644,721	9,331	1,061,436	(0)	93,586	16	6,350
Fuel From Cheu	Jan-19	7,551	1,438,603	4	474	196	41,592	6,090	1,165,862	1,262	230,675	0	0
Shrinkage/Loss	Jan-19	3,655	534,460	0	0	0	0	0	0	3,655	534,460	0	0
Unaccounted*	Jan-19	30,581	3,858,289	(161)	169,453	24,622	2,888,606	6,116	795,245	0	1,099	4	3,885

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)		
	Government	Private
Beginning inventory	2,949,557	2,908,671
net acceptances +	0	0
redeliveries	0	(78,832)
In Kind Transfers	0	0
Conservation Crude Sales	0	0
Gain/loss	(2,106)	
Ending Inventory	2,947,452	2,829,839
Total Helium in Reservoir	8,075,949	
Total Helium in Storage	5,777,291	
Helium in native gas	2,298,659	

	Gross	Net Helium	Percent
Beginning inventory	38,651	27,722	71.72%
Measured to Pipeline (Private Plants)	17,792	10,639	59.80%
Measured from Pipeline (Private Plant	125,753	89,387	71.08%
HEU Production	111,036	81,135	73.07%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	39,353	28,004	71.16%
Gain/Loss	(2,373)	(2,106)	

Tuck Trigg Reservoir Operations

			Since Field
Native Gas (Gross)	Month	Fiscal Year	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

January - 2019

	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$)**
				In Kind H	elium				(billed quarterly)
Airgas Merchant (Month FYTD	Gases, Contra	ict no. INC1	8-0102						
Air Liquide Heliun Month FYTD	n America, Ind	c., Contract	no. INC18	3-0104					
Air Products, L.P. Month FYTD	, Contract no.	INC18-010	5						
Messer, LLC, Con Month FYTD	tract no. INC1	18-0106							
Praxair, Inc., Cont Month FYTD	ract no. INC1	8-0112							
Matheson Tri-Gas Month FYTD	, Inc., Contra	ct no. INC1	8-0114						
Global Gases Ame Month FYTD	erica, Contrac	t no. INC18	3-0116						
Total month	0	0	0	0	0	0	0	0	\$0
Total FYTD	26,754	0	0	-	0	20,370	47,124	46,394	\$3,989,884
Total CYTD	0	0	0	0	0	0	0	0	\$0
Cumulative	2,075,205	108,685	450	271,593	422,045	956,928	3,834,904	3,775,523	\$228,370,454
In Kind Trans	fers						Month	FYTD	CYTD Cumulative
Transferred Volume outstanding							0 53,486	41,864	0 3,722,112

* Volumes in Mcf at 14.7 psia & 70°F

+ Volumes in Mcf at 14.65 psia & 60°F

Natural Gas / Natural Gas Liquid Sales

Month 275,493 303,662 1,102 \$0 FYTD 1,115,946 1,231,792 1,104 \$0 Cumulative 47,987,489 52,231,694 1,088 (\$5,088,325) Minerals Management Service No Longer Provides Natural Gas Marketing Services (\$179,913) Cumulative (\$1,028 \$657,568 Month 303,300 \$2,168045 \$657,568 FYTD 52,092,839 \$4,218105 \$218,906,496 Cumulative 52,092,839 \$4,218105 \$218,906,496 Sandstone 52,092,839 \$4,218105 \$42,875 Month 52,092,839 \$4,218105 \$42,875 Sandstone 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5,418479 \$223,155	
Month 275,493 303,662 1,102 \$0 FYTD 1,115,946 1,231,792 1,104 \$0 Cumulative 47,987,489 52,231,694 1,088 (\$5,088,325) Minerals Management Service No Longer Provides Natural Gas Marketing Services (\$179,913) Cumulative (\$1,020 \$6,088,325) Month 52,231,694 1,088 (\$5,088,325) Minerals Management Service No Longer Provides Natural Gas Marketing Services (\$179,913) Tenaska Purchaser - Natural Gas (\$1,90,913) Month 303,300 \$2,168045 \$657,568 FYTD 1,235,700 \$1,962,332 \$2,424,854 Cumulative 52,092,839 \$4,218105 \$218,906,496 Sandstone 52,092,839 \$4,306065 \$42,875	\$)**
FYTD 1,115,946 1,231,792 1,104 \$0 Cumulative 47,987,489 52,231,694 1,088 (\$5,088,325) Minerals Management Service No Longer Provides Natural Gas Marketing Services (\$179,913) Tenaska Purchaser - Natural Gas (\$179,913) Tenaska Purchaser - Natural Gas \$\$/Unit \$\$ Month 303,300 \$\$2,168045 \$\$657,568 FYTD 1,235,700 \$\$1.962332 \$\$2,424,854 Cumulative 52,092,839 \$\$4.218105 \$\$218,906,496 Sandstone Purchaser - Natural Gas Liquids 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	nonthly)
Cumulative 47,987,489 52,231,694 1,088 (\$5,088,325) Minerals Management Service No Longer Provides Natural Gas Marketing Services (\$179,913) Tenaska Purchaser - Natural Gas \$\$//unit \$\$//unit \$\$//unit Month 303,300 \$\$2.168045 \$657,568 FYTD 1,235,700 \$1.962332 \$2,424,854 Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
Minerals Management Service No Longer Provides Natural Gas Marketing Services Cumulative (\$179,913) Tenaska Purchaser - Natural Gas \$\$/Unit Month 303,300 \$2.168045 \$657,568 FYTD 1,235,700 \$1.962332 \$2,424,854 Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids \$4.306065 \$42,875 Month 380,158 41,184 \$5.418479 \$223,155	
Cumulative (\$179,913) Tenaska Purchaser - Natural Gas \$\$/Unit \$\$ Month 303,300 \$2.168045 \$657,568 FYTD 1,235,700 \$1.962332 \$2,424,854 Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
Tenaska Month Purchaser - Natural Gas \$\$/Unit Month 303,300 \$2.168045 \$657,568 FYTD 1,235,700 \$1.962332 \$2,424,854 Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
Month 303,300 \$2.168045 \$657,568 FYTD 1,235,700 \$1.962332 \$2,424,854 Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
FYTD 1,235,700 \$1.962332 \$2,424,854 Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids \$4,306065 \$42,875 Month 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
Cumulative 52,092,839 \$4.218105 \$218,906,496 Sandstone Purchaser - Natural Gas Liquids 52,092,839 \$4.218105 \$218,906,496 Month 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
Sandstone Purchaser - Natural Gas Liquids Month 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
Month 90,897 9,957 \$4.306065 \$42,875 FYTD 380,158 41,184 \$5.418479 \$223,155	
FYTD 380,158 41,184 \$5.418479 \$223,155	
Cumulative 14,836,979 1,580,319 \$10.642499 \$16,818,544	
Natural Gas (Mcf)*** NGLs (gal) Purchased (Dth's) \$\$ Per Unit (\$\$/Dth) Total	(\$\$)
Total month 275,493 90,897 313,257 \$2.236003 \$7	00,443
Total FYTD 1,115,946 380,158 1,276,884 \$2.073805 \$2,6	48,009
Total CYTD 275,493 90,897 313,257 \$2.236003 \$7	00,443
Cumulative 47,987,489 14,836,979 53,673,158 \$4.309106 \$230,4	56,802

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

**Rounded to nearest dollar

**Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down Helium & Natural Gas Sales

	Charges	Charges Billed (\$)**			
	Award Volume* Conservatio	Outstanding* n Helium	Sales*	Charges	(billed quarterly)
Air Liquide Helium America, Inc.					(Direct quarterry)
Month	0	0	0	\$0	
FYTD	0	0	0	\$0 \$0	
Cumulative	335,217		335,217	\$25,454,815	
Air Products, L.P.					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	9,201,991		9,201,991	\$735,759,540	
Messer, LLC					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	6,310,276		6,310,276	\$437,286,782	
Keyes Helium Co., LLC					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	1,016,747		1,016,747	\$70,653,572	
Matheson Tri-Gas, Inc.					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	361,534		361,534	\$38,417,646	
Praxair, Inc.					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	5,577,644		5,577,644	\$426,522,384	
Global Gases America					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	37,767		37,767	\$3,798,165	
Airgas Merchant Gases					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
	15,667		15,667	\$1,488,365	
IACX Energy Month	0	0		¢0.	
	0	0	0	\$0 ©	
FYTD	0	0	0	\$0	
Cumulative Uniper Global Commodities North Americ	16,220		16,220	\$1,720,180	
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	42,834	0	42,834	\$0 \$5,301,246	
Weil Group Resources LLC	42,034		42,034	ψ 0,001,24 0	
Month	0	0	0	\$0	
FYTD	0	0	0	\$0 \$0	
Cumulative	22,500	0	22,500	\$2,791,500	
NAH USA Helum Marketing, Inc	22,000		22,000	φ2,101,000	
Month	0	0	0	\$0	
FYTD	0	0	0	\$0 \$0	
Cumulative	12,834		12,834	\$1,611,246	
Progressive Chemical Technologies LLC			,	,	
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	0	Ū	.,200,
	* \/olumos	in Mcf at 14.65 psia &	60°E		

Table 6 - Helium Resources Evaluation

All Volumes in Mcf at 14.7 psia & 70°F

Revenue Collected From Federal Leaseholds	Month*	FYTD*
Fee Sales & Royalties	\$2,009,514	\$8,585,755
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	<u>\$7,789</u>	<u>\$122,848</u>
Revenue Collected from Federal Lease Holds	\$1,976,697	\$8,593,543

*Totals do not sum

Helium Analysis and Evaulation	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)	32	79

U.S. Helium Production

Domestic	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 All Volumes in Mcf at 14.65 psia & 60°F

January - 2019

All Volumes in Mcf at 14.65 psia & 60°F											
	Cross Cos			ed Gas	Helium		Transferred Gas Helium		Stored		s Billed
	Gross Gas	Month	Helium	FYTD	CYTD	Cumulative	Month	Cumulative	Helium EOM	(ع) Month)** FYTD
Total All Contra	acts*		1		0.1.2			C annanan r C			
Crude Acquired	17,792	59.3%	10,555	36,613	10,555	27,376,777	8,865	60,908,600			
Crude Disposed	125,753	71.1%	89,387	345,172	89,387	54,199,850	8,865	26,764,795		\$497,830.65	Storage Fees
Grade-A Rdlvrd	0		0	0	0	1,478,718	,			<u>\$312,457.68</u>	RMF Fees
Net/Balance	(107,961)		(78,832)	(308,559)	(78,832)		0	34,143,805	2,829,839	\$810,288.32	\$2,985,469
Total Prior Con		MINATED)	(-) /	((/			- , -,	1 1		* ,,
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				0		
Messer, LLC, C		3249				-,			-		
Crude Acquired											
Crude Disposed											
Net/Balance											
Praxair, Inc., Co	ontract no	3251									
Crude Acquired		5201									
Crude Disposed											
Net/Balance											
Air Products, L	P Contrac	t no 3256									
Crude Acquired		. 110. 3230									
Crude Acquired Crude Disposed											
Net/Balance											
Air Liquide Hel	ium America	a. Inc., Con	tract no 3	284							
Crude Acquired		.,, 0011		-07							
Crude Disposed											
Net/Balance											
Keyes Helium (ntroot no f	2007								
Crude Acquired	50., LLC, CC		5201								
Crude Disposed Net/Balance											
	Cas Inc. Ca	ntroot no 3	200								
Matheson Tri-G	bas, Inc., Co	ntract no. 3	0200								
Crude Acquired											
Crude Disposed											
Net/Balance	1000										
Airgas Merchar	nt Gases, Co	ontract no.	3290								
Crude Acquired											
Crude Disposed											
Net/Balance			202								
Global Gases A Crude Acquired	America, Col	ntract no. 3	293								
Crude Disposed											
Net/Balance											
Linn Operating	, Inc., Contr	act no. 329	6								
Crude Acquired											
Crude Disposed											
Net/Balance											
IACX Energy, C	Contract no.	3297									
Crude Acquired											
Crude Disposed											
Net/Balance											
Uniper Global (Commoditie	s North ∆m	ericaLLC	. Contract	no. 3298						
Crude Acquired				,							
Crude Disposed											
Net/Balance											
Weil Group Res	sources LLC	C, Contract	no. 3299								
Crude Acquired											
Crude Disposed											
Net/Balance											
NAH USA Helur	m Marketinc	, Inc, Conti	ract no. 33	300							
Crude Acquired											
Crude Disposed											
Net/Balance											
Progressive Ch	nemical Tecl	hnologies L	LC, Contr	ract no. 33	01						
Crude Acquired		- J									
Crude Disposed											
Net/Balance											
Covernment II	olium										
Government He	enunn										

Government H	elium	
Remaining Crude	Acquired beginning of the month	2,949,557
Crude Disposed:	In Kind Sales transferred for the month	0
	Conservation Crude Sales/Reserve Sell Down transferred (I	0
	Gains and Loses for the month	<u>(2,106)</u>
Net/Balance of Pu	rchased Helium Remaining for Sale	2,947,452

*Includes In Kind and Conservation Crude transfers from Government storage ** New Contracts

Table 8 - Compression & CHEU (Operations)

January - 2019

Field/CHEU Compressor Operations			FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$2.17	#VALUE!	#VALUE!
Fuel used * (now includes field compression well head)	total MMBTU	#VALUE!	#VALUE!	#VALUE!
Rental compressor(s) helium in fuel (Mcf)	Mcf	0	0	0
#1 Compressor run time *	hours	743	2,952	119,800
#2 Compressor run time *	hours	4	470	80,100
#3 Compressor run time *	hours	743	1,938	65,757

* Field/CHEU Compressor Operations based on Jan 19 activity

Crude Helium Enrichment Unit (CHEU)	Month		FY	Cumulative	
CHEU Runtime	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	744	100.0%	2,953	100.0%	132,588
Producing residue gas	744	100.0%	2,953	100.0%	129,586
Producing helium product	744	100.0%	2,953	100.0%	125,909
Producing natural gas liquids	744	100.0%	2,952	100.0%	124,990

CHEU Utility Usage	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage Jan 19	#VALUE!	#VALUE!	#VALUE!
Cheu Pure Water Usage (gallons) Jan 19	676	850	317,014
Electricity Metered (Kwh) consumed Dec 18	2,883,035	11,532,140	190,469,762