

Bureau of Land Management

Amarillo Field Office

Helium Operations

Statistical Report

for

March - 2017



Distribution:

Fluid Minerals Group Manager, Washington Office
NMSO, New Mexico State Director
NMSO, Associate State Director
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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

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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: SAMUEL R.M. BURTON

Date: May 11, 2017

Table 1 - Summary of Helium Operations

March - 2017

Helium Enrichment Unit Operations

Gas Processed	Month Gross Volume	Month Net Helium	Average Percent	Gross FYTD	Net FYTD
Measured Plant Feed (Mcf*)	576,409	100,293	17.40%	2,950,787	500,404
Helium Product (Mcf*)	132,075	98,894	74.88%	668,451	497,068
Residue Natural Gas (Mcf*)	306,222	0	00.00%	1,540,450	24

* Volumes in Mcf at 14.65 psia & 60°F

Natural Gas & Liquids Produced

Gas Processed	Month	FYTD
Natural Gas Sales (Mcf***)	335,839	1,683,565
NGL Sales (gallons)	108,534	570,213

*** 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Total Withdrawn (Mcf*)	620,101	107,896	17.40%	3,149,091	529,041
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*)		4,444,599			

* 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*)	30,568			

* 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*)	25,944	15,607	60.16%	145,309
Crude Disposed (Mcf*)	152,998	111,629	72.96%	613,395
Net Balance (Mcf*)	(127,054)	(96,022)		(468,086)
Balance of Stored Helium End Of Month (Mcf*)		3,177,180		

* Volumes in Mcf at 14.65 psia & 60°F

Revenue / Charges

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$712,977	\$4,179,179
Reservoir Management Fees Billed (\$)	\$172,999	\$864,996

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	\$864,996
Total operating costs	(\$913,483)	(\$5,343,573)
Sub Total - Items provided by BLM	\$403,523	\$2,283,815
Total - Cliffside Refiners, LP, GDA030001	(\$509,960)	(\$3,059,758)

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

	Month	FYTD
Conservation Crude Helium Sales	\$0	\$0
In Kind Sales	\$2,222,657	\$5,313,132
Natural Gas & Liquid Sales	\$883,979	\$4,737,261

Helium Resources Evaluation

	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,626,704	\$8,575,405
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 19

*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

March - 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		620,101	229,381,737	107,896	42,840,318	154,768	56,536,974	318,928	116,318,430	33,021	11,760,573	5,489	1,925,441
BIVINS A-3	Mar-17	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	Mar-17	56,913	11,850,476	26,368	7,002,554	14,192	2,913,519	14,412	1,708,085	1,519	169,745	421	56,573
BIVINS A-13	Mar-17	38,955	8,790,199	12,879	4,563,487	9,673	2,257,916	14,498	1,725,684	1,613	191,805	292	51,306
BIVINS A-14	Mar-17	46,048	9,906,614	13,708	5,606,407	11,312	2,509,367	18,622	1,562,207	1,997	169,188	410	59,445
BIVINS A-4	Mar-17	44,200	13,827,034	5,093	2,429,811	10,682	3,349,999	25,368	7,199,456	2,597	724,180	460	123,588
BUSH A-2	Mar-17	48,269	13,545,264	4,450	1,987,829	12,125	3,323,722	28,310	7,364,759	3,060	756,431	323	112,523
Injection	Mar-17	0	66,474,735	0	48,019,788	0	17,121,580	0	780,676	0	37	0	552,655
inj Bivins A-3	Mar-17	0	(25,652,315)	0	(18,384,452)	0	(6,554,549)	0	(332,777)	0	0	0	(380,537)
inj Bivins A-6	Mar-17	0	(24,412,686)	0	(17,669,978)	0	(6,486,588)	0	(143,192)	0	(72)	0	(112,856)
inj Bivins A-13	Mar-17	0	(6,490,417)	0	(4,706,191)	0	(1,656,853)	0	(122,391)	0	(2)	0	(4,980)
inj Bivins A-14	Mar-17	0	(6,501,333)	0	(4,767,421)	0	(1,602,106)	0	(126,303)	0	(7)	0	(5,497)
inj Bivins A-4	Mar-17	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	Mar-17	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	Mar-17	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	Mar-17	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	Mar-17	22,846	14,172,519	793	1,886,415	5,331	3,469,164	14,918	7,909,309	1,576	789,095	228	118,536
BIVINS A-5	Mar-17	65,028	16,388,691	12,240	2,110,106	16,624	4,021,638	32,145	9,189,247	3,512	926,218	507	141,482
BIVINS A-7	Mar-17	6,737	11,958,573	2,088	2,829,619	1,755	3,012,748	2,563	5,470,561	285	558,426	44	87,219
BIVINS A-9	Mar-17	39,330	10,692,927	935	205,067	10,079	2,633,821	25,242	7,043,387	2,742	713,301	332	97,352
BIVINS A-11	Mar-17	1	6,573,526	0	142,858	0	1,636,148	1	4,291,255	0	441,323	0	61,941
BIVINS A-15	Mar-17	37,636	10,131,073	658	436,047	8,818	2,412,318	25,104	6,523,311	2,597	653,969	459	105,428
BIVINS B-1	Mar-17	39,683	8,351,389	913	307,291	10,056	2,027,260	26,782	5,387,853	1,738	544,889	194	84,096
BIVINS B-2	Mar-17	31,476	6,921,991	598	130,471	8,001	1,735,478	20,171	4,494,565	2,147	463,232	559	98,245
BUSH A-1	Mar-17	0	5,721,962	0	104,140	0	1,356,677	0	3,830,281	0	374,216	0	56,647
BUSH A-3	Mar-17	34,505	12,381,514	11,542	2,952,534	8,761	3,063,597	12,534	5,681,345	1,382	576,023	286	108,016
BUSH A-4	Mar-17	23,374	8,822,551	2,160	1,596,583	5,981	2,207,862	13,625	4,495,668	1,475	459,271	133	63,168
BUSH A-5	Mar-17	49,016	16,985,844	12,777	3,916,599	12,527	4,265,907	21,100	7,884,716	2,325	801,224	287	117,398
BUSH A-8	Mar-17	23,350	4,428,768	433	81,203	5,800	1,073,824	15,134	2,922,396	1,592	295,218	391	56,126
BUSH A-9	Mar-17	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	Mar-17	9,463	4,644,260	201	134,662	2,279	1,110,949	6,222	3,036,662	631	308,448	129	53,540
BUSH B-1	Mar-17	3,272	3,365,272	58	63,140	771	798,470	2,176	2,248,687	235	222,037	32	32,940
FUQUA A-1	Mar-17	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	Mar-17	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	Mar-17	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	Mar-17	0	0	0	0	0	0	0	0	0	0	0	0
field-wide pct				17.40%	18.68%	24.96%	24.65%	51.43%	50.71%	5.33%	5.13%	0.89%	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 Mar-17 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 - 16	95.429	23.389
Injection 2003 - 16	(1.423)	(1.089)
Produced to Date 2017	1.571	0.269
Injected to Date 2017	0.000	0.000
Amount of Raw Gas Available to CHEU	84.986	=====> 10.684 total helium in reservoir
Estimated Bottom Hole Pressure	313.002	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

March - 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	Mar-17	576,409	94,213,337	100,293	22,809,801	143,863	23,621,144	296,457	42,450,564	30,694	4,519,151	5,102	812,677
Calculated Feed	Mar-17	620,101	94,165,641	107,896	22,818,427	154,768	23,605,503	318,928	42,389,210	33,021	4,538,727	5,489	813,773
Feed to Box	Mar-17	615,586	93,572,492	107,896	22,818,605	154,768	23,605,586	318,928	42,389,256	33,021	4,538,728	974	220,317
Cheu Product	Mar-17	132,075	28,751,855	98,894	22,430,107	29,492	5,555,619	2,798	566,088	19	786	872	199,255
Residue	Mar-17	306,222	42,231,203	0	2,063	7,011	1,040,690	272,373	37,472,552	26,837	3,714,640	0	1,258
Cold Box Vent	Mar-17	87,636	15,803,537	59	89,512	79,328	13,998,642	8,231	1,654,047	0	118	18	61,219
Flare/Boot Strap	Mar-17	87,636	6,319,786	59	50,291	79,328	5,253,644	8,231	916,216	0	93,583	18	6,053
Fuel From Cheu	Mar-17	7,975	1,283,693	4	397	207	37,579	6,432	1,040,927	1,333	204,790	0	0
Shrinkage/Loss	Mar-17	4,832	465,175	0	0	0	0	0	0	4,832	465,175	0	0
Unaccounted*	Mar-17	76,846	3,324,870	8,939	196,628	38,730	2,380,417	29,093	742,561	(0)	1,371	84	3,891

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)

	Government	Private
Beginning inventory	4,443,777	3,273,202
net acceptances +	0	0
redeliveries	0	(96,022)
In Kind Transfers	0	0
Conservation Crude Sales	0	0
Gain/loss	823	
Ending Inventory	4,444,599	3,177,180
Total Helium in Reservoir	10,684,182	
Total Helium in Storage	7,621,779	
Helium in native gas	3,062,403	

Crude Helium Pipeline

	Gross	Net Helium	Percent
Beginning inventory	38,061	27,271	71.65%
Measured to Pipeline (Private Plants)	25,944	16,070	61.94%
Measured from Pipeline (Private Plant)	152,998	111,629	72.96%
HEU Production	132,075	98,894	74.88%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	43,138	31,428	72.86%
Gain/Loss	56	823	

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

March - 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	9,840	6	0	8	292	17,053	27,198	26,779	\$2,222,657	
Total FYTD	28,328	6	0	8	292	35,756	64,389	63,396	\$5,313,132	
Total CYTD	9,840	6	0	8	292	17,053	27,198	26,779	\$2,222,657	
Cumulative	1,914,349	108,683	450	271,593	422,045	828,422	3,545,541	3,490,640	\$204,184,543	
In Kind Transfers							Month	FYTD	CYTD	Cumulative
Transferred							0	74,669	35,094	3,460,147
Volume outstanding							30,568			

* 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

March - 2017

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	419,309	\$44,881,063	
Cumulative	8,448,745		8,448,745	\$610,716,090	
<u>Linde Gas North America, LLC</u>					
Month	0	0	0	\$0	
FYTD	0	0	140,334	\$15,015,738	
Cumulative	6,170,987		6,170,987	\$419,707,591	
<u>Keyes Helium Co., LLC</u>					
Month	0	0	0	\$0	
FYTD	0	0	21,844	\$2,337,308	
Cumulative	998,957		998,957	\$68,353,106	
<u>Matheson Tri-Gas, Inc.</u>					
Month	0	0	0	\$0	
FYTD	0	0	46,700	\$4,996,900	
Cumulative	328,700		328,700	\$34,316,400	
<u>Praxair, Inc.</u>					
Month	0	0	0	\$0	
FYTD	0	0	183,513	\$19,635,891	
Cumulative	5,403,189		5,403,189	\$404,125,671	
<u>Linde Gas, LLC discontinued 10 2008</u>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	200,000		200,000	\$11,035,000	
<u>Global Gases America</u>					
Month	0	0	0	\$0	
FYTD	0	0	13,300	\$1,423,100	
Cumulative	36,267		36,267	\$3,535,665	
<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	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 (\$)**	
<u>El Paso Natural Gas</u>						
		Provides Measured Firm/Interruptible Transportation Services			(billed monthly)	
Month	335,839	---	306,221	912	(\$27,997)	
FYTD	1,683,565	---	1,540,451	915	(\$167,982)	
Cumulative	41,766,113	---	45,494,991	1,089	(\$4,752,361)	
<u>Minerals Management Service</u>						
		No Longer Provides Natural Gas Marketing Services				
Cumulative	---	---	---	---	(\$179,913)	
<u>Tenaska</u>						
		Purchaser - Natural Gas			\$/Unit	
Month	---	---	333,700	\$2.554401	\$852,404	
FYTD	---	---	1,676,200	\$2.720888	\$4,560,753	
Cumulative	---	---	45,301,305	\$4.510278	\$203,494,929	
<u>Sandstone</u>						
		Purchaser - Natural Gas Liquids				
Month	---	108,534	11,309	\$5.267669	\$59,572	
FYTD	---	570,213	59,401	\$5.799390	\$344,490	
Cumulative	---	12,650,607	1,345,390	\$11.359965	\$15,283,583	
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$\$)	
Total month	335,839	108,534	345,009	\$2.562190	\$883,979	
Total FYTD	1,683,565	570,213	1,735,601	\$2.729464	\$4,737,261	
Total CYTD	841,171	293,739	864,432	\$2.744846	\$2,372,732	
Cumulative	41,766,113	12,650,607	46,646,695	\$4.602101	\$213,846,239	

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

**Rounded to nearest dollar

Table 6 - Helium Resources Evaluation

March - 2017

All Volumes in Mcf at 14.7 psia & 70°F

Revenue Collected From Federal Leaseholds	Month*	FYTD*
Fee Sales & Royalties	\$1,605,434	\$8,515,157
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	\$60,248	\$217,900
Revenue Collected from Federal Lease Holds	\$1,626,704	\$8,575,405

*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)	19	92

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

March - 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	25,944	60.2%	15,607	145,309	53,541	32,046,080	6,013	56,732,838				
Crude Disposed	152,998	73.0%	111,629	613,395	302,603	52,145,645	6,013	30,867,350		\$712,977	Storage Fees	
Grade-A Rdlvrd	0		0	0	0	1,478,718				<u>\$172,999</u>	RMF Fees	
Net/Balance	(127,054)		(96,022)	(468,086)	(249,062)	(21,578,283)	0	25,865,488	3,177,180	\$885,976.28	\$5,044,176	
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												

Error on LiINN for march corrected on April statement

Government Helium	
Remaining Crude Acquired beginning of the month	4,443,777
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	823
Net/Balance of Purchased Helium Remaining for Sale	4,444,599

*Includes In Kind and Conservation Crude transfers from Government storage

**Rounded to nearest dollar

Table 8 - Compression & CHEU (Charges & Operations)

March - 2017

Field/CHEU Compressor Operations

		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$2.55	\$2.76	\$4.82
Fuel used * (now includes field compression well head)	total MMBTU	9,219	50,719	1,761,642
Field Compression Fuel Cost *	\$dollars	\$0	\$0	\$658,447
CHEU Compression Fuel Cost *	\$dollars	\$14,346	\$84,439	\$4,380,443
CHEU Process Fuel Cost *	\$dollars	\$9,165	\$55,364	\$2,929,038
Rental compressor(s) fuel consumed (well head)	\$dollars	\$0	\$0	\$207,234
Rental Compressor(s) helium in fuel (Mcf x \$\$)	\$dollars	\$0	\$0	\$315,893
Rental compressor(s) helium in fuel (Mcf)	Mcf	0	0	3645
#1 Compressor run time *	hours	719	4,039	106,305
#2 Compressor run time *	hours	690	2,379	67,842
#3 Compressor run time *	hours	80	1,670	60,994

* Field/CHEU Compressor Operations based on Mar 17 activity

Crude Helium Enrichment Unit (CHEU)

CHEU Runtime

	Month		FYTD		Cumulative
	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	743	99.9%	4,197	96.1%	116,766
Producing residue gas	743	99.9%	4,141	94.8%	113,947
Producing helium product	743	99.9%	4,046	92.6%	110,392
Producing natural gas liquids	743	99.9%	4,092	93.7%	109,402

CHEU Charges

	Charges Billed (\$)*		
	Month	FYTD	Cumulative
Reservoir Management Fees (RMF)	\$172,999	\$864,996	\$32,696,119
Total operating costs	(\$913,483)	(\$5,343,573)	(\$142,173,731)
Labor	\$161,237	\$967,420	\$15,306,035
Compressor fuel cost Feb 17	\$13,533	\$78,827	\$4,386,022
HEU fuel cost Feb 17	\$7,976	\$55,075	\$2,934,542
Electrical power cost Feb 17	\$137,196	\$681,004	\$21,131,984
Other	<u>\$83,582</u>	<u>\$501,489</u>	<u>\$13,560,749</u>
Sub Total - Items provided by BLM	\$403,523	\$2,283,815	\$60,528,687
Total - Cliffslope Refiners, LP, GDA030001	(\$509,960)	(\$3,059,758)	(\$81,645,044)

*Rounded to nearest dollar

CHEU Utility Usage

	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage Mar 17	3,109	17,649	557,288
Cheu Pure Water Usage (gallons) Mar 17	581	9,332	303,780
Electricity Metered (Kwh) consumed Feb 17	2,694,473	10,744,410	130,861,628