

Bureau of Land Management

Amarillo Field Office

Helium Operations

Statistical Report

for

February - 2017



Distribution:

Fluid Minerals Group Manager, Washington Office
NMSO, New Mexico State Director
NMSO, Associate State Director
NMSO, Petroleum Engineer
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-Federal Leased Lands
-Resources Evaluation & Gas Analysis
-Division Of Helium Operations, -
Engineering and Technical Support

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Amarillo, Texas

Compiled by: Joan Grochowina

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Revised

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

Approved for Distribution: Joan Grochowina
Helium Storage Analyst, AmFO

Date: June 9, 2017

Table 1 - Summary of Helium Operations

February - 2017

Helium Enrichment Unit Operations

Gas Processed	Month Gross Volume	Month Net Helium	Average Percent	Gross FYTD	Net FYTD
Measured Plant Feed (Mcf*)	455,763	78,604	17.25%	2,374,378	400,110
Helium Product (Mcf*)	105,980	78,393	73.97%	536,376	398,174
Residue Natural Gas (Mcf*)	238,243	0	00.00%	1,234,229	24

* Volumes in Mcf at 14.65 psia & 60°F

Natural Gas & Liquids Produced

Gas Processed	Month	FYTD
Natural Gas Sales (Mcf***)	260,450	1,347,726
NGL Sales (gallons)	93,044	461,679

*** 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Total Withdrawn (Mcf*)	488,345	84,223	17.25%	2,528,990	421,145
Crude Injection (Mcf*)	0	0	00.00%	9,764	7,204
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	825,000	0	21,952,729
Conservation Crude Sale Volume Transferred (Mcf*)	15,000	0	825,000	0	21,937,729
Conservation Helium in Storage (EOM) (Mcf*)		4,443,777			

* Volumes in Mcf at 14.65 psia & 60°F

In Kind Helium

	Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)	0	74,669	35,094	3,460,147
Sale Volumes Outstanding (Mcf*)	3,789			

* 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*)	29,742	18,693	62.85%	129,702
Crude Disposed (Mcf*)	138,425	99,159	71.63%	501,766
Net Balance (Mcf*)	(108,683)	(80,466)		(372,064)
Balance of Stored Helium End Of Month (Mcf*)		3,273,202		

* Volumes in Mcf at 14.65 psia & 60°F

Revenue / Charges

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$705,230	\$3,466,202
Reservoir Management Fees Billed (\$)	\$172,999	\$691,997

Field Compressor Charges (Charges Billed (\$))

	Month	FYTD
Funded by the Refiners (provides for booster compression services)	\$0	\$0
Cliffside Refiners, LP, by Agreement #GDA010003 (reimburses BLM for fuel, labor, supplies, etc.)	\$0	\$0
Net-Total (Funded by the Refiners for compression costs.)	\$0	\$0

Enrichment Unit Charges (Charges Billed (\$))

	Month	FYTD
Reservoir Management Fees (RMF)	\$172,999	\$691,997
Total operating costs	(\$934,158)	(\$4,430,090)
Sub Total - Items provided by BLM	\$424,198	\$1,880,291
Total - Cliffside Refiners, LP, GDA030001	(\$509,960)	(\$2,549,799)

Conservation Helium - Natural Gas - Liquid Sales (Charges Billed (\$))

	Month	FYTD
Conservation Crude Helium Sales	\$0	\$0
In Kind Sales	\$0	\$3,090,475
Natural Gas & Liquid Sales	\$707,635	\$3,853,282

Helium Resources Evaluation

	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,645,988	\$6,948,700
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 15

*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

February - 2017

		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		488,345	228,761,636	84,223	42,732,422	121,915	56,382,207	251,829	115,999,502	26,061	11,727,553	4,317	1,919,952
BIVINS A-3	Jan-00	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	Jan-00	44,357	11,793,564	20,605	6,976,185	11,060	2,899,327	11,183	1,693,673	1,180	168,226	328	56,152
BIVINS A-13	Jan-00	29,296	8,751,244	9,707	4,550,608	7,274	2,248,243	10,884	1,711,187	1,212	190,193	219	51,015
BIVINS A-14	Jan-00	34,916	9,860,565	10,397	5,592,699	8,576	2,498,055	14,118	1,543,585	1,515	167,191	311	59,035
BIVINS A-4	Jan-00	34,191	13,782,834	3,914	2,424,717	8,248	3,339,318	19,610	7,174,089	2,057	721,583	362	123,128
BUSH A-2	Jan-00	38,395	13,496,995	3,540	1,983,378	9,645	3,311,597	22,518	7,336,449	2,434	753,371	257	112,200
Injection	Jan-00	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-00	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-00	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-00	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-00	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-00	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Jan-00	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Jan-00	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Jan-00	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Jan-00	18,450	14,149,673	630	1,885,622	4,309	3,463,832	12,061	7,894,391	1,266	787,520	184	118,308
BIVINS A-5	Jan-00	49,194	16,323,663	9,146	2,097,866	12,569	4,005,014	24,452	9,157,102	2,649	922,706	378	140,975
BIVINS A-7	Jan-00	8,705	11,951,837	2,654	2,827,531	2,269	3,010,993	3,354	5,467,998	371	558,140	57	87,175
BIVINS A-9	Jan-00	30,907	10,653,596	729	204,131	7,931	2,623,742	19,832	7,018,145	2,156	710,559	260	97,020
BIVINS A-11	Jan-00	2,085	6,573,524	63	142,858	530	1,636,148	1,329	4,291,254	144	441,323	20	61,941
BIVINS A-15	Jan-00	29,934	10,093,437	523	435,389	7,020	2,403,500	19,958	6,498,207	2,067	651,372	366	104,969
BIVINS B-1	Jan-00	30,473	8,311,706	701	306,378	7,722	2,017,204	20,567	5,361,071	1,335	543,151	149	83,901
BIVINS B-2	Jan-00	24,301	6,890,515	462	129,873	6,183	1,727,477	15,567	4,474,394	1,658	461,085	432	97,686
BUSH A-1	Jan-00	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-00	26,390	12,347,010	8,838	2,940,992	6,704	3,054,836	9,572	5,668,811	1,057	574,642	219	107,729
BUSH A-4	Jan-00	18,362	8,799,177	1,690	1,594,423	4,702	2,201,881	10,707	4,482,043	1,159	457,797	104	63,034
BUSH A-5	Jan-00	38,733	16,936,828	10,052	3,903,822	9,912	4,253,379	16,774	7,863,616	1,773	798,900	222	117,111
BUSH A-8	Jan-00	17,349	4,405,417	322	80,770	4,314	1,068,024	11,240	2,907,261	1,183	293,627	290	55,735
BUSH A-9	Jan-00	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Jan-00	9,291	4,634,798	197	134,460	2,234	1,108,670	6,102	3,030,440	630	307,816	129	53,411
BUSH B-1	Jan-00	3,014	3,362,001	54	63,081	712	797,699	2,002	2,246,511	217	221,802	29	32,908
FUQUA A-1	Jan-00	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Jan-00	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Jan-00	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Jan-00	0	0	0	0	0	0	0	0	0	0	0	0
field-wide pct				17.25%	18.68%	24.96%	24.65%	51.57%	50.71%	5.34%	5.13%	0.88%	0.84%

Latest estimates of reserves and feed to HEU

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

As of EOM Jan-00 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 - 15	95.429	23.389
Injection 2003 - 15	(1.423)	(1.089)
Produced to Date 2017	0.951	0.161
Injected to Date 2017	0.000	0.000
Amount of Raw Gas Available to CHEU	85.606	=====> 10.792 total helium in reservoir
Estimated Bottom Hole Pressure	315.284	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 - 2017

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	Jan-00	455,763	93,636,929	78,604	22,709,508	113,781	23,477,281	235,027	42,154,107	24,322	4,488,457	4,029	807,575
Calculated Feed	Jan-00	488,345	93,545,540	84,223	22,710,531	121,915	23,450,736	251,829	42,070,282	26,061	4,505,706	4,317	808,285
Feed to Box	Jan-00	484,787	92,956,906	84,223	22,710,710	121,915	23,450,818	251,829	42,070,328	26,061	4,505,707	758	219,343
Cheu Product	Jan-00	105,980	28,619,780	78,393	22,331,213	24,588	5,526,126	2,304	563,290	4	767	690	198,383
Residue	Jan-00	238,243	41,924,981	0	2,063	5,167	1,033,679	212,062	37,200,179	21,015	3,687,803	0	1,258
Cold Box Vent	Jan-00	76,011	15,715,901	48	89,453	66,878	13,919,314	9,071	1,645,815	0	118	15	61,202
Flare/Boot Strap	Jan-00	76,011	6,232,150	48	50,232	66,878	5,174,316	9,071	907,984	0	93,583	15	6,035
Fuel From Cheu	Jan-00	7,297	1,275,718	4	393	189	37,373	5,885	1,034,495	1,219	203,457	0	0
Shrinkage/Loss	Jan-00	3,823	460,343	0	0	0	0	0	0	3,823	460,343	0	0
Unaccounted*	Jan-00	53,432	3,248,024	5,779	187,690	25,093	2,341,687	22,507	713,468	(0)	1,371	53	3,807

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)

	Government	Private
Beginning inventory	4,445,336	3,353,668
net acceptances +	0	0
redeliveries	0	(80,466)
In Kind Transfers	0	0
Conservation Crude Sales	0	0
Gain/loss	(1,559)	
Ending Inventory	4,443,777	3,273,202
Total Helium in Reservoir	10,792,078	
Total Helium in Storage	7,716,979	
Helium in native gas	3,075,099	

Crude Helium Pipeline

	Gross	Net Helium	Percent
Beginning inventory	42,676	30,720	71.98%
Measured to Pipeline (Private Plants)	29,742	18,875	63.46%
Measured from Pipeline (Private Plant)	138,425	99,159	71.63%
HEU Production	105,980	78,393	73.97%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	38,061	27,271	71.65%
Gain/Loss	(1,912)	(1,559)	

Tuck Trigg Reservoir Operations

Native Gas (Gross)	Since Field		
	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

February - 2017

	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$)**		
In Kind Helium											
AirGas South West, Contract no. INC98-0101									(billed quarterly)		
Month											
FYTD											
AirGas North Central, Contract no. INC98-0102											
Month											
FYTD											
AirGas Intermountain, Contract no. INC98-0103											
Month											
FYTD											
Air Liquide Helium America, Inc., Contract no. INC98-0104											
Month											
FYTD											
Air Products, L.P., Contract no. INC98-0105											
Month											
FYTD											
Linde Gas North America, LLC, Contract no. INC98-0106											
Month											
FYTD											
Corp Brothers, Inc., Contract no. INC98-0107											
Month											
FYTD											
FIBA Technologies, Inc., Contract no. INC98-0108											
Month											
FYTD											
General Air Service & Supply Co., Contract no. INC98-0109											
Month											
FYTD											
Praxair, Inc., Contract no. INC98-0112											
Month											
FYTD											
United States Welding, Inc., Contract no. INC98-0113											
Month											
FYTD											
Matheson Tri-Gas, Inc., Contract no. INC98-0114											
Month											
FYTD											
GT & S, Contract no. INC00-0115											
Month											
FYTD											
Global Gases America, Contract no. INC13-0116											
Month											
FYTD											
Total month	0	0	0	0	0	0	0	0	\$0		
Total FYTD	18,488	0	0	0	0	18,703	37,191	36,617	\$3,090,475		
Total CYTD	0	0	0	0	0	0	0	0	\$0		
Cumulative	1,904,509	108,677	450	271,584	421,753	811,369	3,518,342	3,463,861	\$201,961,886		
In Kind Transfers								Month	FYTD	CYTD	Cumulative
Transferred								0	74,669	35,094	3,460,147
Volume outstanding								3,789			

* Volumes in Mcf at 14.7 psia & 70°F
 + Volumes in Mcf at 14.65 psia & 60°F

**Rounded to nearest dollar

Table 5 - Conservation Crude Sales/Reserve Sell-down

February - 2017

Helium & Natural Gas Sales

	Award Volume*	Outstanding*	Sales*	Charges Billed (\$)**	
Conservation Helium					
(billed quarterly)					
Air Liquide Helium America, Inc.					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	335,217		335,217	\$25,454,815	
Air Products, L.P.					
Month	0	0	0	\$0	
FYTD	0	0	419,309	\$44,881,063	
Cumulative	8,448,745		8,448,745	\$610,716,090	
Linde Gas North America, LLC					
Month	0	0	0	\$0	
FYTD	0	0	140,334	\$15,015,738	
Cumulative	6,170,987		6,170,987	\$419,707,591	
Keyes Helium Co., LLC					
Month	0	0	0	\$0	
FYTD	0	0	21,844	\$2,337,308	
Cumulative	998,957		998,957	\$68,353,106	
Matheson Tri-Gas, Inc.					
Month	0	0	0	\$0	
FYTD	0	0	46,700	\$4,996,900	
Cumulative	328,700		328,700	\$34,316,400	
Praxair, Inc.					
Month	0	0	0	\$0	
FYTD	0	0	183,513	\$19,635,891	
Cumulative	5,403,189		5,403,189	\$404,125,671	
Linde Gas, LLC discontinued 10 2008					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	200,000		200,000	\$11,035,000	
Global Gases America					
Month	0	0	0	\$0	
FYTD	0	0	13,300	\$1,423,100	
Cumulative	36,267		36,267	\$3,535,665	
Airgas Merchant Gases					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	15,667		15,667	\$1,488,365	
IACX Energy					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	15,000		15,000	\$1,575,000	
Total month	0	0	0		0
Total FYTD	0	0	825,000		\$0
Total CYTD	0	0	0		\$0
Cumulative	21,952,729		21,952,729		\$1,580,307,703
Conservation Crude Transfers					
		Month	FYTD	CYTD	Cumulative
Transferred		0	825,000	0	21,937,729
Volume outstanding		15,000			

* Volumes in Mcf at 14.65 psia & 60°F

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	260,450	---	238,242	915	(\$27,997)	
FYTD	1,347,726	---	1,234,230	916	(\$139,985)	
Cumulative	41,430,274	---	45,188,770	1,091	(\$4,724,364)	
Minerals Management Service						
		No Longer Provides Natural Gas Marketing Services				
Cumulative	---	---	---	---	(\$179,913)	
Tenaska						
		Purchaser - Natural Gas			\$/Unit	
Month	---	---	264,700	\$2.553071	\$675,798	
FYTD	---	---	1,342,500	\$2.762272	\$3,708,350	
Cumulative	---	---	44,967,605	\$4.524792	\$202,642,526	
Sandstone						
		Purchaser - Natural Gas Liquids				
Month	---	93,044	9,593	\$6.237276	\$59,834	
FYTD	---	461,679	48,092	\$5.924427	\$284,918	
Cumulative	---	12,542,073	1,334,081	\$11.411609	\$15,224,011	
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$\$)	
Total month	260,450	93,044	274,293	\$2.579851	\$707,635	
Total FYTD	1,347,726	461,679	1,390,592	\$2.770965	\$3,853,282	
Total CYTD	505,332	185,205	519,423	\$2.866168	\$1,488,754	
Cumulative	41,430,274	12,542,073	46,301,686	\$4.617301	\$212,962,260	

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

**Rounded to nearest dollar

Table 6 - Helium Resources Evaluation

February - 2017

All Volumes in Mcf at 14.7 psia & 70°F

Revenue Collected From Federal Leaseholds	Month*	FYTD*
Fee Sales & Royalties	\$1,638,102	\$6,909,723
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	\$38,978	\$157,652
Revenue Collected from Federal Lease Holds	\$1,645,988	\$6,948,700

*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	1
Total Number of Other Samples Analyzed (2)	15	73

U. S. Helium Production

<i>Domestic</i>	FY Volume	CY Volume
2012 Helium Sold	4,531,140	4,645,930
2013 Helium Sold	4,725,187	4,623,130
2014 Helium Sold	3,815,746	3,463,698
2015 Helium Sold	3,282,185	3,104,695
2016 Helium Sold	4,559,100	4,644,278
Estimated Helium Resources as of 12/31/2006 (Mcf)		732,000,000

	FY-2015	CY-2015
U.S. Helium Exports (3)	2,423,915	2,334,648
US Helium Imports	491,006	565,023

(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 - 2017

All Volumes in Mcf at 14.65 psia & 60°F

	Metered Gas					Transferred Gas		Stored Helium EOM	Charges Month	Billed (\$)**		
	Gross Gas	Helium %	Helium	Helium			Helium			Month	FYTD	
				FYTD	CYTD	Cumulative	Month					Cumulative
Total All Contracts*												
Crude Acquired	29,742	62.9%	18,693	129,702	37,934	32,030,473	20,191	56,726,825				
Crude Disposed	138,425	71.6%	99,159	501,766	190,974	52,034,016	20,191	30,861,337		\$705,230	Storage Fees	
Grade-A Rdlvrd	0		0	0	0	1,478,718				<u>\$172,999</u>	RMF Fees	
Net/Balance	(108,683)		(80,466)	(372,064)	(153,040)	(21,482,261)	0	25,865,488	3,273,202	\$878,229.75	\$4,158,199	
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			
Linde Gas North America, 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												
IACX Energy, Contract no. 3297												
Crude Acquired												
Crude Disposed												
Net/Balance												
Pioneer Natural Resources USA, Inc, Contract no. 3286												
Crude Acquired												
Crude Disposed												
Net/Balance												
Keyes Helium Co., LLC, Contract no. 3287												
Crude Acquired												
Crude Disposed												
Net/Balance												
Air Liquide Helium America, Inc., Contract no. 3284												
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												

Government Helium	
Remaining Crude Acquired beginning of the month	4,445,336
Crude Disposed: In Kind Sales transferred for the month	0
Conservation Crude Sales/Reserve Sell Down transferred (mont	0
Gains and Losses for the month	(1,559)
Net/Balance of Purchased Helium Remaining for Sale	4,443,777

*Includes In Kind and Conservation Crude transfers from Government storage

**Rounded to nearest dollar

Table 8 - Compression & CF February - 2017

Field/CHEU Compressor	Month	FYTD	Cumulative
Spot gas fuel price *	\$2.55	\$2.80	\$4.83
Fuel used * (now includes field compression)	8,435	41,500	1,752,423
Field Compression Fuel Cost *	\$0	\$0	\$658,447
CHEU Compression Fuel Cost *	\$13,533	\$70,093	\$4,366,097
CHEU Process Fuel Cost *	\$7,976	\$46,199	\$2,919,873
Rental compressor(s) fuel consumed (w/)	\$0	\$0	\$207,234
Rental Compressor(s) helium in fuel (Mcf)	\$0	\$0	\$315,893
Rental compressor(s) helium in fuel (Mcf)	0	0	3645
#1 Compressor run time *	672	3,320	105,586
#2 Compressor run time *	229	1,689	67,152
#3 Compressor run time *	440	1,590	60,914

* Field/CHEU Compressor Operations based on Feb 17 activity

Field Compressor Charge	Charges Billed (\$)*		
Linde Gas North America, LLC, Contract no. 3249			
Praxair, Inc., Contract no. 3251			
Air Products, L.P., Contract no. 3256			
Keyes Helium Co., LLC, Contract no. 3287			
SubTotal - Cliffside Refiners, LP	\$0	\$0	(\$11,422,651)
Cliffside Refiners, LP, GDA010003	\$0	\$0	\$2,880,795
Net Total - Cliffside Refiners, LP	\$0	\$0	(\$8,541,856)

* BLM provided fuel cost is based on Jan 17 fuel consumption. **Rounded to nearest dollar**

Crude Helium Enrichment	FYTD		Cumulative
CHEU Runtime	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	3,454	95.3%	116,023
Producing residue gas	3,398	93.8%	113,204
Producing helium product	3,303	91.2%	109,649
Producing natural gas liquids	3,349	92.4%	108,659

CHEU Charges	Charges Billed (\$)*		
	Month	FYTD	Cummulative
Reservoir Management Fees (RMF)	\$172,999	\$691,997	\$32,523,120
Total operating costs	(\$934,158)	(\$4,430,090)	(\$141,260,248)
Labor	\$161,237	\$806,183	\$15,144,799
Compressor fuel cost Jan 17	\$17,541	\$65,294	\$4,372,489
HEU fuel cost Jan 17	\$10,052	\$47,099	\$2,926,566
Electrical power cost Jan 17	\$151,787	\$543,808	\$20,994,788
Other	\$83,582	\$417,908	\$13,477,168
Sub Total - Items provided by BLM	\$424,198	\$1,880,291	\$60,125,164
Total - Cliffside Refiners, LP, GDA0	(\$509,960)	(\$2,549,799)	(\$81,135,084)

***Rounded to nearest dollar**

CHEU Utility Usage	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage Feb 17	2,706	14,540	554,179
Cheu Pure Water Usage (gallons) Feb 17	1,096	8,750	303,198
Electricity Metered (Kwh) consumed Jan 17	3,087,446	8,049,937	128,167,155